

Supplementary Table 1. List of SNPs and primers for genotyping

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr1_63040824	1	63040824	331	A/G	F1_63040824A	GAGGGGAAACTCCATCCACTA
					F1_63040824G	GAGGGGAAACTCCATCCAAAG
					R63040824	GAGACCTACGCTGTATGACCA
Chr 1_63048213	1	63048213	561	G/C	F163048213C	TGGGGCAAATGACTTAAGCTGTATC
					F163048213G	TGGGGCAAATGACTTAAGCTGTATG
					R163048213	ACAGAAACAGACTCACAGACATAGA
Chr 1_63445934	1	63445934	628	T/C	F163445934T	AGCAAACCTACACCAAATGTATCATAATCTA
					F163445934C	AGCAAACCTACACCAAATGTATCATAATAAG
					R63445934	CCTCTGGTTGTGCTCTAAGAGA
Chr 2_99932513	2	99932513	858	G/A	FS299932513	CTACCTAACTACAAGACACTAATAATGAC
					RS299932513G	GATAGGAAATTGATCAGTGAATCTGATG
					RS299932513A	GATAGGAAATTGATCAGTGAATCTGTGA
Chr 6_14654249	6	14654249	727	A/G	FS614654249A	CTCTAAAATCCTGTAATGAAGTCTGGA
					FS614654249A	TGCTCTAAAATCCTGTAATGAAGTCTTTG
					RS614654249A	ACTGAATTAATAAGGAAGGCTGTAGGA
Chr 6_24997291	6	24997291	484	T/C	FS624997291C	CTCAGAAAGGTAAAGTGAGTCACAC
					FS624997291T	CTCAGAAAGGTAAAGTGAGTCAACT
					RS624997291	CAATGTATTAATGGCACACTGACAAC
Chr 7_75108807	7	75108807	215	G/A	FS775108807G	CAACCTGAAAGATACGTGTATTAC
					FS775108807A	GCAACCTGAAAGATACGTGTATTACT
					RS775108807	TAGTTCCAACCTCGGTTTTACAGTGA

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 7_82468596	7	82468596	1209	C/T	FS782468596T	CAAGCTGAGTCCTACCTAACGTGCA
					RS782468596T	GACTCATGTAAAAATTCTCTGTAAGGTTGCT
					RS782468596C	GACTCATGTAAAAATTCTCTGTAAGGTTTAC
Chr 7_82483675	7	82483675	1108	T/C	FS782483675C	CCATCTGCAAAGCTTGTCTAC
					FS782483675T	CCATCTGCAAAGCTTGTCCACT
					RS782483675	CGTCCAATTACACTACTCAGCAATTTTC
Chr 8_72594593	8	72594593	1361	G/T	FS872594593	TGCTGTGGTGAAGTAGACTAGTTG
					RS872594593T	CCTCCTTCATATAGTTGTTGTGATAGT
					RS872594593G	CTCCTTCATATAGTTGTTGTGATGAG
Chr 9_22550930	9	22550930	502	T/G	FS922550930T	TTCCTGCTCCTTTGACACTCACATTG
					FS922550930G	TTCCTGCTCCTTTGACACTCACATG
					RS922550930	ACATTGGCTGGTGAAGTAACACTTGC
Chr 1_63040834	1	63040834	331	G/C	FS163040834	GCCAGAGGTAAGTTTCGATTCCCA
					RS163040834C	AGGTGCACTACATTGTGGATGCAG
					RS163040834G	AGGTGCACTACATTGTGGATGCAC
Chr 10_13608620	10	13608620	163	A/G	FS1013608620	TCCCTGTGACAACAGCAACACTTC
					RS1013608620A	ACCCCTTCATATTGCATCCTCATCA
					RS1013608620G	ACCCCTTCATATTGCATCCTCAGAG
Chr 10_13892353	10	13892353	990	G/A	FS1013892353	TCAGCCTCCAGTGTAACAGAGAAG
					RS1013892353A	GTAAGCATCTTGTTTATAGATTAGCCTAC
					RS1013892353G	AGTAAGCATCTTGTTTATAGATTAGCCTG
Chr 11_70990227	11	70990227	1137	C/T	FS1170990227	AGTTTGGCACTGGTCAGATAAGACG
					RS1170990227T	TGGTGTGAGCATTTGCCTTGTTGAG
					RS1170990227C	TTGGTGTGAGCATTTGCCTTGTTGG
Chr 11_71992855	11	71992855	636	G/T	FS1013892353T	AAAGCTCAGCAGCTCTCCCAGAG
					FS1013892353G	AAAGCTCAGCAGCTCTCCCAGC

