Table 1 The primers used for real-time PCR of *OsDUF810* genes in rice

gene	primers for real-time PCR(5'-3')
OsDUF810.1	Forward: AGTGCATGCTCCGAGCCAAA
	Reverse: TCACCGCCTCTTGGGAAGCT
OsDUF810.2	Forward: ATGGACGAAGAAAATGTTGT
	Reverse: AAGATATGCTTTCATGTCTG
OsDUF810.3	Forward: ATGCTAAACTTGGTAGTTAT
	Reverse: TTACCAACAATGAATAATGT
OsDUF810.4	Forward: ATGGCGCGCTTCTTCCGCGA
	Reverse: CTAGAAGCTTCAGGTACCTC
OsDUF810.5	Forward: ATGTCTCGCCTCTTCCGCGA
	Reverse: TTTCAAGTGGTCTATCGTAT
OsDUF810.6	Forward: ATGGCCGCCTGGAACGGCGG
	Reverse: CTAACGGTGGTAACGGAGCA
OsDUF810.7	Forward: ATGGGGCGCCACCAGCGTTC
	Reverse: GGTCGAAGATGGCGTGGAGG

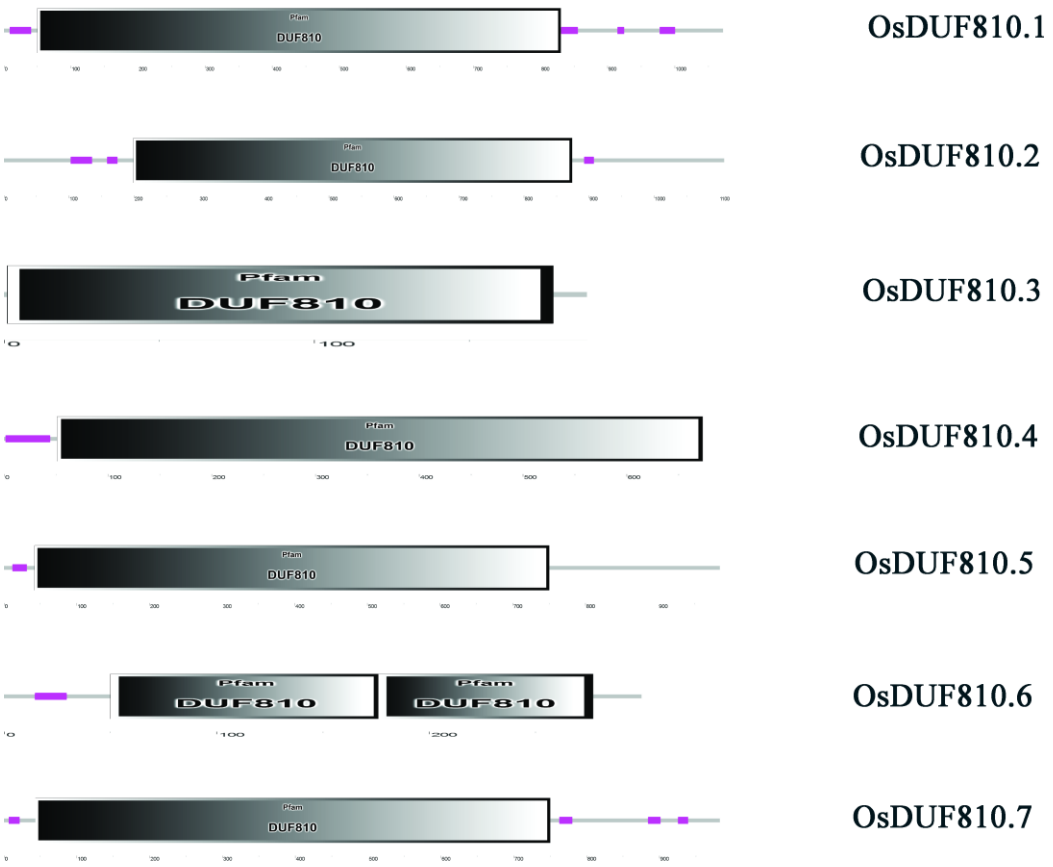

Fig. 1 Prediction of protein structure of OsDUF810 family using the SMART database (http://smart.embl-heidelberg.de/smart/batch.pl)

