

Table S16. Sugar metabolic and transporter genes of *A. montana* genome.

Gene ID	Type	Subfamily	Description	Start	End	Length (bp)
Amo021330	sugar metabolism enzyme	CWINV	cell wall invertase	4355888	4360459	2082
Amo007261	sugar metabolism enzyme	CWINV	cell wall invertase	9756700	9761522	1497
Amo006983	sugar metabolism enzyme	CWINV	cell wall invertase	5446360	5454114	1917
Amo019663	sugar metabolism enzyme	FRK	fructokinase	2238748	2245744	1206
Amo017070	sugar metabolism enzyme	FRK	fructokinase	1751050	1752030	981
Amo010647	sugar metabolism enzyme	FRK	fructokinase	10317014	10321253	1110
Amo003080	sugar metabolism enzyme	FRK	fructokinase	9948072	9949757	987
Amo022530	sugar metabolism enzyme	HK	hexokinase	510038	521615	1497
Amo020432	sugar metabolism enzyme	HK	hexokinase	3592625	3604308	1500
Amo016670	sugar metabolism enzyme	HK	hexokinase	41281	55195	1542
Amo012946	sugar metabolism enzyme	HK	hexokinase	2894869	2897327	417
Amo023294	sugar metabolism enzyme	NIVI	neutral invertase	923019	927755	1821
Amo020421	sugar metabolism enzyme	NIVI	neutral invertase	3357217	3365515	1701
Amo016363	sugar metabolism enzyme	NIVI	neutral invertase	6077331	6083745	2010
Amo015907	sugar metabolism enzyme	NIVI	neutral invertase	5557173	5565411	1947
Amo012168	sugar metabolism enzyme	NIVI	neutral invertase	5940463	5946161	2031
Amo010001	sugar metabolism enzyme	NIVI	neutral invertase	1576942	1584176	1704
Amo011136	sugar metabolism enzyme	SPS	sucrose phosphate synthase	4035347	4043464	3303
Amo006575	sugar metabolism enzyme	SPS	sucrose phosphate synthase	13713032	13721137	3039
Amo001581	sugar metabolism enzyme	SPS	sucrose phosphate synthase	13292669	13301230	3285
Amo023377	sugar metabolism enzyme	SUS	sucrose synthase	2185168	2191689	2421
Amo023188	sugar metabolism enzyme	SUS	sucrose synthase	2364530	2372208	2424
Amo012379	sugar metabolism enzyme	SUS	sucrose synthase	9160822	9174686	2430
Amo008440	sugar metabolism enzyme	SUS	sucrose synthase	3460373	3464498	2445
Amo007259	sugar metabolism enzyme	VAIN	vacuolar acid invertase	9701495	9707943	2145
Amo023590	sugar transporter	SUT	sucrose transporter	2422375	2432050	1788

Amo012943	sugar transporter	SUT	sucrose transporter	2823511	2829704	1542
Amo010009	sugar transporter	SUT	sucrose transporter	1673352	1675512	1782
Amo025687	sugar transporter	SWEET	sugar swill eventually be exported transporter	689775	691799	813
Amo025419	sugar transporter	SWEET	sugar swill eventually be exported transporter	708223	709008	285
Amo023752	sugar transporter	SWEET	sugar swill eventually be exported transporter	1385290	1389274	921
Amo018727	sugar transporter	SWEET	sugar swill eventually be exported transporter	5401875	5405778	678
Amo017066	sugar transporter	SWEET	sugar swill eventually be exported transporter	1679578	1681898	789
Amo016361	sugar transporter	SWEET	sugar swill eventually be exported transporter	6055440	6060417	1293
Amo015644	sugar transporter	SWEET	sugar swill eventually be exported transporter	657828	661091	1065
Amo015291	sugar transporter	SWEET	sugar swill eventually be exported transporter	7992762	7994120	480
Amo015156	sugar transporter	SWEET	sugar swill eventually be exported transporter	6058067	6060457	477
Amo014723	sugar transporter	SWEET	sugar swill eventually be exported transporter	477280	481562	711
Amo012385	sugar transporter	SWEET	sugar swill eventually be exported transporter	9267775	9277159	750
Amo011350	sugar transporter	SWEET	sugar swill eventually be exported transporter	7014606	7023206	774
Amo010558	sugar transporter	SWEET	sugar swill eventually be exported transporter	8940251	8947102	711
Amo002432	sugar transporter	SWEET	sugar swill eventually be exported transporter	15470631	15472823	804
Amo024707	sugar transporter	HXT	hexose transporter	2192957	2197807	1560
Amo024272	sugar transporter	HXT	hexose transporter	73594	75286	1056
Amo023449	sugar transporter	HXT	hexose transporter	362518	376870	1626
Amo022648	sugar transporter	HXT	hexose transporter	1969181	1970612	927
Amo022638	sugar transporter	HXT	hexose transporter	1879359	1882067	1557
Amo022538	sugar transporter	HXT	hexose transporter	632988	636671	1551
Amo017585	sugar transporter	HXT	hexose transporter	2307139	2310131	1725
Amo016267	sugar transporter	HXT	hexose transporter	4562978	4569823	1563
Amo016260	sugar transporter	HXT	hexose transporter	4491106	4498993	1587
Amo015507	sugar transporter	HXT	hexose transporter	4316446	4330660	1566
Amo011936	sugar transporter	HXT	hexose transporter	2098934	2102049	1548
Amo011935	sugar transporter	HXT	hexose transporter	2089664	2091976	1668
Amo011933	sugar transporter	HXT	hexose transporter	2074332	2076344	1551

Amo008423	sugar transporter	HXT	hexose transporter	3075594	3092066	1551
Amo008418	sugar transporter	HXT	hexose transporter	2942184	2943338	1071
Amo007162	sugar transporter	HXT	hexose transporter	7863978	7870473	1554
Amo007161	sugar transporter	HXT	hexose transporter	7859137	7862786	1554
Amo007159	sugar transporter	HXT	hexose transporter	7850522	7851598	1077
Amo001175	sugar transporter	HXT	hexose transporter	7006577	7015395	1575
Amo023173	sugar transporter	SFP	sugar-porter family protein	2107438	2115946	1377
Amo013949	sugar transporter	SFP	sugar-porter family protein	6366053	6372167	1491
Amo013947	sugar transporter	SFP	sugar-porter family protein	6343597	6348464	1257
Amo011107	sugar transporter	SFP	sugar-porter family protein	3584373	3594391	1473
Amo017632	sugar transporter	TMT	tonoplast sugar transporters	2867152	2874064	1470
Amo010121	sugar transporter	TMT	tonoplast sugar transporters	3047021	3053441	1869
Amo009685	sugar transporter	TMT	tonoplast sugar transporters	3120387	3131161	2229
Amo008502	sugar transporter	TMT	tonoplast sugar transporters	5194664	5205668	2217
Amo007630	sugar transporter	TMT	tonoplast sugar transporters	3538227	3548137	1449
Amo021081	sugar transporter	vGT	vacuolar glucose transporter	1365350	1372127	1527
Amo002546	sugar transporter	vGT	vacuolar glucose transporter	1516926	1528255	1695