

## Supplementary Information

**Table S1.** *TsGPX* genes related ESTs in GenBank.

Gene name	Number of ESTs	Accession number
<i>TsGPX1</i>	7	BY805042, BY834089, BY814638, BY831158, BY805041, BY831159, BY834088
<i>TsGPX2</i>	1	FJ357243
<i>TsGPX3</i>	1	BY825912
<i>TsGPX5</i>	1	BY818373
<i>TsGPX6</i>	2	BM985497, BM986105
<i>TsGPX7</i>	2	BY816539, DN774281
<i>TsGPX8</i>	1	BY806901

**Table S2.** Gene specific primers used in 3' RACE.

Gene name	Primer sequences (5'–3')
<i>TsGPX3</i> _SP1	CCTTATTCTCCAGCCATCGT
<i>TsGPX3</i> _SP2	GGAATGATGTGAGTTTGAGCCAG
<i>TsGPX5</i> _SP1	CCGAGAAATCCATCCACCAA
<i>TsGPX5</i> _SP2	GCTTCTAAATGCGGTTTCACG
<i>TsGPX7</i> _SP1	AACCAAACCCAATCCACCTCG
<i>TsGPX7</i> _SP2	ATGTCAATGGACCGAGCAC

**Table S3.** Primers used for isolating the CDs of *TsGPX* genes.

Gene name	Forward primers (5'–3')	Reverse primers (5'–3')
<i>TsGPX1</i>	ATGGCTTCTTCTTCTTACGCAC	CCATGACCGGTAACATTAAGATTC
<i>TsGPX2</i>	CTCAGAAAGAGACCAACGACAC	CATCCATGAAACGGCATCTCAACAATG
<i>TsGPX3</i>	TGTCGATGCCTAAATCAAGC	GAAAATGAGATTCACACTGGTACTC
<i>TsGPX4</i>	GGGAGATAGAGATGGGTGCT	CATGATTAACCGGGATGGTG
<i>TsGPX5</i>	GAGGACAAAACCTGGCGAGAG	CAATTCGGAGAGTCGTAGCC
<i>TsGPX6</i>	GCAAATGCTTCGCTCCTCAATTCTG	CCCAAATACACTCAAGAACTCAGACAG
<i>TsGPX7</i>	GTAATGGCTTCTTCTTACGCACCA	TACGATGCACACATGGGAAC
<i>TsGPX8</i>	CGTCTCTCATTCTCCTGCTTCTG	GGAGATATTCAGAAGCTTCTTTATGTC

**Table S4.** *AtGPX* genes expression under salt and drought stresses. The data were manually extracted from AtGenExpress. Highlighted data denote significant up-regulation (>1.5-fold).

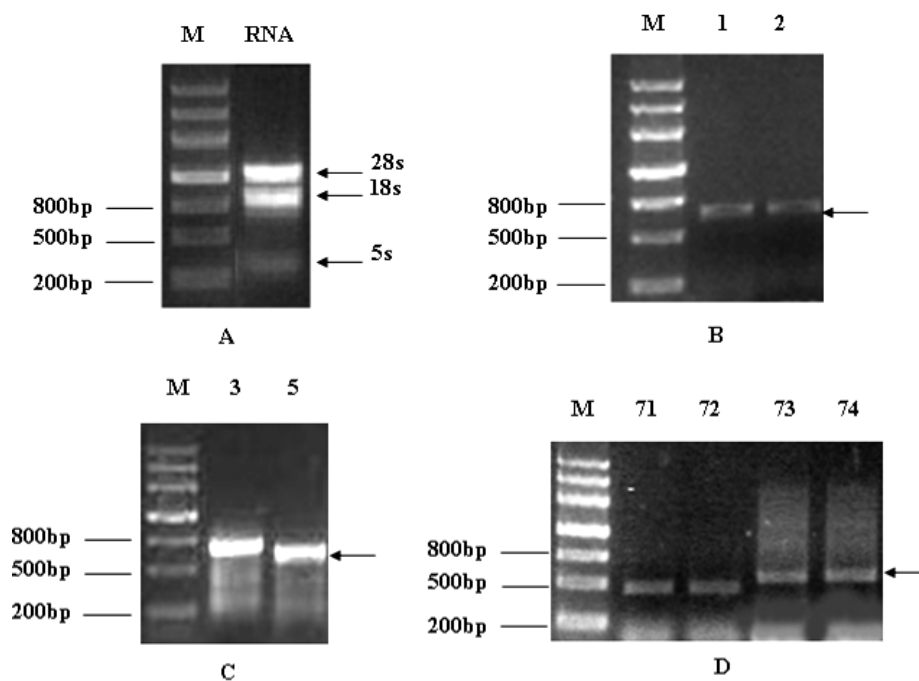
Salt stress: 150 mM NaCl				
Shoot				
	0 h	6 h	12 h	24 h
<i>GPX1</i>	10064.4044	6895.3897	2701.4183	6239.0952
<i>GPX2</i>	5246.3739	5447.4280	3024.1973	9346.0837
<i>GPX3</i>	159.9263	219.3388	213.3176	207.4407
<i>GPX4</i>	7.4473	6.6617	6.1240	7.0386
<i>GPX5</i>	323.0878	430.1305	389.1488	416.5335
<i>GPX6</i>	541.5357	3902.5248	2696.5284	1118.0756
<i>GPX7</i>	1279.2264	118.8702	28.1226	1058.7937
<i>GPX8</i>	290.7771	428.4135	458.2031	346.8564
Root				
	0 h	6 h	12 h	24 h
<i>GPX1</i>	389.8374	223.8204	450.2026	590.9868
<i>GPX2</i>	5586.5607	3906.6186	7840.4588	6560.5704
<i>GPX3</i>	294.3101	153.1334	256.1301	269.7614
<i>GPX4</i>	8.1259	14.5233	8.1488	10.6864
<i>GPX5</i>	653.3744	432.7572	509.1552	567.7098
<i>GPX6</i>	3112.7230	5896.1167	5051.1119	3453.4035
<i>GPX7</i>	10.5994	12.9030	14.6064	14.1410
<i>GPX8</i>	1643.8376	643.7455	934.3056	982.2966
Drought stress				
Shoot				
	0 h	6 h	12 h	24 h
<i>GPX1</i>	10064.4044	8515.1334	3248.3612	12107.0491
<i>GPX2</i>	5246.3739	2759.6138	2582.8341	3981.7766
<i>GPX3</i>	159.9263	298.8367	249.6073	154.7041
<i>GPX4</i>	7.4473	5.2068	7.1161	7.6206
<i>GPX5</i>	323.0878	412.5666	386.3245	330.3208
<i>GPX6</i>	541.5357	2626.6964	1635.7669	368.6772
<i>GPX7</i>	1279.2264	54.3319	25.7462	805.2453
<i>GPX8</i>	290.7771	399.8747	494.3356	200.2977
Root				
	0 h	6 h	12 h	24 h
<i>GPX1</i>	389.8374	572.1580	364.2638	457.8970
<i>GPX2</i>	5586.5607	4586.6898	4651.6141	3580.1164
<i>GPX3</i>	294.3101	350.1968	304.0444	287.5815
<i>GPX4</i>	8.1259	6.3090	6.9119	6.6159
<i>GPX5</i>	653.3744	507.4506	487.5507	587.0016
<i>GPX6</i>	3112.7230	4358.5389	3790.3118	2432.0862
<i>GPX7</i>	10.5994	15.3150	10.7799	13.6470
<i>GPX8</i>	1643.8376	1413.9898	1161.6843	1242.5744

