

Table S1. Primers for qRT-PCR of the differentially expressed *ZmGST* genes

genes	Primer sequence (5'-3')	
	Forward primer	Reverse primer
<i>UPF1</i>	CACCCGGTTGGCTATGCTGTAC	TGTGCTCCACCAGAAGGCTGAC
<i>ZmGSTU1</i>	GTAGAGCATCCATCGGTCGG	TGAACACGAACTGCTCTGCT
<i>ZmGSTU3</i>	GACACCAAGTTCTCCCAGCC	CATAGAGCGGGGAACTCGTC
<i>ZmGSTU9</i>	GACAACAAGTGCTTGAAGCCG	GCGAAGAACCTCTTCCCCTG
<i>ZmGSTU14</i>	GCCAGGAAGGACTCGTTTGT	CAGCAGTCCTGACCACTTGT
<i>ZmGSTU22</i>	CGACAAGTTGTTTCCAGCGT	AGAACAAGAAGGAGCCGAGC
<i>ZmGSTU25</i>	TACATCGACGACAAGATGCTGC	CCACCGAAGAAGGGCTTCCC
<i>ZmGSTU28</i>	CGACAAGTTCTGCAAGGAGTG	TCGTCCAGAAGCTTTACGCC
<i>ZmGSTF2</i>	CGAGCCGTACACAAGAGCTA	ACGTGATTCTGAAGAGCGTGA
<i>ZmDHAR1</i>	AGGAGCATCTCAAAGCCAC	GCTGAACATAGCCTGGGTGT

Table S2. List of identified *ZmGST* genes in *Zea mays* along with their detailed genomic and proteomic information.

Class	Gene name	Gene ID	Genomic position	CDS (bp)	Protein (aa)	Strand	MW (kDa)	pI
Phi	<i>ZmGSTF1</i>	Zm00001d012675	Chr08:178411857-178414647	645	214	+	23.8	5.44
	<i>ZmGSTF2</i>	Zm00001d024839	Chr10:90384434-90385822	672	223	-	24.6	5.76
	<i>ZmGSTF3</i>	Zm00001d042216	Chr03:156422305-156423867	666	221	+	23.9	5.96
	<i>ZmGSTF4</i>	Zm00001d043344	Chr03:197152506-197154049	675	224	+	25.2	5.98
	<i>ZmGSTF5</i>	Zm00001d048354	Chr09:154871684-154872915	681	226	-	25.9	8.35
	<i>ZmGSTF6</i>	Zm00001d027542	Chr01:7885525-7886863	720	239	-	26.6	5.96
	<i>ZmGSTF7</i>	Zm00001d027539	Chr01:7844326-7845737	918	305	-	34.1	7.84
	<i>ZmGSTF8</i>	Zm00001d027540	Chr01:7878334-7879915	678	225	-	25.8	7.09
	<i>ZmGSTF9</i>	Zm00001d048353	Chr09:154861537-154862959	678	225	-	25.7	7.75
	<i>ZmGSTF10</i>	Zm00001d029801	Chr01:87469723-87475392	888	295	-	33.1	9.39
	<i>ZmGSTF11</i>	Zm00001d010870	Chr08:131542385-131544754	705	234	-	25.6	5.30
	<i>ZmGSTF12</i>	Zm00001d021470	Chr07:153075349-153079559	903	300	-	34.6	5.97
	<i>ZmGSTF13</i>	Zm00001d027541	Chr01:7882159-7883359	681	226	-	25.8	7.09
Tau	<i>ZmGSTU1</i>	Zm00001d034356	Chr01:290470998-290471672	675	224	-	25.3	6.20
	<i>ZmGSTU2</i>	Zm00001d018809	Chr07:5834880-5838491	669	222	-	25.1	5.55
	<i>ZmGSTU3</i>	Zm00001d042104	Chr03:150759060-150760119	684	227	-	25.2	5.29
	<i>ZmGSTU4</i>	Zm00001d036951	Chr06:107194843-107195520	678	225	+	25.2	6.35
	<i>ZmGSTU5</i>	Zm00001d043787	Chr03:210237044-210238359	720	239	+	26.1	5.71
	<i>ZmGSTU6</i>	Zm00001d042096	Chr03:150586826-150587533	708	235	-	26.5	5.25
	<i>ZmGSTU7</i>	Zm00001d024963	Chr10:96969512-96970459	699	232	-	25.4	5.81
	<i>ZmGSTU8</i>	Zm00001d020780	Chr07:132447942-132449006	669	222	+	24.9	6.00
	<i>ZmGSTU9</i>	Zm00001d018220	Chr05:216862591-216863616	717	238	-	26.5	5.36
	<i>ZmGSTU10</i>	Zm00001d048558	Chr09:158667068-158667751	684	227	-	24.8	5.33
	<i>ZmGSTU11</i>	Zm00001d049657	Chr04:38891516-38892238	723	240	-	25.8	5.38
	<i>ZmGSTU12</i>	Zm00001d011154	Chr08:140938753-140939834	714	237	+	25.2	5.39
	<i>ZmGSTU13</i>	Zm00001d042102	Chr03:150720597-150721538	612	203	+	22.5	4.93
	<i>ZmGSTU14</i>	Zm00001d042095	Chr03:150585101-150586111	696	231	+	25.7	8.25
	<i>ZmGSTU15</i>	Zm00001d029708	Chr01:83411025-83411720	696	231	+	25.2	5.33
	<i>ZmGSTU16</i>	Zm00001d027557	Chr01:8129042-8130156	765	254	-	27.8	6.60
	<i>ZmGSTU17</i>	Zm00001d029700	Chr01:83119704-83120481	417	138	+	15.1	5.10
	<i>ZmGSTU18</i>	Zm00001d029696	Chr01:82924832-82926012	585	194	-	21.1	5.62
	<i>ZmGSTU19</i>	Zm00001d048559	Chr09:158676251-158677196	708	235	-	25.6	5.37
	<i>ZmGSTU20</i>	Zm00001d029704	Chr01:83198362-83199180	819	272	+	30.2	8.81
	<i>ZmGSTU21</i>	Zm00001d029707	Chr01:83264283-83265235	687	228	+	24.9	4.90
	<i>ZmGSTU22</i>	Zm00001d029706	Chr01:83226938-83228043	603	200	-	22.1	7.55
	<i>ZmGSTU23</i>	Zm00001d029701	Chr01:83132970-83133833	864	287	+	31.4	5.59
	<i>ZmGSTU24</i>	Zm00001d038192	Chr06:151106706-151108105	804	267	-	29.0	4.85
	<i>ZmGSTU25</i>	Zm00001d029699	Chr01:83058555-83059659	717	238	+	25.7	5.11
	<i>ZmGSTU26</i>	Zm00001d043789	Chr03:210250790-210261339	762	253	+	27.3	6.12
	<i>ZmGSTU27</i>	Zm00001d013693	Chr05:17669086-17669866	681	226	+	24.3	5.71
	<i>ZmGSTU28</i>	Zm00001d043795	Chr03:210370495-210371606	708	235	+	25.7	5.87

