Figure S1

Effects of β-estradiol on wild type and AtABCC3ox seedling growth.
**Figure S2**

Cytosolic and vacuolar regions in wild type, *abcc3* and AtABCC3ox protoplasts.

A) A protoplast from wild type leaves stained with neutral red. The vacuole is in red colour. (B,C) Leaf protoplasts from *abcc3* leaves, loaded with BTC-5N. White-light image (B), and fluorescent image with the bright green signal in the cytosol (C).

(D,E) Protoplasts from AtABCC3ox-26 leaves loaded with leadmium green. White-light image (D), and fluorescent image with the fluorescent green signal in the vacuole (E). The arrows show the tonoplast. Bars = 10 μm.
Figure S3

Quantitative analysis of \(AtBCC3\) in \(cadl-3\), and in wild type, \(cadl-3\) and \(abcc1abcc2\) lines overexpressing \(AtABCC3\).

A) \(AtBCC3\) transcript levels in \(cadl-3\), AtABCC3ox-21, AtABCC3ox-\(cadl-53\) and AtABCC3ox-\(cadl-59\) seedlings grown for 9 days in the absence or presence of \(\beta\)-estradiol. Error bars indicate SE. B) Fresh weight of AtABCC3ox-\(cadl-53\) and AtABCC3ox-\(cadl-59\) seedlings grown for 9 days at 15, 30, and 60 \(\mu\)M CdSO\(_4\), in the absence or presence of \(\beta\)-estradiol. Values correspond to means (\(n=3\)). C) \(AtABCC3\) transcript levels in AtABCC3ox-\(abcc1abcc2-1\), AtABCC3ox-\(abcc1abcc2-3\) and AtABCC3ox-\(abcc1abcc2-5\) seedlings grown for 9 days in the absence or presence of \(\beta\)-estradiol. Error bars indicate SE. Asterisks indicate a significant difference from seedlings grown in the absence of \(\beta\)-estradiol (***(P<0.001). 3ox, AtABCC3ox; est, \(\beta\)-estradiol.
Figure S4
Cd tolerance of abcc3 and atabc1 atabc2 mutant seedlings exposed to Cd during the germination phase (A,B) and quantitative analysis of AtABCC3, AtABCC2 and AtABCC1 transcripts in wild type seedlings exposed to Cd during the germination phase (C). Values correspond to means (n=3). Error bars indicate SE. Asterisks indicate a significant difference from wild type grown in the presence of 60 mM CdSO₄ (**p<0.01, ***p<0.001). A single dot indicates a significant difference from abcc3 roots grown at 60 mM CdSO₄ (*p<0.05). wt, wild type.