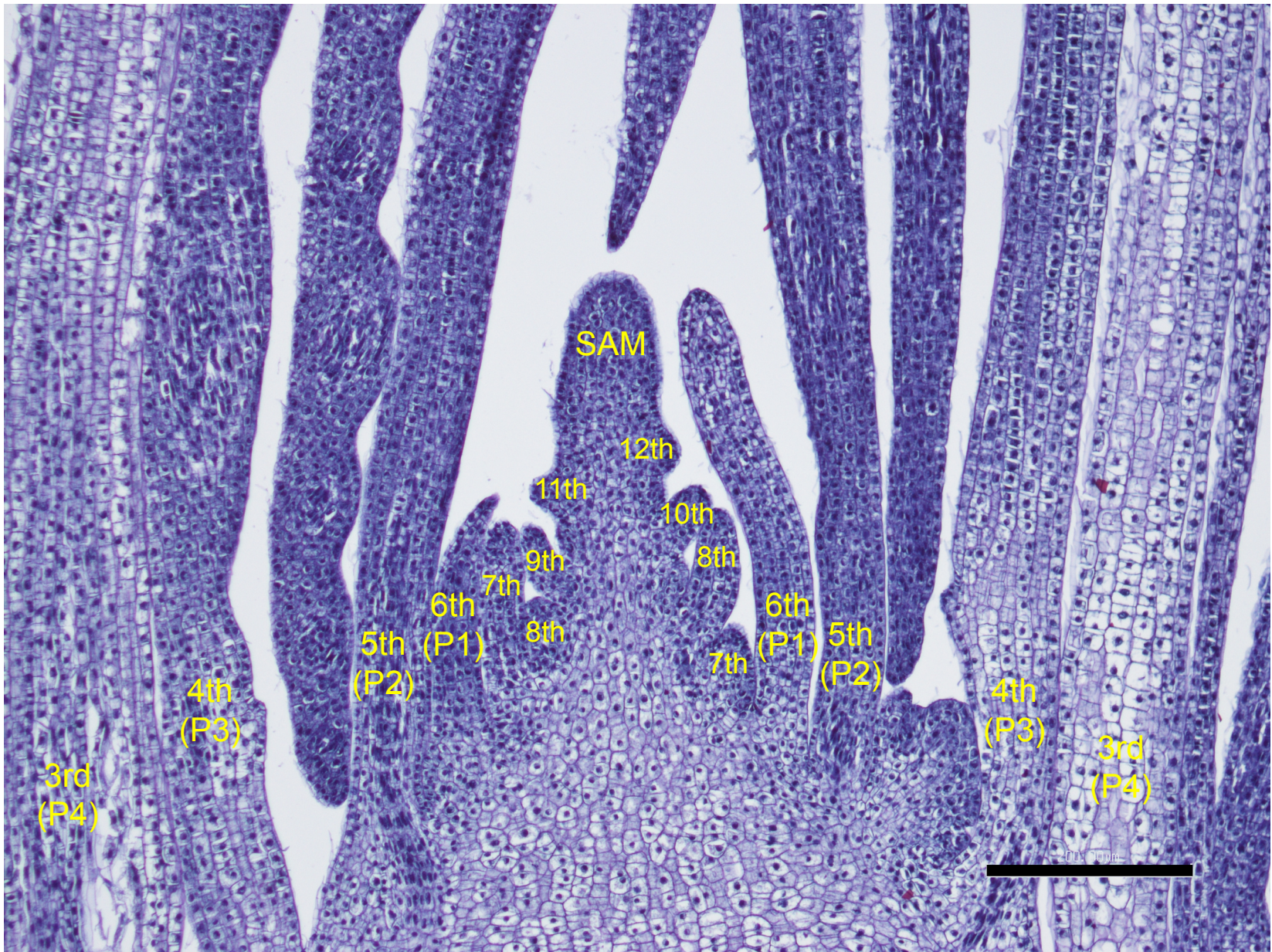


Supplemental Fig. 1. Comparison of the leaf emerging rate between wild-type (KN29) and *nld1.b*.

