

Genotype: AOG F06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

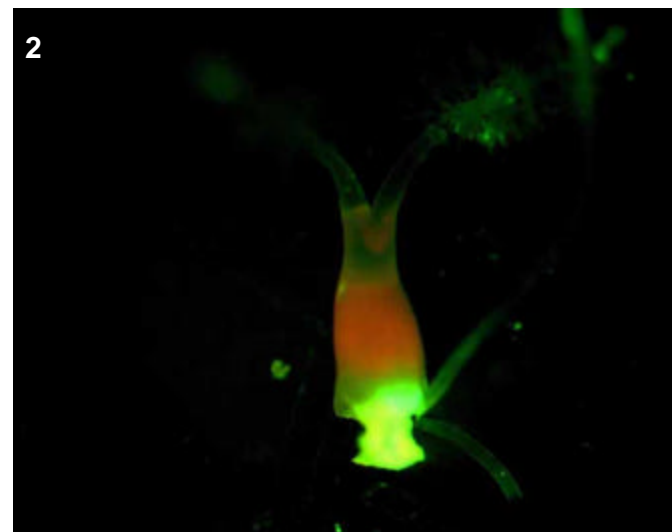
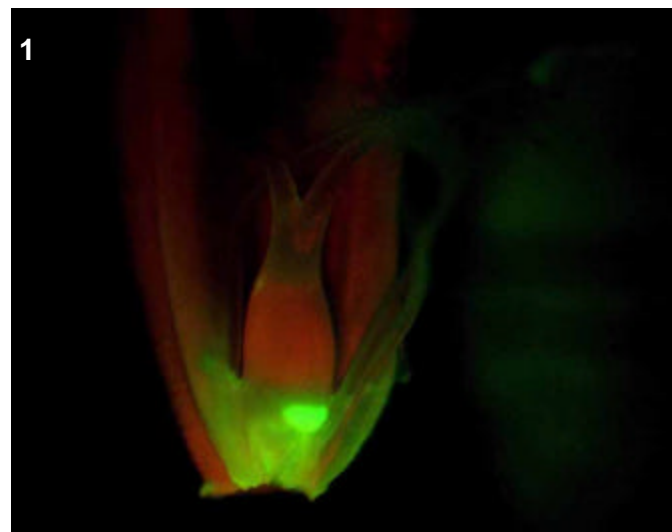
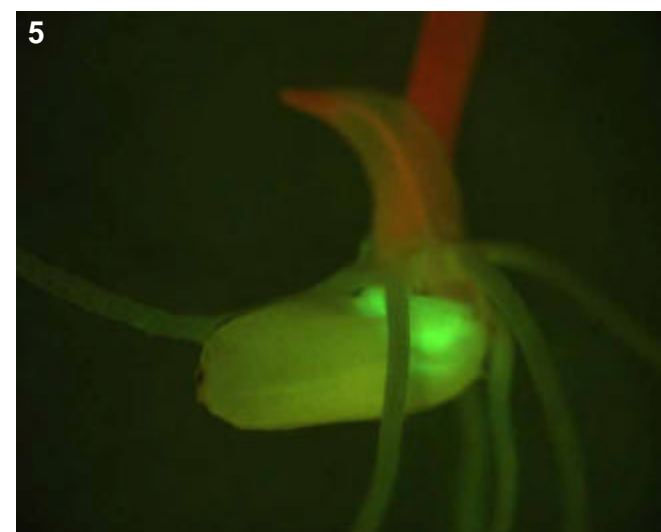
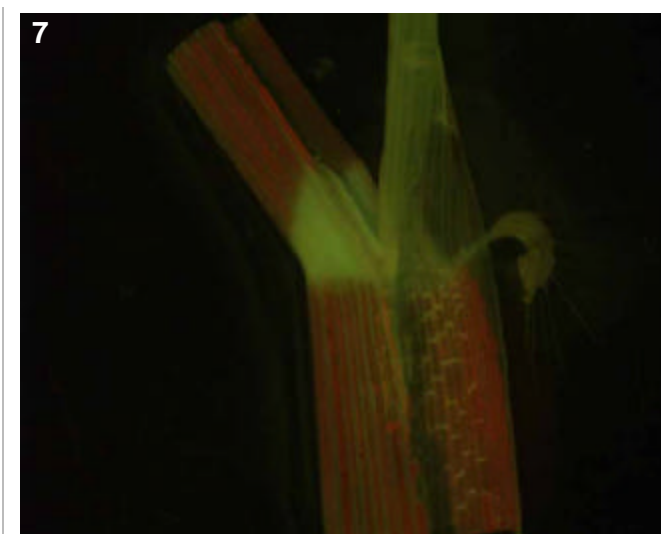
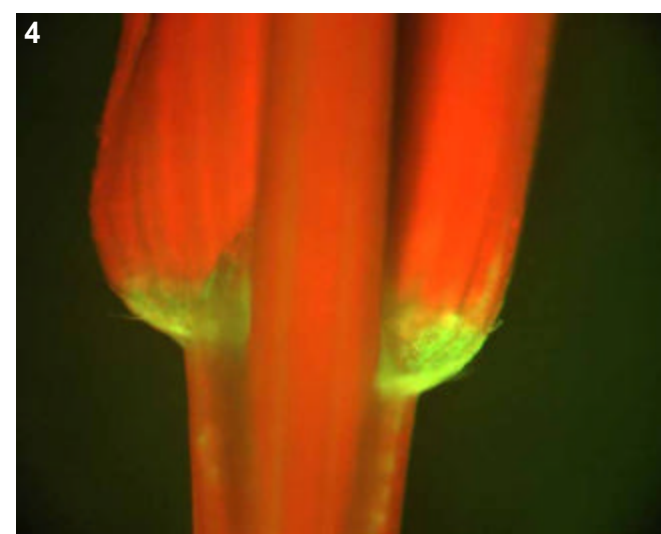
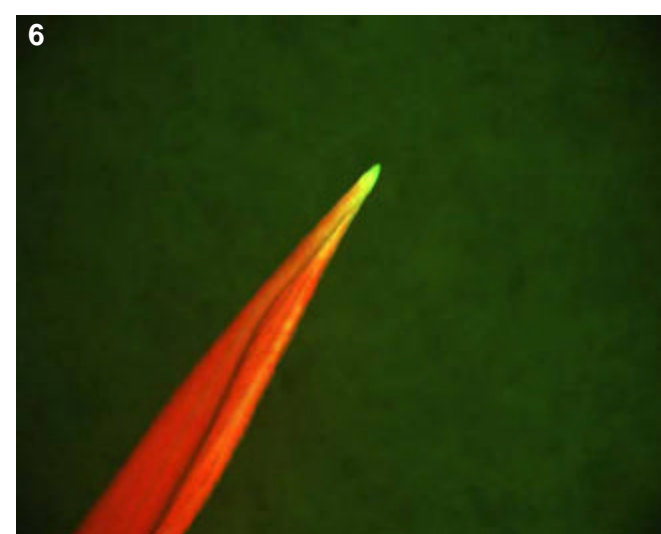
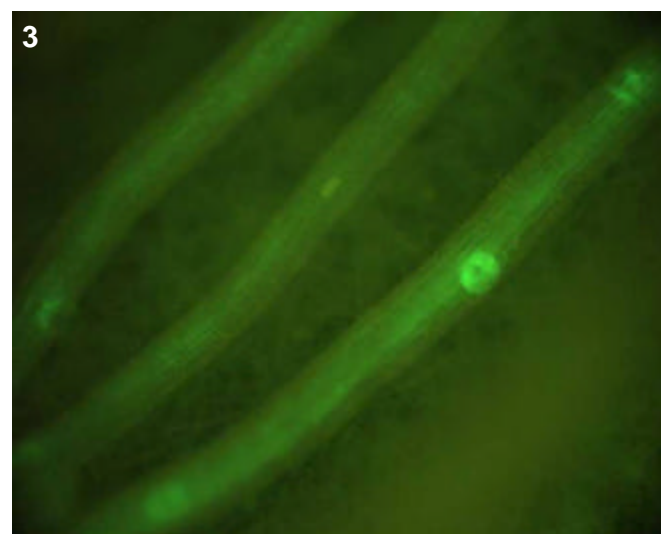
- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
Only saw collar and sheath vascular expression
- No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants Confocal?

Number T2 seed produced: 79



T0 comments

The base of the pistil is GFP bright, upon closer inspection I discovered that it is the small piece of leafy tissue that the pistil sits on that is glowing, as well as the rachilla?

T1 seed comments

4/5 seeds show expression.

T1 seedling comments

Vascular in crown and lateral roots. Seedlings all show digesting endosperm pattern as well. Expression in shoot ranges from nothing to collar and tips of leaves.

Genotype: AOH C04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

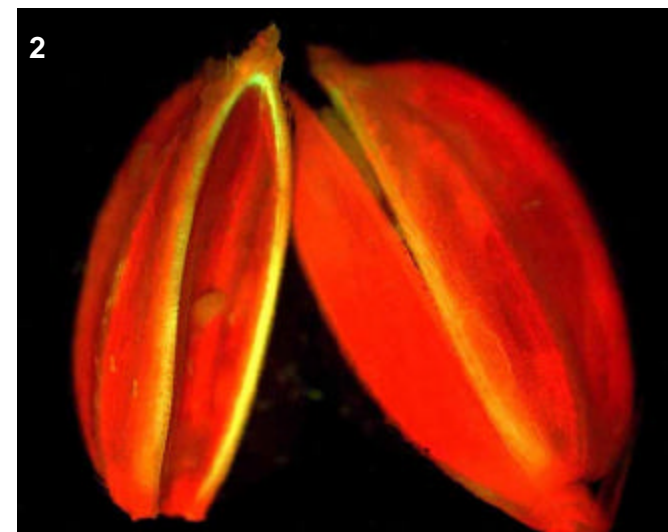
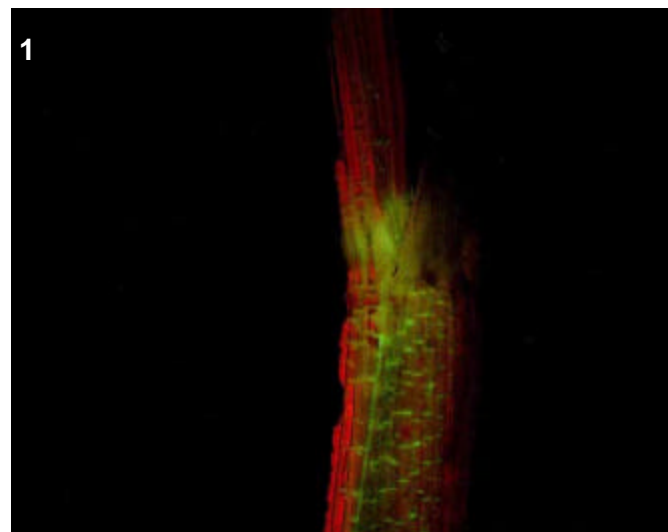
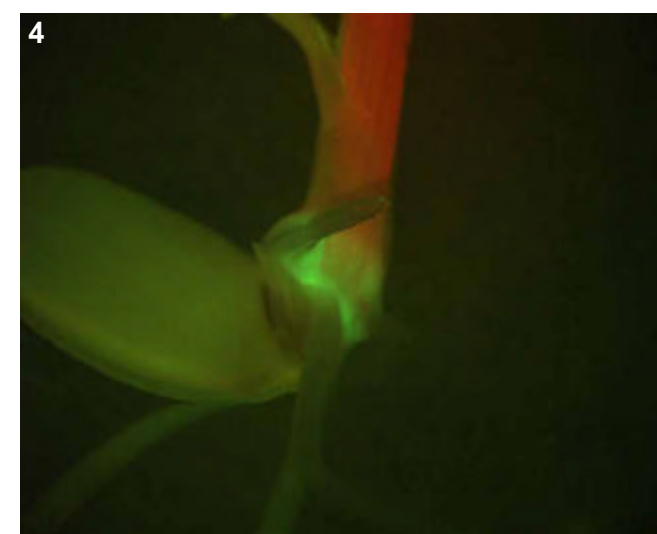
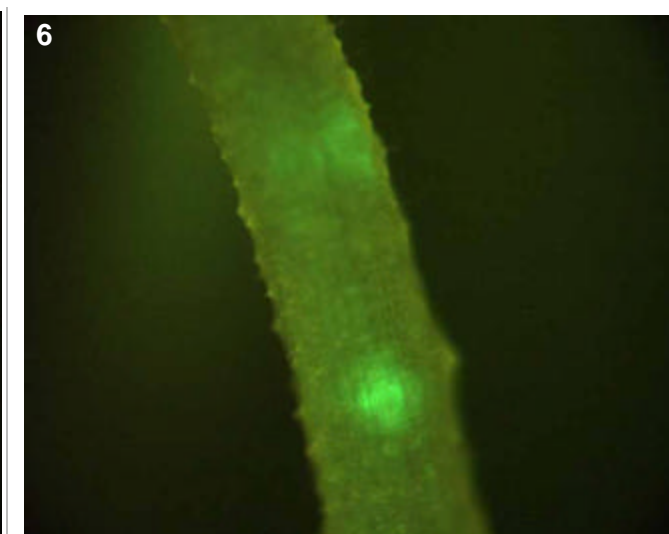
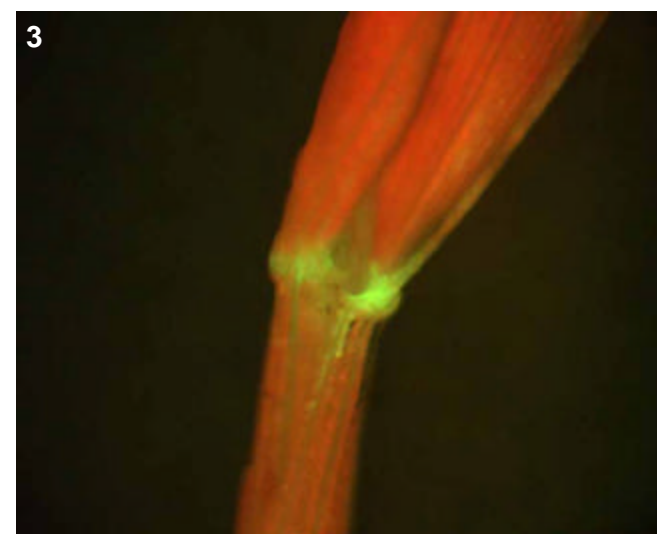
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 6



T0 comments

Moderate expression in collar and sheath vascular, strong expression in floral vascular.

T1 seed comments

1/5 seeds showed faint expression in scutellum.

T1 seedling comments

The base of the seedling shoot is bright, perhaps the mesocotyl? Shoot expression in addition to bright lateral roots.

Genotype: AOI B02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

Bright collar and sheath vascular

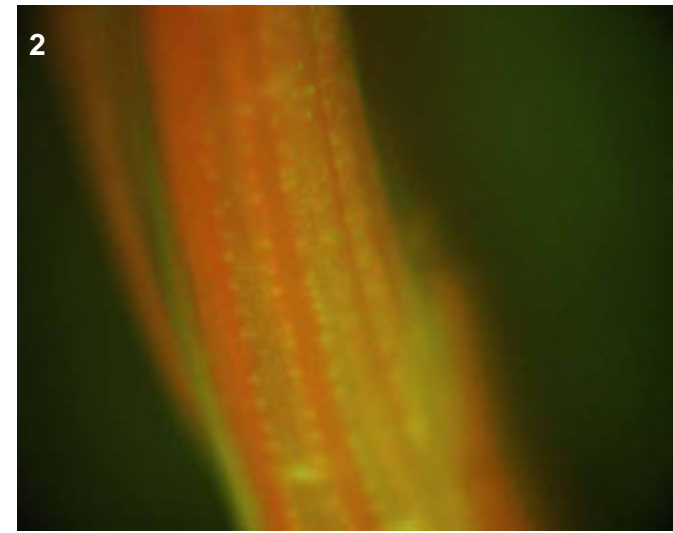
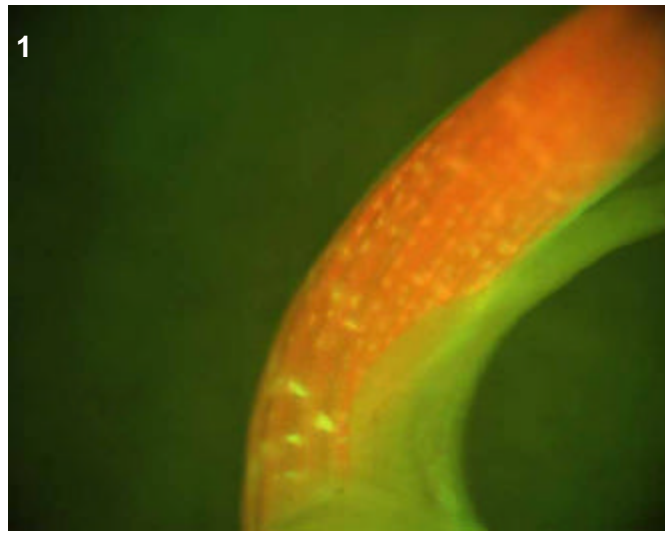
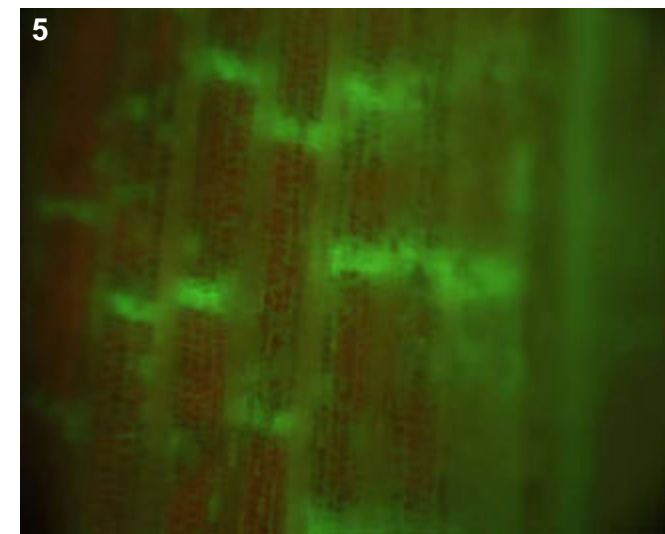
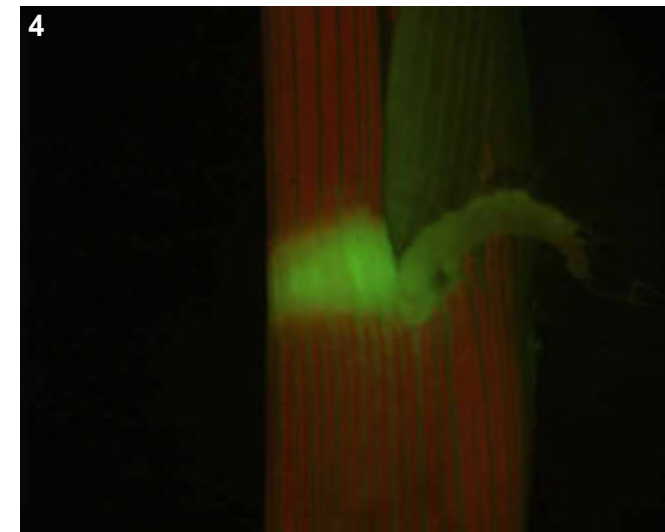
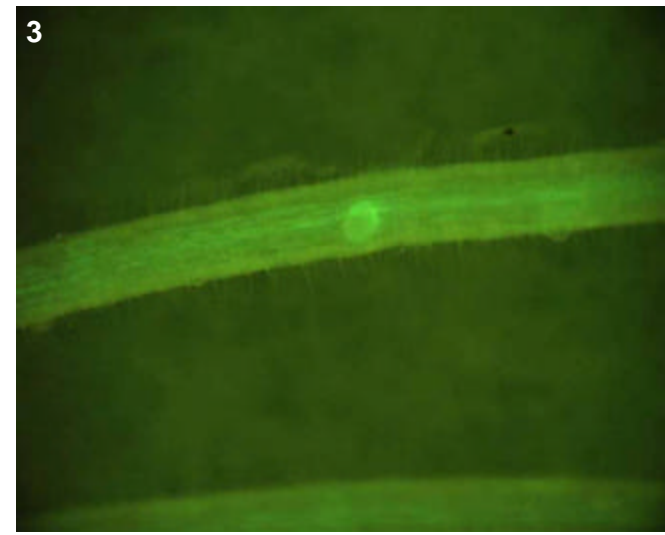
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 111



T0 comments

T1 seed comments

2/5 show expression.

T1 seedling comments

Interesting pattern on the shoot, not sure what the line of dots is in second pic. I think this may be an overall vascular line, with brighter expression in the shoot.

Genotype: AOL A03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

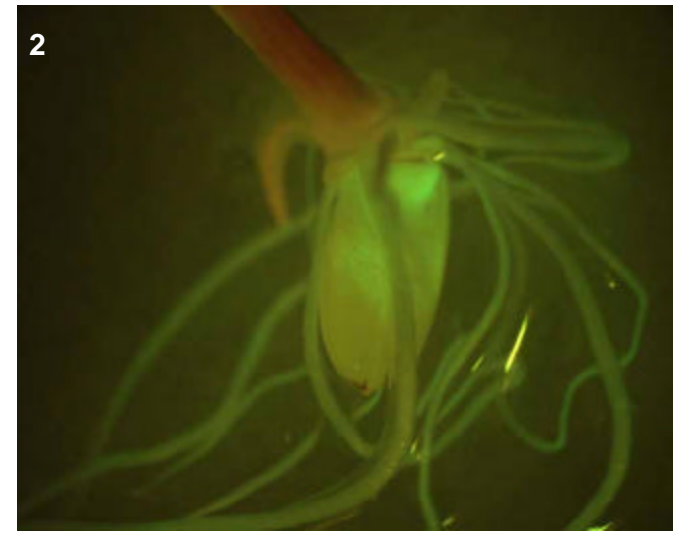
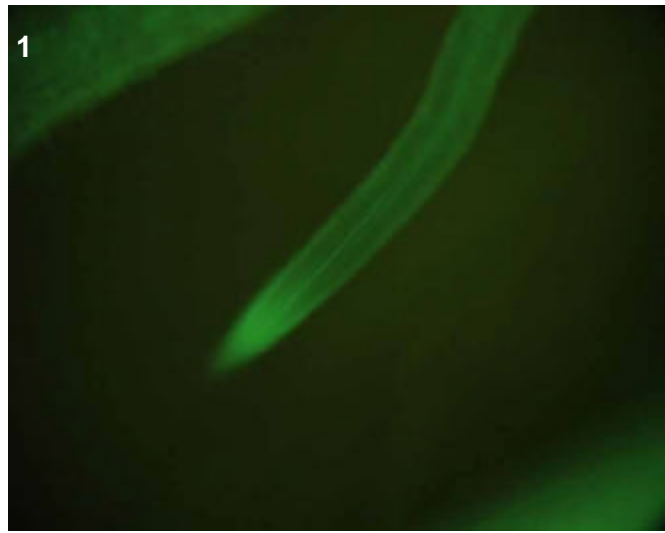
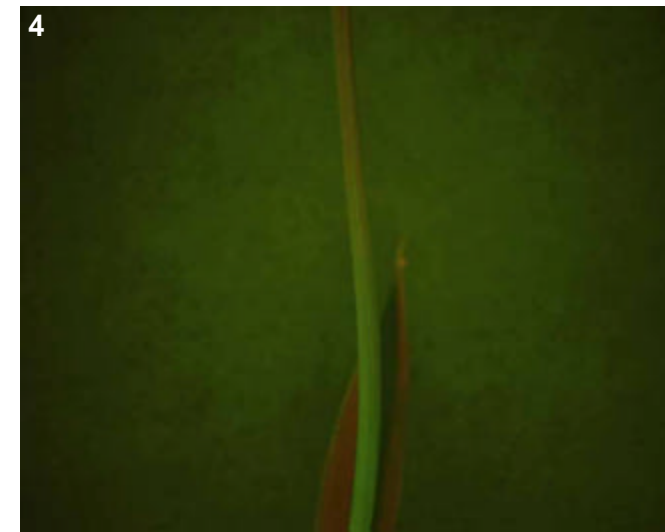
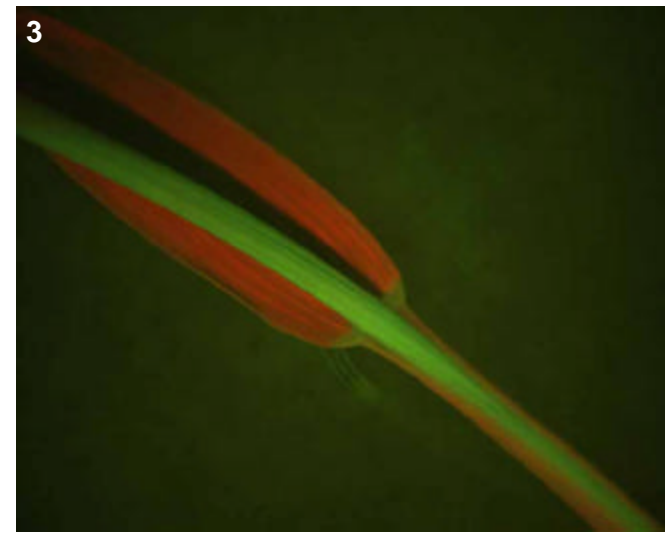
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 87



T0 comments

T1 seed comments

4/5 seeds show expression.

T1 seedling comments

General expression throughout roots, but brightest in the tips. Interesting plants because no lateral roots, perhaps a phenotype? Bright expression in mature leaf that dies out towards the younger portion (see the two last pics).

Genotype: AOL D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

Virtually no collar but bright sheath and leaf vascular.

No GFP detected

T1 in greenhouse?

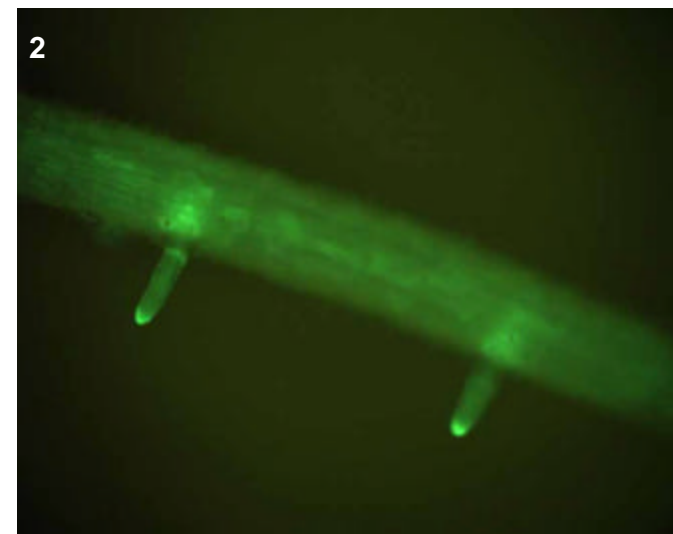
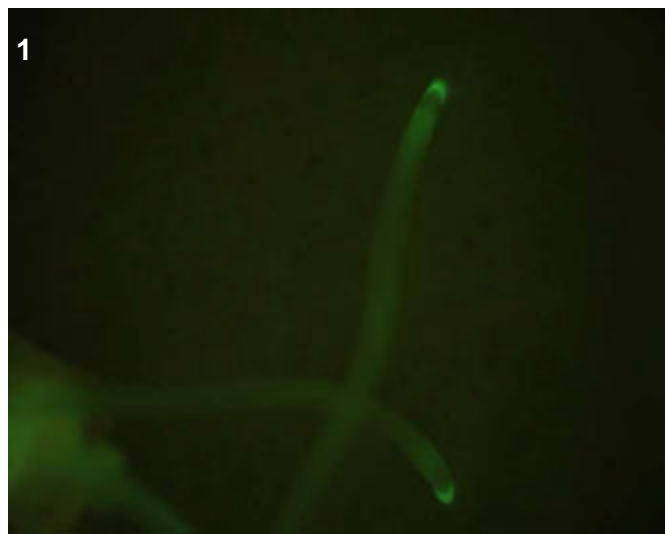
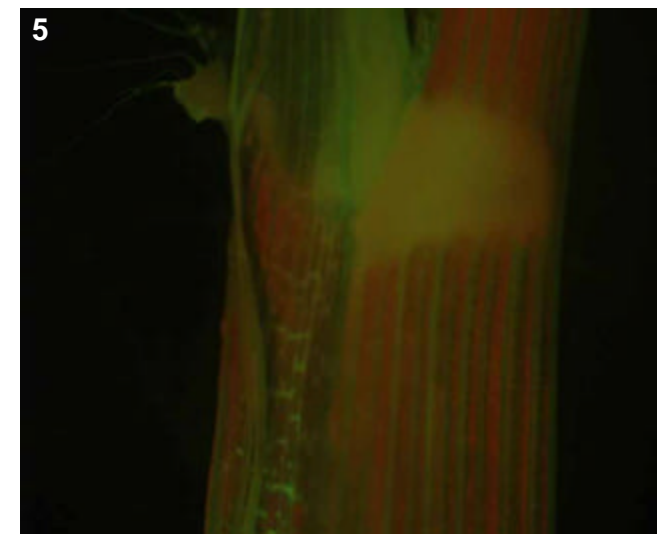
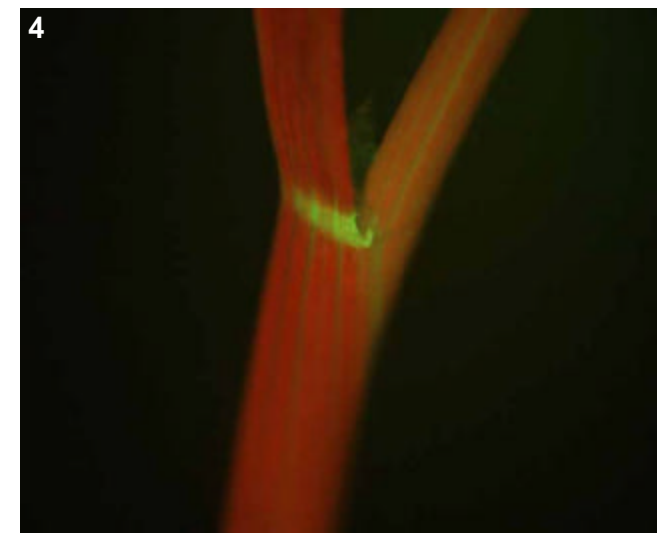
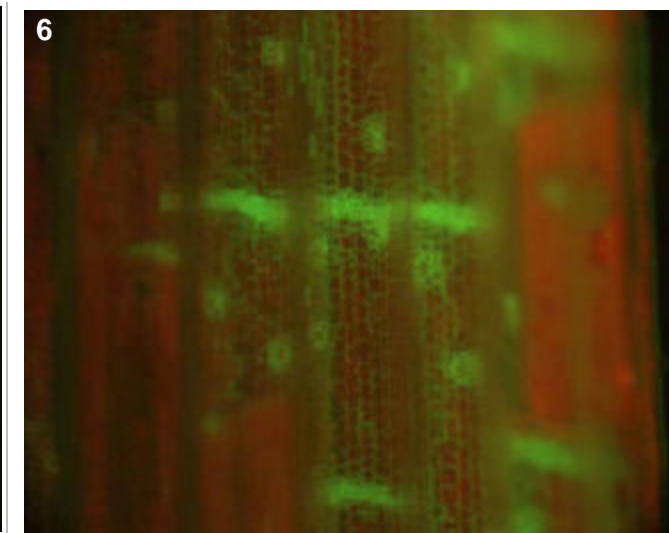
YES, 2 GFP+ plants

Confocal?

YES

Number T2 seed produced:

150



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Very bright expression in the root cap.

Genotype: AOM C12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

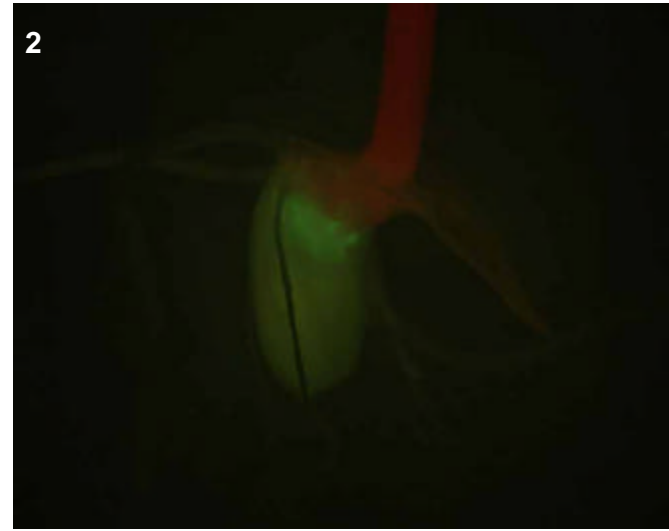
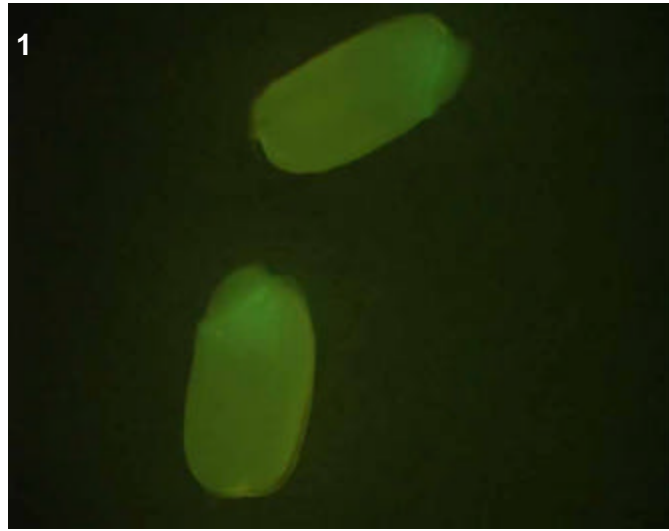
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 25



T0 comments

T1 seed comments

4/5 seeds show expression

T1 seedling comments

Thought it was embryo expression in the seed, but now think it must have been endosperm based on the seedling result. This looks to be an endosperm-specific line.

Genotype: AOM D02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

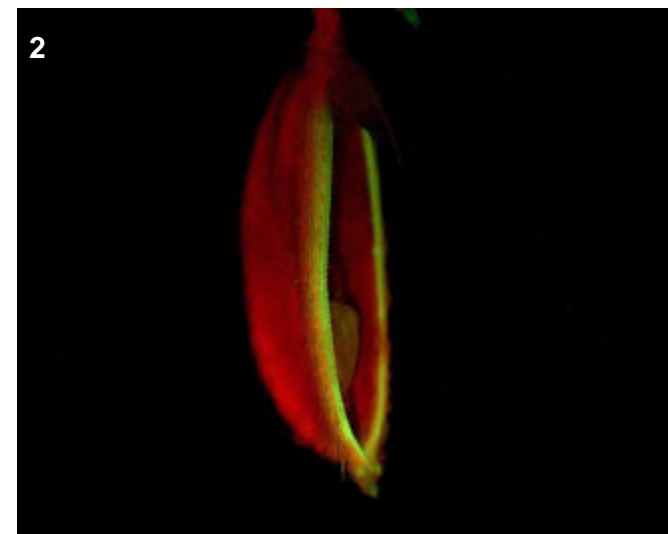
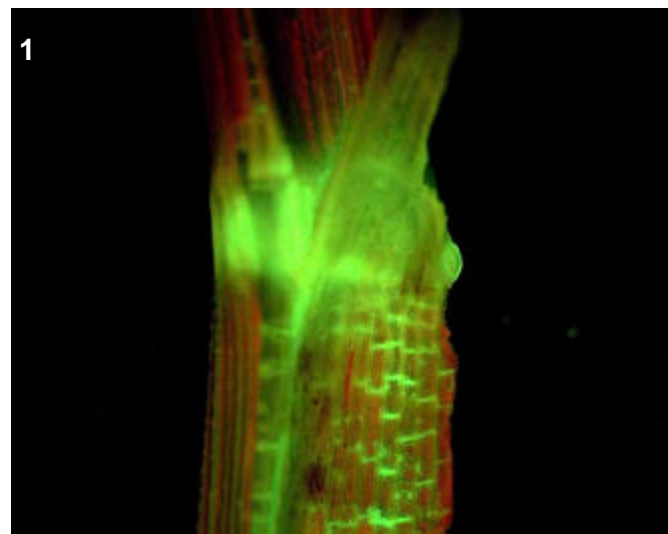
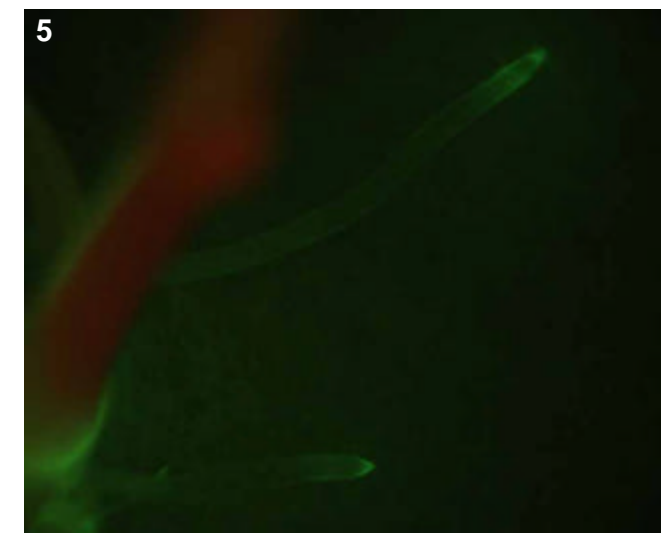
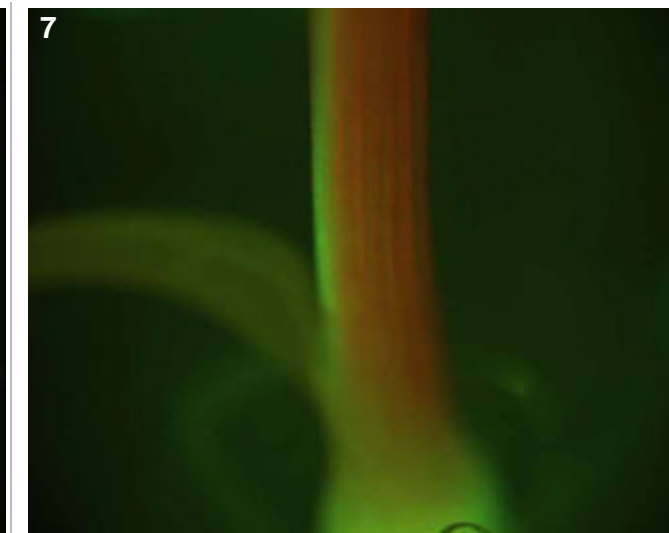
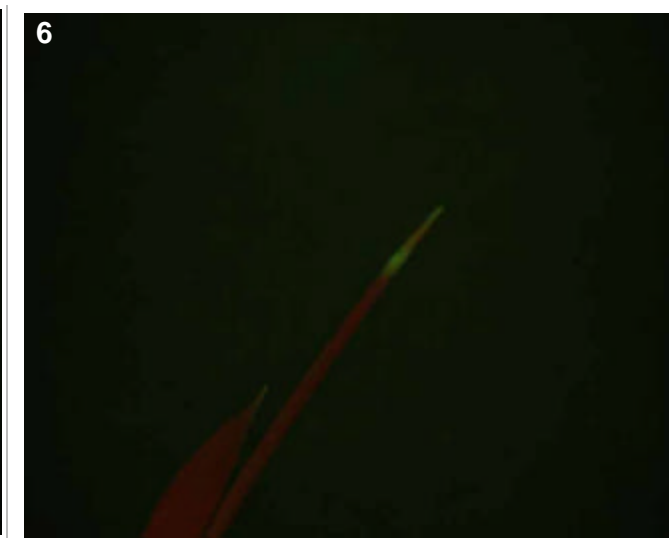
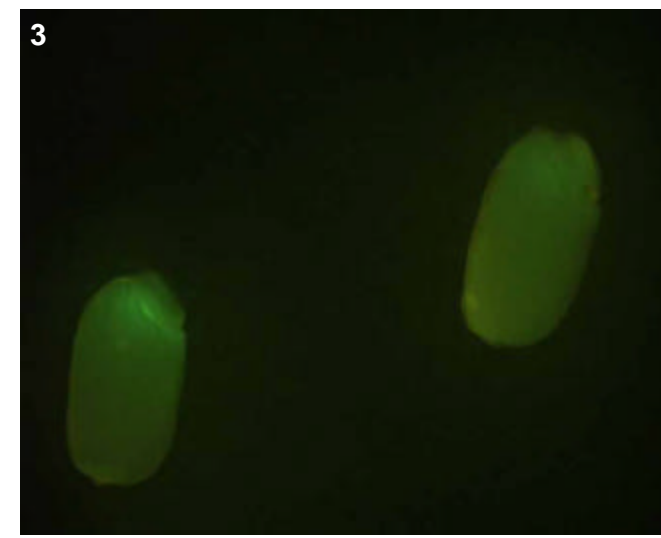
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 13



T0 comments

A bright vascular line. Expression in collar and surrounding vascular, as well as bright in floral vascular.

T1 seed comments

2/5 seeds show bright embryo expression

T1 seedling comments

Very bright roots, especially in the cap. Also bright endosperm and activity in the leaf tips and base of the plant.

Genotype: AON E07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
Again, no expression in adult plants.

T0 pattern verified plus:

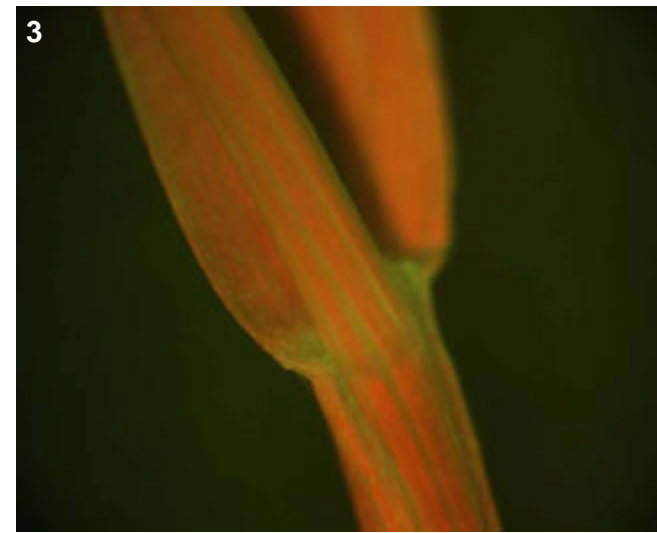
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 153



T0 comments

T1 seed comments

4/5 seed show expression.

T1 seedling comments

Genotype: AON F09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

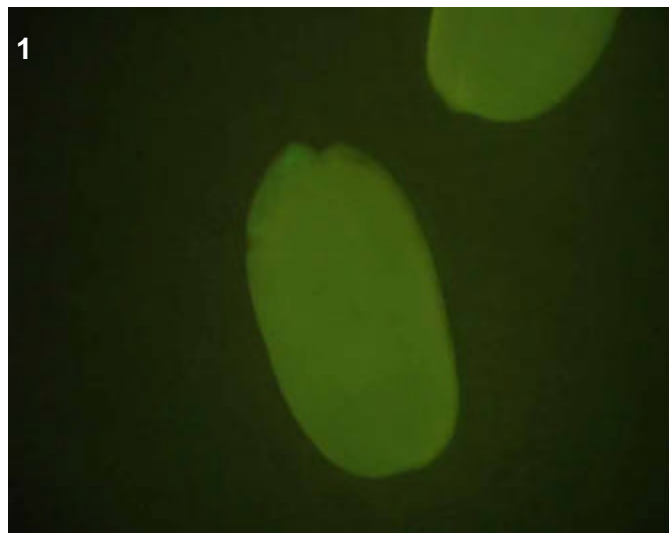
Confocal?

YES

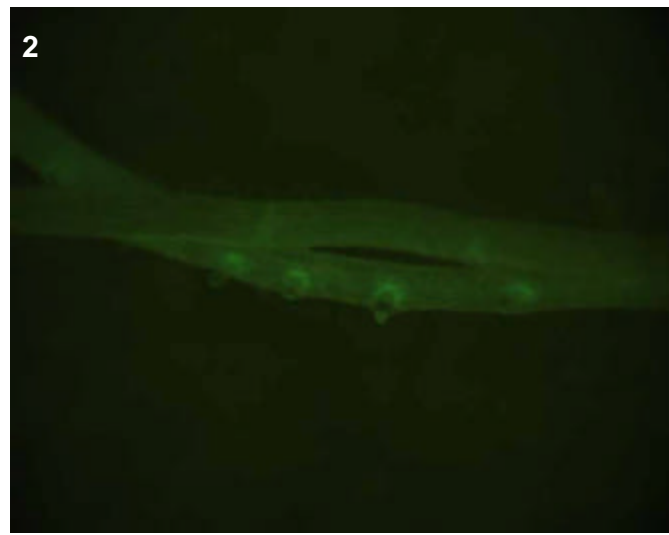
Number T2 seed produced:

31

1



2



T0 comments

T1 seed comments

1/5 shows expression

T1 seedling comments

Bright where the lat roots emerge only. A root-specific line.

Genotype: AOO F11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

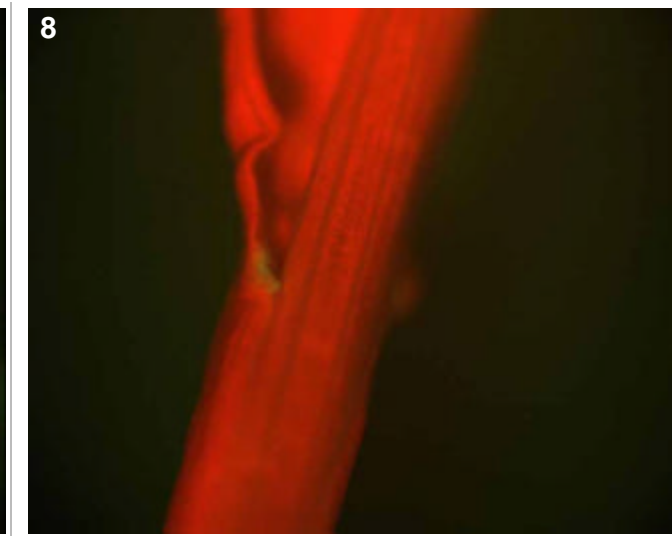
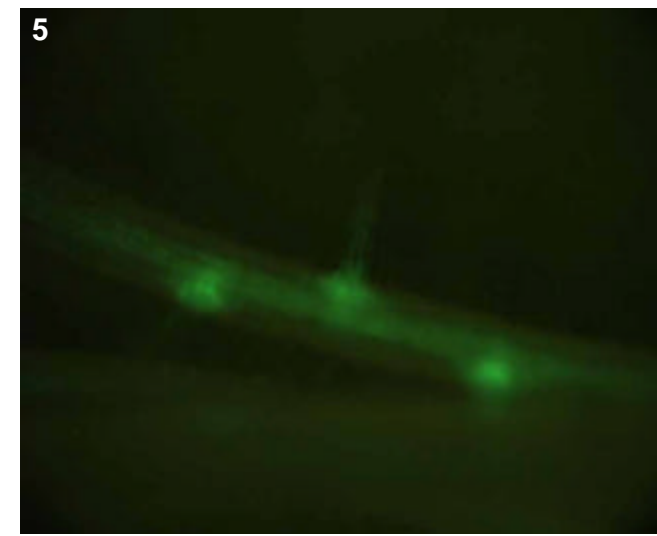
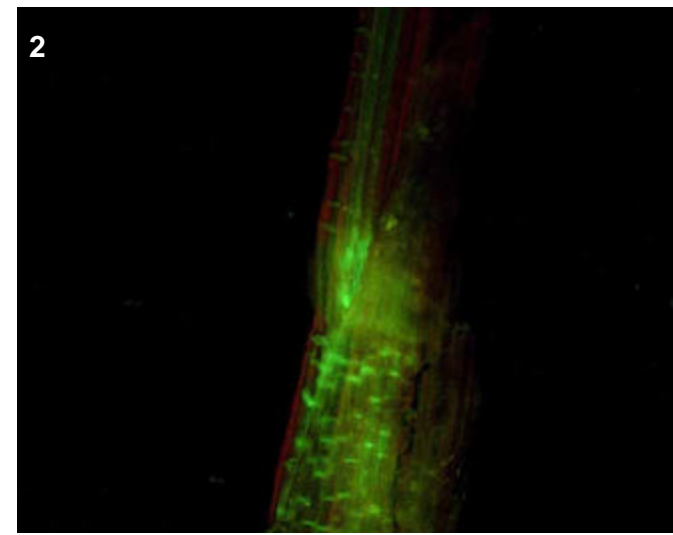
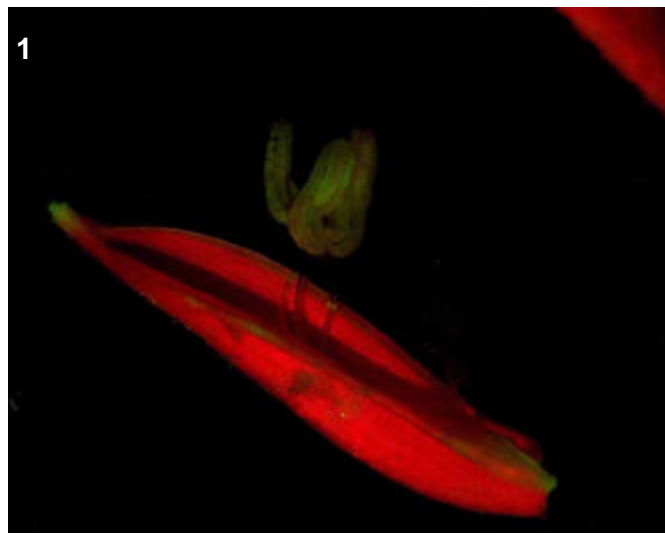
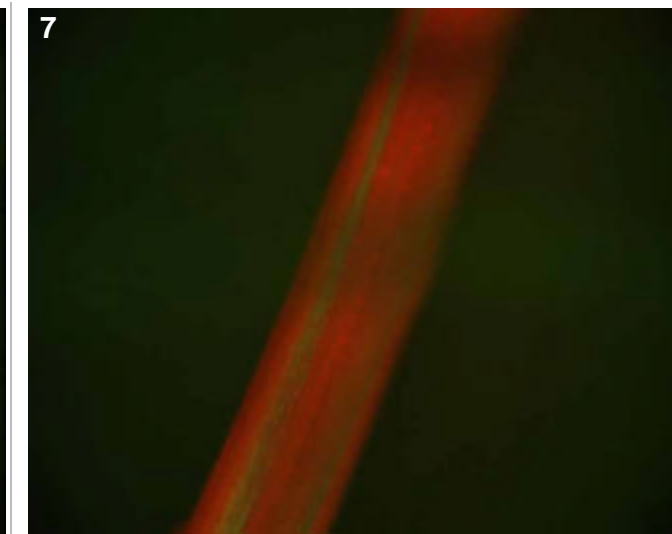
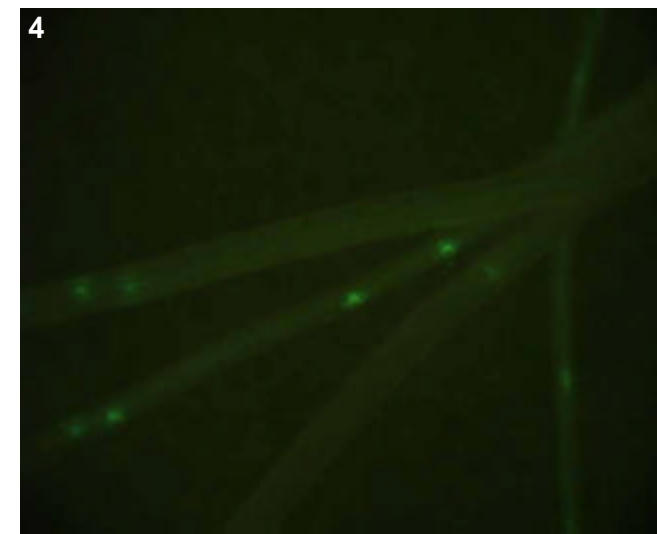
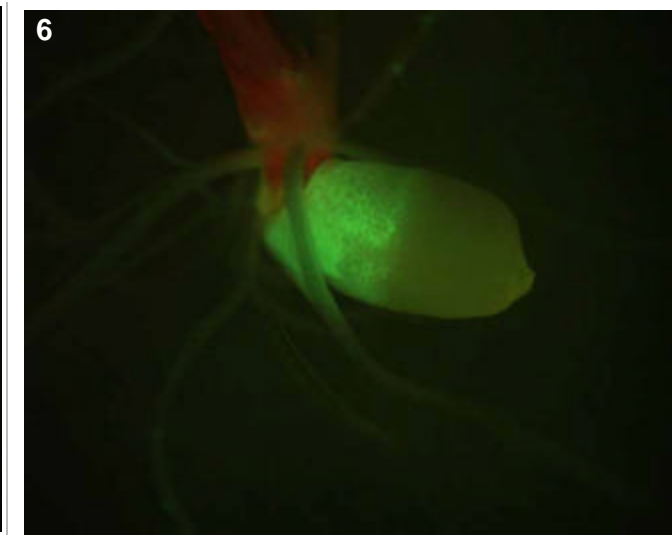
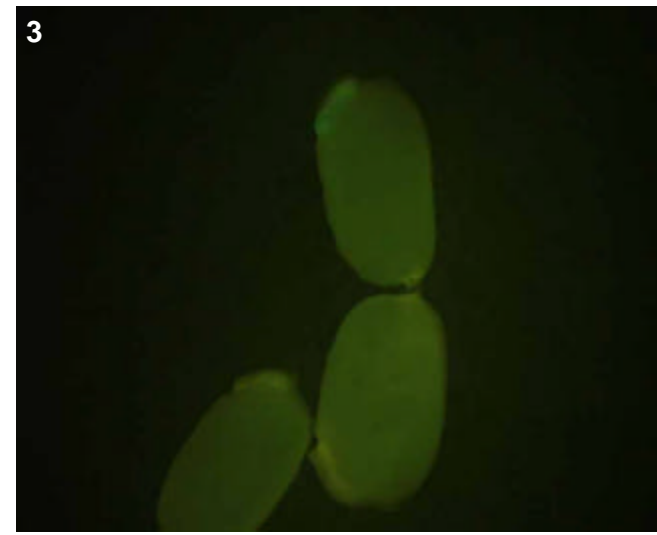
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

Expression in collar and surrounding vascular tissue, also in floral tip and moderately in anthers

T1 seed comments

1/5 seed showed bright expression

T1 seedling comments

Very bright at lateral root emergence. Also crown and lat vascular. Not much in the shoot except around the edge of first leaf and very faint collar expression.

Genotype: AOP B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling:

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
Again, no expression in adult plants.

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 3 plants

Confocal?

Number T2 seed produced: 141

T0 comments

T1 seed comments

3/5 seeds show expression.

T1 seedling comments

Genotype: AOP D12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling:
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

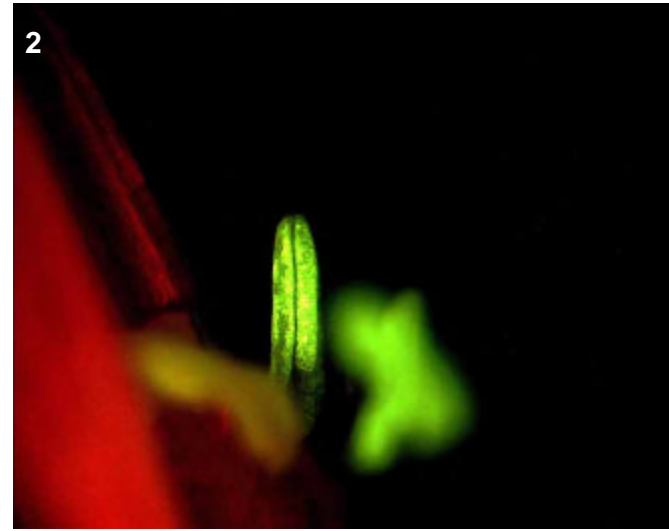
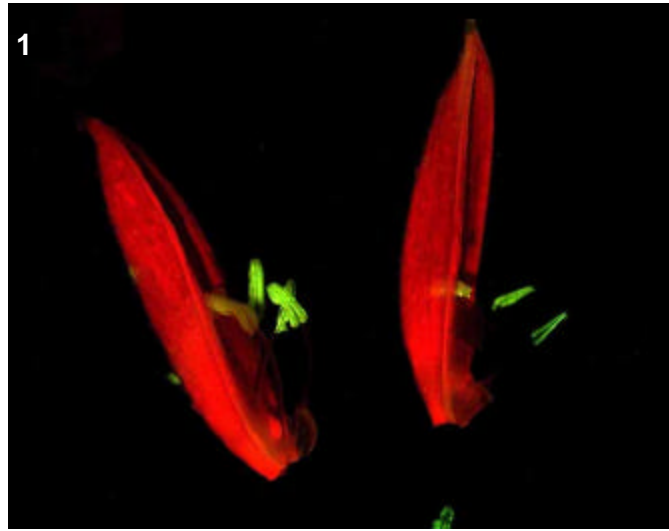
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 plants

Confocal?

Number T2 seed produced: 179



T0 comments

Strong expression in anthers, but inconsistent in expression between flowers and within flowers

T1 seed comments

1/5 seed show expression.

T1 seedling comments

Genotype: AOP H03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-10
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

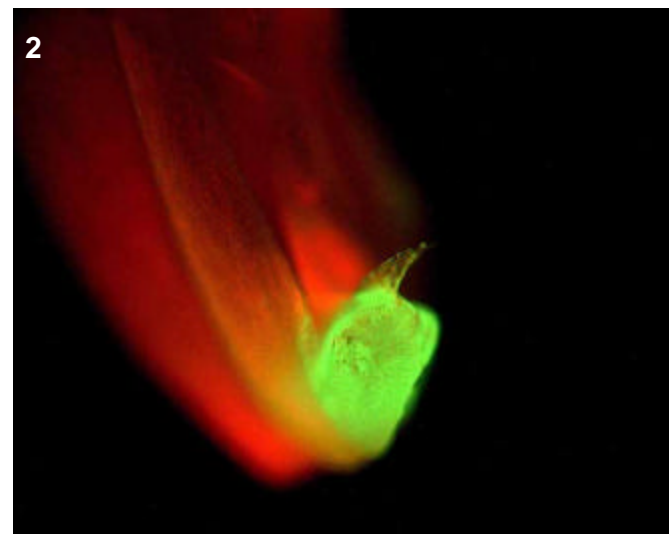
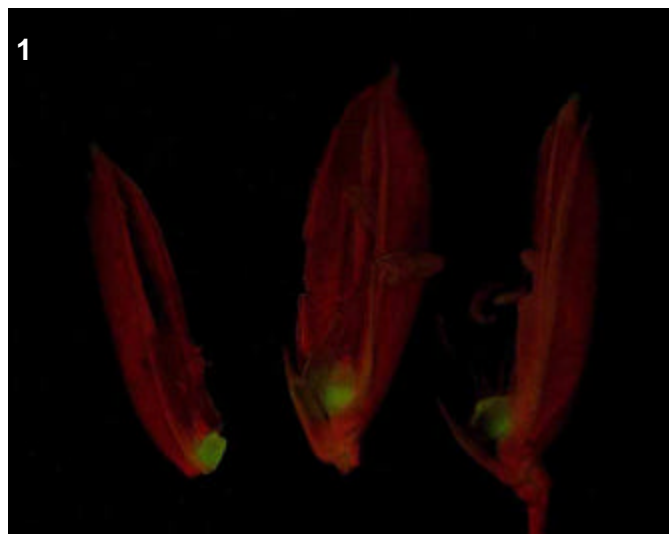
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal? YES

Number T2 seed produced: 58



T0 comments

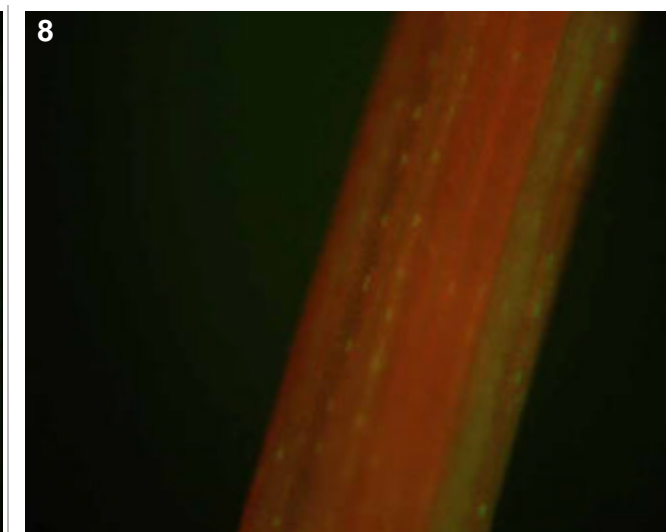
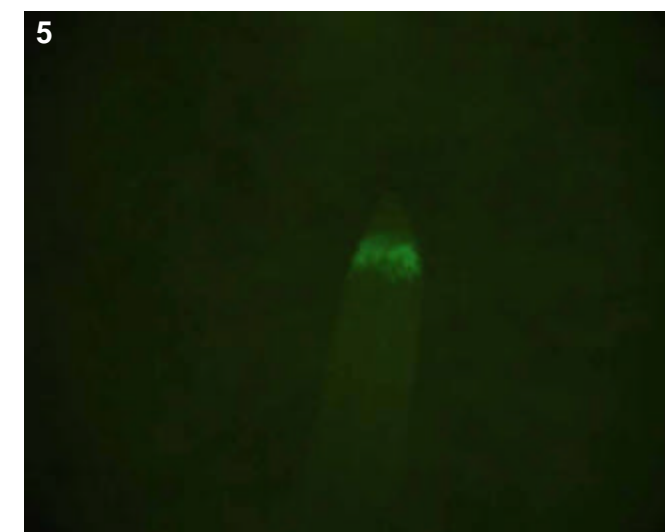
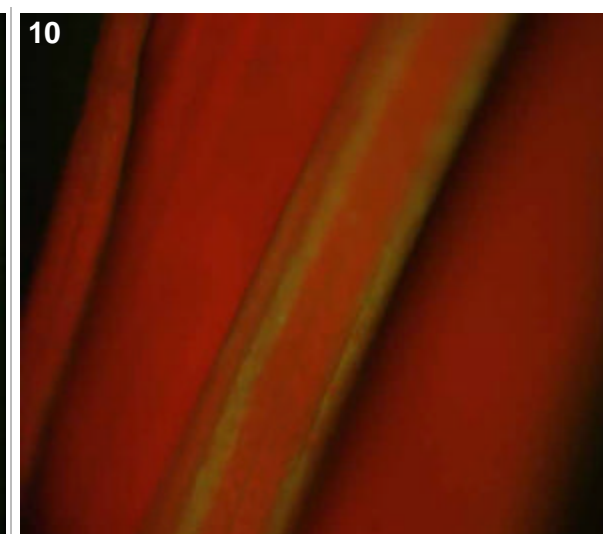
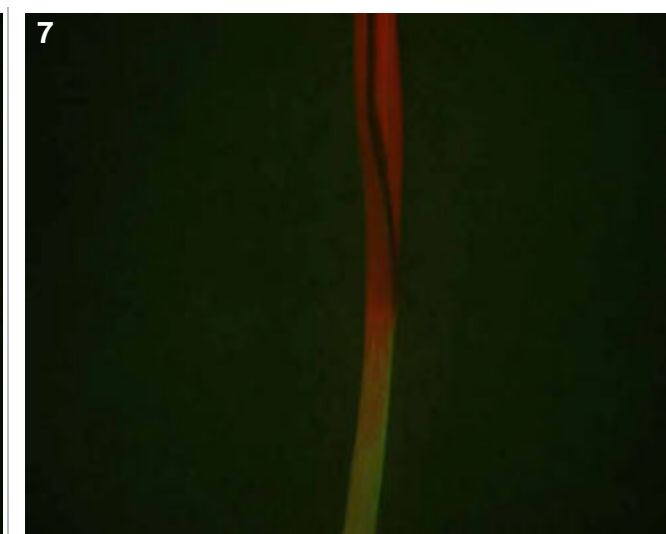
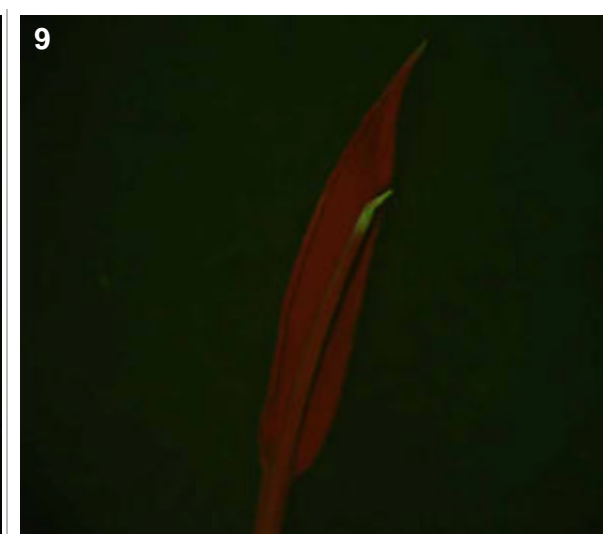
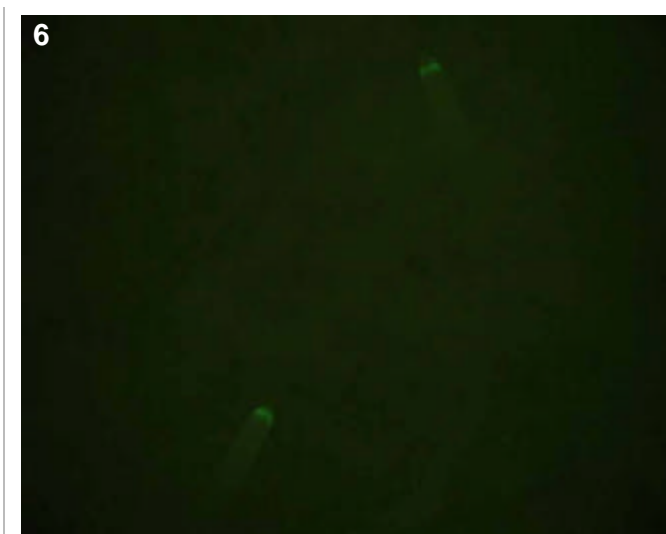
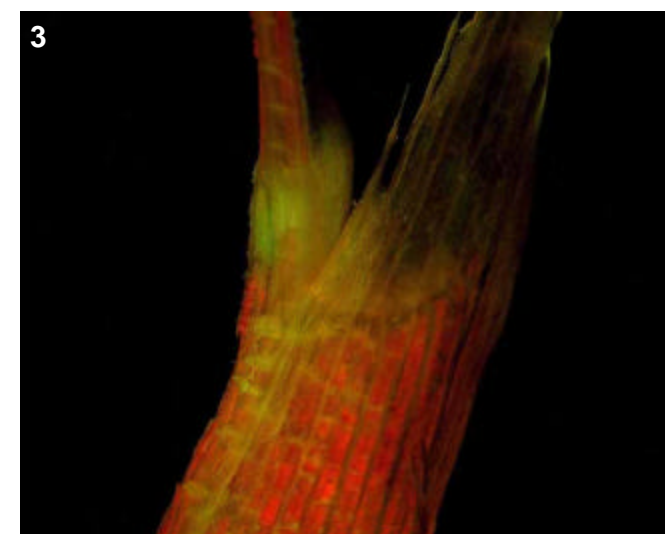
Expression concentrated in the collar, not much into surrounding vascular tissue. Also bright expression in lodicules

T1 seed comments

Expression faint in either the scutellum or embryo, for 3/5 seeds

T1 seedling comments

A fantastic root line because expression appears very specific to the root apex region, no where else. Bring many for confocal, may be variable. In shoot, strong expression in young leaf and sheath tissues--mesophyll and stomata. Tips of leaves bright too.



Genotype: AOR D02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

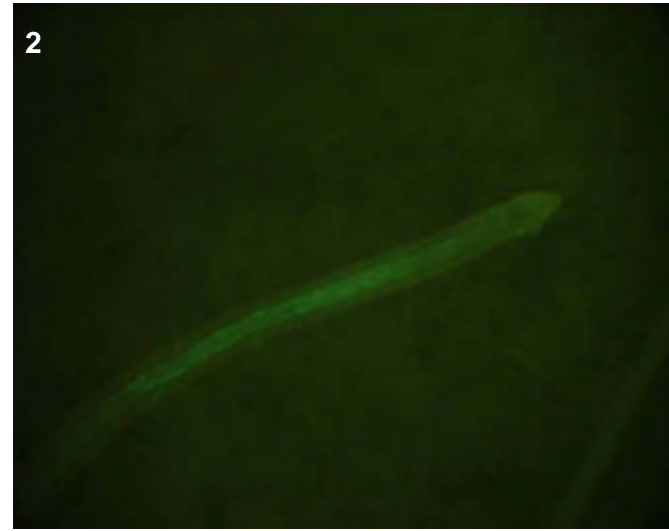
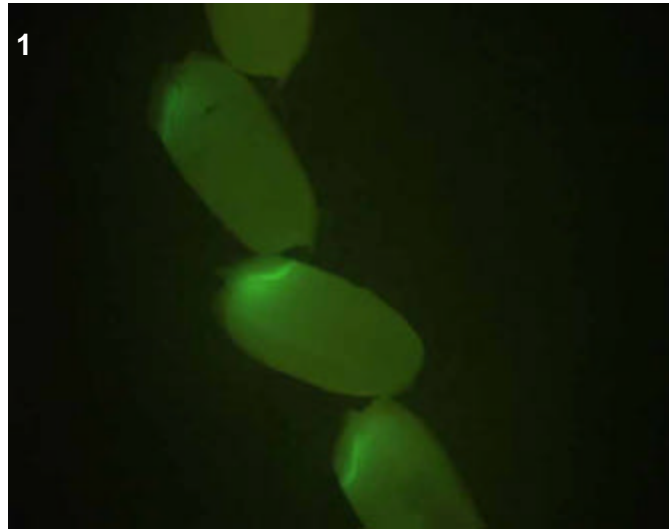
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 50



T0 comments

T1 seed comments

5/5 show bright expression in scutellum

T1 seedling comments

A lateral root-specific line, could be great for confocal. Expression is very faint.

Genotype: AOR E05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

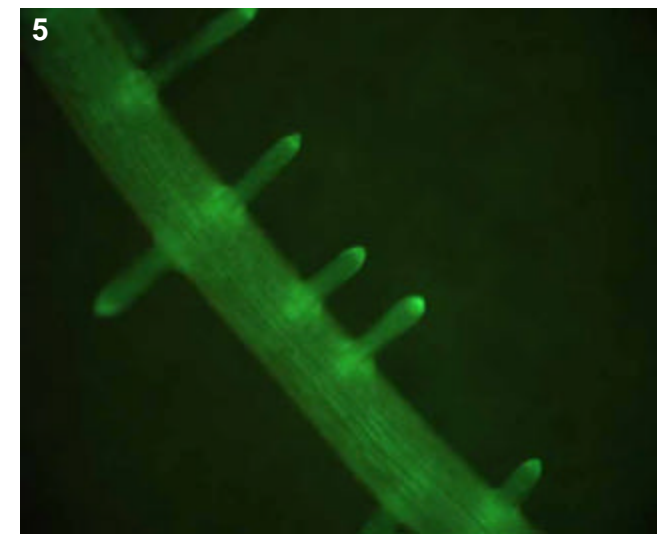
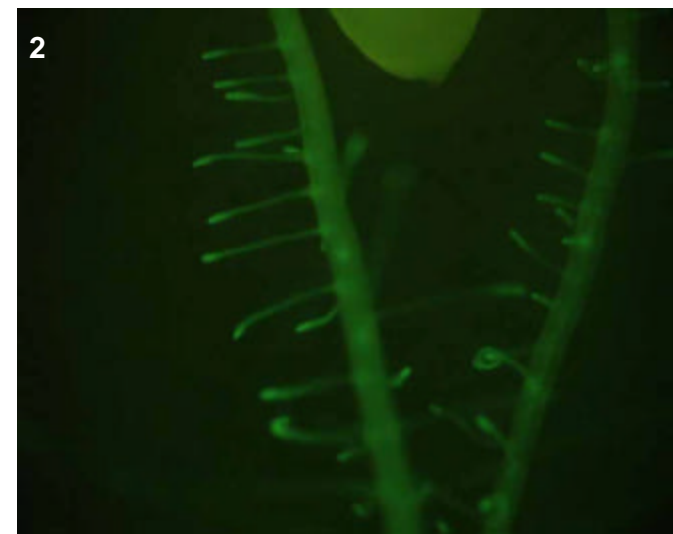
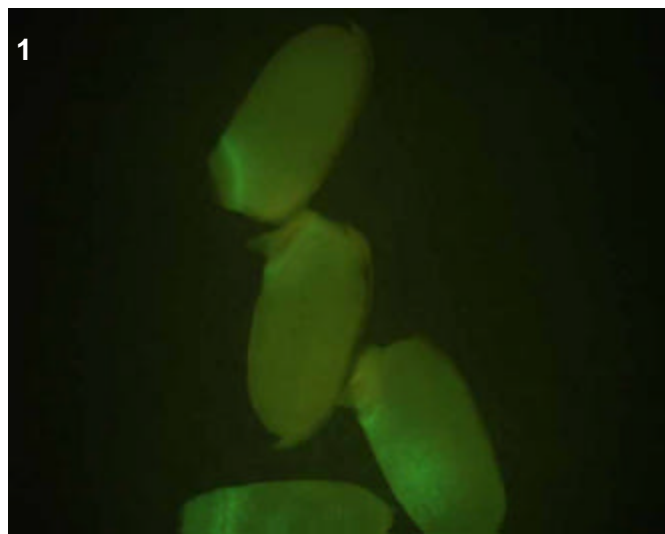
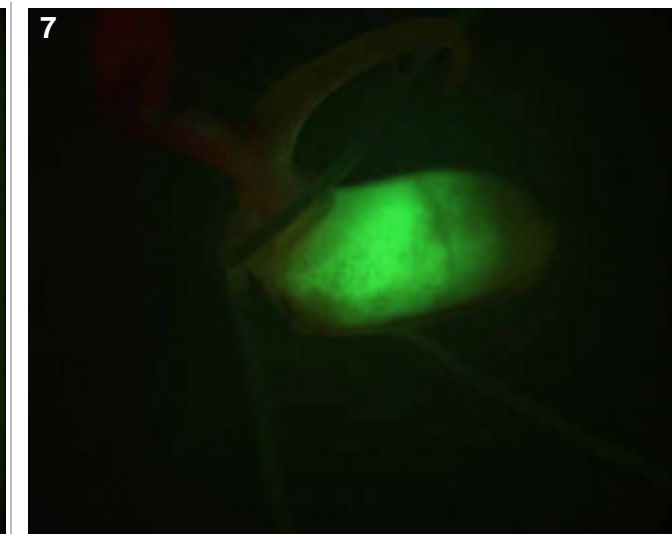
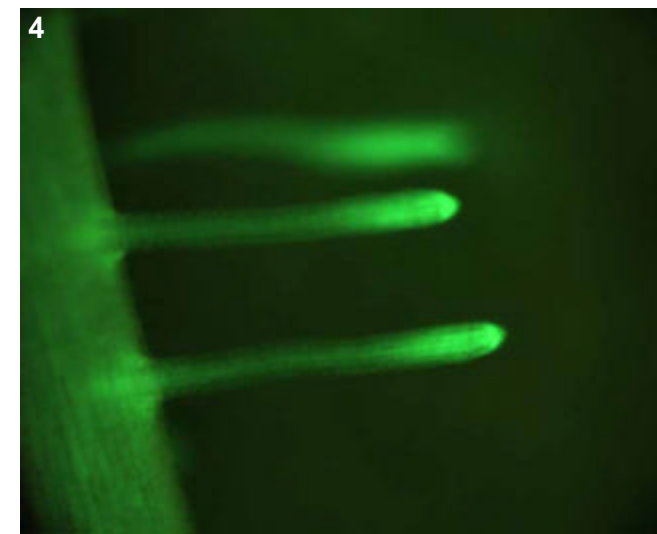
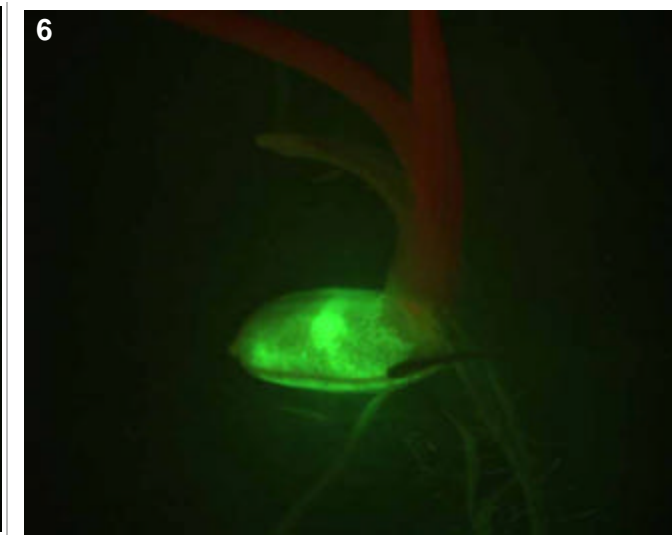
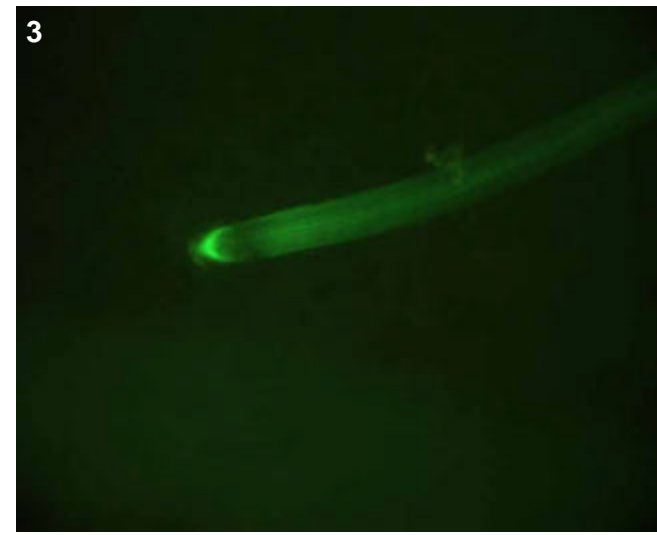
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

All 5 seeds have expression in scutellum region, while only 2 have scattered expression in aleurone.

T1 seedling comments

Extremely bright roots, note the concentrated expression towards tip and cap. Also very bright endosperm, though nothing in the shoot.

Genotype: AOR H08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- No expression in adult T1

- T0 pattern verified plus:

- New pattern:

- No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 83

1



2



T0 comments

T1 seed comments

GFP in scutellum (4/5 seeds)

T1 seedling comments

Fluorescence still visible in scutellum, but no other pattern noted.

Genotype: AOS D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant:
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:

T0 comments

T1 seed comments

Four of five seeds show expression.

T1 seedling comments

Genotype: AOS D07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-4
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

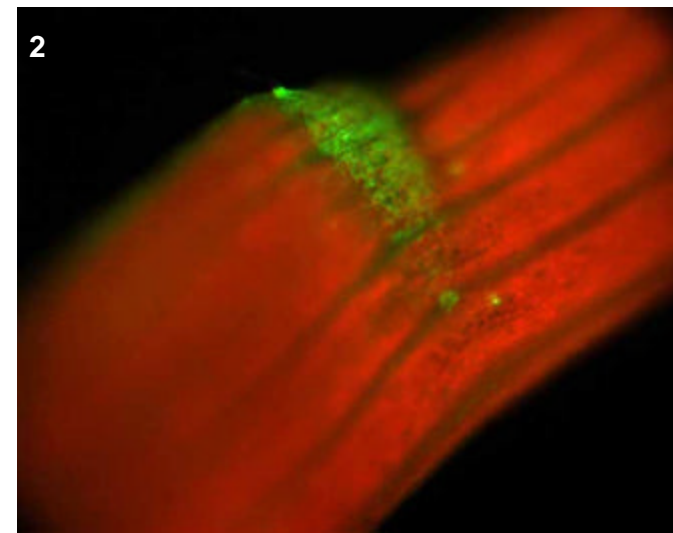
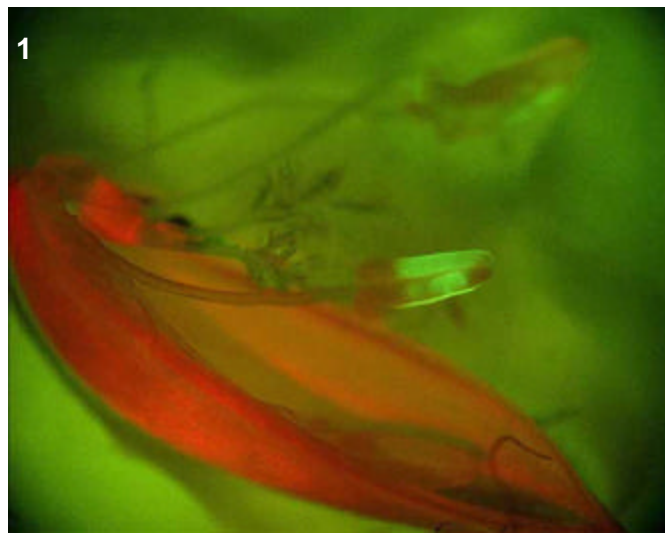
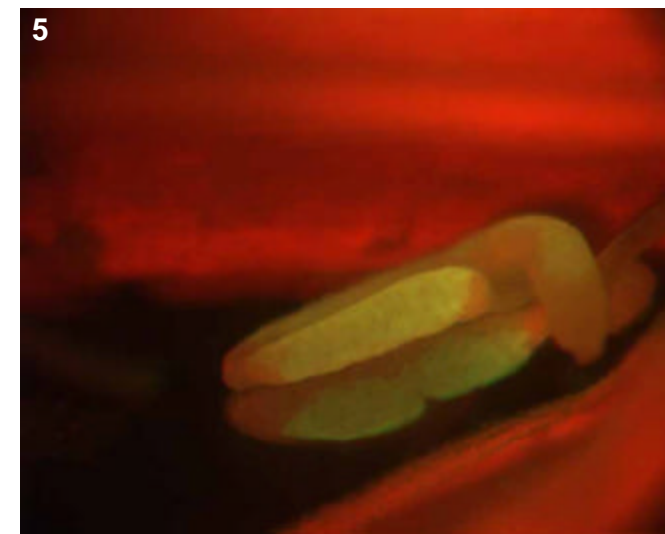
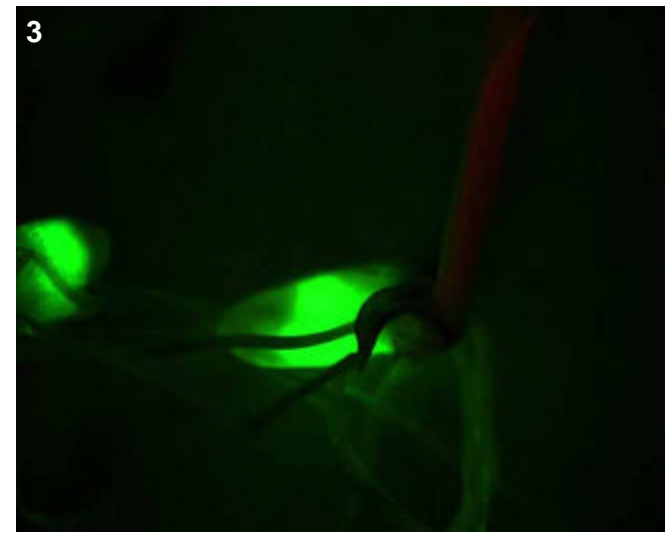
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 45



T0 comments

Patchy expression in anthers.

T1 seed comments

Four of five seeds have expression.

T1 seedling comments

Clear that expression is very strong in the digesting endosperm and more faintly in the collar region.

Genotype: AOS D10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant: 2-3

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

Faint sheath vascular only.

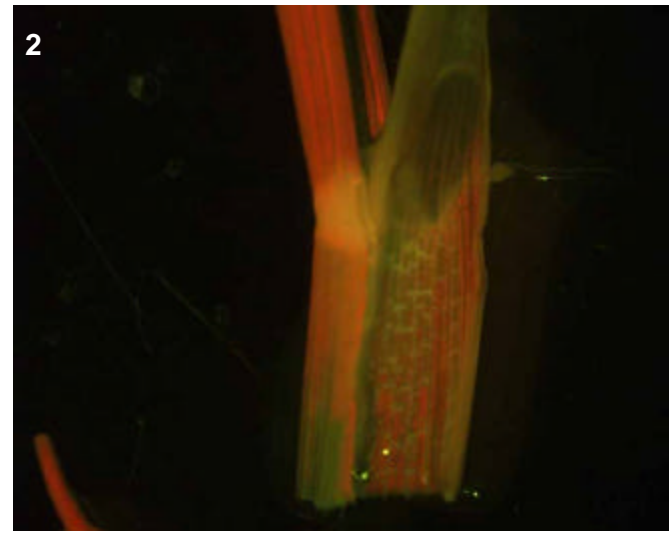
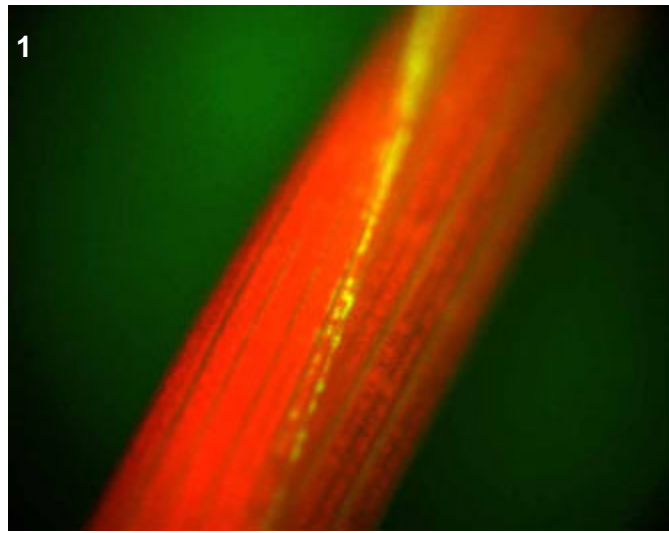
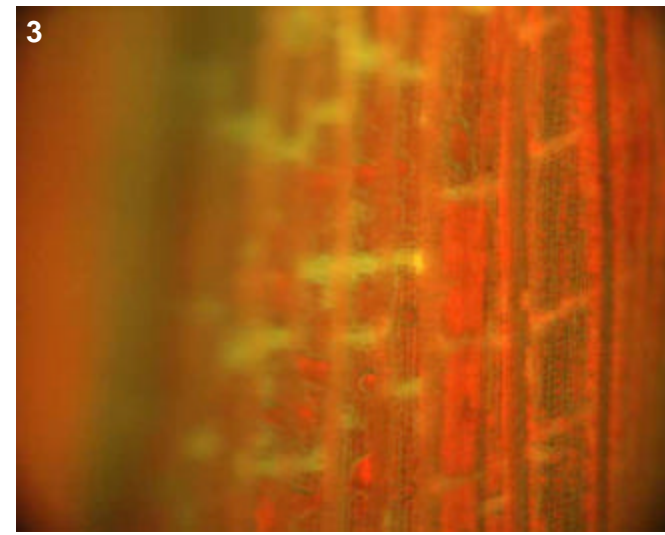
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 275



T0 comments

T1 seed comments

Two of five seeds have expression

T1 seedling comments

Faint expression in tips of leaves also noted, perhaps indicative of vascular?

Genotype: AOS G04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

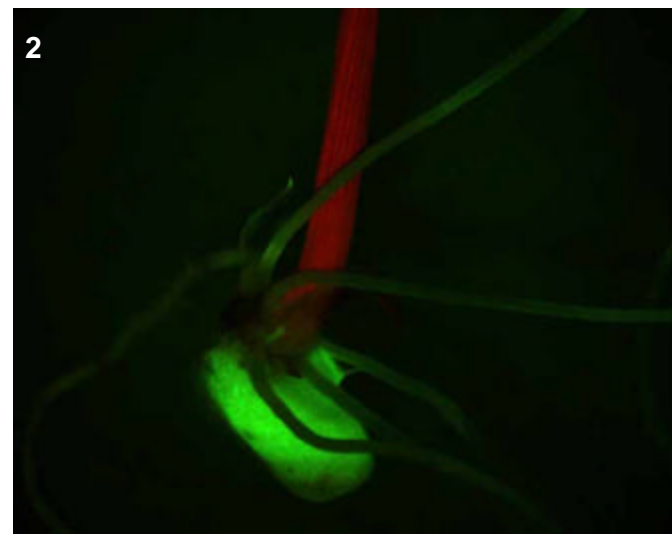
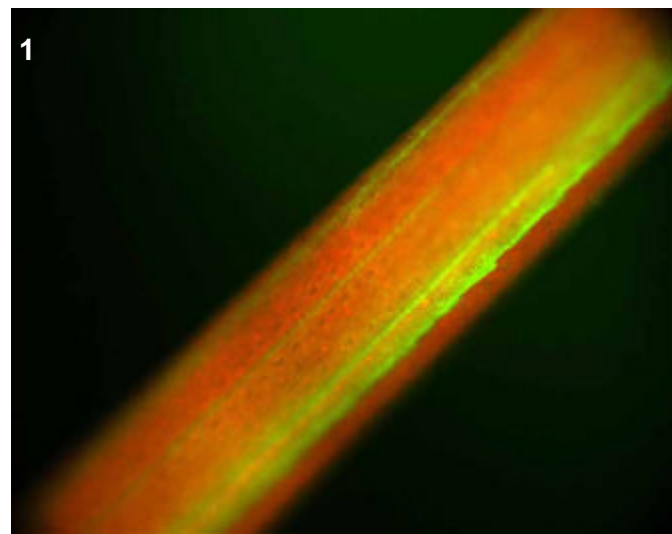
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 138



T0 comments

T1 seed comments

3/5 seeds have expression

T1 seedling comments

Expression bright in endosperm and more faint in the leaf vascular.

Genotype: AOS G09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:
T0 was not examined, but there was no expression in adult T1.

T0 pattern verified plus:

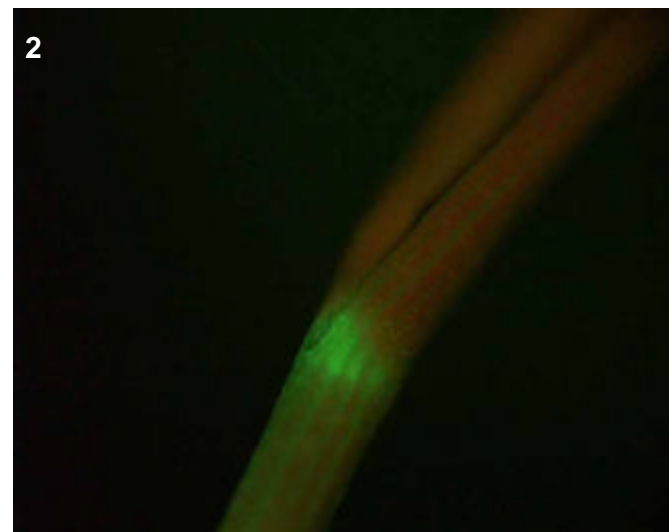
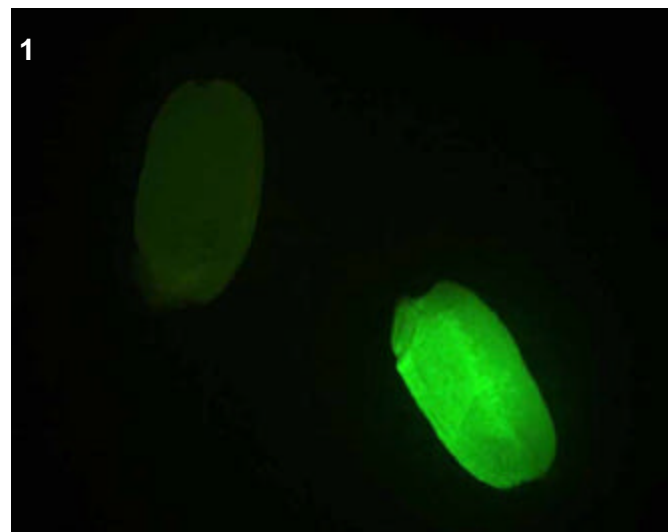
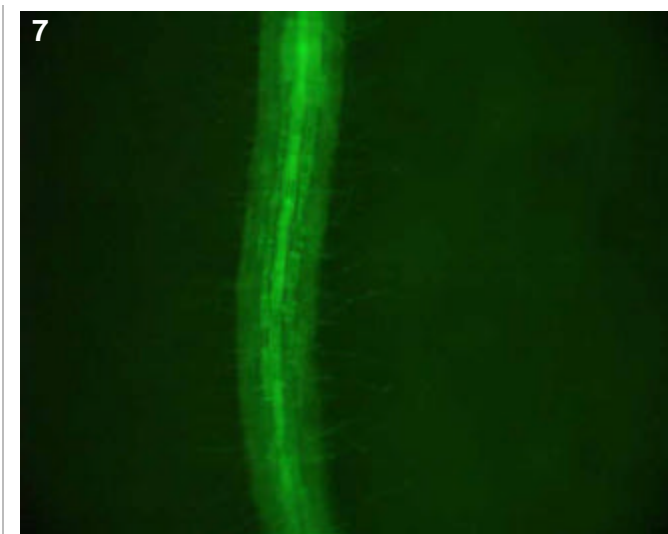
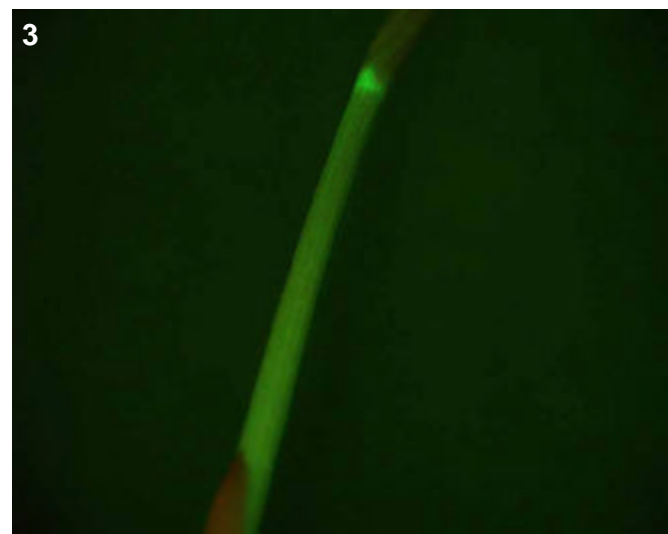
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 296



T0 comments

T1 seed comments

T1 seedling comments

Genotype: AOT C03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant: 3

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

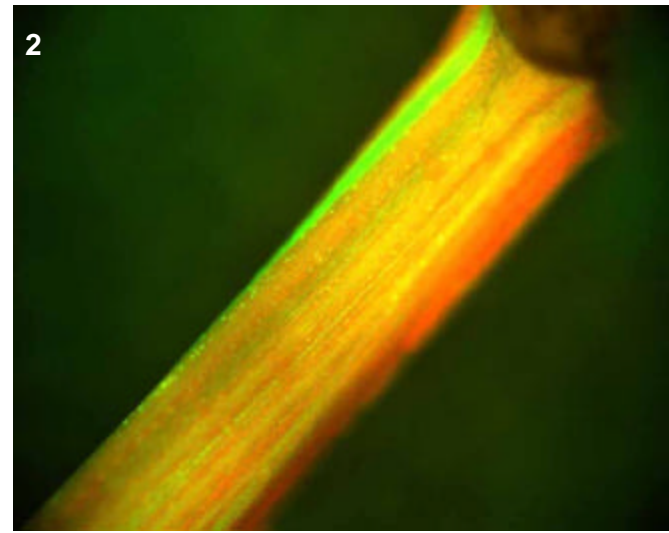
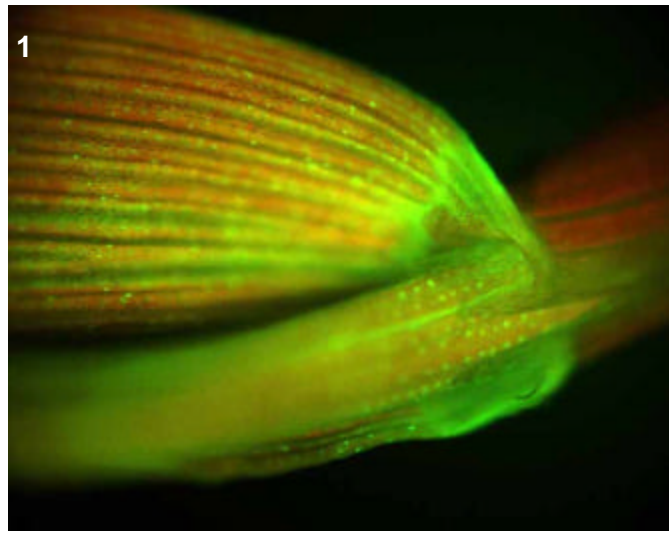
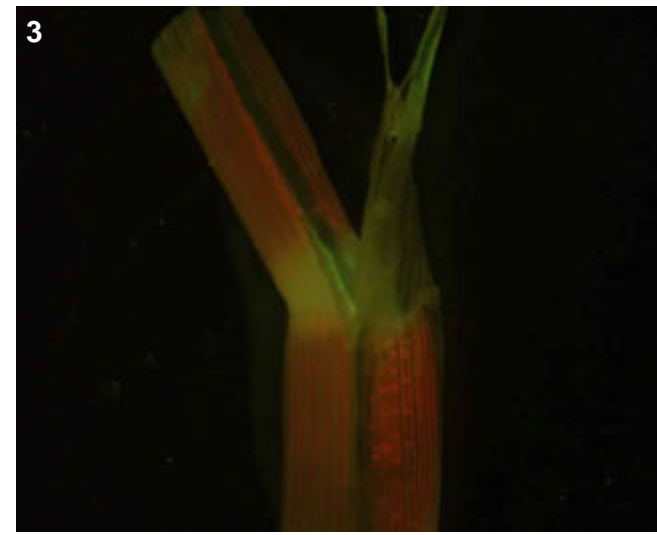
Moderate collar expression.

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 48



T0 comments

T1 seed comments

Expression in embryo (2/5)

T1 seedling comments

Expression bright in the shoot vascular, collar and in the stomata/trichomes of the primary leaf.

Genotype: AOT C06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

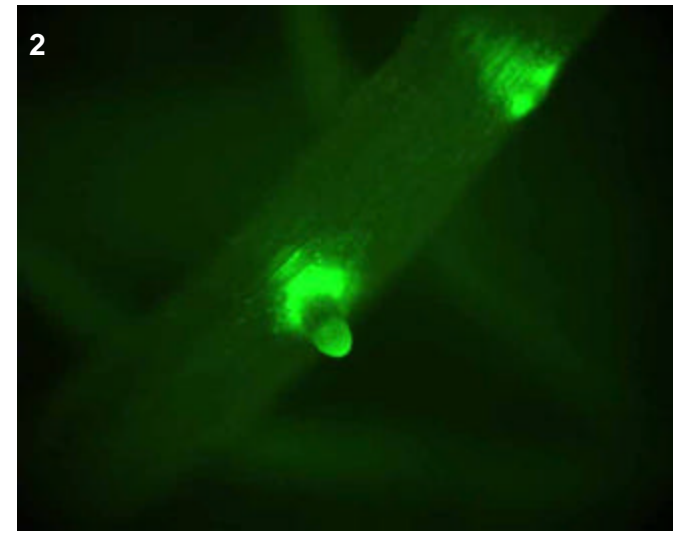
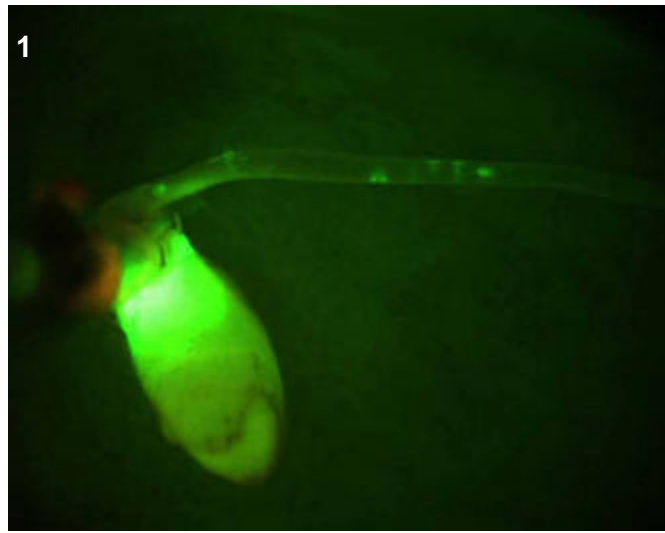
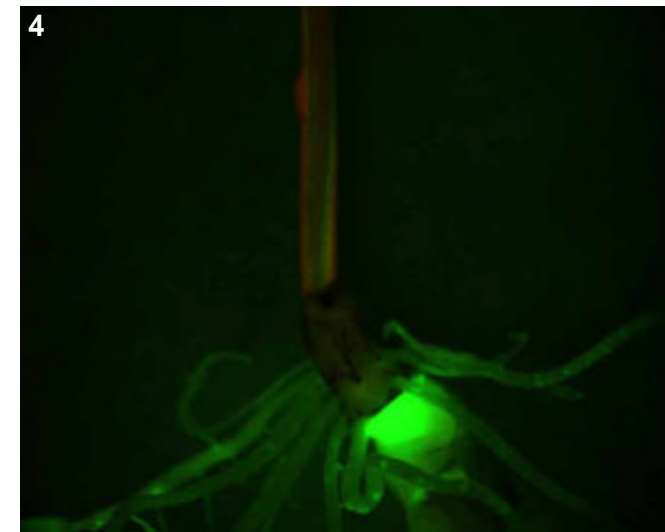
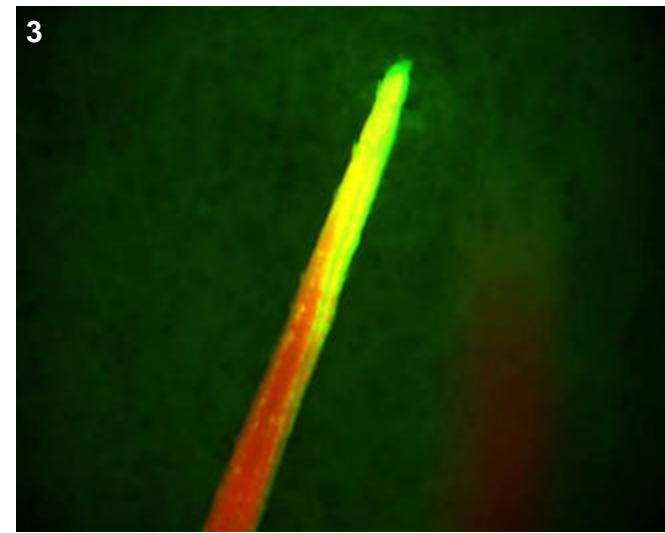
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 55



T0 comments

T1 seed comments

Scutellum expression (4/5).

T1 seedling comments

Expression in the shoot vascular and leaf tips. Also expression in roots, particularly at base of lateral roots.

Genotype: AOT F07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant: 2-3

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

Bright collar and sheath vascular, flowers were too old to examine.

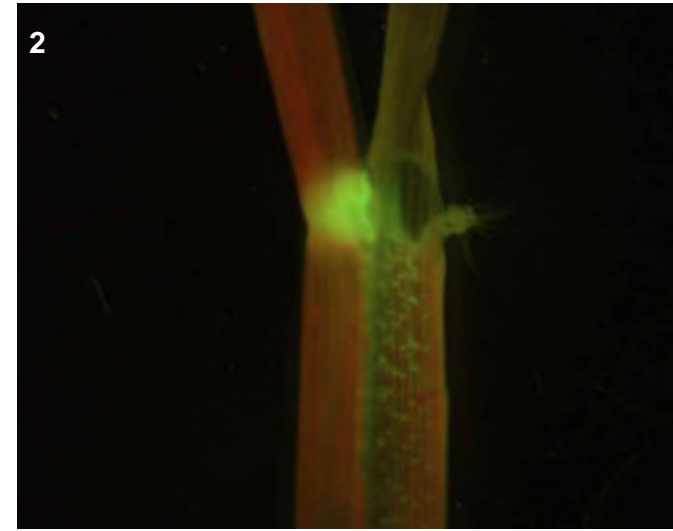
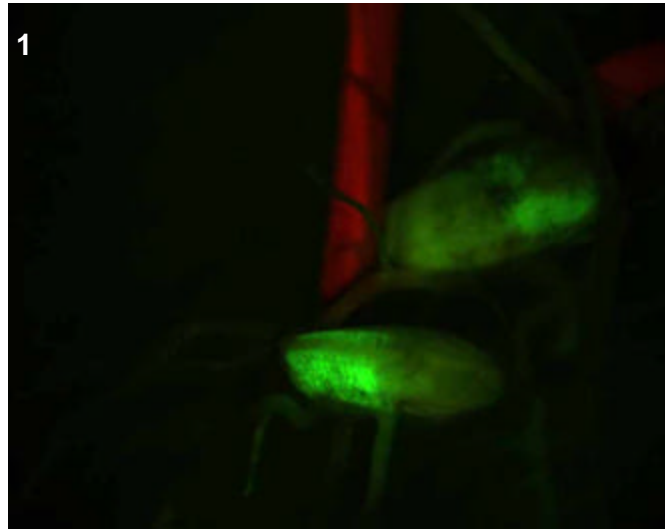
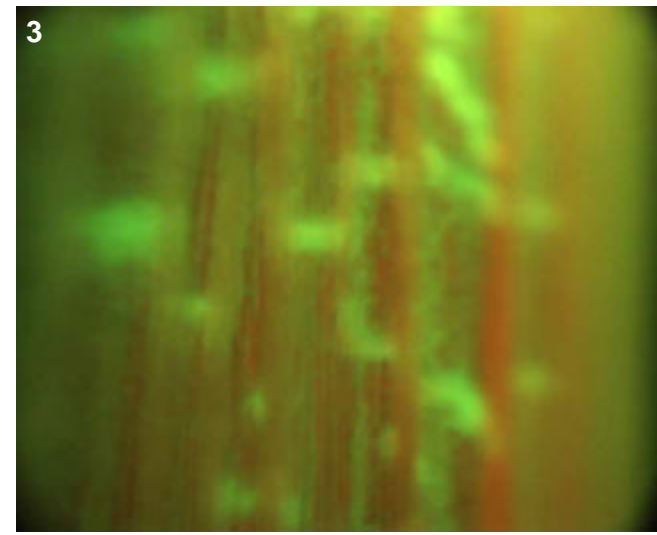
No GFP detected

T1 in greenhouse?

YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 189



T0 comments

T1 seed comments

Seed shows scutellum expression four days post-germination.

T1 seedling comments

Expression in the endosperm.

Genotype: AOT G01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

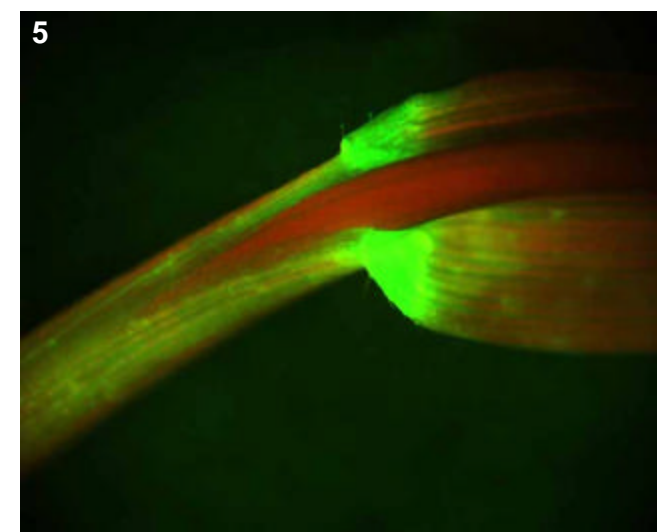
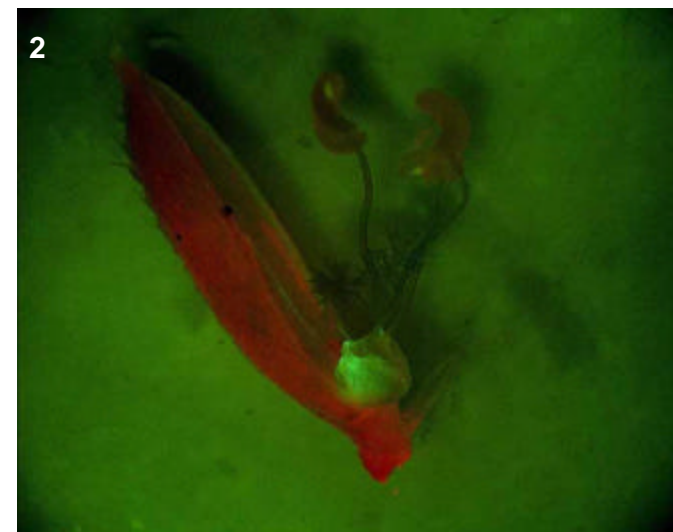
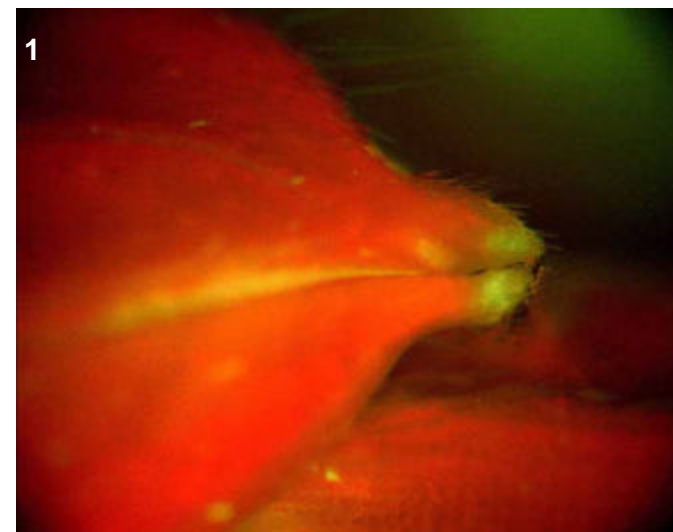
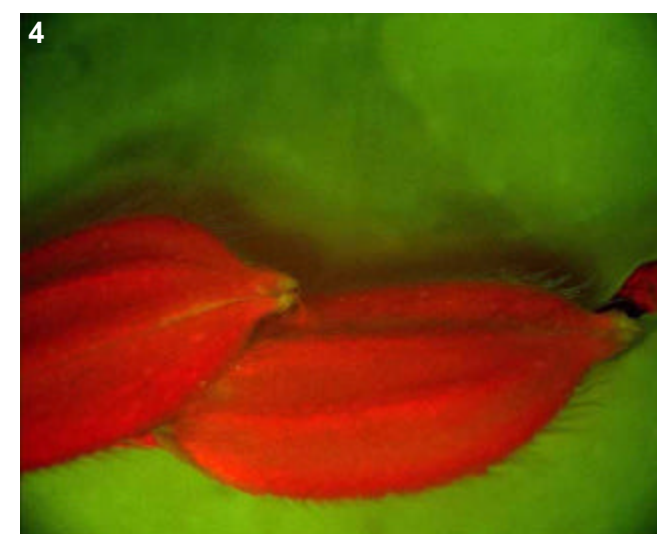
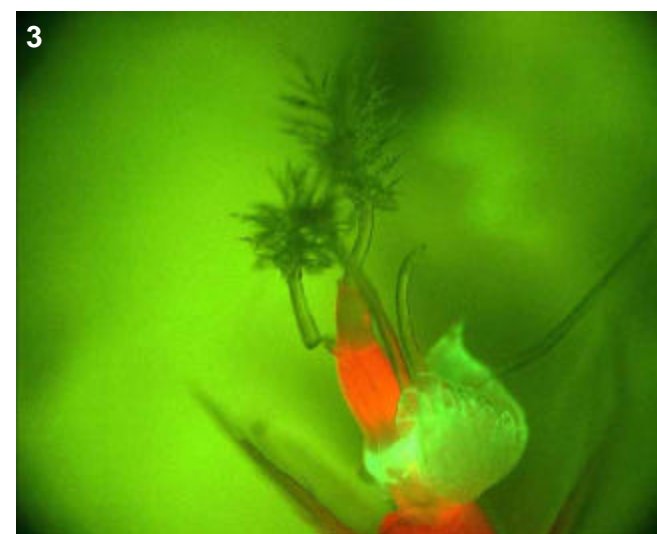
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 90



T0 comments

Bright GFP observed at tips of all three flowers, and in the rachilla/loxicule region. Also some patchy expression seen in the anthers.

T1 seed comments

Scutellum expression observed (1/5).

T1 seedling comments

Seedlings show bright expression in the collar, shoot vascular, root vascular and lateral roots.

Genotype: AOT G05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-5
 T1 mature plant: 6-11

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

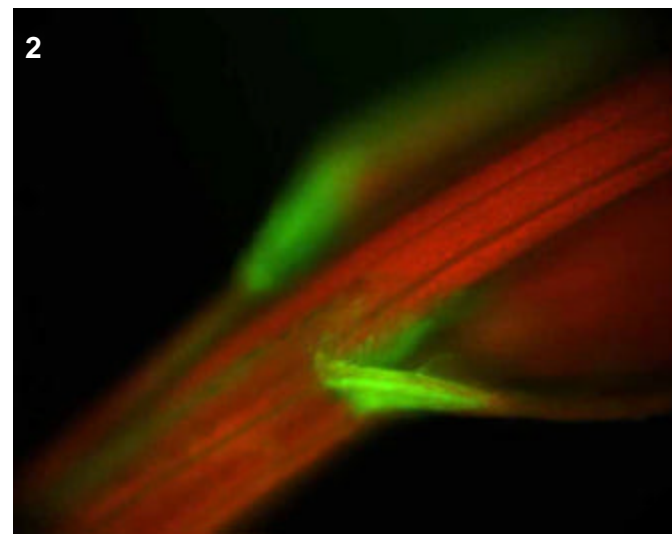
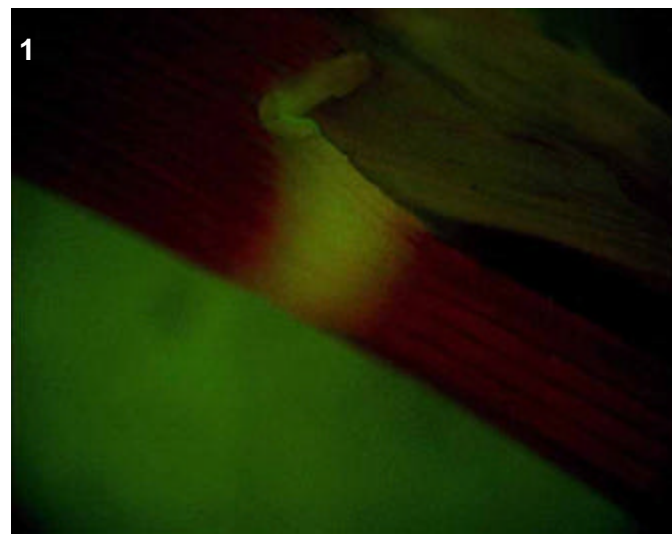
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
Collar and sheath vascular, floral vascular and patchy anther.
- New pattern:
- No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

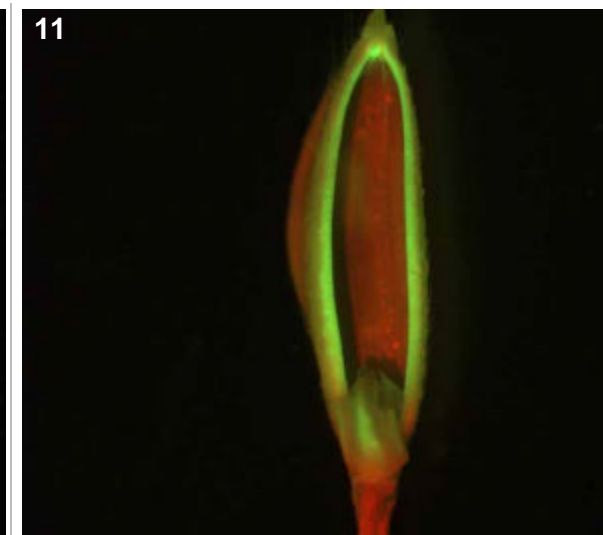
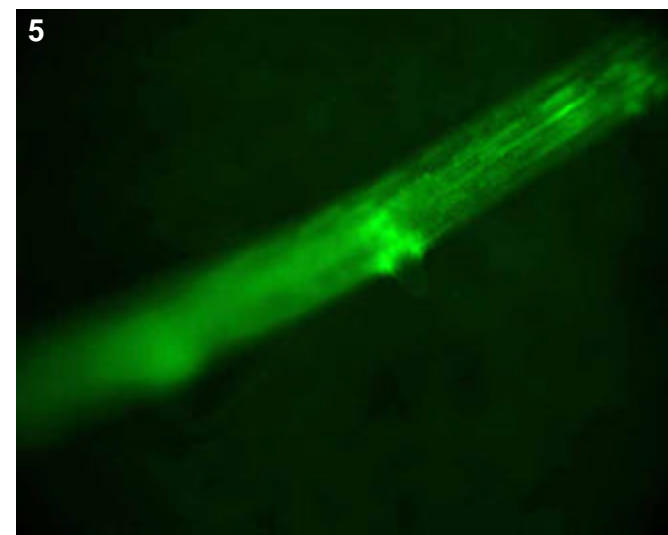
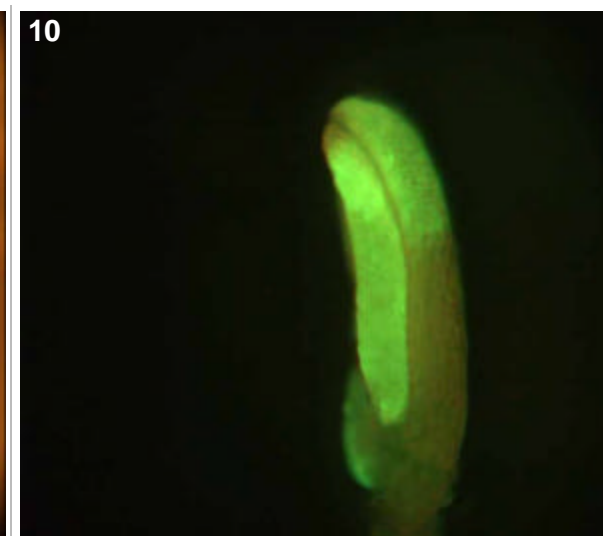
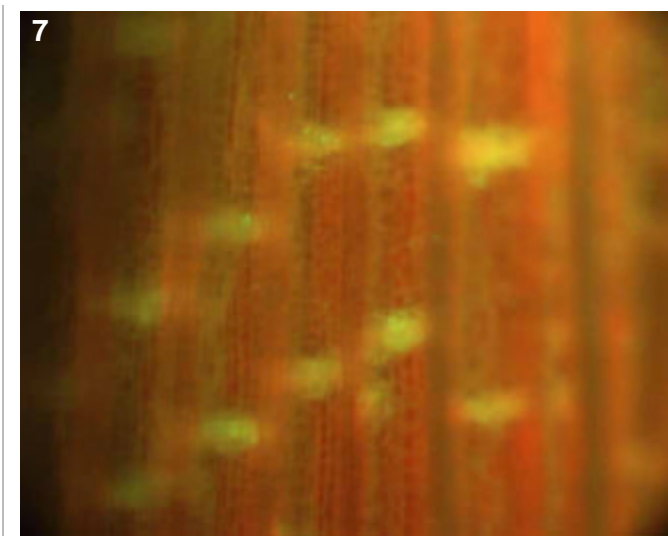
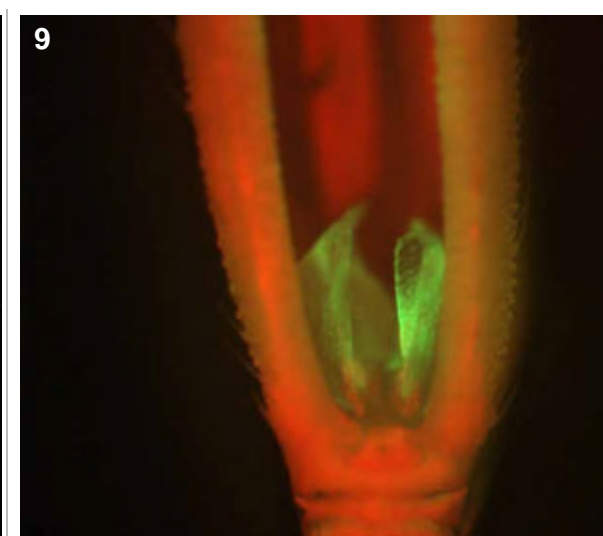
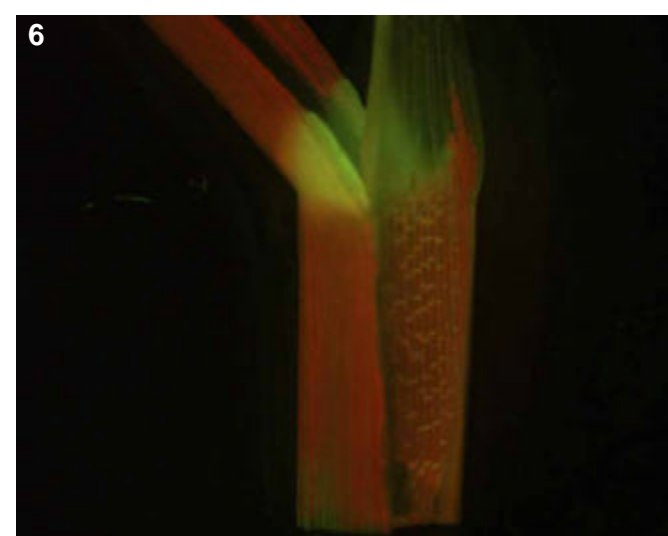
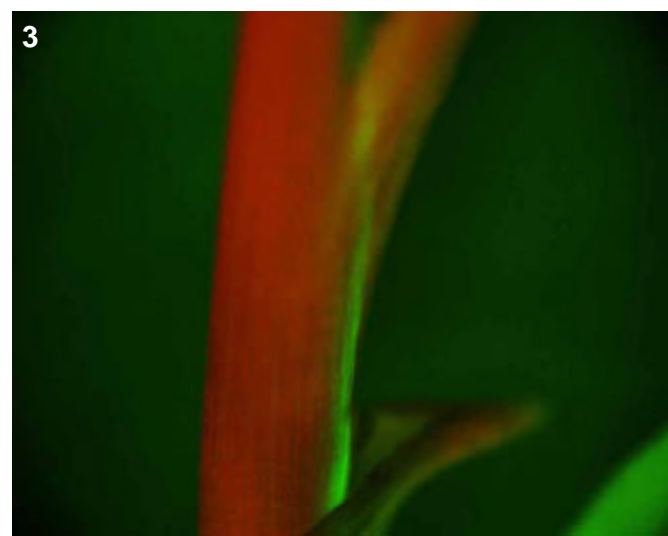
Number T2 seed produced: 60



T0 comments
 Moderate GFP in the collar.

T1 seed comments
 GFP observed in scutellum (1/5)

T1 seedling comments
 Expression in both shoot and root vascular, as well as in collar.



Genotype: AOT G09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

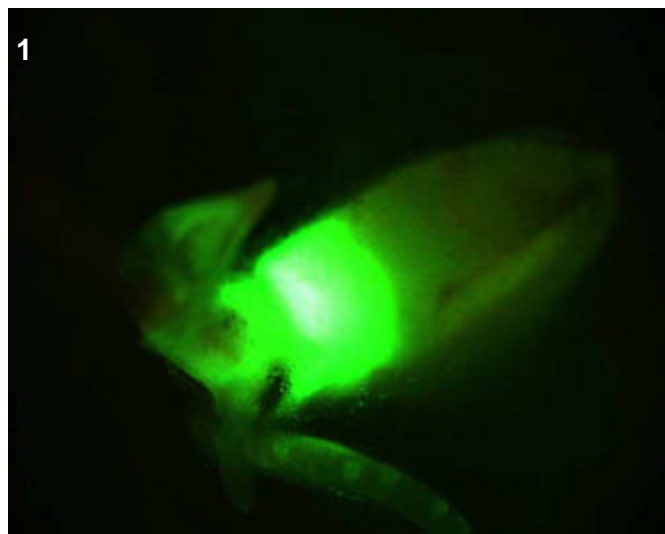
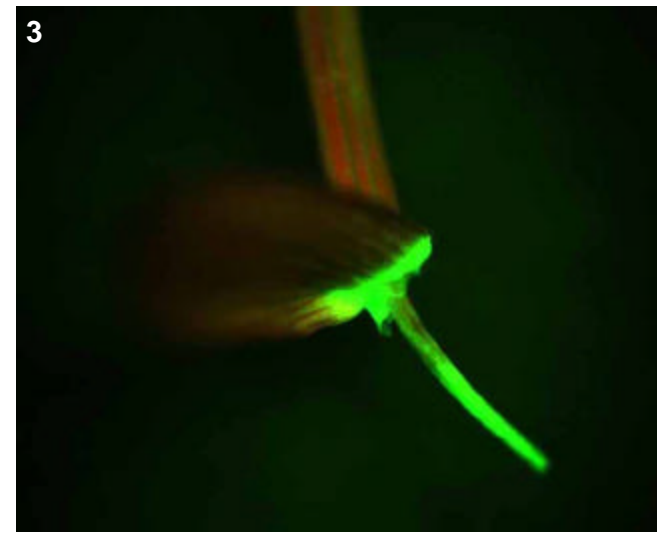
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 112



T0 comments

Small spikelets on the T0 greenhouse plant.

T1 seed comments

2/5 seeds have expression.

T1 seedling comments

Expression in shoot vascular as well as root in general, very bright lateral roots.

Genotype: AOT H01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling:

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0

T0 comments

T1 seed comments

Scutellum expression (3/5).

T1 seedling comments

Genotype: AOT H03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

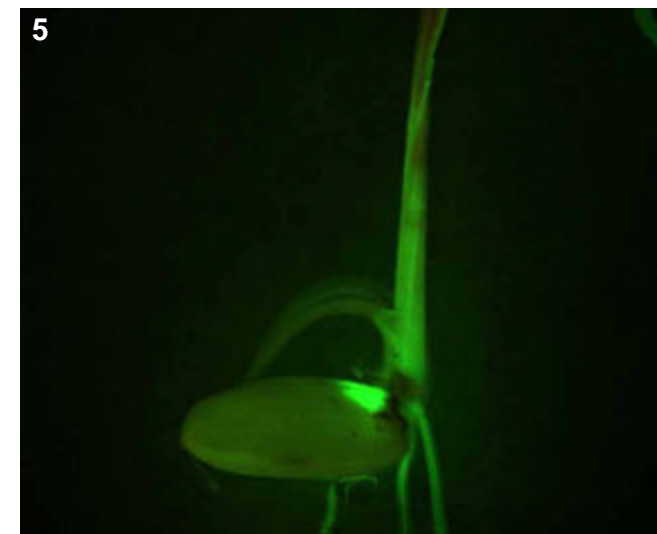
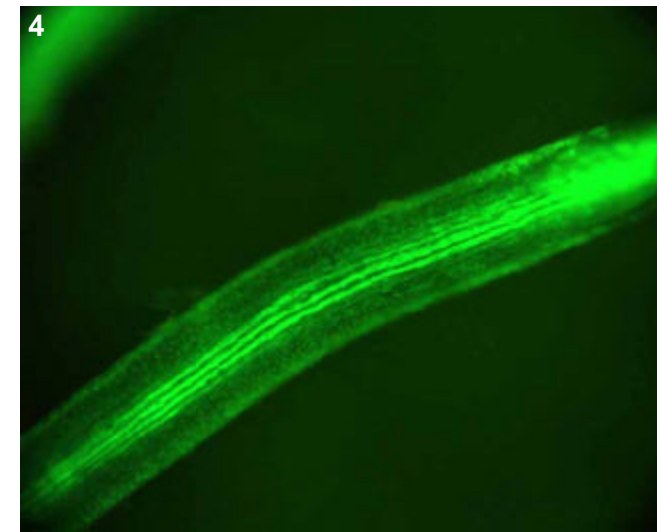
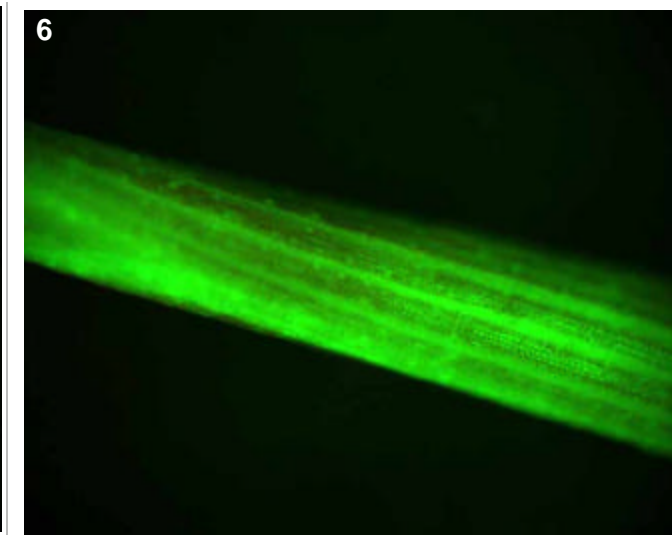
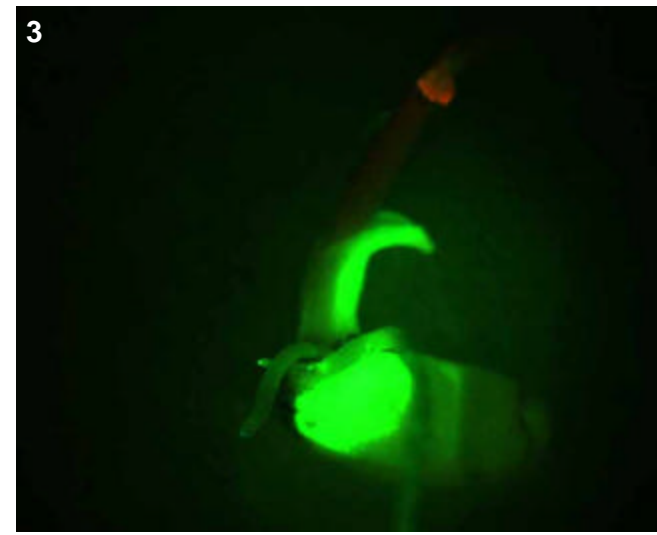
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 124



T0 comments

T1 seed comments

T1 seedling comments

Strong expression in the scutellum, coleoptile, root and shoot vascular.

Genotype: AOU A04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

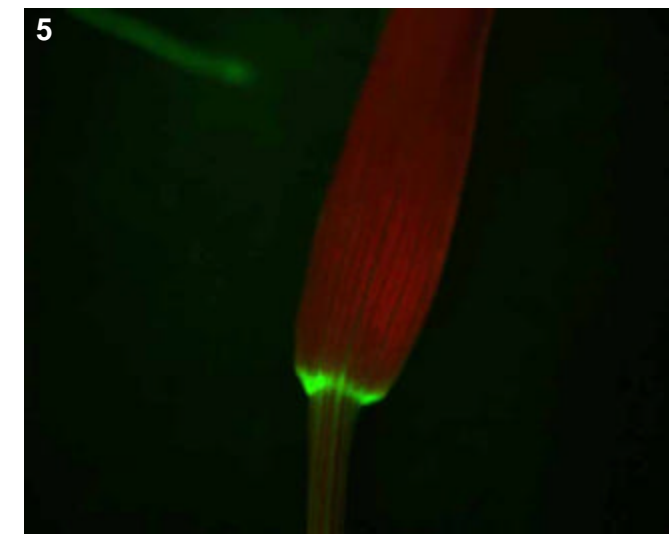
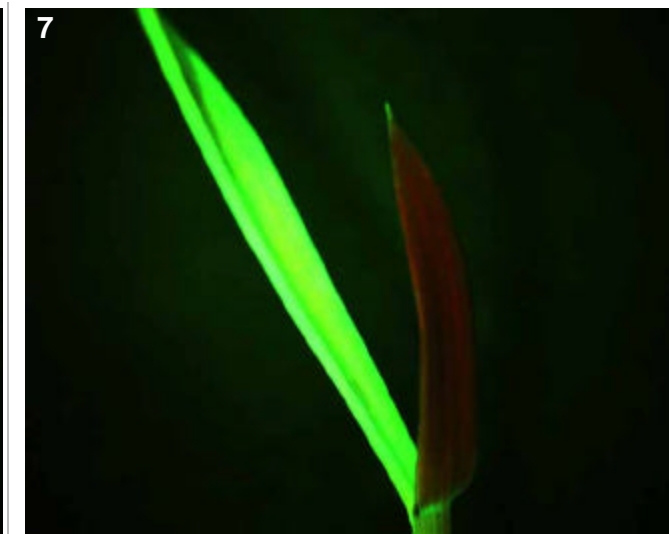
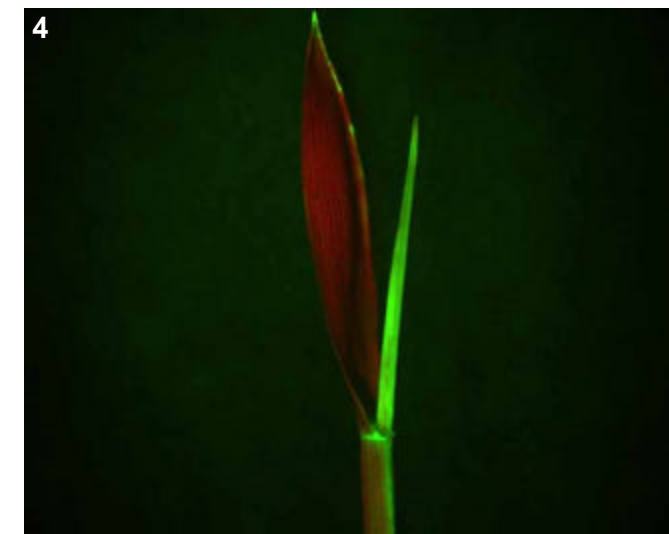
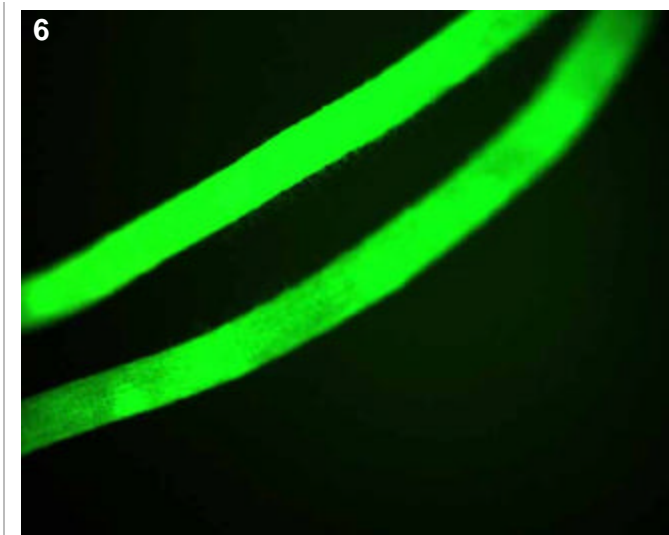
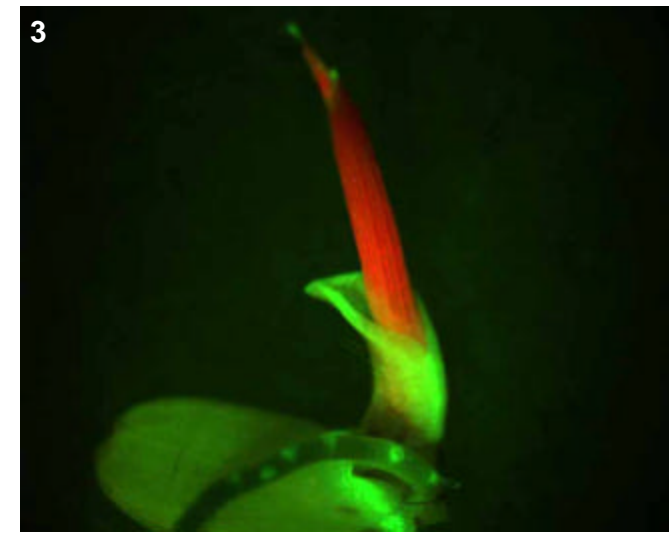
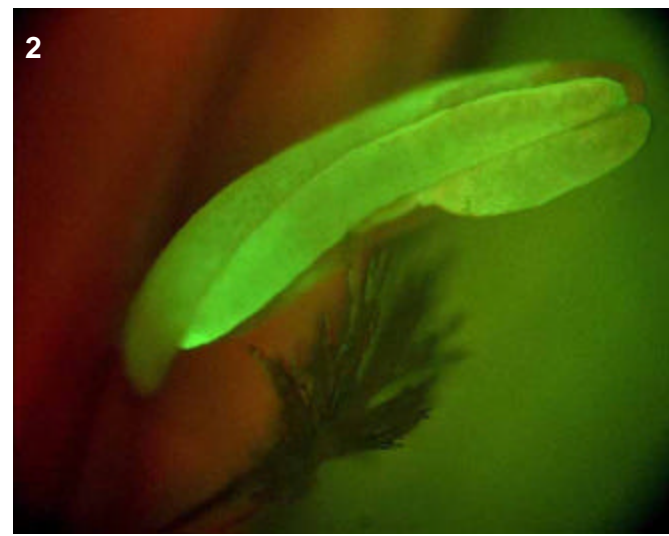
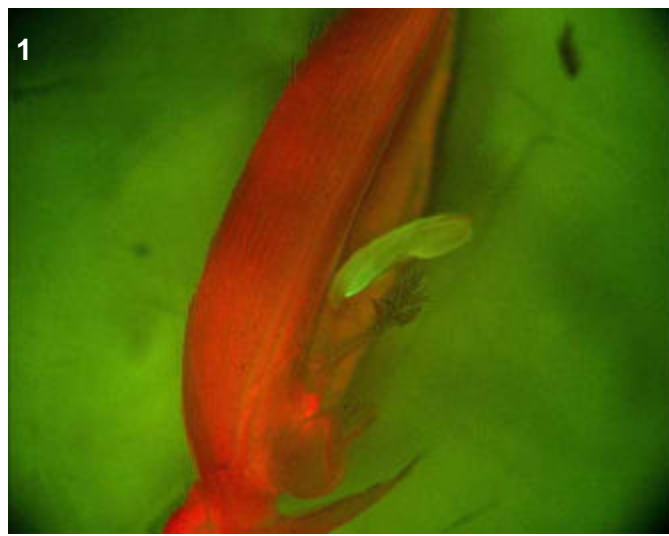
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 4



T0 comments

Most anthers showed this GFP expression throughout the entire organ. Seems less bright yet more continuous than the other anther-specific lines.

T1 seed comments

Four of five seeds had expression.

T1 seedling comments

Four days after germination, expression in many places such as leaf vascular, coleoptile, general root and lateral roots, and scutellum. One week post-germination, still very bright expression everywhere, emerging second leaf is almost entirely GFP positive.

Genotype: AOU D06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-5
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

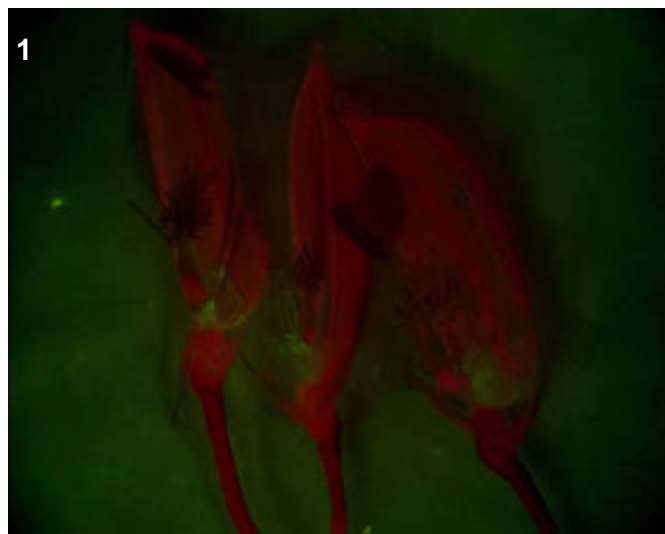
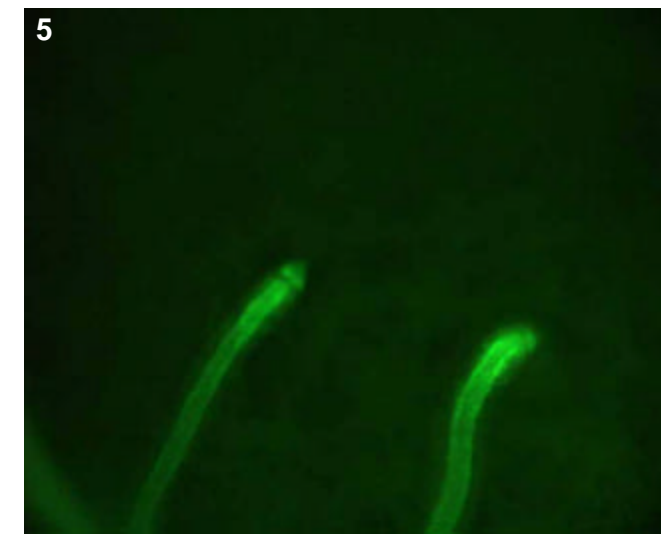
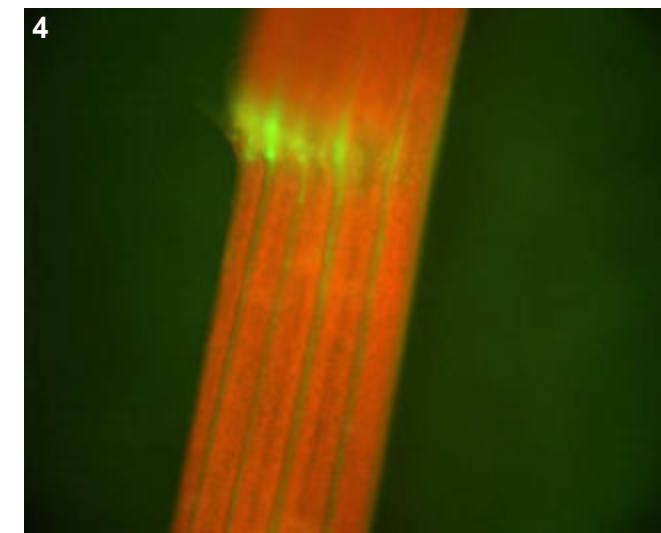
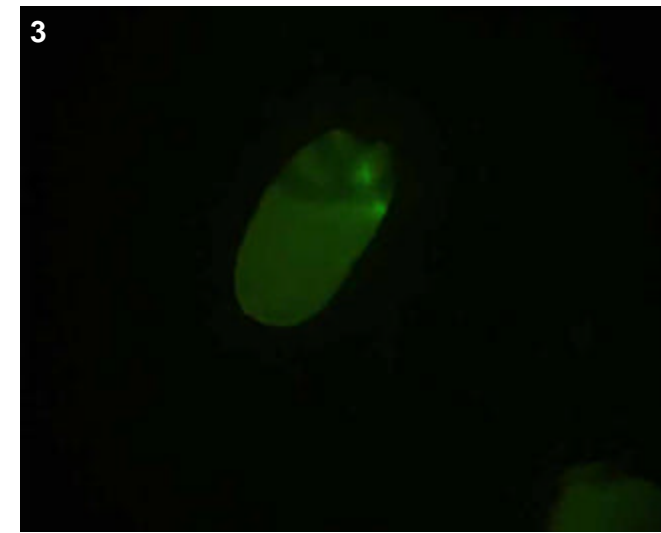
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 39



T0 comments

Expression is bright, consistent and in the lodicules of flower.

T1 seed comments

T1 seedling comments

Expression noted in collar and lateral roots.

Genotype: AOU D07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant: 2

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

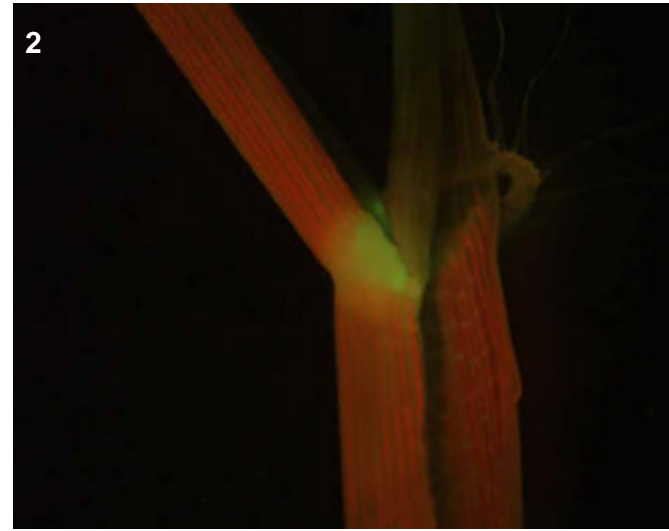
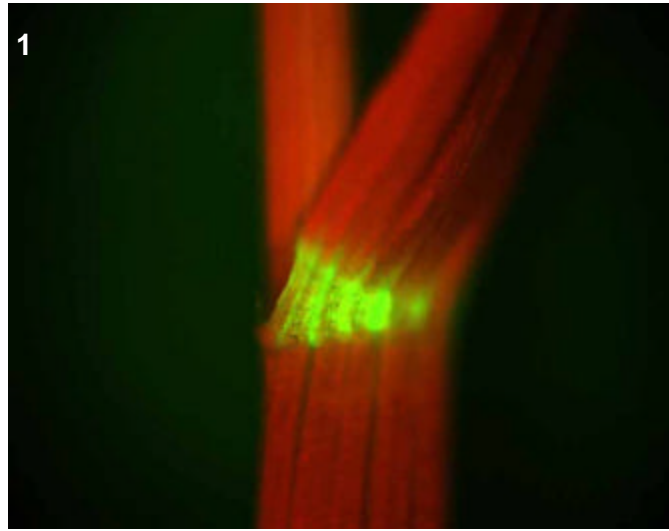
Collar only

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 234



T0 comments

.

T1 seed comments

2/5 seeds have expression.

T1 seedling comments

Expression in scutellum and in collar.

Genotype: AOU E07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant:
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
Again, no expression in adult T1
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
YES, 3 GFP+ plants
- Confocal?
- Number T2 seed produced:** 123

T0 comments

T1 seed comments

4/5 seeds have expression.

T1 seedling comments

Perhaps faint expression in lateral roots.

Genotype: AOU F02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant:
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:

T0 comments

T1 seed comments

1/5 seeds has expression.

T1 seedling comments

Genotype: AOU F04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

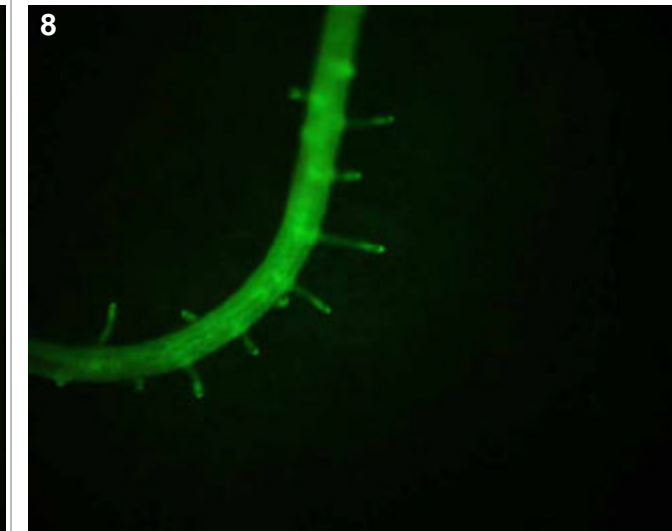
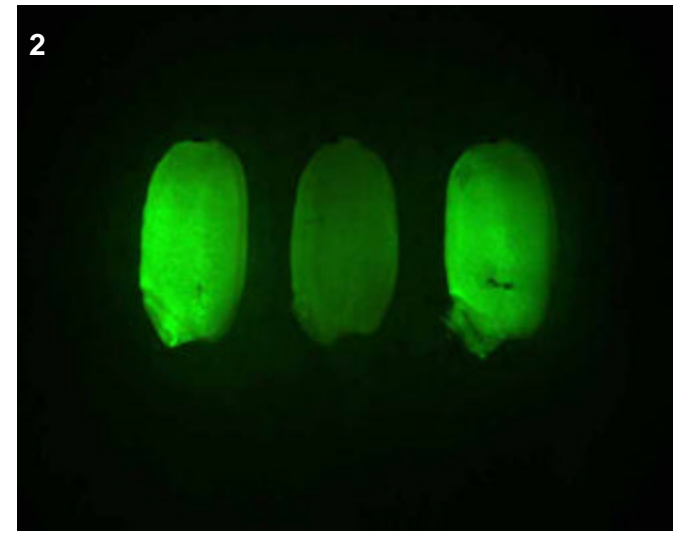
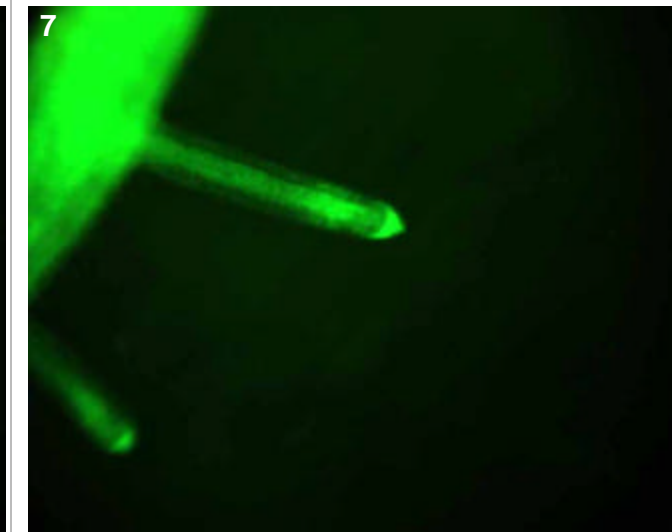
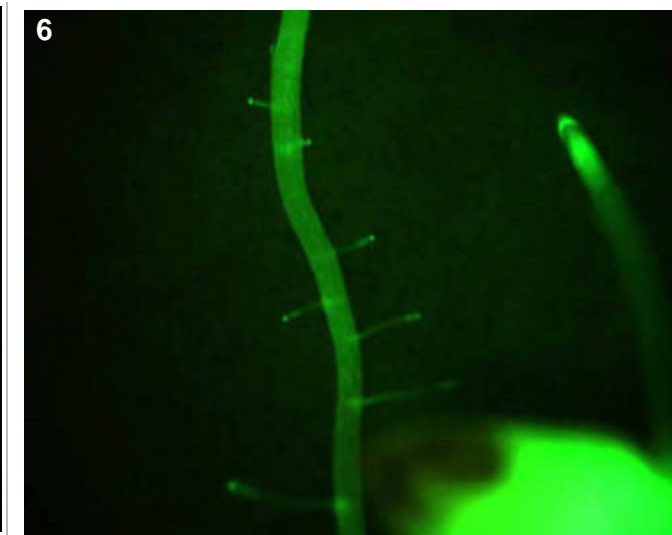
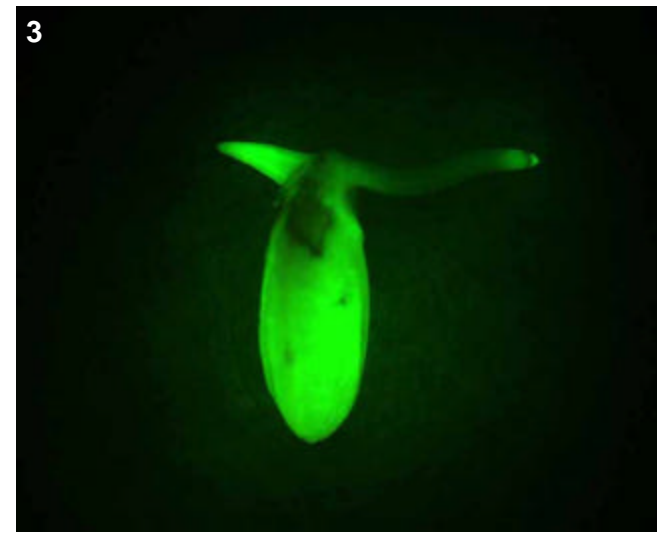
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 224



T0 comments

T1 seed comments

Entire seed shows expression (4/5 seeds)

T1 seedling comments

Note the bright expression in root cap. This line is very bright and appears to be constitutive.

Genotype: AOV A05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

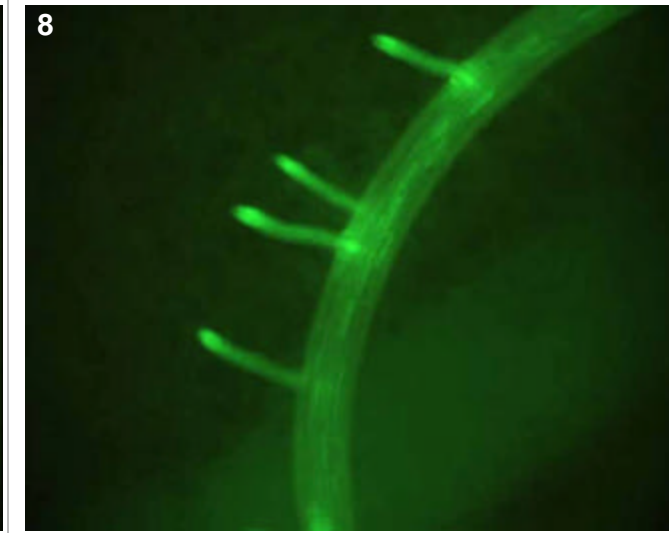
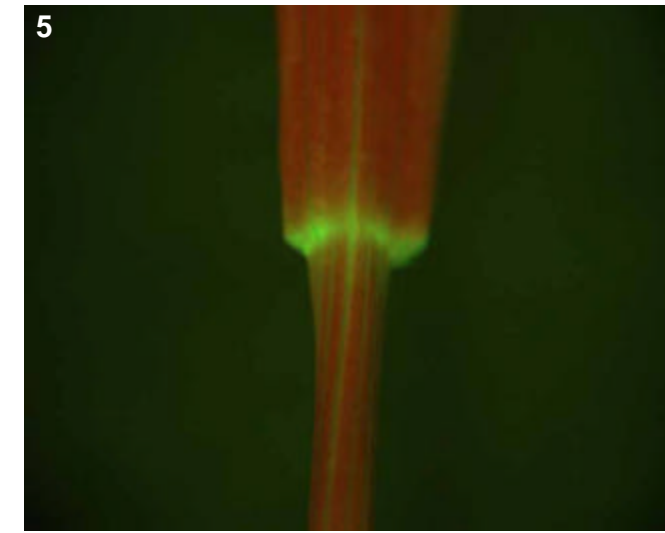
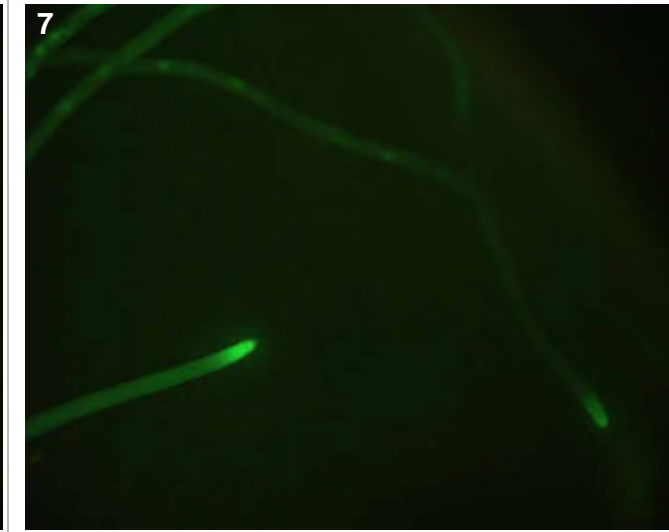
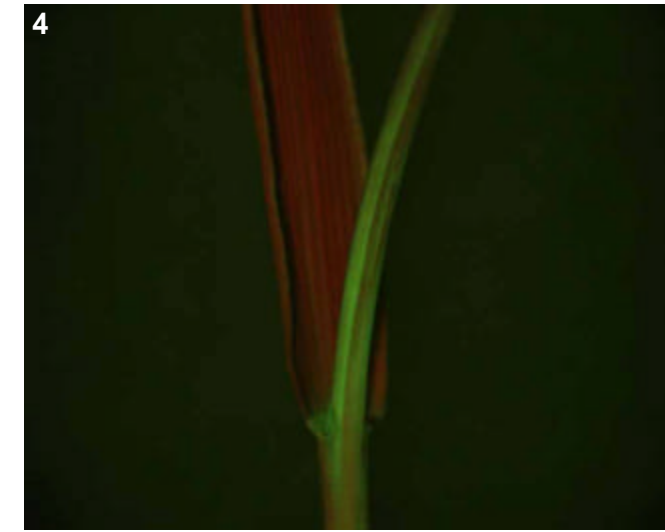
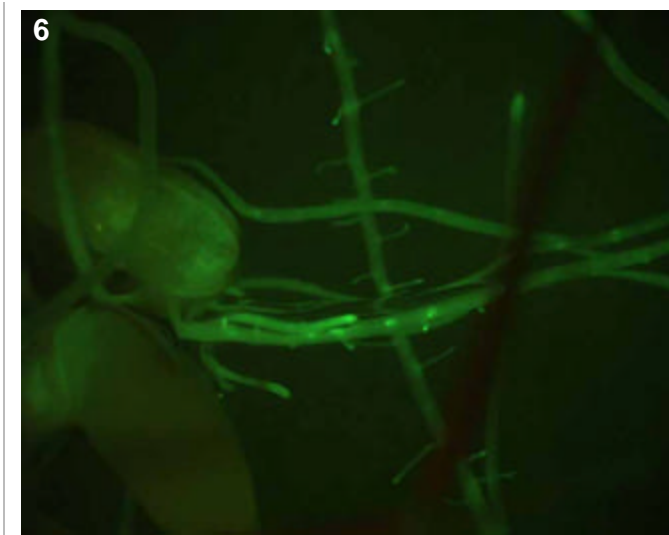
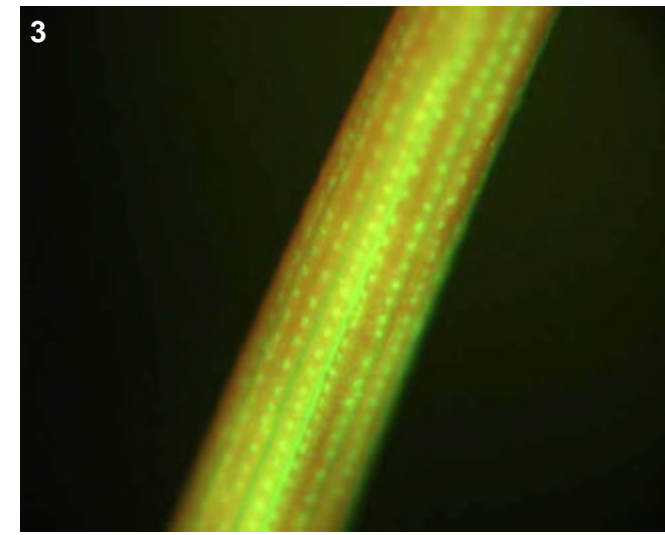
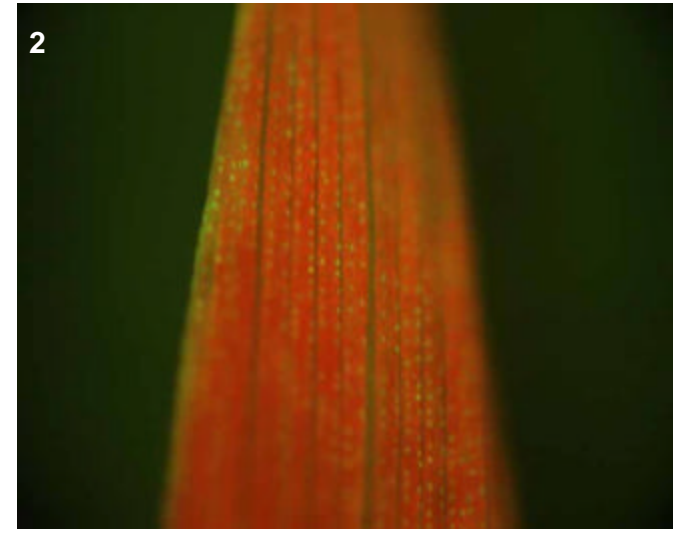
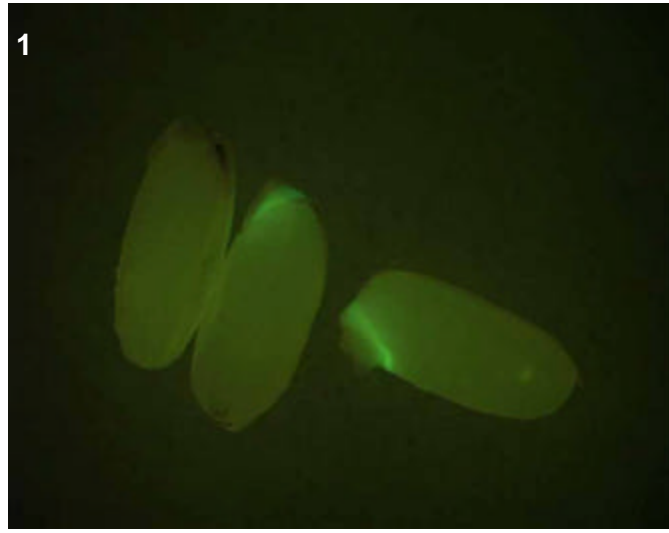
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? YES

Number T2 seed produced: 43



T0 comments

T1 seed comments

4/5 seeds show bright expression in the scutellum.

T1 seedling comments

Note the bright stomata in pictures 2 and 3.

Genotype: AOV B07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-9
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

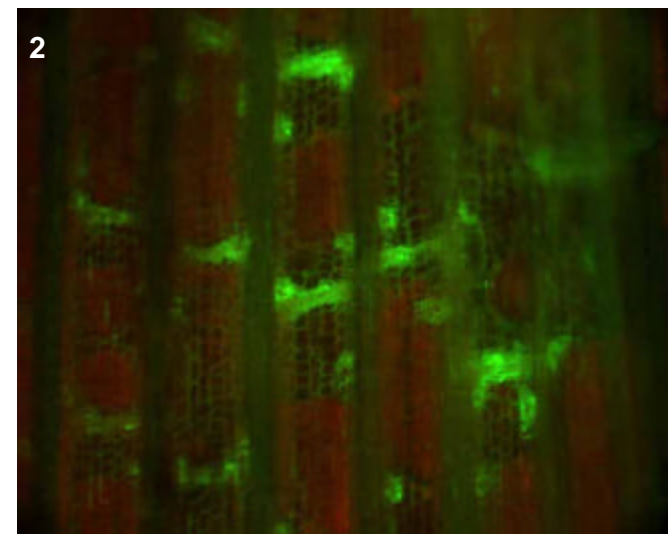
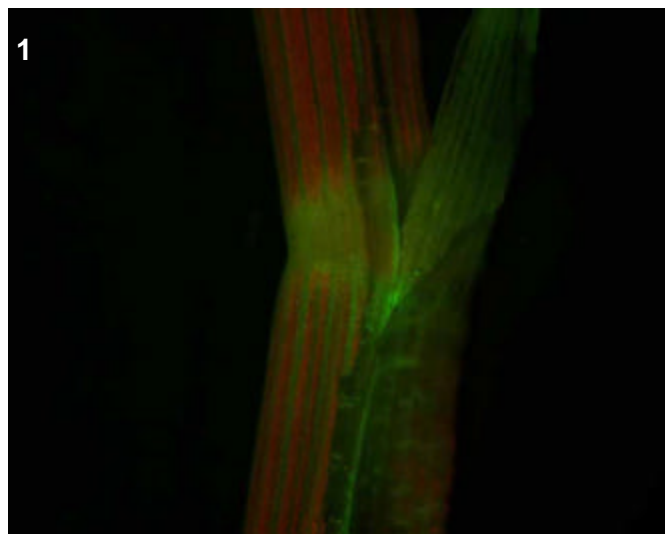
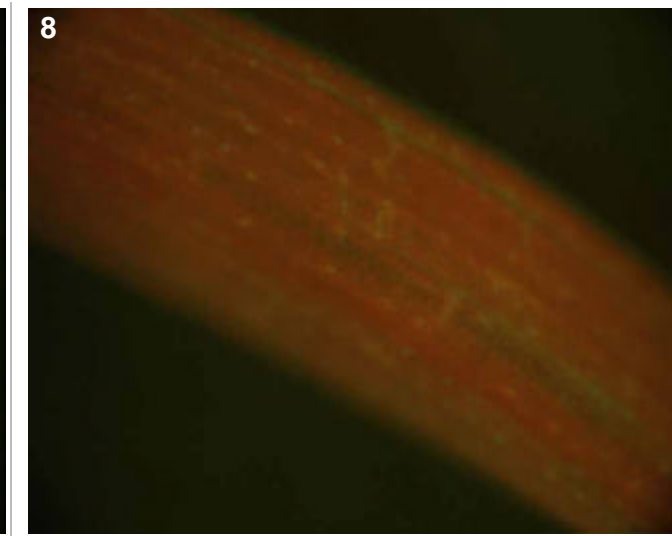
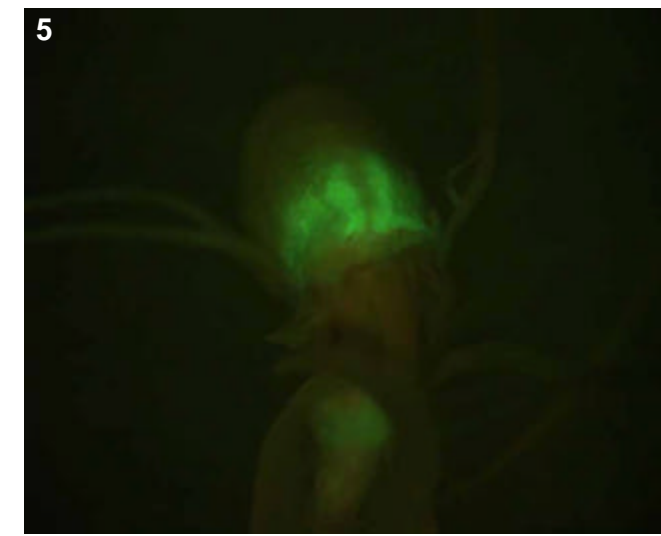
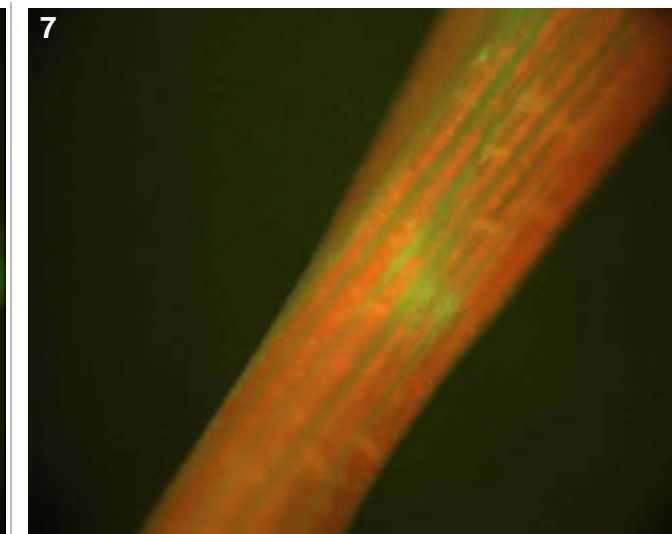
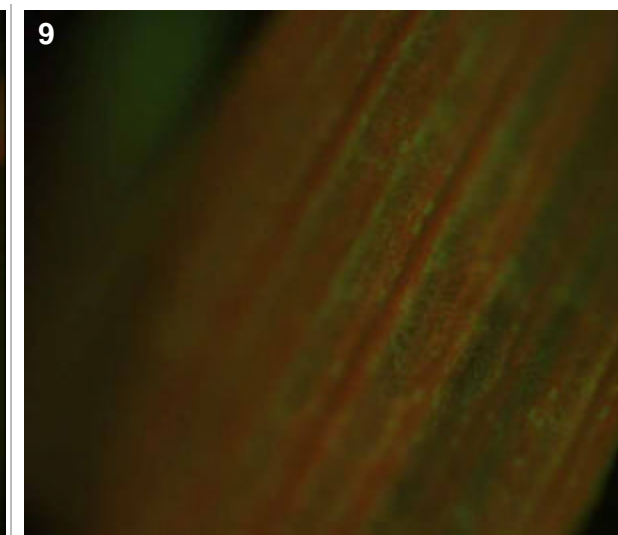
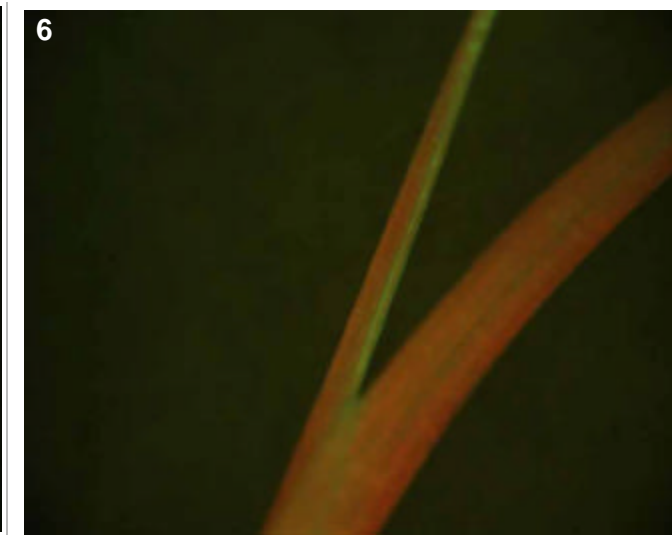
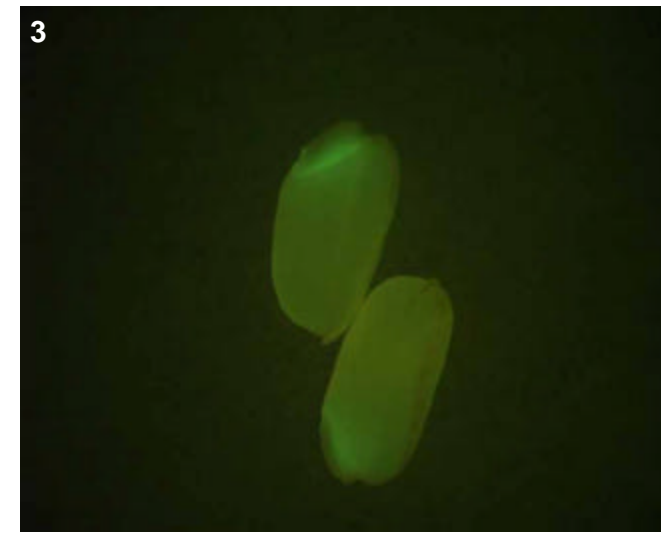
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 15



T0 comments

Expression only in the sheath vascular, not the collar.

T1 seed comments

3/5 seeds show bright expression in scutellum.

T1 seedling comments

Seedlings germinated badly, and only one sick plant screened after 2 weeks growth. Strange morphology, with strong GFP in root and shoot vascular as well as mesophyll of sheath.

Genotype: AOV D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

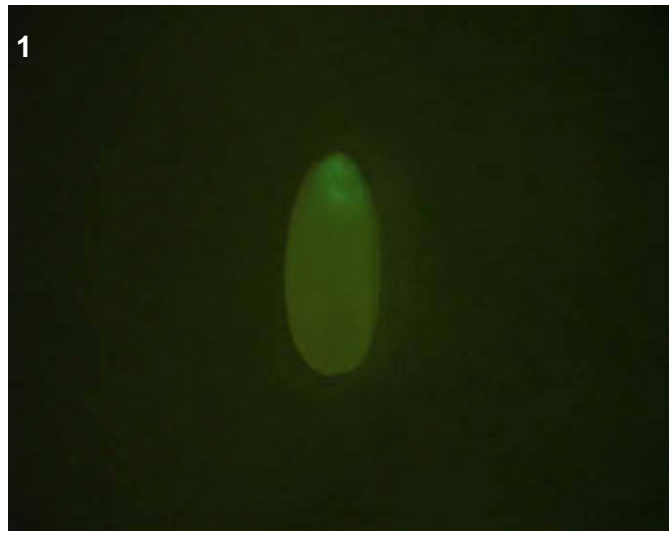
T1 in greenhouse?

YES, 1 GFP+ plant

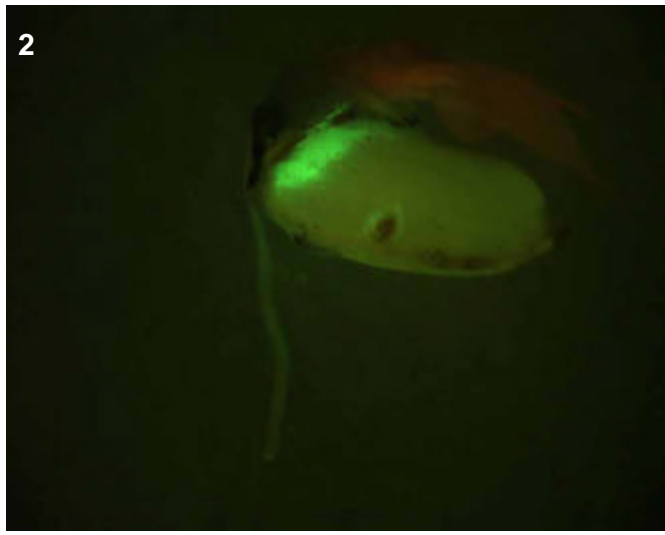
Confocal?

Number T2 seed produced: 0

1



2



T0 comments

T1 seed comments

3/5 seeds show bright expression in the embryo.

T1 seedling comments

Seedlings grew poorly, and only one very sick plant after 2 weeks growth. Bright in endosperm and the root in general.

Genotype: AOX E06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

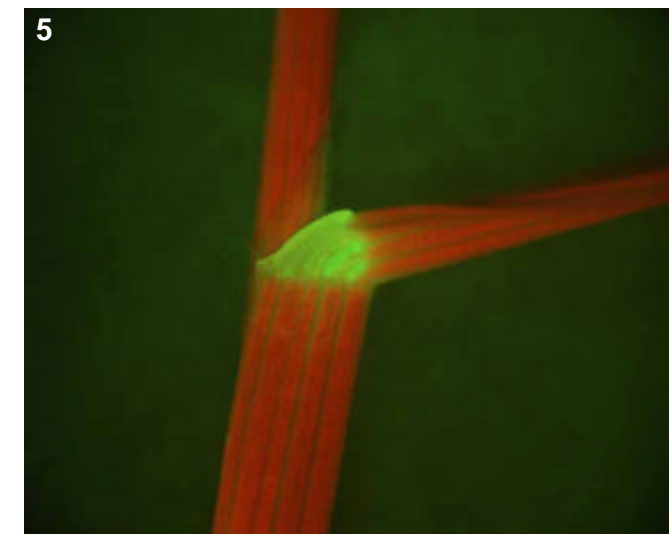
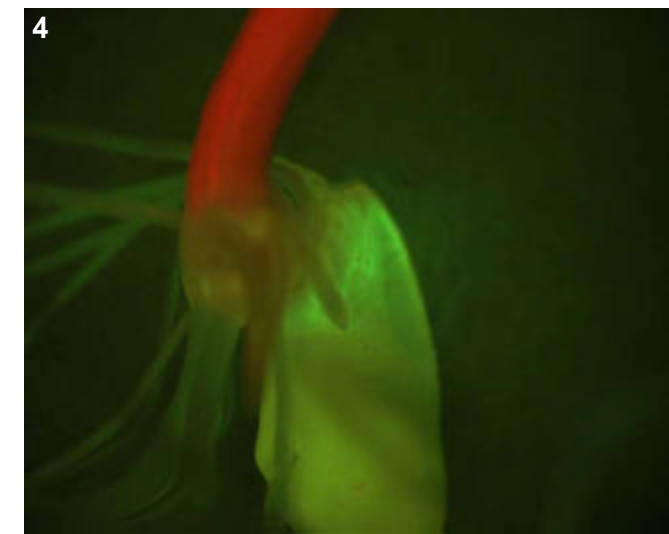
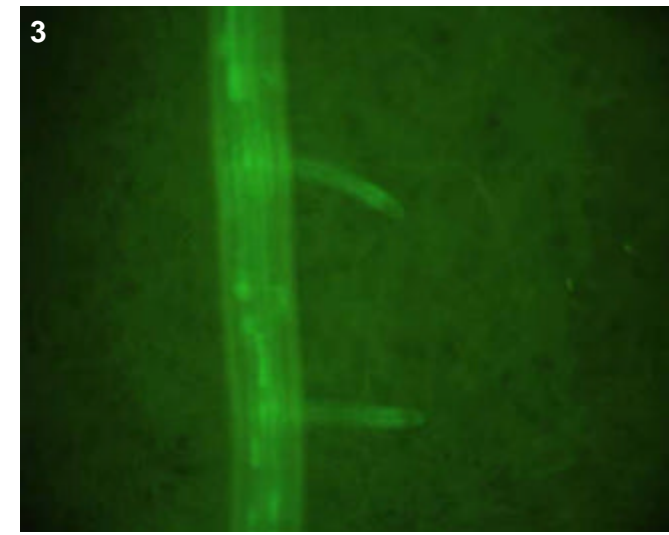
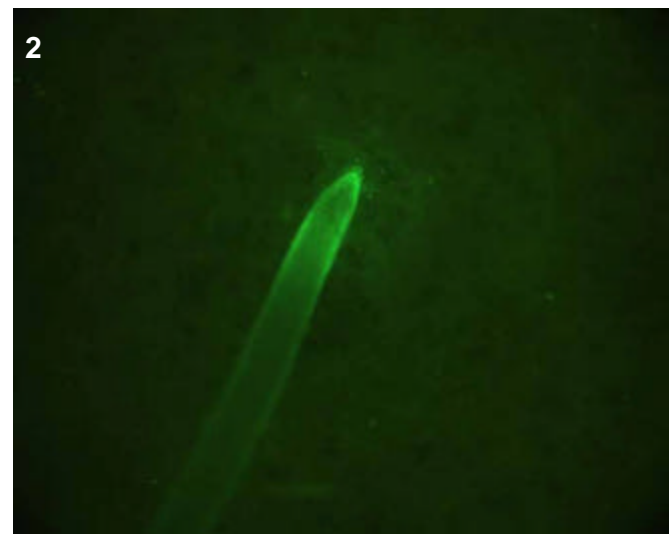
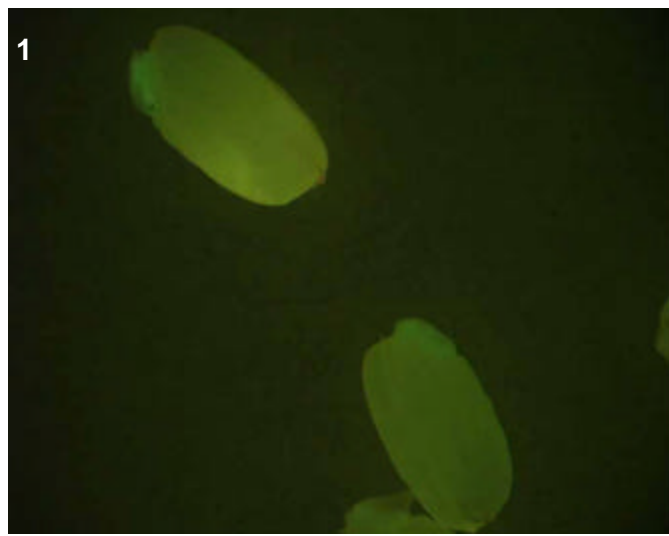
YES, 3 GFP+ plants

Confocal?

YES

Number T2 seed produced:

0



T0 comments

T1 seed comments

2/5 seeds show bright expression.

T1 seedling comments

Bright root vascular line with more GFP at tips. Also bright collar, endosperm and perhaps shoot vascular.

