

Supplementary Information

Table S1 Analysis of physicochemical properties of members of *GAST* gene family in Chinese cork oak

Gene ID	Gene name	Number of Amino Acid/aa	Molecular Weight/KDa	Isoelectric point	Instability Index	Aliphatic Index	Grand Average of Hydropathicity
QV_Chr02G01770.1	<i>QvGAST1</i>	88	9.65	8.71	32.73	57.61	-0.080
QV_Chr02G01780.1	<i>QvGAST2</i>	88	9.63	8.71	35.45	57.61	-0.045
QV_Chr02G07160.1	<i>QvGAST3</i>	144	15.63	9.59	49.08	80.00	0.110
QV_Chr02G18590.1	<i>QvGAST4</i>	111	12.35	9.56	53.17	69.64	-0.366
QV_Chr02G34760.1	<i>QvGAST5</i>	194	20.73	9.52	76.94	49.02	-0.418
QV_Chr02G34800.1	<i>QvGAST6</i>	171	18.69	9.18	91.75	47.89	-0.602
QV_Chr03G22170.1	<i>QvGAST7</i>	105	11.62	9.32	44.22	76.00	-0.063
QV_Chr06G17900.1	<i>QvGAST8</i>	96	10.45	8.68	28.90	68.02	0.100
QV_Chr08G16600.1	<i>QvGAST9</i>	88	9.62	8.42	52.16	45.57	-0.251
QV_Chr10G05310.1	<i>QvGAST10</i>	109	12.07	8.61	46.66	74.22	-0.032

Table S2 Oligonucleotide primer sequences used for qRT-PCR and in Chinese cork oak experiments

Gene name	Forward primer	Reverse primer
<i>QvActin7</i>	5' ACAGTGTCTGGATCGGAGGA 3'	5' GGACCACTCTCGTCGTACTC 3'
<i>QvGAST1</i>	5' TCCTGCTTGTTTGCCTTGTC 3'	5' ACTTCTCACAGCAAACACCG 3'
<i>QvGAST2</i>	5' AATGGCTGGTTCAAGCTTCT 3'	5' CTCTTGCCCTTGGAGTTCTT 3'
<i>QvGAST3</i>	5' CAGCCATGACCATCTCAAAG 3'	5' ACAGGTTTGGCCTAGACGAT 3'
<i>QvGAST4</i>	5' TGGATGAAGGGGAAAACGAAC 3'	5' GCGTTCTTGTTGCCATAGGT 3'
<i>QvGAST5</i>	5' TTCAGAGATGCCGCTTAGCT 3'	5' GCACTTGTATCTTTTGCCGTG 3'
<i>QvGAST6</i>	5' TCCCACCTTATGCACCACCT 3'	5' TGGCATCTCTGATCACATCTG 3'
<i>QvGAST7</i>	5' TTTGCCTTTCGTGGACTGTG 3'	5' AGCACCTCCCACACATTTCT 3'
<i>QvGAST8</i>	5' TTGTGACTCCAAATGCGGTG 3'	5' TGCCCTTGGAGTTCAACTTG 3'
<i>QvGAST9</i>	5' CAACCTATGCTGTGCGAAGT 3'	5' TCCTCCTTCCTTAGTTTTTCCAGT 3'
<i>QvGAST10</i>	5' TTGGGGGCTTTATTCTTCTG 3'	5' AAGTTTGGCCTCGAGTGAAG 3'