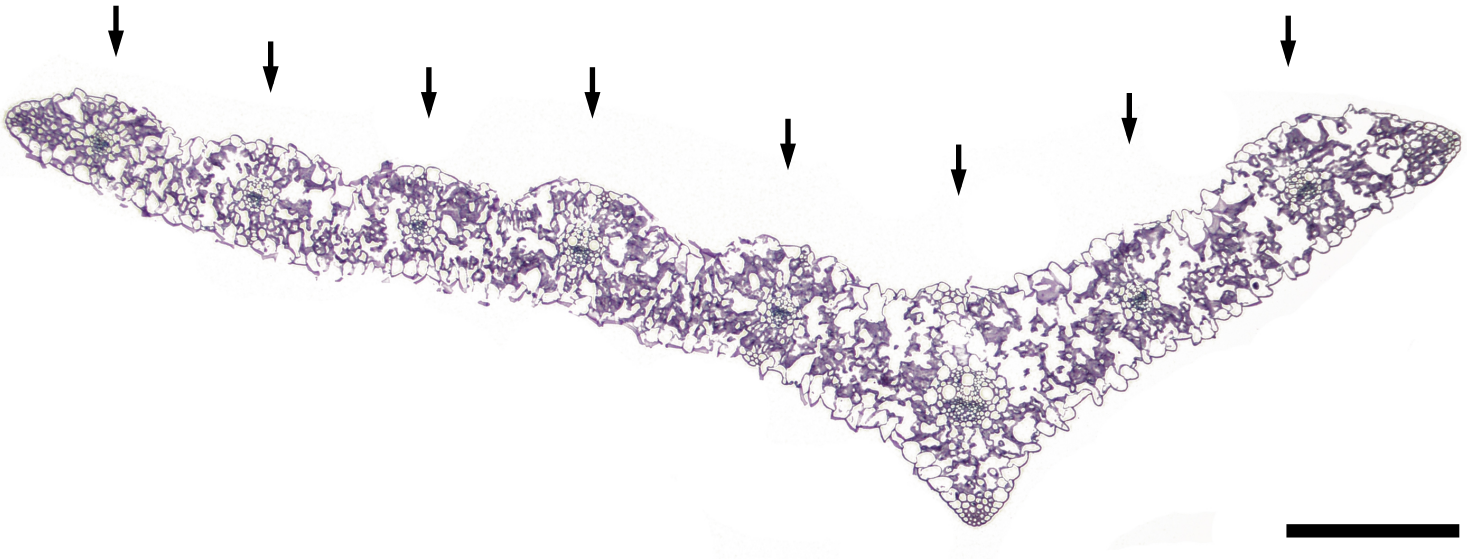
Results are shown as means \pm SE (n=10).



Supplemental Fig. 2. The longitudinal section of the shoot apex of wild-type (KN29).

Seedling at the 2nd leaf stage is used as the plant material. The shoot apical meristem (SAM), the leaf positions (3rd to 12th), and the leaf primordial stages (P1-P4) are shown in the figure.