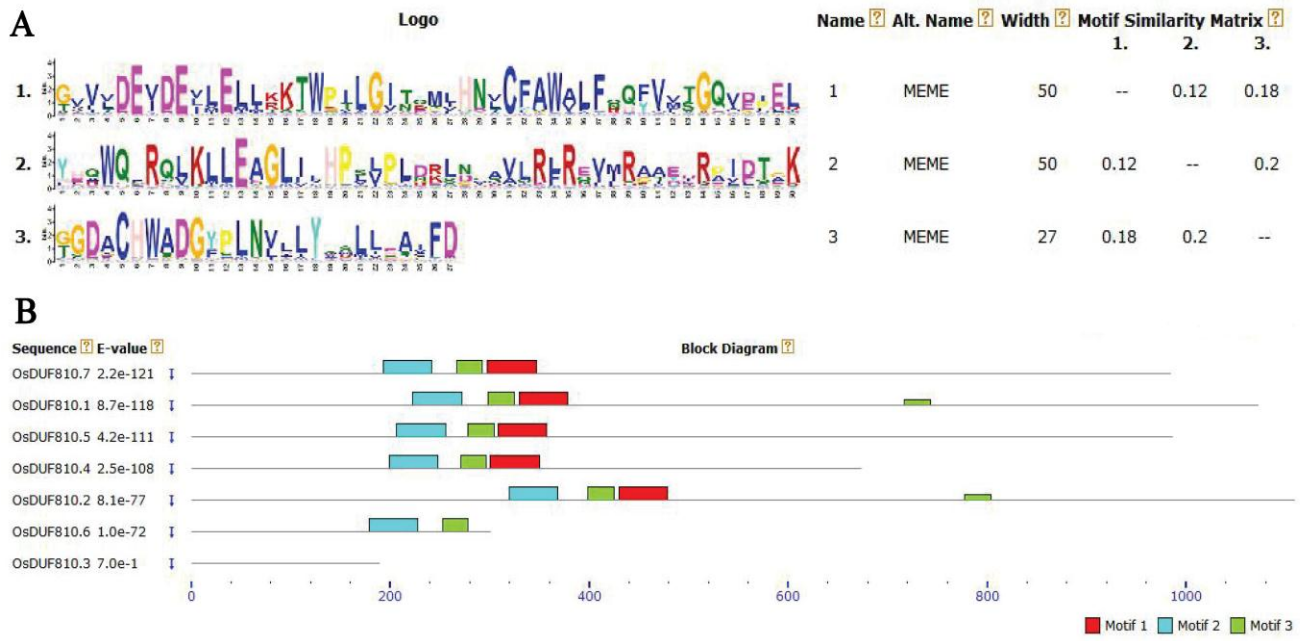

Fig. 2 Conservative structural analysis of rice OsDUF810 family. Moif 1, motif 2, and motif 3 were conserved motifs in rice OsDUF810 family obtained by MEME (A). Distribution of conserved motifs in OsDUF810 proteins identified by MEME software (B).

