

Expanded View Figures

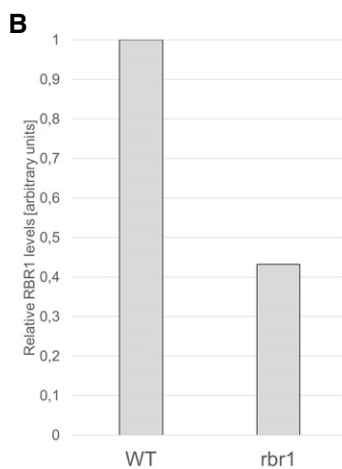
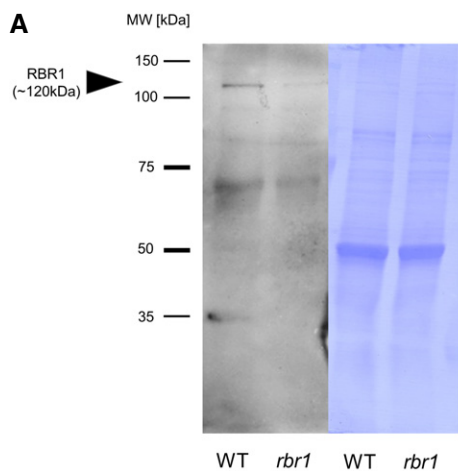


Figure EV1. *rbr1-2* is a temperature-dependent mutant.

A Western blot of RBR1 protein in WT and *rbr1* plants at the restrictive temperature of 17°C.
 B Relative quantification of the signal intensity of the RBR1 bands (gray mean values measured by ImageJ) in (A).

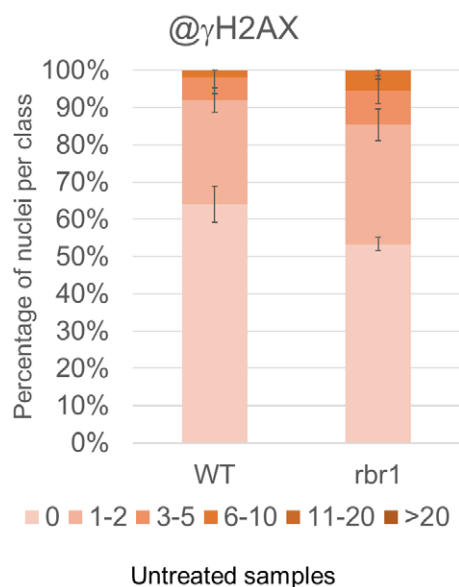


Figure EV2. Quantification of γ H2AX foci in untreated WT and *rbr1* plants.

A Fifty nuclei per line per experiment were filed into six classes according to their counted number of γ H2AX foci: nuclei containing no γ H2AX foci, 1–2, 3–5, 6–10, 11–20, or more than 20 γ H2AX foci, respectively. Three independent experiments were analyzed. Error bars indicate the standard deviation.

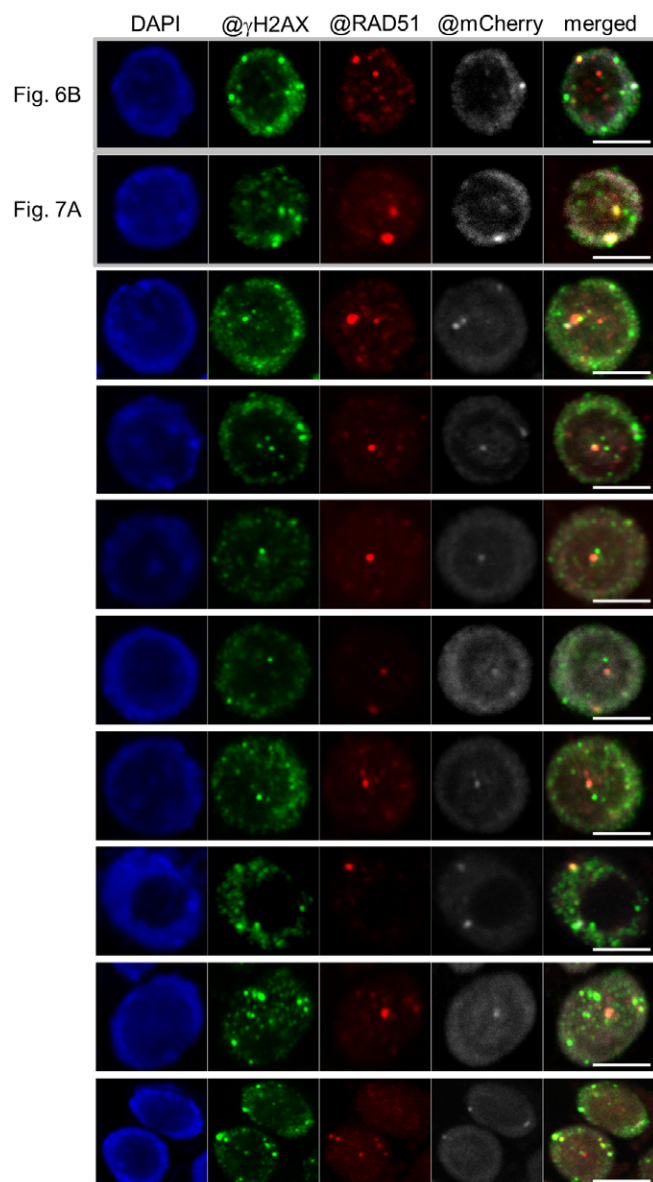


Figure EV3. Co-localization of RBR1 and RAD51 to γ H2AX foci.