Genotype: AOY A08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

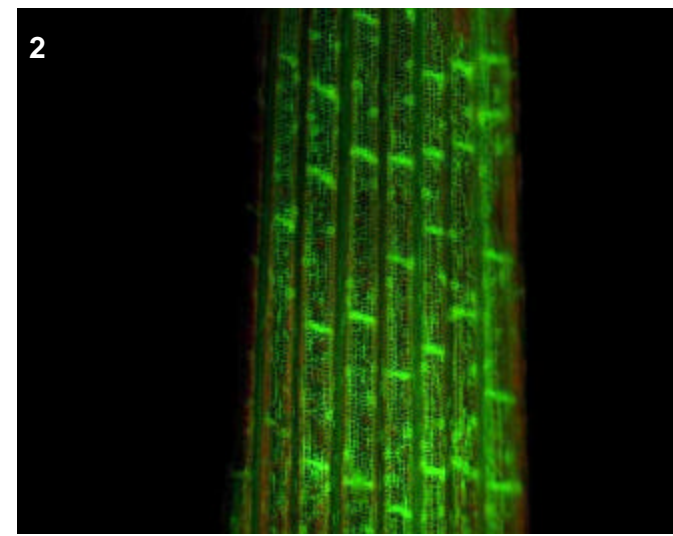
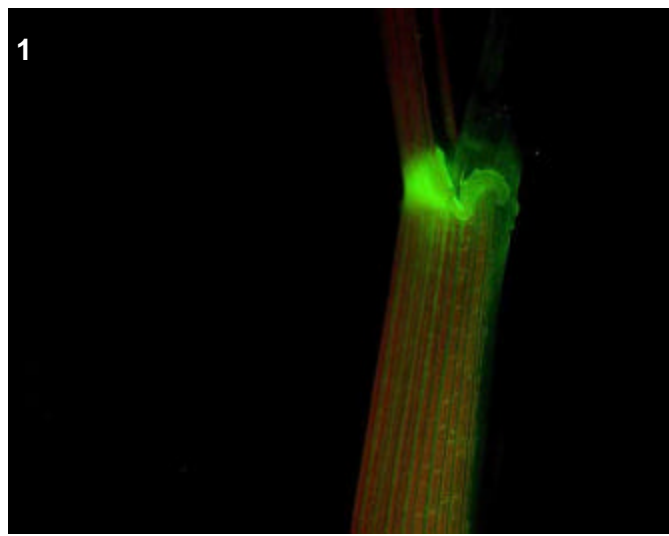
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 13



T0 comments

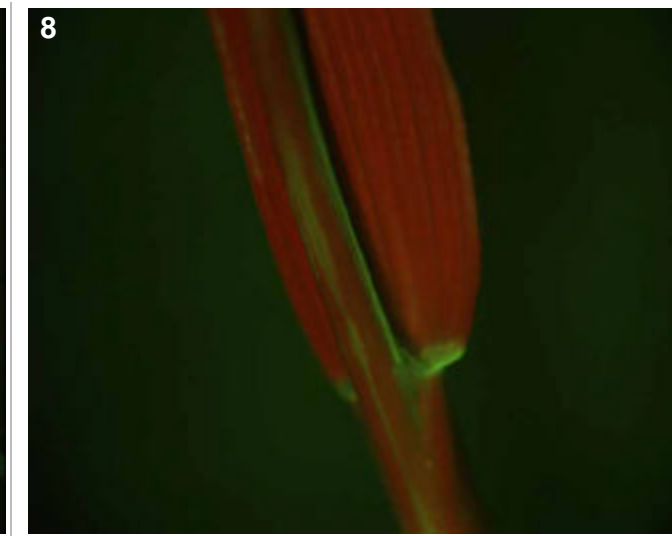
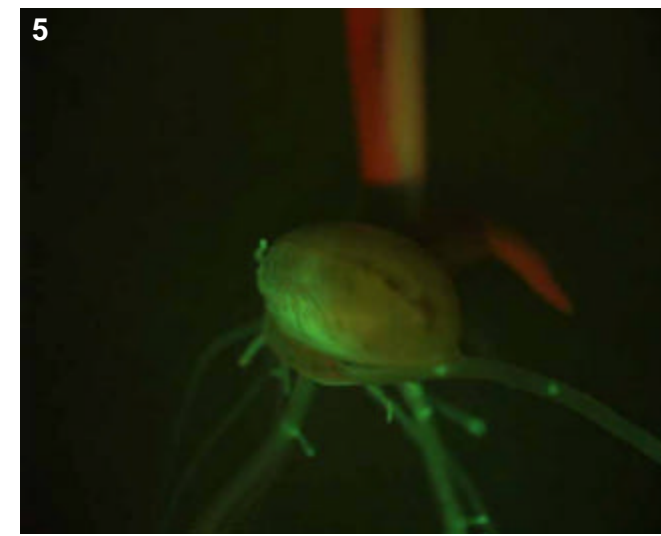
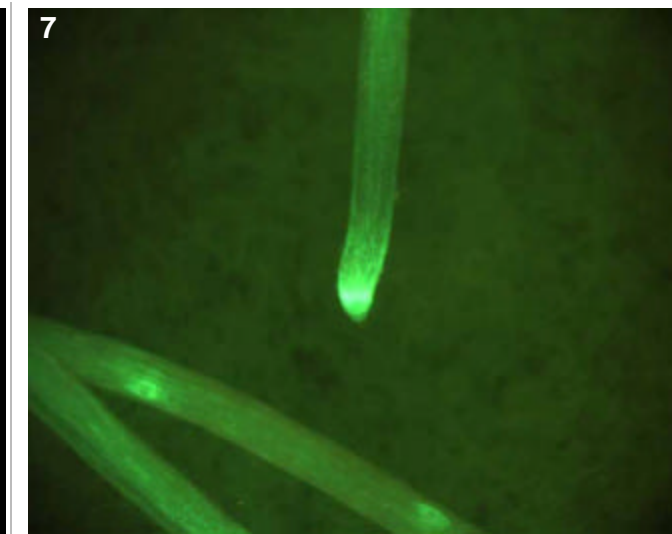
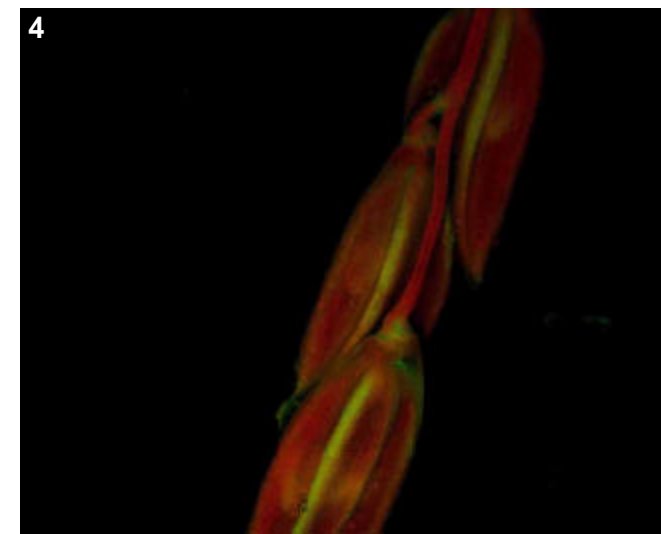
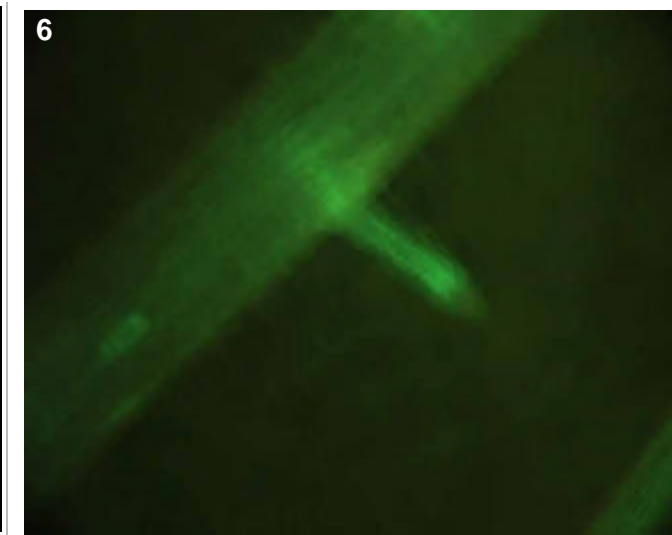
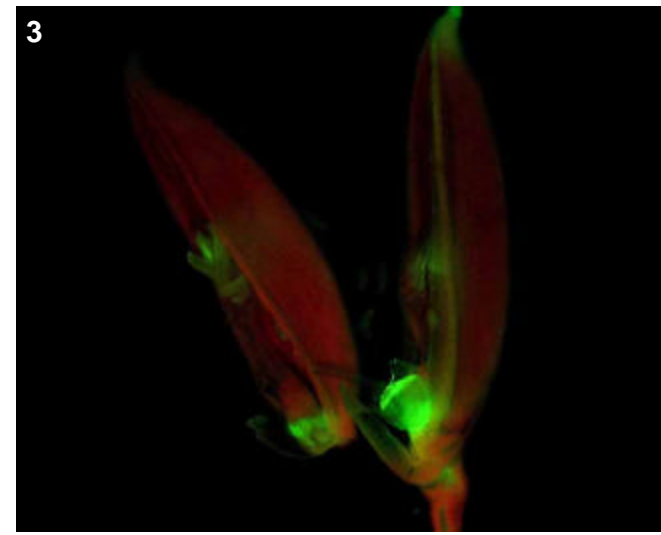
Expression in collar and sheath vascular. Also lodicules and floral vascular.

T1 seed comments

2/5 seeds showed bright expression in the embryo.

T1 seedling comments

Bright root and shoot vascular expression.



Genotype: AOY H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

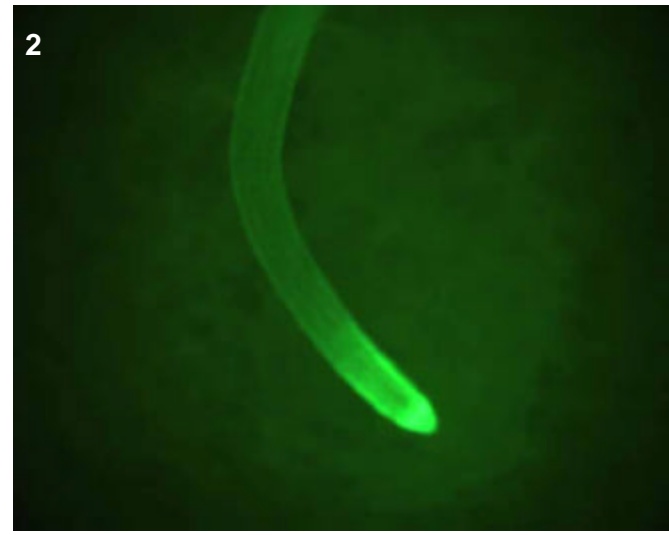
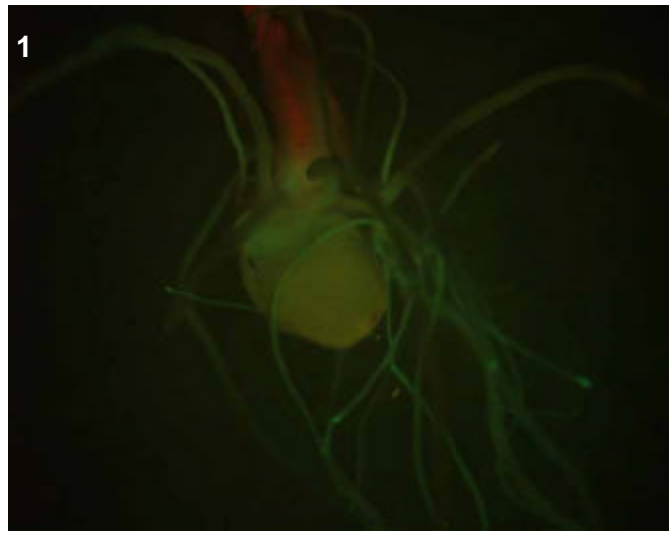
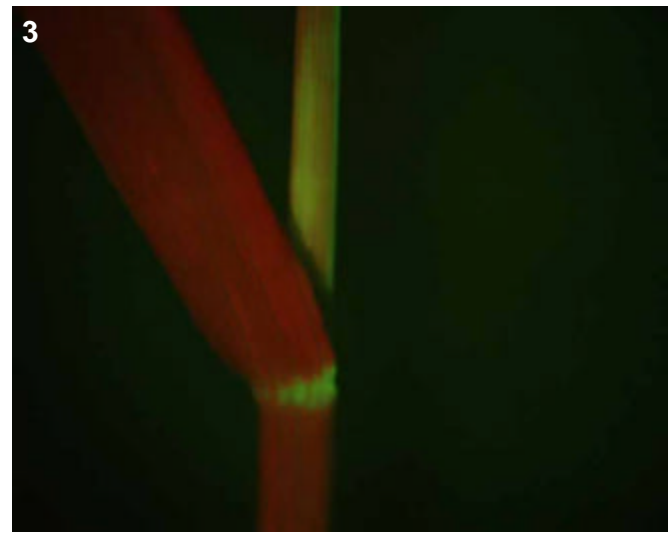
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? YES

Number T2 seed produced: 26



T0 comments

T1 seed comments

2/5 seeds showed expression.

T1 seedling comments

Looks to be epidermal in the roots visible in pic 1, and the crown root in pic 2.

Genotype: APA D02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling:
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells

T1 Mature

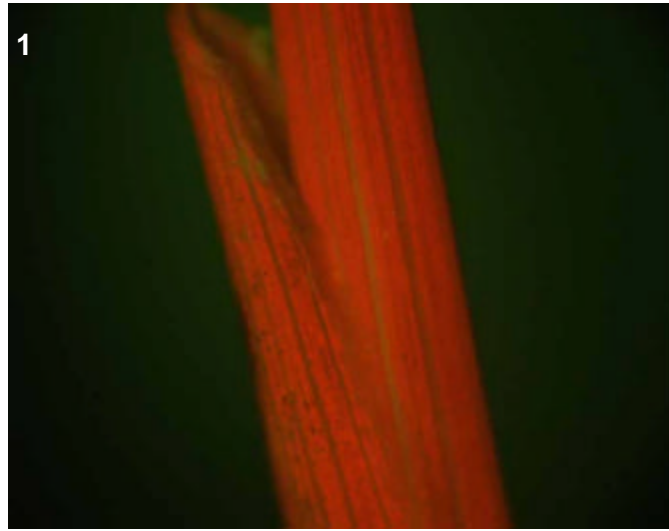
- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 70



T0 comments

T1 seed comments

3/5 seeds show expression.

T1 seedling comments

Genotype: APA D05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 3-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

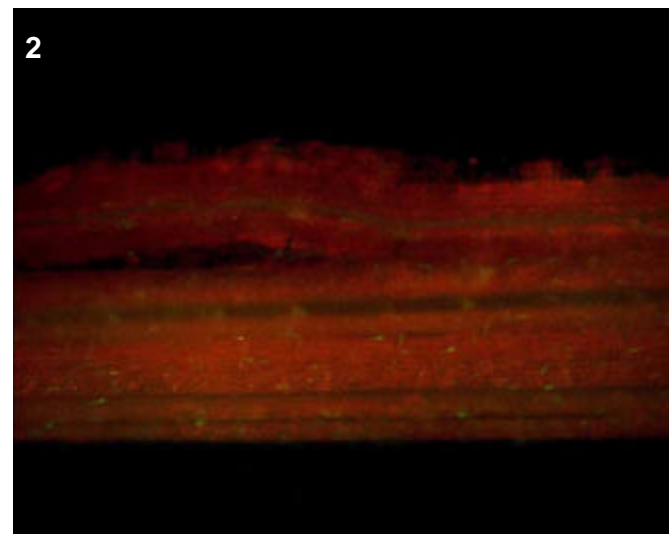
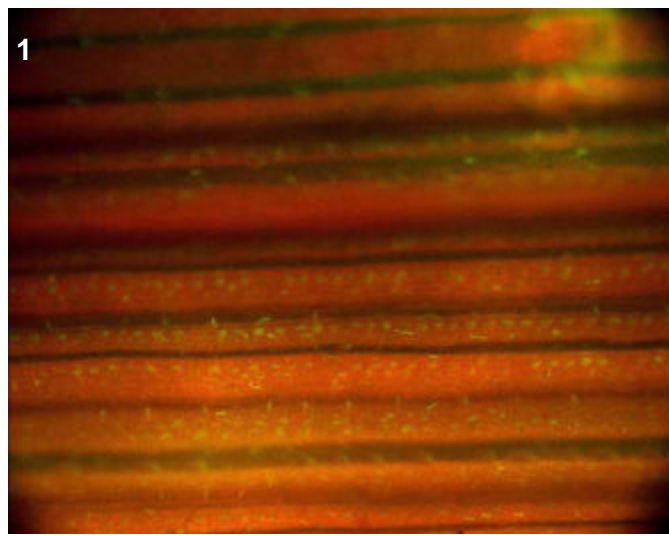
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 164



T0 comments

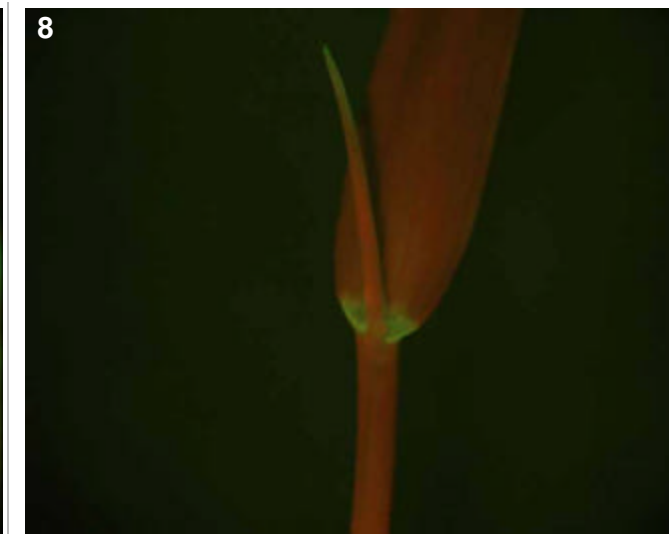
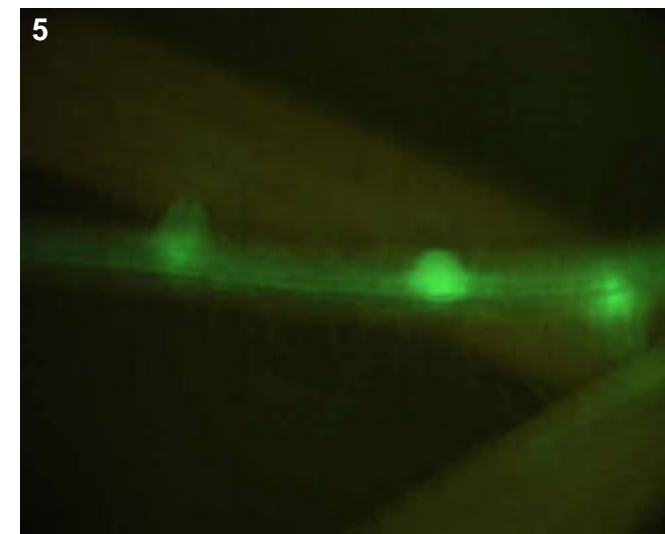
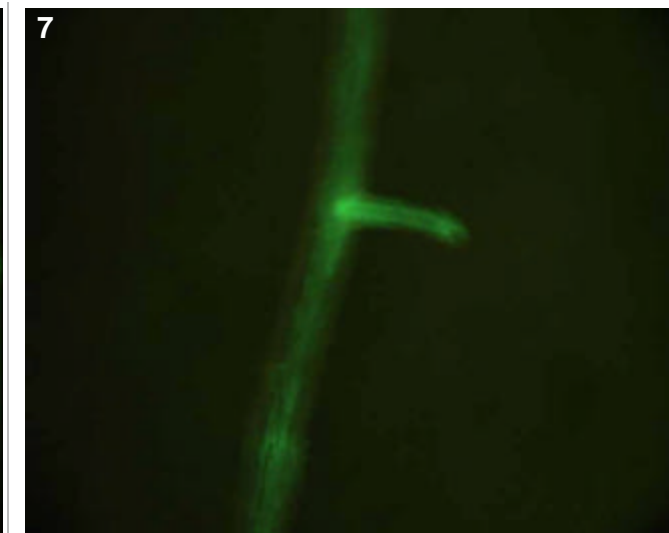
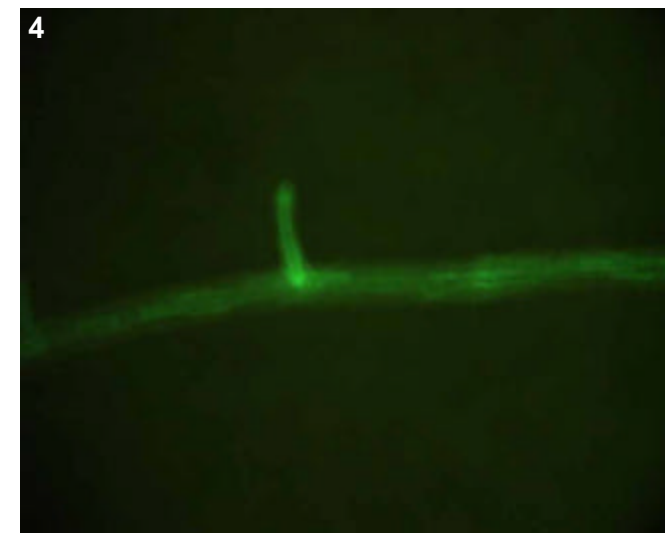
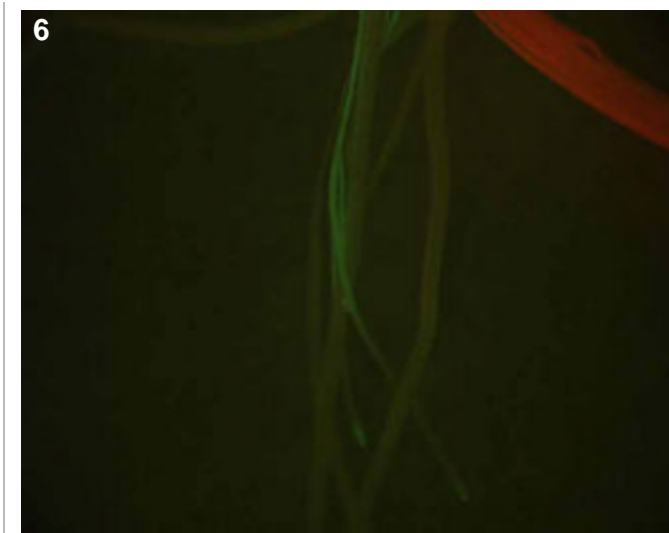
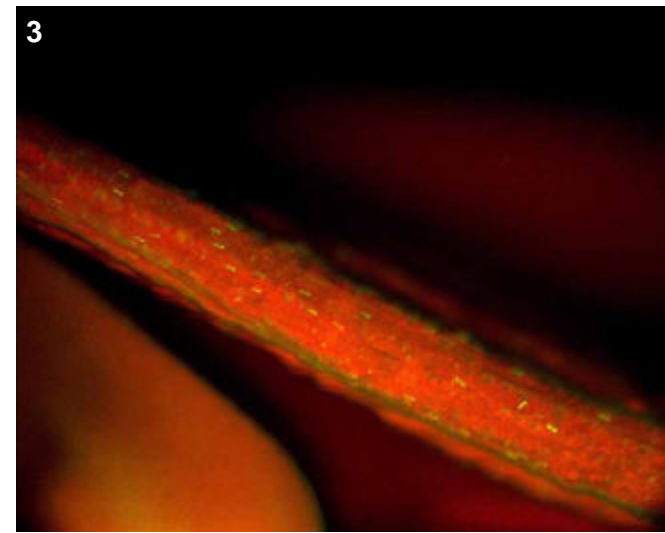
Expression interesting because only in the trichomes/stomata of leaf and the floral stem (the rachis?).

T1 seed comments

2/5 seeds show bright expression in scutellum.

T1 seedling comments

Very bright lateral roots. Lateral roots are interesting because in general they are extremely long and few in number. Could be a phenotype?



Genotype: APA H12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

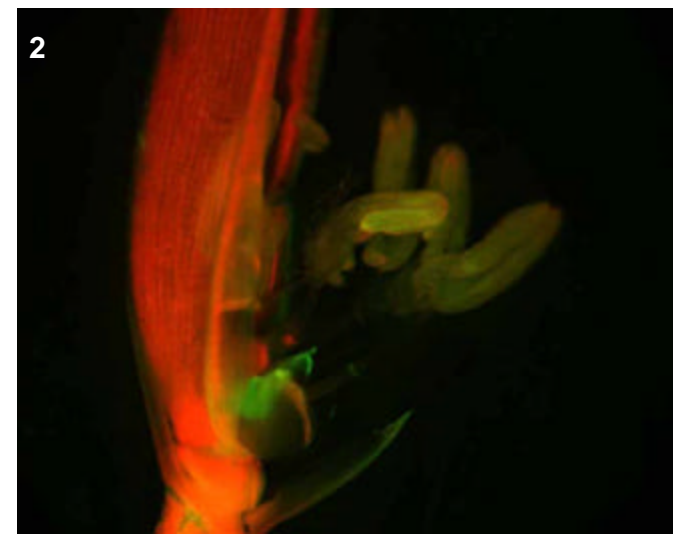
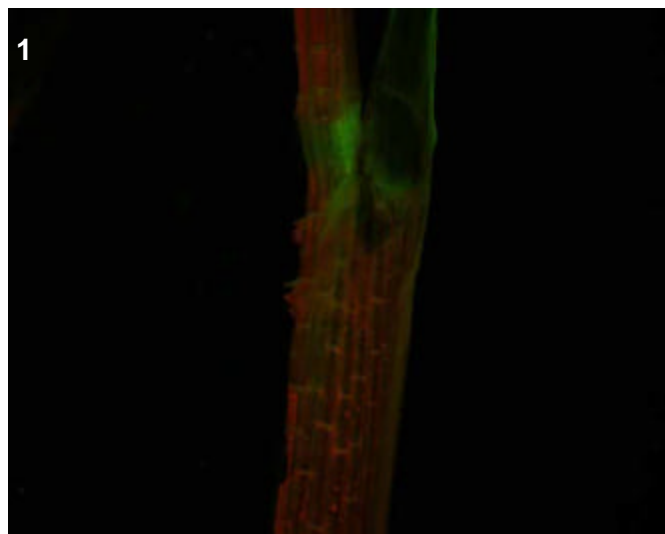
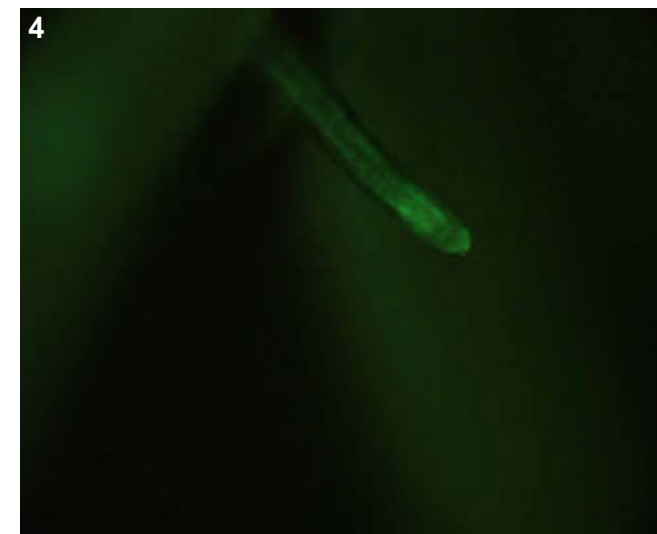
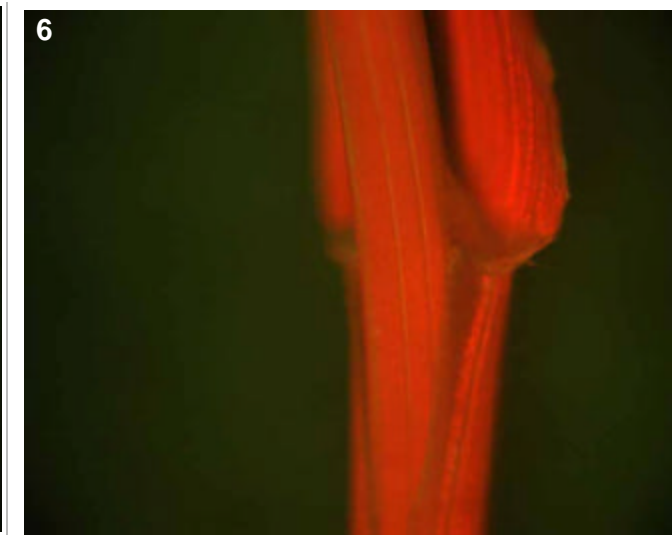
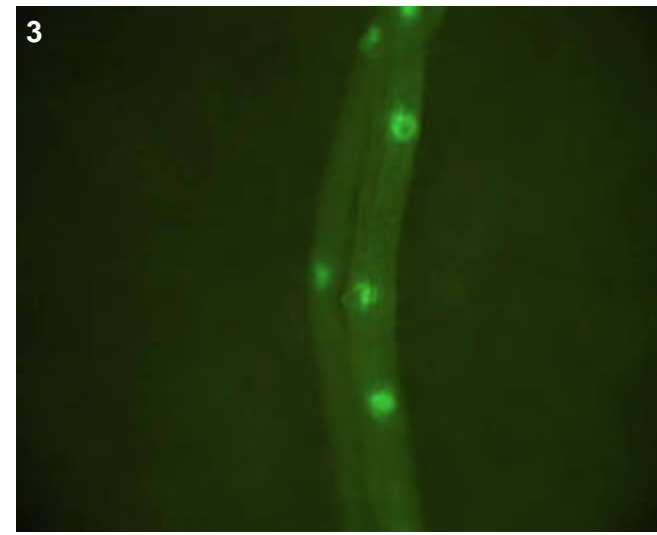
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal? YES

Number T2 seed produced: 48



T0 comments

T1 seed comments

3/5 seeds show bright expression in embryo.

T1 seedling comments

In roots, expression specific to the emerging lateral roots. Perhaps some vascular activity in the shoot and endosperm.

Genotype: APB B02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-5
 T1 seed/seedling: 6-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

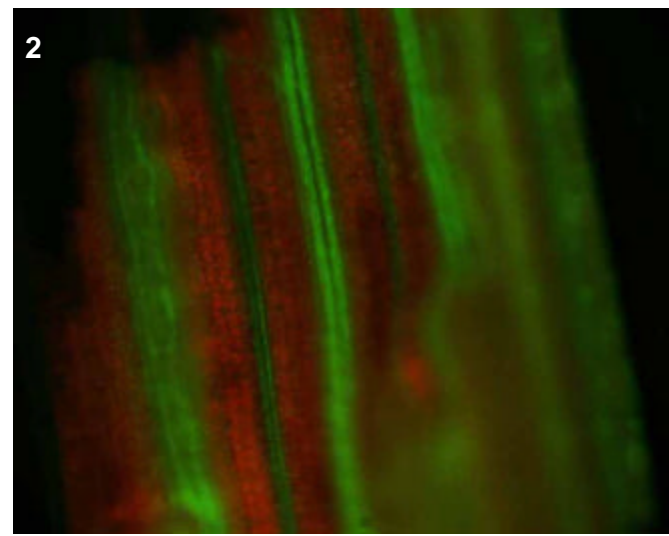
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 125



T0 comments

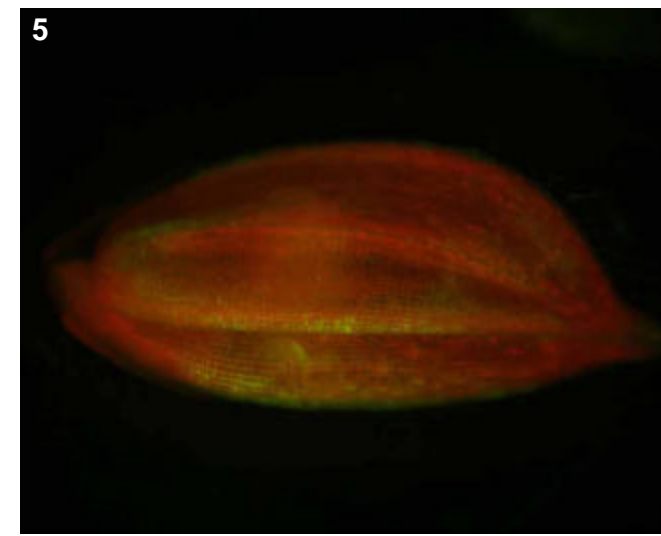
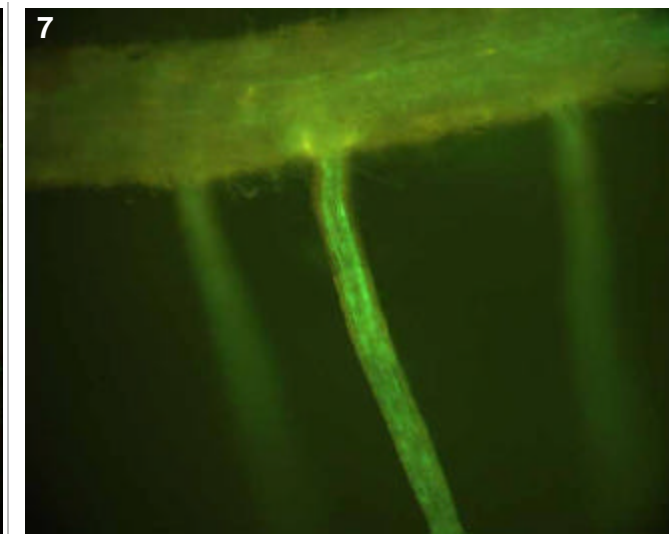
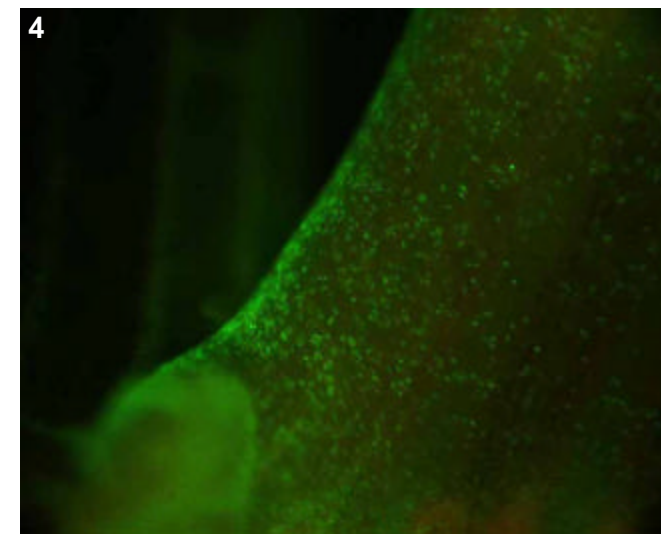
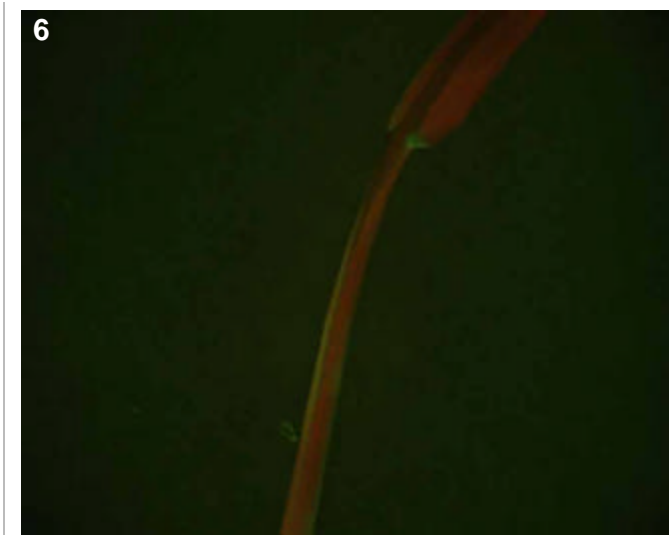
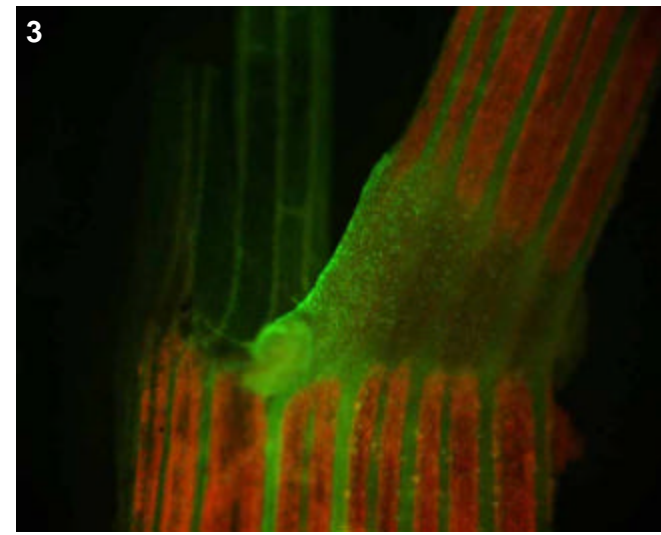
Interesting pattern on the collar. Looks like cells on the surface brightly lit up? Very strong vascular in sheath and leaf surrounding the collar. Also what looks like general expression in the flower.

T1 seed comments

3/5 seeds show bright expression in the scutellum.

T1 seedling comments

Same interesting T0 pattern on collar noted in the T1--described as perhaps the mesophyll of the sheath also GFP positive. Collar bright, as well as something in the seed. Lateral roots show vascular expression.



Genotype: APB D07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

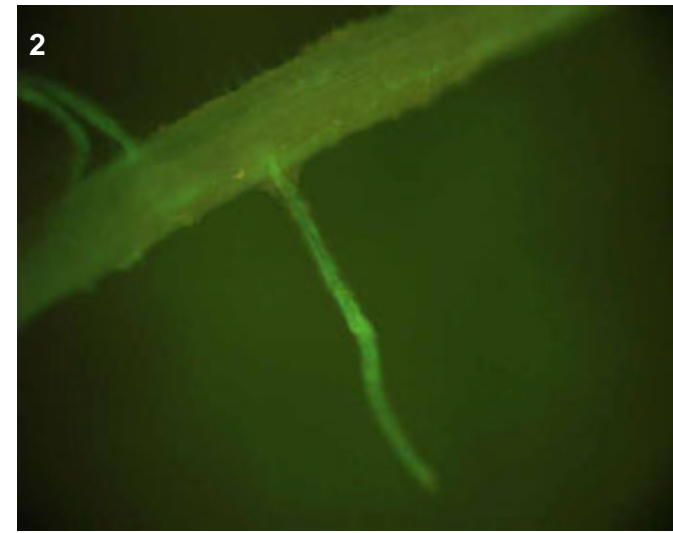
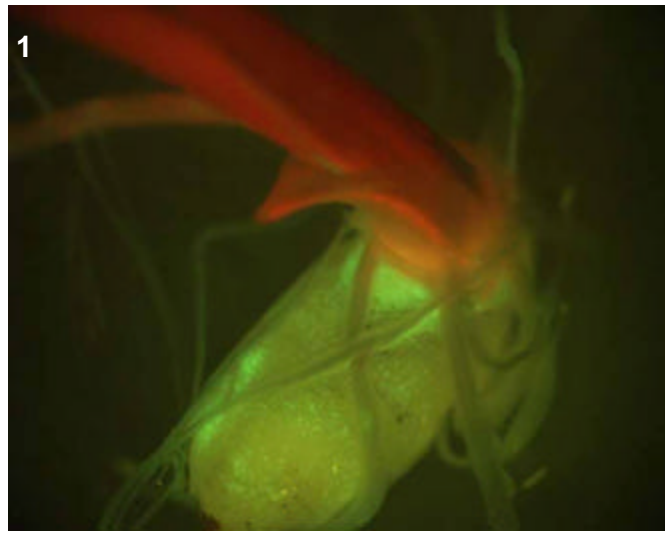
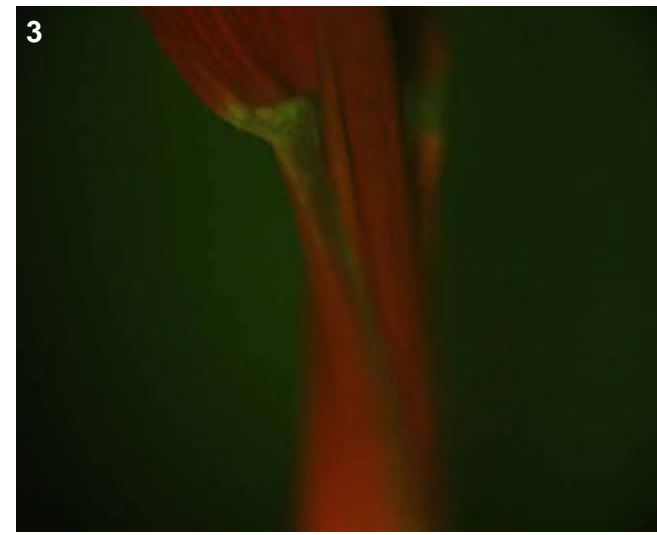
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 28



T0 comments

T1 seed comments

2/5 seeds show expression.

T1 seedling comments

Genotype: APB E02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant: 1-2
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

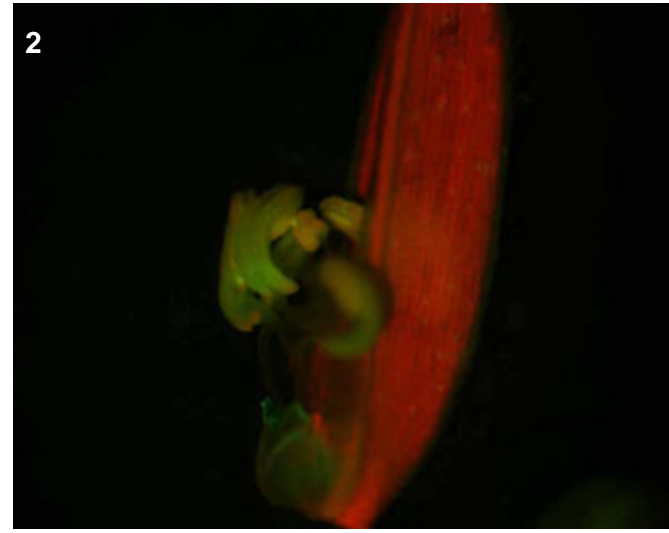
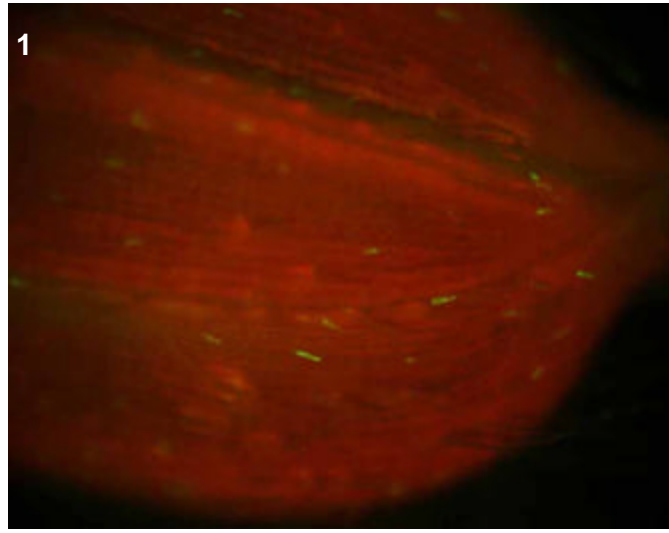
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced: 0



T0 comments

Faint expression in the lodicules and floral trichomes.

T1 seed comments

3/5 seeds show bright expression in the embryo.

T1 seedling comments

Genotype: APB E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

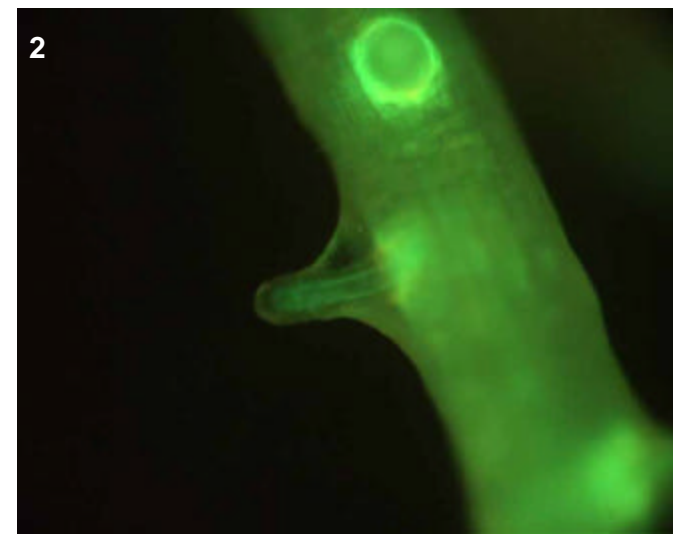
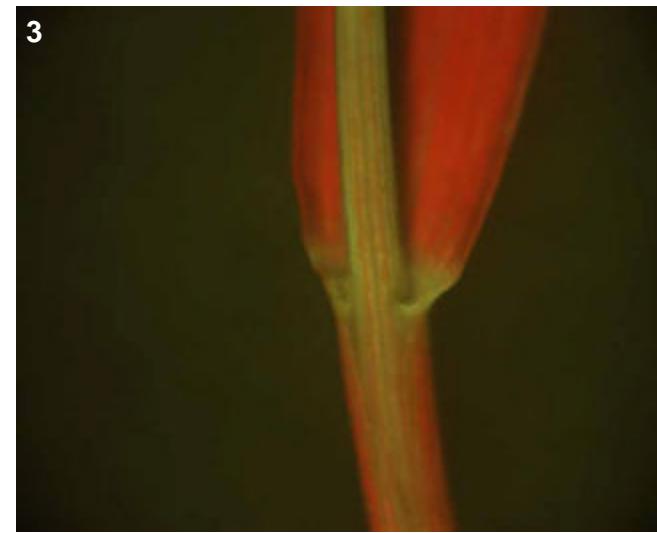
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 22



T0 comments

T1 seed comments

3/5 seeds show expression.

T1 seedling comments

Genotype: APB F11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-5
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

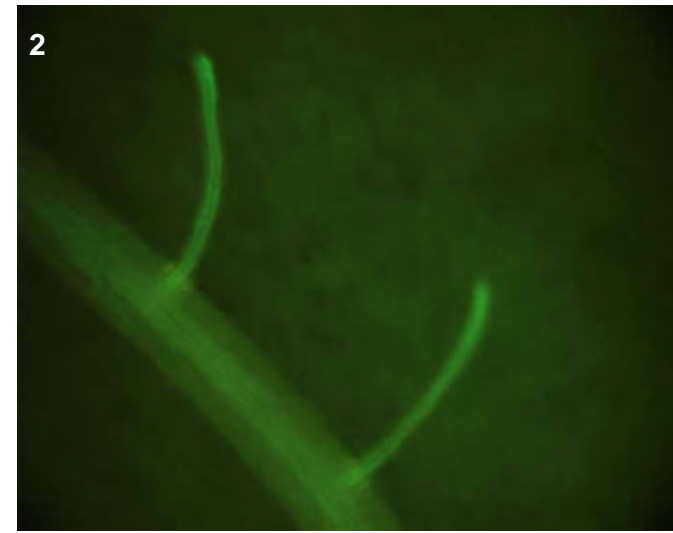
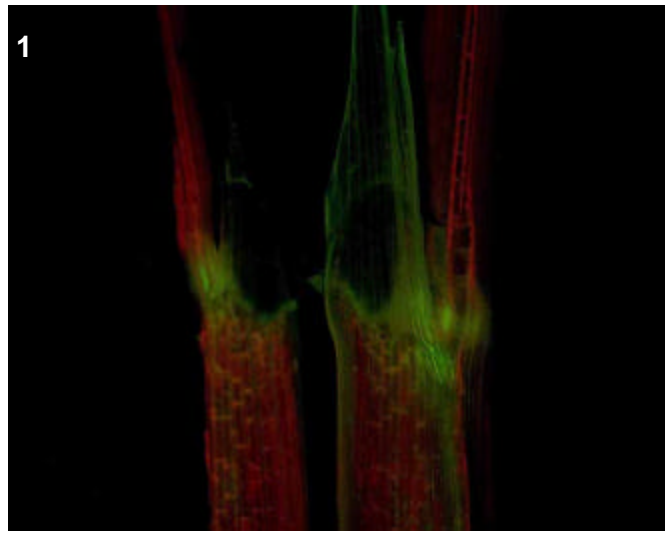
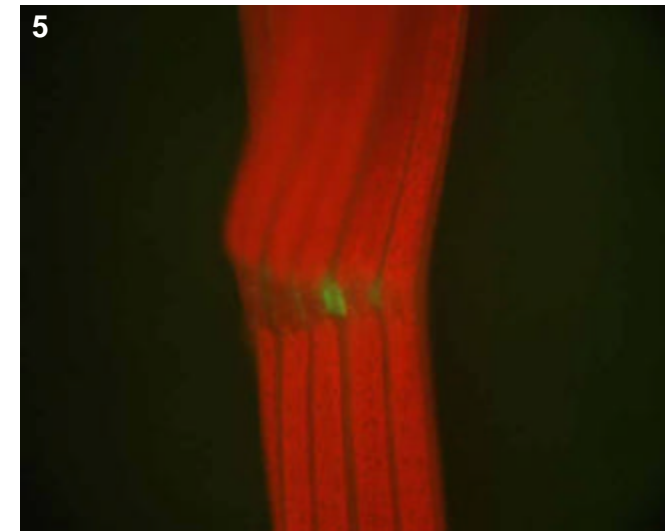
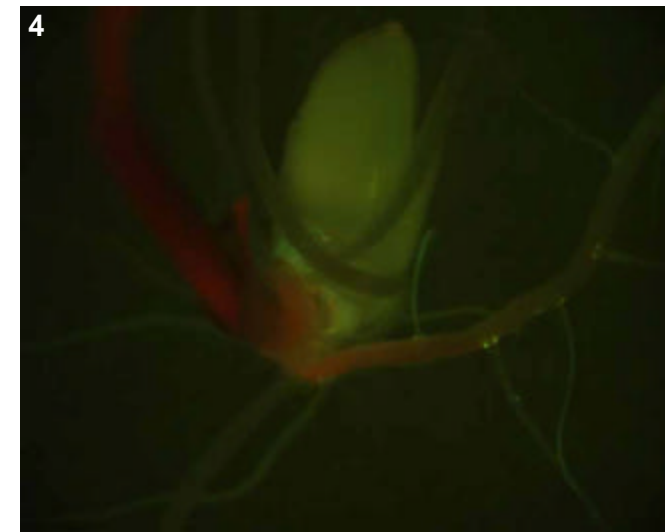
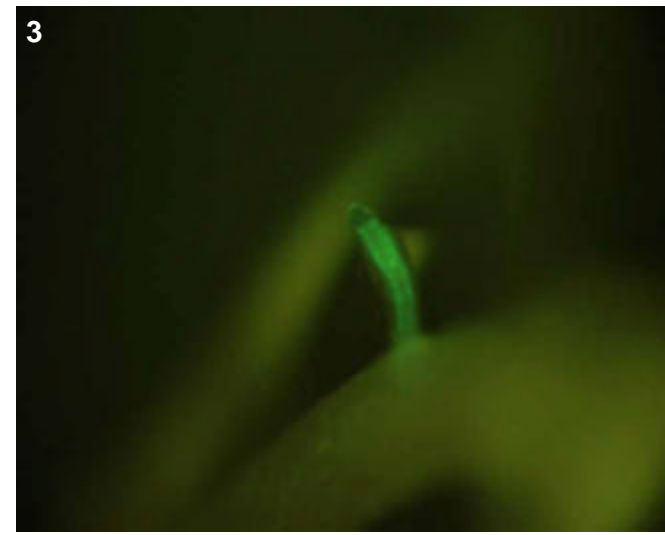
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 20



T0 comments

Weak expression in the collar and surrounding vascular of sheath.

T1 seed comments

Faint scutellum expression in 3/5 seeds.

T1 seedling comments

Weak expression in the collar. Bright roots, especially in the laterals.

Genotype: APC B01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant:
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:

T0 comments

T1 seed comments

3/5 show expression.

T1 seedling comments

Genotype: APC C10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-4
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

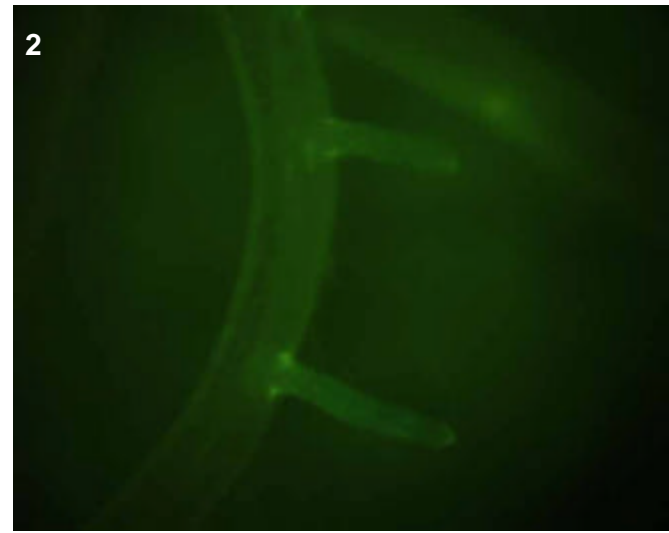
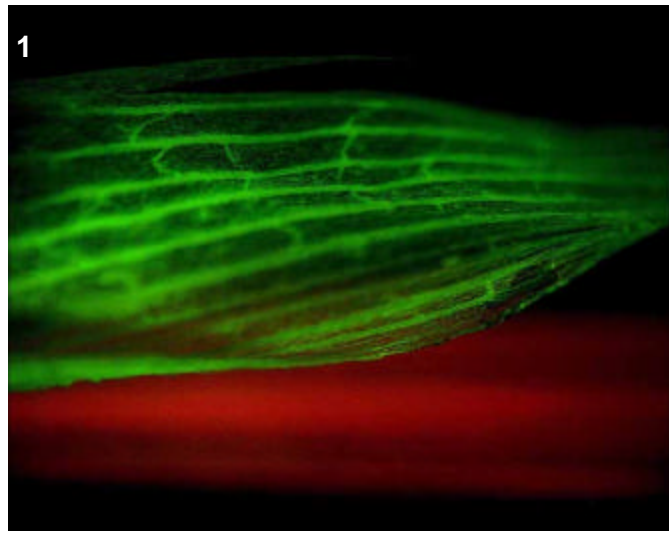
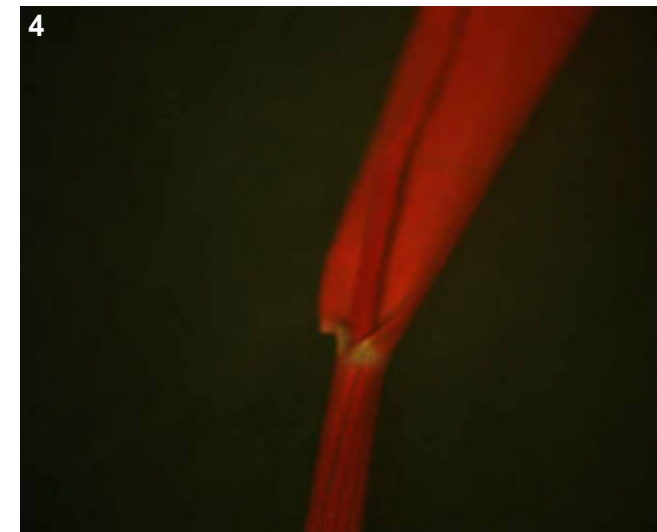
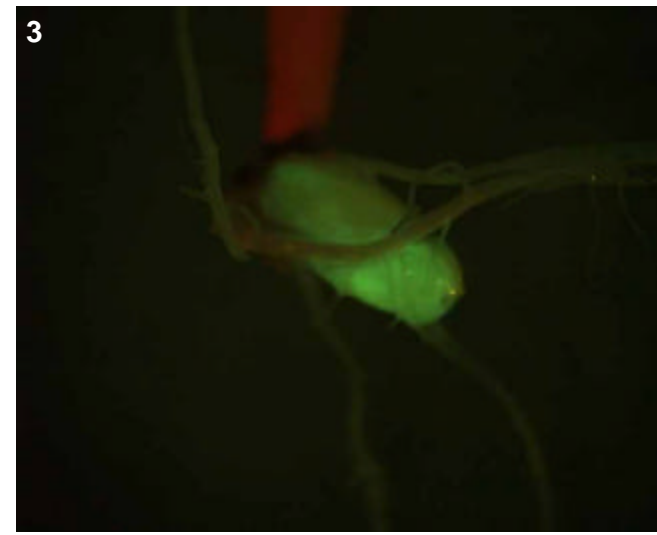
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 73



T0 comments

Interesting line because expression appears to be strictly limited to the ligule found just above the collar.

T1 seed comments

2/5 seeds showed bright expression in both the scutellum/embryo regions.

T1 seedling comments

Genotype: APC D07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

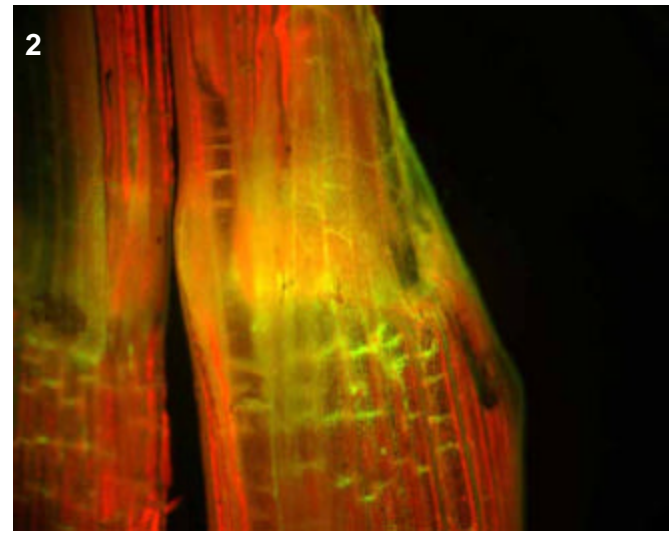
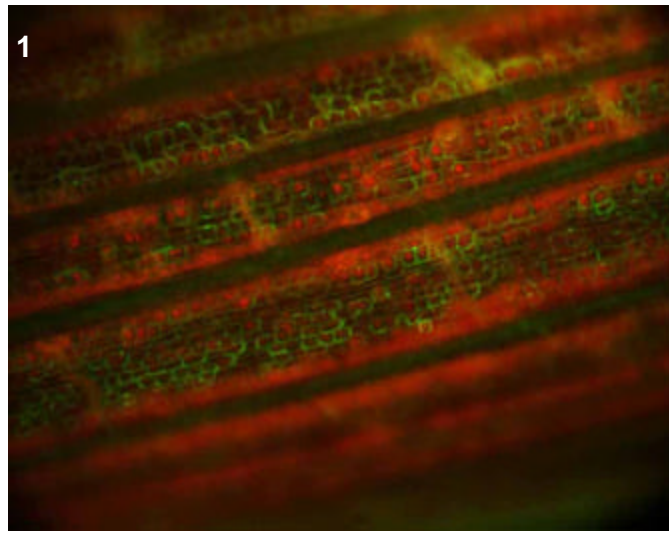
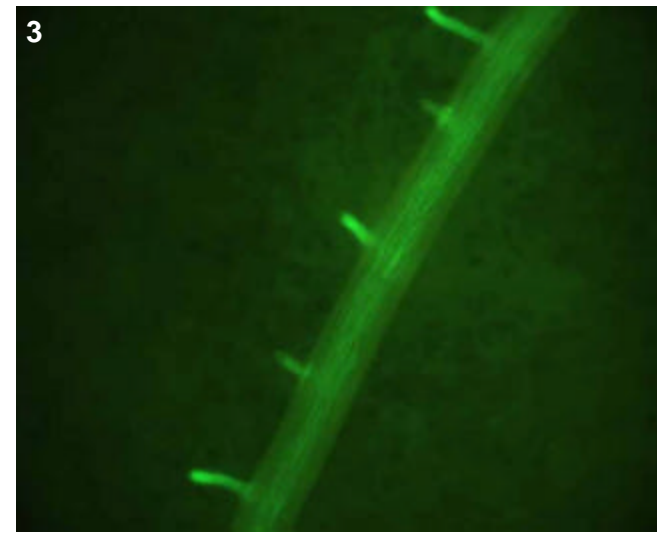
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 150



T0 comments

Expression in the collar and in the sheath vascular. Expression in sheath vascular is a bit unusual in that the horizontal vascular bundles are not bright, rather it is more just surrounding the cells in the sheath vascular.

T1 seed comments

3/5 seeds show medium expression in the scutellum.

T1 seedling comments

Genotype: APC E01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

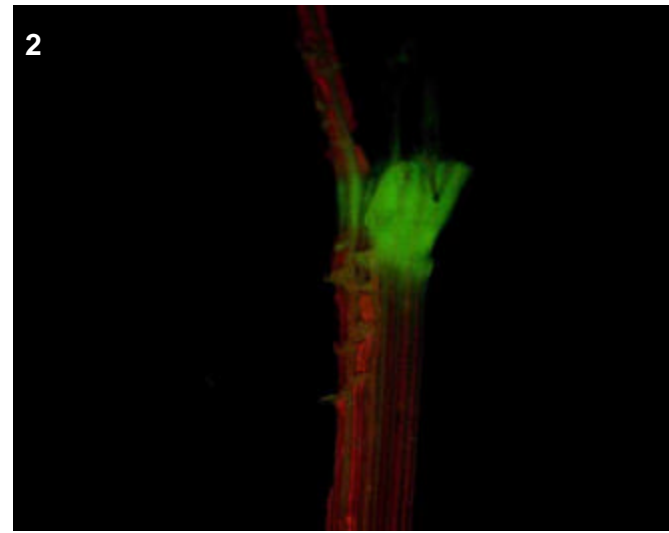
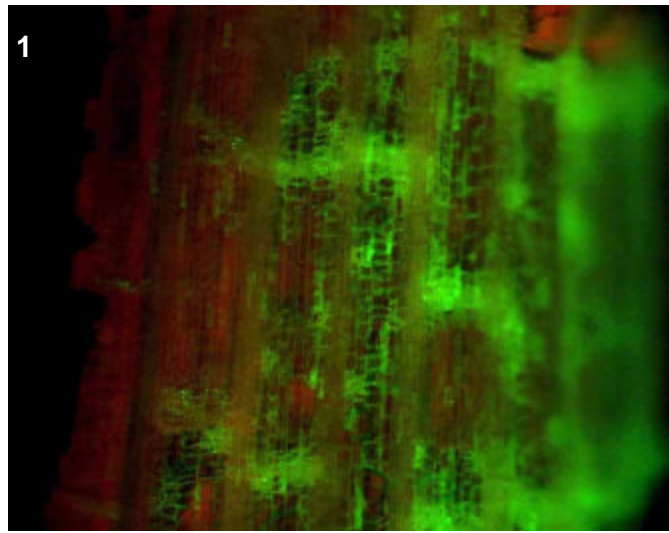
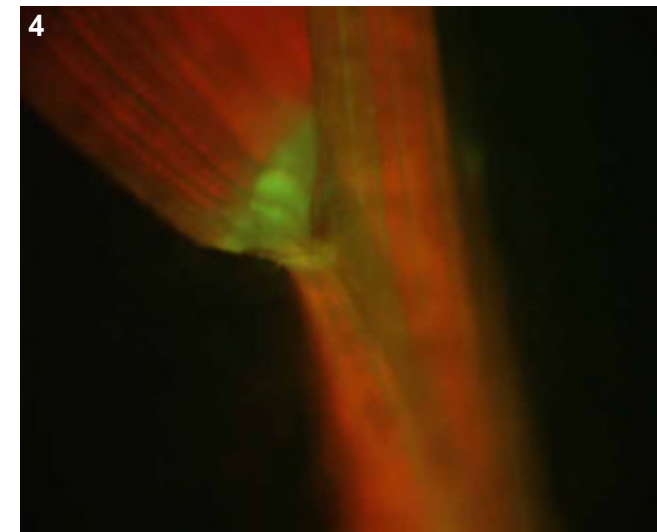
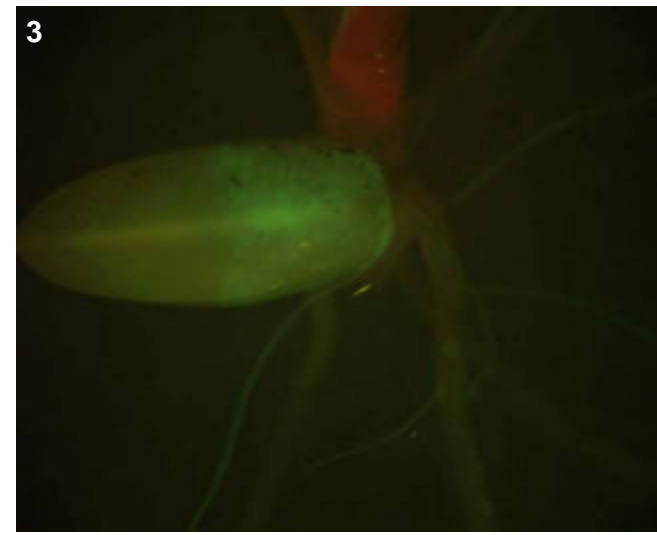
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal? YES

Number T2 seed produced: 44



T0 comments

Bright collar and sheath vascular. Note a few horizontal elements in the sheath vascular.

T1 seed comments

3/5 seeds show bright expression in scutellum.

T1 seedling comments

Appears to be a strong vascular line, both in the root and shoot.

Genotype: AQW A01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

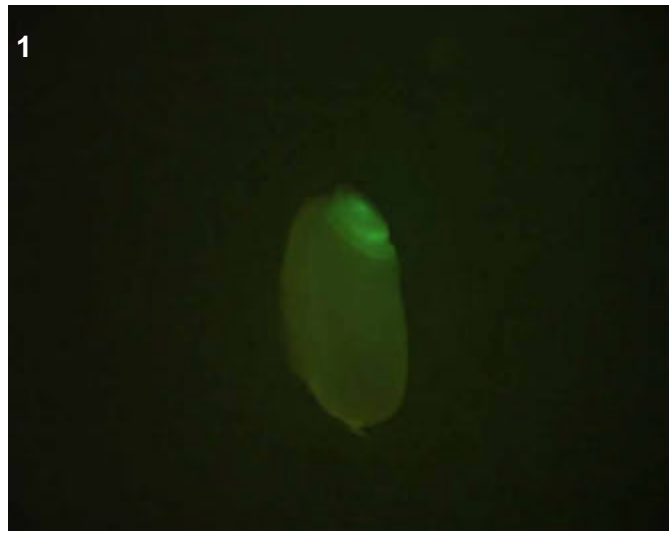
No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

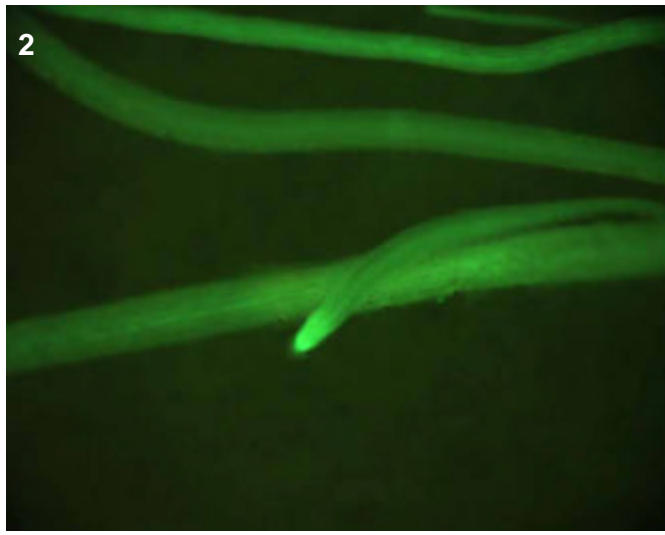
Confocal?

Number T2 seed produced: 33

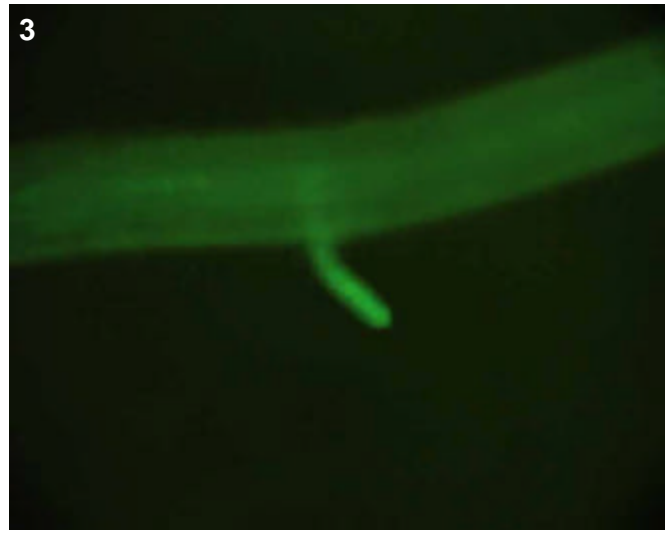
1



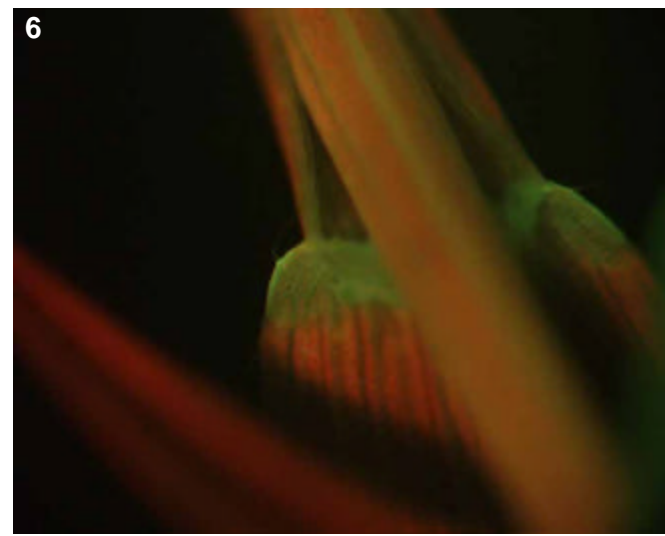
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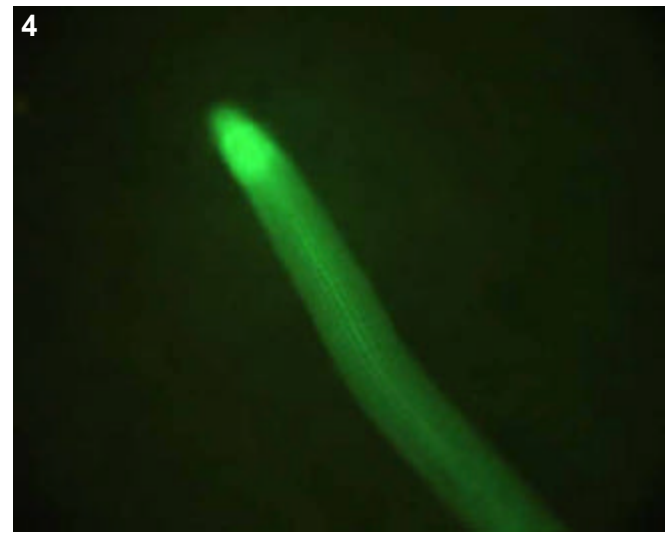
3



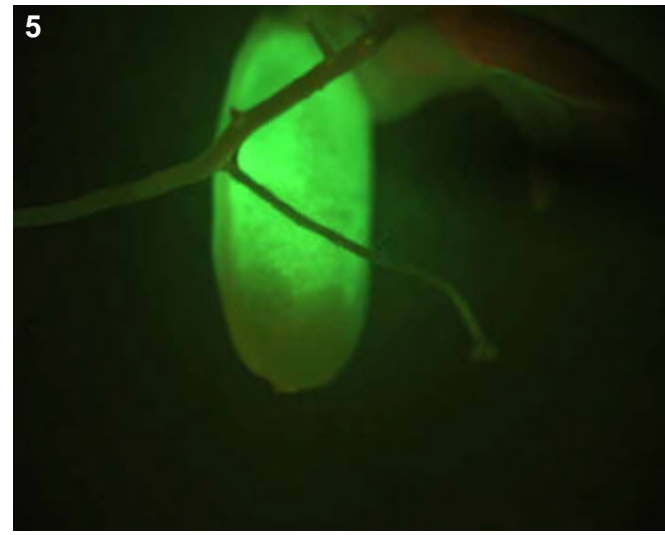
6



4



5



T0 comments

T1 seed comments

3/5 seeds show this pattern, perhaps it is the coleorhiza but too early to tell.

T1 seedling comments

Bright, perhaps epidermal, expression in crowns and lats. More bright near root cap. Also shoot expression in collar and shoot vascular.

Genotype: AQW B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-4
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

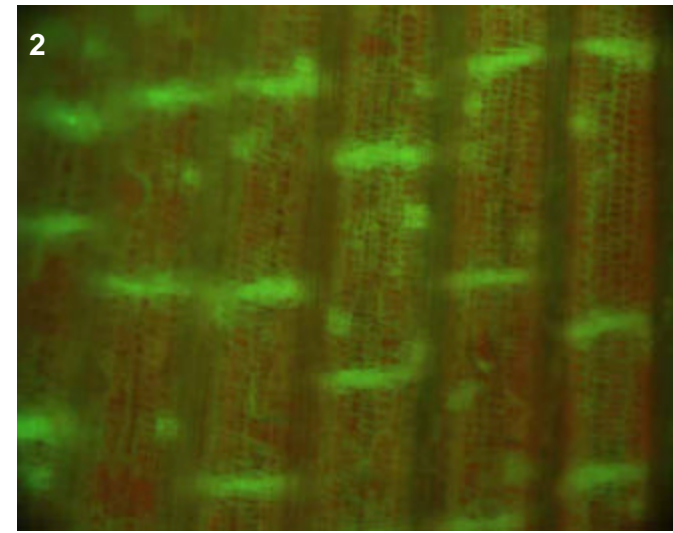
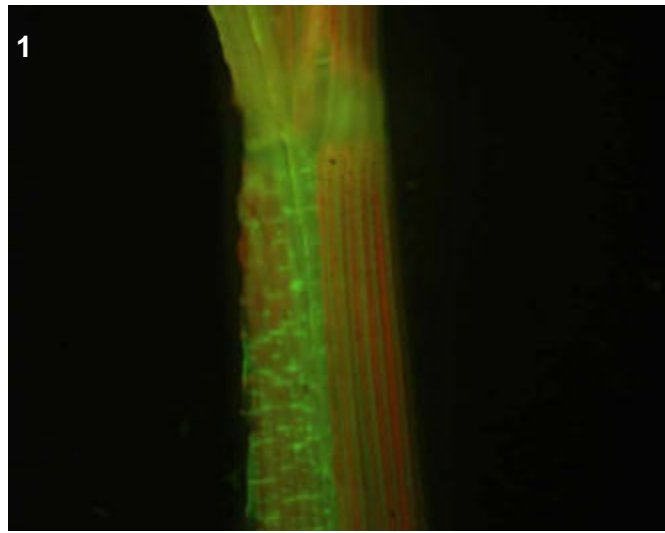
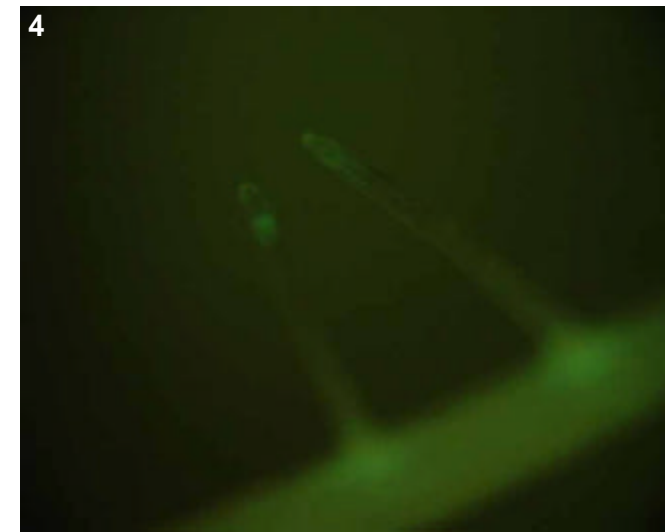
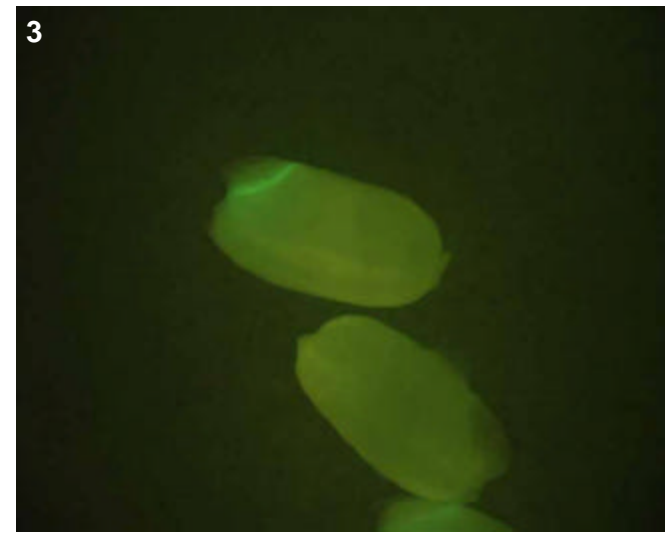
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal? YES

Number T2 seed produced: 3



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Picture 4 shows the interesting pattern observed in the roots, with expression observed in the elongation zone and emergence of lateral roots. Should confocal this one.

Genotype: AQW D07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-9
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

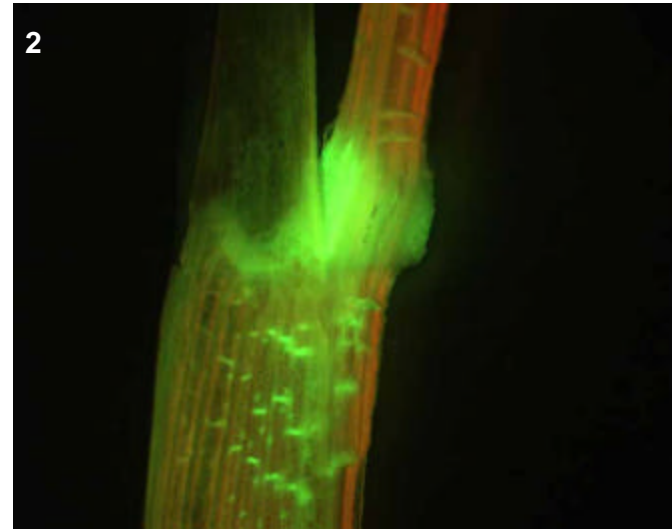
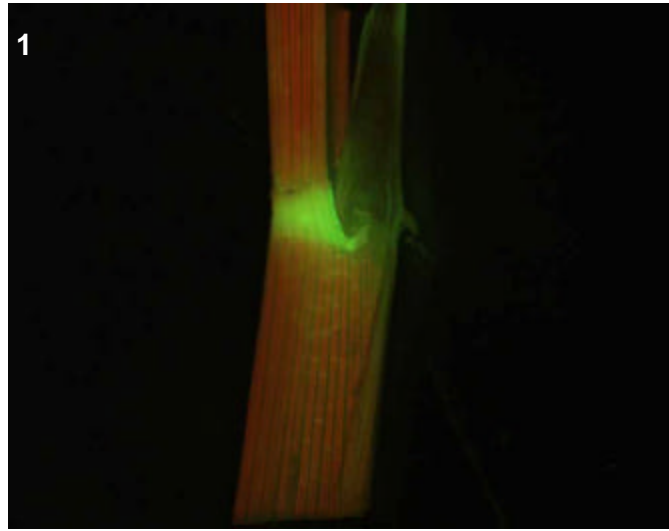
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 8



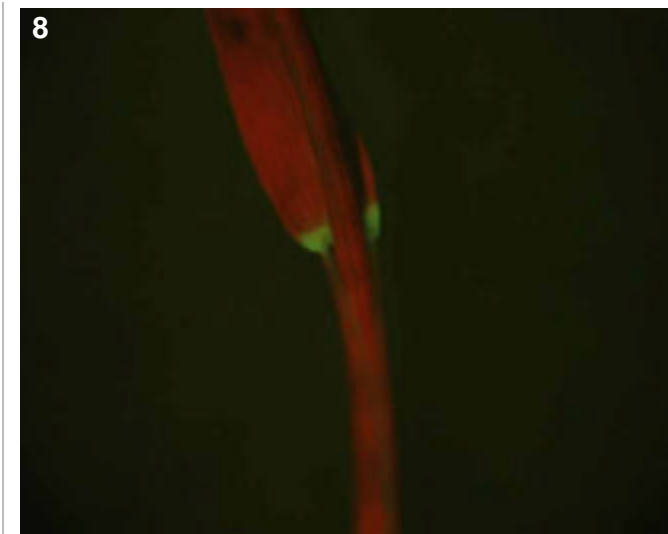
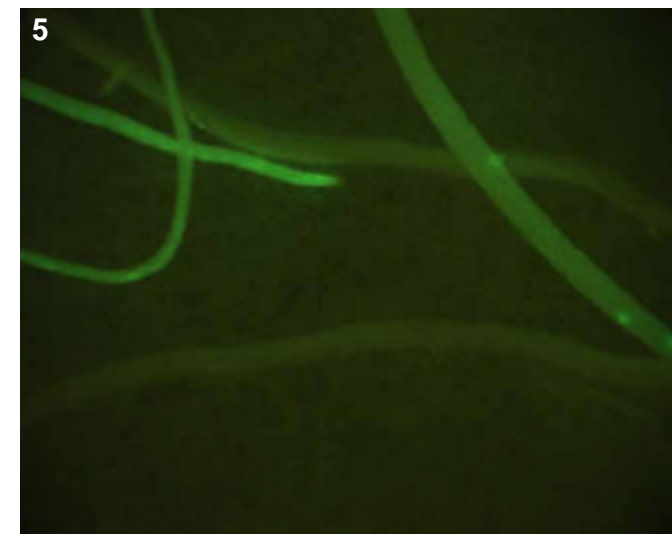
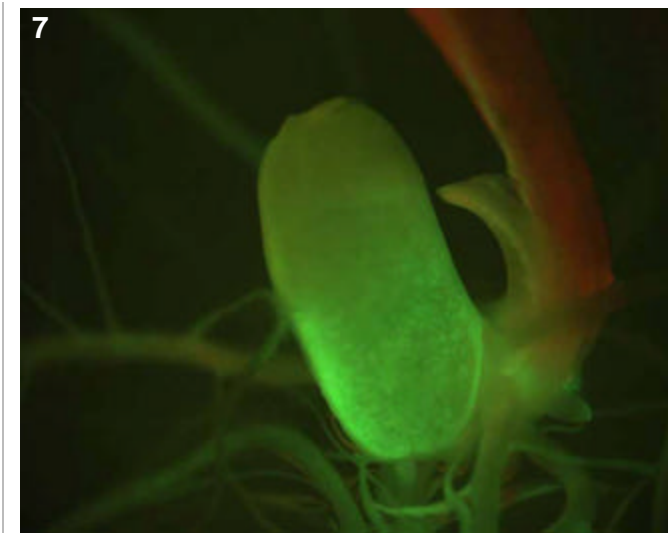
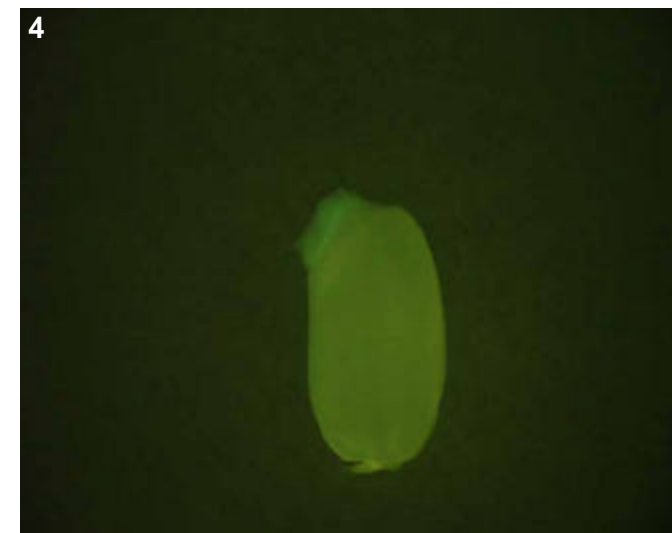
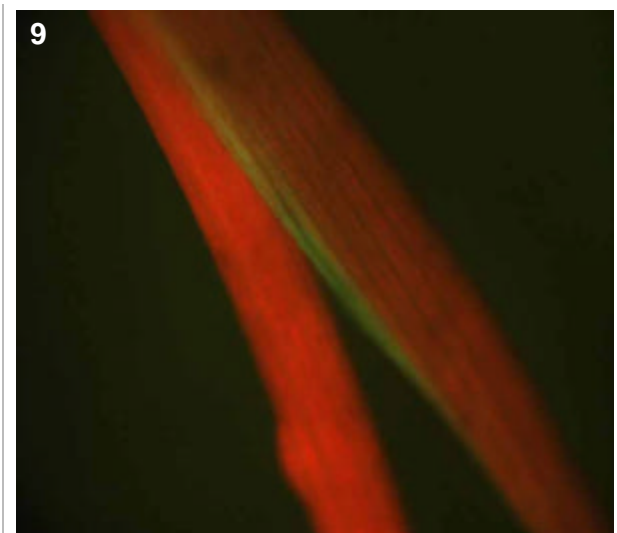
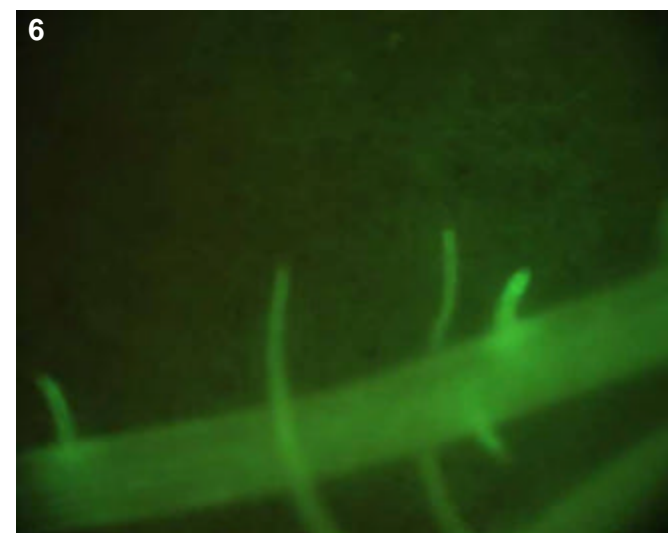
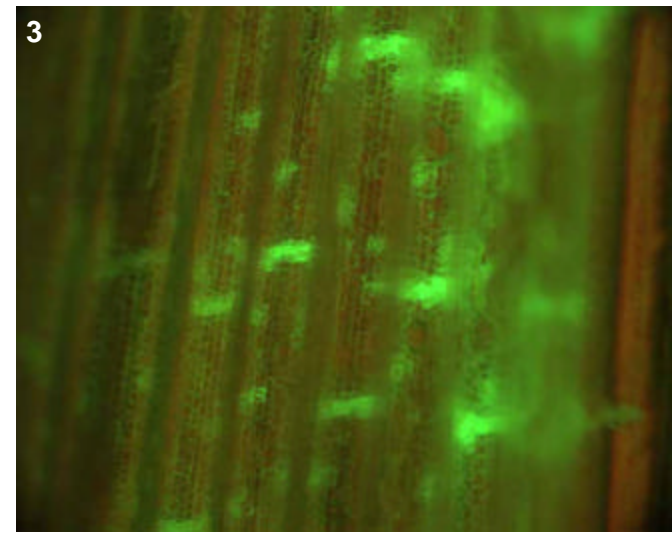
T0 comments

Very bright expression.

T1 seed comments

2/5 had expression in the embryo, or perhaps this is the coleorhiza

T1 seedling comments



Genotype: AQX A08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-5
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

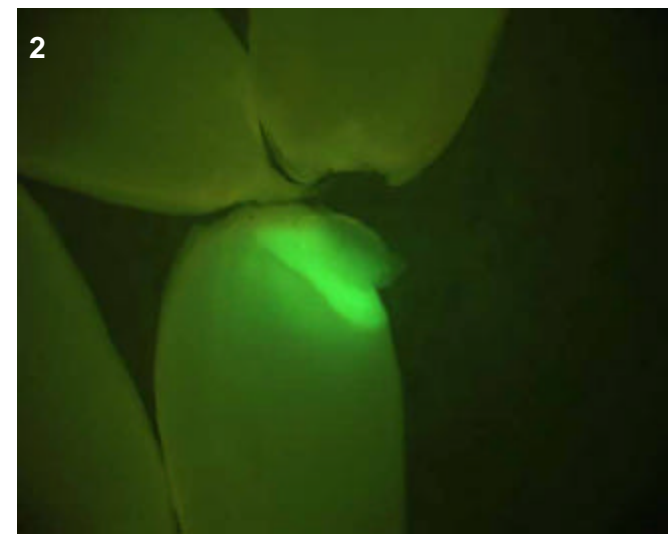
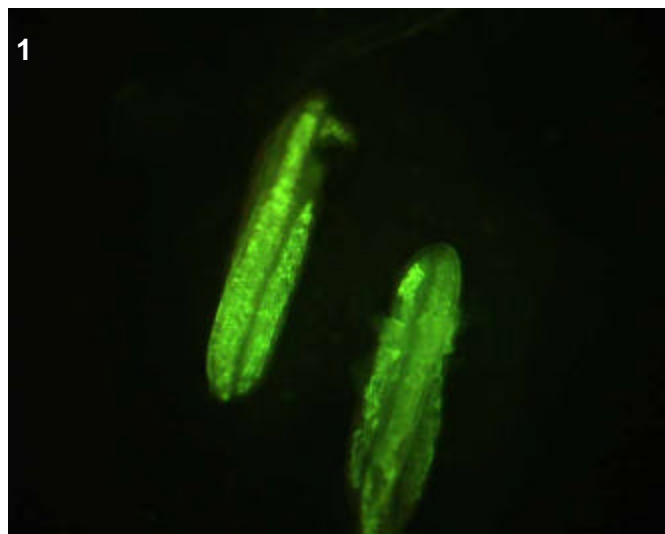
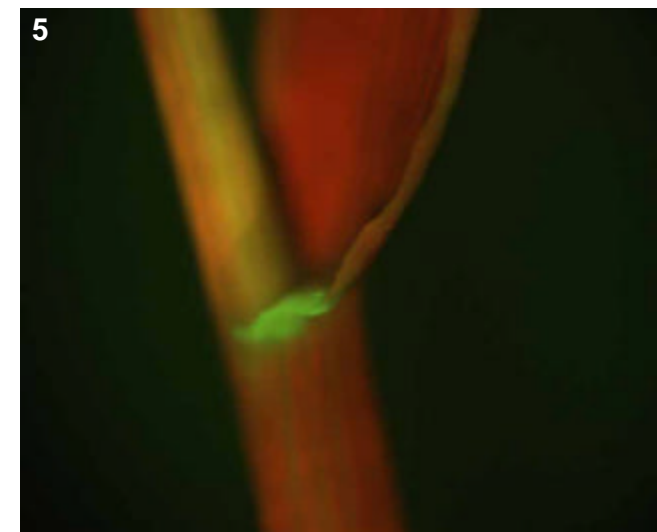
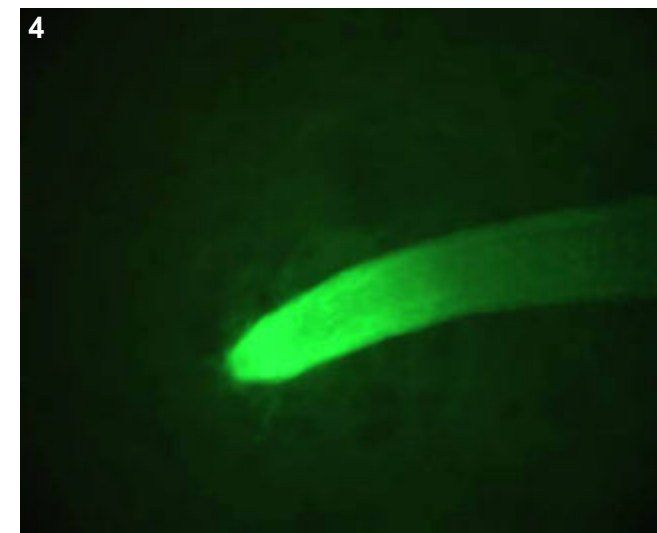
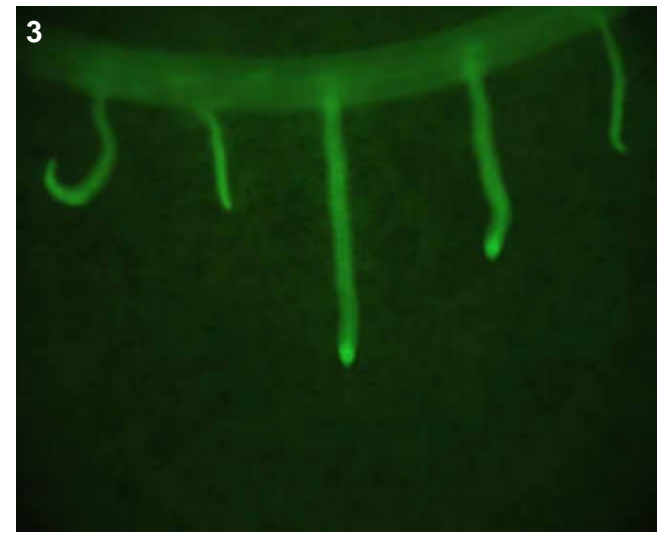
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 41



T0 comments

anther wall only

T1 seed comments

2/5 seeds showed bright embryo expression

T1 seedling comments

Root expression could be interesting--note the extremely bright lat root tips. Epidermal?

Genotype: AQX H02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

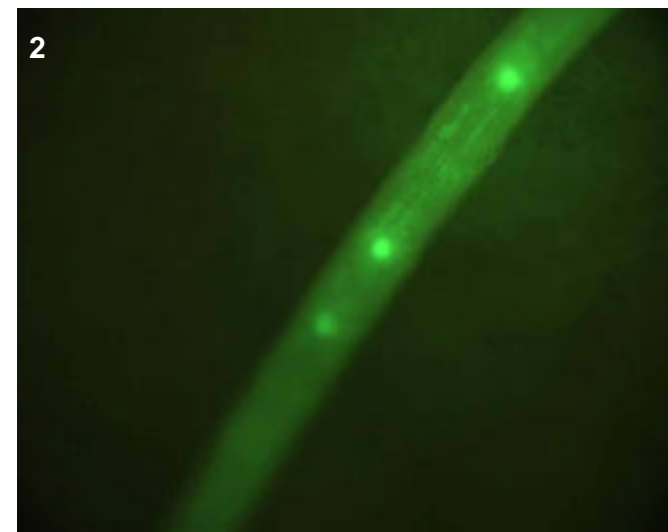
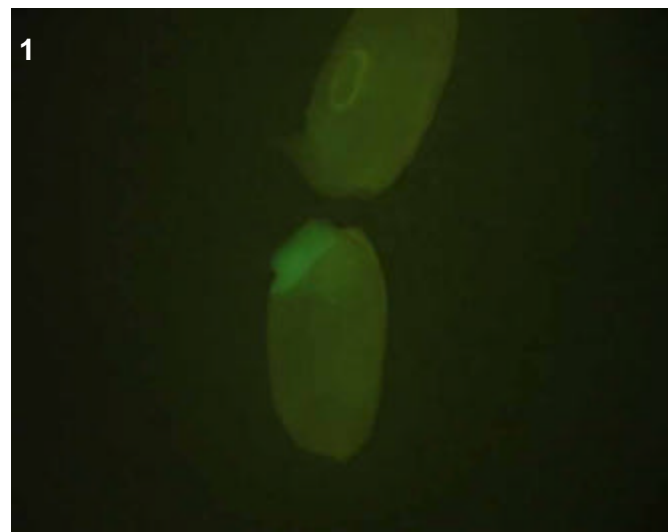
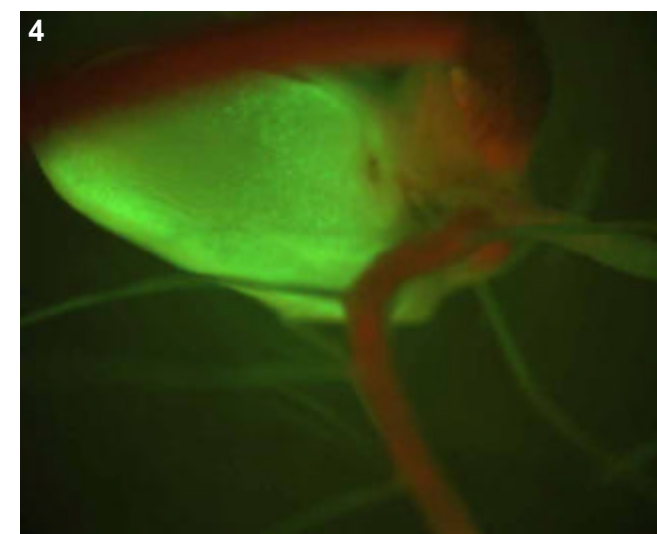
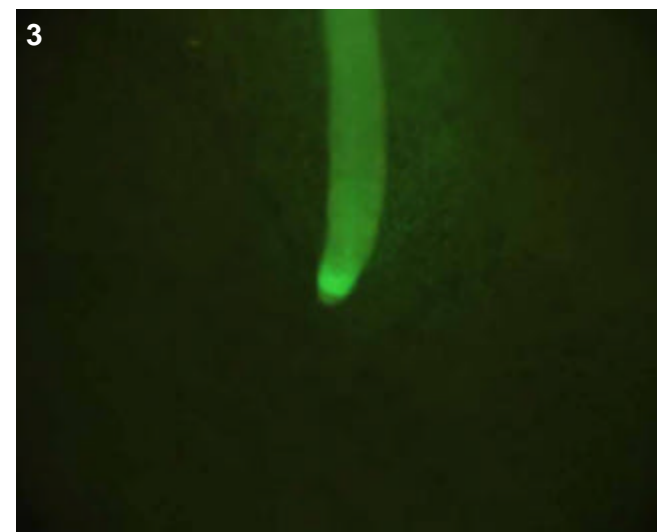
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 4



T0 comments

T1 seed comments

3/5 seeds show this pattern in either the embryo or coleorhiza.

T1 seedling comments

Genotype: AQY H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

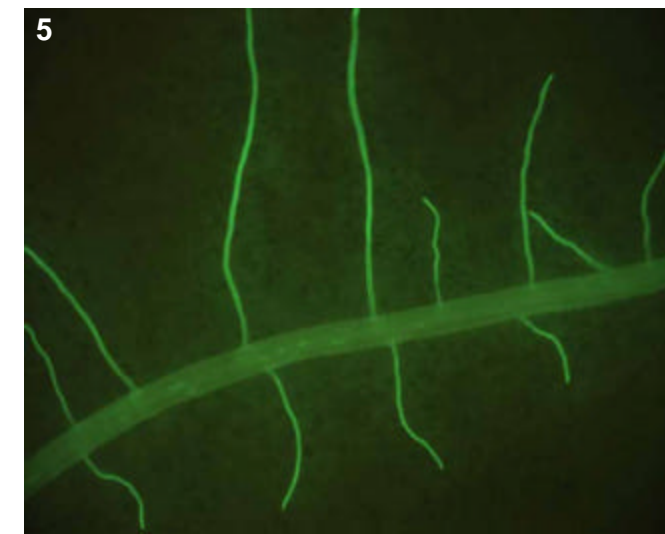
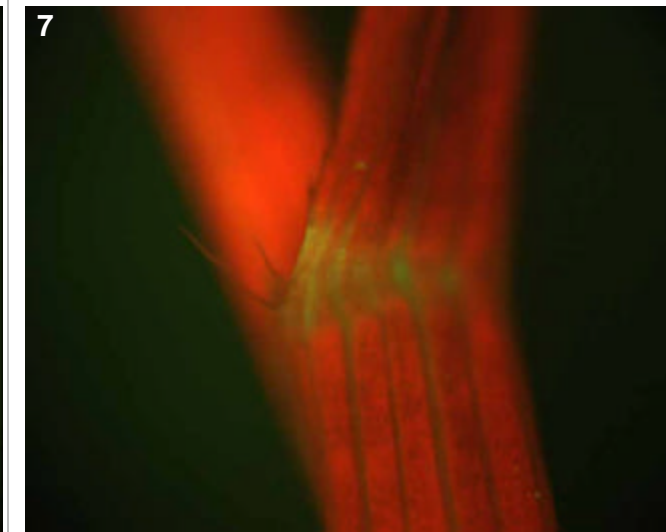
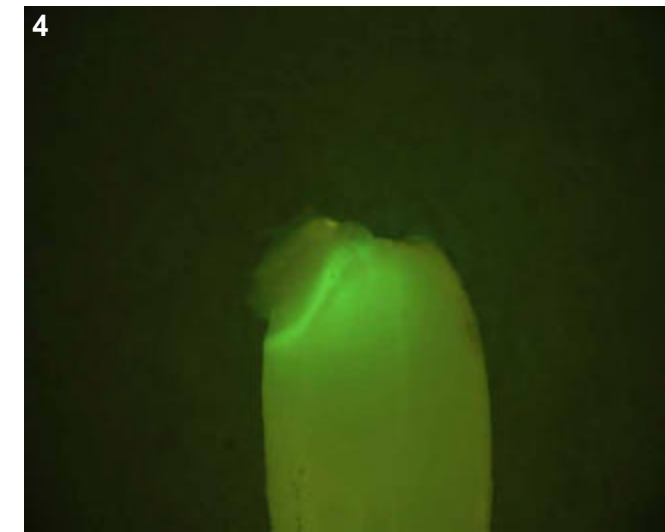
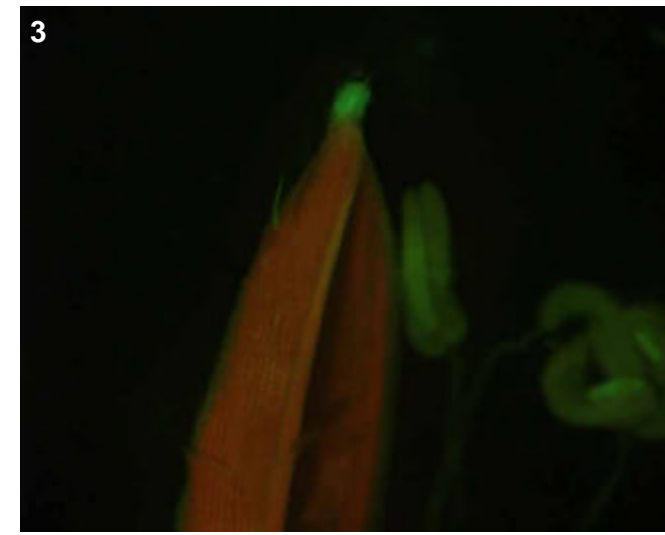
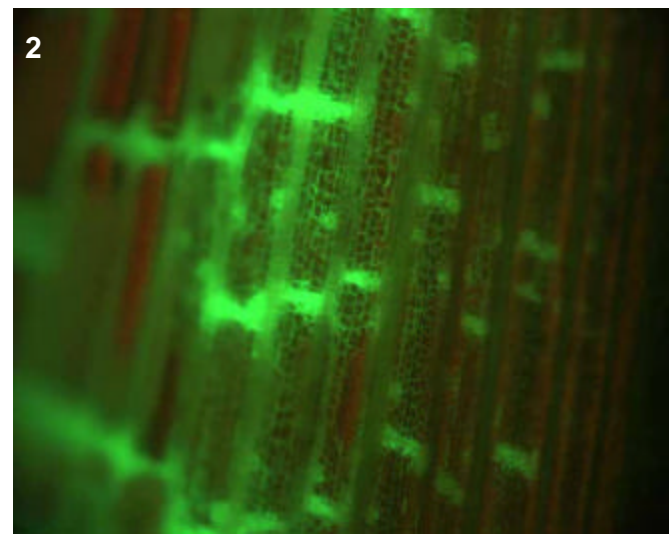
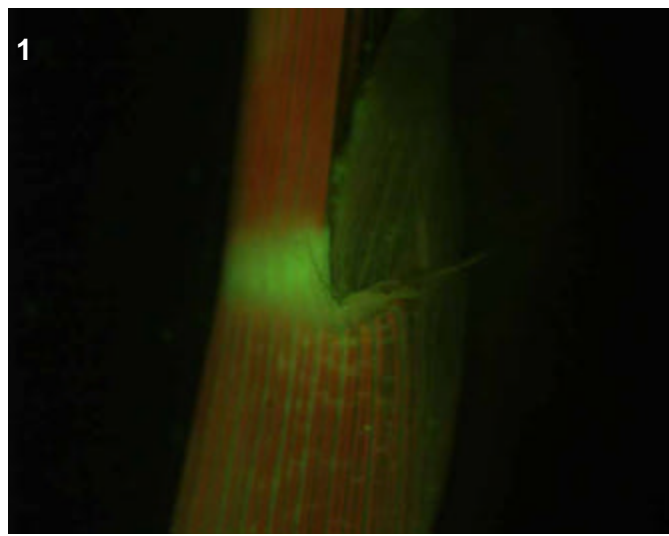
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 12



T0 comments
 Bright expression in collar, sheath vascular and the floral tip.

T1 seed comments
 3/5 seeds showed this pattern

T1 seedling comments
 Only faint expression in collar, note the especially bright expression in tips of roots (pic 6). Perhaps epidermal?

Genotype: AQZ C06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

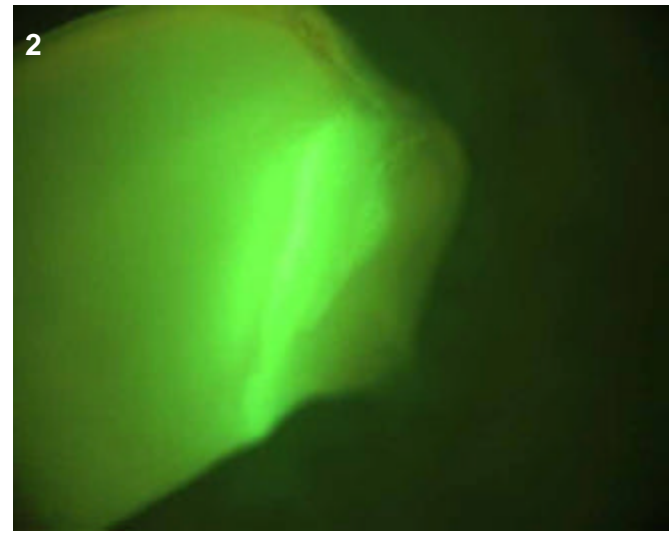
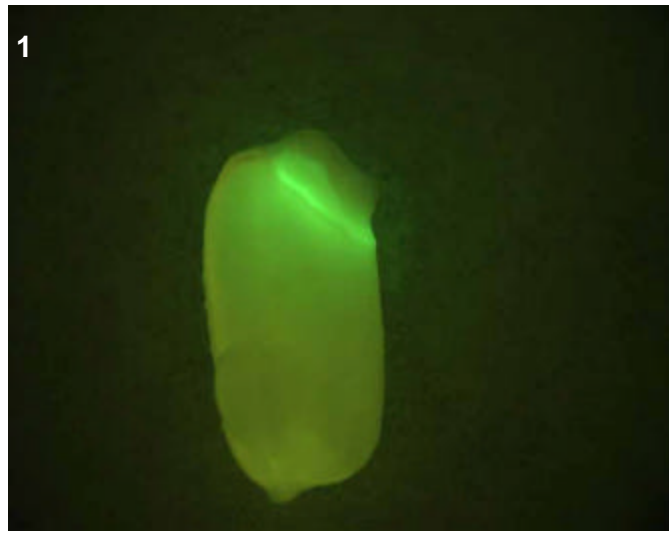
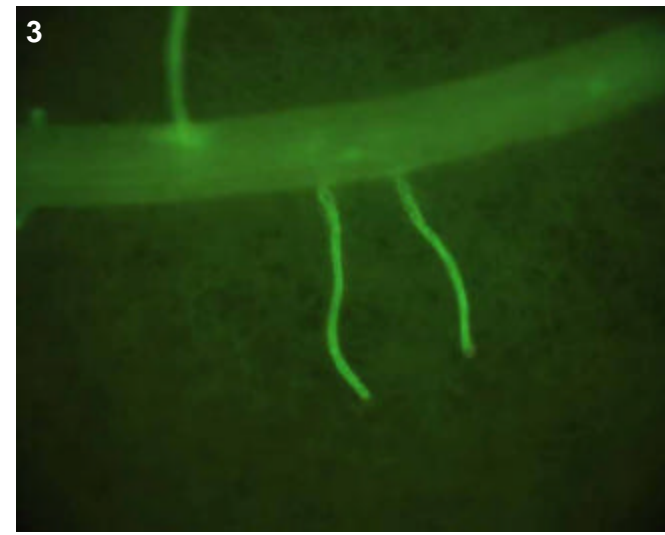
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 2



T0 comments

T1 seed comments

3/5 seeds show this pattern, weak expression.

T1 seedling comments

Bright expression in roots, perhaps vascular? Also shoot vascular expression.

Genotype: AQZ F11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-5
 T1 seed/seedling: 6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

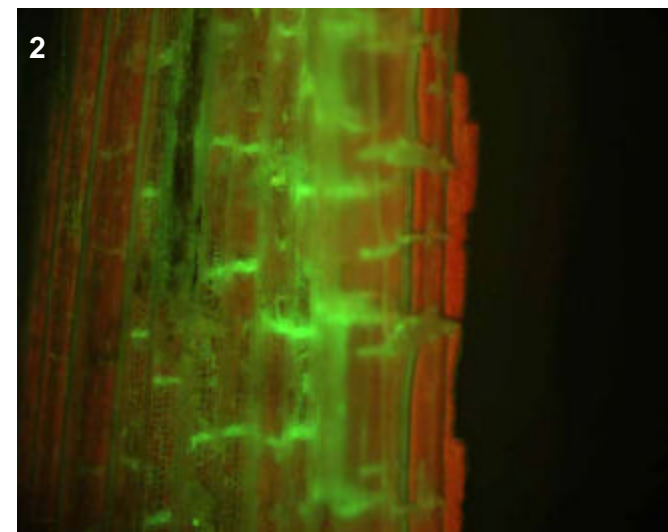
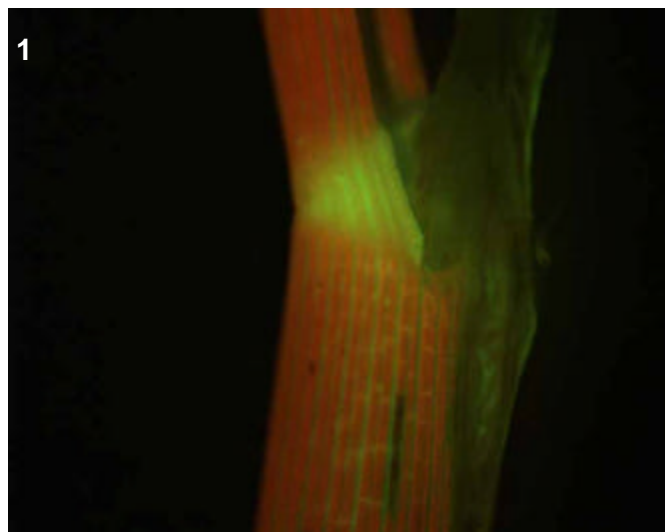
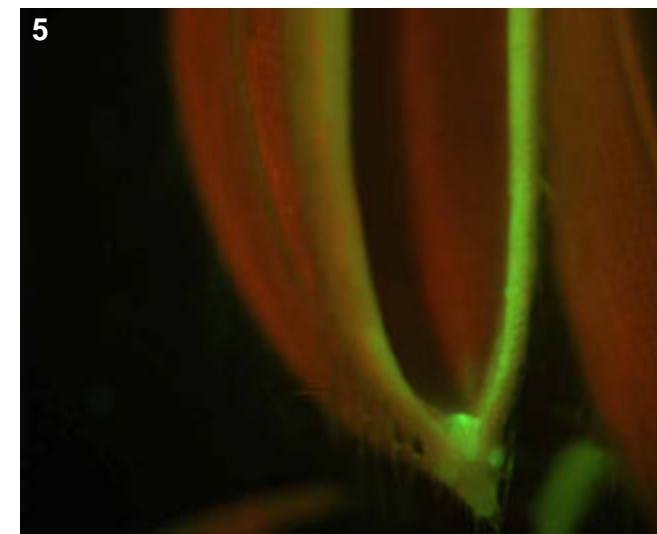
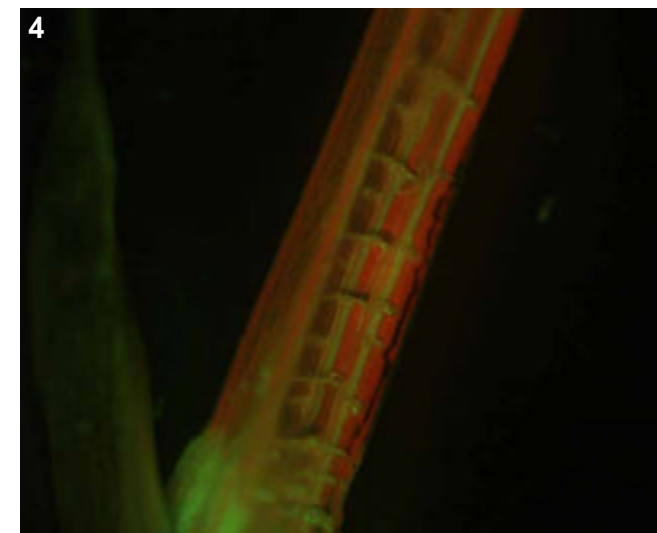
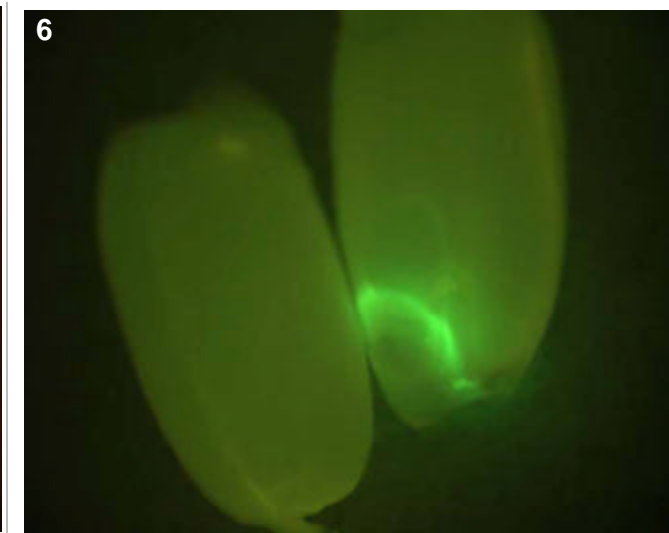
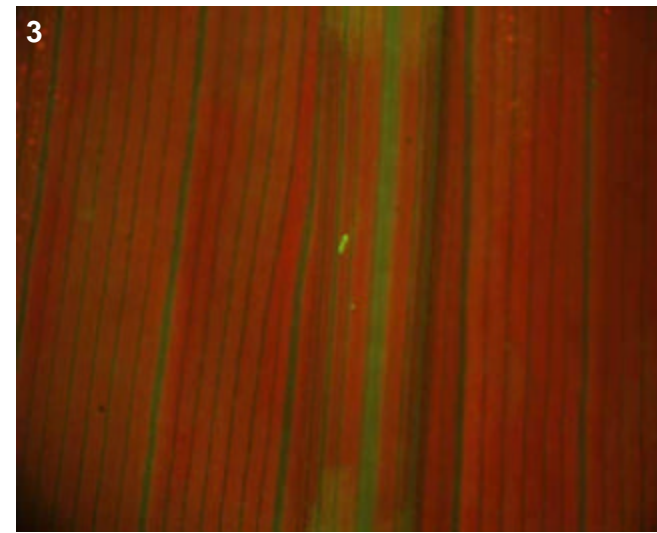
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 plants

Confocal?

Number T2 seed produced: 2



T0 comments

Strong vascular line

T1 seed comments

3/5 showed the pattern in pic 6

T1 seedling comments

Genotype: ARA A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

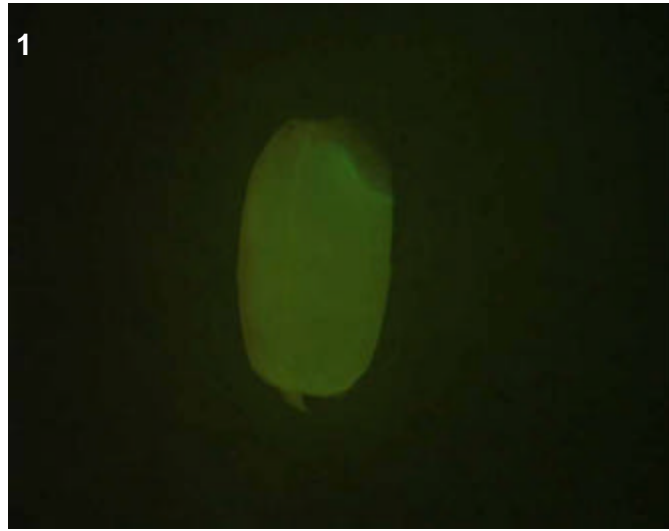
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced: 9



T0 comments

T1 seed comments

2/5 seeds showed this pattern.

T1 seedling comments

Genotype: ARA F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-3
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

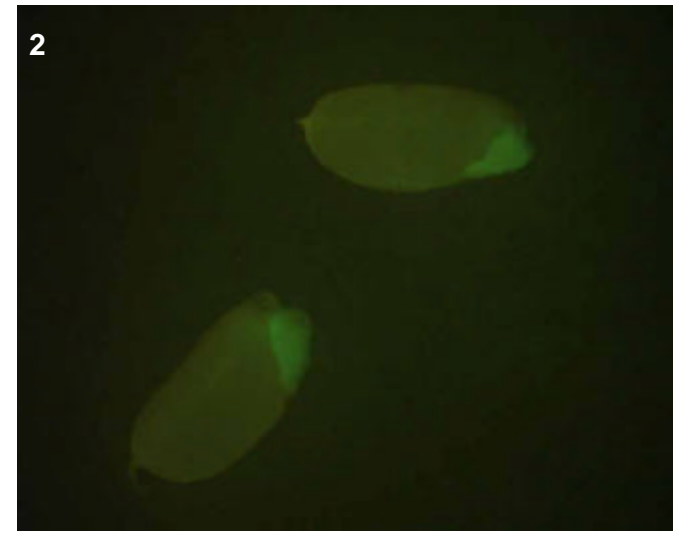
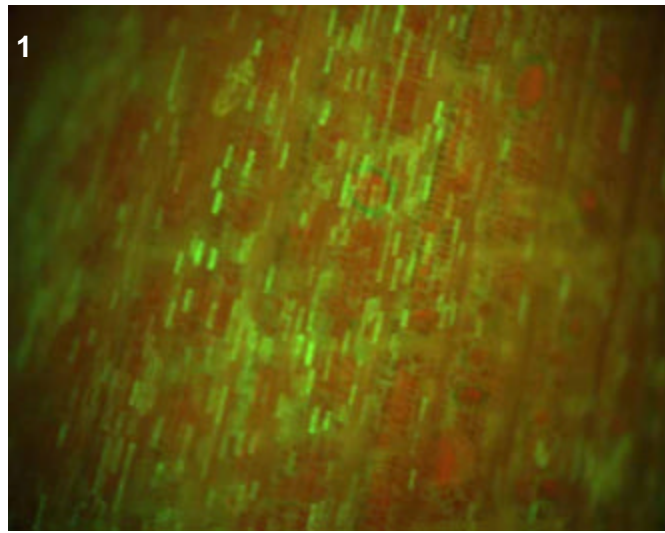
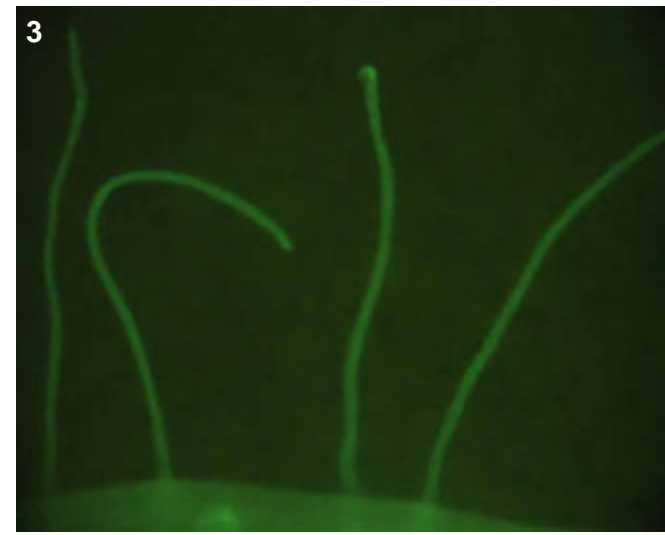
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 3



T0 comments

Maybe scattered cells in sheath vascular?

T1 seed comments

4/5 seeds showed bright expression in the embryo region, maybe the coleorhiza too.

T1 seedling comments

Perhaps epidermal expression in the roots? No picture taken of shoot expression.

Genotype: ARB A02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 3 plants

Confocal?

Number T2 seed produced:

1



T0 comments

T1 seed comments

1/5 seeds showed weak scutellum expression. In pic 1, it is the seed on the right.

T1 seedling comments

Genotype: ARC A03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

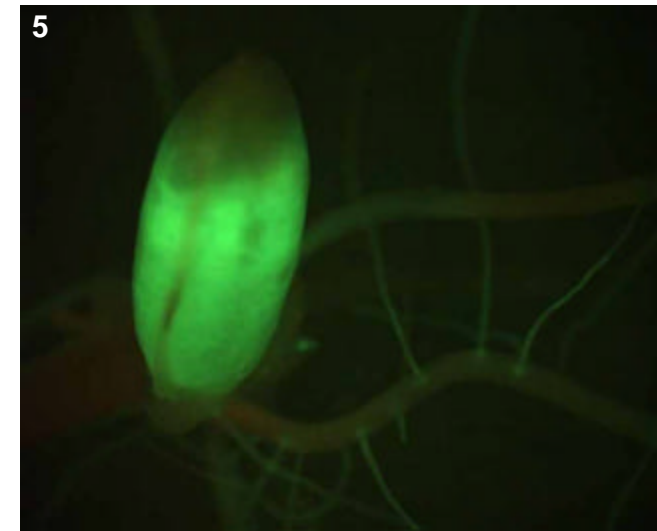
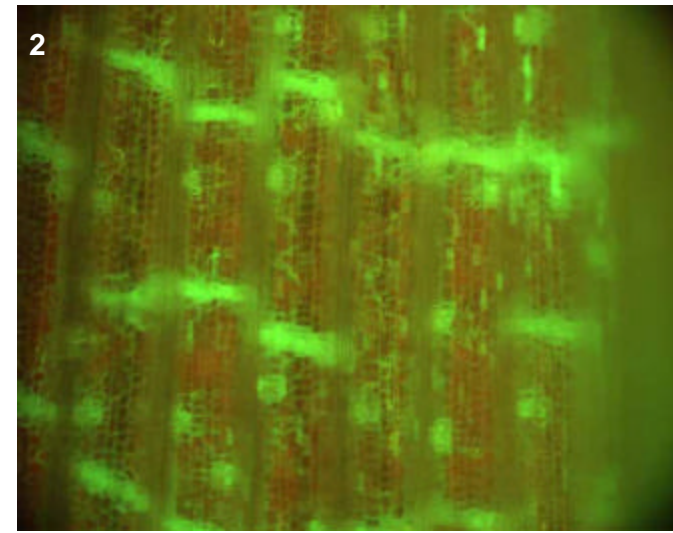
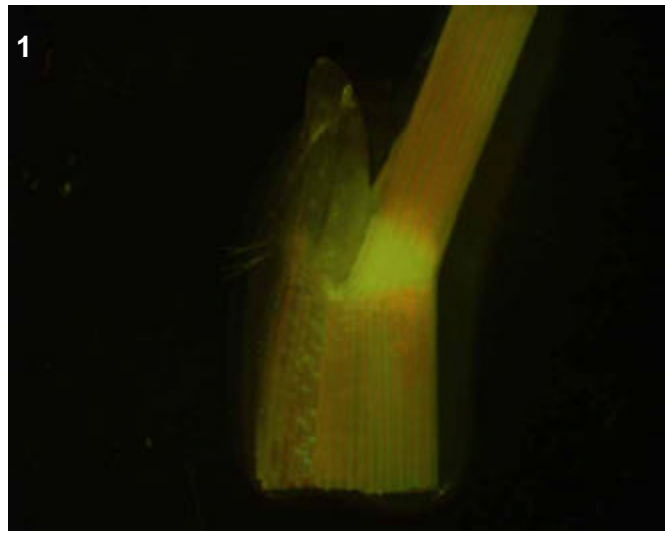
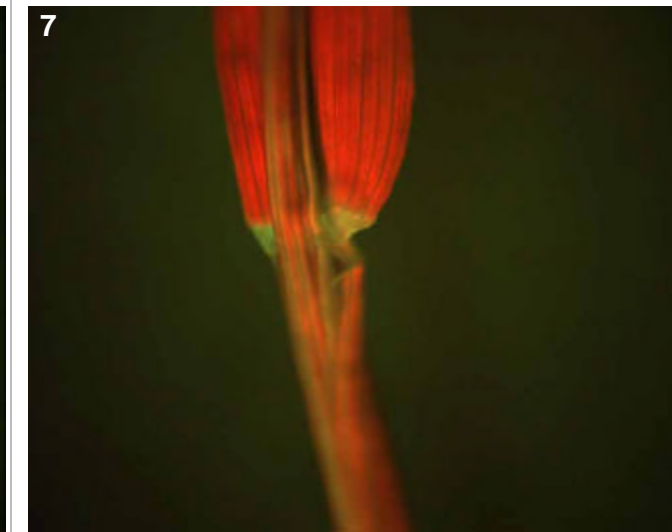
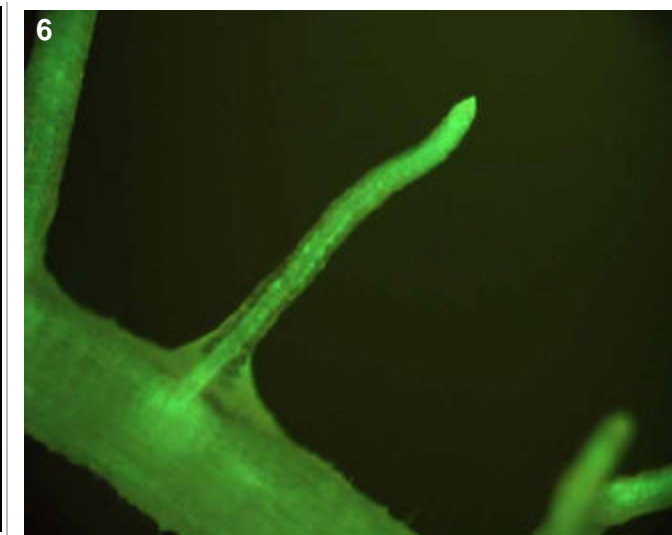
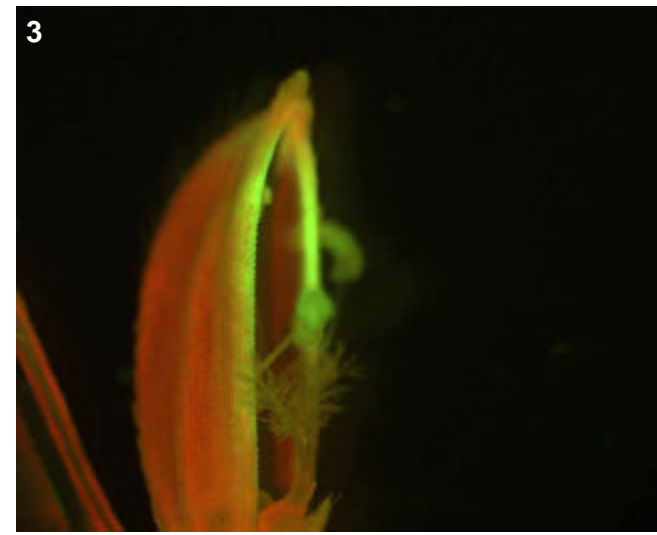
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 17



T0 comments

T1 seed comments
 1/5 had expression

T1 seedling comments
 Bright digesting endosperm (pic 5).

Genotype: ARC A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-5
 T1 seed/seedling: 6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

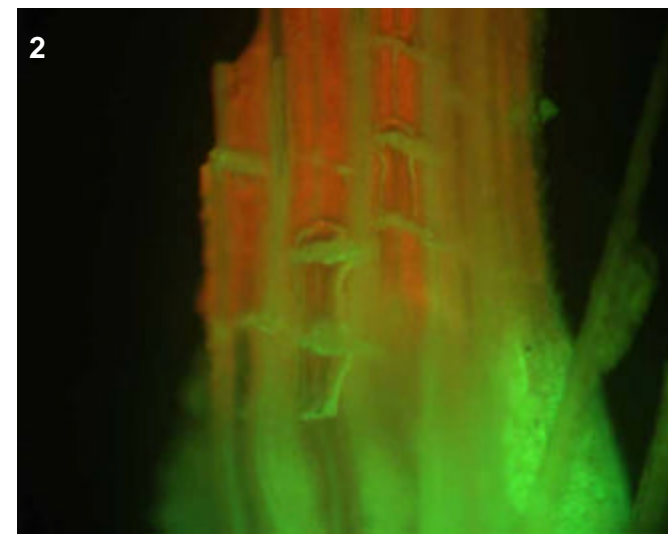
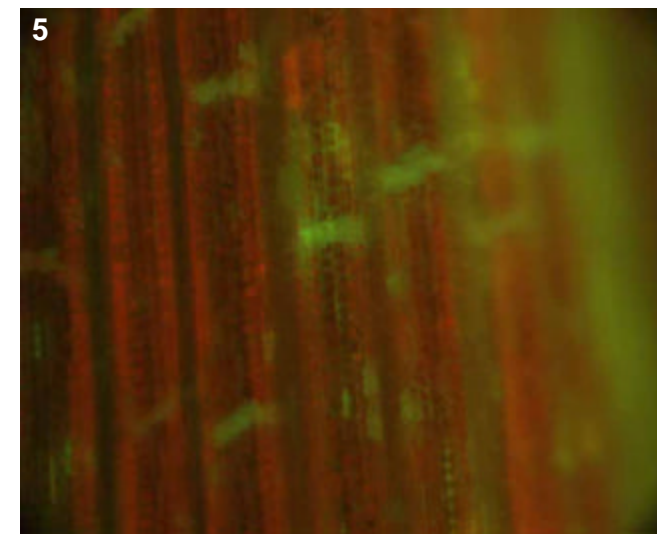
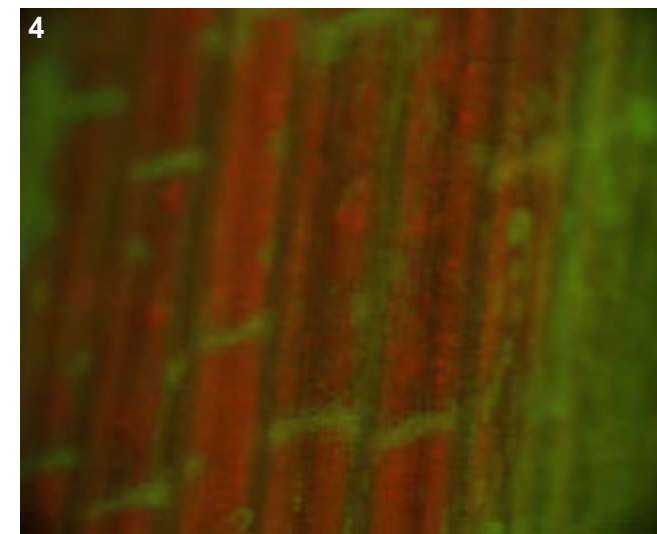
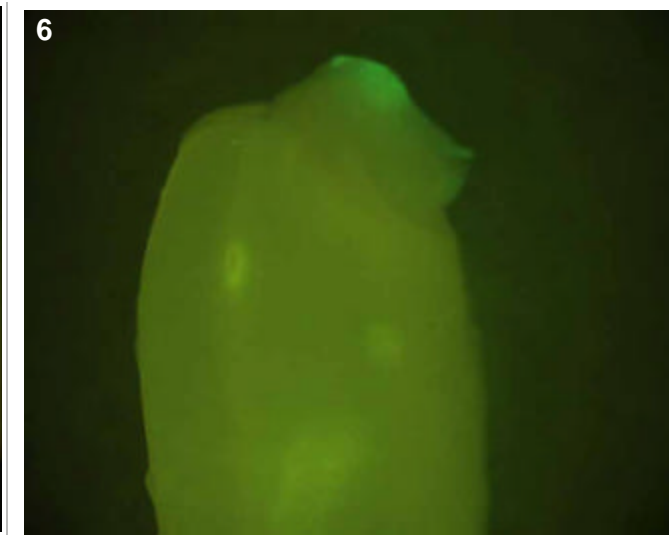
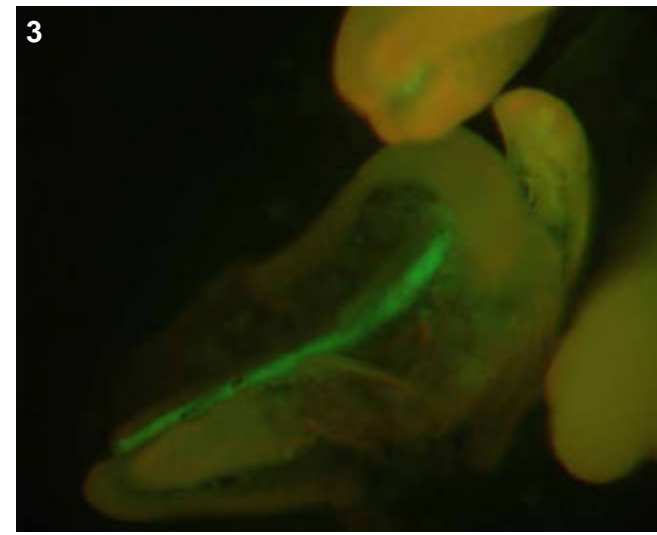
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 0



T0 comments

Interesting "stripe" in the anthers, where the filament enters (see pic 3). Must be filament vascular expression inside the anther. In older flowers, there may be vascular expression throughout the entire filament.

T1 seed comments

1/5 had expression

T1 seedling comments

Expression quite general throughout the root, and vascular in the shoot. No pictures were taken of the seedlings. The 1 GFP+ seedling died after transfer to the greenhouse.

Genotype: ARC D06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-10
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

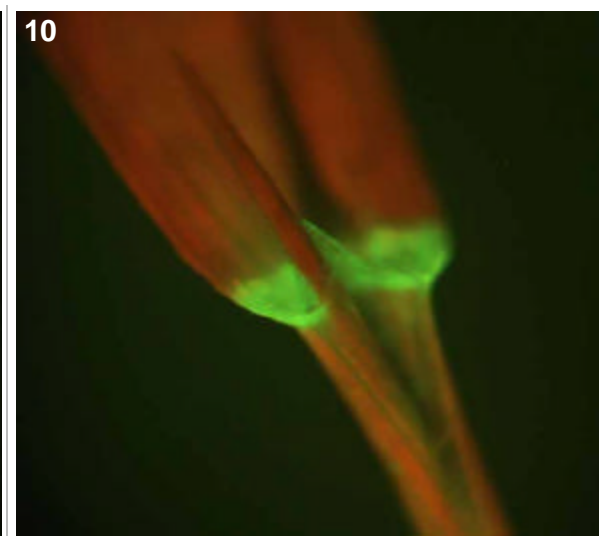
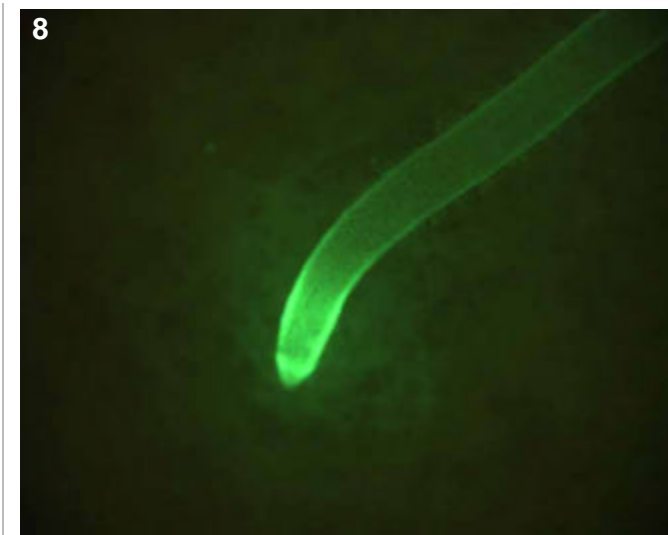
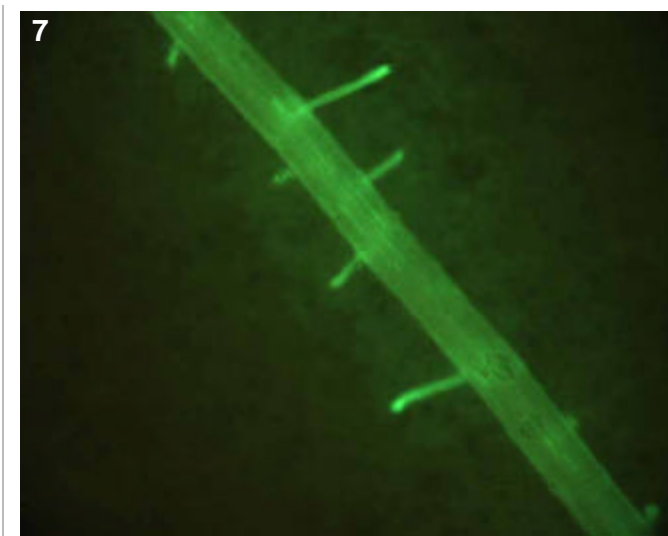
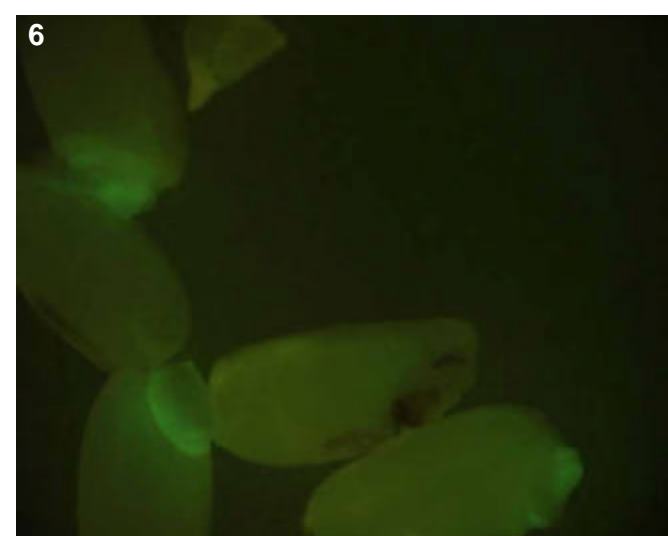
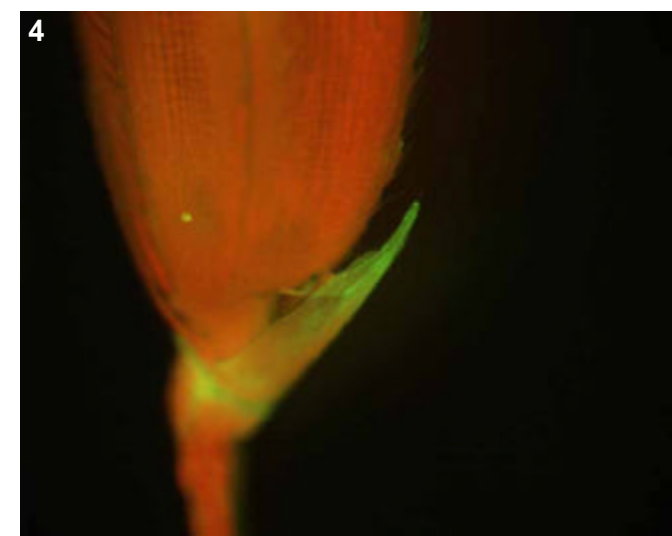
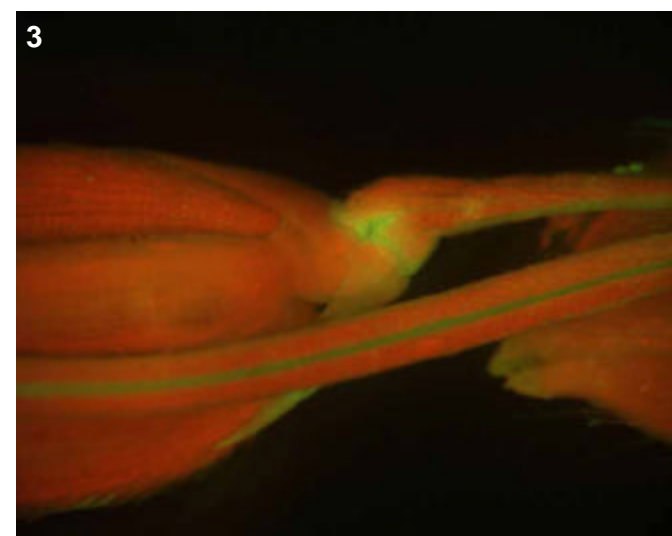
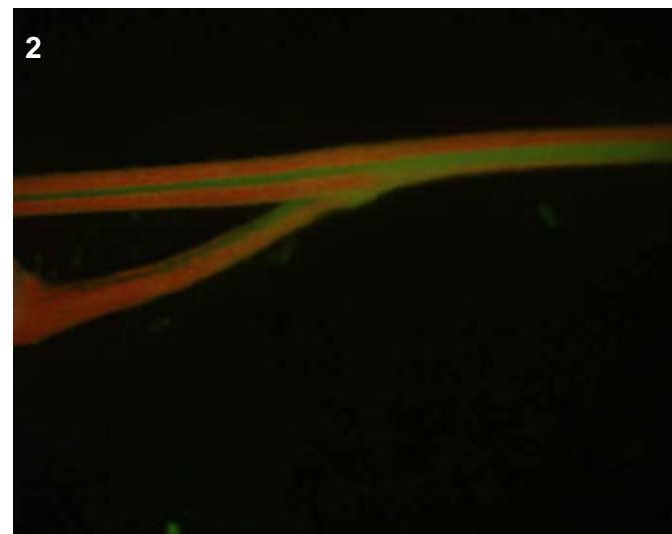
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 15



T0 comments

Scattered expression in cells of sheath. Bright vascular expression in the pedicel (pic 2) floral stem (pic 3) and sterile lemmas (pic 4).

T1 seed comments

3/5 seeds had expression. Two seeds looked like embryo, while the other looked like scutellum.

T1 seedling comments

Looks like bright epidermal expression in the roots (pics 7-8).

Genotype: **ARD B09**

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

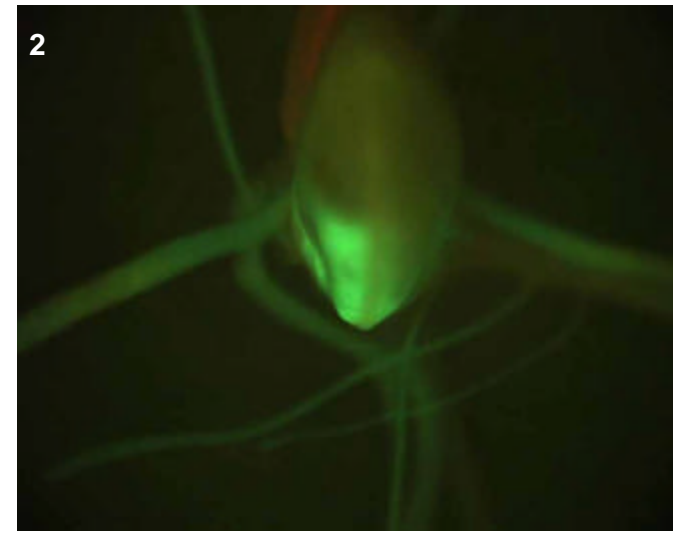
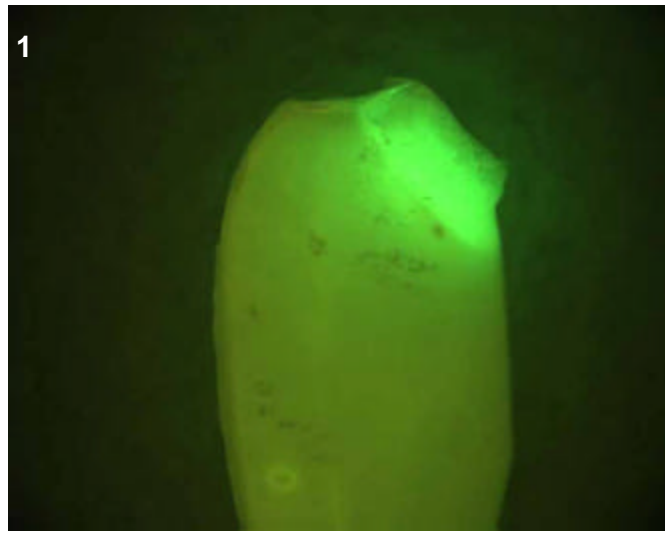
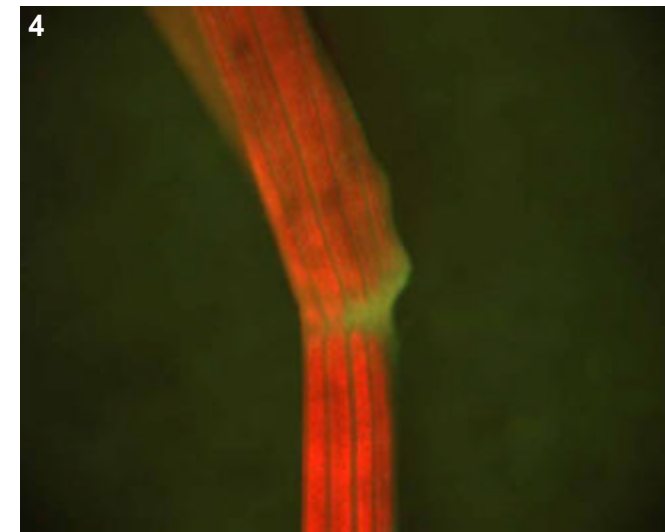
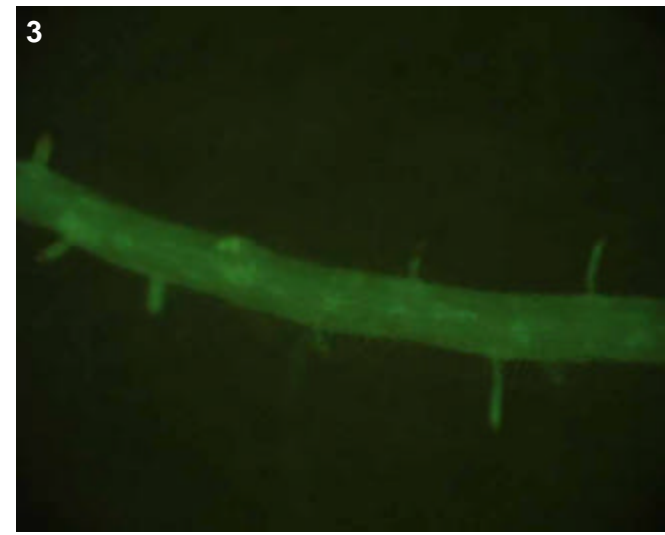
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 2



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Genotype: ARE B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

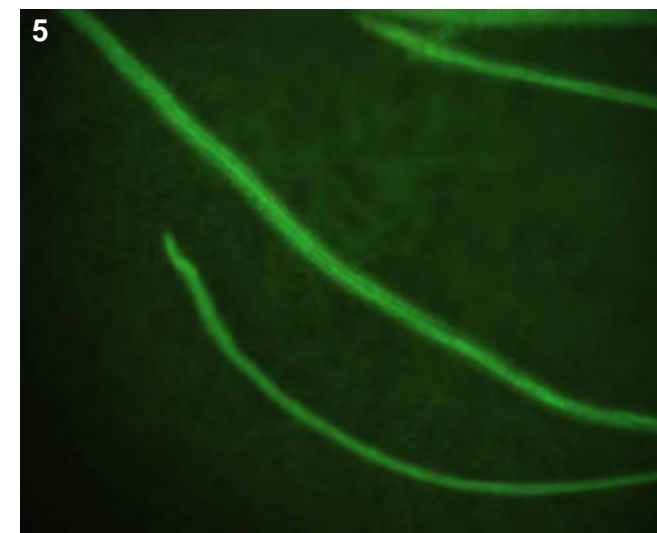
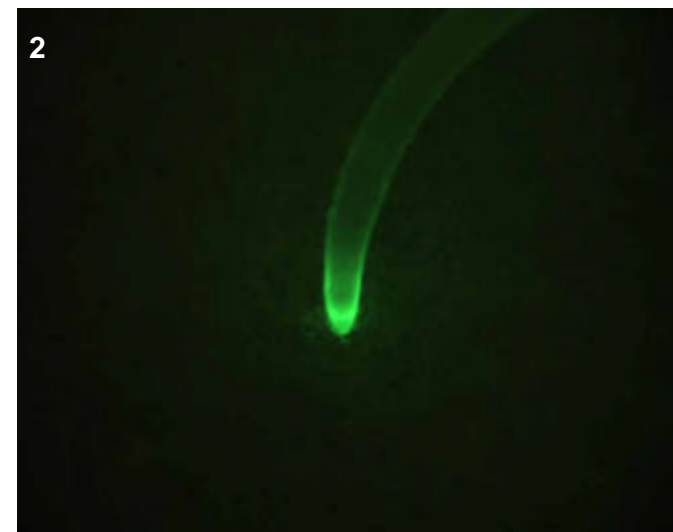
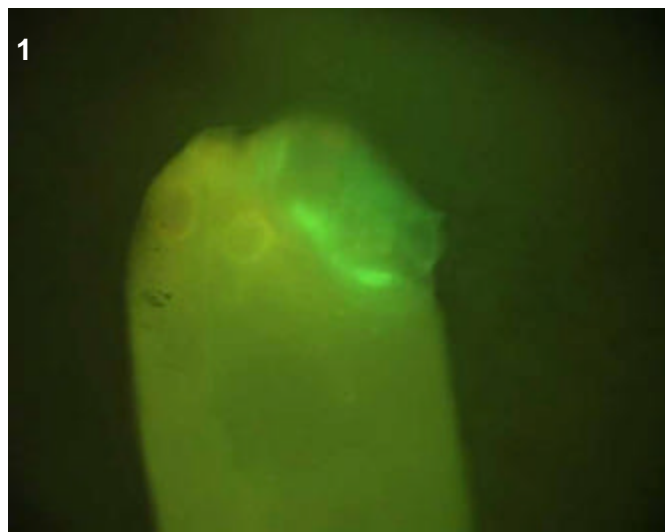
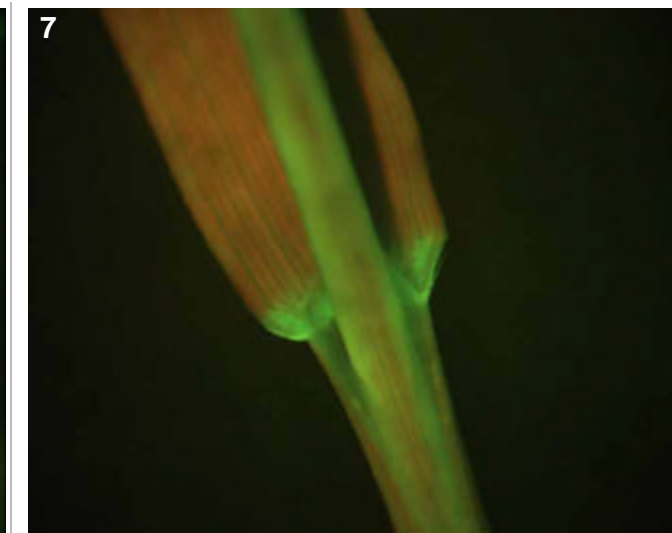
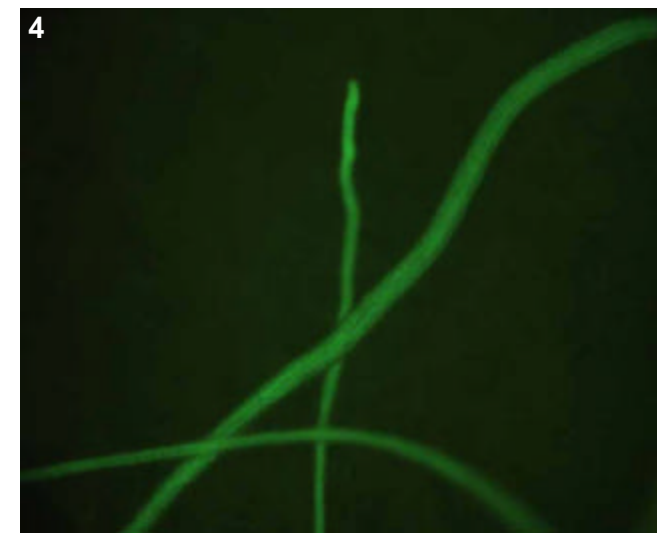
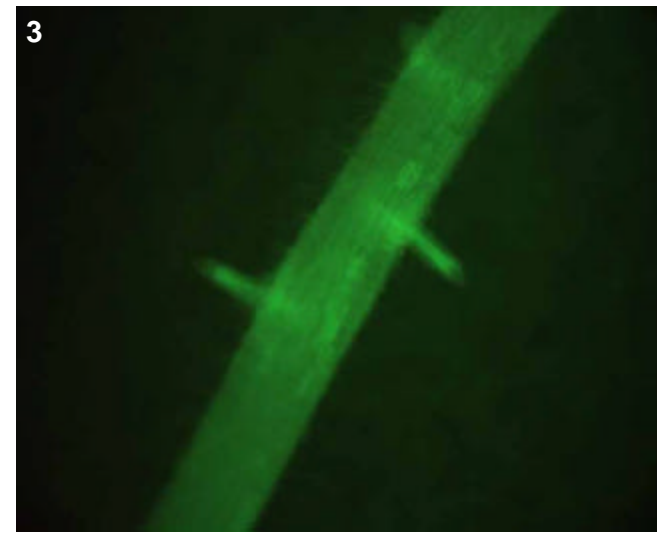
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 3



T0 comments

T1 seed comments

2/5 seeds had faint expression in the embryo

T1 seedling comments

Bright expression in the roots (pic 2-5) and shoot (pics 6-8). Perhaps there is epidermal expression not only in the root (pic 2), but also in the shoot (pic 7).

Genotype: ARE C11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

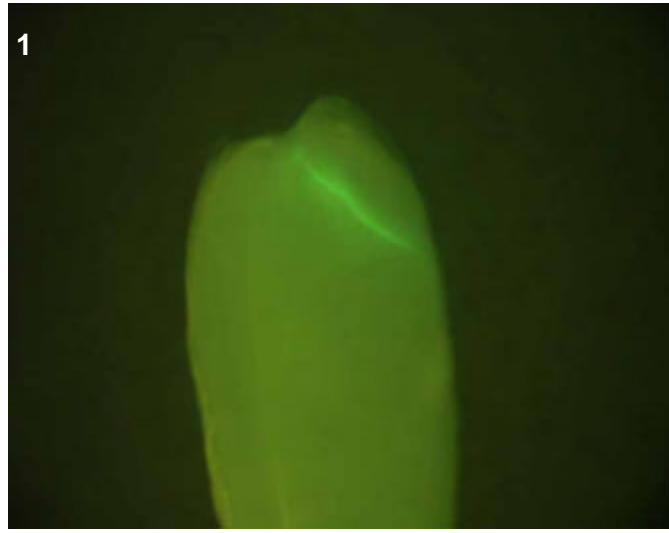
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced: 7



T0 comments

T1 seed comments

2/5 seeds had faint expression in scutellum, perhaps 4/5 but difficult to tell.

T1 seedling comments

Only three really small plants grew, so the negative result for seedling screen could be inaccurate.

Genotype: ARE E04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

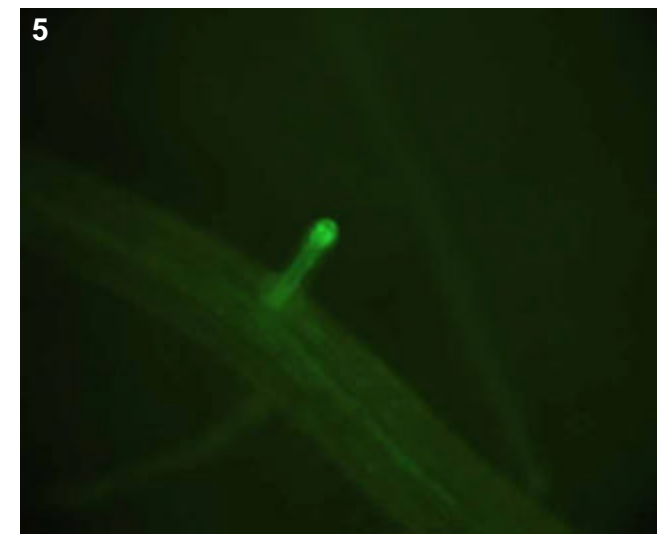
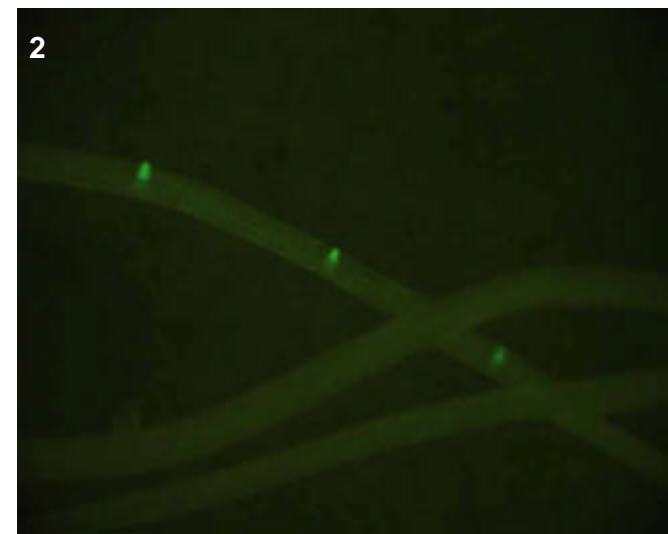
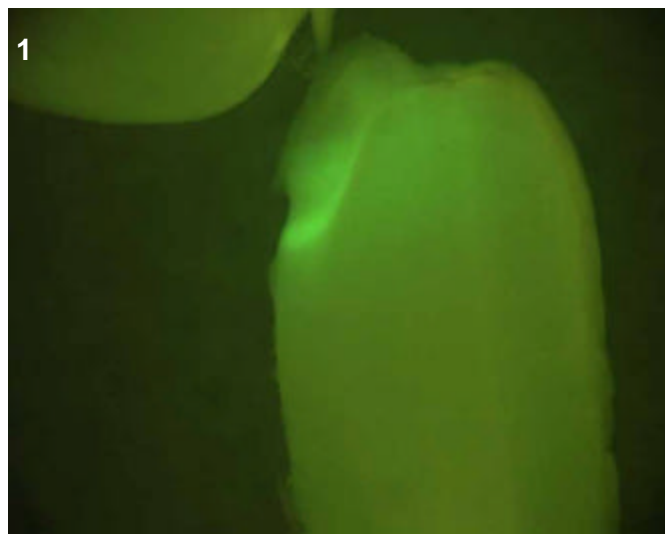
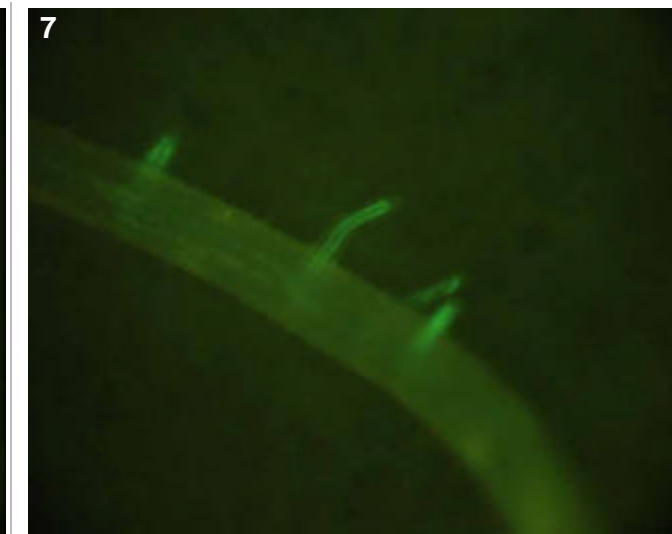
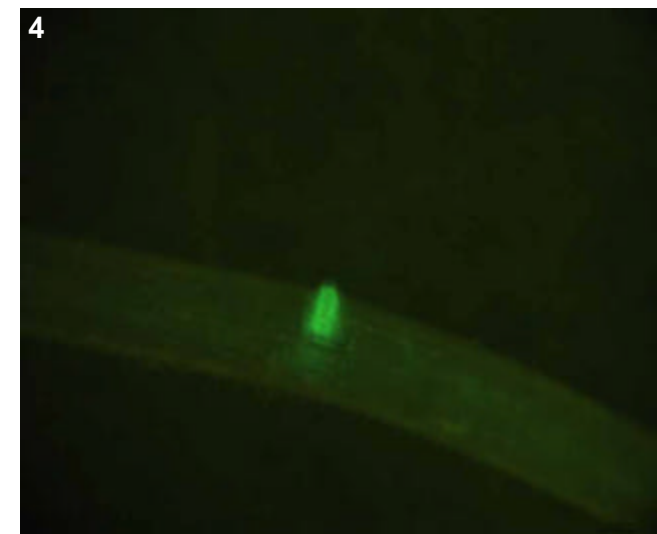
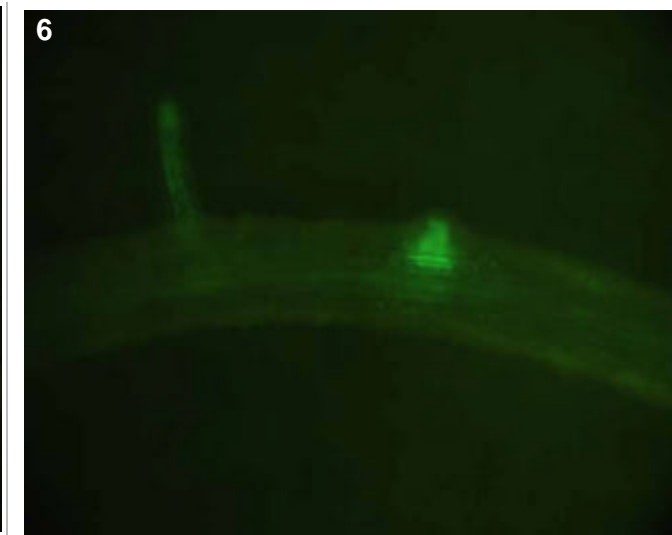
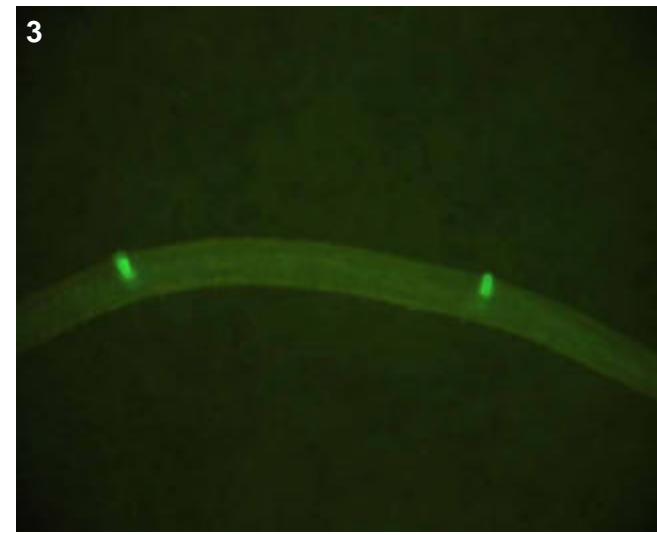
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal? YES

Number T2 seed produced: 12



T0 comments

T1 seed comments

2/5 seeds had medium expression in scutellum

T1 seedling comments

A great root-specific line. Expression only appears around one week, with the emergence of bright lateral roots (pics 2-4). Expression appears to be vascular in the lats (pic 5-7). Tips of some of the crown roots also show a bright point of expression close to the root apex.

Genotype: ARE E12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-9
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

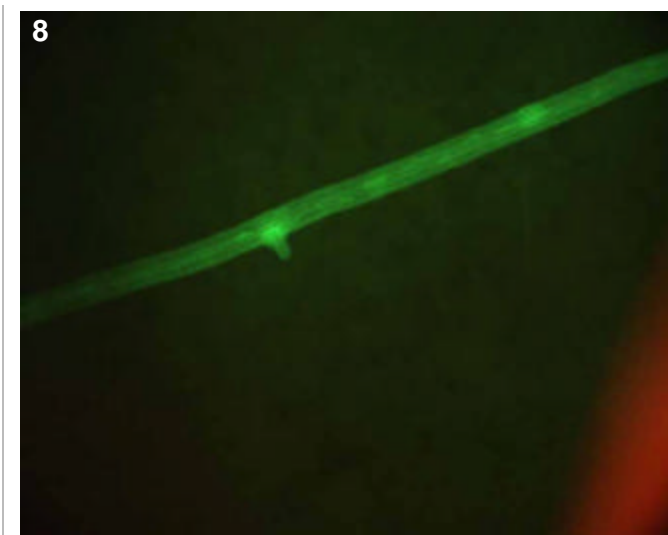
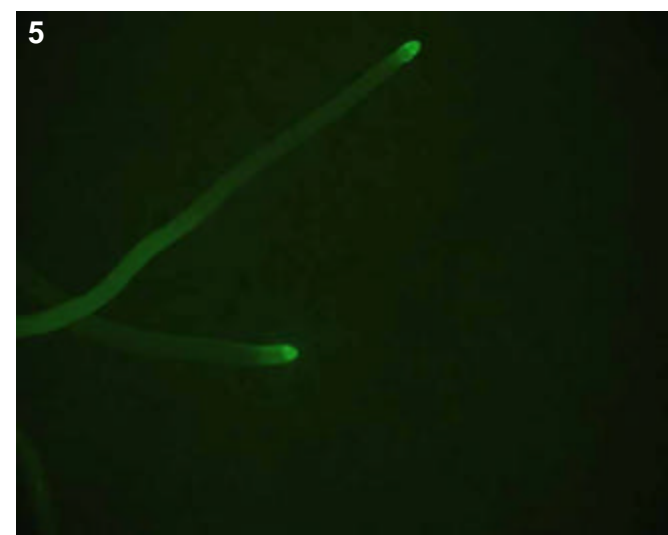
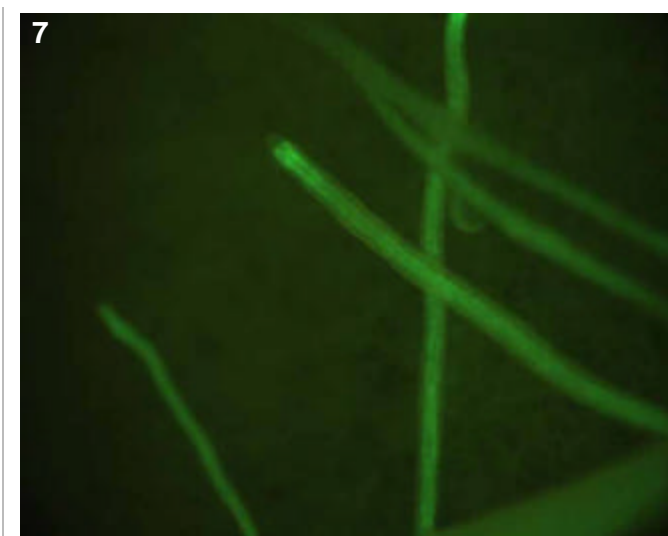
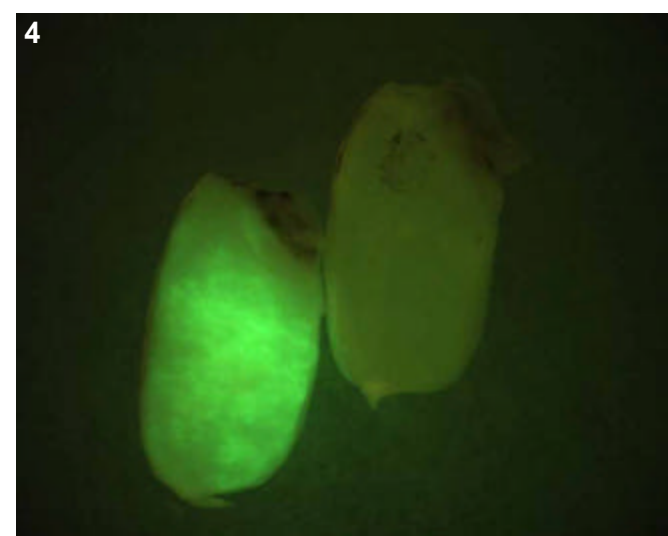
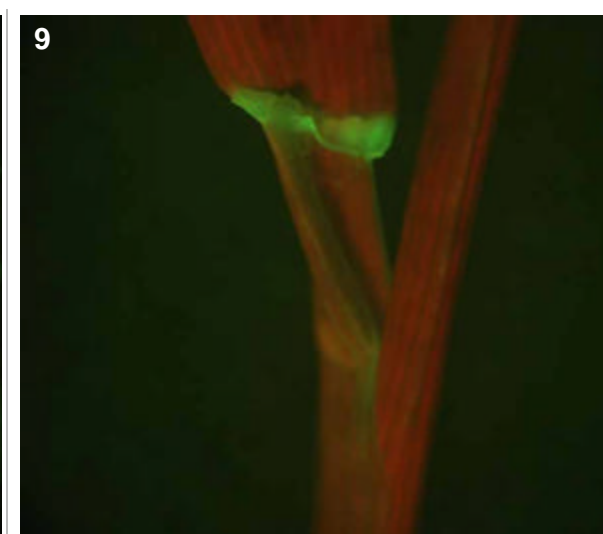
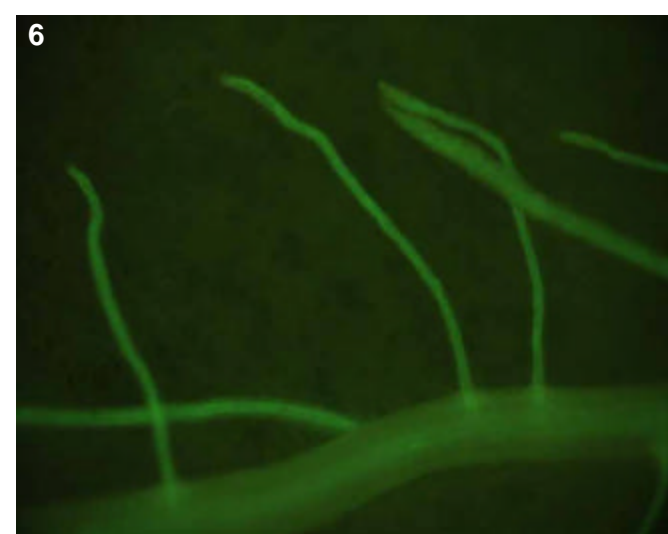
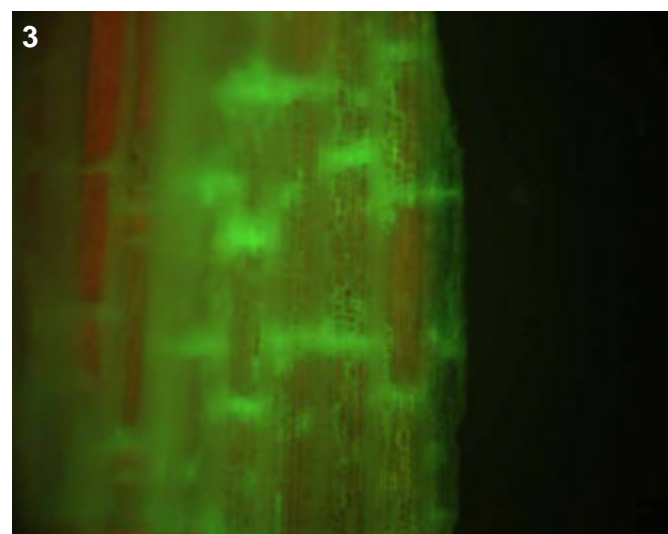
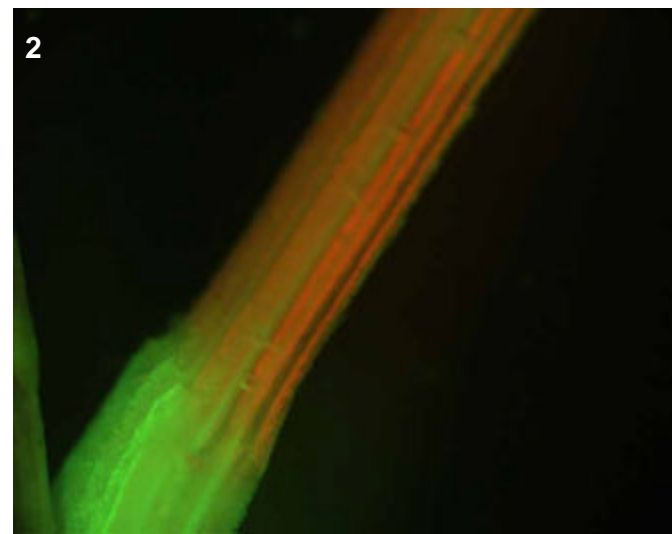
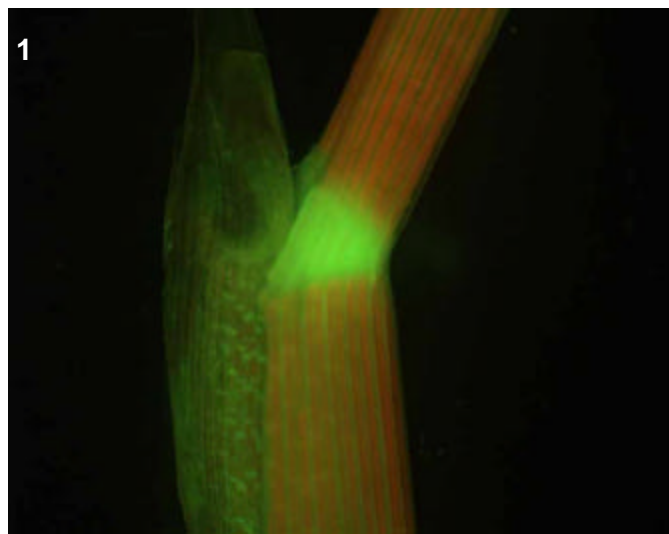
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 32



T0 comments

Flowers were too old for analysis.

T1 seed comments

1/5 seeds had expression in the aleurone/endosperm layer (pic 4)

T1 seedling comments

Bright expression, either epidermal or vascular I think, in the roots (pics 5-8). Also bright collar and vascular in the shoot (pic 9).

Genotype: ARE G07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

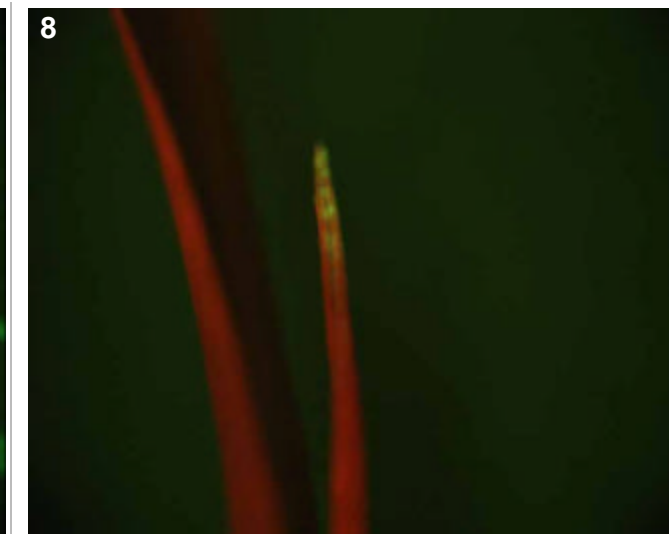
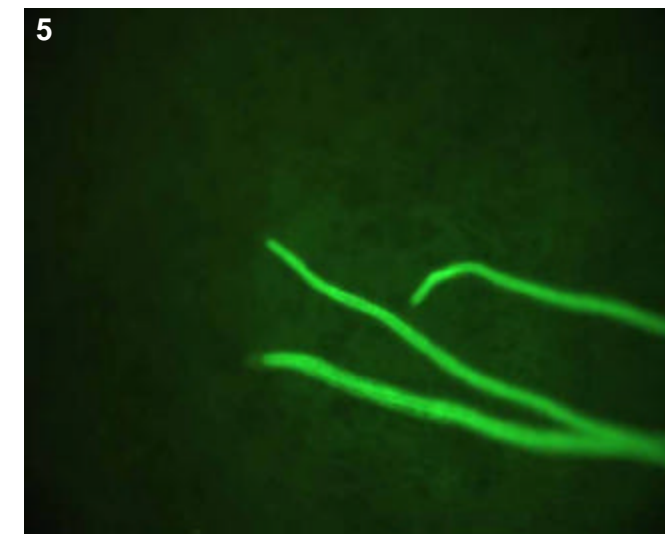
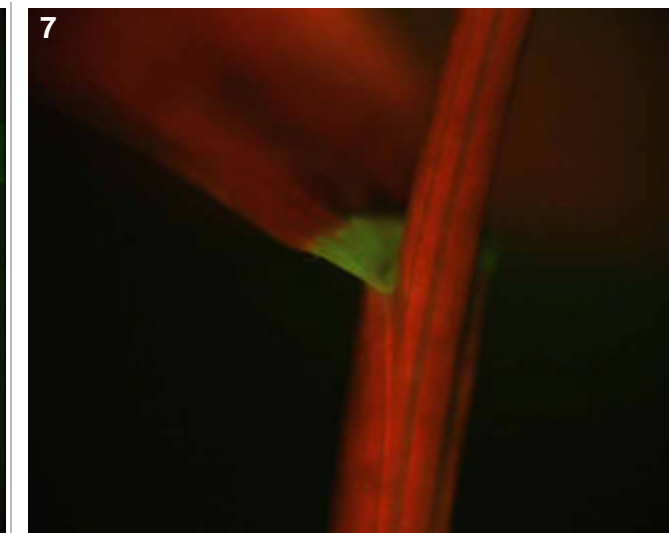
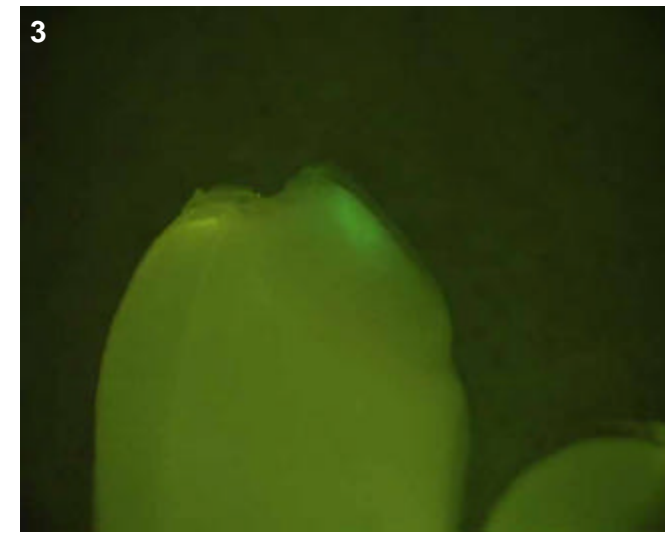
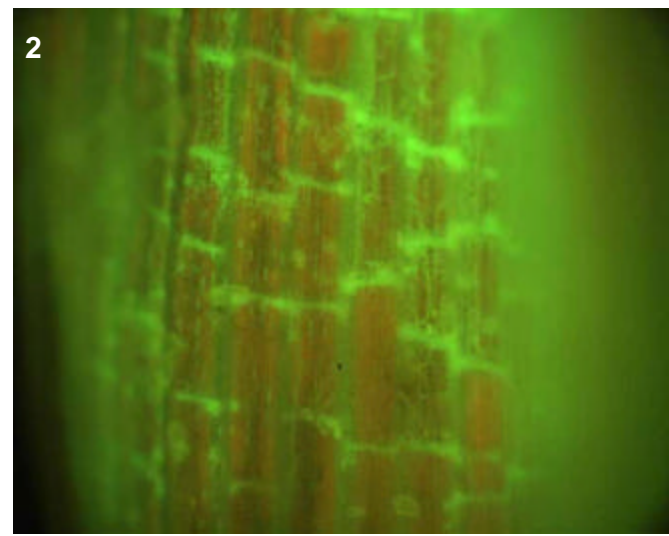
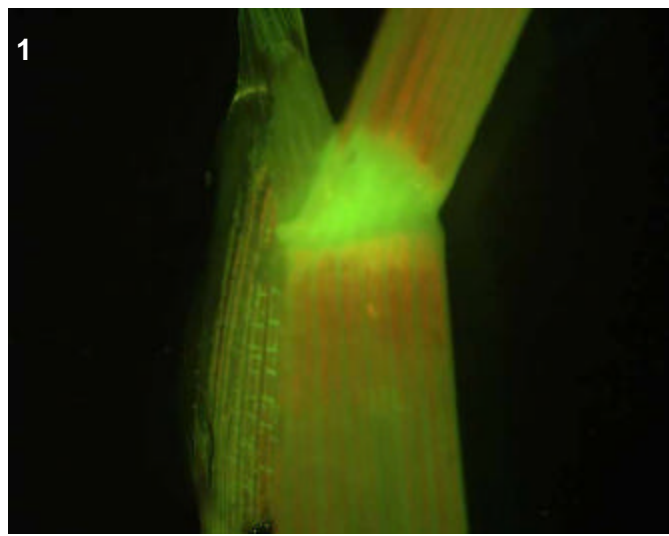
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 24



T0 comments

T1 seed comments
 1/5 seeds had faint expression in the embryo

T1 seedling comments
 Very bright roots, epidermal at least in the crowns (pics 4-6). Medium expression in the collar (pic 7) and leaf tips (pic 8).

Genotype: ARE G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-5
 T1 seed/seedling: 6-9
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

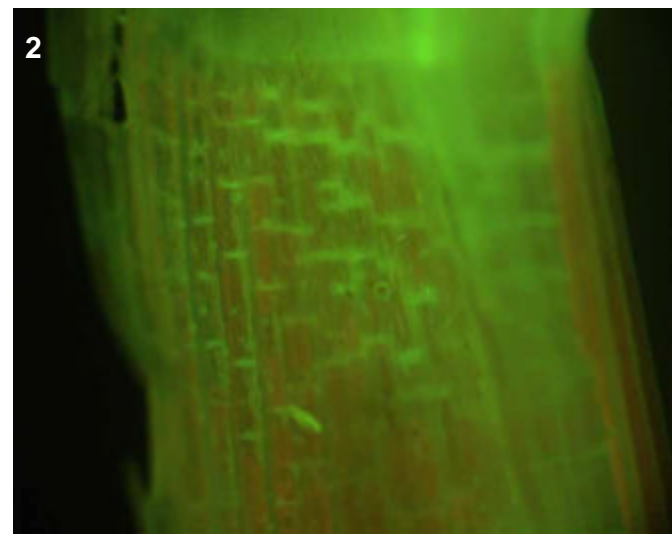
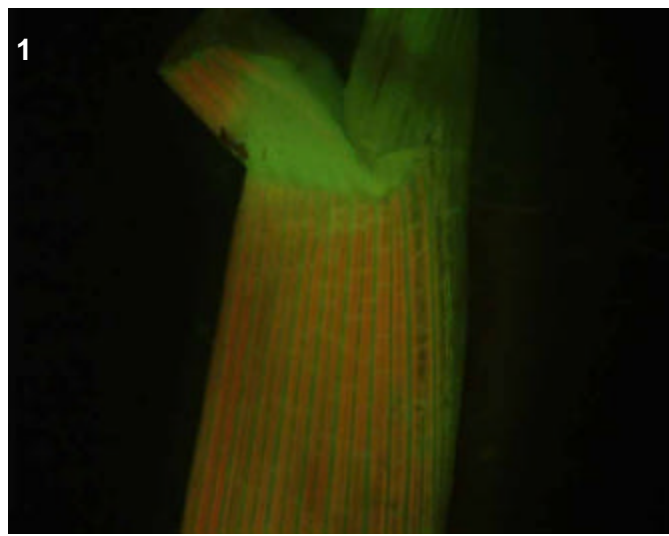
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 7



T0 comments

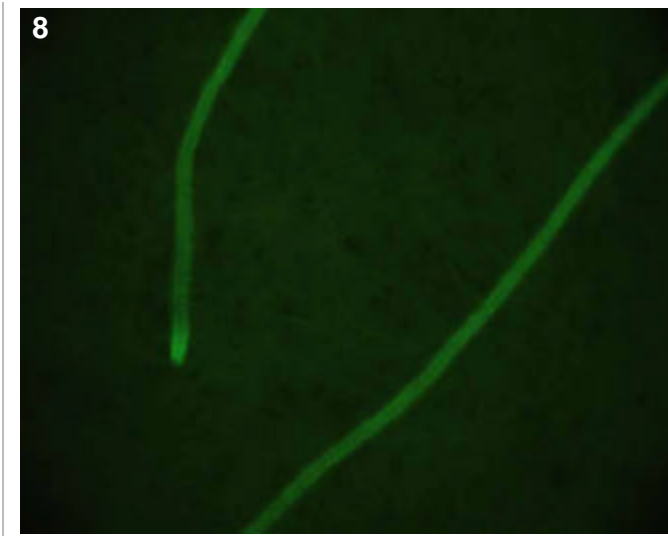
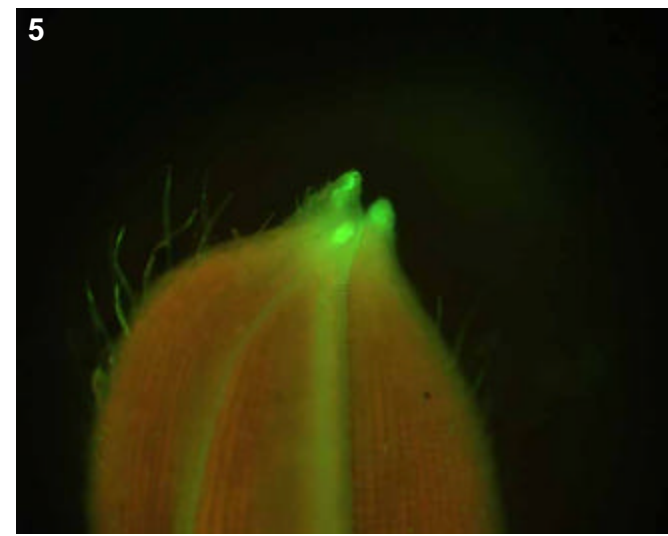
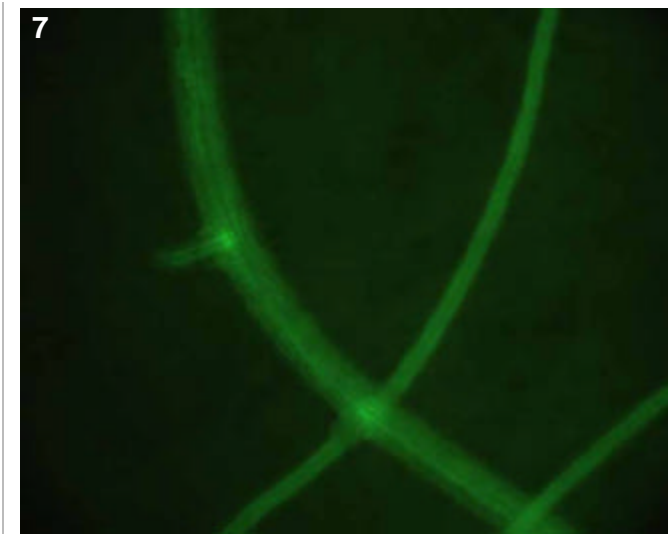
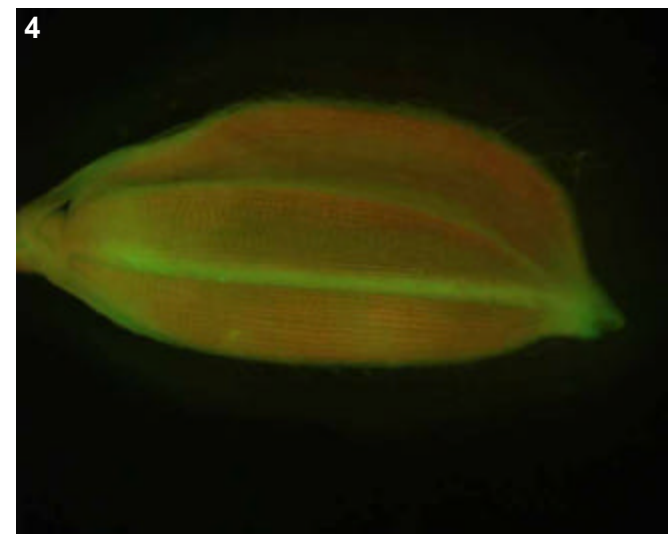
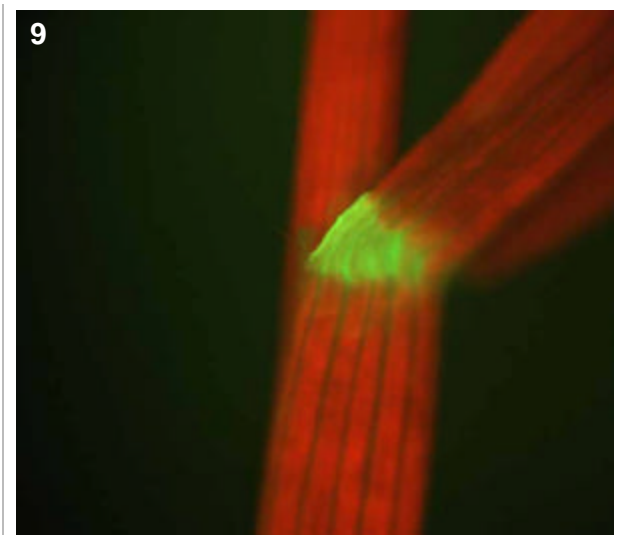
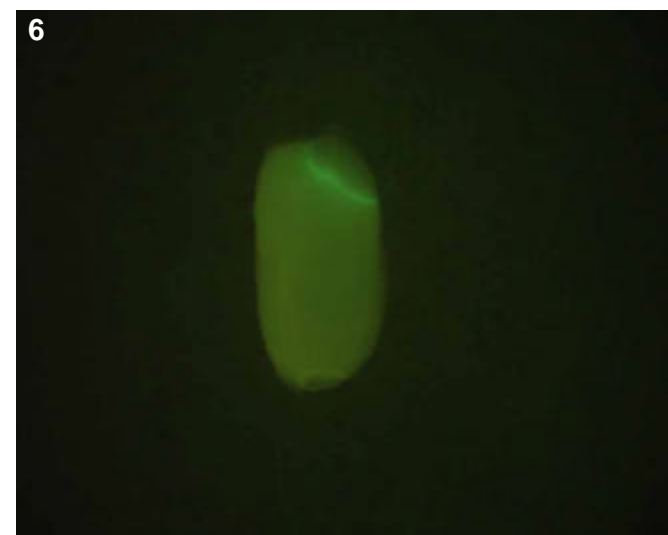
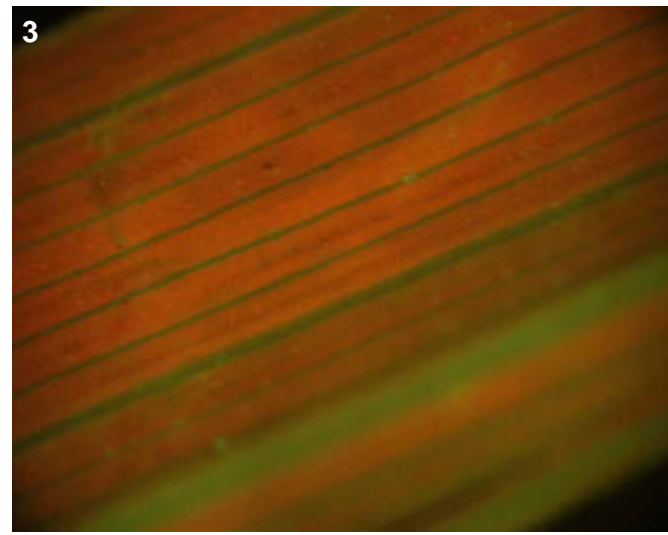
A bright vascular line.

