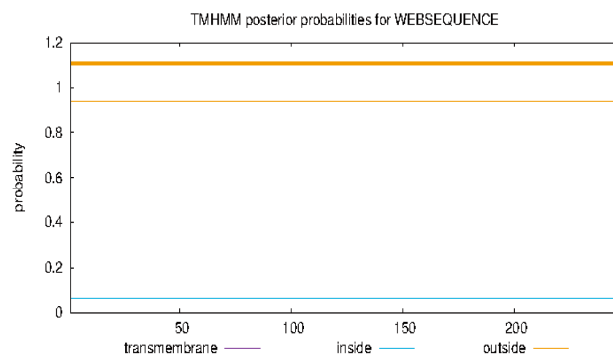
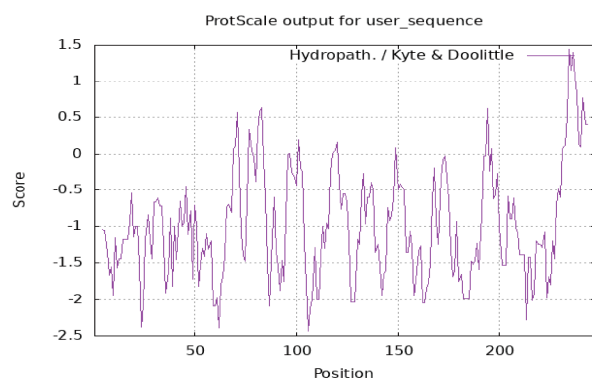


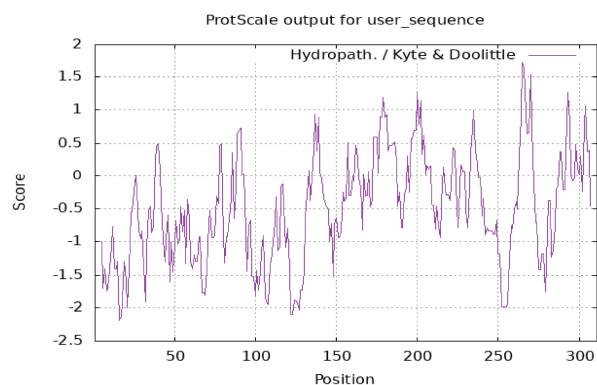
**Supplementary Figure S1:** The secondary structure and tertiary structure of PdMYB2R089/151 protein. (a) shows secondary structure and tertiary structure of PdMYB2R089 protein. (b) shows secondary structure and tertiary structure of PdMYB2R151 protein.