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 11_72060113	11	72060113	815	G/A	RS1013892353	TCTACTCTTTCTCTTGTCTTCTTCCTTCCT
					FS1172060113	CTCATCACTCGTAGTTTGCTGTAGTG
					RS1172060113G	CAAATGCGCTCACCACCTTAAGTCATG
					RS1172060113A	CAAATGCGCTCACCACCTTAAGTCATAC
Chr 11_72350029	11	72350029	400	T/TG	FS1172350029T	AAAATTCGACAGGTGTGGCCCTGT
					FS1172350029TG	AAAATTCGACAGGTGTGGCCCArTG
					RS1172350029	GCATGAAGGAATAAGCACCTATAACTGG
Chr 11_74288613	11	74288613	815	T/A	FS1174288613	CAGGGTATGAAGTAGGTGTTACGTC
					RS1174288613A	ACTGGTCTTCTTGTCATTCTCTCTAATAC
					RS1174288613T	ACTGGTCTTCTTGTCATTCTCTCTAAATC
Chr 11_81210420	11	81210420	248	T/C	FS1181210420	CTTCAAGCTCACTGACAGCTACGGA
					RS1181210420T	GAGGTGGTCGCCCTTCTTCCGTC
					RS1181210420C	GAGGTGGTCGCCCTTCTTCATC
Chr 19_10328831	19	10328831	1228	GT/G	F1910328831	AGGATGGCAATAGAGGCTGGA
					R1910328831GT	CAGCATATCTTTCCTAAGAACACGCA
					R1910328831G	CAGCATATCTTTCCTAAGAACACGC
Chr 19_10433012	19	10433012	625	G/T	F1910433012	CTGATTGCTGTTGGAATGGAGAAATC
					RS1910433012G	CTCCTCTCTCAATCTCCTCCTC
					RS1910433012T	CTCCTCTCTCAATCTCCTCGCA
Chr 19_10894226	19	10894226	350	C/T	F1910894226	TCCAGGTCAGTGATGCTTCCAG
					R1910894226C	GTGTCCCTTGTATGTATAAAGATCCACTC
					R1910894226T	GTGTCCCTTGTATGTATAAAGATCCACTTG
Chr 19_11030167	19	11030167	1044	C/G	F1911030167	CCACAGTGAGTTTAGTGAACATCCA
					R1911030167C	AGTGAACAAAGACGCAGGATCG
					R1911030167G	AGTGAACAAAGACGCAGGATCC
Chr 25_262898	25	262898		G/A	F25262898A	GTTTCCACAAGCACACGTCTCA
					F25262898G	GTTTCCACAAGCACACGTCAAG
					R25262898	GCCATCGGAGGAAAGGTTAAGTG
Chr 18_29985605	18	29985605	457	G/C	F1829985605	TCTGACTCCGGTTGGTCTGAG