T1 seed comments

2/4 seeds had medium expression

T1 seedling comments

Only 1/5 seeds germinated, yielding one seedling with bright root vascular expression (pics 7-8) and collar (pic 9).



Genotype: ARF C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

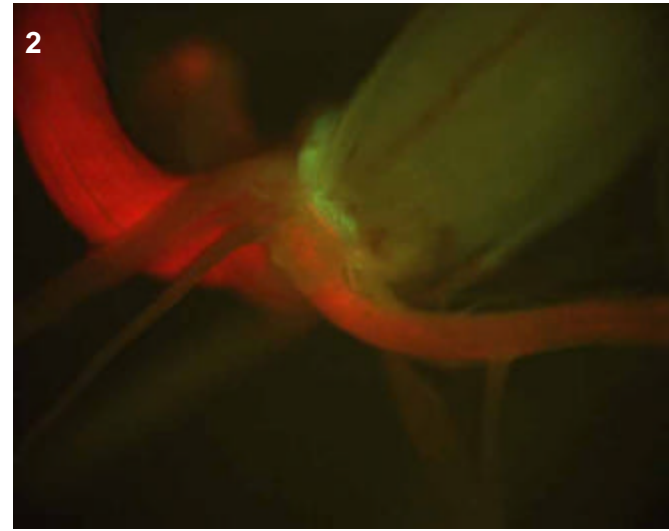
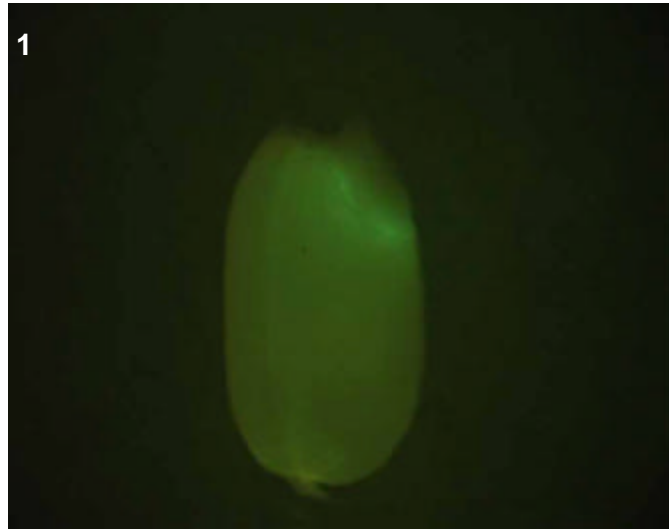
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 8



T0 comments

T1 seed comments

About 3/5 seeds had expression, difficult to determine because very faint. Brightest one in pic 1.

T1 seedling comments

Expression in seedlings is only evident near the scutellum region of the digesting seed (pic 2).

Genotype: ARF C05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

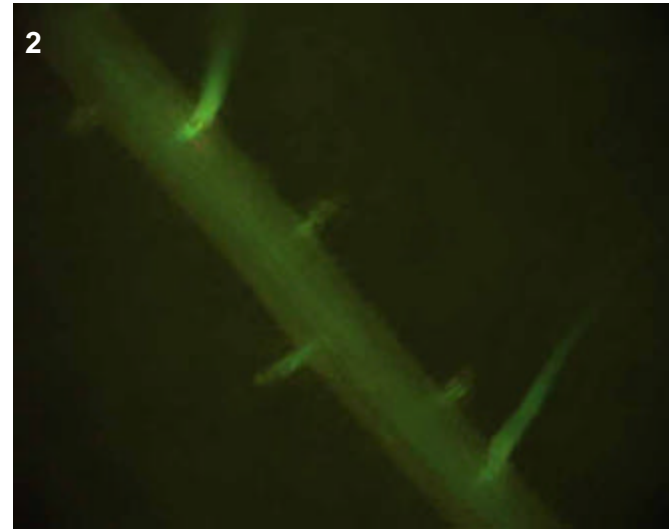
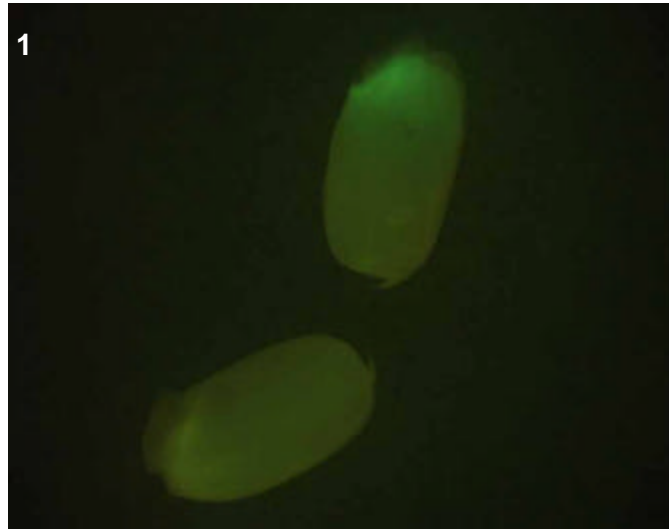
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

1/5 had expression

T1 seedling comments

A root-specific line, with bright expression in the vascular system (pic 2).

Genotype: ARF E01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 3 plants

Confocal?

Number T2 seed produced: 0

1



T0 comments

T1 seed comments

1/6 seeds had expression

T1 seedling comments

The seedlings all died just after being planted, looked like they were sprayed with an herbicide (though obviously they weren't).

Genotype: ARG A08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

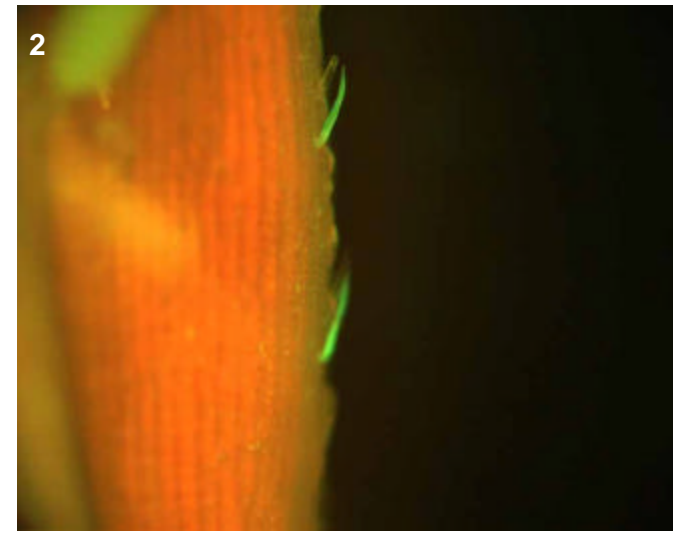
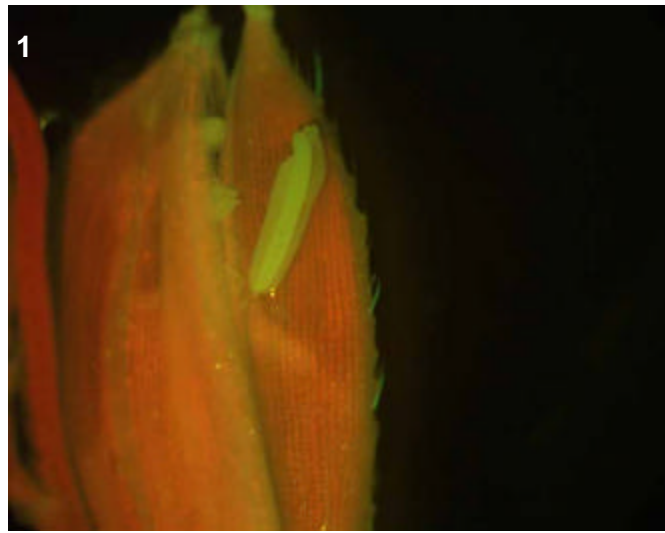
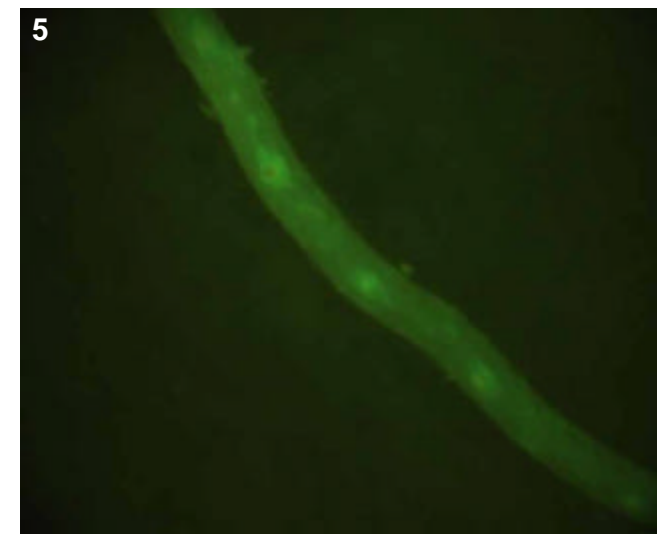
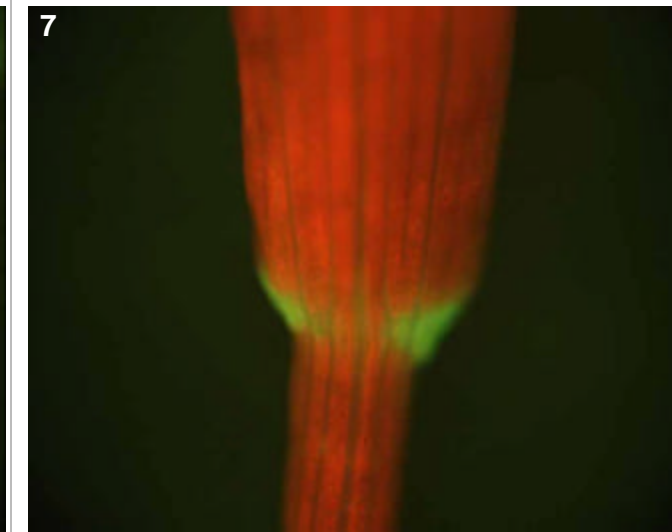
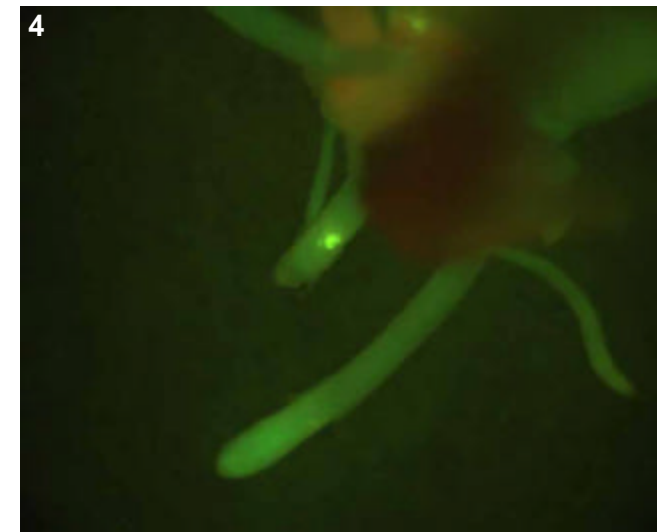
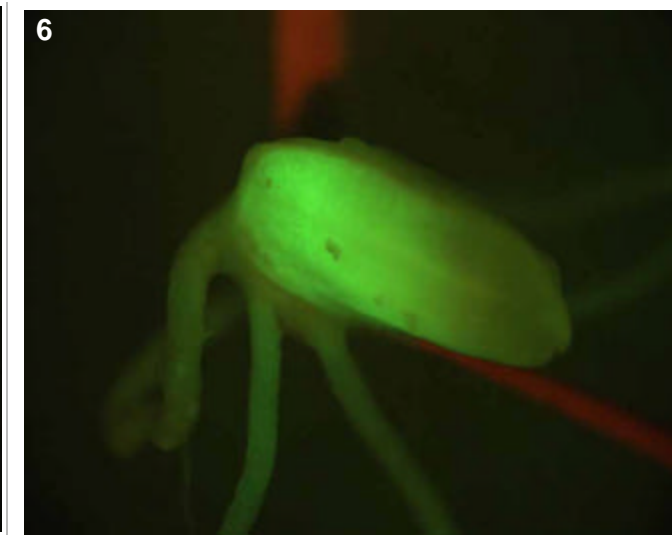
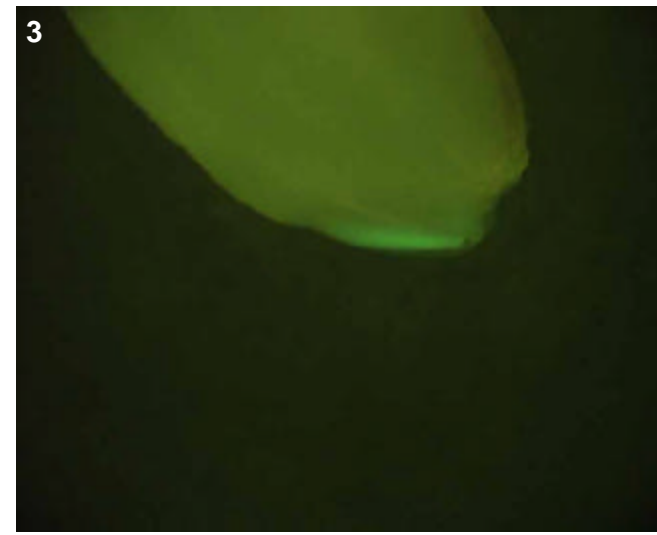
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 13



T0 comments

The large trichomes of the flower.

T1 seed comments

1/5 seeds had faint expression in the embryo.

T1 seedling comments

Quite general expression throughout the root (pics 4-5).

Genotype: ARG H04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

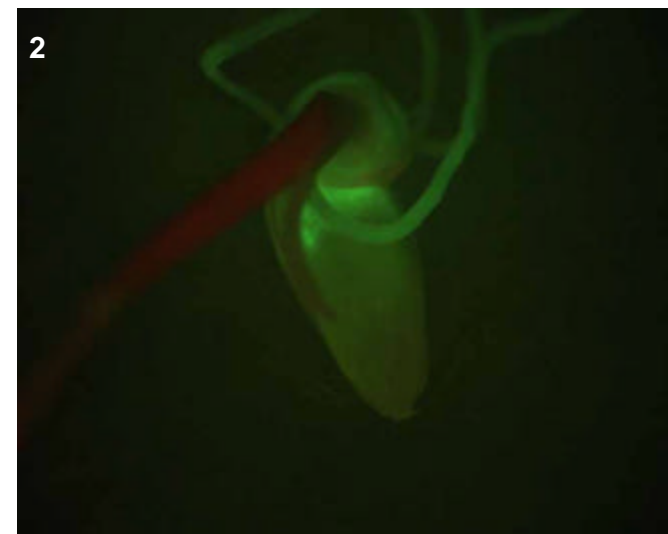
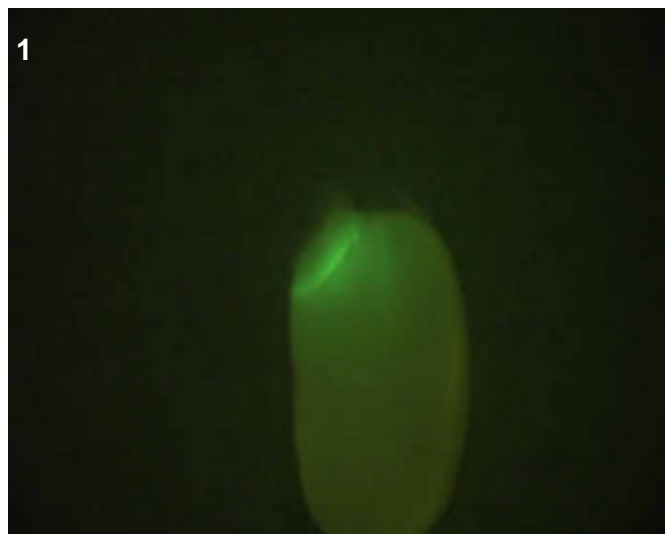
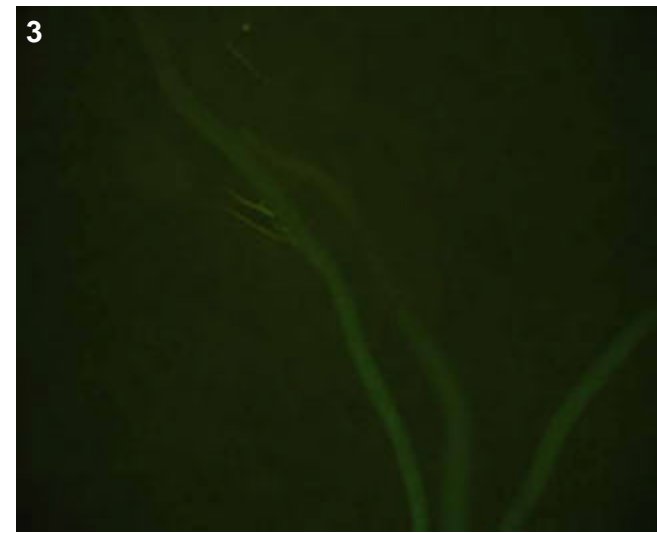
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 4



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Interesting root in that the brightest expression occurs in the older portion of the root. This expression was not very bright and difficult to photograph, but pic 2 shows it best. I didn't observe expression in lats. There was also faint epidermal expression around tips of crown roots (pic 4). Maybe faint collar?

Genotype: ARH E03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

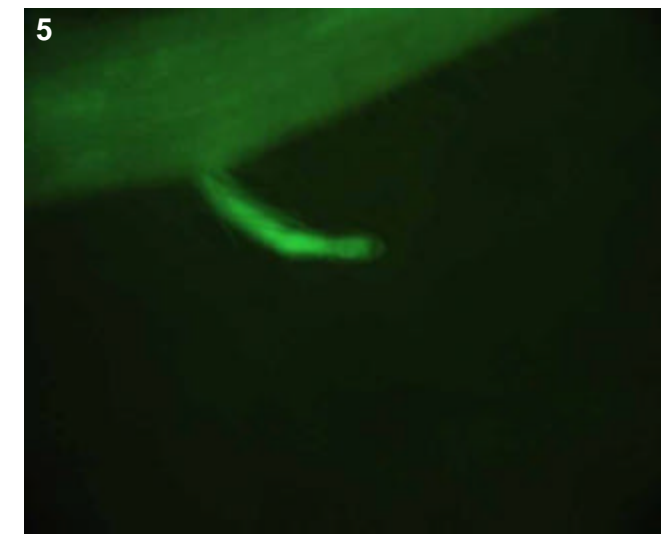
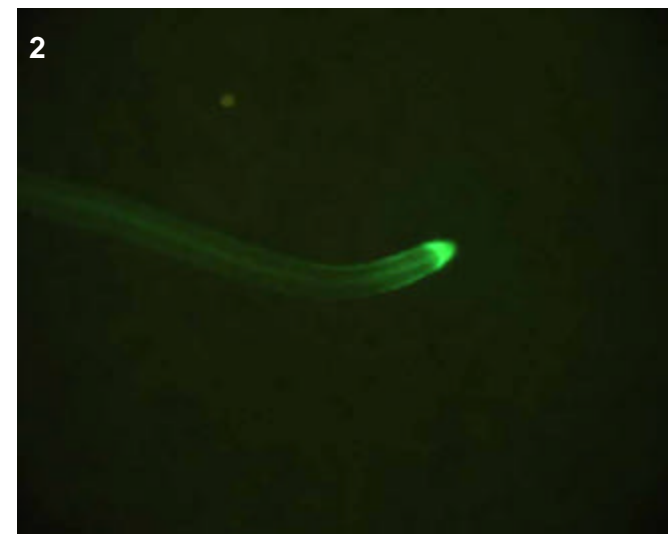
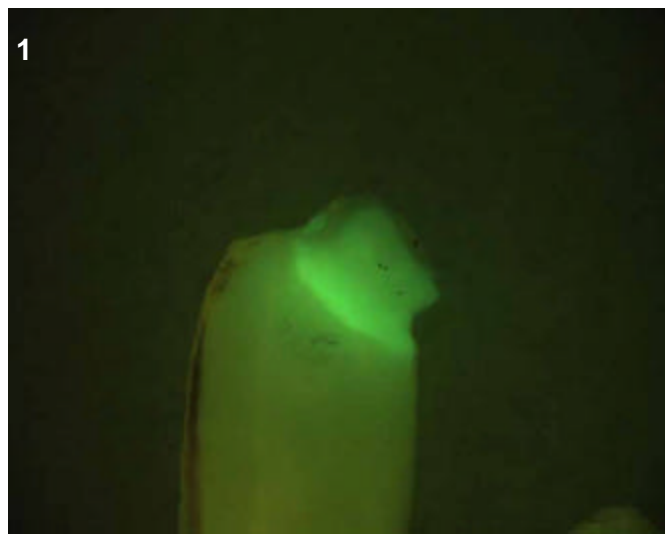
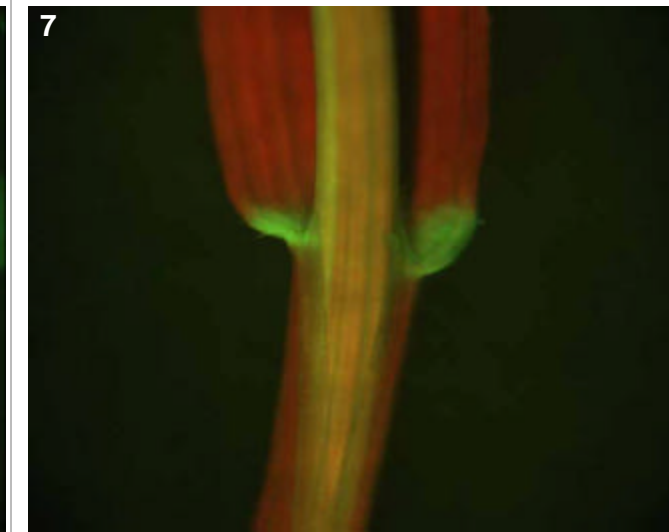
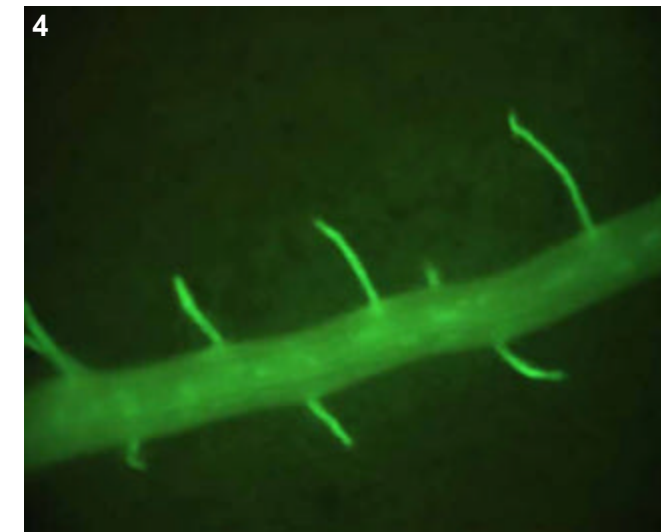
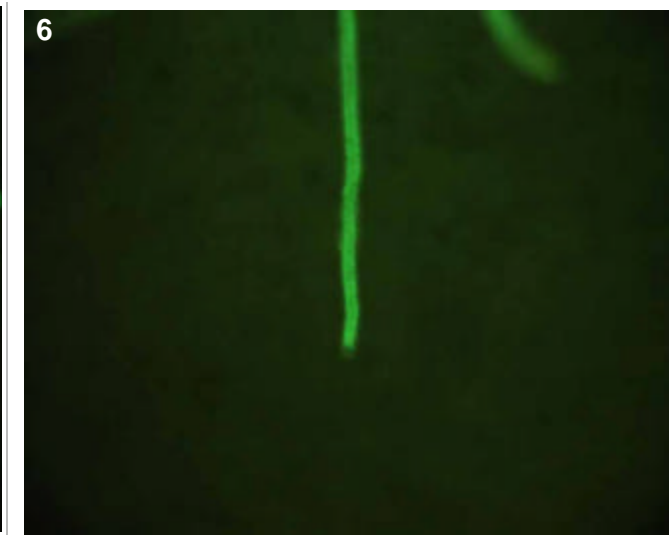
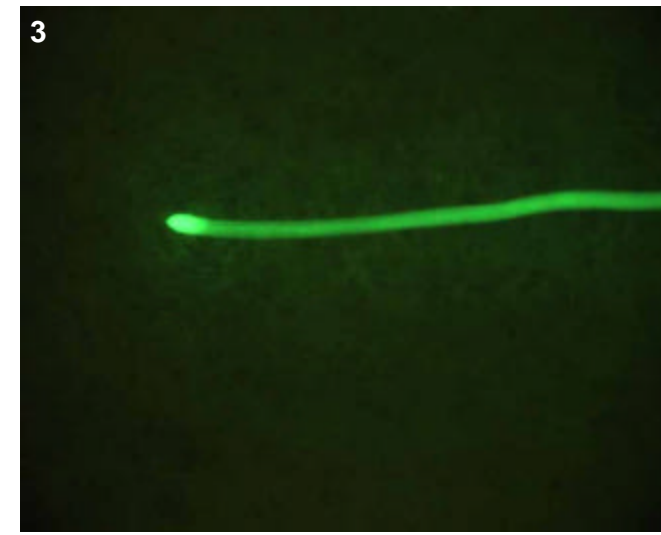
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 11



T0 comments

T1 seed comments

2/5 showed expression in the embryo and perhaps also the coleorhiza.

T1 seedling comments

Very bright roots (pics 1-6), perhaps a cortical pattern? Note the interesting pattern in crown roots in pic 2. Also very bright shoots (pic 7), notice the bright collar and perhaps more general expression throughout the leaf tissue. Interestingly, 2/4 plantlets were looked pale--possibly a mutant phenotype linked to the insertion??

Genotype: ARI B02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

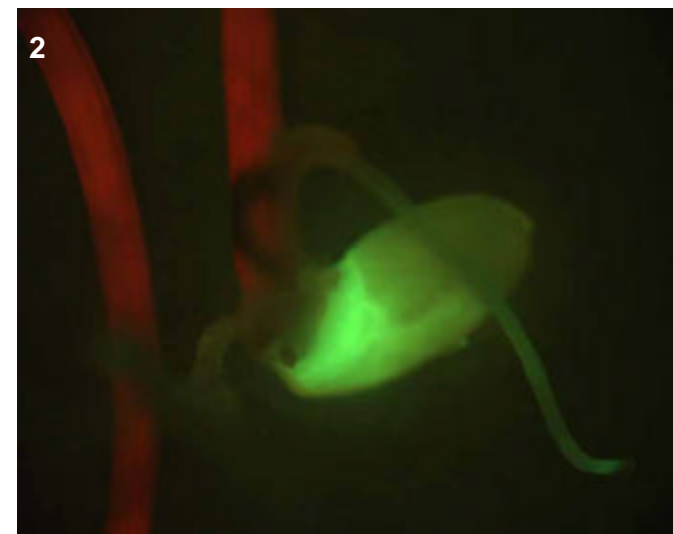
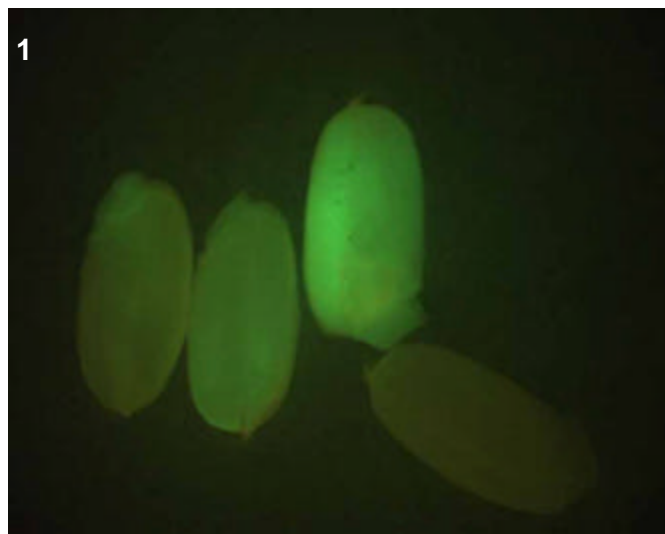
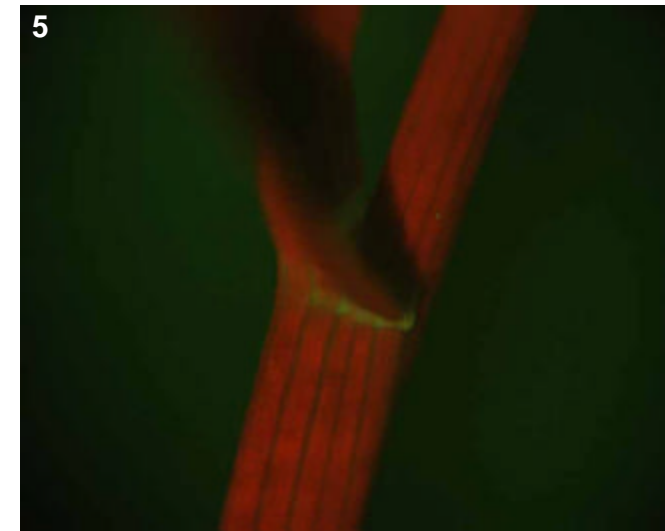
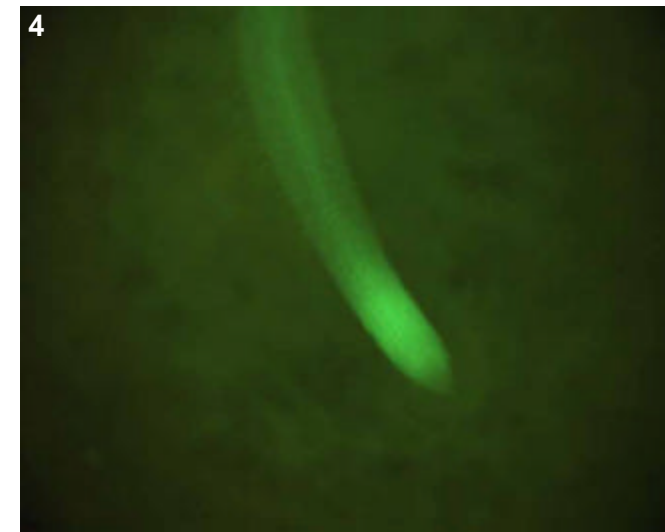
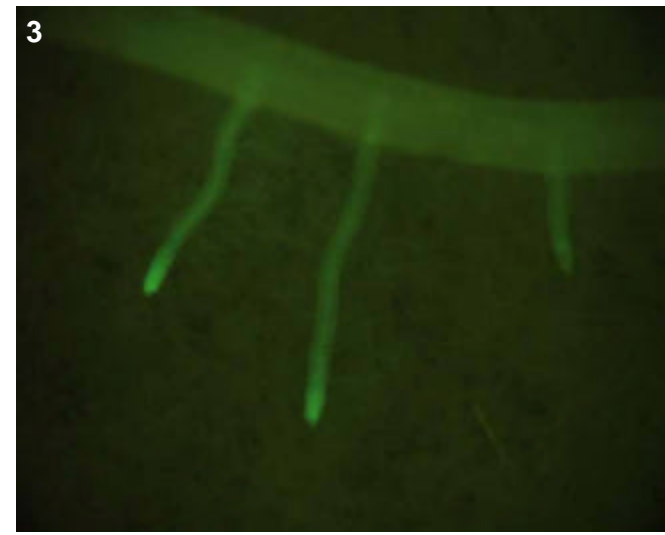
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 94



T0 comments

T1 seed comments

4/5 seeds had expression, patterns ranged from bright aleurone/endo (3rd seed from right in pic 1), to medium in aleurone/endo (2nd seed), to just medium embryo/coleorhiza (1st seed on right).

T1 seedling comments

Possibly an epidermal pattern in the roots (pics 3 and 4)? All 5 of the seedlings were GFP positive.

Genotype: ARI D05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1
 T1 seed/seedling: 2-4
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

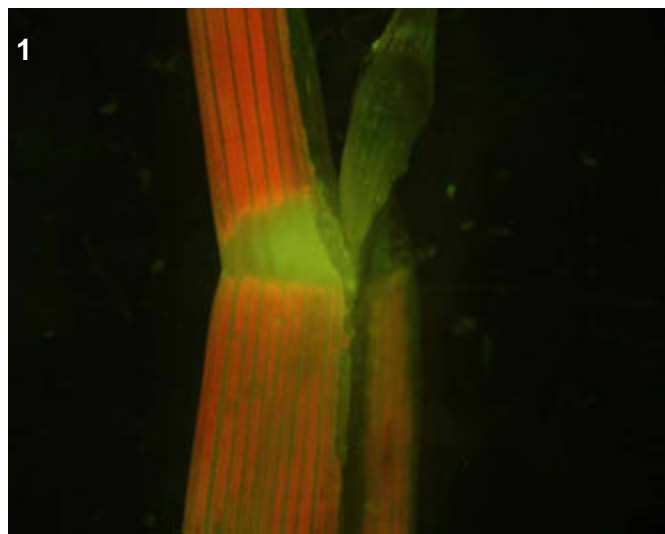
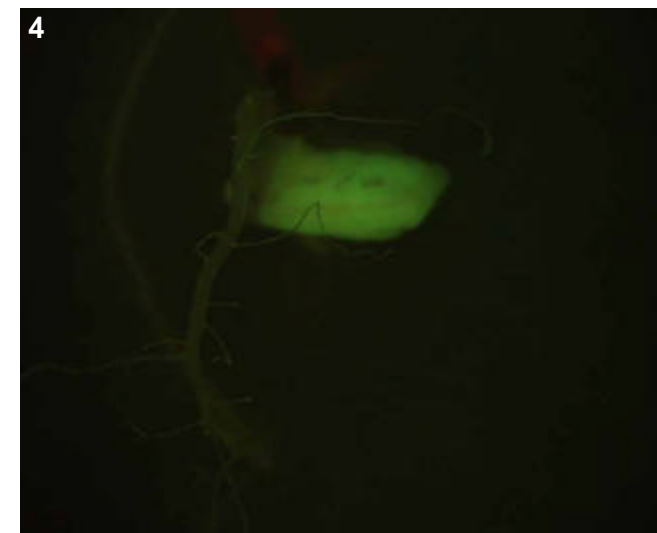
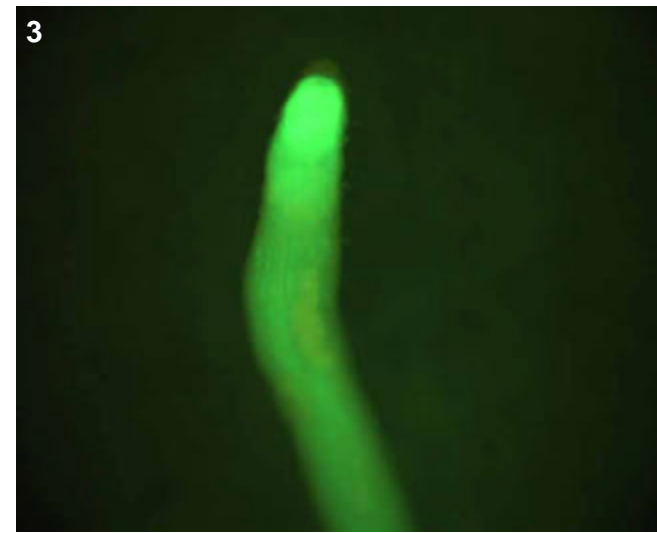
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 47



T0 comments

T1 seed comments

3/5 seeds had faint expression in the embryo (pic 2).

T1 seedling comments

Root expression was brightest at the point of lateral root emergence and also at root apex of both laterals and crowns.

Genotype: ARI F02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

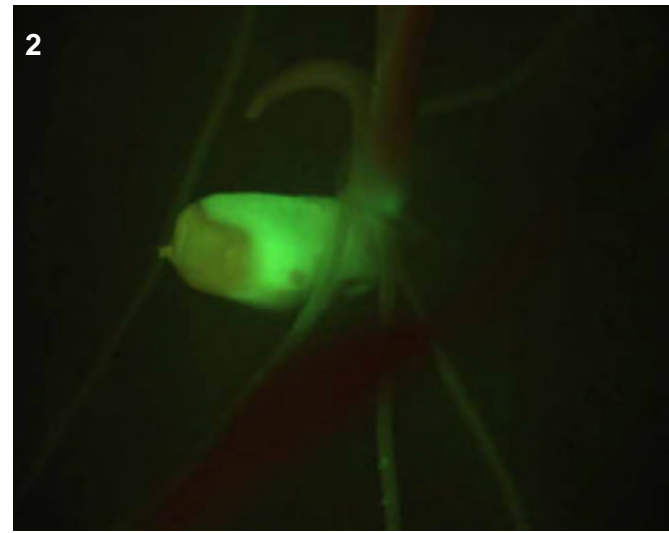
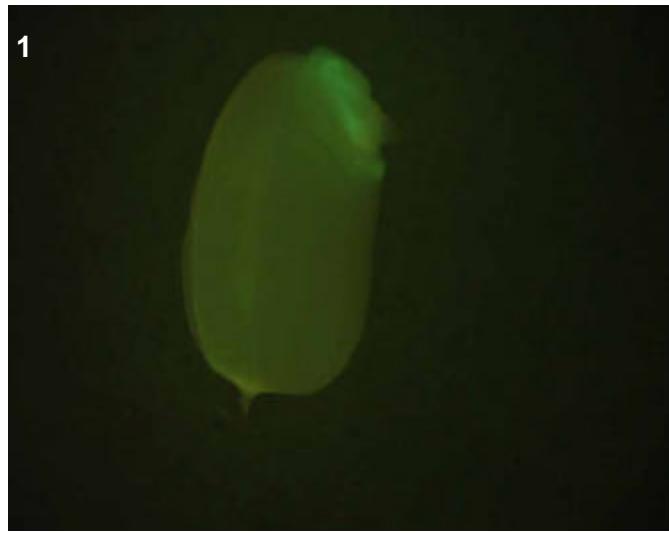
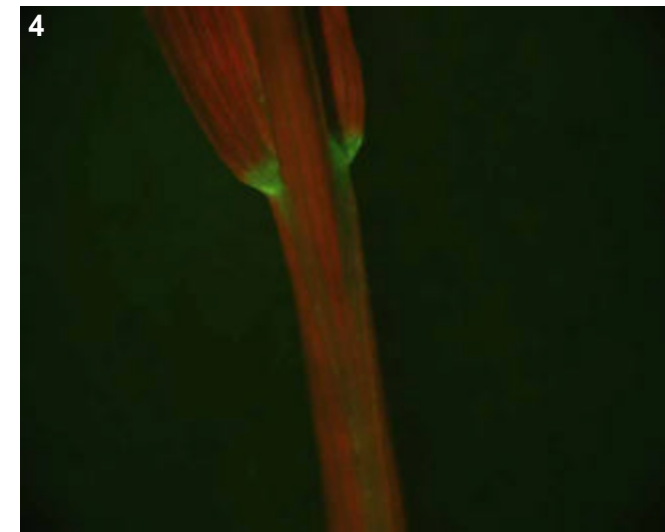
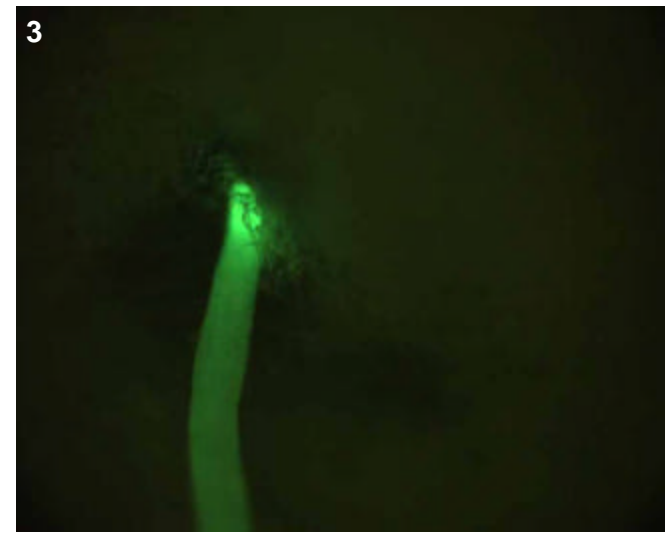
T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

WIP

Number T2 seed produced: 178



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Looks like either an overall vascular or epidermal pattern throughout the root and shoot, confocal will clarify.

Genotype: ARI G07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

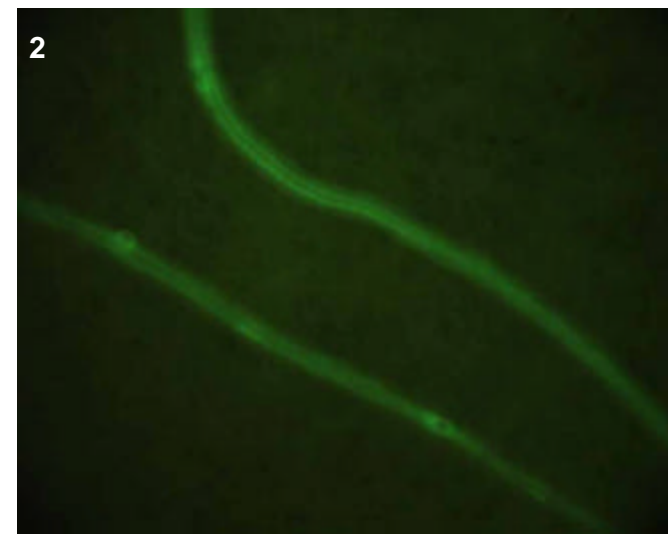
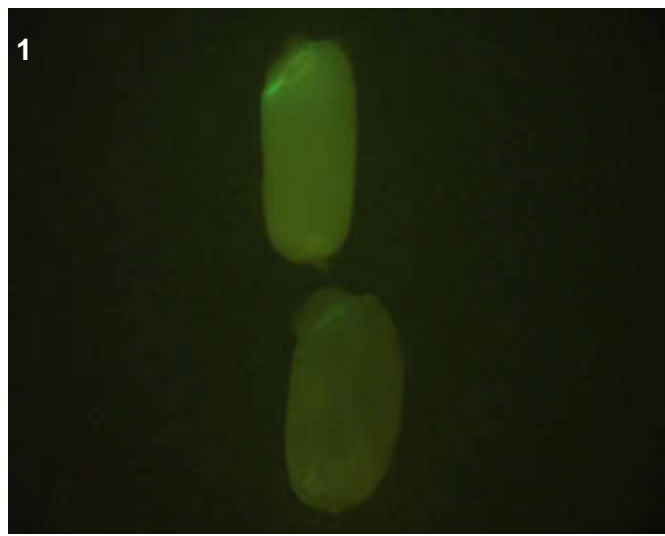
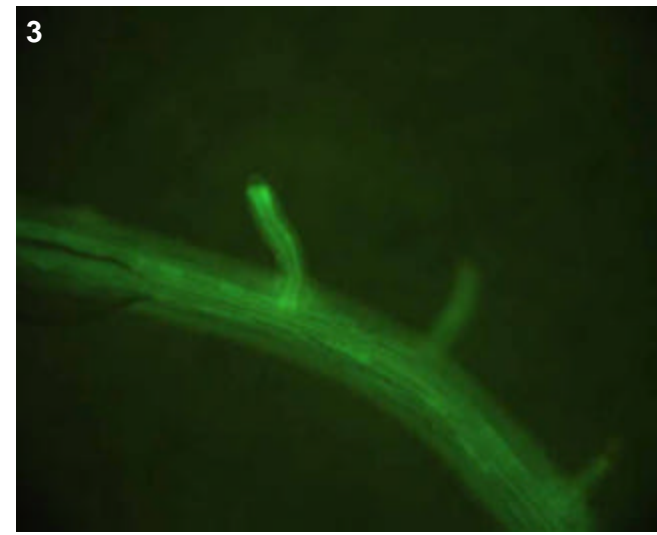
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 70



T0 comments

T1 seed comments

4/5 seeds had medium expression in the scutellum

T1 seedling comments

A root-specific line.

Genotype: ARI H04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-9
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

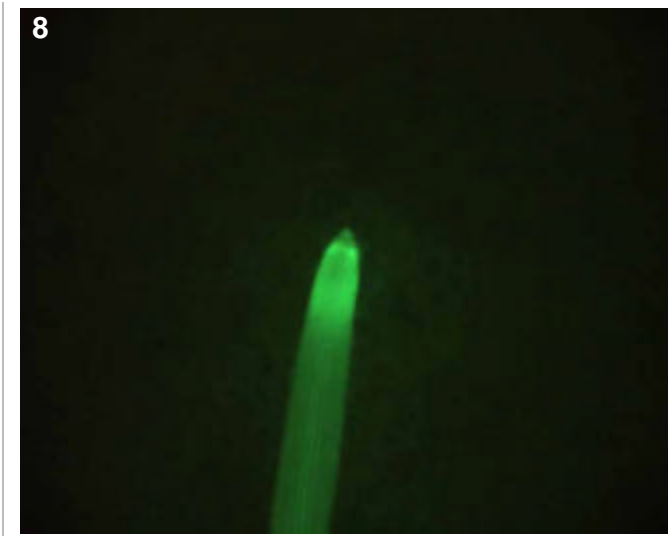
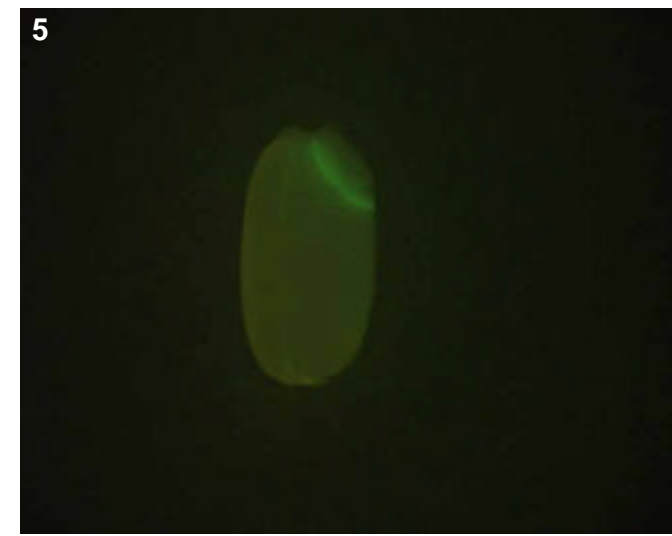
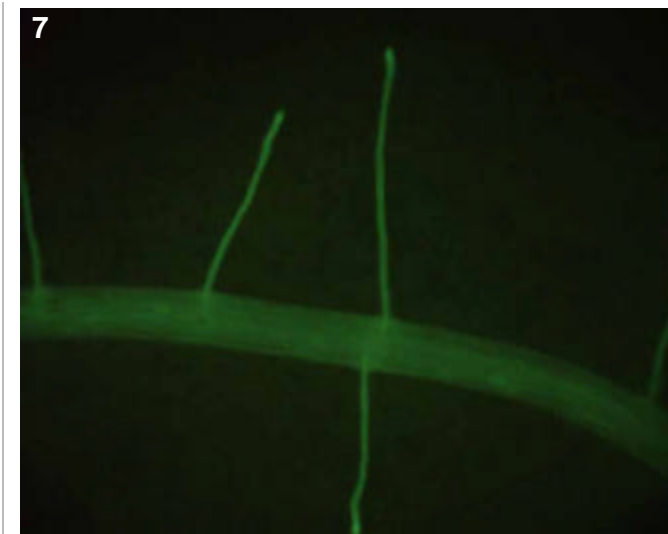
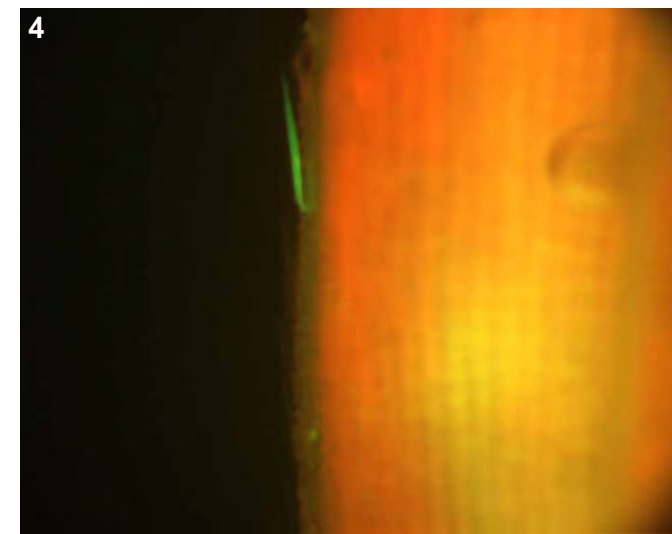
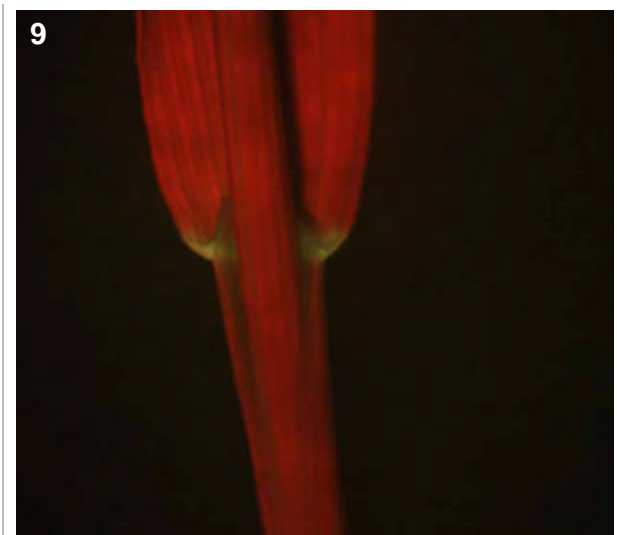
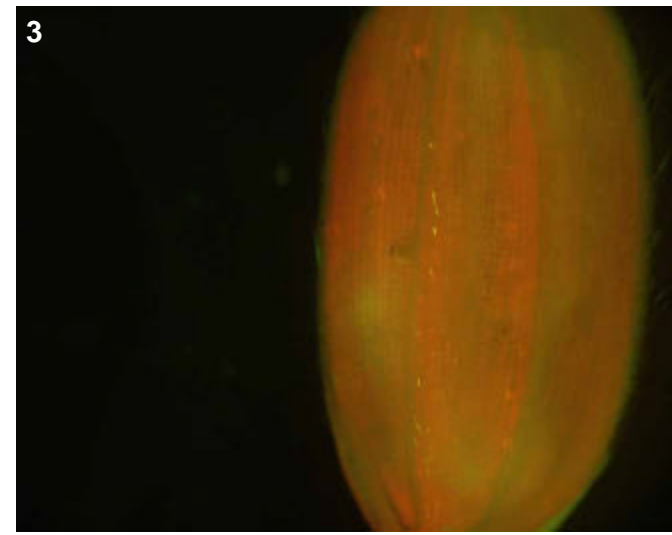
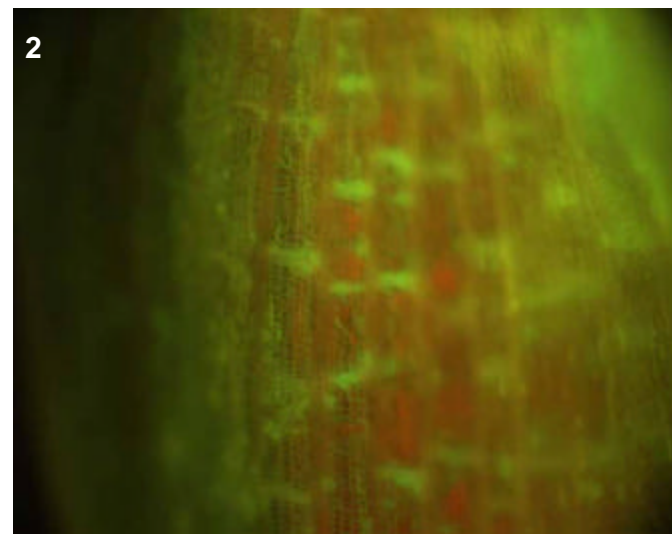
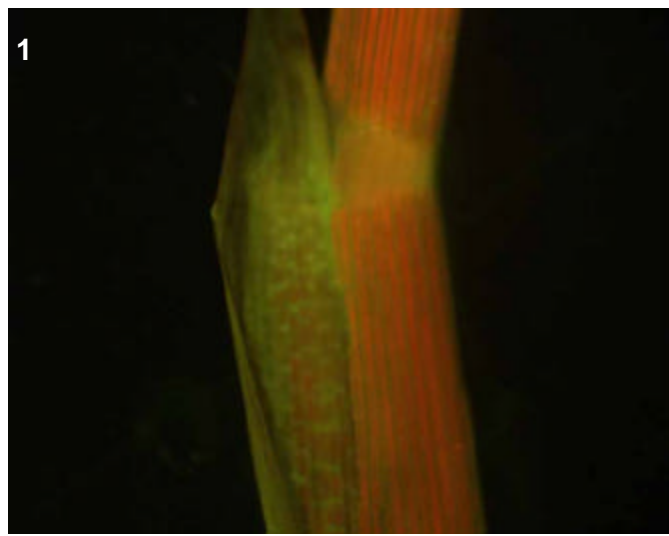
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 101



T0 comments

The floral trichome expression (pics 3 and 4) was quite scattered.

T1 seed comments

3/5 seeds had medium expression in the scutellum (pic 5).

T1 seedling comments

Looks like an epidermal pattern in roots, at least for the crown roots (pic 8).

Genotype: ARJ A10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

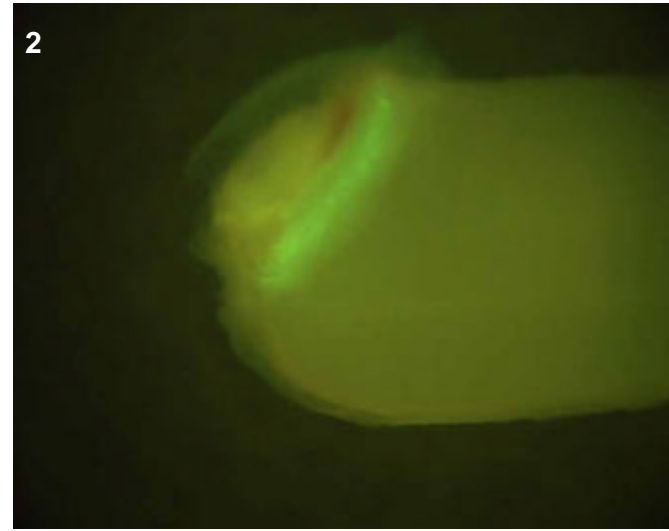
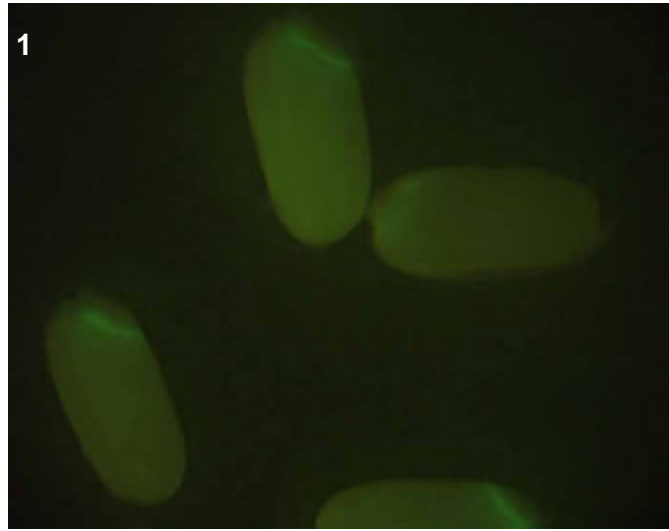
New pattern:

No GFP detected

T1 in greenhouse?

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had medium expression in the scutellum.

T1 seedling comments

Very bad germination, nothing transferred to greenhouse because virtually no growth.

Genotype: ARJ C06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

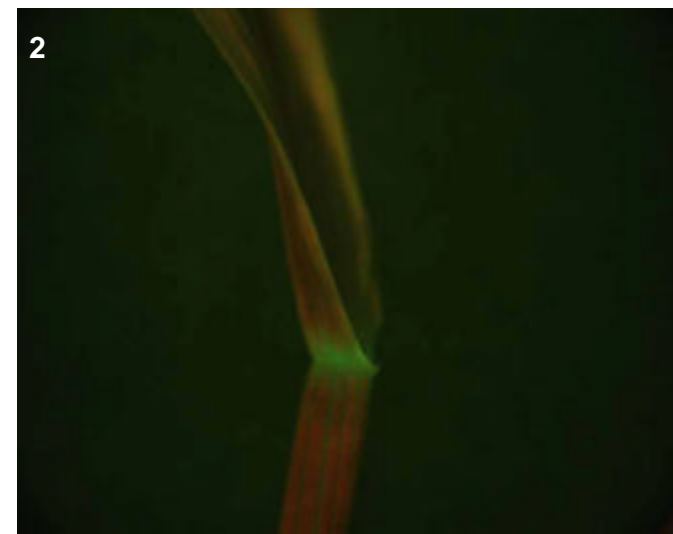
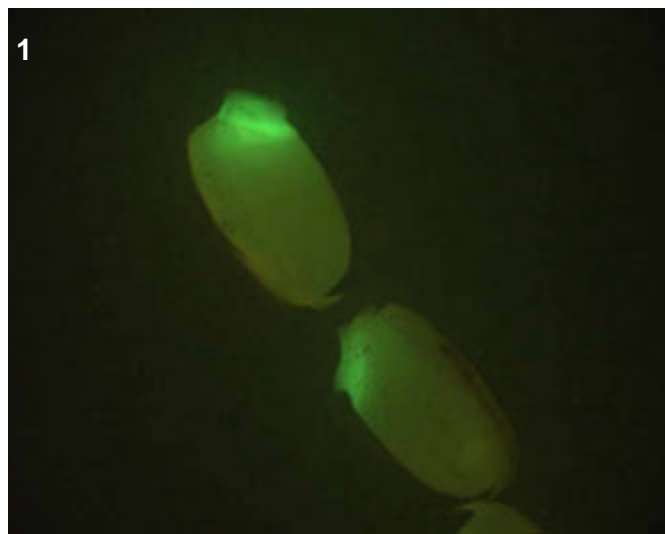
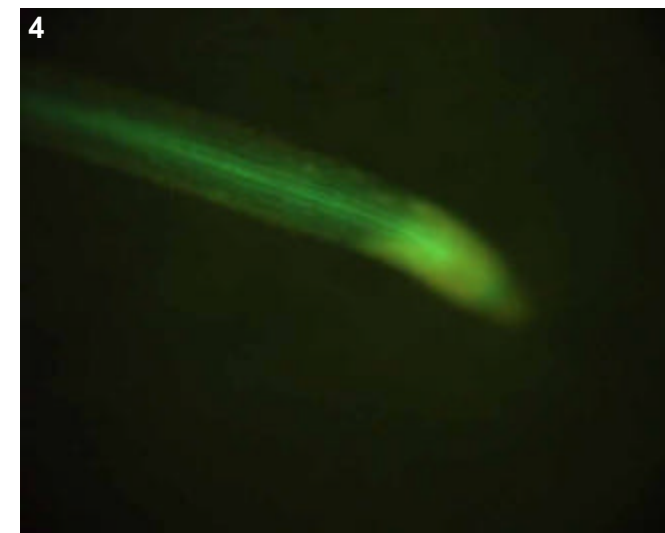
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 43



T0 comments

T1 seed comments

3/5 seeds had very bright expression in the embryo region (pic 1).

T1 seedling comments

Expression was bright towards the base of the shoot (pic 3) and in the collar and shoot vascular (pic 2). Expression also appears unusually bright in the crown root vascular (pic 4), though there were not any laterals to get a good look at.

Genotype: ARJ D03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

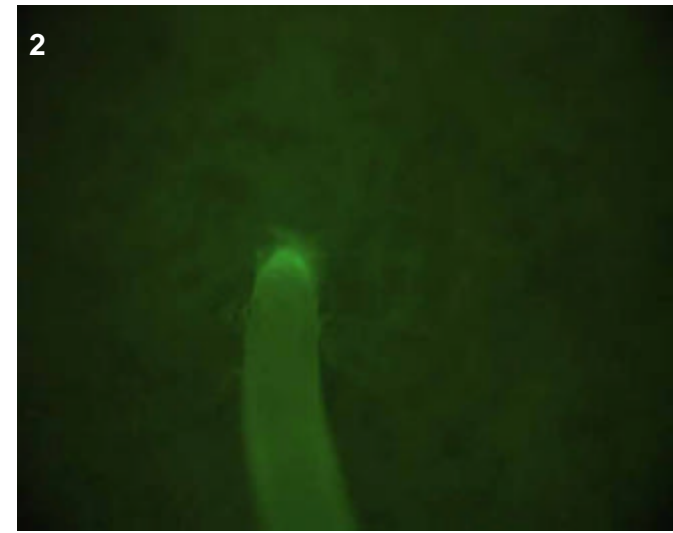
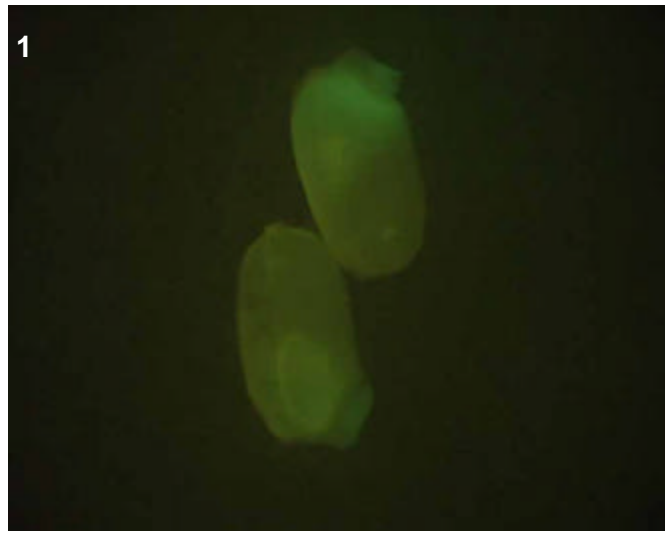
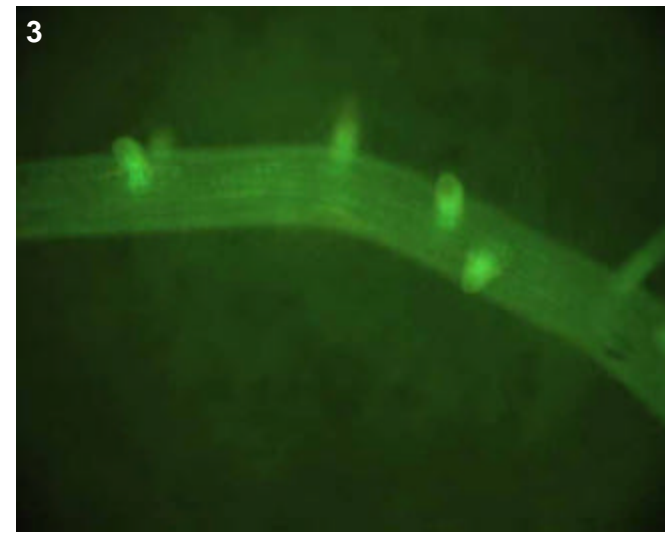
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced: 54



T0 comments

T1 seed comments

3/5 seeds had expression. The coleorhiza appears to have expression, as well as the embryo.

T1 seedling comments

Interesting root expression (pics 2-4), especially in the laterals. The pattern (perhaps vascular) looks to be much brighter in the elongation zone of root tips (pic 4). Confocal could clarify the cell type responsible for this pattern.

Genotype: ARJ G03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-5
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

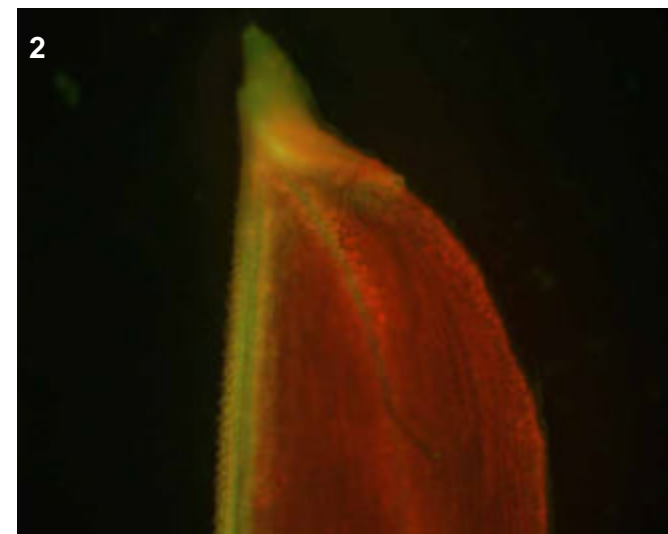
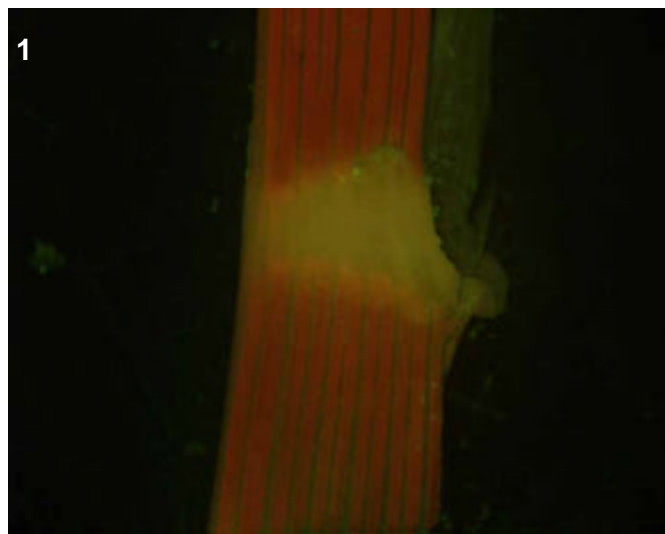
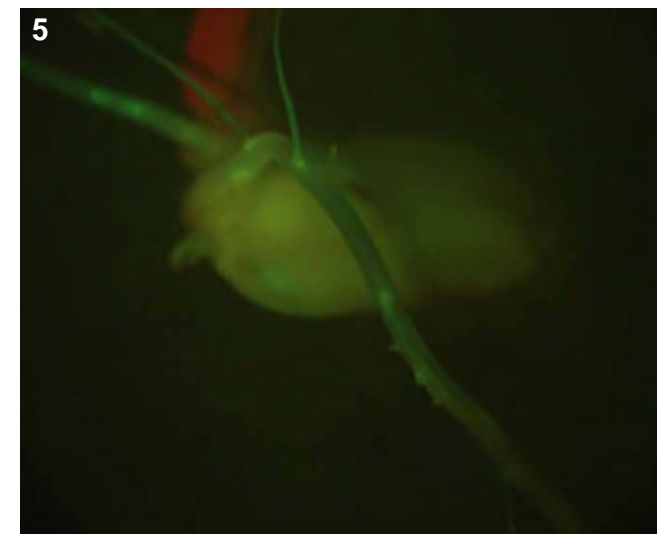
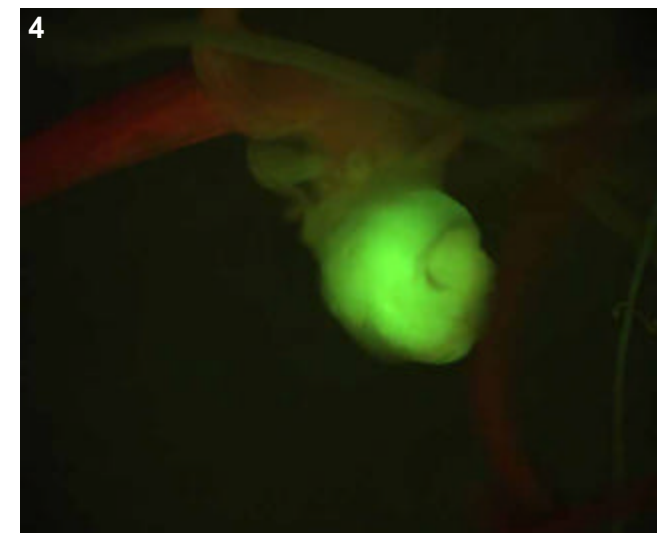
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 27



T0 comments

T1 seed comments

1/5 seeds had medium expression in the scutellum (pic 3).

T1 seedling comments

No good picture of roots taken, but from picture 5 it looks like a vascular pattern.

Genotype: ARJ G08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-10
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

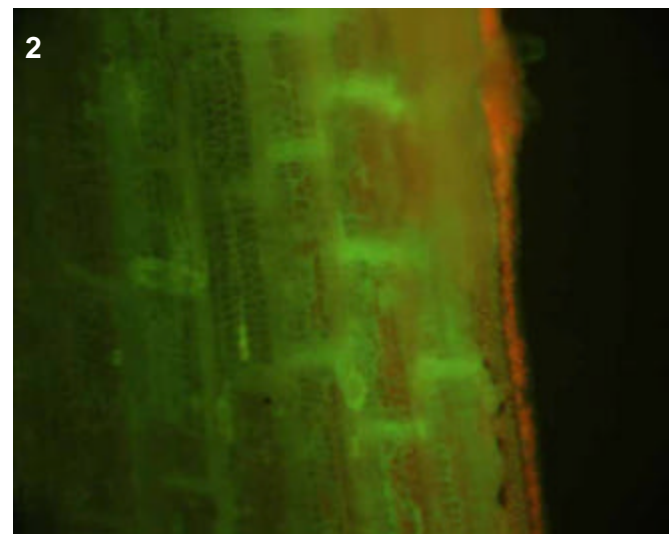
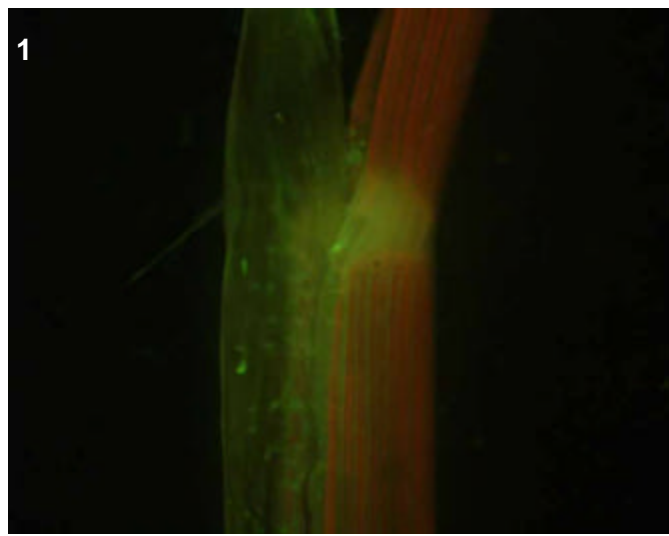
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 43



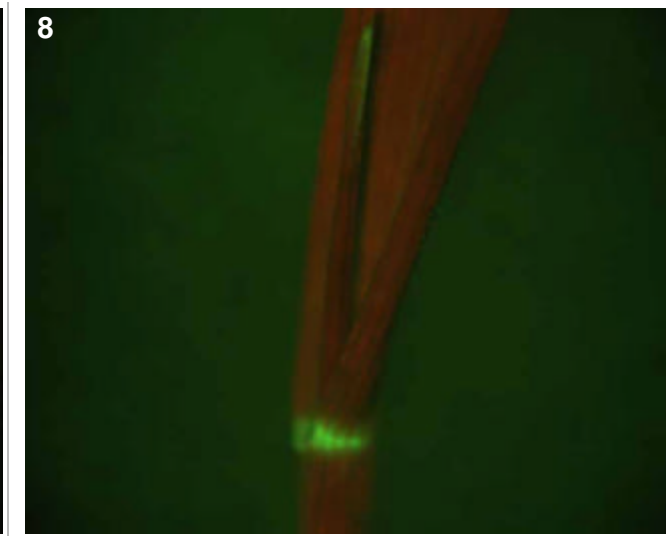
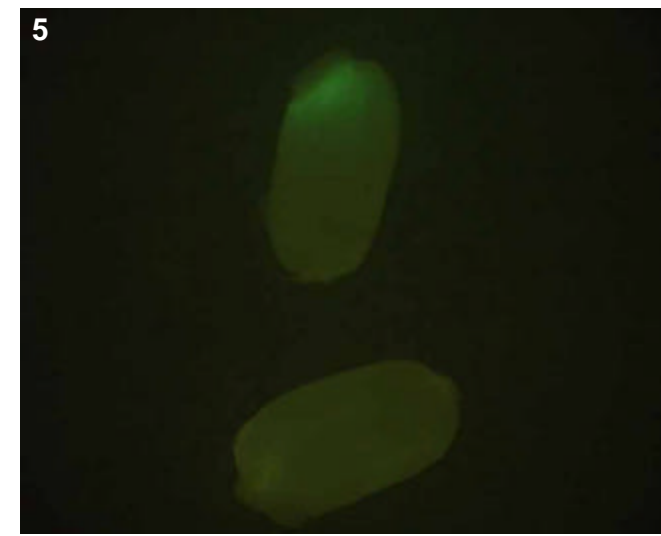
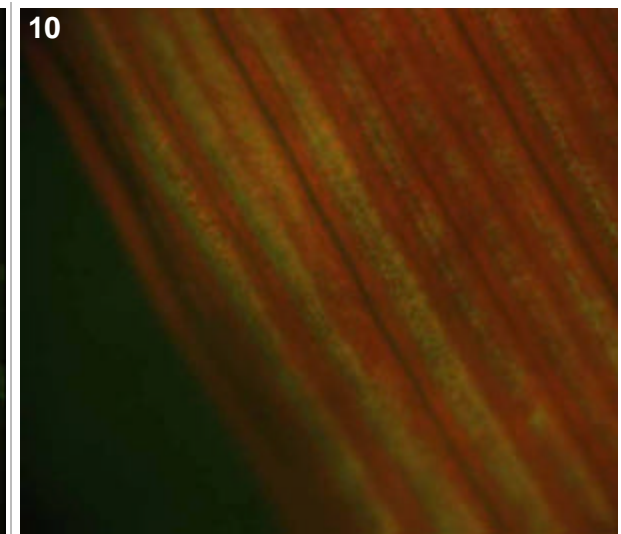
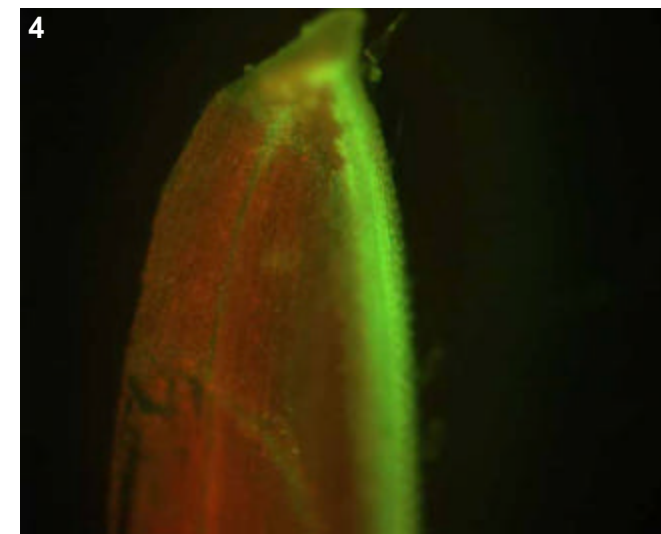
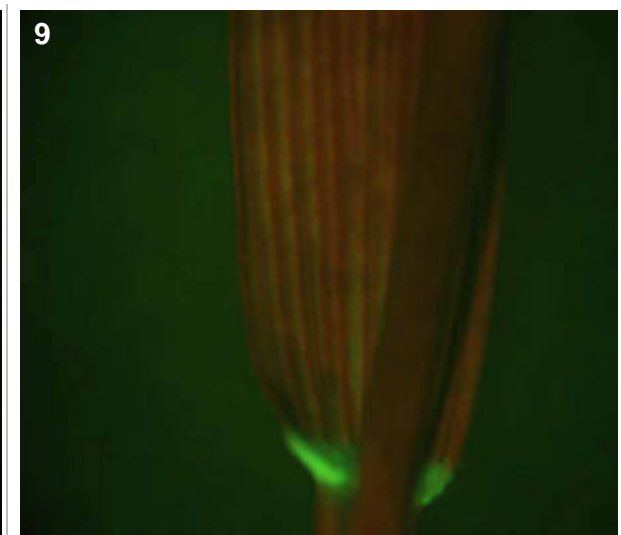
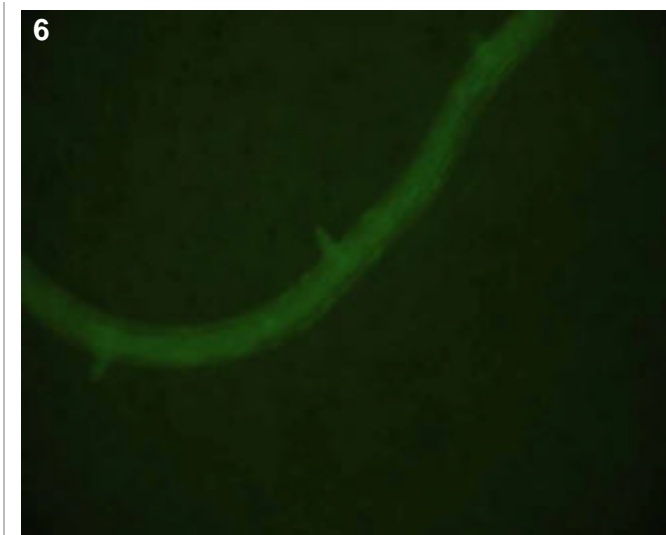
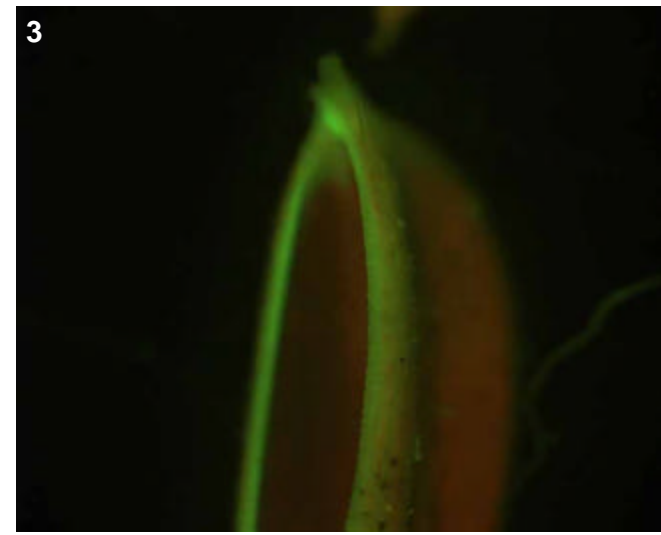
T0 comments

T1 seed comments

Bright expression in embryo of 4/5 seeds

T1 seedling comments

Note the bright "stripes" of expression on leaf tissue (pics 9-10), I'm not sure what cell-type this is but it doesn't look vascular. Perhaps mesophyll tissue between the leaf veins?



Genotype: ARK G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

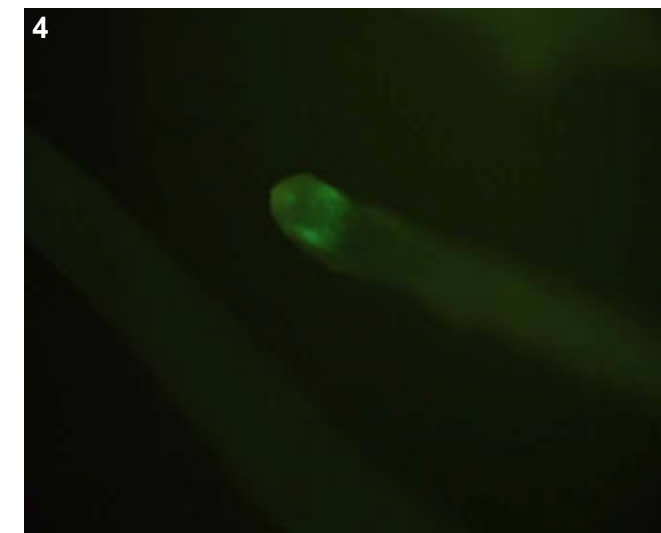
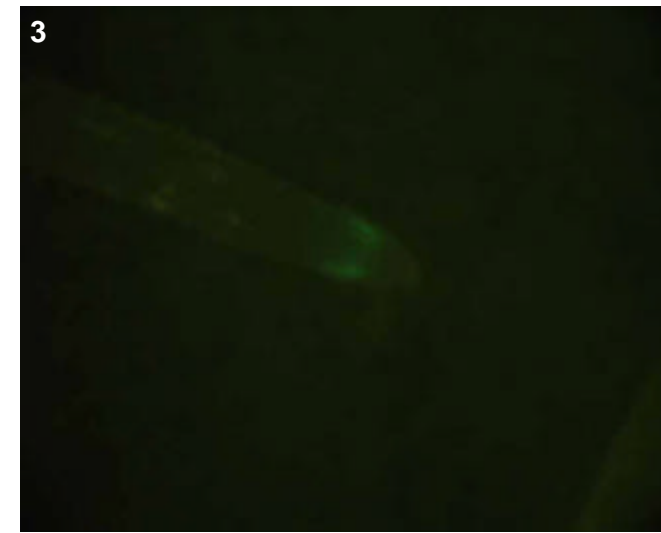
T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

WIP

Number T2 seed produced: 53



T0 comments

T1 seed comments

2/5 seeds showed expression in what looks like the central vascular bundle of the seed (pic 1).

T1 seedling comments

Bright expression throughout the endosperm (pic 2). Root expression was very interesting as it occurred only in the youngest crown roots and in some type of initials at the root tip presumably in the elongation zone (pics 3-4). This would be a great line for confocal analysis.

Genotype: ARK H11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-3
 T1 seed/seedling: 4-7
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

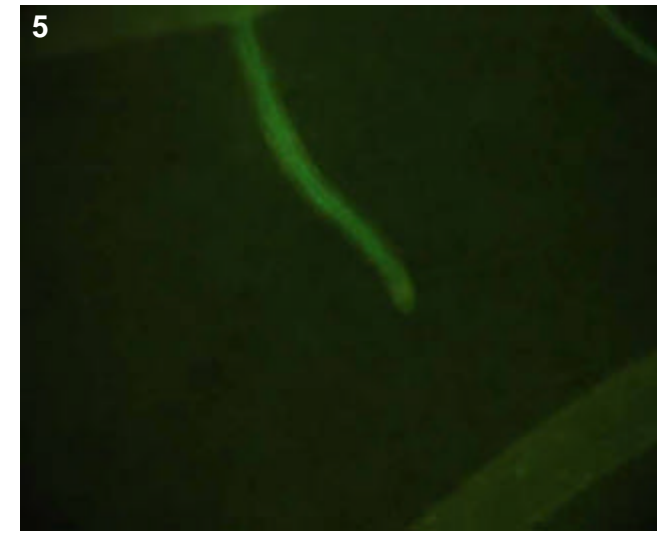
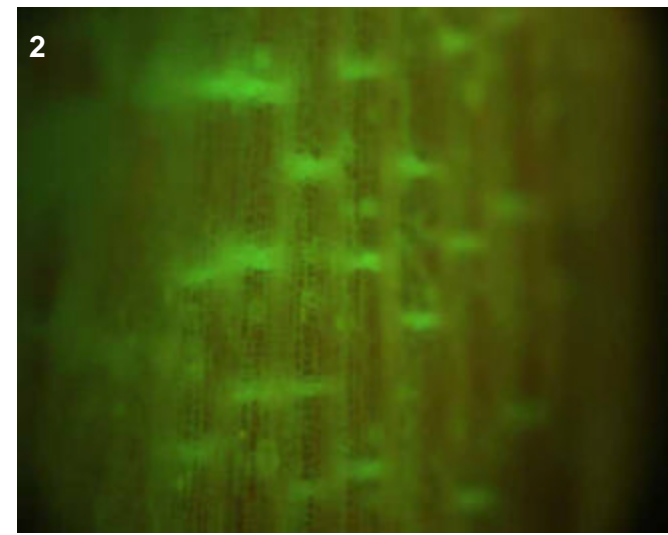
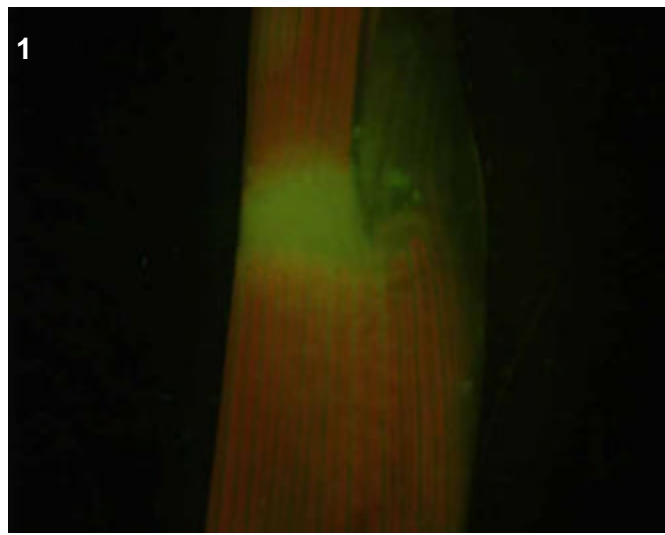
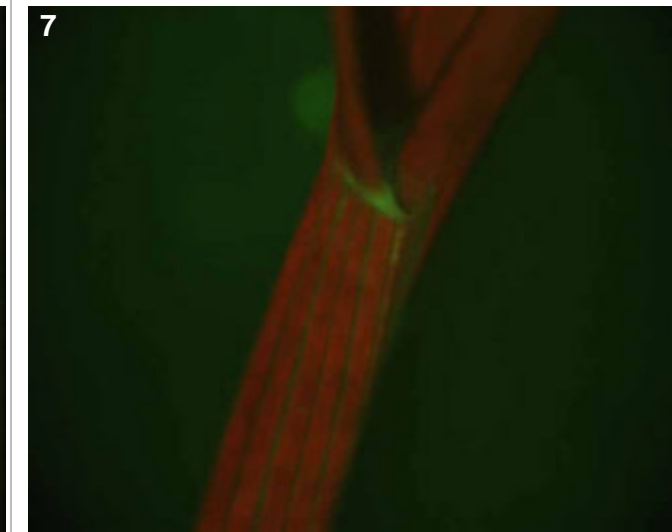
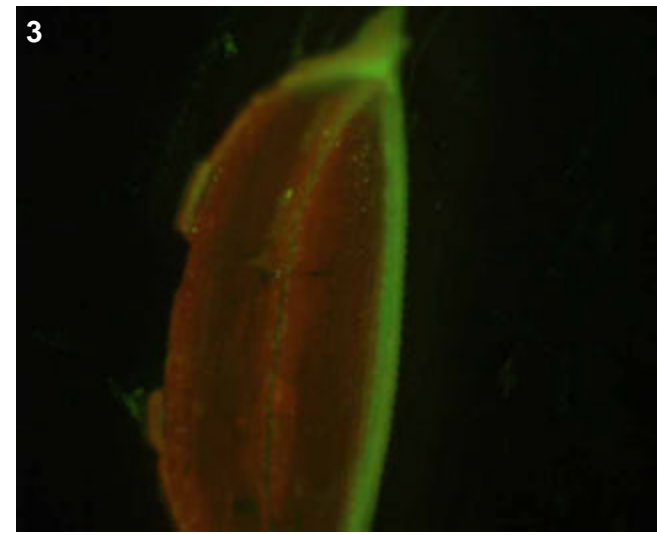
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 137



T0 comments

Probably leaf vascular, but no pic taken because sample was bad.

T1 seed comments

1/5 seeds showed faint expression in the scutellum.

T1 seedling comments

Genotype: ARL A10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-4
 T1 seed/seedling: 5-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

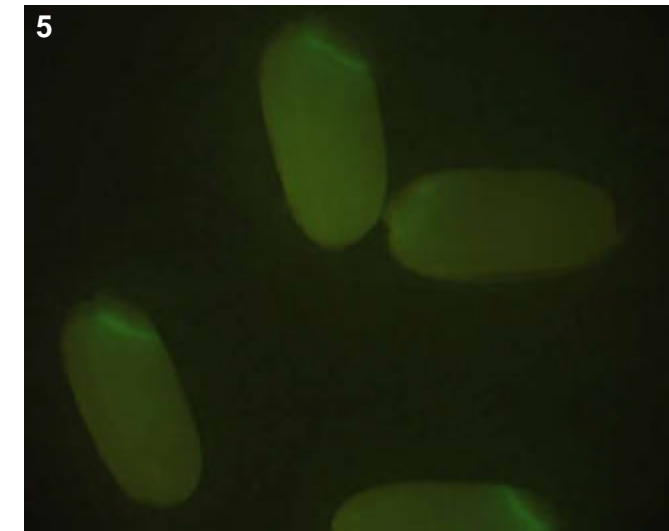
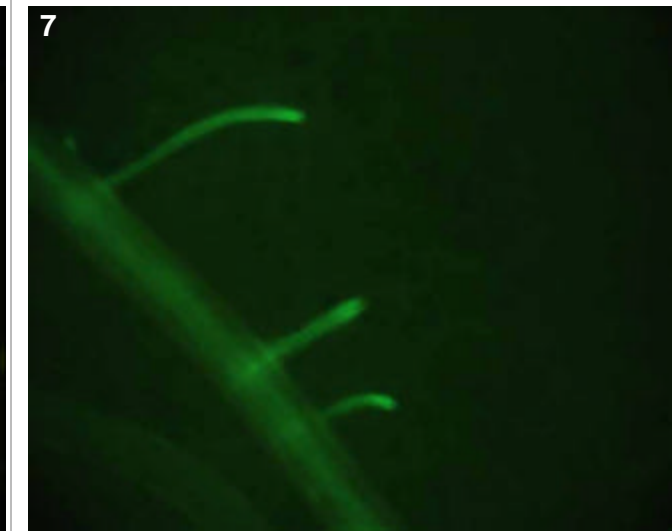
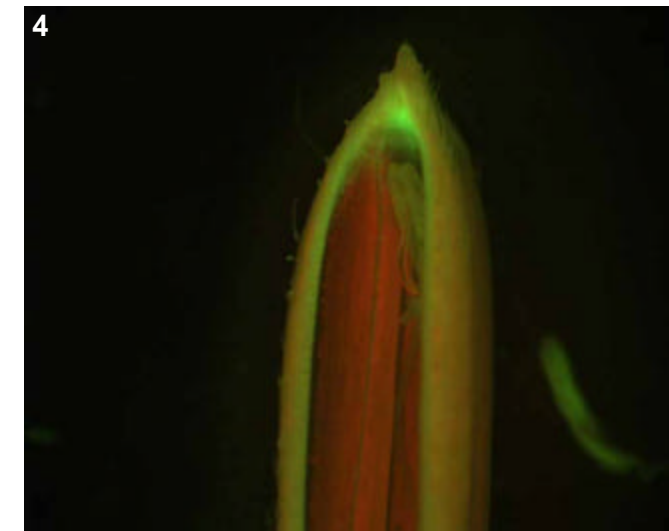
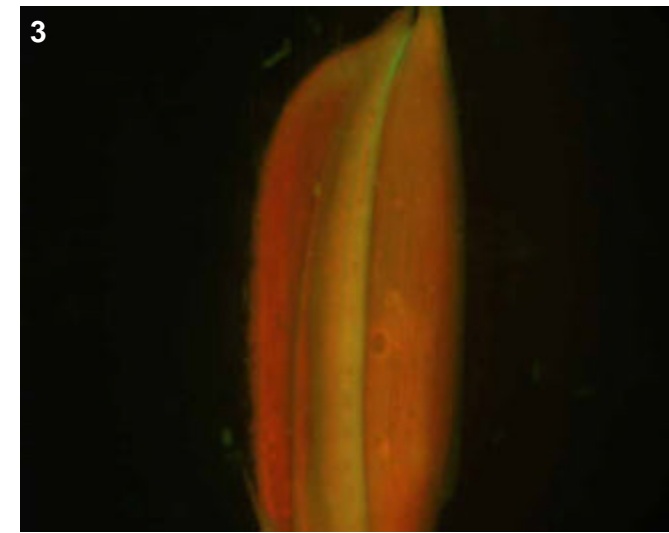
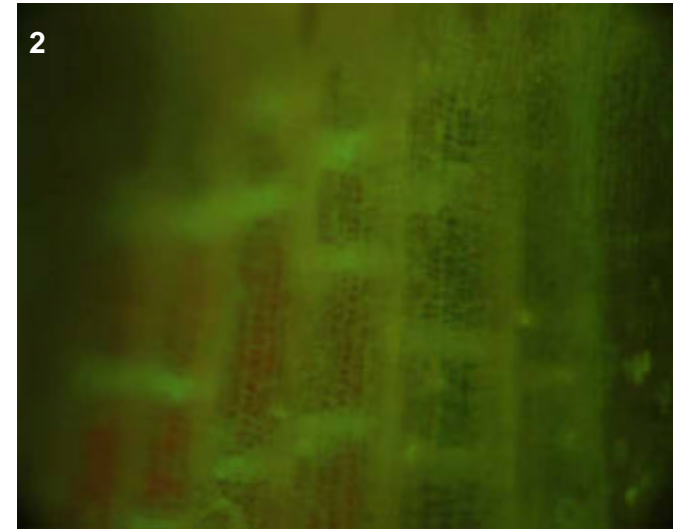
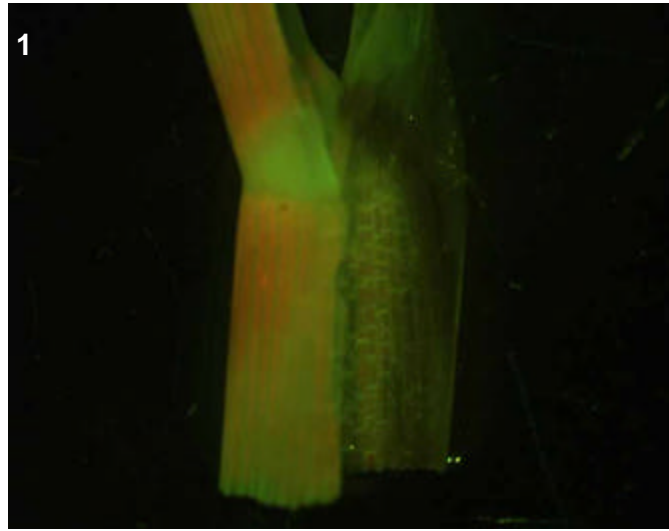
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 132



T0 comments

Lemma/palea expression is in the tips (pic 4).

T1 seed comments

3/5 seeds showed bright expression in the embryo (pic 5).

T1 seedling comments

Bright root expression (pics 6-7), with most expression in the tips.

Genotype: ARL E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

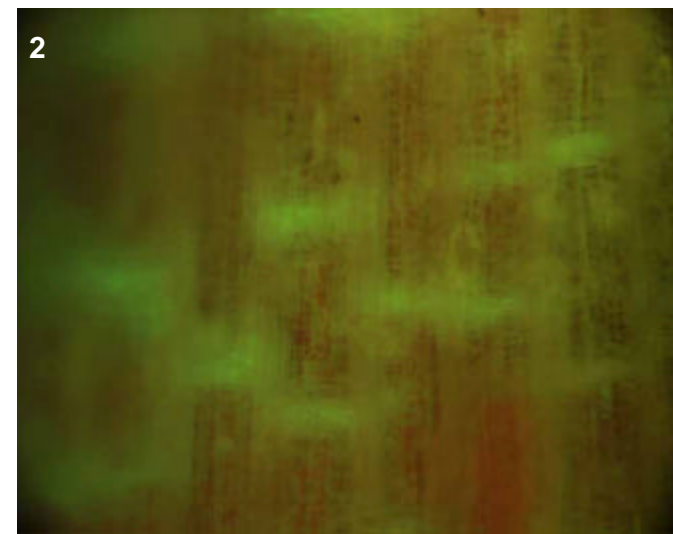
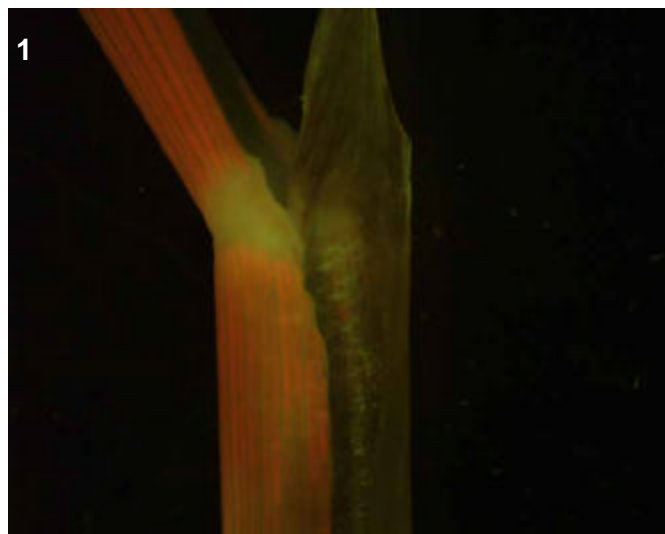
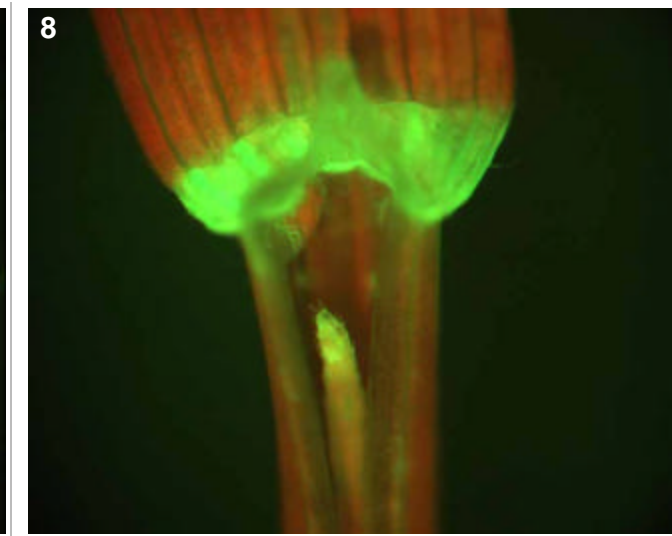
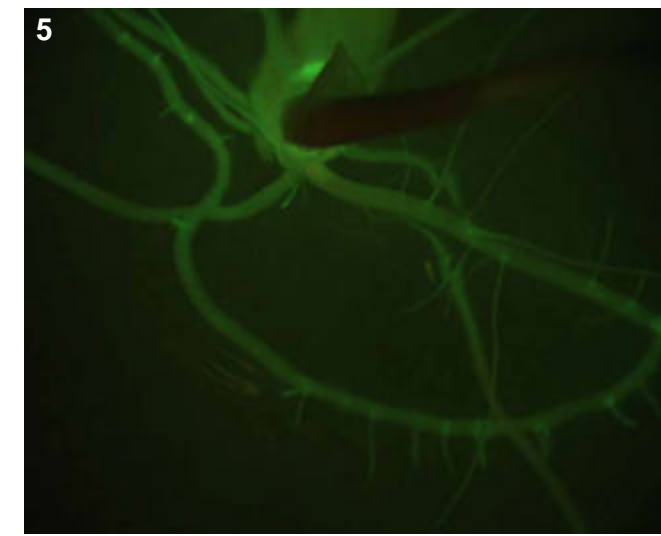
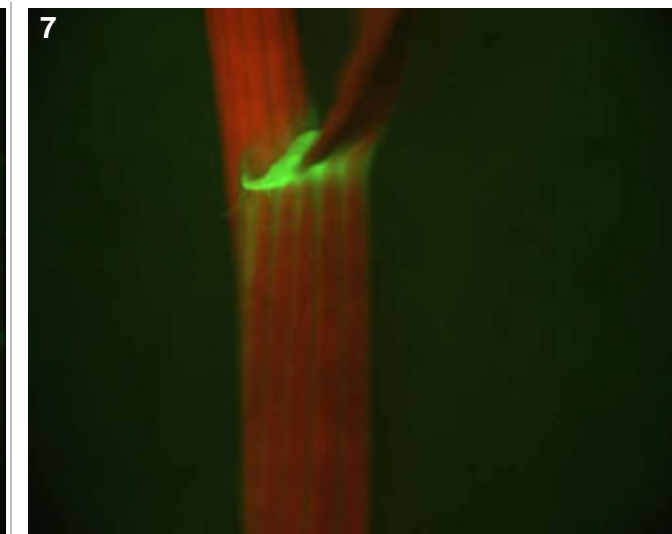
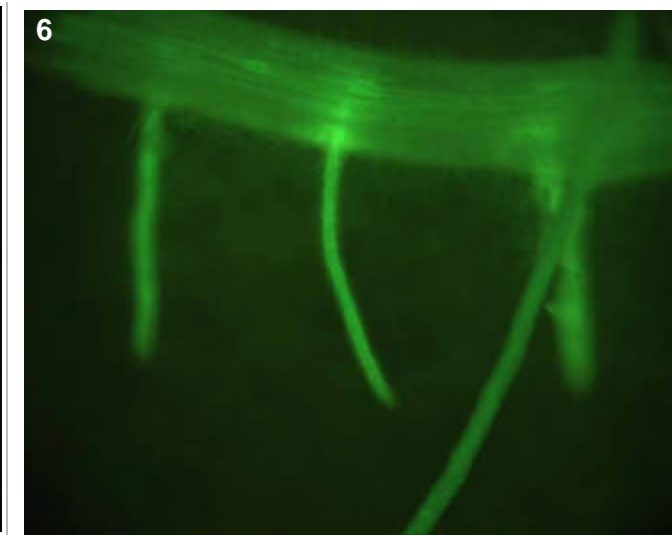
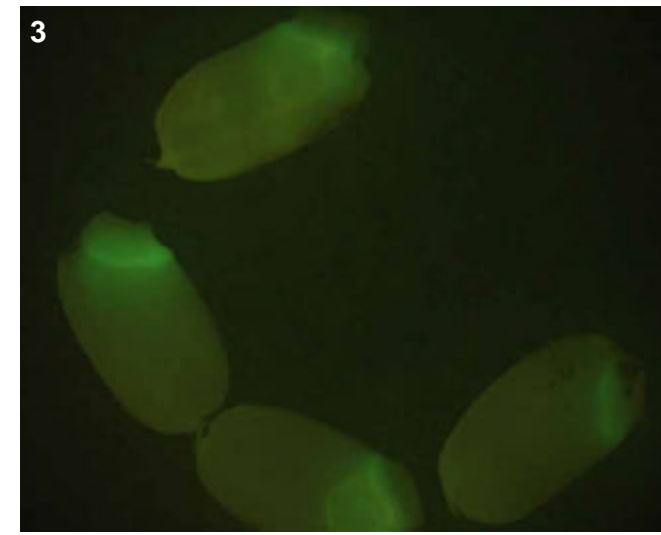
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 18



T0 comments

T1 seed comments

5/5 seeds showed bright expression in the scutellum (pic 3).

T1 seedling comments

Bright vascular in root (pics 4-6) and shoot (pic 7). This line is probably a root mutant due to the rather small size of seminal and crown roots (pics 4-5) and perhaps a shoot mutant as well because one of the two plants had delayed emergence of the second leaf (pic 8).

Genotype: ARL F07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

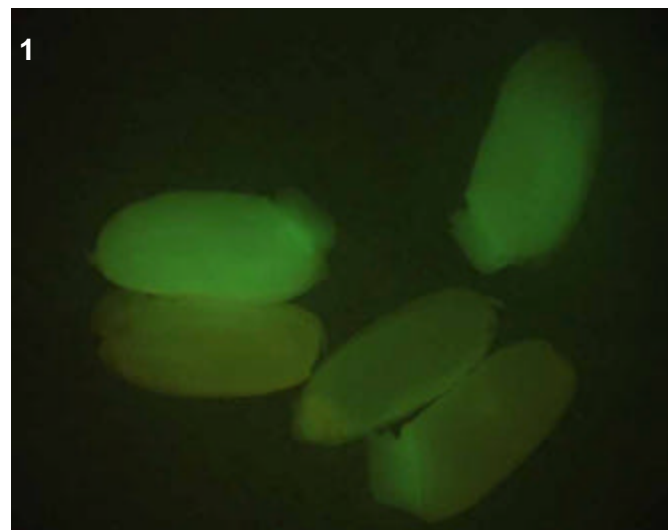
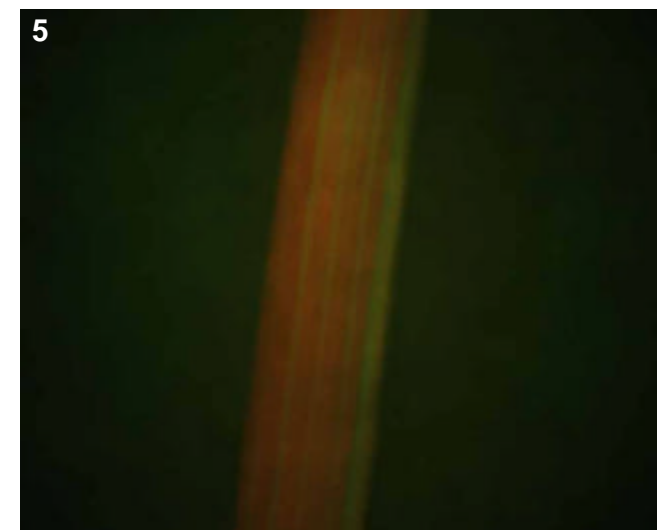
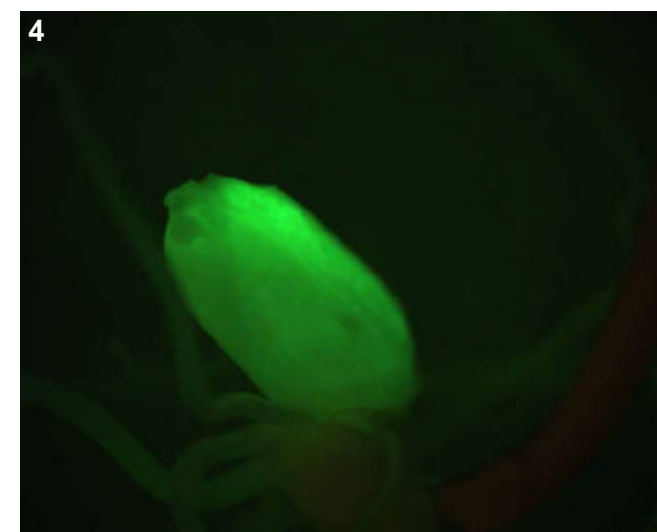
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 72



T0 comments

T1 seed comments

4/5 seeds had expression (pic 1) ranging from aleurone/endo, embryo and scutellum bright (upper two seeds), to the same pattern but less bright (second seed up from bottom) to just the embryo and scutellum bright (bottom)

T1 seedling comments

Bright expression in roots (pics 2-3), perhaps cortical/epidermal expression. Endosperm also bright (pic 4) as well as shoot vascular (pic 5).

Genotype: ARM C07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-10

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

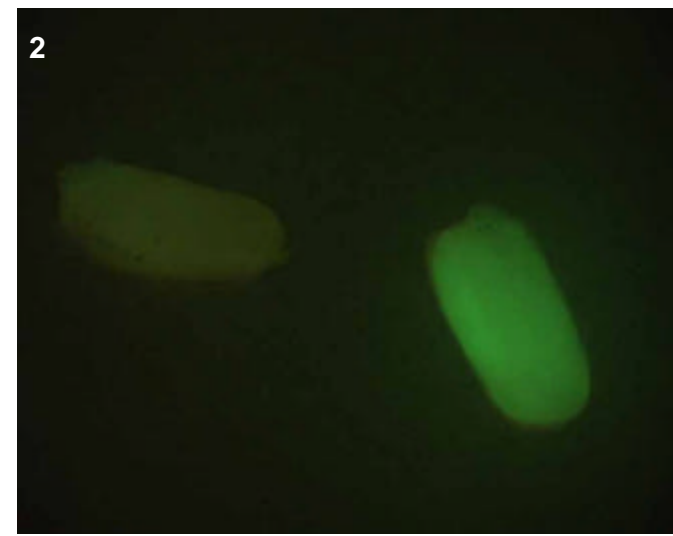
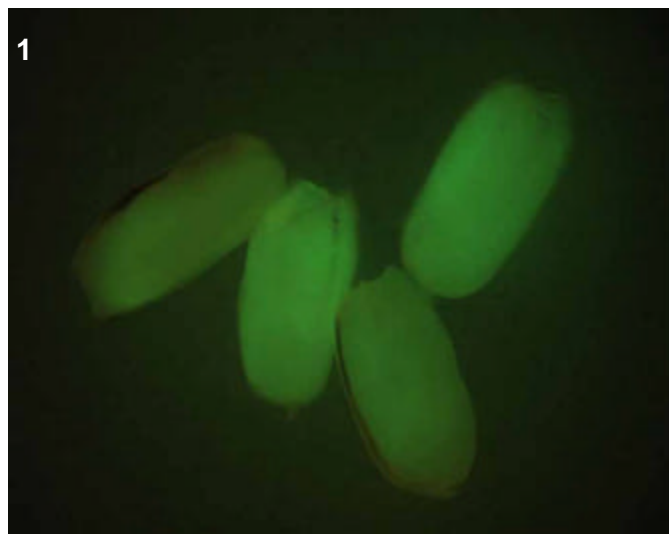
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 104



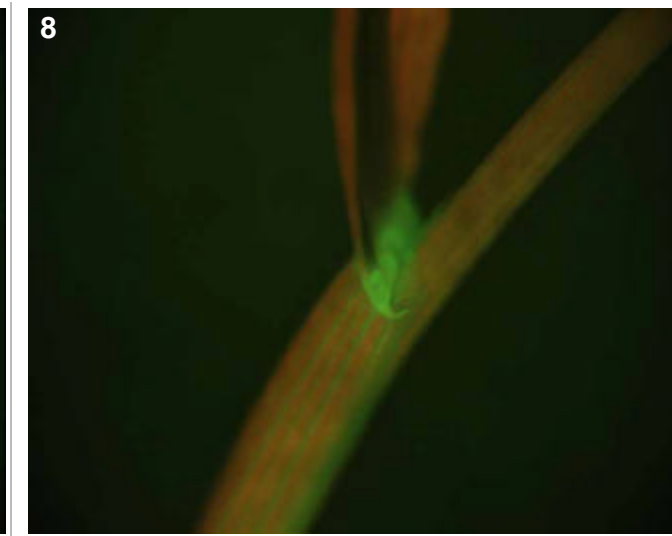
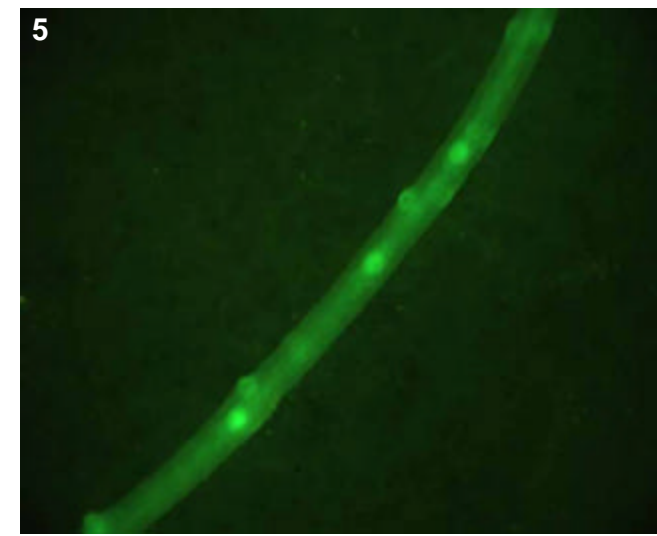
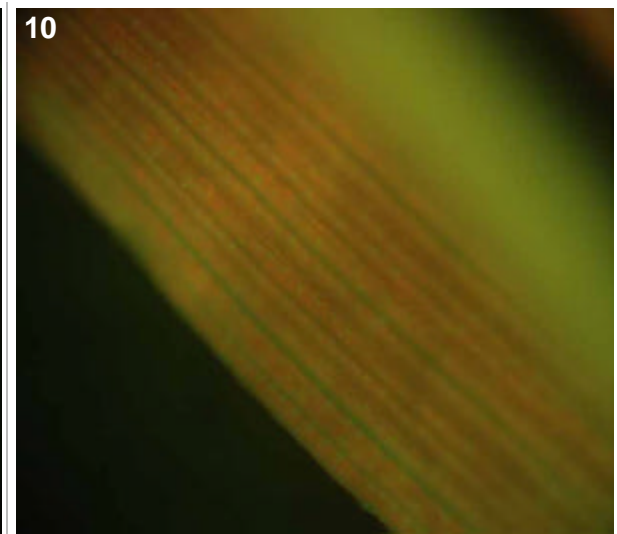
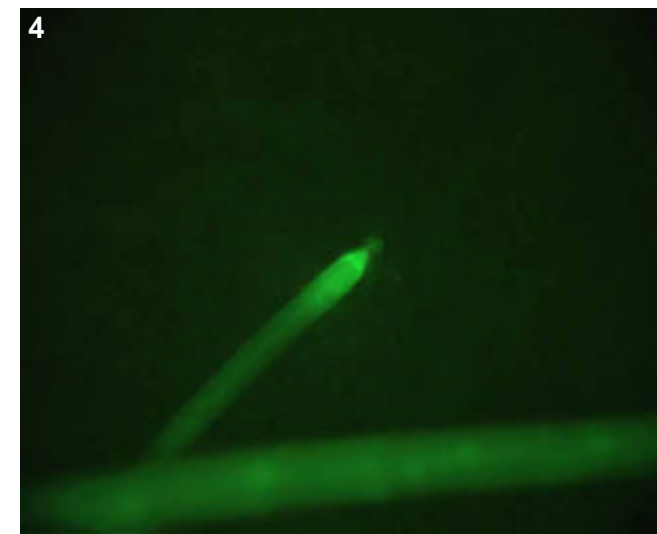
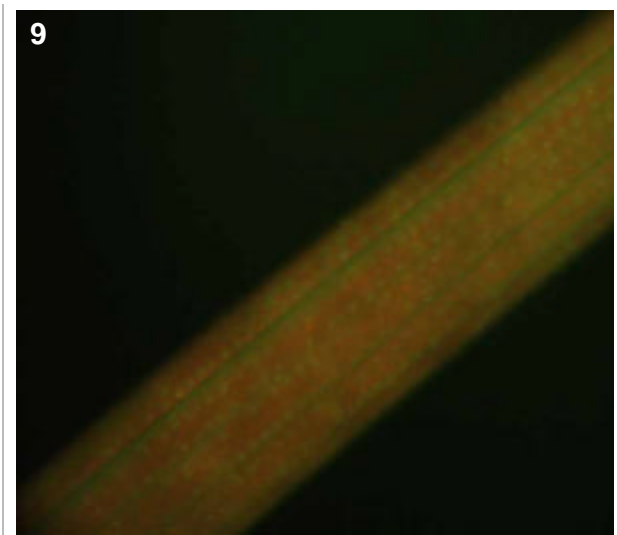
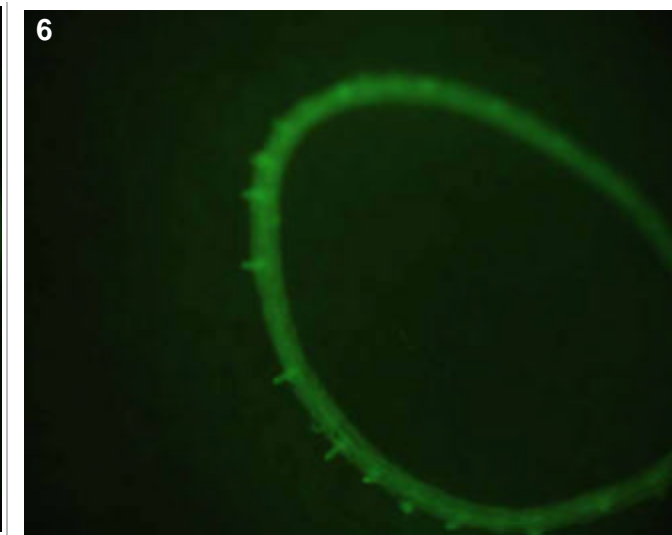
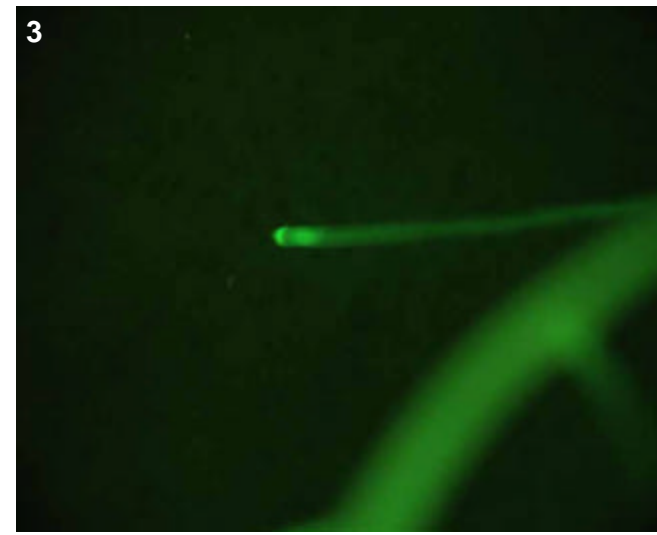
T0 comments

T1 seed comments

3/5 seeds had bright expression in aleurone/endosperm. Maybe coleorhiza too (pictures 1-2).

T1 seedling comments

Very bright expression--looks like constitutive throughout the plant.



Genotype: ARN E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle
- Embryo

T1 Seedling

- YES
- POSSIBLE
- S. vascular
- SHOOT
- ROOT
- ENDOSPERM
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

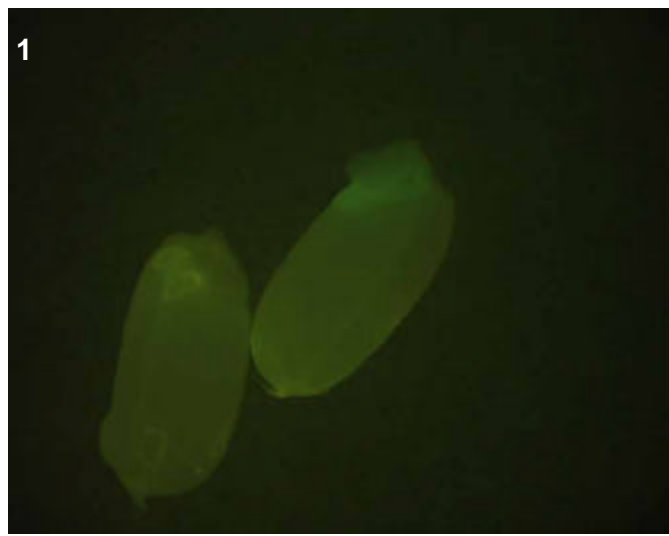
T1 in greenhouse?

YES, 1 GFP+ plant

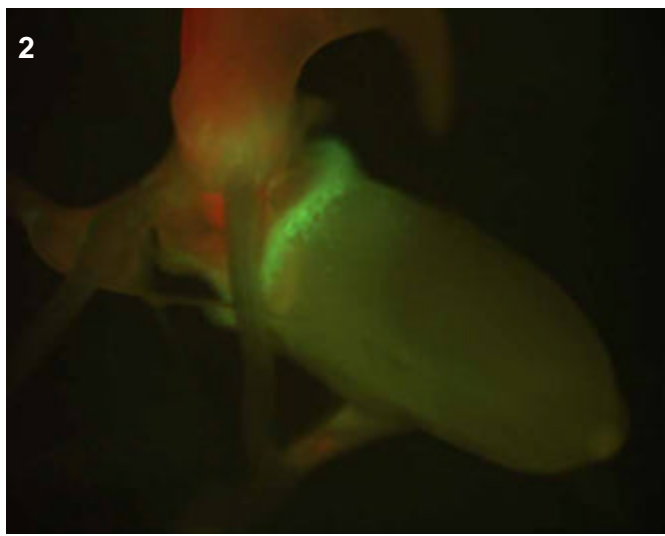
Confocal?

Number T2 seed produced: 0

1



2



T0 comments

T1 seed comments

3/5 seeds had bright expression.

T1 seedling comments

NOTE: this line may have been mixed up with ARN A07. Expression in the plant was specific to the endosperm and just the base of the sheath tissue.

Genotype: ARO A10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

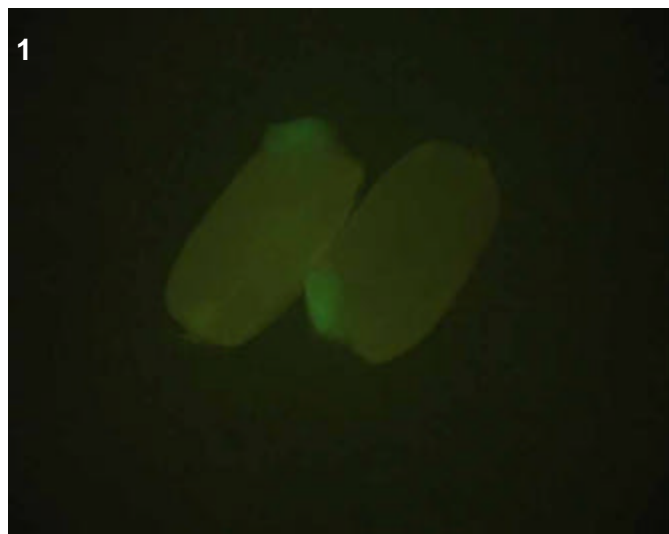
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

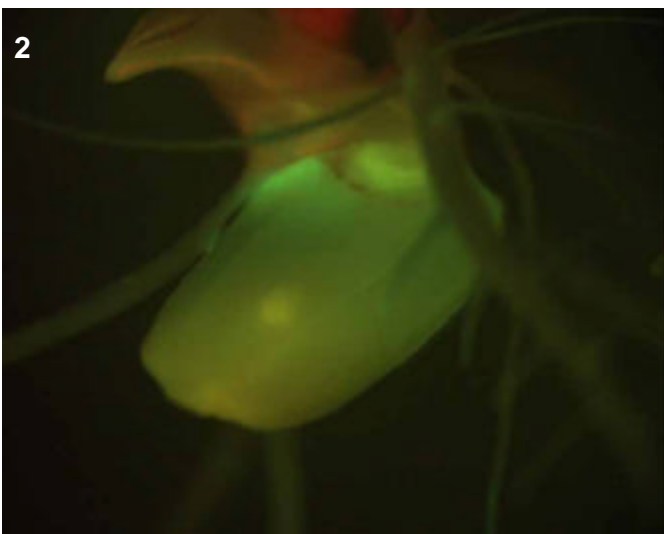
Confocal?

Number T2 seed produced: 65

1



2



T0 comments

T1 seed comments

3/5 seeds had bright expression.

T1 seedling comments

Genotype: ARO C09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-4
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

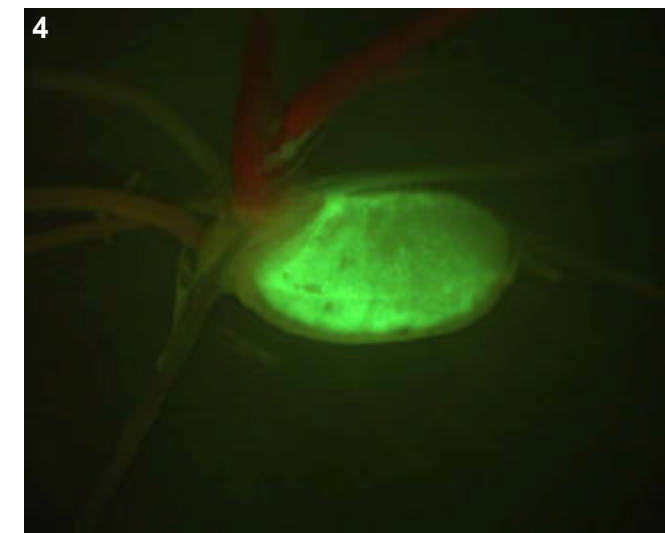
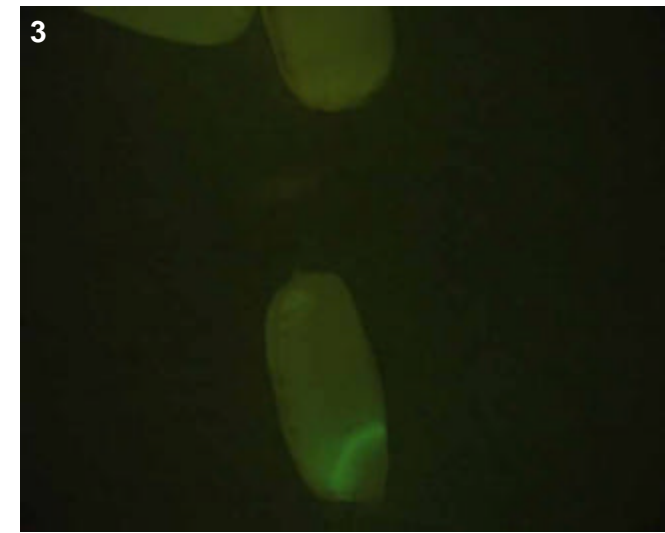
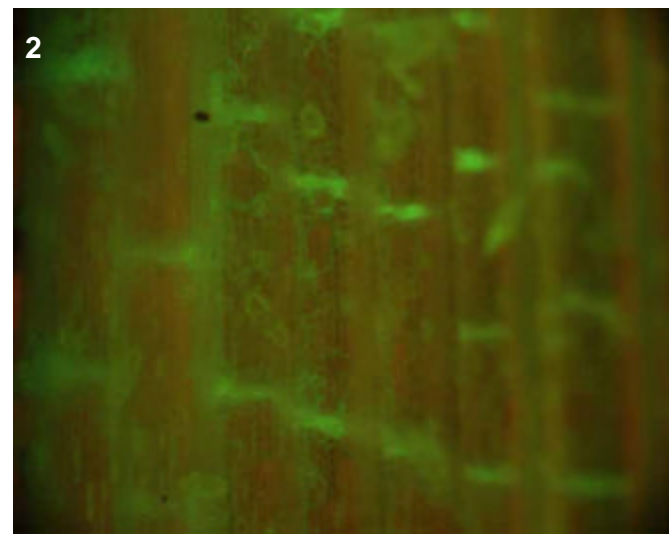
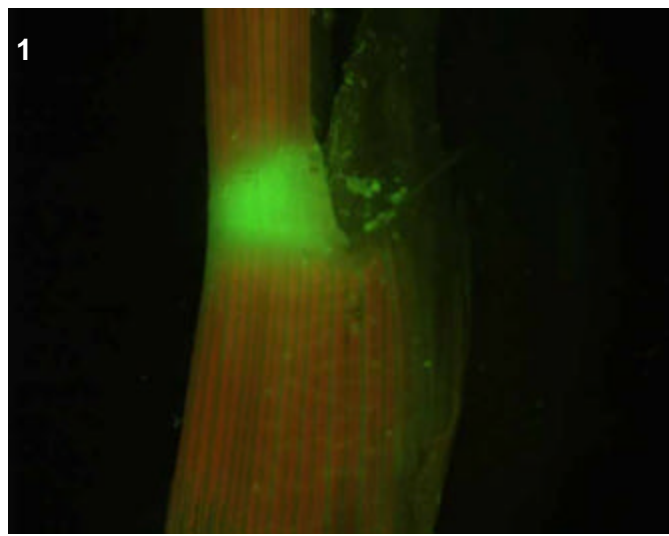
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 28



T0 comments

Flowers were too old to be analyzed.

T1 seed comments

4/5 seeds had bright scutellum expression (pic 3).

T1 seedling comments

Extremely bright expression in the entire endosperm one week post-germination (pic 4).

Genotype: ARO E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

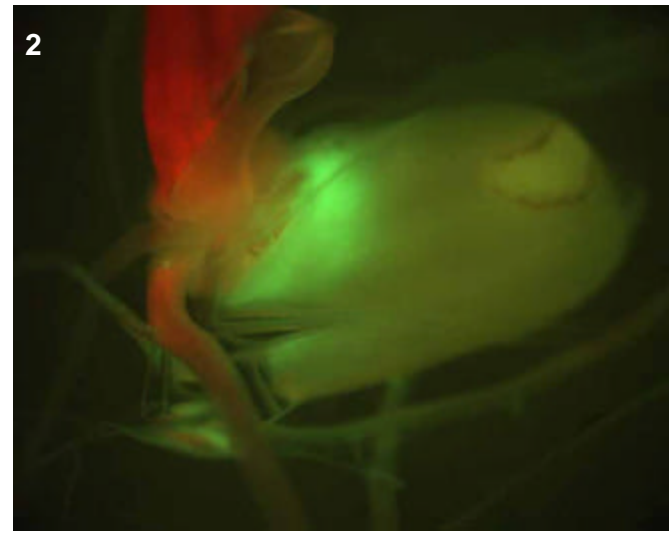
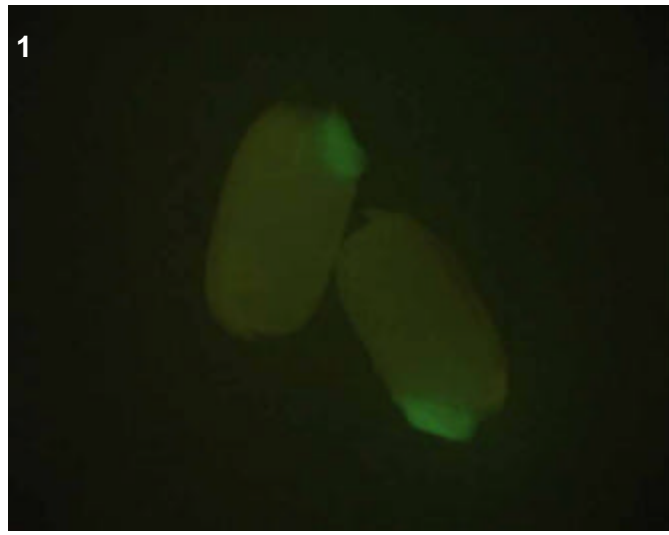
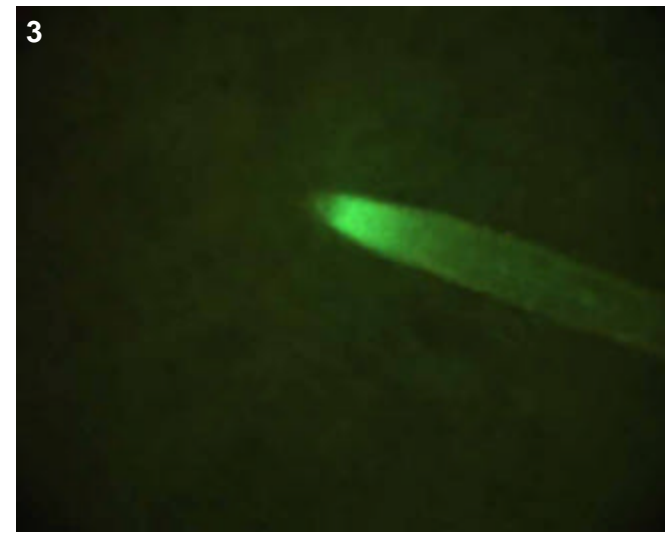
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 51



T0 comments

T1 seed comments

3/5 seeds had bright expression.

T1 seedling comments

Genotype: ARO G10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

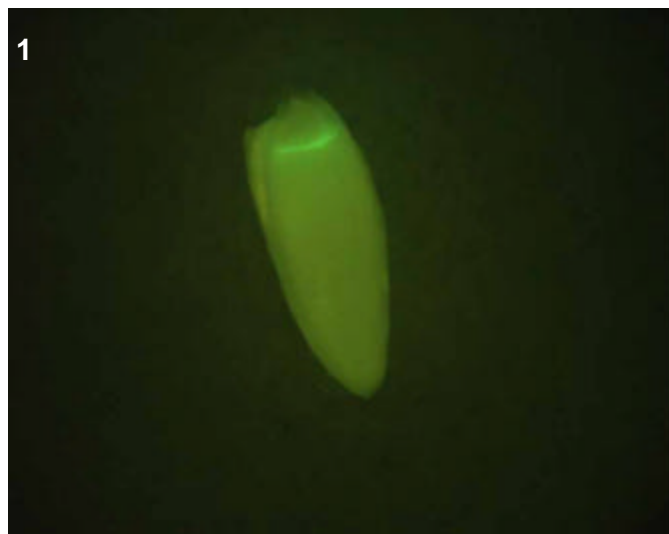
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

Only 2 oddly shaped seeds available to screen, both had expression in scutellum

T1 seedling comments

The seedlings hardly grew, I transferred the two to the greenhouse where they promptly died.

Genotype: ARO H06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-6
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

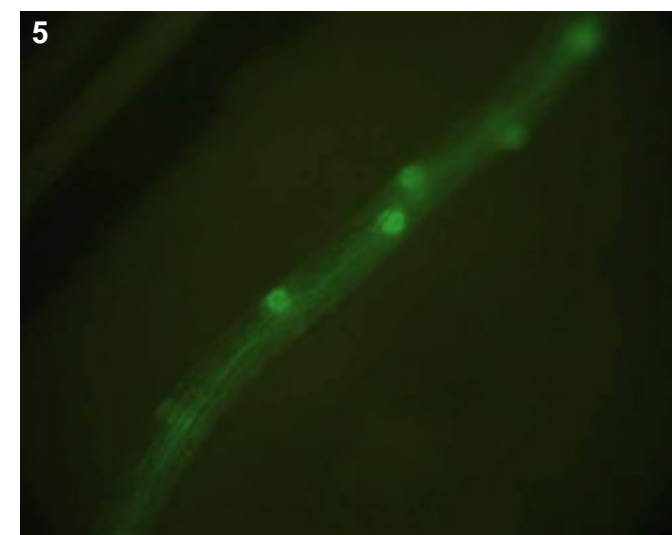
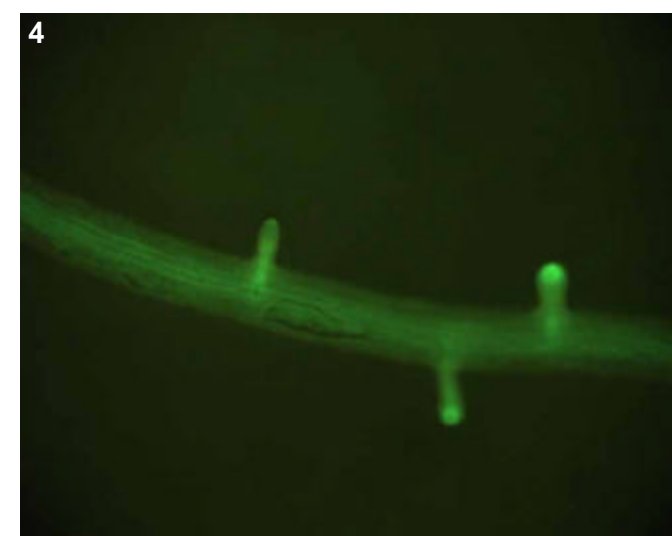
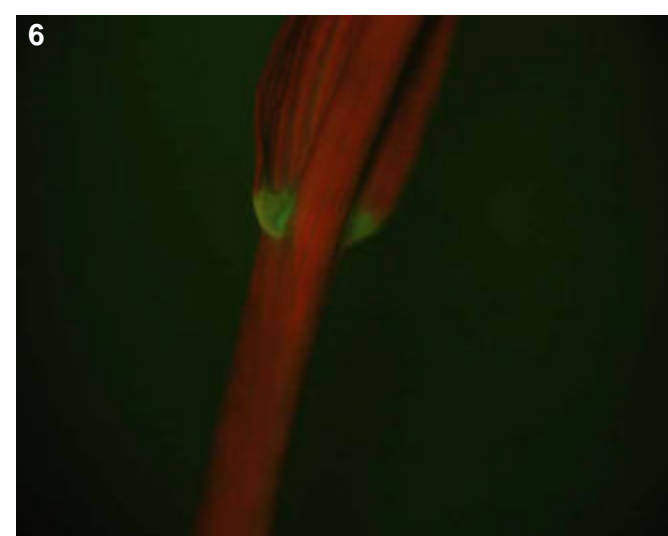
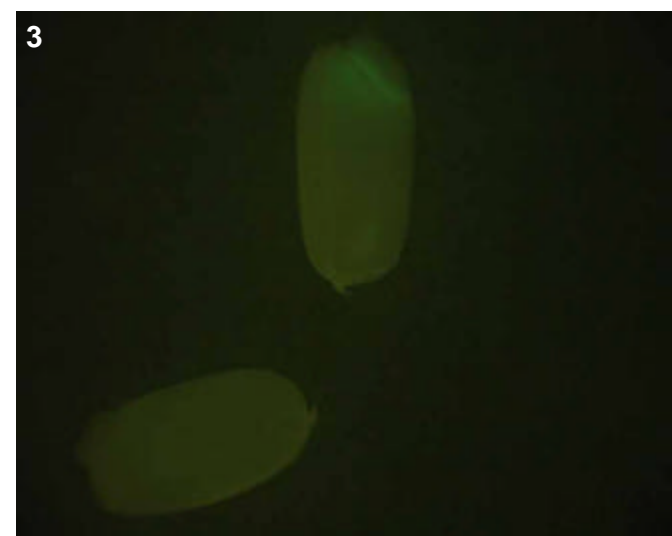
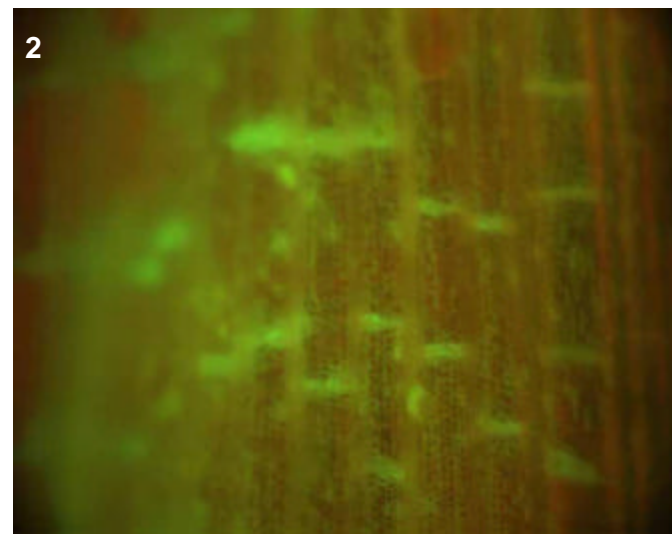
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 51



T0 comments

T1 seed comments

4/5 seeds had medium expression in the embryo.

T1 seedling comments

Genotype: ARP B02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

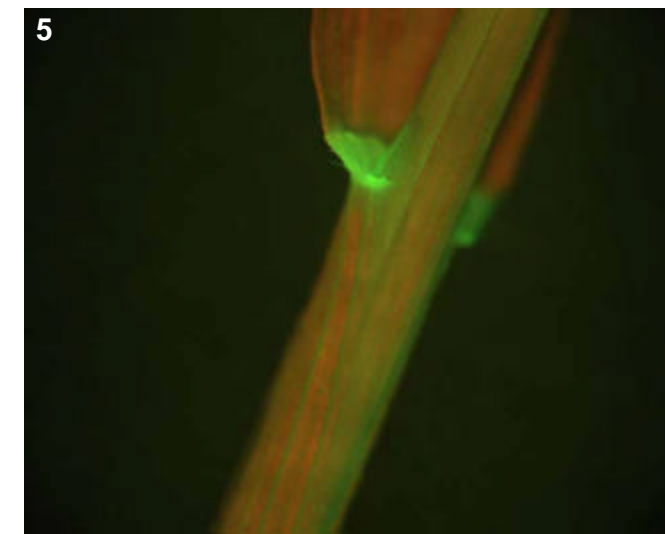
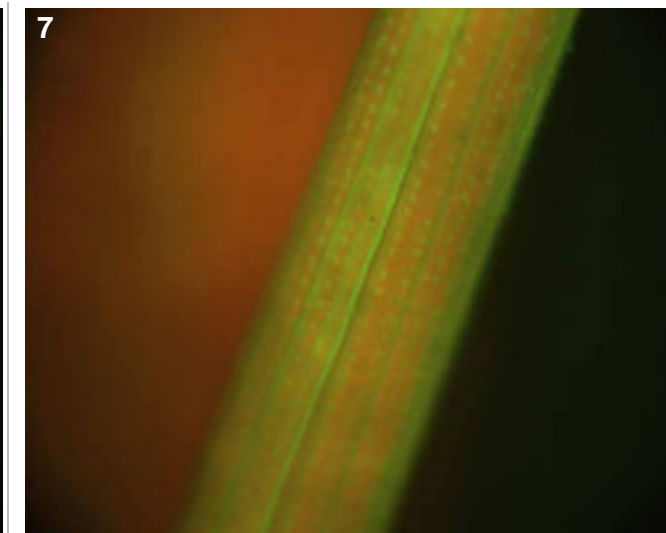
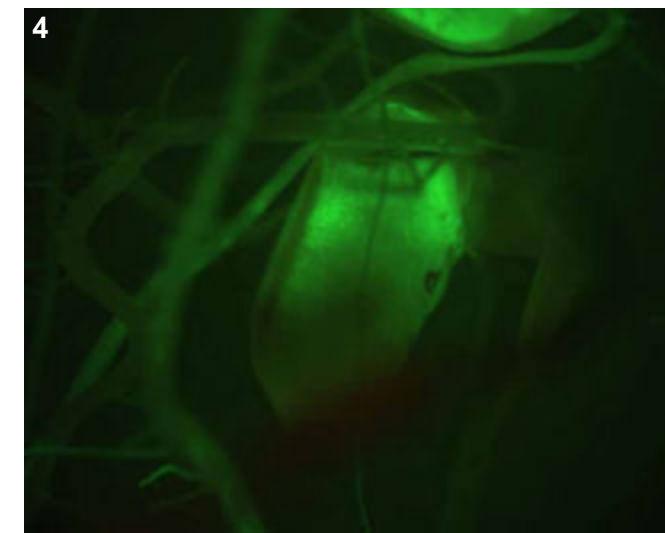
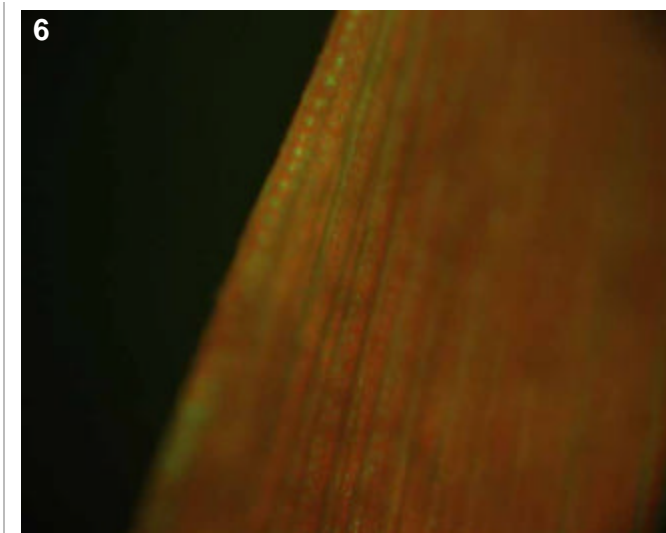
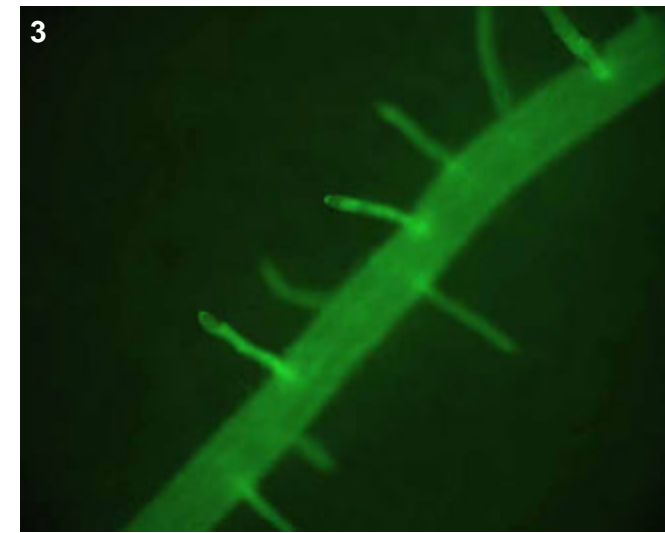
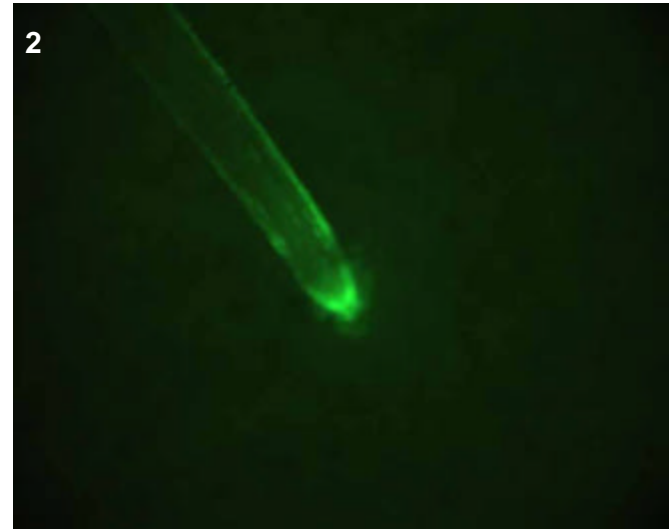
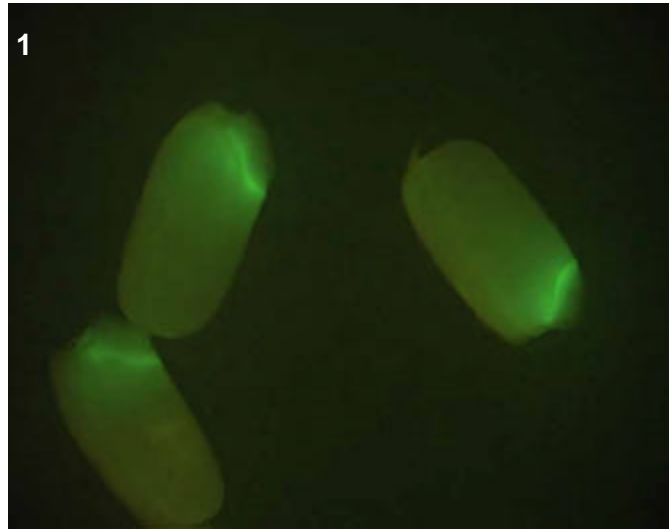
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 26



T0 comments

T1 seed comments

4/5 seeds showed expression

T1 seedling comments

Looks like bright epidermal expression in roots (pics 2-3). Also bright expression in the shoot-collar and perhaps epidermal expression there as well. Note the bright guard cells in pics 6 and 7.

Genotype: ARP F01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

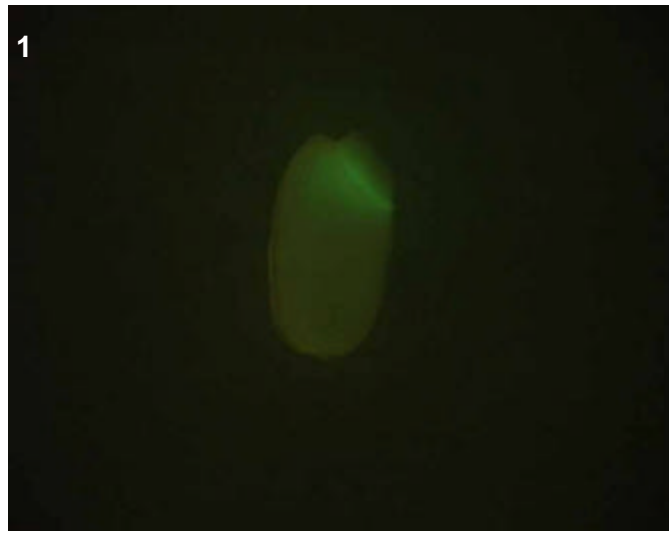
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

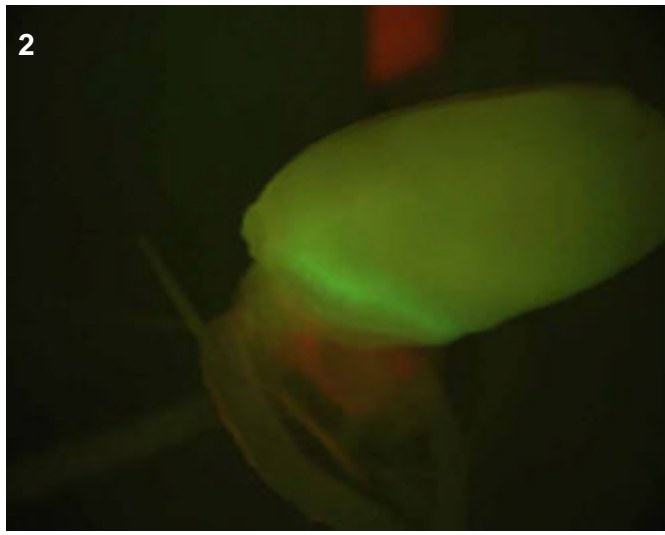
Confocal?

Number T2 seed produced: 84

1



2



T0 comments

tetraploid

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Medium expression specific to the scutellum region of the digesting seed (pic 2).

Genotype: ARQ B06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

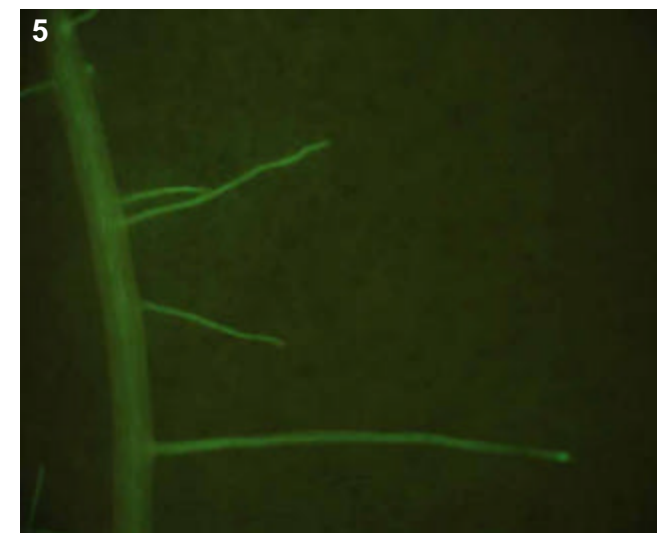
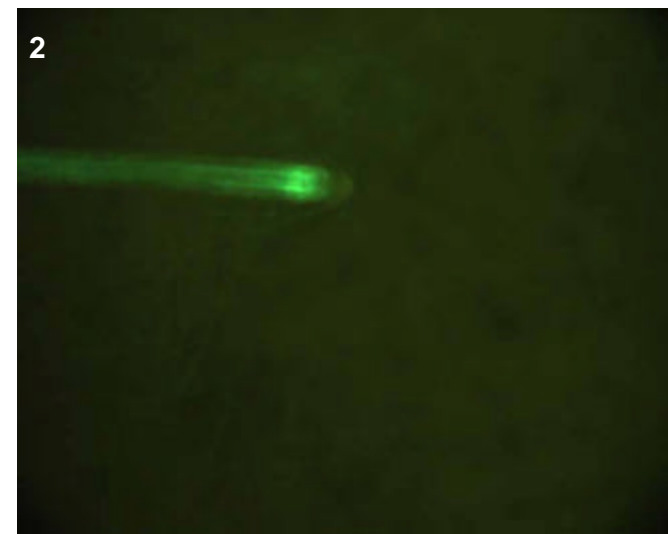
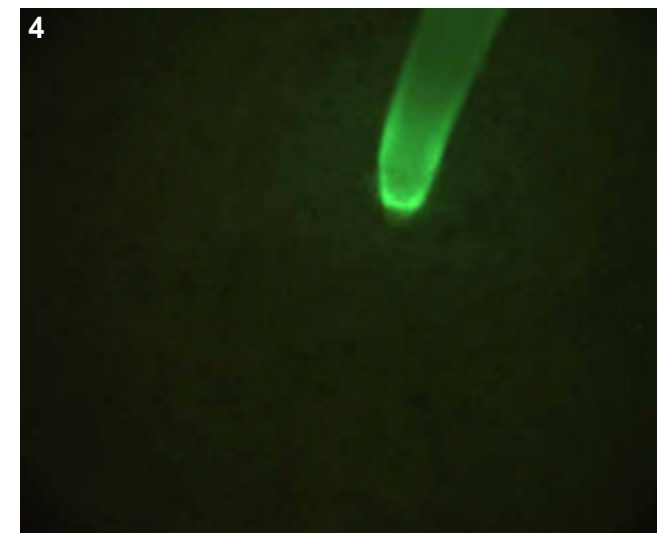
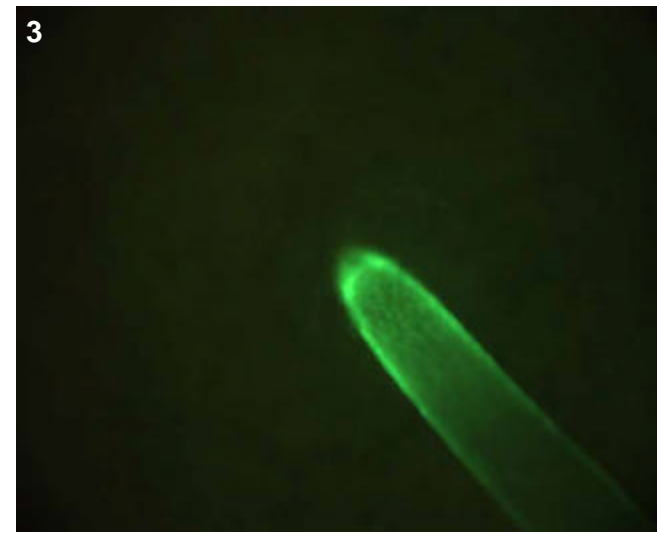
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 40



T0 comments

T1 seed comments

T1 seedling comments

Bright root expression, perhaps cortical, in laterals (pics 2 and 5), note the very bright GFP near elongation zone of tips. Tips of crowns were bright epidermal (pics 3-4). More faint collar expression (pic 6).

Genotype: ARQ D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

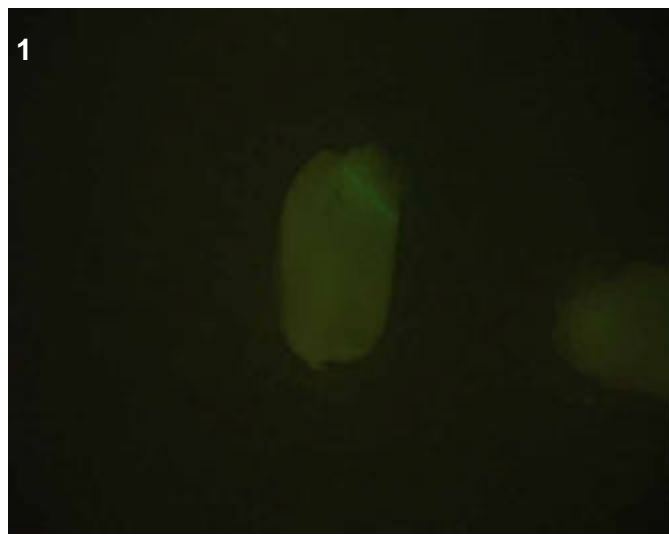
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

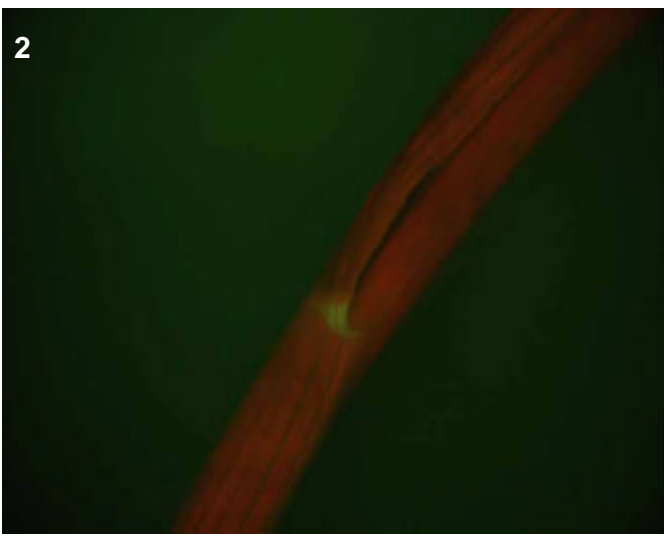
Confocal?

Number T2 seed produced: 115

1



2



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Root expression of some kind, but could not be defined due to bacterial contamination.

Genotype: ARQ F02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

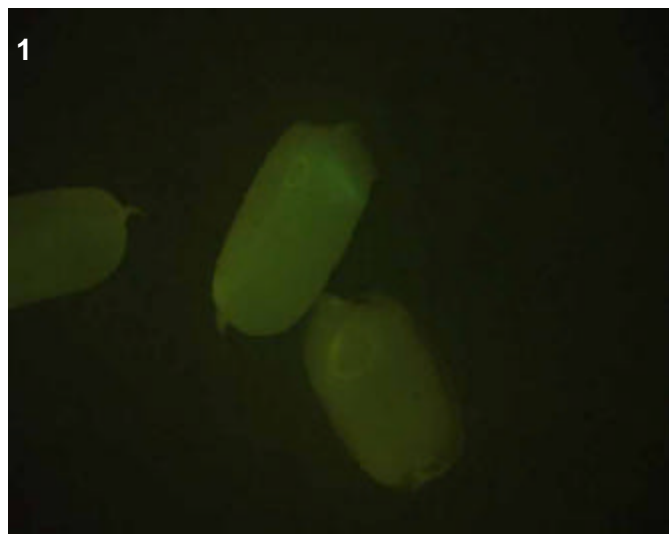
- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Genotype: ARQ G05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

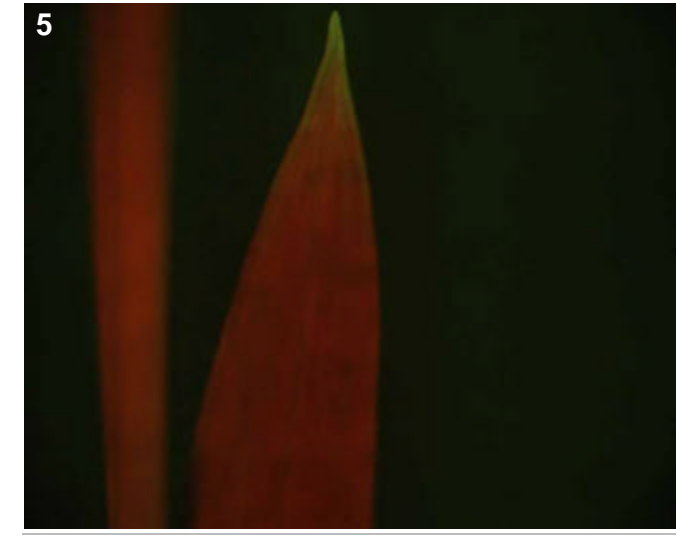
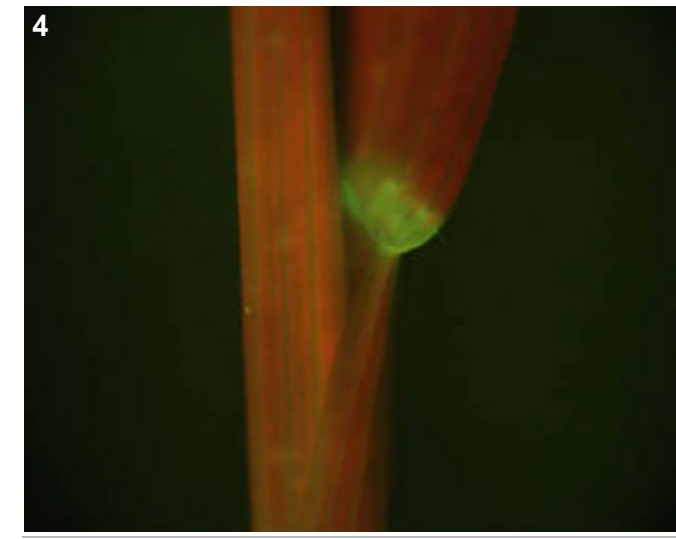
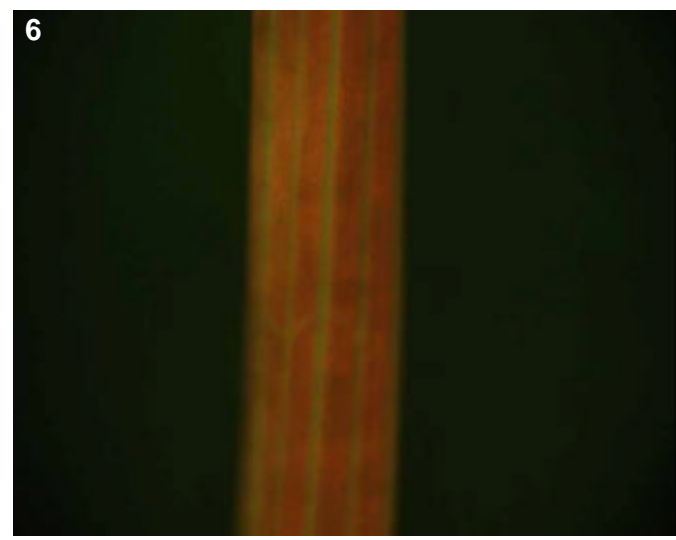
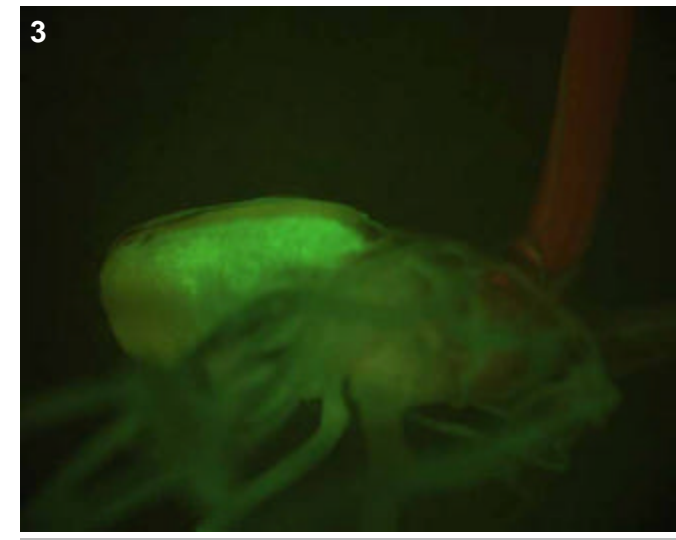
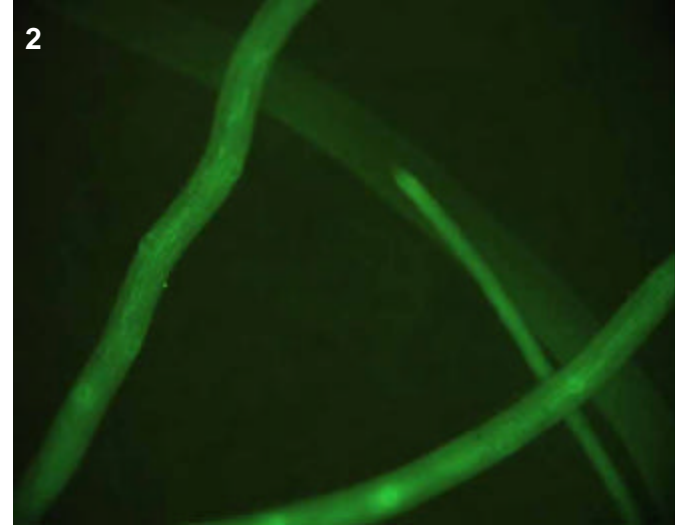
T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?**
YES, 2 GFP+ plants
- Confocal?**

Number T2 seed produced: 2



T0 comments

T1 seed comments
2/5 seeds showed expression

T1 seedling comments
Bright, quite general appearing expression in roots (pics 2-3). Also bright endosperm, (pic 3) as well as collar and tips of leaves (pics 4-5).

Genotype: ARR C09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

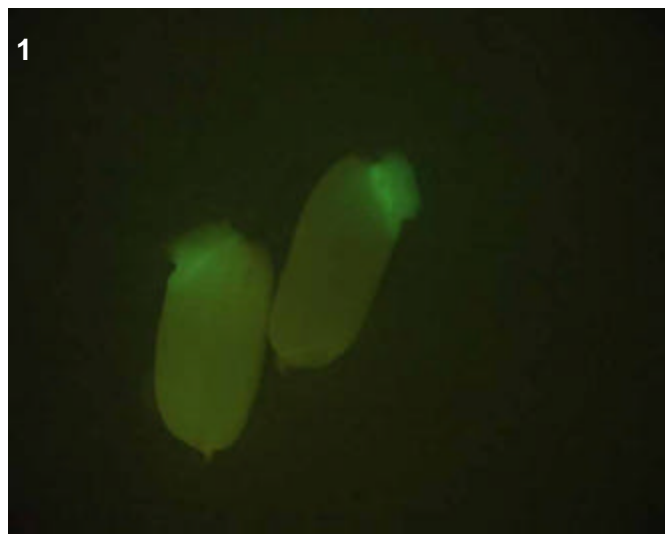
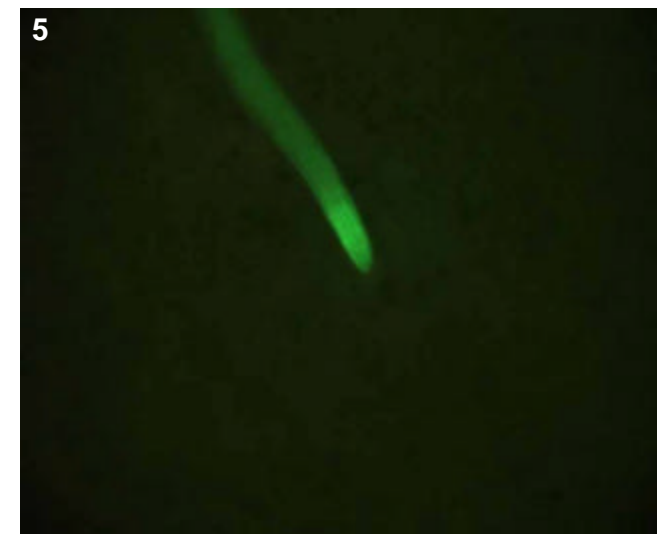
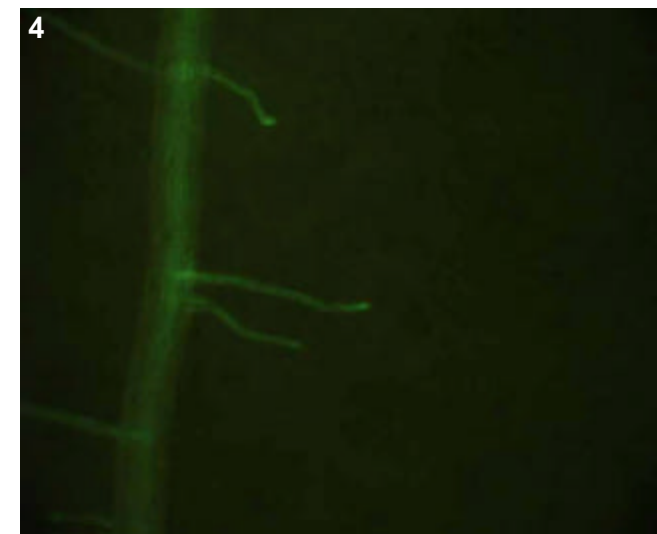
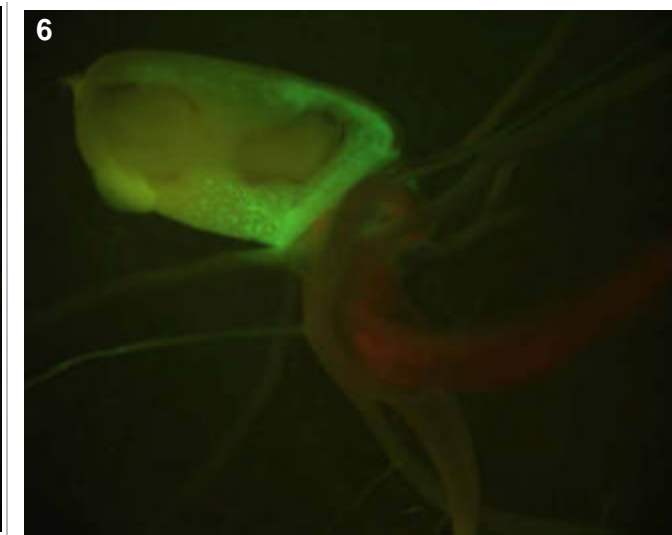
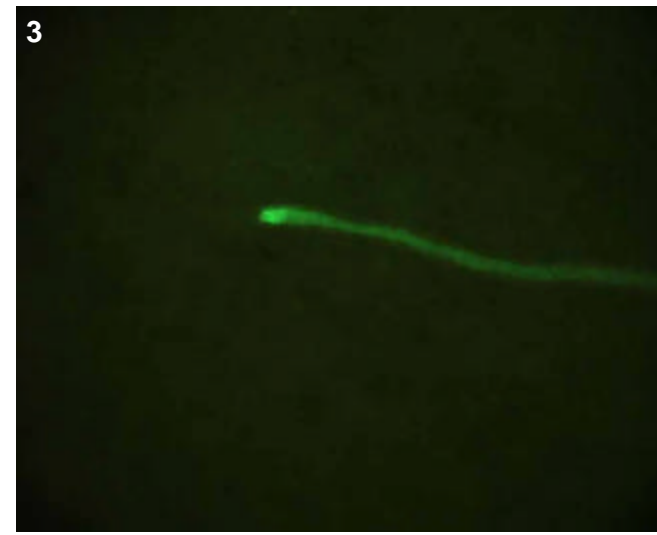
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 46



T0 comments

T1 seed comments

4/5 seeds had expression. Expression clearly in coleorhiza of seeds (see pic 1, seed on right).

T1 seedling comments

Bright distinct root vascular expression (pics 2-5), note the especially bright expression near the cell division/elongation zone of both lateral and crown root tips. No root cap expression. Perhaps faint shoot vascular but not sure.

Genotype: ARR D06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

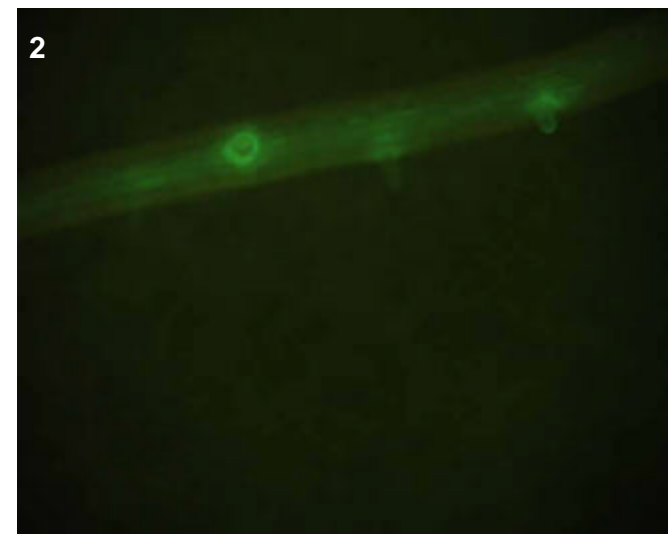
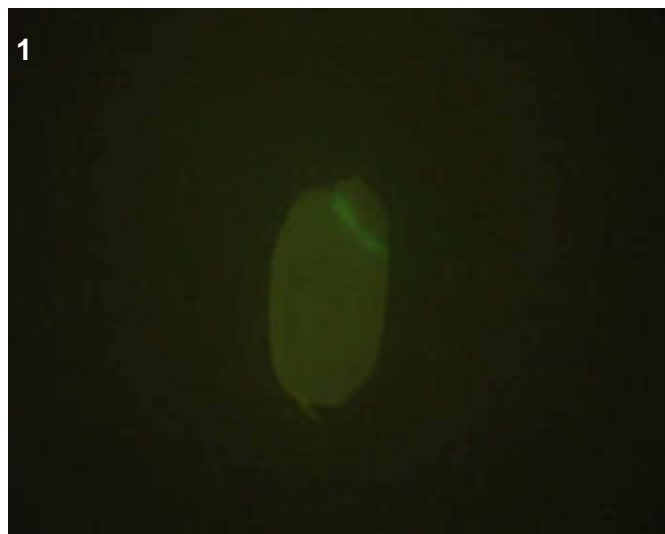
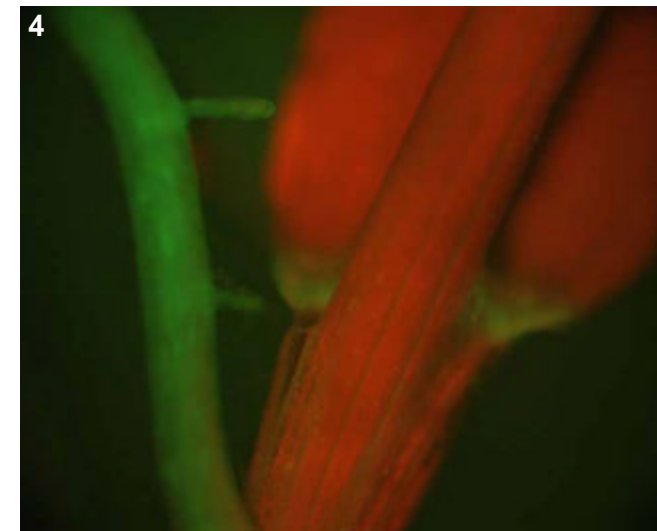
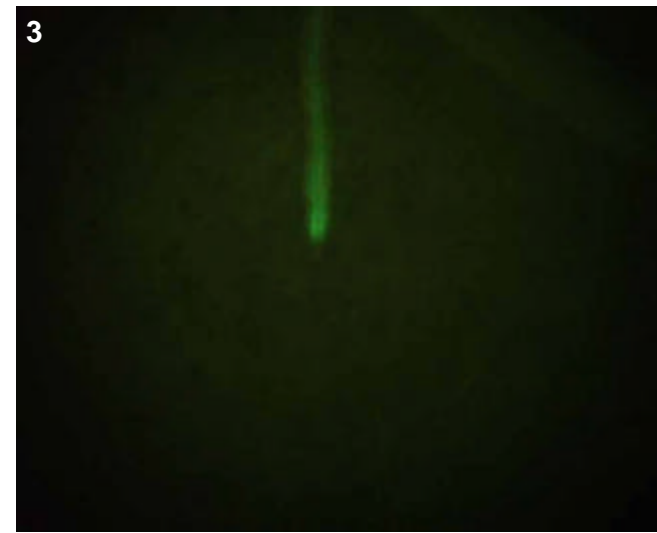
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 168



T0 comments

T1 seed comments

4/5 seeds had expression.

T1 seedling comments

Note the bright vascular expression near lateral tips (pic 3).

Genotype: ARR F04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant: 1-2
 T1 seed/seedling: 3-8
 T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

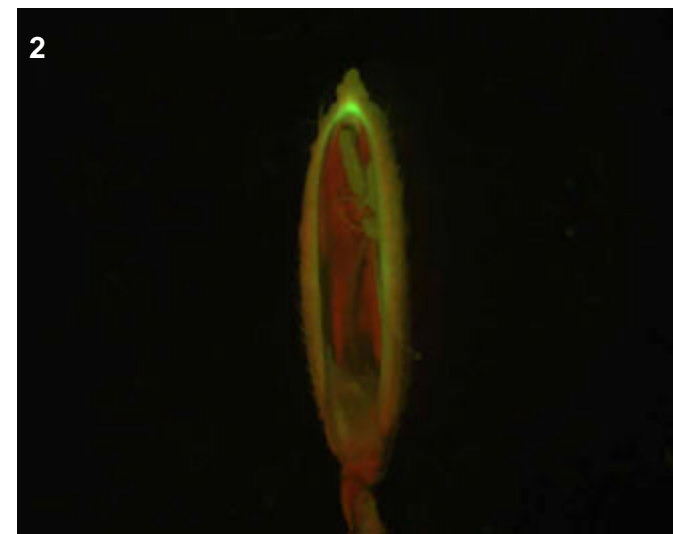
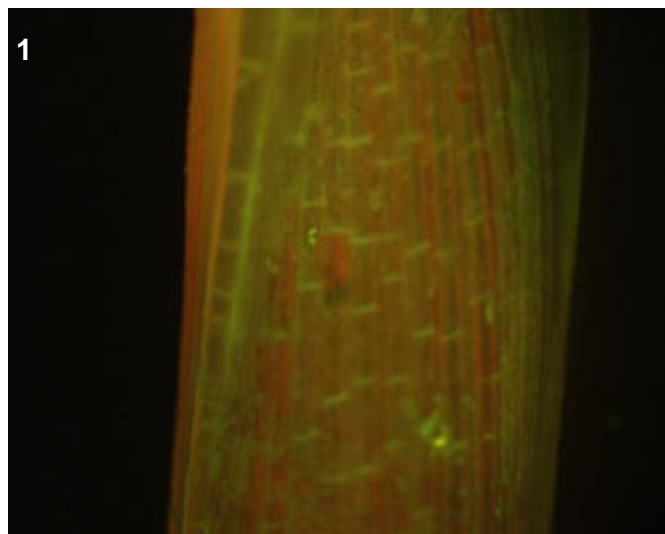
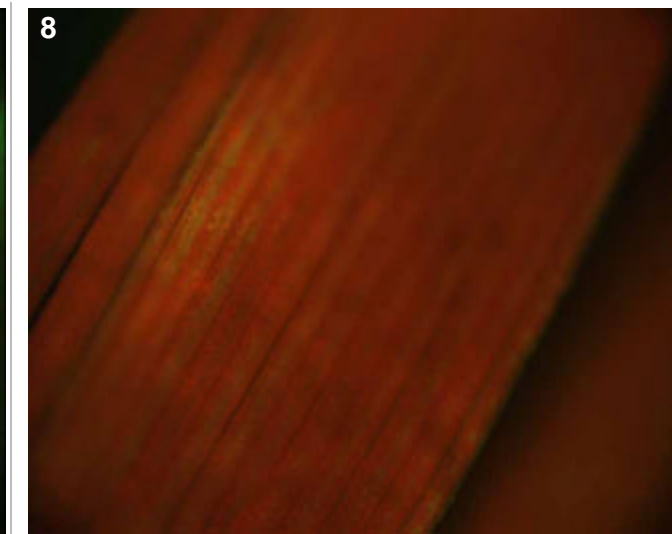
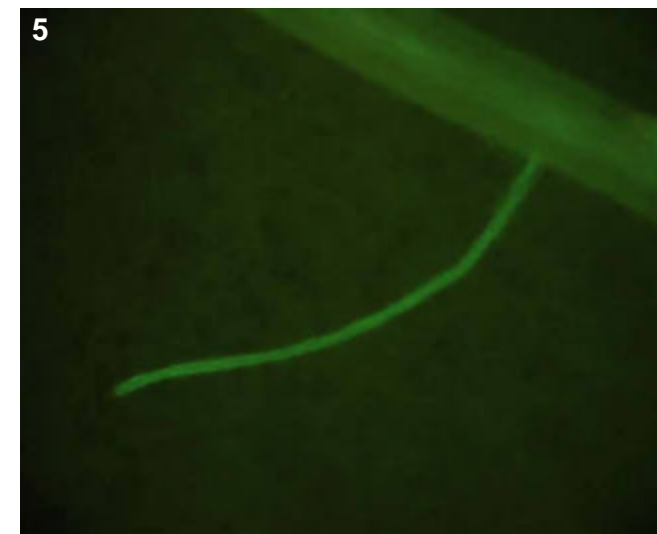
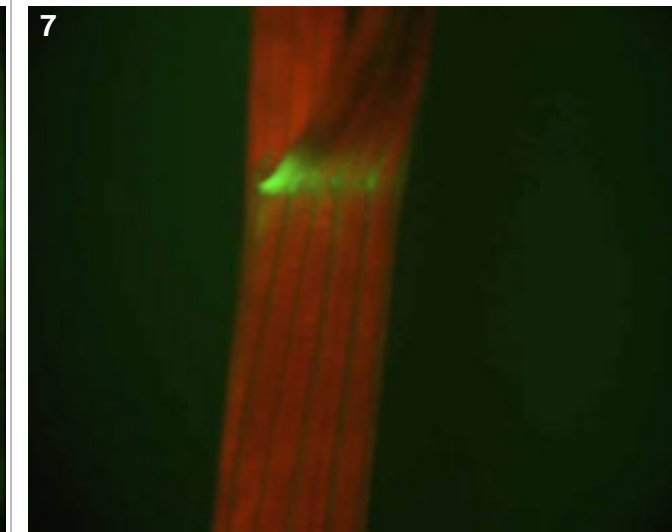
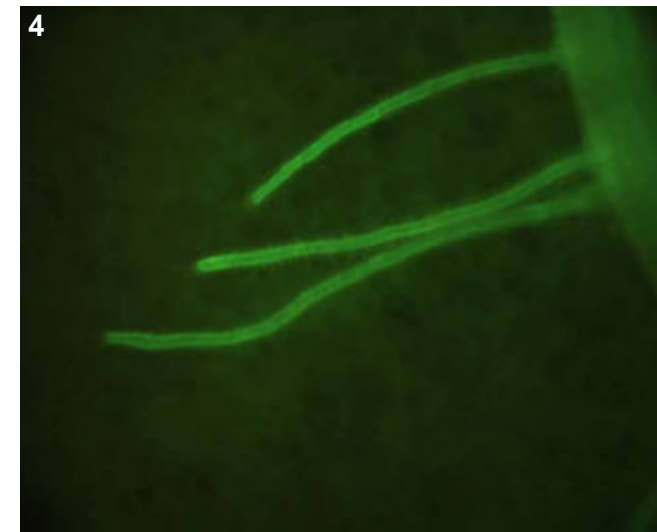
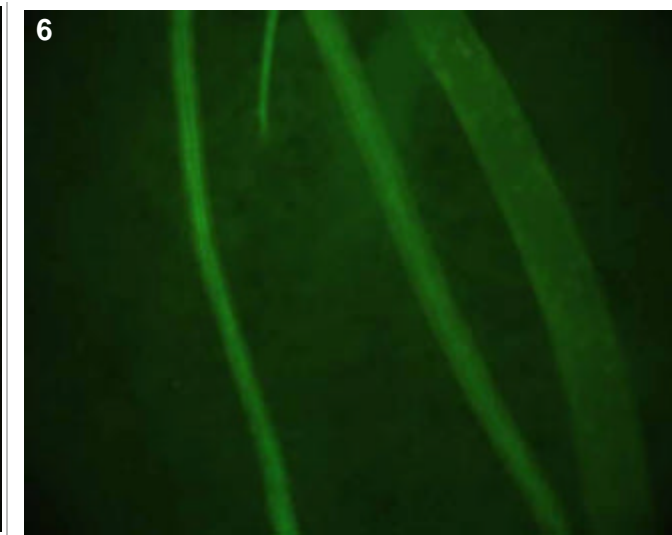
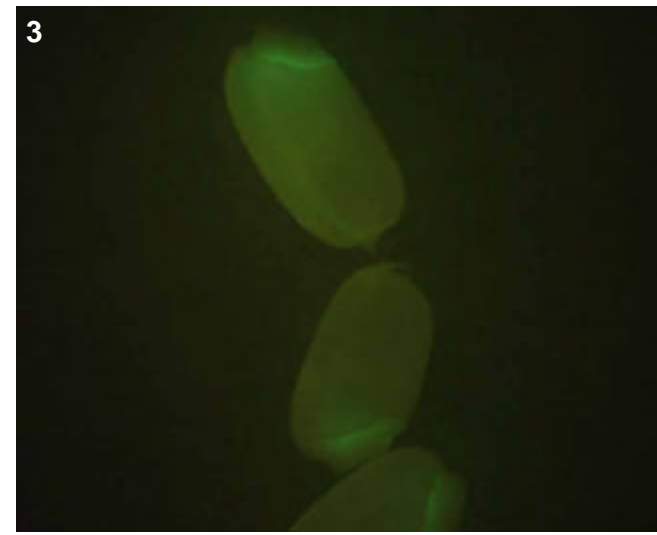
New pattern:

No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 200



T0 comments

Medium expression in vascular of collar and flower (pics 1-2).