#### PdMYB2R089

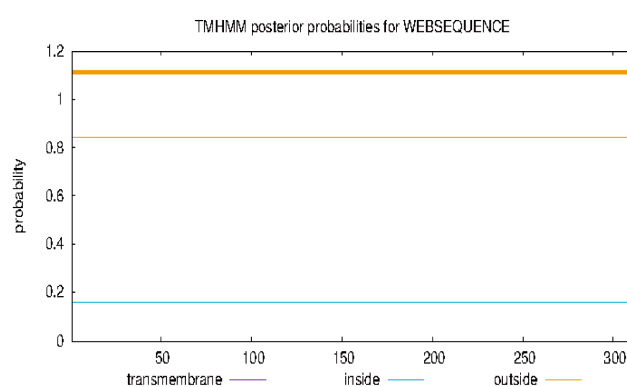


#### PdMYB2R151

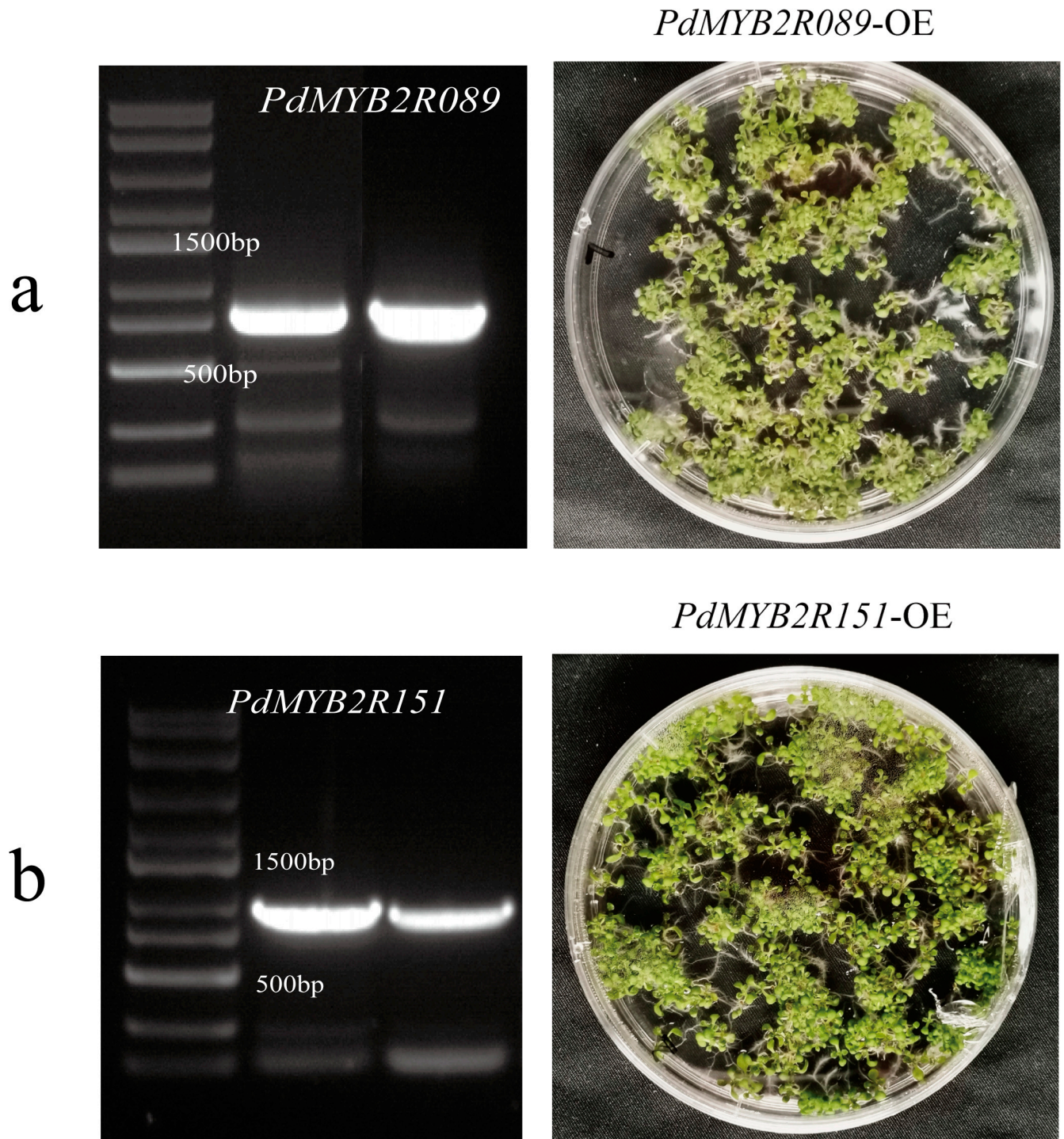
#### Hydrophobicity



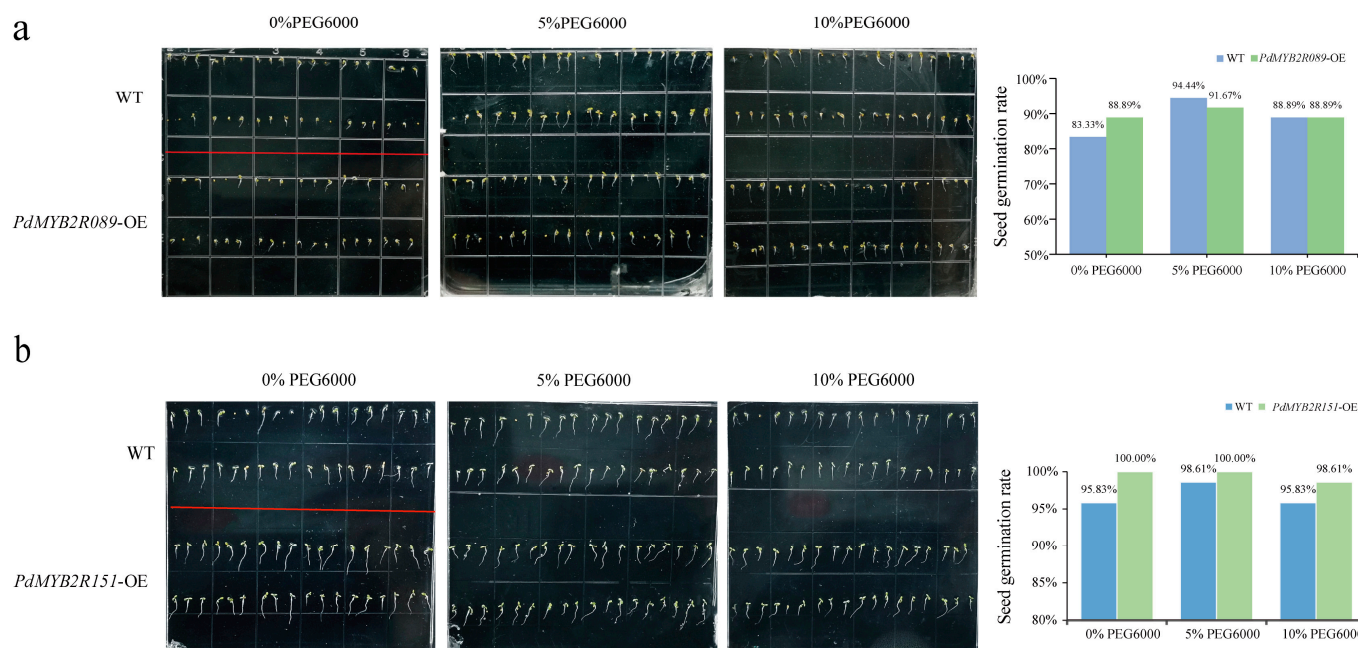
#### Transmembrane helices



**Supplementary Figure S2:** The hydrophobicity and transmembrane domain of PdMYB2R089/151 protein;



**Supplementary Figure S3:** PCR detection of overexpressed transgenic plants and homozygous transgenic plants. (a) shows PCR detection and homozygous *PdMYB2R089-OE* transgenic plants. (b) shows PCR detection and homozygous *PdMYB2R151-OE* transgenic plants.



**Supplementary Figure S4:** Seed germination of WT and transgenic plants under different PEG6000 concentration gradients. (a) shows seed germination of WT and *PdMYB2R089*-OE plants under drought stress. (a) shows seed germination of WT and *PdMYB2R089*-OE plants under drought stress.

**Supplementary Table S1:** Physicochemical properties analysis of *PdMYB2R089/151* protein;

**Supplementary Table S2:** Primer information is required for vector construction.

**Supplementary Table S3:** Protein information for protein-protein interaction prediction.