

#### Appendix D The basic information of sorghum sugar transporter coding gene

SST families	Genomic Locus	Our Name	Chr	Length of cDNA (bp)	Length of Protein (aa)	pI	Mw (kD)	Synonym	Reference
	SORBI_3001G373600	SbSWEET1	1	1462	313aa	6.84	34.39	SbSWEET1-1/SbSWEET12	
	SORBI_3001G377600	SbSWEET2	1	1502	329aa	9.30	35.19	SbSWEET1-2/SbSWEET16	
	SORBI_3002G259301	SbSWEET3	2	1301	273aa	9.03	29.75	SbSWEET2-1/	
	SORBI_3003G015200	SbSWEET4	3	1475	259aa	8.94	28.39	SbSWEET3-1/SbSWEET3B	
	SORBI_3003G038700	SbSWEET5	3	642	213aa	4.53	23.69	SbSWEET3-2/	
	SORBI_3003G038800	SbSWEET6	3	666	221aa	8.71	24.26	SbSWEET3-3/	
	SORBI_3003G149000	SbSWEET7	3	1327	242aa	6.41	26.38	SbSWEET3-4/	
	SORBI_3003G182800	SbSWEET8	3	1800	243aa	8.86	26.82	SbSWEET3-5/SbSWEET2A	
	SORBI_3003G213000	SbSWEET9	3	1207	244aa	9.30	27.20	SbSWEET3-6/SbSWEET6	
Sugars will eventually be exported transporters (SWEETs)	SORBI_3003G269300	SbSWEET10	3	3715	231aa	9.18	25.15	SbSWEET3-7/SbSWEET2B	Mizuno et al., 2016
	SORBI_3003G377700	SbSWEET11	3	1682	269aa	9.36	29.08	SbSWEET3-8/SbSWEET1A	
	SORBI_3004G133500	SbSWEET12	4	1669	250aa	9.54	27.43	SbSWEET4-1/SbSWEET4B	
	SORBI_3004G133600	SbSWEET13	4	1380	262aa	9.38	27.62	SbSWEET4-2/SbSWEET4C	
	SORBI_3004G136600	SbSWEET14	4	1263	250aa	9.36	27.20	SbSWEET4-3/SbSWEET4A	
	SORBI_3004G157100	SbSWEET15	4	1731	336aa	7.61	35.69	SbSWEET4-4/SbSWEET15	
	SORBI_3005G123500	SbSWEET16	5	1406	289aa	9.10	31.50	SbSWEET5-1/SbSWEET14	
	SORBI_3007G191200	SbSWEET17	7	1642	309aa	9.45	33.52	SbSWEET7-1/SbSWEET11A	
	SORBI_3008G094000	SbSWEET18	8	1480	304aa	9.48	33.25	SbSWEET8-1/SbSWEET13A	
	SORBI_3008G094300	SbSWEET19	8	1394	314aa	9.69	34.59	SbSWEET8-2/SbSWEET13B	
	SORBI_3008G094400	SbSWEET20	8	1292	302aa	9.50	33.01	SbSWEET8-3/SbSWEET13C	
	SORBI_3009G080900	SbSWEET21	9	2108	246aa	8.75	27.34	SbSWEET9-1/SbSWEET3A	

	SORBI_3009G143500	SbSWEET22	9	2093	256aa	9.12	27.27	SbSWEET9-2/SbSWEET1B	
	SORBI_3009G252000	SbSWEET23	9	1464	239aa	6.81	25.93	SbSWEET9-3/SbSWEET5	
Sucrose transporters (SUT)	SORBI_3001G254000	SbSUT3	1	1953	507aa	6.58	53.21	SbSUT3	Milne et al., 2013
	SORBI_3001G488700	SbSUT1	1	2440	519aa	8.86	54.99	SbSUT1	
	SORBI_3004G190500	SbSUT5	4	2143	534aa	8.72	56.39	SbSUT5	
	SORBI_3004G353600	SbSUT2	4	2483	594aa	6.00	63.34	SbSUT2	
	SORBI_3007G214500	SbSUT6	7	2364	596aa	8.95	63.04	SbSUT6	
	SORBI_3008G193300	SbSUT4	8	2671	501aa	8.60	53.45	SbSUT4	
STP (Sugar transporter protein)	SORBI_3001G190200	SbSTP1	1	2506	533aa	8.90	56.72	None	
	SORBI_3001G297600	SbSTP2	1	2316	520aa	9.38	57.38	None	
	SORBI_3001G454100	SbSTP3	1	2135	517aa	9.04	56.98	None	
	SORBI_3001G543500	SbSTP4	1	3593	538aa	9.12	58.53	None	
	SORBI_3002G004900	SbSTP5	2	2128	520aa	9.25	56.89	None	
	SORBI_3002G073600	SbSTP6	2	1679	512aa	9.13	56.06	None	
	SORBI_3002G169300	SbSTP7	2	1842	379aa	9.22	40.80	None	
	SORBI_3002G201900	SbSTP8	2	2131	518aa	9.30	55.77	None	
	SORBI_3002G338500	SbSTP9	2	2048	531aa	9.03	57.64	None	
	SORBI_3003G192200	SbSTP10	3	1988	509aa	9.39	55.73	None	
	SORBI_3004G049300	SbSTP11	4	2558	521aa	8.91	57.24	None	
	SORBI_3004G188701	SbSTP12	4	1604	488aa	8.86	53.12	None	
	SORBI_3004G332700	SbSTP13	4	1572	523aa	9.12	55.63	None	
	SORBI_3005G171200	SbSTP14	5	1704	524aa	9.40	56.06	None	
	SORBI_3006G003600	SbSTP15	6	1892	516aa	9.32	56.39	None	
	SORBI_3006G003601	SbSTP16	6	1536	511aa	9.32	55.86	None	
	SORBI_3006G101900	SbSTP17	6	2316	542aa	9.77	57.73	None	
	SORBI_3006G102300	SbSTP18	6	2329	511aa	9.40	55.33	None	