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 18_30061144	18	30061144	750	G/A	R1829985605G	CTGAAACAAATAATTAGGTGCCTGAGTC
					R1829985605T	CTGAAACAAATAATTAGGTGCCTGAGTAC
					F1830061144	AGCACCTTCCTCTGCCTCTTAC
Chr 18_30075711	18	30075711	265	T/A	R1830061144G	ATGGACCGCAGCAAAGTGGAGTC
					R1830061144A	ATGGACCGCAGCAAAGTGGAGTTC
					F1830075711T	AGCAGGTAGAGAGGGTCCATG
Chr 18_30105059	18	30105059	161	C/G	F1830075711A	AGCAGGTAGAGAGGGTCCAAG
					R1830075711	GGCCTGTTACGAGGTGGTTCA
					F1830105059G	CTGAAAAAGTATTGAGGAACCCAACTAG
Chr 19_10237641	10	10237641	883	G/T	F1830105059C	CTGAAAAAGTATTGAGGAACCCAACTAC
					R1830105059	CGAAAACAGAGTTATTGTTCTTATGTTTATGTG
					F1910237641G	GTTGAAGACGTCAGACTGTTCCCTC
Chr X_6887230	X	6887230	944	G/C	F1910237641T	GTTGAAGACGTCAGACTGTTCCCTAC
					R1910237641	CAGCTTGGGTCCTGGTATTGG
					FX6887230	CATGGCTTAGTGACGGGATGGTAC
Chr X_62116802	X	62116802	747	A/G	RX6887230C	CTTCACACAAAACACTCTAATACAAGATTACAG
					RX6887230G	CTTCACACAAAACACTCTAATACAAGATTACAC
					FX62116802A	GGCATTTTTCACTTTGTGTCAATTTACA
Chr X_60452363	X	60452363	853	C/A	FX62116802G	GGCATTTTTCACTTTGTGTCAATTTACAG
					RX62116802	CATTTGCTGTAGAGACTGTCATTATTCCA
					FX60452363C	GAGTAACAAGGTCTCTTTTCTGACTGTC
Chr X_113249264	X	113249264	407	G/T	FX60452363T	GAGTAACAAGGTCTCTTTTCTGACTTGT
					R60452363	AGACAAGGACACAATAGGTTTCAGC
					FX113249264G	TGCTTTAGCCAAGGGAAGATTAGAG
Chr 25_263086	25	263086	317	C/T	FX113249264T	TGCTTTAGCCAAGGGAAGATTAGATG
					RX113249264	ACATAAAGTTCAGAAGAGGAAAAGGATGA
					F25263086T	ACCAAGCCAGGAAGTCAGTTTG
					F25263086C	ACCAAGCCAGGAAGTCAGTTC

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 29_10601495	29	10601495	234	G/T	R25263086	AGGTTAAGTGGGATGGTATGCTCT
					F2910601495T	CACTTGAACCTGCCTGTGGTAACTAG
					F2910601495G	CACTTGAACCTGCCTGTGGTAACTC
					R2910601495	GACCTCTTCCATGACTGCTGATGATC
Chr 31_16998649	31	16998649	522	A/G	F3116998649G	CCAGCAGGCTCCACAAAGTTAC
					F3116998649A	CCAGCAGGCTCCACAAAGTTATC
					R3116998649	GACAGCCAAGAAGAAGACAGAACC
Chr 35_6600815	35	6600815	1011	A/C	F356600815	CTTCCGCTCTGTATGATGTAACCCA
					R356600815A	GAAACAACCTCTTCCAATTCCAGGAGTAATG
					R356600815C	GAAACAACCTCTTCCAATTCCAGGAGTAAG
Chr 35_9257022	35	9257022	131	T/G	F359257022	CAAGAACACAAGGTATAAATCTTTGTCCAGA
					R359257022T	CCTAATTCCAAGTGATAACACTGAGATATG
					R359257022G	CCTAATTCCAAGTGATAACACTGAGATAG
Chr 35_9290500	35	9290500	621	T/C	F359290500	GCTTGAACCTCCACACTGTCCTG
					R359290500C	CTAAACAAAGGGAAGTCTAAGCAAATATC
					R359290500T	CTAAACAAAGGGAAGTCTAAGCAAATTGT
Chr 14_31371222	14	31371222	525	G/C	FS1431371222C	AAGCCGGAAGTCATACAGTGTC
					FS1431371222G	AAGCCGGAAGTCATACAGTGTG
					RS1431371222	GACAATGTTAAGGCTTCCAAAGTCC
Chr 16_34358452	16	34358452	294	C/A	FS1634358452	GTGACTCTTATTGTGATAGGGGCTTAAC
					RS1634358452A	CTTCCAACATTGTTGTTACACACTACGTT
					RS1634358452C	CTTCCAACATTGTTGTTACACACTACGTG
Chr 16_34483240	16	34483240	456	C/G	F1634483240	GTCTGAGATCTTCTCTTGGATAATAAAACAATG
					R1634483240C	TCTTGGAGGCTCCAGTGTTAGCAG
					R1634483240G	TCTTGGAGGCTCCAGTGTTAGCAC
Chr 17_75949	17	75949	355	C/G	F1775949G	CCACTGGGGCTGATCCCTTG
					F1775949C	CCACTGGGGCTGATCCCTTC
					R1775949	CATGGAGGTGAAATTTGAGCTTCTG

