

**Table S6** Functionally identified GSTs in other plants.

Gene	Genome id/Accession number/Protein Sequence	Species/Cultivars	Reference
<i>AcGST1</i>	QCQ77644.1	<i>Actinidia chinensis</i>	Liu et al., 2019a
<i>AtTT19</i>	At5g17220	<i>Arabidopsis thaliana</i>	Sun et al., 2012
<i>AtGSTF2</i>	At4g02520	<i>Arabidopsis thaliana</i>	Ahmad et al., 2017
<i>AtGSTU17</i>	At1g10370	<i>Arabidopsis thaliana</i>	Jiang et al., 2010
<i>CkmGST3</i>	BAM14584.1	<i>Cyclamen</i> 'Kaori-no-mai'	Kitamura et al., 2012
<i>CsGSTF1</i>	MVVKVYGPVRAACPQRVLACLVEMGVEFELIHVDL DSGEHKKPDFLLRQPFQVPIEDGDFRLFESRAIRY YAAKNADYGPNNLLGTTLEEKALVDQWLEIEAHNFN DLVYNMVLQLVVLPRMGESDLALVHSCEDKLEKV LDIYEQRLSKSNYLAGDSFTLADLSHLP AIRYLLNEA GLGHLVRNRKNVNSWWMDISSRPAWKVMNLM*	<i>Camellia sinensis</i>	Wei et al., 2019
<i>CsGSTa</i>	QCQ77495.1	<i>Camellia sinensis</i>	Liu et al., 2019b
<i>CsGSTb</i>	QCQ77496.1	<i>Camellia sinensis</i>	Liu et al., 2019b
<i>CsGSTc</i>	QCQ77497.1	<i>Camellia sinensis</i>	Liu et al., 2019b
<i>DcGSTF2</i>	BAM21533.1	<i>Dianthus caryophyllus</i>	Sasaki et al., 2012
<i>FvRAP</i>	MVLK VYGPVRAACPQRVMVCLLELGVFEFIVPVDL QAGEQKQPHILARQPFQVPAIEDGDFKLFESRAIVR YYAAKYAERGNLLGTTLEEKALVDQWLEVESHNF NDLVFTVVLQLVILPSMGQPGDLALVRSCEEKLLKKV FDVYEERLSKSTYLAGNYFSLADLSHLP AIRFLVDEF KMGLHLITERKNVNAWWKDISNRPAWKLMKLAQY *	<i>Fragaria vesca</i>	Luo et al., 2018
<i>IbGSTF4</i>	AYE56326.1	<i>Ipomoea batatas</i>	Kou et al., 2019
<i>LcGST4</i>	ALY05893.1	<i>Litchi chinensis</i>	Hu et al., 2016
<i>LhGST</i>	QEE82349.1	<i>Lilium</i> 'Tiny Padhye'	Cao et al., 2021
<i>MdGSTF6</i>	MD17G1272100	<i>Malus × domestica</i>	Jiang et al., 2019
<i>MdGSTU12</i>	HF22792	<i>Malus × domestica</i>	Zhao et al., 2021
<i>MtGSTF7</i>	Medtr3g064700	<i>Medicago truncatula</i>	Wang et al., 2022
<i>PavGST1</i>	Pavsc0001124.1g450.1.mk	<i>Prunus avium</i>	Qi et al., 2022
<i>PcGST57</i>	pycom17g27080	<i>Pyrus communis</i>	Li et al., 2022
<i>PfGST1</i>	BAG14300.1	<i>Perilla frutescens</i>	Yamazaki et al., 2008
<i>PhAn9</i>	CAA68993.1	<i>Petunia hybrida</i>	Alfenito et al., 1998
<i>PpRiant</i> ( <i>PpGST1</i> )	Prupe.3G013600	<i>Prunus persica</i>	Cheng et al., 2015; Zhao et al., 2020
<i>PsGSTF3</i>	MVVKVYGSAKAACPQRVMVCLLEKEVEFEIIHVDLE SGEHKKPDFLARQPFQVPAIEDGDLKLFESRAIRYY AAKFDNRGSNNLLGTTLEERALMDQWLEVEAHNFD LVYTIVLQIVILPRMGQGTDLALVRTCEEKLEKVLVDV YEQRLSKSSYLAGDDFTLADLSHLPGLRYLINEAGKG YLVTVRKNVNAWWENISNRPSWKLMNLVN*	<i>Paeonia suffruticosa</i>	Han et al., 2022

<i>PtGSTU20</i>	Potri.008G175000	<i>Populus trichocarpa</i>	Sylvestre-Gonon et al., 2022
<i>RsGST1</i>	MVVKVYGGVTAACPQRVLLCCLLEKEIEFEIVHIDLDT LEQKRPEHLLRQFFGQVPAIEDGDFKLFESRAIARYY ATKYADQGTNLLGKSLEHRAIVDQWADVEVGYFNV LVHPLVMNLVIKPRLGEECDVAVLVEELKEKLGVVLD IYDNQLASNRFLAGDEFTMADLTHMPAMRYLMGTG LNRIVKARVNMNRWWEIARPAWKKLMNIAGL* MVKVYGPVTAACPQRVLLCCLLEFEVDYELINVDLD SNEHKQPDFLQKQPFQVPPVEDGDFRLFESRAIIRY YATKFSDRNPPLYGTTLEEKALVDQWLEVEAHHFN DMVYTIIVQKLVIPKMGGKTDVFLVKNCEKKLEHVF DVYEQQLSKNSYLAGDFFTLADLSHLPARYLMNEA ELGHMVRDKKKVNSWWNDISNRPAWKKVLLL*	<i>Raphanus sativus</i>	Lai et al., 2021
<i>ScGST3</i>		<i>Senecio cruentus</i>	Cui et al., 2021
<i>VvGST3</i>	ABO64930.1	<i>Vitis vinifera</i>	Pérez-Díaz et al., 2016
<i>VvGST4</i>	NP001267869.1	<i>Vitis vinifera</i>	Pérez-Díaz et al., 2016
<i>ZmBZ2</i>	AAA50245.1	<i>Zea mays</i>	Marrs et al., 1995