T1 seed comments

3/5 seeds had bright expression in the embryo (pic 3).

T1 seedling comments

Bright vascular in both the root (pics 4-6) and shoot (pics 7-8). Note the bright "stripes" on the surface of leaf tissue (pic 8).

Genotype: ARR H08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

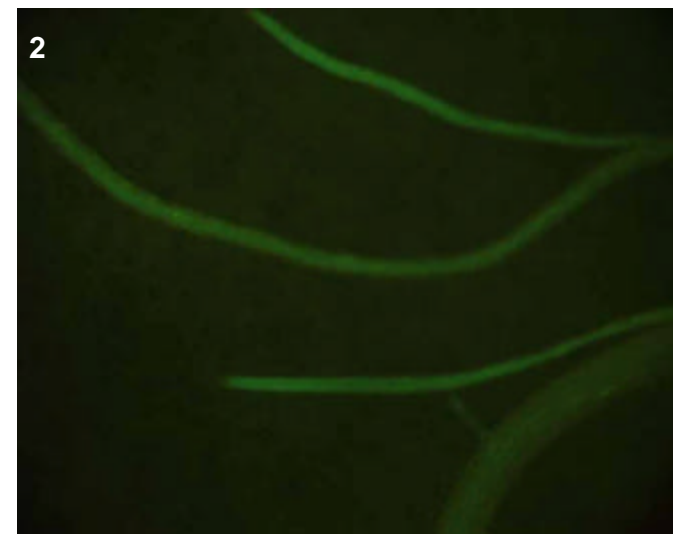
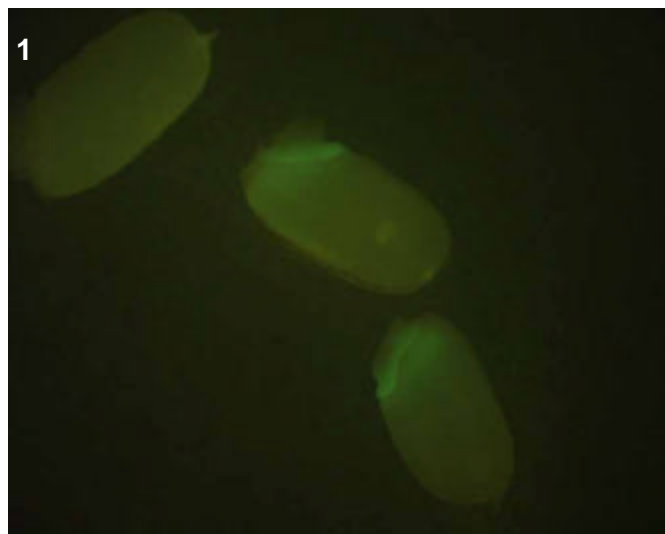
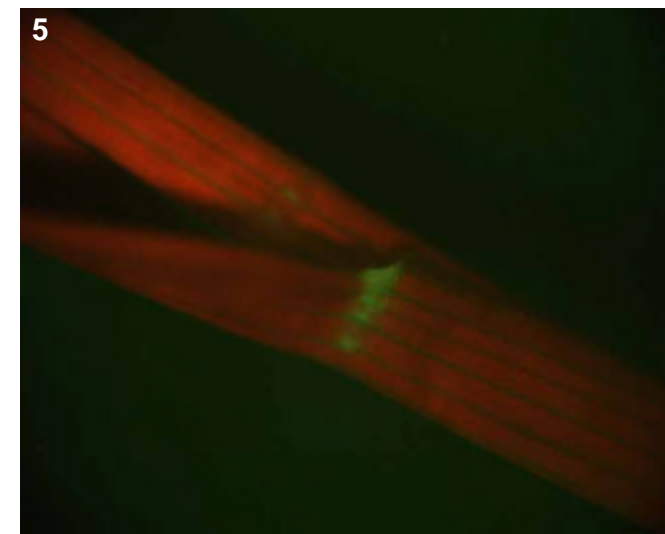
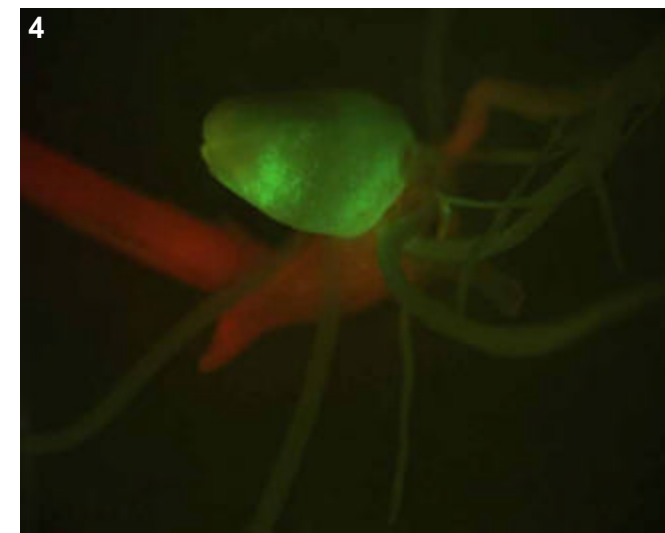
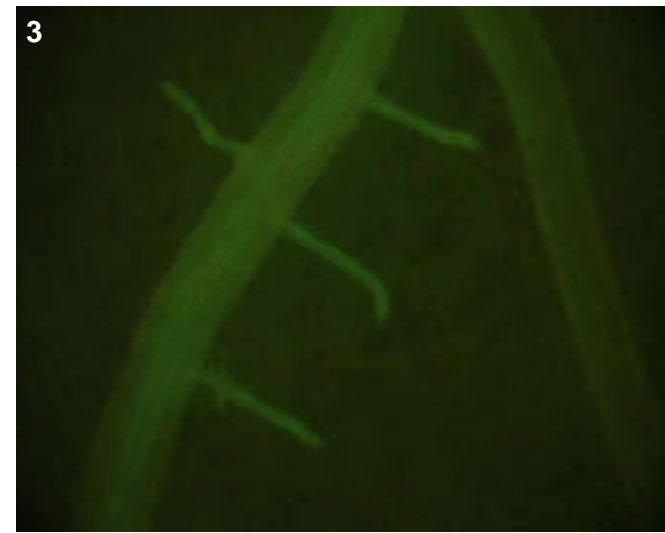
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 84



T0 comments

T1 seed comments

2/5 seeds had bright expression in the embryo (pic 1).

T1 seedling comments

Bright vascular line in both root (pics 2-3) and shoot (pic 5). Also expression in the digesting endosperm (pic 4).

Genotype: ARS C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

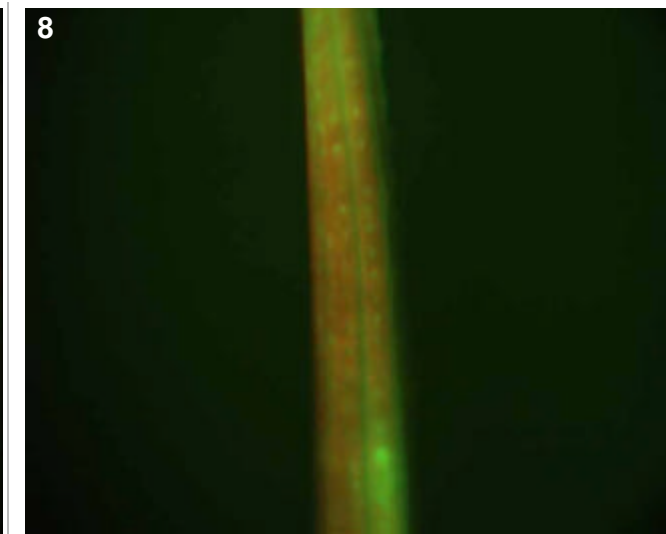
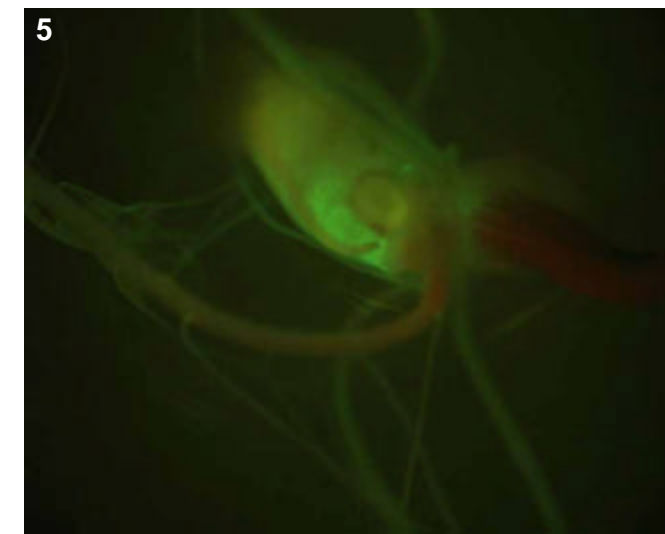
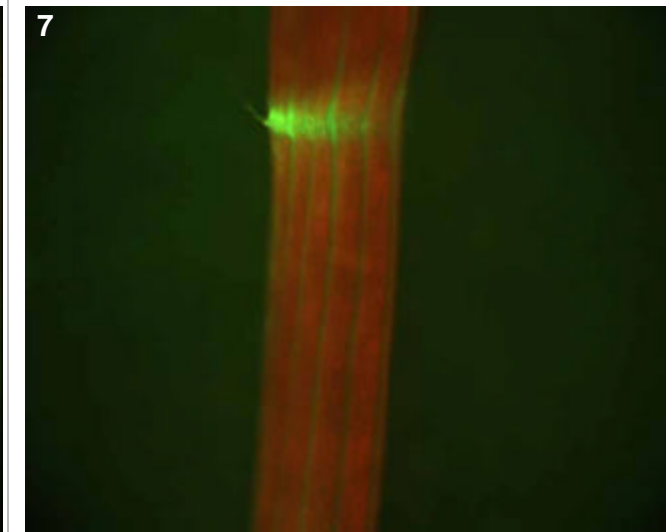
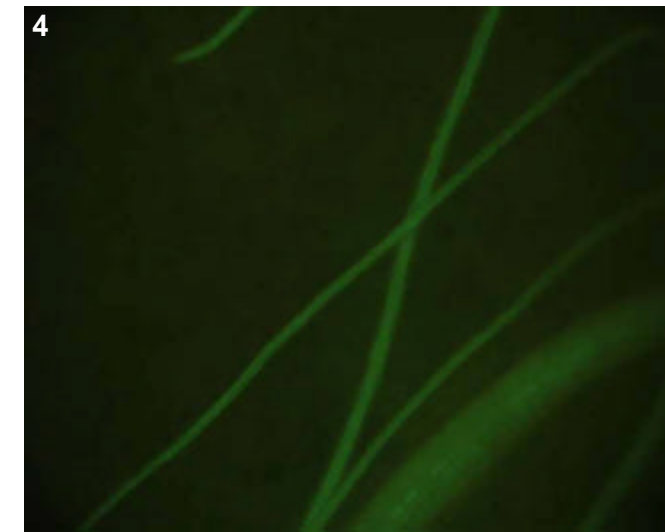
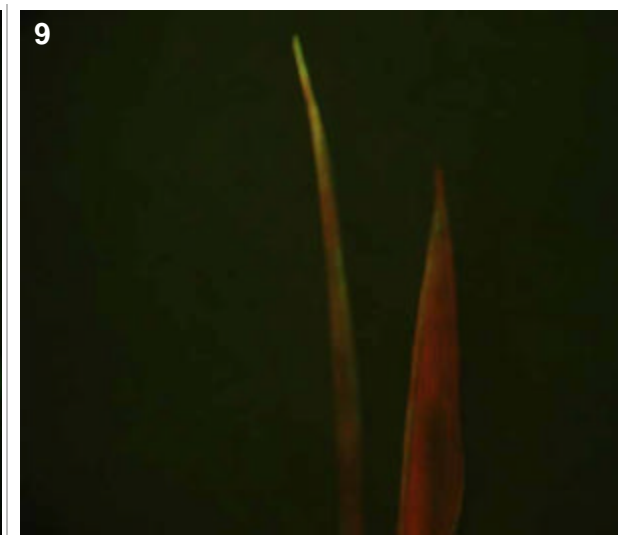
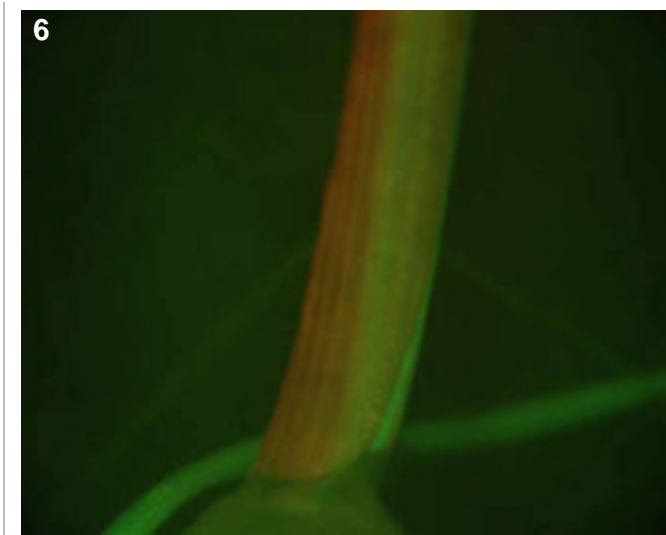
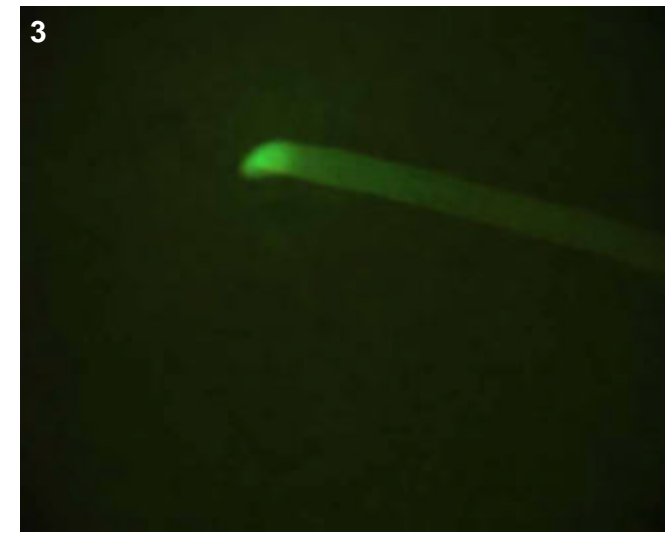
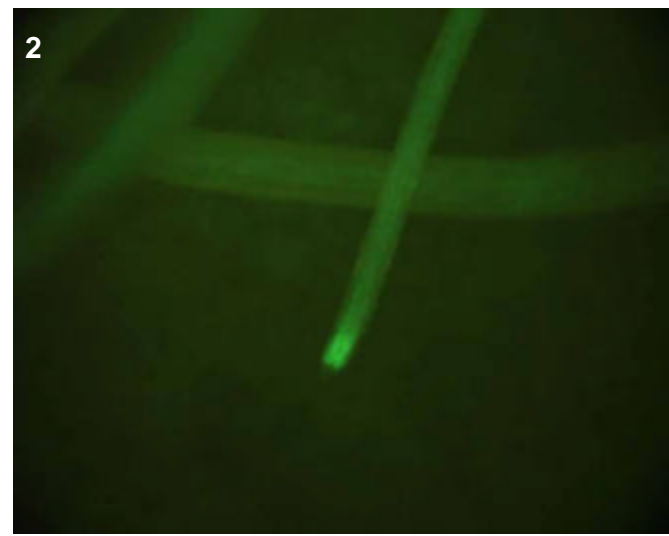
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 2



T0 comments

T1 seed comments
2/5 seeds had medium expression. Interesting because it looked like expression specifically towards the lower side of the scutellum. In pic 1, expression is just in the upper left part of the seed, in the lowest part of the visible

T1 seedling comments
Very bright root (pics 2-4) and shoot (pics 6-9). Note the bright tips of roots (pics 2-3). Vascular expression in the sheath is extremely bright and begins at the base of shoot (pic 6) continuing through the bright collar (pic 7). Bright "dots" near leaf tip (pic 8), guard cells?

Genotype: ARS H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

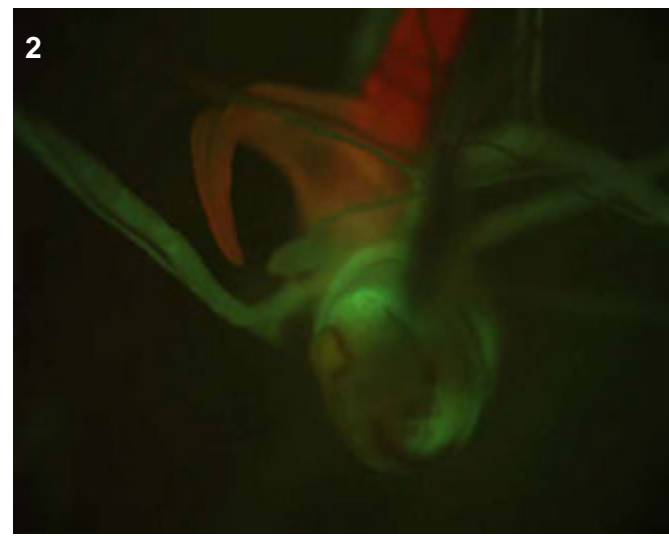
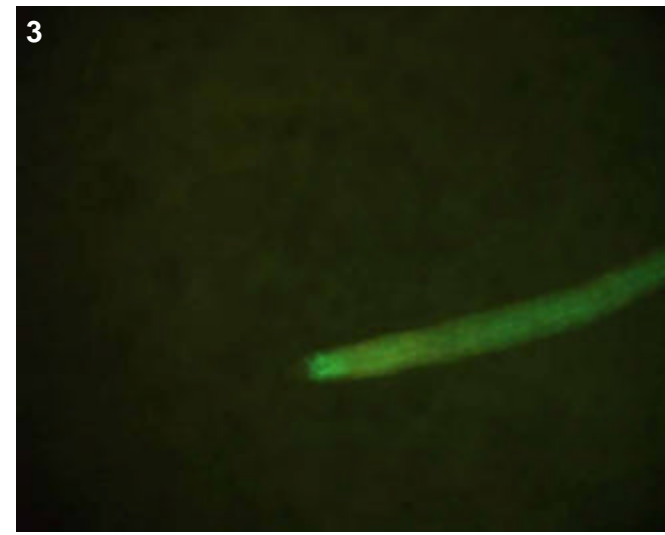
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 24



T0 comments

T1 seed comments

2/5 seeds had faint expression in the scutellum (pic 1)

T1 seedling comments

Genotype: ARS H09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

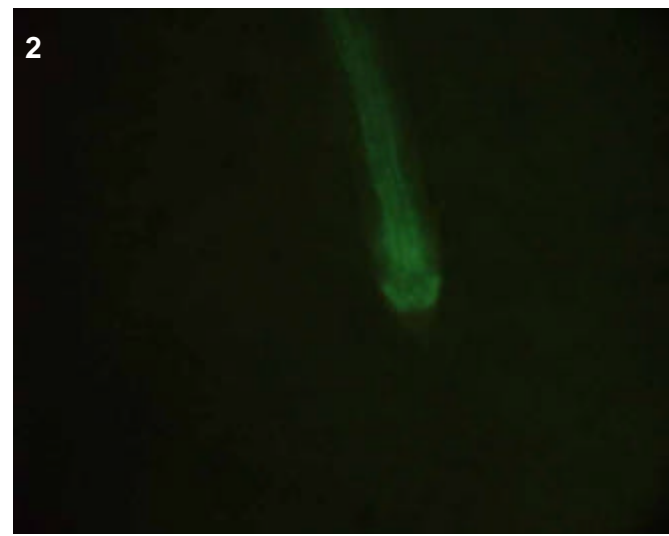
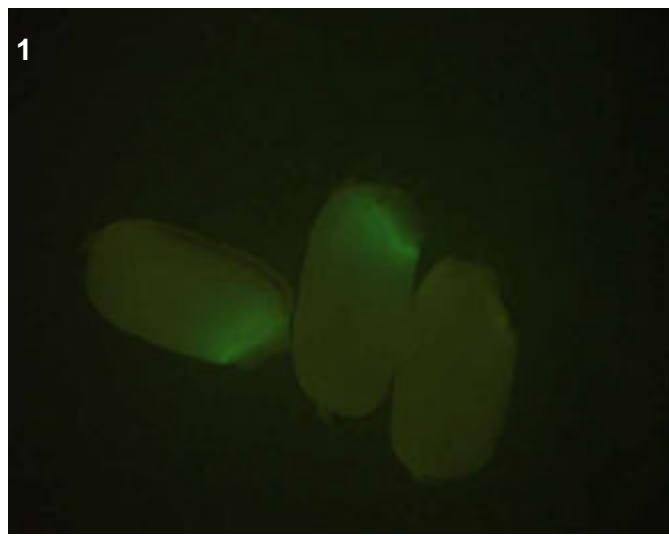
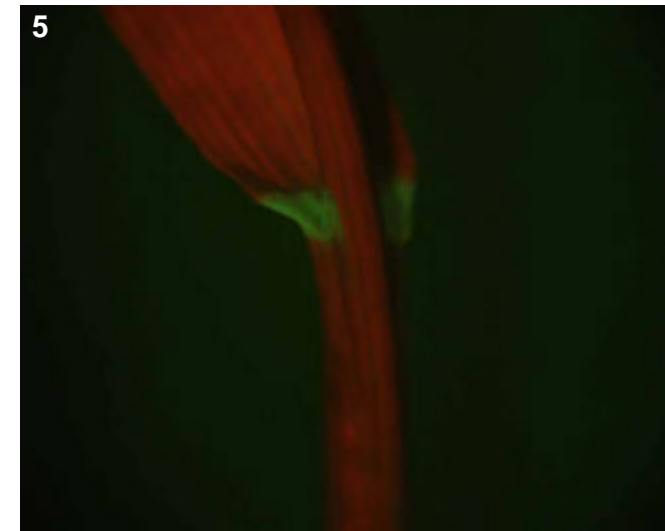
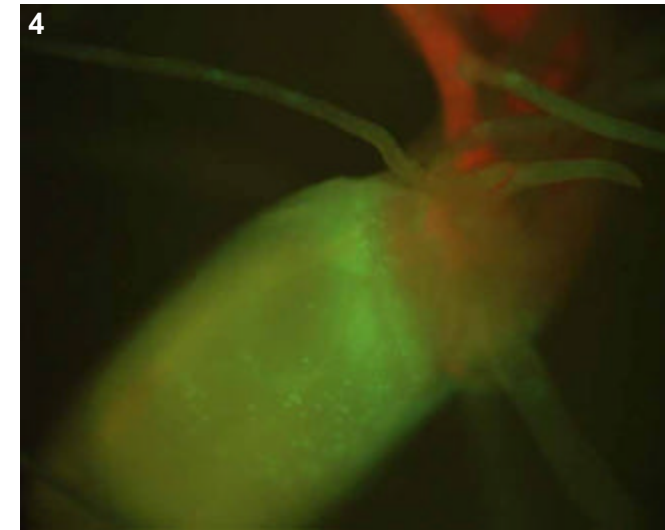
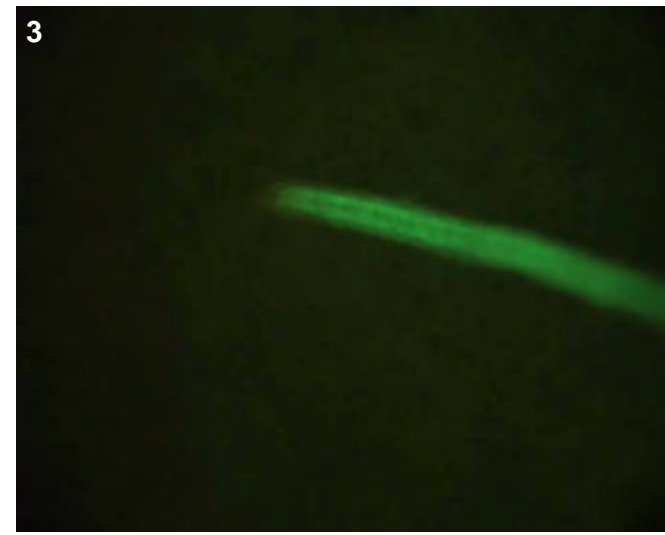
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

3/5 seeds had bright expression in the embryo (pic 1).

T1 seedling comments

Note the interesting pattern in crown roots (pic 2) which could be interesting to analyze by confocal.

Genotype: ART G08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

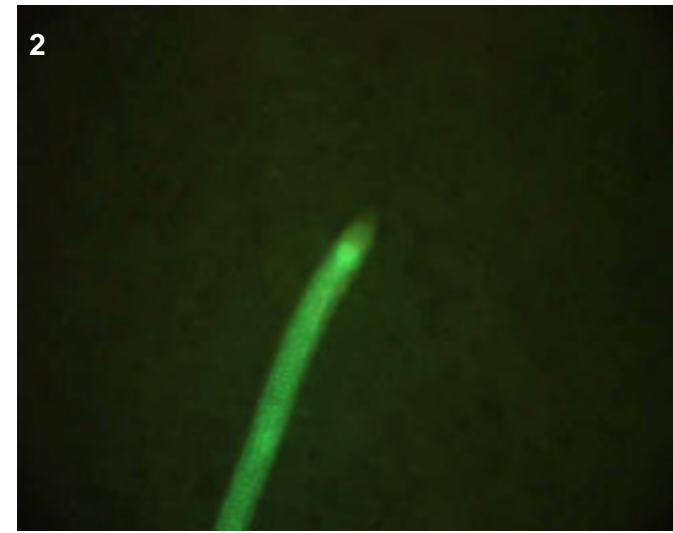
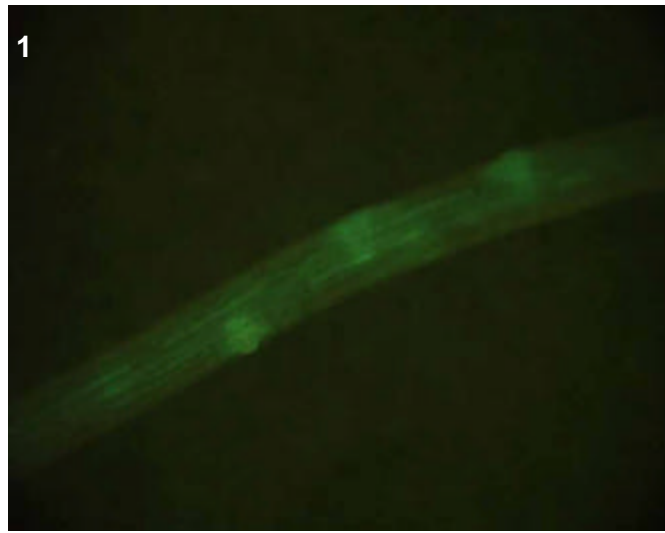
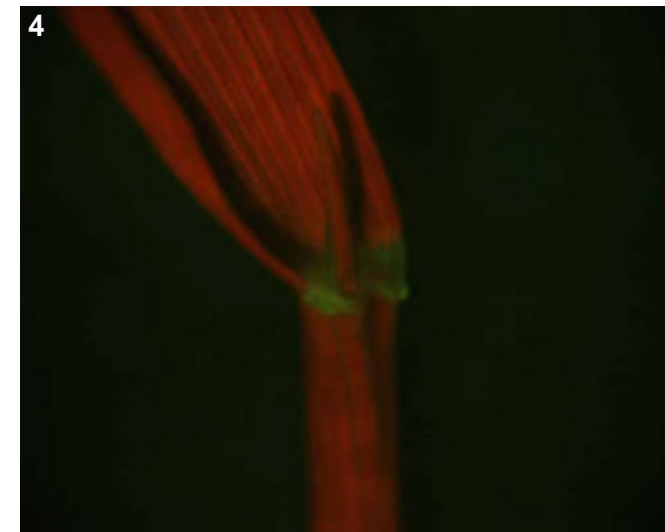
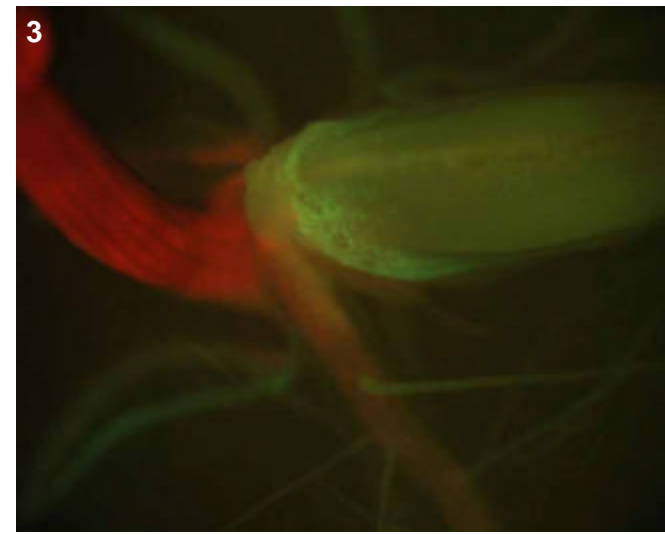
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 3



T0 comments

T1 seed comments

2/5 seeds had very faint expression in the scutellum region, no pic taken.

T1 seedling comments

Genotype: ART H04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

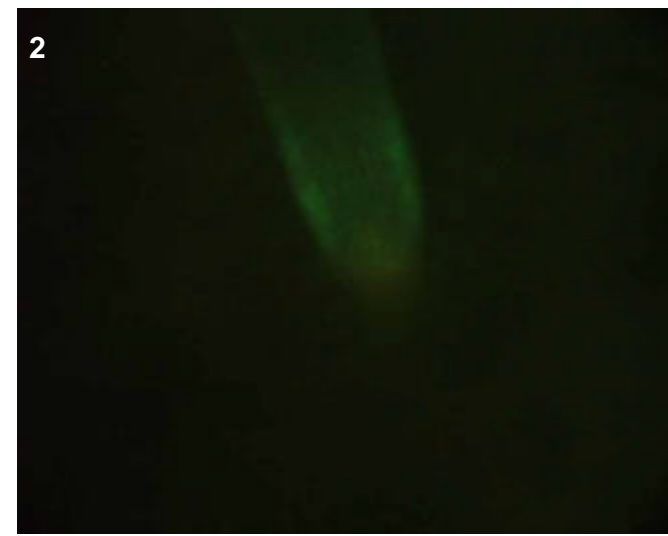
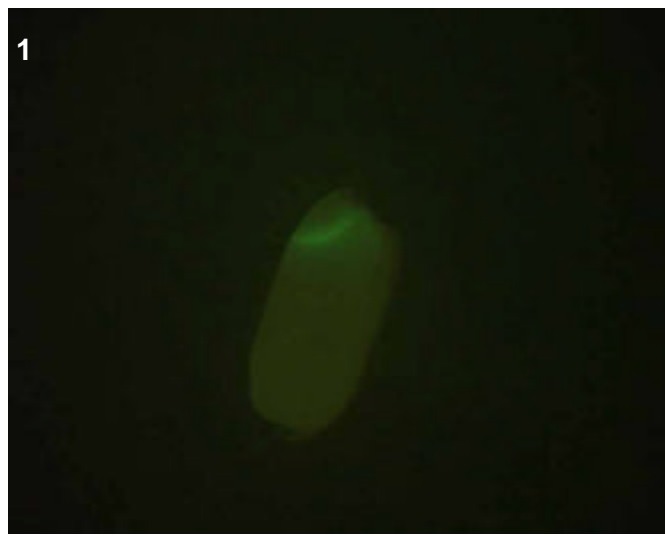
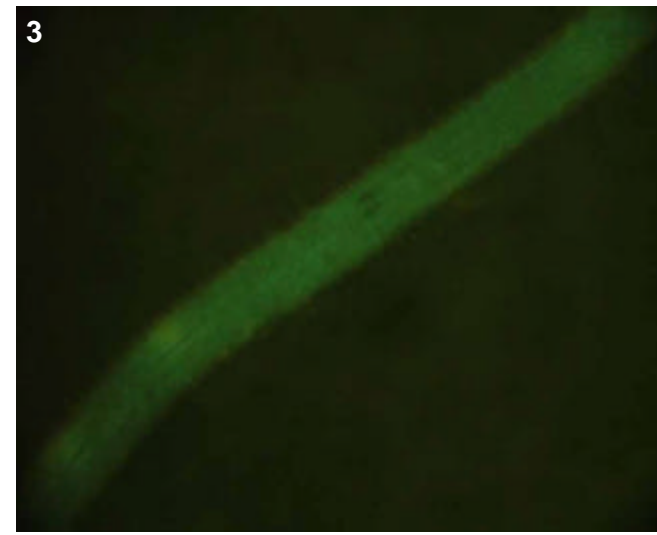
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 14



T0 comments

T1 seed comments

3/5 seeds had expression in the scutellum, and perhaps the embryo as well.

T1 seedling comments

Epidermal expression in crowns (pics 2-3).

Genotype: ARU A05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

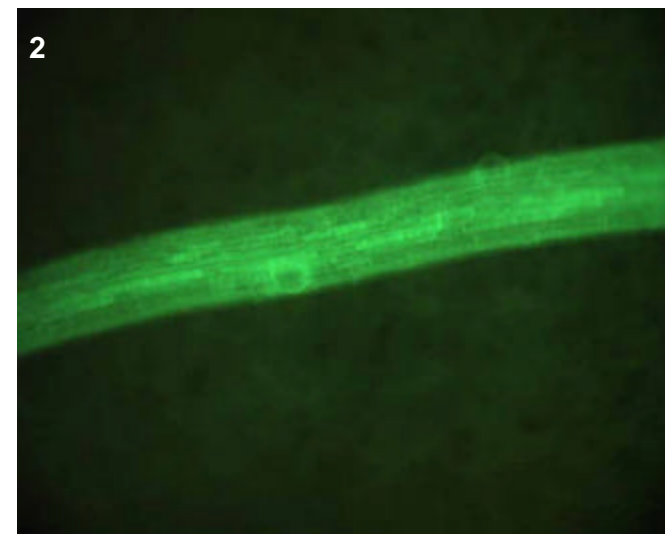
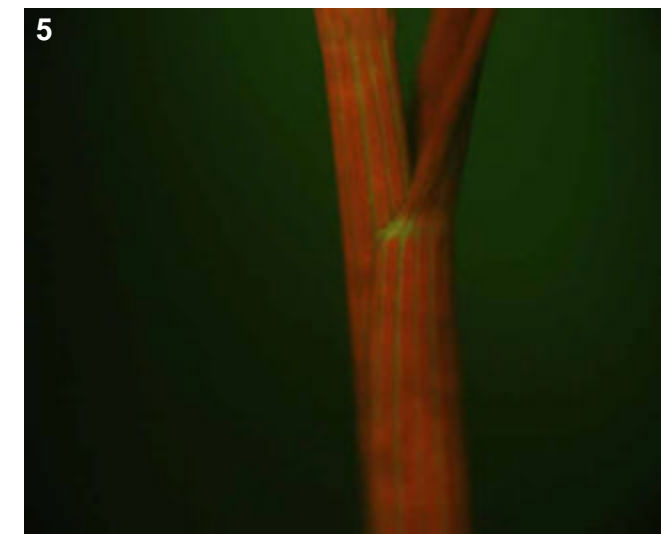
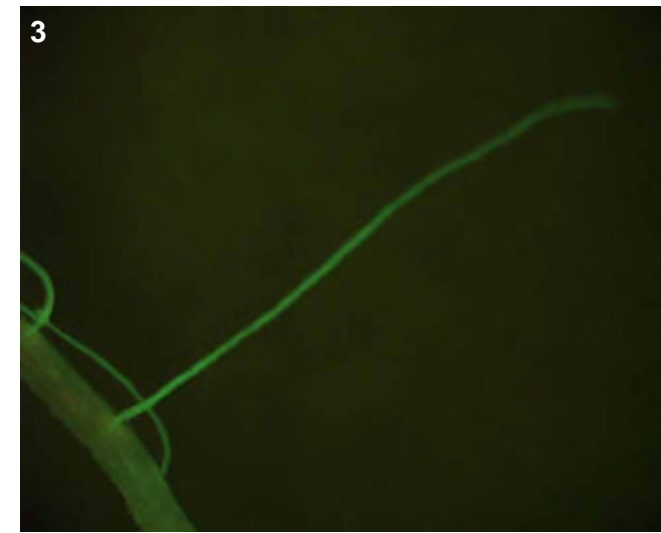
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 1



T0 comments

T1 seed comments

1/4 seeds had medium expression in scutellum, but only on one side (lower left of scutellum in pic 1).

T1 seedling comments

Could be bright epidermal expression in roots (pics 2-3).

Genotype: ARU A06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

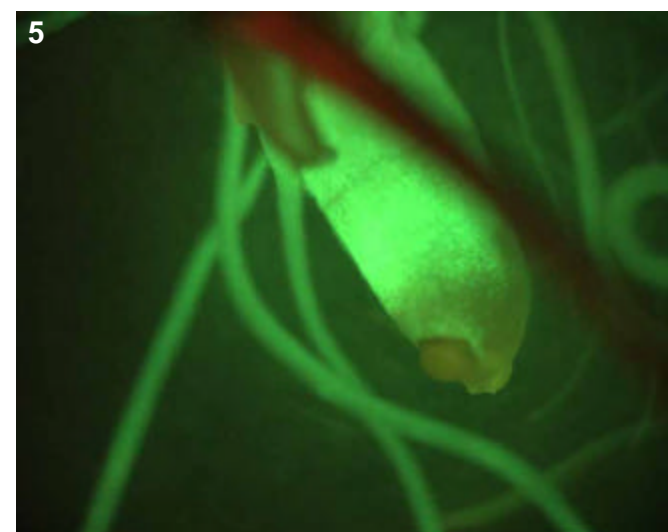
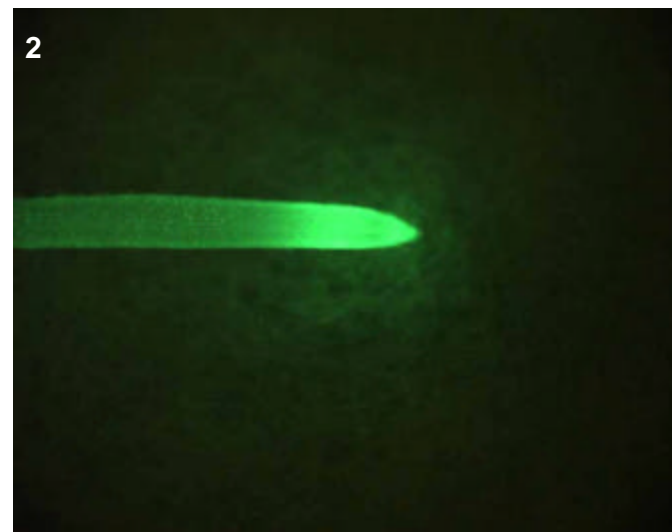
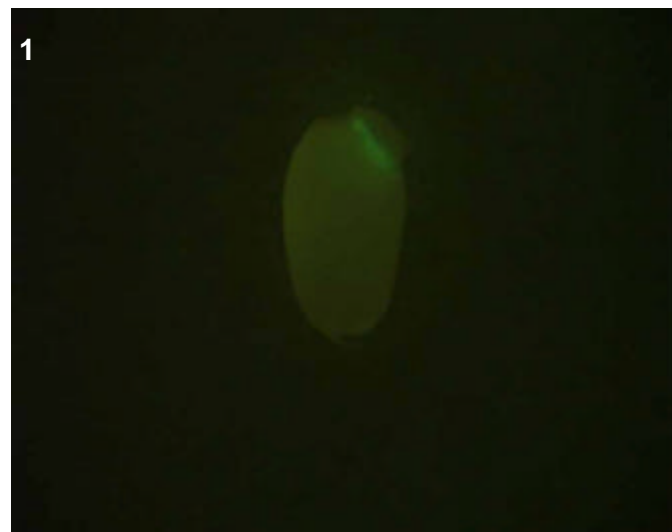
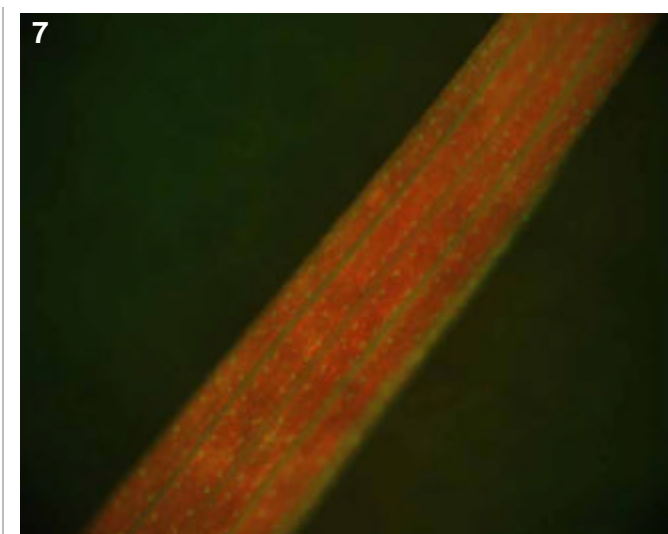
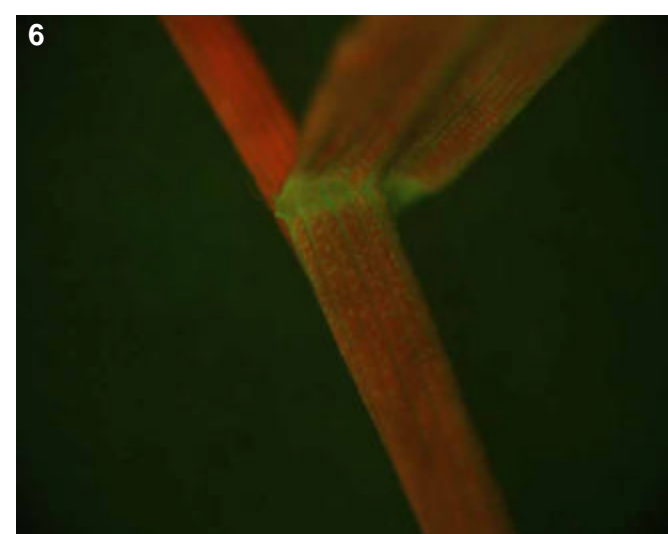
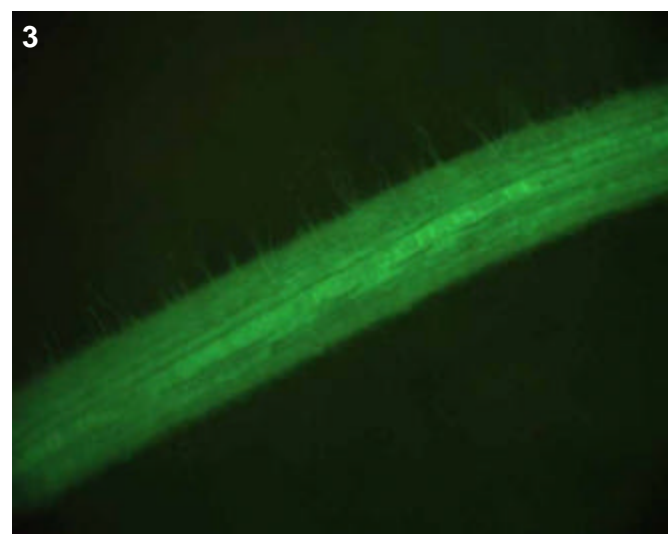
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 3



T0 comments

T1 seed comments

2/5 seeds had bright expression in the scutellum region

T1 seedling comments

Definitely bright root epidermal expression (pics 4-5) with perhaps also something inside like cortical (pic 4). Note the very bright guard cells on surface of leaf AND sheath (pics 6-7), because expression is usually found only on the leaf.

Genotype: ARU E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

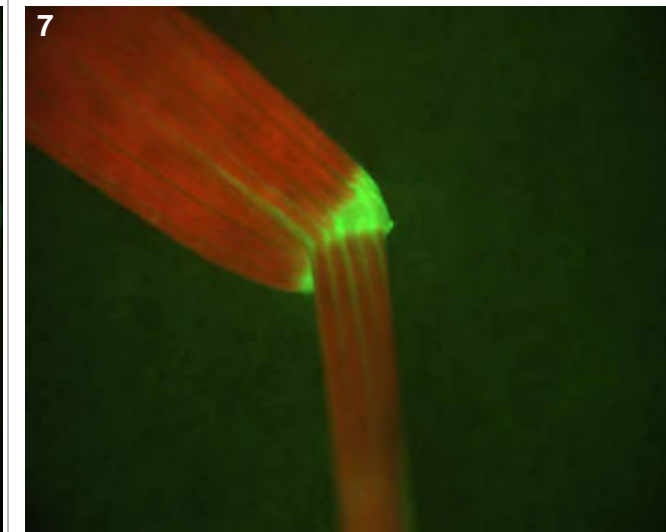
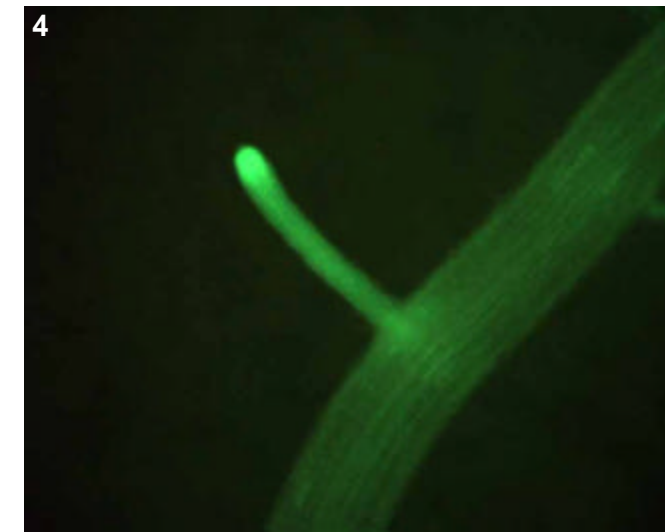
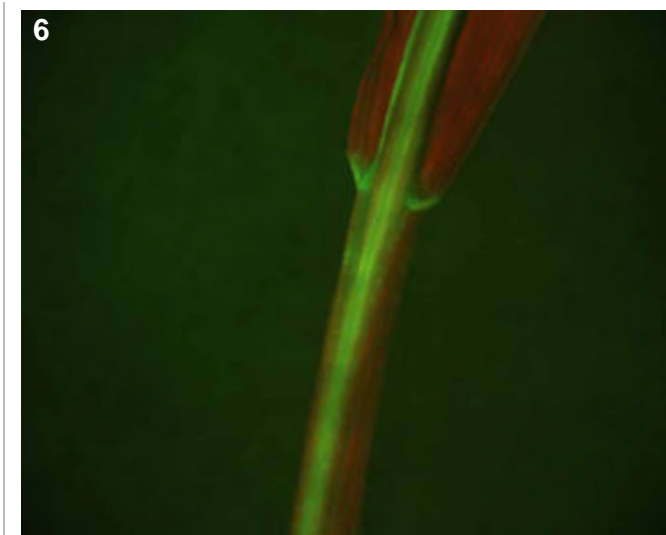
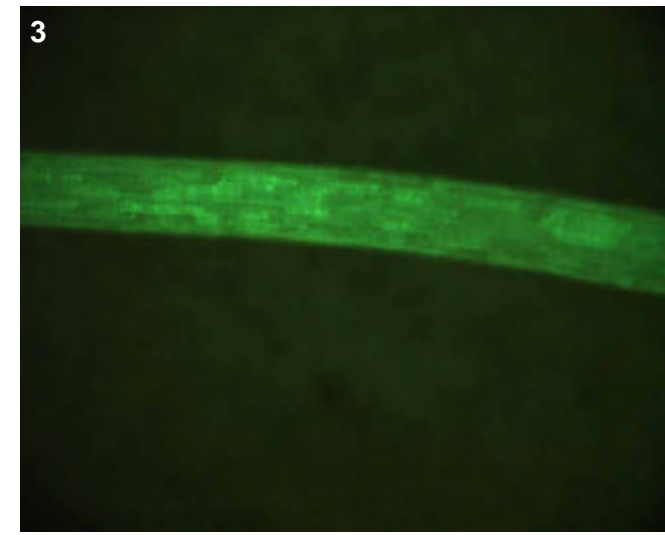
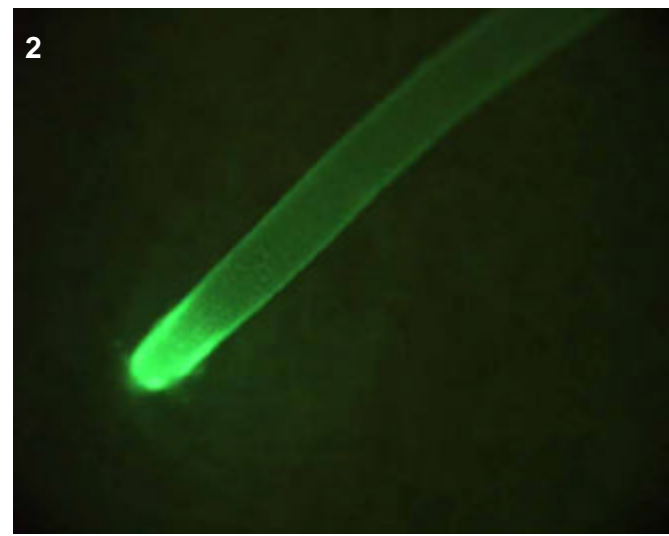
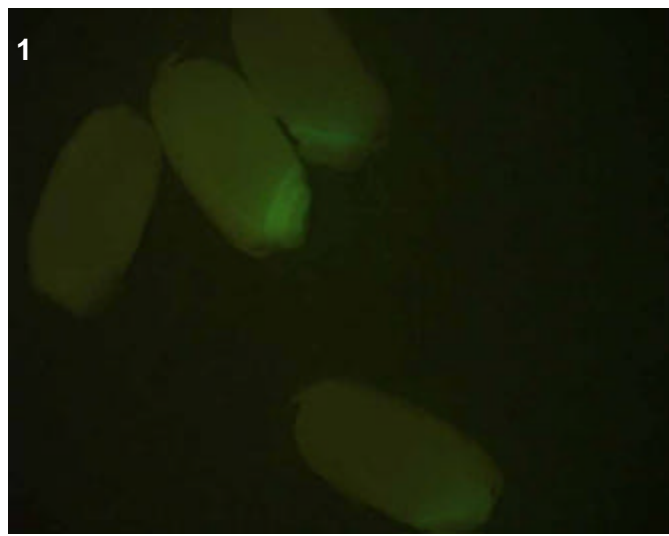
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments
3/5 seeds had expression in the scutellum, as well the coleorhiza (see central seed in pic 1)

T1 seedling comments
Could be epidermal expression in the roots (pic 2) as well as the shoot, particularly in the leaf (pic 6).

Genotype: ARV C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

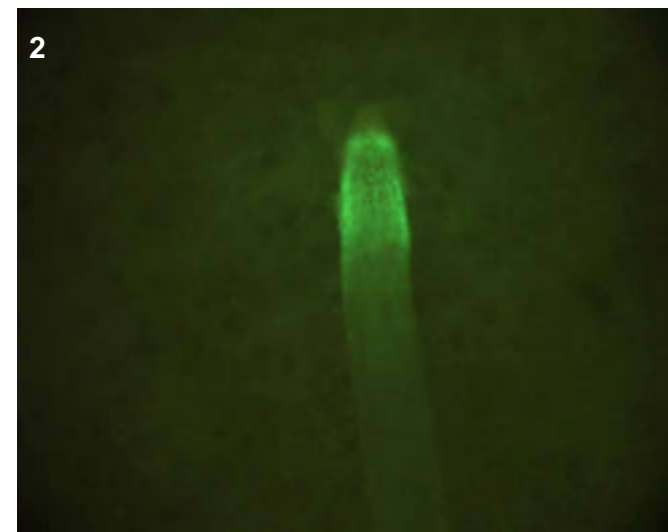
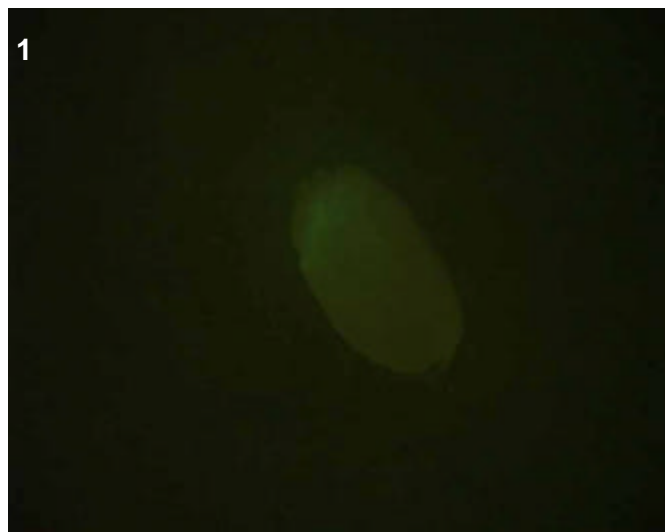
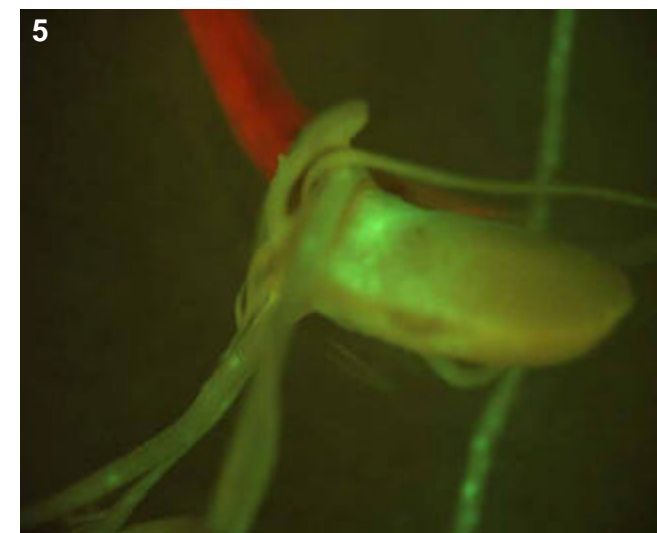
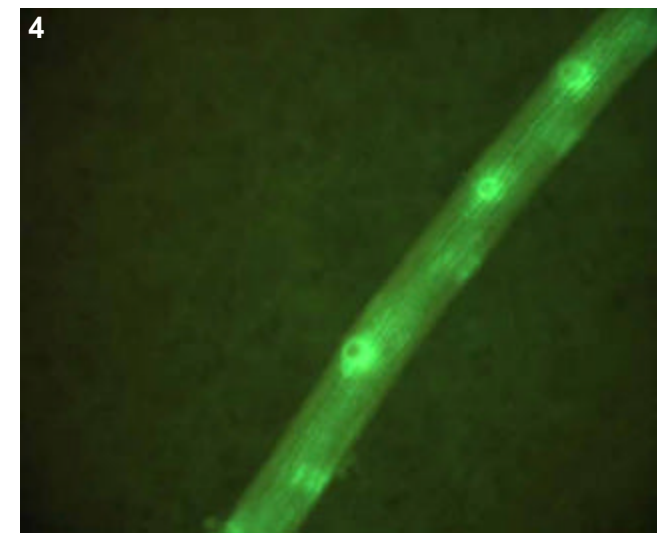
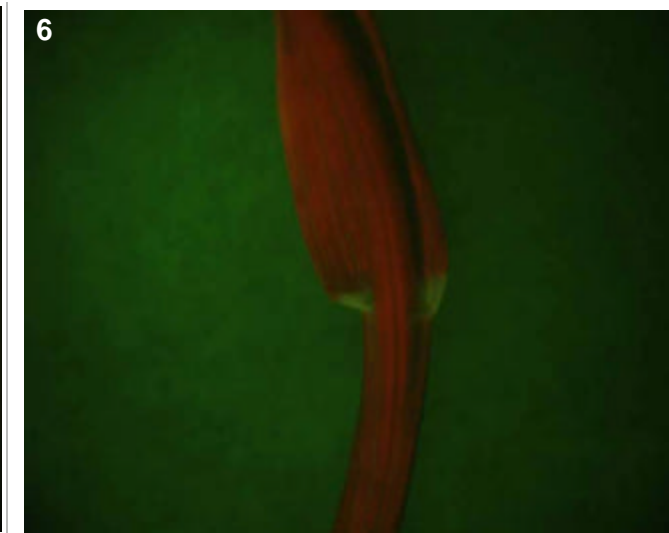
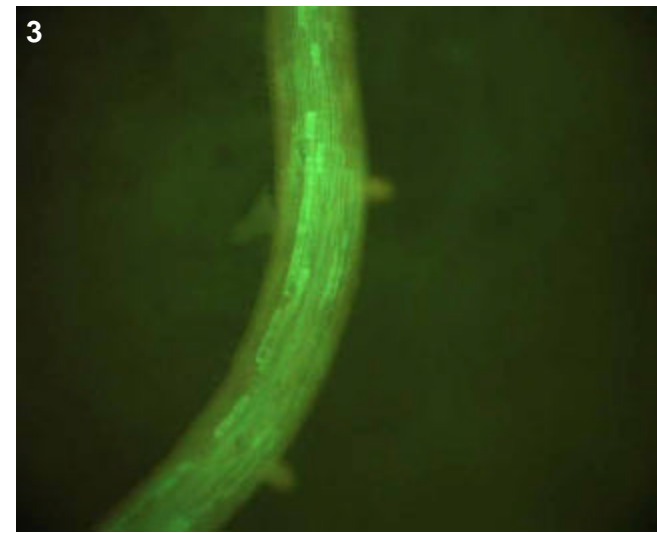
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 2



T0 comments

T1 seed comments

1/5 seeds had medium expression in the embryo, perhaps 2 more have very faint embryo expression.

T1 seedling comments

Genotype: ARV G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

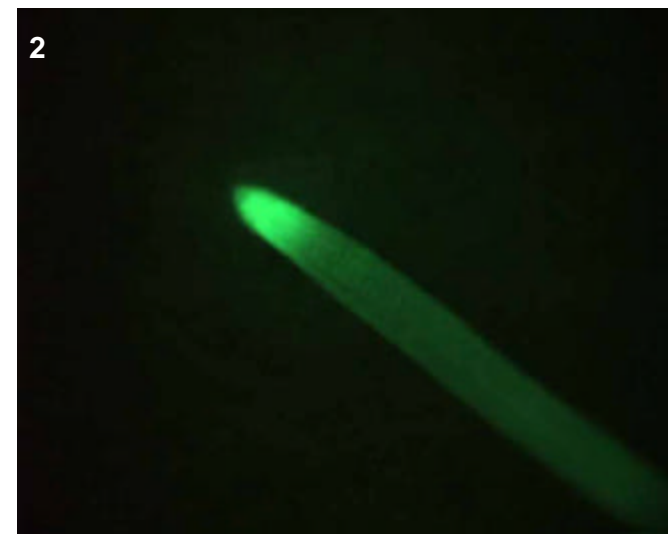
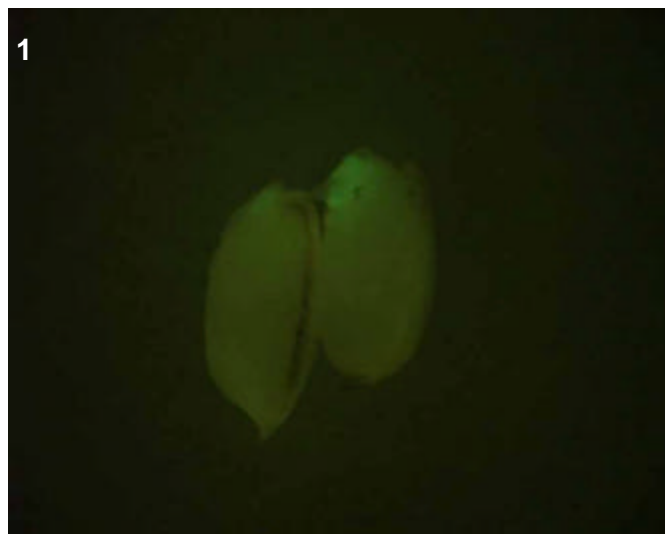
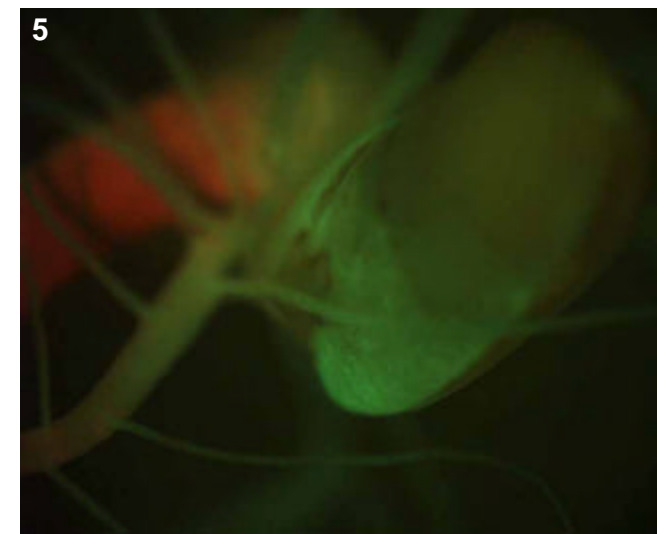
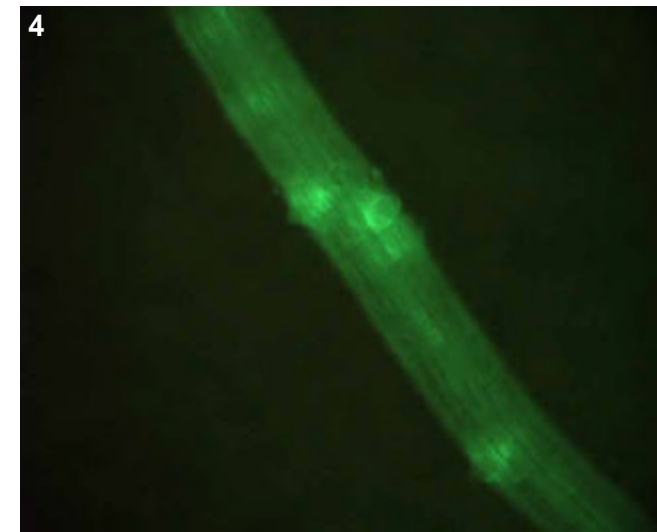
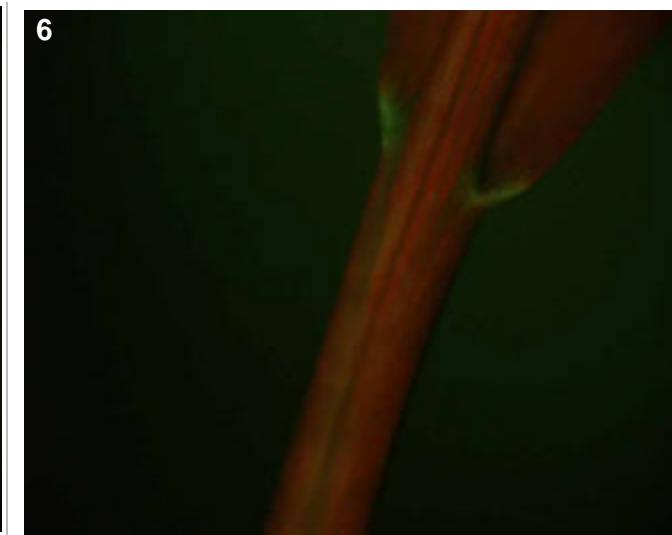
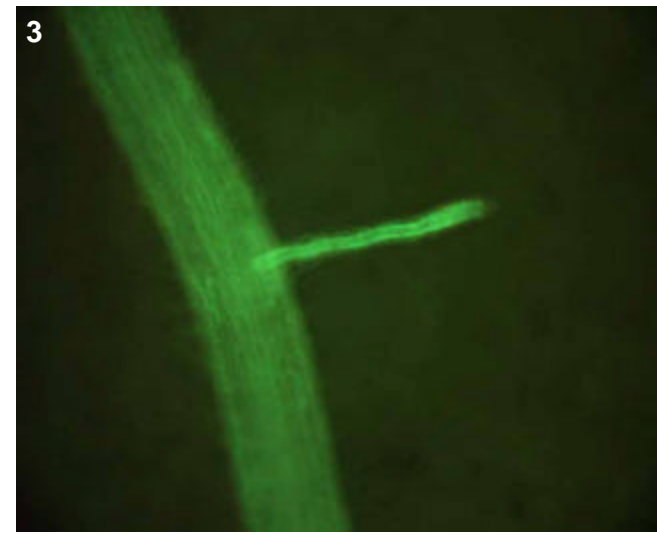
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 26



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Epidermal in crown/seminal roots (pic 2), something inside the lats (pic 2).

Genotype: ARX B03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

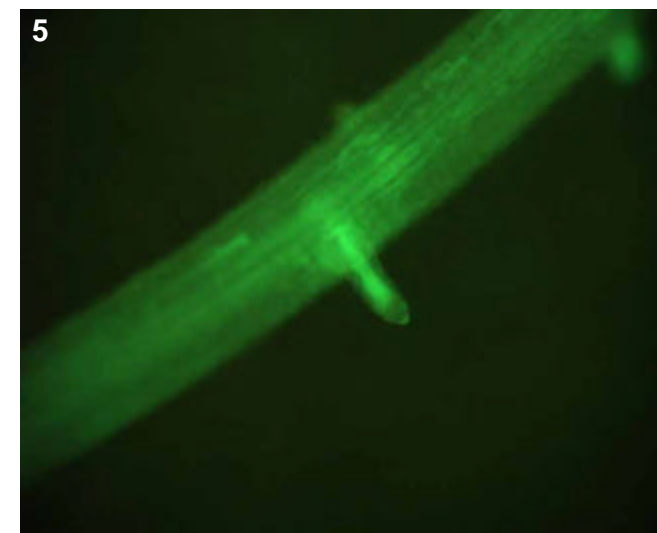
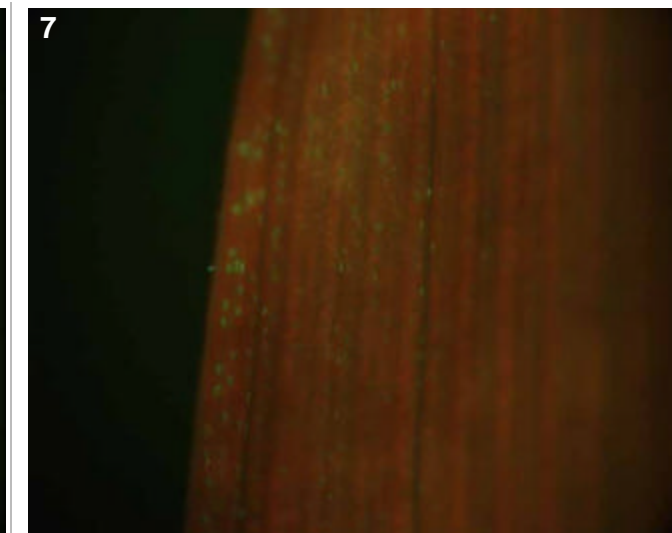
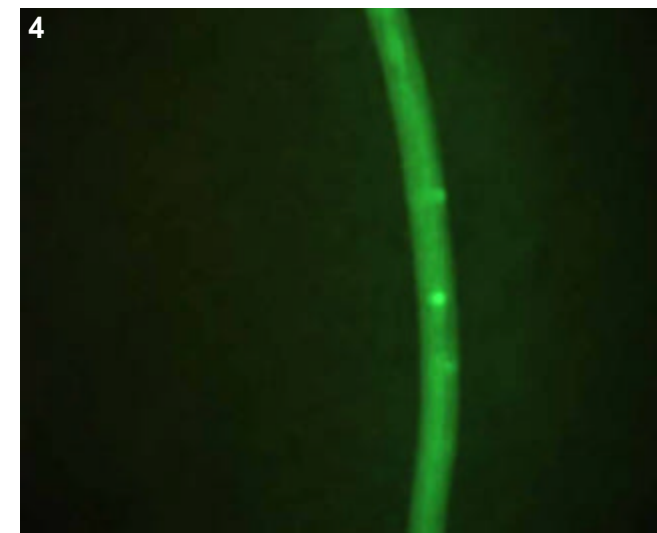
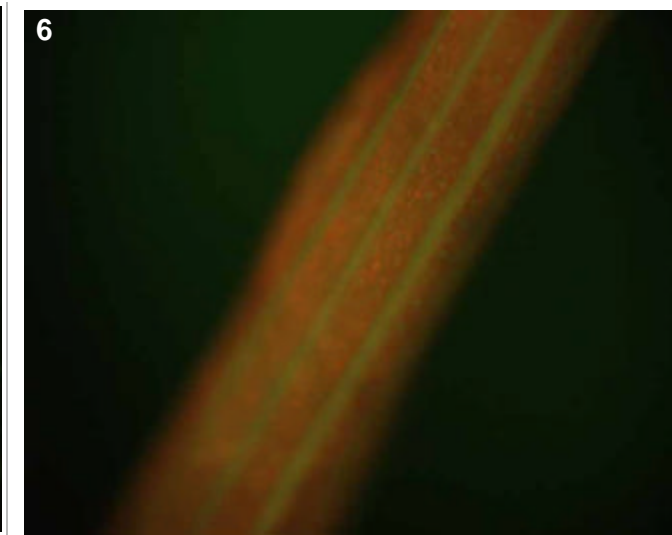
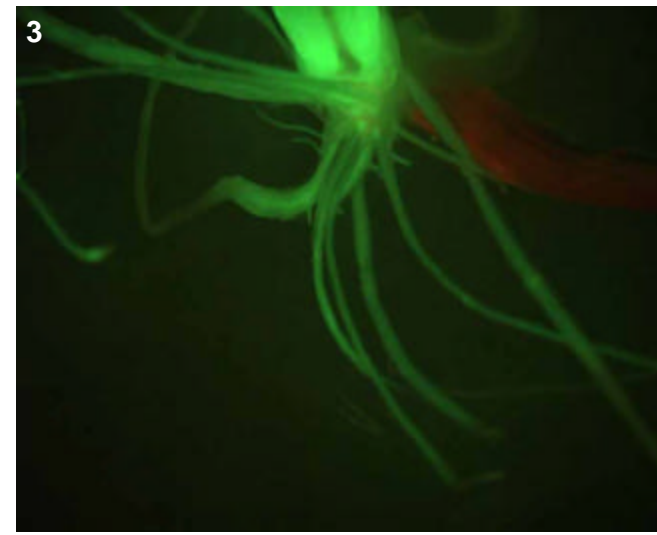
No GFP detected

T1 in greenhouse?

YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 15



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Extremely bright endosperm (pic 2) and small, compact roots (pics 3-5). The roots may display a mutant phenotype? In shoot, bright sheath vascular (pic 6) and leaf guard cells (pic 7). The collar, however, had no expression.

Genotype: ARX B12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 3 plants

Confocal?

Number T2 seed produced: 3

1



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ARX C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

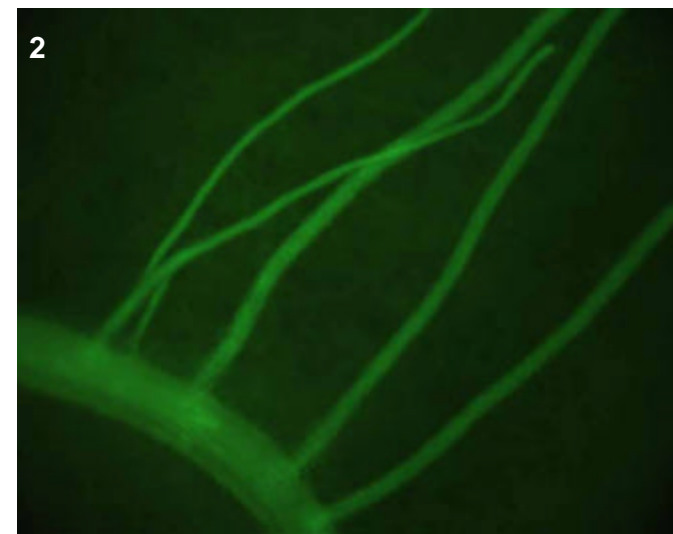
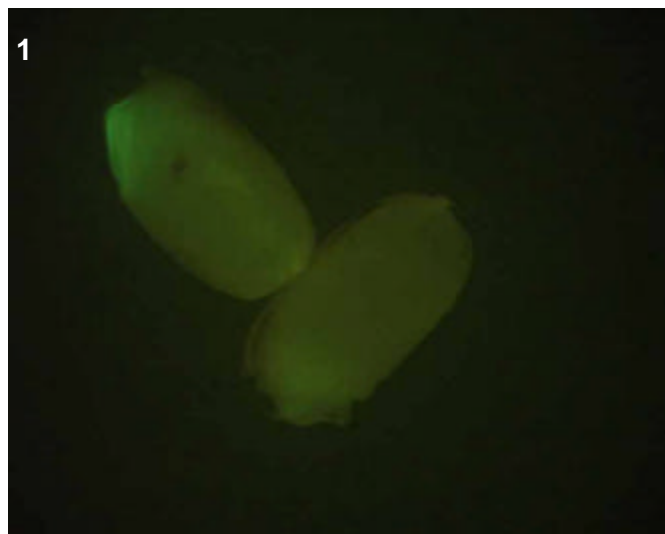
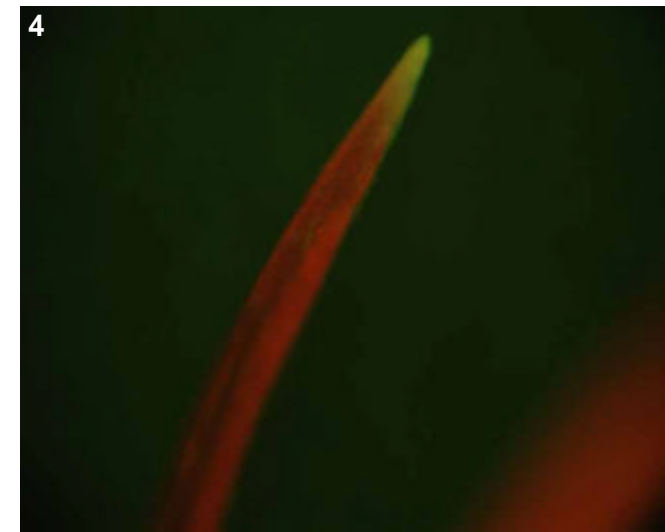
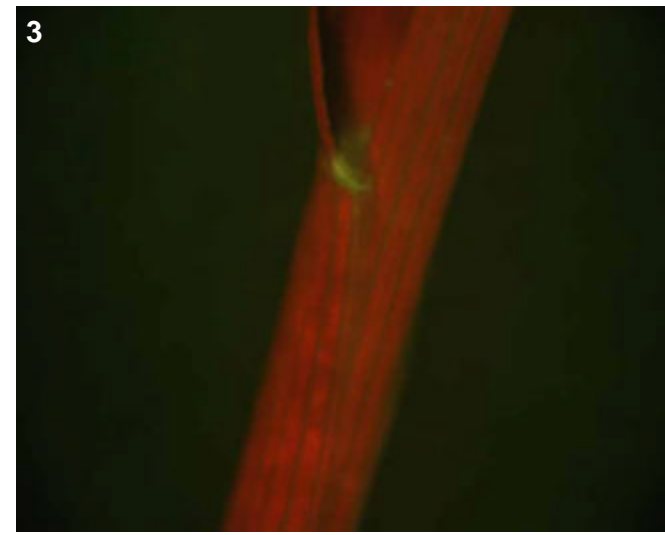
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 9



T0 comments

T1 seed comments

1/4 seeds showed expression

T1 seedling comments

Bright, perhaps epidermal, expression in roots (pic 2). Medium expression in collar (pic 3) and leaf tips (pic 4).

Genotype: ARX C04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

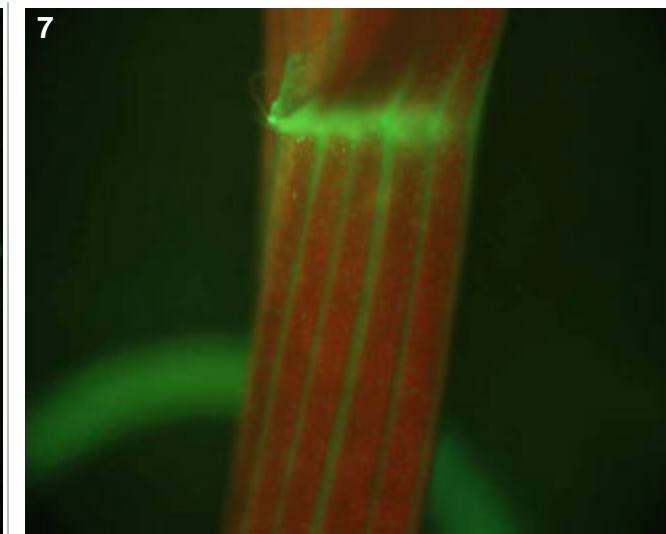
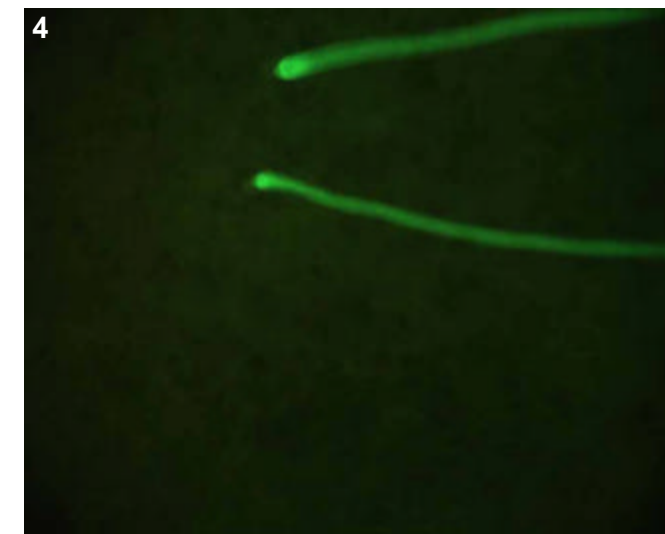
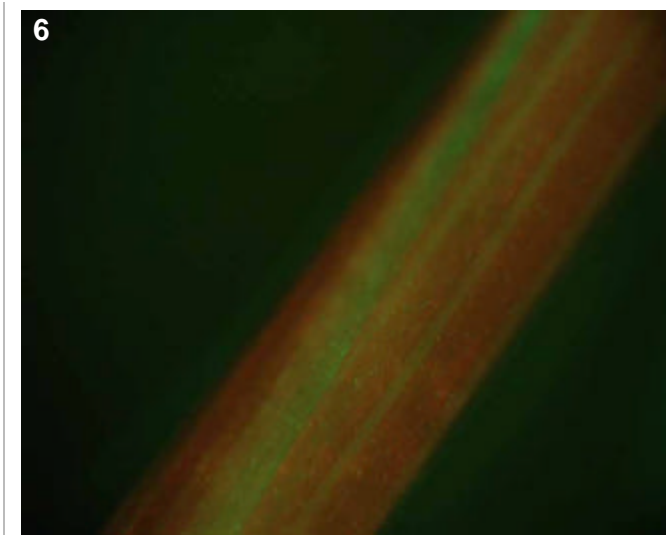
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 26



T0 comments

T1 seed comments

2/5 seeds had faint expression towards the lower left side of the scutellum (central seed, pic 1).

T1 seedling comments

Extremely bright roots (pics 2-4), perhaps all tissue layers are GFP positive. Shoots also extremely bright--collar, vascular and trichomes on the leaf and sheath (pics 6-8).

Genotype: ARX E01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-10

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

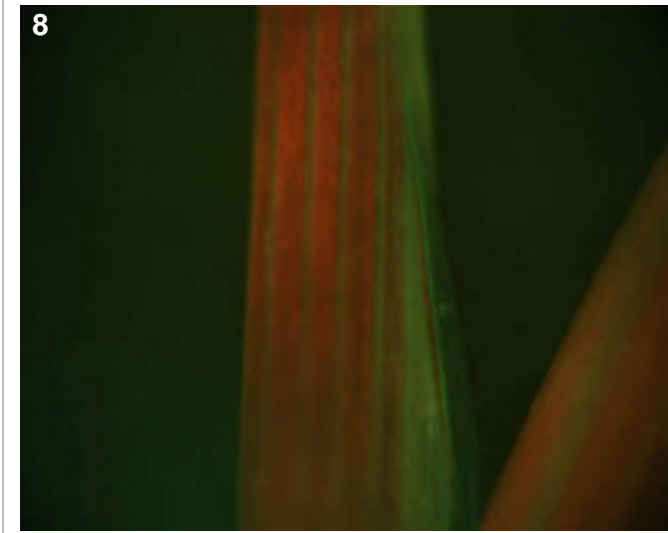
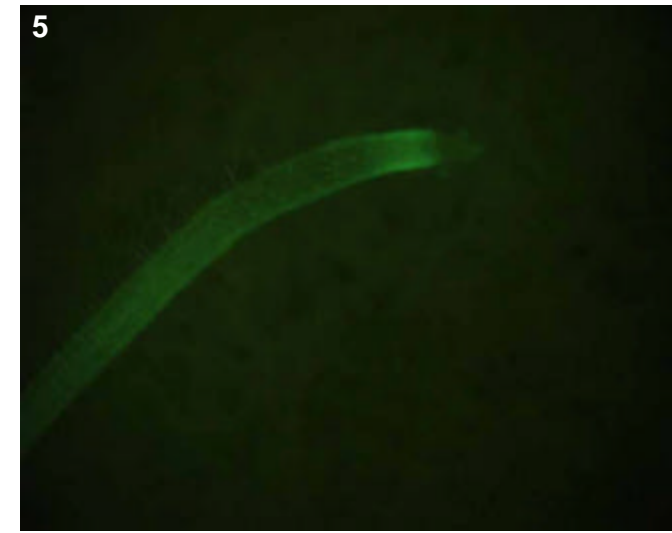
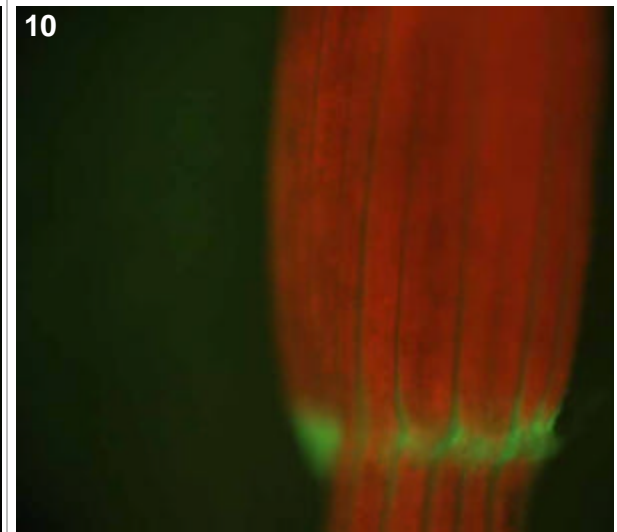
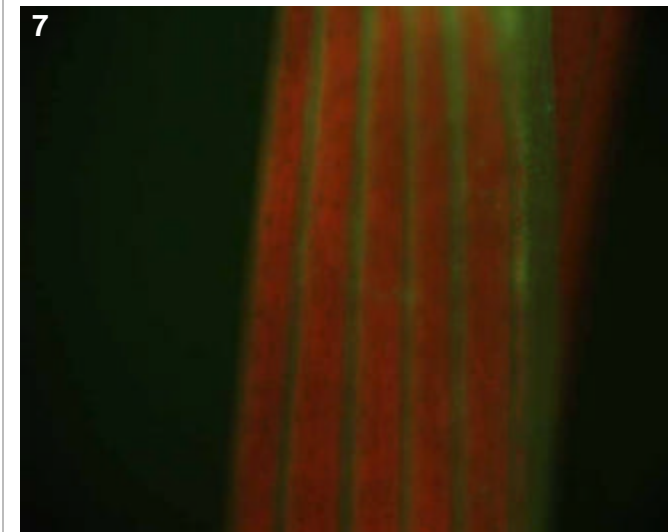
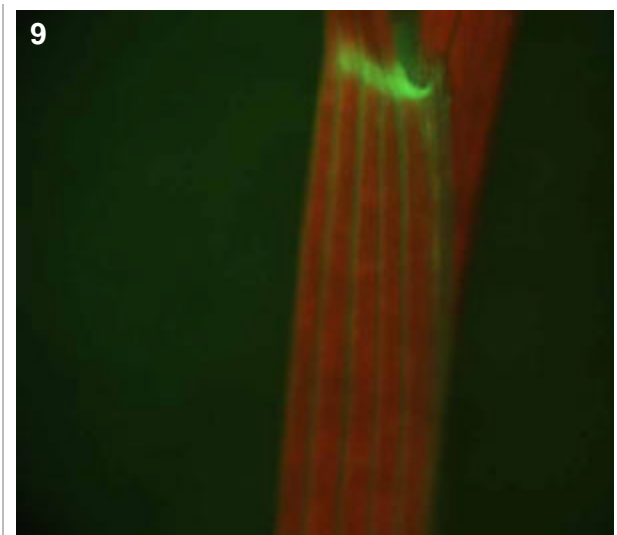
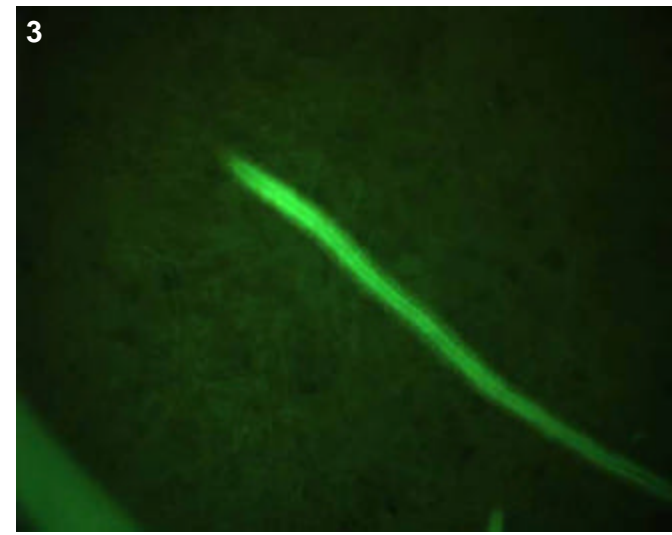
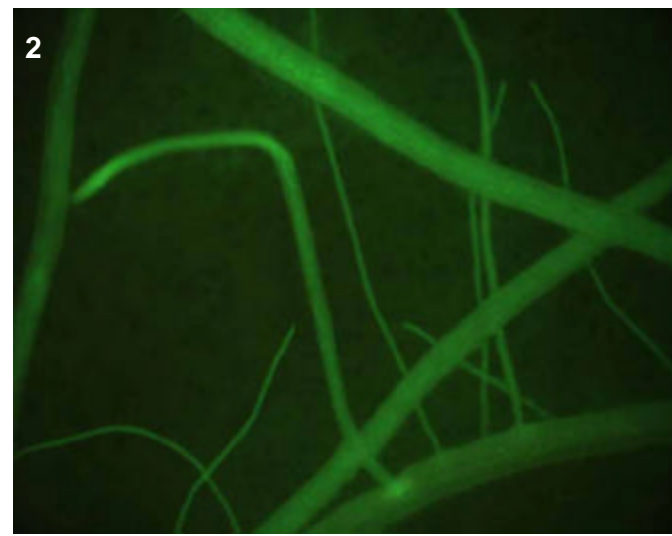
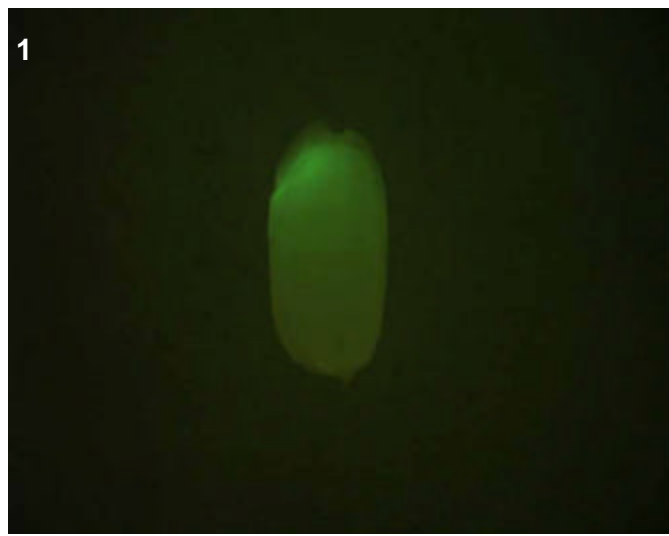
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 34



T0 comments

T1 seed comments

4/5 seeds had expression, however, 2 were bright (like pic 1) and 2 were faint. Hetero- vs. homo-zygosity of the transgene perhaps?

T1 seedling comments

Extremely bright expression! In roots could be cortical/endodermal in the laterals (pics 2-4), epidermal at tips of crowns (pic 5). In shoot, bright vascular expression in the coleoptile (pics 7-8) and sheath (pic 9). Much fainter vascular expression in the leaf (pic 10).

Genotype: ARX E04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

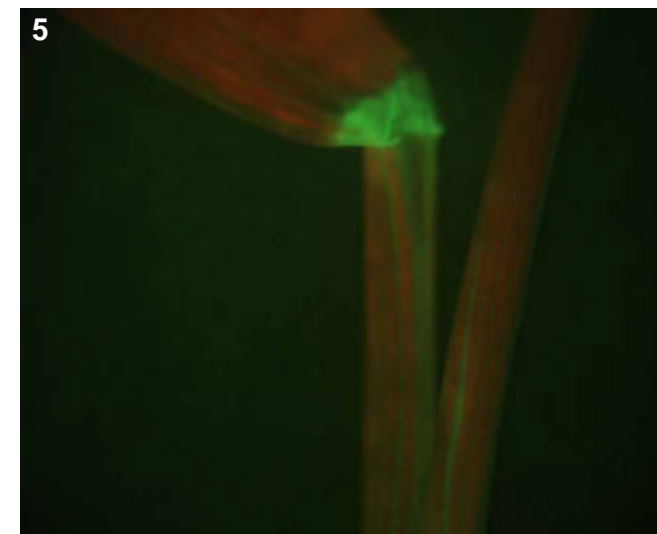
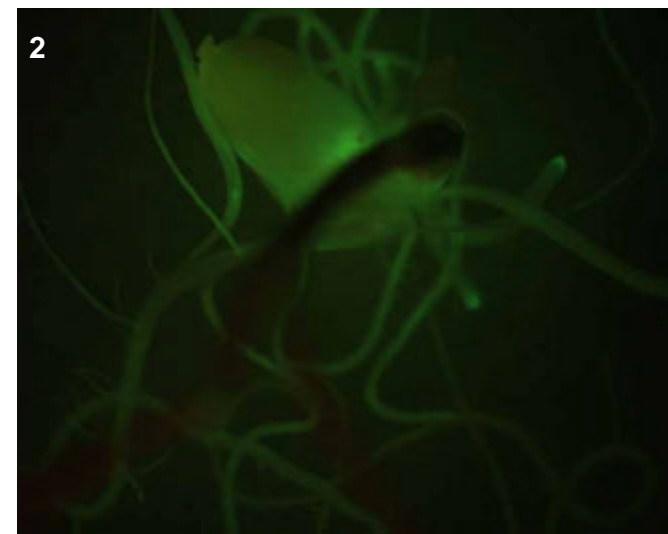
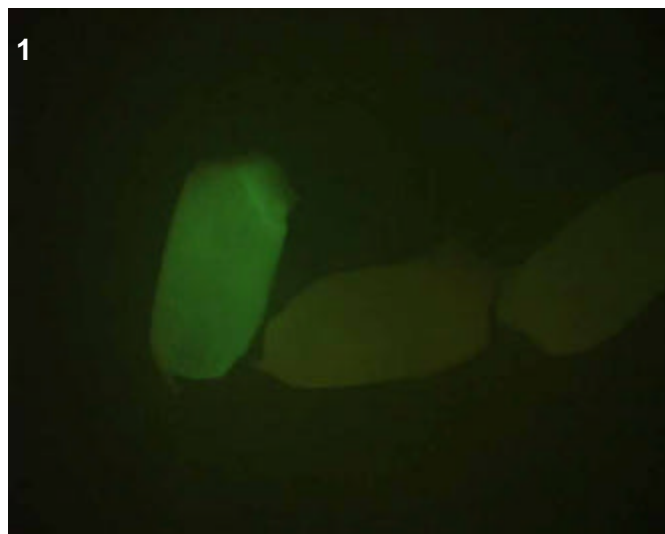
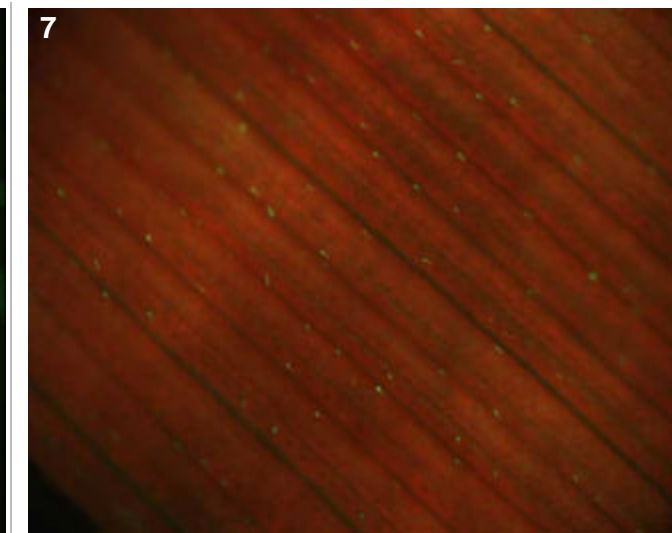
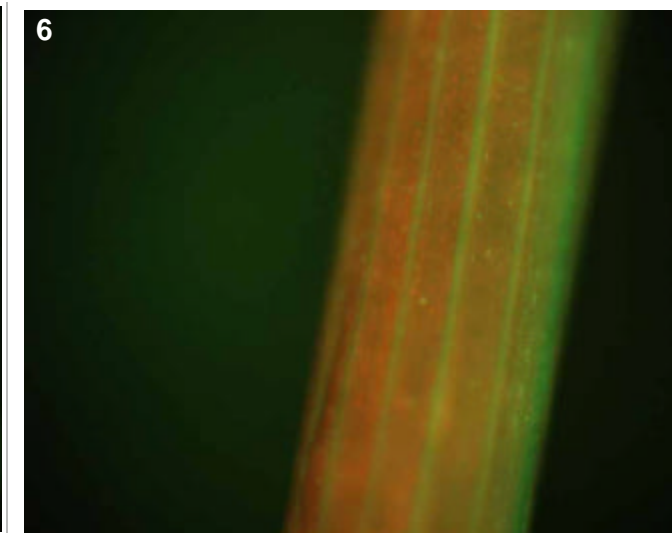
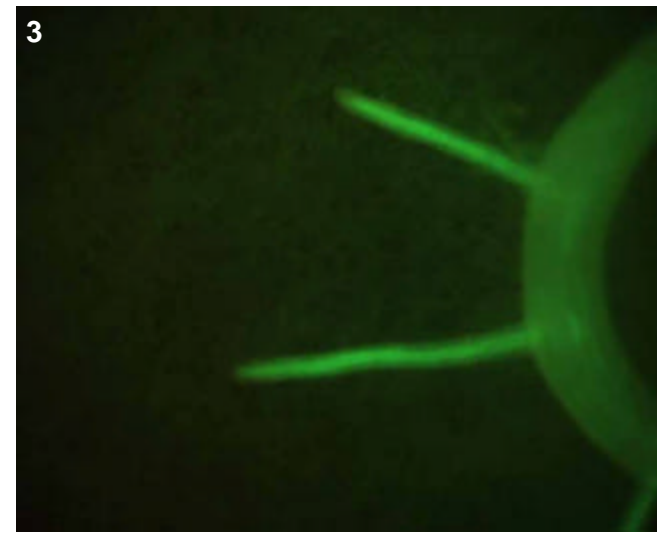
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced: 24



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Very bright, small roots--perhaps a root mutant (pic 2). Maybe constitutive expression in roots. Bright vascular expression in shoot, particularly the sheath (pics 5-6). Note the trichome expression in leaf (pic 7).

Genotype: ARX G07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

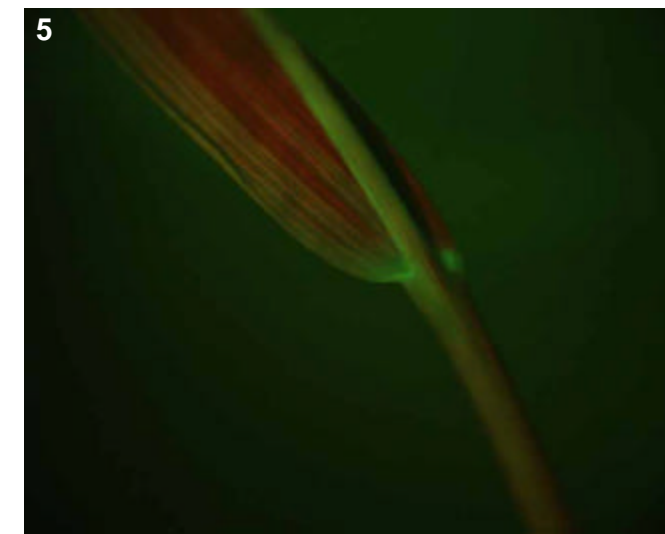
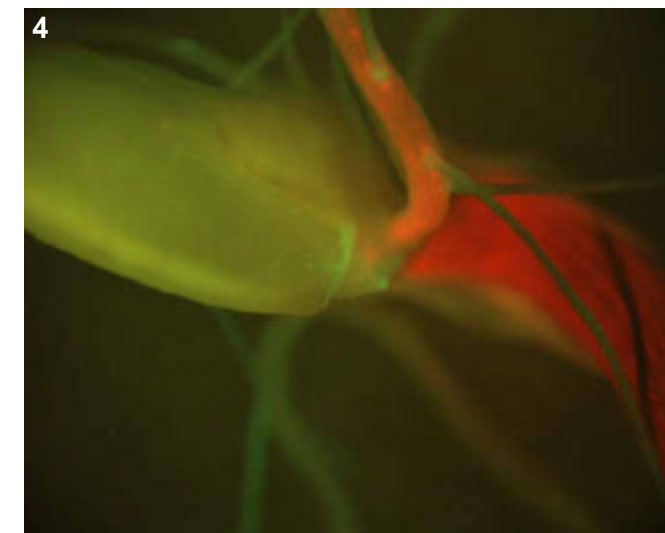
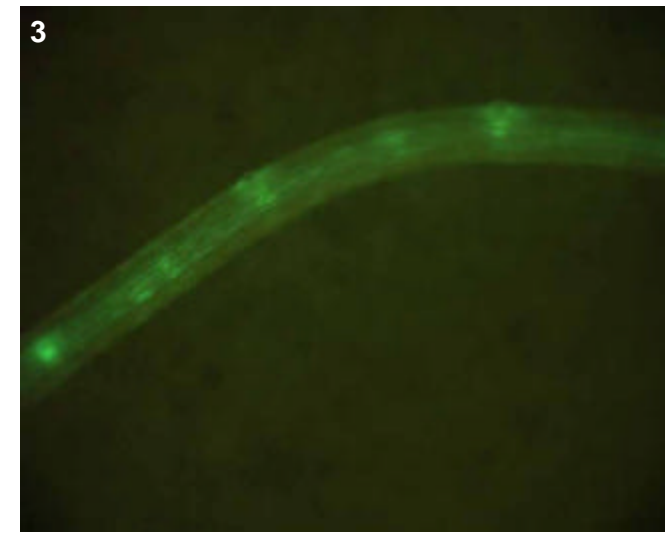
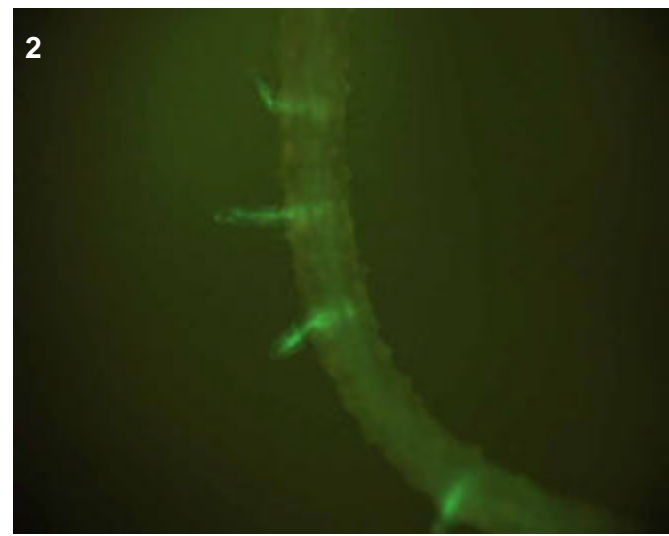
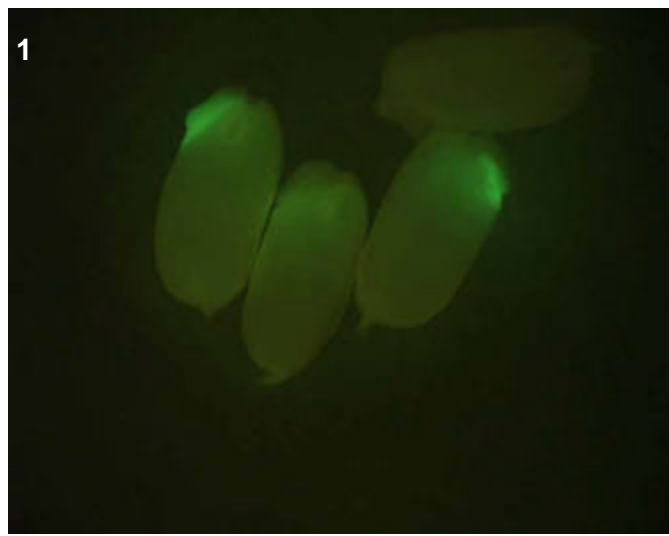
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 6



T0 comments

T1 seed comments

4/5 seeds had VERY bright expression in the embryo and coleorhiza.

T1 seedling comments

Could be an interesting pattern to confocal in lateral roots (pic 2), looks specific to stele. From picture 5 it looks like there is quite a lot of expression in the shoot, perhaps in the sheath and leaf mesophyll/epidermis?

Genotype: ARX G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

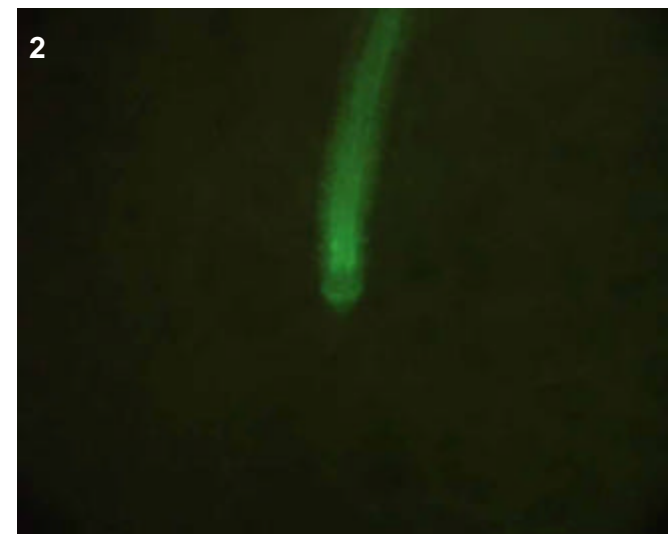
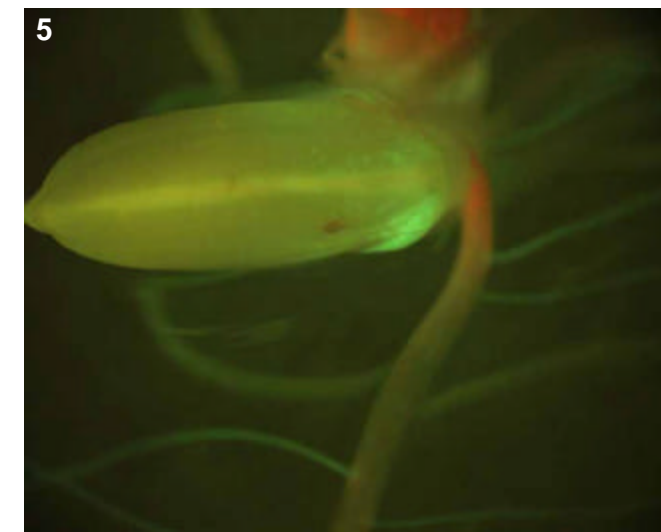
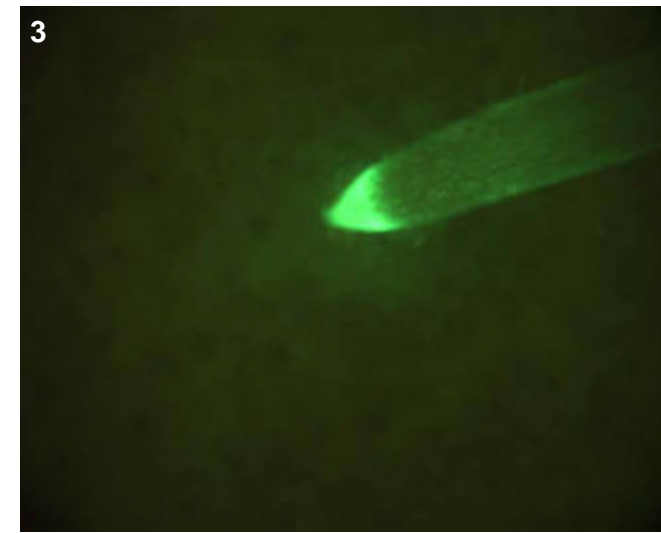
No GFP detected

T1 in greenhouse?

YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 7



T0 comments

T1 seed comments

2/5 seeds had medium expression towards the lower left side of scutellum (right seed, pic 1).

T1 seedling comments

Note the bright root cap (pic 3) and stelar expression beginning in elongation zone (pic 2).

Genotype: ARY A05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

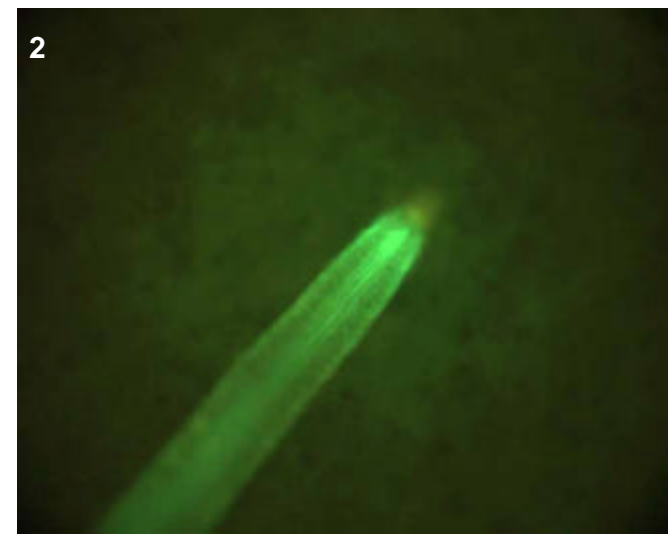
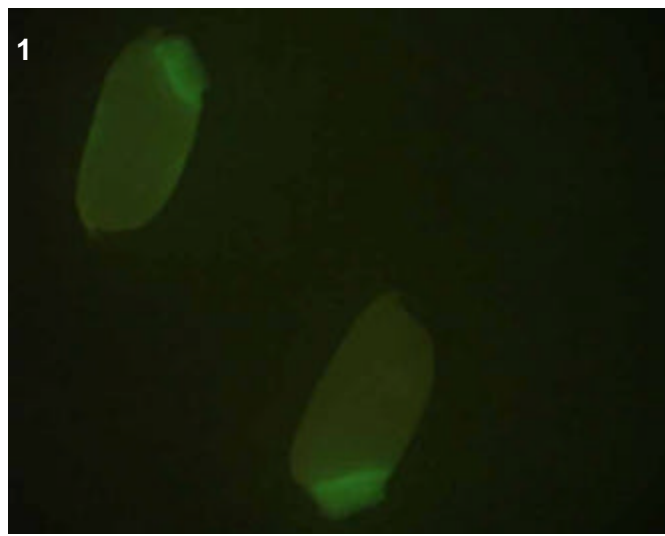
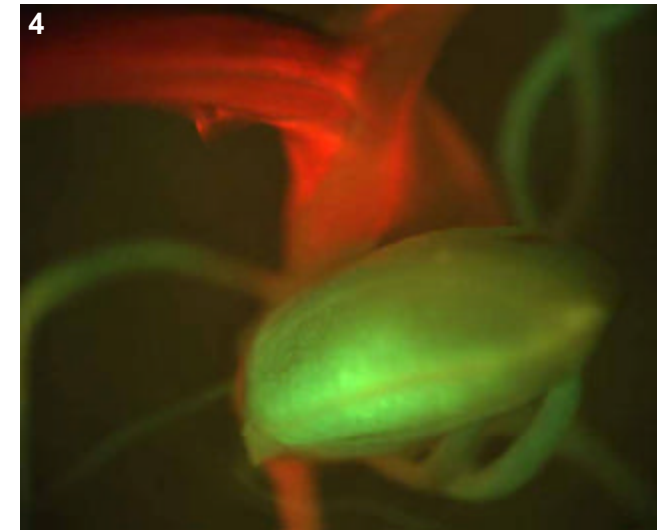
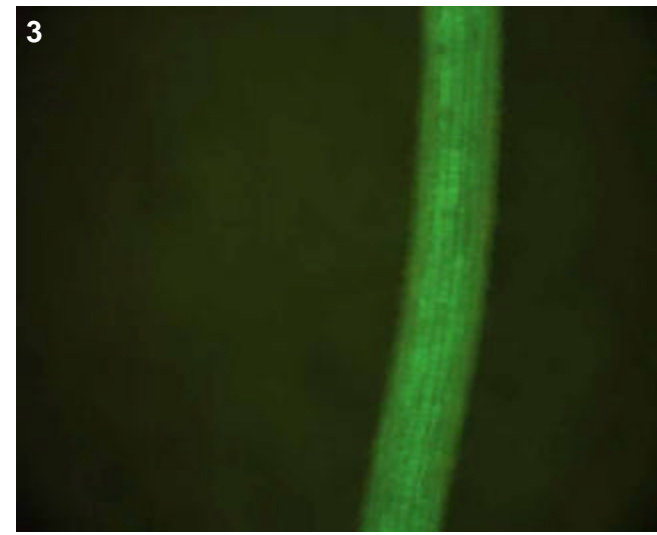
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 11



T0 comments

T1 seed comments

5/5 seeds had bright expression

T1 seedling comments

Genotype: ARY B04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

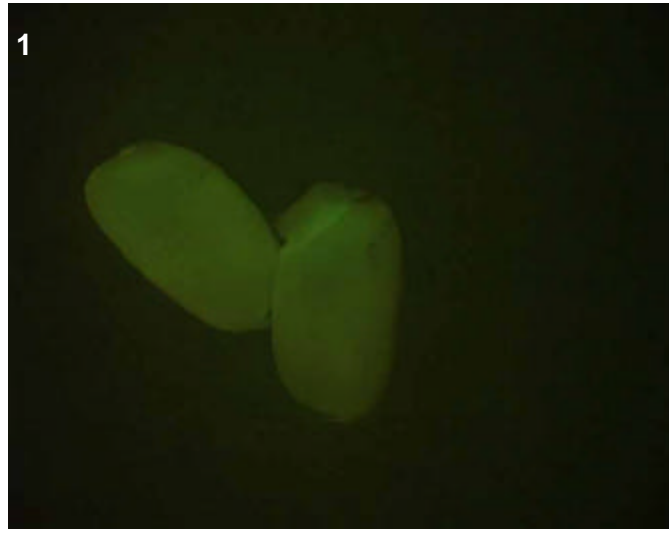
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced: 33



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Genotype: ARY B12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

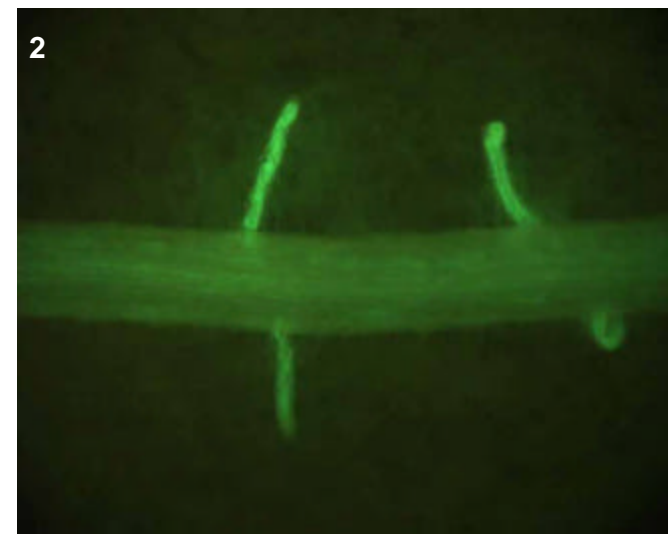
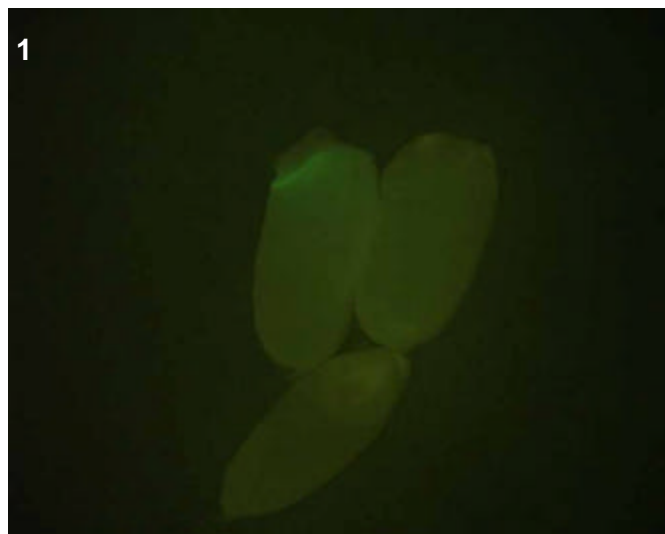
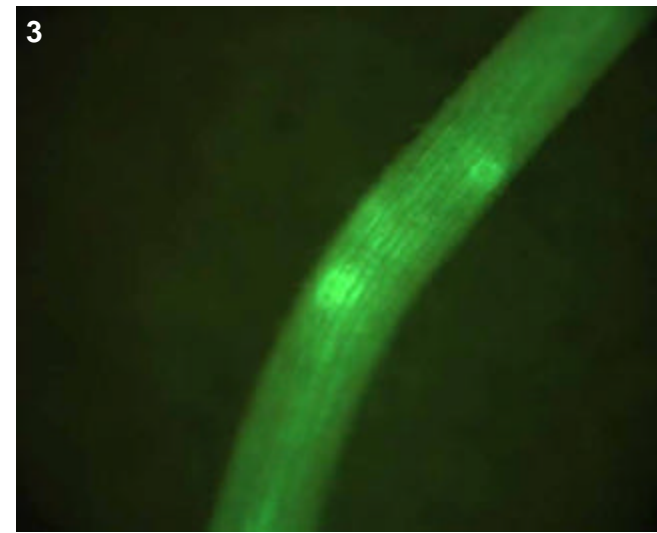
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 17



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ARY C09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

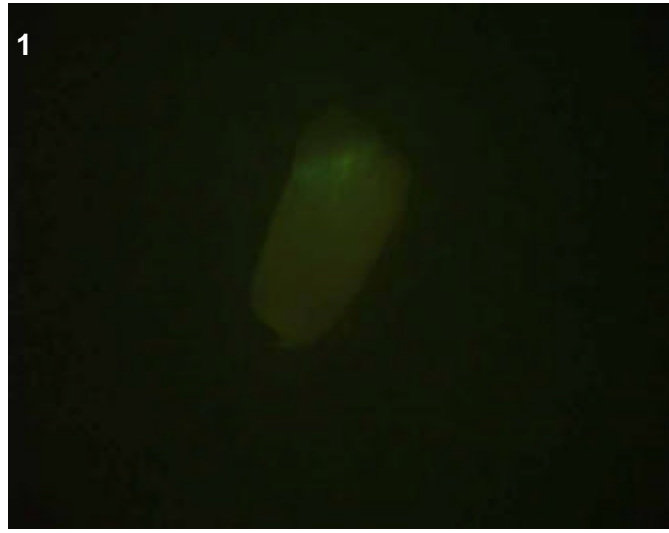
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

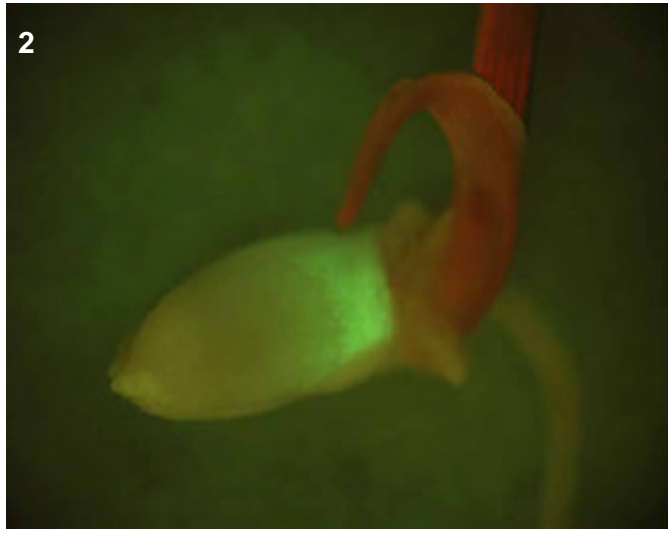
Confocal?

Number T2 seed produced: 0

1



2



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ARY E10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

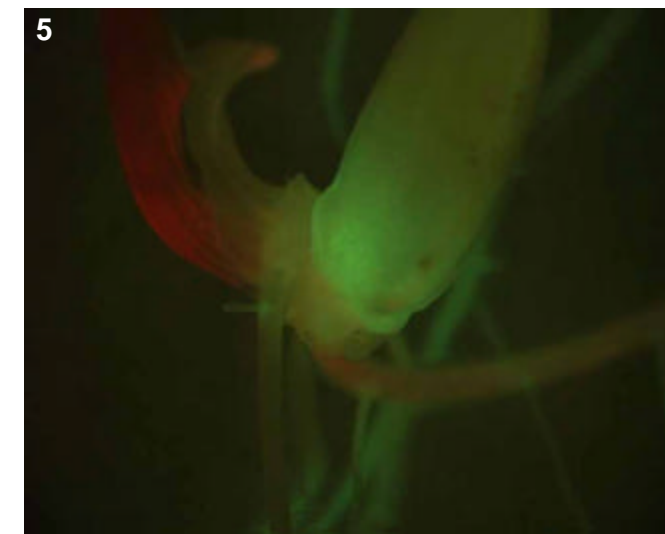
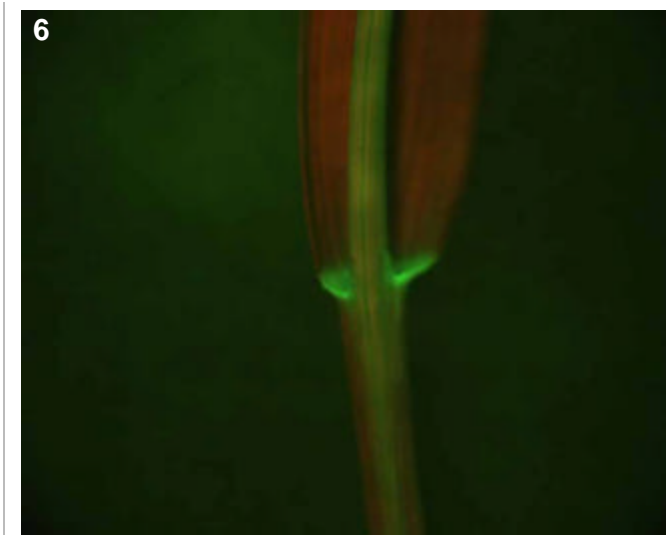
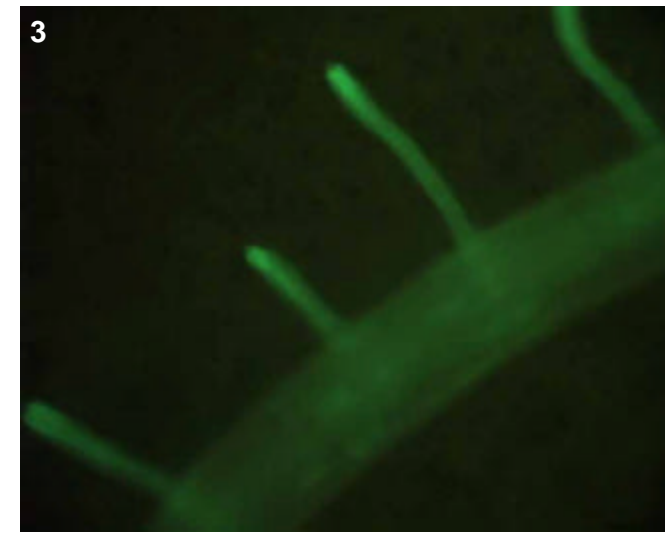
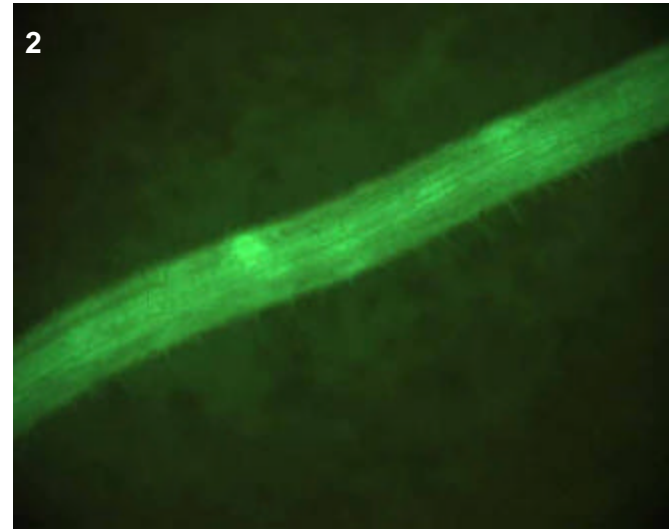
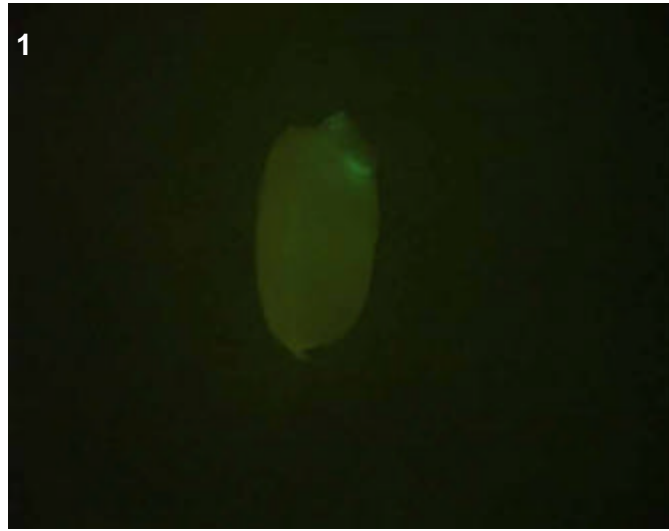
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 33



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Could be a bright, epidermal root line (pics 2-5).

Genotype: ARY F07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

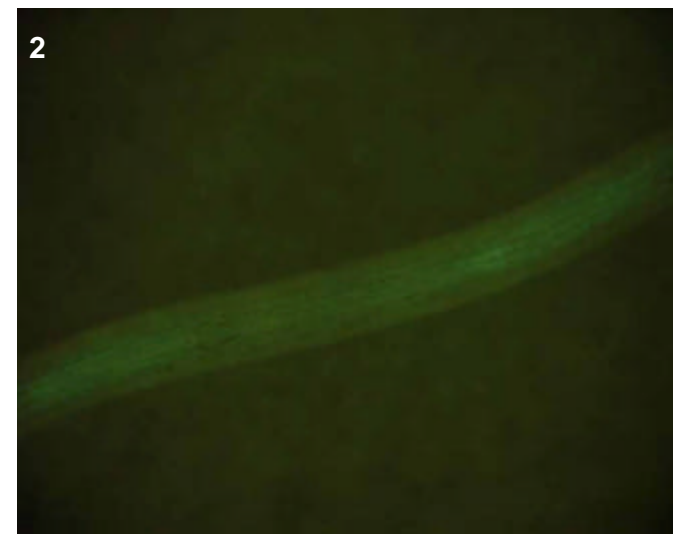
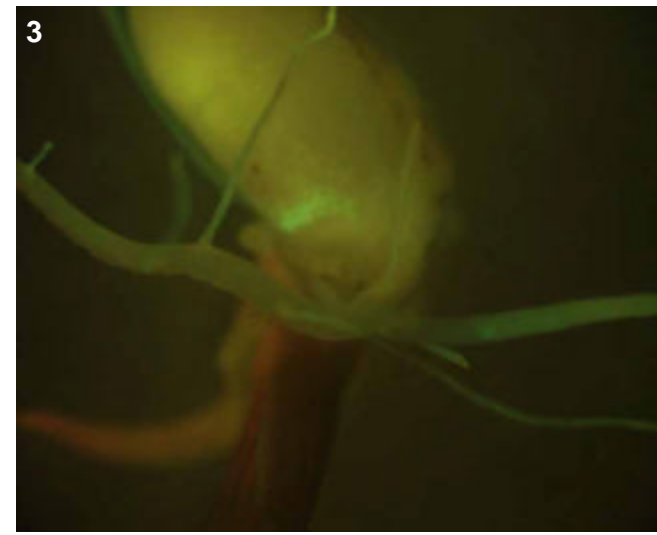
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 43



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ARZ C03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

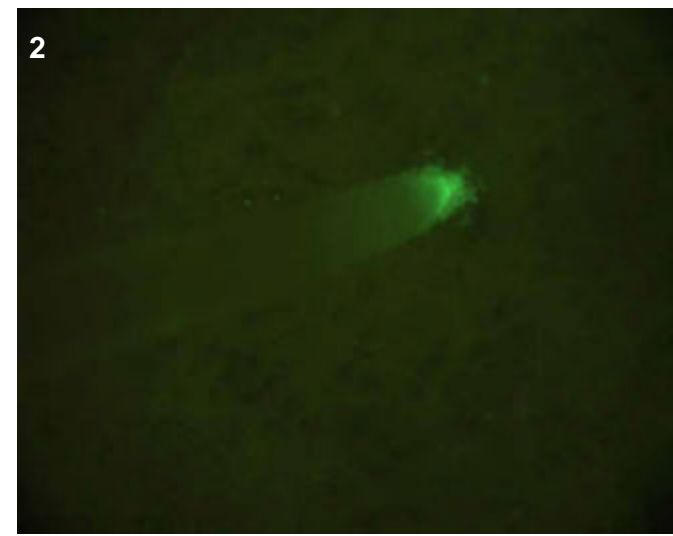
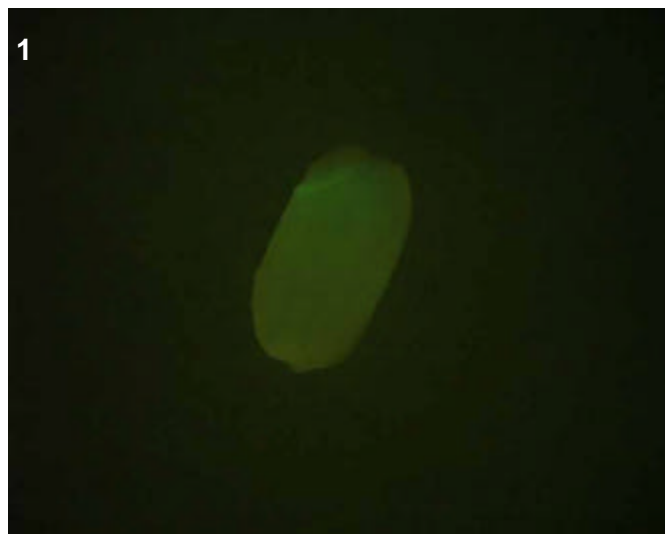
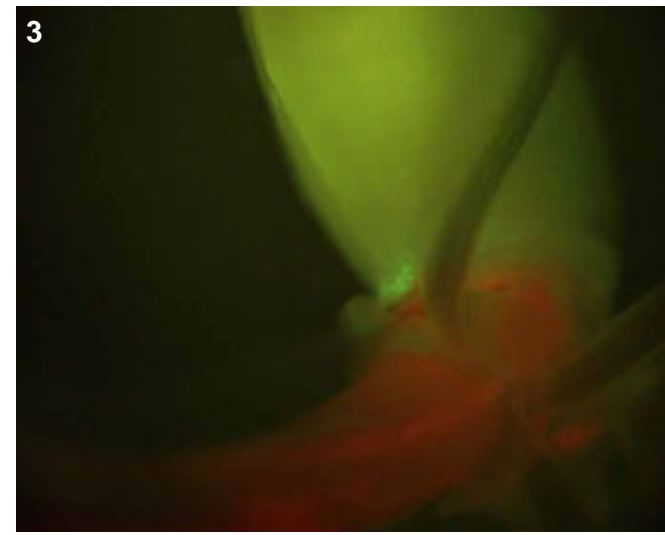
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 16



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ARZ C06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

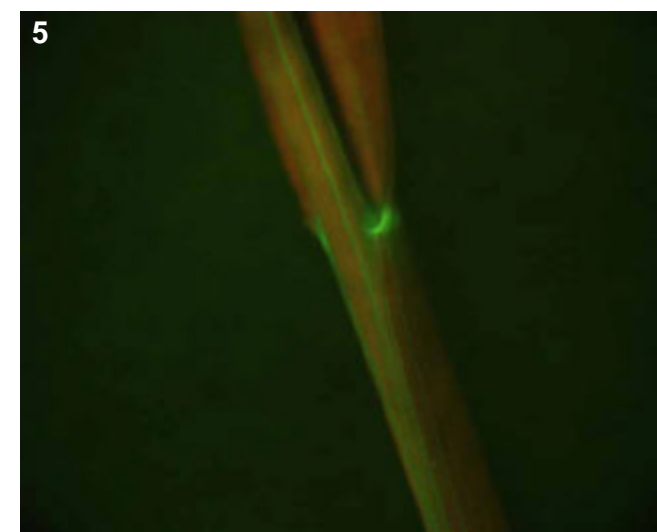
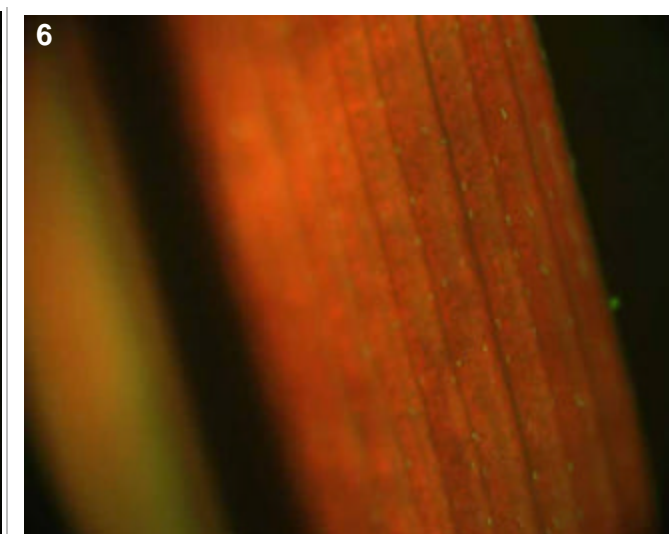
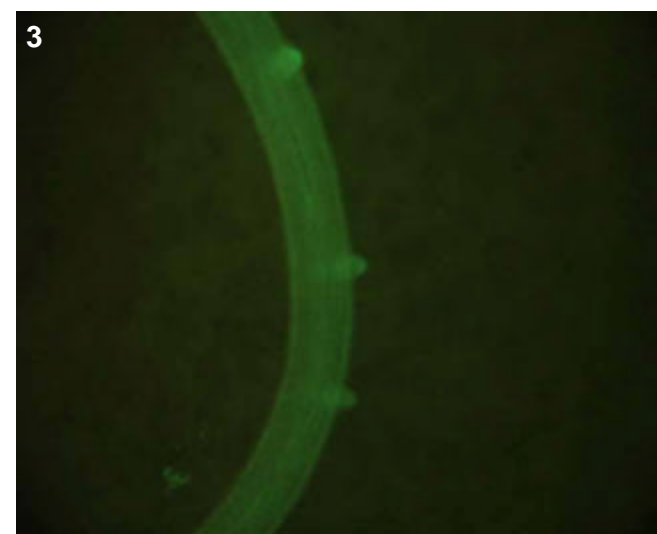
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds (pic 1, seed on left) definitely had medium expression, perhaps others did more faintly.

T1 seedling comments

Bright, perhaps constitutive, expression throughout the plant. Note the leaf trichomes in picture 6.

Genotype: ARZ C12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

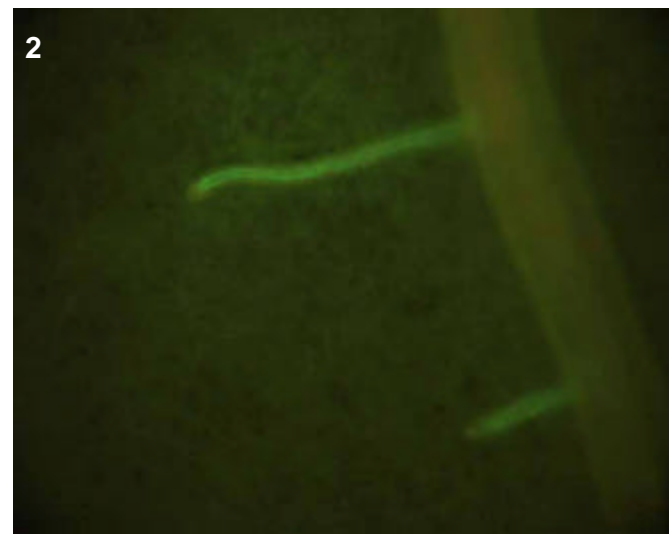
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced: 0



T0 comments

T1 seed comments

2/5 seeds had weak expression.

T1 seedling comments

Could be stelar expression in the lateral roots (pic 2).

Genotype: ARZ D09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

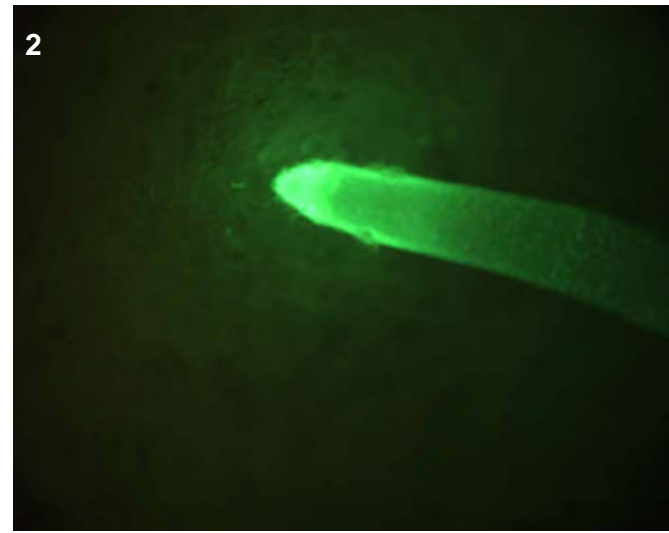
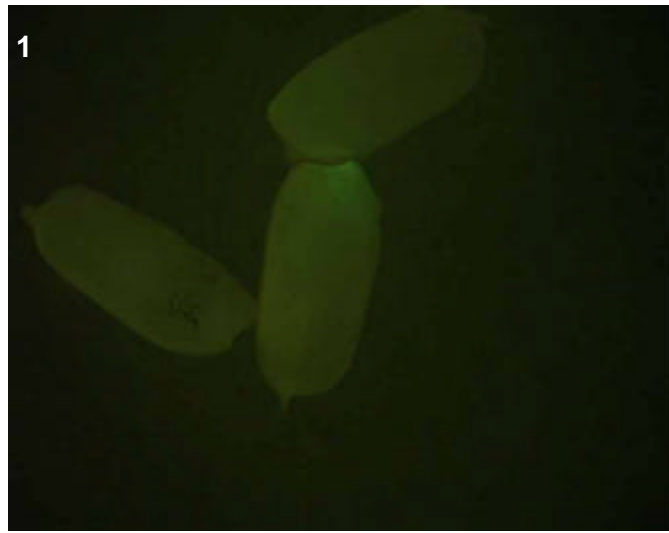
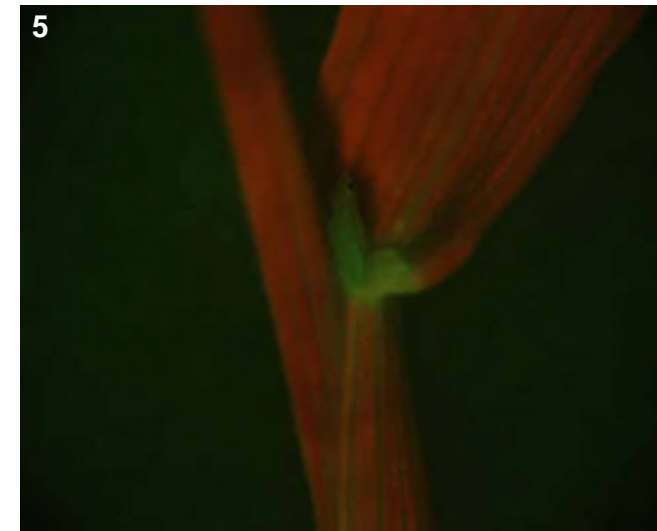
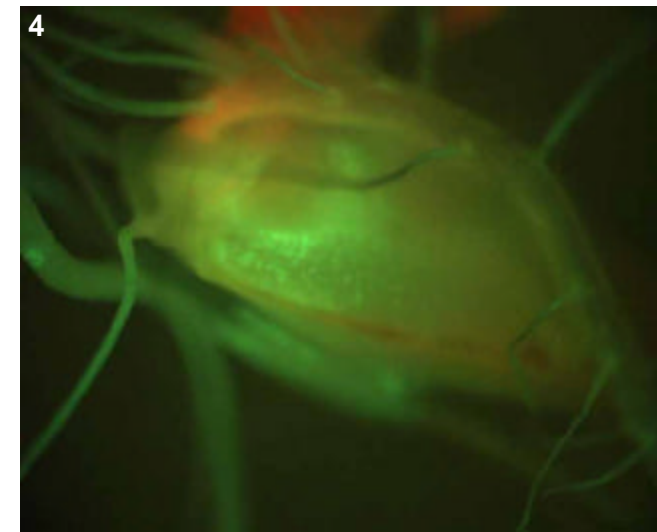
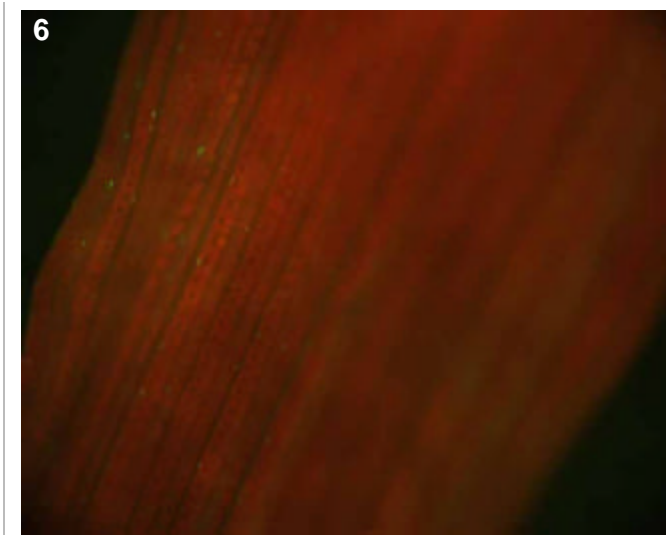
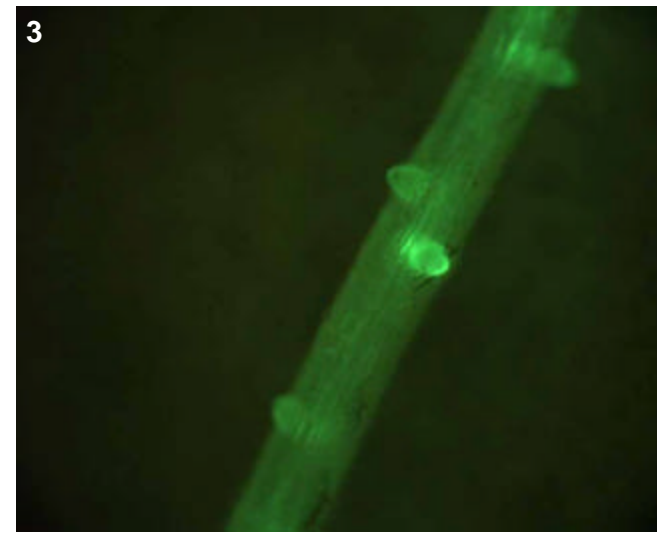
- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants Confocal?

Number T2 seed produced: 15



T0 comments

T1 seed comments
 2/5 seeds had weak expression.

T1 seedling comments

Genotype: ARZ E11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ARZ F02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

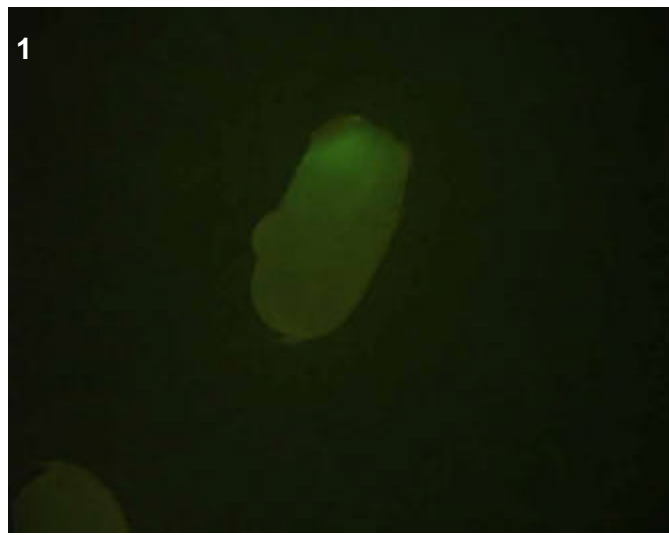
No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

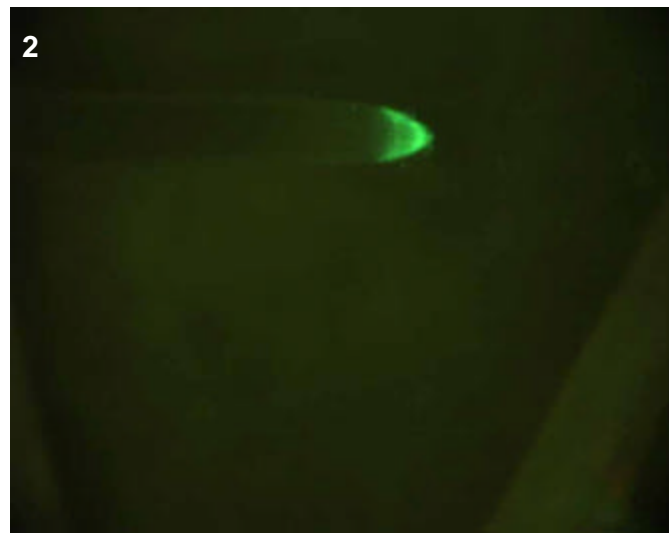
Confocal? WIP

Number T2 seed produced: 32

1



2



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Appears to be bright epidermal expression at tips of crowns (pic 2). There was a similar expression in laterals but much more faint.

Genotype: ARZ G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

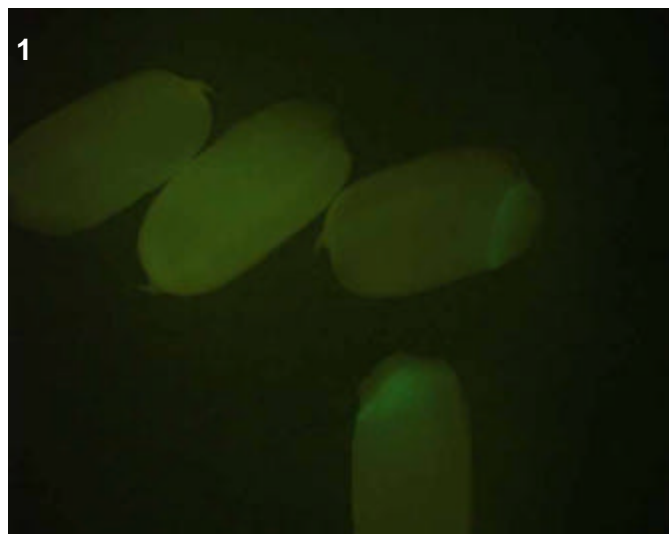
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced: 25



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ASA B06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

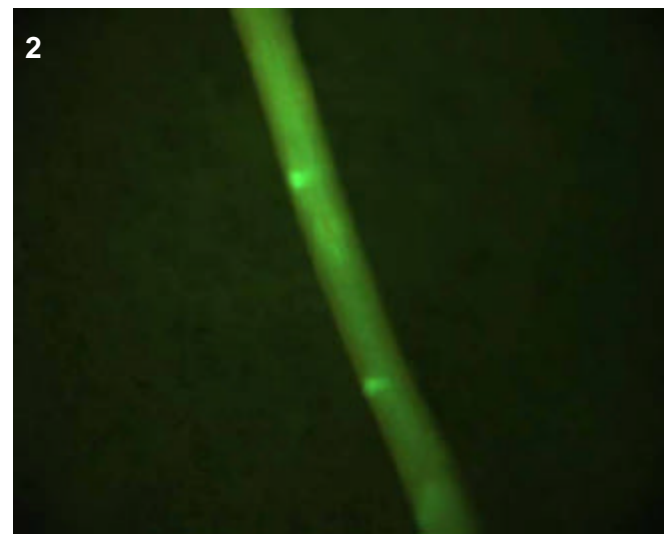
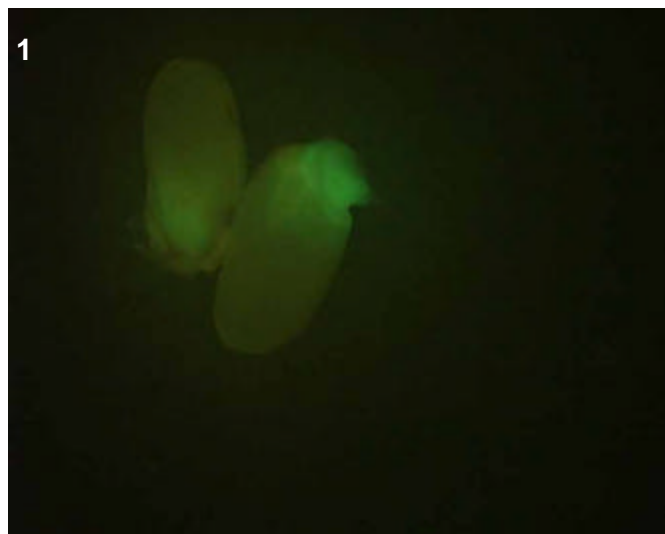
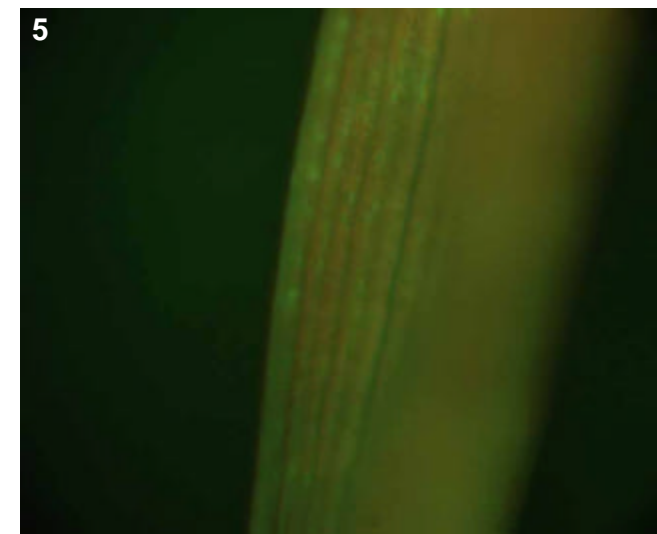
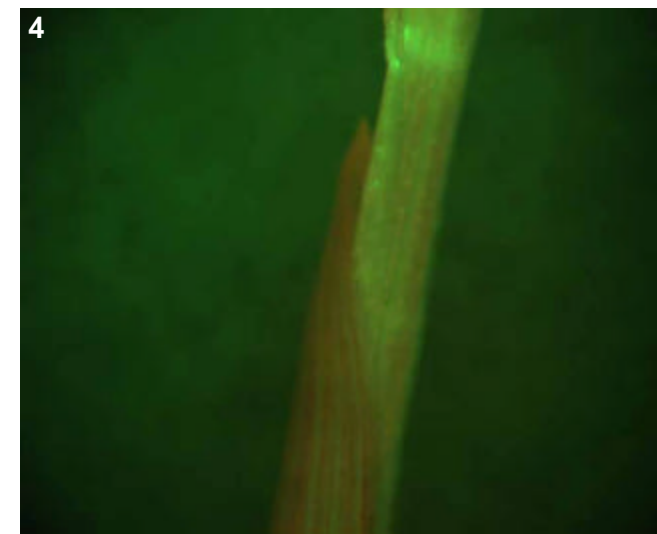
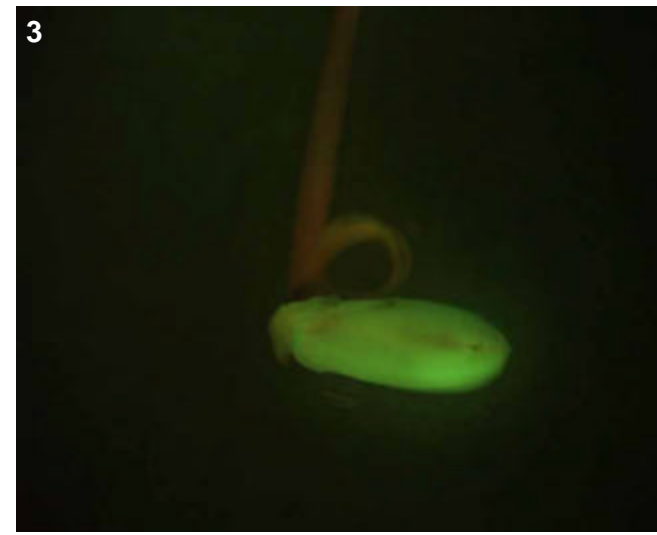
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

3/4 seeds had bright expression.

T1 seedling comments

2/3 of the GFP positive plants had no root (pic 3). The 1 plant with roots had small roots with perhaps stelar expression (pic 2). The shoot was overall bright and could be epidermal or mesophyll expression in leaf and sheath tissue (pics 4-5).

Genotype: ASA C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

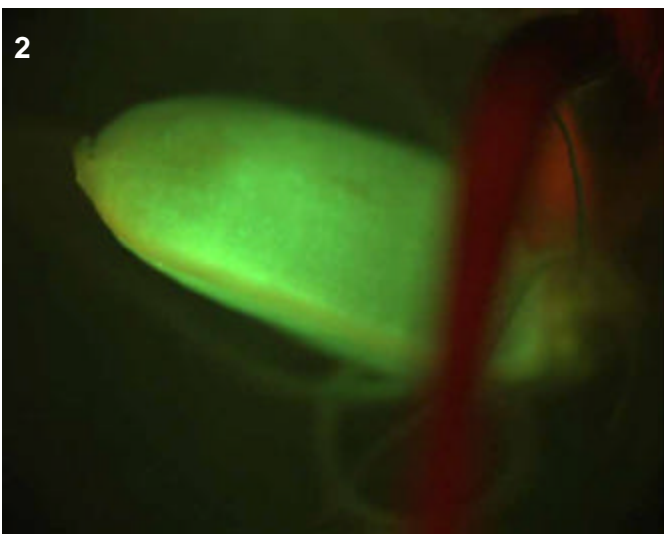
Confocal?

Number T2 seed produced: 25

1



2



T0 comments

T1 seed comments

2/5 seeds had medium expression.

T1 seedling comments

A bright endosperm-specific line (picture 2).

Genotype: ASA C03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

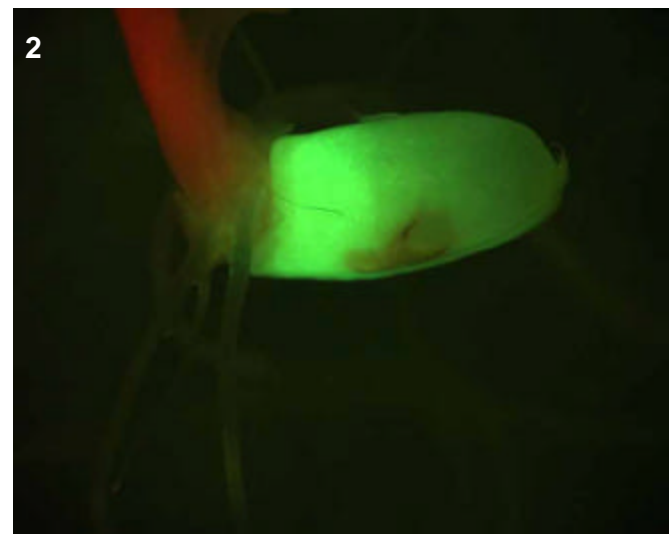
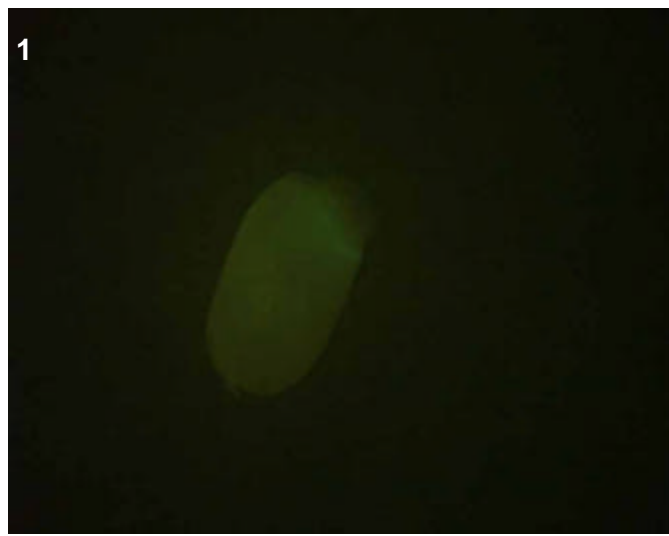
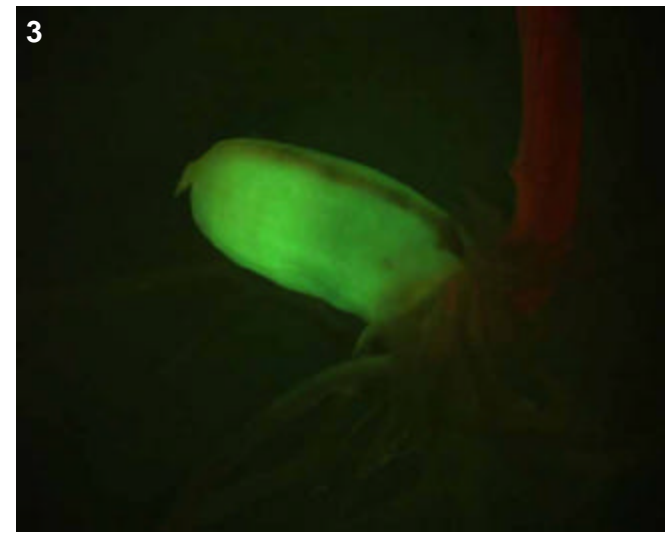
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 7



T0 comments

T1 seed comments

3/5 seeds had weak expression.

T1 seedling comments

A bright endosperm-specific line (pics 2-3). Perhaps this line and the preceding, ASA C02, are clonal copies?

Genotype: ASA C07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

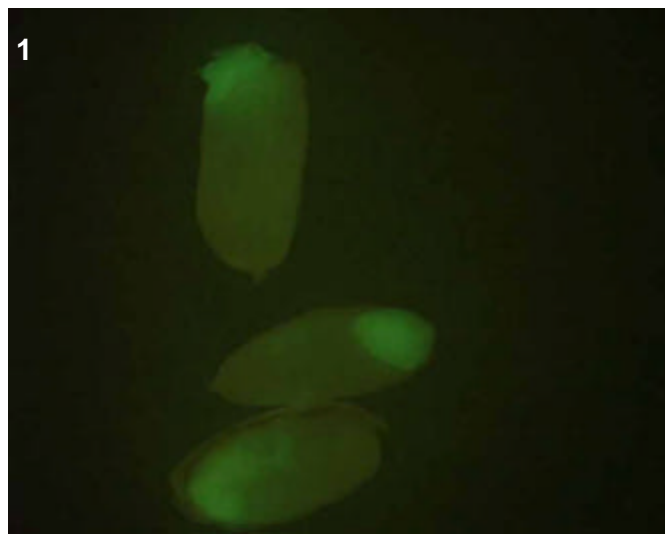
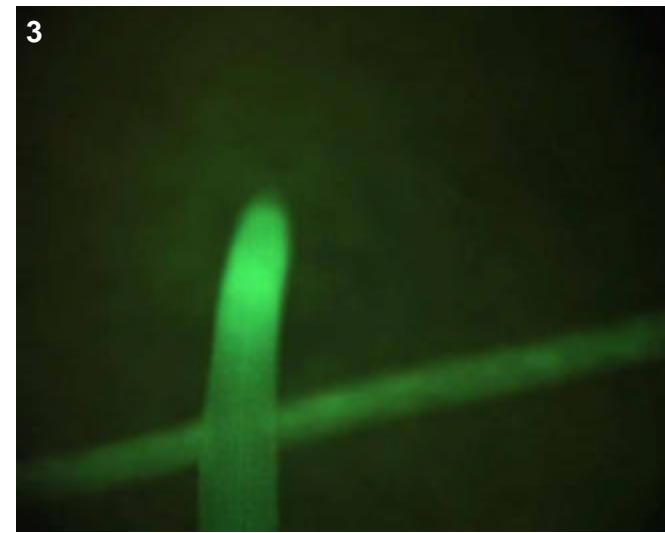
YES, 3 GFP+ plants

Confocal?

WIP

Number T2 seed produced:

0



T0 comments

T1 seed comments

5/5 seeds had bright expression.

T1 seedling comments

Appears to be a bright root-specific line (pics 2-3). It's brightness and width indicates either epidermal or cortical expression. Note the extra bright expression near cell elongation zone of lateral root tip (pic 2).

Genotype: ASA E01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

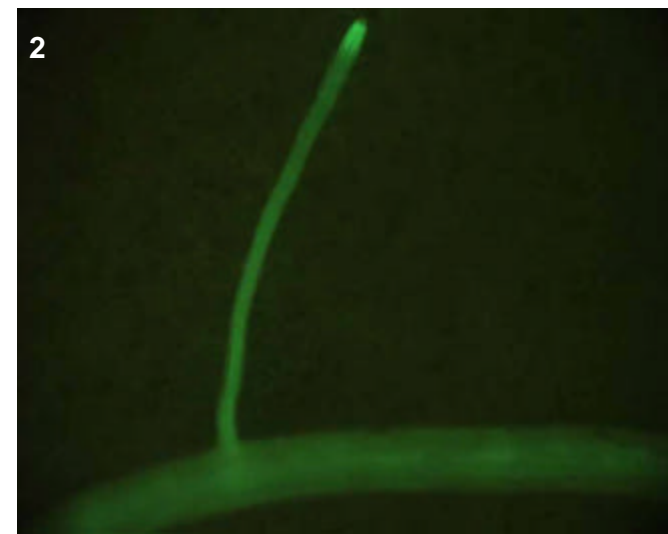
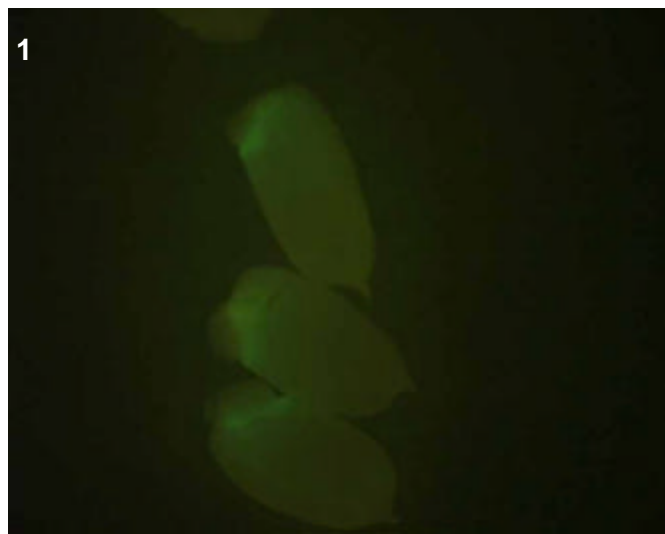
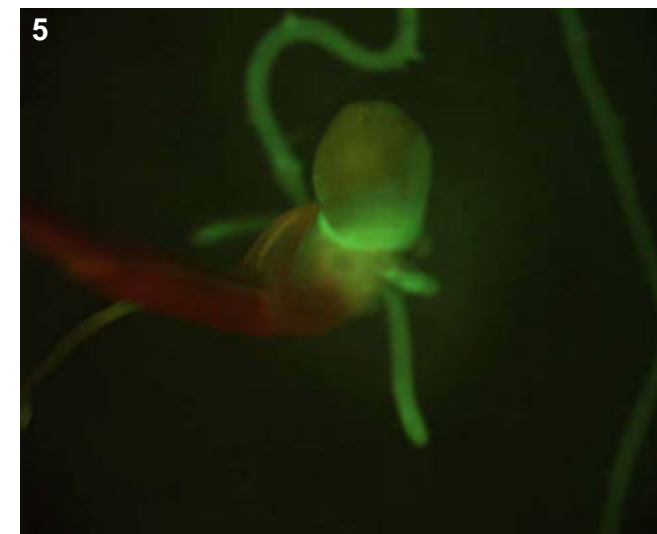
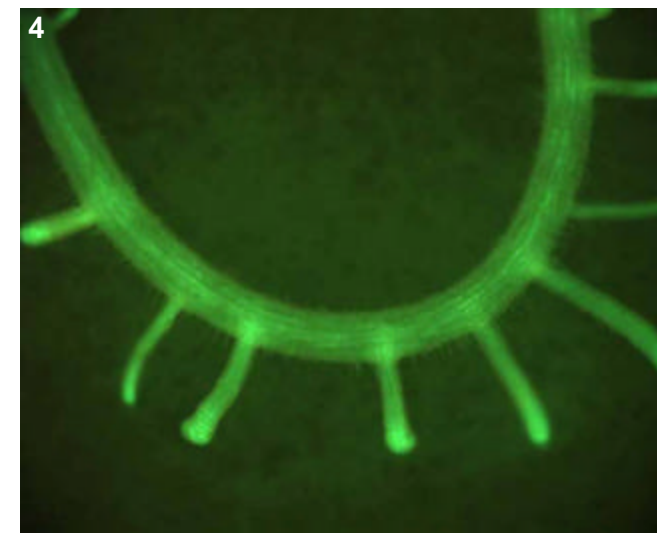
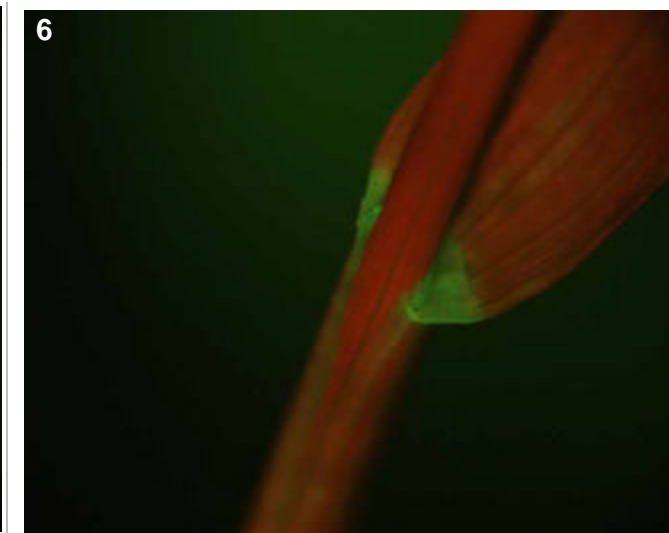
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced: 0



T0 comments

T1 seed comments

4/5 seeds had medium expression.

T1 seedling comments

This could be a bright cortical pattern in the root system (pics 2-4). This line had extremely long seminal roots, perhaps a phenotype?

Genotype: ASA F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

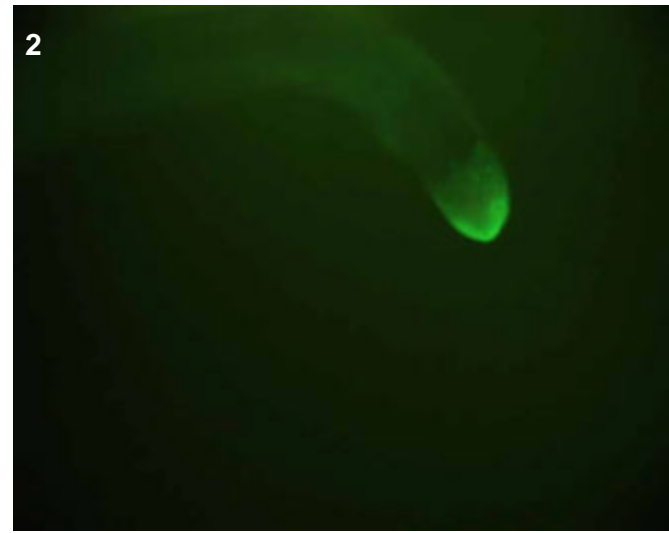
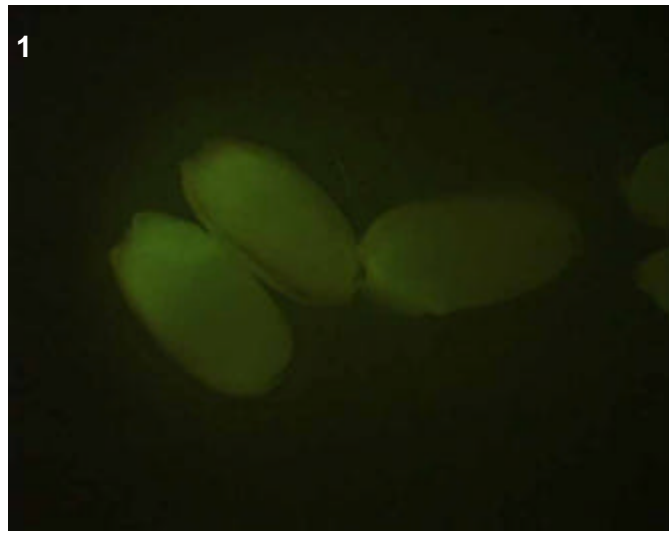
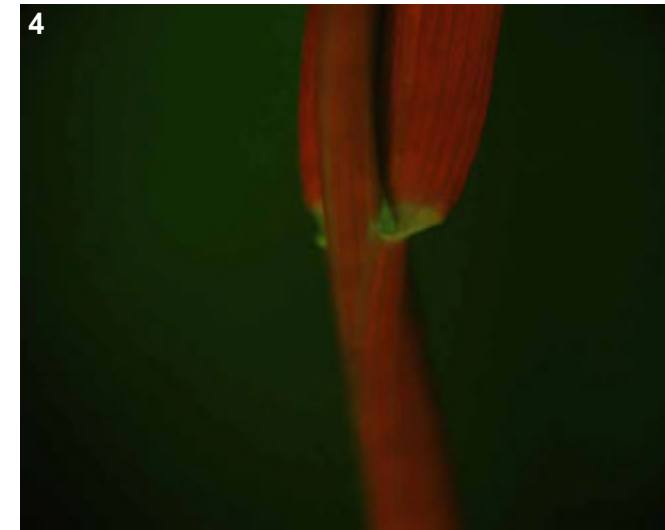
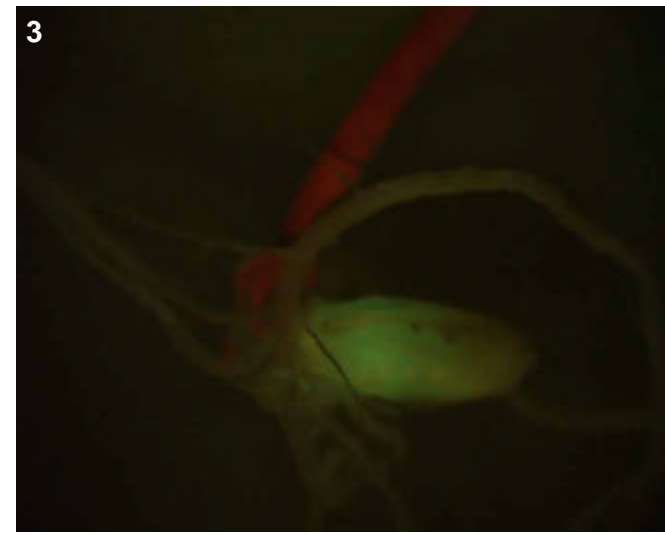
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments
4/5 seeds had weak expression.

T1 seedling comments

Genotype: ASA H04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

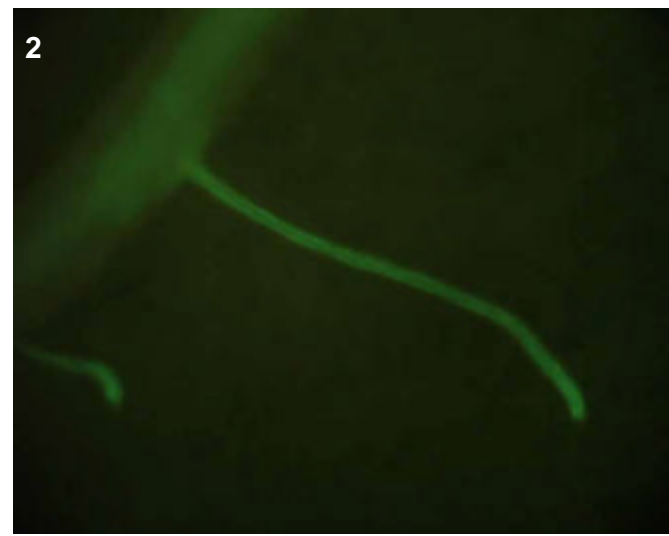
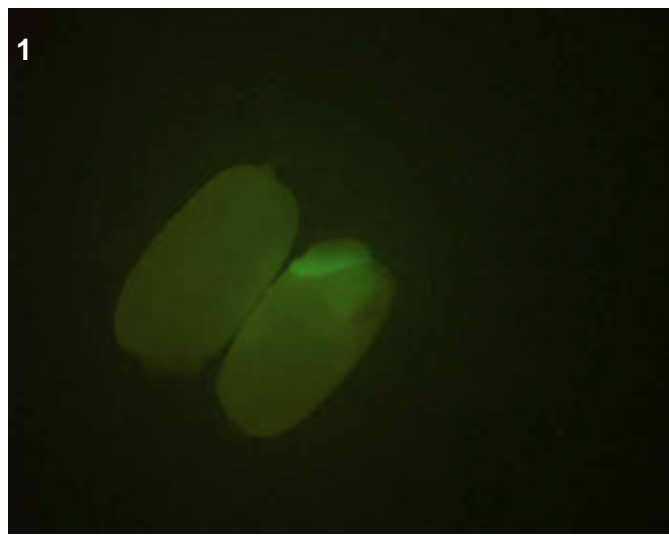
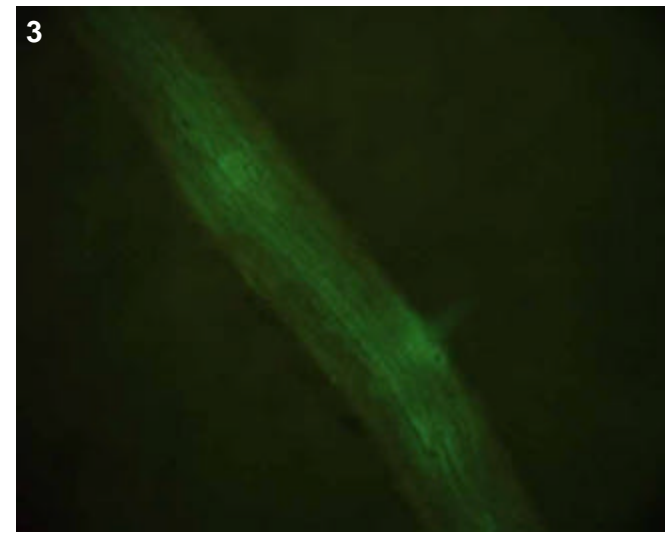
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

3/4 seeds had expression.

T1 seedling comments

Genotype: ASA H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

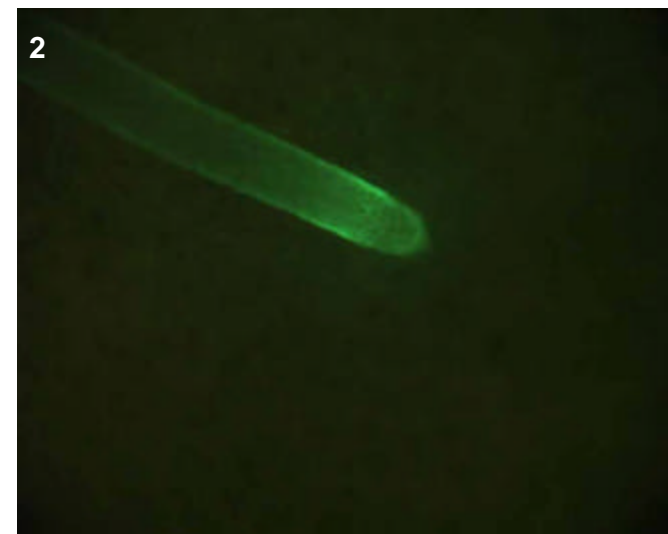
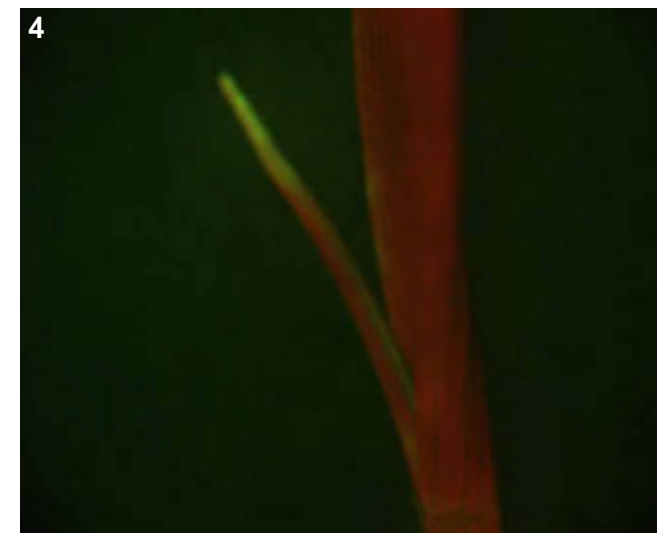
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

2/4 seeds had expression.

T1 seedling comments

Epidermal expression observed only in the crown roots (pic 2), especially bright in the young, thin crowns emerging around 1 week (pic 2).

Genotype: ASB A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

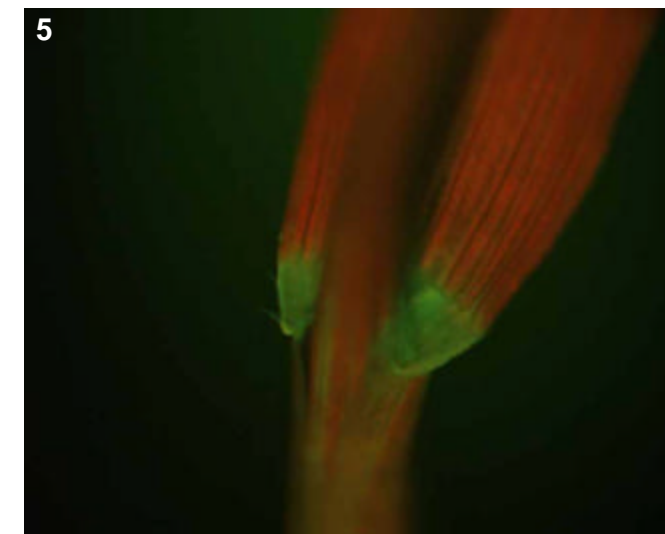
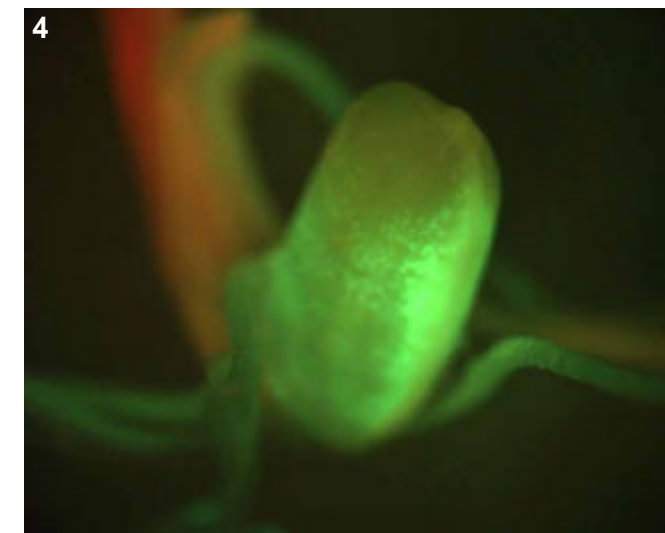
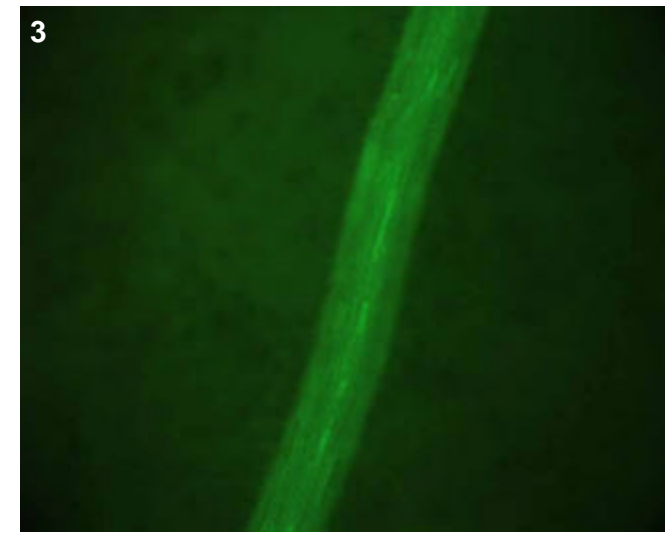
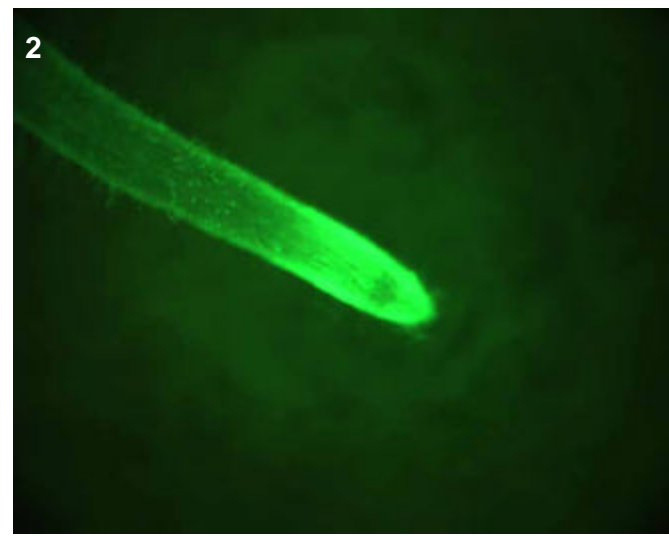
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

Bright expression in the embryo for 1/5 seed, but very localised, just a small bright circle.

T1 seedling comments

From picture 5 there appears to be some activity in the leaf and sheath tissues in close proximity to the collar.

