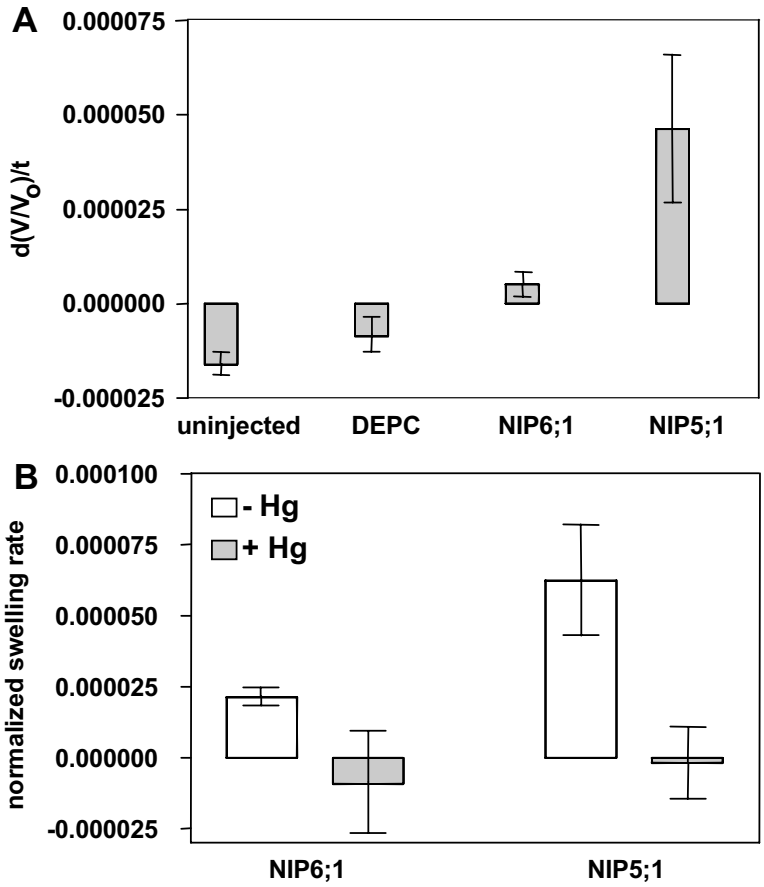
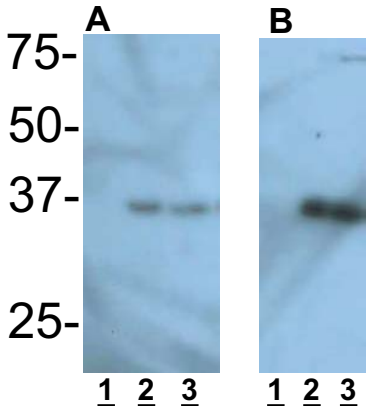


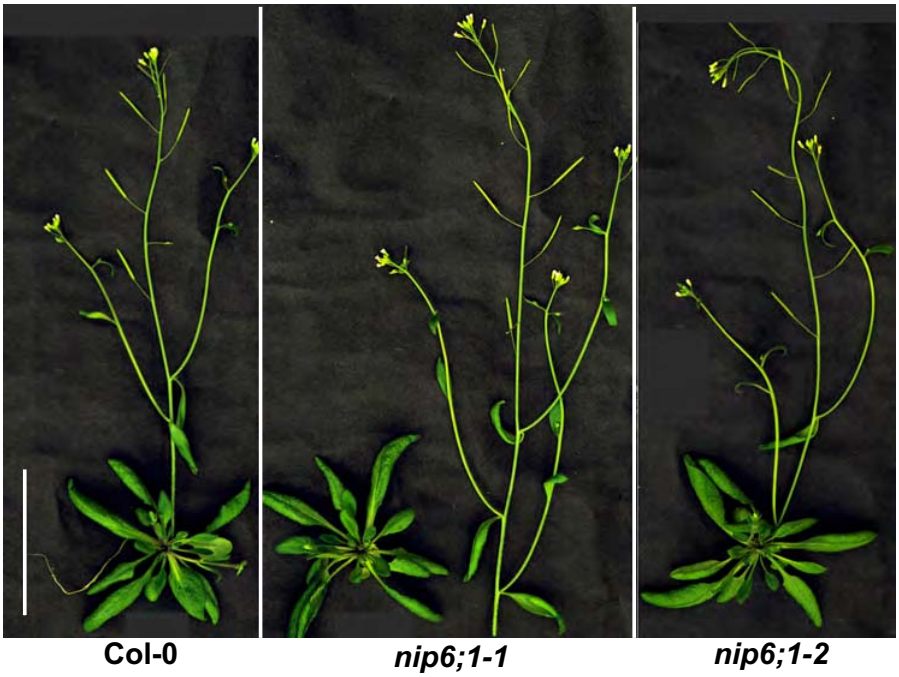
Supplemental Figure 1. Comparison of swelling rates of control and NIP oocytes and mercury inhibition of swelling.

(A) Comparison of the boric acid induced swelling rates of negative control oocytes (uninjected or DEPC-water "mock" injected oocytes) and NIP5;1- and NIP6;1-expressing oocytes was done as described in the Methods. Error bars show the SEM (n=7 oocytes for each value); **(B)** Comparison of the boric acid-induced oocyte swelling properties of NIP5;1 and NIP6;1 in the absence (-Hg) and the presence of 1 mM $HgCl_2$ (+Hg) are shown. The error bars show the SEM (n=6 oocytes for each value).