	<i>ZmGSTU29</i>	Zm00001d042099	Chr03:150690594-150691502	687	228	-	25.7	5.44
	<i>ZmGSTU30</i>	Zm00001d029703	Chr01:83192078-83193405	738	245	+	26.3	4.99
	<i>ZmGSTU31</i>	Zm00001d048560	Chr09:158683140-158684127	726	241	-	26.6	5.74
	<i>ZmGSTU32</i>	Zm00001d042098	Chr03:150672477-150673522	681	226	-	25.6	5.31
Zeta	<i>ZmGSTZ1</i>	Zm00001d016860	Chr05:178504960-178508727	837	278	-	30.2	6.17
	<i>ZmGSTZ2</i>	Zm00001d041772	Chr03:136996989-137007669	891	296	+	33.5	6.45
	<i>ZmGSTZ3</i>	Zm00001d023968	Chr010:32563929-32567309	642	213	-	23.8	5.49
DHAR	<i>ZmDHAR1</i>	Zm00001d037240	Chr06: 17483616-117495193	789	262	-	28.8	6.34
	<i>ZmDHAR2</i>	Zm00001d011035	Chr08: 37157191-137159528	798	265	+	29.2	9.11
TCHQD	<i>ZmTCHQD1</i>	Zm00001d003640	Chr02:51340087-51353092	798	265	+	31.1	8.95
EF1B γ	<i>ZmEF1γ1</i>	Zm00001d036959	Chr06:107398589-107403318	1236	411	+	46.7	5.86
	<i>ZmEF1γ2</i>	Zm00001d016358	Chr05:159037923-159041603	1245	414	-	47.0	6.31
	<i>ZmEF1γ3</i>	Zm00001d046352	Chr09:82889286-82893077	1254	417	-	47.3	6.08
	<i>ZmEF1γ4</i>	Zm00001d053576	Chr04:235104770-235108555	1314	437	-	49.5	6.44

Abbreviations: CDS, coding DNA Sequence; MW, Molecular Weight; pI, Isoelectric point; bp, base pair; aa, amino acid; kDa, kilodalton.