A SUMO ligase AtMMS21 regulates the stability of the chromatin remodeler BRAHMA in root development

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SUPPLEMENTAL FIGURES

Supplemental Figure 1. Interaction assays between AtMMS21 (fused to BD) and the indicated chromatin remodeling and modification components (fused to AD) were performed in a yeast two-hybrid system. The results, including interaction (+) and no interaction (-), are shown in the table.

Supplemental Figure 2. The treatment of MG132 increases the protein level of BRM-GFP. The 5-day-old seedlings were treated by 50 μM MG132 (the stock is prepared in DMSO), the seedlings in the medium containing DMSO was used as a control. The images for BRM-GFP (in green) were taken after 6 hours. The PI staining is shown in red. Bar=100 μm. The data are a representative from at least three independent experiments. The quantification of GFP signals at the bottom panel is from 100 nuclei in three independent experiments. *** $p<0.001$, Student's t test.

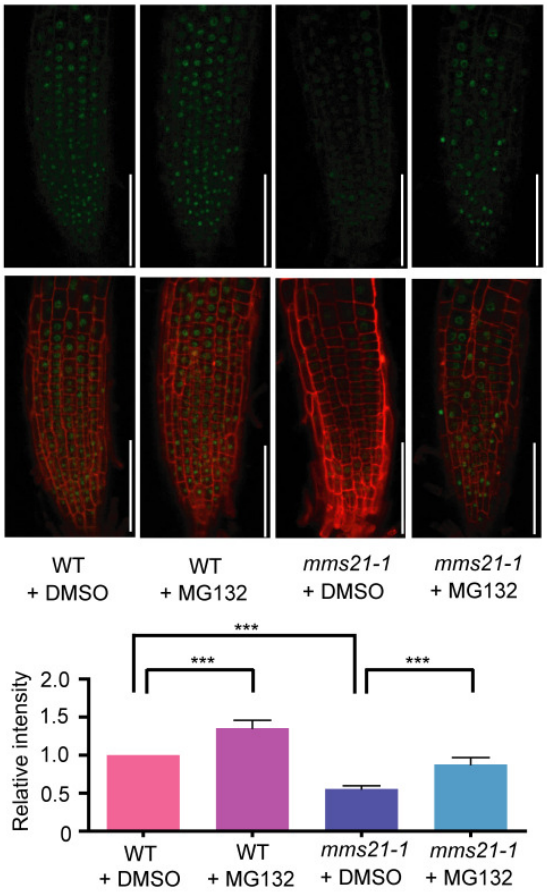
Supplemental Figure 3. The expression levels of *AtMMS21* in the complementary lines for *BRM-GFP*/*mms21-1*. The RNA extracted from 5-day-old seedlings was used for RT-PCR, *ACTIN2* was used as a reference gene.

Supplemental Figure 4. The expression levels of *BRM* in the *BRM* overexpression lines. The RNA extracted from 5-day-old seedlings was used for RT-PCR, *ACTIN2* was used as a reference gene.

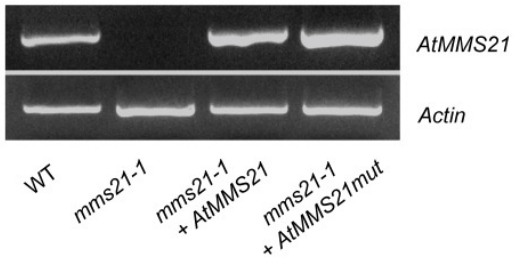
Supplemental Figure 5. The effect of *BRM* deletion in the *mms21-1* background. The photo was taken 5 days after germination. Bar=1cm. The measurement of root length of 5-day-old wild type, *mms21-1* and *mms21-1 brm-3* are shown in the right panel. The data are means ± SD from three biological independent experiments (n=20). *** $p<0.001$, Student's t test.

AD \ BD-AtMMS21	
JMJ15	–
HDA6	–
HDA19	–
GCN5	–
ADA2B	–
BRM	+
SWI3B	–
SWI3C	–

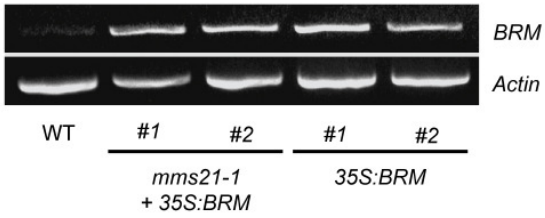
Supplemental Figure 1



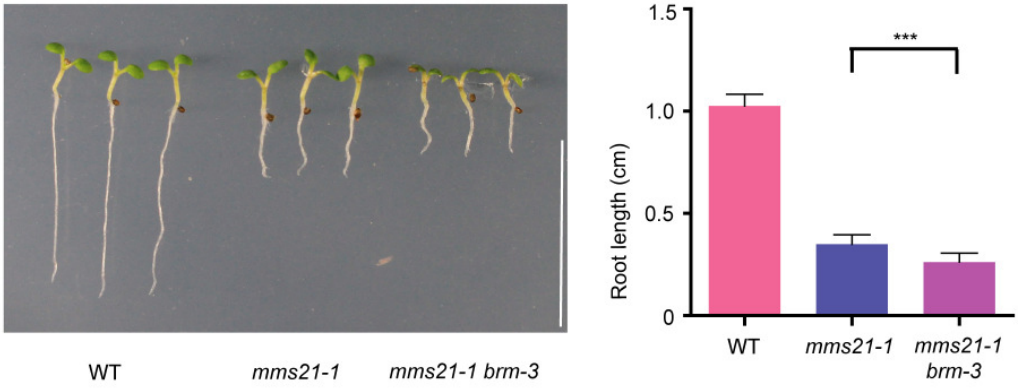
Supplemental Figure 2



Supplemental Figure 3



Supplemental Figure 4



Supplemental Figure 5