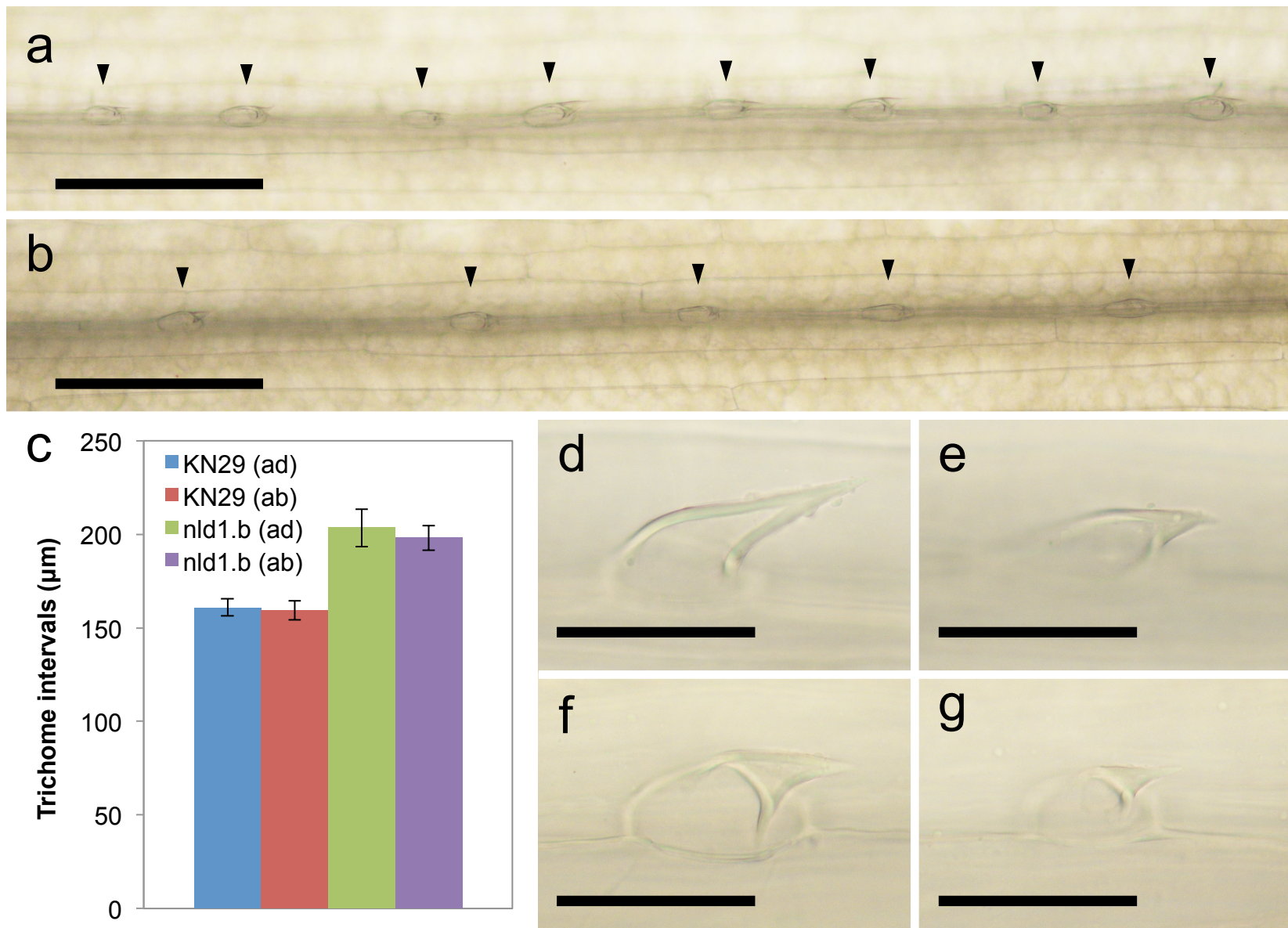
Bar = 200μm.



Supplemental Fig. 3. Asymmetrically-developed 2nd leaf blade in *nld1.a*.

Arrows indicate the positions of vascular bundle.

Bar = 400 μ m.