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 18_29963702	18		975	T/G	F1829963702	GAAAGAATTTGGAAGACTTGCATTATCACATAG
					R1829963702T	CCTGAAAAGAAGATTCCACGCAATC
					R1829963702G	CCTGAAAAGAAGATTCCACGGACG
Chr 14_31359918	14	31359918	208	C/T	FS1431359918	CCTGGATTGTGATCGAGACCAC
					RS1431359918T	ATCCCGGTACCTTGCACCTCT
					RS1431359918C	ATCCCGGTACCTTGCACAAC
Chr 14_31244620	14	31244620	1071	G/A	FS1431244620	AGCAGACTACTTATCAACTAGATTTGACA
					RS1431244620A	ATCCGGCCTTACACACTTGTATC
					RS1431244620G	ATCCGGCCTTACACACTTGTAC
Chr 14_31241643	14	31241643	858	A/G	FS1431241643	GATTCTACAATCTCTTCTCATCTCTTTCC
					RS1431241643A	GGAGTTAACCGAAATTGGACAAGTGT
					RS1431241643G	GGAGTTAACCGAAATTGGACAAGATC
Chr 14_30865065	14	30865065	685	G/A	FS1430865065	CATCAGAGTATCAGCAATCAGAATAGACAC
					RS1430865065A	CGAGCATTTTTTTCATGTGCCTATGAG
					RS1430865065G	CGAGCATTTTTTTCATGTGCCTATGG
Chr 14_30854110	14	30854110	139	T/C	FS1430854110	TCCCAGGTTTGCTACGAGATTTC
					RS1430854110C	TCAGTGGTATCTAGAGTCCATATCACG
					RS1430854110G	TCAGTGGTATCTAGAGTCCATATCACC
Chr X_78141509	X	78141509		T/C	FX78141509C	CCTGGAATTCTGACTTCTAGACCATTG
					FX78141509T	CCTGGAATTCTGACTTCTAGACCATTAC
					RX78141509	ACCAAGTATCTCATGACAAGTTCTACCA
Chr X_78141514	X	78141514	620	T/C	FX_78141514	GAAAGCCTGGAAATGTTGCA
					RX_78141514A	ATGTAGACTTATGATATGATTA
					RX_78141514G	ATGTAGACTTATGATATGATTG
Chr 10_13608628	10	13608628	505	T/C	F10_13608628A	GTTCTTAGGTGCTTGCTGATTA
					F10_13608628T	GTTCTTAGGTGCTTGCTGATTT
					R10_13608628T	ACAAAAGCACATATGGAATTTG
Chr 11_72356400	11	72356400	401	C/A	F11_72356400A	TAGCATGTCAATTTCTATA
					F11_72356400C	TAGCATGTCAATTTCTATC

SNP	Chr	Position	Amplicon length(bp)	Alleles	Primer Name	Primer Sequence
Chr 11_74292760	11	74292760	227	T/C	R11_72356400	GATAGAAAATCTTAATGAATCG
					F11_74292760C	AGCTTATTAAAAATTCCTTAC
					F11_74292760T	AGCTTATTAAAAATTCCTTAT
					R11_74292760	CACCACCGACACTTTGG
Chr 19_10237661	19	10237661	1009	G/A	F19_10237661	ACATTAGCCTTGCTGCCAGCTCT
					R19_10237661G	GGACTGCAATCAGCAAAATAG
					R19_10237661A	GGACTGCAATCAGCAAAAGTA
S19_9631630	19	9631630	845	G/A	F19_9631630A	GAATATTATGCTTAGTGAAACA
					F19_9631630G	GAATATTATGCTTAGTGAAACG
					R19_9631630	ACTAACAGAGTGTTGTAGGT
Chr 21_31508895	21	31508895	528	T/C		
Chr 25_262766	25	262766	300	T/G	F25_262766A	ACAAACGCACCATCTCCGATA
					R25_262766G	CCACCTGGGGTTGCTCCTG
					R25_262766G	CCACCTGGGGTTGCTCCTG
Chr 25_263079	25	263079	225	G/T	F25_263079G	ATGGTTCACCGAGCCAGGACG
					F25_263079T	ATGGTTCACCGAGCCAGGACT
					R25_263079	CTGTGGCGGTTGGACGTTGG