

Table S1. Supplementary sequence data of primers 5'—3'

Primer/ Probe	Forward sequence	Reverse sequence
ORS316	GAGATTTGAGCTTCGTGTTGC	TGGCGTCTTCATAGCATCAG
4W2	ATGCGGAAATCTCTCACC	GACAGCCTCGTCTTGTGA
ha1604	GCAAATGCACTAAAGGCCCC	CCCTACTCAAACCTTACCTC
ha2682	CACAATCGTTTCTTTCCAAAA	ACCCATATGCCCACTCATAA
ha3513	TGACCCATTCAACTTCTTAA	TCATGGTTCCTGATGAGAAT
ha3555	GATATCTCTCATAAGTGCCG	GGTCTTGTGATGACGAA
HA432	CTTTATCCCCCACCCTCC	GGGTTAGTGGCCAGTAGTTGTC
Hap3	GTTTGTGGATCATCTCTATGCG	TGCTTCTTCCTTCTATCTCACTC
HRG01	GGCATGATCAAGTACATAAGCAC AGTC	TATGTACGGGAATGAGCTCCGGTT
HRG02	TGAGTTTACTCCGGCAACTCGTT C	TGCTCTTGAATGGCAGTGGTGATG
N1-3F	GAGAAGAGGGAGGTGTGAAG	AGCGGTTATGGTGAGGTCAG
F4-R1	GTAACGTCTGCGCGCT TGCAGACATCA	GGTTTTGCATGAGGGACTCGATCGA GTG
NSA001392	TTTATTCGTCATTTAAAAAATGCACATTTTTTTGTGTCCTTGTAATCAATTT ACCTGAATCAGTAGCAATGGTGAATTAAGAATGCCACTTGAGCCAGGAAC ATCATAAAGGAGCTCTTCCATAACAAGGCAATGGTAGCGGAAGTGGATCTC CGAATTGATCCAGCGTAGCATCCGCCTCTGCCTCAATAAAACAACATGCC TCACCCGAGCAGTACACCATCAGCTTCCCTGGCGGACCTTCCTTTAGACGT CCAGCGAACGGATAGTAAAAACACCAGAAGCTTAGCCAAAGCCTCTCTTAT [A/G]ACACTAGCCGGATTCTTATTTCTCATCTTTGGATTCCACGATAAACT AT	
NSA-001835	TTGCCAAATATATATAAAACCAAGAATAAAACTATCATGTTCAATTGCGCT CCAAGACTCTTCATTGTCTGTGTCACAACCTACAATATACGACGCATCCTT TGGACACGCATTAATCCCCATGGTTTCTTCCTTGTCTTATCTTGACTGTG AACCCAAGTGACAGGAATTGACAGACCAAAATTCACAGACAGGTAACCTC ATGAGCTGGGATCGCTCGTTTTCTGTCAATCAAAGCTGGGATTAGTGCCTG GTACTCATGCCCGACCCGCGTTGTCTTTTGTGGTTCTCC[A/G]AAAGTGTTA TCAGCAGAAGAACACTGTTTCAAGATGGAGCCACTCGACTCGTTTATAAAC AACATCCGTATCTTTATCCATCTATCCATAGTACACATGAAACATGTTCTT GATCTTTGTCCCCAAAAACAGAACTAATTTTCCCTCGAACTTGACGCG ATTTACAACATTTCCATAACTTTACCCCTAACACAGAAACTTT	
NSA002798	AATGTCCGCCTCGATCCTTCACTTGTACTACCTGATGACGTGCGATTTTCT TCTTGTCTCACC GGTTGTTATTTTCTTCAGATGAATCTTTCTCAGATGTTT CAGTTTGGTGTATGCAAGACT	
NSA-007595	TCAACCCTACATATAAGCATGCAATTCATGTACGAATGTACCTGCACTGA AGAAAAC TGGAACGGGCTTCCATAATAGGCTTTCCGTCACACTCAACA TCCAGCATGTAATCCCTCTCTTCGGAACCACATAAGTAACAGTGTAGGT CCCATCACCCATATCCTTAAACAATACCTTCTTGTTCAGACCC[A/G]CCAAC ACCGACACCAGGCGAAACCTTACCTTAACTGGGCTCCACCCTTGGGTA CTTTACGACCATCTGCATCCTTCGTAACAACCAGCAATGAAGACGGTGCA CAAGCAGTTCCTCCAGCAACACCAGTCCCAGCAGCCGTGCTC	
ORS 1068	AATTTGTCGACG GTGACGATAG	TTTTGTCAATTCATTACCCAAGG
ORS 1088	ACTATCGAACCTC CCTCCAAAC	GGATTTCTTTCATCTTTGTGGTG
ORS 149	GCTCTCTATCTCC CTTGACTCG	TGCTCTAAGATCTCAGGCGTGC
ORS191	ACTGCGTTTGTGA TTACTGGTG	CATGCACTGAAGACATACACCC