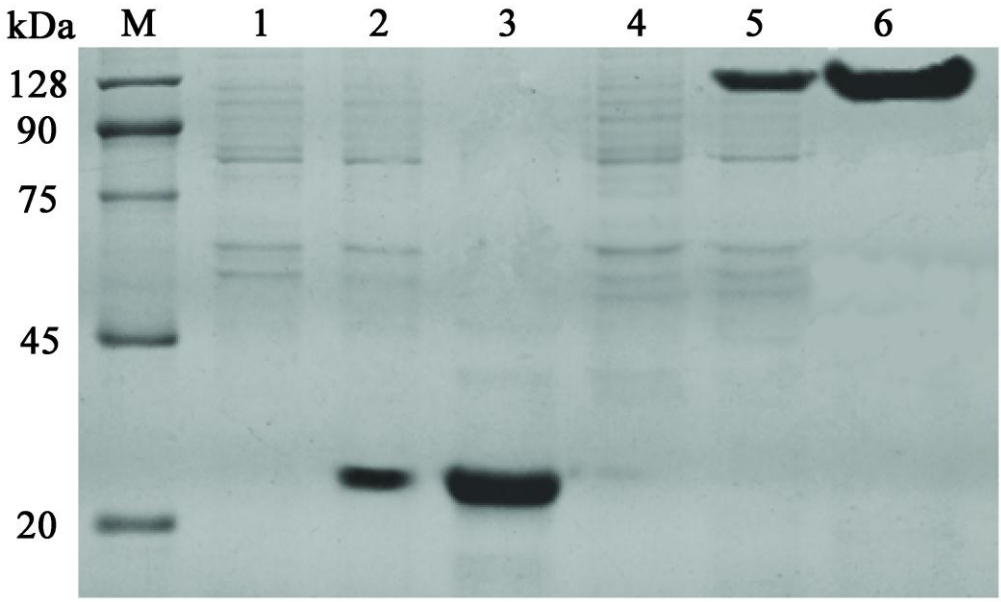

Fig. 3 SDS-PAGE analysis of OsDUF810.7 in *E. coli* recombinants in the absence and the presence of 1 mM IPTG. Lane M: molecular weight standards; Lane 1: uninduced Rosetta cells transformed with pET32a vector; Lane 2: induced Rosetta cells transformed with pET32a vector; Lane 3: purified protein from Rosetta /pET32a cells; Lane 4: uninduced Rosetta cells transformed with pET32a-OsDUF810.7 recombinant plasmid; Lane 5: induced Rosetta cells transformed with pET32a-OsDUF810.7 recombinant plasmid; Lane 6: purified pET32a-OsDUF810.7 fusion protein.

