

Supplemental materials

Lists of sucrose synthase alleles and the nucleotide and predicted amino acid sequence changes compared with the WT

Table S1. *Lotus japonicus* *SUS1* alleles and their sequence differences compared with the wild type

SL Plant Number	Allele number	Nucleotide change	Effect
1861-1	n/a	C329T	INTRON
3456-1	<i>sus1-6</i>	C463T	A87V
1437-1	<i>sus1-2</i>	G815A	G154E
3365-1	<i>sus1-7</i>	C1296T	P220L
4106-1	n/a	G1345A	L236=
2035-1	<i>sus1-8</i>	G1346A	E237K
427-1	<i>sus1-9</i>	C1424T	P263S
1130-1	<i>sus1-10</i>	G1449A	G271E
4194-1	n/a	C1585T	INTRON
6-1	n/a	C1598T	INTRON
322-1/2721-1	<i>sus1-3</i>	G1653A	D308N
266-1	<i>sus1-11</i>	C1689T	R320C
967-2	n/a	G1749A	INTRON
937-1	n/a	G1787A	INTRON
136-1	n/a	C1836T	INTRON
2109-1	<i>sus1-4</i>	C1854T	P340S
1123-1	<i>sus1-5</i>	G1863A	V343M
1974-1	n/a	G1892A	E352=
122-2	<i>sus1-12</i>	G1944A	E370K
3337-1/1177-1	<i>sus1-13</i>	G1951A	G372E
649-1	<i>sus1-1</i>	G1988A	W384*

1496-1	<i>sus1-14</i>	C1990T	P385L
3055-1/2/3	n/a	G2000A	E388=
1966-3	<i>sus1-15</i>	C2108T	T396I
3465-1	n/a	T2478C	INTRON
1392-1	n/a	C2512T	INTRON
1729-1	n/a	C2547T	INTRON
2723-1	<i>sus1-16</i>	G2676A	G525E
1197-1	n/a	C2830T	INTRON
283-1	n/a	C2991T	D580=
1882-1	n/a	C3375T	Y708=
820-3	<i>sus1-17</i>	C3443T	A731G
693-1	n/a	C3609T	INTRON
1484-1	n/a	C3862T	INTRON

Table S2. *Lotus japonicus* *SUS2* alleles and their sequence differences compared with the wild type

SL Plant Number	Allele number	Nucleotide change	Effect
1567-1	<i>sus2-1</i>	G911A	E112K
170-1	<i>sus2-2</i>	G956A	V127I
1955-1/ 1967-1	n/a	C1185T	N165=
1554-1	<i>sus2-3</i>	G1267A	G193S
4341-1	<i>n/a</i>	G1314A	INTRON
1710-1	<i>sus2-4</i>	G2314A	V339I
1037-2/ 4947-1	n/a	C2398T	L367=
1467-1	<i>sus2-5</i>	C2465T	P389L
1664-1	n/a	C2648T	INTRON
642-1	<i>sus2-6</i>	C2765T	S425F
1568-1	n/a	C2809T	INTRON

Table S3. *Lotus japonicus* *SUS3* alleles and their sequence differences compared with the wild type

SL Plant Number	Allele number	Nucleotide change	Effect
338-1	<i>sus3-2</i>	G1605A	G240S
3152-1	n/a	C1727T	I280=
721-1	<i>sus3-4</i>	G1956A	D326N
1401-1	<i>sus3-3</i>	G2140A	V342M
3154-1	<i>sus3-1</i>	G2244A	W376*
406-1	n/a	C2322T	INTRON
317-5	n/a	C2505T	INTRON

Table S4. *Lotus japonicus* *SUS4* alleles and their sequence differences compared with the wild type

SL Plant Number	Allele number	Nucleotide change	Effect
398-1	n/a	A2570G	INTRON
4801-1	n/a	C2625T	INTRON
4671-1/ 4864-1	<i>sus4-1</i>	C2762T	P366S
1162-1	<i>sus4-2</i>	G3044A	G434R
3274-1	<i>sus4-3</i>	G3377A	G509E