

**S3 Table. Information of SSR markers near fourteen loci identified by association mapping**

<b>Maker Name</b>	<b>BARCSOYSSR Sequence ID</b>	<b>Primer</b>	<b>Sequences</b>	<b>Product size(bp)</b>	<b>Physical Position (assembly v1.1)</b>	<b>Physical Position (assembly v2.0)</b>	<b>Locus</b>
1-1536	Barcsoyssr_1_1536	Forward	AATCCAAAATCCTGTCGTGC	217	52,438,759	53,323,483	<i>qSC1</i>
		Reverse	CATTCACACAAGCTGCAACA		52,438,784	53,323,508	
1-1528	Barcsoyssr_1_1528	Forward	TCTTAAGATTTGCCCGTTG	270	52,316,259	53,203,363	<i>qSC1</i>
		Reverse	GGCTTTTACAAAATATTGAAGTTTGA		52,316,312	53,203,416	
1-1544	Barcsoyssr_1_1544	Forward	TTGGATCATGTCAATTTCTTTT	239	52,530,918	53,415,809	<i>qSC1</i>
		Reverse	AAAAGTTGGACCAAACGGGT		52,530,949	53,415,840	
1-1546	Barcsoyssr_1_1546	Forward	ATGCCGCTTCTCATTGAGAT	210	52,632,975	53,517,849	<i>qSC1</i>
		Reverse	TTGATGATTTAGGTTACGGTGC		52,633,016	53,517,890	
6-998	Barcsoyssr_6_998	Forward	TCAAAACAATAATTTTCGAGGAA	288	18,713,522	-	<i>qSC2</i>
		Reverse	TGTAATTATTTTGAGTCGAAGGAAG		18,713,575	-	
6_1032	Barcsoyssr_6_1032	Forward	GGATGAGTTTGATAAACATGAATGA	273	19,653,852	19,858,118	<i>qSC2</i>
		Reverse	TTATTTGGAGCCCTCCCT		19,653,932	19,858,198	
Satt557	Barcsoyssr_6_1041	Forward	GCGGGATCCACCATGTAATATGTG	207	20,018,845	20,218,992	<i>qSC2</i>
		Reverse	GCGCACTAACCCCTTATTGAA		20,018,907	20,219,054	
Satt308	Barcsoyssr_7_1556	Forward	GCGTTAAGGTTGGCAGGGTGGAAGTG	170	42,876,591	42,822,341	<i>qSC3</i>
		Reverse	GCGCAGCTTTATACAAAATCAACAA		42,876,656	42,822,406	
7-1552	Barcsoyssr_7_1552	Forward	TGTCATCAGGCGTCAGTAA	231	42,805,187	42,750,937	<i>qSC3</i>
		Reverse	CGTGGAGATCAAAGTTGGGT		42,805,237	42,750,987	
Sat_276	Barcsoyssr_7_1561	Forward	GCGGAAACCCATCTAGAATATGAAAACA	272	42,916,026	42,861,774	<i>qSC3</i>
		Reverse	GCGTTCTTCTCGAGGTGAGATAACAATC		42,916,087	42,861,835	
8-248	Barcsoyssr_8_248	Forward	TGTCACCATTTCAATCCTAATCA	289	4,726,529	4,732,715	<i>qSC4</i>
		Reverse	CTCCCATTCACATCAGCAG		4,726,596	4,732,782	