Co-localization of γ H2AX (green) and RAD51 (red) to RBR1 foci (gray) in immunostained spreads of BLM-treated root tips of *PRO_{RBR1}mCherry:RBR1 rbr1-3* plants, counterstained with DAPI (DNA, blue). Note that the examples shown in Figs 6 and 7 were also added to this figure (the first two rows) for better comparison. Scale bars: 5 μ m.

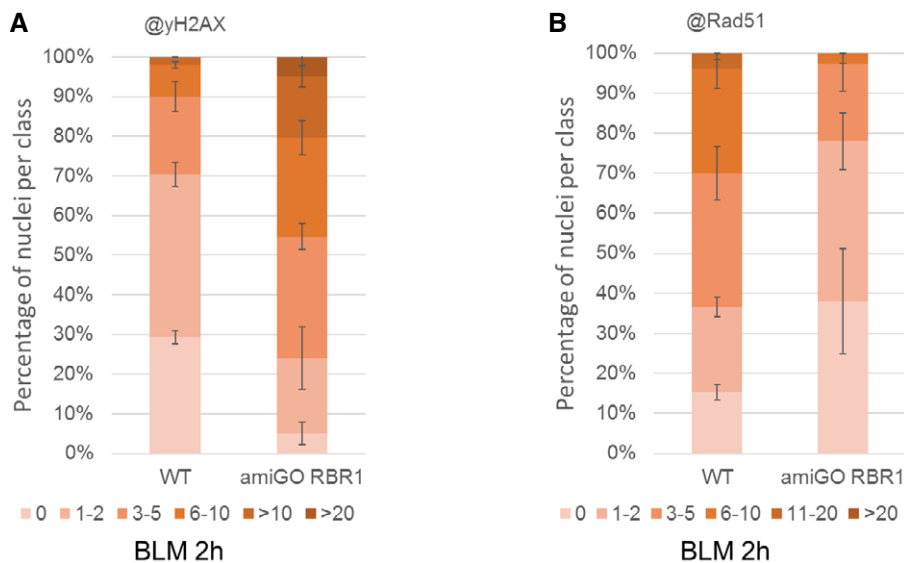


Figure EV4. Distribution of γ H2AX and RAD51 foci in *amiGO RBR1* line.

A Quantification of γ H2AX foci in WT and *amiGO RBR1* plants after BLM treatment. Fifty nuclei per line per experiment were filed into six classes according to their counted number of γ H2AX foci: nuclei containing no γ H2AX foci, 1–2, 3–5, 6–10, 11–20, or more than 20 γ H2AX foci, respectively. Three independent experiments were analyzed. Error bars indicate the standard deviation.

B Quantification of RAD51 foci in WT and *amiGO RBR1* plants after BLM treatment. Fifty nuclei per line per experiment were filed into six classes according to their counted number of RAD51 foci: nuclei containing no RAD51 foci, 1–2, 3–5, 6–10, 11–20, or more than 20 RAD51 foci, respectively. Three independent experiments were analyzed. Error bars indicate the standard deviation.

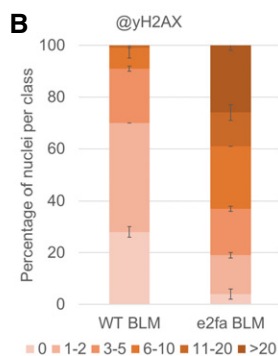
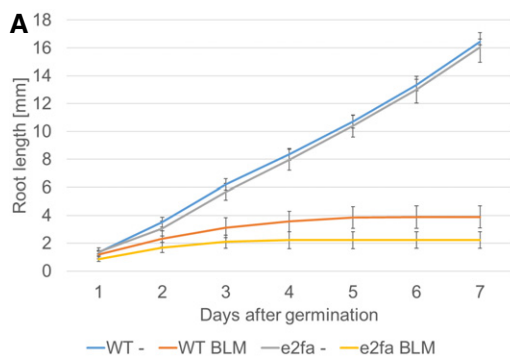


Figure EV5. *e2fa* mutant is hypersensitive against BLM.

A Comparison of root growth of wild-type and *e2fa* plants germinated and grown on medium containing 6 μ g/ml BLM or no supplement (-). Error bars signify the standard deviation in three independent experiments.

B Quantification of γ H2AX foci in WT and *e2fa* plants after BLM treatment. One hundred nuclei per line per experiment were filed into six classes according to their counted number of γ H2AX foci: nuclei containing no γ H2AX foci, 1–2, 3–5, 6–10, 11–20, or more than 20 γ H2AX foci, respectively. Three independent experiments were analyzed. Error bars indicate the standard deviation.