

**Water uptake and distribution in germinating tobacco seeds investigated *in vivo* by nuclear magnetic resonance imaging (MRI)<sup>1,[w]</sup>**

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<sup>[w]</sup> The online version of this article contains Web-only data. The **supplemental** material is available at <http://www.plantphysiol.org>

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**Supplementary Figure 1.** Non-invasive *in vivo* NMR microimaging analyses of the effect of  $\beta$ Glu I over-expression on water uptake and distribution during tobacco seed germination in medium with 10  $\mu$ M ABA. The spatial distribution of water within the seed tissues is visualized by false colors (relative scales from "0" (black) to maximum signal strength "max" (white)). A scale bar is given as a size marker. The NMR microimages were obtained with ca. 30  $\mu$ m resolution. **(A,B)** Each of the panels shows two-dimensional slices from full 3D NMR microimages as serial sections through three single seeds (one per row) at the given stage that corresponds to a time window presented in Fig. 6A as grey box (80-110 h). *Upper two rows of each panel:* The serial microimages correspond to longitudinal sections with the orientation: radicle at the bottom, shoot at the top. *Lower row of each panel:* The serial microimages correspond more or less to transverse sections. **(A)** TKSG7 ( $\beta$ Glu I over-expressing) seeds. **(B)** TCIB1 ("empty-vector control") seeds. Small white arrows indicate the micropylar endosperm (A,B). **(C, D)** Enlarged view of selected NMR microimages of TKSG7 (C) and TCIB1 (D) corresponding to slices presented in (A) and (B), respectively. The small numbers designate the corresponding slices.