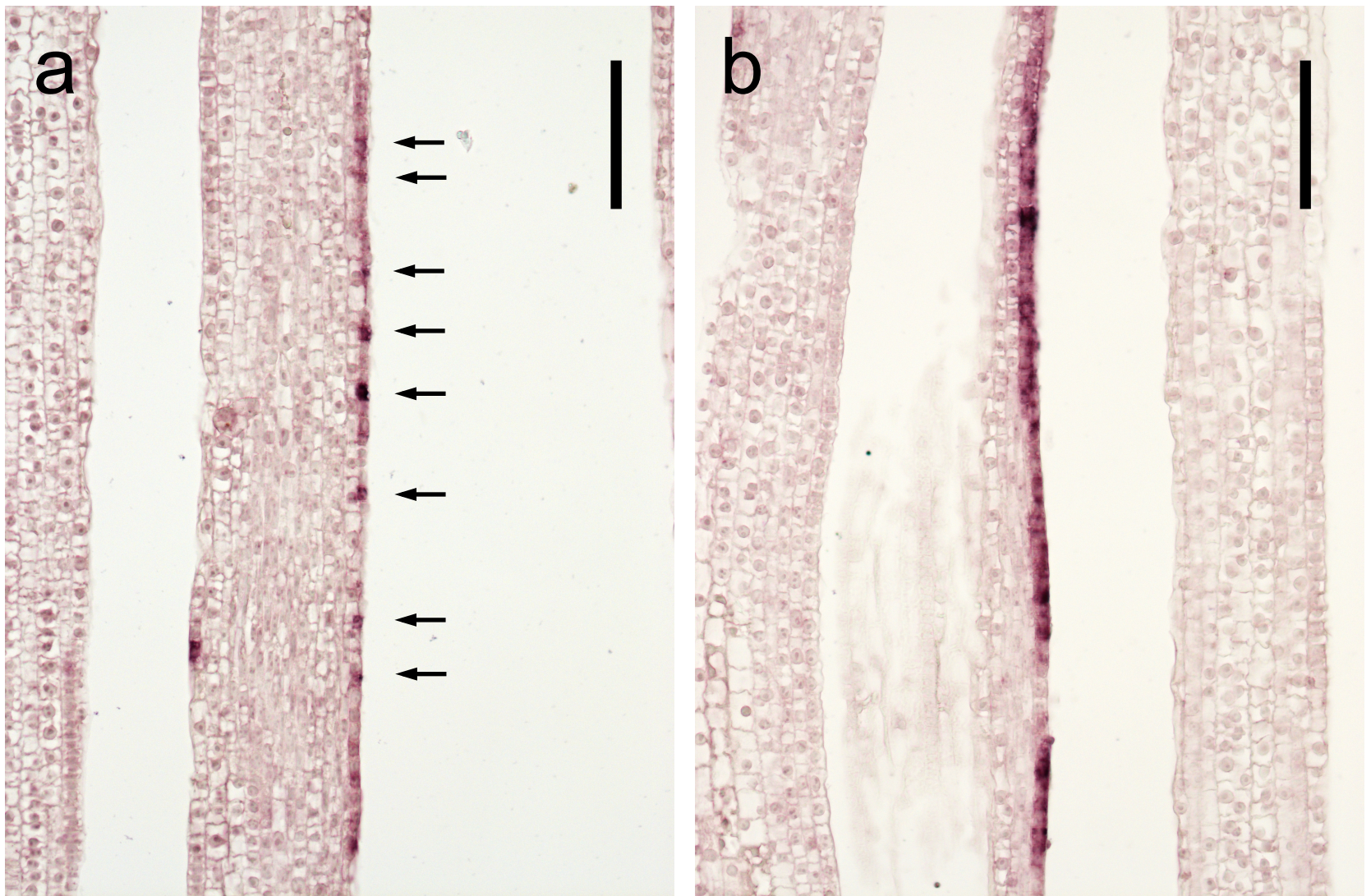
Supplemental Fig. 4. Comparison of the trichome development between wild-type and *nld1.b*.

(a and b) The distribution of trichomes on the adaxial-side of the 2nd leaf-blades of wild-type (KN29) (a) and *nld1.b* (b). Arrow heads indicate the positions of trichomes.

(c) The comparison of the trichome intervals on the 2nd leaf-blades between wild-type (KN29) and *nld1.b*. ad and ab indicate adaxial and abaxial side, respectively.

(d-g) Variation of trichomes on the 2nd leaf-blades of wild-type (KN29) (d,e) and *nld1.b* (f,g). (d) and (f) are largest trichomes, and (e) and (g) are smallest ones.

Bars = 200μm (a,b), 50μm (d-g)



Supplemental Fig. 5. Expression pattern of the *NLD1* gene in leaf primordia.

(a and b) Longitudinal section of leaf primordia in wild-type (KN29) hybridized with *NLD1* anti-sense probe. The localization of *NLD1* transcripts on the epidermal cells along with longitudinal vein is interspersed (arrows in (a)), while *NLD1* transcripts are continuously localized in leaf edges (b).

Bar = 100 μ m.