**Table S5.** The synthetic peptides used for TsGPXs antibodies preparation.

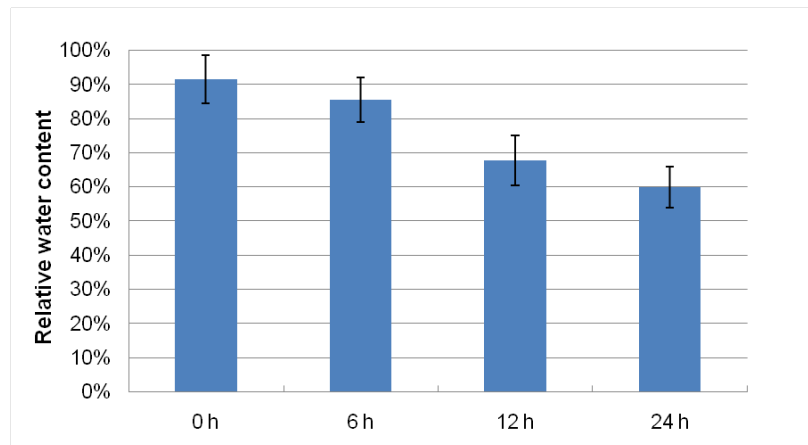
GPXs	Peptide sequences
TsGPX1	FNGSRPNPSVKPAAFLASC
TsGPX2	SPDGKVFQRYSPRTSPLC
TsGPX3	FVFYLYRYPYSPAIVEHC
TsGPX4/TsGPX5	CLVGKDGQVIDRYGPT
TsGPX6	CTTGAKLSRSGHSMMAATS
TsGPX7	CPSKNFSTETSNSRNLRNGV
TsGPX8	DKTGQAVERYYPPTSPLTLC

**Table S6.** Primers used for quantitative real-time RT-PCR analysis.

Gene	Forward Primers (5'–3')	Reverse Primers (5'–3')
<i>TsGPX1</i>	ATCAATTTGGTGGCCAAGAG	AAGAATCCTCCTGCGTTTGA
<i>TsGPX2</i>	GGGACAAGAACCAGGAAACA	AGACTTTGCCGTCAGGAGAA
<i>TsGPX3</i>	ACCTGGTAGCAACGAGGAGA	TGGAGCATATCGATCCACAA
<i>TsGPX4</i>	CATTCCCTTGCAACCAGTTT	GGCCGTAACGATCAATCACT
<i>TsGPX5</i>	GAGGACAAAACCTGGCGAGAG	AAACGCCAAGATCACAAACC
<i>TsGPX6</i>	TCGTCCTCTTCCTTTATCGACAACG	CGCATCCTTCACGGTGAAATCATAG
<i>TsGPX7</i>	GACCGAGCACAGCTCCTATC	TCTCGATTTGGAAGGGAGAA
<i>TsGPX8</i>	GGCCAGAAATCTGTTTACGA	TGGTCAGTAGTTCCCGGTTT
<i>TsTublin</i>	GTCAGTCTGGTGC GG GTAAC	CCAGATCCAGTTCCTCCTCCC

**Figure S1.** Electrophoretogram for isolating CDs of *TsGPX3*, *TsGPX5* and *TsGPX7*. (A) Total RNA; (B) cDNA quality testing; (C) 3' RACE for *TsGPX3*, *TsGPX5*; (D) 3' RACE for *TsGPX7*, 71 and 72: PCR product using inner primers; 73 and 74: PCR product using outer primers.

**Figure S2.** The relative water contents of the *Thellungiella salsuginea* leaves during PEG 6000 treatment. Data are means  $\pm$  SE of at least six replicates.



**Figure S3.** The water potentials of the *Thellungiella salsuginea* leaves during NaCl treatment. Data are means  $\pm$  SE of at least eight replicates.