Genotype: ASB C08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

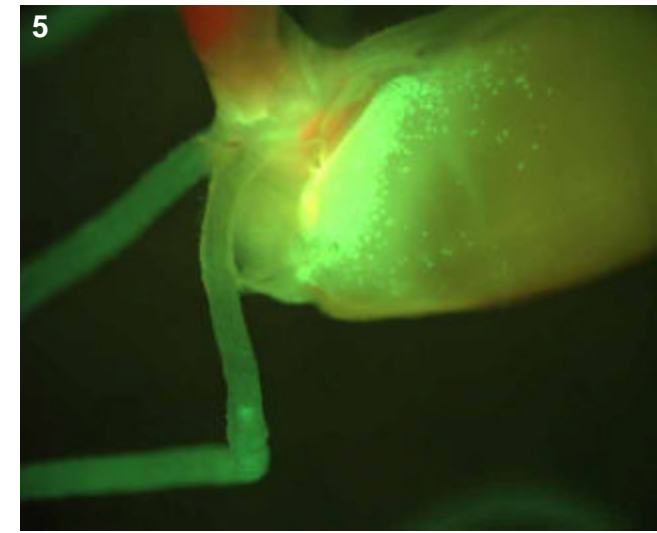
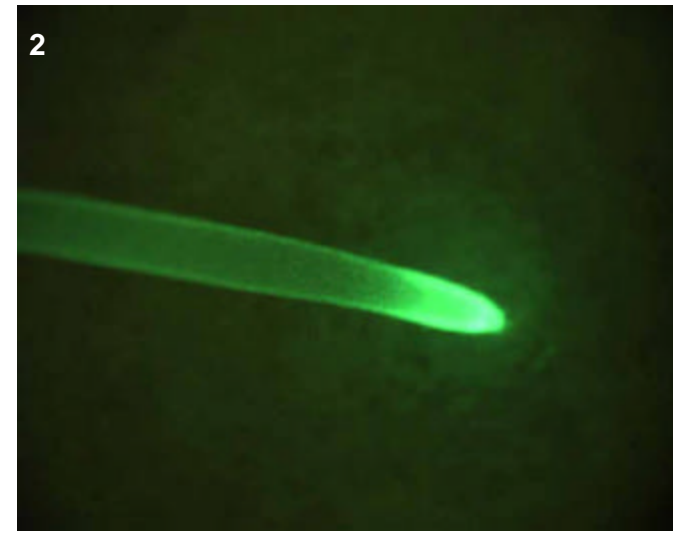
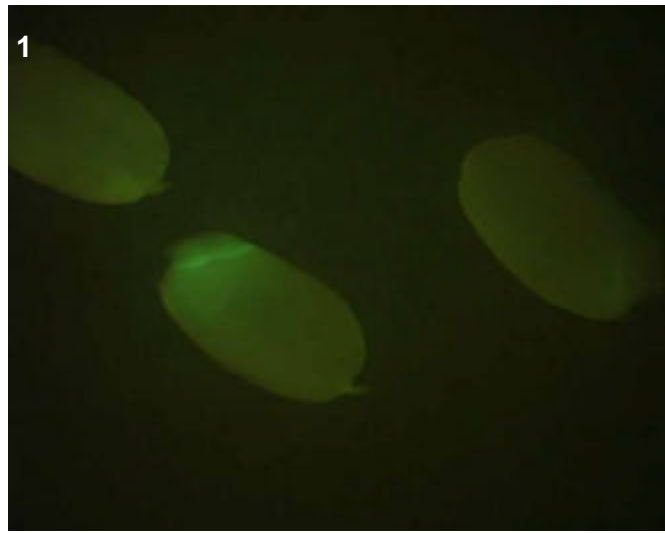
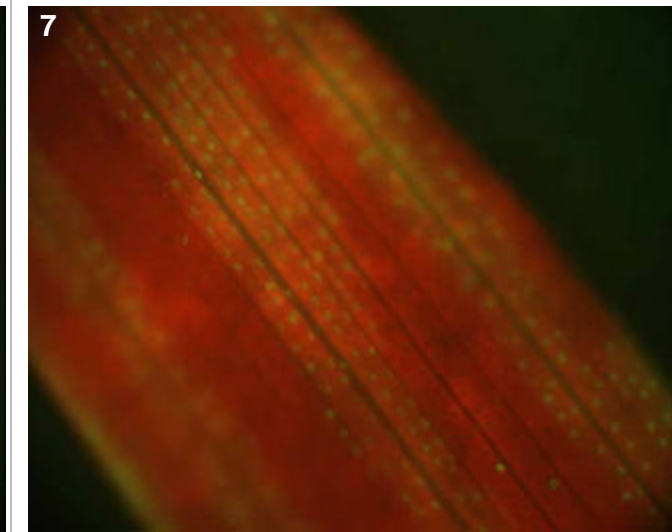
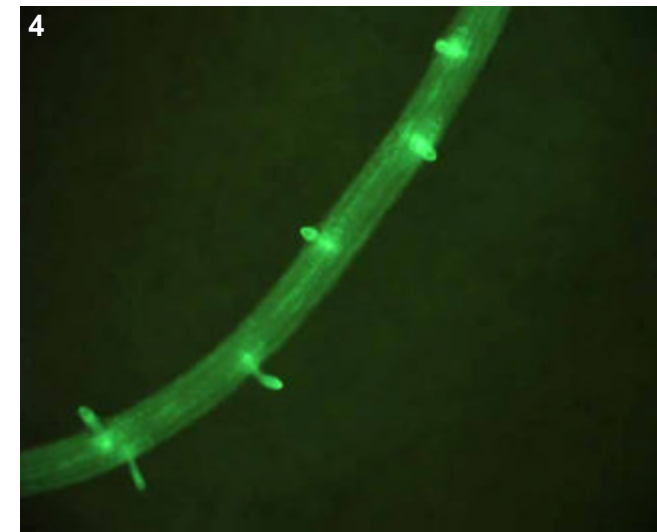
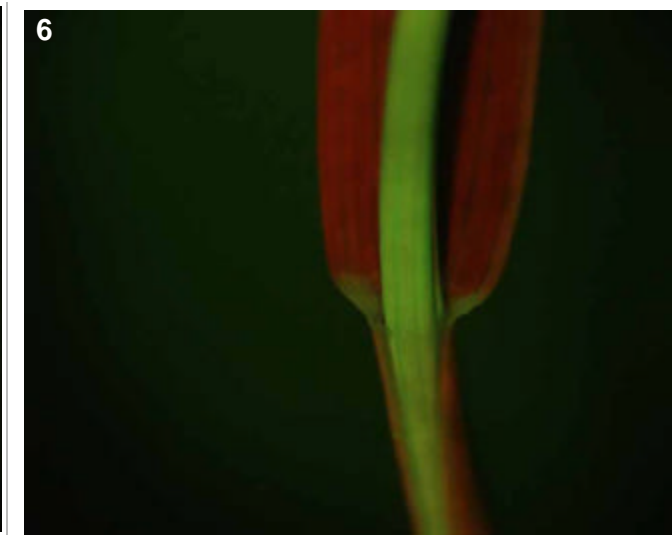
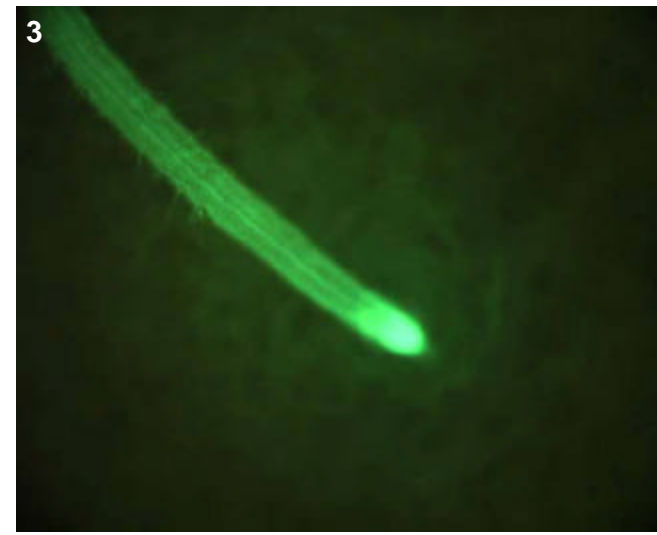
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced: 37



T0 comments

T1 seed comments

2/5 seed had expression.

T1 seedling comments

Root expression very bright and probably epidermal (pics 2-4). The entire newly-emerging leaf looks GFP positive (pic 6). Note the leaf guard cells in picture 7.

Genotype: ASB D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

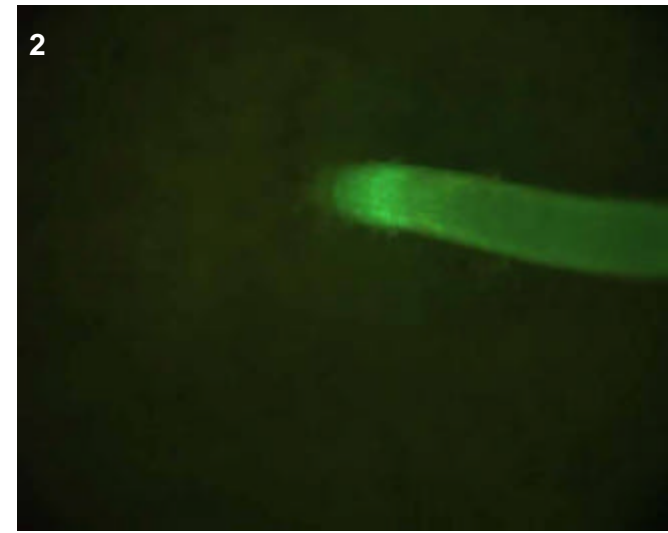
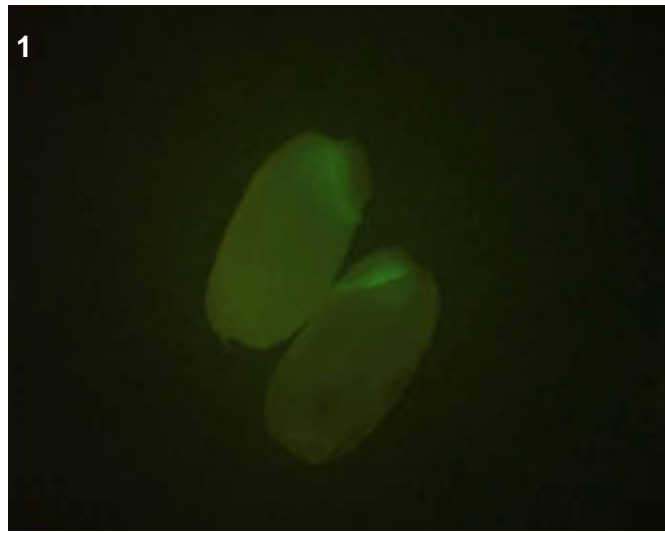
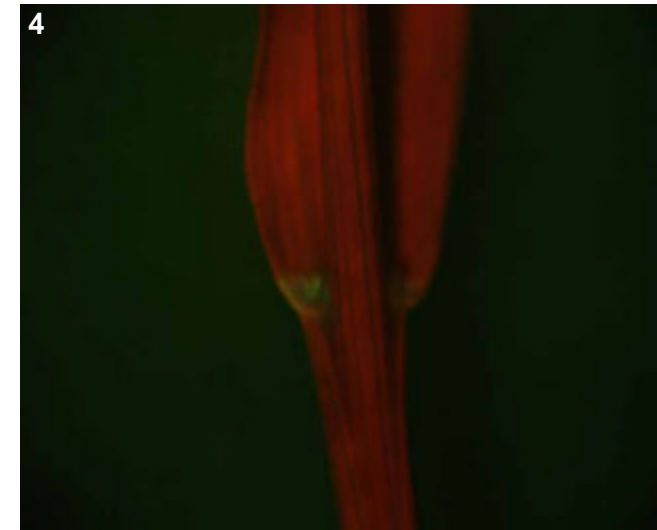
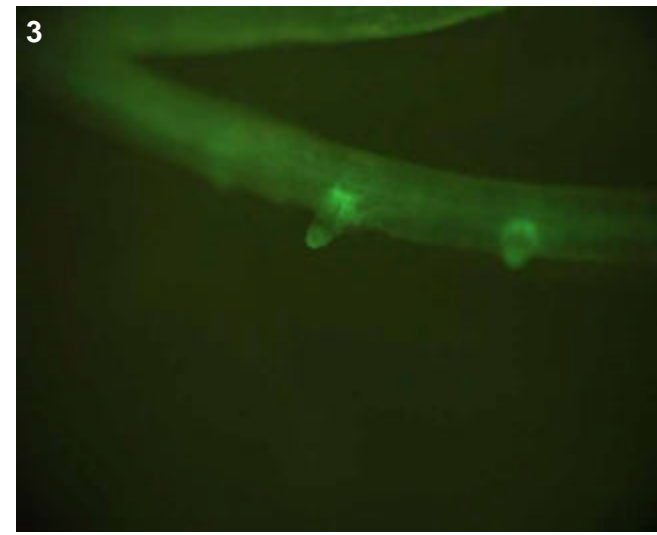
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

4/5 seed had expression.

T1 seedling comments

Genotype: ASB E07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?

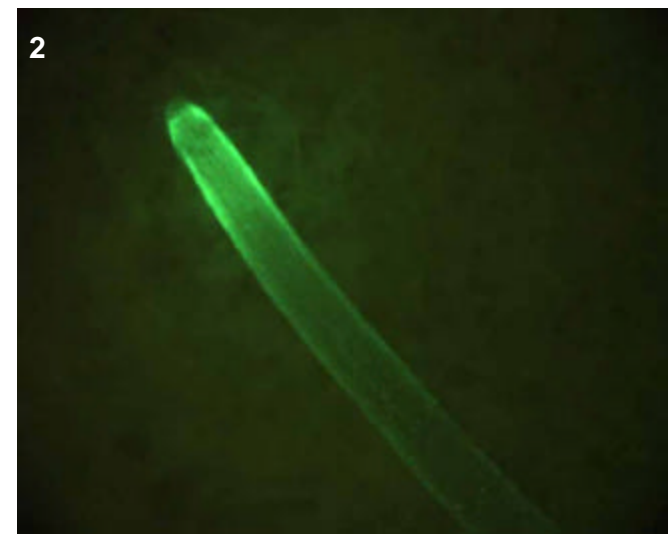
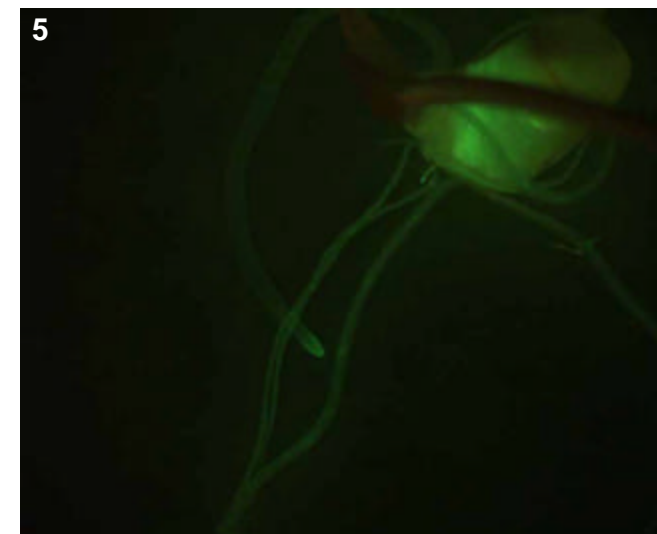
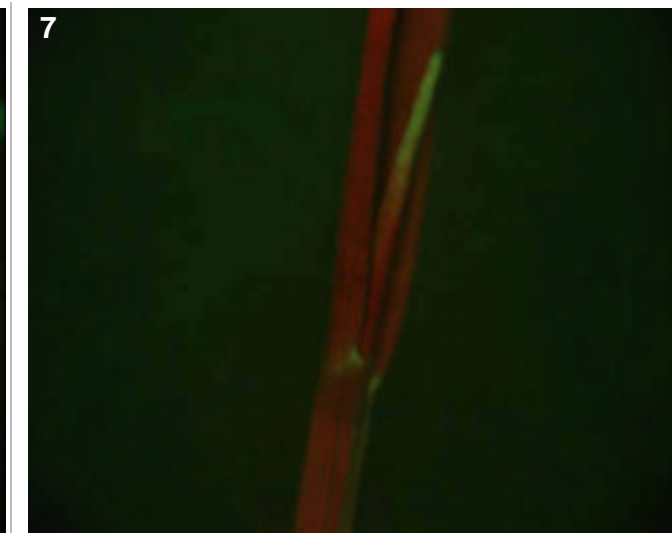
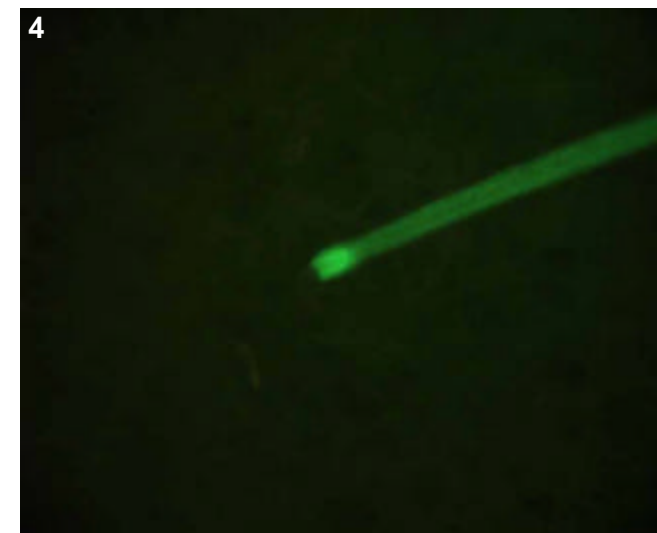
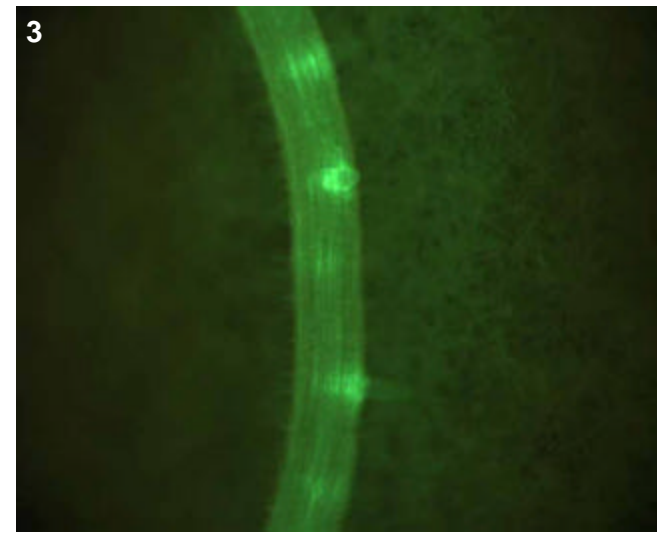
YES, 3 GFP+ plants

Confocal?

WIP

Number T2 seed produced:

6



T0 comments

T1 seed comments

3/5 seed had expression. Interesting in that it appears to be a distinct "spot" at the top of the embryo, perhaps the emerging coleorhiza or coleoptile.

T1 seedling comments

Bright epidermal expression in seminal and crowns (pics 2-3) while probably more cortical in lats (pic 4) with especially bright expression near the tip. Young sheath tissue appears to show general GFP expression (pic 6).

Genotype: ASC A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

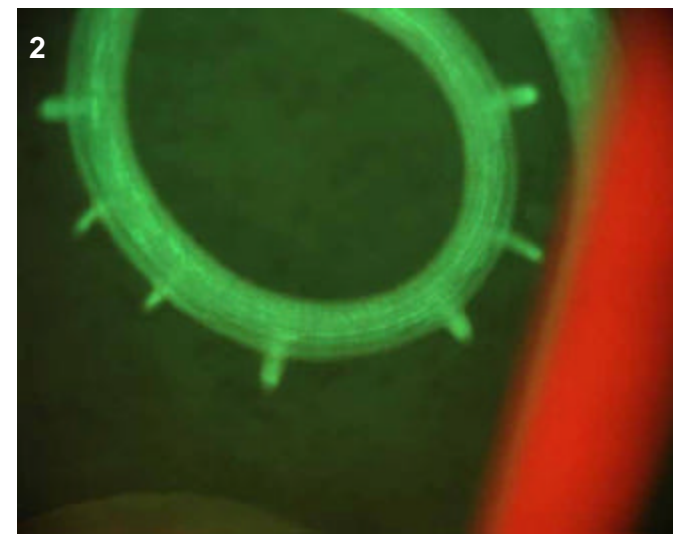
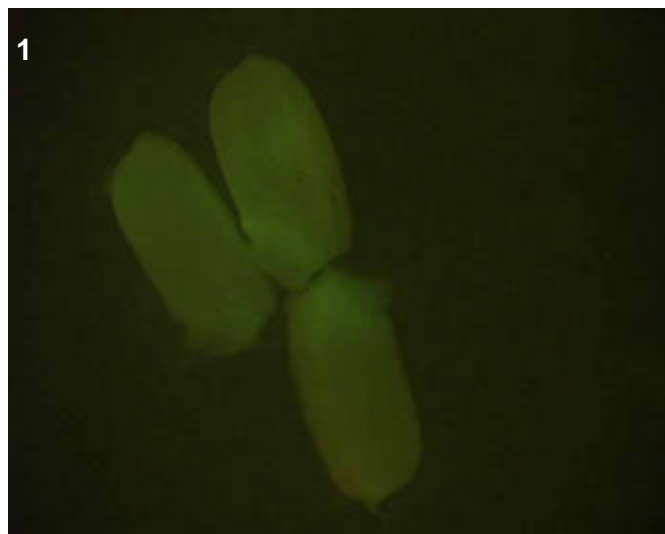
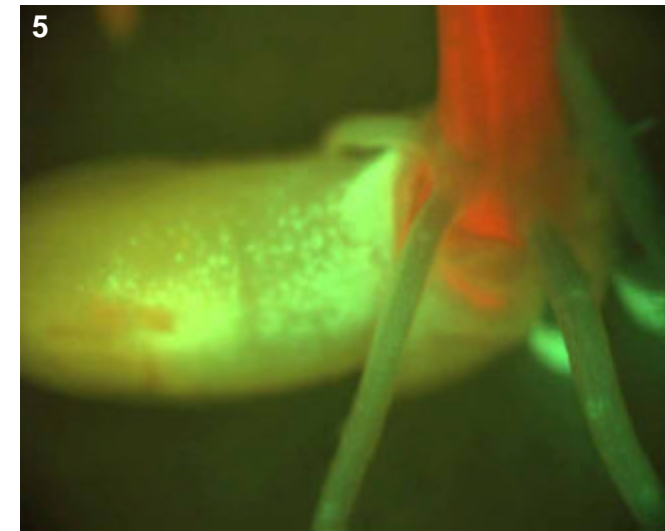
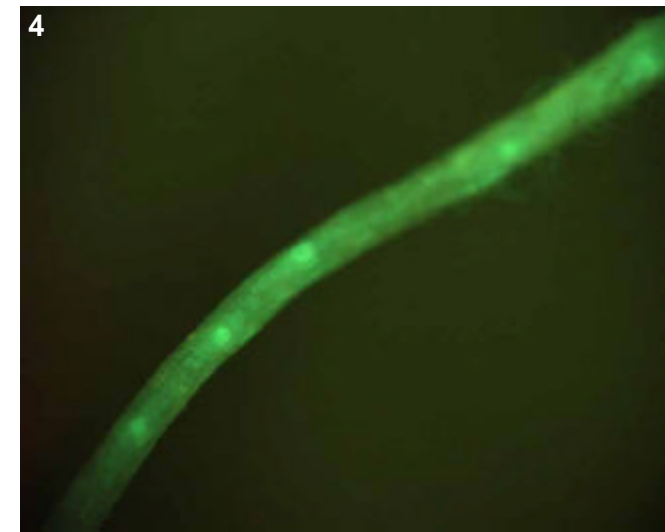
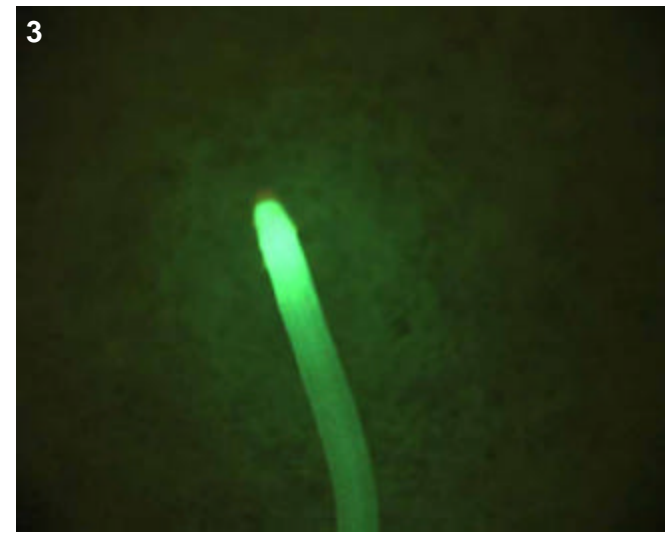
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 0



T0 comments

T1 seed comments

4/5 seeds had weak expression.

T1 seedling comments

Shoot expression was limited to the base of the shoot in the sheath region.

Genotype: ASC C05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

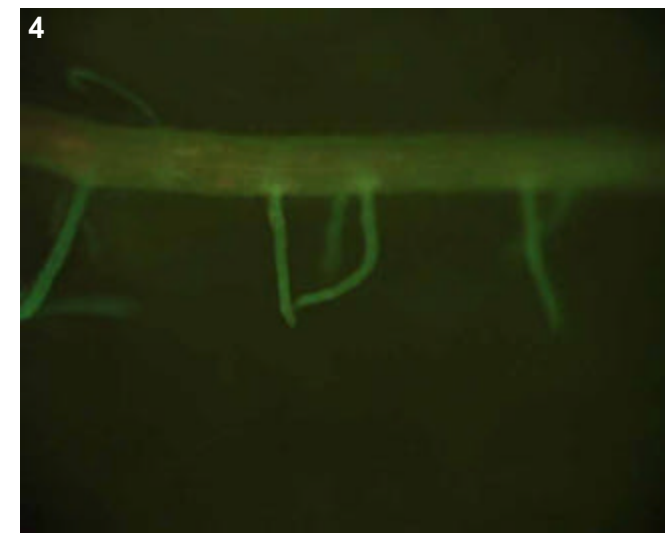
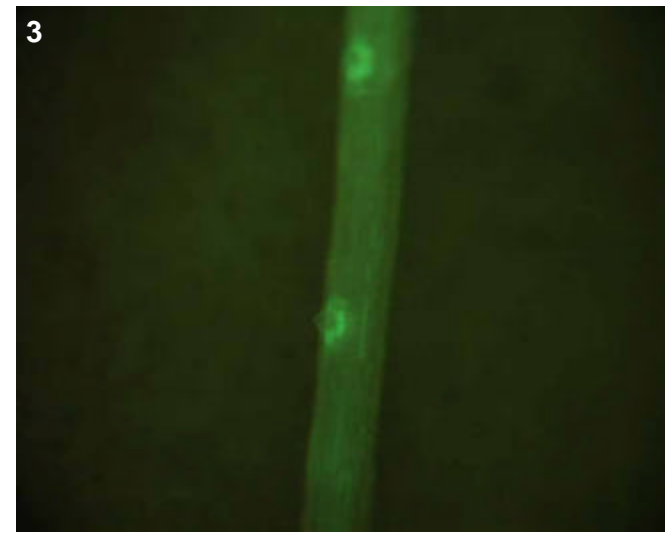
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced: 0



T0 comments

T1 seed comments

1/4 seeds had weak expression.

T1 seedling comments

An interesting root-specific line with expression either in the stele or cortex/endodermis. Note how the expression in lateral root tips begins quite high up, apparently in the cell elongation zone (pic 2).

Genotype: ASC G04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

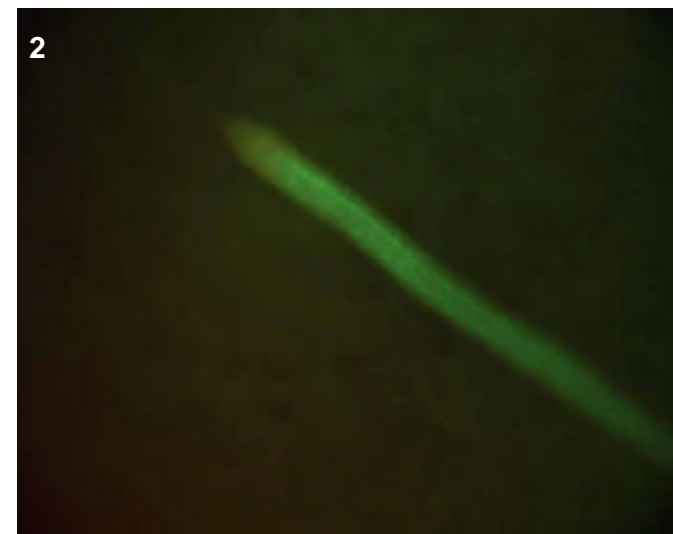
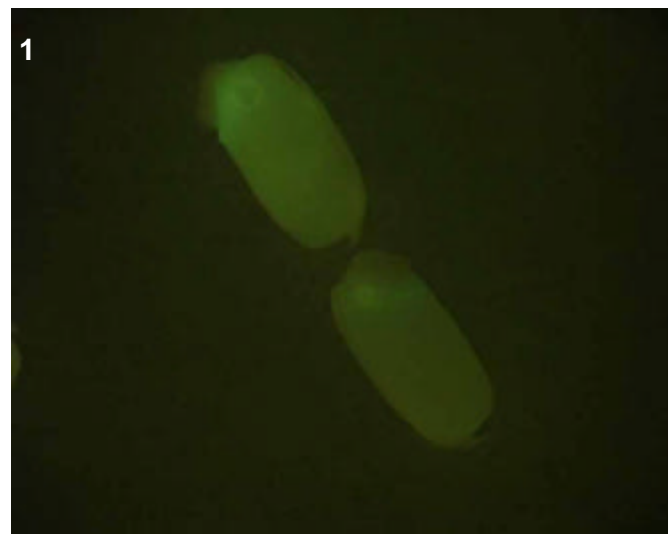
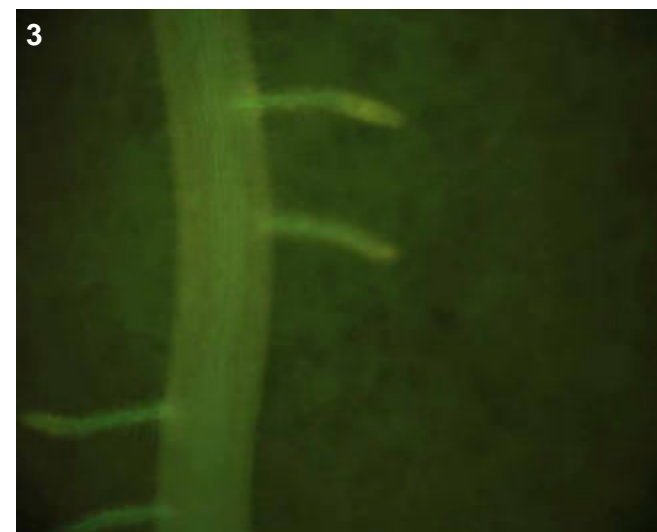
No GFP detected

T1 in greenhouse?

YES, 2 GFP+ plants

Confocal?

Number T2 seed produced: 18



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ASC G05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

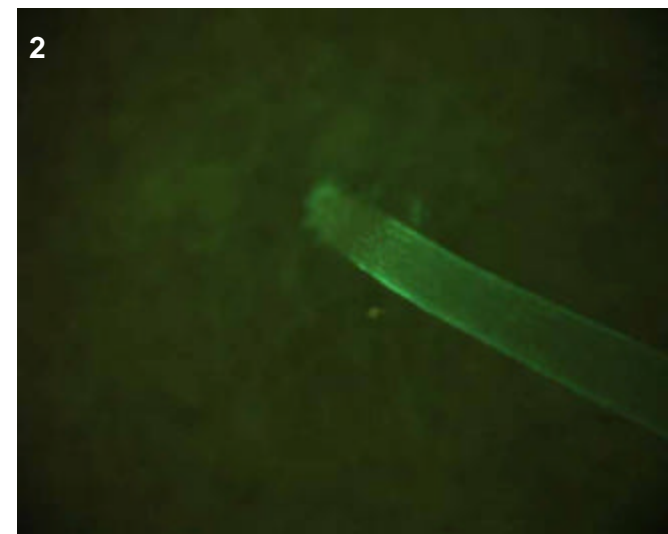
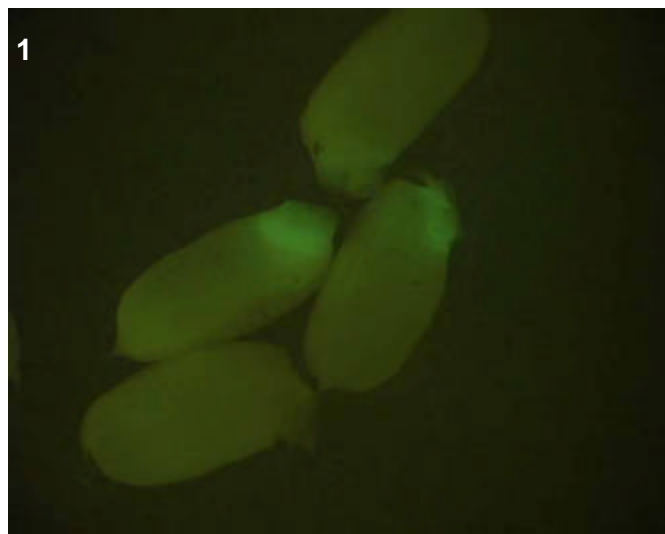
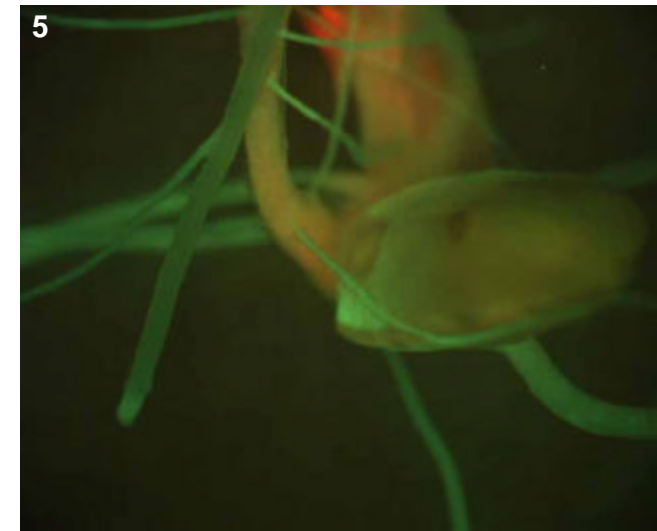
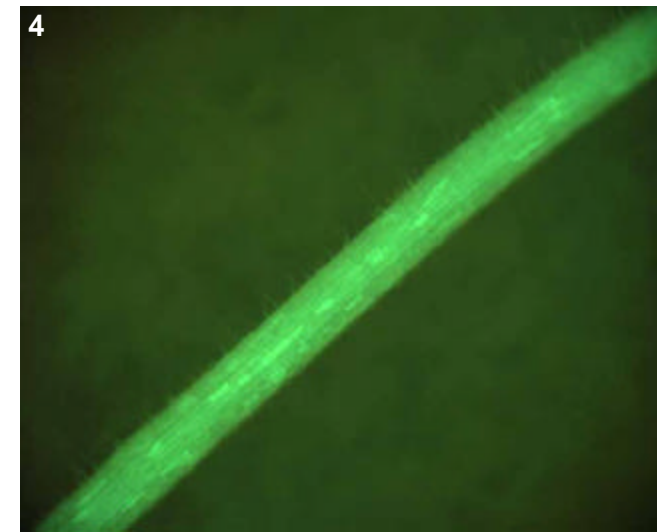
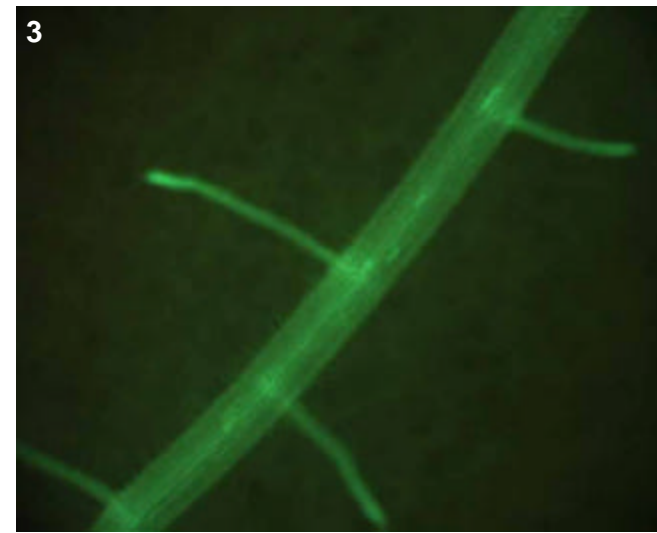
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced: 0



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Surprising to find such bright expression in the root and not in the shoot. Could be an interesting line for confocal.

Genotype: ASD C07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

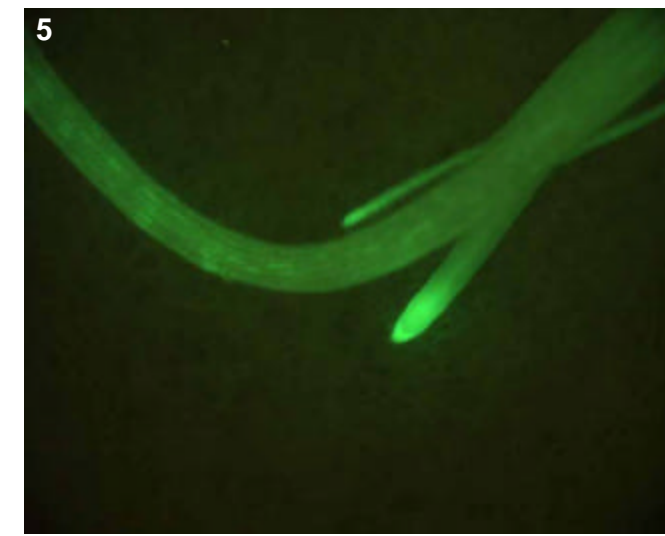
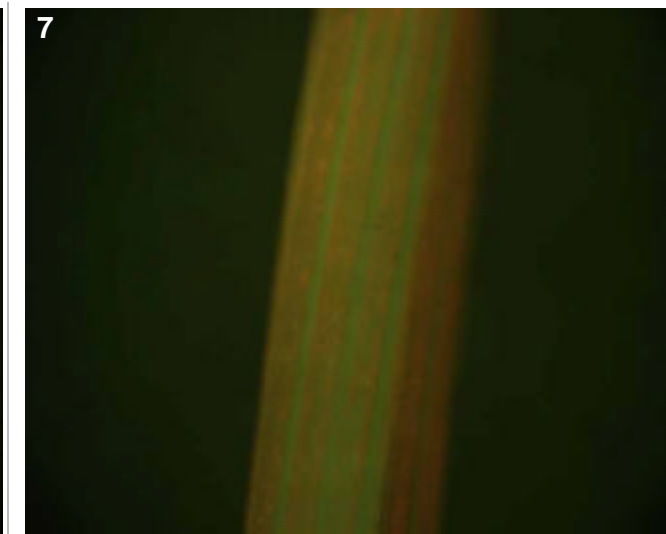
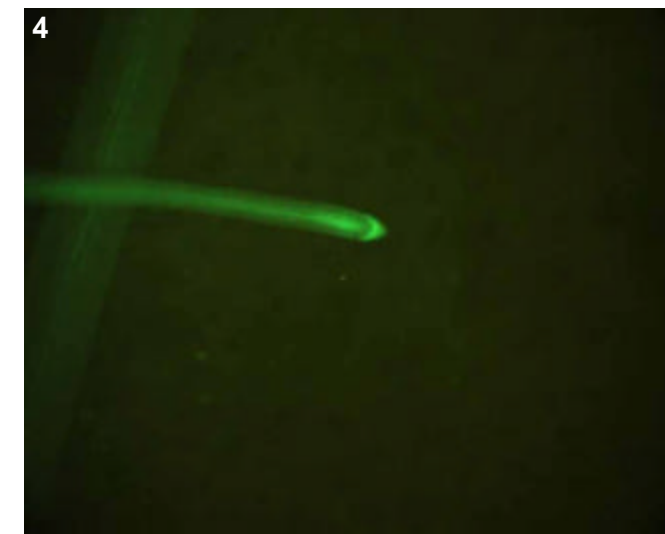
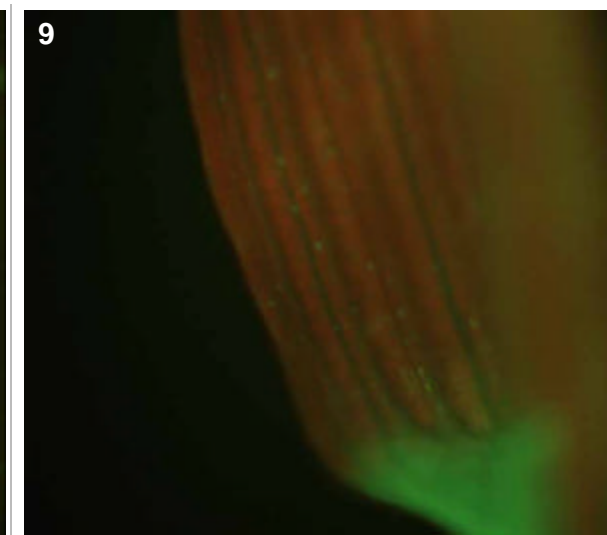
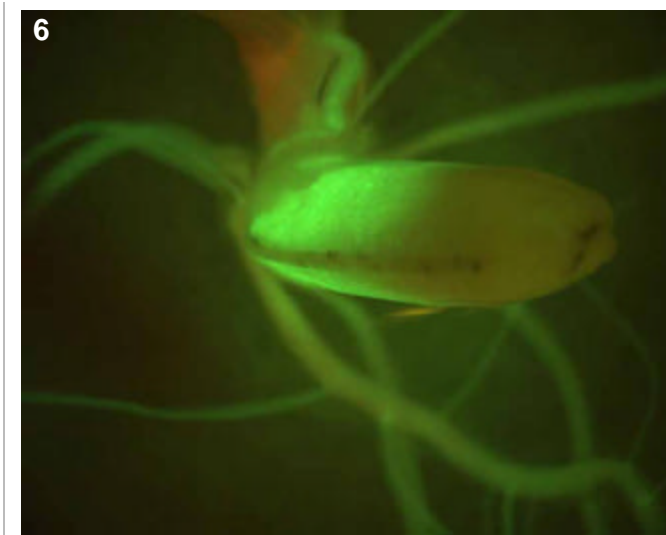
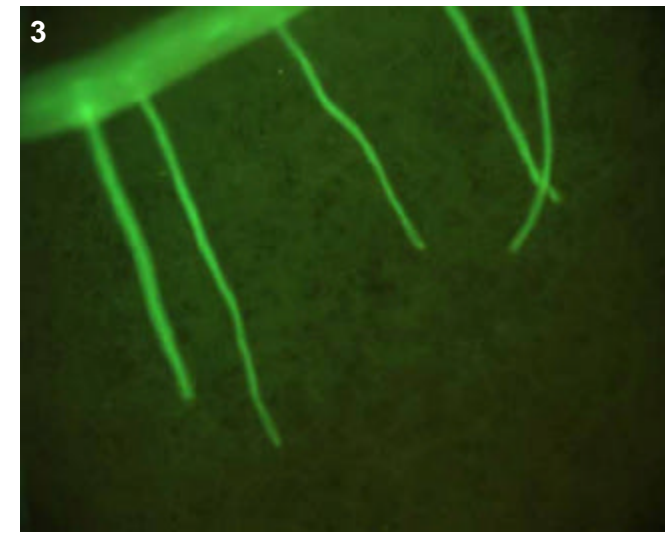
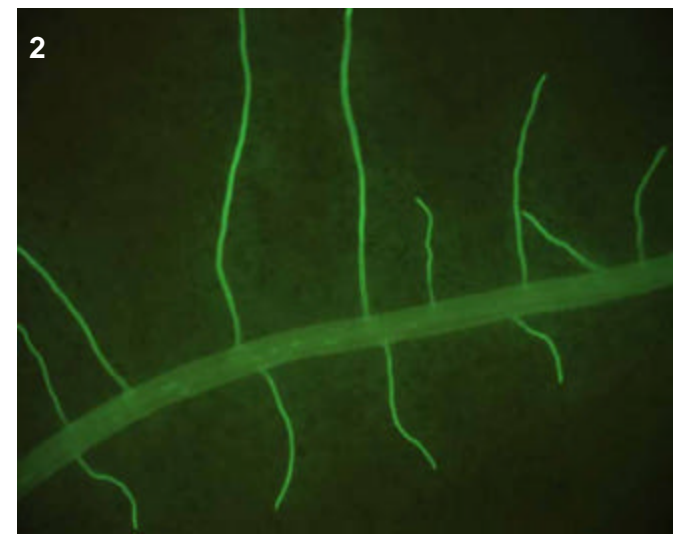
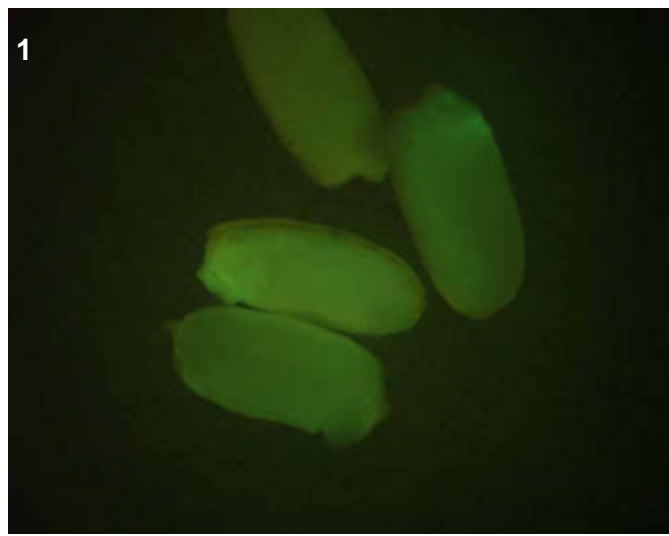
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced: 10



T0 comments

T1 seed comments

3/4 seeds had quite faint expression in the aleurone/endosperm layer (picture 1).

T1 seedling comments

Extremely bright expression in root (pics 2-5), endosperm (pic 6), and shoot (pics 7-9). Perhaps this is constitutive expression?

Genotype: ASD H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

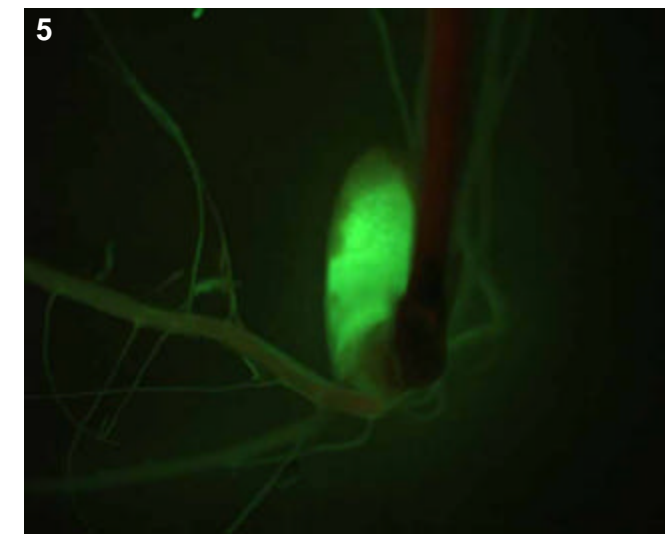
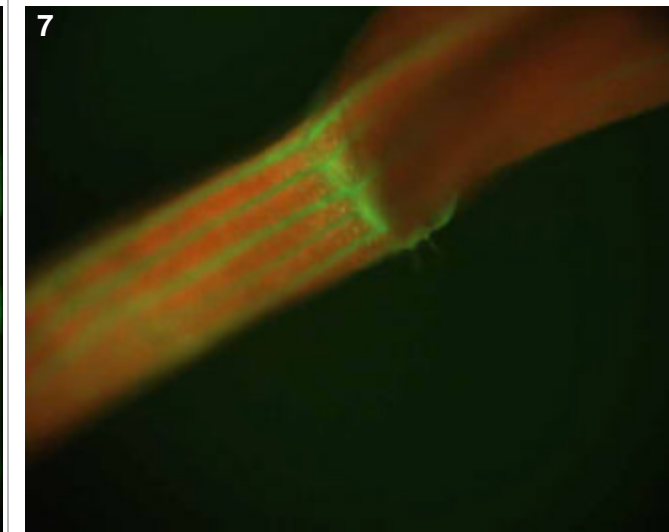
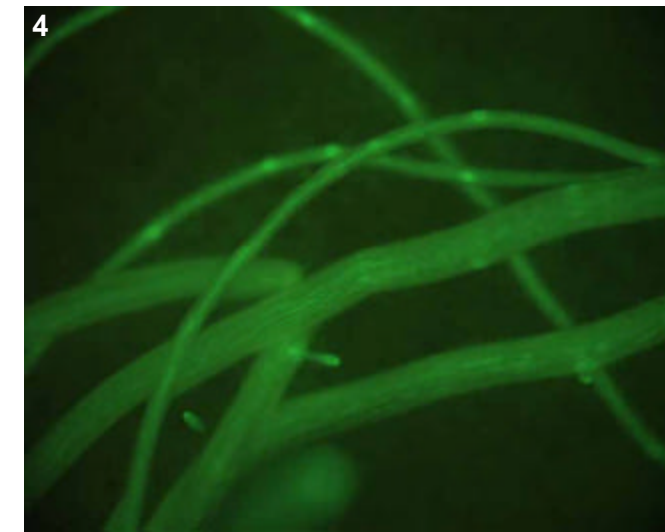
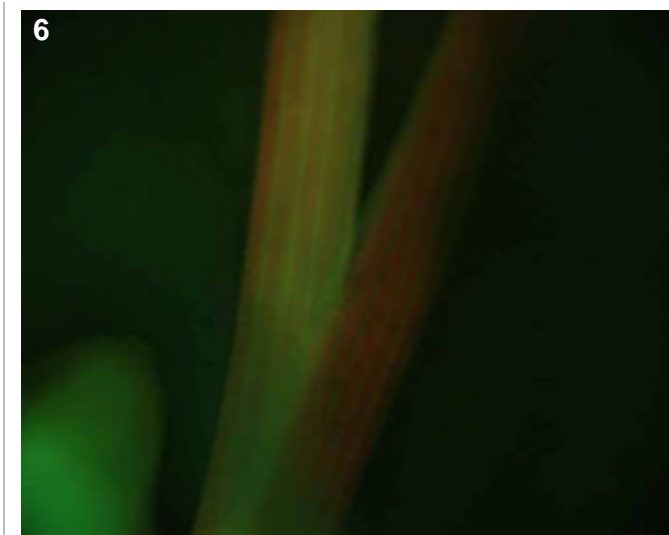
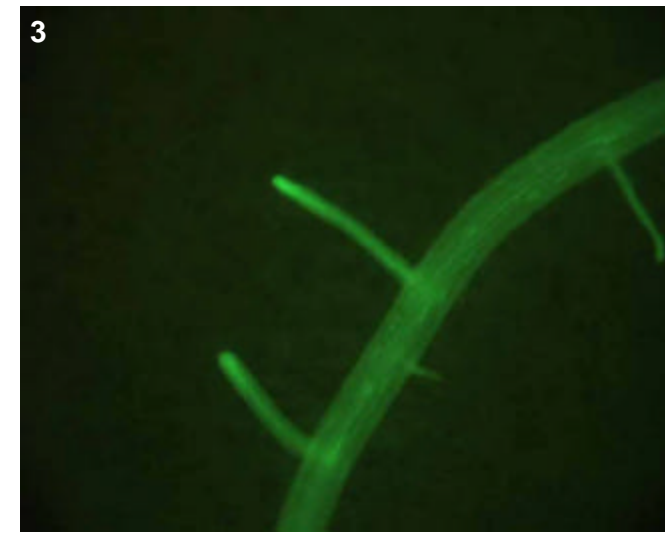
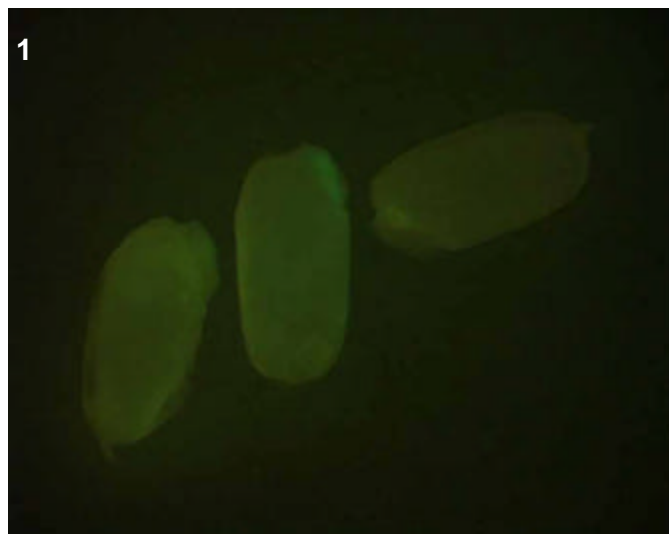
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced: 9



T0 comments

T1 seed comments

3/5 seeds had medium expression in the coleorhiza and, more faintly, in the aleurone/endo. layer.

T1 seedling comments

Extremely bright expression in the root (pics 2-4), endosperm (pic 5) and shoot (pics 6-8). It is rare to see a line with vascular tissue as bright in the shoot as seen in pictures 6 and 7.

Genotype: ASE G09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

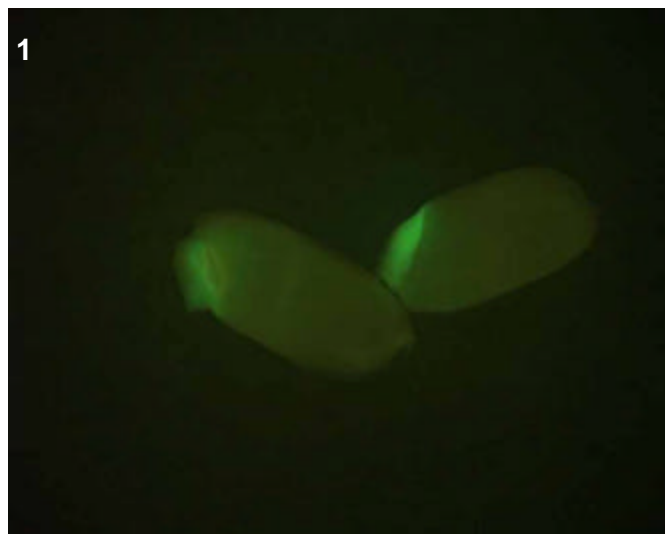
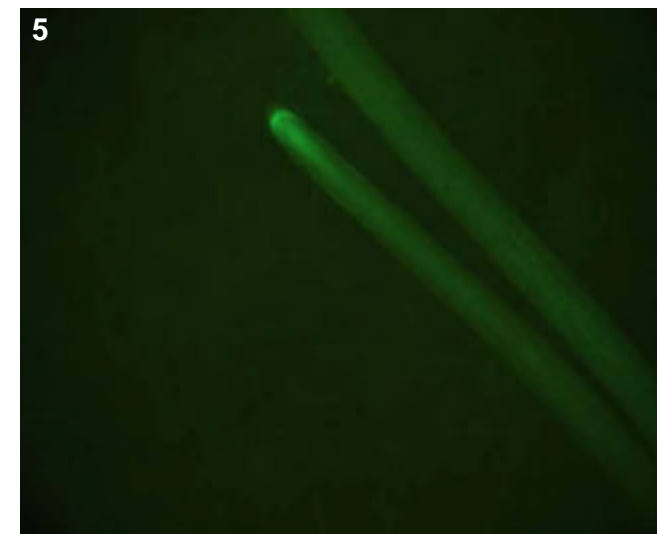
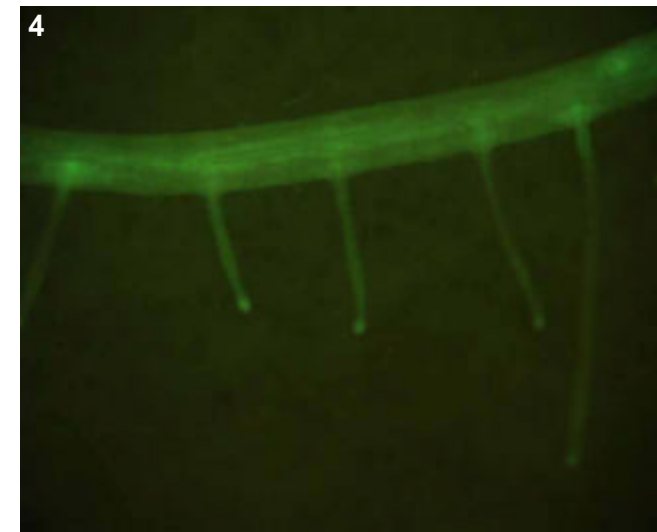
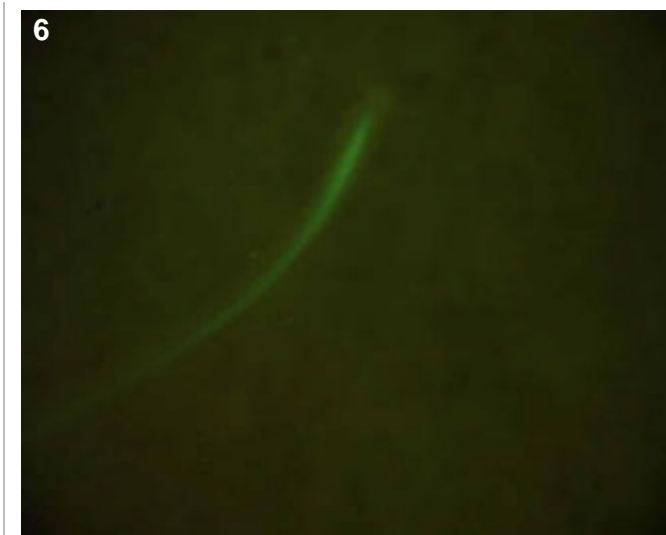
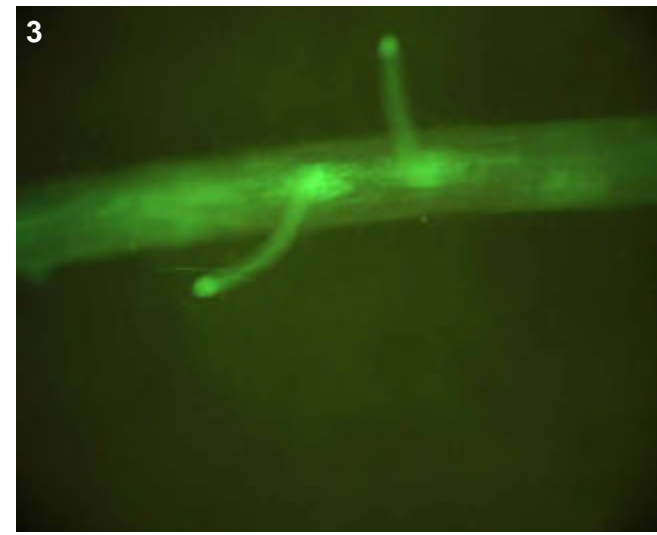
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had bright expression.

T1 seedling comments

A fantastic root-specific line. The pattern in the seminal and crowns is clearly stelar, most evident by picture 2. In young crowns and all laterals, stelar expression is accompanied by a bright burst of activity near/in the root apex (pictures 3-5). One plant was normal, one very small, perhaps a mutant?

Genotype: ASF B12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

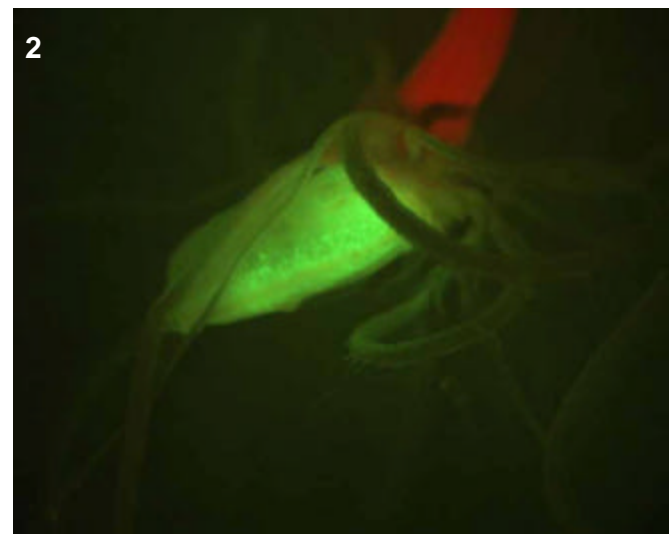
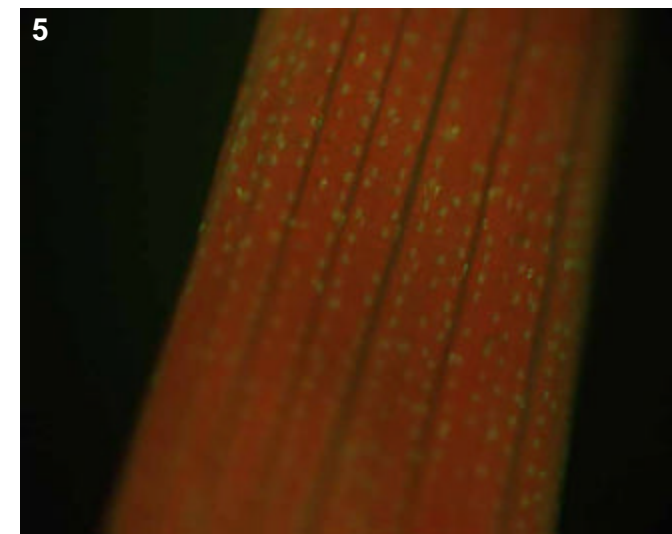
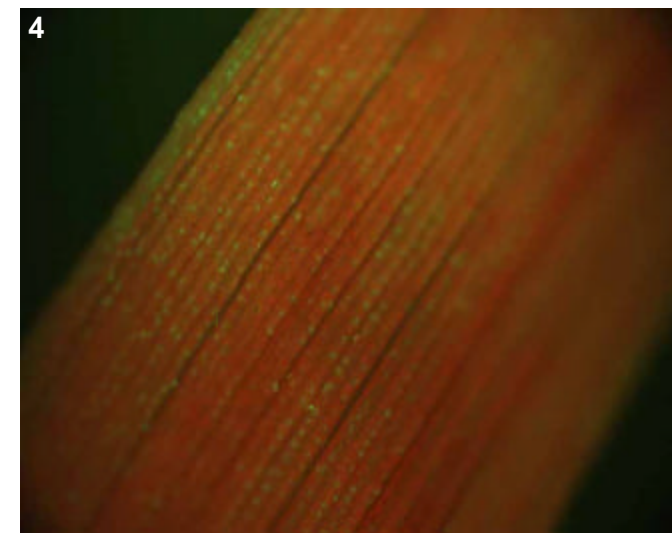
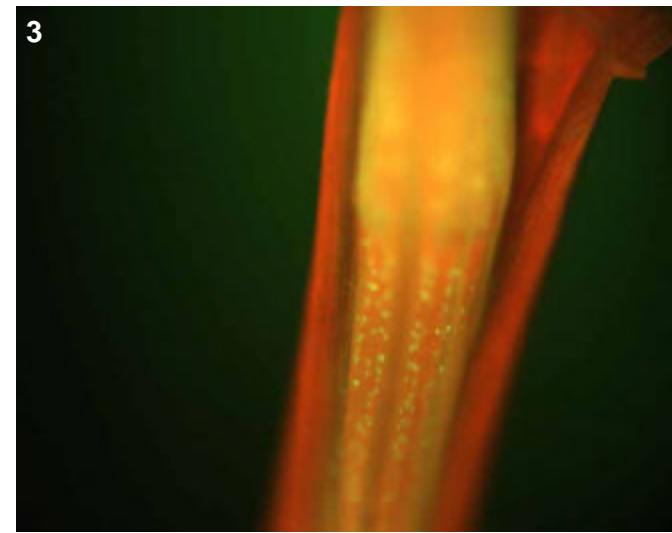
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/4 seeds had bright expression in either embryo or coleorhiza

T1 seedling comments

Very interesting line-expression observed only in the endosperm (pic 2) and guard cells (3-5). There was also some bright trichomes present (pics 4-5).

Genotype: ASF E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

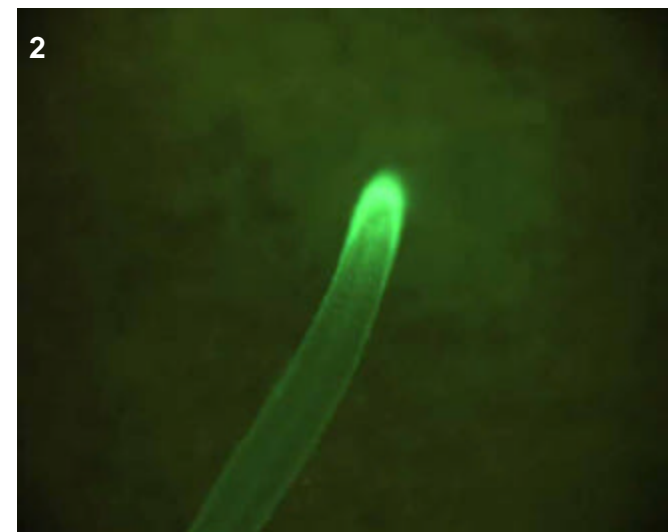
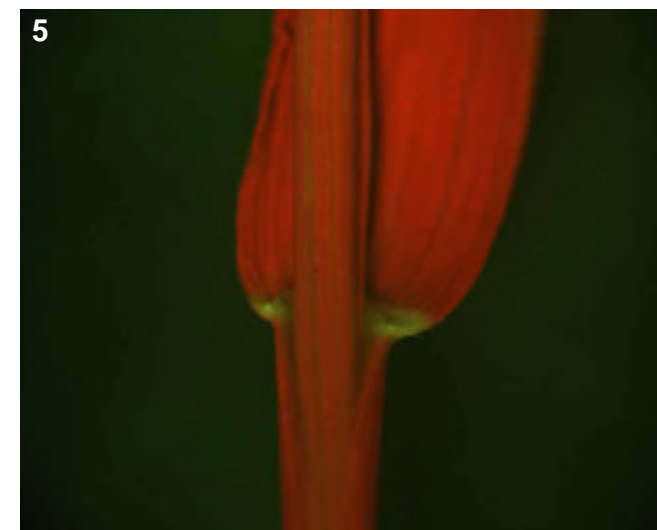
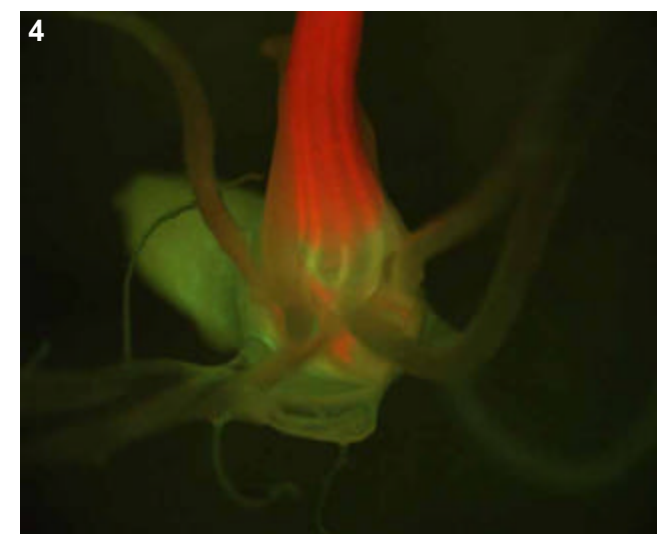
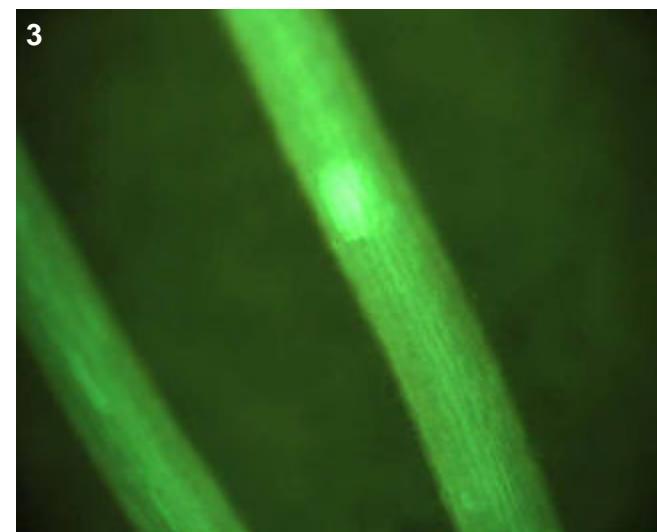
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had medium expression

T1 seedling comments

Genotype: ASF F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

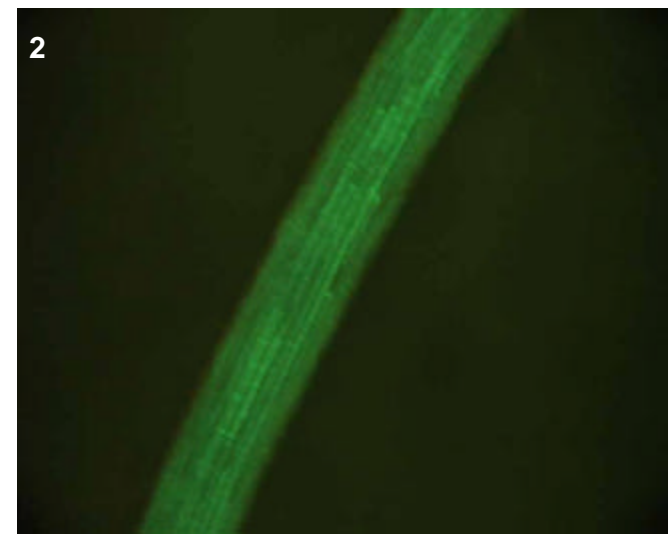
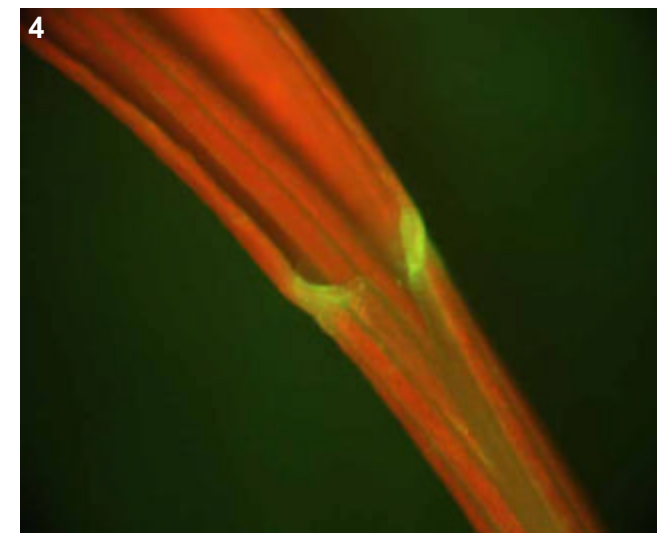
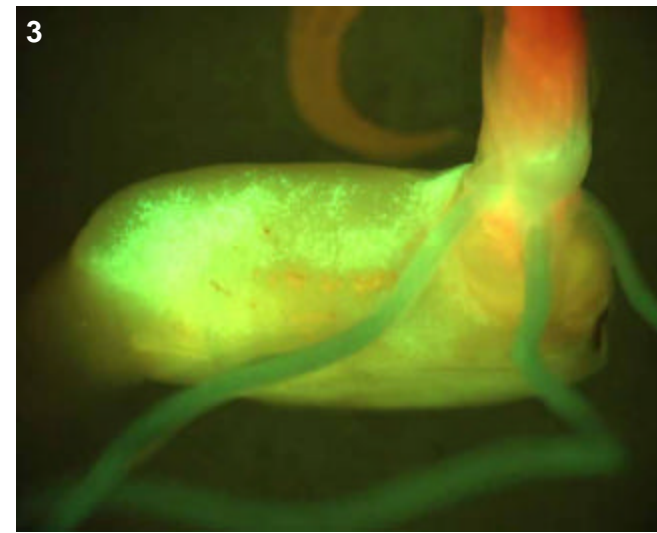
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had faint expression

T1 seedling comments

Definitely epidermal pattern in roots (pics 2-3), maybe in the shoot as well. There was no seminal root evident in the two plants, perhaps a mutant?

Genotype: ASF G02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

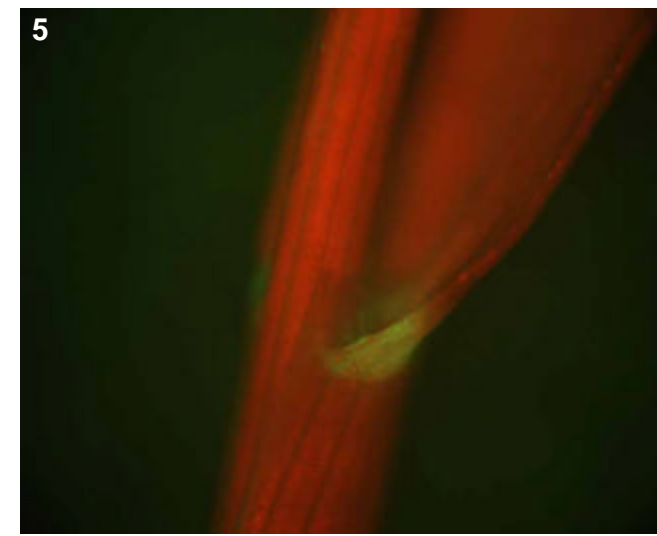
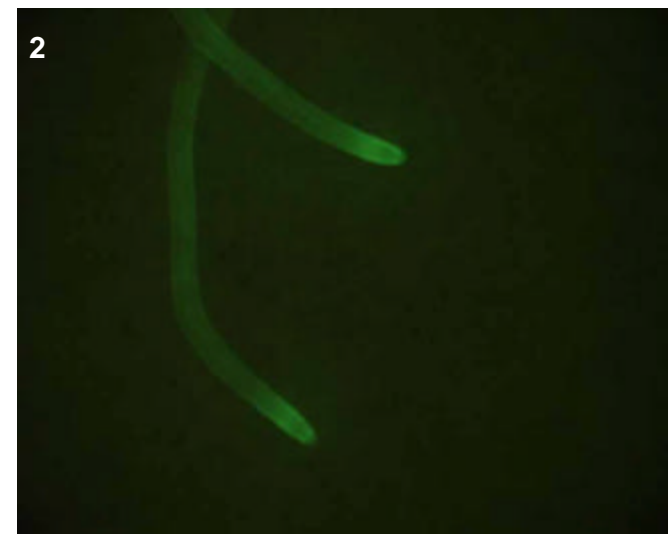
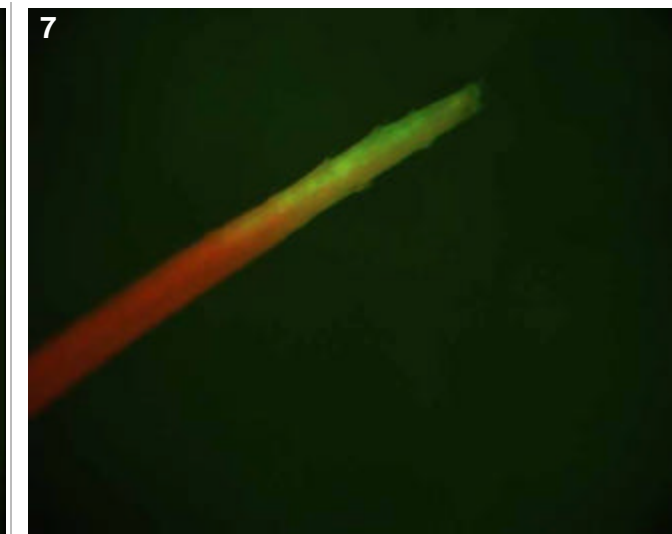
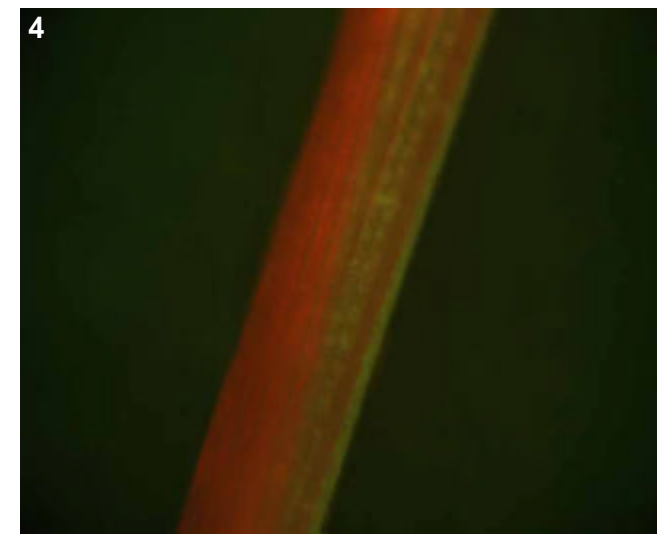
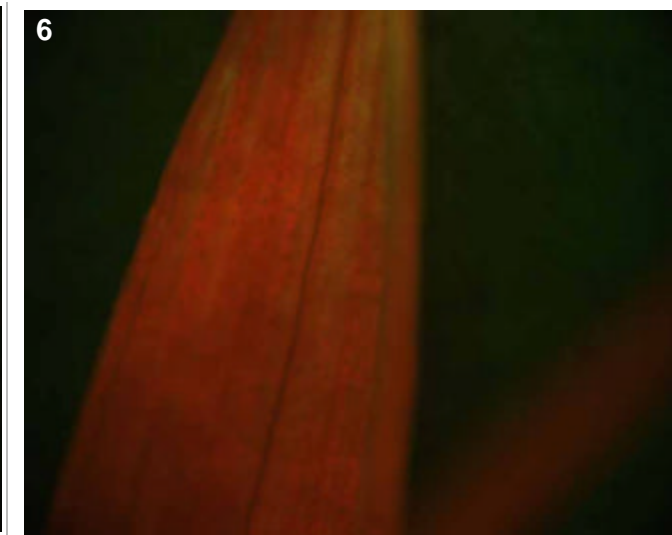
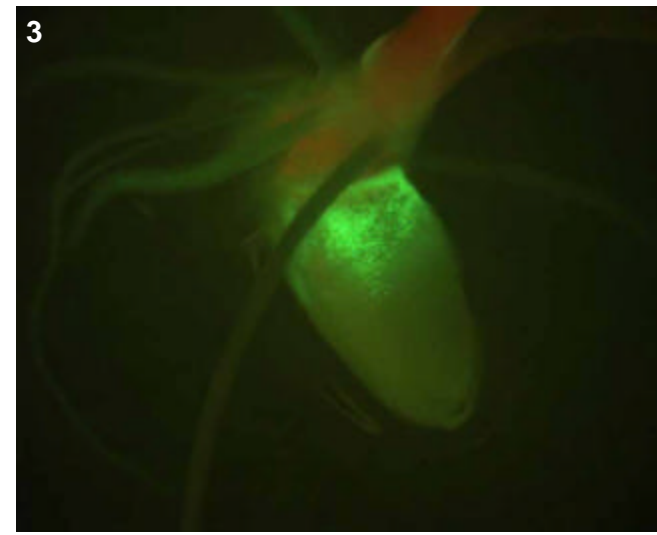
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced: 5



T0 comments

T1 seed comments

1/5 seeds had faint expression.

T1 seedling comments

Nice epidermal expression at tips of seminal/crowns (pic 2), not sure about laterals because there were none to examine. I believe that there is some form of mesophyll or epidermal expression in the sheath (pic 4) and leaf (pic 6) that could be interesting for confocal.

Genotype: ASF G10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

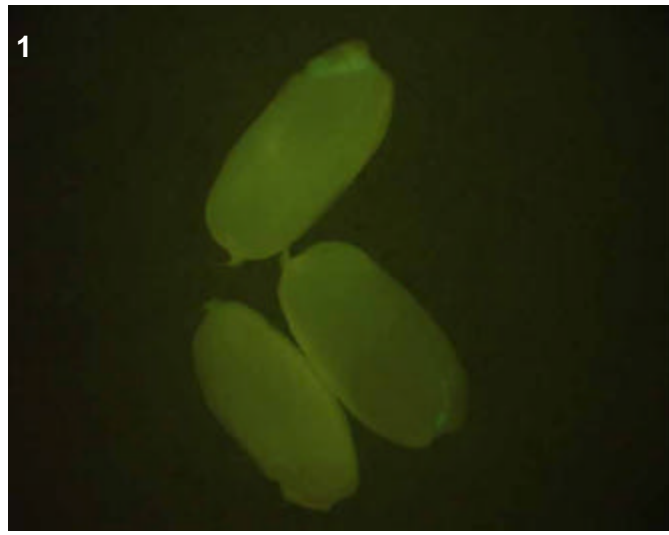
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

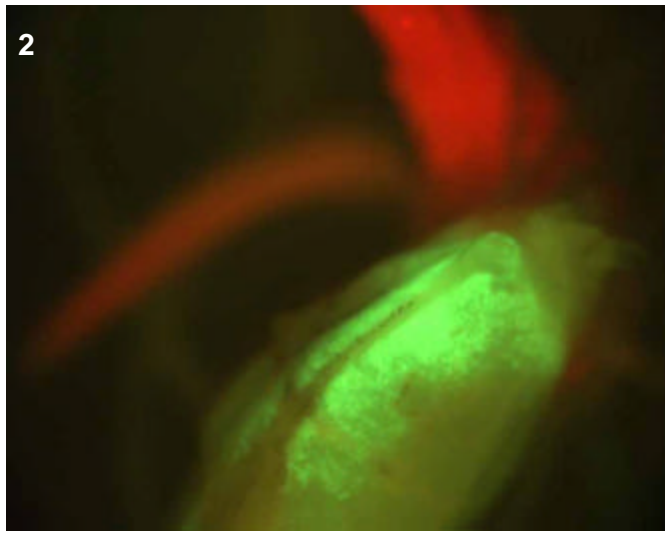
Confocal?

Number T2 seed produced:

1



2



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Genotype: ASF H01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

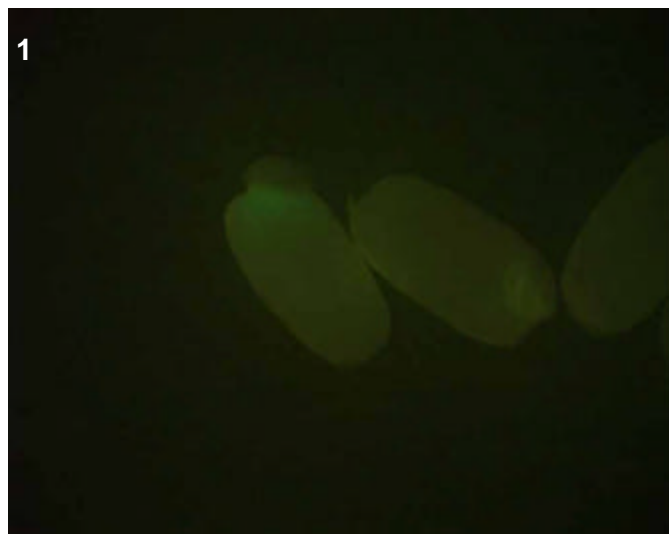
No GFP detected

T1 in greenhouse?

Confocal?

Number T2 seed produced:

1



T0 comments

T1 seed comments

1/5 seeds had faint expression.

T1 seedling comments

The one seed with expression showed quite bright expression throughout the endosperm after one week but did not germinate.

Genotype: ASG E07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

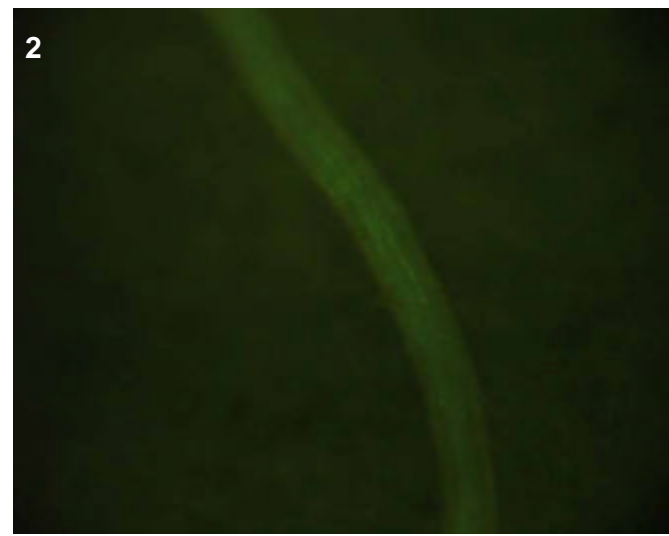
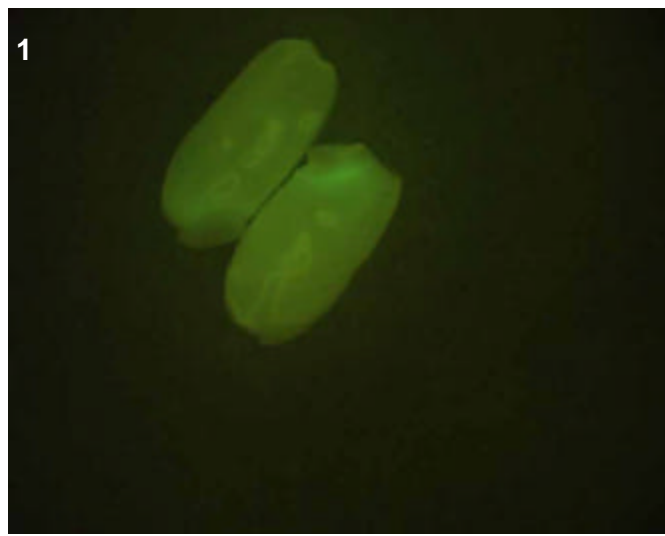
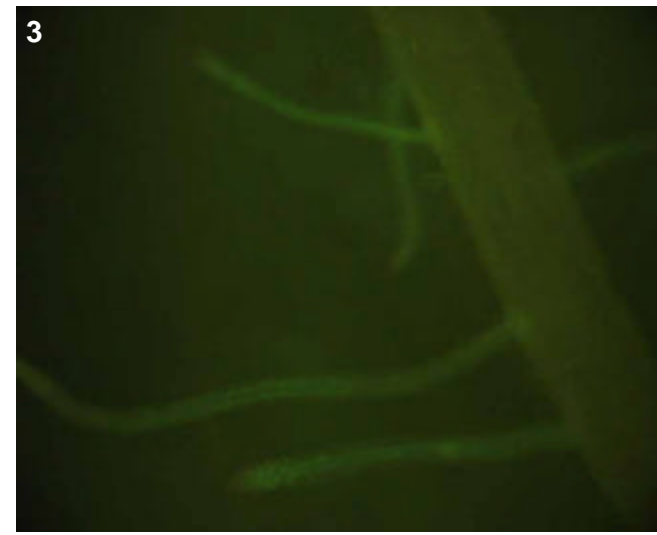
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Could be a root pattern in the cortex or endodermis (pics 2-3).

Genotype: ASG F06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

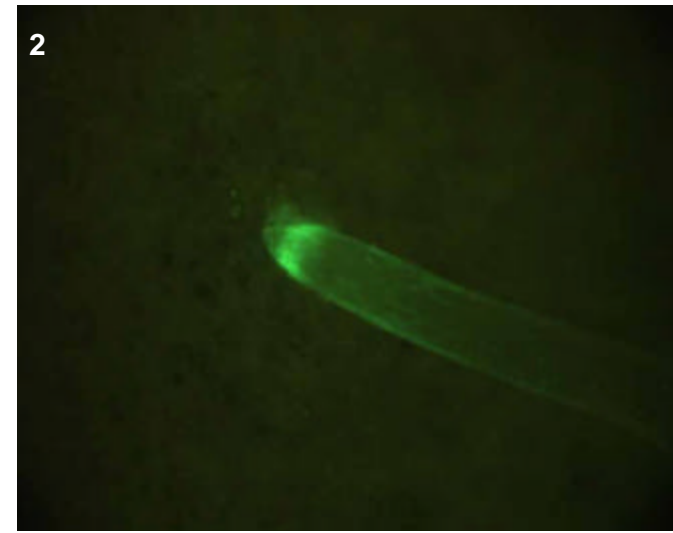
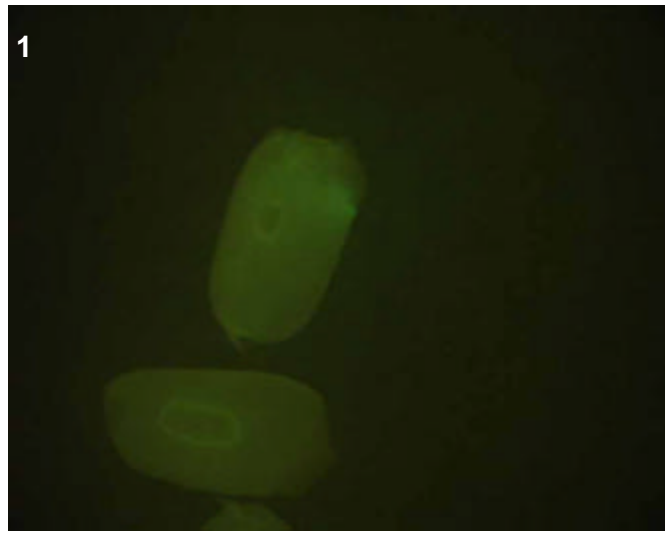
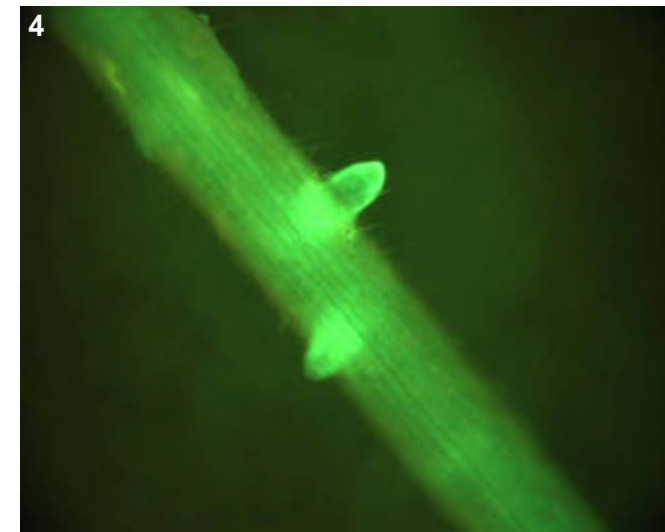
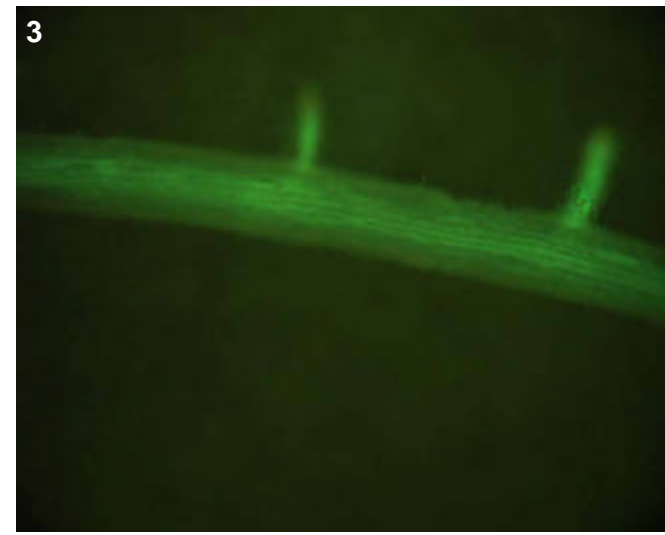
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seed showed medium scutellum expression on the lower side of scutellum (pic 1)

T1 seedling comments

Genotype: ASG G04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

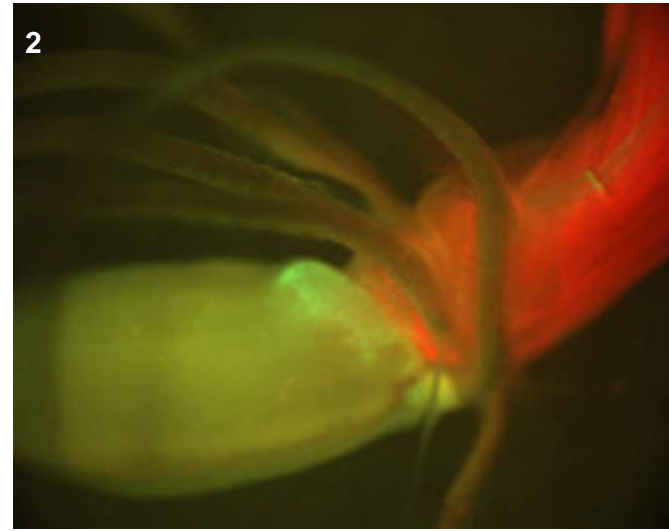
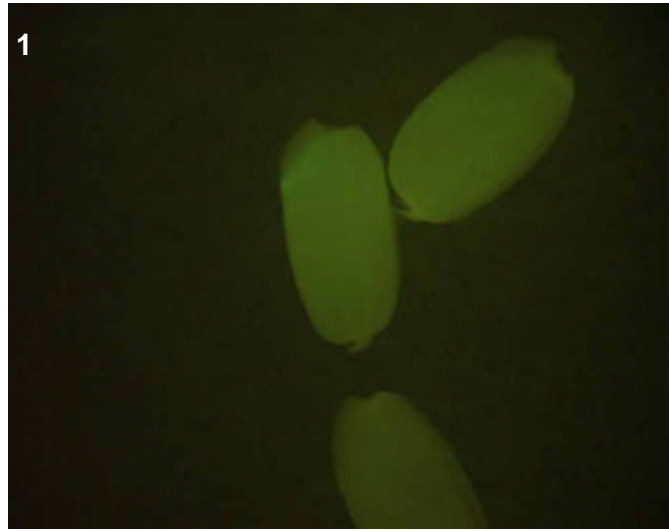
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
 YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments
 2/5 seeds had expression

T1 seedling comments

Genotype: ASG G10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

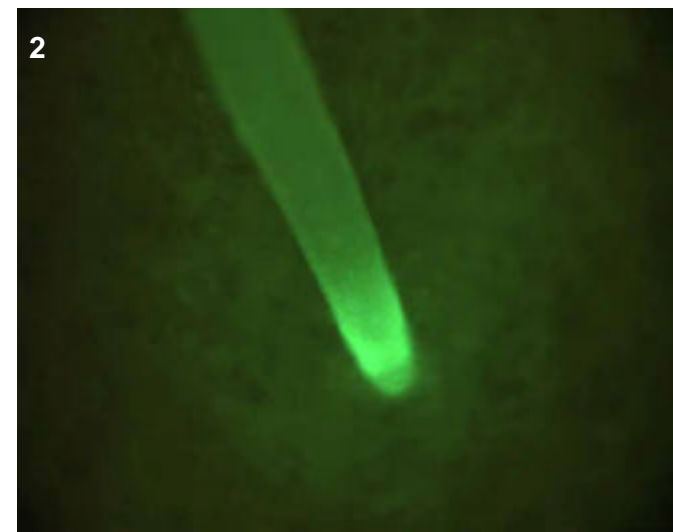
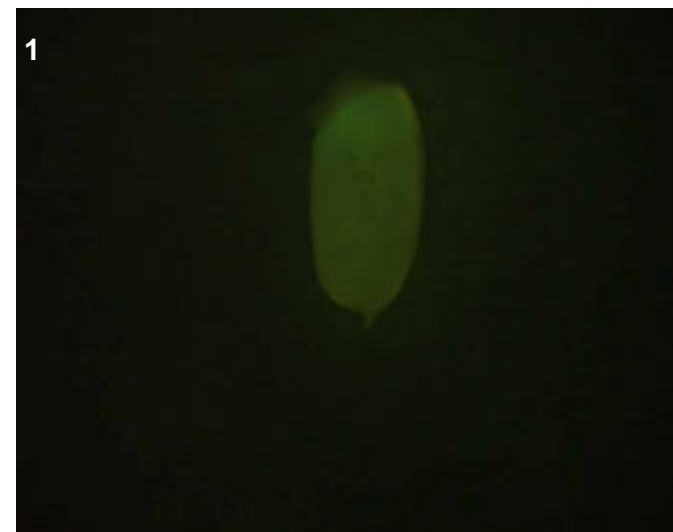
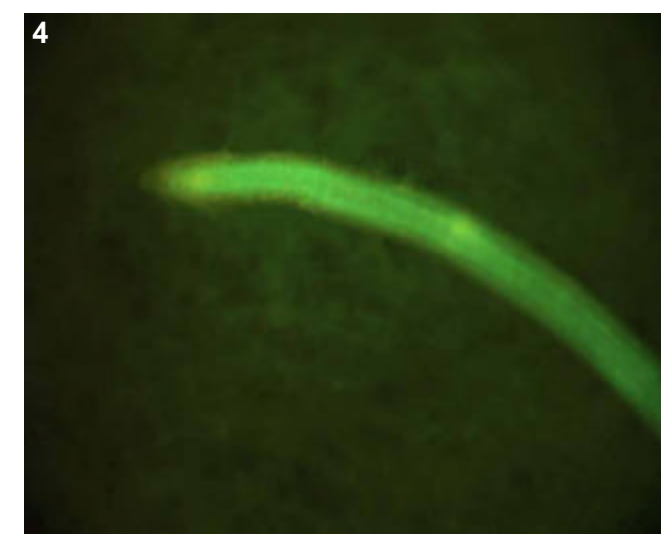
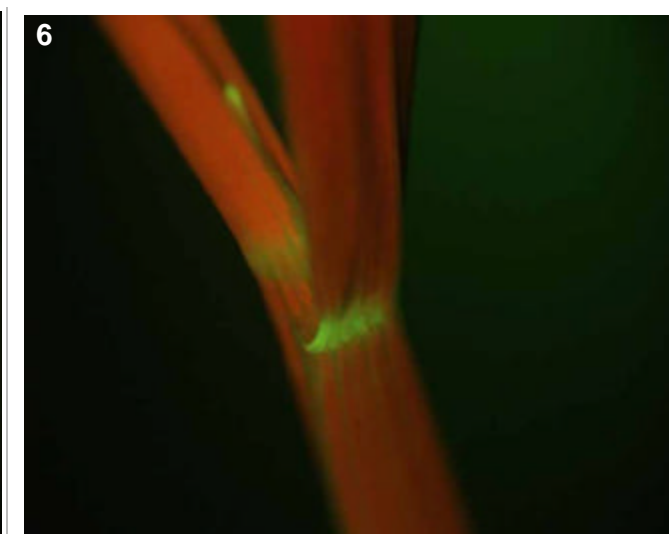
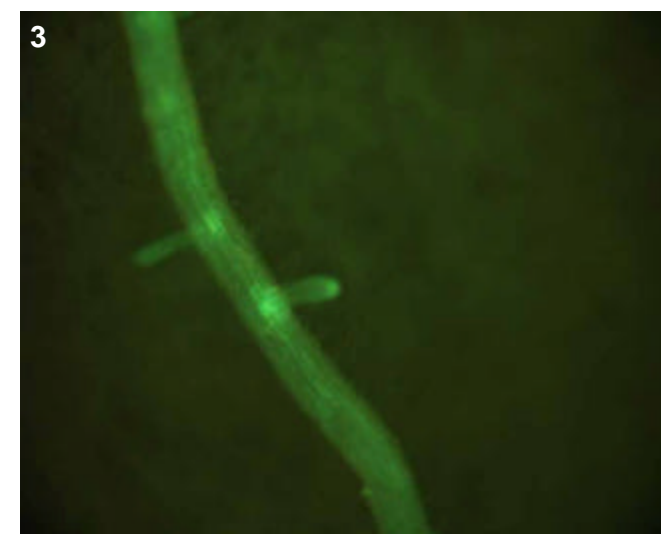
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

Genotype: ASG G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

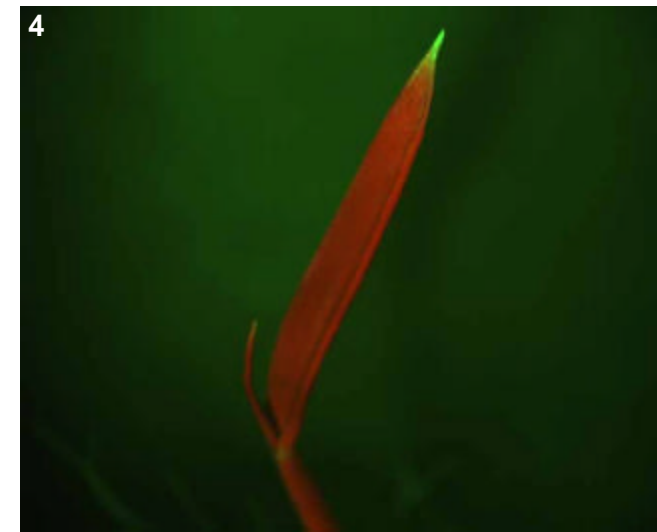
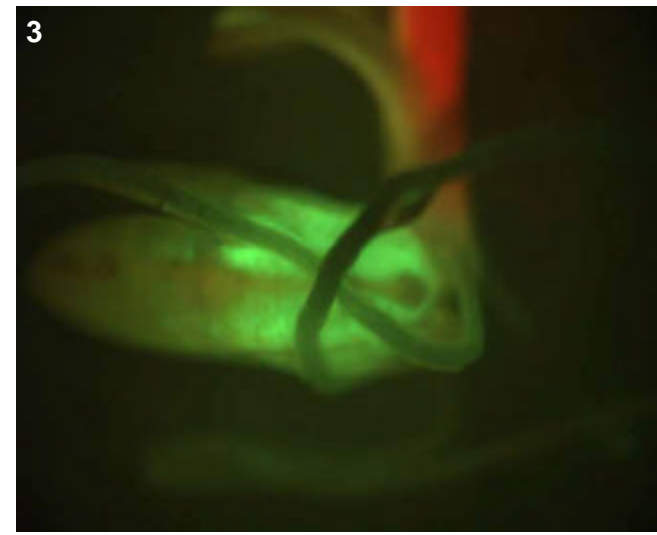
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: ASH A03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

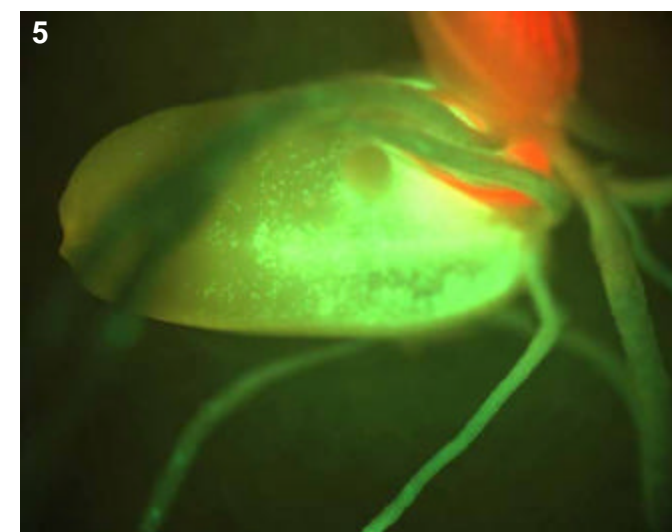
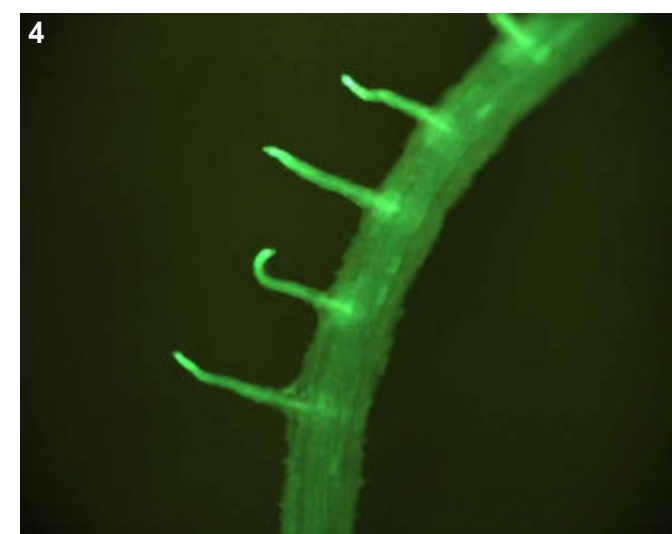
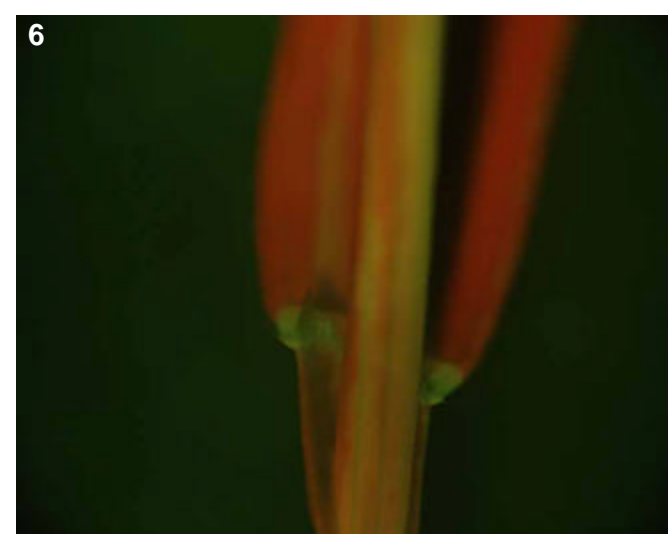
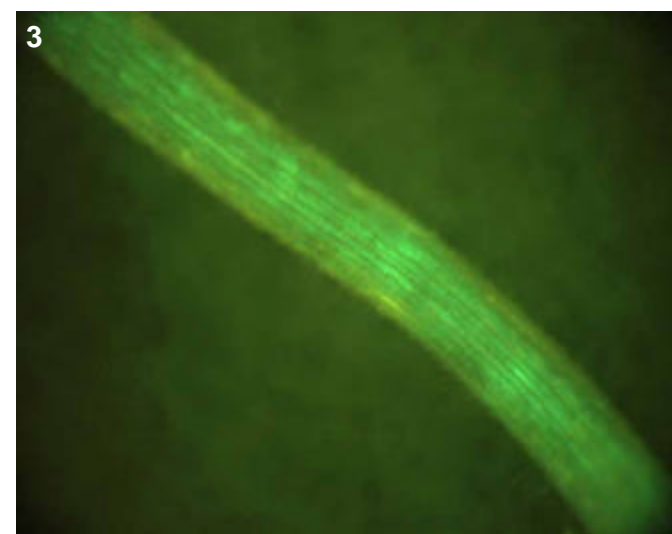
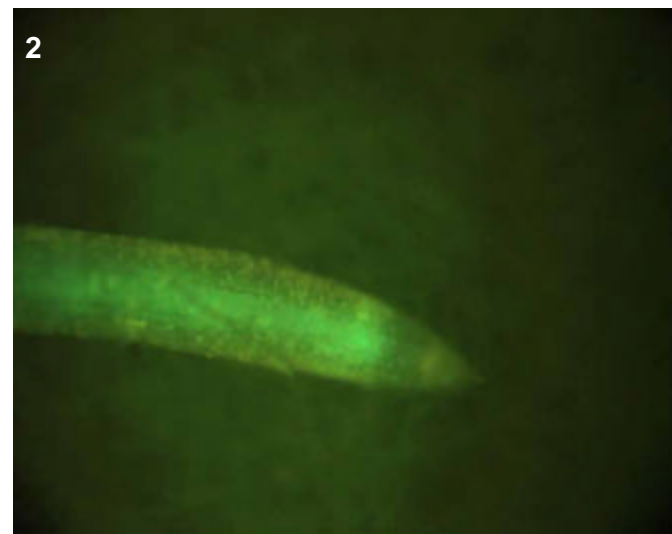
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

3/5 seeds had medium expression

T1 seedling comments

Genotype: ASH B02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

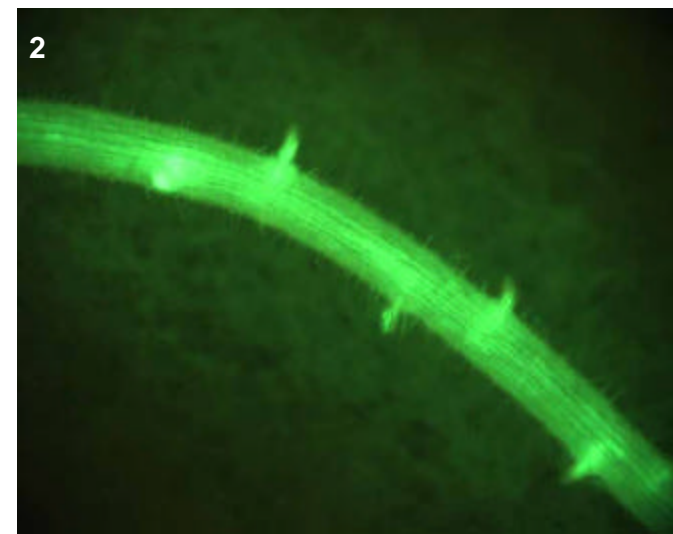
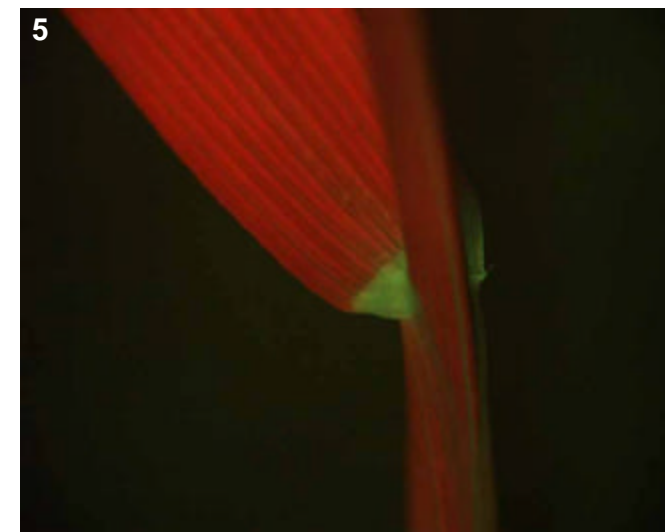
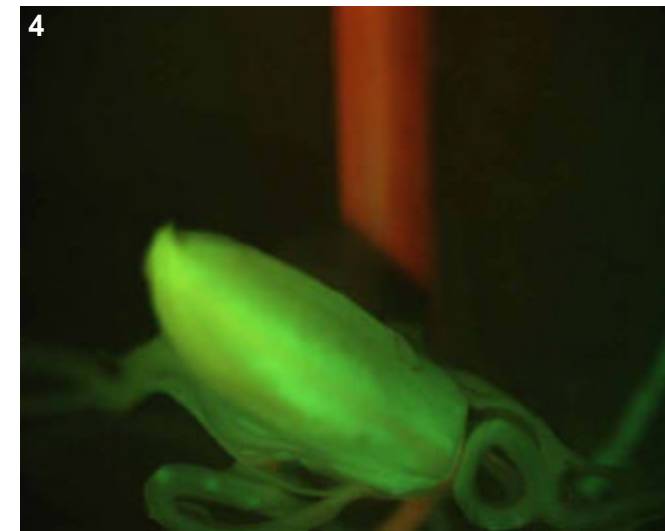
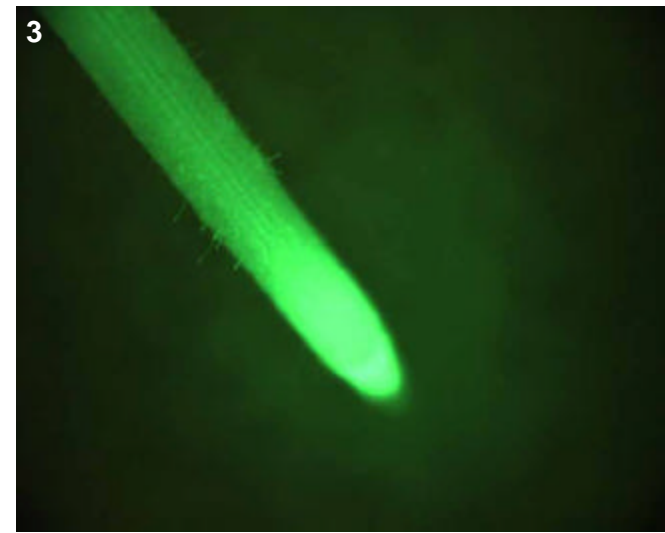
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

At least 2/5 seeds had medium aleurone expression, perhaps more (more faintly)

T1 seedling comments

Genotype: ASH C05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

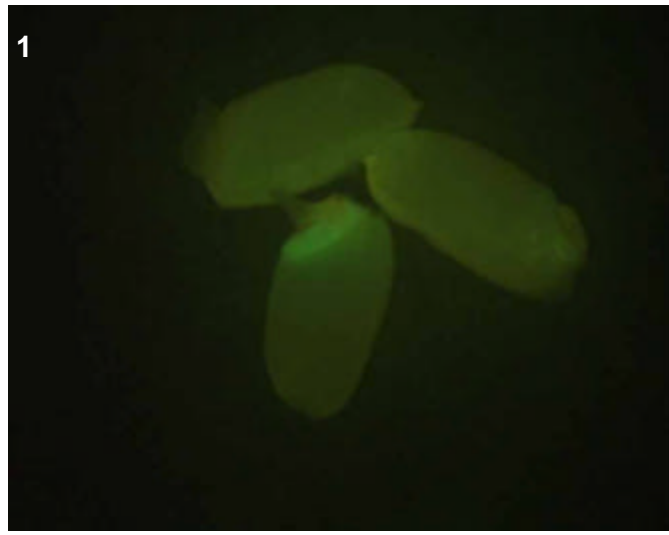
No GFP detected

T1 in greenhouse?

Confocal?

Number T2 seed produced:

1



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Genotype: ASH D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

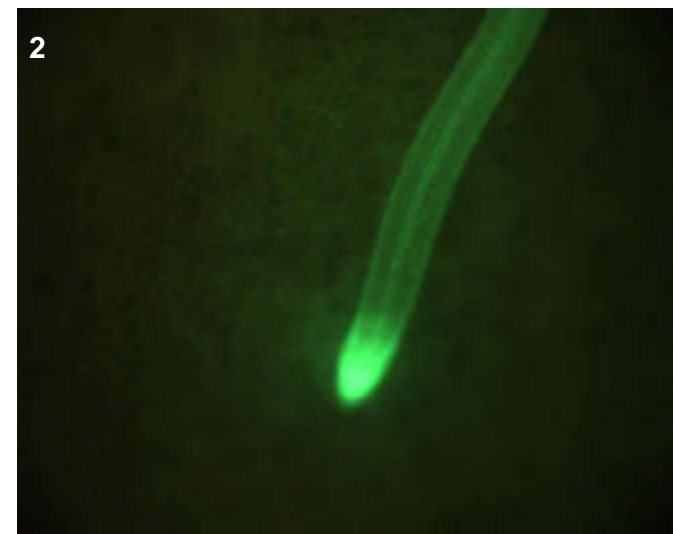
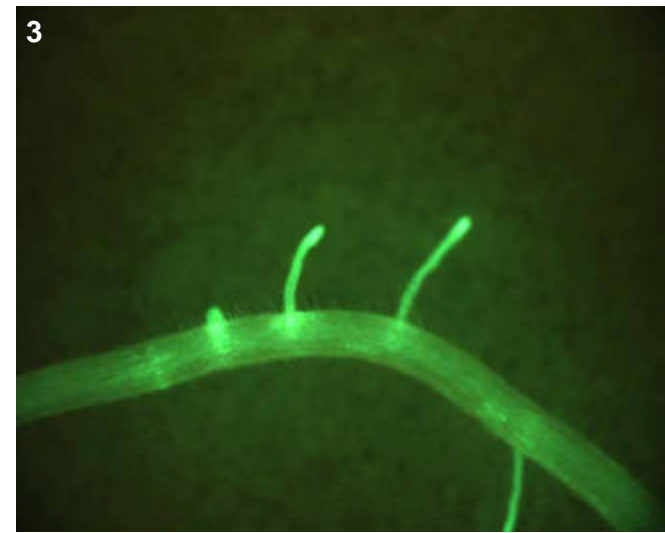
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: ASH D02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

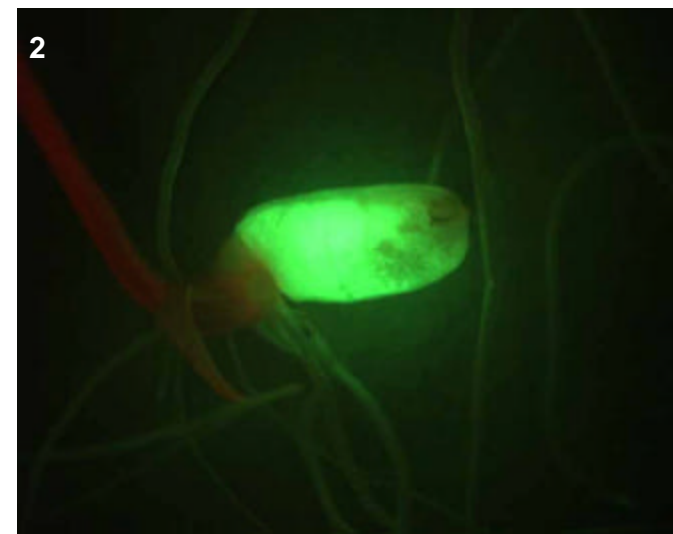
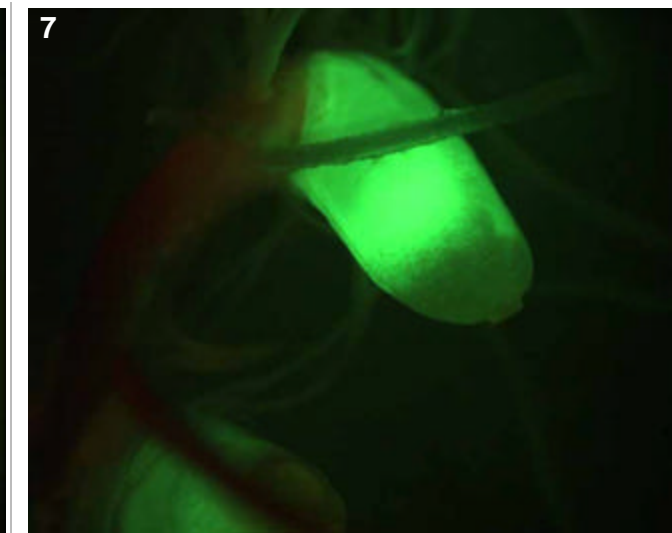
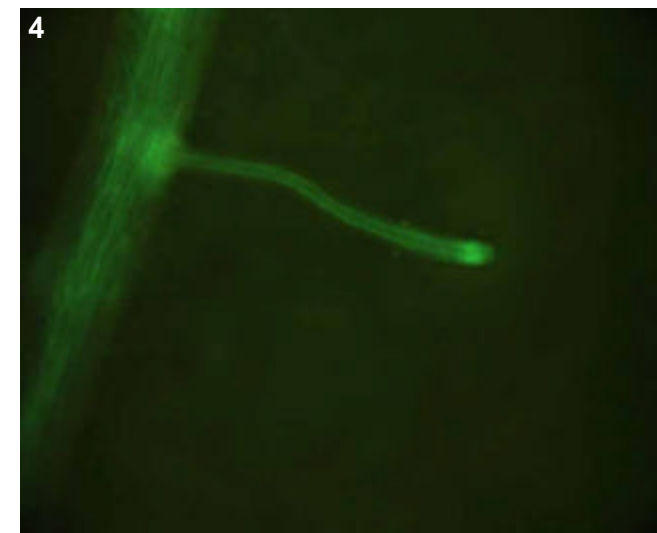
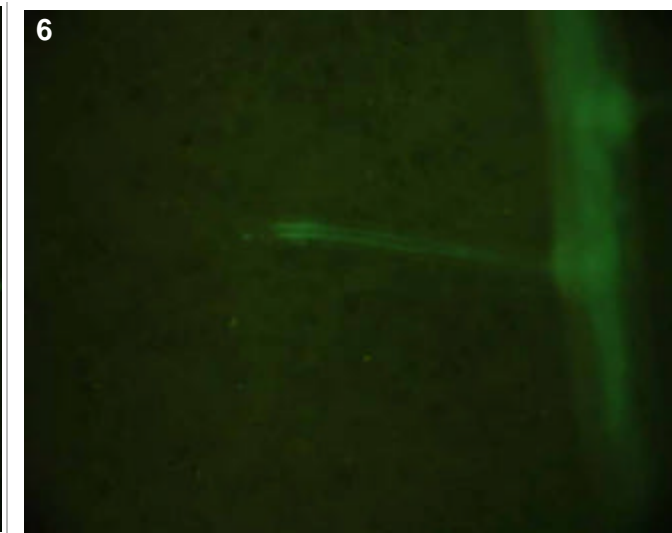
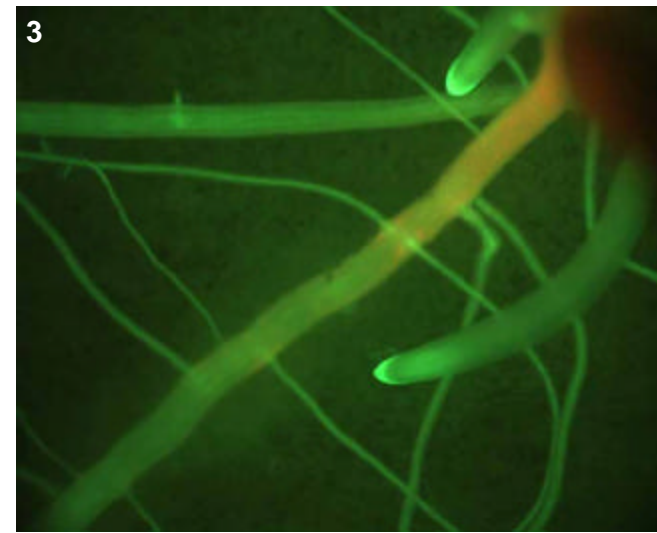
T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

WIP

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

4/5 seeds had expression

T1 seedling comments

Incredibly bright endosperm (pic 2) and nice, bright vascular pattern in roots which could be stelar or extra-stelar (pics 4-6). This line is rare in that the aleurone was bright after imbibition, but the pattern in seedlings is limited to the endosperm/roots, and not constitutive throughout the plant.

Genotype: ASH D10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-10

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

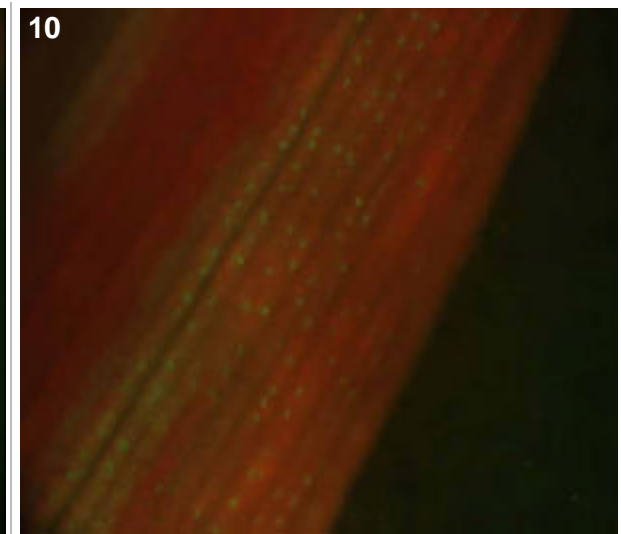
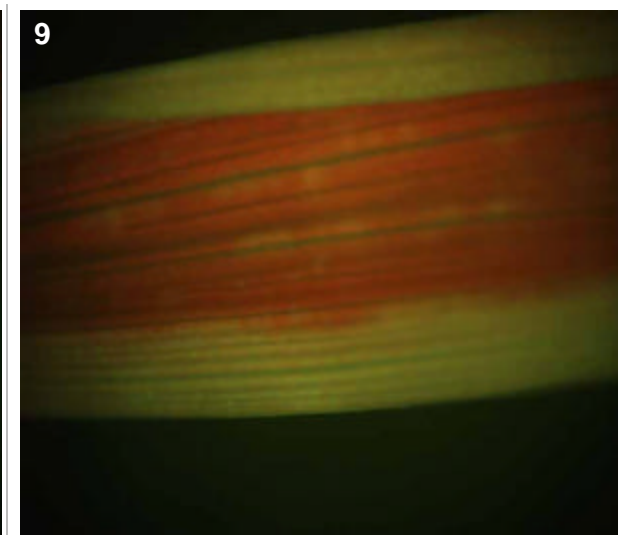
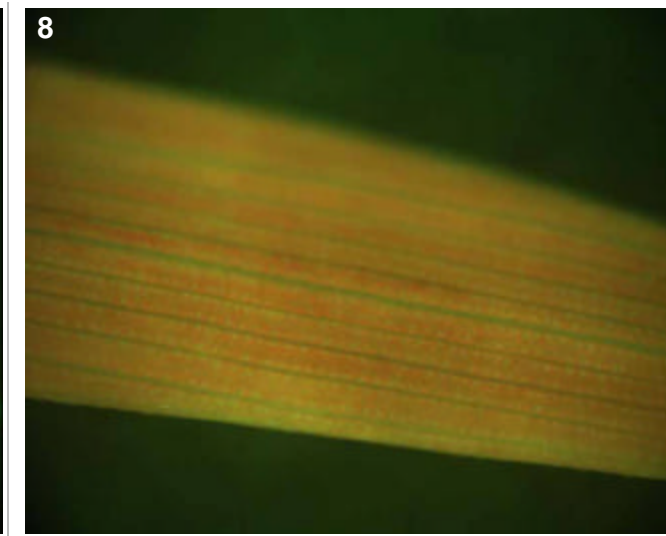
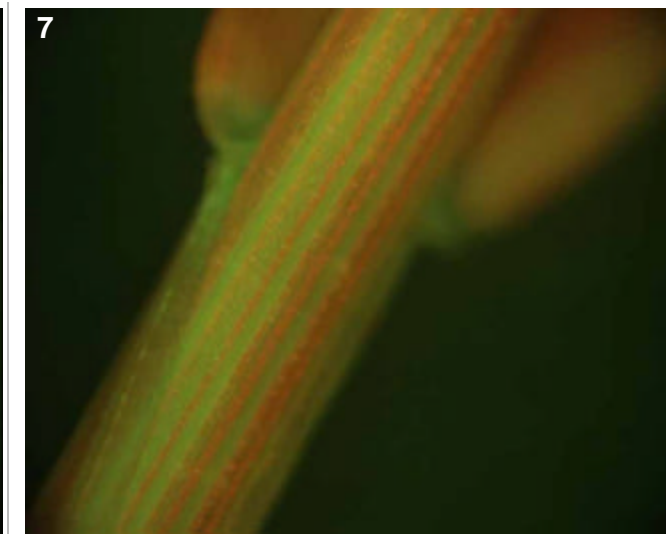
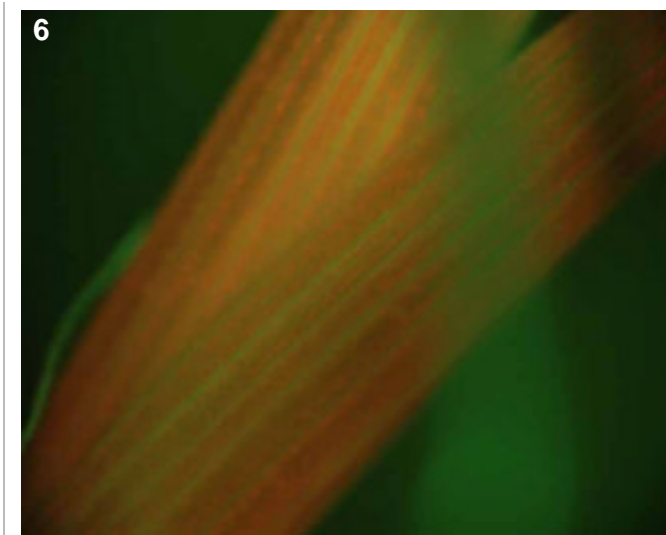
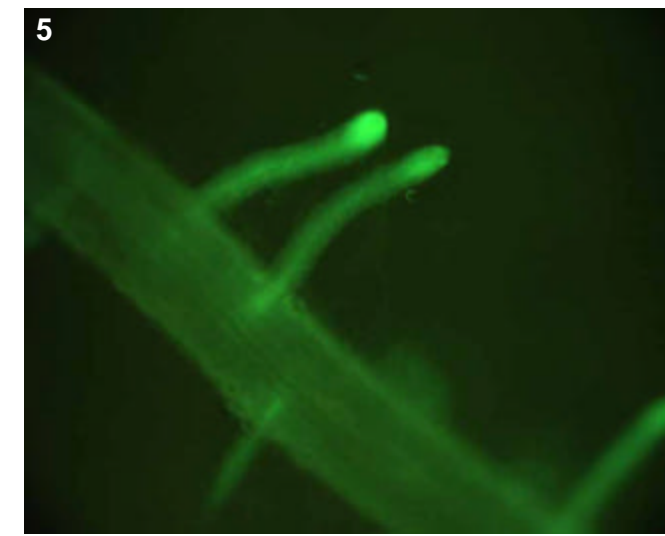
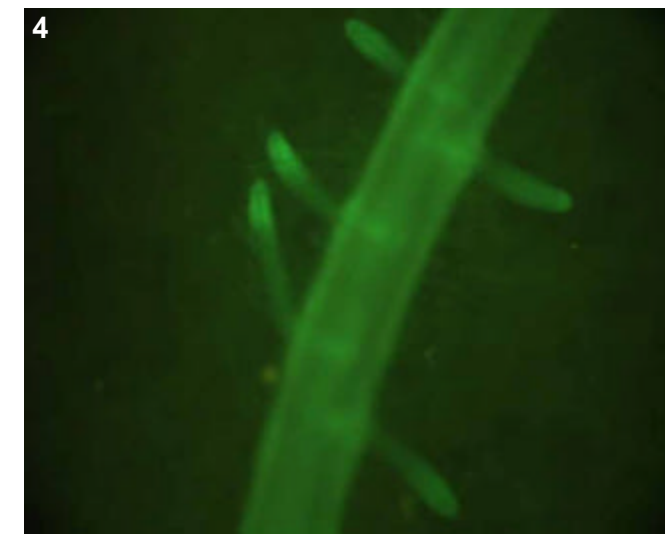
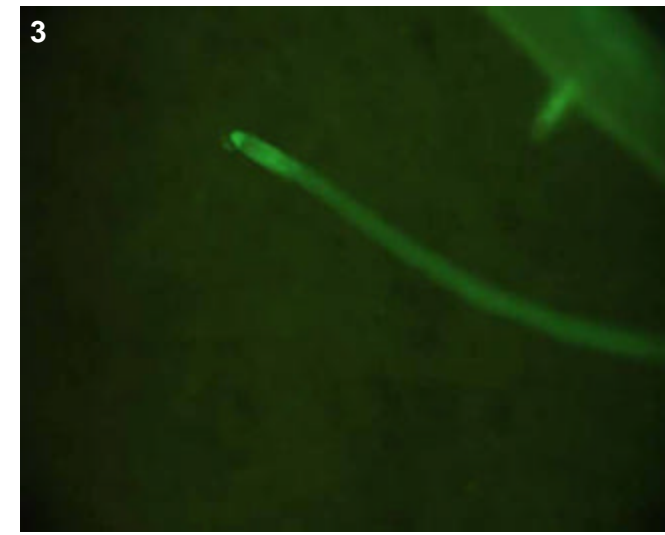
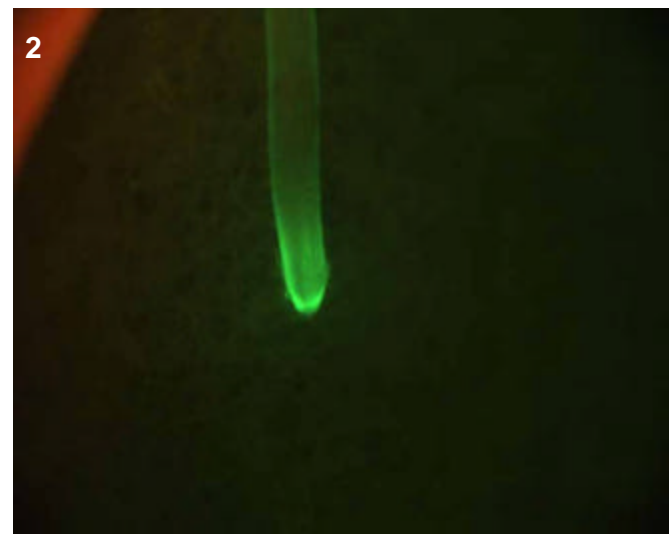
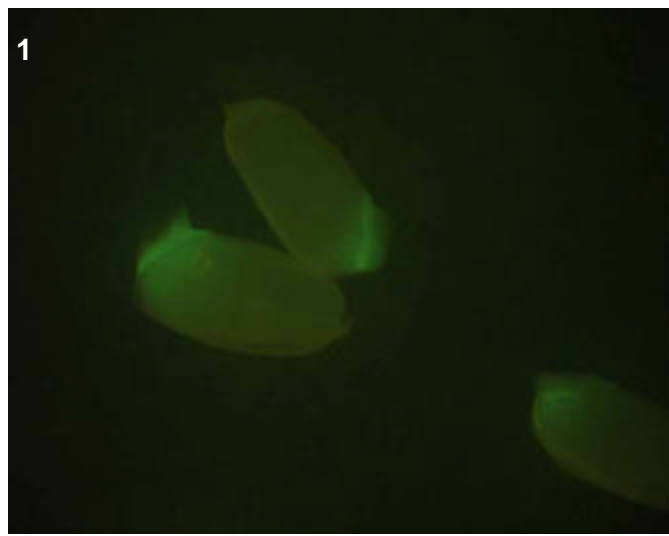
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

5/5 seeds had bright expression

T1 seedling comments

Bright expression in root and shoot, only 1/3 GFP+ seedlings had expression in the endosperm as well. There may be epidermal expression in the sheath and leaf tissue (pics 6-10), note that epidermal expression appears first towards leaf margins and then moves in towards center (pic 9).

Genotype: ASH E07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

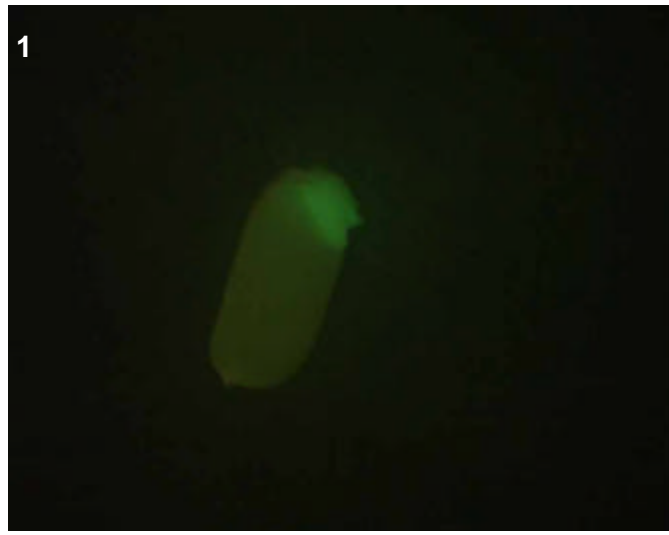
No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

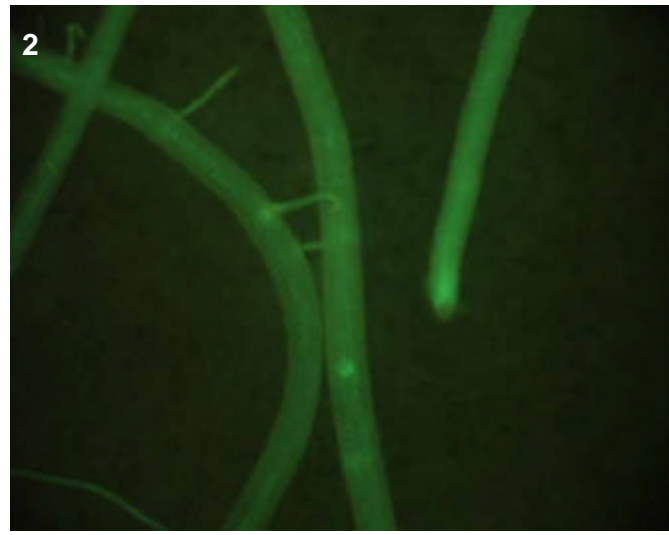
Confocal?

Number T2 seed produced:

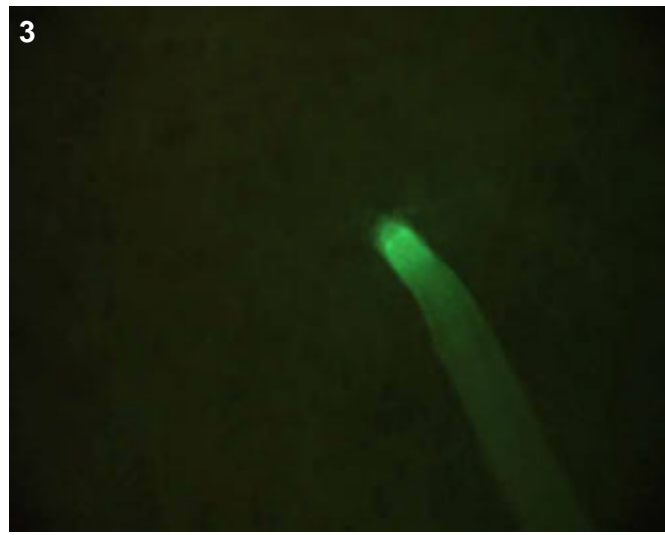
1



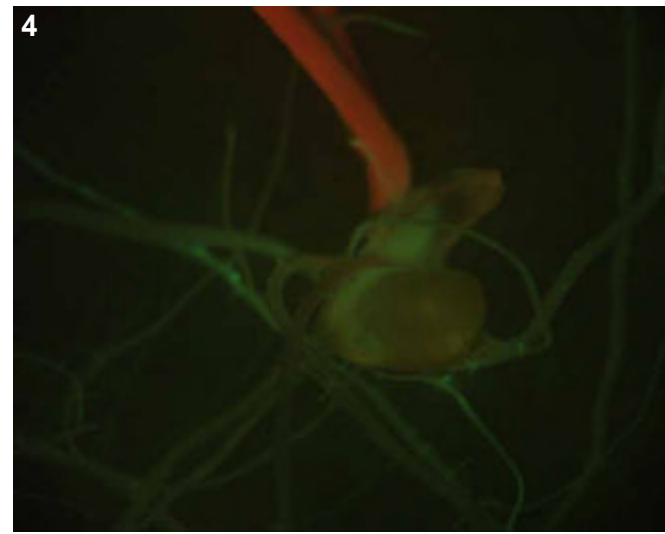
2



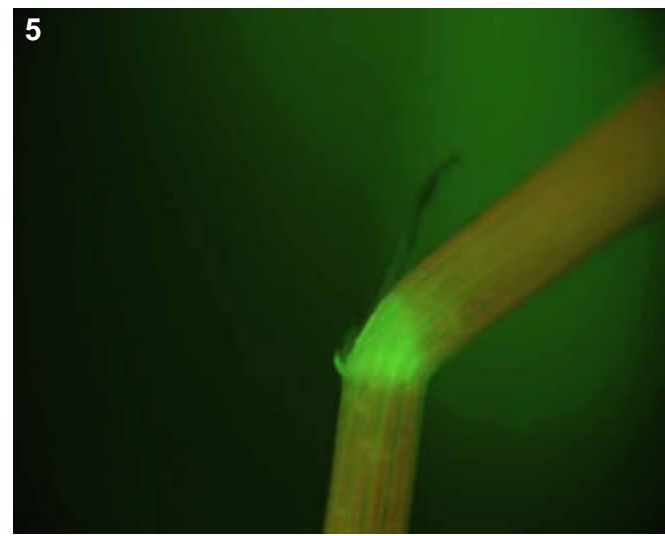
3



4



5



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

4/5 seeds had bright expression

T1 seedling comments

Genotype: ASH F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

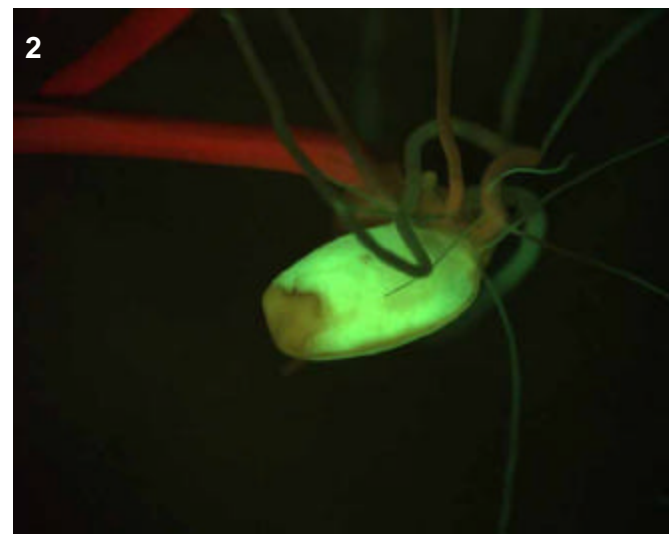
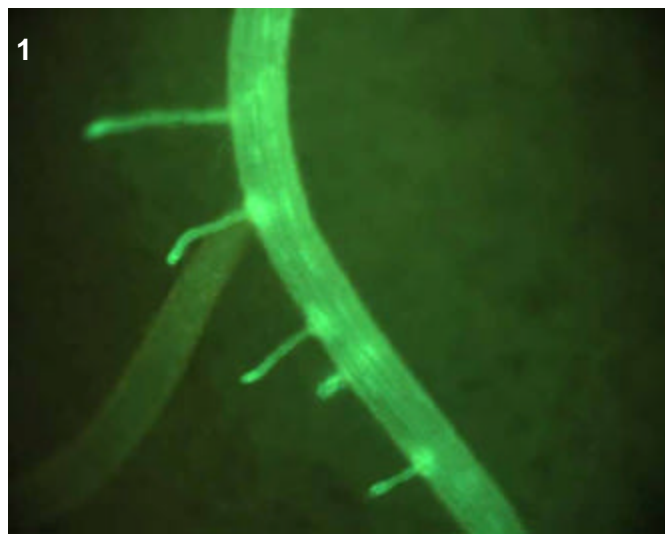
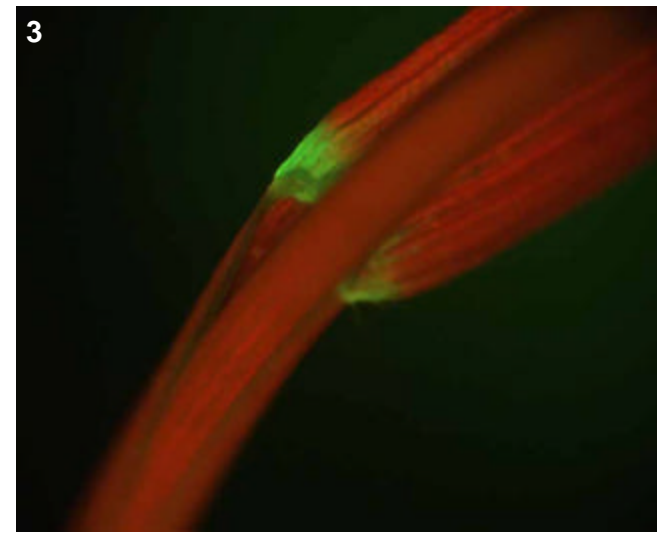
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

1/5 seeds had faint expression, no picture taken

T1 seedling comments

Genotype: ASH F06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

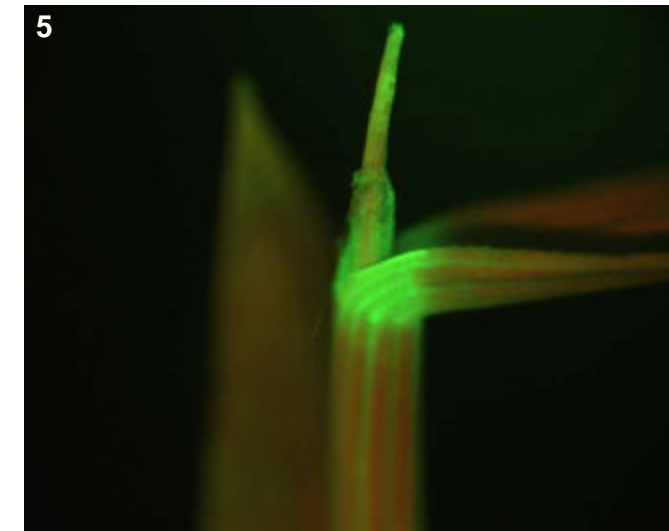
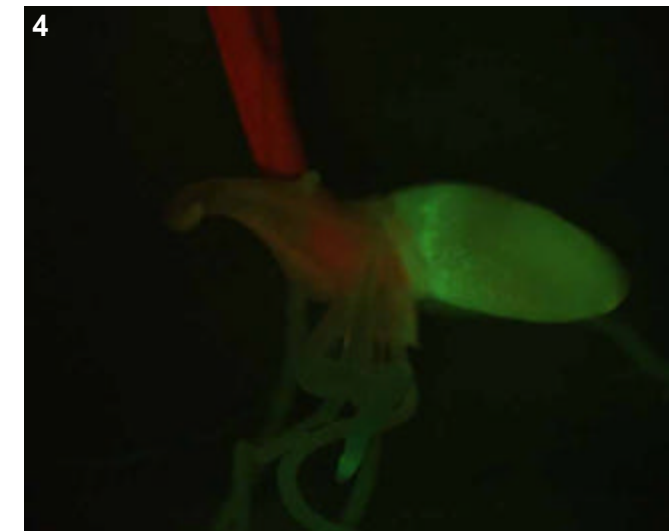
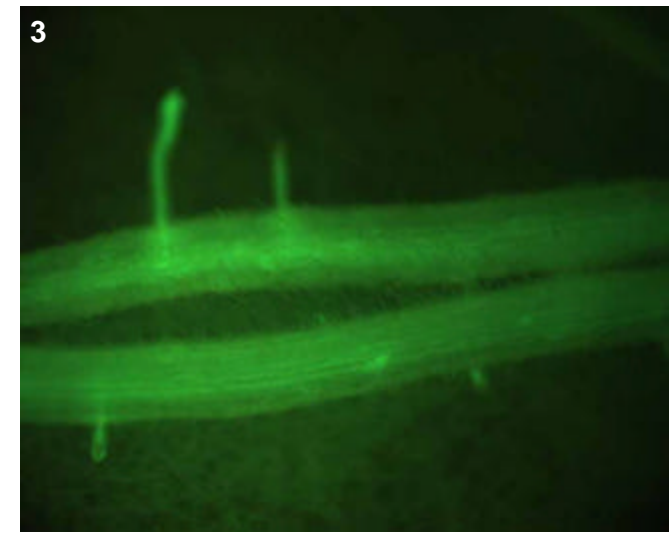
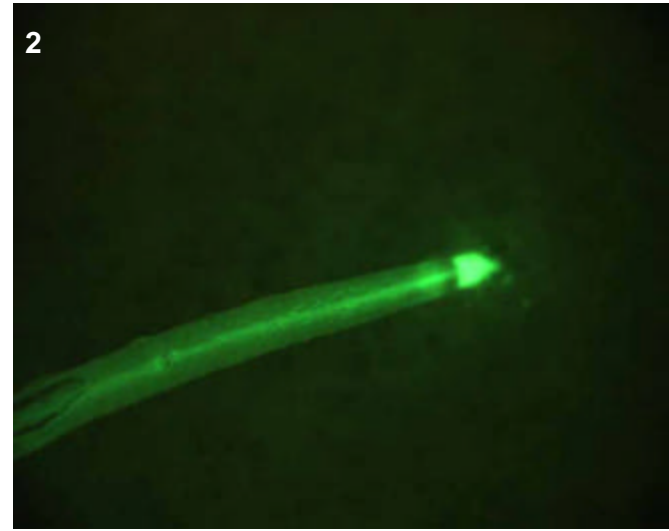
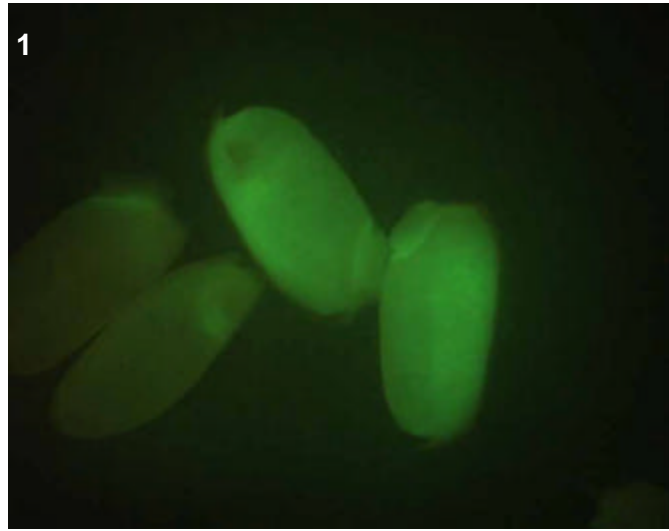
- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
 YES, 3 GFP+ plants **Confocal?** WIP

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

At least 2/5 seeds had expression

T1 seedling comments

The pattern in crown roots (pic 2) looks to be within the stele and could be interesting to confocal.

Genotype: ASH G05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

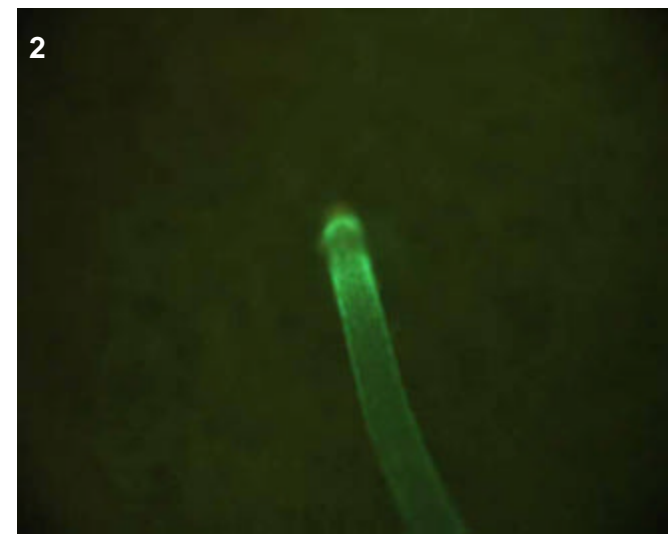
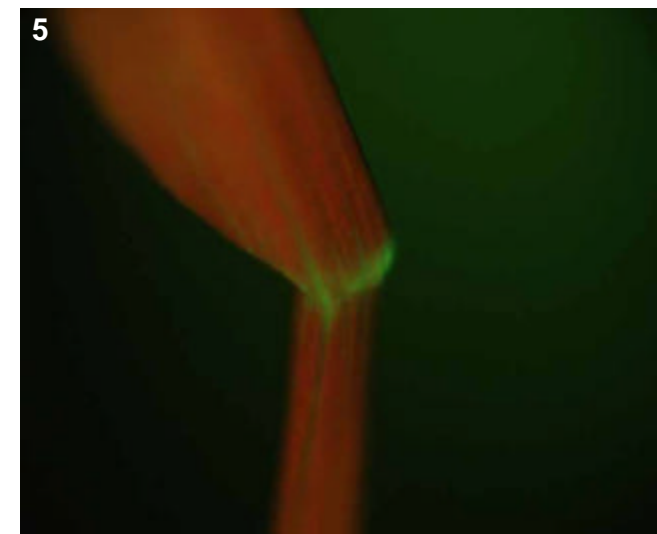
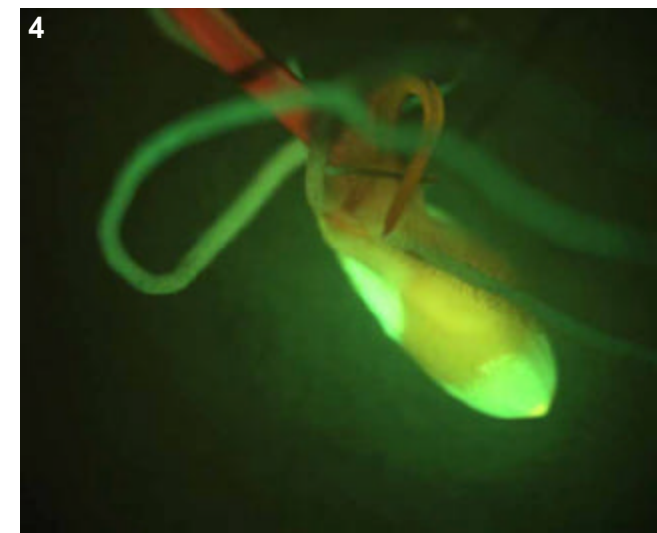
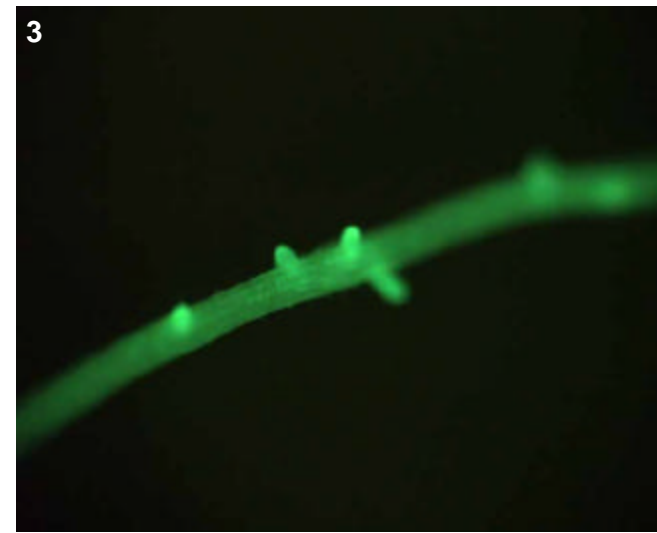
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

3/5 seeds had medium expression (picture 1).

T1 seedling comments

Genotype: ASH G10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

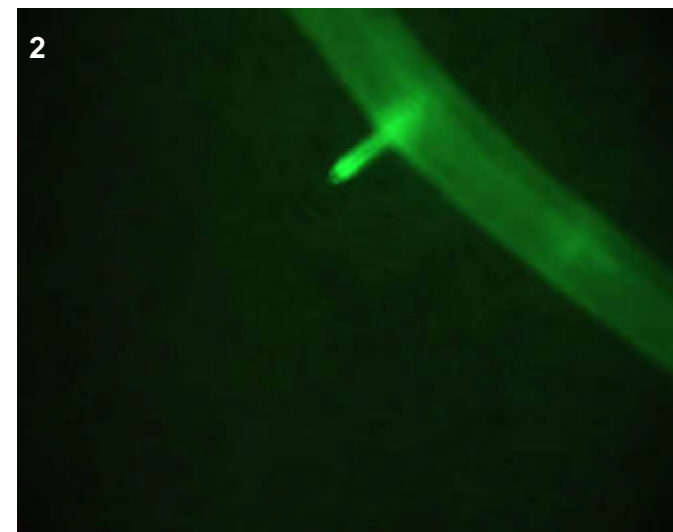
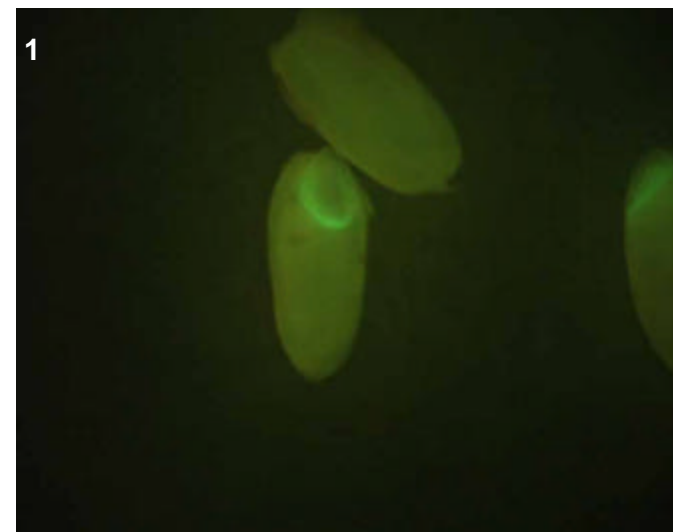
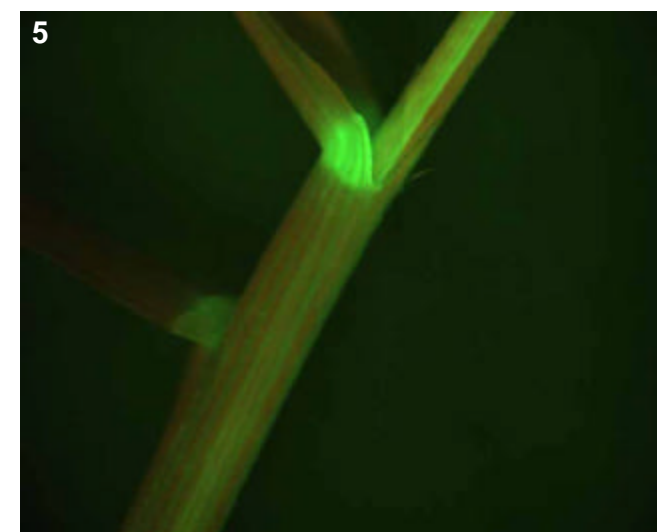
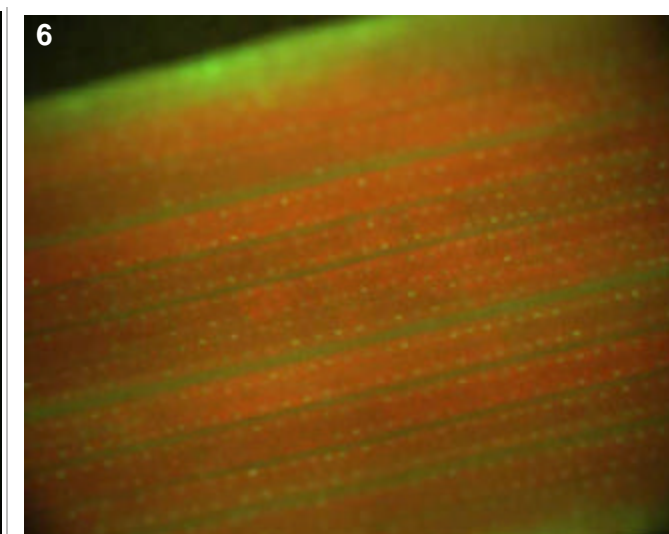
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

4/5 seeds had medium expression

T1 seedling comments

There were two GFP+ plants, one extremely bright and the other about half so. Perhaps dosage effect of the transgene?

Genotype: ASH G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

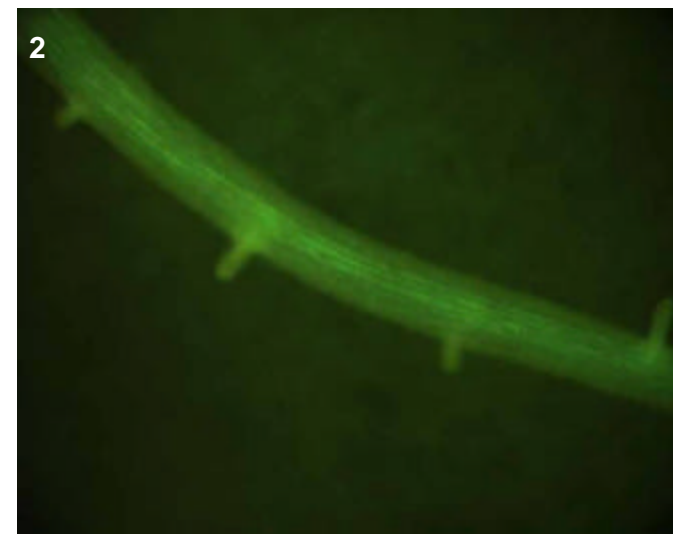
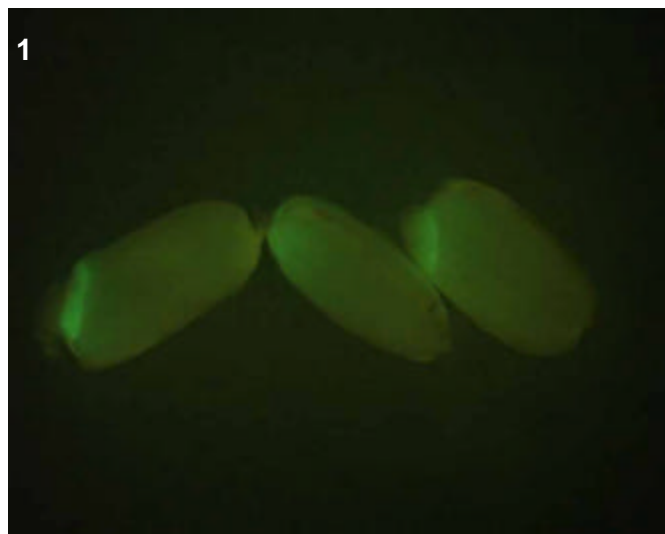
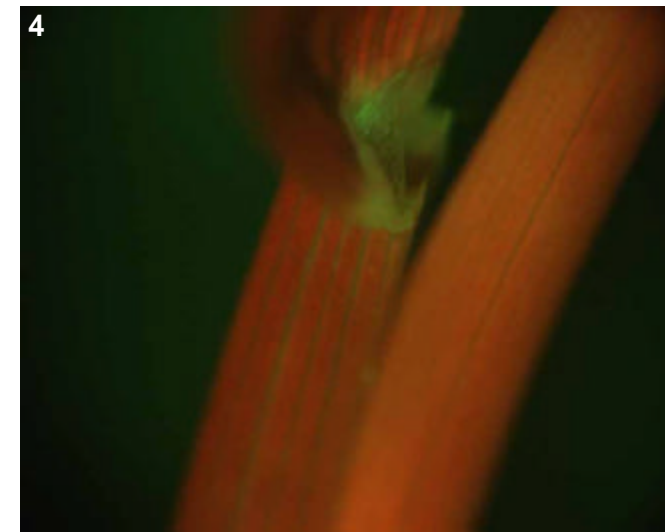
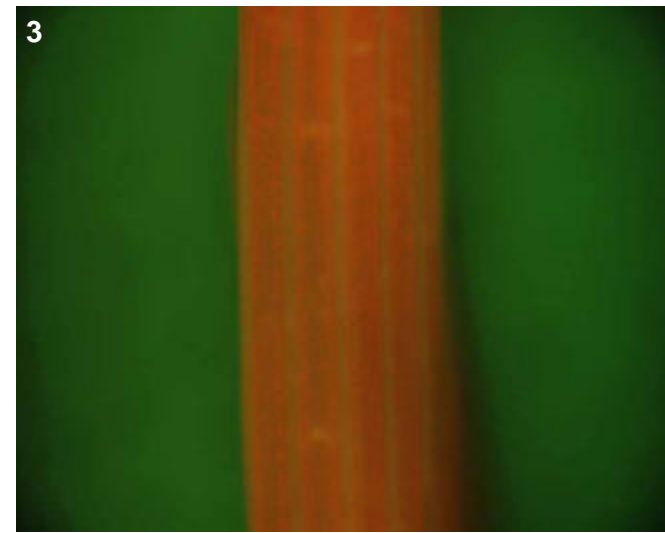
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: ASH G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

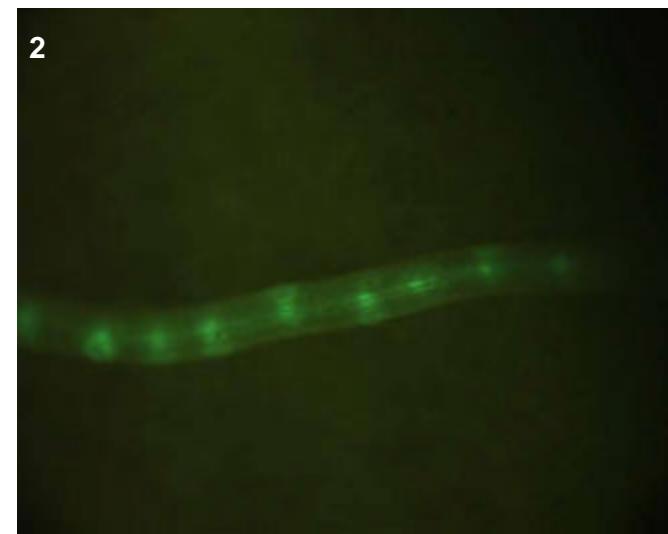
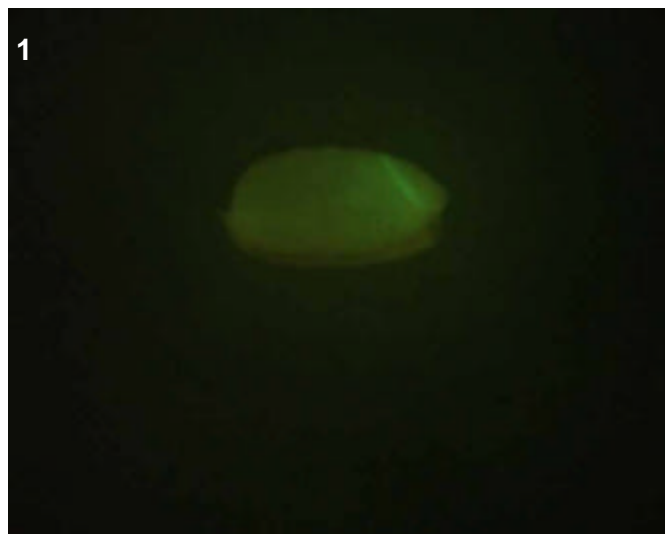
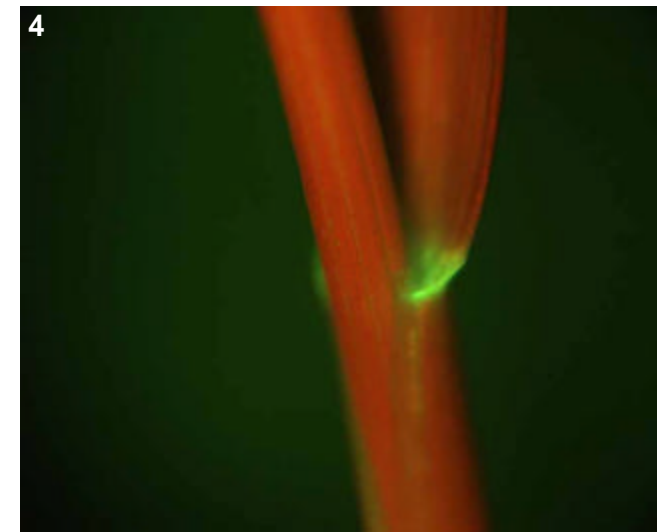
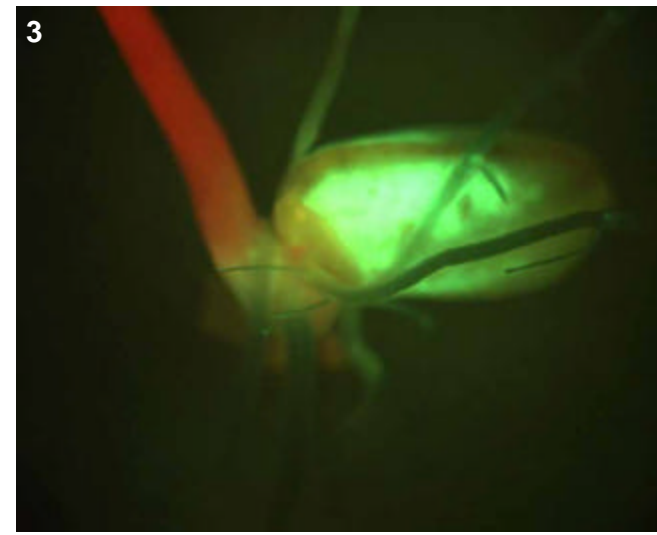
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

5/5 seeds had medium expression

T1 seedling comments

Genotype: ASH H02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

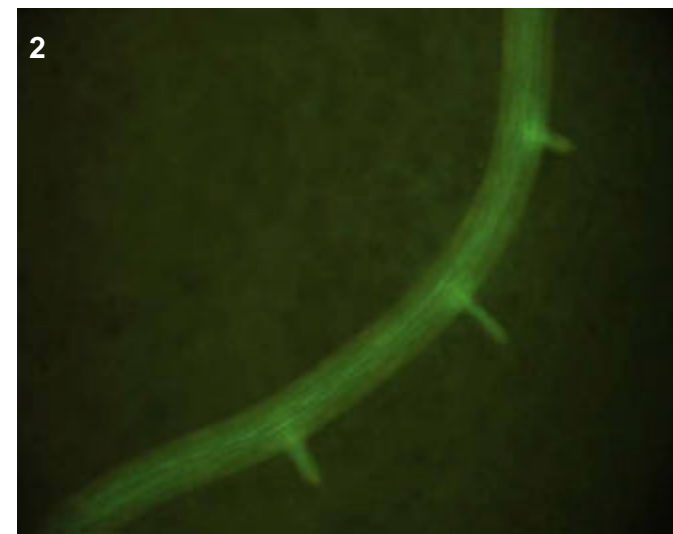
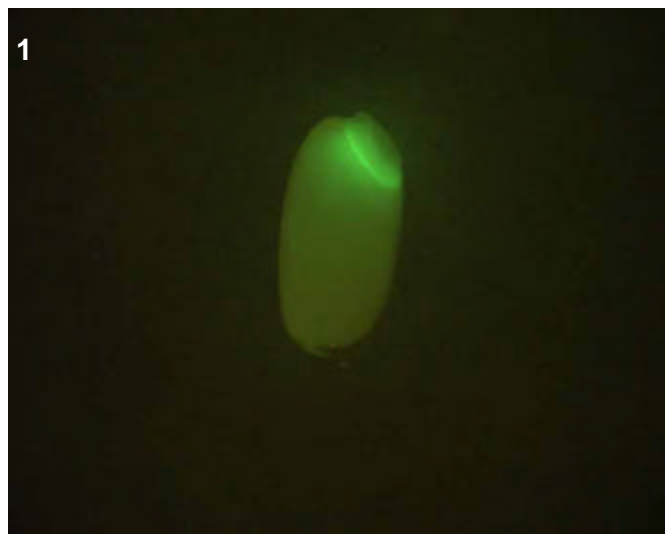
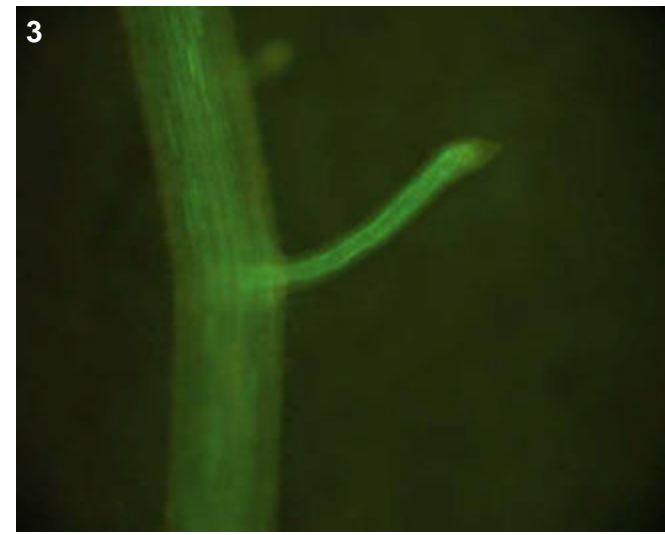
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

4/5 seeds had expression

T1 seedling comments

Genotype: ASH H10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

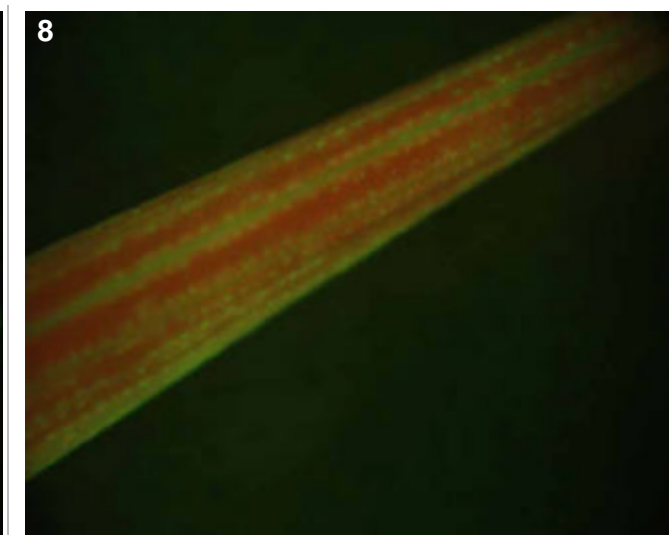
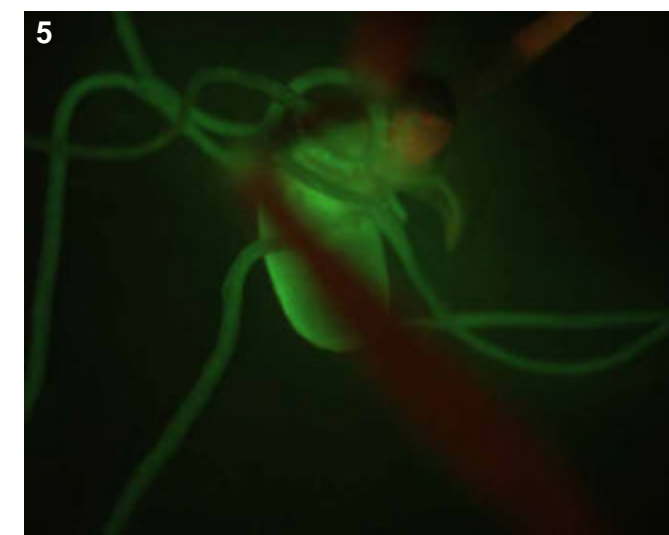
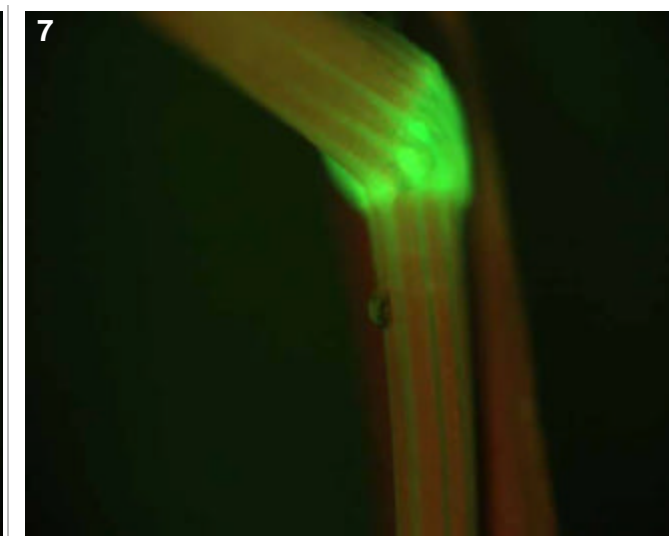
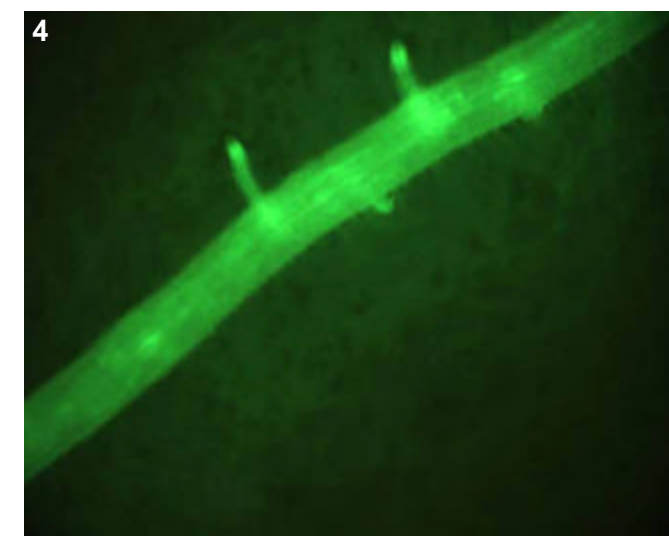
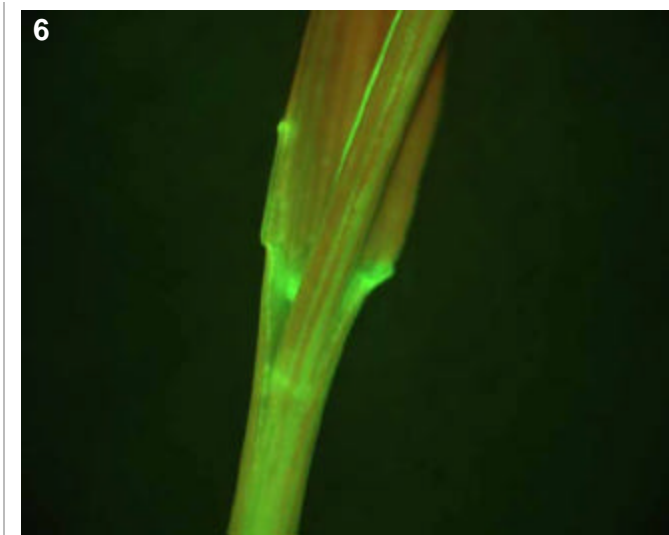
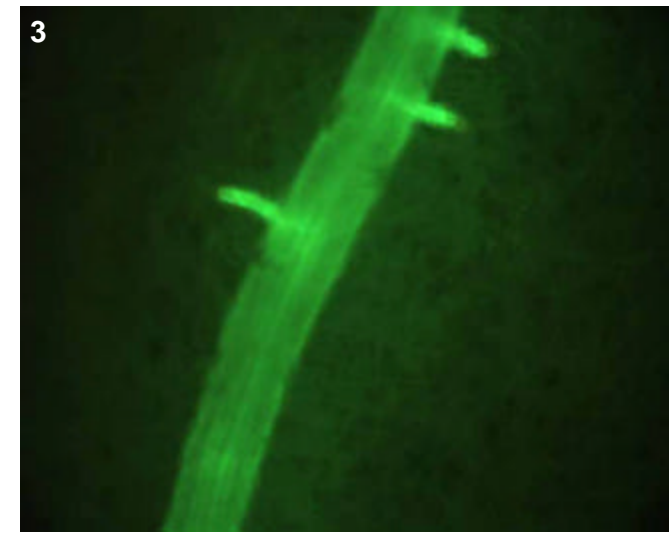
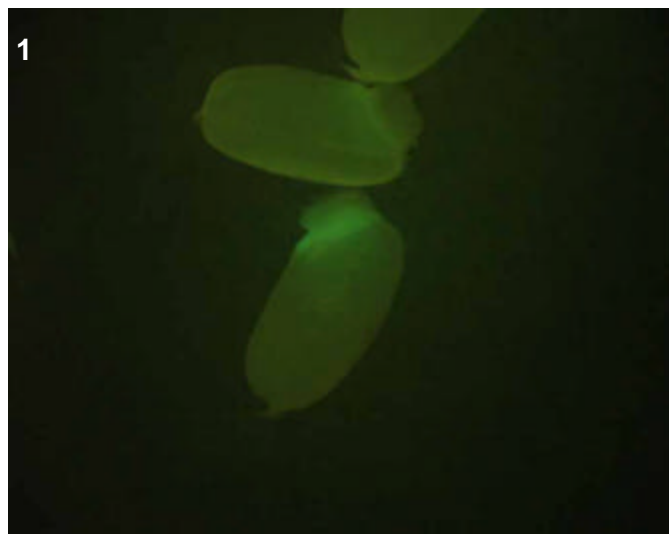
- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- YES, 3 GFP+ plants
- Confocal?
- Number T2 seed produced:



T0 comments
This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments
3/5 seeds had expression

T1 seedling comments
Extremely bright expression (see pics 2-8), most likely constitutive.

Genotype: ASH H12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

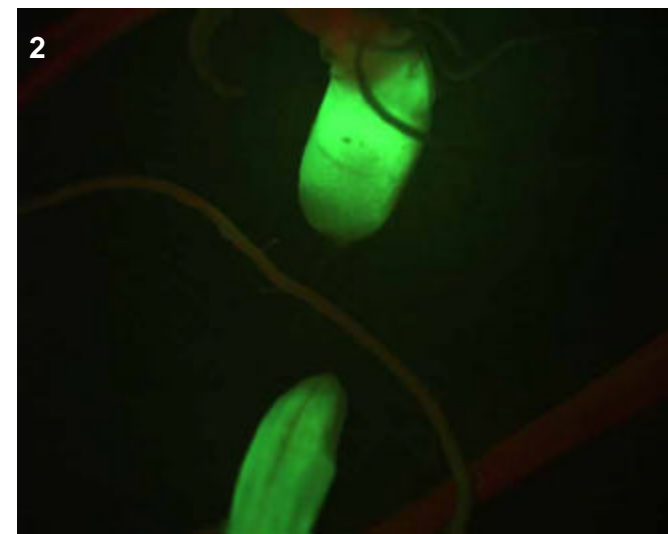
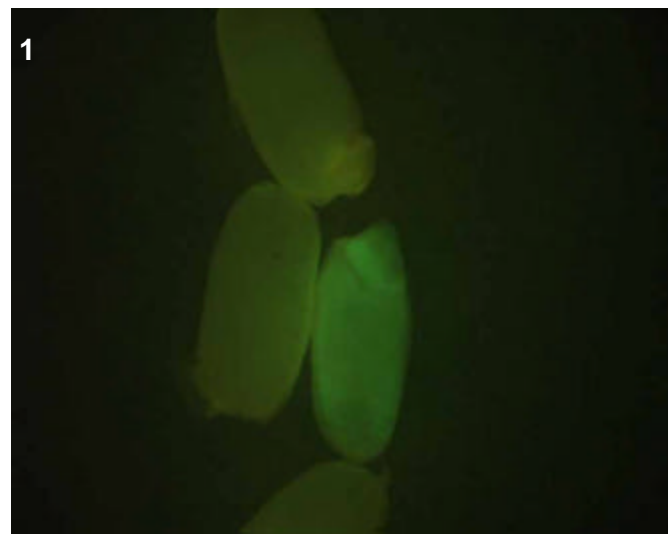
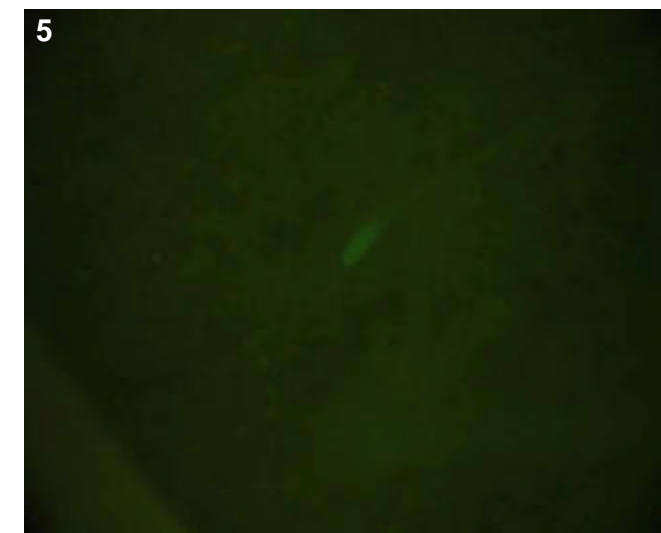
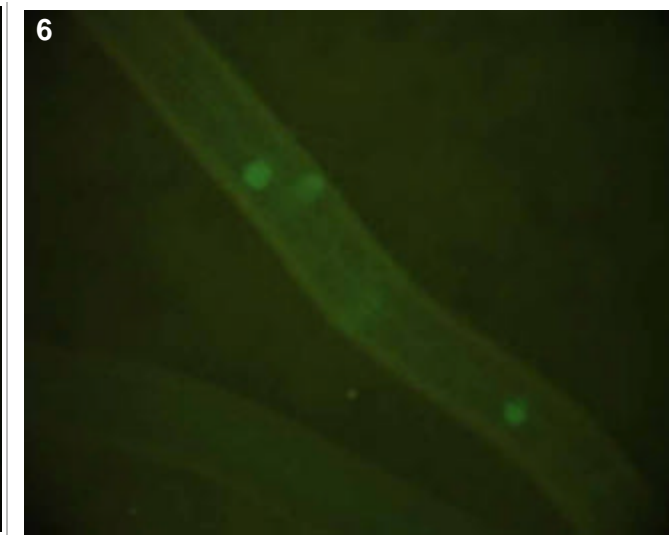
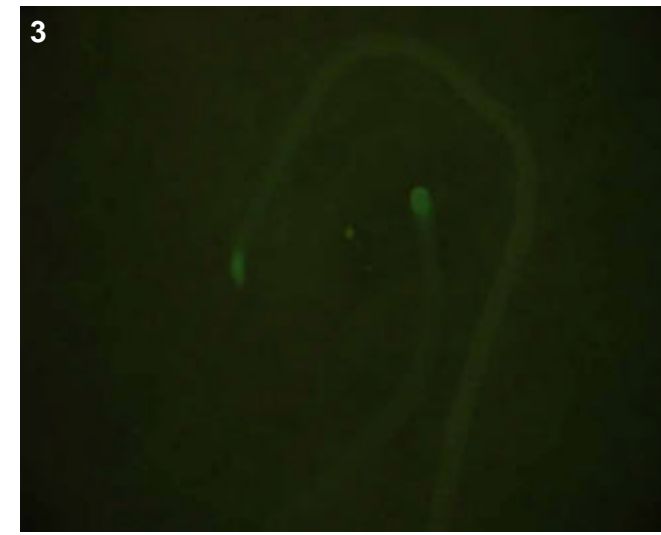
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

This line, like all of the ASH lines, was derived from a glowing callus selected during regeneration.

T1 seed comments

2/5 seeds had expression

T1 seedling comments

The root pattern (pics 3-6) was not nearly as bright as the endosperm expression (pic 2), but still was very interesting and consisted of a small burst of expression in the cell division zone of crown and lateral roots. Also some expression at the zone of lateral root emergence (pic 6).