8-250	Barcsoyssr_8_250	Forward	TGCTGCATTTGGCATTACAT	261	4,760,029	4,766,186	qSC4
		Reverse	TCATTTTTCTCACTTTGGTCCC		4,760,064	4,766,221	
Satt493	Barcsoyssr_8_262	Forward	GTTAACGGGAAAAAATTAACCTA	251	5,027,329	5,033,482	qSC4
		Reverse	GTGGCTGCCTAGTGCTGTTTTATA		5,027,364	5,033,517	
8-459	Barcsoyssr_8_459	Forward	CAACTTTCGCATCGGTTACA	232	8,321,840	8,326,164	qSC5
		Reverse	CGGAAACTGCTTATGTTTGC		8,321,883	8,326,207	
8-466	Barcsoyssr_8_466	Forward	TGACATGGCGTGATTGTTCT	224	8,423,496	8,438,244	qSC5
		Reverse	ACACATCCAGTCCCAGGAAA		8,423,563	8,438,311	
8-475	Barcsoyssr_8_475	Forward	TTAAAGAGCCTTACATGACATCTG	286	8,613,309	8,643,336	qSC5
		Reverse	CCGTATTCAAATGACTAGCAT		8,613,368	8,643,395	
Sat-352	Barcsoyssr_9_1453	Forward	GCGTATTAGACTAGTGCTATTCGCGAGTTA	224	41,890,948	45,087,036	qSC7
		Reverse	GCGTGTCATTTCAATAAAAACAAAAACATAA		41,891,009	45,087,097	
Sat-293	Barcsoyssr_9_1512	Forward	GCGTTAGGCAAATGAGATGTCAA	281	42,848,842	46,053,189	qSC7
		Reverse	GCGCAGGGCAGTCATCGGAGGTAT		42,848,903	46,053,250	
Satt196	Barcsoyssr_9_1541	Forward	TTGGGAAATAGTGATTGAGGTAAAA	189	43,310,876	46,515,643	qSC7
		Reverse	AAATCCCCATTGAATGAGAATAAG		43,310,941	46,515,708	
Satt592	Barcsoyssr_10_1339	Forward	GCGAAGATTGGTCTTTTATGTCAAATG	241	42,983,859	43,509,853	qSC8
		Reverse	GCGGAGGAATACAAGTCTCTATTCAA		42,983,897	43,509,891	
10-1362	Barcsoyssr_10_1362	Forward	CCCCTAAATATAGATCGCCT	238	43,451,401	44,031,058	qSC8
		Reverse	GGAACCAACCACACTCTCCA		43,451,442	44,031,099	
11-38	Barcsoyssr_11_38	Forward	AAGTAACACCCCTCATGTGCAA	185	788,385	797,360	qSC9
		Reverse	GTGGTCAAAGCAAGTCGTGA		788,458	797,435	
11-46	Barcsoyssr_11_46	Forward	CCATCCATTCTTGTGTGGA	173	1,062,244	1,071,226	qSC9
		Reverse	GCAATAGCCGTAGGTTTTGG		1,062,275	1,071,257	
Satt453	Barcsoyssr_11_1468	Forward	GCGGAAAAAAACAATAACAACA	234	38,360,612	34,173,223	qSC10
		Reverse	TAGTGGGGAAGGGAAGTTACC		38,360,653	34,173,264	

12-270	Barcsoyssr_12_270	Forward	CTCGTGGACTGATAAAGGGC	264	5,531,936	5,542,880	<i>qSC11</i>
		Reverse	GCTAATTACCCTTTTGTTCAAGG		5,532,005	5,542,949	
12-286	Barcsoyssr_12_286	Forward	ACGCCACCATCTCTCAAAGT	248	5,706,951	5,718,418	<i>qSC11</i>
		Reverse	CCCTGCTAGAAACAAGAACCC		5,707,018	5,718,485	
Satt269	Barcsoyssr_13_340	Forward	GCGTGCCAGGTAGAAAAATATTAG	253	6,580,533	15,306,342	<i>qSC12</i>
		Reverse	GCGGTTTTTCACTTTTCAAATTC		6,580,565	15,306,374	
13-368	Barcsoyssr_13_368	Forward	TGACCCCATGTGTTCAAATTA	222	7,178,656	14,672,696	<i>qSC12</i>
		Reverse	AATGTGGATACCAAACATGGA		7,178,739	14,672,779	
Satt569	Barcsoyssr_13_458	Forward	GCGCAAATTGCTTCACGCATCCAAAT	184	9,567,219	12,294,094	<i>qSC12</i>
		Reverse	GCGGCCTACTATAGTGAAGGGTATA		9,567,260	12,294,135	
Satt193	Barcsoyssr_13_477	Forward	GCGTTTCGATAAAAATGTTACACCTC	239	10,032,901	11,847,952	<i>qSC12</i>
		Reverse	TGTTTCGATTATTGATCAAAAAT		10,032,969	11,848,020	
Satt472	Barcsoyssr_18_1708	Forward	GCGAATACATAAAACTCAAATCAAATCATA	279	58,136,231	53,866,606	<i>qSC14</i>
		Reverse	GCGTTCATAAATTCATTCATAGTTTCAAT		58,136,341	53,866,716	