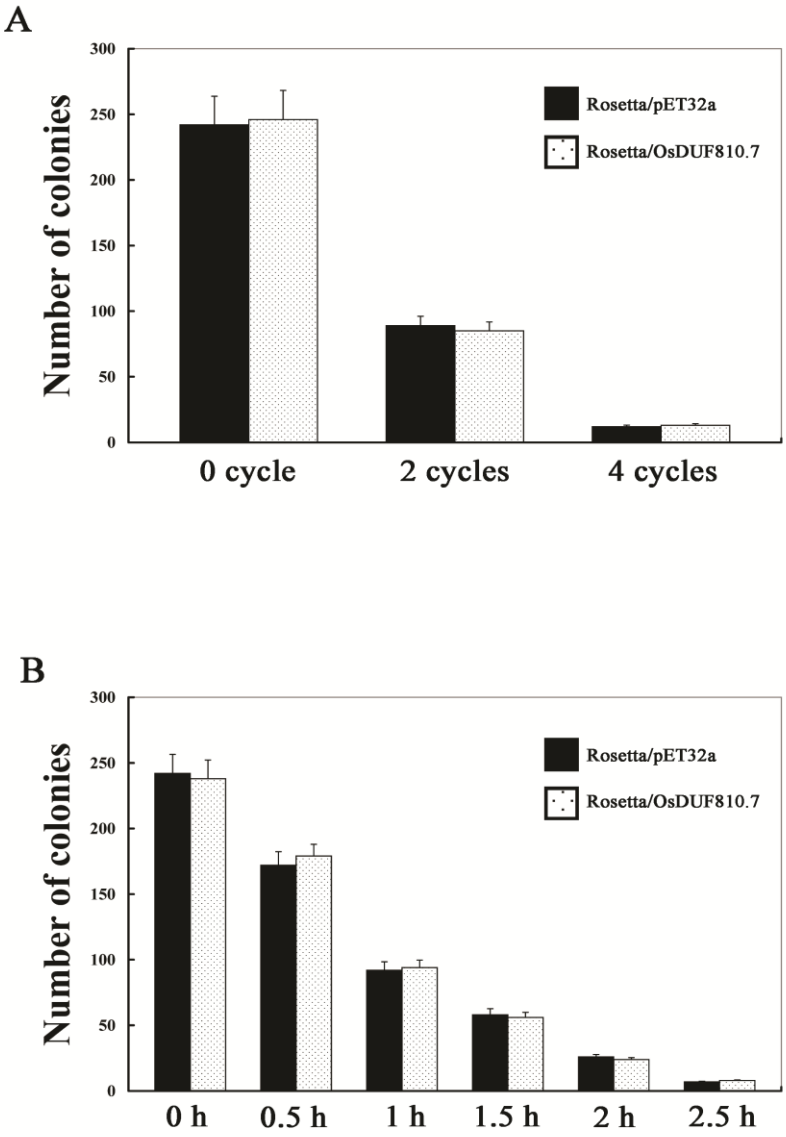

Fig. 4 Growth effect of *E. coli* recombinants overexpresing *OsDUF810.7* under cold and heat stresses. After 2 and 4 freeze–thaw cycles, 100 µl of dilutions (1:100) were spotted onto LB agar plates supplemented with 1 mM IPTG (A). After heat shock (50 °C water bath), 100 µl (1:100) of dilutions was spotted onto LB agar plates with 1 mM IPTG at 0, 0.5, 1, 1.5, 2, 2.5 h (B), and then the number of the control (Rosetta/pET-32a) and Rosetta/ *OsDUF810.7* colonies was counted. Error bars indicate SE based on three biological replicates.

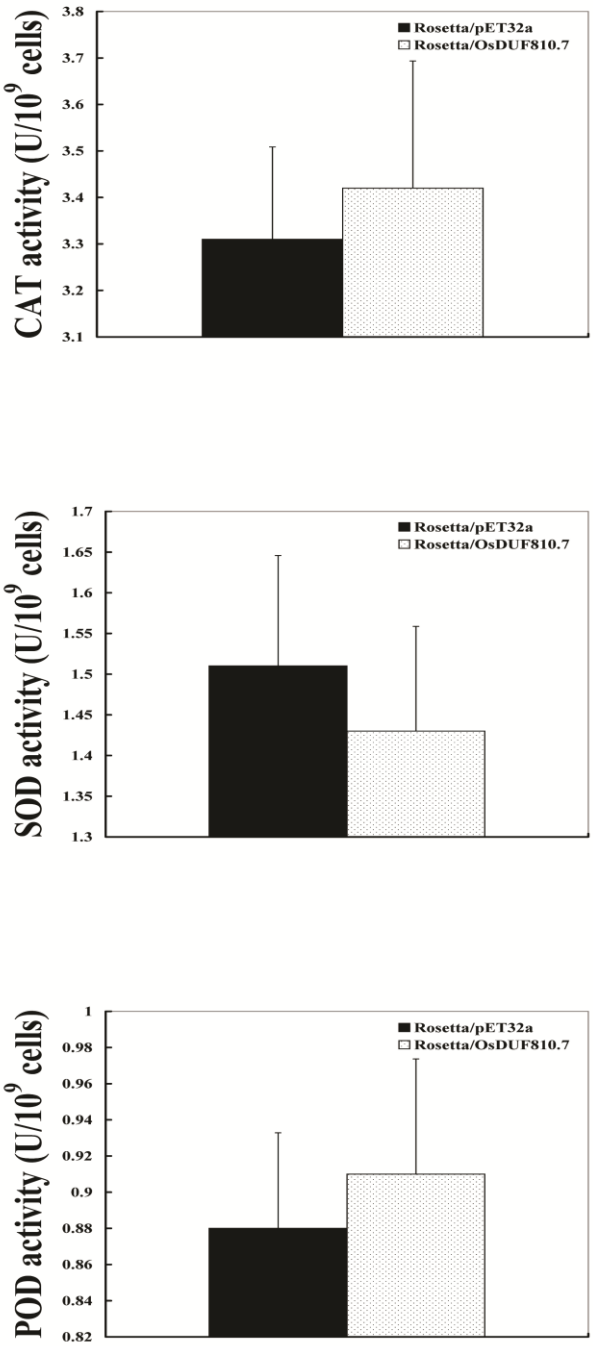

Fig. 5 Antioxidant ability of *E. coli* transformants overexpressing *OsDUF810.7* under normal conditions. Catalase (CAT), superoxide dismutase (SOD) and peroxidase (POD) activities were determined. Error bars indicate SE based on three biological replicates.