Genotype: ASI C02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

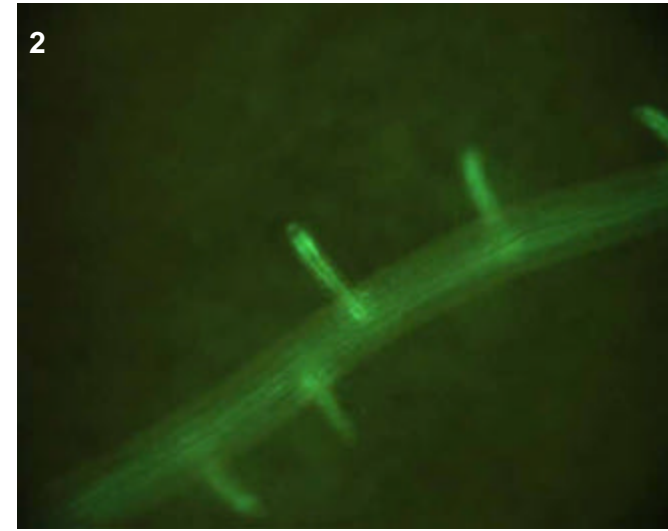
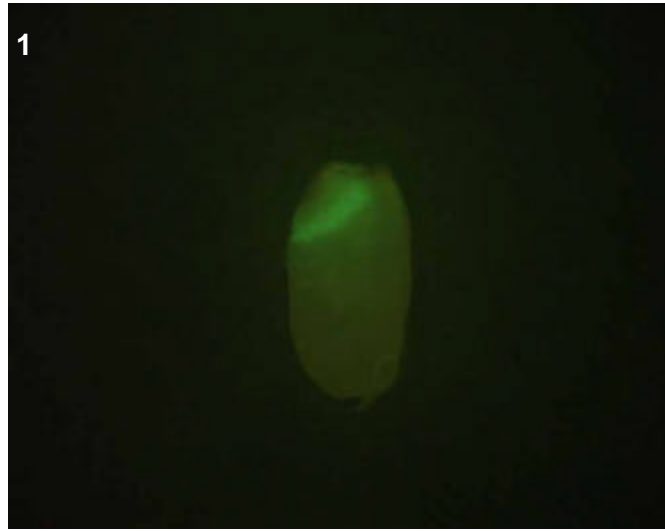
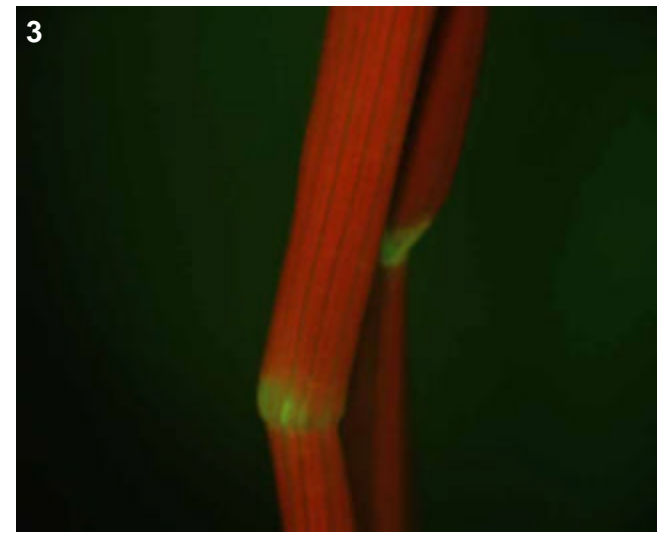
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

This line was derived from a glowing callus selected during regeneration.

T1 seed comments

3/4 seeds had expression

T1 seedling comments

Genotype: ASI C03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

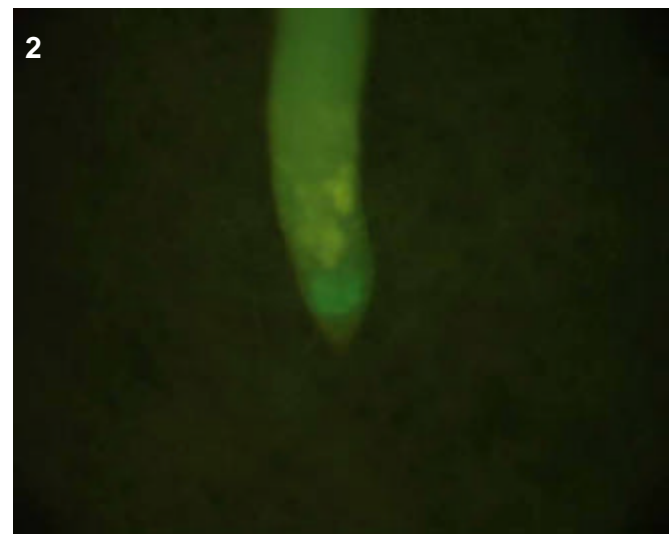
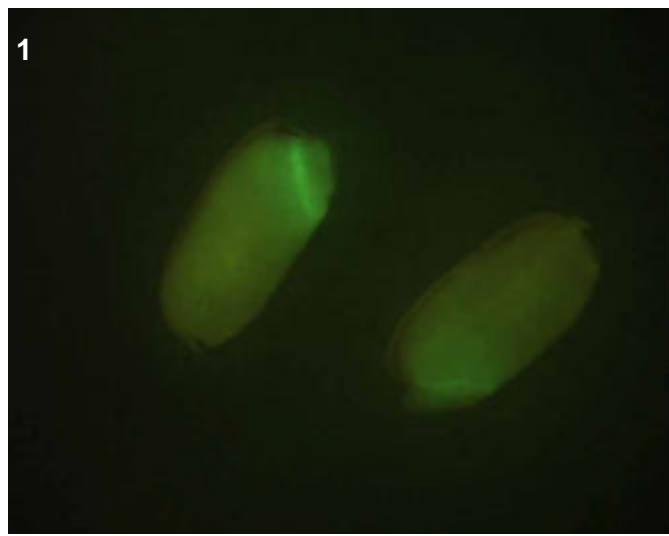
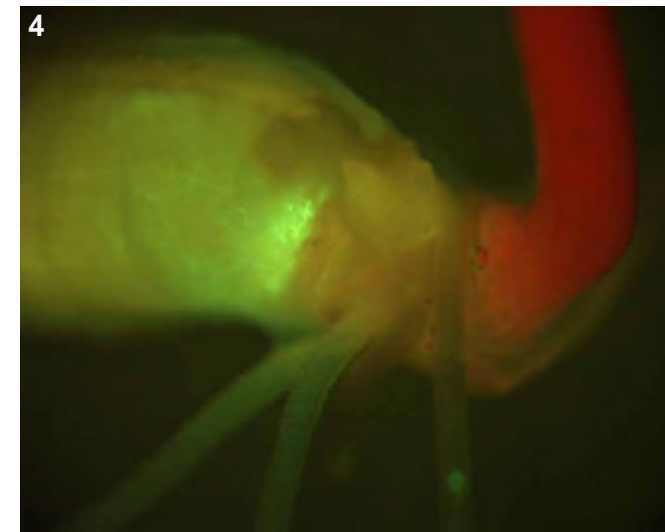
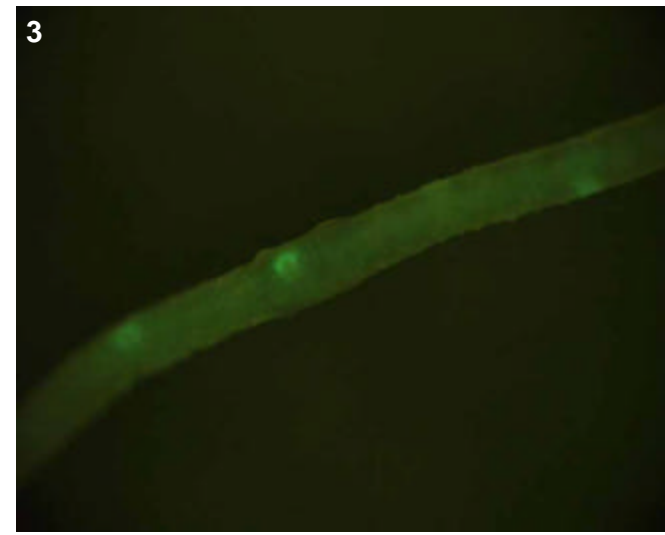
T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

WIP

Number T2 seed produced:



T0 comments

This line was derived from a glowing callus selected during regeneration.

T1 seed comments

2/5 seeds had expression

T1 seedling comments

The most interesting aspect regarding root expression is the bright initials in the apex of crown roots (pic 2), and could be interesting to confocal. There may be a phenotype, as no seminal root was present. The 1 GFP+ plant, as well as two GFP- (hoping they are heterozygous) were moved to GH.

Genotype: ASI D11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

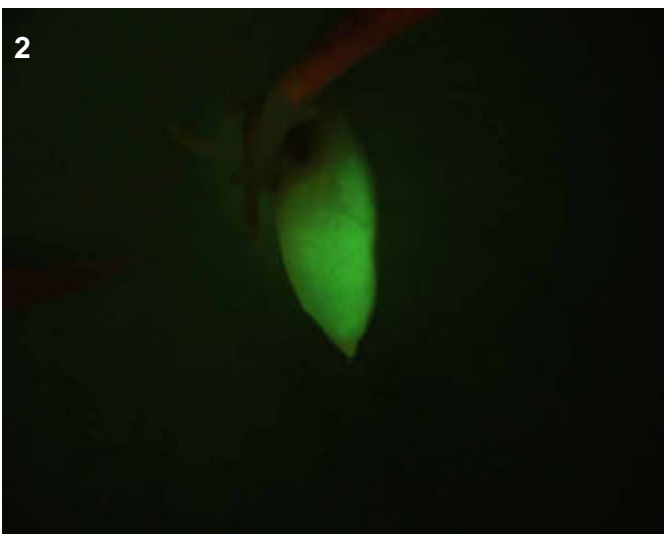
Confocal?

Number T2 seed produced:

1



2



T0 comments

T1 seed comments

4/5 seeds had faint expression

T1 seedling comments

Genotype: ASI F02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

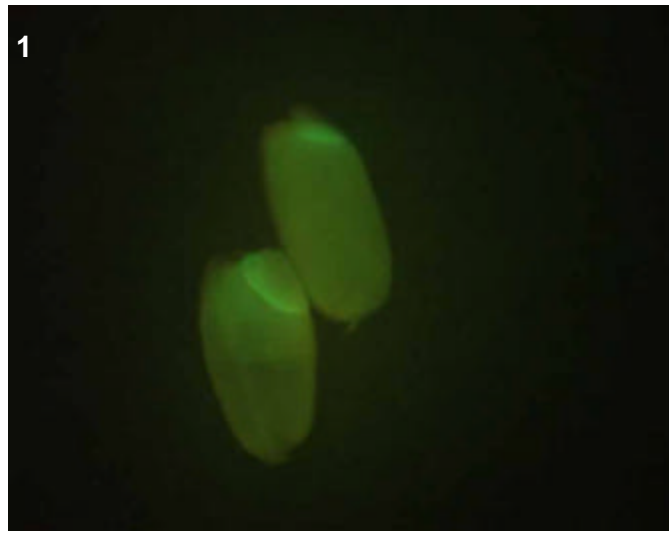
No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

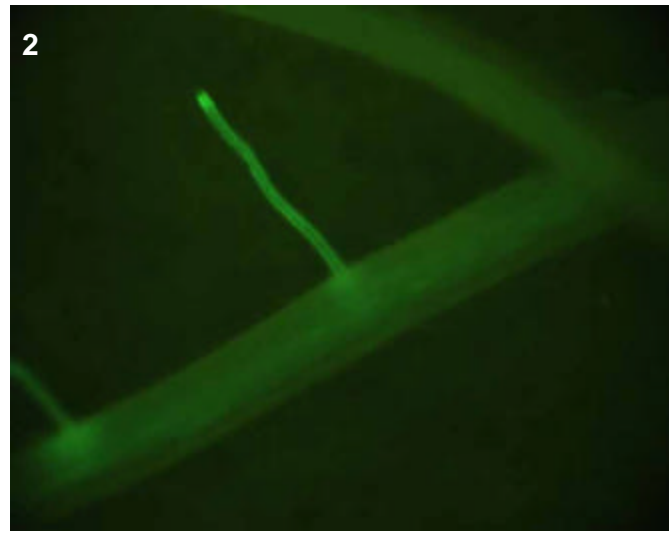
Confocal?

Number T2 seed produced:

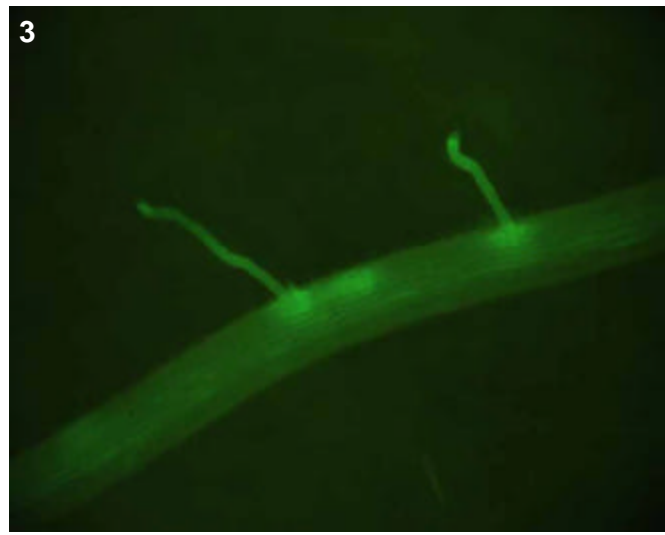
1



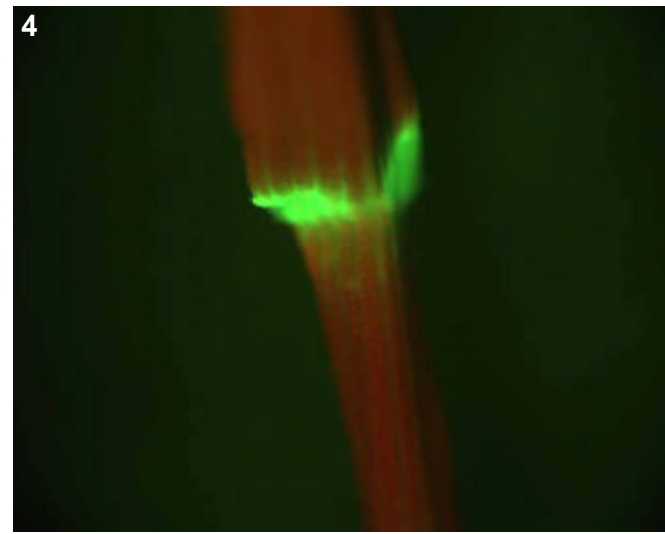
2



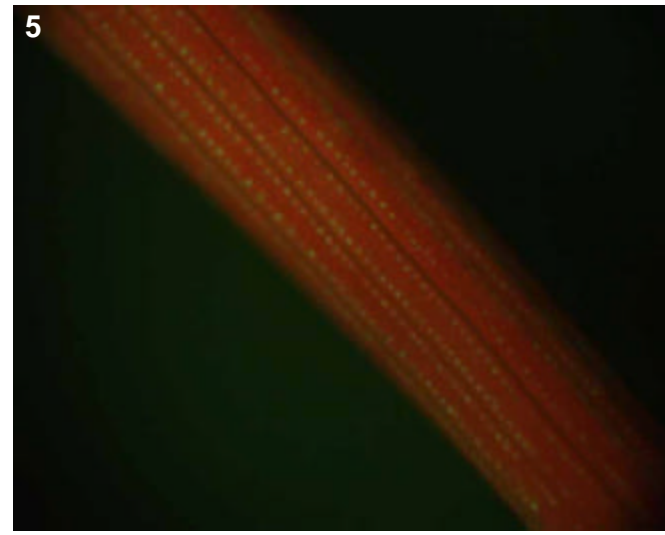
3



4



5



T0 comments

This line was derived from a glowing callus selected during regeneration.

T1 seed comments

4/5 seeds had expression

T1 seedling comments

Genotype: ASI G09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

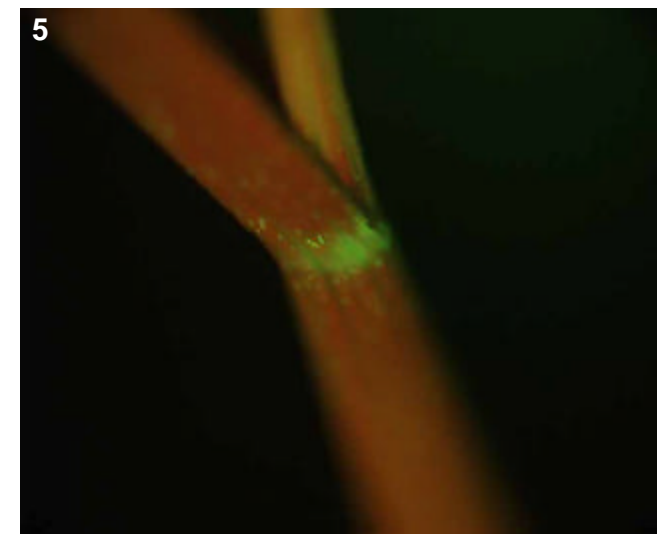
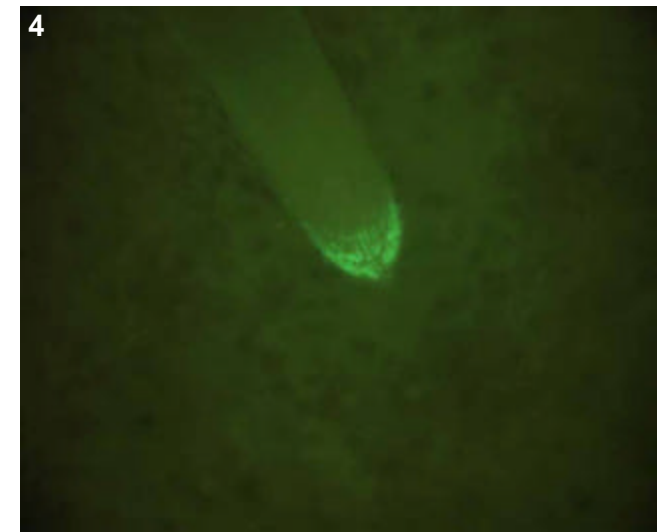
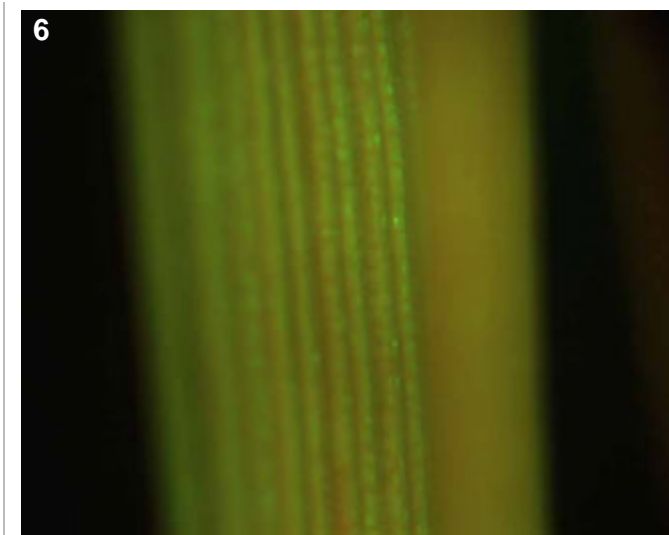
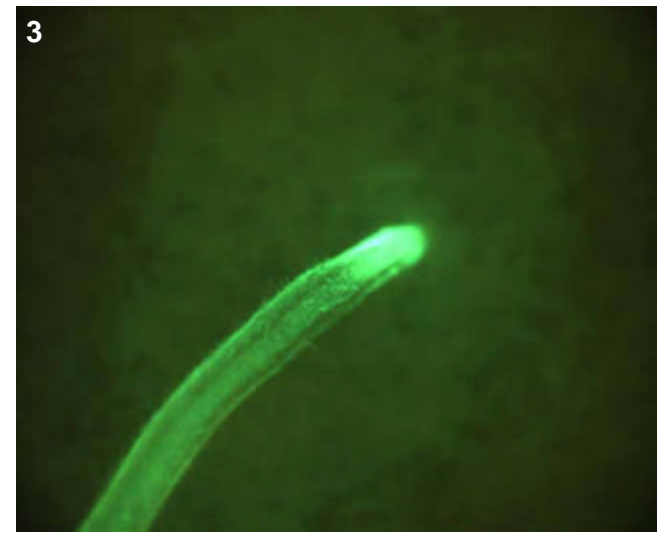
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

Genotype: ASI H01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

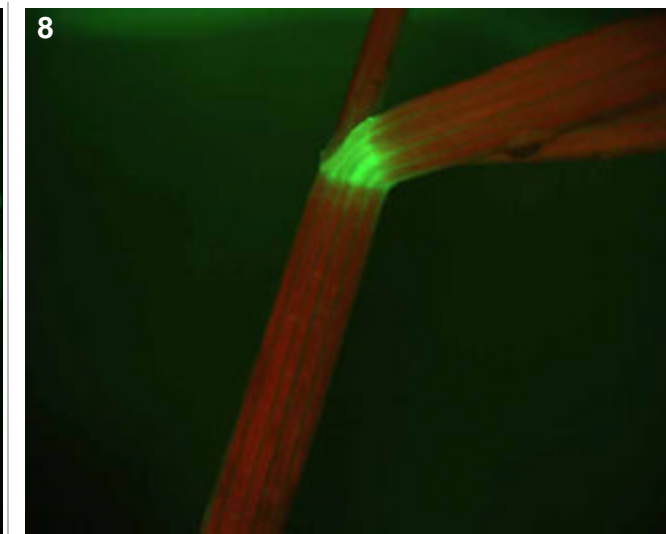
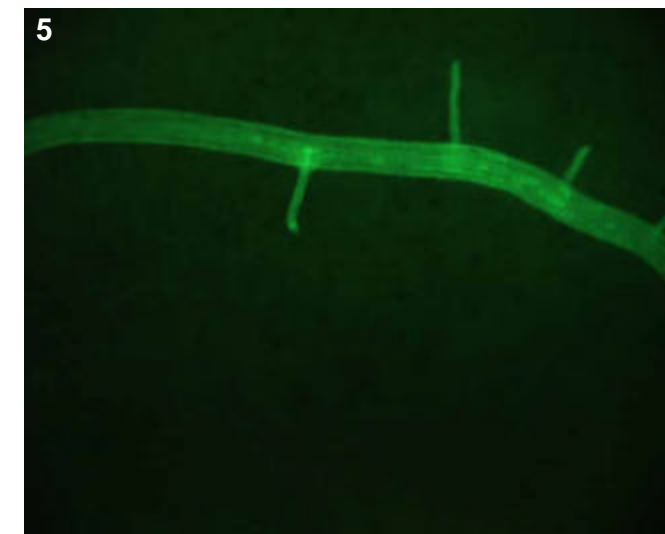
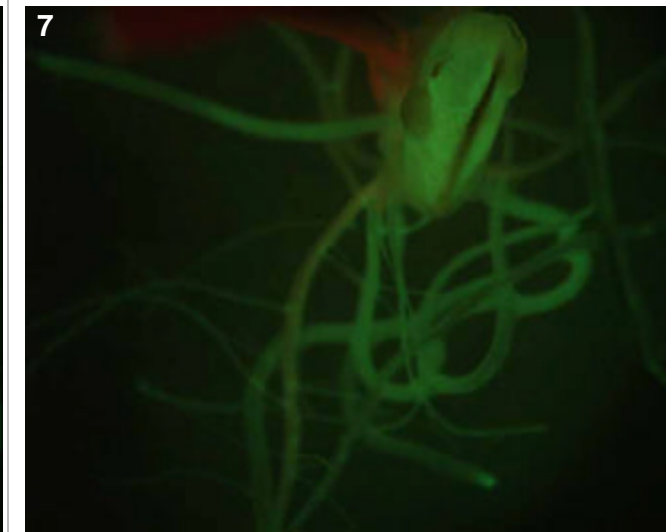
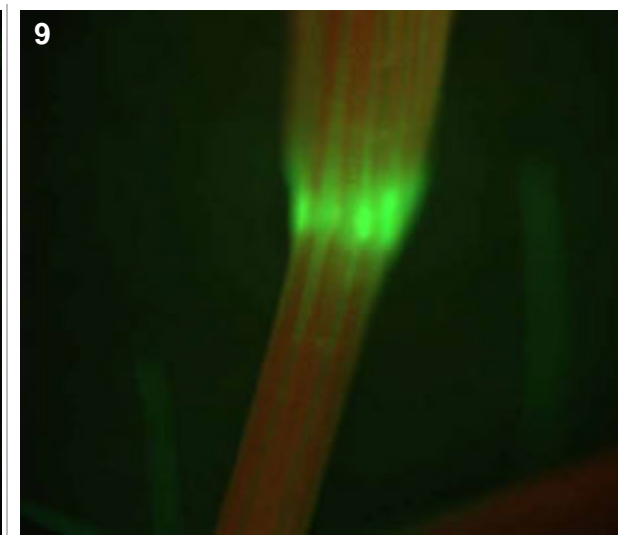
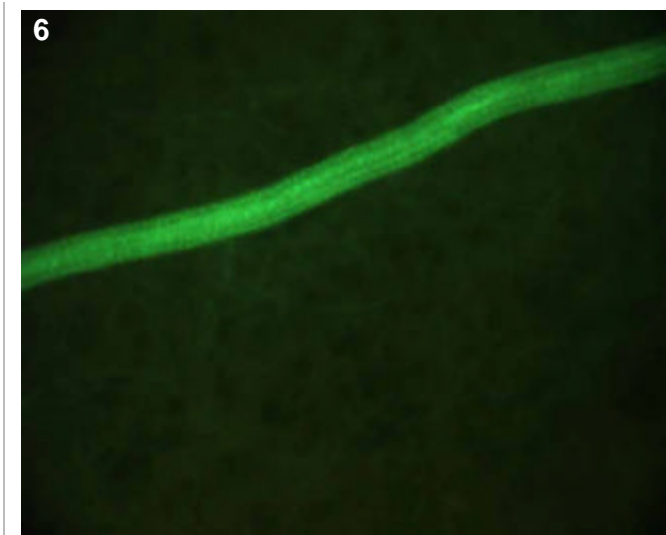
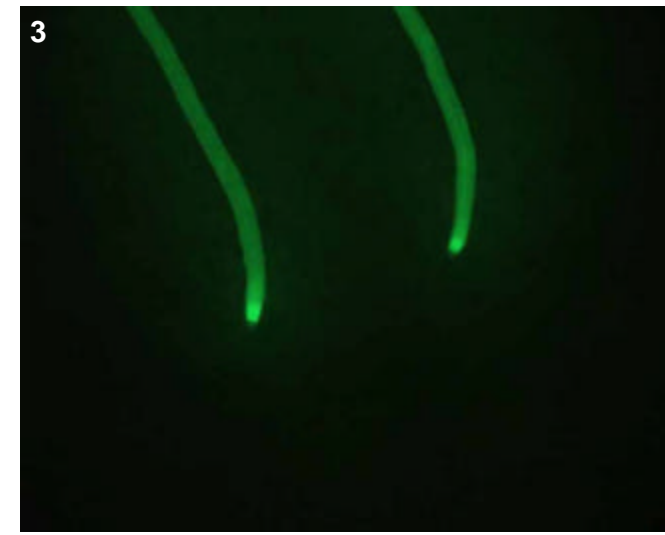
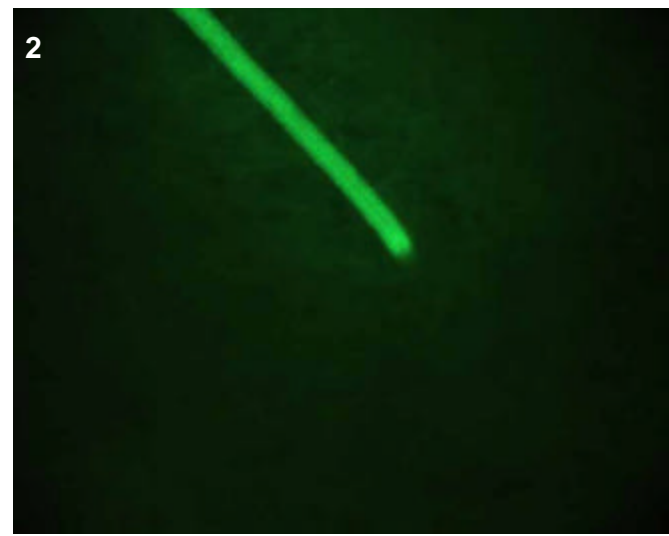
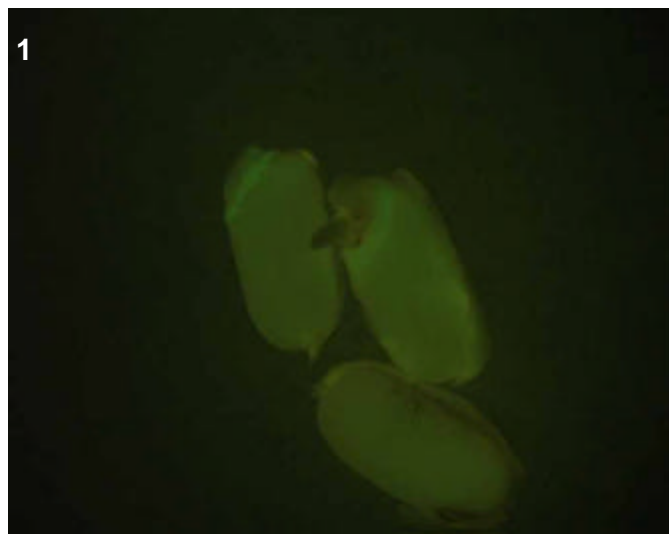
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

This line was derived from a glowing callus selected during regeneration.

T1 seed comments

2/4 seeds had faint expression

T1 seedling comments

This looks like a very bright epidermal or cortical expression in roots (pictures 2-6).

Genotype: ASJ E08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

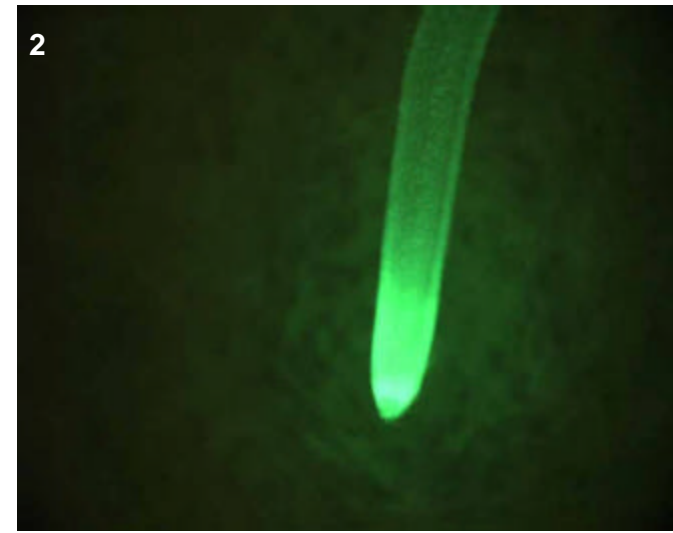
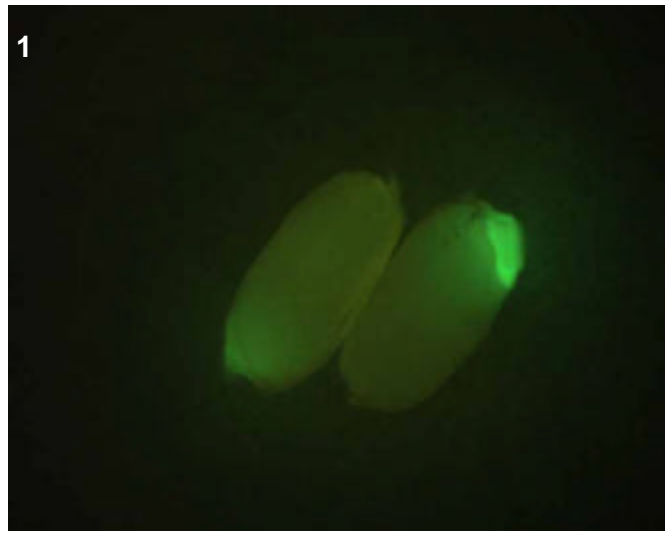
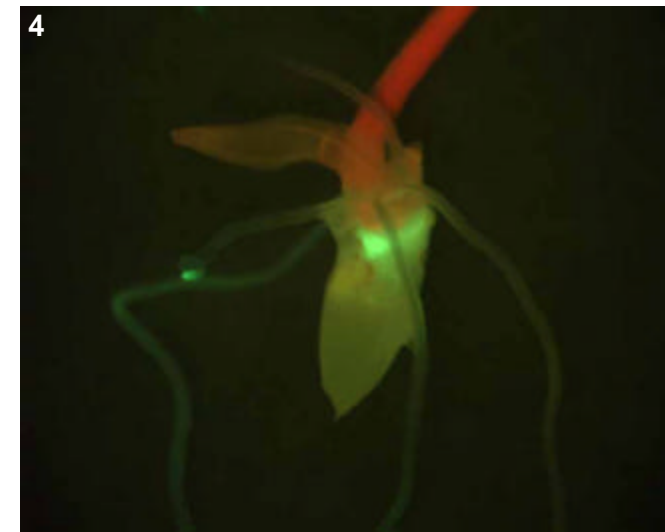
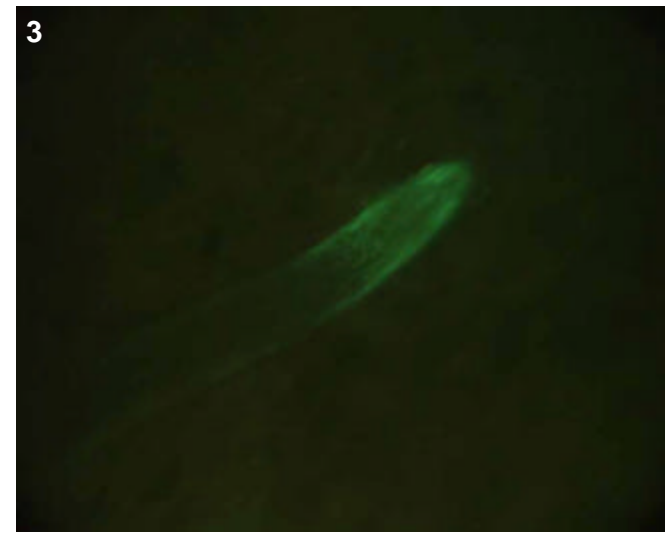
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

5/5 seeds had bright expression (pic 1).

T1 seedling comments

A bright root-specific line (pics 2-4).

Genotype: ASJ F08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

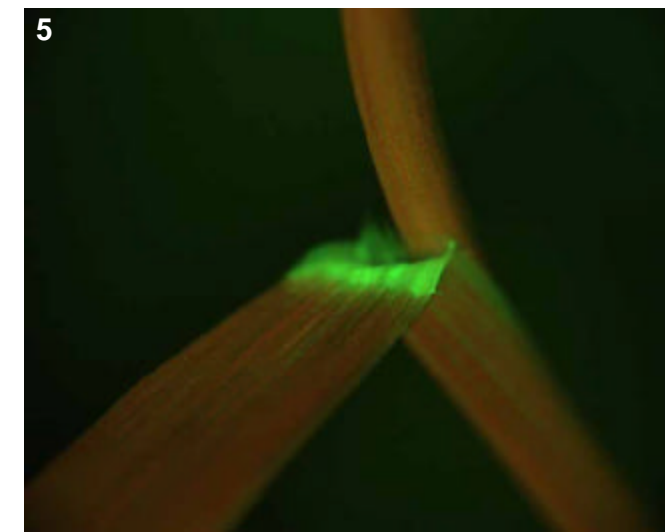
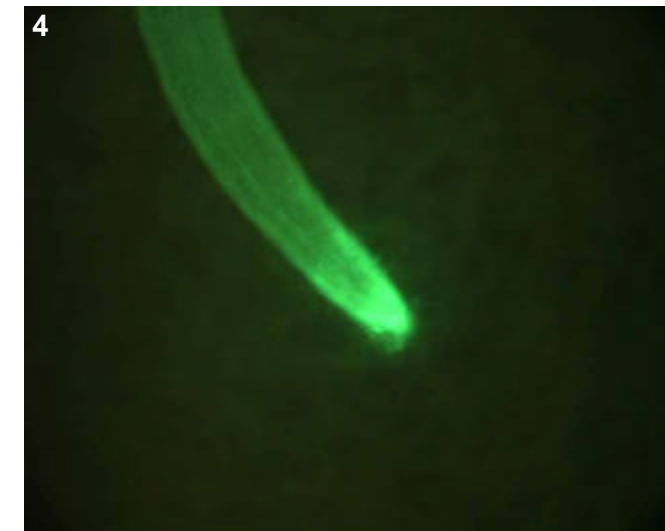
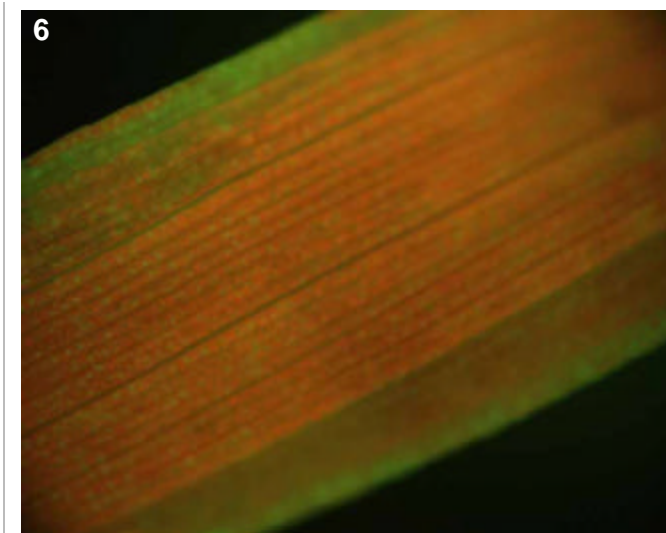
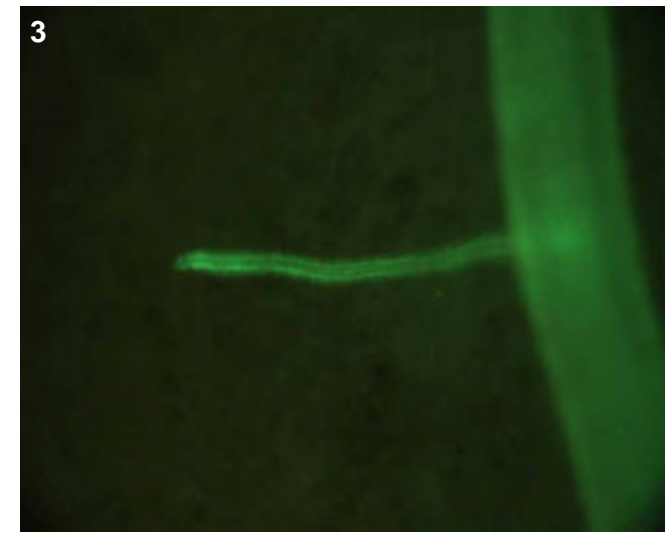
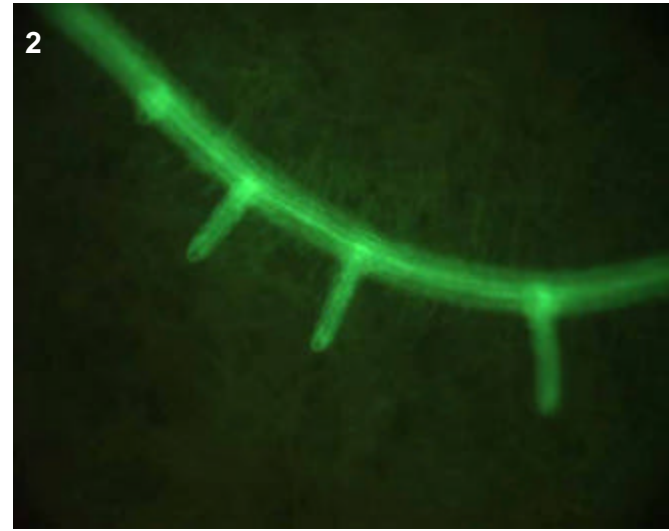
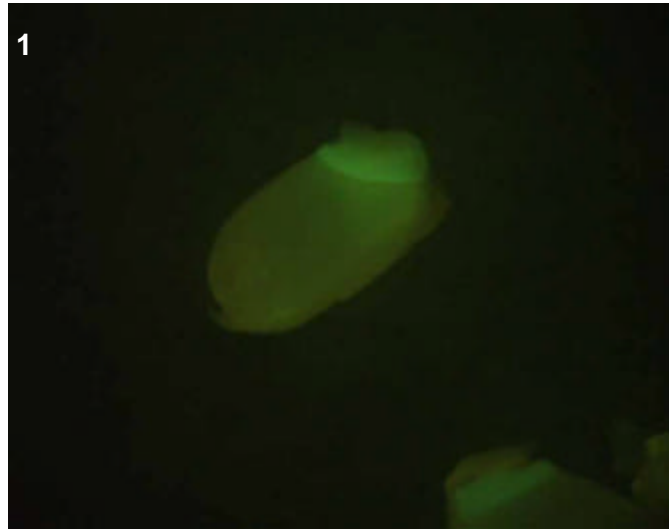
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/3 seeds had medium expression (pic 1).

T1 seedling comments

Genotype: ASJ G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

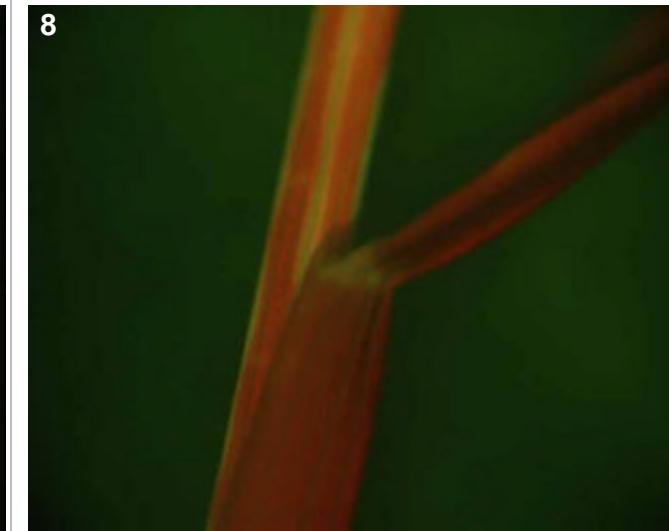
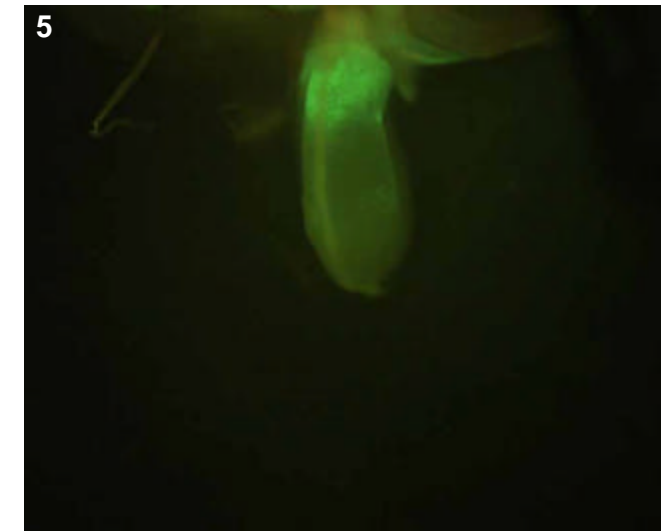
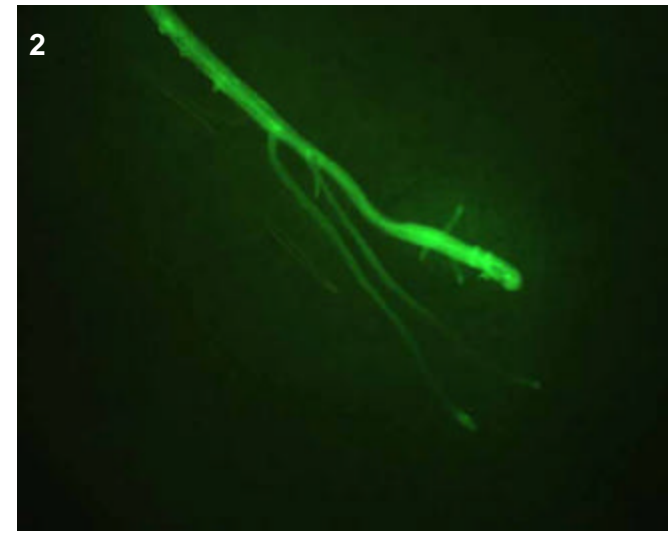
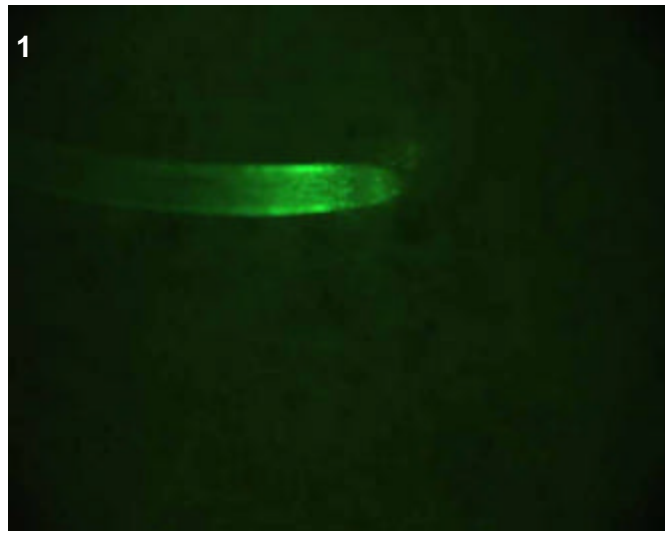
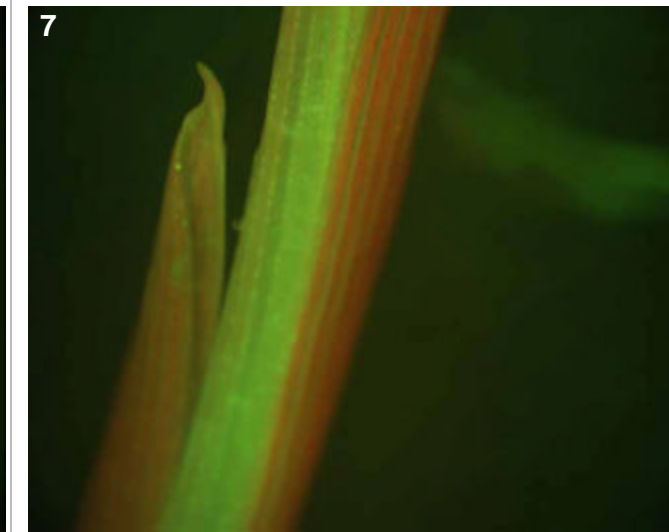
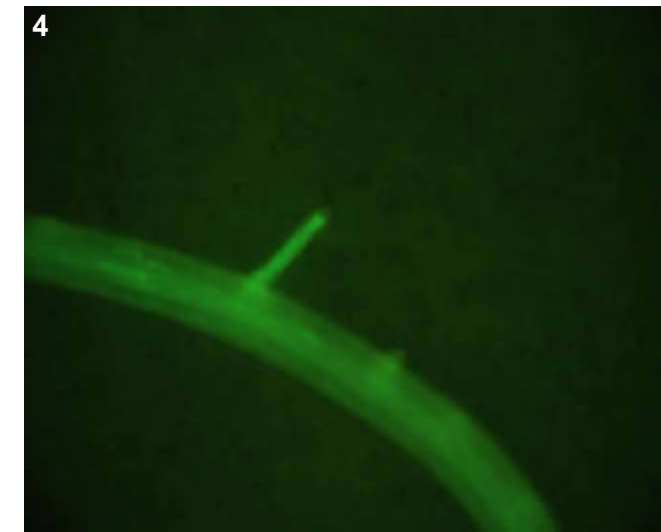
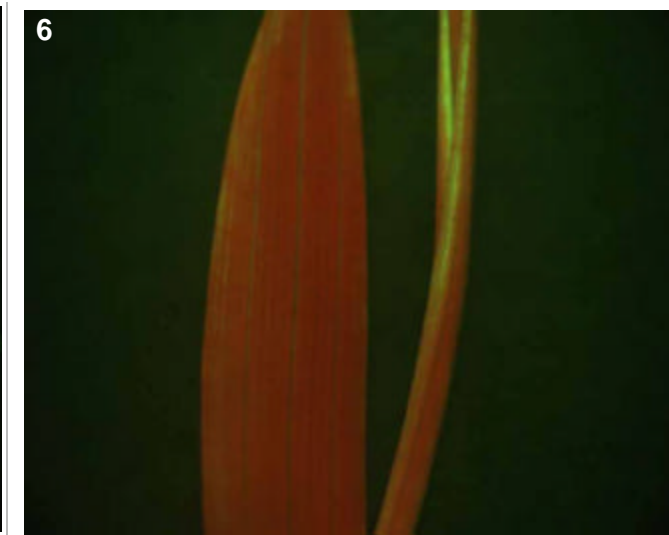
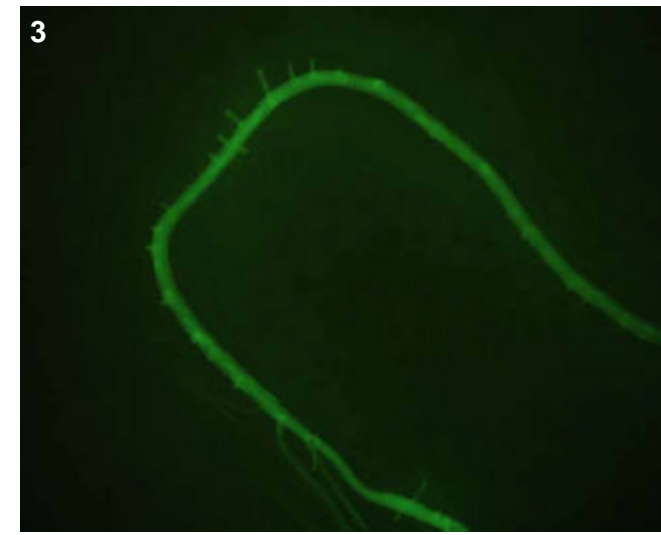
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had faint expression, no picture taken

T1 seedling comments

Perhaps a root mutant--no crown roots were visible, just a long seminal root with extensive lateral root development near the root tip (see pic 2).

Genotype: ASK A05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

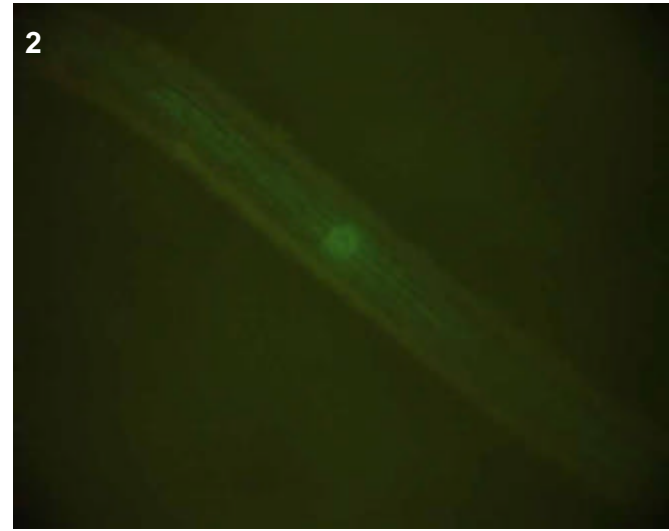
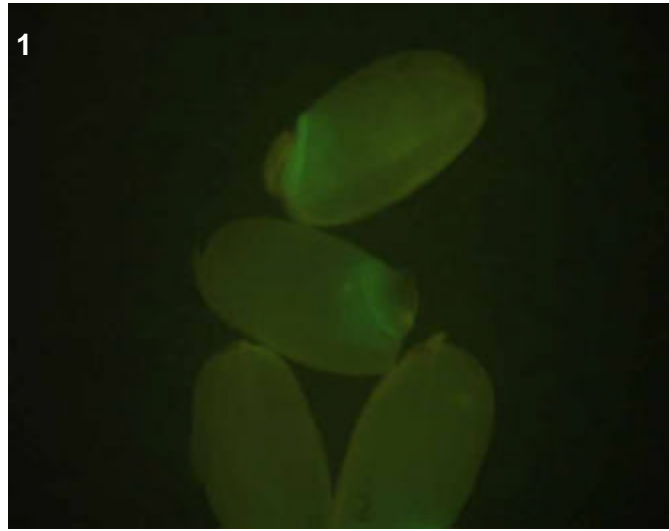
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression

T1 seedling comments

This plants were very small, perhaps mutant?

Genotype: ASK B11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

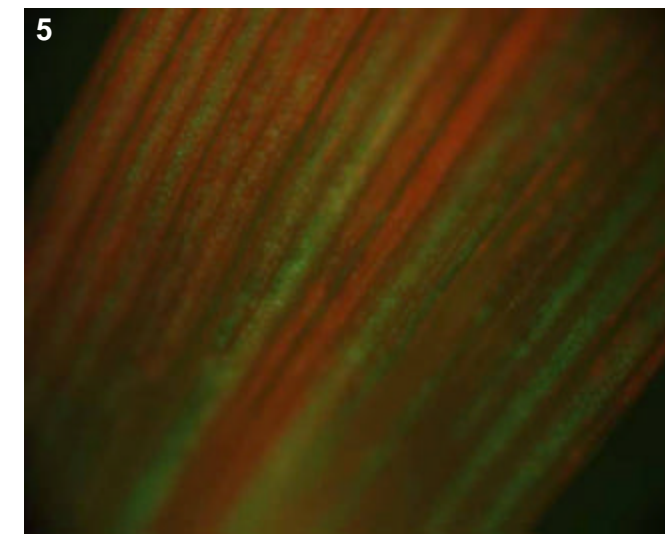
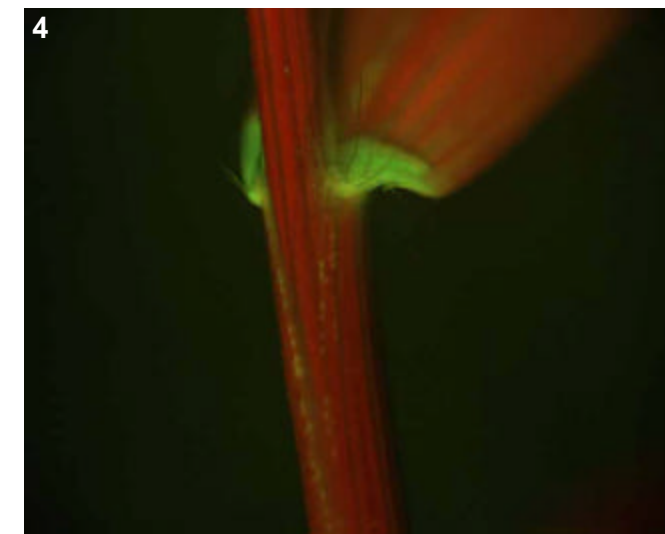
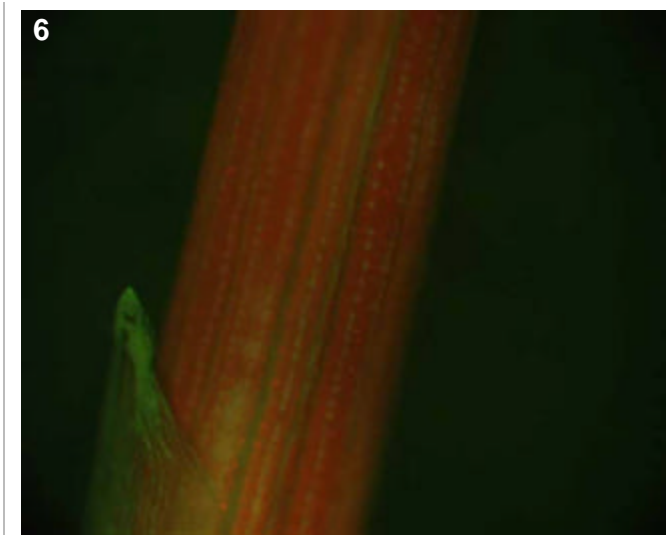
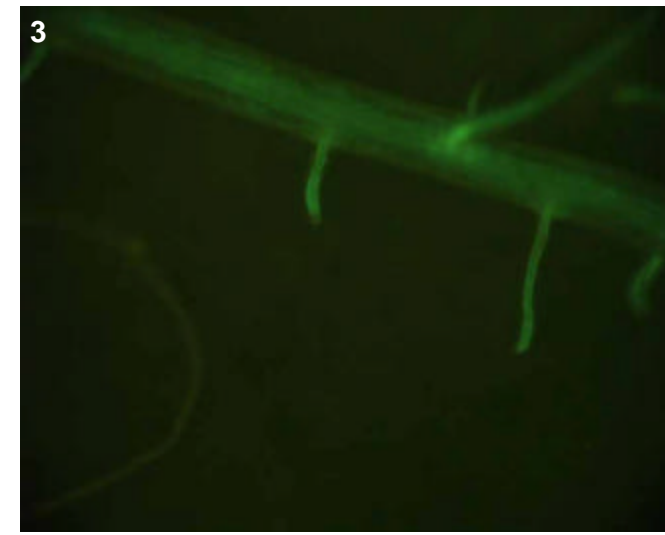
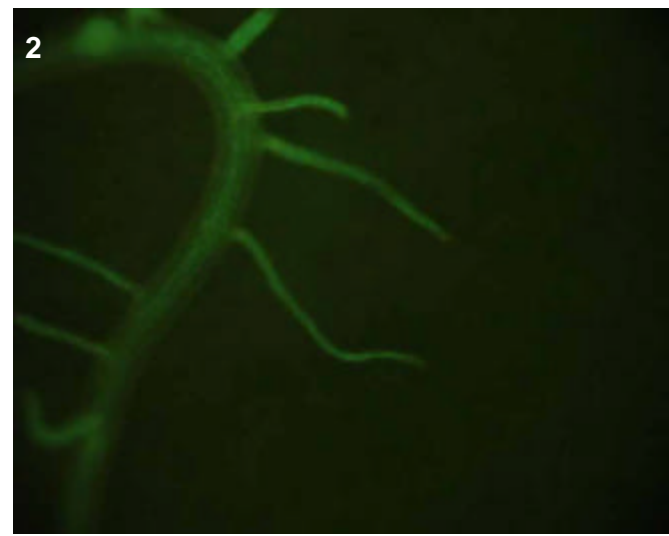
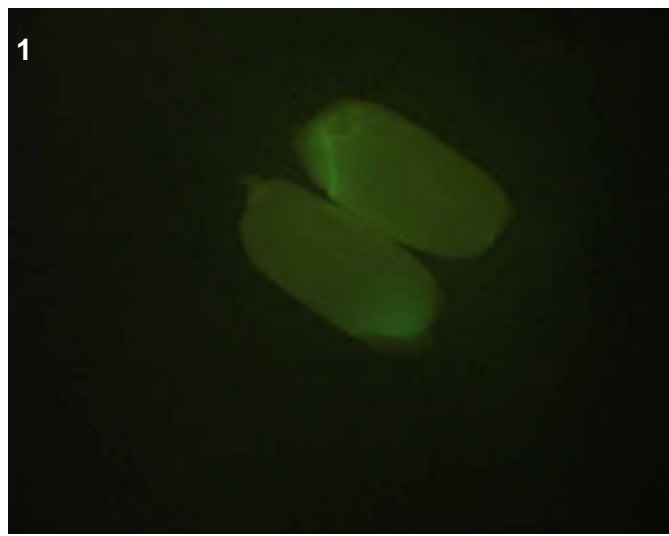
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression

T1 seedling comments

Interesting leaf pattern (see picture 5).

Genotype: ASK D11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

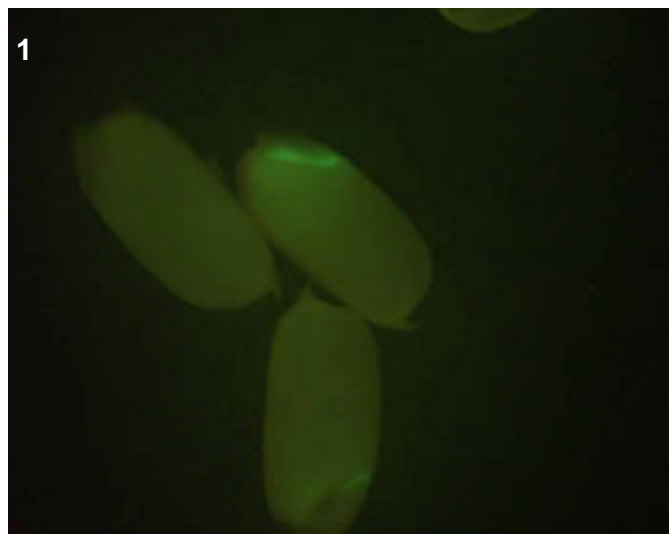
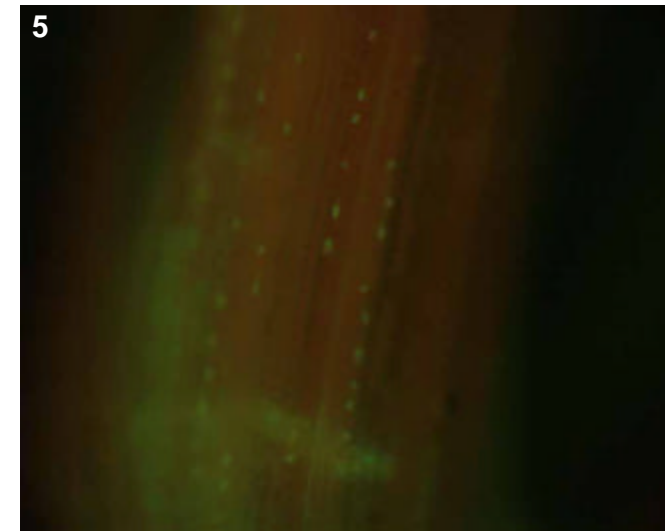
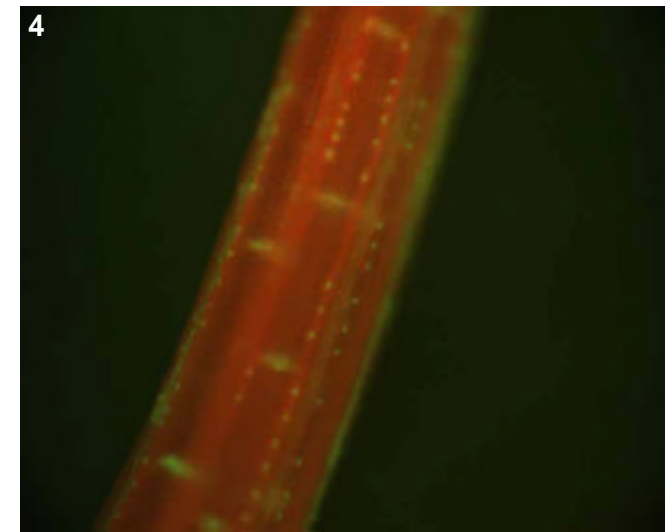
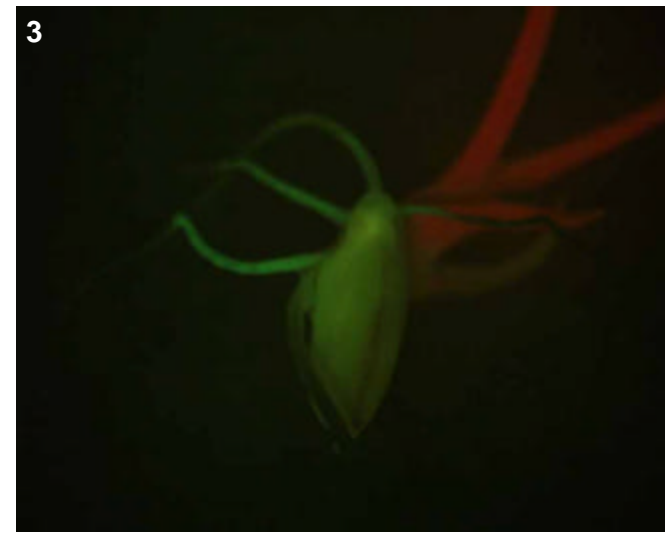
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

This line appears to be mutant--the single GFP+ plant had a dwarf root system (pics 2-3) and shoot (pics 4-5). Note the particularly bright horizontal vascular elements and guard cells in the shoot.

Genotype: ASK E03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

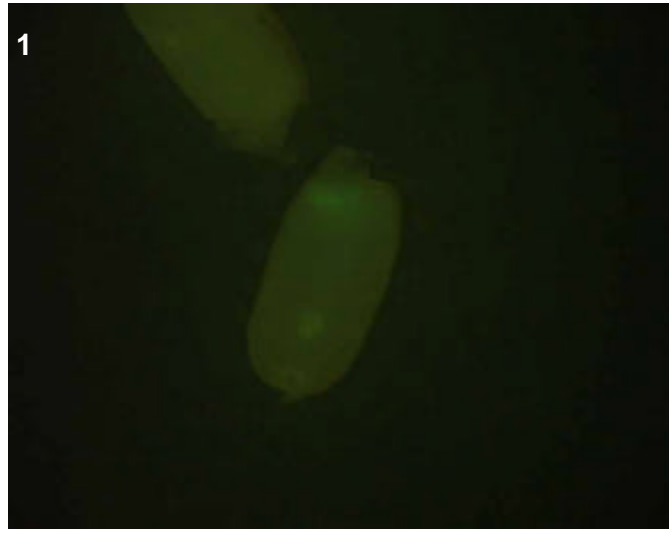
- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had faint expression

T1 seedling comments

Genotype: ASK F04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

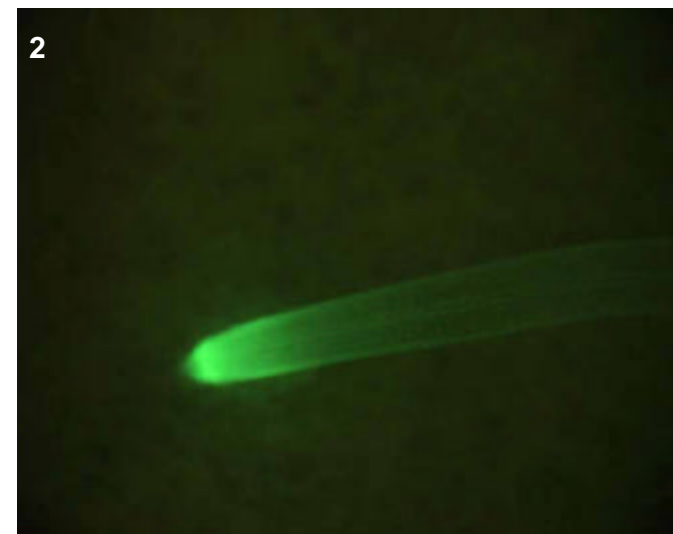
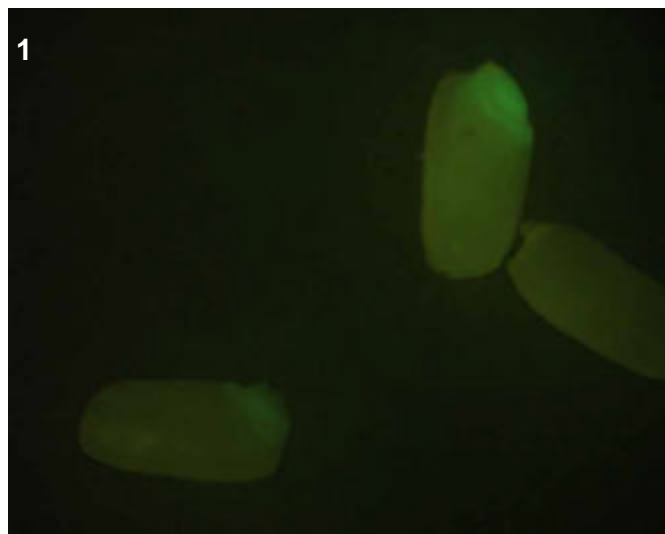
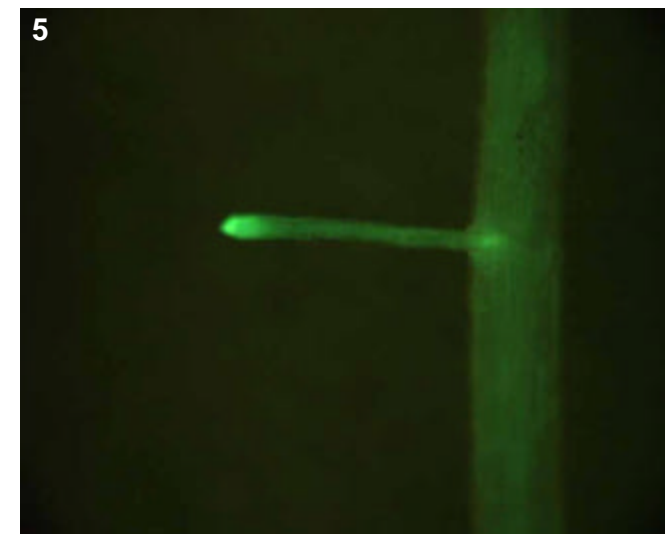
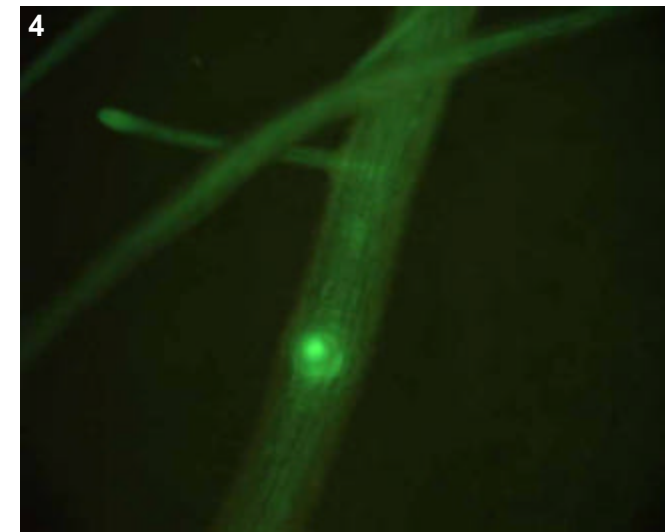
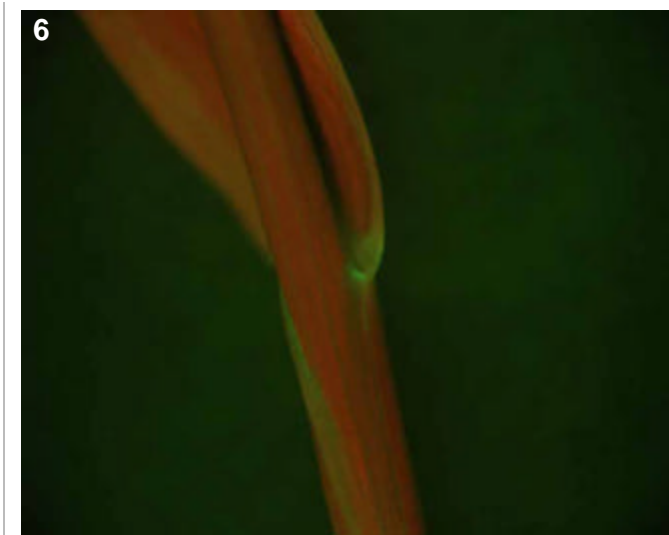
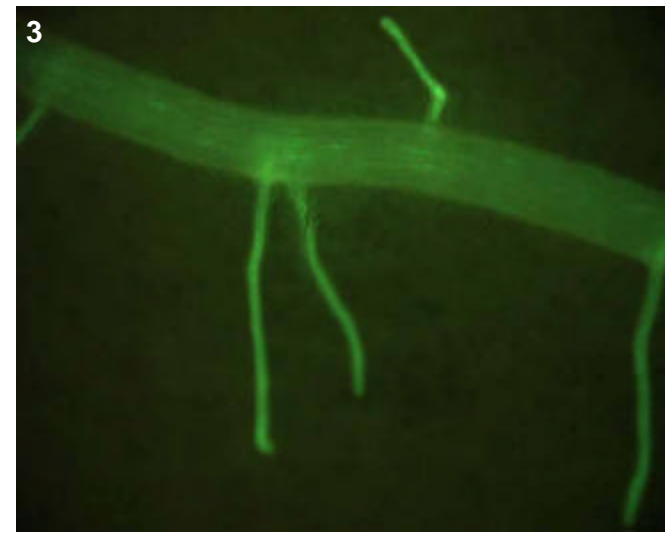
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression (pic 1)

T1 seedling comments

Genotype: ASK F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

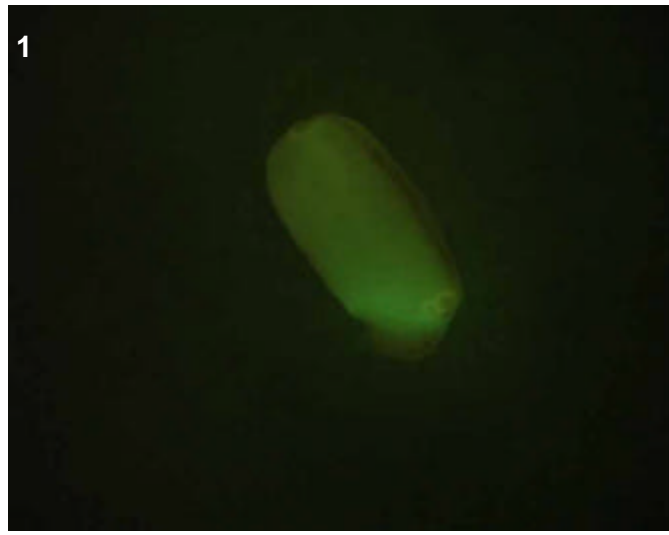
No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

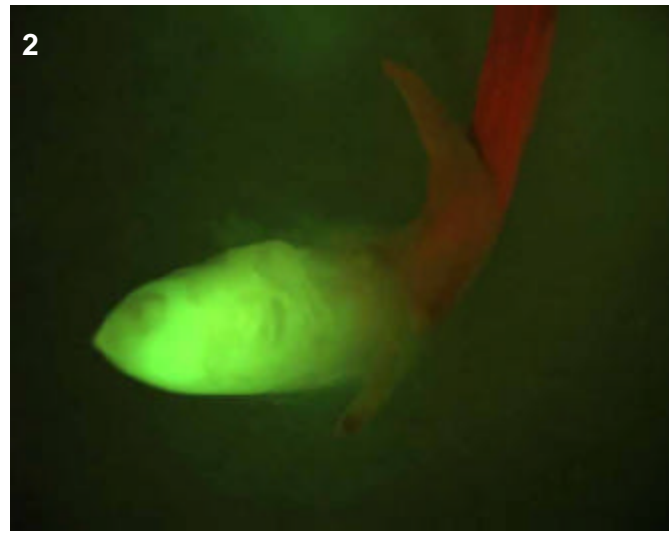
Confocal?

Number T2 seed produced:

1



2



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Perhaps a mutant line, no seminal roots and aborted crown roots (pic 2).

Genotype: ASK G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

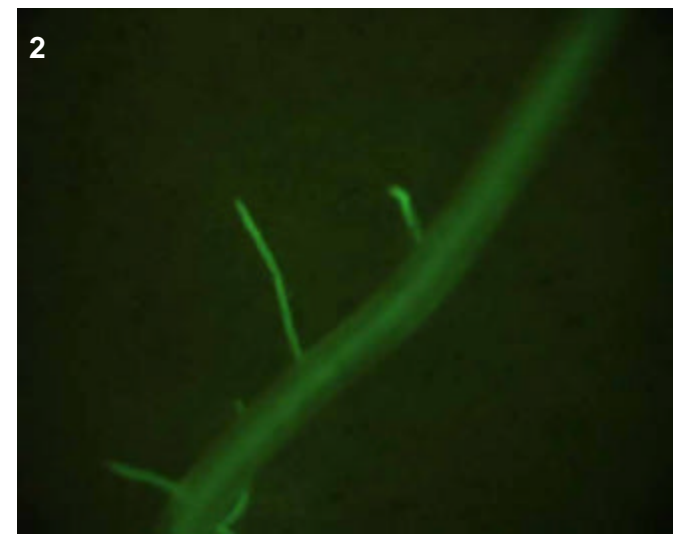
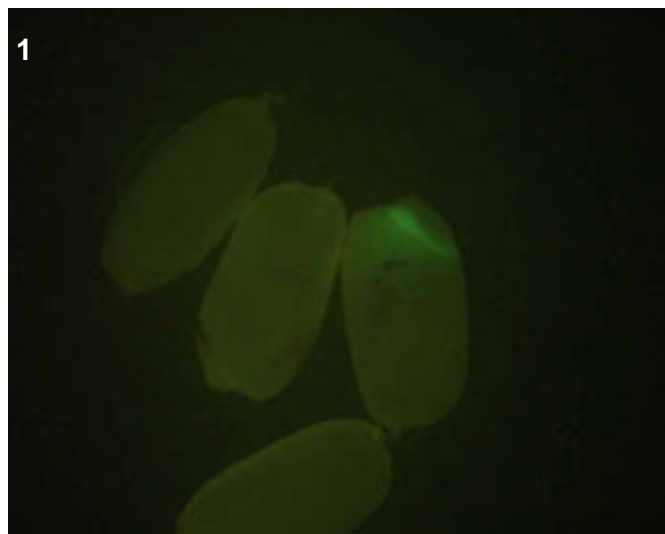
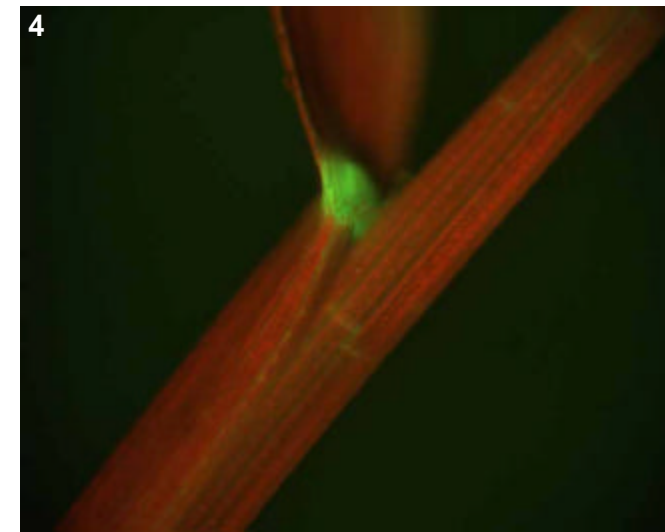
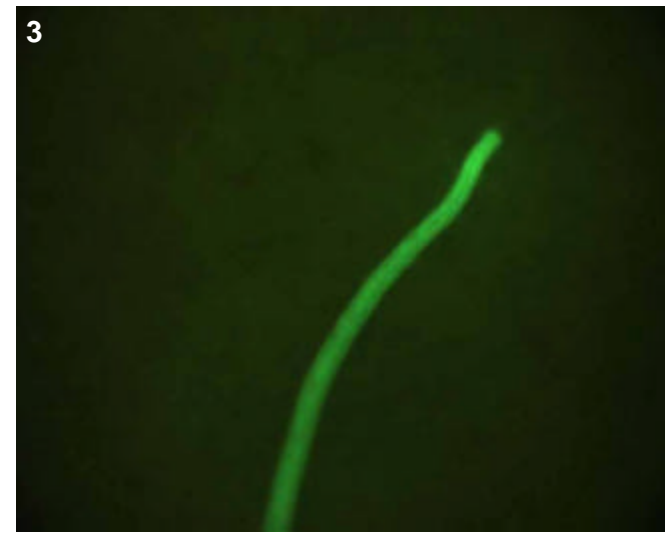
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

Root expression was most bright in the young, thin crown roots (pics 2-3) and looks like cortical expression.

Genotype: ASK G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

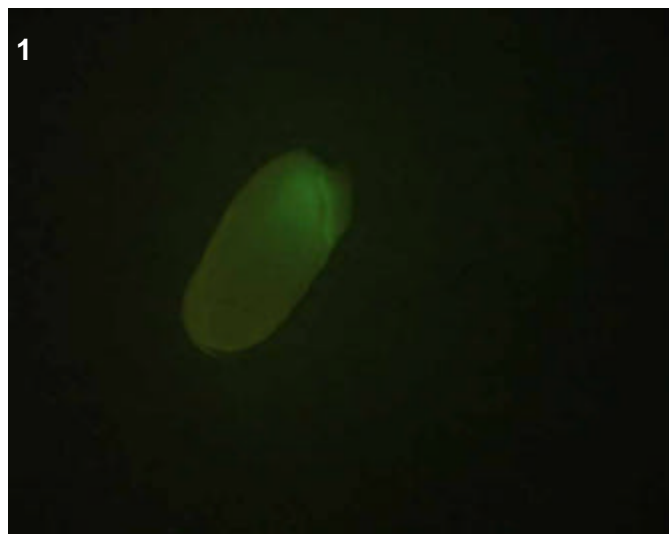
T1 in greenhouse?

YES, 3 GFP+ plants

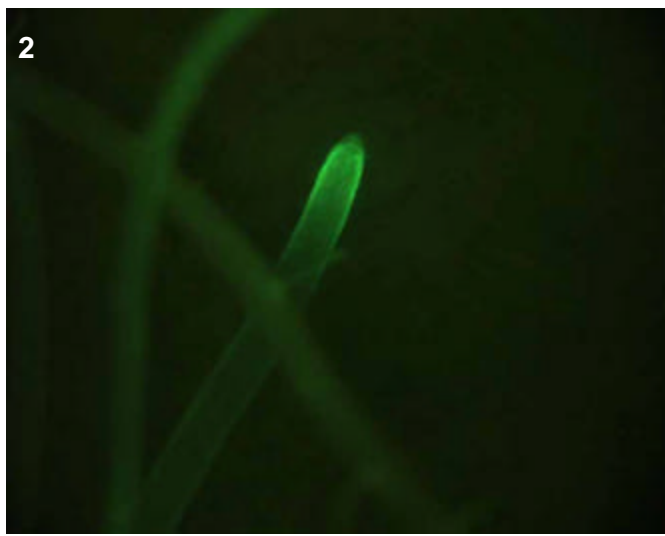
Confocal?

Number T2 seed produced:

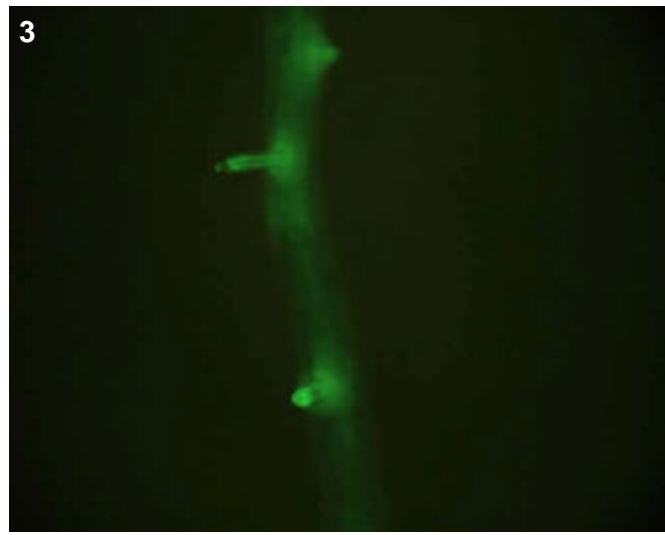
1



2



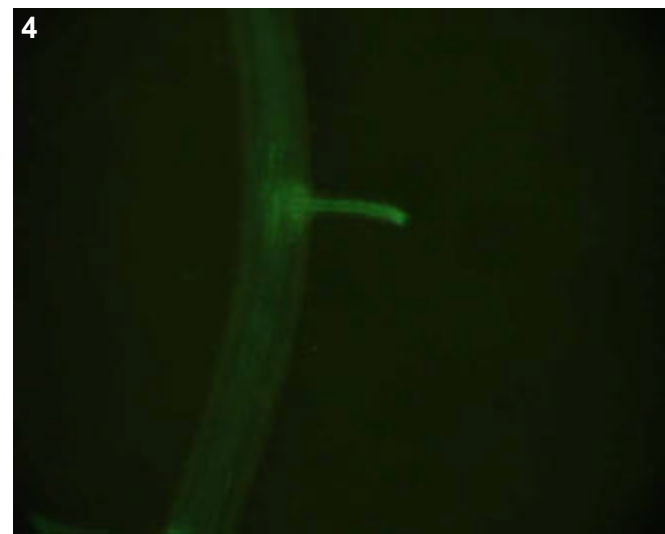
3



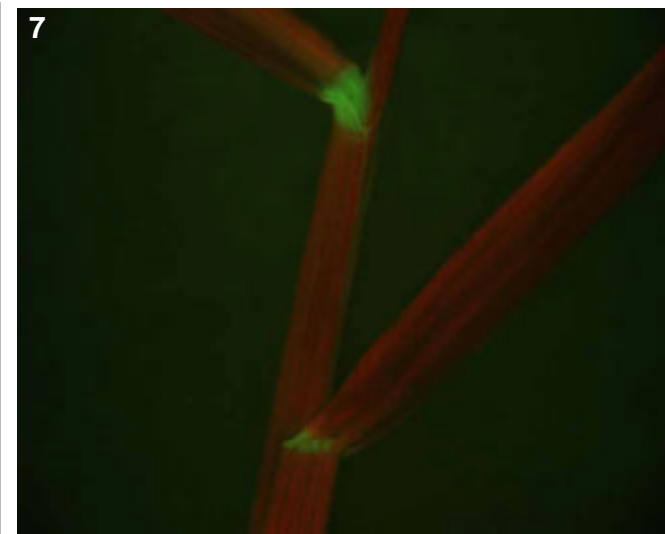
6



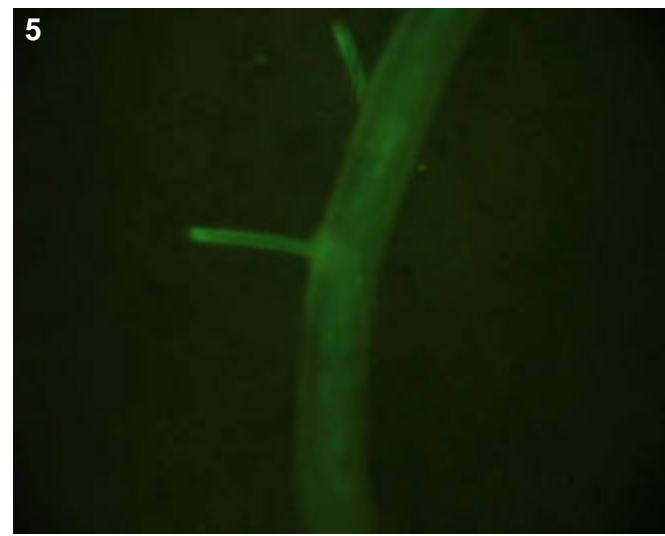
4



7



5



T0 comments

T1 seed comments

5/5 seeds had expression

T1 seedling comments

Root expression was brightest at the root apex (pics 2-5).

Genotype: ASL E10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

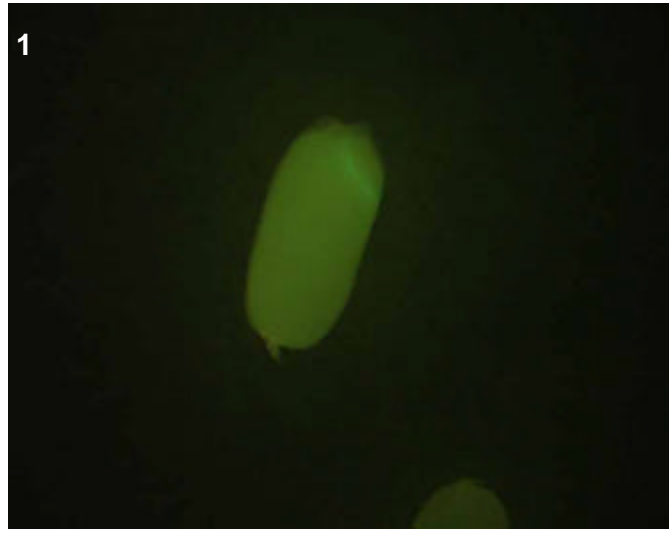
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

None of the seeds germinated after 1 week. After 2 weeks still no growth. Perhaps a germination mutant line?

Genotype: ASM A04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

No GFP detected

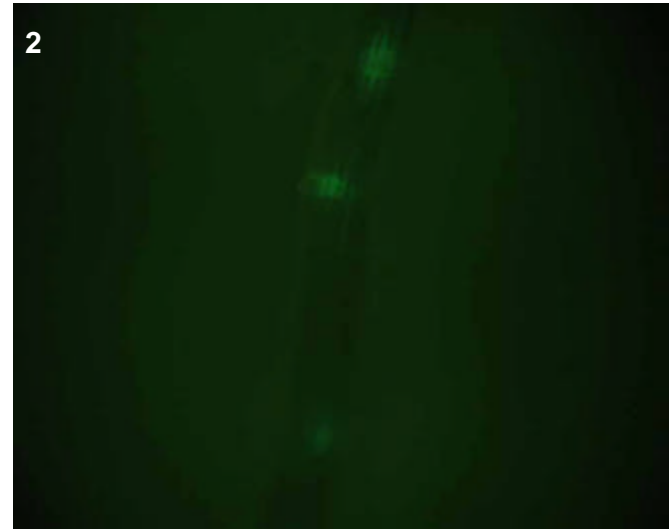
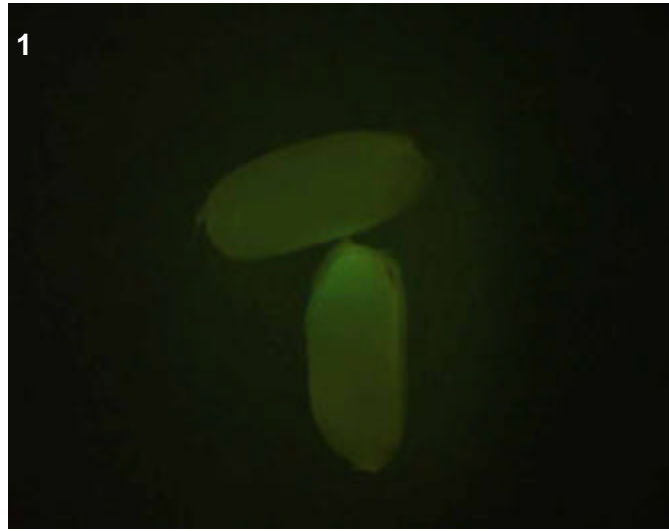
T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

WIP

Number T2 seed produced:



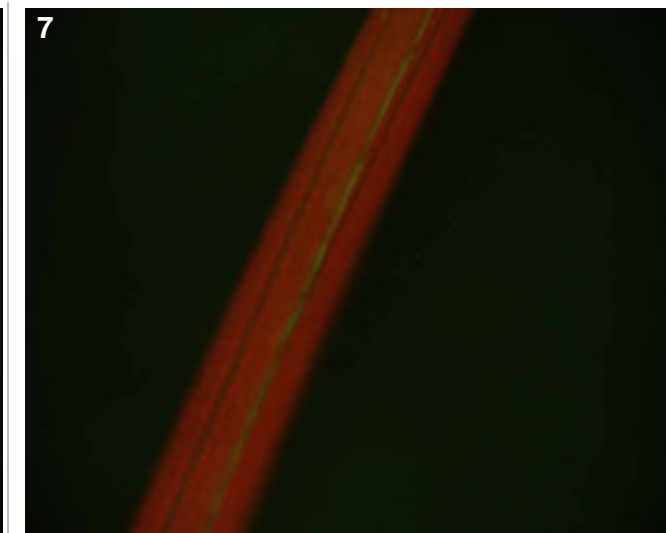
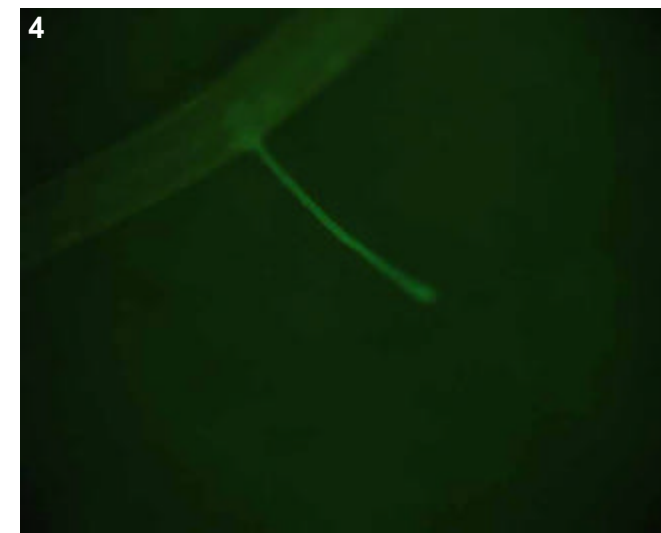
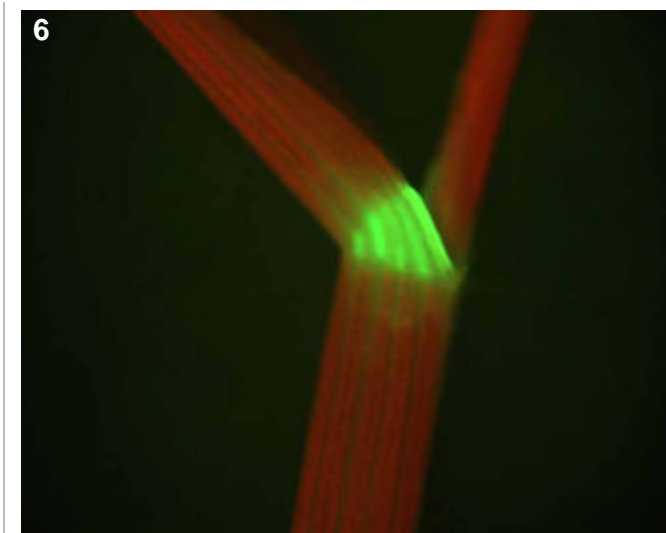
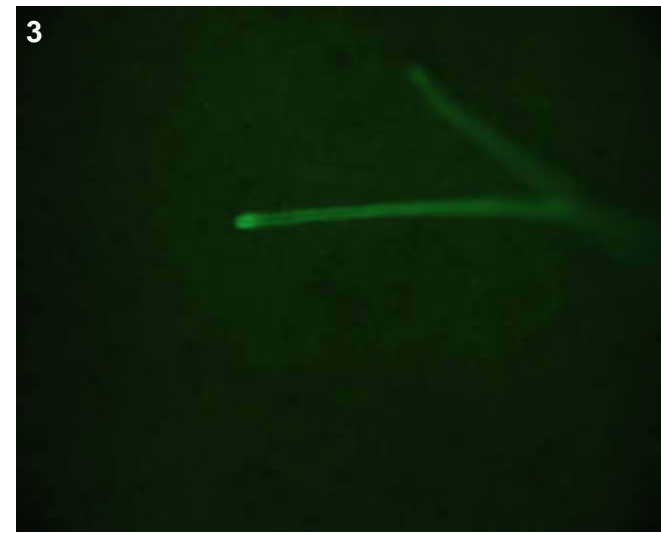
T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Root expression is strictly limited to the lateral roots, clearly evident at both lateral root emergence (pic 2) and in the elongated lateral roots (pics 3-5).



Genotype: ASM C07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

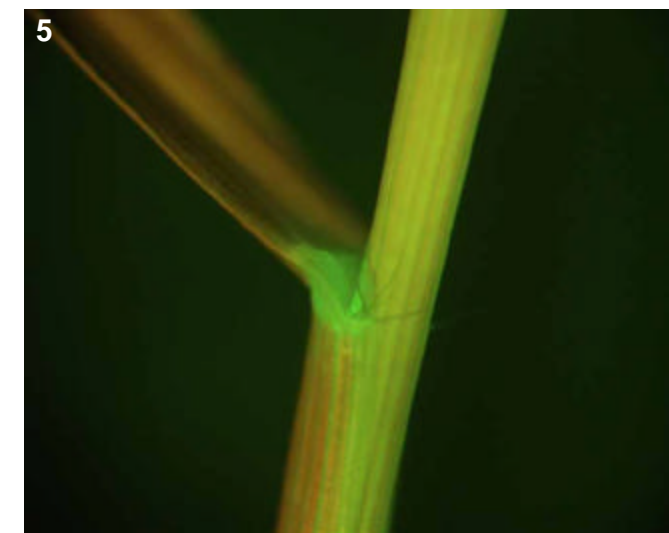
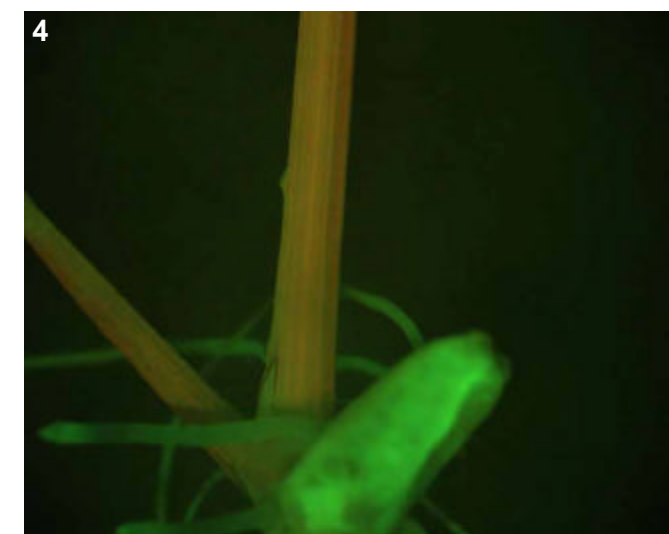
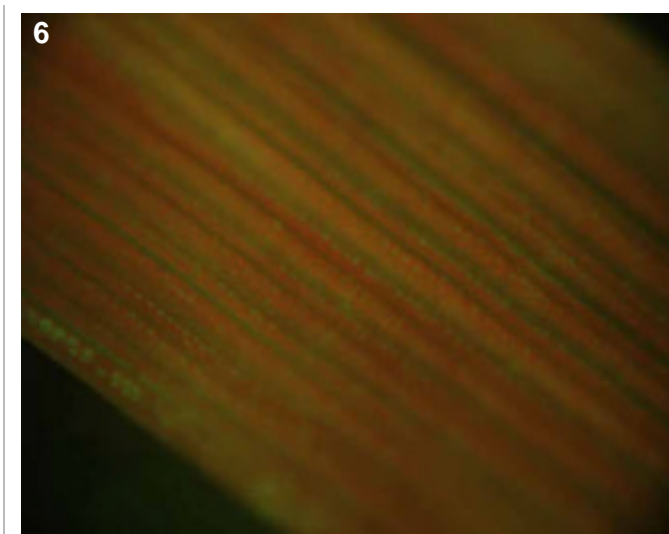
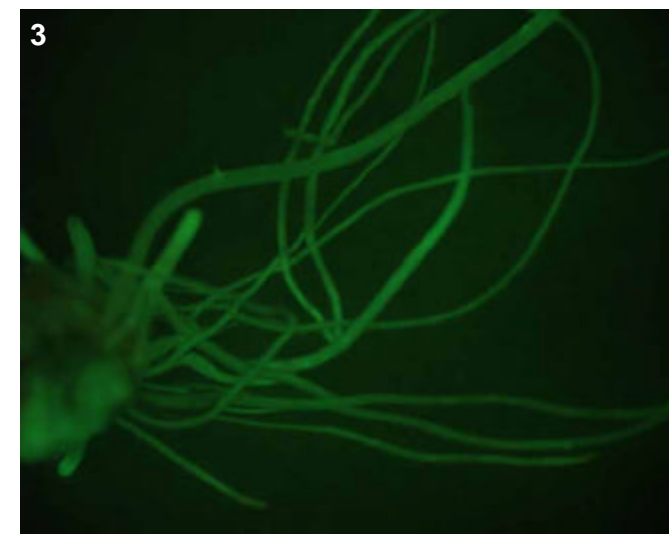
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression. Just a small spot of expression near tip of embryo region (pic 1).

T1 seedling comments

Extremely bright expression in the seedlings (pics 2-6), probably constitutive.

Genotype: ASM H11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

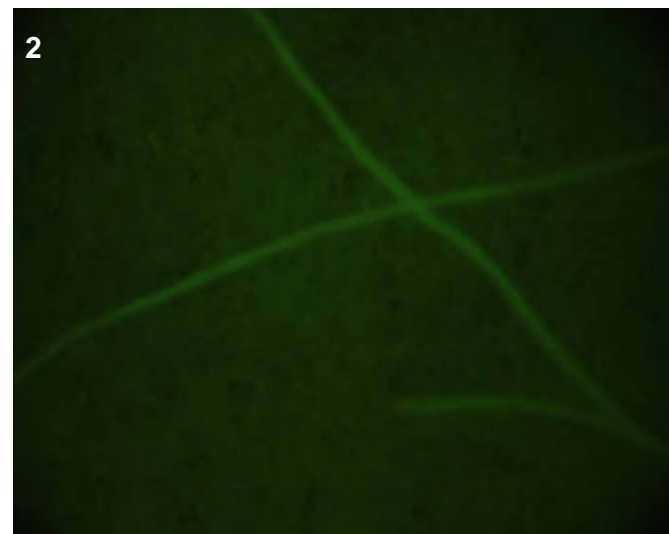
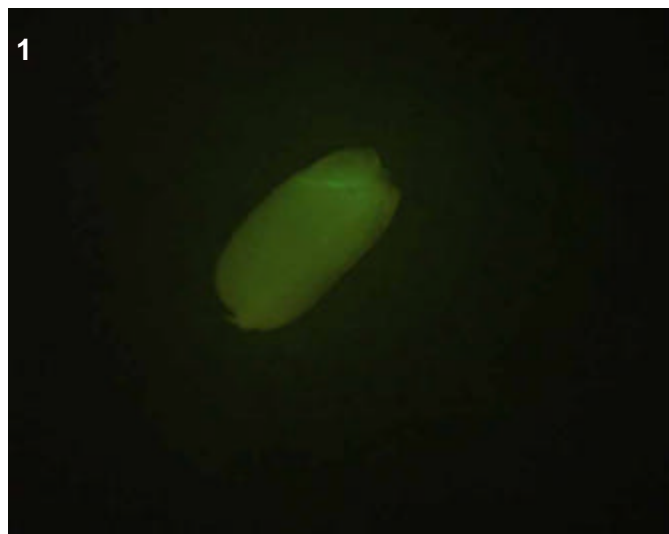
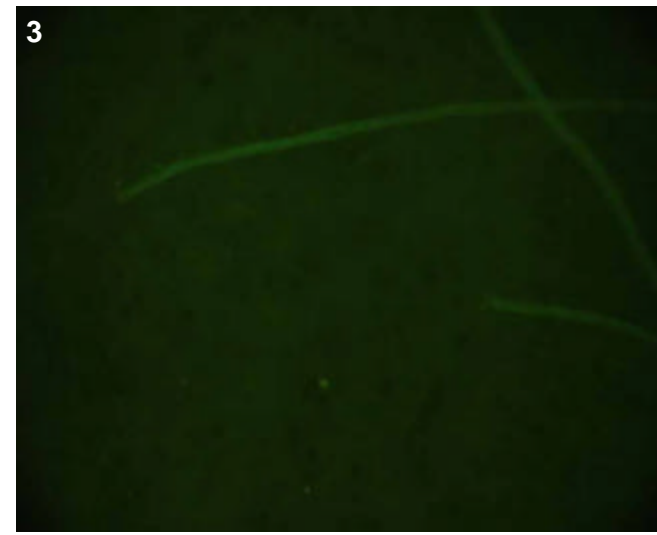
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Root expression appeared stelar and was limited to the lateral roots (pics 2-3).

Genotype: ASN A07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

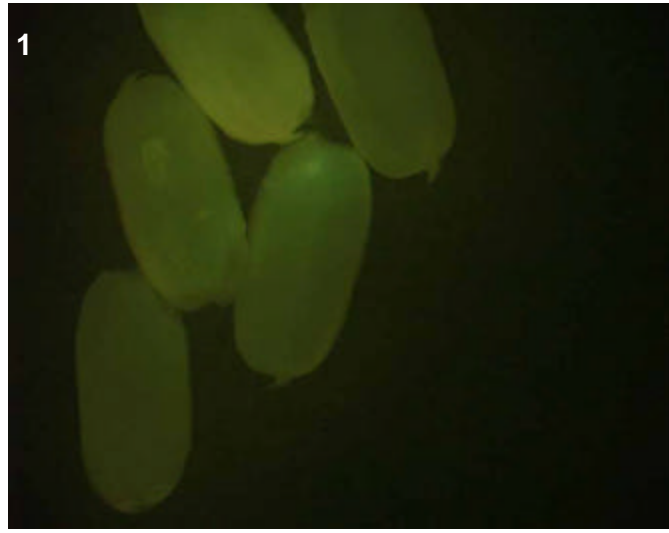
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had faint expression in the embryo

T1 seedling comments

Genotype: ASN G04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

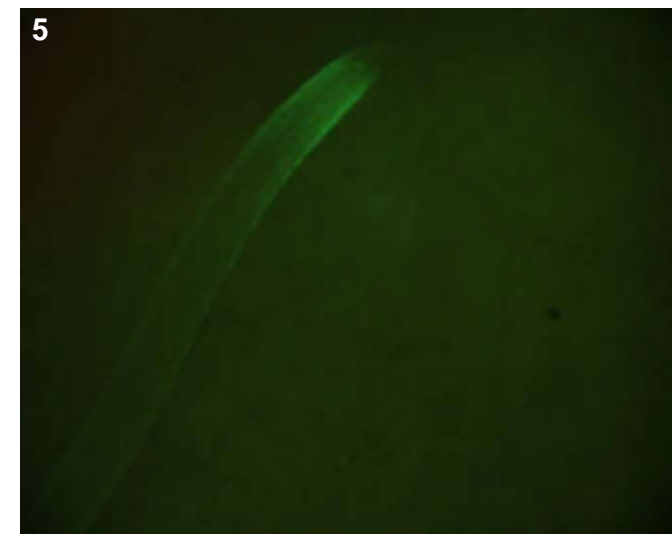
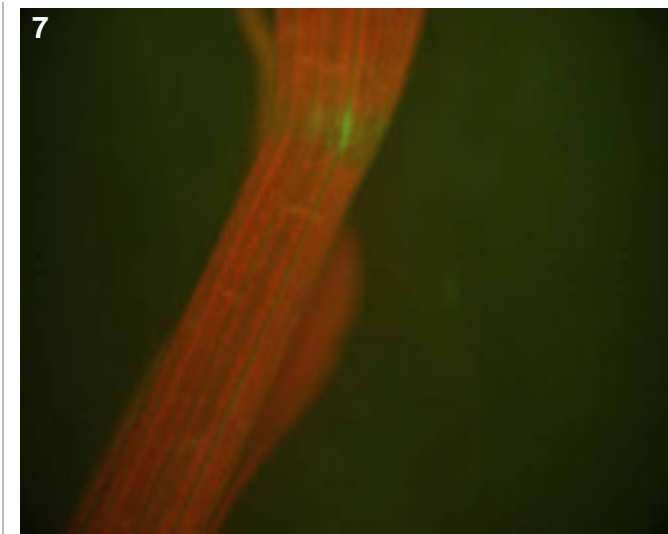
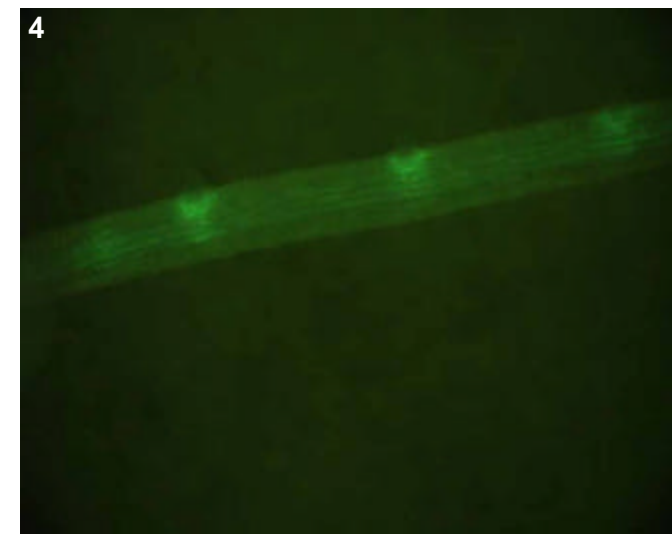
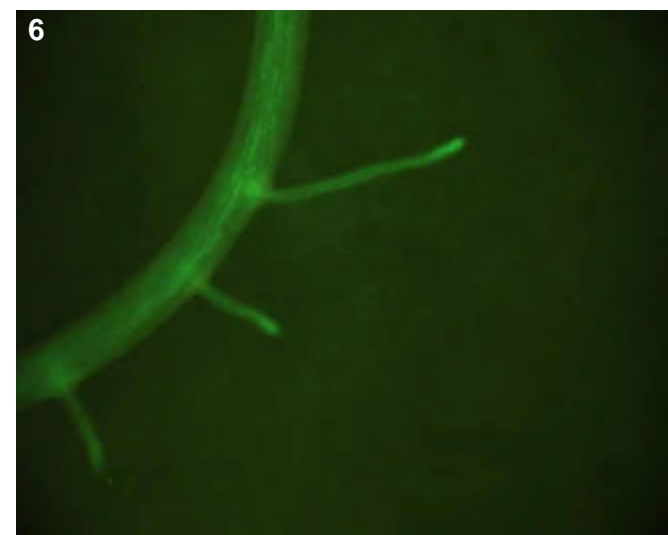
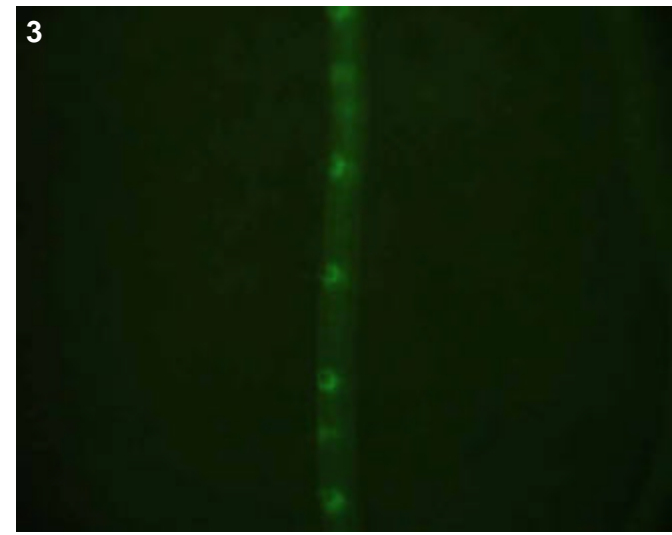
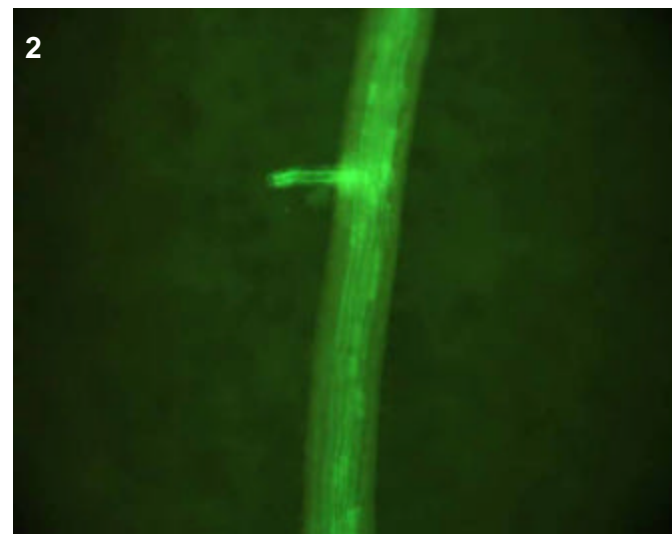
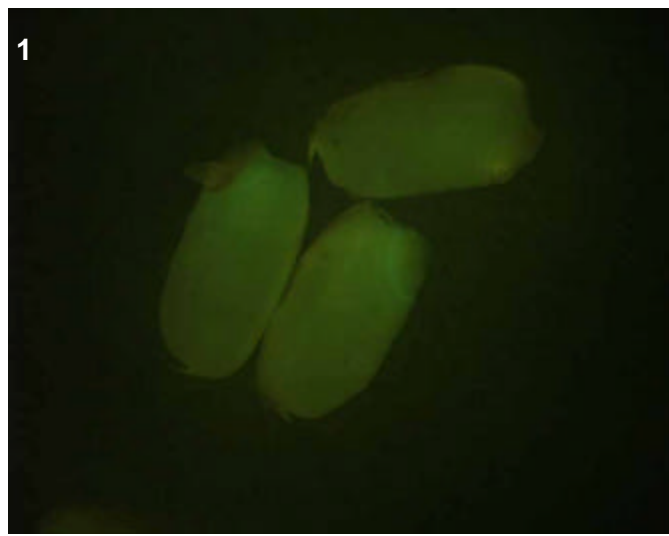
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/4 seeds had medium expression

T1 seedling comments

The root expression (pics 2-6) was much brighter than the shoot (pic 7).

Genotype: ASO G03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:



T0 comments

T1 seed comments

1/4 seeds had expression

T1 seedling comments

Genotype: ASP A10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

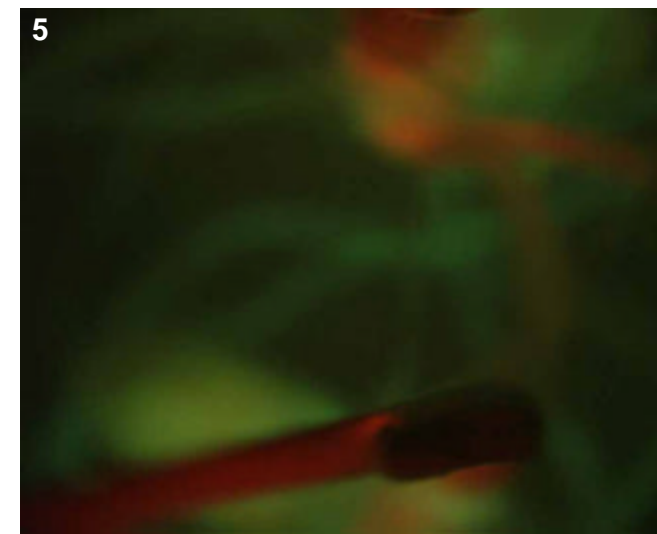
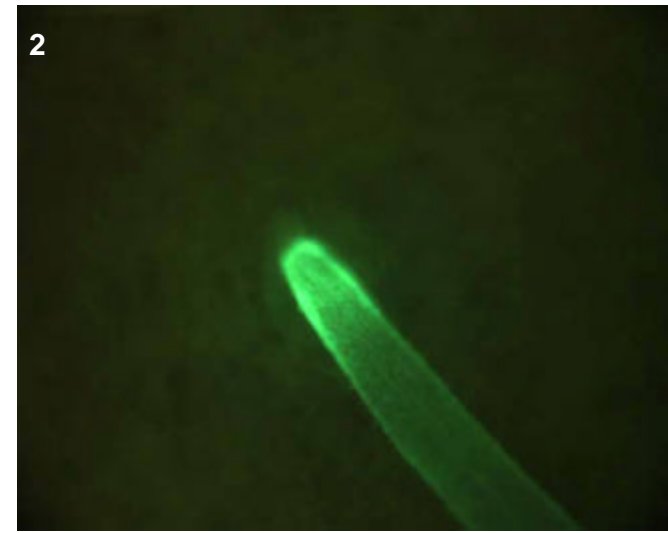
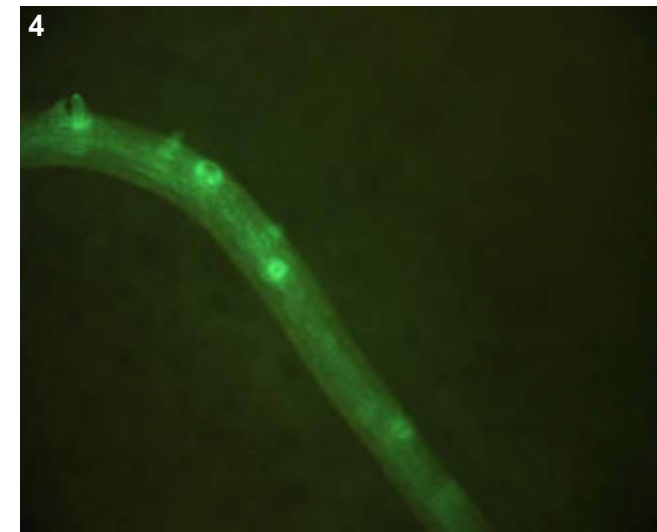
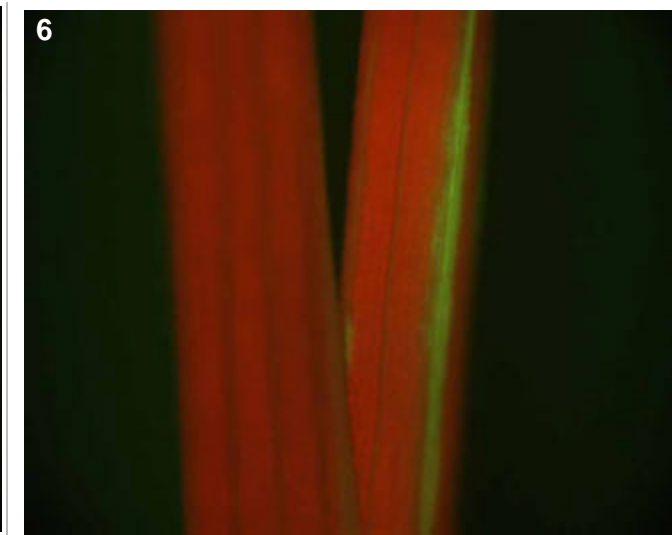
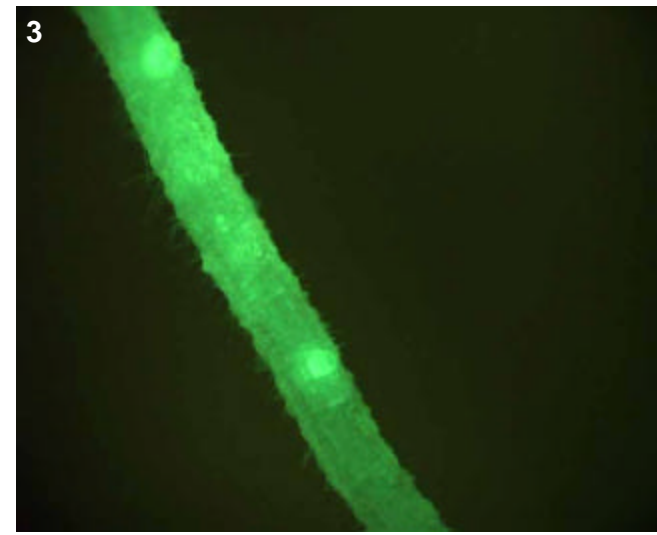
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: ASP B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

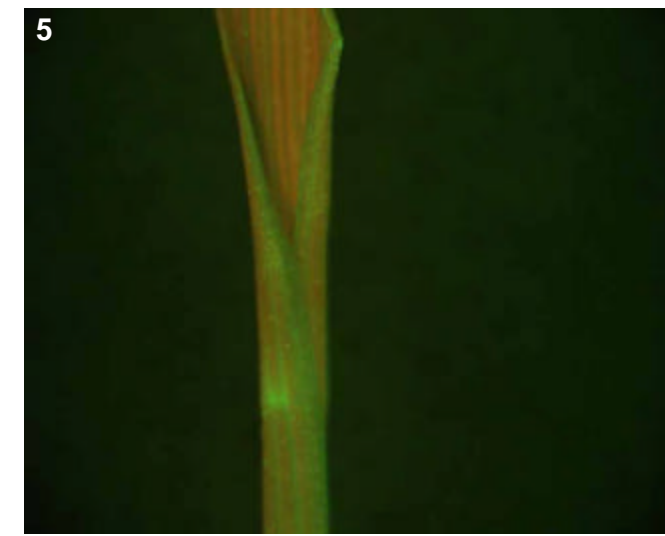
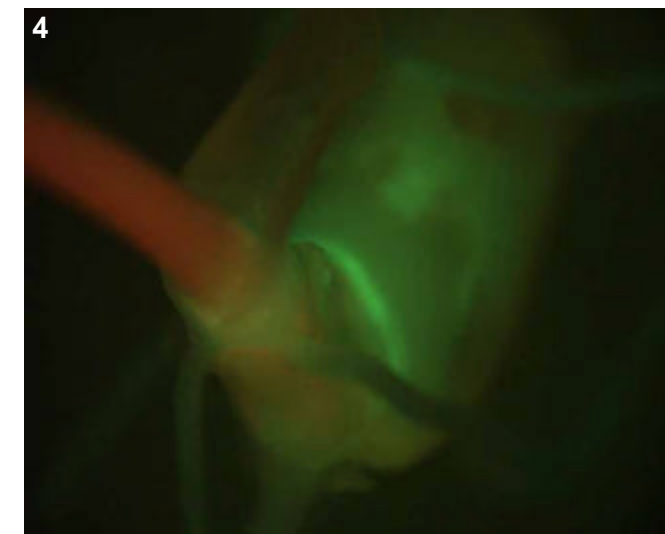
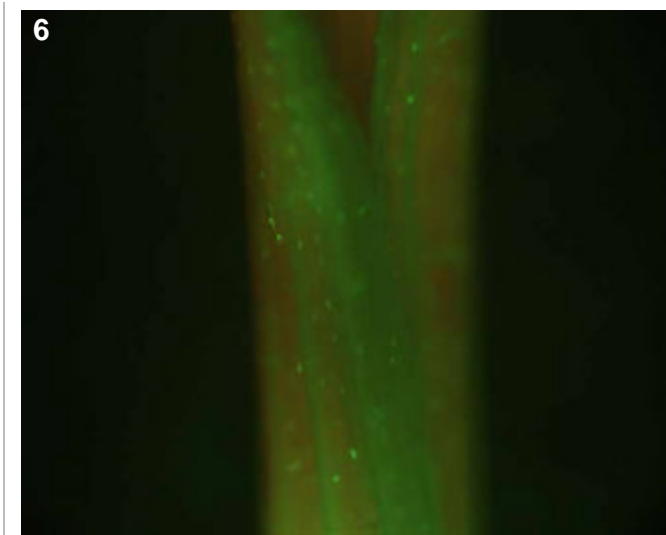
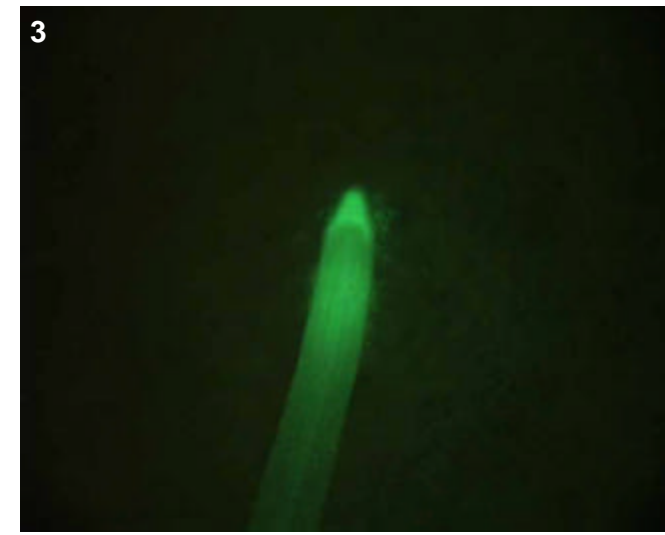
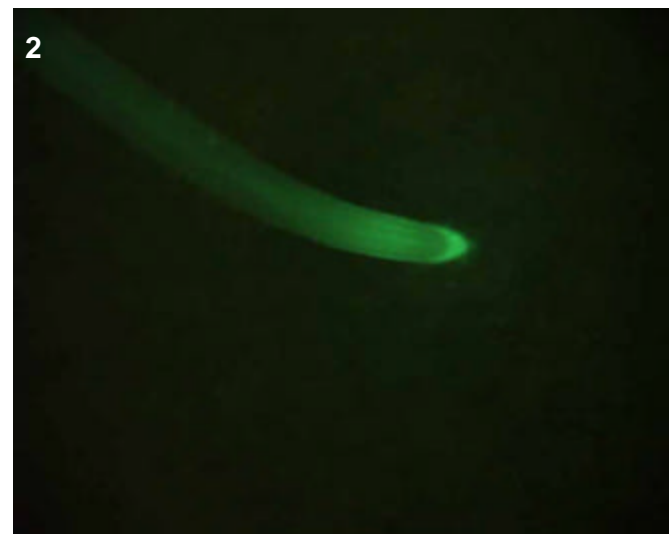
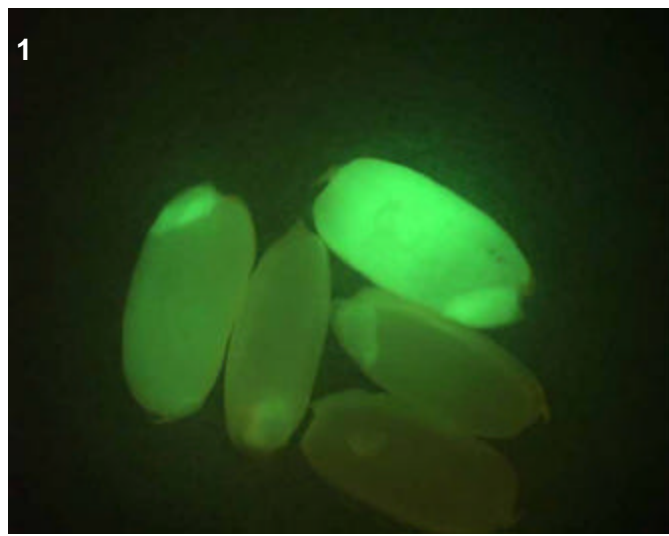
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression ranging from aleurone, coleorhiza and embryo, to just embryo.

T1 seedling comments

Genotype: ASP C04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

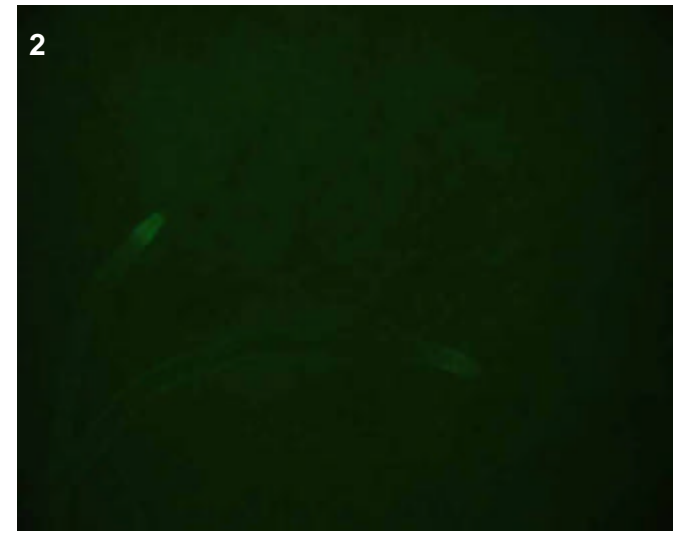
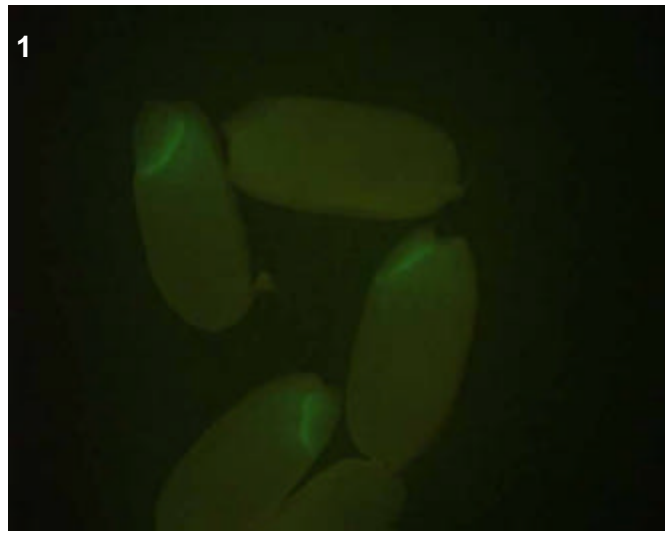
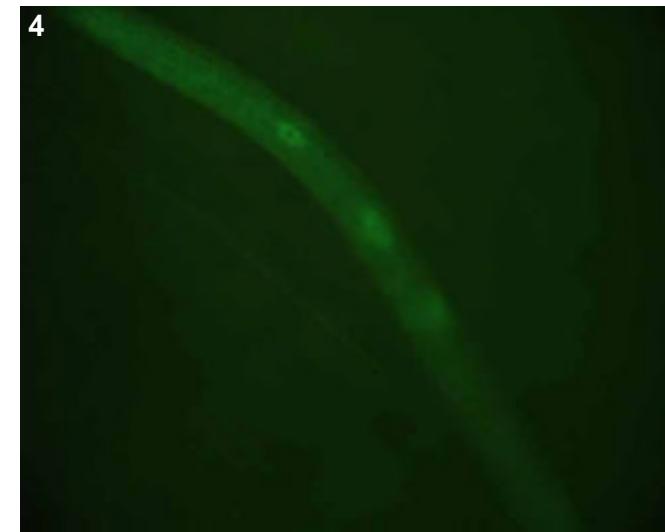
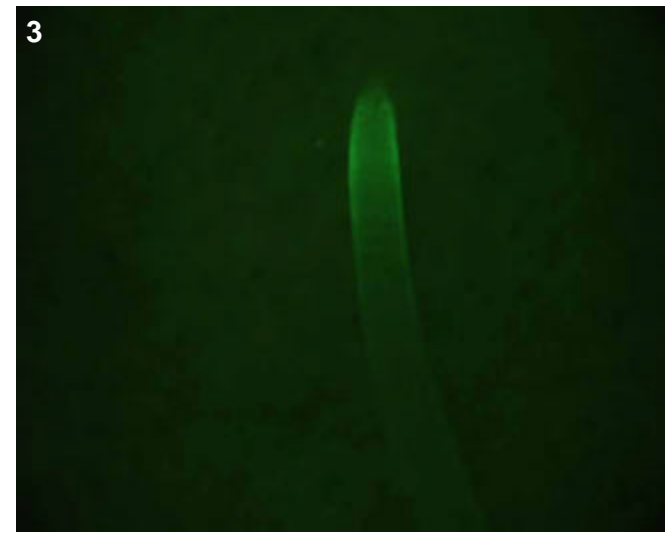
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

A nice epidermal-specific line in roots (pics 2-4). The plants were abnormally small, perhaps mutant?

Genotype: ASP F04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

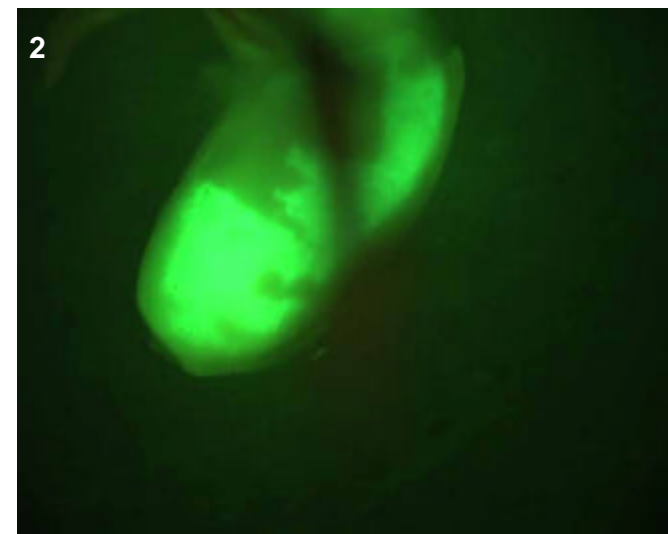
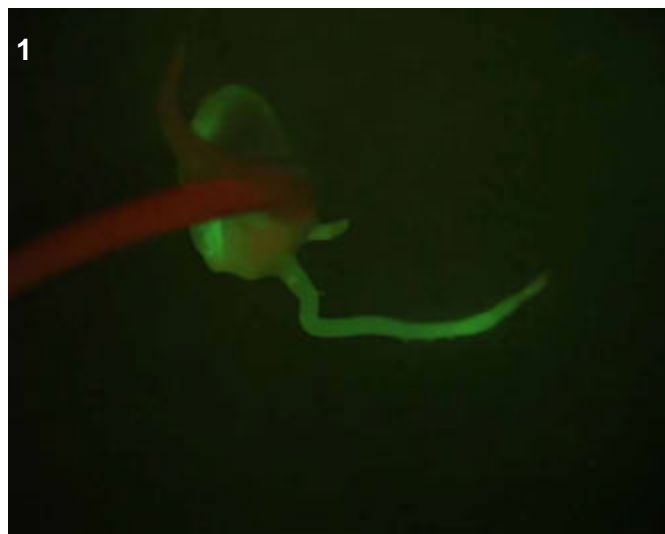
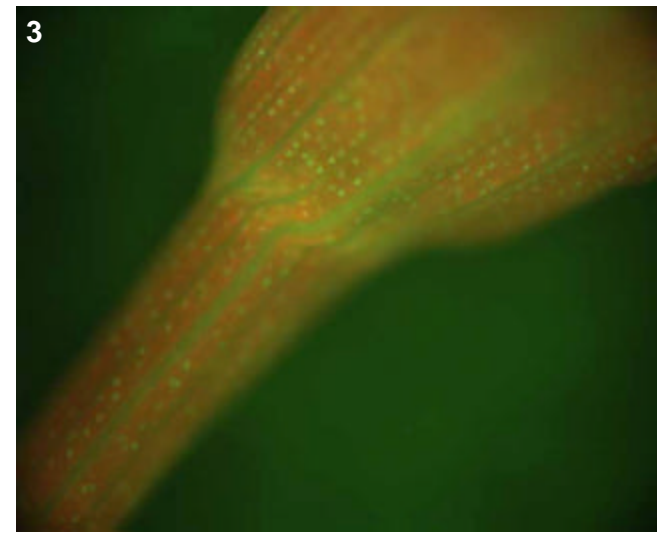
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had faint expression in the scutellum (no picture taken)

T1 seedling comments

This line appears to be mutant--there were no seminal or lateral roots, just a few small crown roots (pic 1). Endosperm was very bright (picture 2), as was the shoot vascular and guard cells (pic 3).

Genotype: ASP G09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

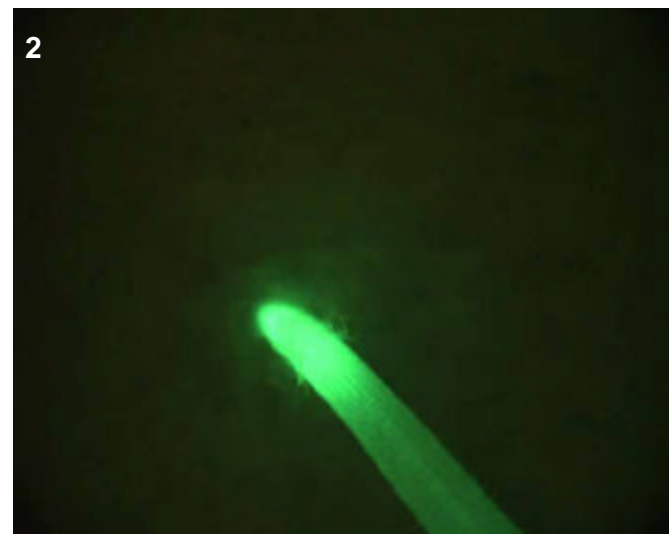
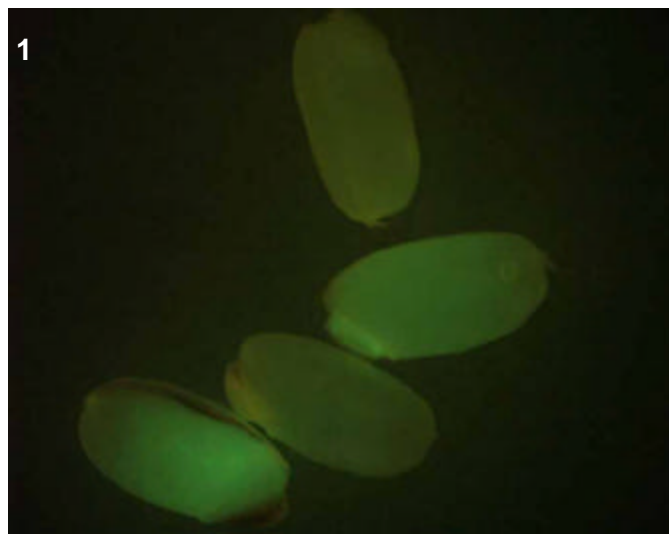
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



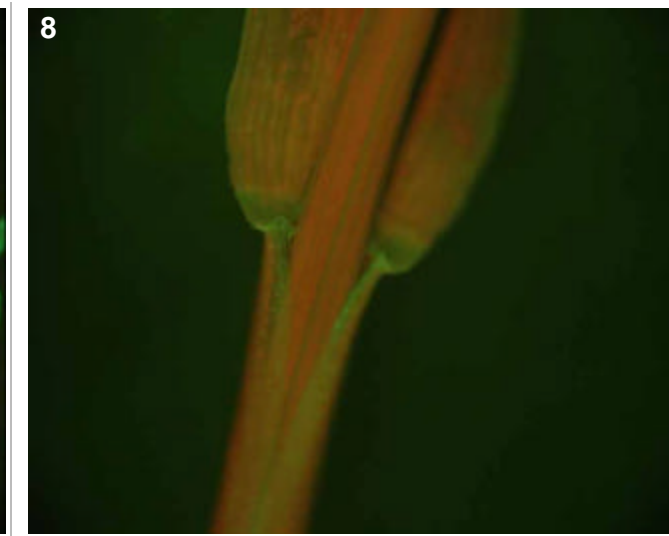
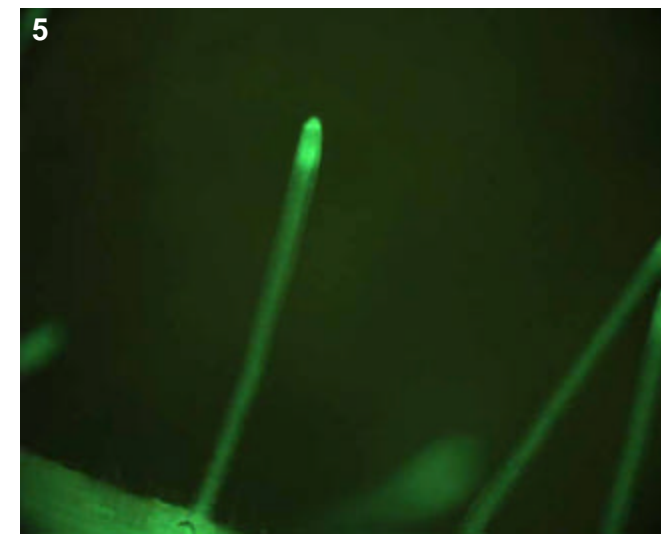
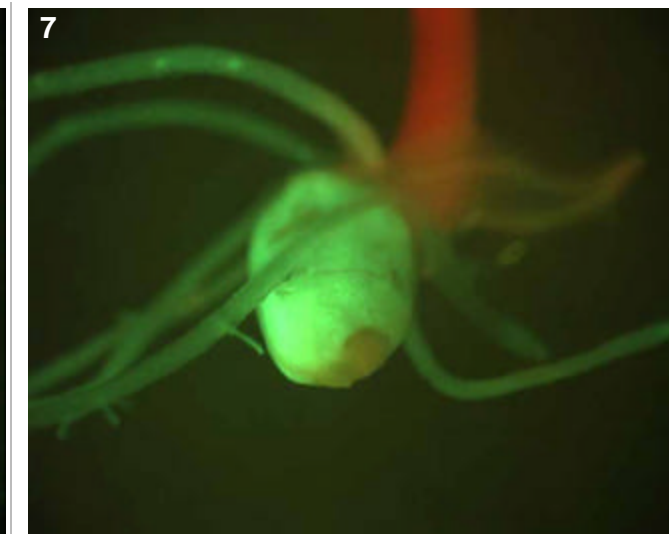
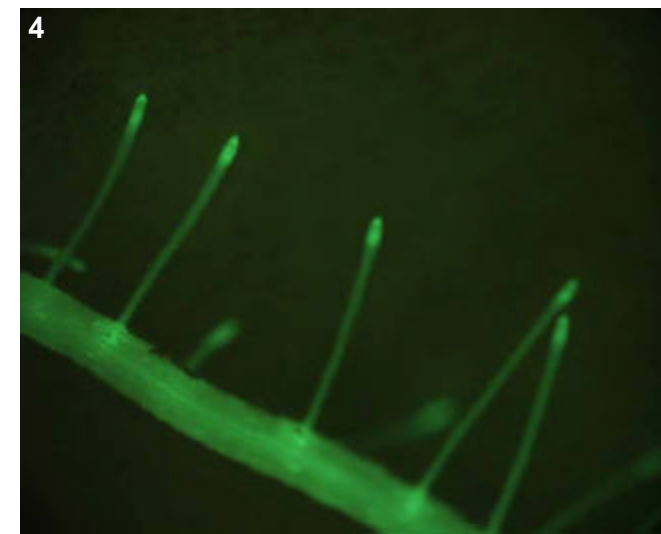
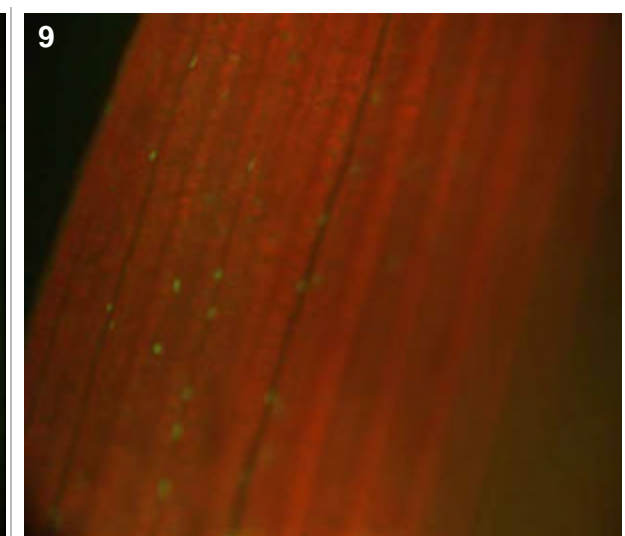
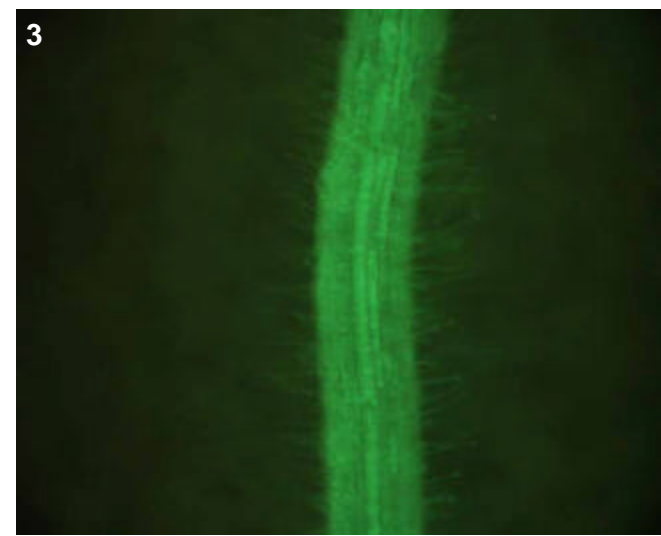
T0 comments

T1 seed comments

2/4 seeds had medium aleurone/endosperm expression

T1 seedling comments

Extremely bright expression in root and endosperm (pics 2-7), perhaps in a constitutive manner. The root hairs in pic 3 appear to be GFP positive.



Genotype: ASP H08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

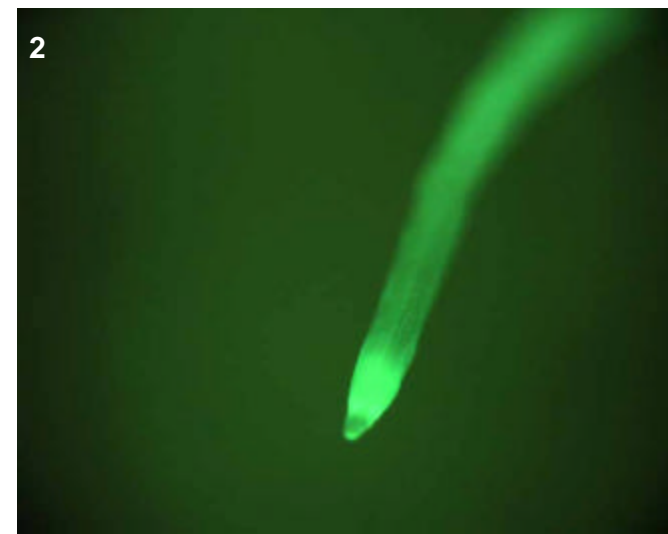
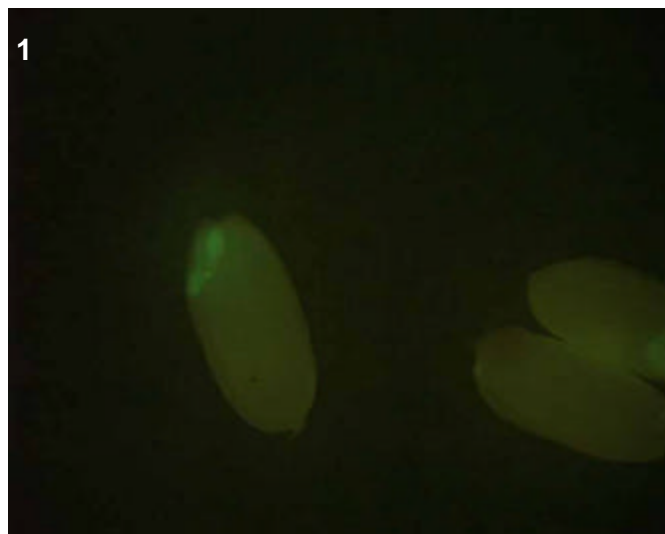
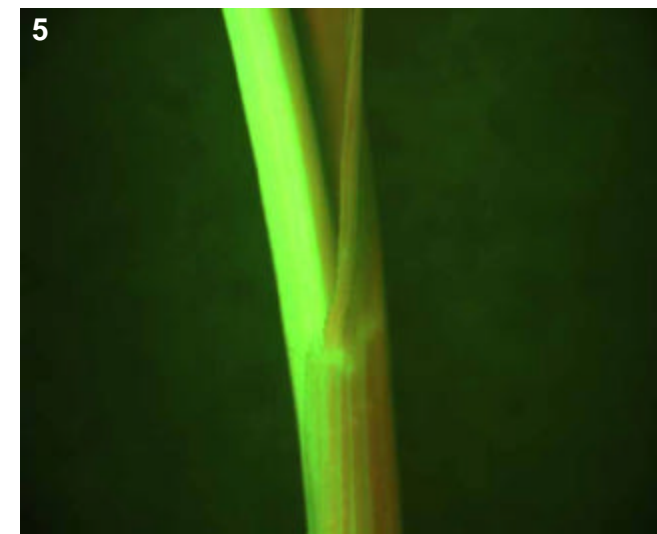
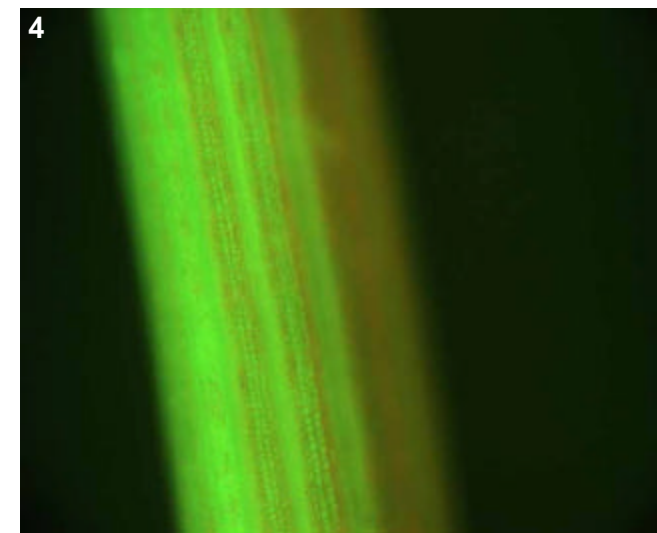
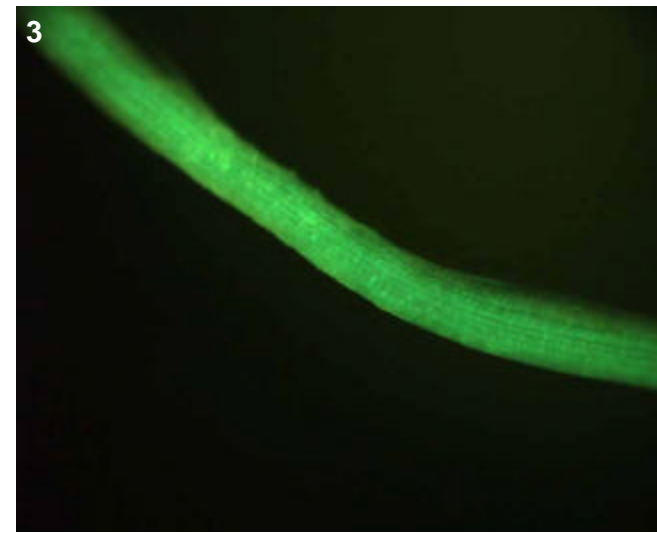
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression

T1 seedling comments

This looks like a bright epidermal pattern in both root (pics 2-3) and shoot (pics 4-5).

Genotype: ASQ B07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

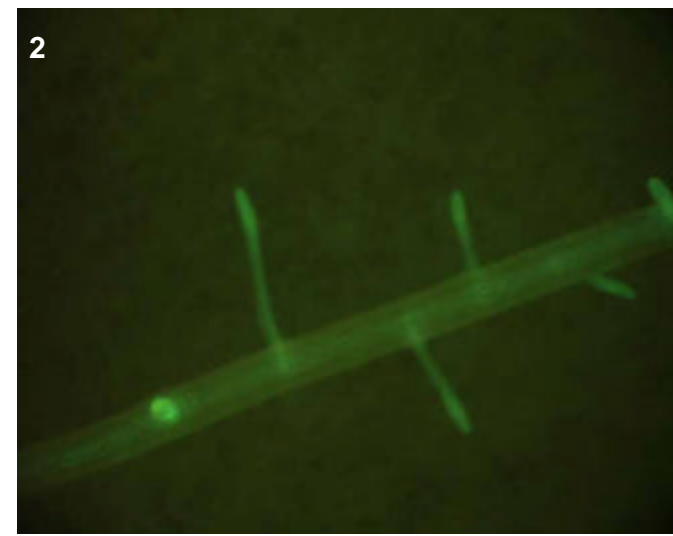
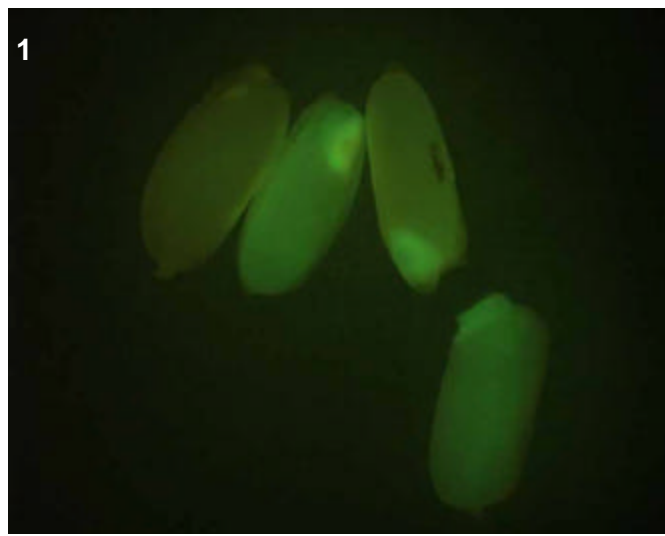
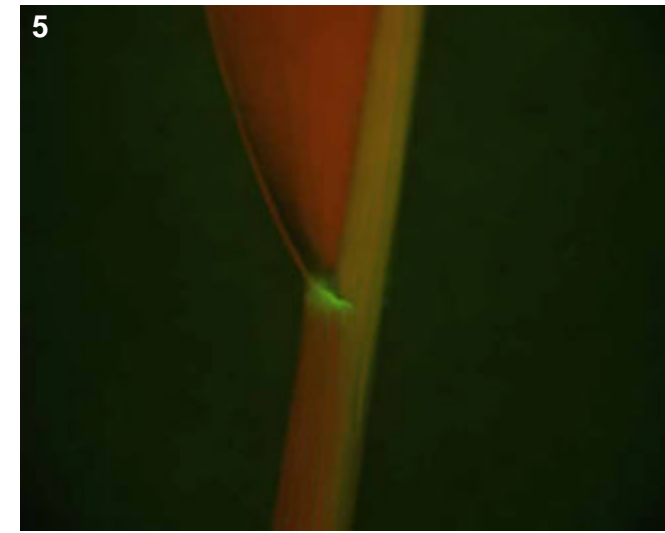
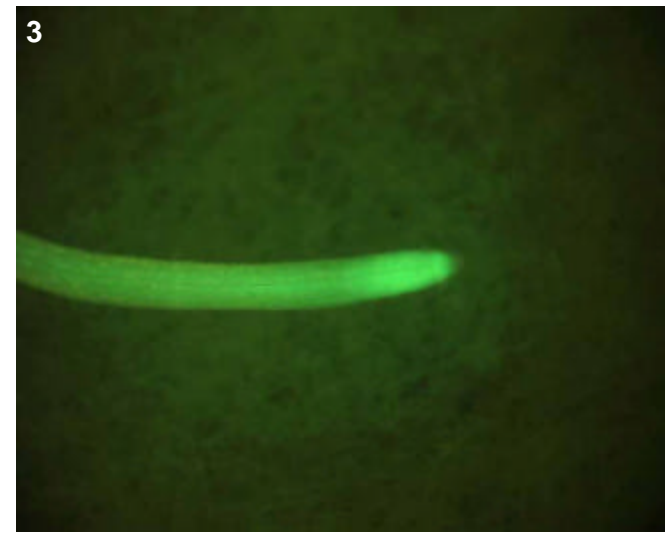
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: ASQ B10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

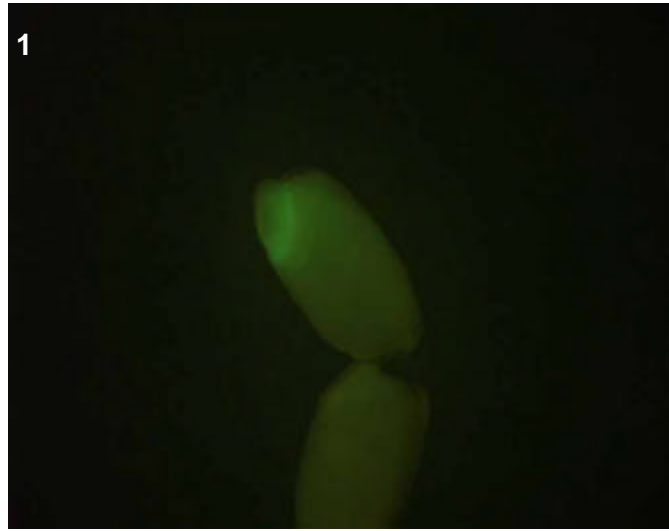
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Genotype: ASQ E03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

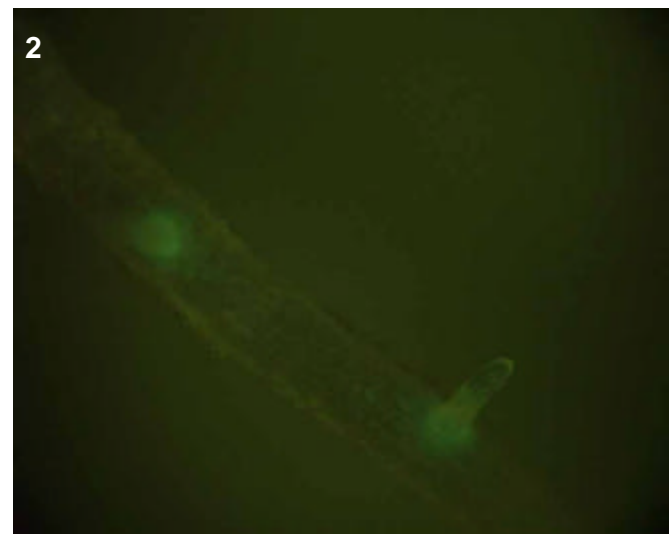
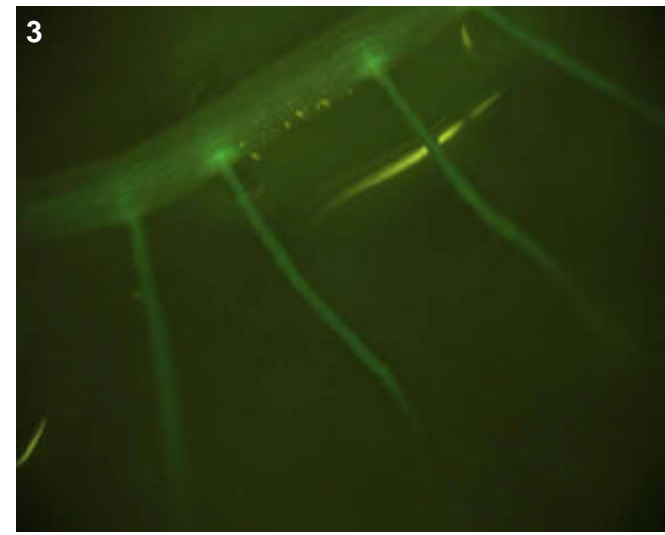
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had faint expression

T1 seedling comments

Genotype: ASQ E12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

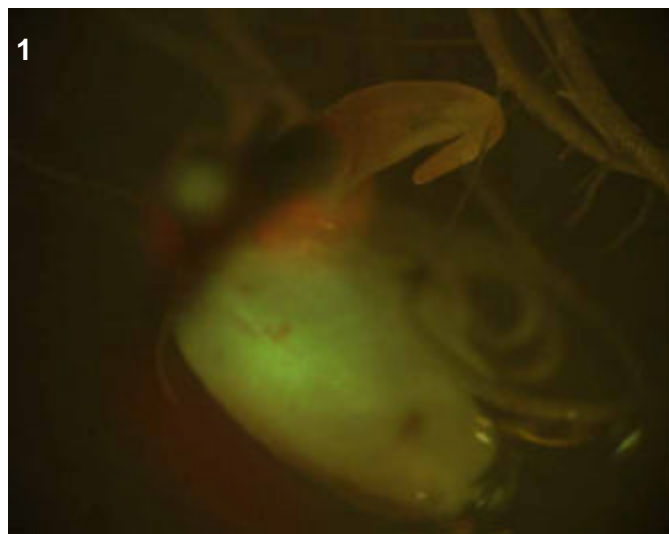
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had faint expression (no picture taken)

T1 seedling comments

Genotype: ASQ F12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

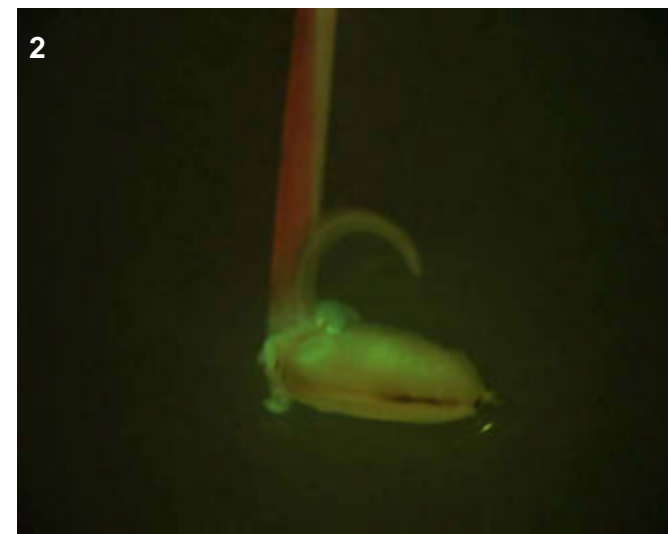
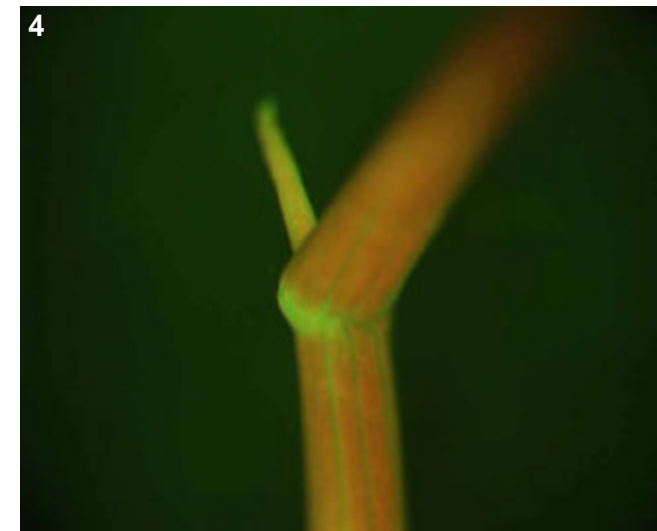
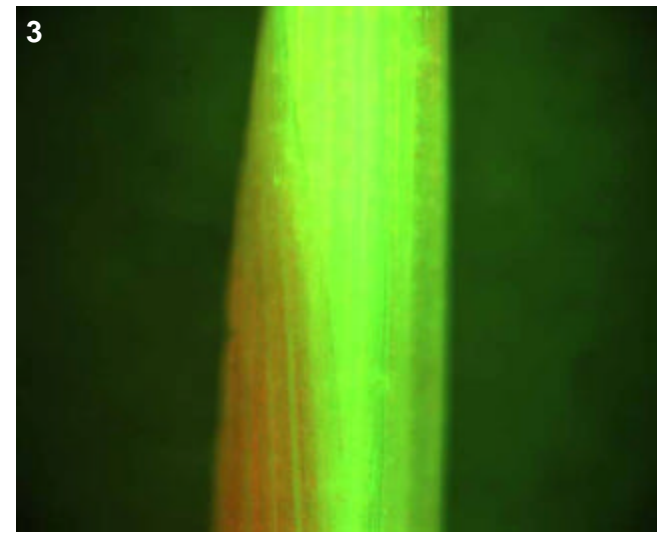
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

This line appears to have a mutant phenotype: no seminal or crown roots. Shoot expression was bright. 4 seedlings were moved to the greenhouse: 2 GFP+ and two negative, all of them showing the root phenotype.

Genotype: ASQ G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

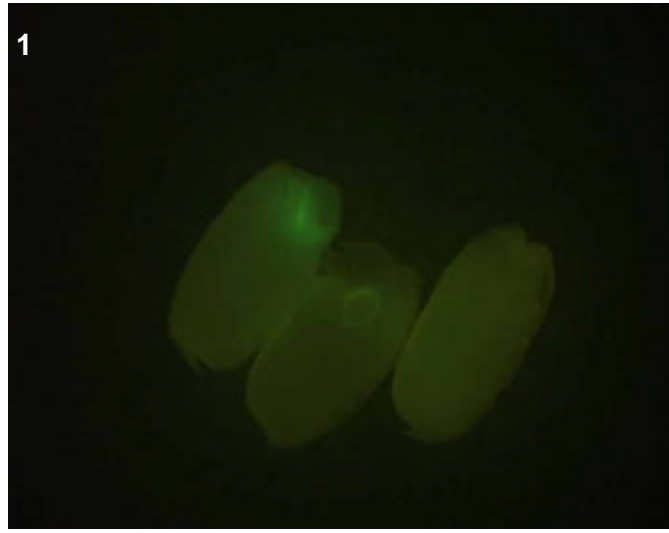
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: ASS B08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

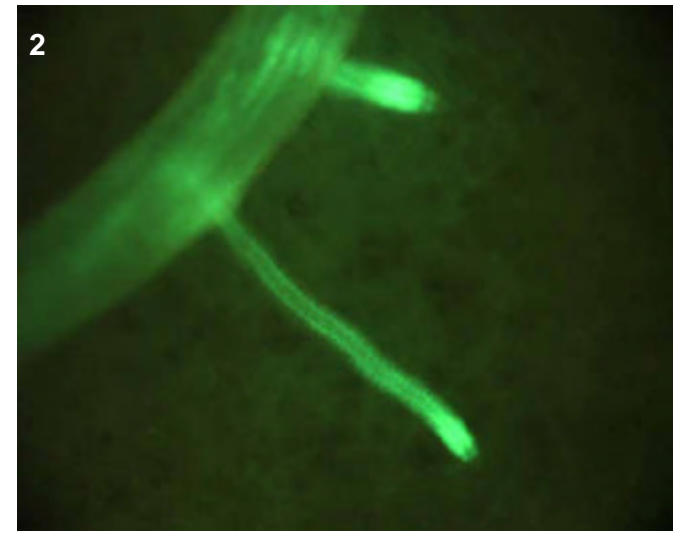
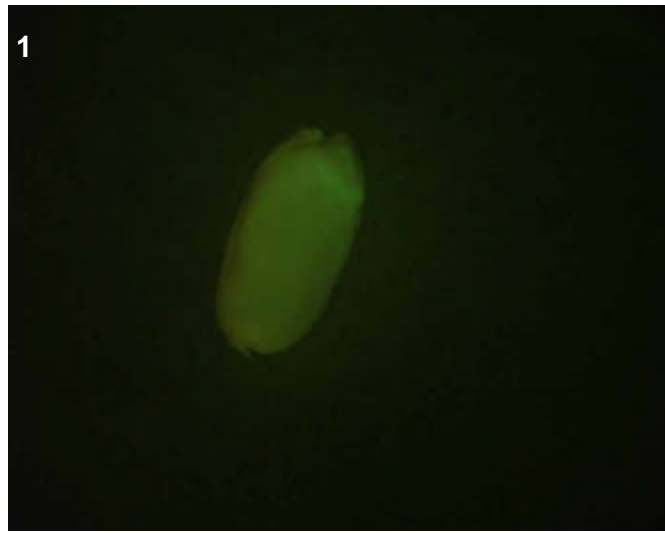
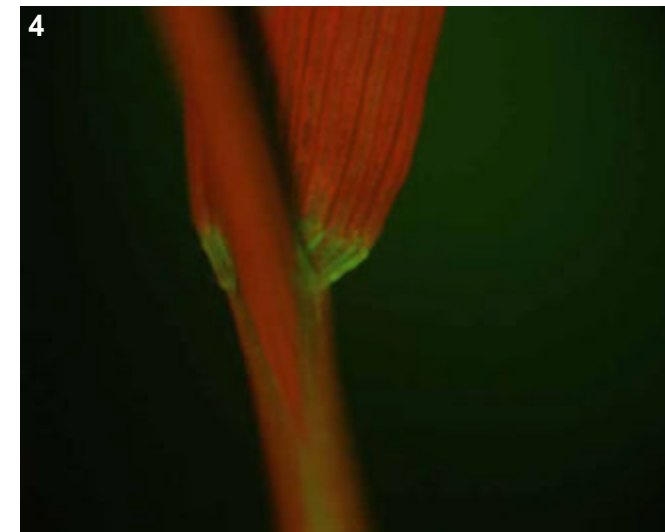
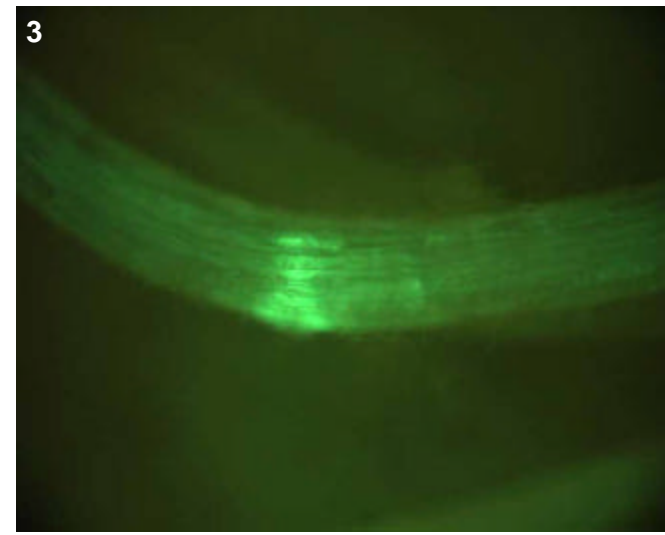
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

Genotype: ASS G02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

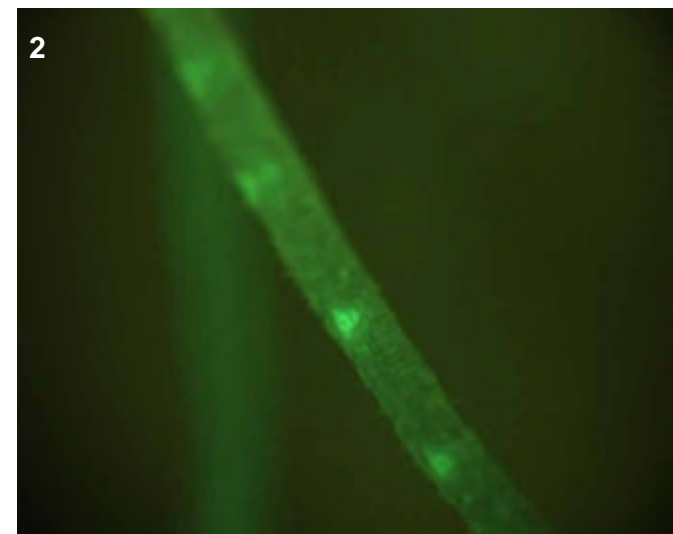
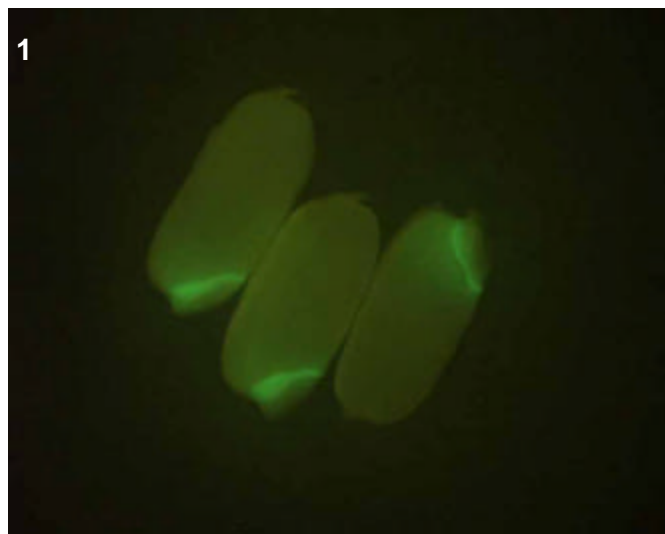
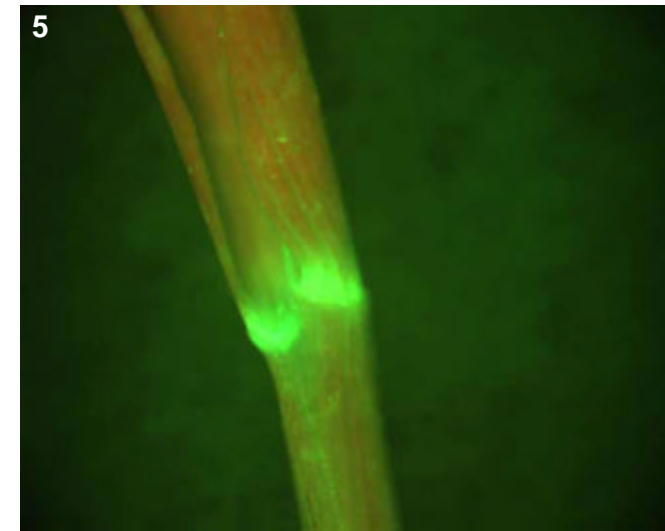
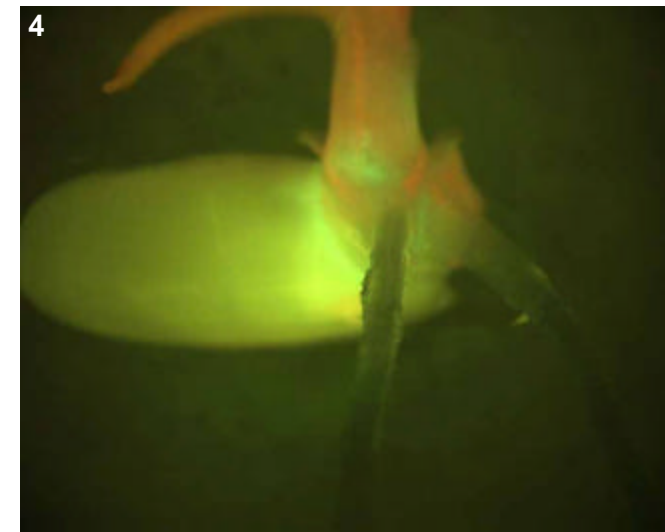
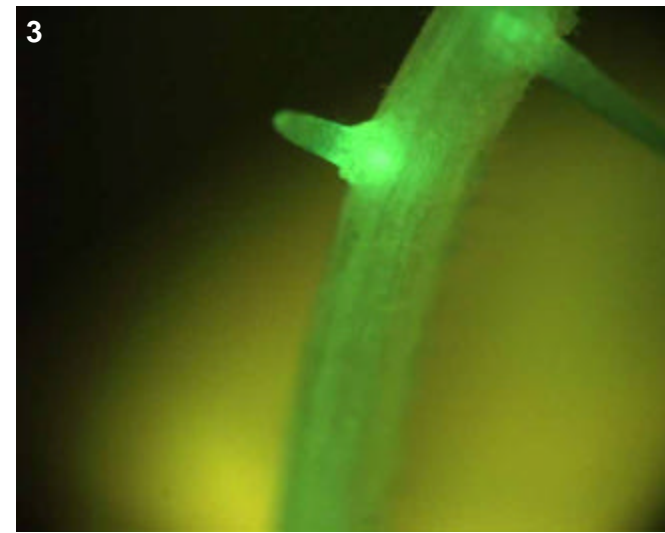
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

5/5 seeds had expression

T1 seedling comments

Genotype: ASS H07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

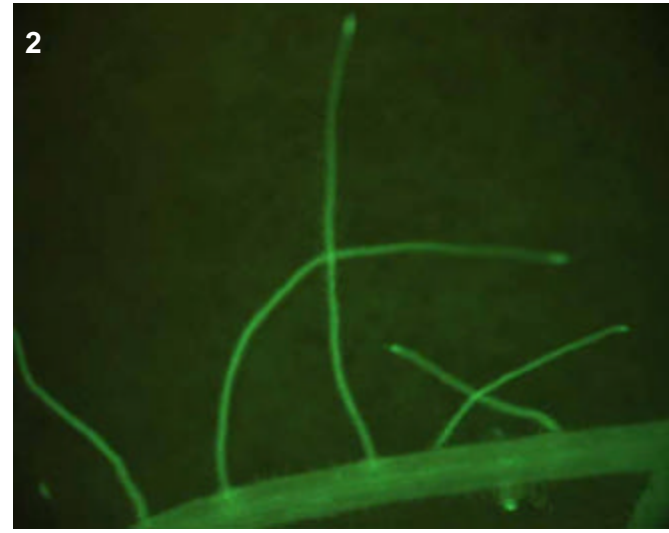
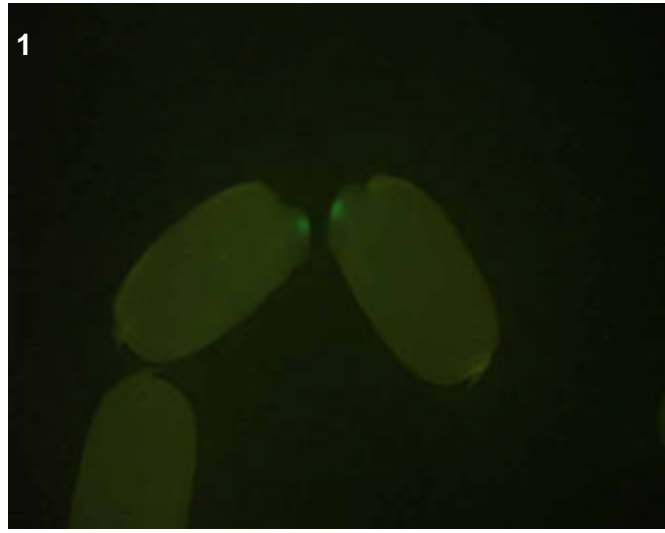
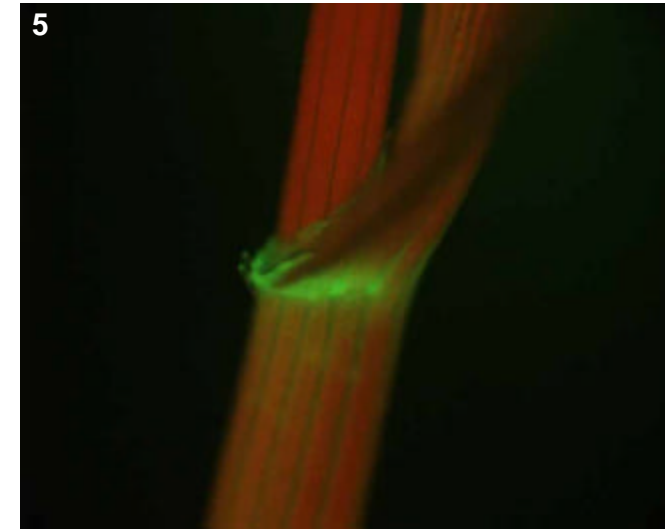
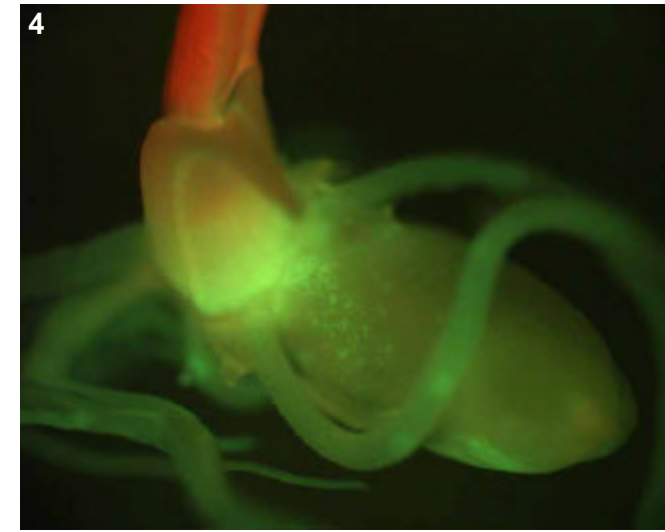
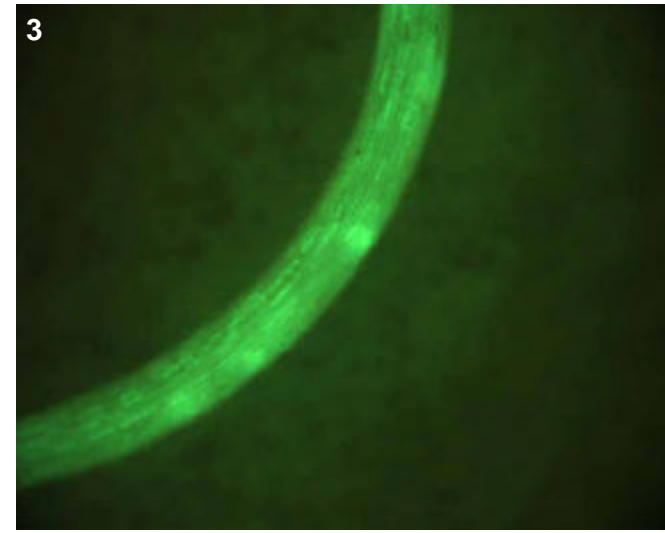
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds displayed a bright spot near the top of the embryo, this has not been observed before!

T1 seedling comments

Genotype: AST B05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

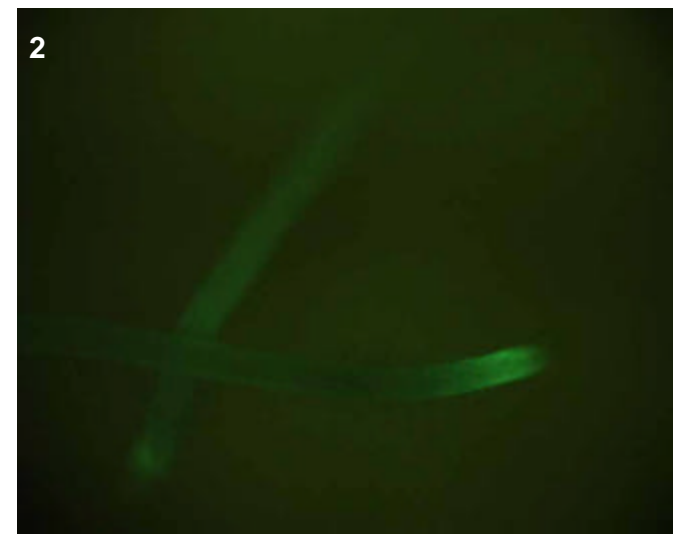
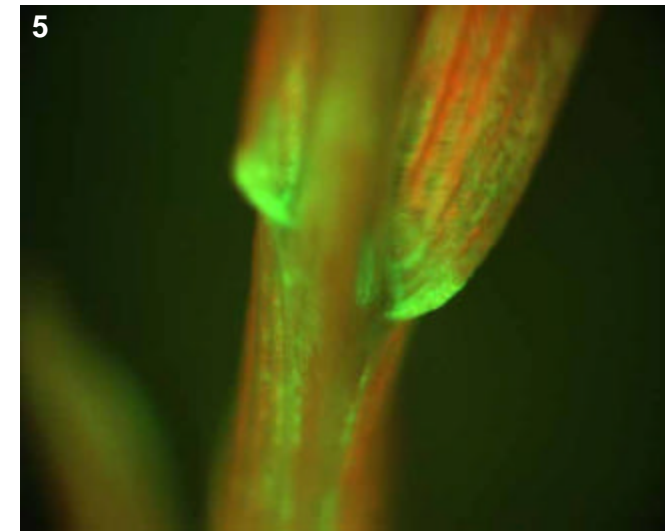
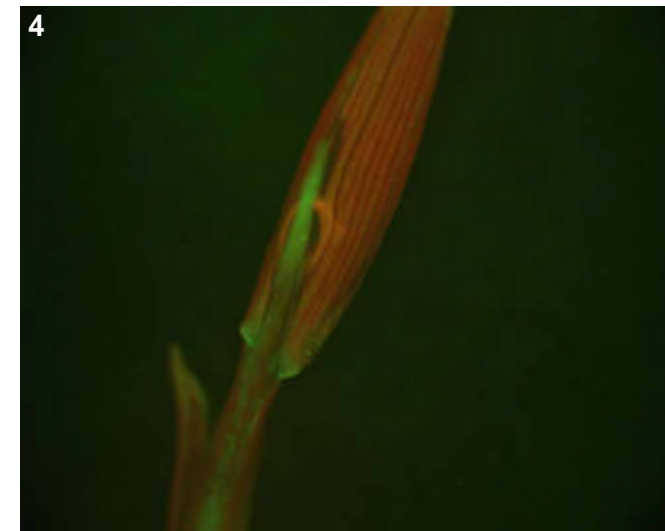
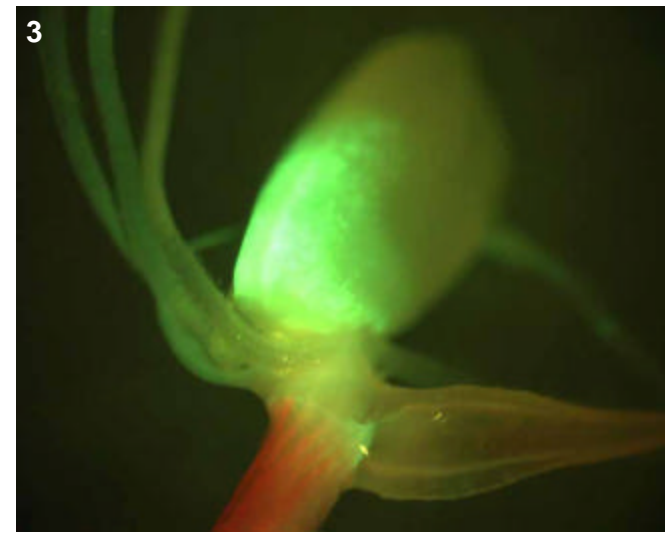
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/4 seeds had weak expression

T1 seedling comments

Could be epidermal expression in both root (pic 2) and shoot (pics 4-5). The plants were small and may have a dwarf mutant phenotype.