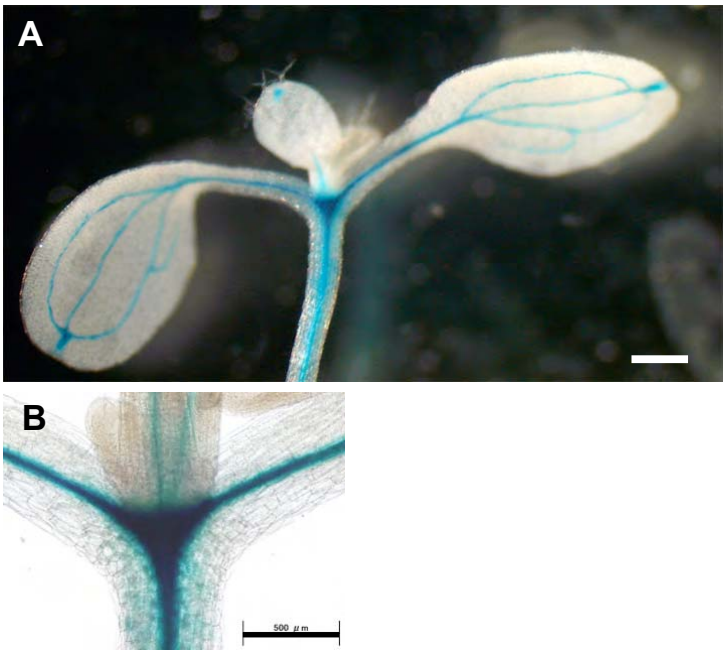
Supplemental Figure 2. FLAG-tag Western blot of *Xenopus* oocyte lysates.

5 **(A)** and 20 **(B)** µg of lysate protein from NIP5;1- as well as NIP6;1- expressing oocytes were separated on a 12.5% SDS-PAGE gel, blotted to PVDF, and probed with the anti-FLAG antibody. Lane 1: uninjected oocyte lysate, lane 2: NIP5;1- lysate, lane 3: NIP6;1- lysate. The position of the molecular mass markers (kDa) are indicated to the left of the blot.



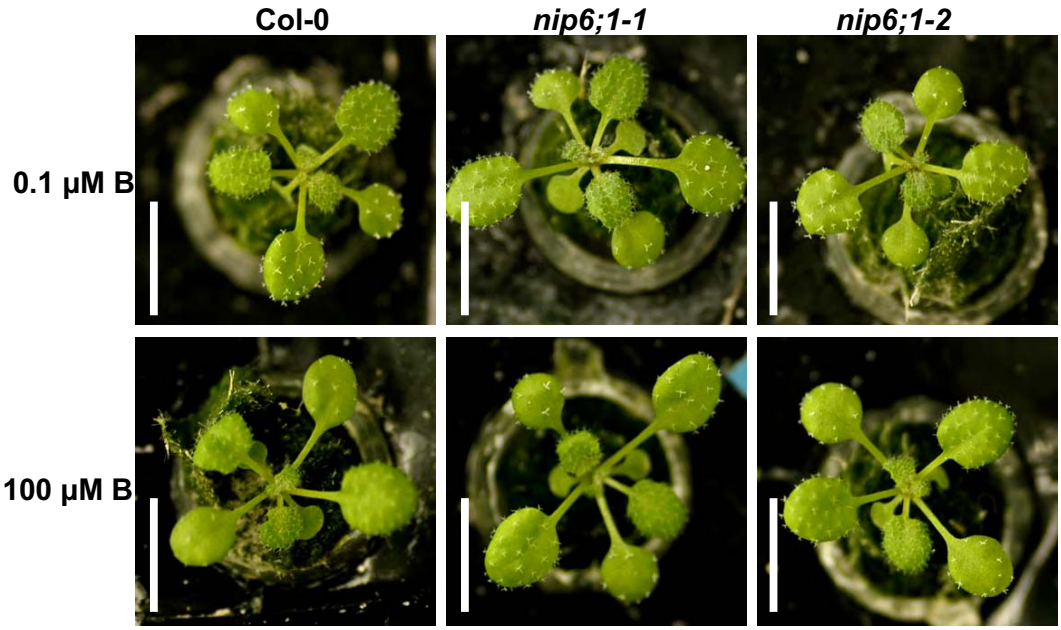
Supplemental Figure 3. Plant growth under high B conditions.

Wild-type plants and the *NIP6;1*T-DNA insertion lines were grown hydroponically for 28 days supplied with 100 µM B under long-day conditions (16 h/ 8 h light/dark cycle). Bar=50 mm.



Supplemental Figure 4. GUS Staining in *Pro-NIP6;1-GUS* transgenic seedlings.

Pro-NIP6;1-GUS transgenic plants were grown on solid medium for 10 days supplied with 100 µM B and stained with 5-bromo-4-chloro-3-indolyl-b-D-glucuronic acid. **(A)** Whole shoot, **(B)** Close-up of the nodal area. Bar=1 mm in (A), bar=500 µm in (B).



Supplemental Figure 5. Plant growth of NIP6;1T-DNA insertion lines for 14 days.

Wild-type plants and the *NIP6;1* T-DNA insertion lines were grown hydroponically for 14 days supplied with 0.1 and 100 µM B under short-day conditions (10 h/14 h light/dark cycle). Bar =10 mm.