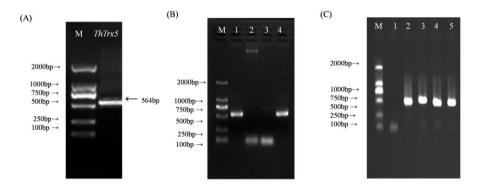
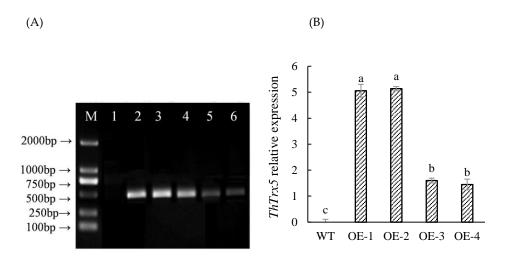
## Supplementary data

	*:: **.*:*::	****	.* * ** ****	
ThTrx5	LVIGSETPVLVEFWAR	WCGPC	RMIAPVVNELAKEWAGKIACYKVNTDDCPNIATKYGIRSIPTVLFFKNGERKESAIGAVPKSTLADSIEKYLAV	187
ThTrx9			RMIHPIIDELAKEYAGRLKCCKVNTDDSPSIATRYGIRSIPTVIIFRNGEKKDAVIGAVPKSTLAASIEKFL	160
ThTrx10			OMVHRVIDETAREYRGKLKCFVLDTDDNLKVAETYDIKAVPVVLLFKNGVKRGTIVGTMPKEFYVA	127
AtTRX-M1			KMID <mark>PIVNELAQKYAGQFKFYKLNTDESPATPGQYGVRSIPTIMIFVNGEKKDTIIGAVSKDTLATSINKFL</mark>	179
AtTRX-M2	LVLKATGPVVVDFWAF	WCGPC	KMID <mark>PLVNDLAQHYTGKIKFYKLNTDESPNTPGQYGVRSIPTIMIFVGGEKKDTIIGAVPKTTLTSSLDKFLP</mark> -	186
AtTRX-M3			RMVHRIIDEIAGDYAGKLNCYLLNADNDLPVAEEYEIKAVPVVLLFKNGEKRESIMGTMPKEFYISAIERVLNS	174
AtTRX-M4			RMIHPIVDQLAKDFAGKFKFYKINTDESPNTANRYGIRSVPTVIIFKGGEKKDSIIGAVPRETLEKTIERFLVE	193
		.120.	130140150160170180190	

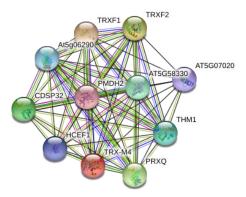
**Supplementary Figure S1.** Multiple Sequence Alignment of ThTrx Proteins of family I m Subclasses in Tamarix and Arabidopsis. The box highlights the WCGPC domains.



**Supplementary Figure S2:** *ThTrx5* gene cloning and plant expression vector construction process. (A) PCR amplified fragment of *ThTrx5* gene; (B) PCR detection of *ThTrx5* gene topo reaction M. DL2000 Marker; 1: Positive control; 2: Negative control; 3: Water control; 4: bacterial solution PCR; (C) PCR detection of *ThTrx5* gene LR reaction M: DL2000 Marker; 1:Water control; 2: Positive control; 3-5:bacterial solution PCR.



**Supplementary Figure S3** Molecular Detection of Transgenic *Arabidopsis* T3 Plants (**A**) M: DNA Maker DL2000;1: water control; 2: positive control; 3-6: transgenic lines; (**B**) *ThTrx5* relative expression detection.



Supplementary Figure 4. Schematic diagram of predicted AtTHM4 interacting proteins.