Table 1 Suppl. Intensity values of each region of interest (ROI) to generate the normalised emission spectrum of a transgenic *Arabidopsis* seedling expressing PIN3::PIN3GFP only (relate to Fig. 1*A*).

| Emission wavelength [nm] | Intensity ROI 1 | Intensity ROI 2 | Intensity ROI 3 |
|---|---|---|---|
| 502 | 33.7 | 100.3 | 33.6 |
| 513 | 41.1 | 131.6 | 39.6 |
| 524 | 30.6 | 86.0 | 30.6 |
| 534 | 17.4 | 29.2 | 17.4 |
| 545 | 19.2 | 29.2 | 19.3 |
| 556 | 20.2 | 40.2 | 19.8 |
| 566 | 18.5 | 31.7 | 17.9 |
| 577 | 17.0 | 25.9 | 16.4 |

Table 2 Suppl. Intensity values of each region of interest (ROI) to generate the normalised emission spectrum of a transgenic *Arabidopsis* seedling expressing LAX3::LAX3GFP only (relate to Fig. 1*D*)

| Emission wavelength [nm] | Intensity ROI 1 | Intensity ROI 2 | Intensity ROI 3 |
|---|---|---|---|
| 502 | 16.3 | 14.6 | 15.5 |
| 513 | 32.9 | 22.0 | 27.0 |
| 524 | 71.6 | 38.7 | 56.5 |
| 534 | 30.7 | 20.4 | 25.1 |
| 545 | 28.4 | 20.7 | 23.9 |
| 556 | 38.9 | 24.2 | 30.9 |
| 566 | 33.5 | 22.5 | 27.8 |
| 577 | 28.6 | 21.0 | 24.5 |

Table 3 Suppl. Intensity values of each region of interest (ROI) to generate the normalised emission spectrum of a double transgenic *Arabidopsis* seedling expressing PIN3::PIN3GFP and LAX3::LAX3GFP (relate to Fig. 1*G*).

| Emission wavelength [nm] | Intensity ROI 1 | Intensity ROI 2 |
|---|---|---|
| 502 | 15.6 | 120.3 |
| 513 | 21.7 | 160.4 |
| 524 | 40.2 | 109.3 |
| 534 | 20.4 | 32.6 |
| 545 | 21.6 | 32.9 |
| 556 | 25.3 | 49.5 |
| 566 | 24.4 | 37.1 |
| 577 | 24.0 | 28.1 |

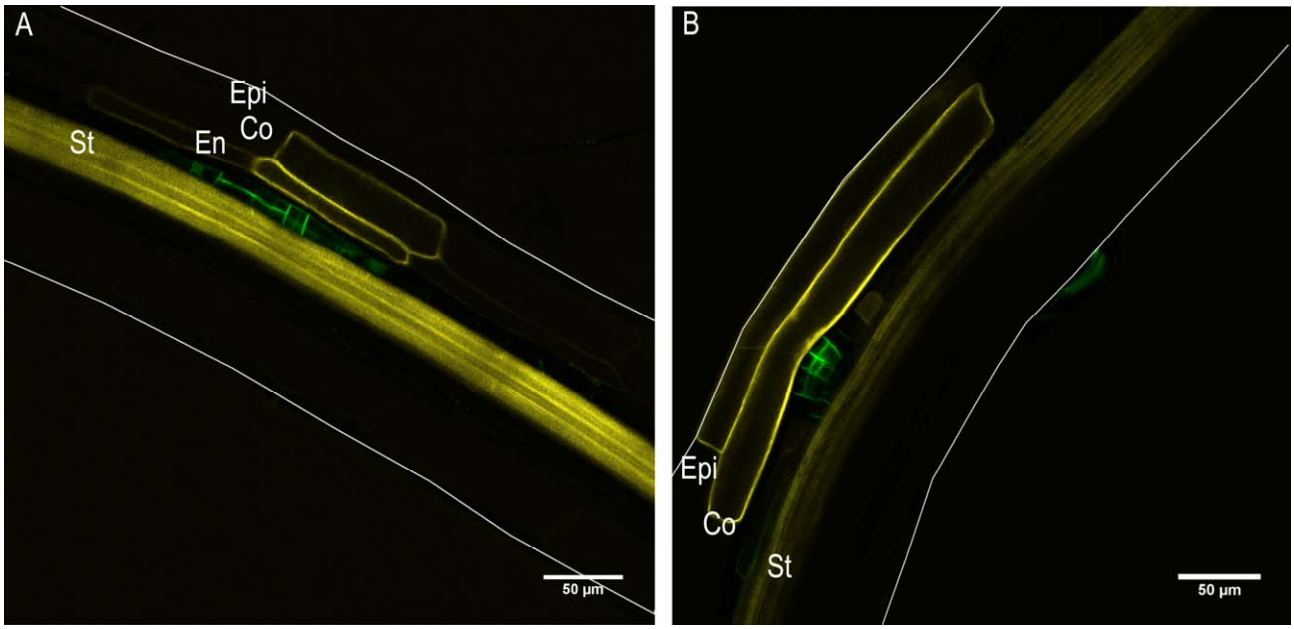


Fig. 1 Suppl. Linear unmixing of the double transgenic *Arabidopsis* line expressing both LAX3::LAX3YFP and PIN3::PIN3GFP at stages II and III of the LR primordium. *A* – The linear unmixed overlay image of the stage II of the LR primordium showing LAX3YFP in the stele and endodermal and cortical cells above the PIN3GFP labeled primordium. *B* – The linear unmixed overlay image of the stage III of the LR primordium showing LAX3YFP in cortical and epidermal cells above the PIN3GFP labelled primodium. En - endodermis, Epi - epidermis, Co - cortex, St - stele.