Genotype: AST B07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

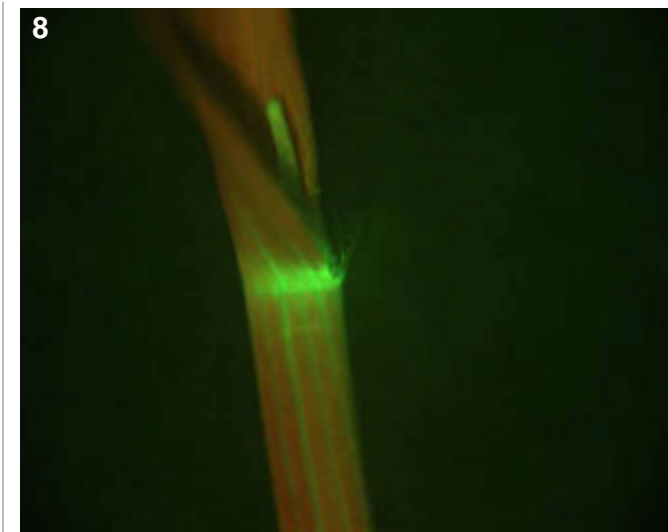
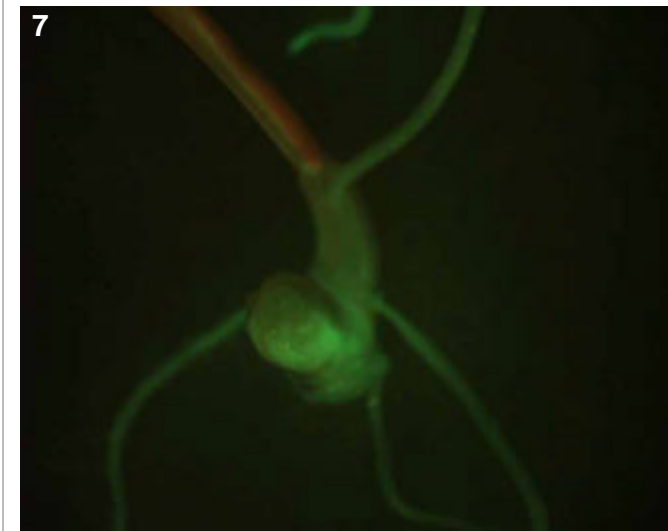
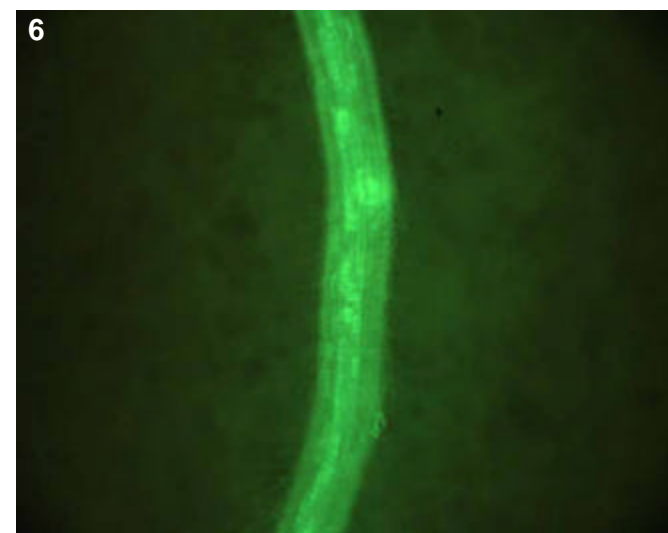
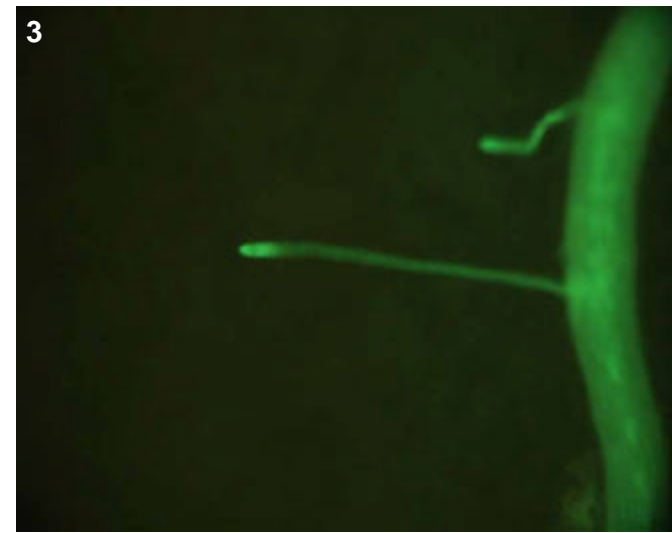
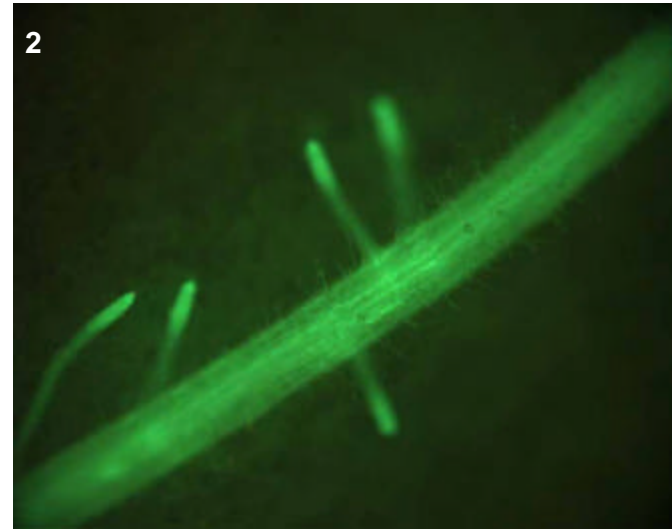
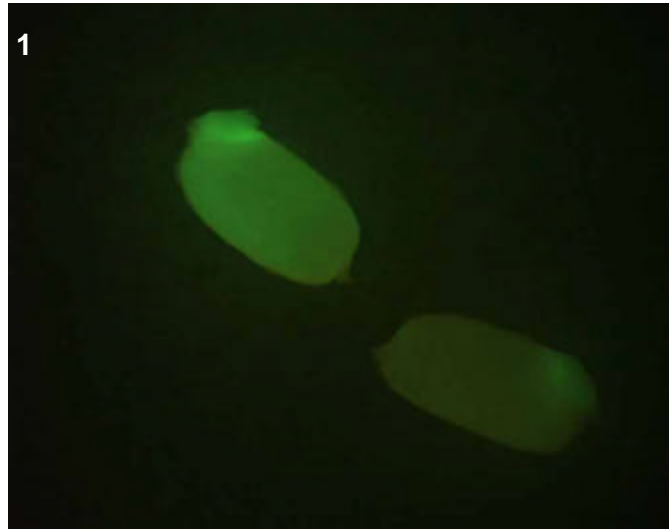
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: AST F01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

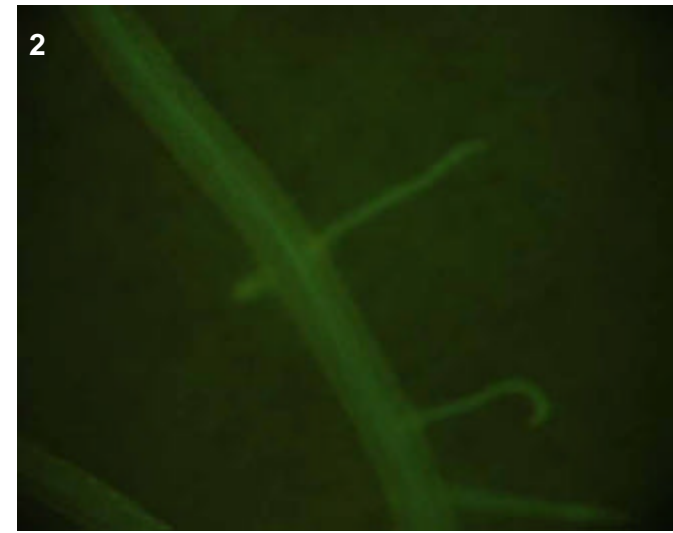
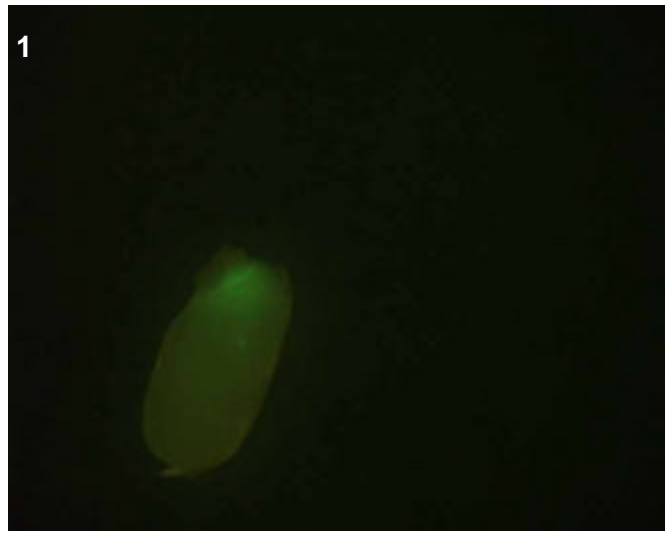
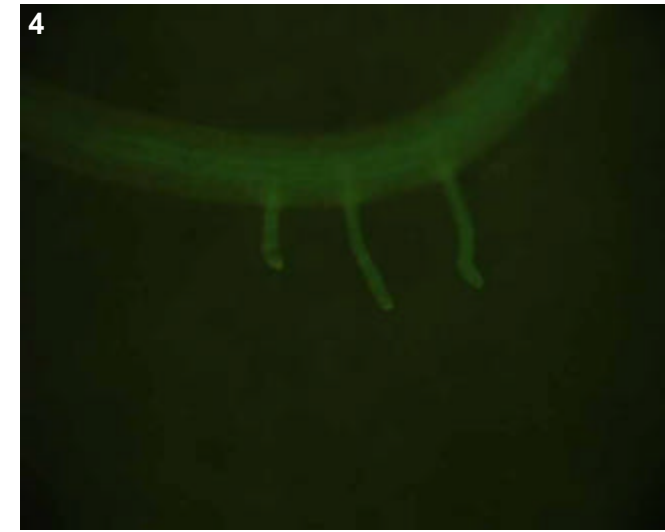
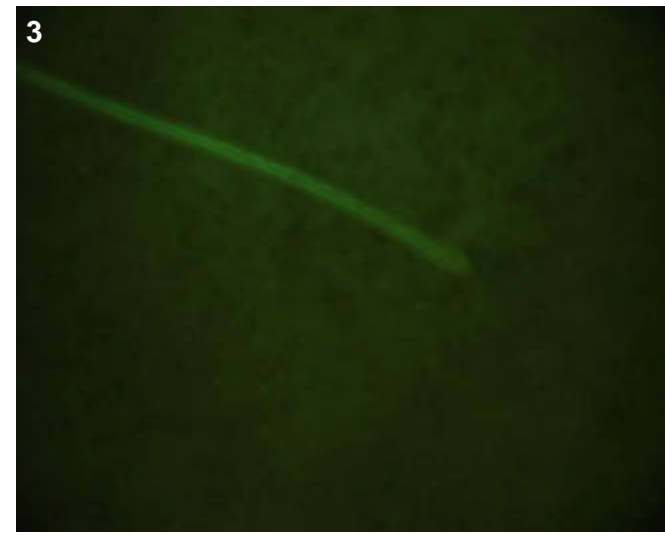
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: AST F07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

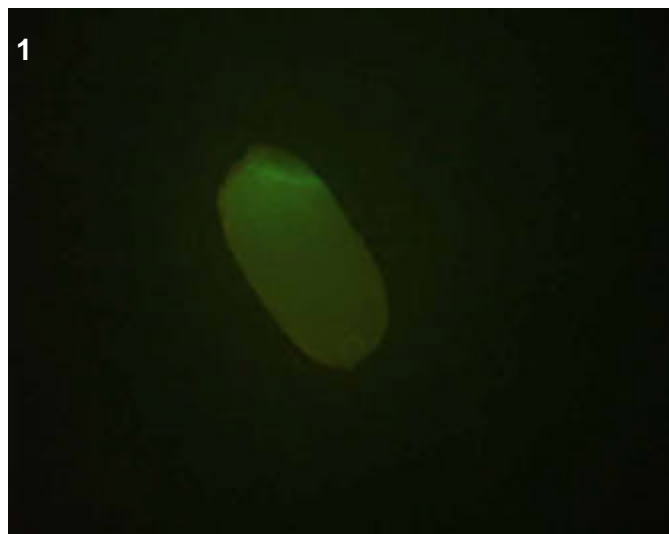
- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?
- Confocal?
- Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: AST G01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

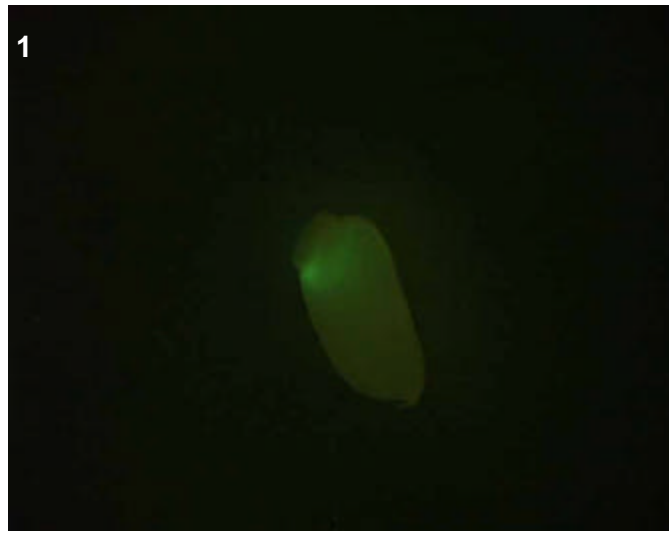
No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

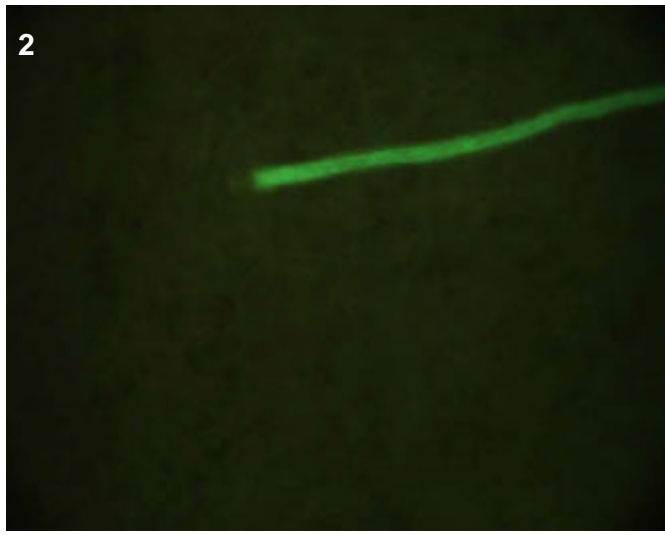
Confocal?

Number T2 seed produced:

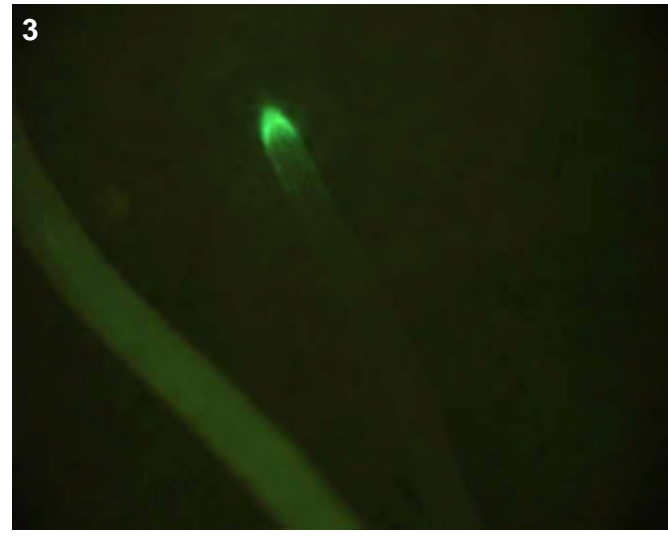
1



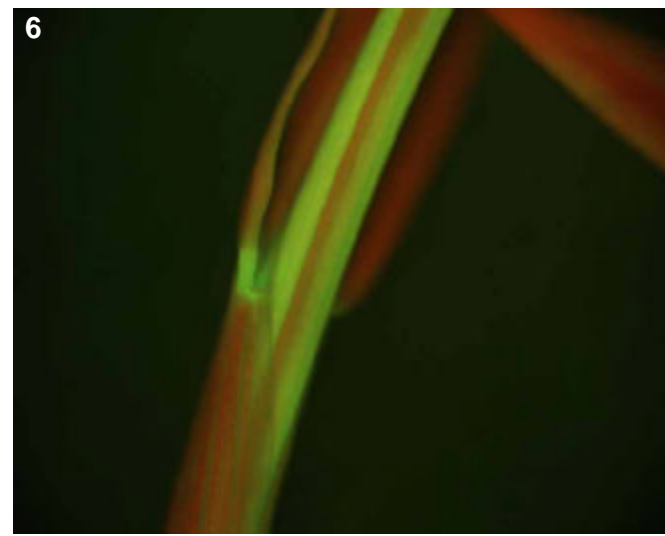
2



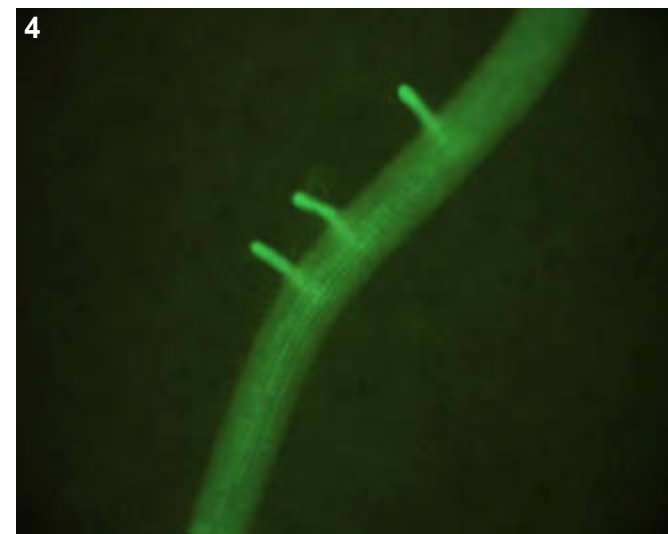
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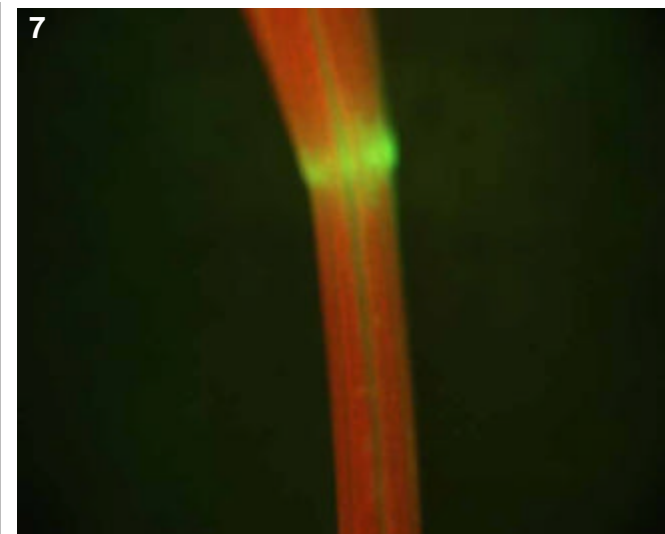
6



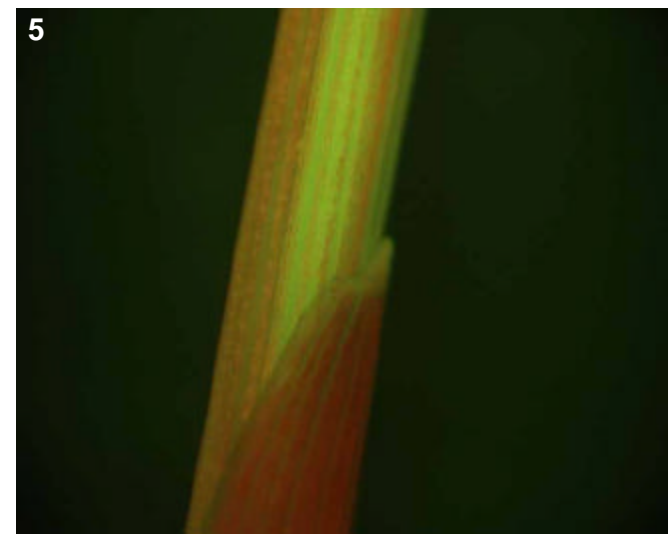
4



7



5



T0 comments

T1 seed comments

3/4 seeds had bright expression mostly to low side of scutellum. Seeds unusually thin and small.

T1 seedling comments

The shoot may have epidermal expression (see pictures 5-6), as well as the root.

Genotype: AST G02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

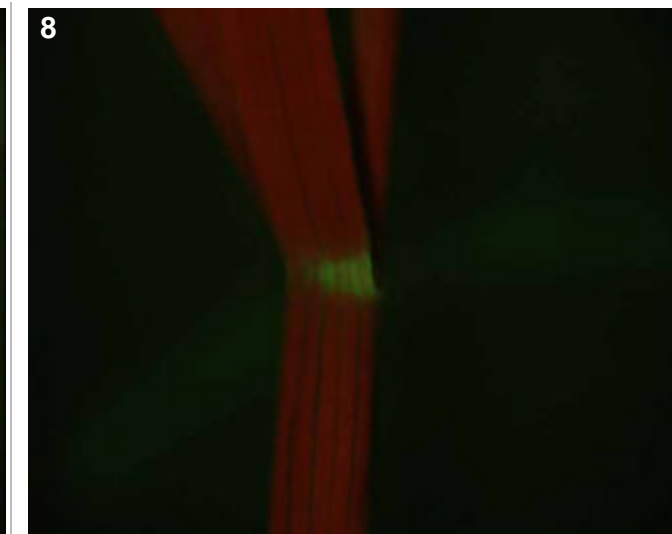
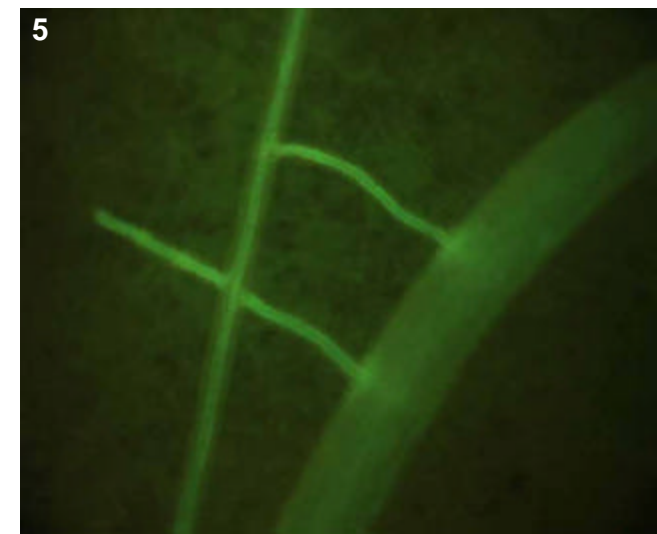
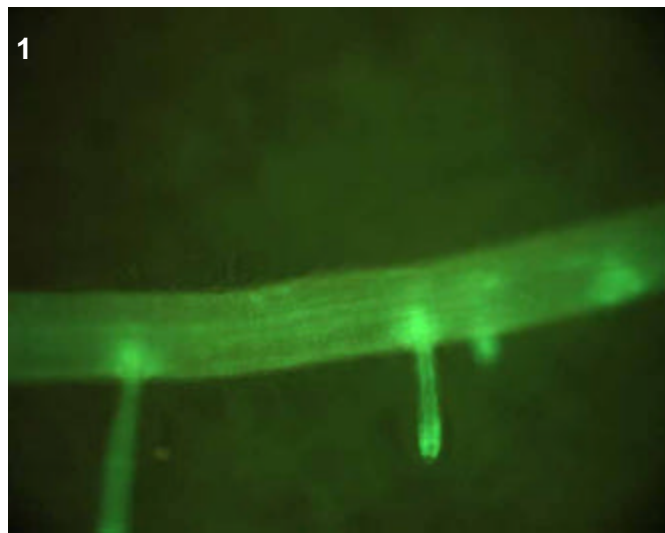
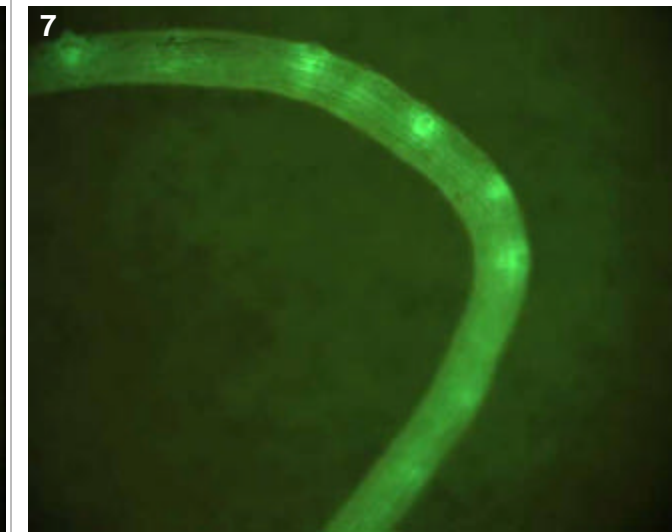
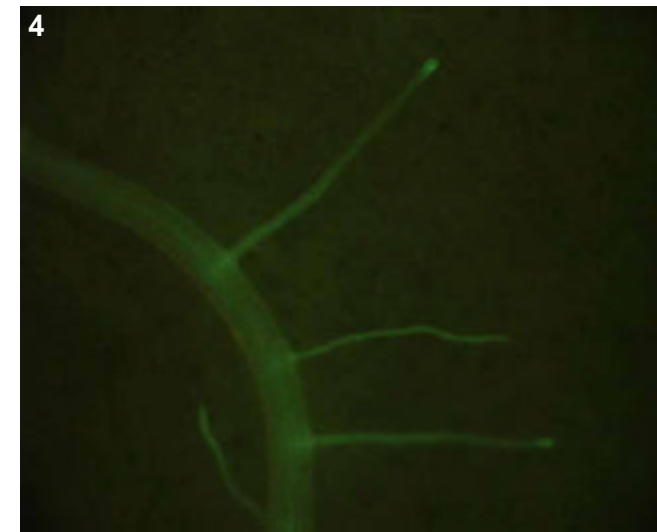
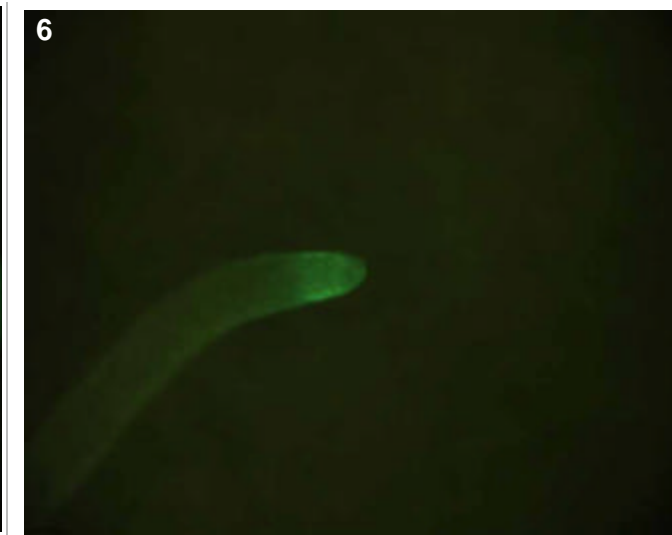
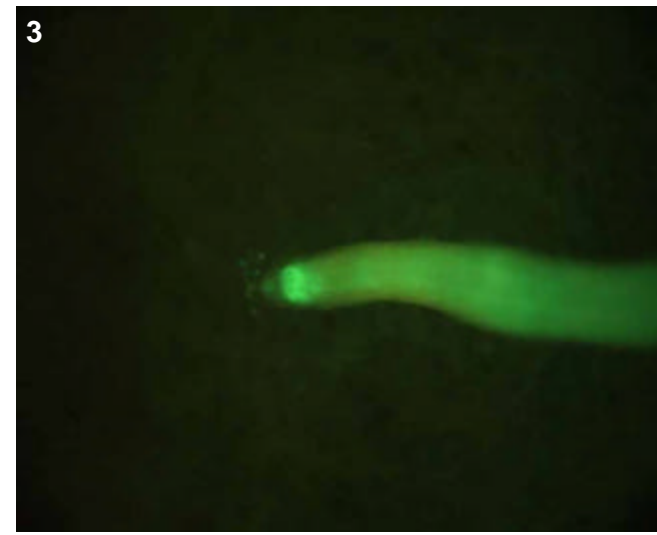
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3 or 4/5 seeds had faint expression in scutellum (no picture taken)

T1 seedling comments

Looks like a bright root cortical line (pic 1) with epidermal expression around tips of crowns (pic 2). GFP is most bright in the cell division zone (pic 4).

Genotype: AST H03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

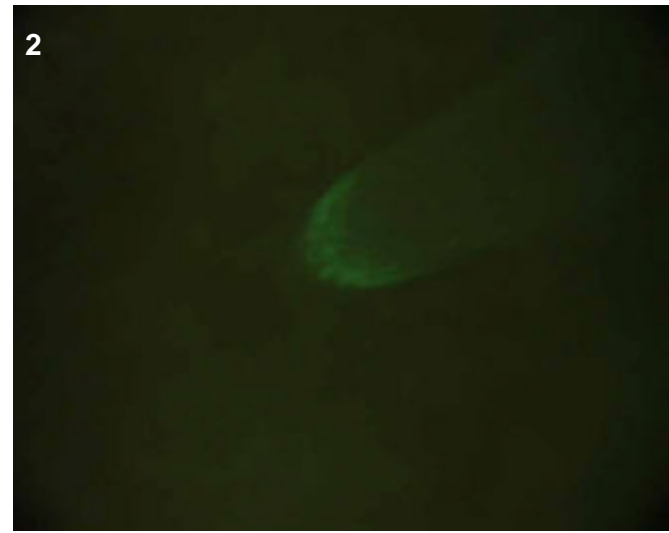
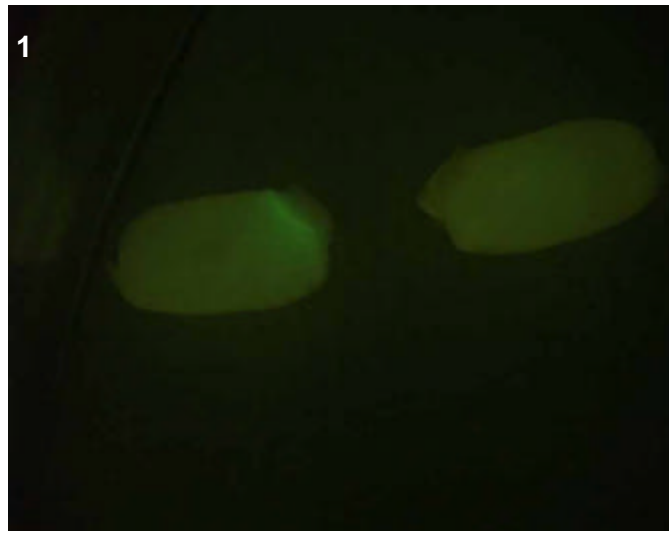
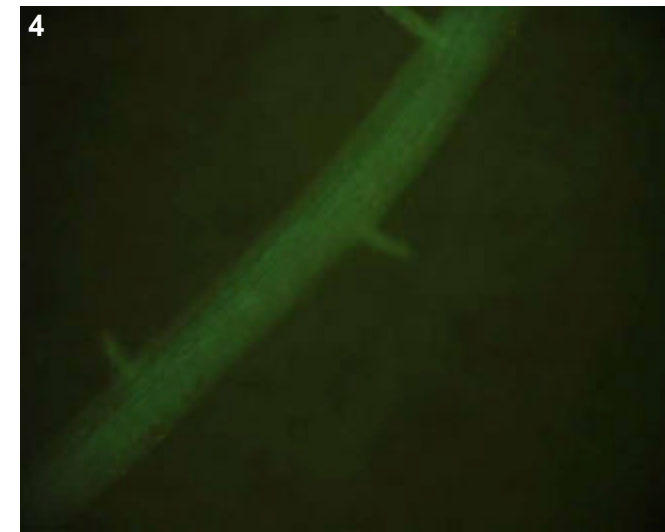
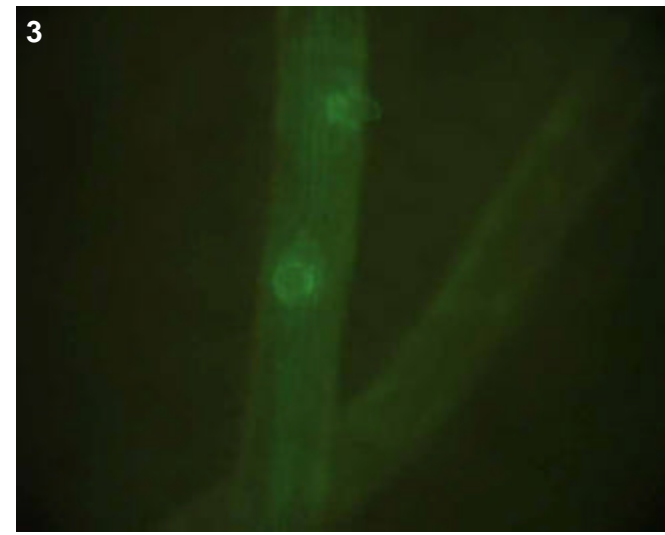
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: ASU A07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

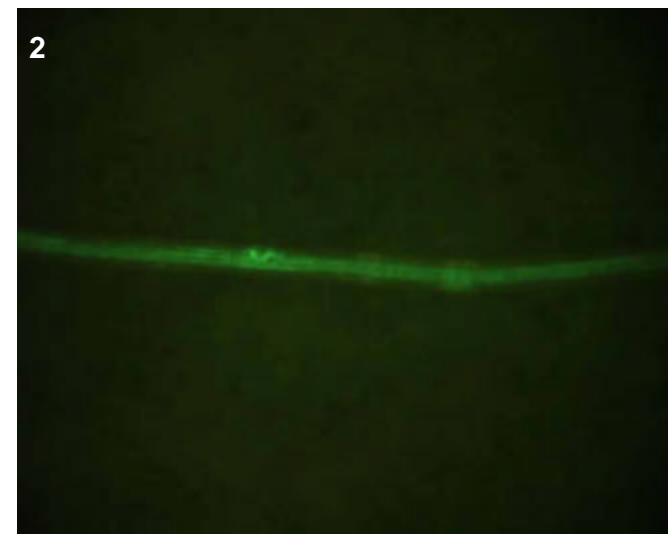
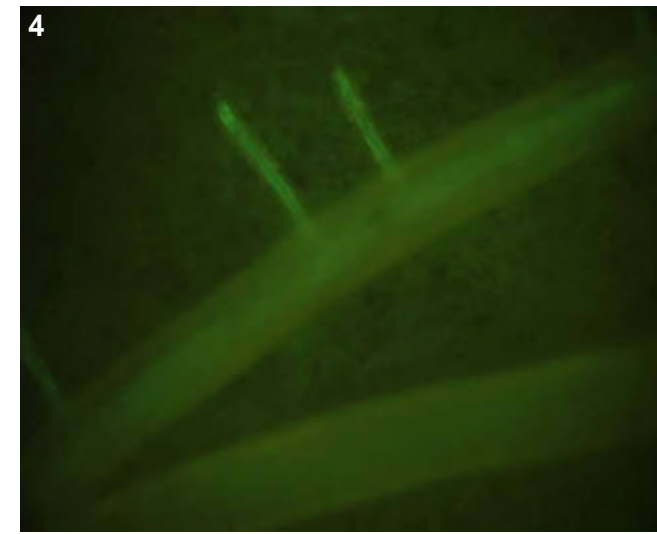
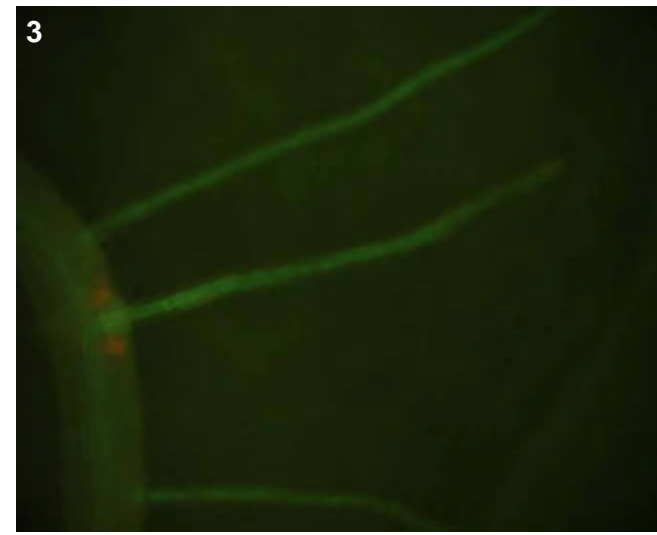
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had faint expression

T1 seedling comments

Clearly a root-stele specific line (pics 2-4).

Genotype: ASU B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

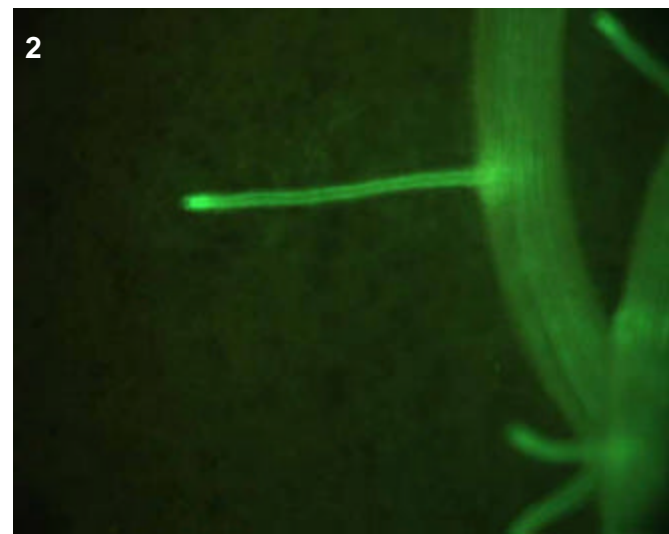
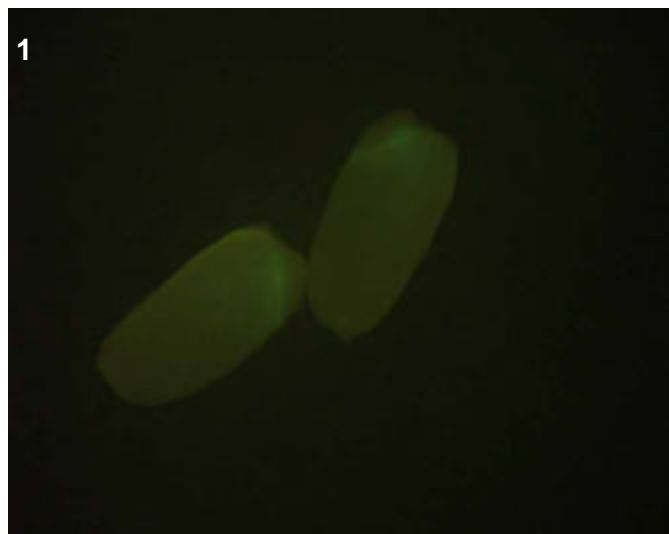
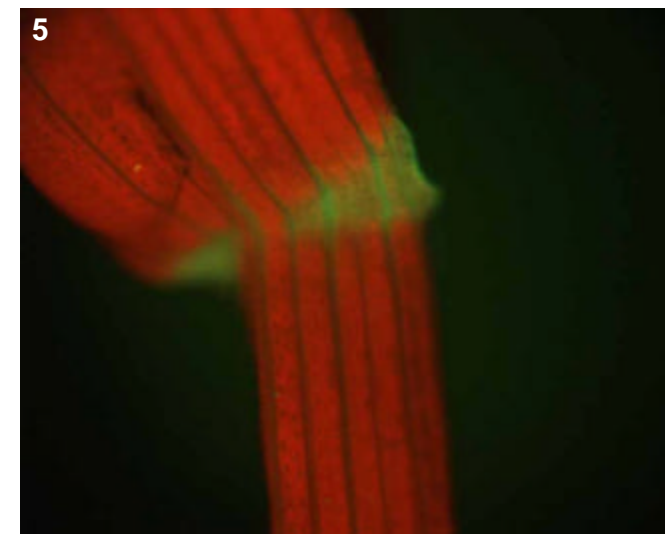
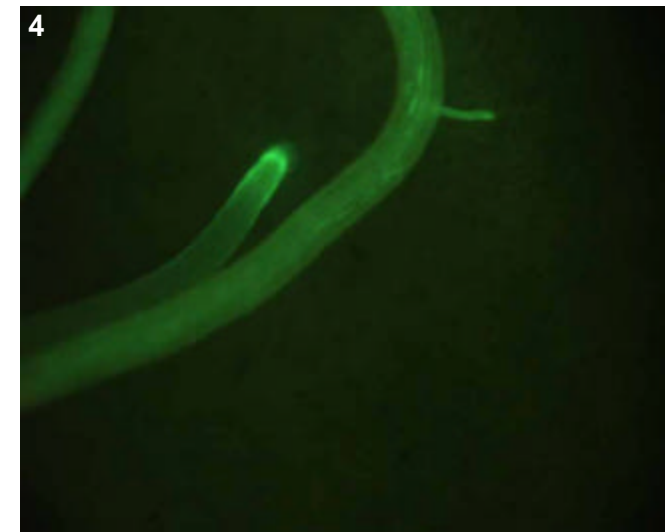
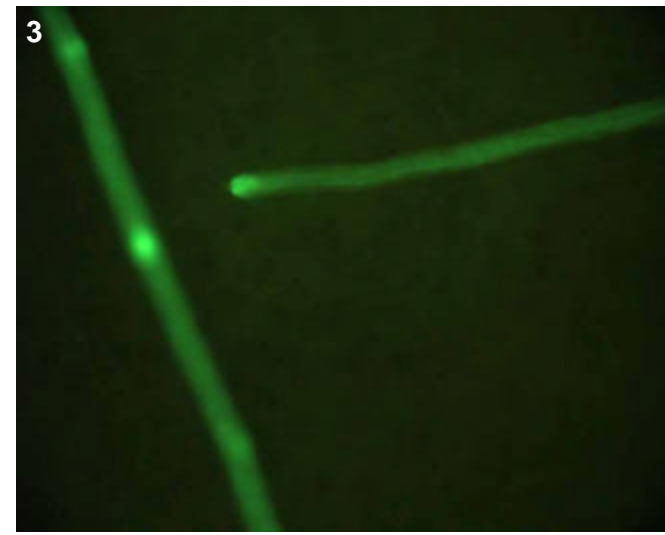
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/3 seeds had medium expression

T1 seedling comments

Genotype: ASU C05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

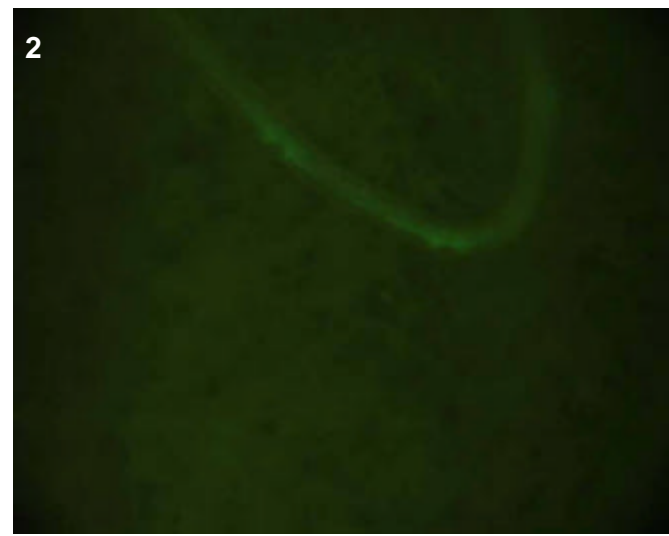
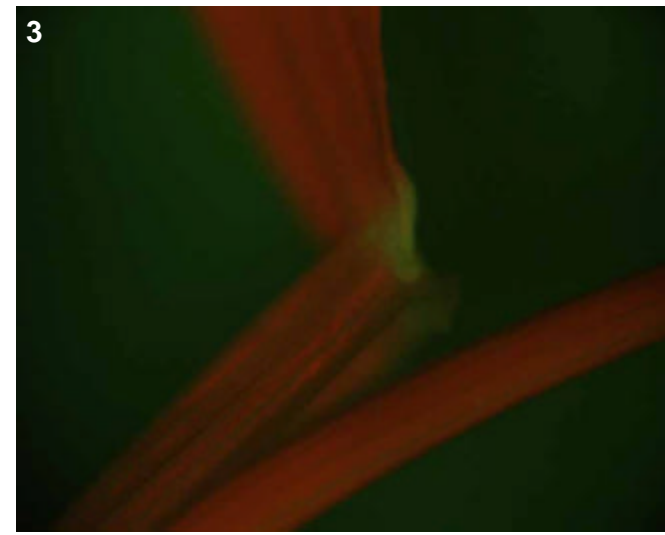
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Seedling expression was quite faint (pics 2-3).

Genotype: ASU D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

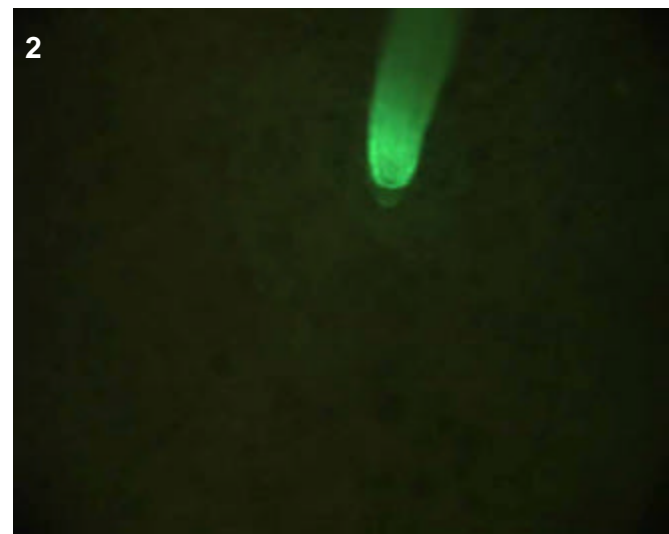
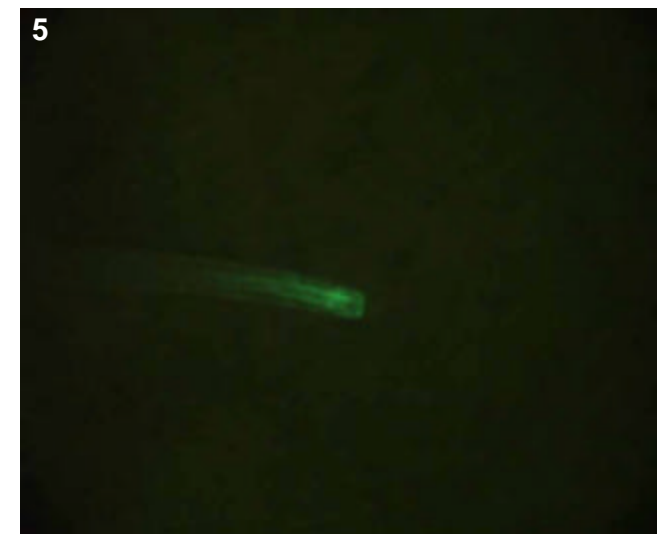
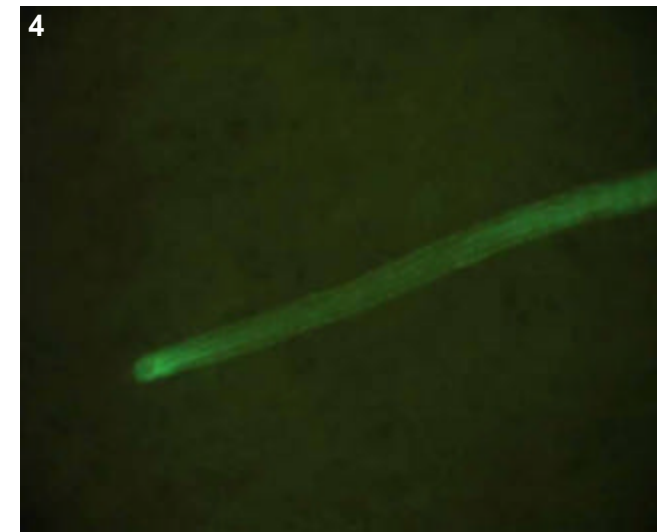
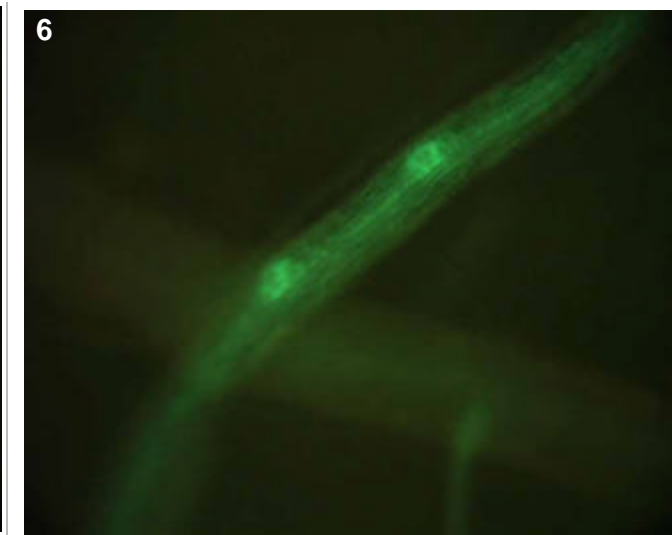
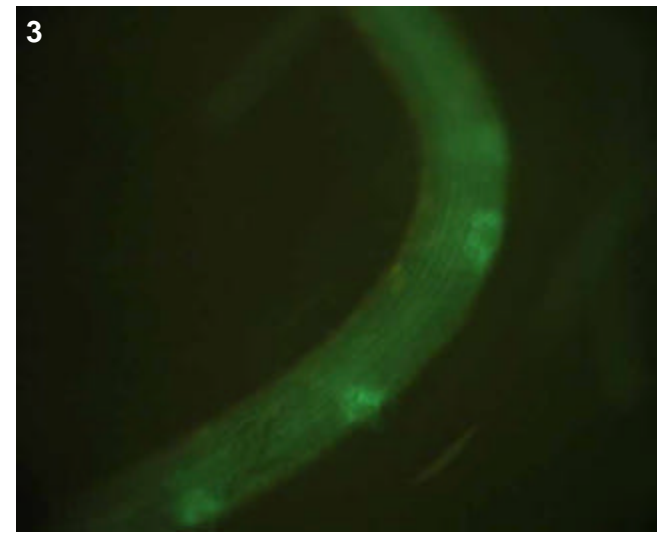
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

3 or 4/5 seeds had faint expression in the scutellum

T1 seedling comments

Tips of crowns (see pictures 4-5) could be interesting to confocal.

Genotype: ASU D02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

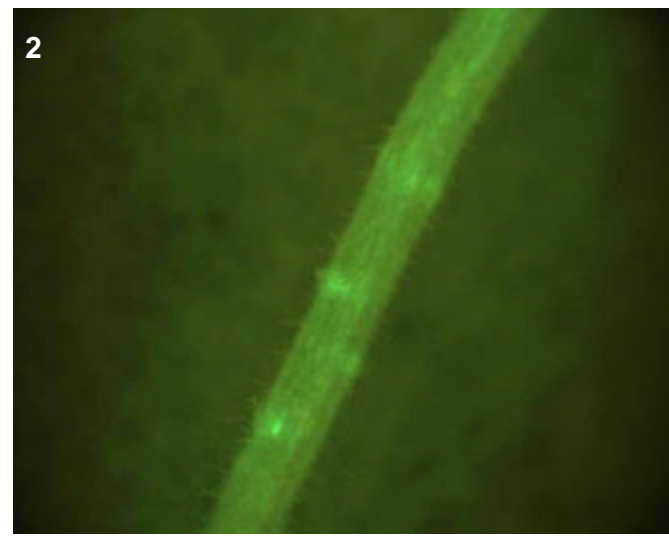
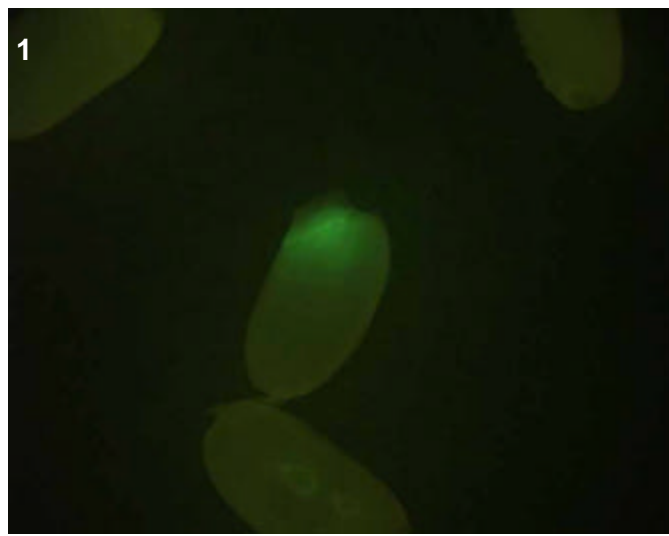
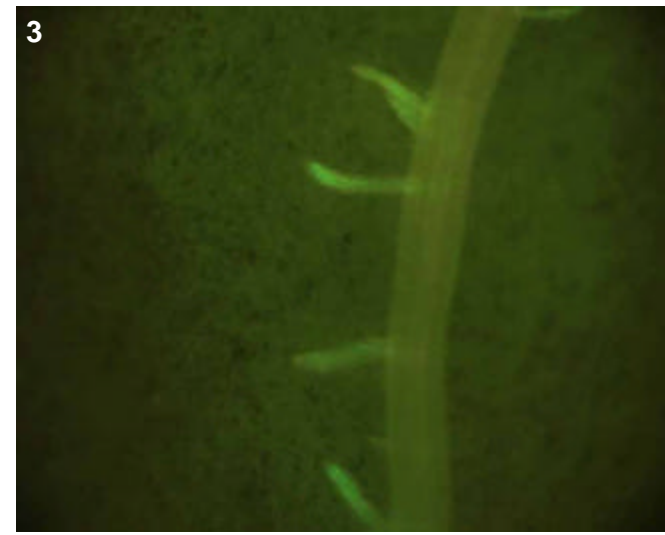
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had bright expression

T1 seedling comments

Genotype: ASU E06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

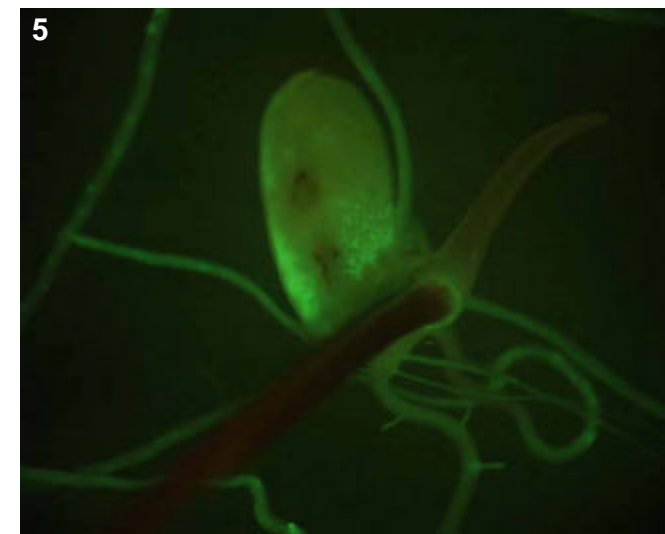
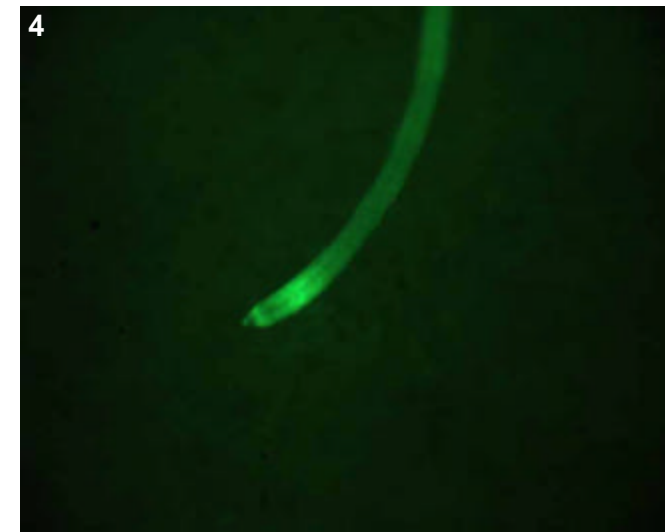
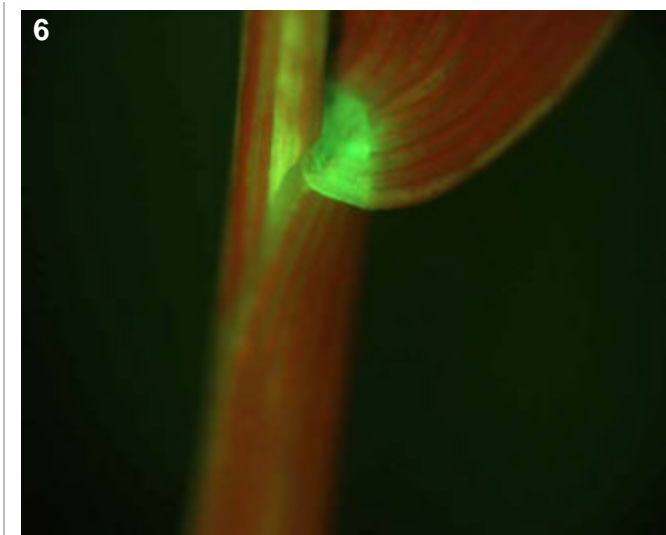
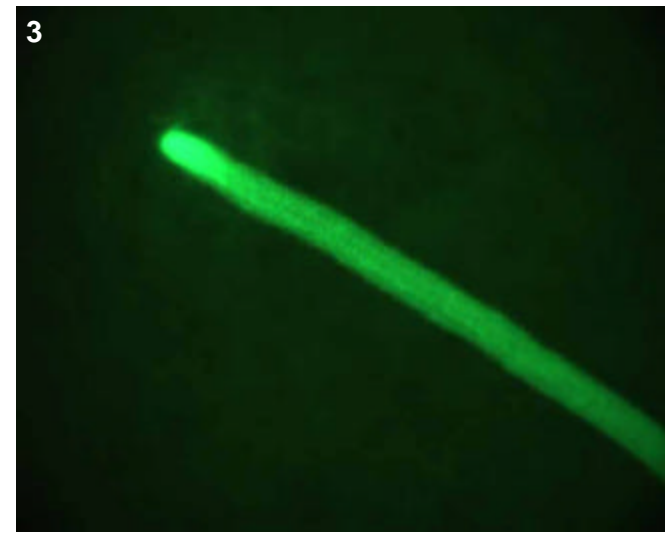
- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?**
YES, 3 GFP+ plants
- Confocal?**
- Number T2 seed produced:**



T0 comments

T1 seed comments

2/5 seeds had faint expression

T1 seedling comments

Overall very bright expression.

Genotype: ASU F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

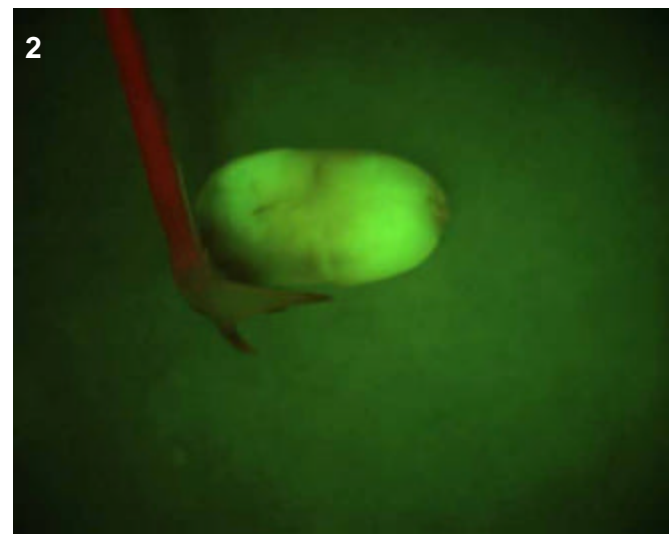
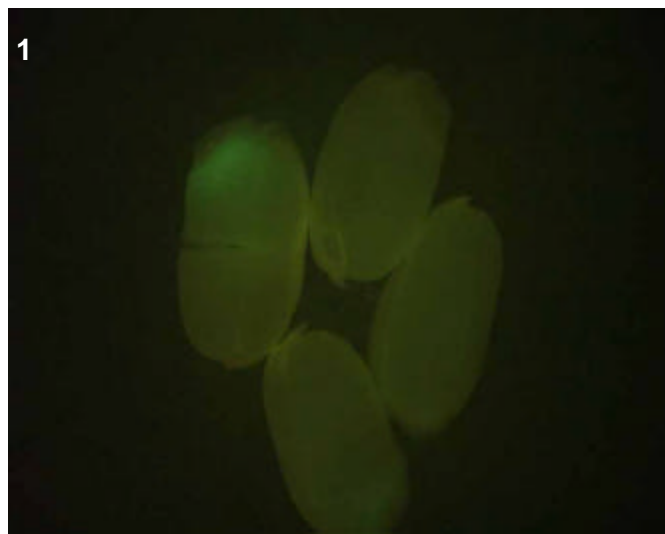
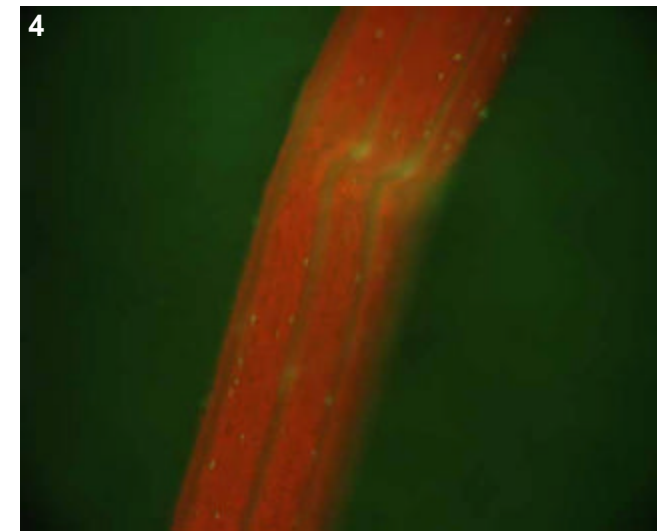
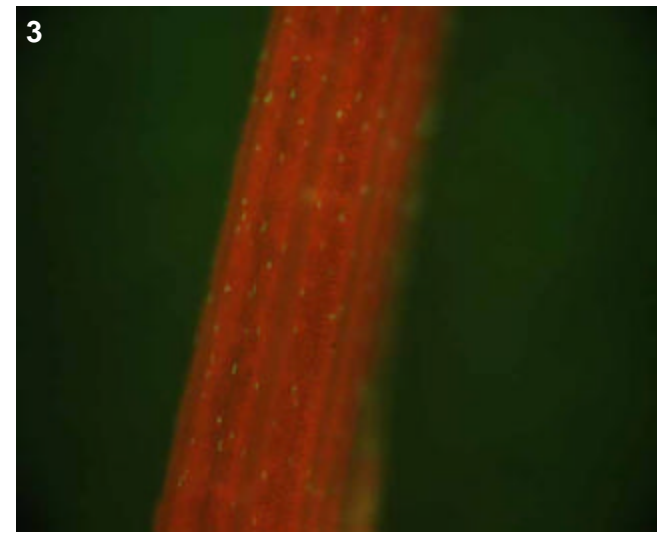
No GFP detected

T1 in greenhouse?

YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

There were no roots at all, perhaps a mutant phenotype?

Genotype: ASU H06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

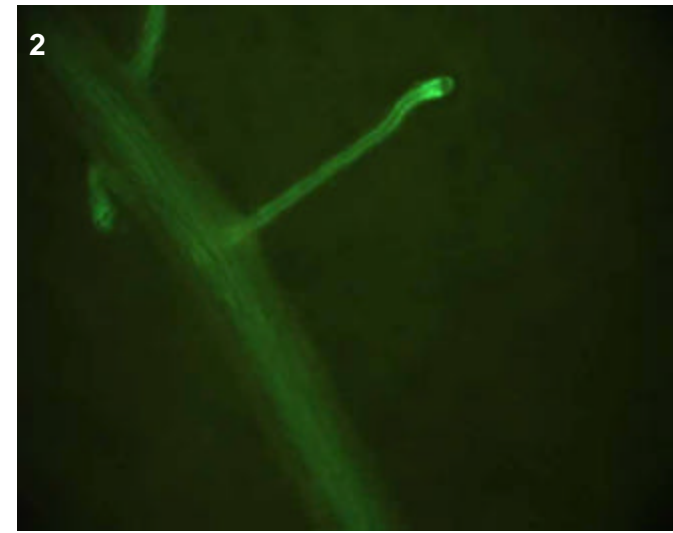
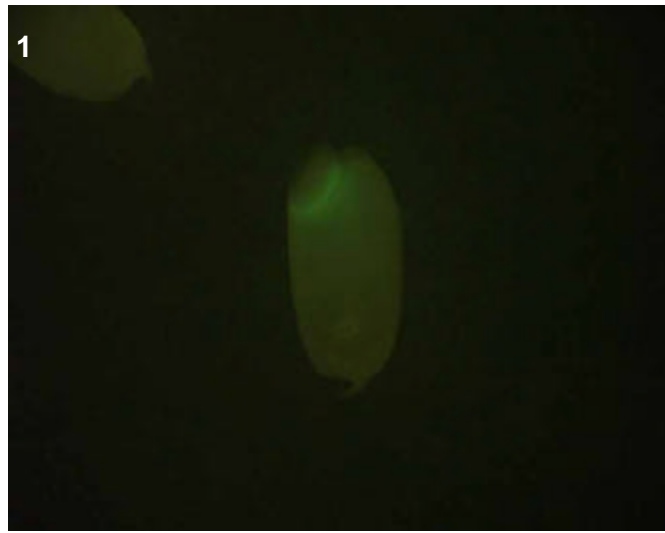
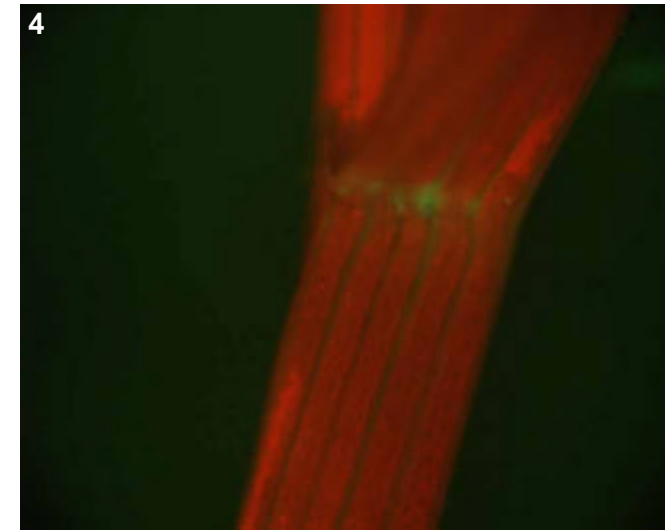
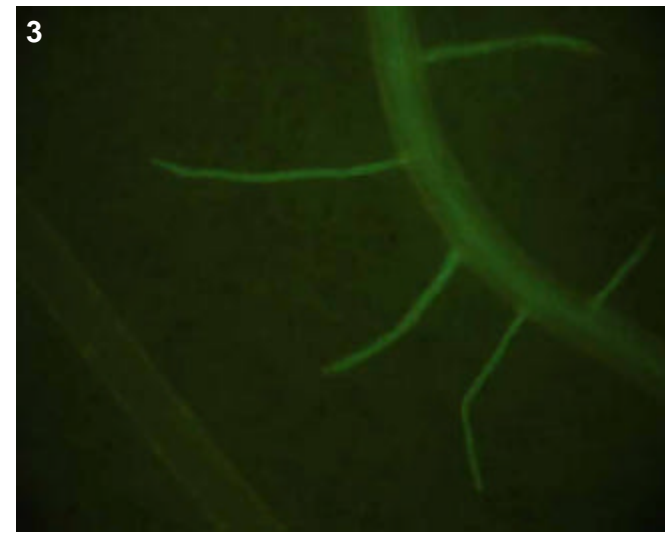
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Bright, distinct vascular pattern in roots (pics 2-3), faint collar (pic 4).

Genotype: ASV A03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

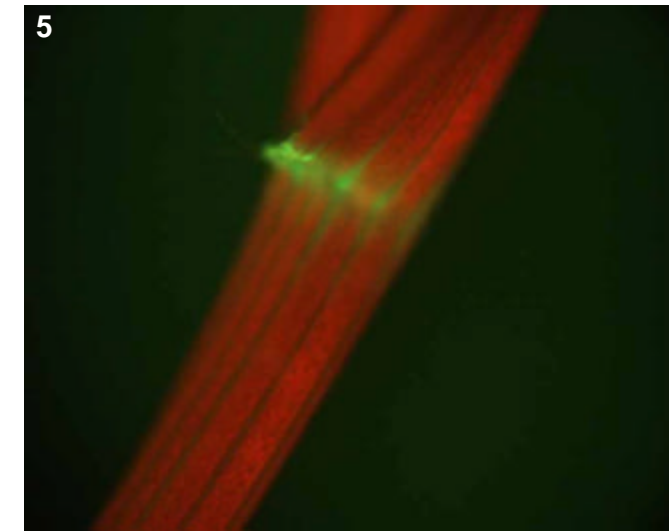
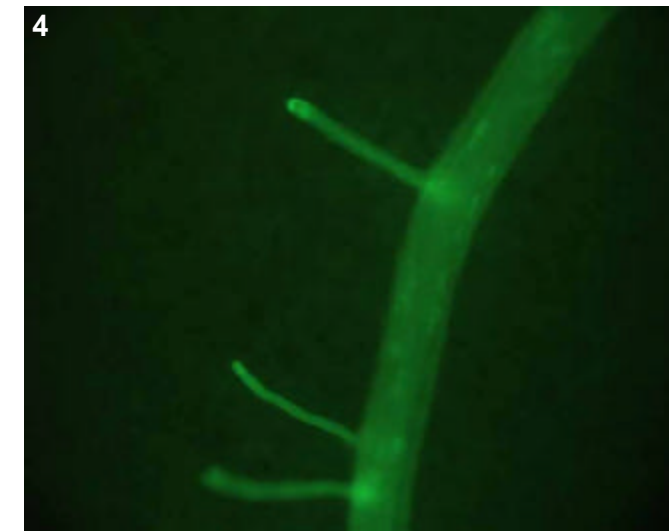
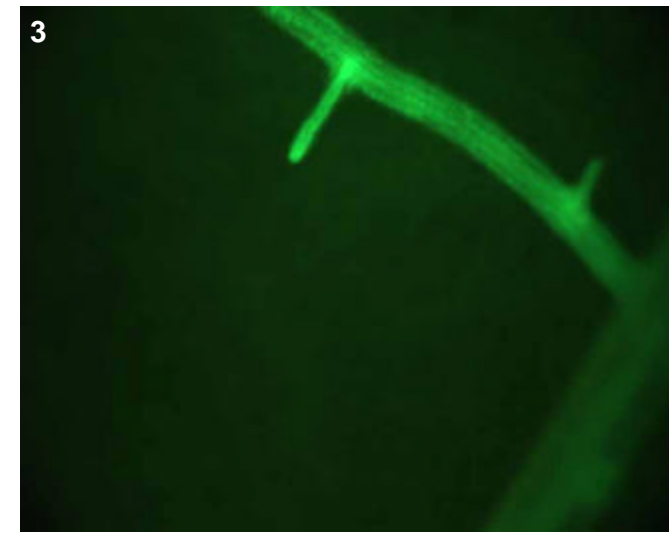
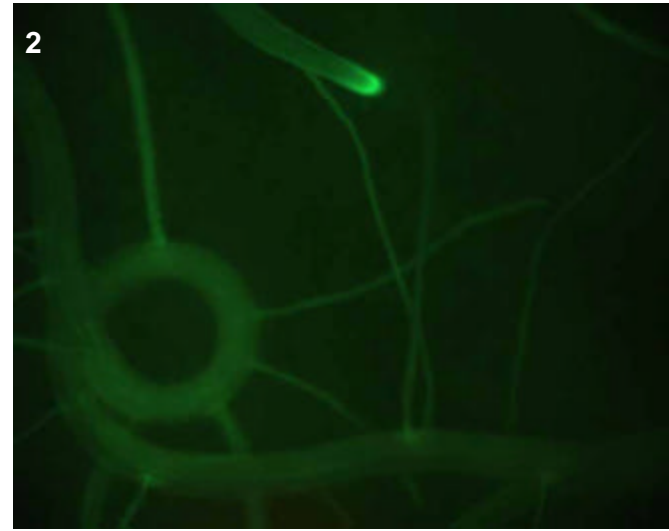
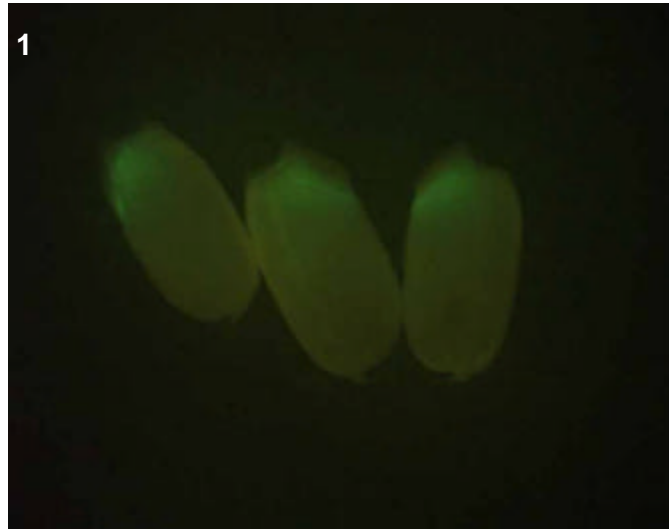
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

5/5 seeds had expression

T1 seedling comments

Genotype: ASV A11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

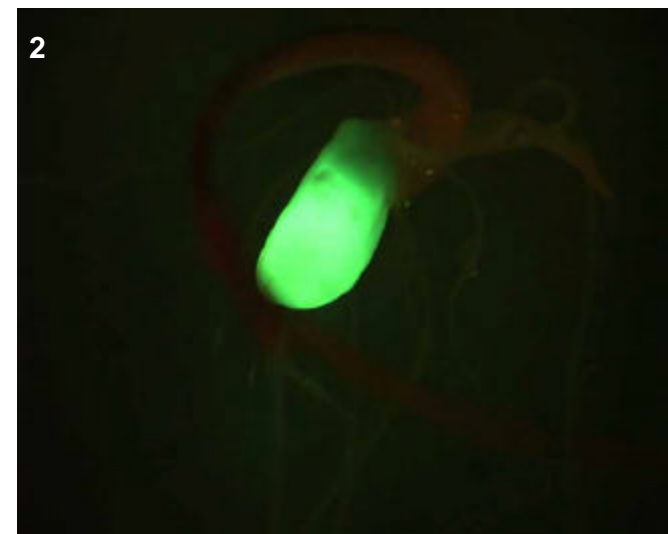
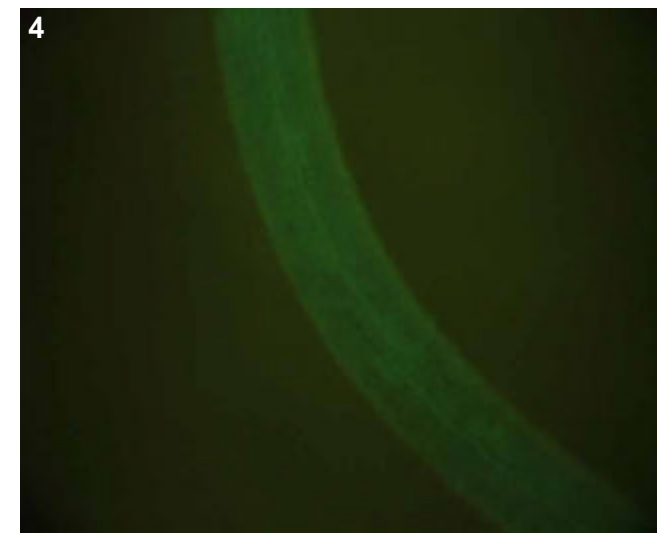
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/4 seeds had expression. 1 was super bright (pic 1, left seed), and 2 others were medium.

T1 seedling comments

The bright endosperm remains after 1 week (pic 2).

Genotype: ASV B08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

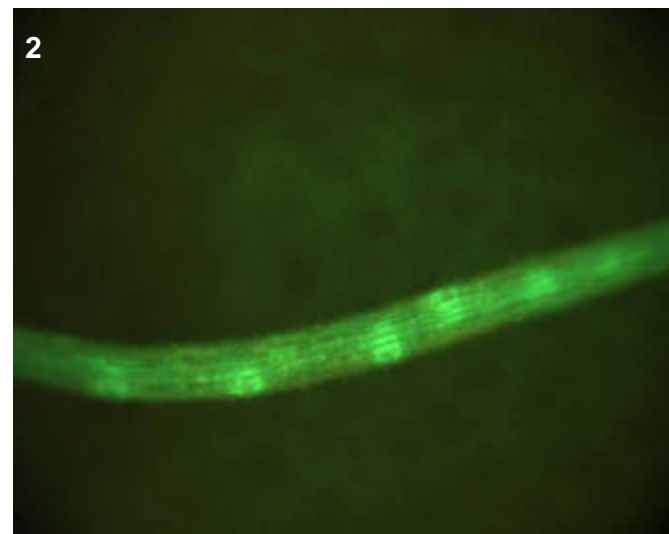
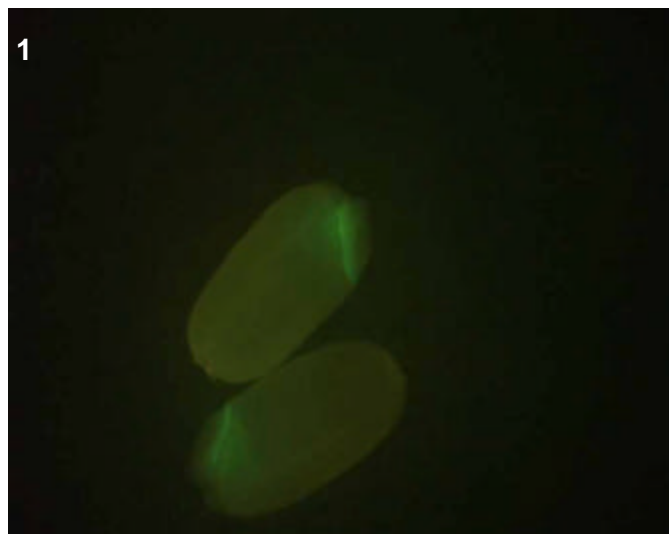
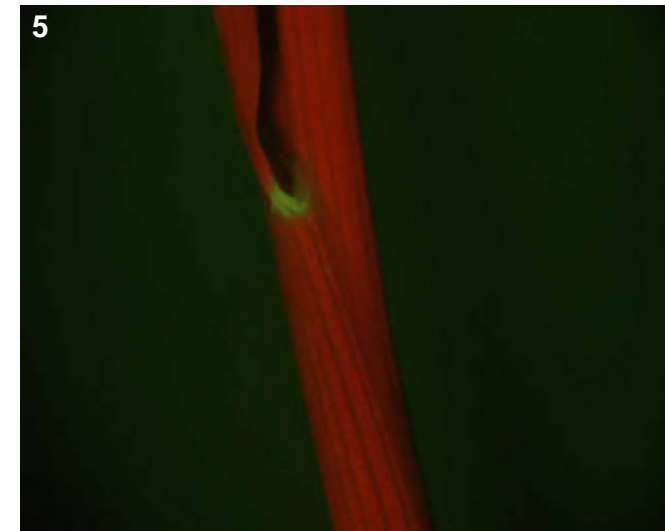
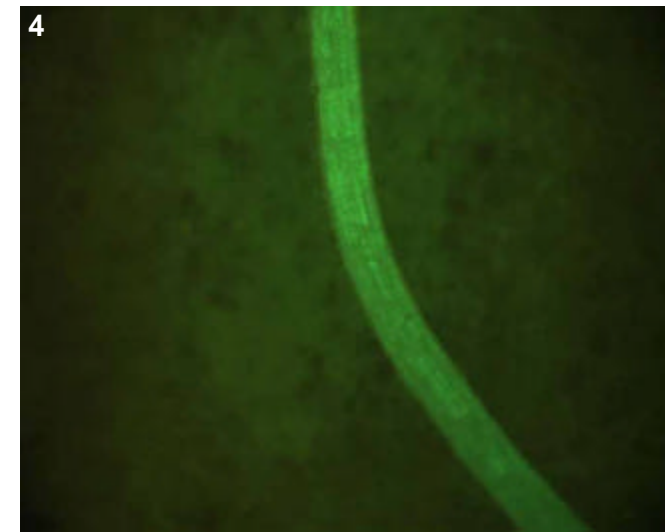
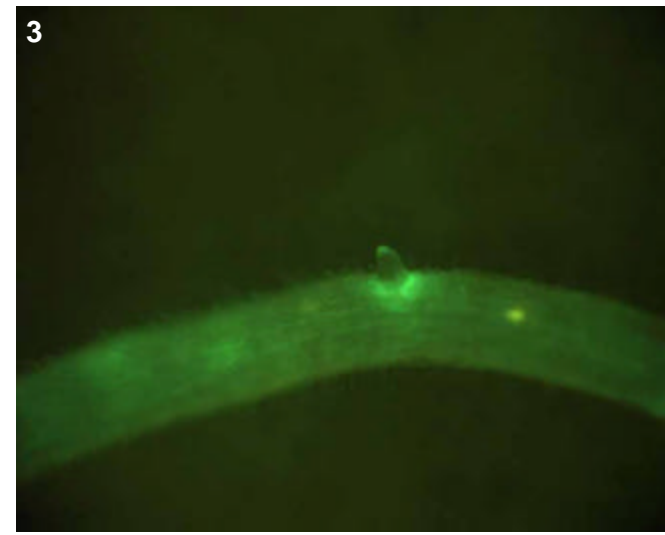
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression

T1 seedling comments

Genotype: ASV B11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

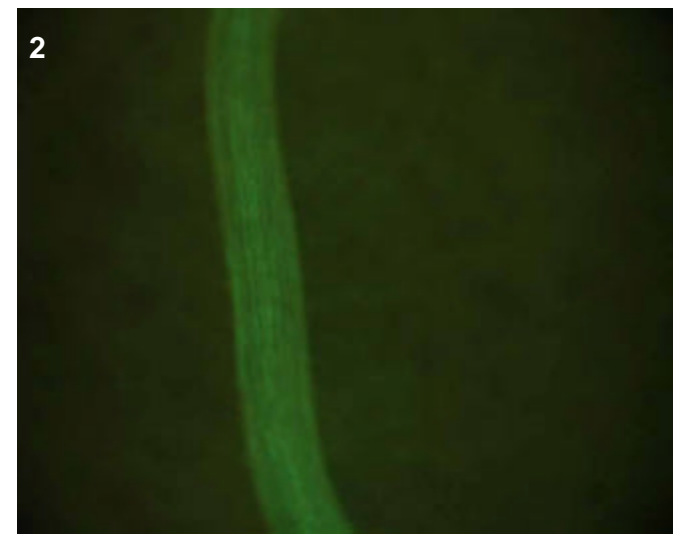
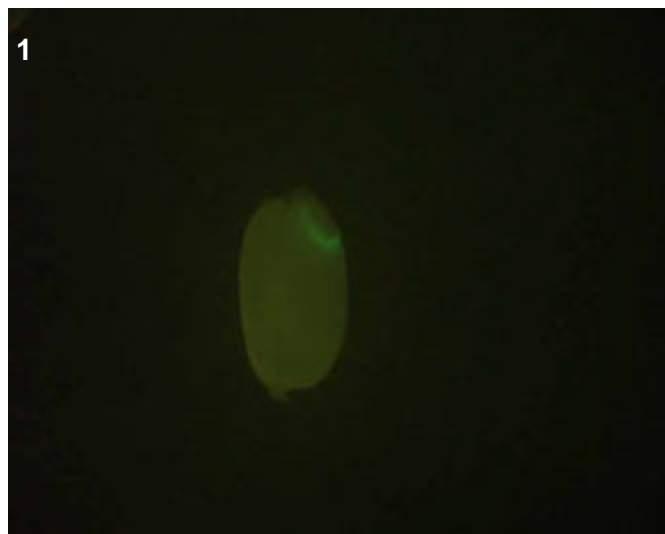
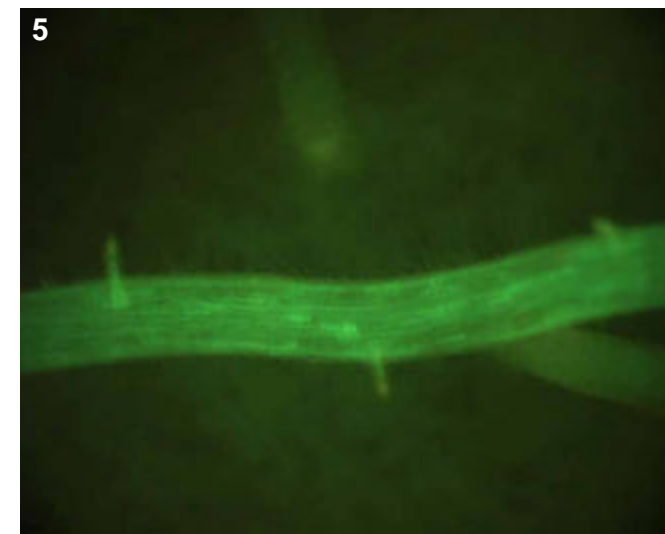
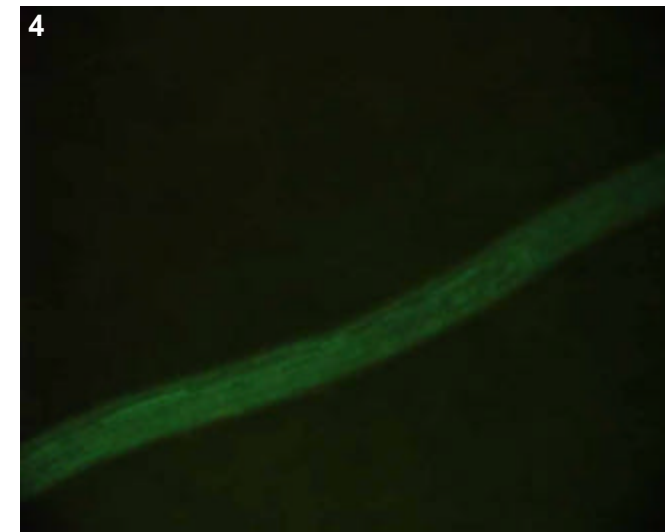
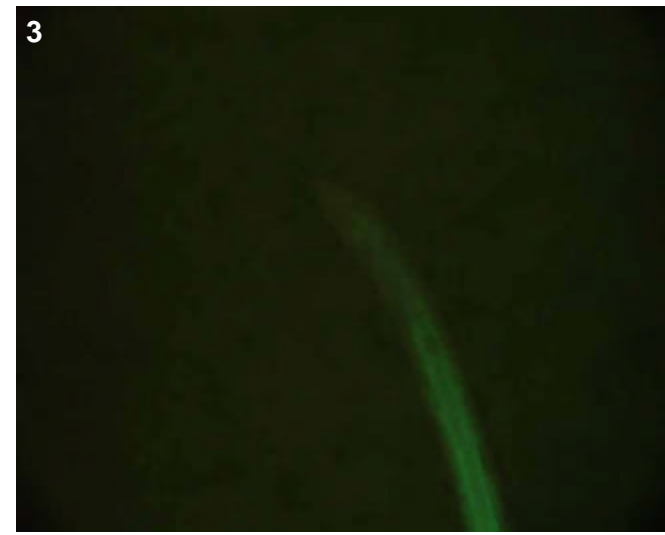
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression

T1 seedling comments

Genotype: ASV C01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

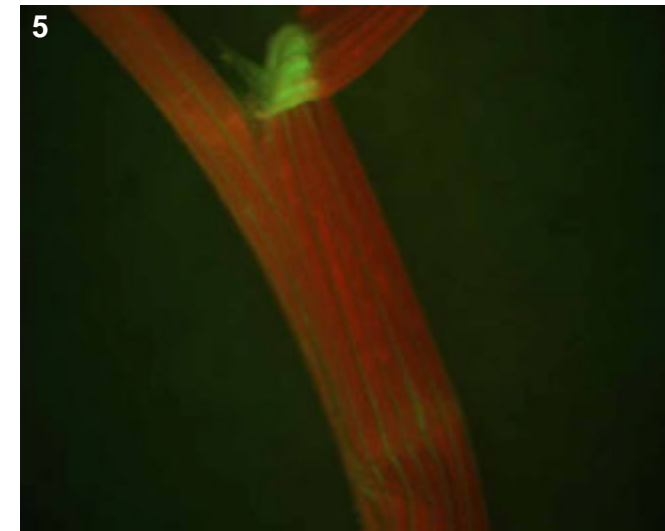
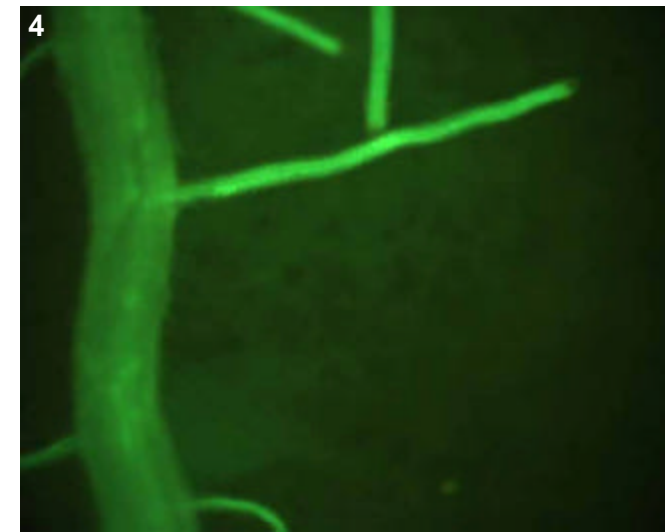
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

5/5 seeds had expression

T1 seedling comments

Genotype: ASV D01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

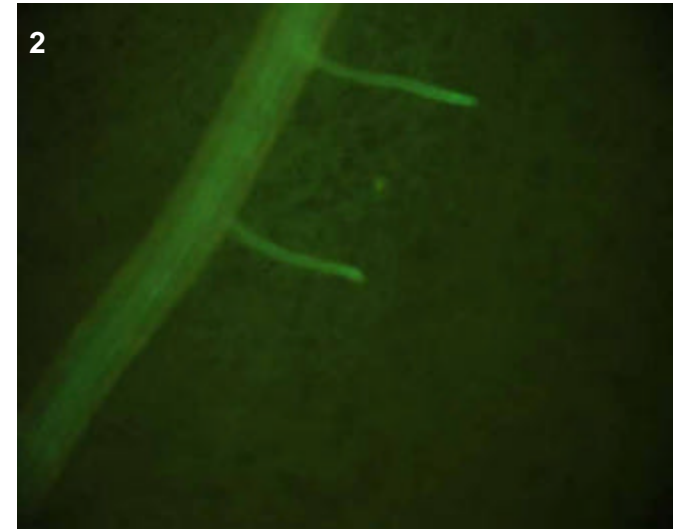
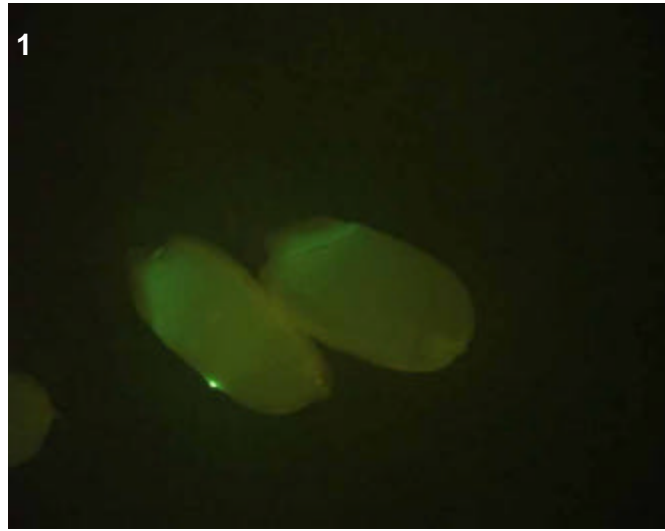
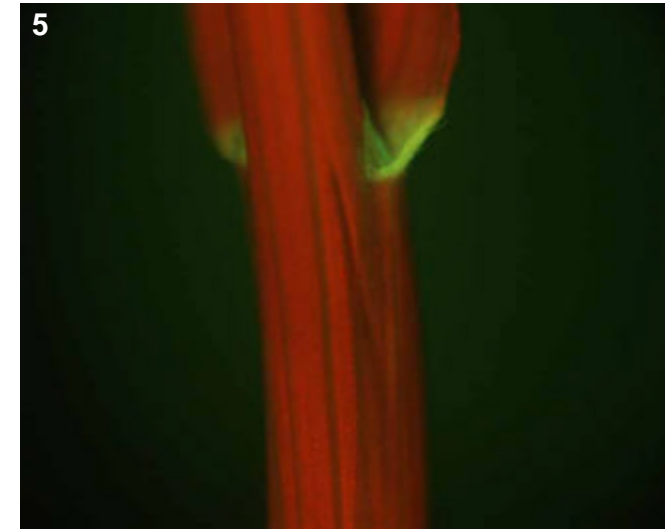
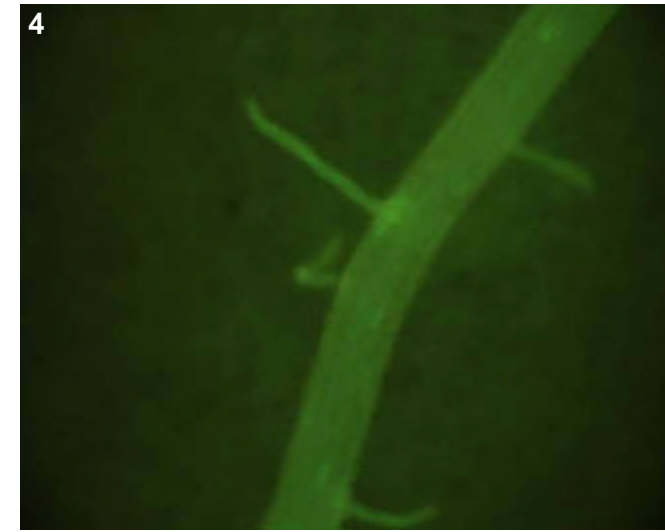
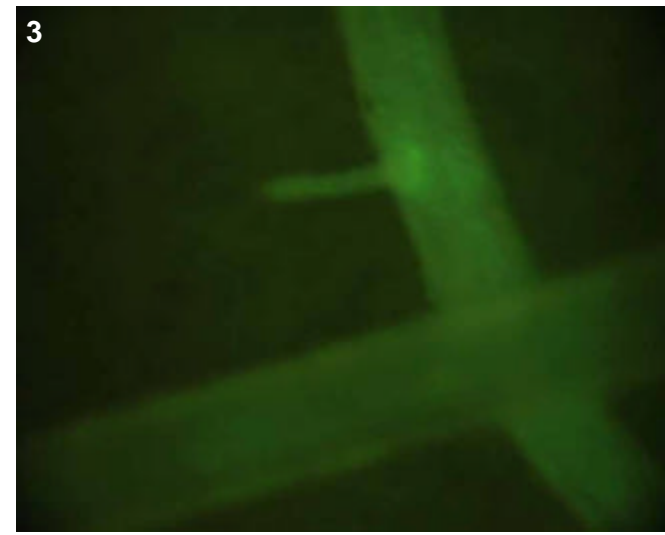
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression

T1 seedling comments

Genotype: ASV E11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-2

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

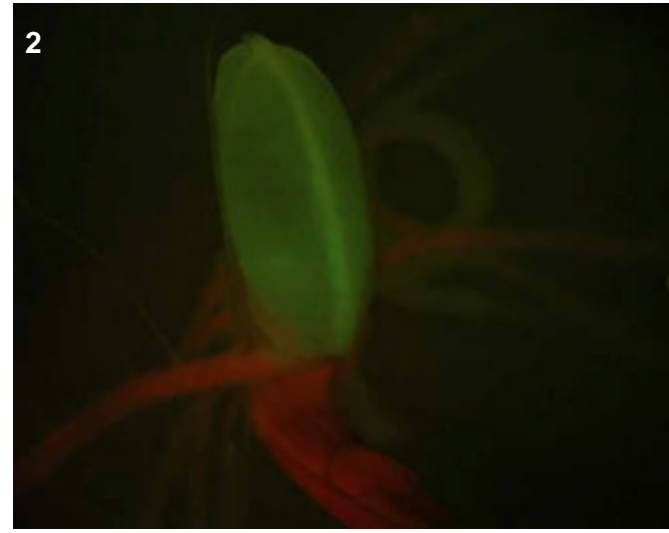
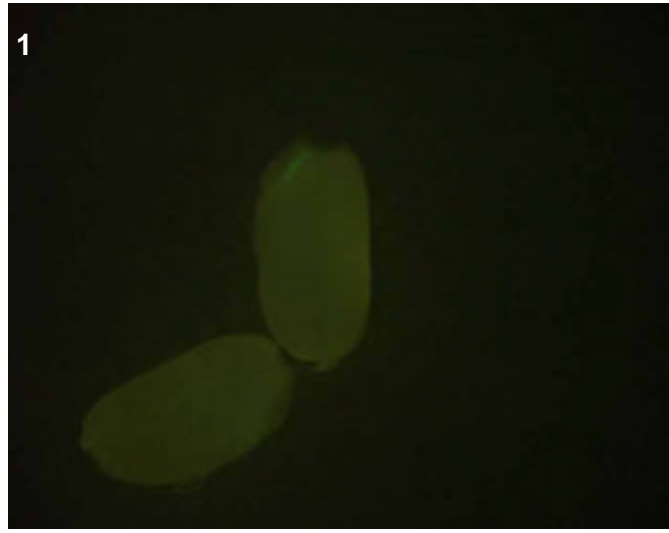
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression, appearing more on the upper side of the scutellum (top seed, pic 1)

T1 seedling comments

Endosperm expression (pic 2) was faint.

Genotype: ASV F01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

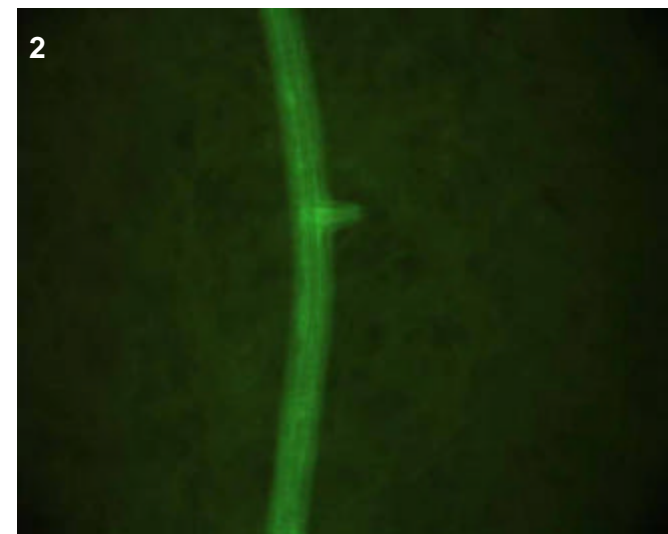
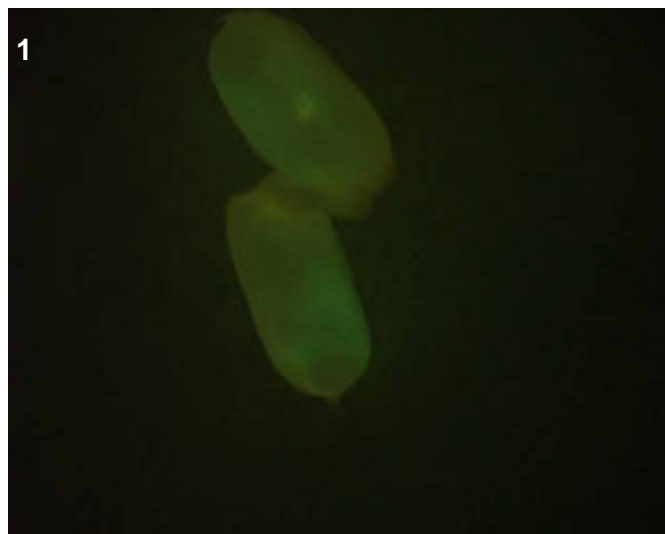
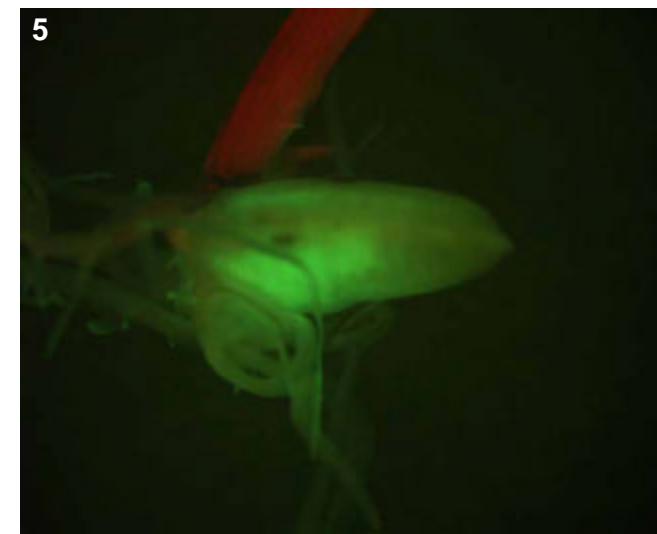
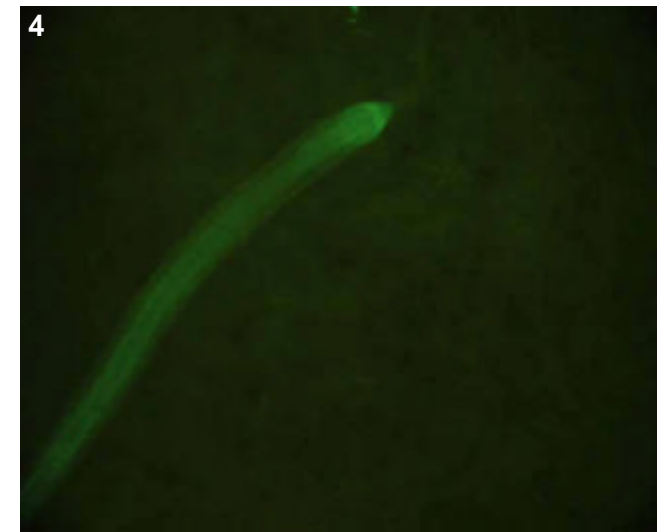
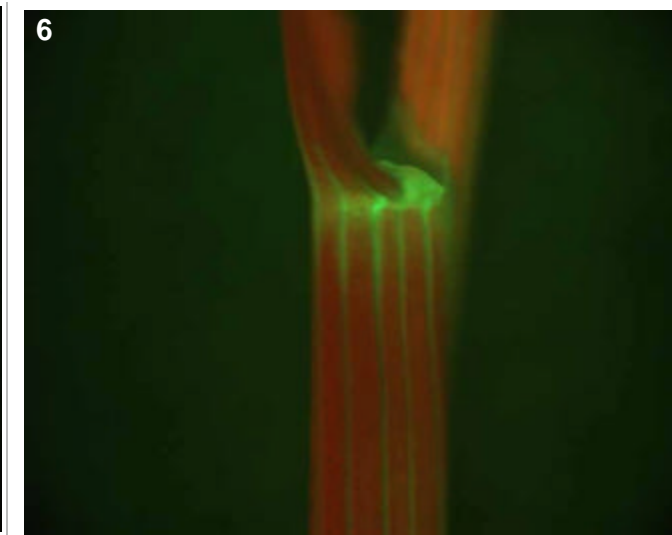
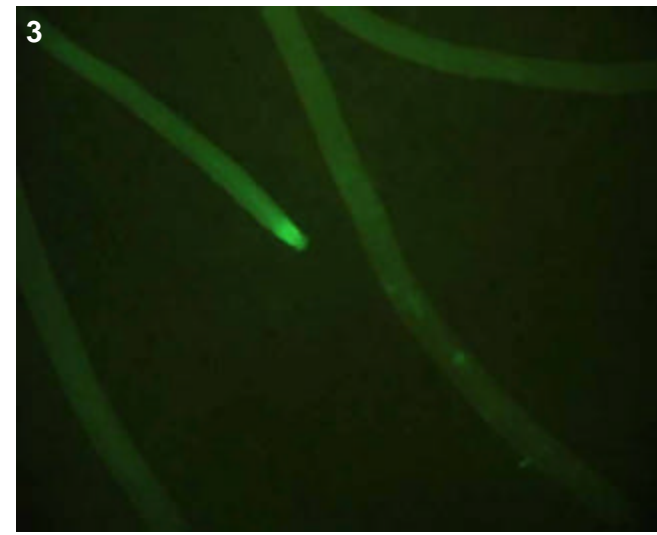
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression. Interesting because the lower 1/3 of seed is bright (pic 1), endosperm?

T1 seedling comments

Genotype: ASV F05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

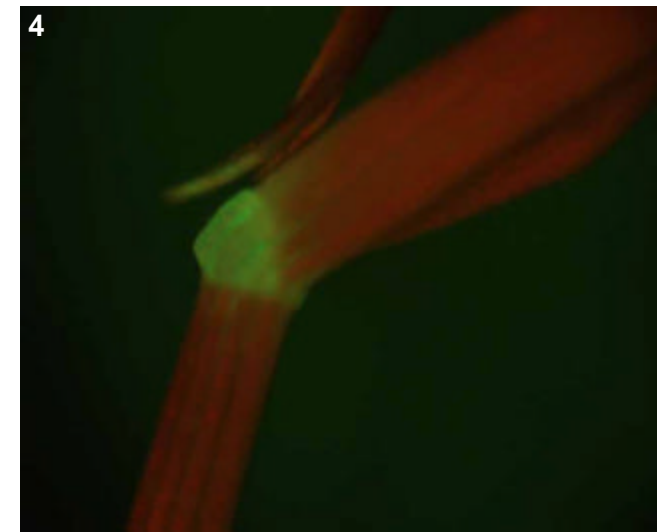
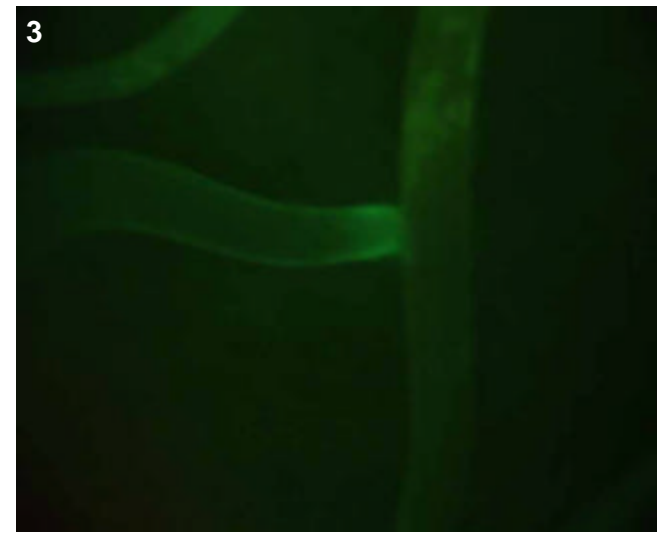
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression

T1 seedling comments

Genotype: ASV G05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

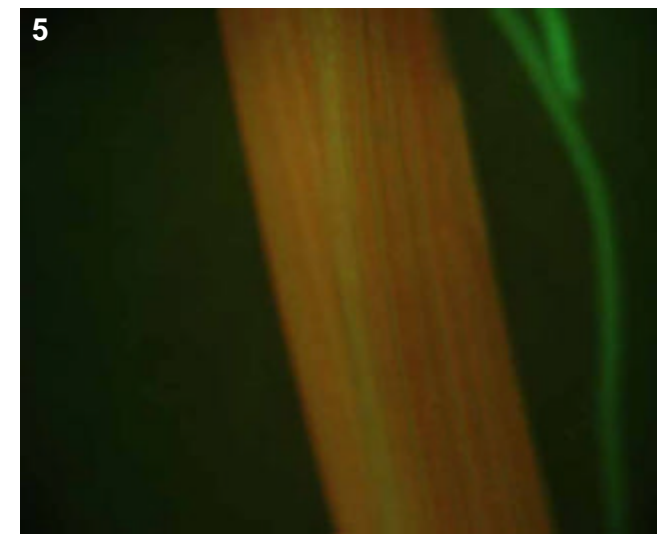
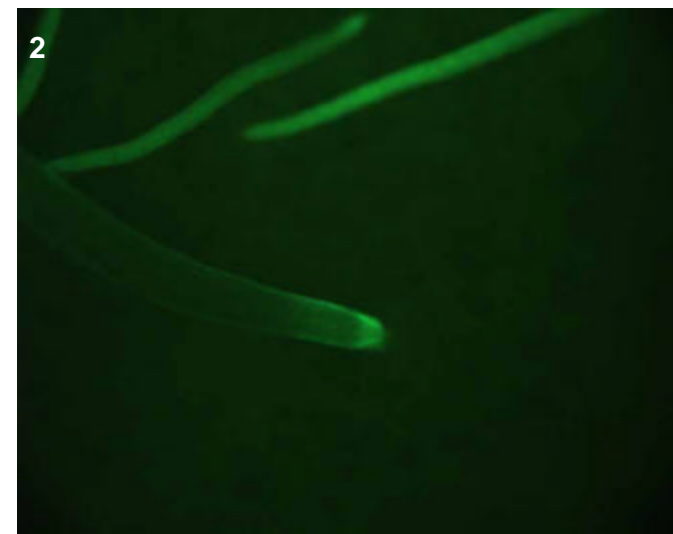
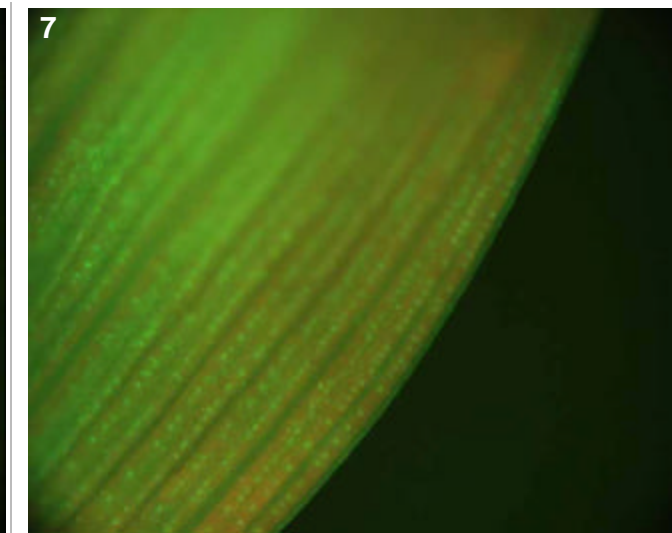
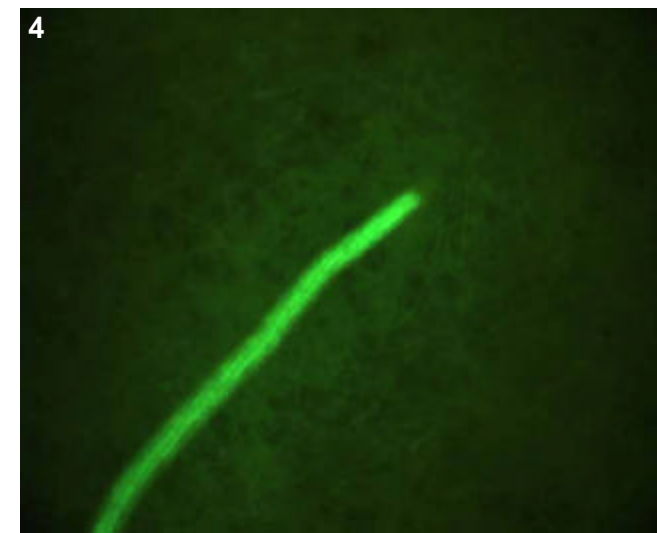
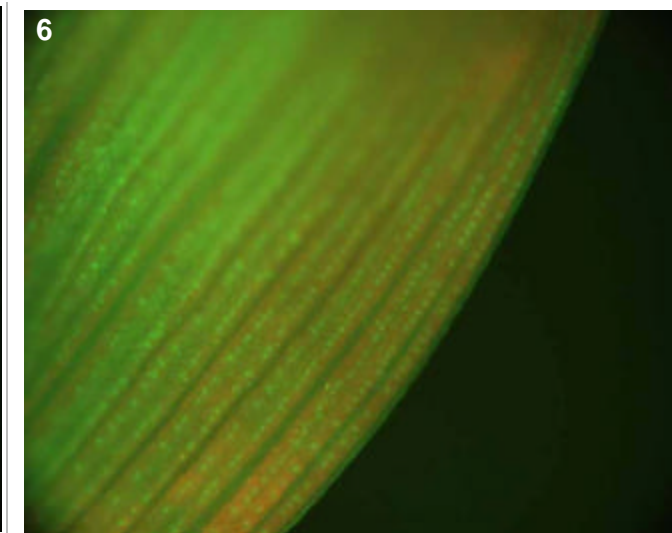
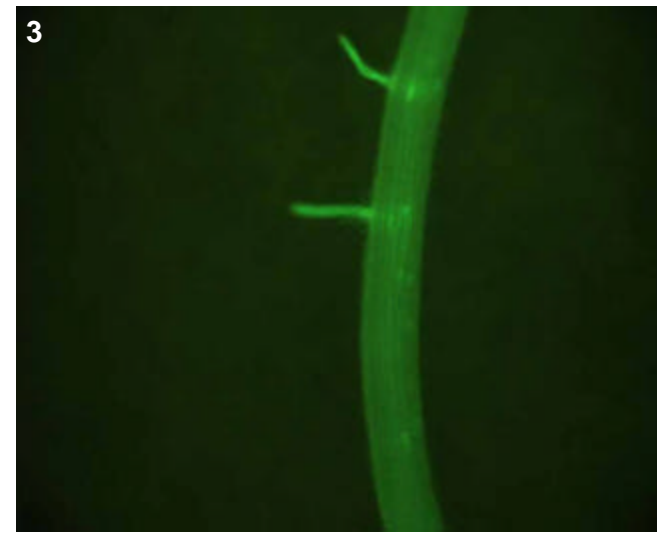
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression

T1 seedling comments

Perhaps an epidermal pattern in both root (pics 2-4) and shoot (pics 5-7).

Genotype: ASV H05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

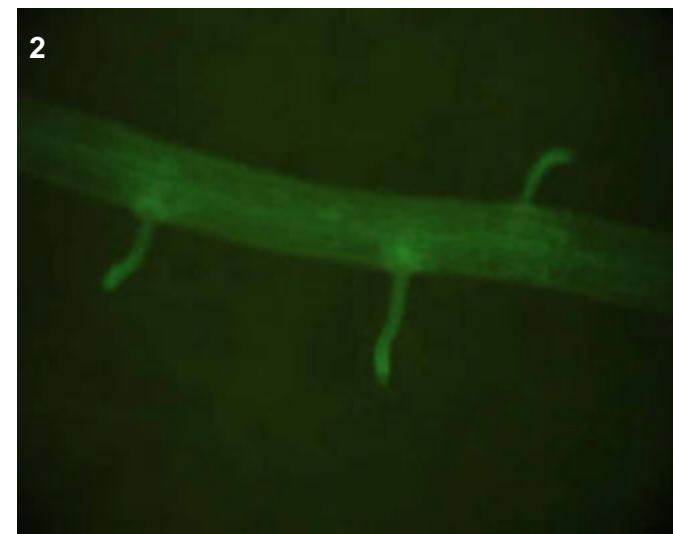
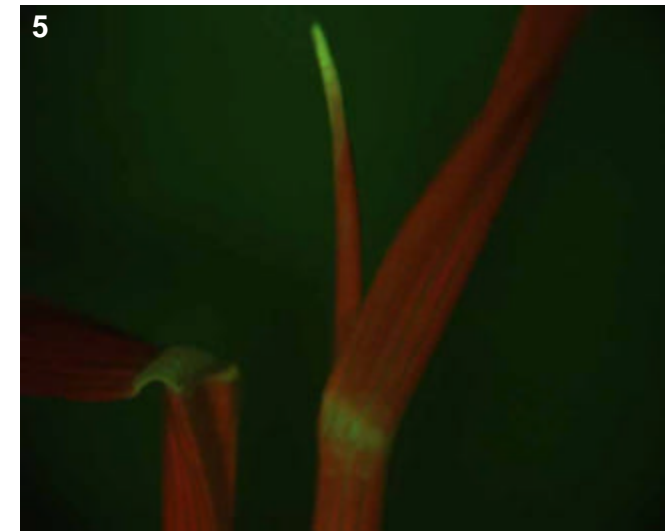
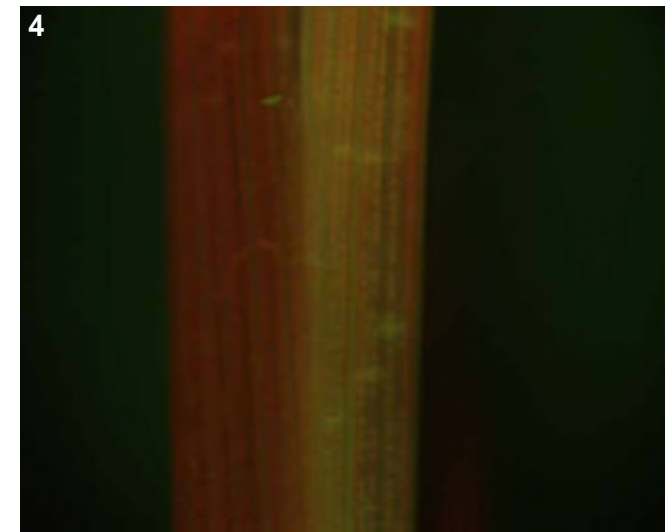
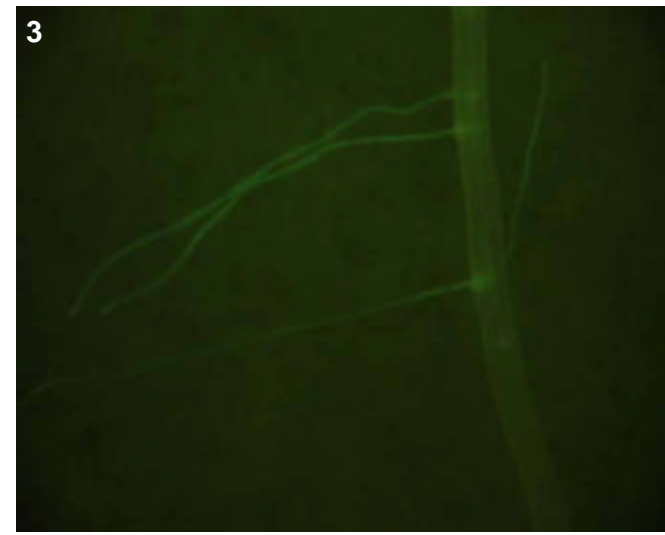
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression

T1 seedling comments

Genotype: ASW A02

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

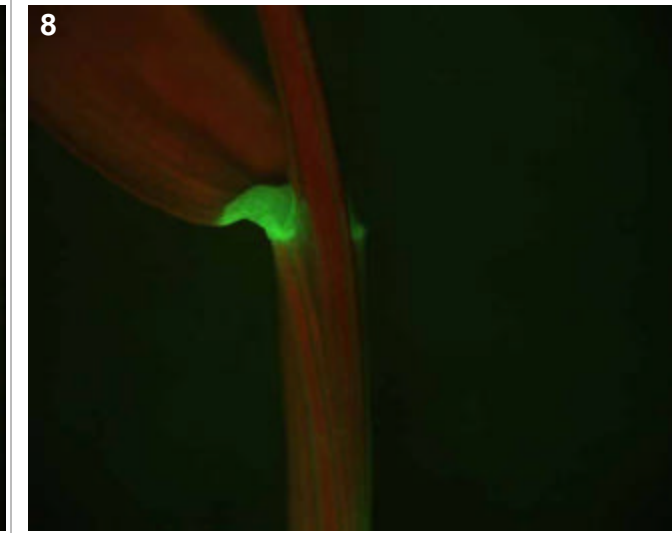
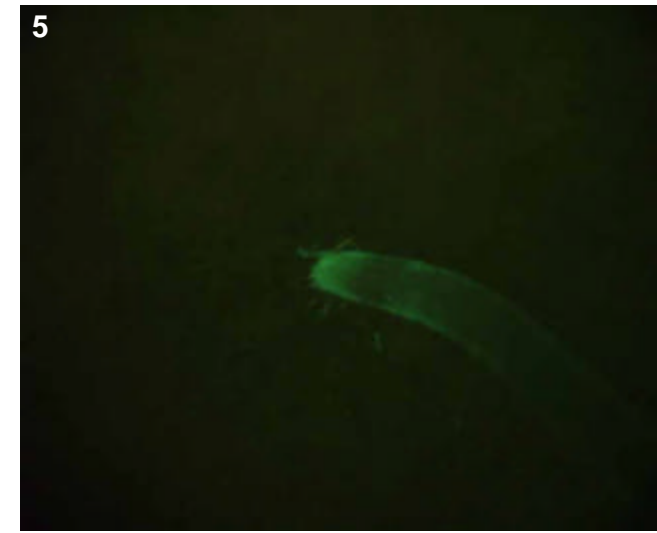
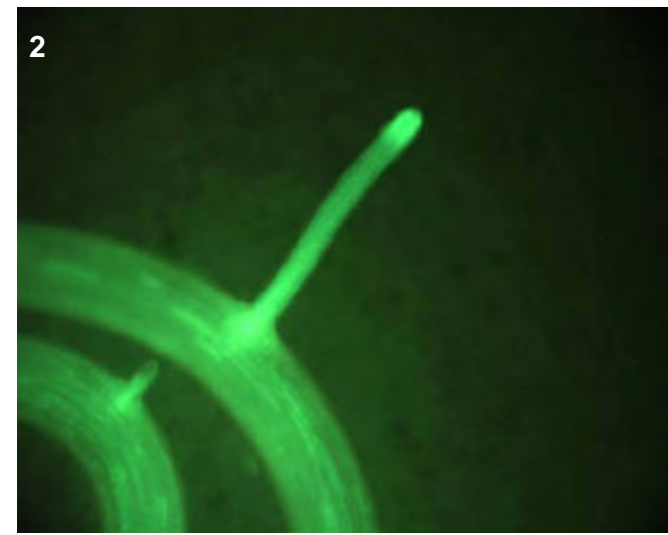
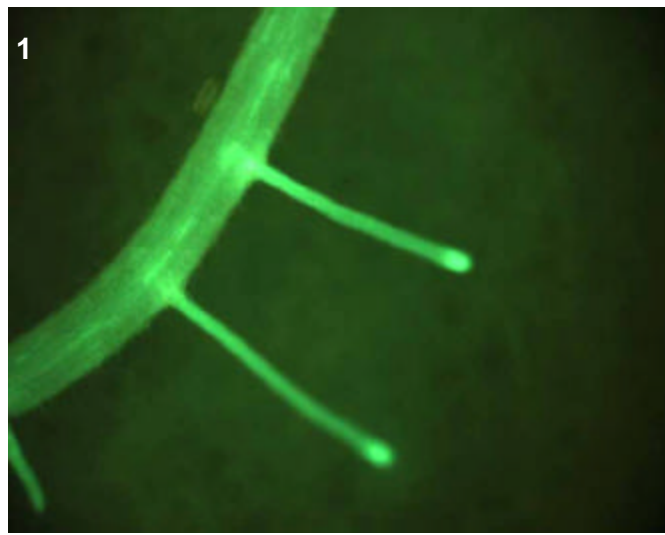
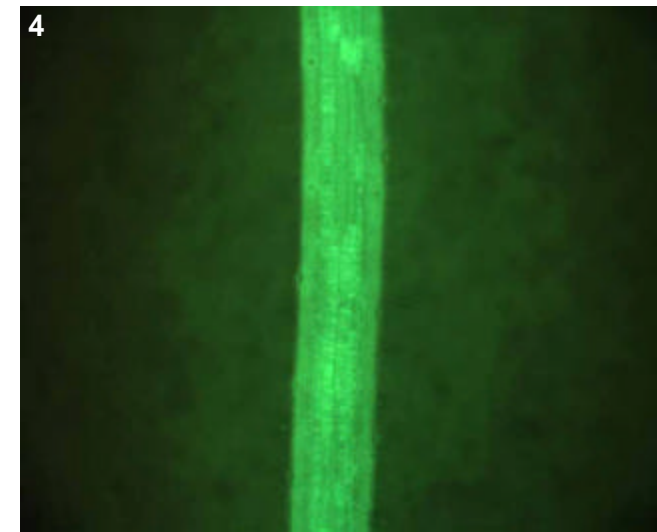
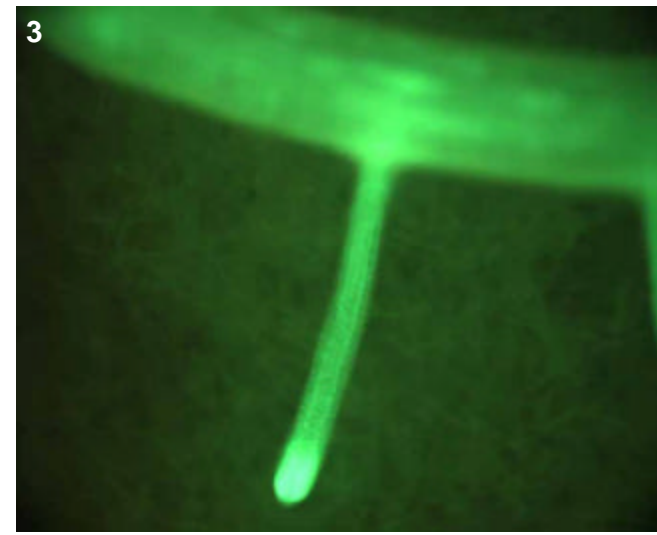
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium scutellum expression (no picture taken).

T1 seedling comments

Note the extremely bright root expression (pics 1-7), I suspect a predominately epidermal pattern with some additional cortical expression in the laterals.

Genotype: ASW A07

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

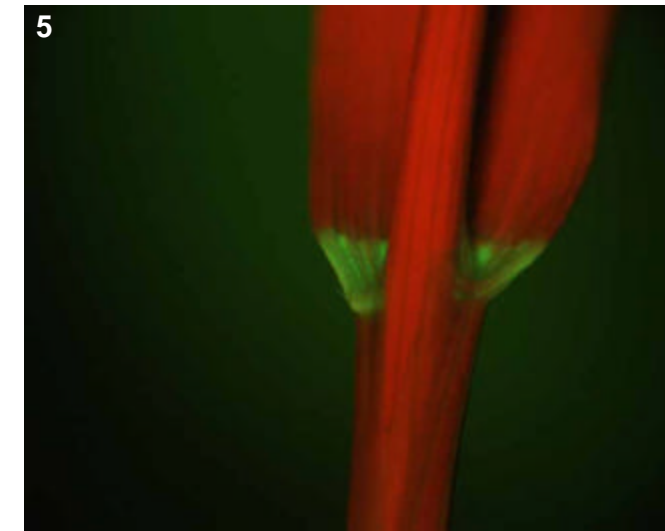
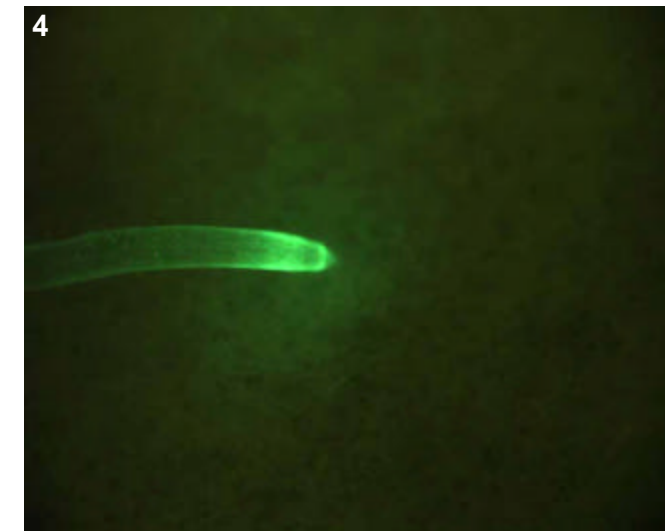
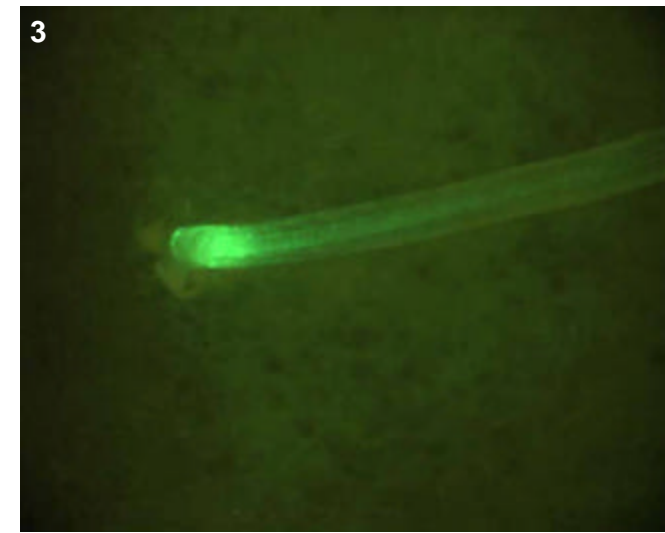
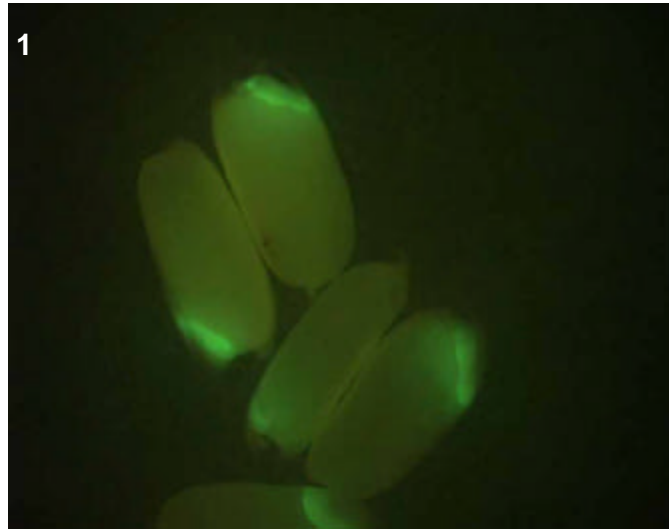
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

5/5 seeds had expression.

T1 seedling comments

Genotype: ASW B09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

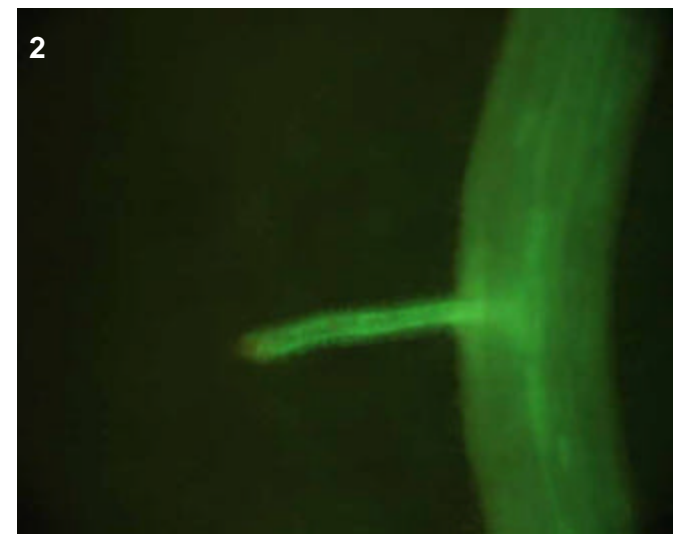
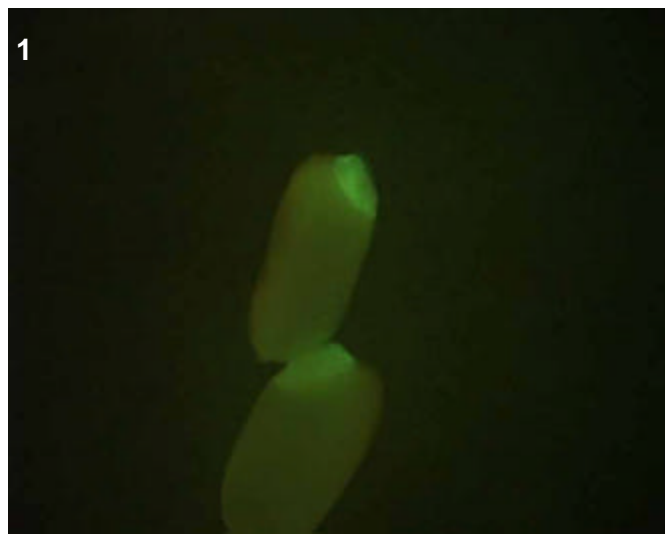
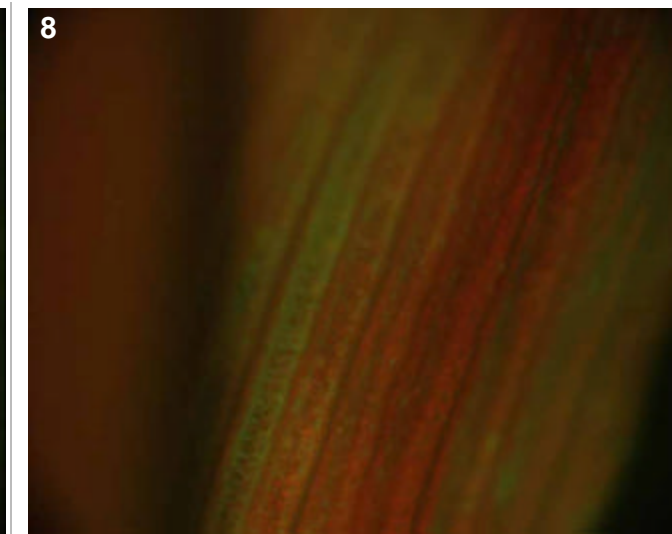
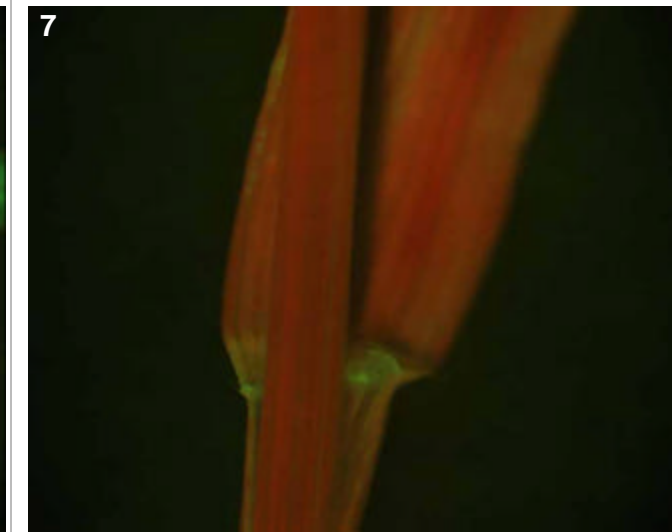
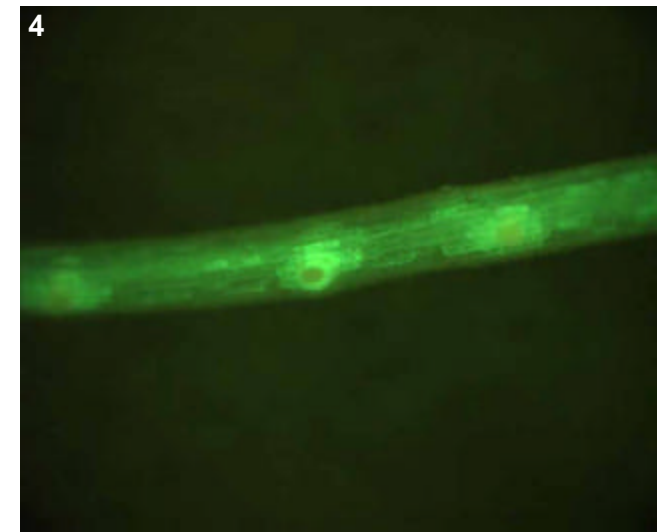
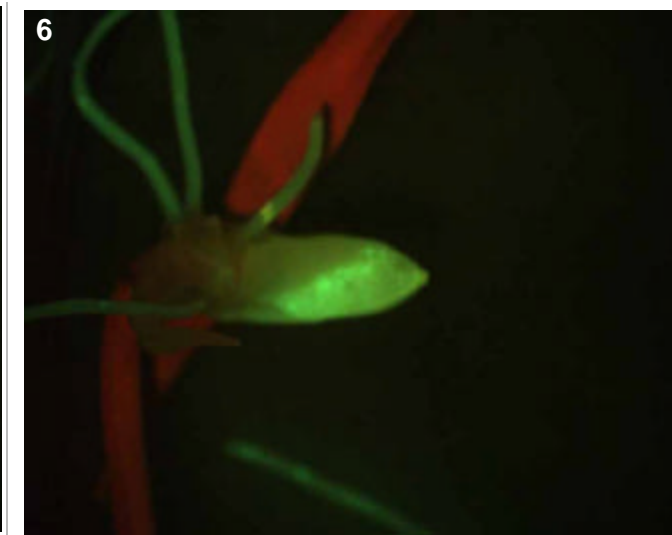
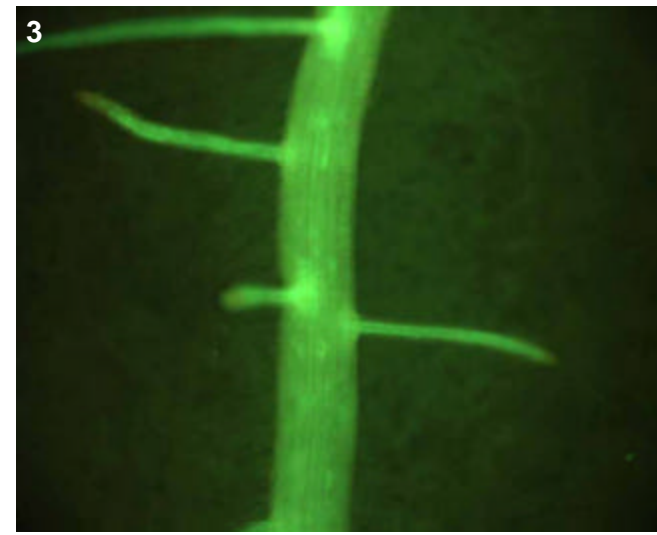
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression.

T1 seedling comments

Genotype: ASW E09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

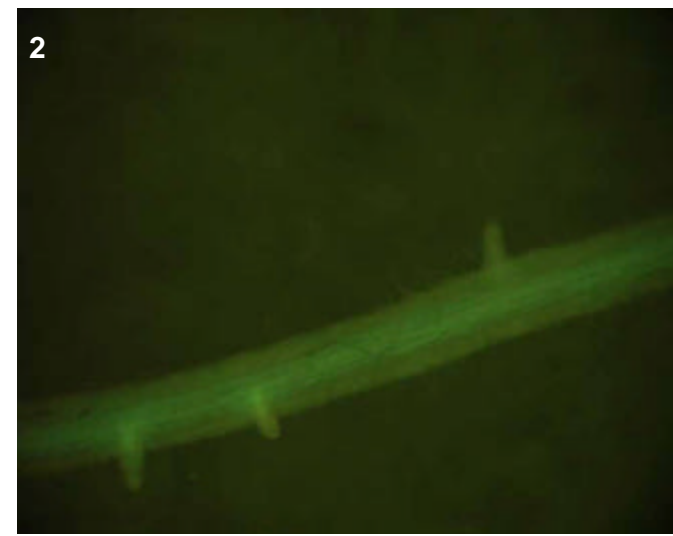
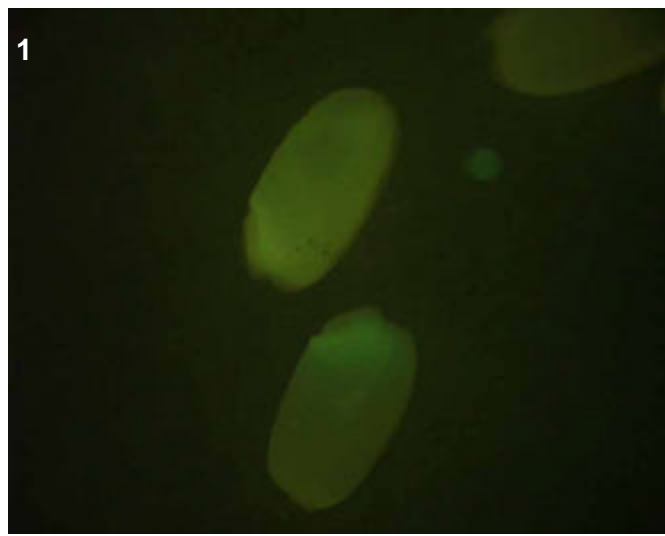
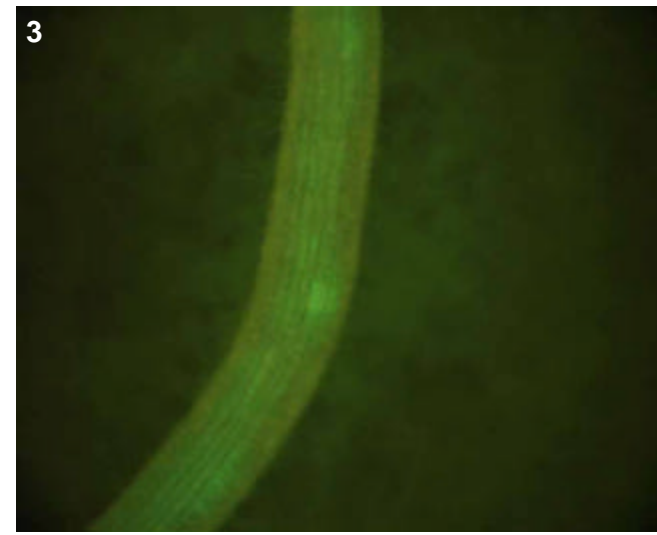
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ASW F03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

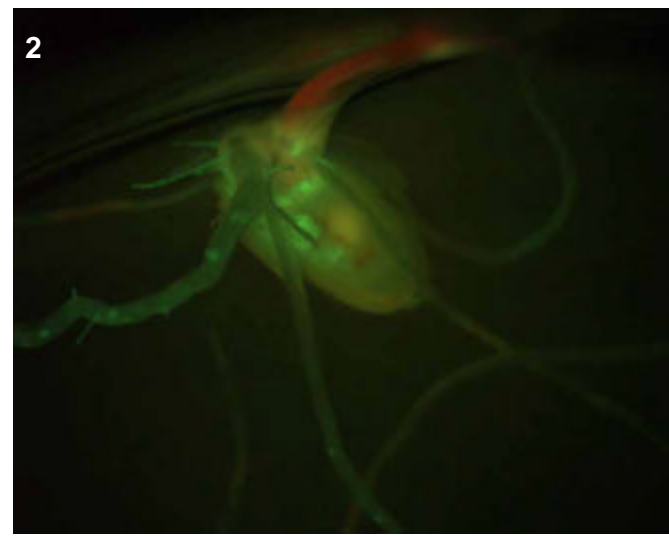
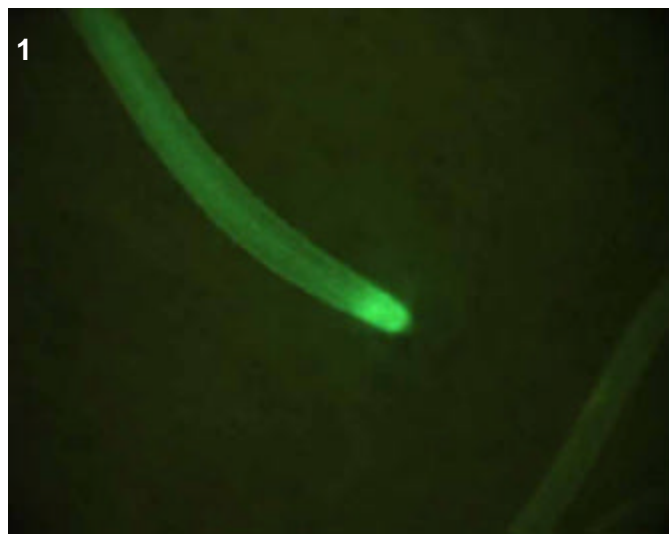
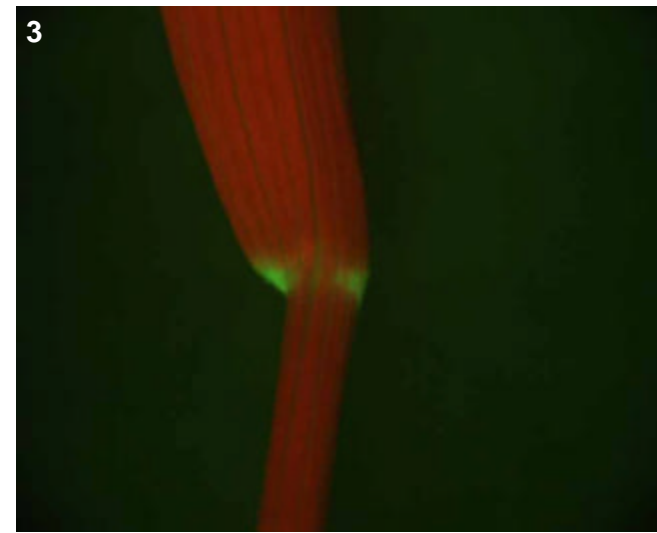
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression in the scutellum (no picture taken).

T1 seedling comments

Genotype: ASW F08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

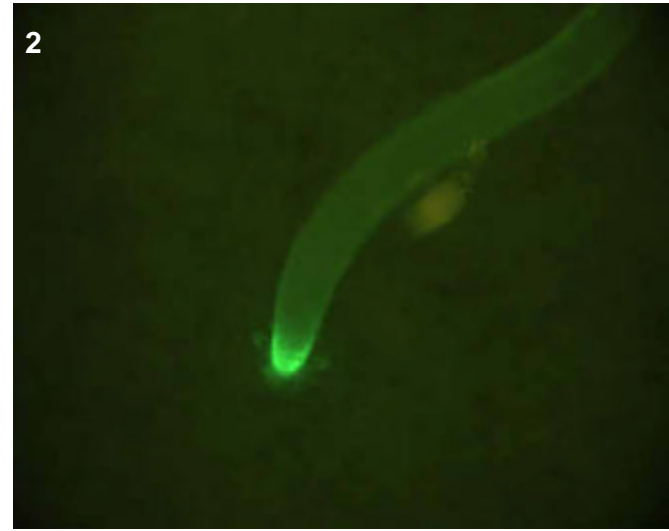
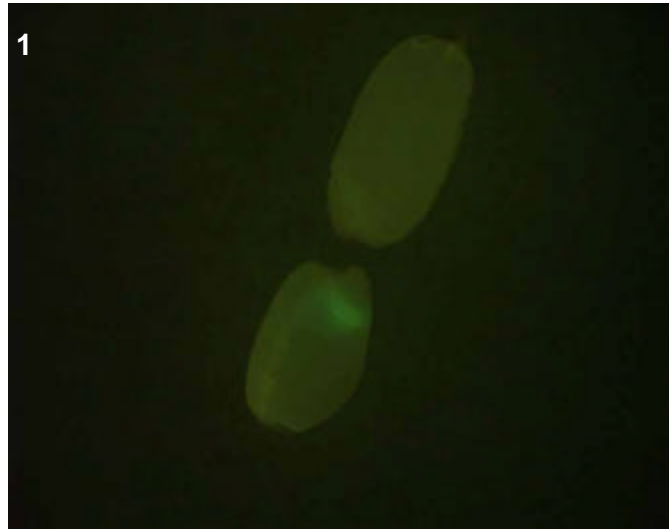
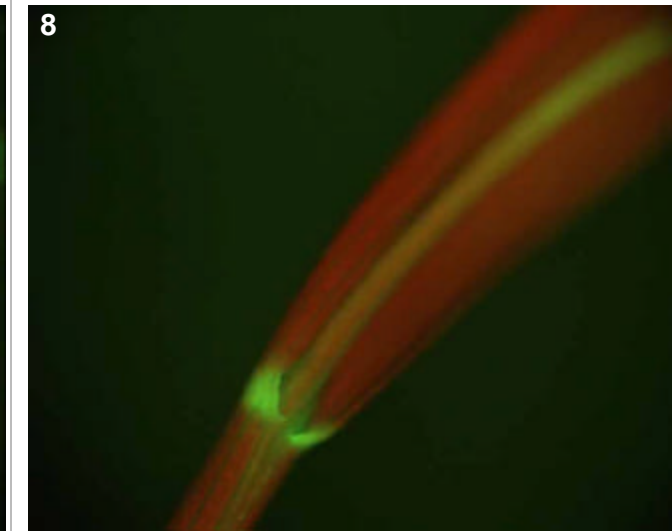
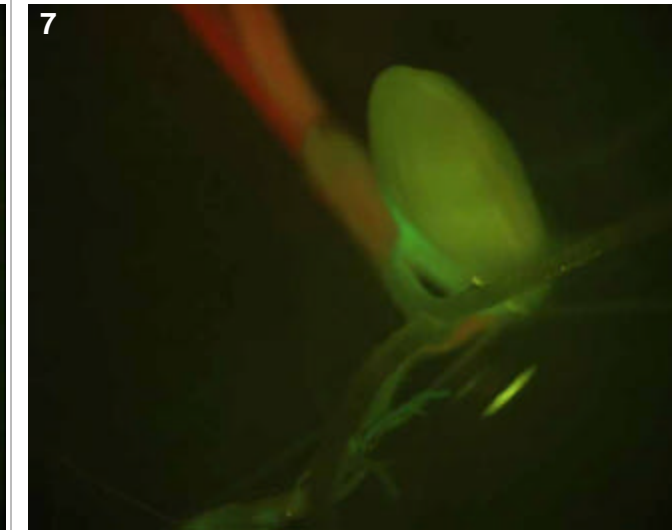
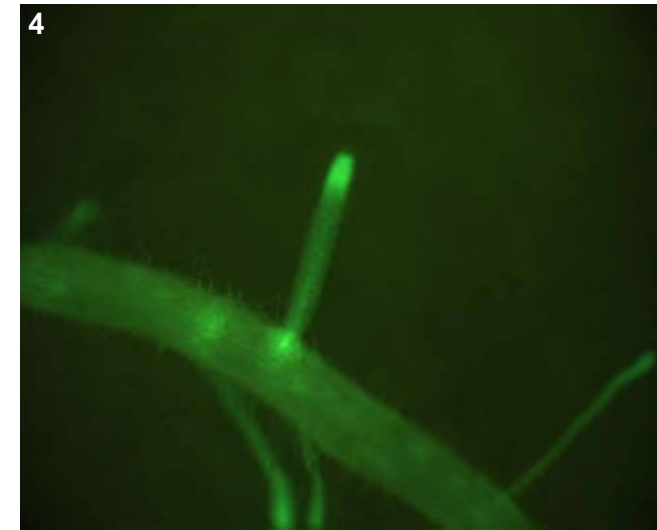
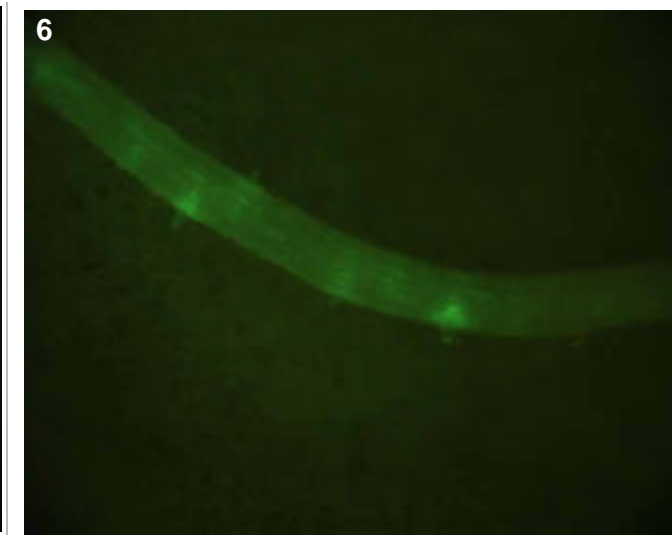
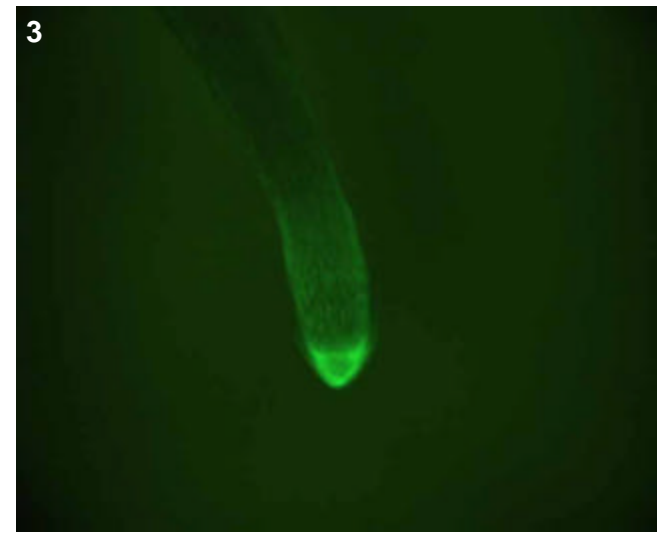
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ASX C08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-3

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

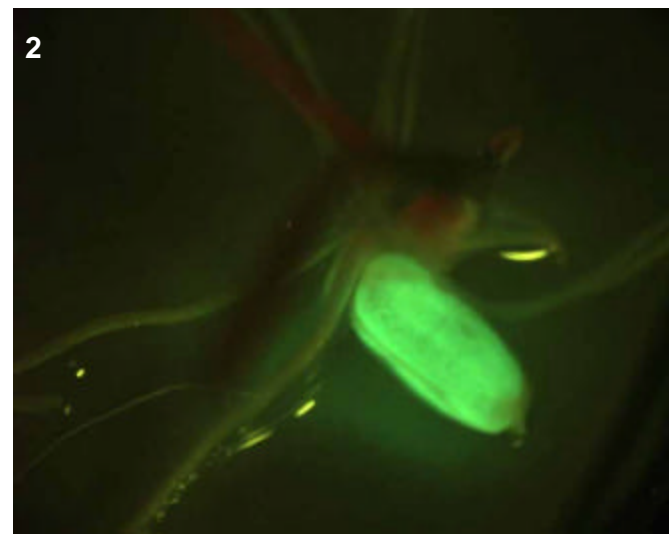
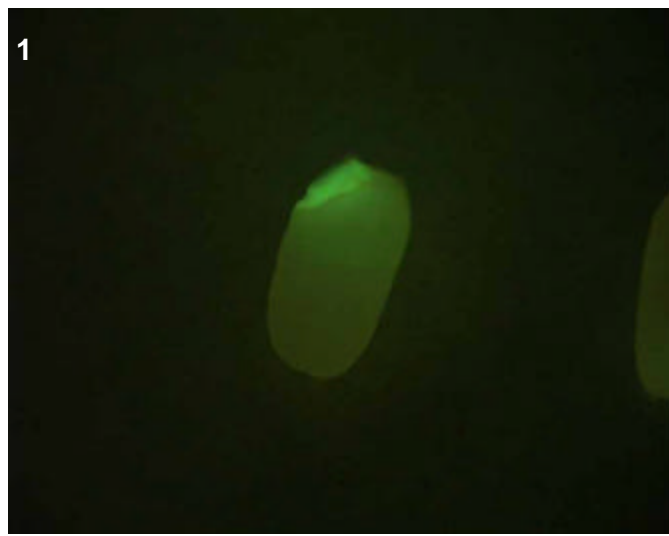
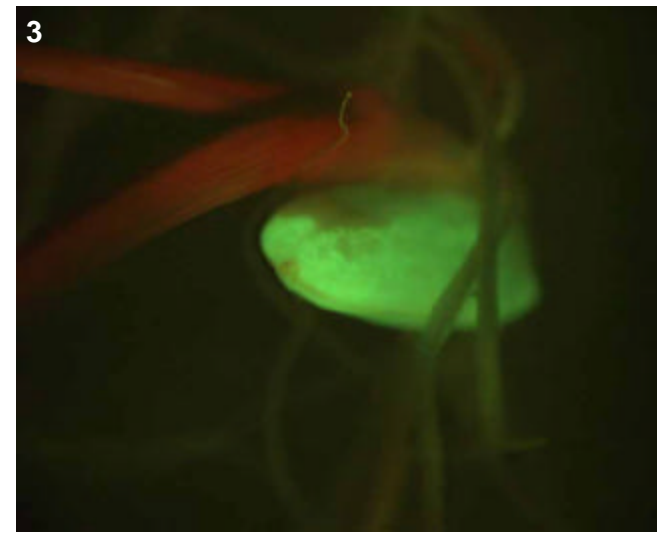
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ASX D03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

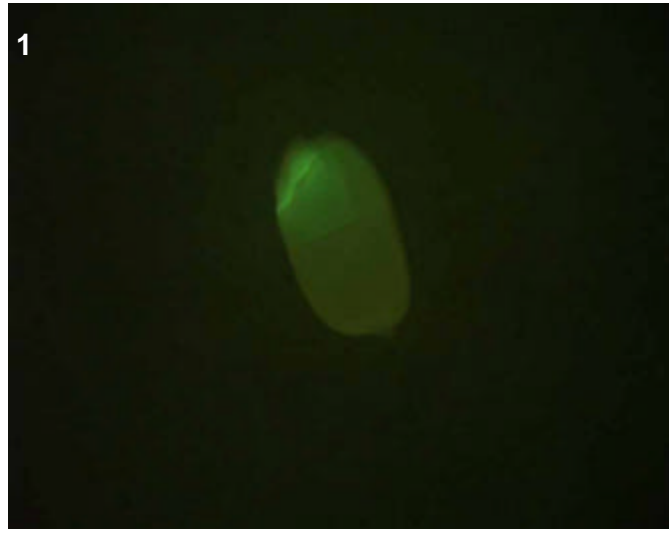
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ASX E12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

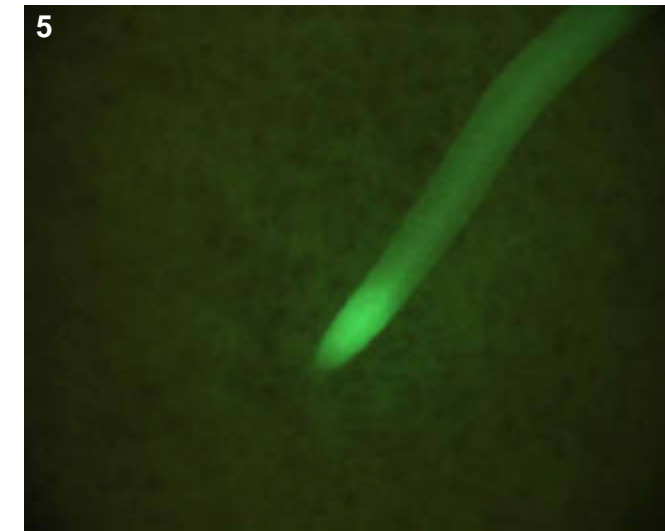
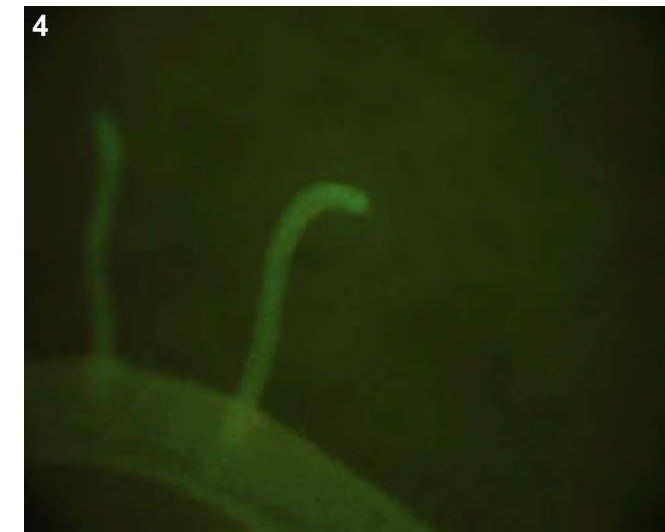
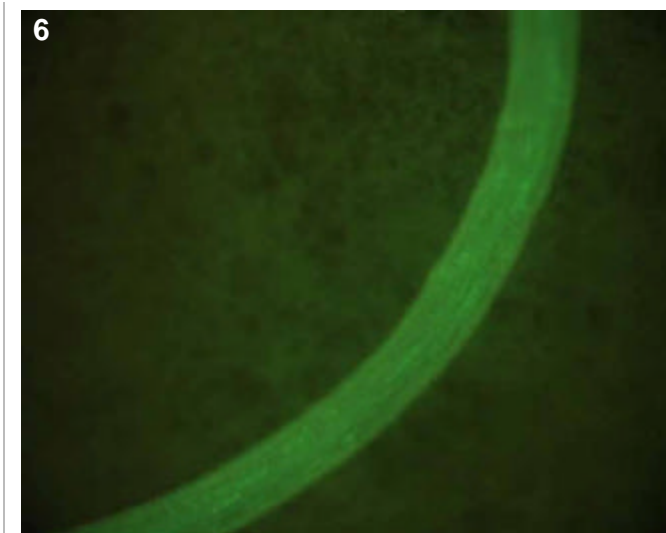
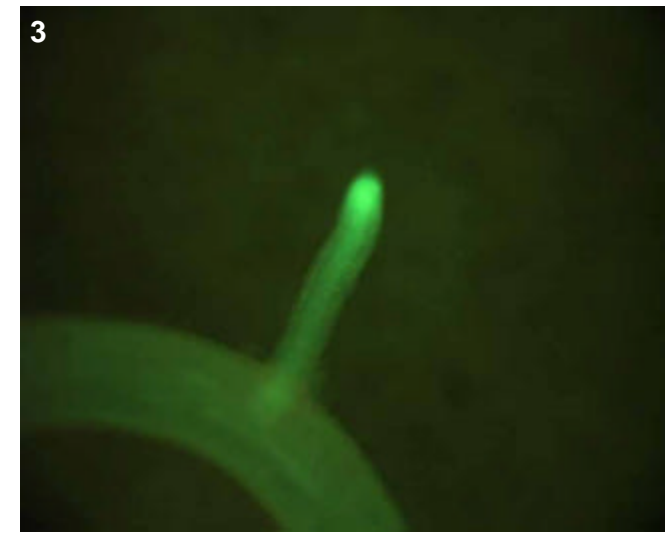
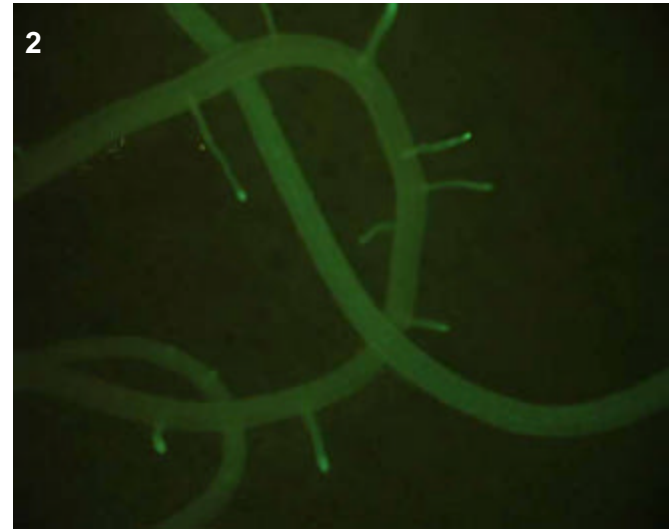
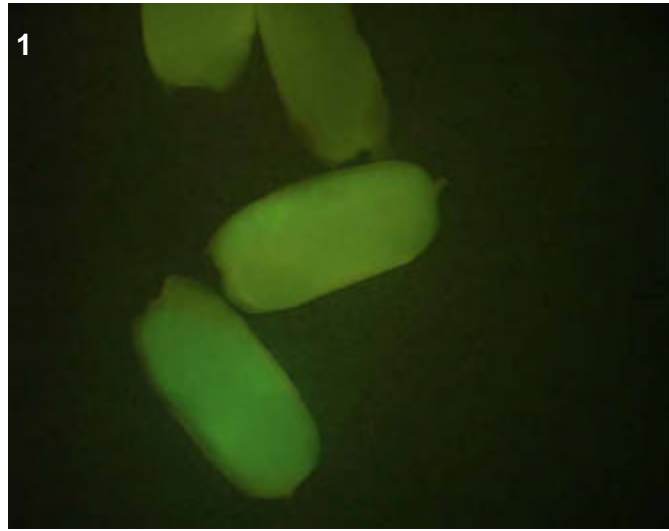
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

3/4 seeds had faint-medium expression.

T1 seedling comments

Confocal analysis must be done to clarify what tissues are GFP positive in the root (pics 2-7)--could be epidermal or more inside, or both.

Genotype: ASX H09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

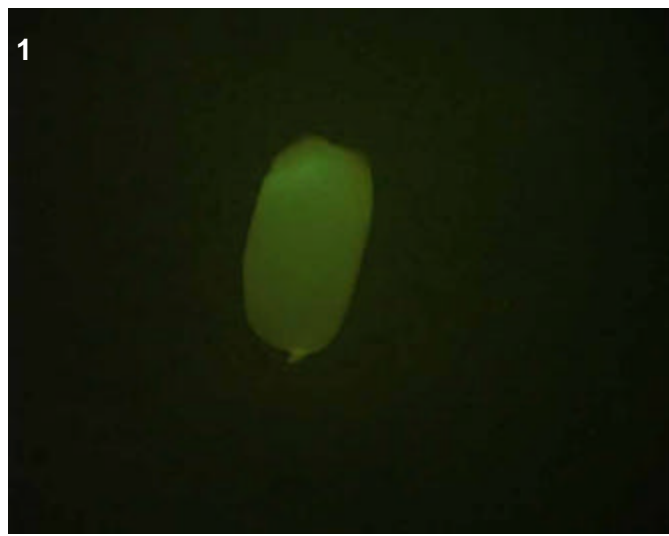
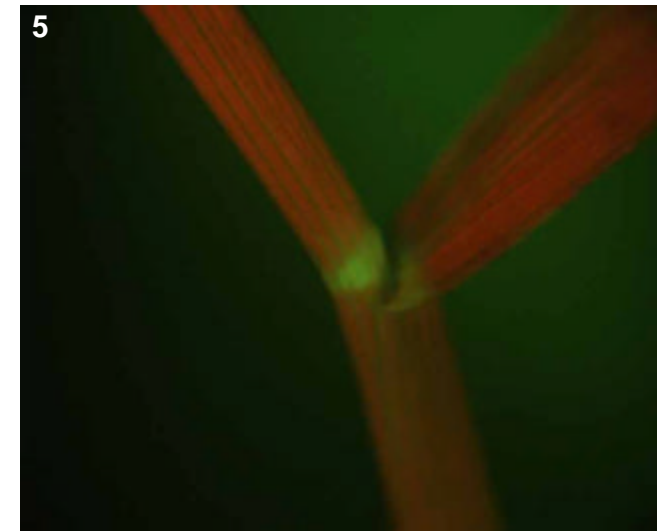
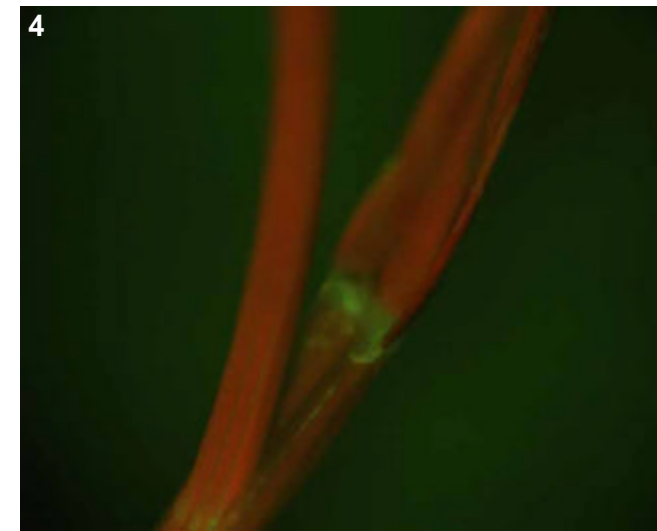
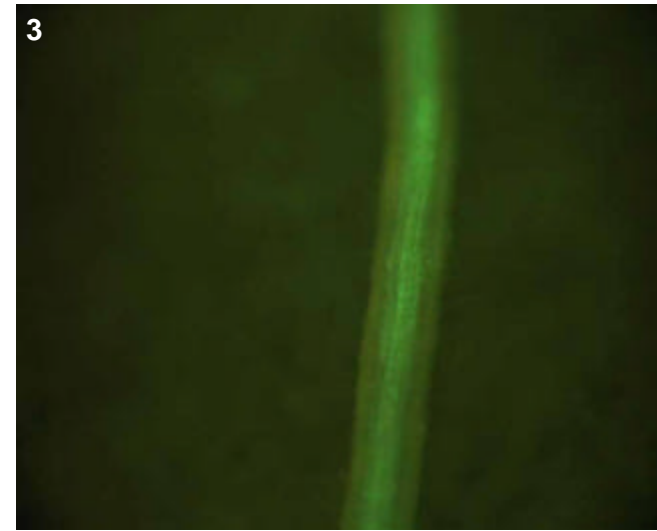
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had weak expression.

T1 seedling comments

Genotype: ASY A11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

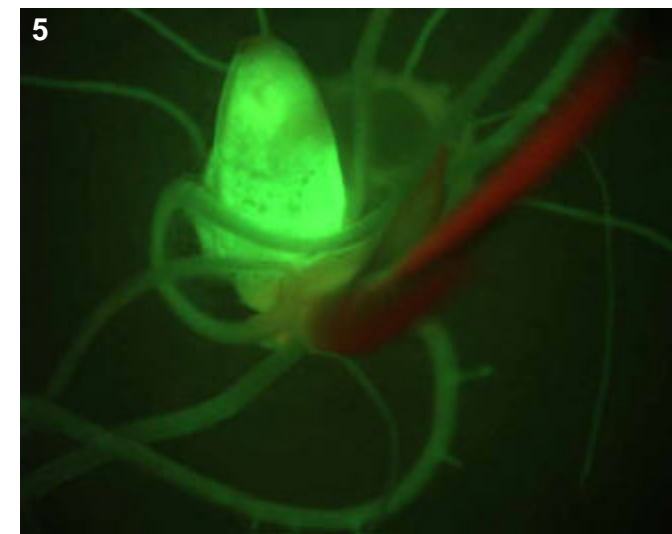
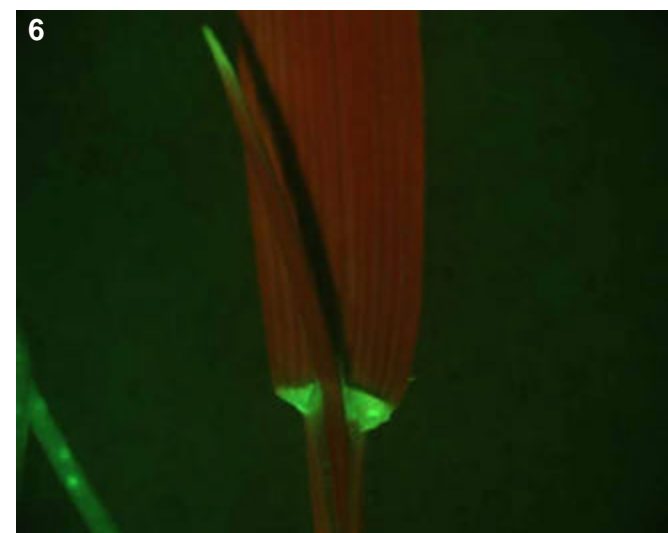
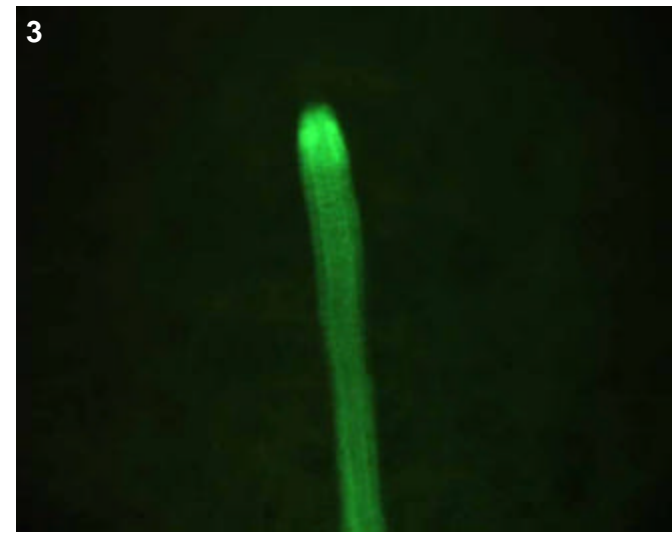
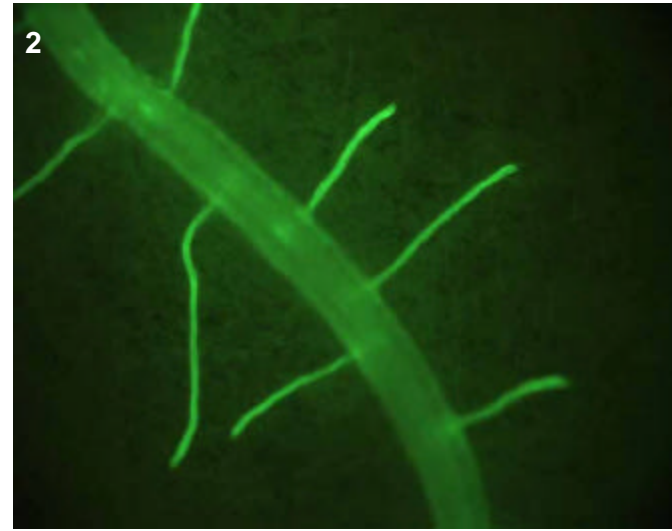
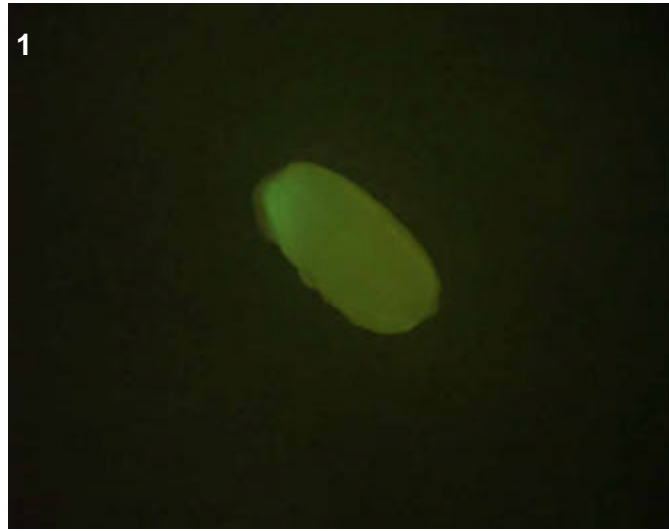
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression.

T1 seedling comments

Very bright expression.

Genotype: ASY C01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

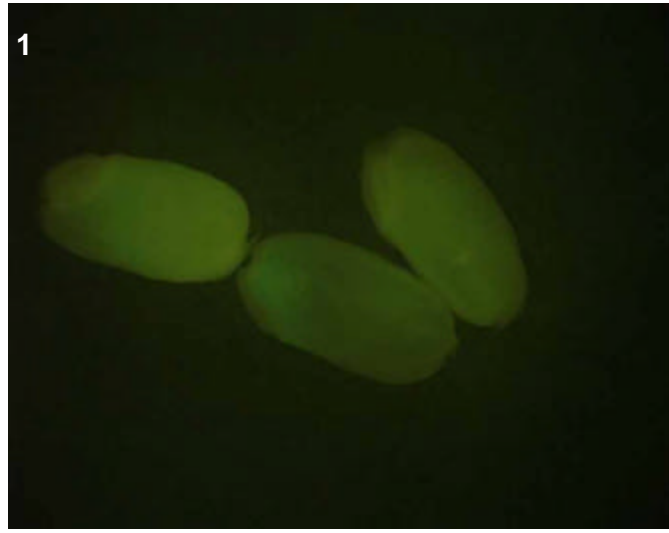
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/4 seeds had expression.

T1 seedling comments

Genotype: ASY D10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

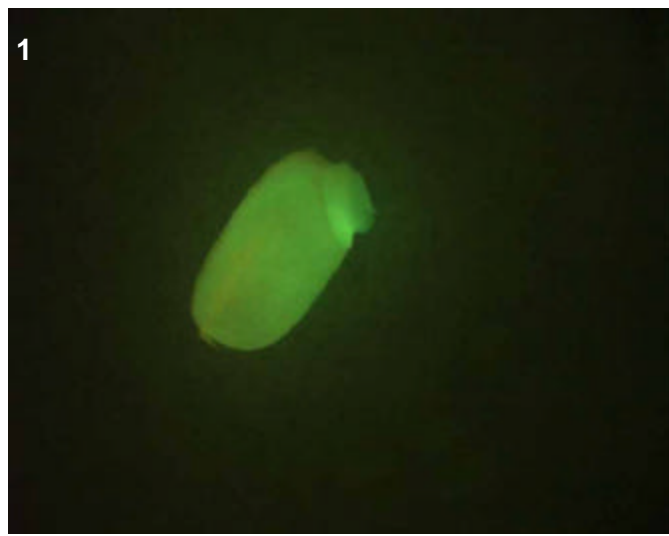
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



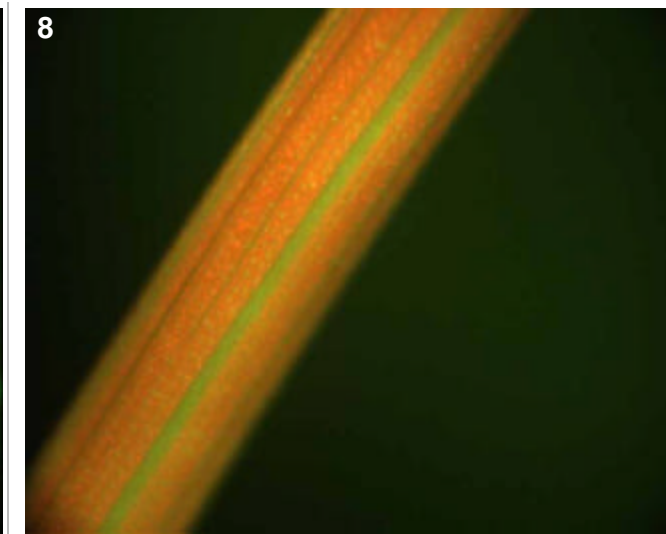
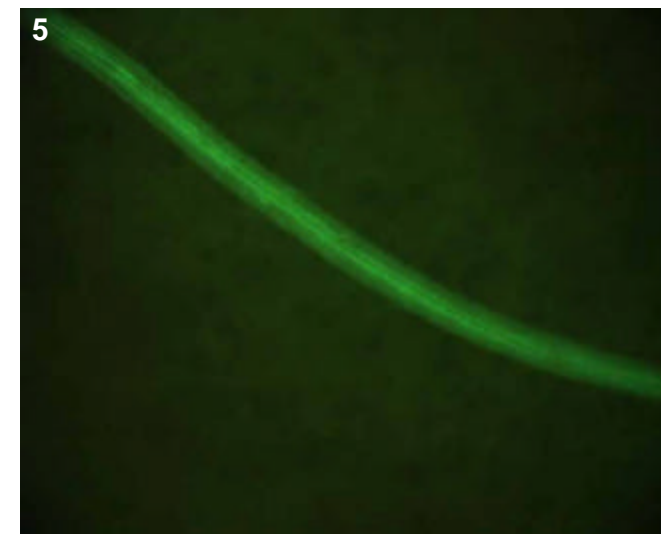
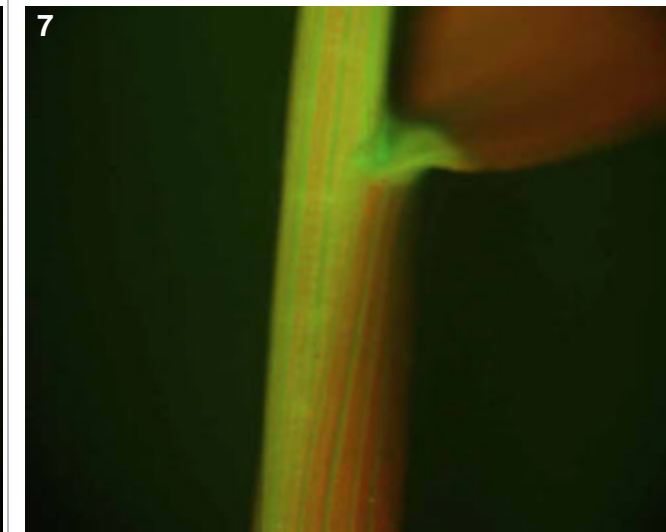
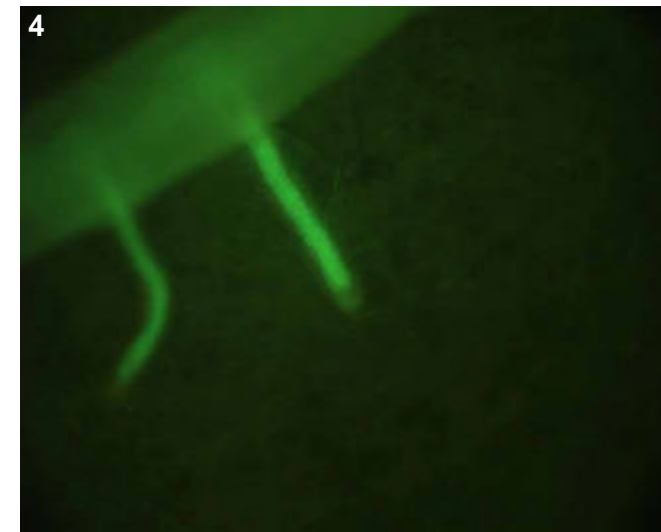
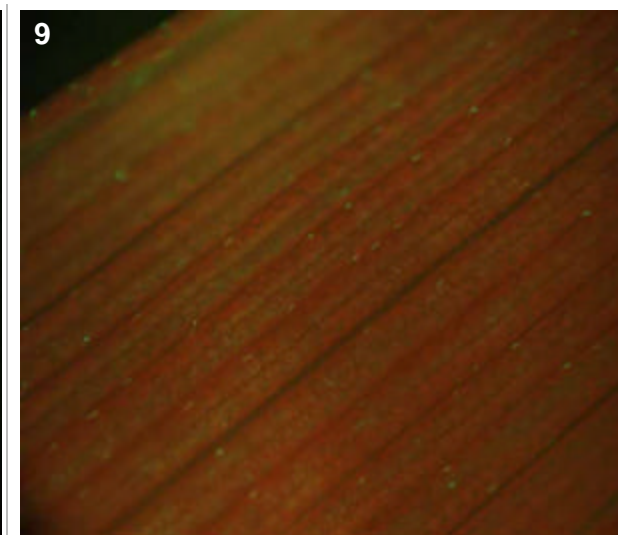
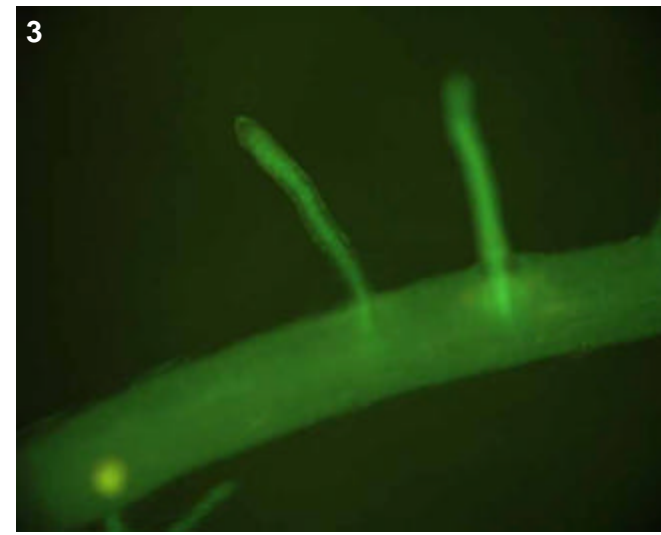
T0 comments

T1 seed comments

4/5 seeds had medium expression.

