

Table S1.The information of the markers for mapping

Maker type	Maker name	Location(s)	Forward primer(5'-3')	Reverse primer (5'-3')	PCR product length(bp)	Amplify temp. (°C)	Restriction enzyme
Indel	CH4-1	SL2. 40ch04:1533907. . 1534029	AGACCGTATTTTATGATTGTGGCTCC	ACTCATCAGCAAAGGCAAGGACC	452	55	
Indel	CH4-4	SL2. 40ch04:37590200. . 37590201	CAAGAGATTGATCCTCCAGAAAGA	CACTAACTTTTACATGGAACAACCC	563	54	
Indel	CH4-10	SL2. 40ch04:47339923. . 47339924	GTTGGCTATTTAGGCATTTTCATCG	TGTTCCGTCTCATTCTGCTTCT	325	55	
Indel	CH4-17	SL2. 40ch04:55006570. . 55006694	GCTGAGAAGAAGAAGAAACCAAAGA	TTGTGATAATGGGAGGTCATGTTC	548	55	
Indel	CH4-25	SL2. 40ch04:50136361. . 50136362	GACGATGCACATGCAGGTTAGTT	ATGAAAAGTGGTTAGGTGGTAGGAA	327	55	
Indel	CH4-35	SL2. 40ch04:52615710. . 52615715	CTCAATCTTGTTTCATATCCACCCT	TAGTAGAGCCTATCATTGAAACACCT	280	55	
Indel	CH4-37	SL2. 40ch04:50905127. . 50905171	GGATCACATGAGAAAGGCAAGCT	TAACCACGAATGTACTGCAACCC	440	55	
Caps	CAPS4-3	SL2. 40ch04:51286129. . 51286230	GGAGGAAAGCAGAAAGAGGAAAC	TCTACCAGCAATCATACCCAACC	1273	56	DraI
SNP	SNP4-2	SL2. 40ch04:51708962. . 51709010	AACAAACCCACGAGTAAGAAGAC	AAATGAGACGGAGGAAGTAACAG	885	54	
SNP	SNP4-4	SL2. 40ch04:52740741. . 52741440	ACATACCATCCCATTAGACTCCC	CCTCATCCTCCTATCGCTACATC	700	54	
SNP	SNP4-6	SL2. 40ch04:52102439. . 52102500	TGGAGCCTATGACTGGAGATTTA	GATACCTTCAGGTGTTCCGGATTA	737	54	