	SORBI_3006G102400	SbSTP19	6	2153	521aa	9.25	55.69	None
	SORBI_3006G102500	SbSTP20	6	2096	510aa	9.51	54.31	None
	SORBI_3006G102800	SbSTP21	6	1942	513aa	9.18	54.04	None
	SORBI_3007G061800	SbSTP22	7	2219	521aa	8.06	56.26	None
	SORBI_3009G152800	SbSTP23	9	1443	480aa	8.73	51.53	None
	SORBI_3010G030600	SbSTP24	10	1771	521aa	9.81	54.58	None
	SORBI_3001G323600	SbPLT1	1	1706	535aa	8.55	56.94	None
	SORBI_3001G469500	SbPLT2	1	2635	530aa	7.10	56.35	None
	SORBI_3001G469600	SbPLT3	1	2164	524aa	8.84	56.12	None
	SORBI_3002G108900	SbPLT4	2	1527	508aa	9.30	53.01	None
	SORBI_3002G353900	SbPLT5	2	2151	510aa	9.16	54.22	None
	SORBI_3002G354000	SbPLT6	2	2038	510aa	8.78	53.91	None
	SORBI_3002G354100	SbPLT7	2	3615	505aa	8.94	54.03	None
	SORBI_3002G354200	SbPLT8	2	1876	508aa	6.38	53.99	None
	SORBI_3002G354300	SbPLT9	2	1260	419aa	9.77	45.27	None
	SORBI_3002G354400	SbPLT10	2	1915	412aa	10.40	48.80	None
	SORBI_3005G043800	SbPLT11	5	1598	166aa	8.89	17.66	None
	SORBI_3005G195900	SbPLT12	5	2215	481aa	8.96	50.34	None
	SORBI_3005G196000	SbPLT13	5	1863	491aa	8.90	51.29	None
	SORBI_3005G196100	SbPLT14	5	1555	507aa	9.11	52.63	None
	SORBI_3005G196200	SbPLT15	5	1717	502aa	8.98	52.31	None
	SORBI_3005G196300	SbPLT16	5	2237	490aa	5.85	50.84	None
	SORBI_3005G196700	SbPLT17	5	2116	485aa	8.36	50.94	None
	SORBI_3006G156600	SbPLT18	6	2181	726aa	8.73	78.98	None
	SORBI_3006G268800	SbPLT19	6	1749	536aa	6.42	55.56	None
	SORBI_3008G111100	SbPLT20	8	1991	616aa	9.47	63.69	None

PLT  
(Polyol/Monosaccharide  
transporter)

	SORBI_3008G111300	SbPLT21	8	1810	482aa	9.14	50.29	None	
	SORBI_3009G084400	SbPLT22	9	2578	524aa	6.03	55.40	None	
	SORBI_3009G157800	SbPLT23	9	5676	530aa	9.58	55.72	None	
VGT (Vacoular Glucose Transporter)	SORBI_3001G032200	SbVGT1	1	2661	565aa	9.52	59.24	None	
	SORBI_3001G282600	SbVGT2	1	2199	511aa	5.29	54.81	None	
INT (Inositol transporter)	SORBI_3002G035200	SbINT1	2	3090	586aa	7.96	62.55	None	
	SORBI_3002G121800	SbINT2	2	2421	574aa	8.19	61.31	None	
	SORBI_3006G130800	SbINT3	6	4118	506aa	5.67	53.93	None	
	SORBI_3006G143900	SbINT4	6	3081	586aa	8.52	63.18	None	
pGlcT/SBG1 (plastic glucose transporter/Suppressor of G protein beta1)	SORBI_3002G193800	SbSGB2	2	2180	550aa	6.21	58.35	None	
	SORBI_3003G084000	SbpGlcT1	3	2456	541aa	9.16	56.76	None	
	SORBI_3004G124500	SbSGB1	4	2894	490aa	8.64	52.48	None	
TMT (Tonoplastic monosaccharide transporter)	SORBI_3001G312900	SbTMT1	1	3820	740aa	4.91	78.91	SbTST1	Bihmidine et al., 2016
	SORBI_3004G099300	SbTMT2	4	3593	745aa	5.16	79.65	SbTST2	Bihmidine et al., 2016
	SORBI_3004G358100	SbTMT3	4	1497	498aa	9.39	52.30	None	
	SORBI_3005G191900	SbTMT4	5	2525	744aa	7.24	81.18	None	
	SORBI_3010G276100	SbTMT5	10	2713	767aa	4.76	81.65	SbTST3	Bihmidine et al., 2016
ERD6-like (Early response to dehydration)	SORBI_3001G362500	SbERD1	1	2161	505aa	6.47	53.92	None	
	SORBI_3001G362601	SbERD2	1	3421	284aa	9.26	30.90	None	
	SORBI_3003G110800	SbERD3	3	1833	482aa	6.24	51.35	None	
	SORBI_3003G111000	SbERD4	3	2768	488aa	8.33	51.69	None	
	SORBI_3009G235600	SbERD5	9	2008	499aa	8.91	53.65	None	

SORBI_3009G235700	SbERD6	9	2007	506aa	7.49	53.70	None
SORBI_3009G235900	SbERD7	9	1972	501aa	7.68	54.03	None
SORBI_3009G243800	SbERD8	9	2415	507aa	9.23	54.12	None

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Note: Chr, Chromosome; pI, isoelectric point; Mw, Molecular weight