T1 seedling comments

The lateral roots appear to have bright expression in the stele, most evident in pictures 3 and 4.



Genotype: ASY F10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

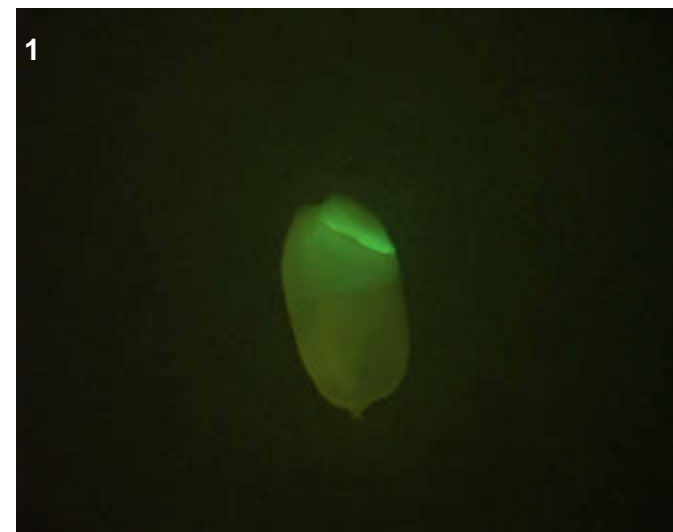
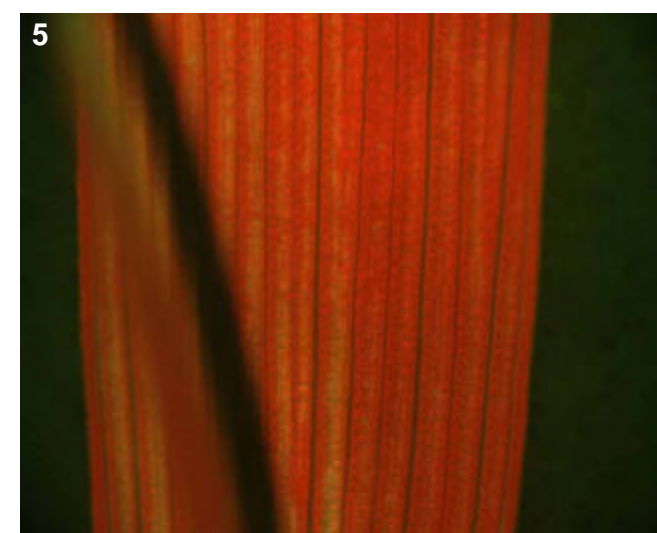
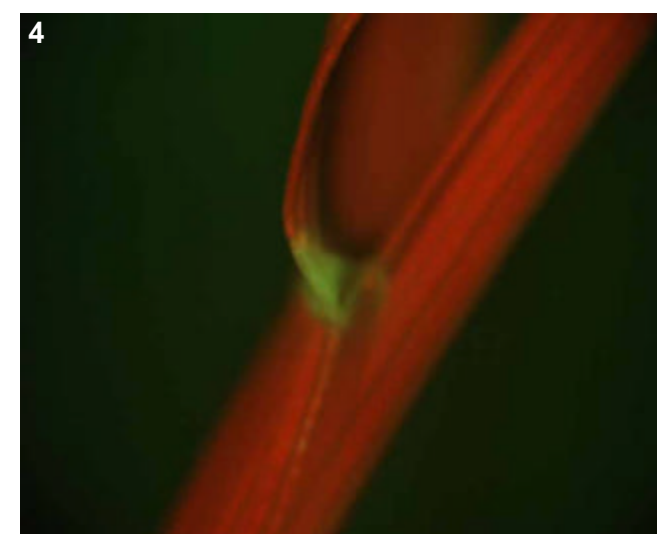
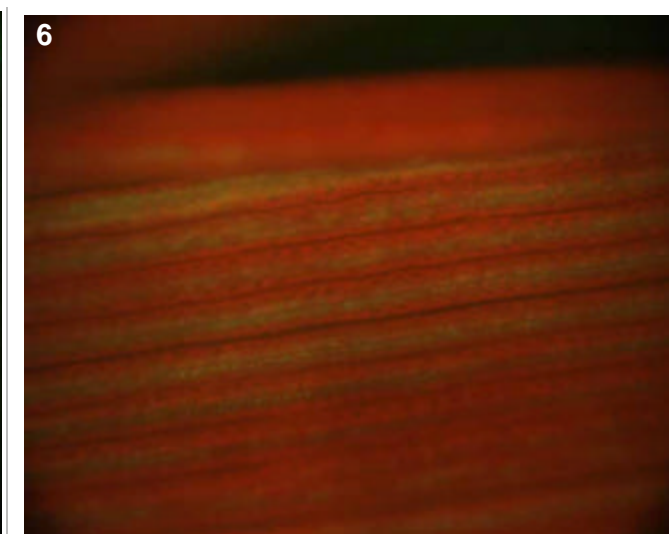
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression.

T1 seedling comments

Genotype: ASY G01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

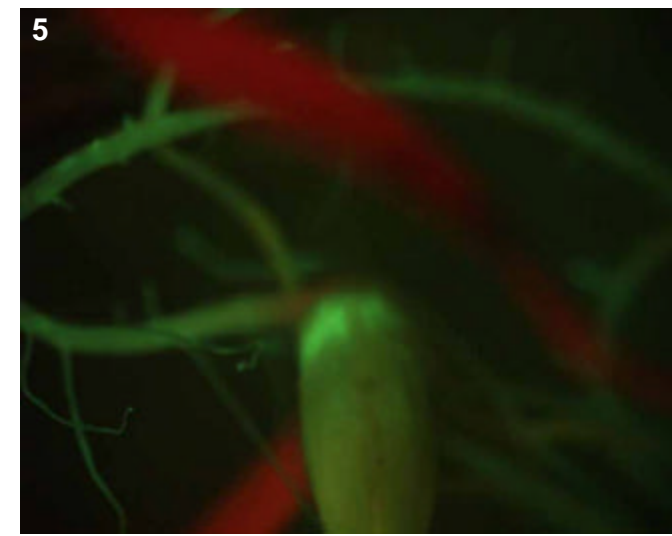
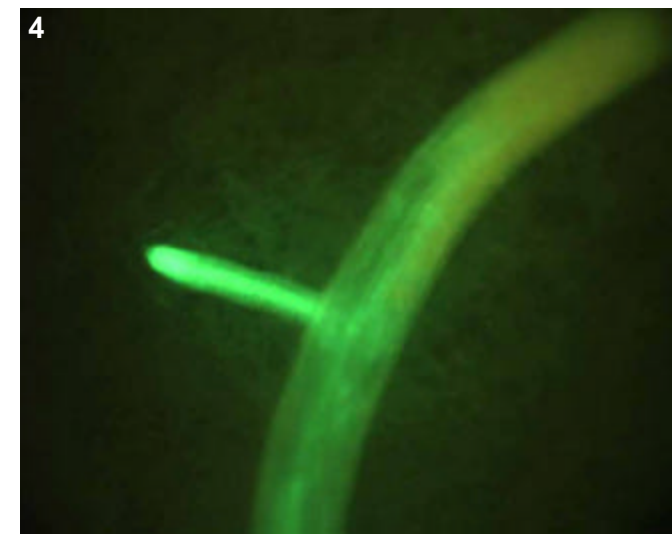
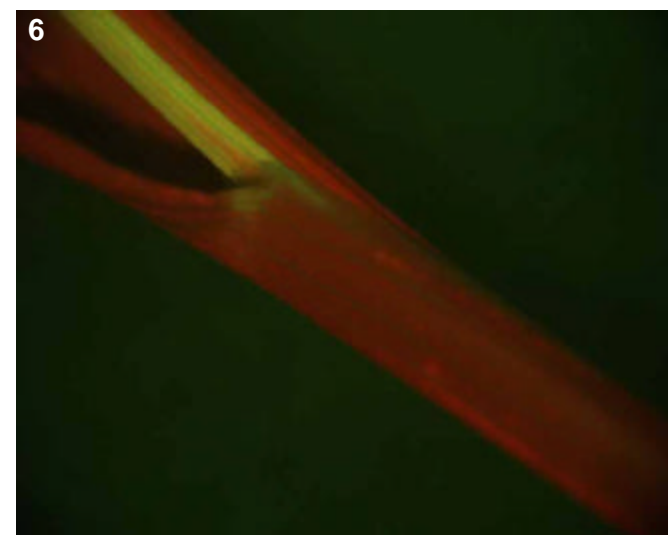
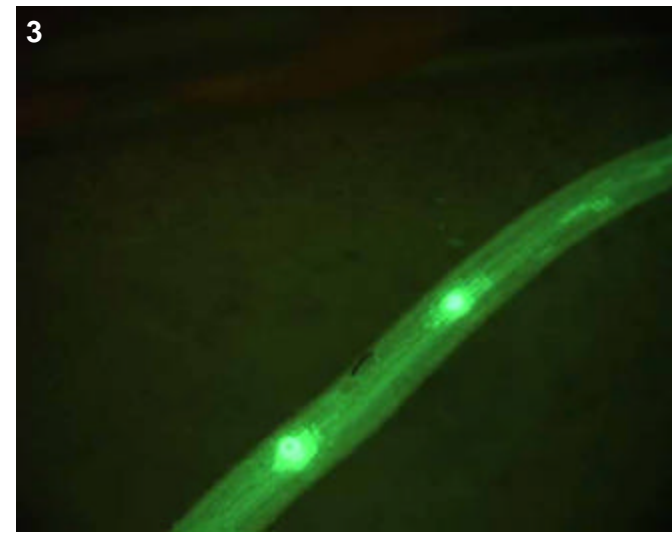
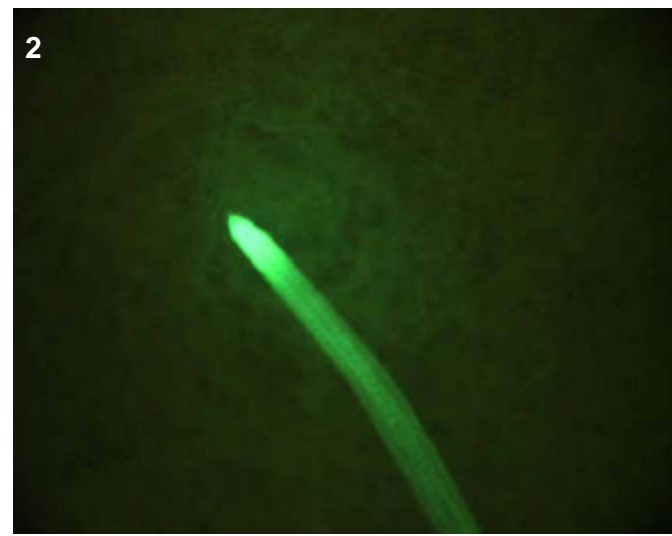
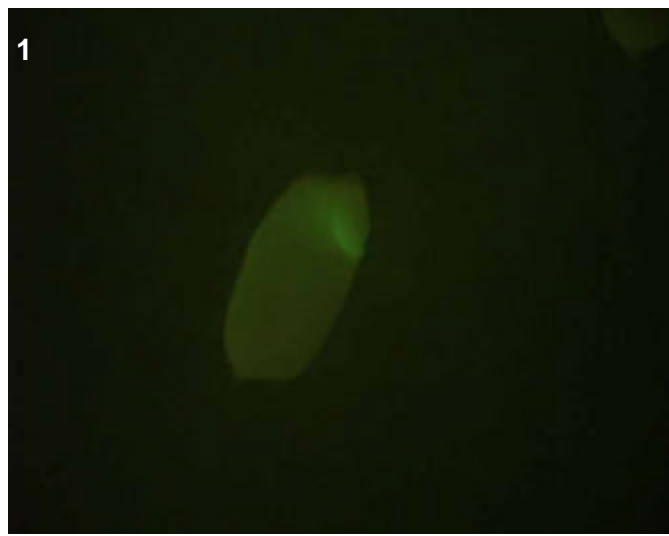
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had faint expression.

T1 seedling comments

Genotype: ASY G11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

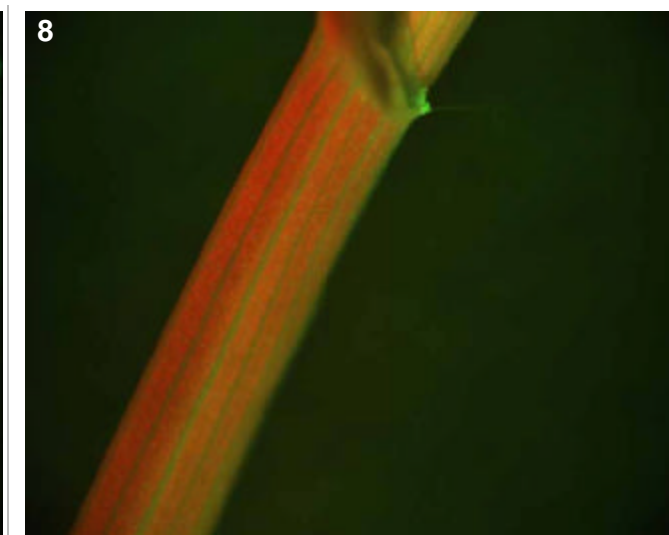
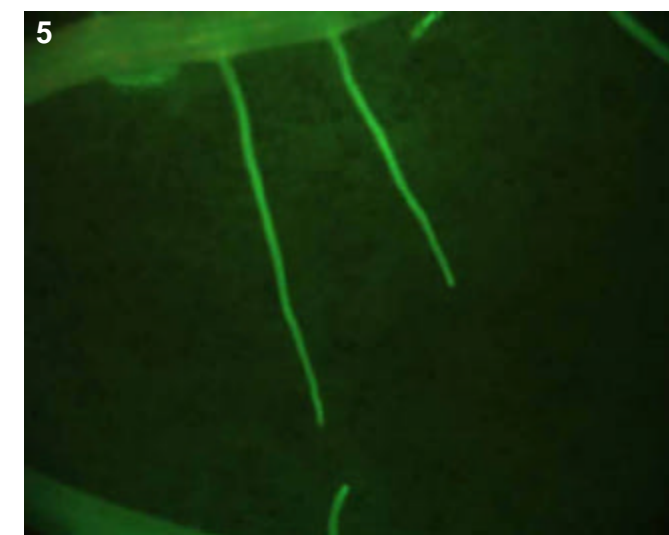
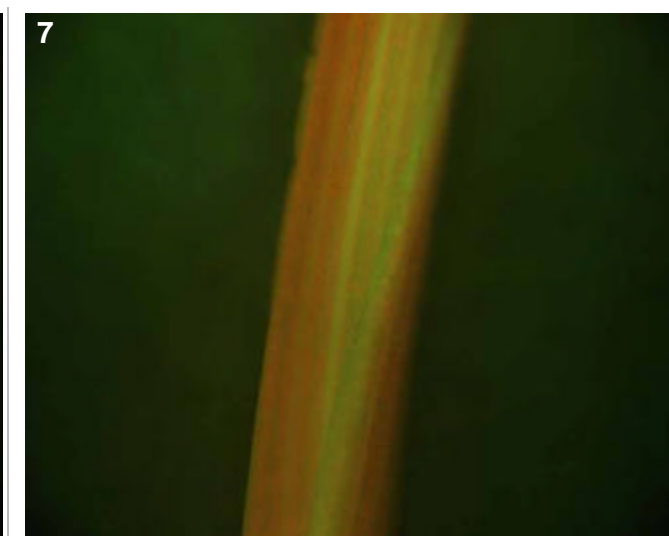
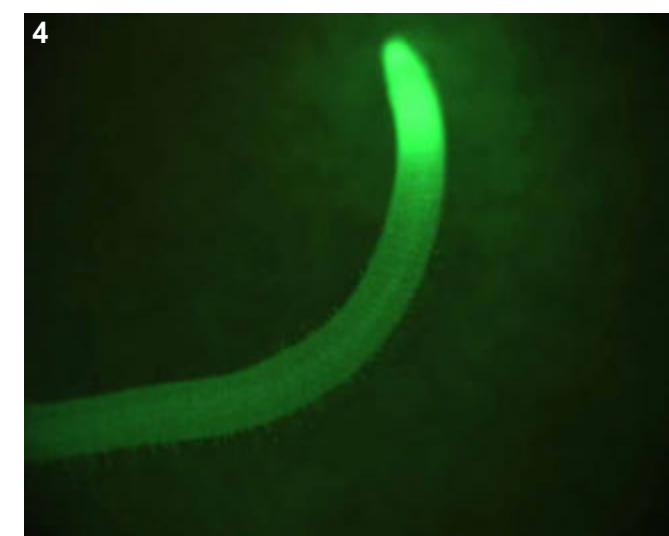
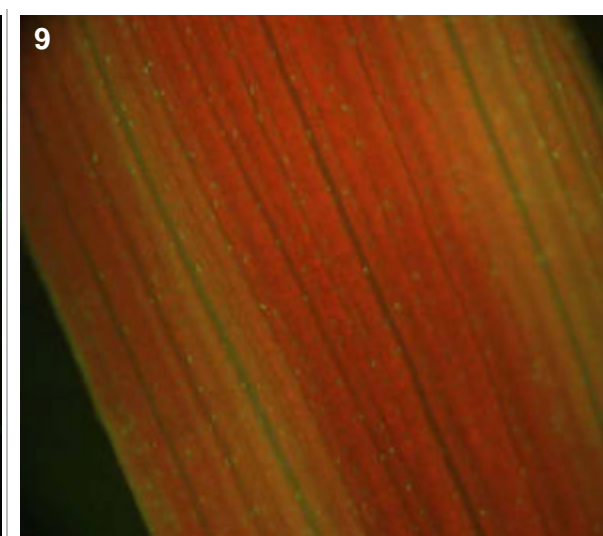
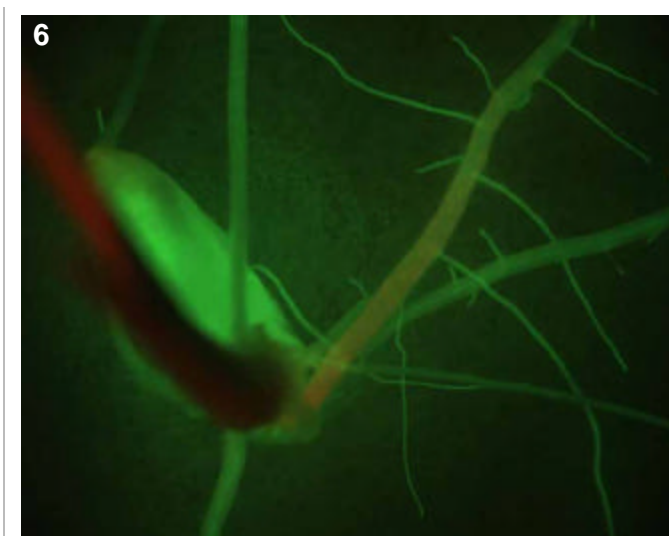
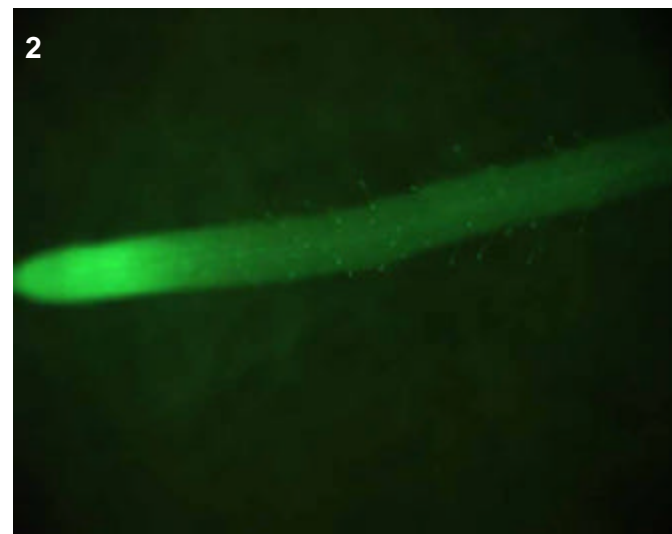
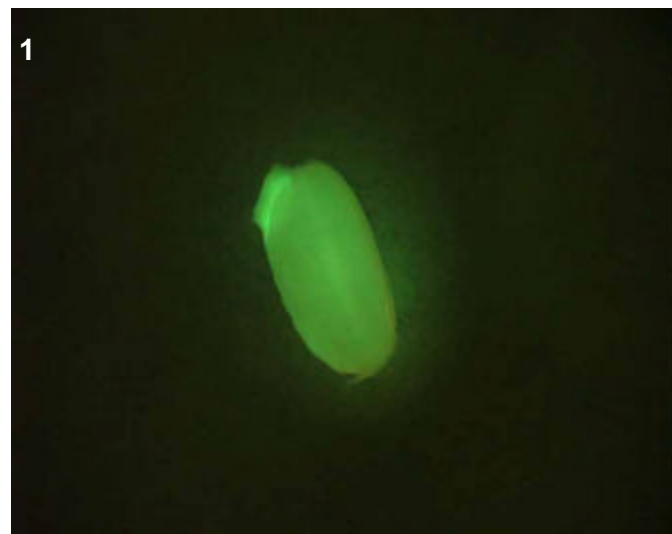
No GFP detected

T1 in greenhouse?

YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had expression.

T1 seedling comments

Very bright expression, note the bright root hairs on crown roots (see pics 2 and 3).

Genotype: ASY H03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

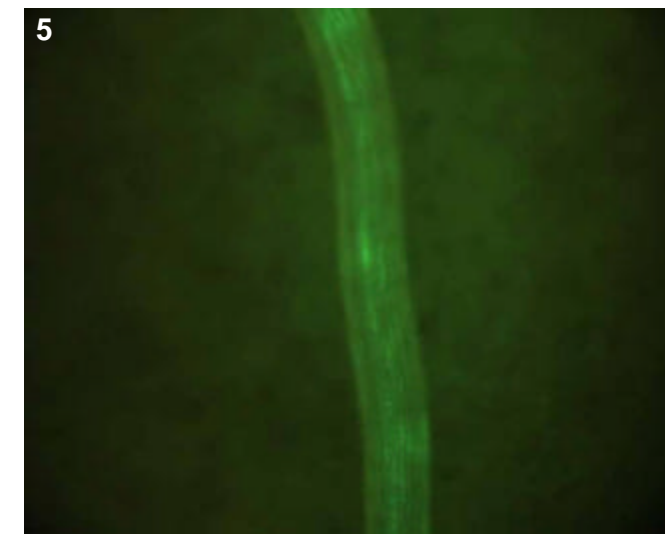
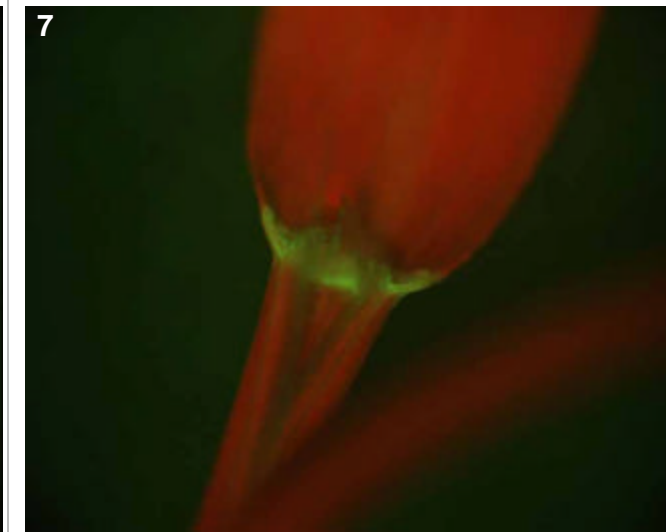
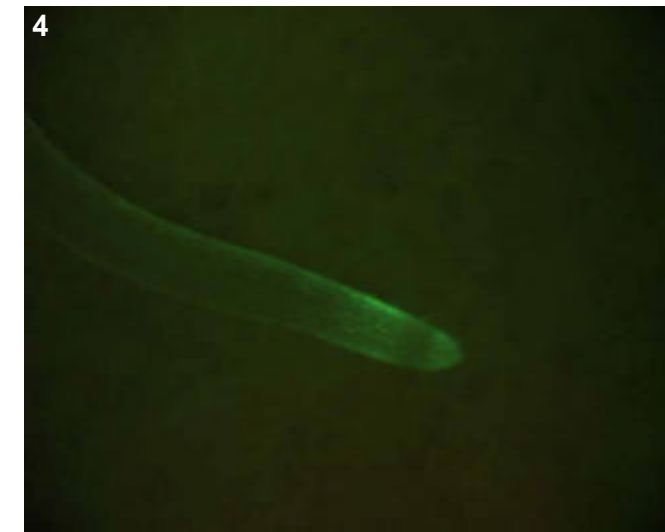
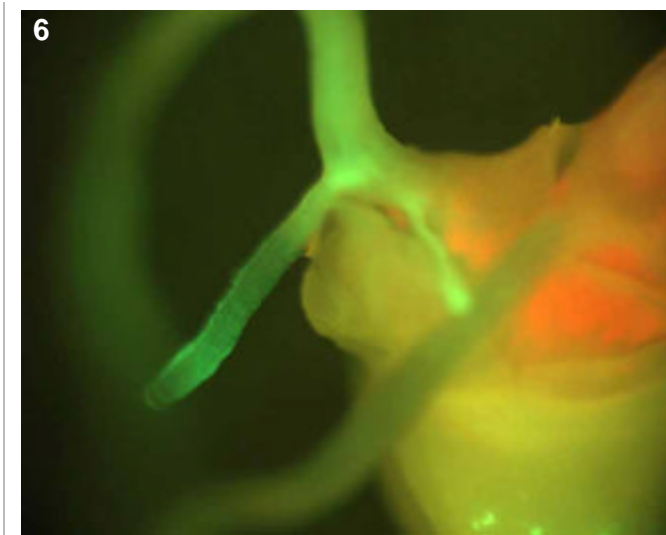
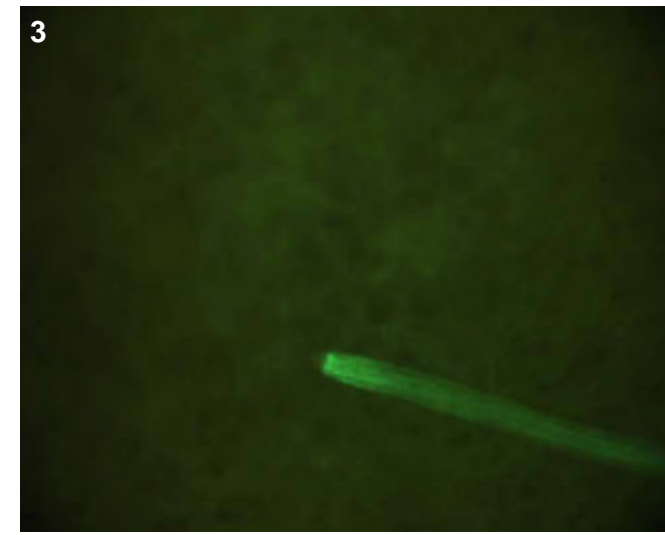
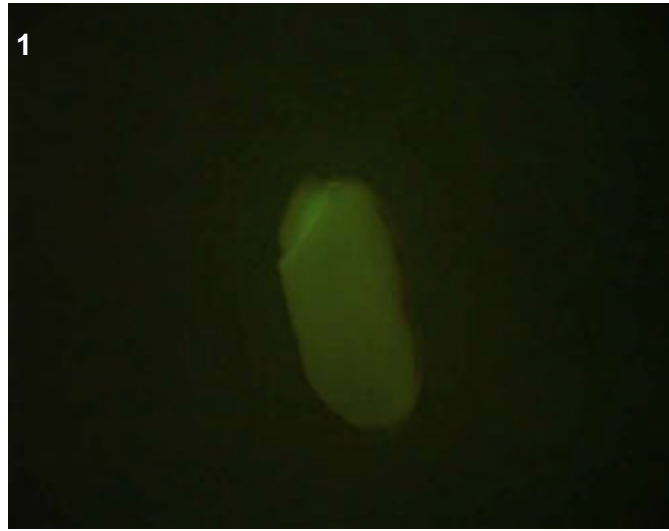
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments
2-3/5 seeds had faint expression.

T1 seedling comments

Genotype: ASZ A04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-10

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

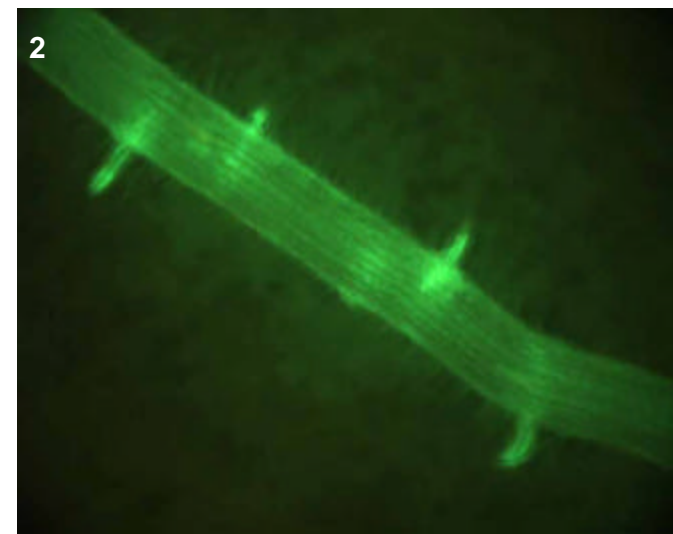
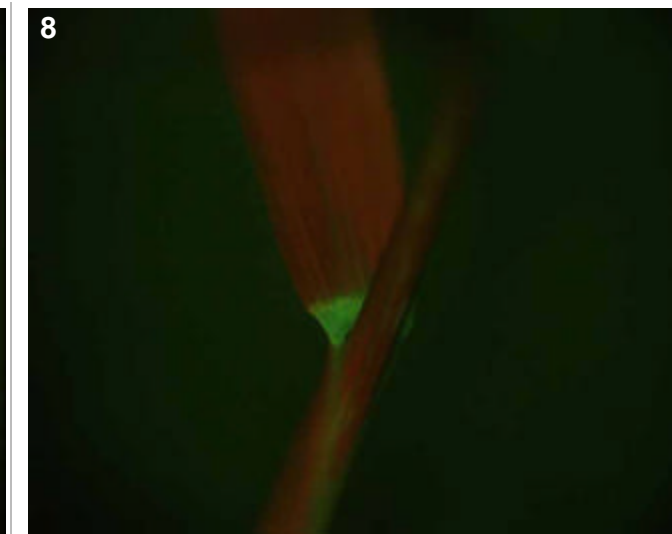
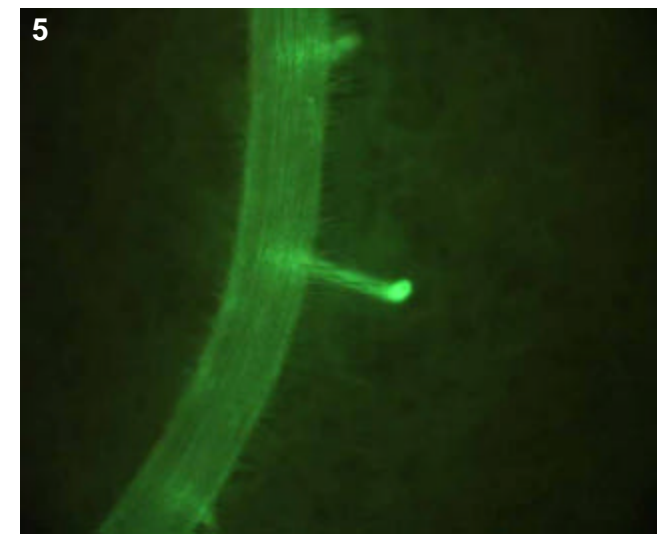
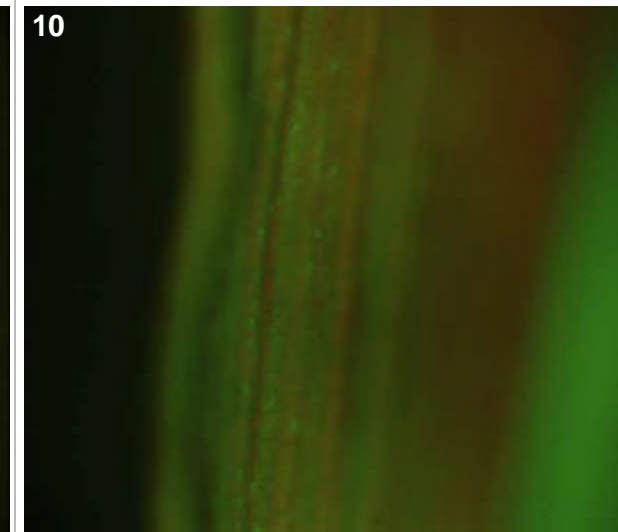
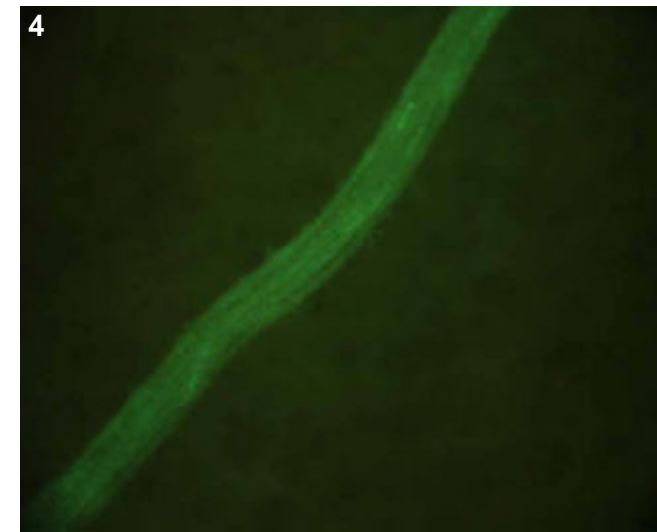
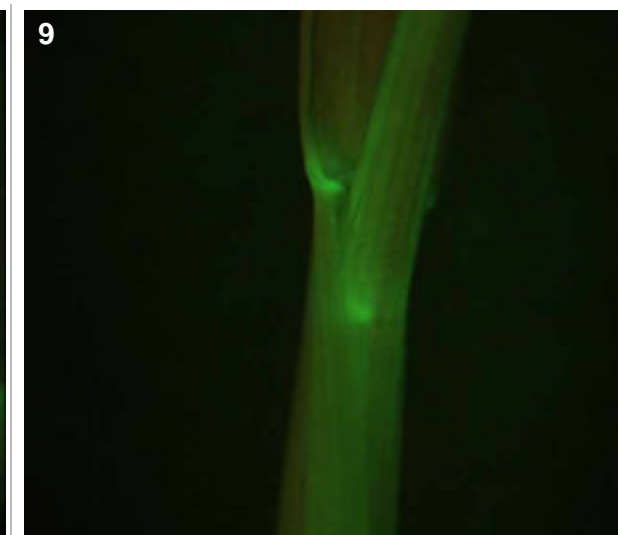
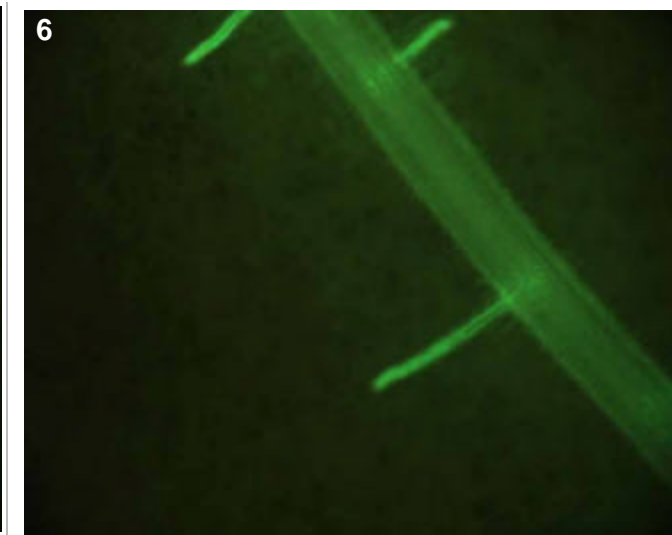
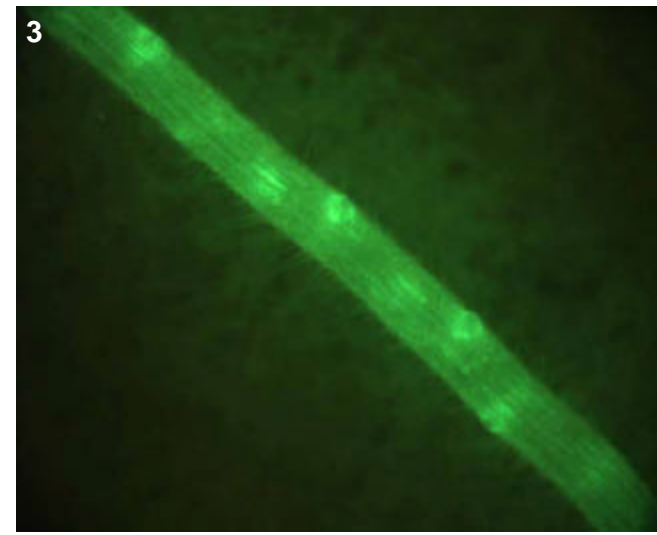
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression.

T1 seedling comments

Genotype: ASZ C06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

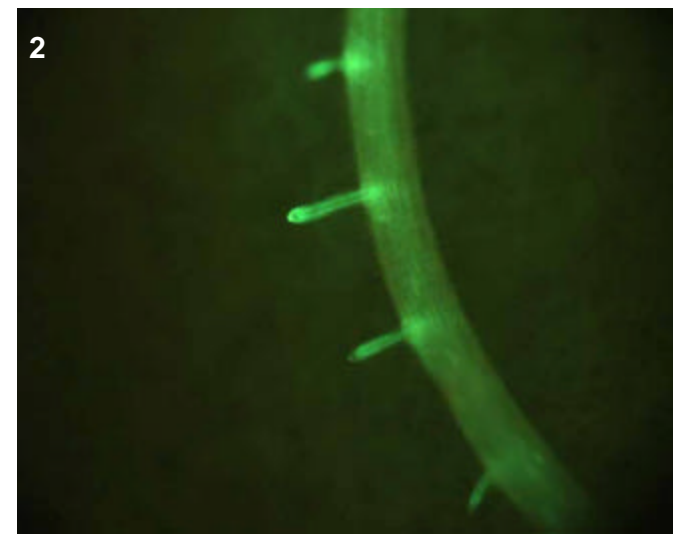
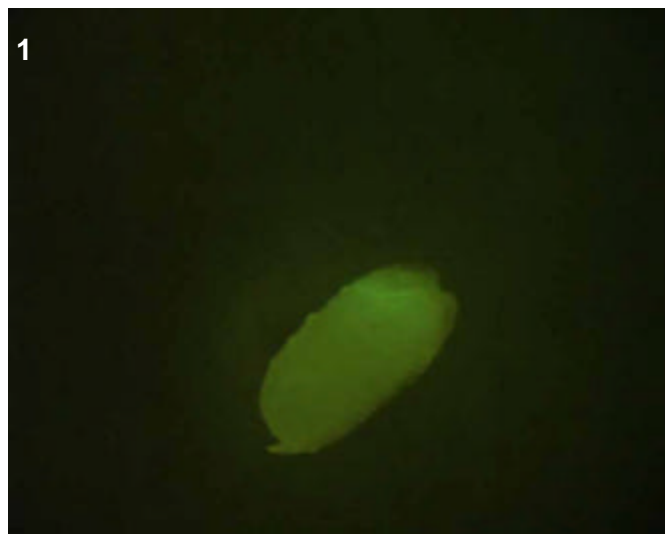
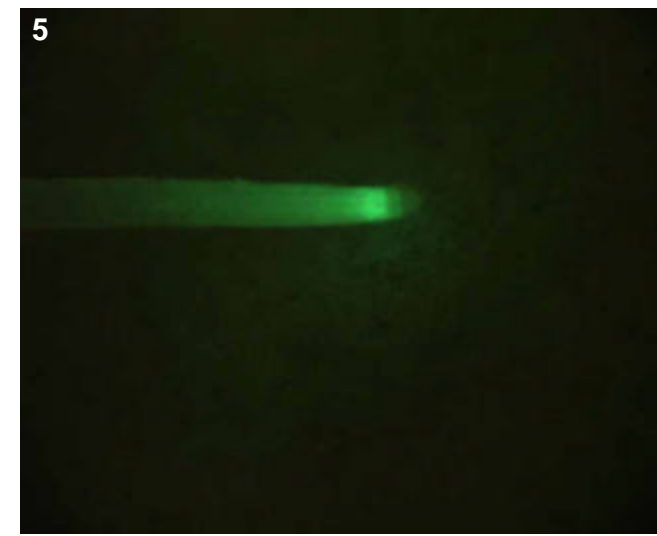
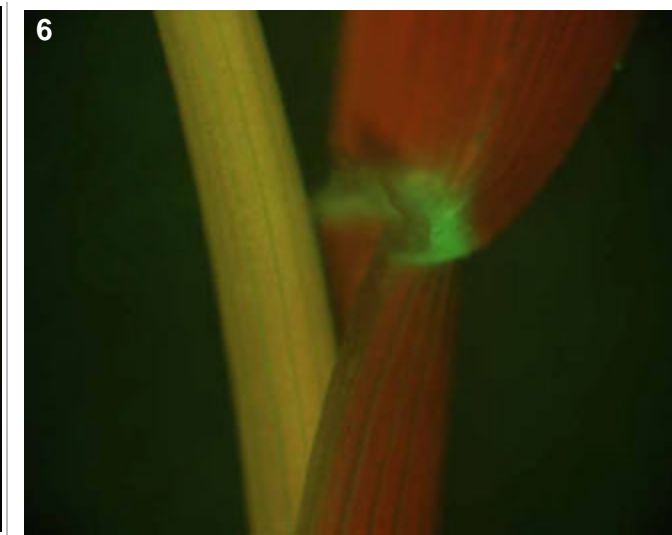
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had faint expression.

T1 seedling comments

Root expression is bright and looks specific to the stele (pics 2-4). Note the bright initials at tips of crowns (pic 5). Shoot expression was in the collar and perhaps epidermis of young blade (pic 6).

Genotype: ASZ F11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

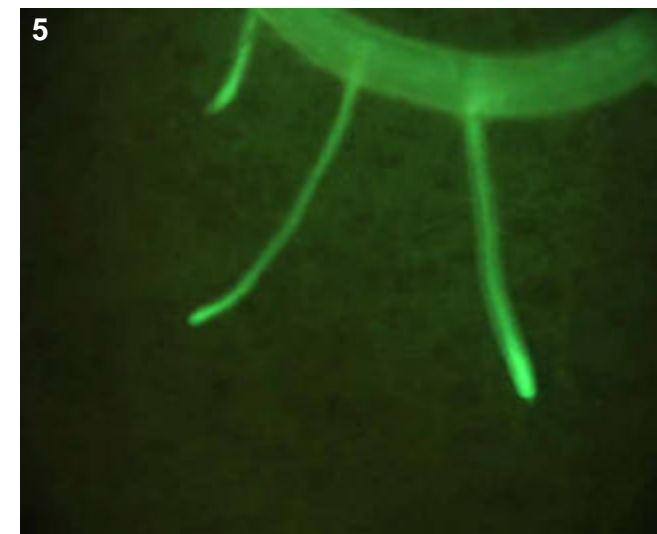
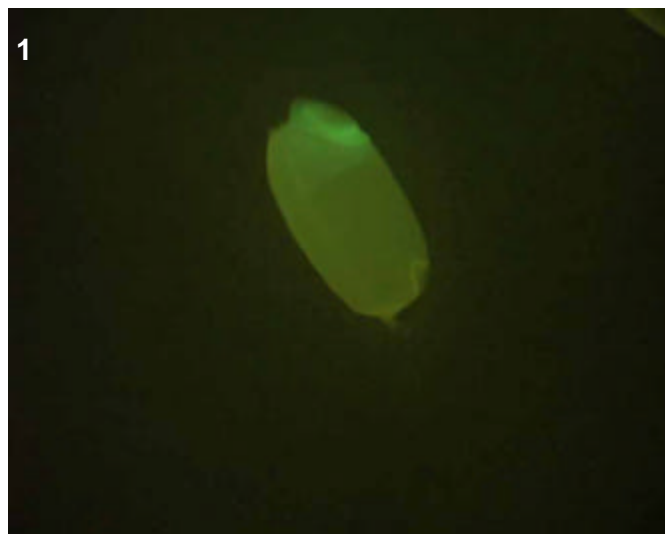
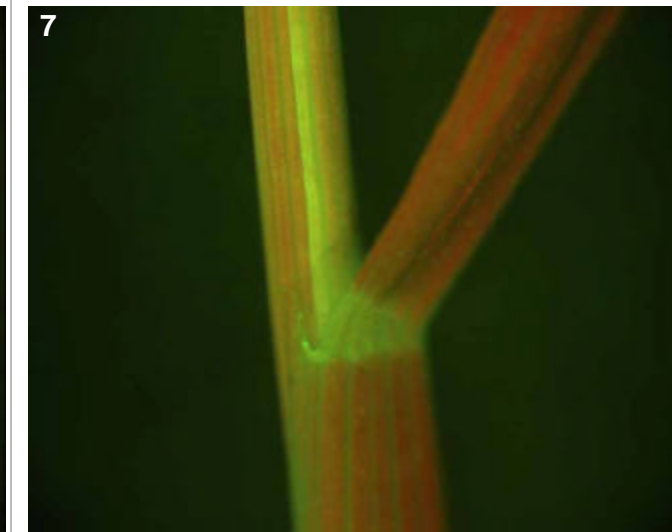
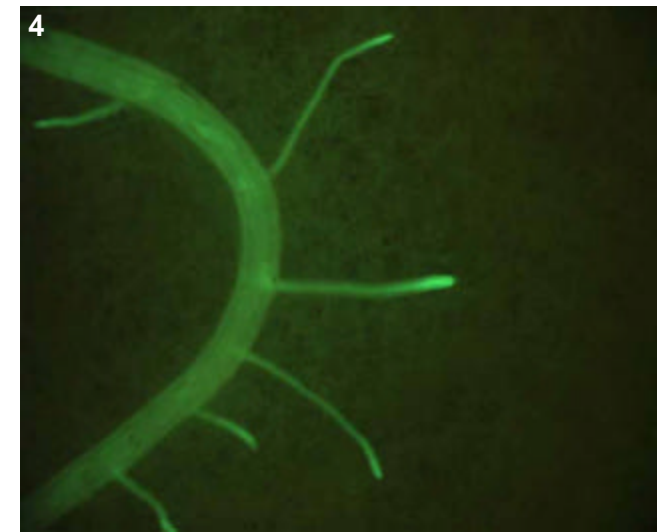
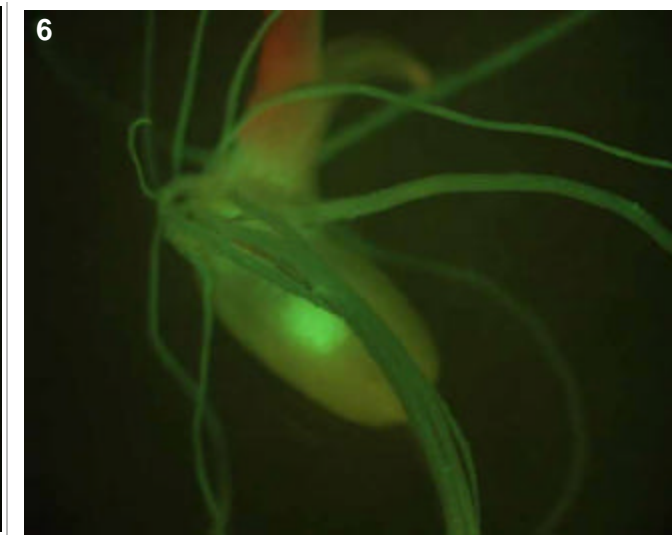
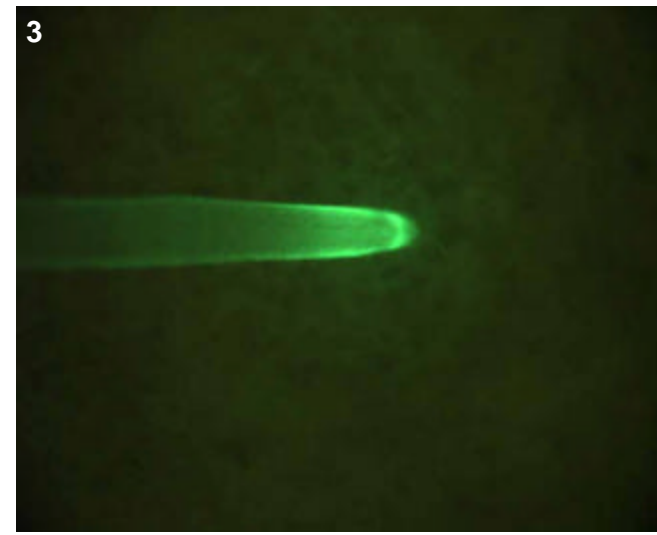
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Perhaps an overall epidermal pattern in both roots (pics 2-5) and shoot (pics 6-7).

Genotype: ASZ G12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

- T0 mature plant:
- T1 seed/seedling:
- T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected
- T1 in greenhouse?**
YES, 1 GFP+ plant
- Confocal?**
- Number T2 seed produced:**

T0 comments

T1 seed comments

1/5 seeds had faint expression.

T1 seedling comments

Genotype: ASZ H11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

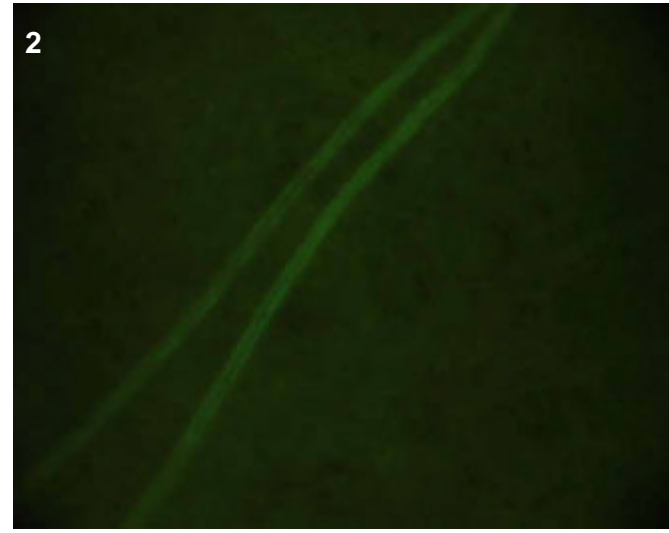
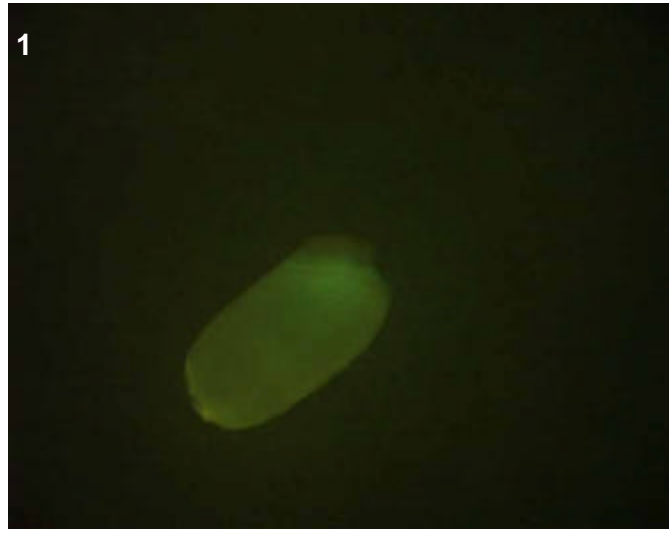
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1 or 2 seeds out of 5 had expression.

T1 seedling comments

Quite faint root expression (pics 2-4), brightest in lats, especially near the root apex (see pic 4).

Genotype: ATA A08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

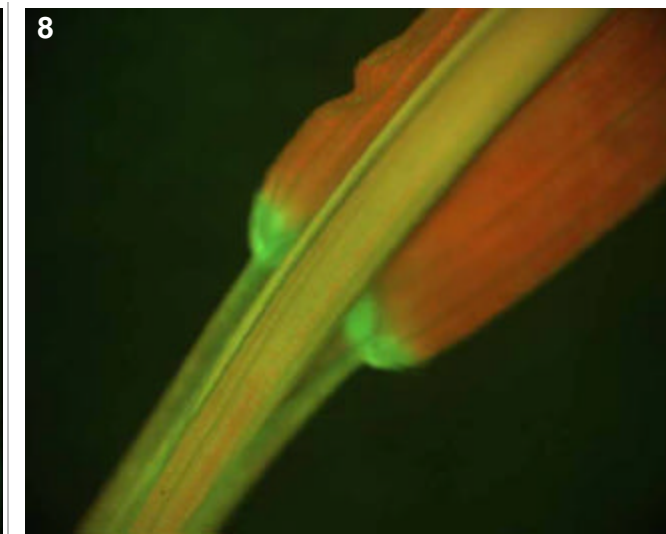
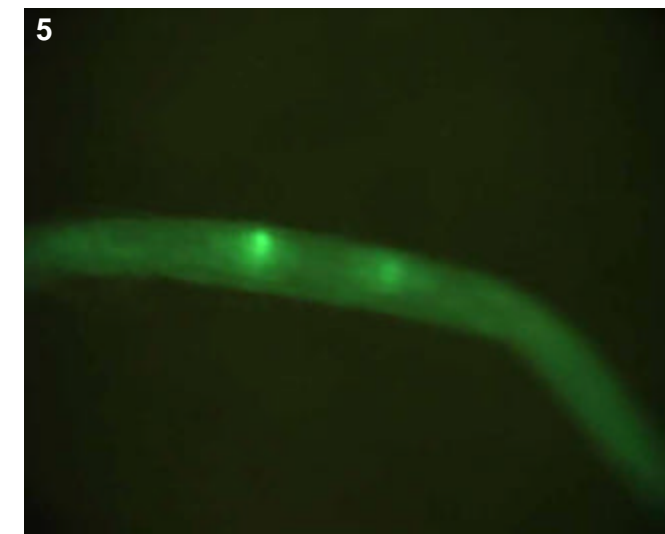
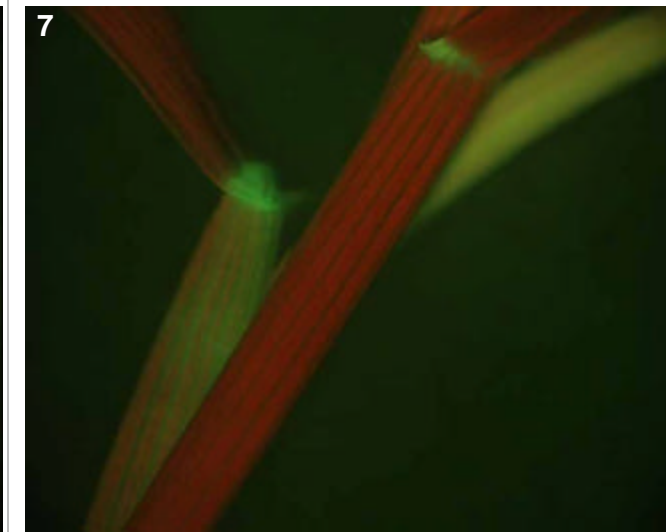
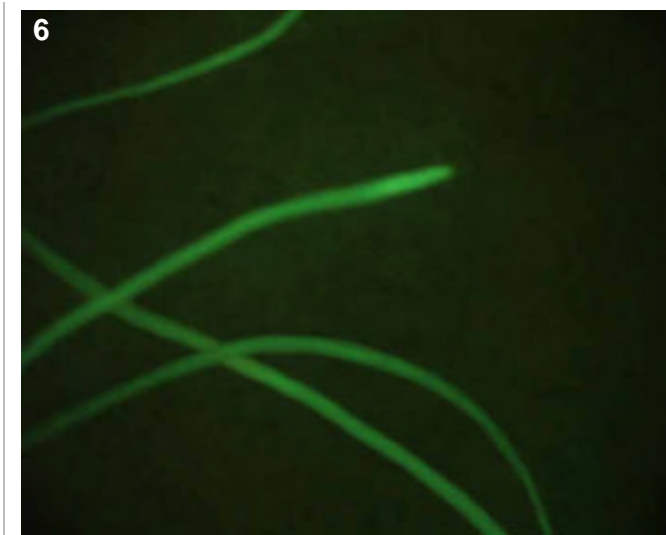
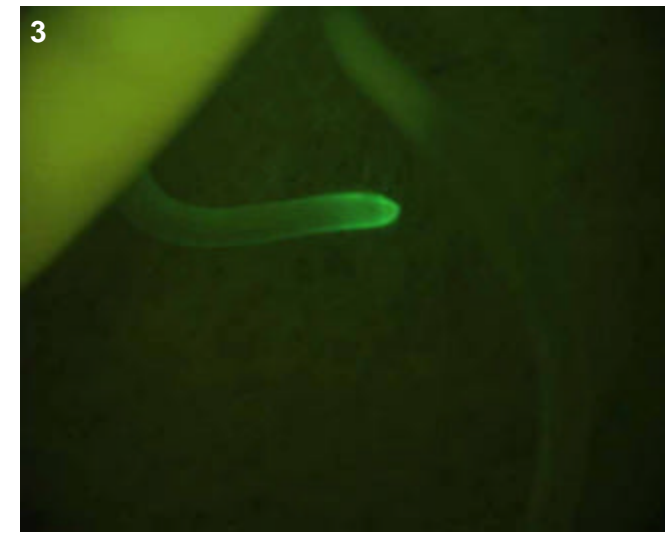
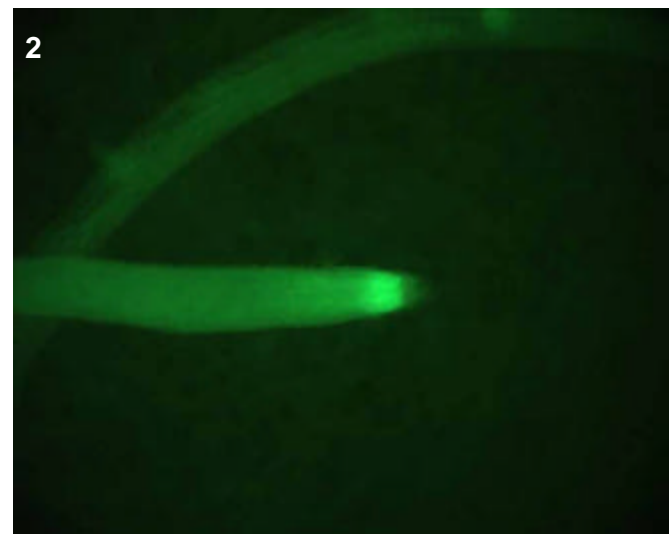
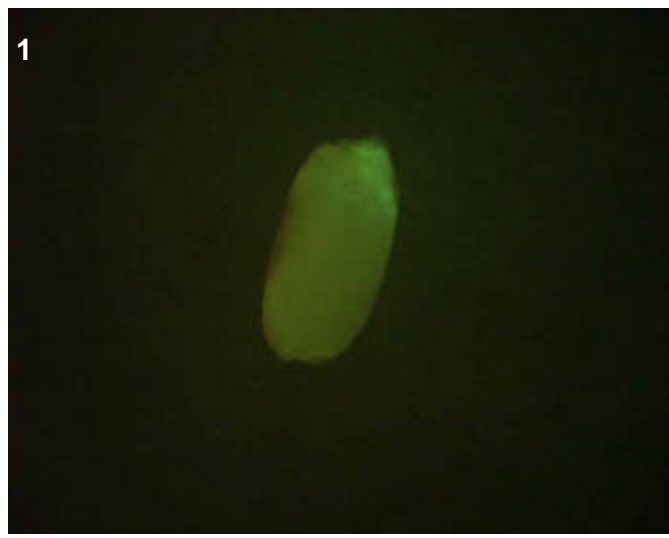
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments
2/5 seeds had medium expression.

T1 seedling comments
Note the bright initials in tips of crown roots (pic 2). Of 4 GFP positive seedlings, 2 appeared to have epidermal expression in the blade (such as pic 8) and 2 did not.

Genotype: ATA B10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

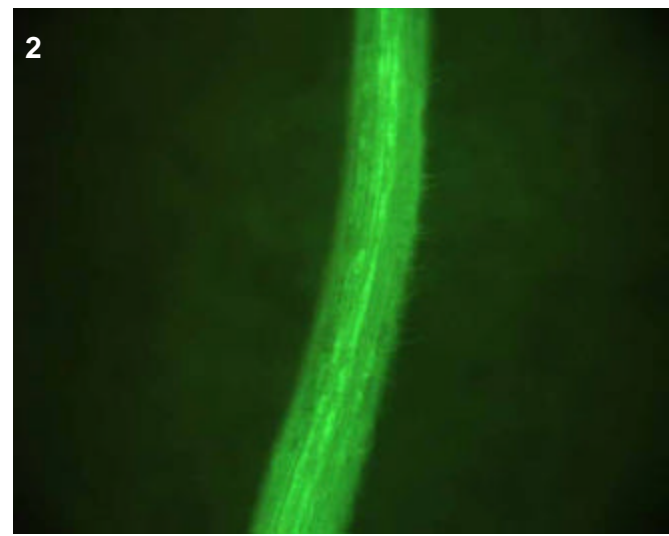
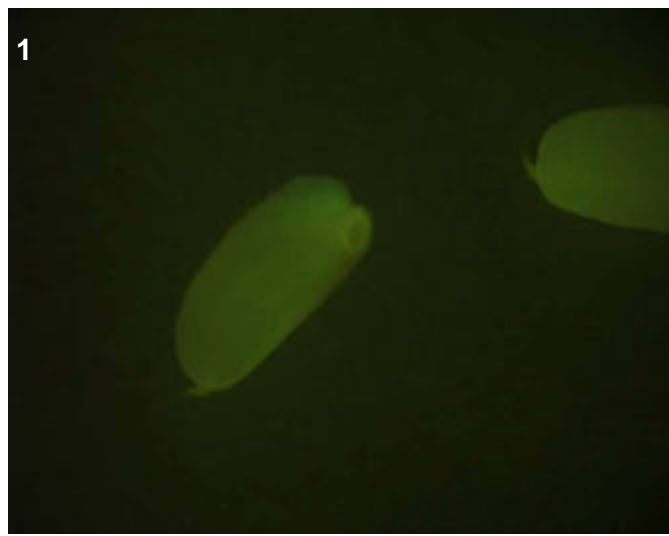
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



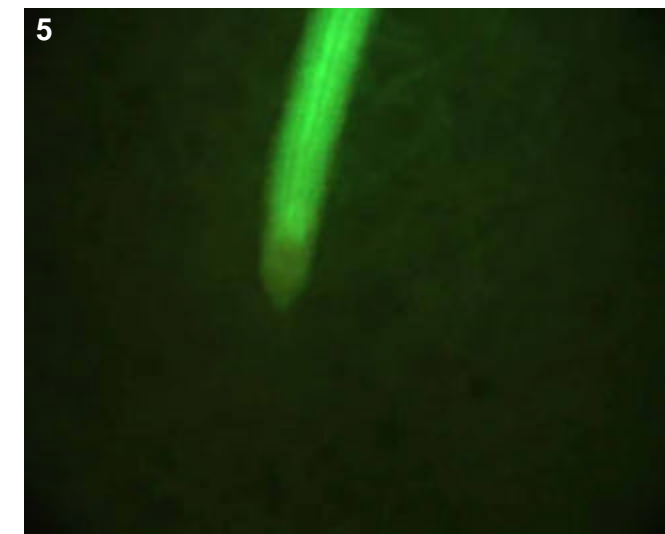
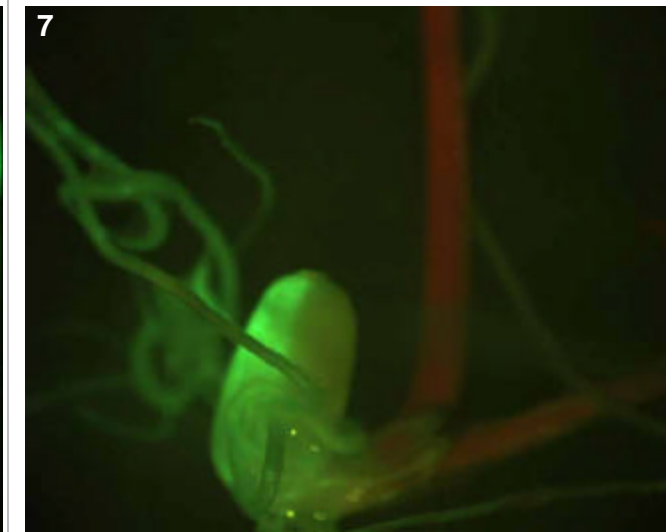
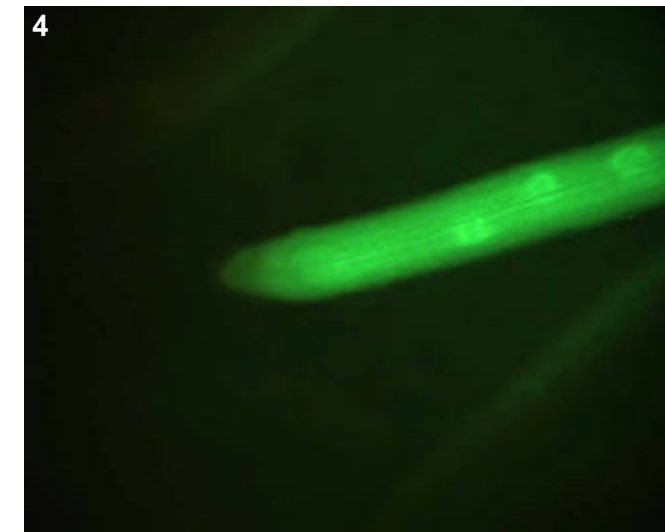
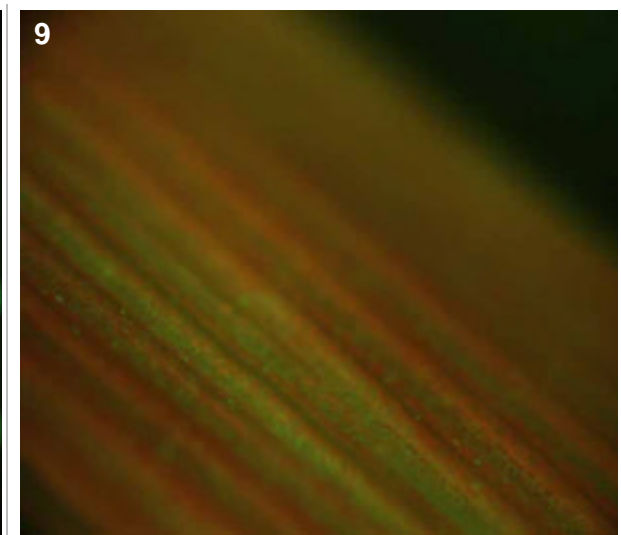
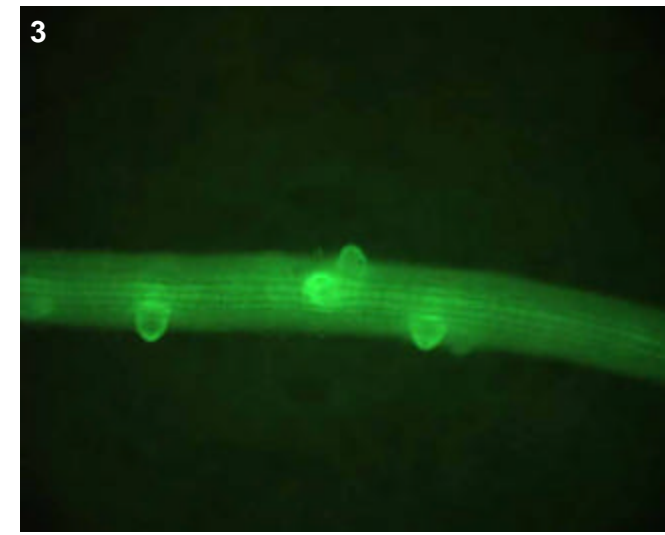
T0 comments

T1 seed comments

2/5 seeds had faint expression.

T1 seedling comments

Perhaps epidermal expression both in root and shoot.



Genotype: ATA C05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-8

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

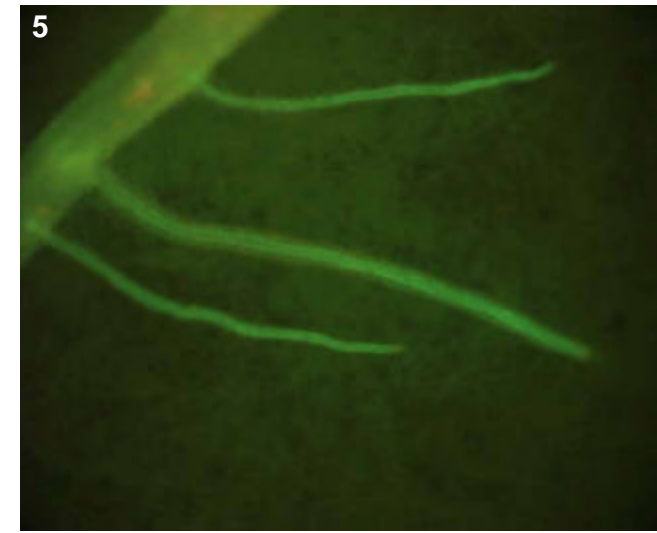
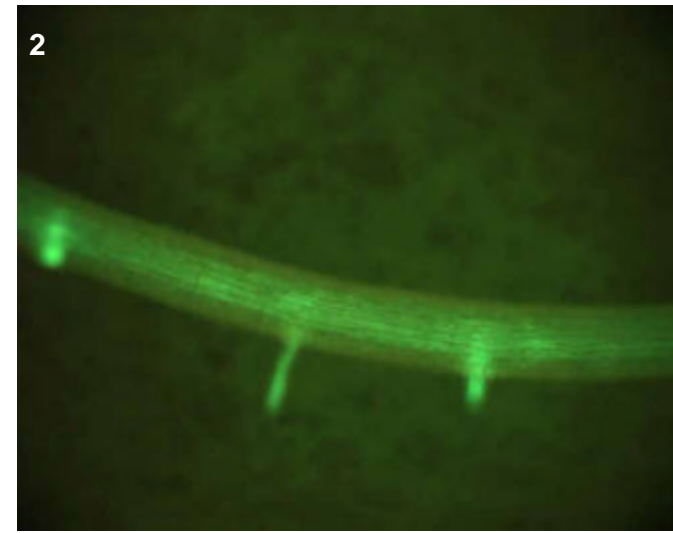
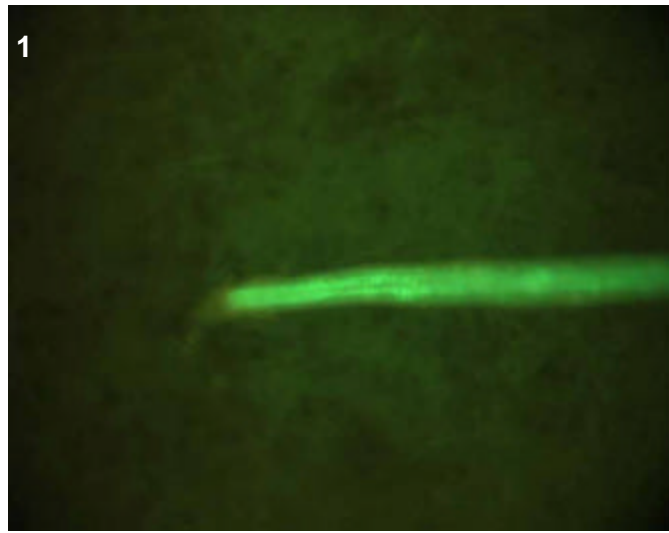
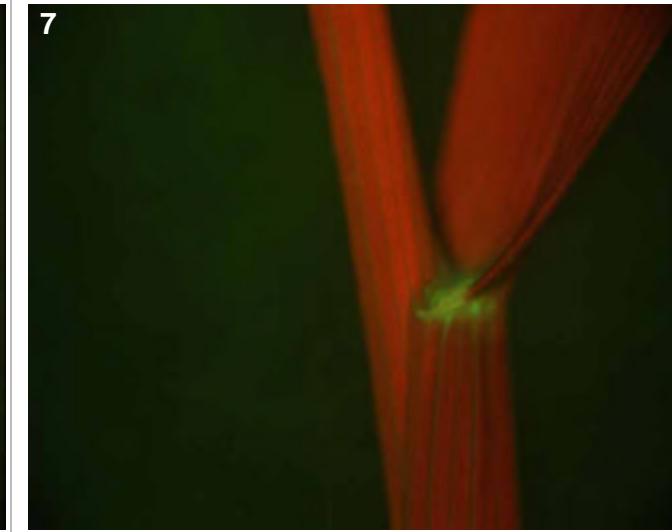
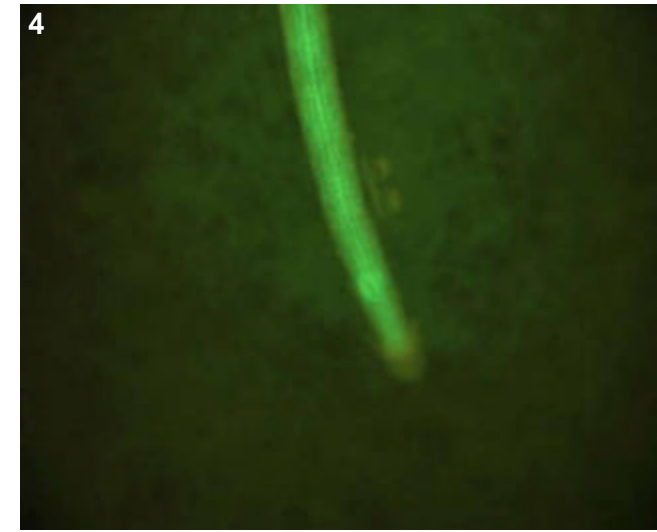
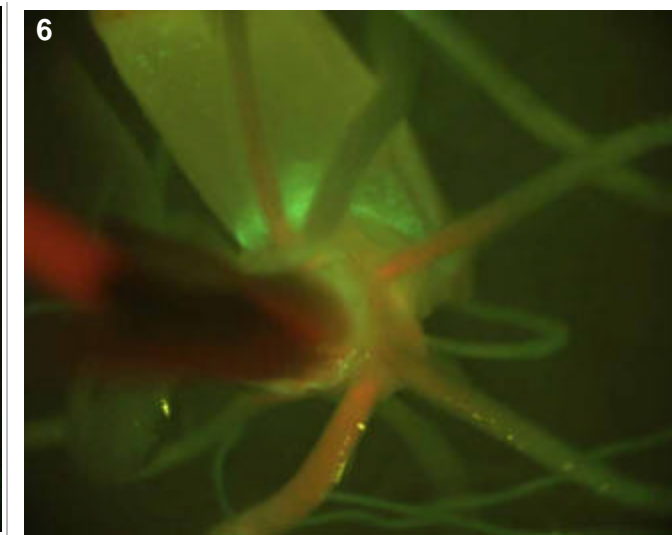
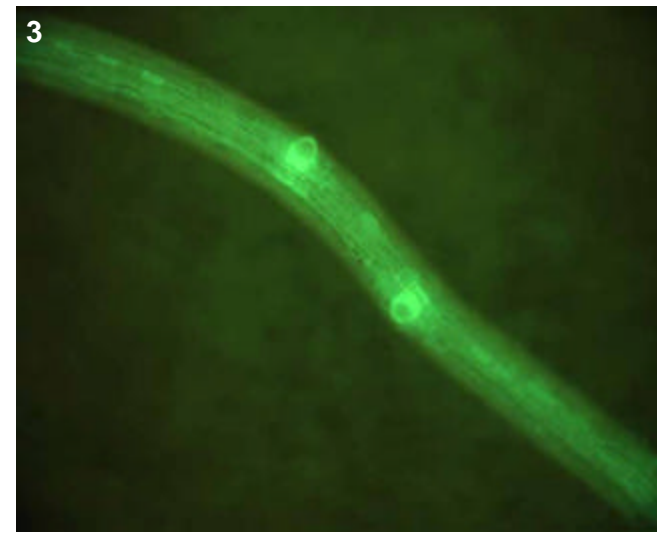
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had faint expression (no picture taken).

T1 seedling comments

Genotype: ATA C08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

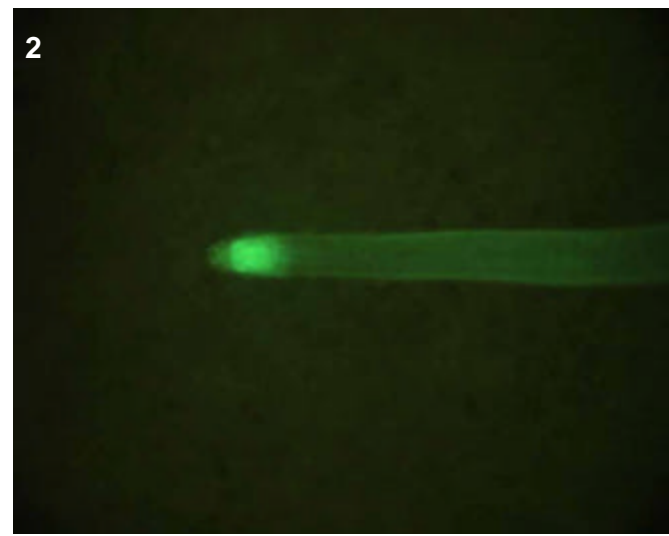
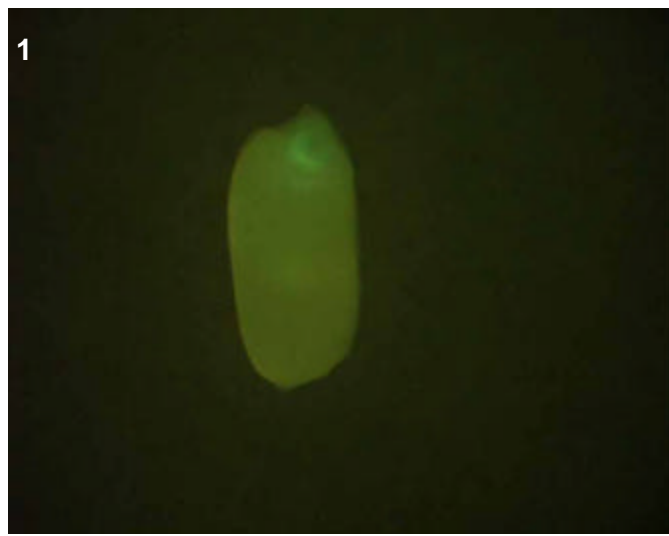
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



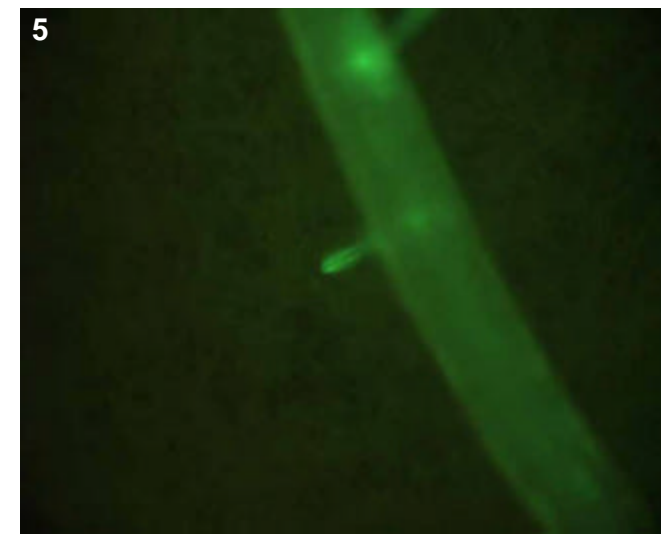
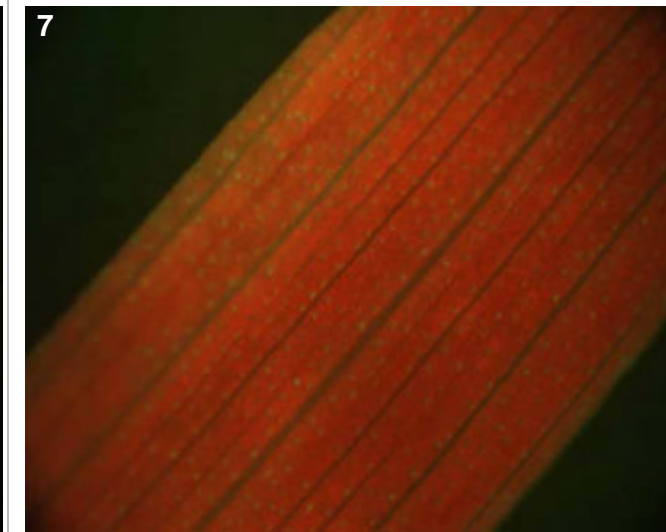
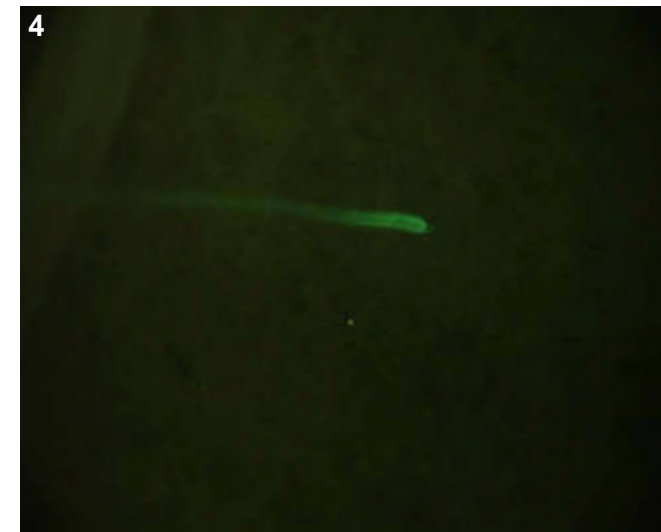
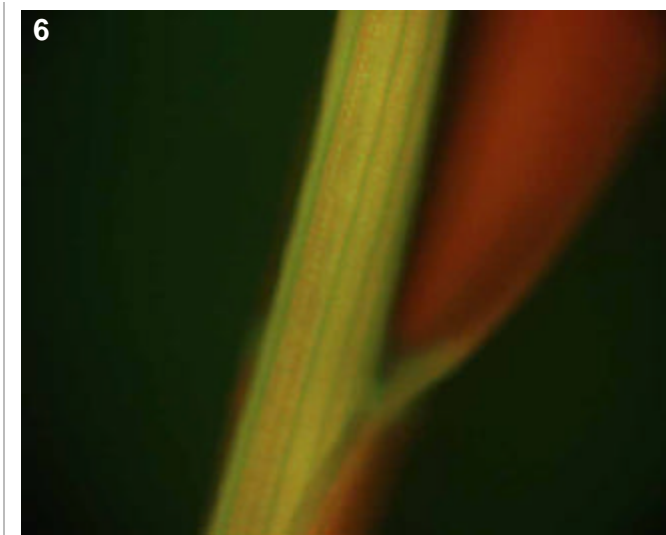
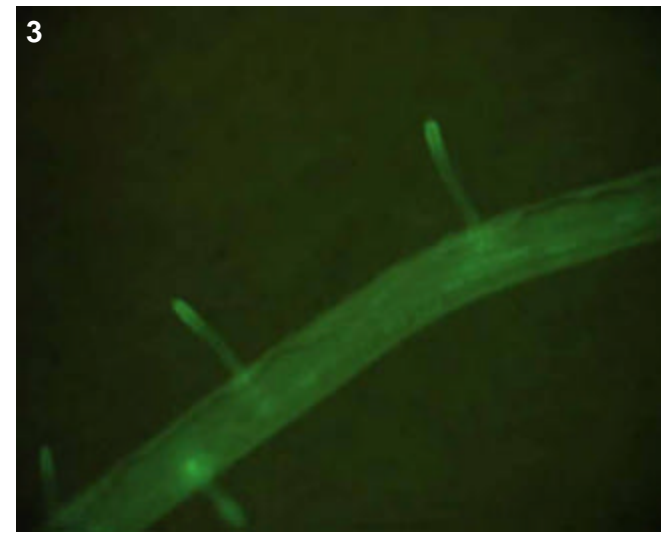
T0 comments

T1 seed comments

2/5 seeds had medium expression.

T1 seedling comments

Definitely brighter GFP expression in cell elongation/maturation zones of roots. The bright initials at tips of crown roots (pic 2) would be interesting to confocal. In shoot, the expression was limited to just the guard cells (pics 6-7).



Genotype: ATA F09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

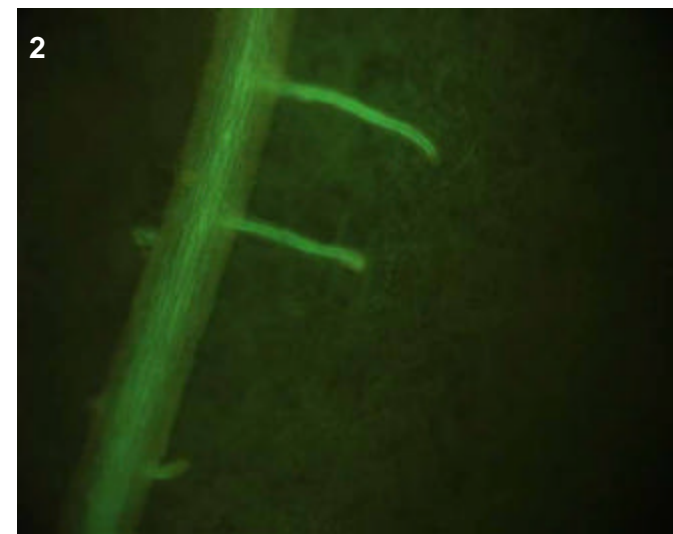
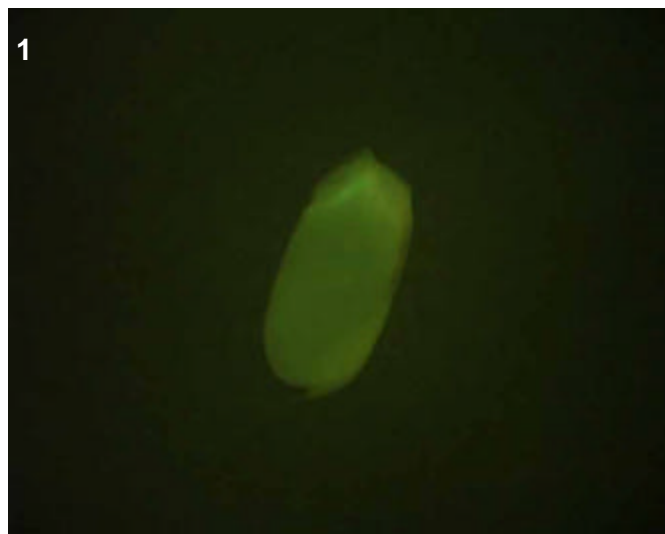
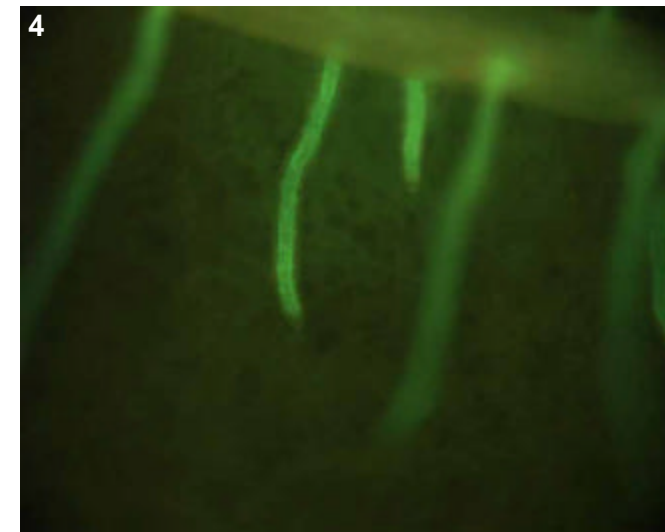
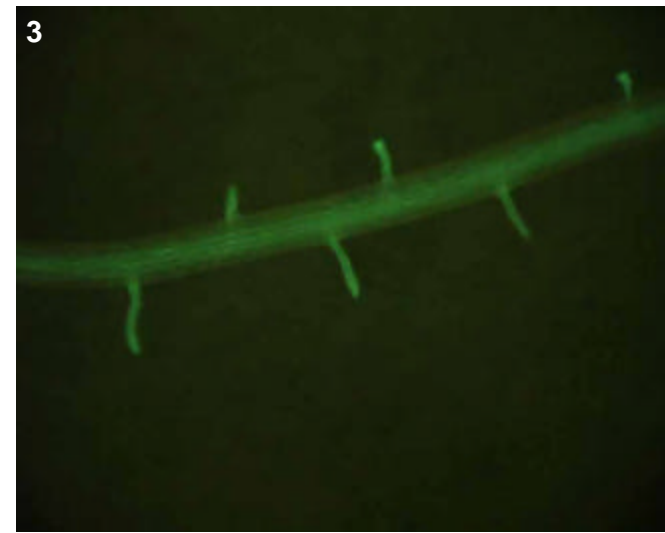
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had medium expression.

T1 seedling comments

Bright root stelar expression that dies out near the tips of crowns.

Genotype: ATB C03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-11

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

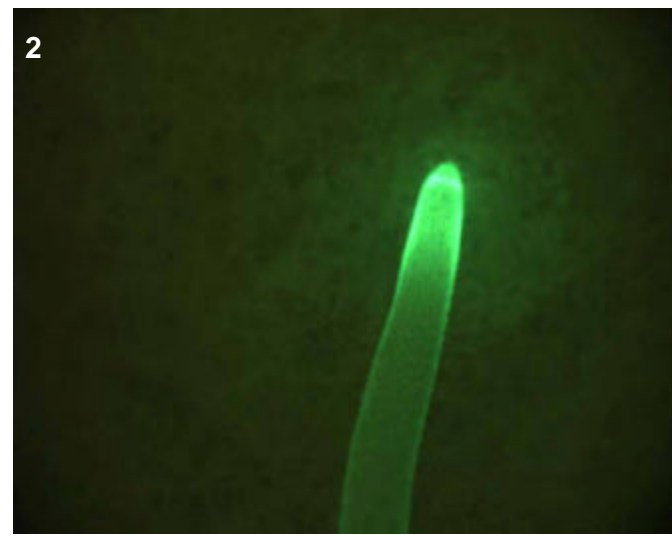
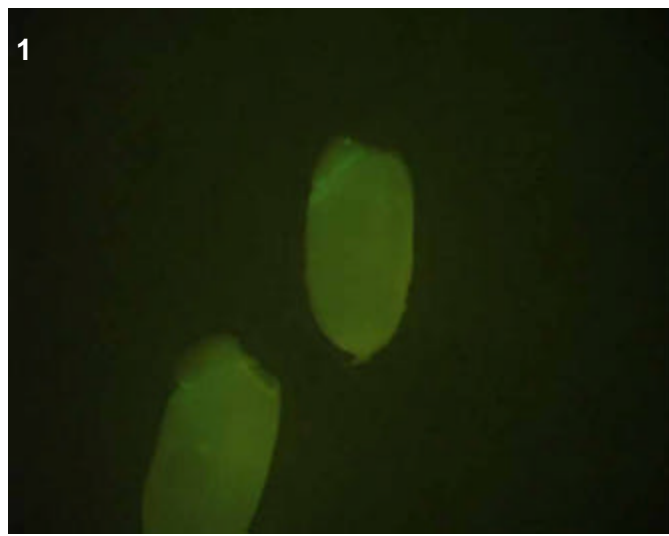
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:

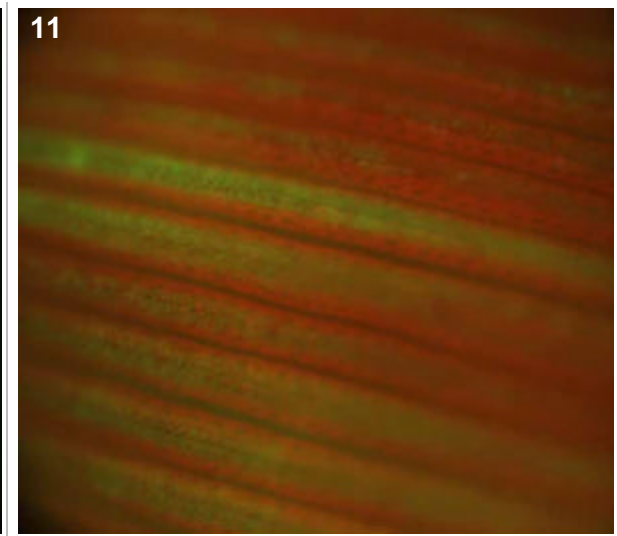
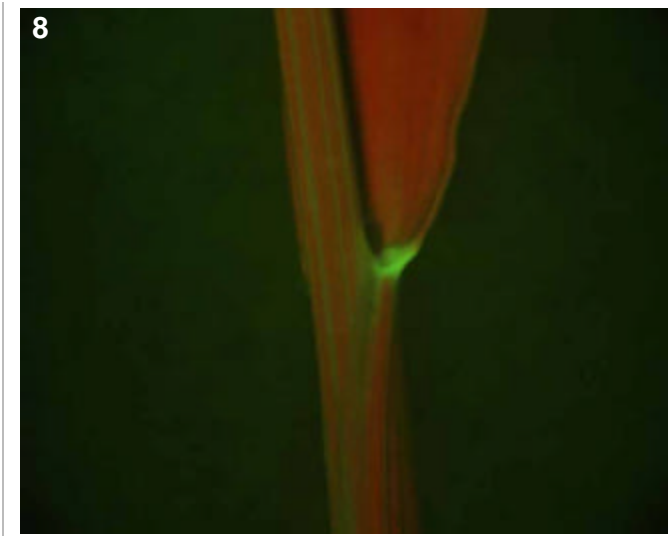
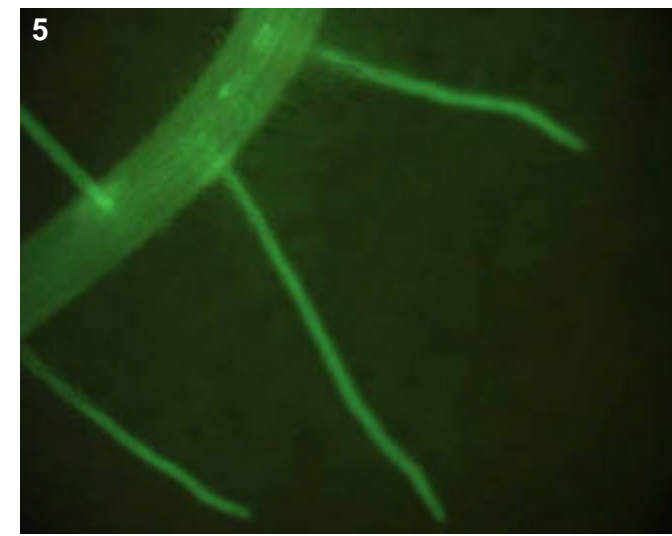
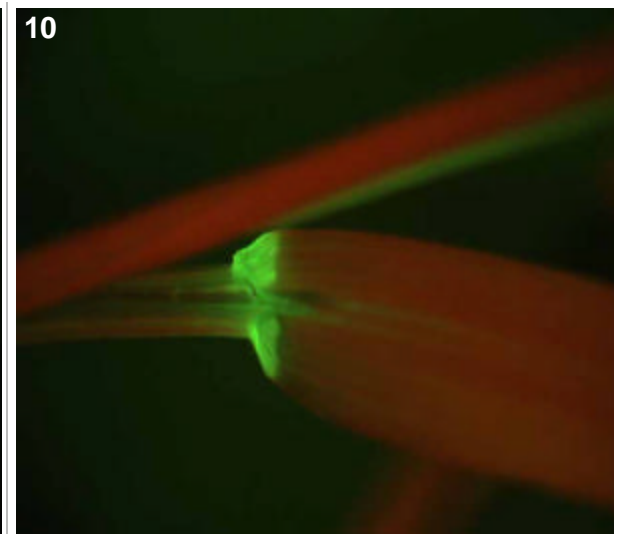
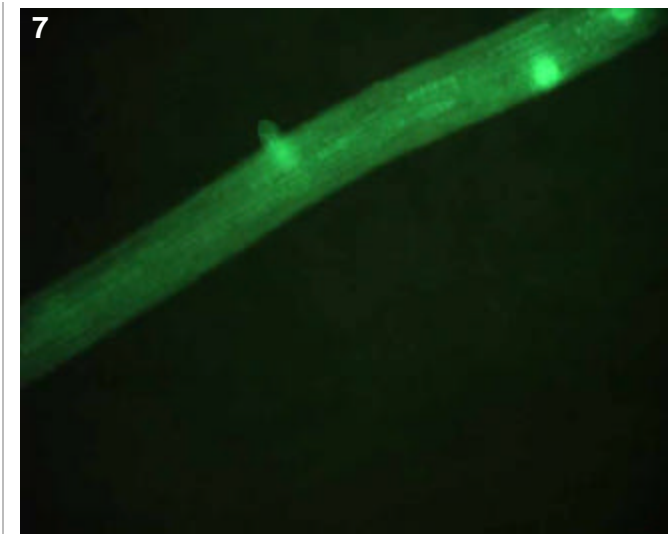
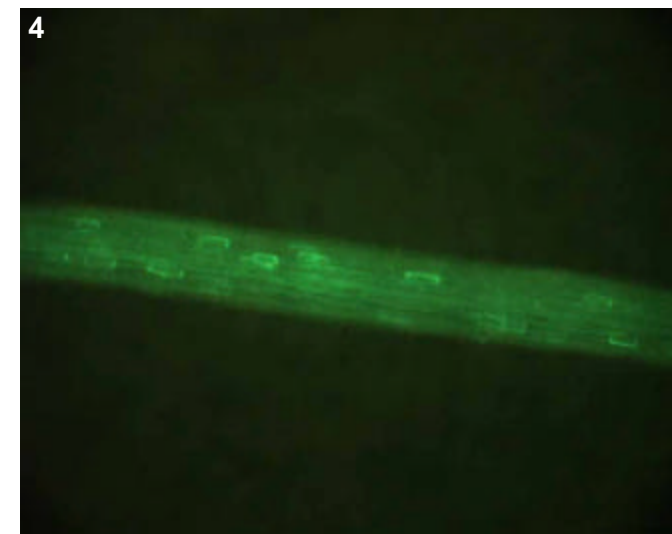
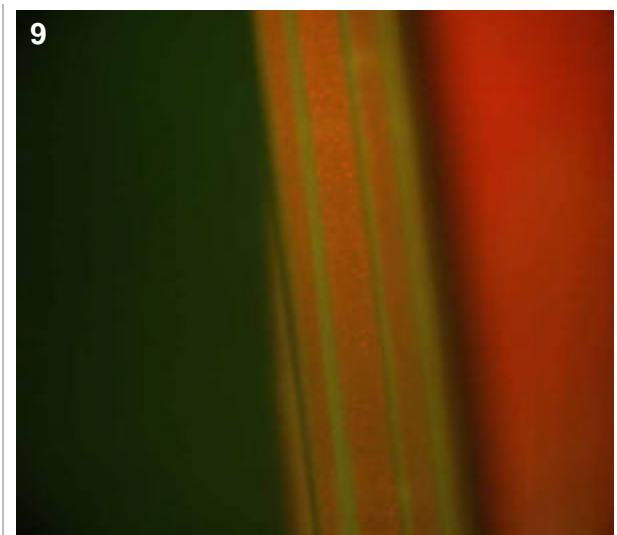
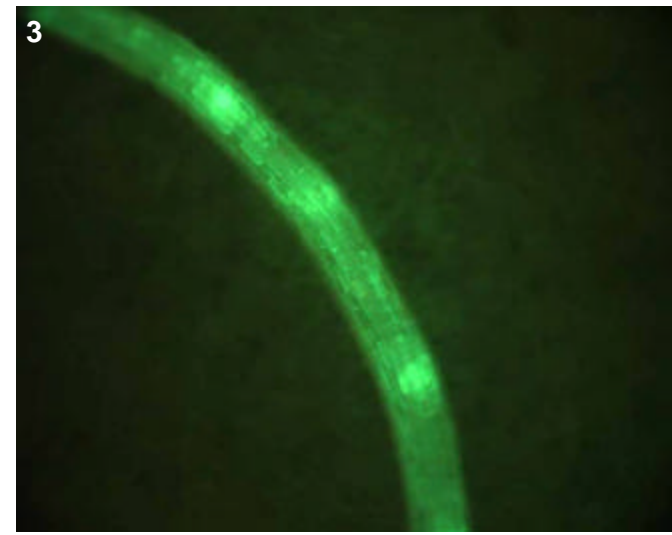


T0 comments

T1 seed comments

3/4 seeds had medium expression.

T1 seedling comments



Genotype: ATB C11

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-10

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

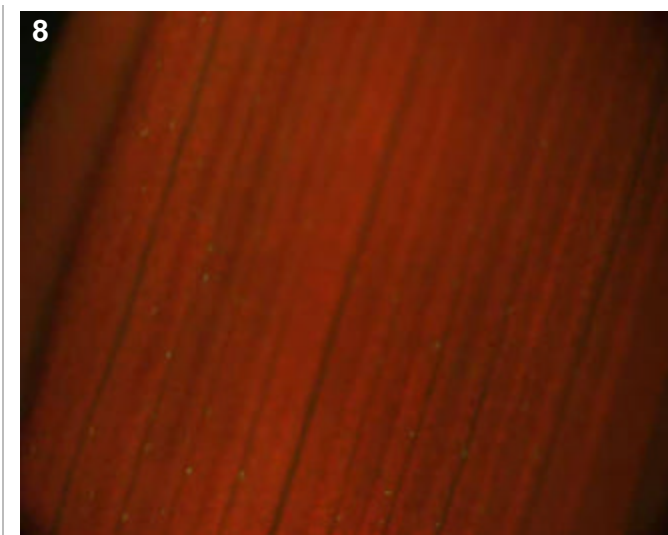
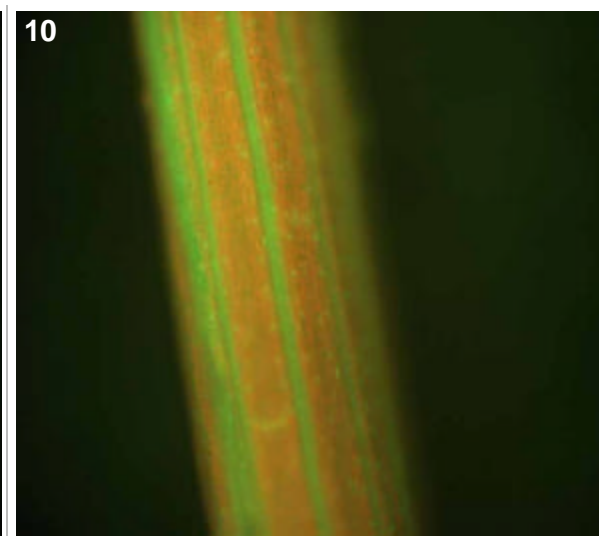
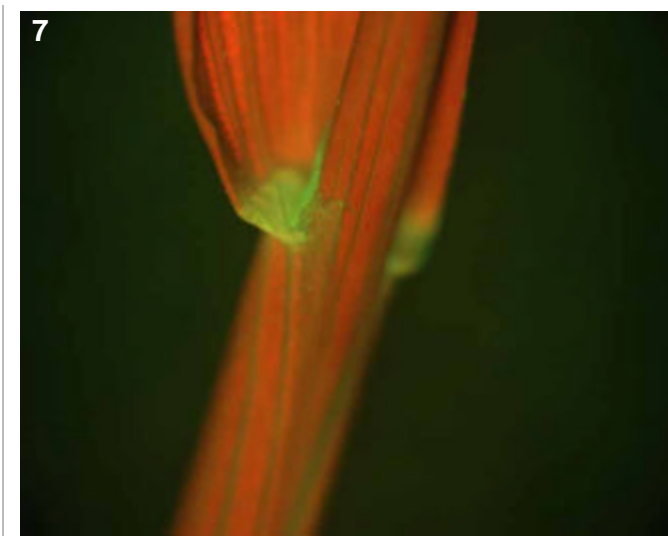
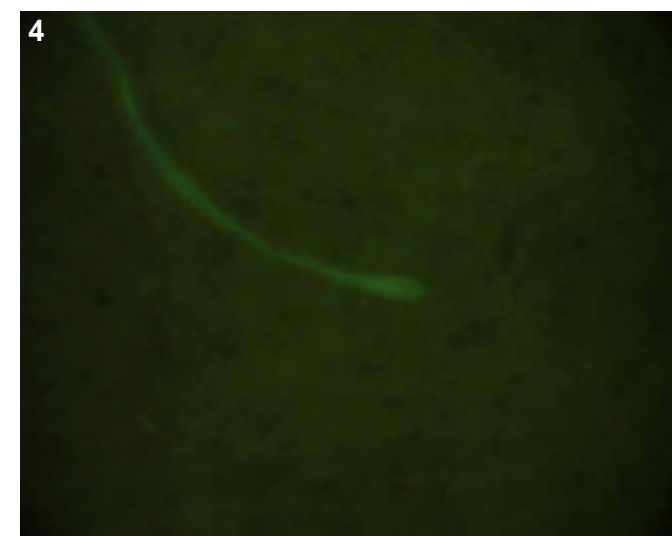
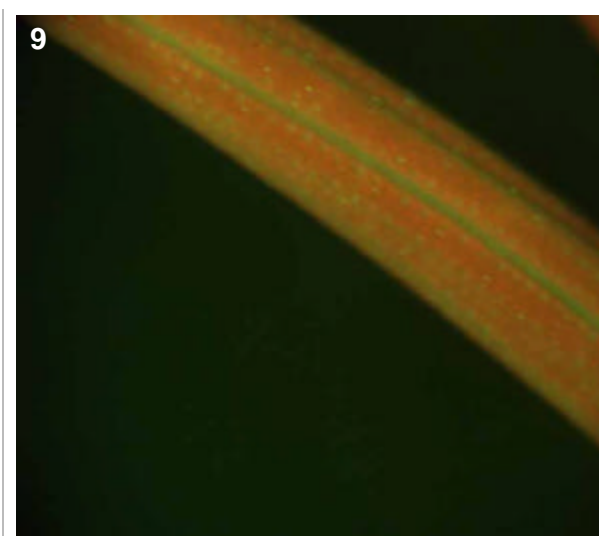
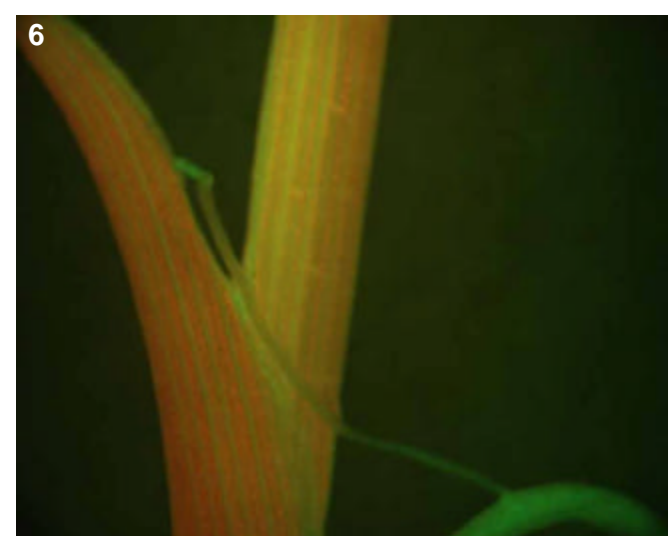
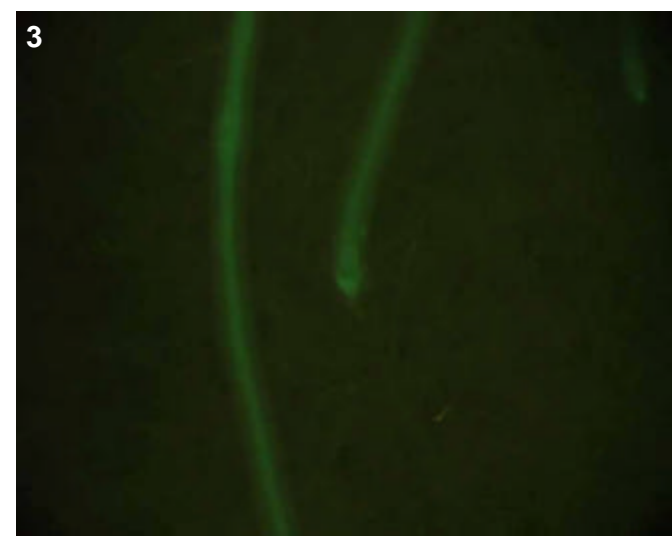
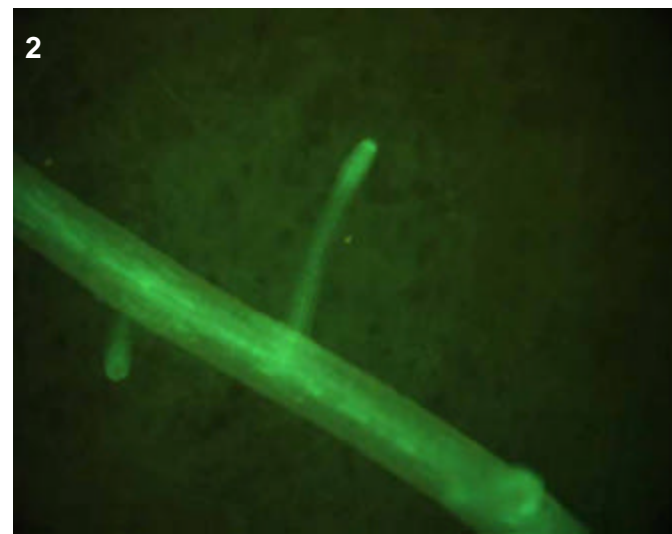
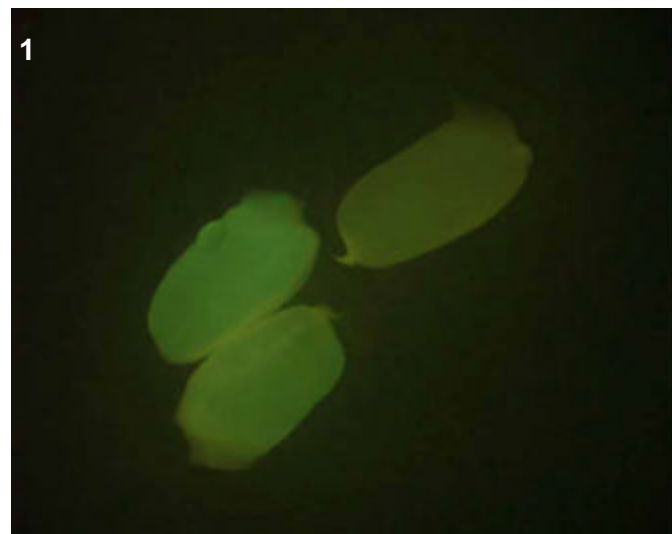
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had medium expression.

T1 seedling comments

Bright stele expression in roots (pics 2-4), shoot expression was even brighter (pics 6-10).

Genotype: ATB E06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

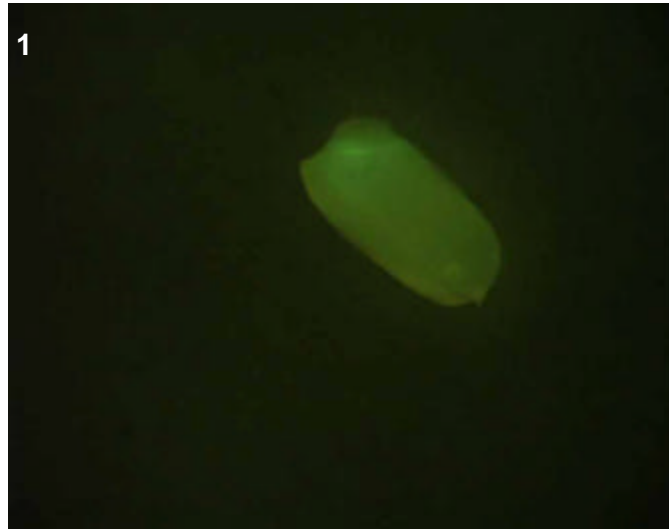
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 2 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

Genotype: ATB H09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

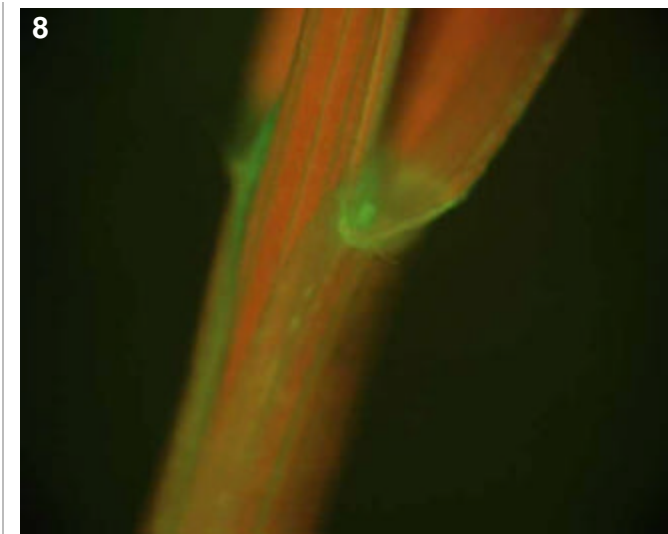
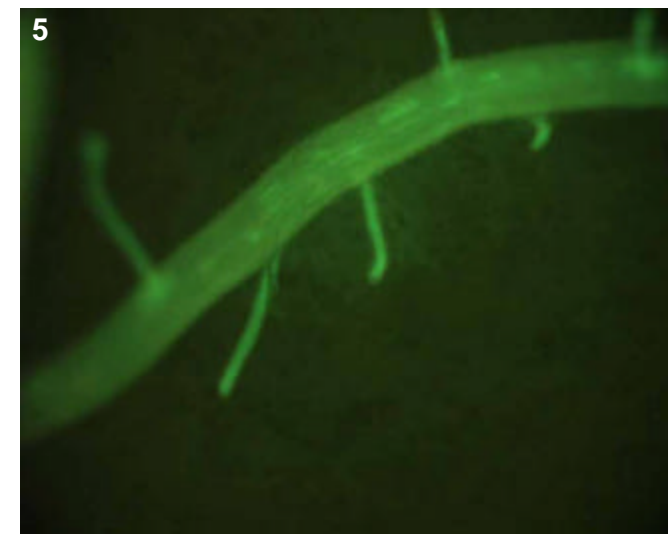
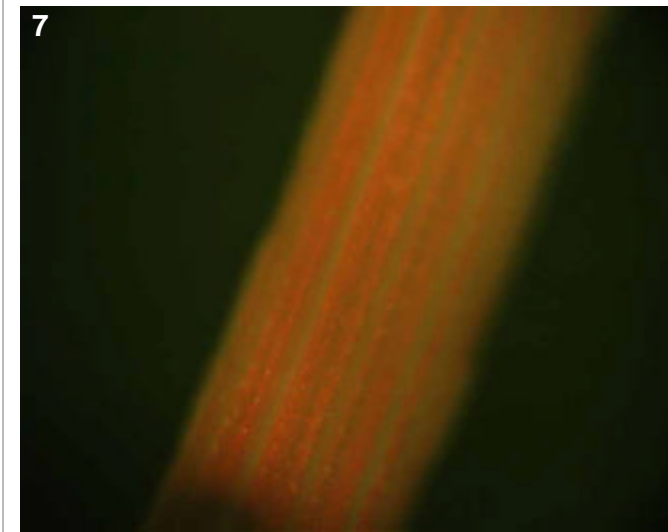
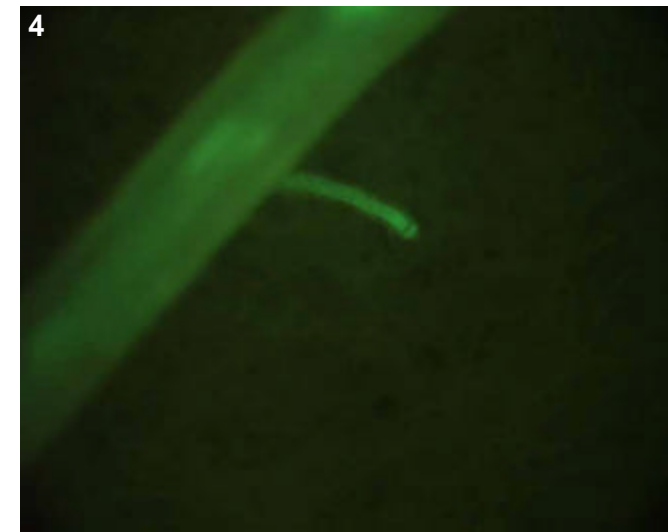
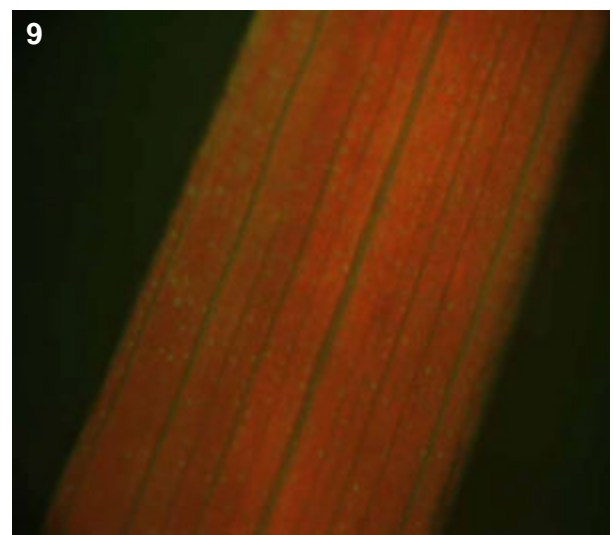
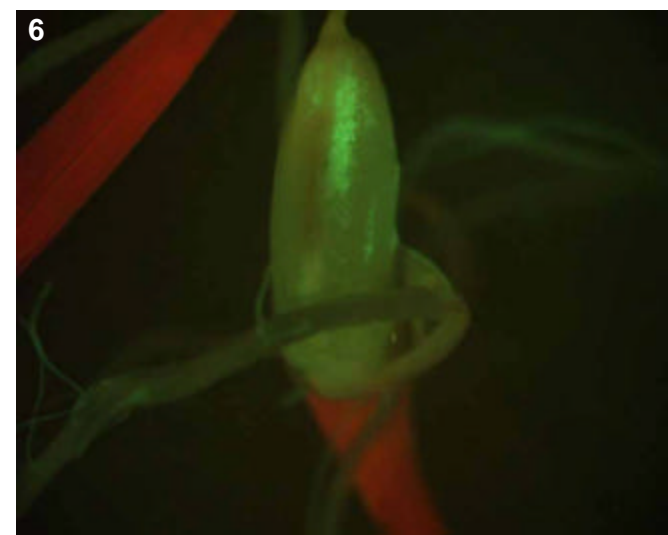
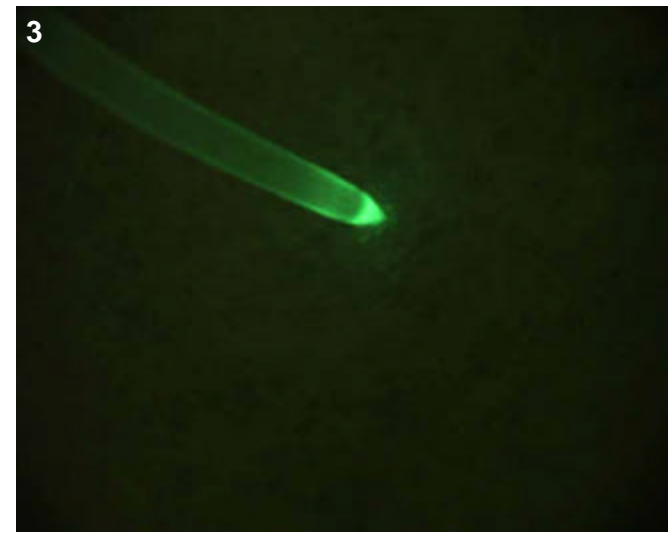
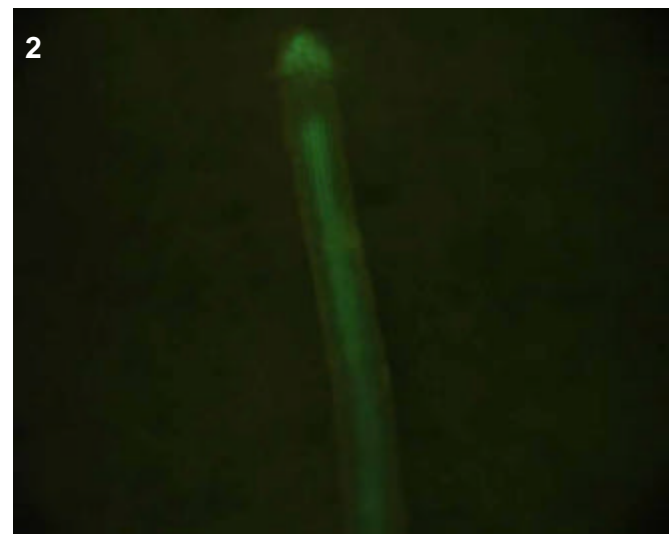
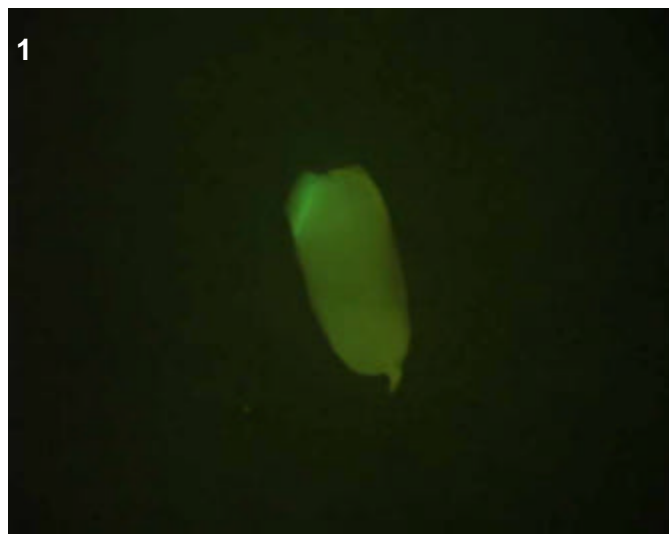
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal? WIP

Number T2 seed produced:



T0 comments

T1 seed comments
3/5 seeds had expression.

T1 seedling comments
Root expression was brighter than the shoot. The root expression seemed to vary by the root, ranging from at times stelar (pic 1), to cortex/endodermis (pic 5), to epidermis (pic 3). In any case, the expression in pic 2 would be interesting to confocal.

Genotype: ATC A05

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

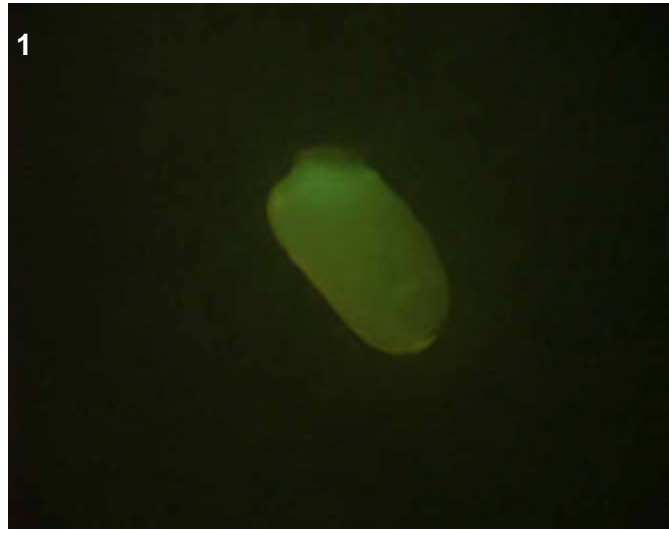
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Genotype: ATC A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-9

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

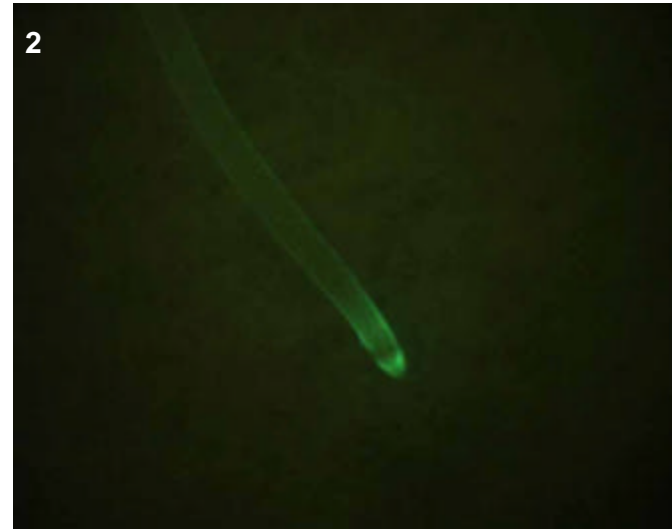
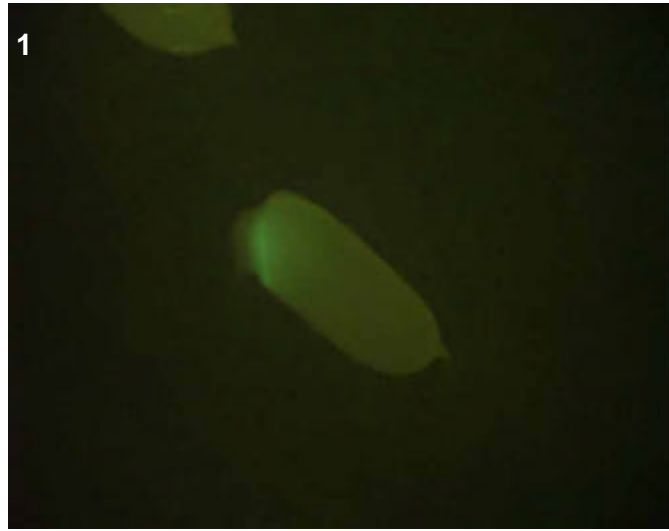
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:

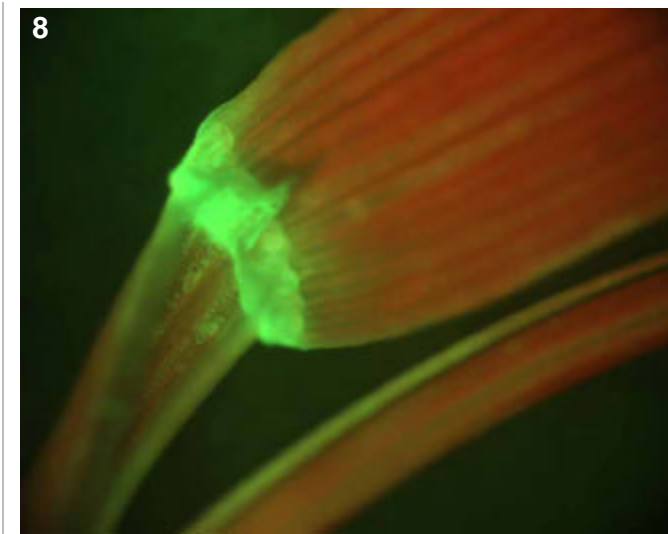
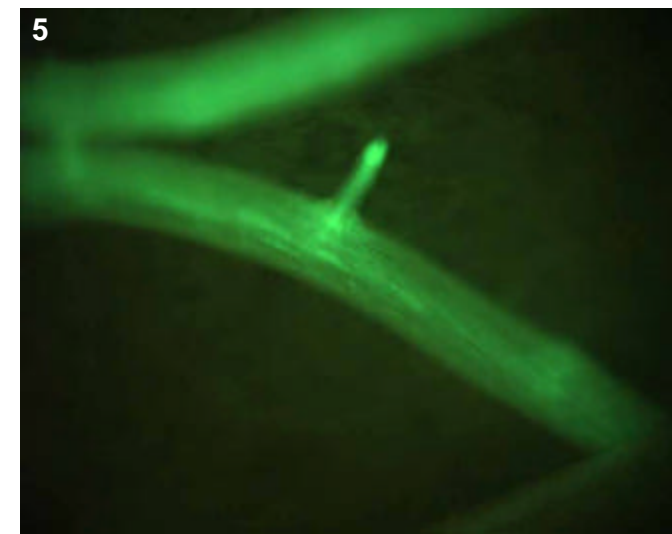
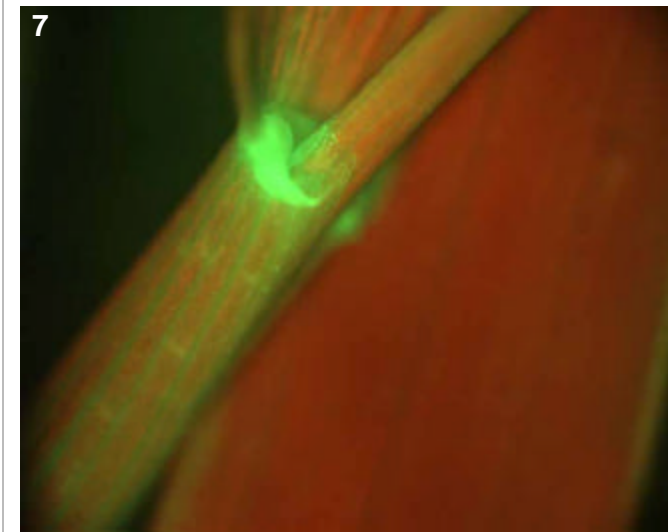
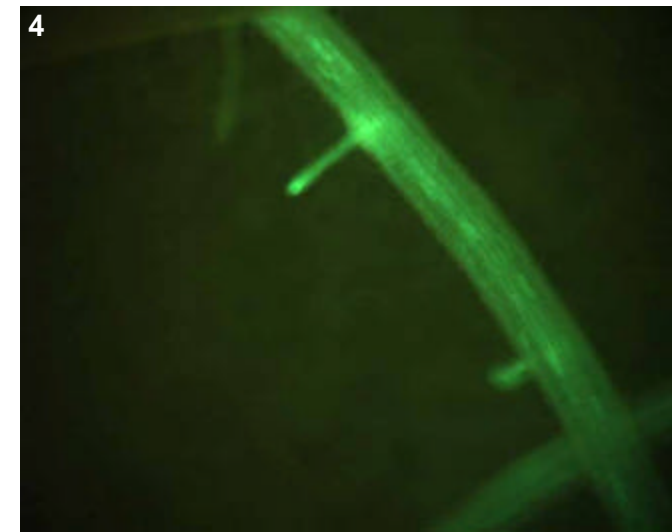
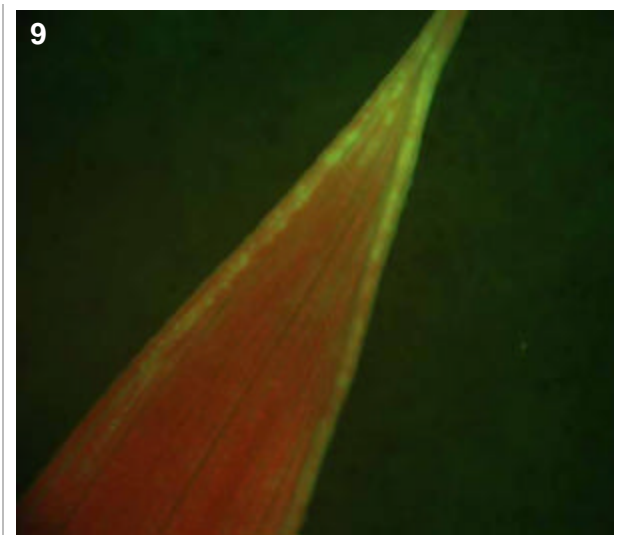
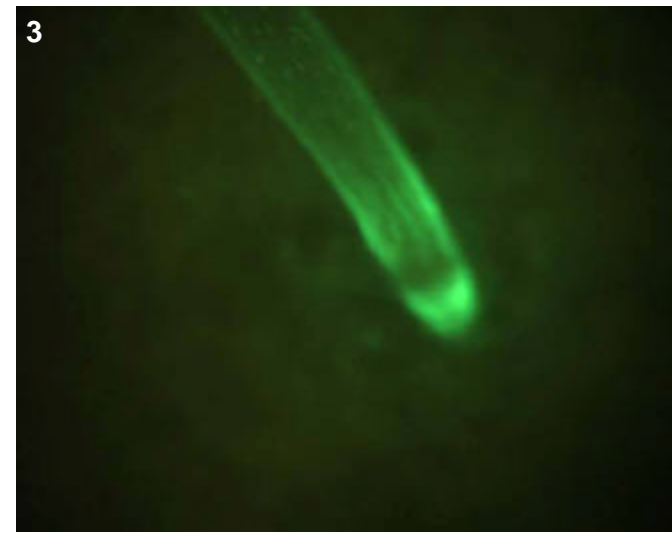


T0 comments

T1 seed comments

4/5 seeds had medium expression.

T1 seedling comments



Genotype: ATC C04

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

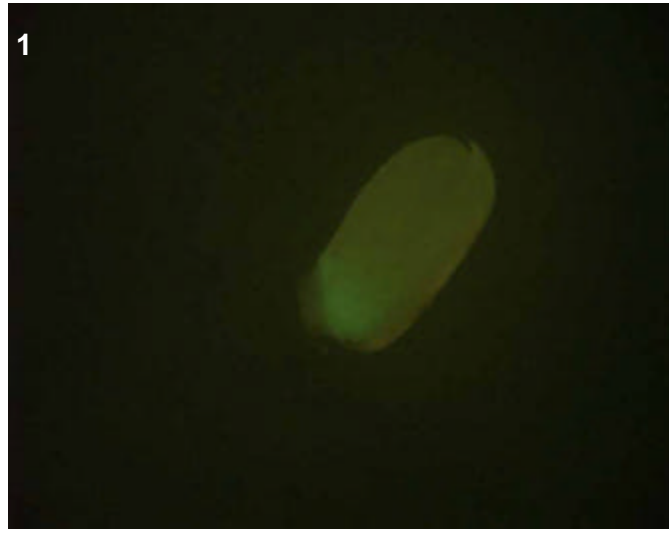
T1 Mature

- T0 pattern verified:
- T0 pattern verified plus:
- New pattern:
- No GFP detected

T1 in greenhouse?
YES, 3 plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/4 seeds had expression.

T1 seedling comments

Genotype: ATC E01

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

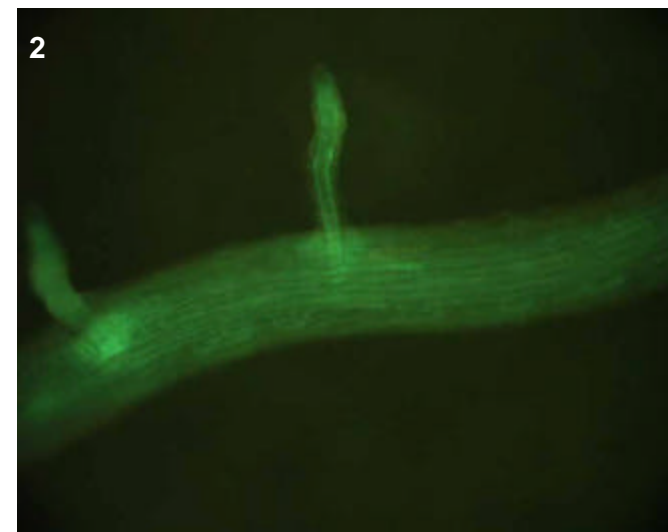
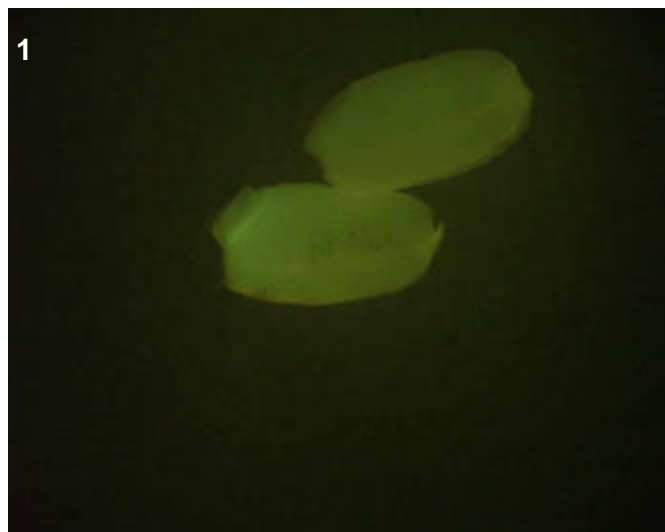
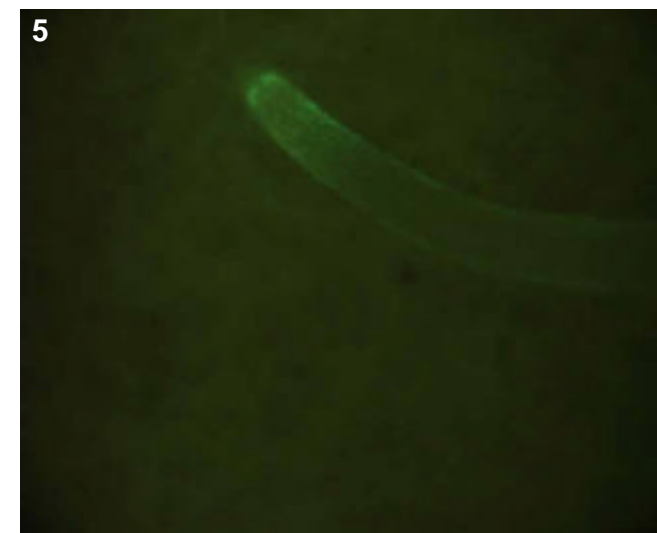
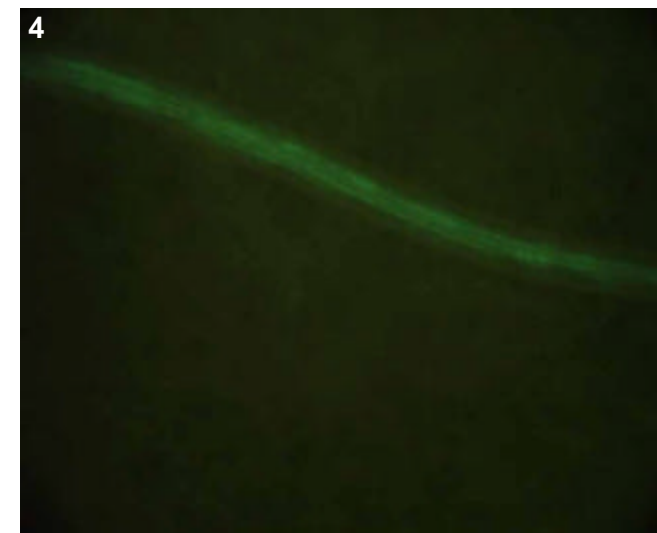
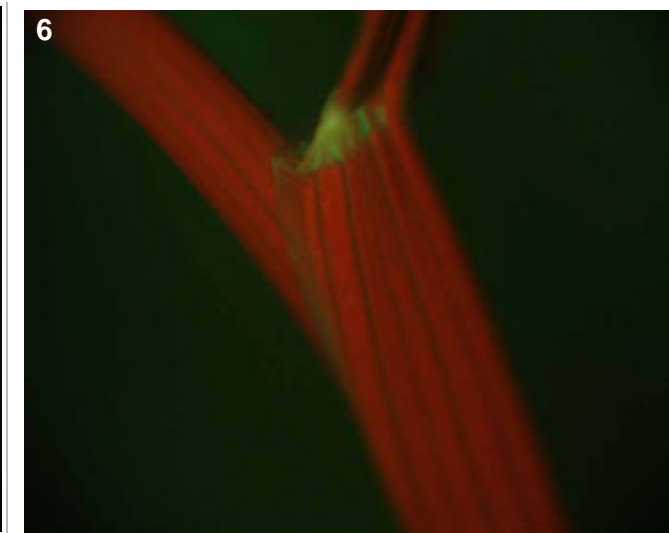
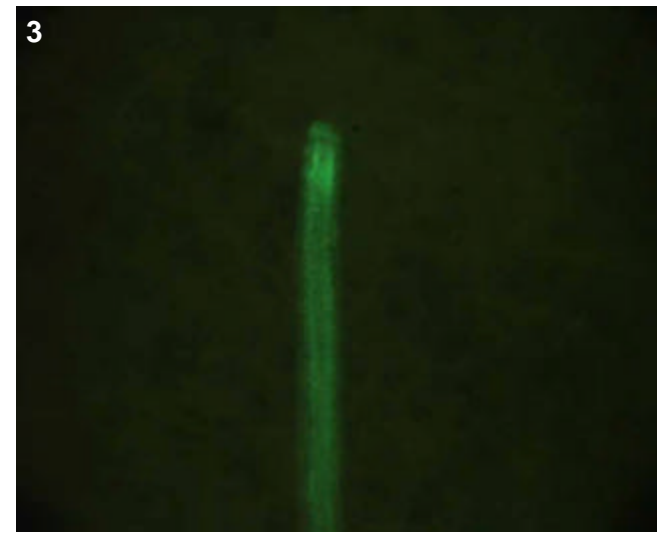
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/4 seeds had expression.

T1 seedling comments

Genotype: ATC E06

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

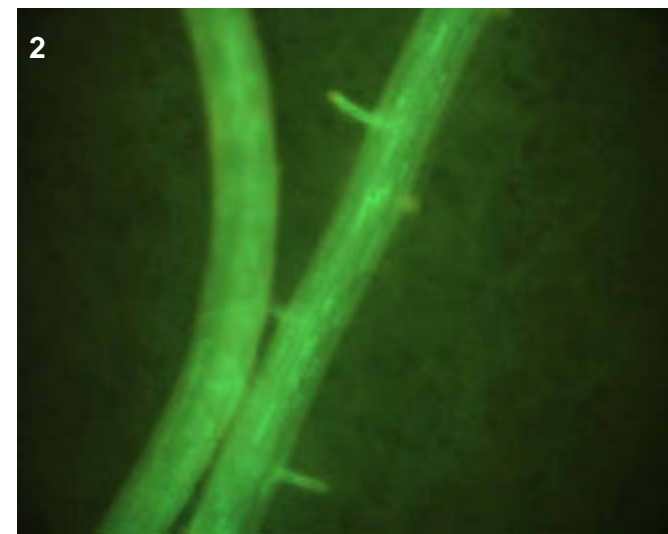
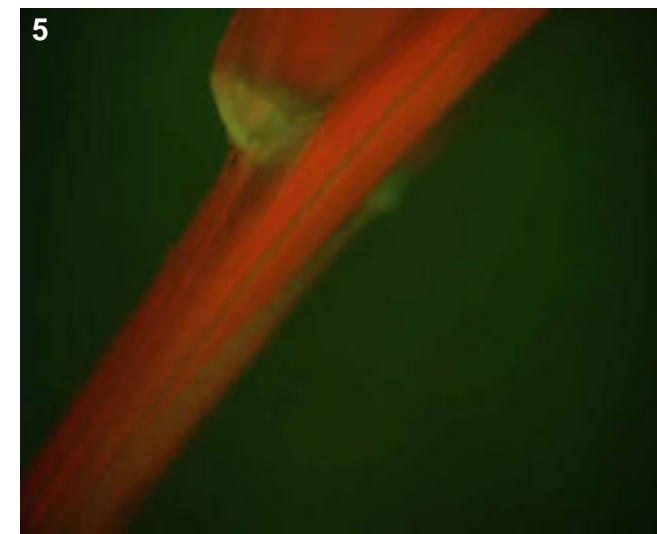
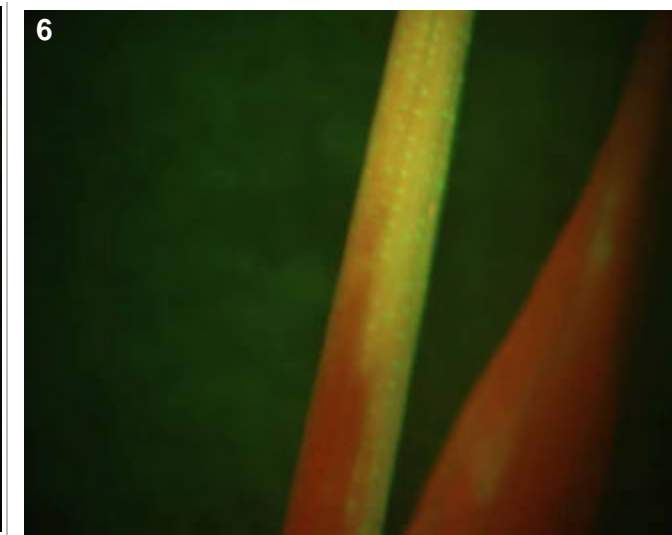
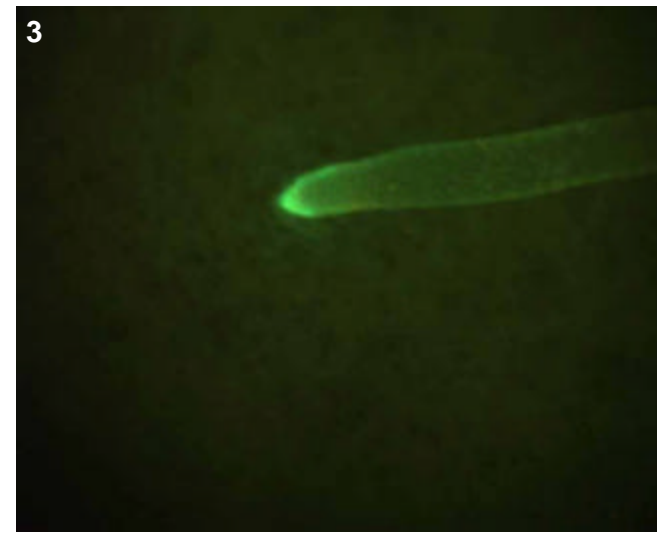
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had faint expression.

T1 seedling comments

Bright roots, medium endosperm and shoot.

Genotype: ATC G10

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

New pattern:

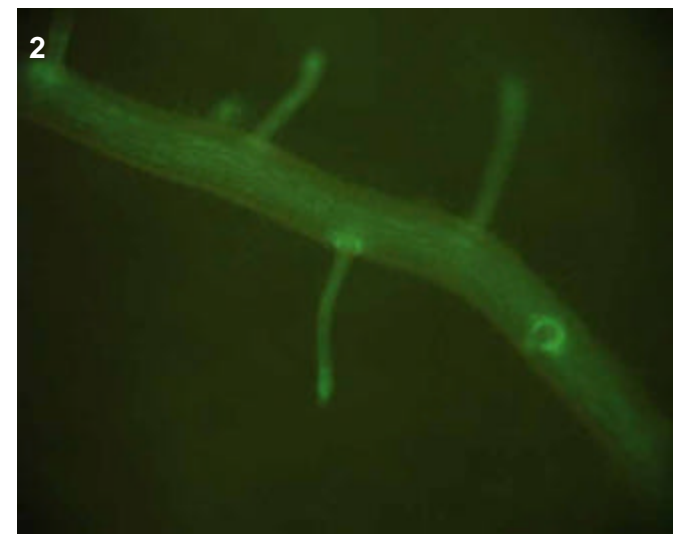
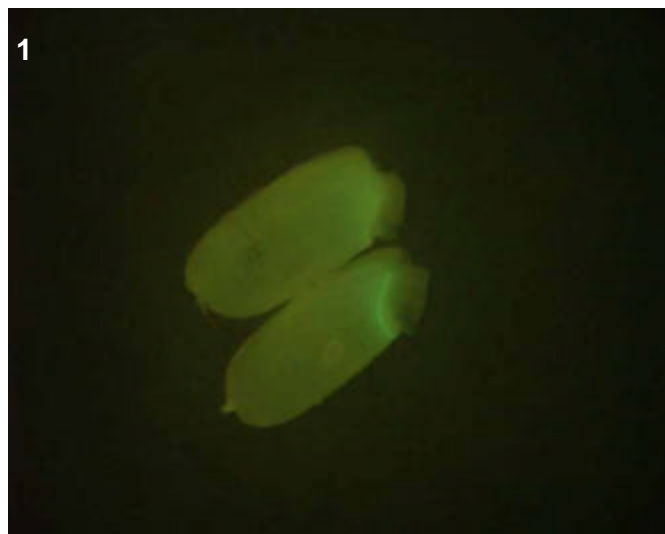
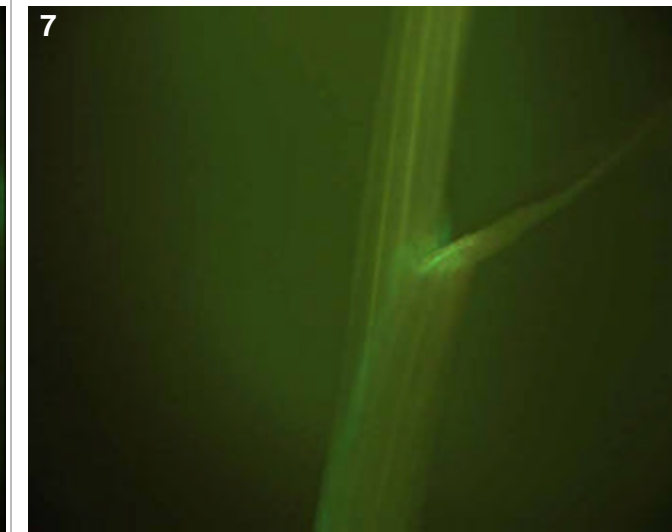
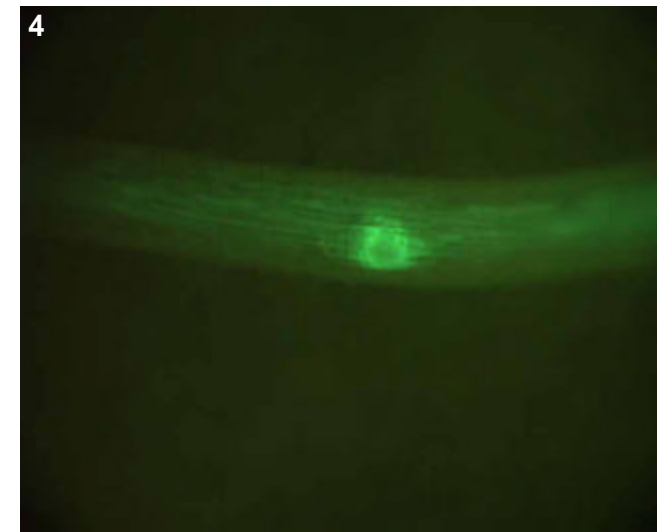
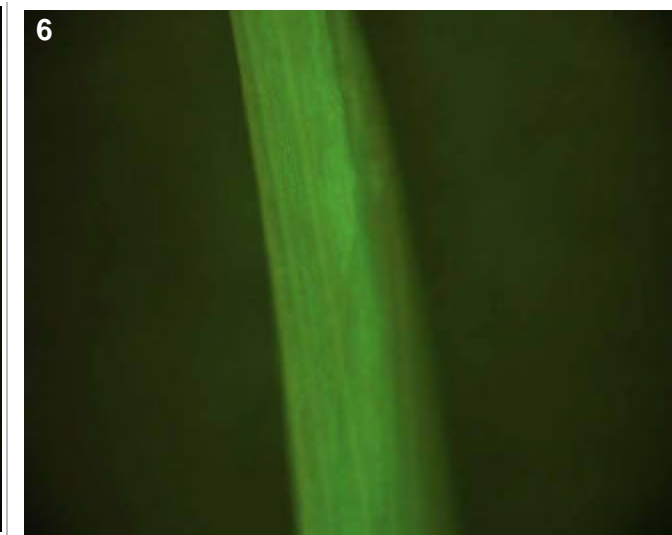
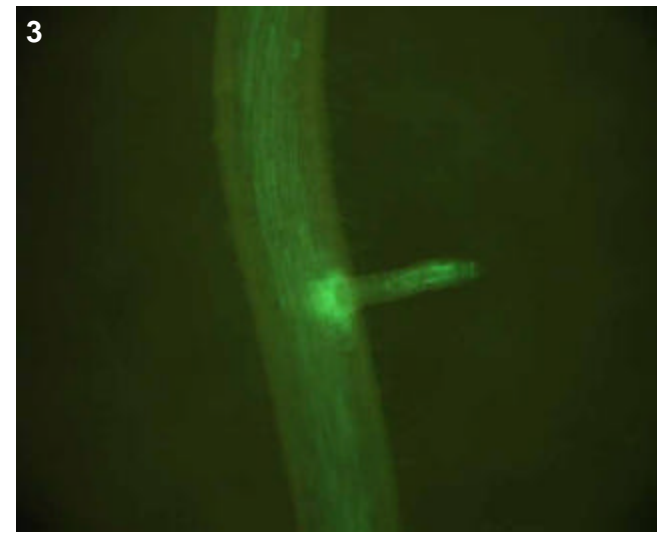
No GFP detected

T1 in greenhouse?

YES, 1 plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

3/5 seeds had expression.

T1 seedling comments

This could be a valuable chlorophyll mutant line, 4 of the 5 seedlings were albinos, and all 4 were also GFP positive. I moved the one GFP- negative seedling to the greenhouse just in case it somehow contained the transgene.

Genotype: ATC H03

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-4

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

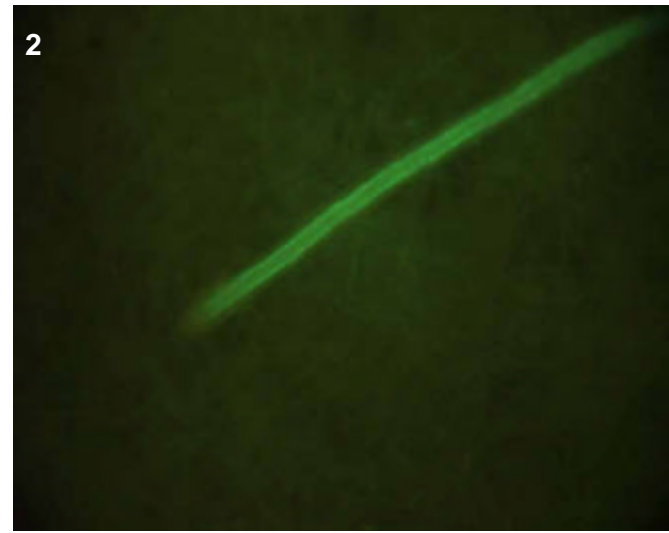
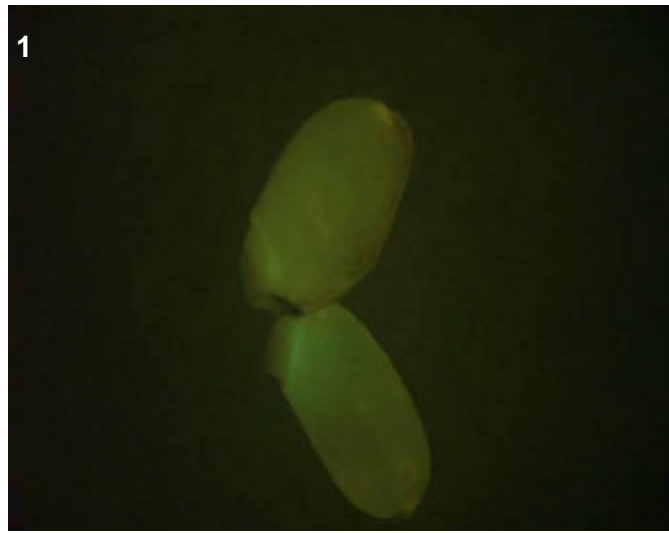
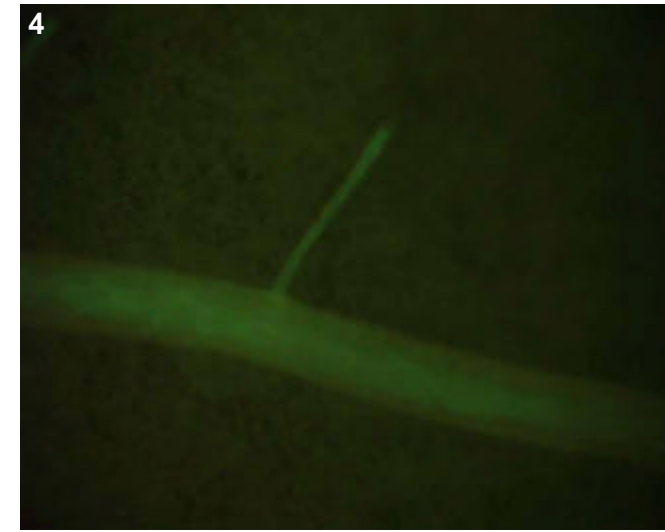
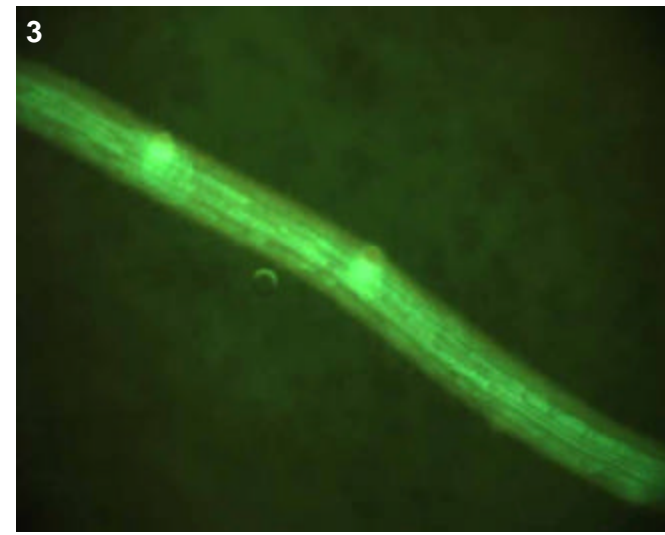
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had expression.

T1 seedling comments

Genotype: ATC H12

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

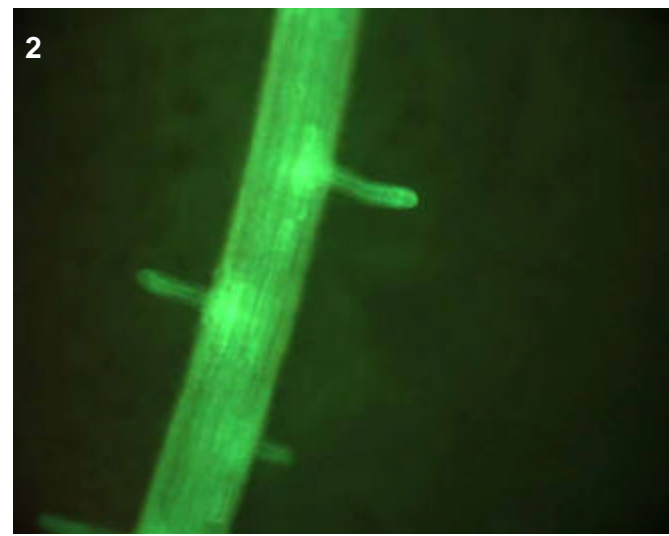
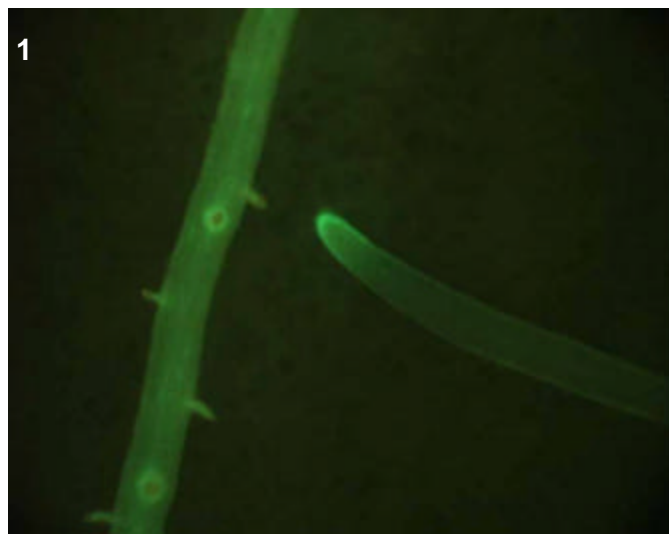
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



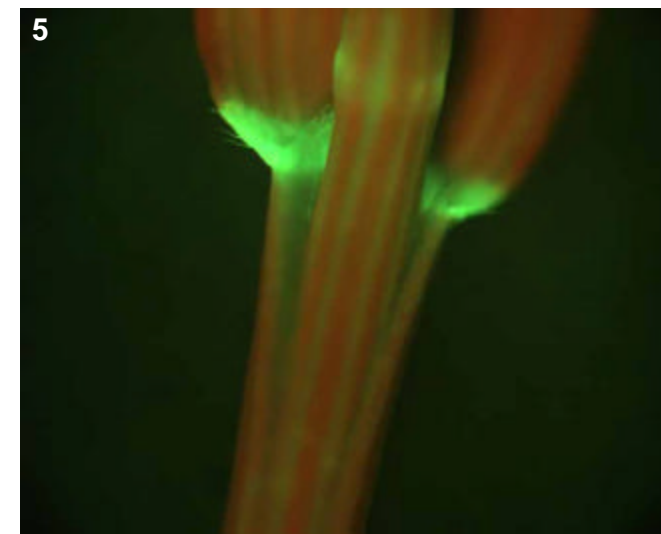
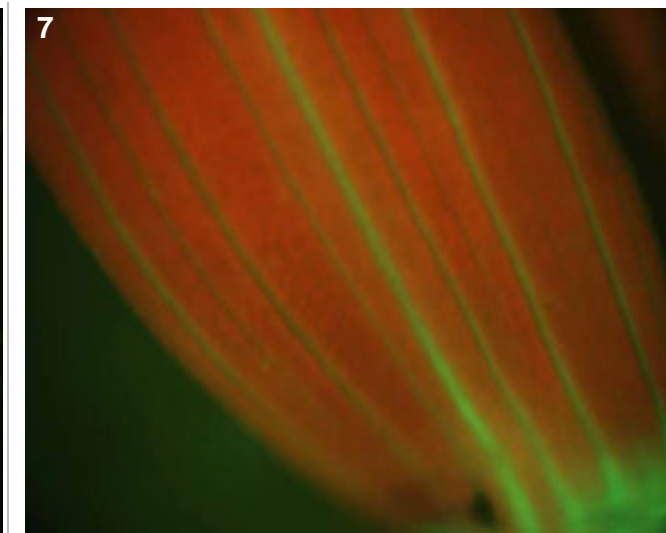
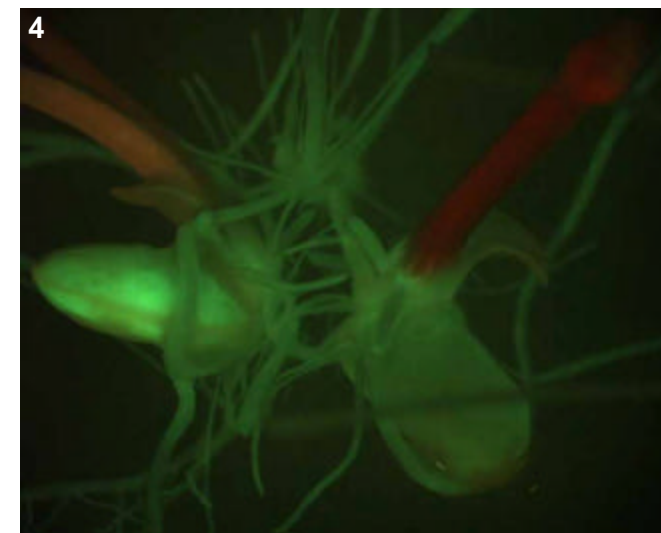
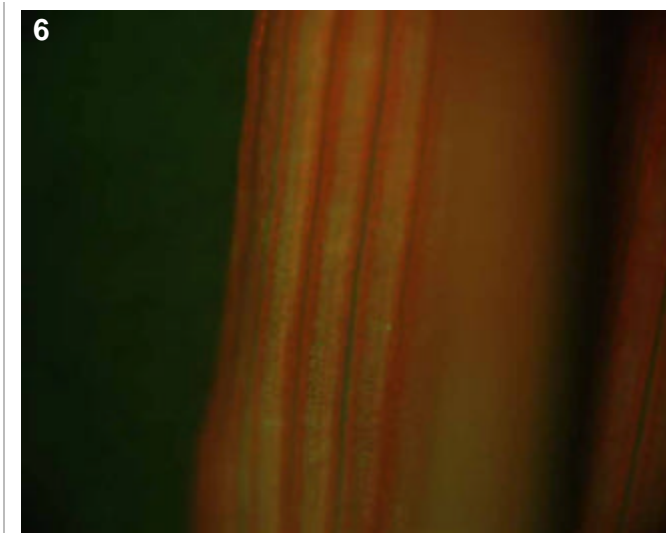
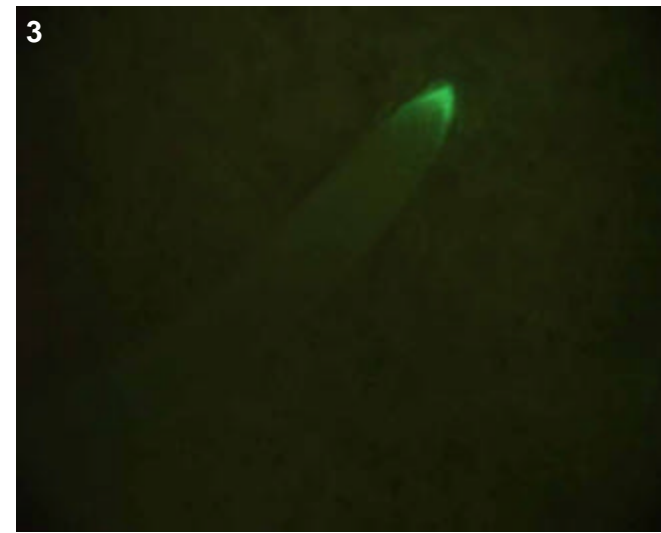
T0 comments

T1 seed comments

1/4 seeds had medium expression (no picture taken).

T1 seedling comments

Note the interesting patterns on the leaf blade (see pics 6 and 7).



Genotype: ATD A08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-6

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

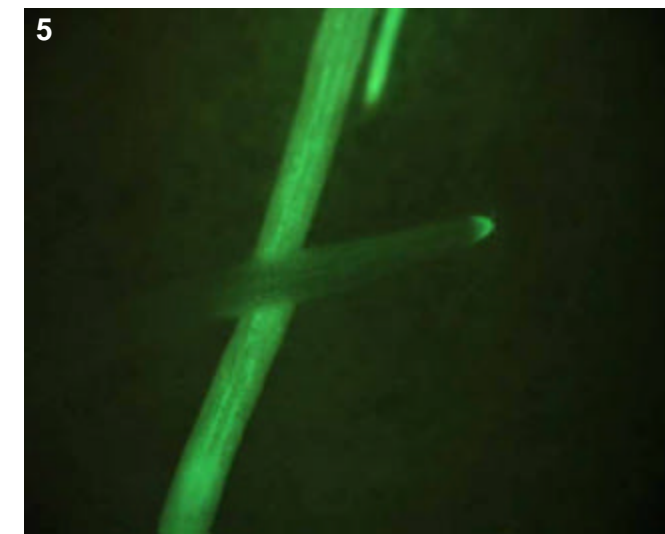
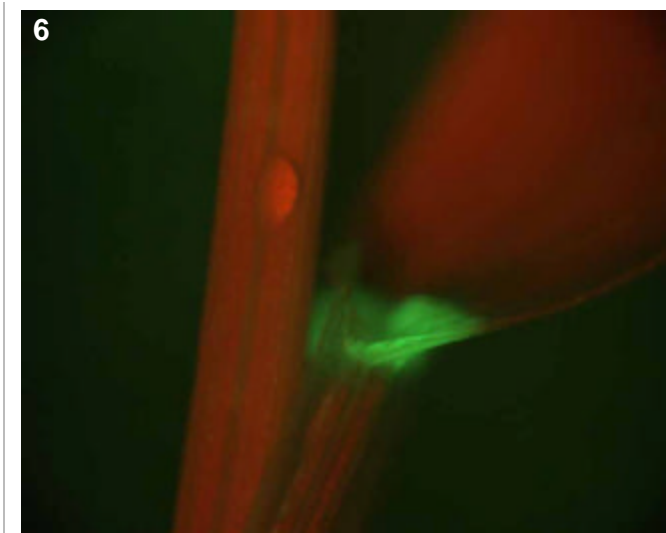
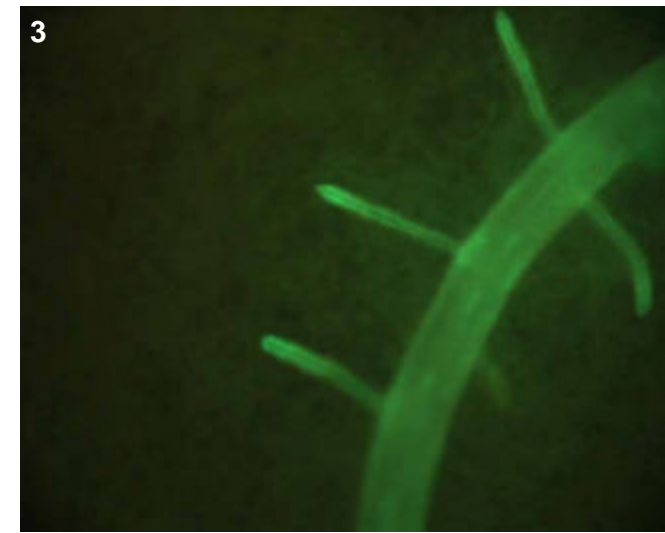
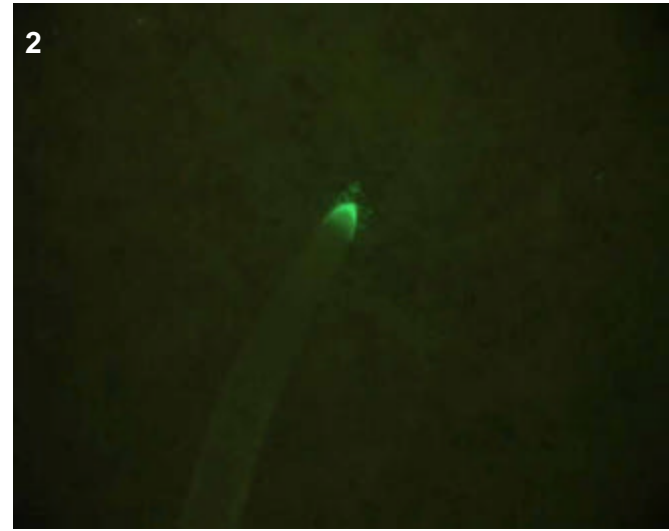
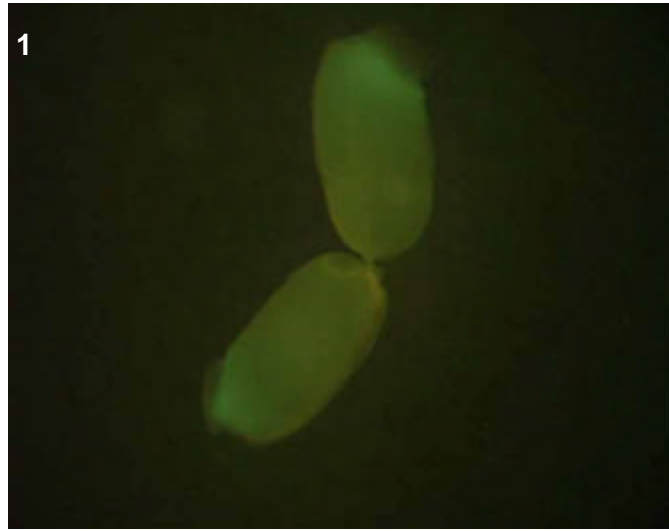
New pattern:

No GFP detected

T1 in greenhouse?
YES, 3 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

4/5 seeds had medium expression.

T1 seedling comments

Genotype: ATD A09

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-5

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

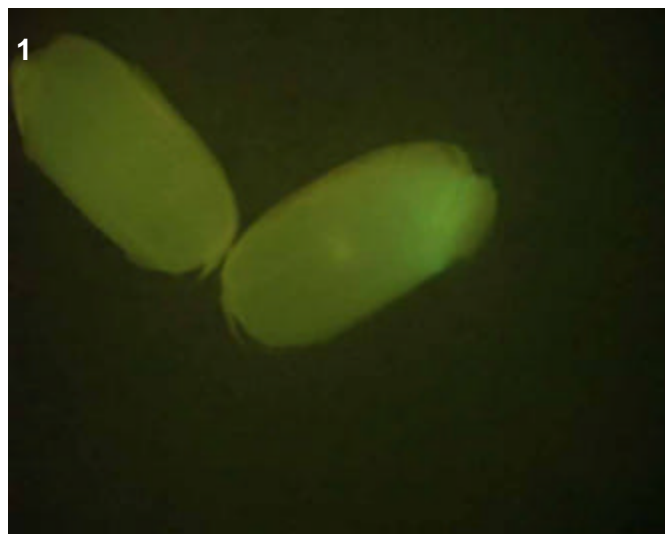
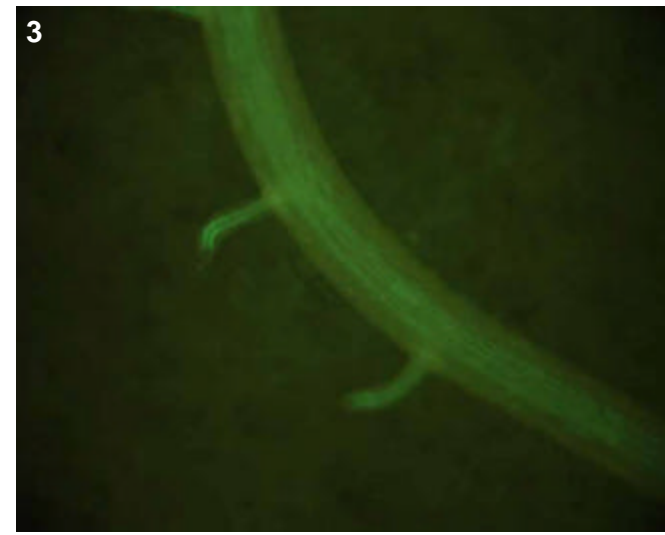
New pattern:

No GFP detected

T1 in greenhouse?
YES, 1 GFP+ plant

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

1/5 seeds had expression.

T1 seedling comments

Medium root expression, faint shoot.

Genotype: ATD C08

Screened

- T0 mature plant
- T1 seed
- T1 seedling
- T1 mature plants

Expression

- None
- Bright
- Medium
- Weak
- Unsure

Pictures

T0 mature plant:

T1 seed/seedling: 1-7

T1 mature plant:

T0 Flower

- YES
- POSSIBLE
- Stamen: anther
- Stamen: filament
- Carpel: stigma
- Carpel: style
- Carpel: ovary
- Carpel: base
- Lemma/palea
- Lodicule
- Rachilla
- Sterile lemma
- Pedicel
- Guard cells
- Trichomes
- Vascular

T0 Blade

- YES
- POSSIBLE
- Vascular
- Guard cells
- Trichomes
- Mesophyll

T0 Sheath

- YES
- POSSIBLE
- Collar
- Vascular
- Trichomes
- Guard cells
- Mesophyll

T1 Seed

- YES
- POSSIBLE
- Embryo
- Coleorhiza
- Scutellum
- Aleurone/Endo.
- Vasc. bundle

T1 Seedling

- YES
- POSSIBLE
- SHOOT
- ROOT
- ENDOSPERM
- Coleoptile
- Sheath tissue
- Blade tissue
- Leaf tip
- Collar
- Trichomes
- Guard cells
- S. vascular
- Seminal root
- Crown roots
- Lateral roots
- Root cap
- Root apex
- R. stele
- R. cortex/end.
- R. epidermis
- Constitutive

T1 Mature

T0 pattern verified:

T0 pattern verified plus:

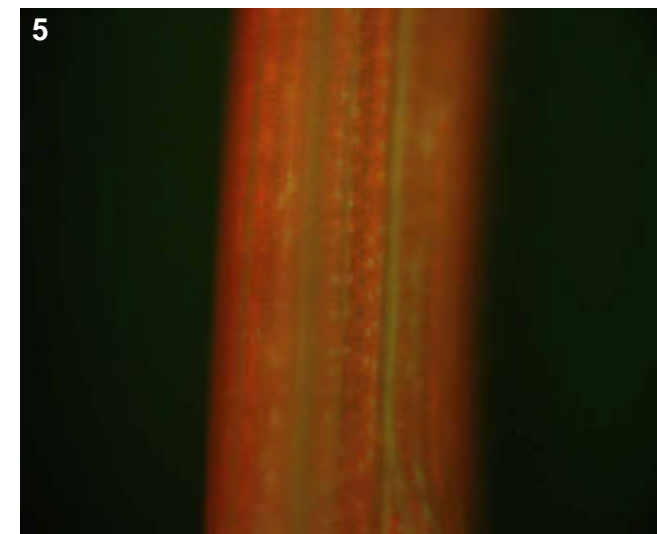
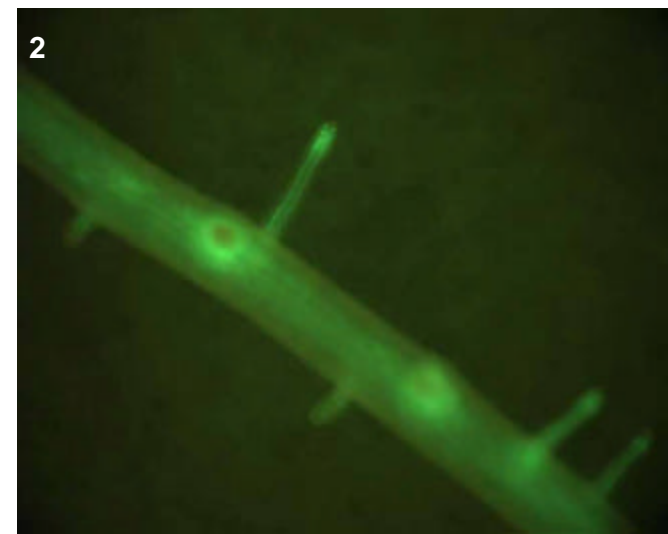
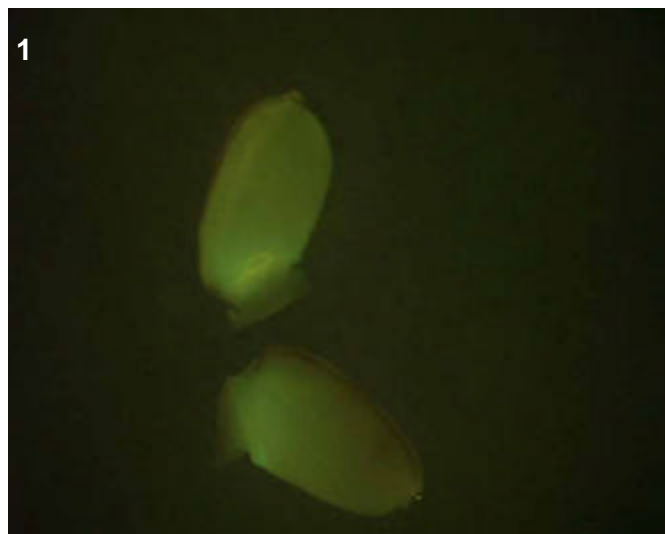
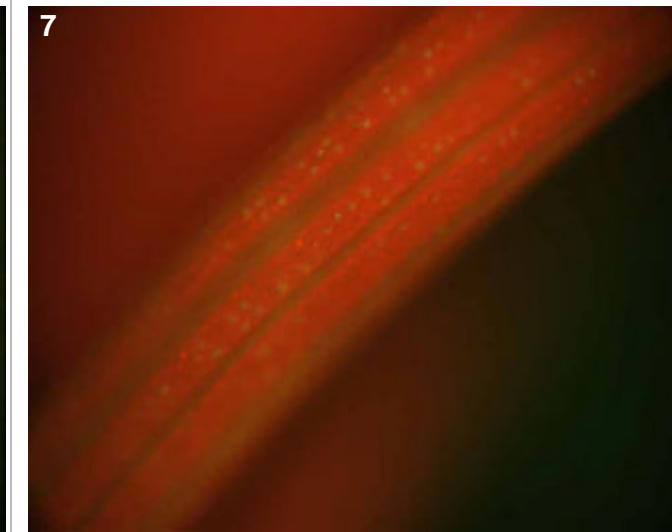
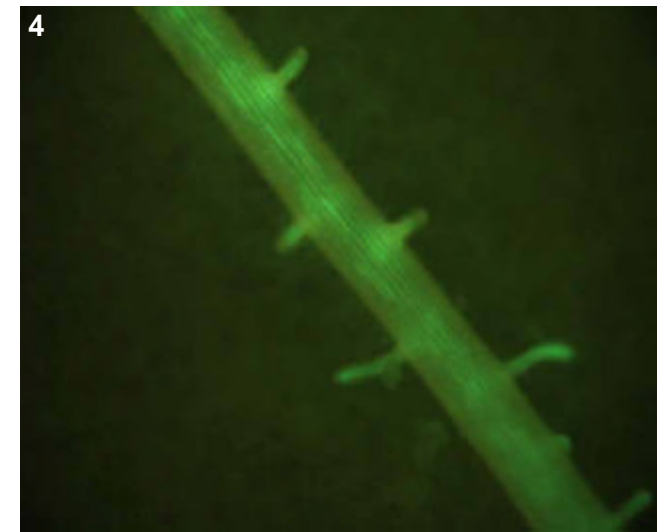
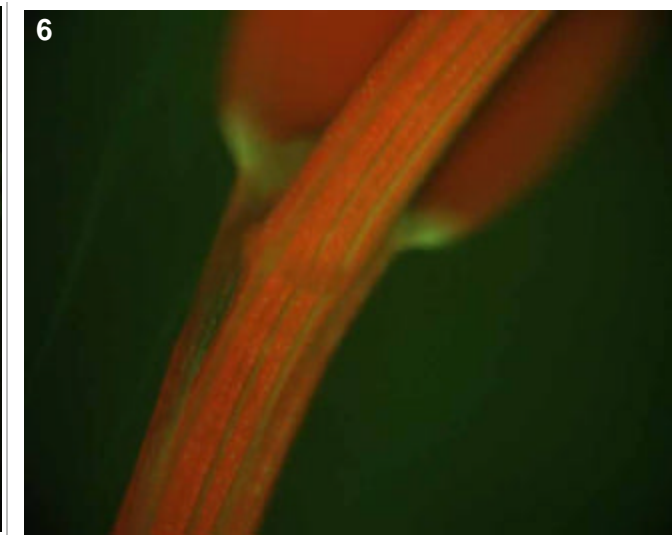
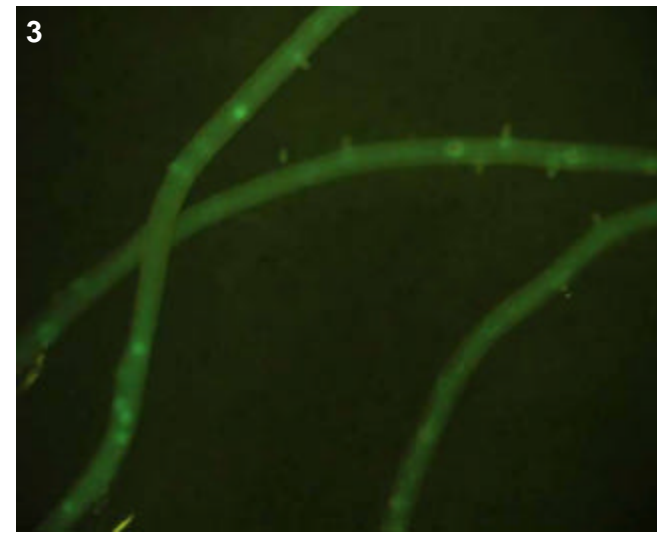
New pattern:

No GFP detected

T1 in greenhouse?
YES, 2 GFP+ plants

Confocal?

Number T2 seed produced:



T0 comments

T1 seed comments

2/5 seeds had faint expression.

T1 seedling comments

The plants appear to be root mutants, having no crown roots, only seminals.