ORS 337	TTGGTTCATTCAT CCTTGGTC	GGGTTGGTGGTTAATTCGTC
ORS 423	TCATATGGAGGG ATCTGTTGG	AAGCAACCATAATGCATCAGAA
ORS 488	CCCATTCACTCCT GTTTCCA	CTCCGGTGAGGATTTGGATT
ORS 920	CGTTGGACGAAG AACTTGATT	ACTTCCGTTTGTCCGAGCTT
ORS 928	CATGGTTATTTTG GTTTGGGTTT	GCTATTATCATGTCCTTGTCTTTT
ORS 988	TTGATTTGGTGAA AGTGTGAAGC	CGAACATTATTTACATCGCTTTGTC
ORS1039	AGAAATGCTCTTT GGAGGAGATG	TTGTCAACTTCCTTTCTTCATCTTT
ORS1114	AGATGGTGGCAG GAGAGTTAAAG	GCAGAAACAGATCAGGAGGGTAT
ORS1129	CTCTTAGCCCAGA GCCAGTTT	TGAGAGGTGTGTAGAATCAGAGGA
ORS1182	TCTTCTGATTGTA AGCGGTGTTC	TGTCATGTTCTCTACCGAGCTTT
ORS191	ACTGCGTTTGTGA TACTGGTG	CATGCACTGAAGACATACACCC
ORS296	CCTTGCACCTTAGC CCA	GCATTCACAACAAACATCATCA
ORS311	TCCCGAATTAGCC AAAGAAC	GGTGTGGGTGTTGCAGCTAT
ORS316	ATATTAAGTTTTG GTTTTAGCCAGA A	ATATTAAGTTTTGGTTTTAGCCAGAA
ORS316	ATATTAAGTTTTG GTTTTAGCCAGA A	ATATTAAGTTTTGGTTTTAGCCAGAA
ORS321	TGTCGAAGAGTT GTCGGAAC	GGGAAGGTGAAACCCTAACC
ORS328	GACCTGTAGGCC AATATGAGACTT	TTATACCGGTGTTGTATCGTATCC
ORS333	CGGTAAAGATGG TTCAGTTGG	ATATTAAGTTTTGGTTTTAGCCAGAA
ORS349	CCCTAACCAATAT GCTCCCATT	TGGATAAACGAGTGAATGGTGT
ORS45	AGAACGTATCTA TCACGTGCCT	GATATTGAGCCTGACACTCACC
ORS509	CAACGAAAAGAC AGAATCGAAA	CCGGGAATTTTACAAGGTGA
ORS581	TCTCGTATAACGT GCCCTGA	ATCTTATGGTCCGCACAAGC
ORS581	TCTCGTATAACGT GCCCTGA	ATCTTATGGTCCGCACAAGC
ORS588	CGGTTCTCTTTCT CACCTCAA	TCTCCCGTTCGGACTTCTC
ORS591	TTTTATTCTACGC AGACAAGACG	GTTGCAGGAAAGGTGCAAAG
ORS605	CGCGTGATGTGA CGATTATT	ACGGAGCAAAGTTTCGAGGT
ORS610	TTGTGACCTTCTC	AGGAAGCGAAACGAGGAAGT

	CCTGCTC	
ORS630	GAGATTTGAGCTT CGTGTTGC	GCACGACCCGGATATGTAAC
ORS662	CGGGTTGGATAT GGAGTCAA	CCTTTACAAACGAAGCACAATTC
ORS675	CGGCTAAGAGAA AGGGAGAGA	CGTCGCTGAACCAACAGTTAT
ORS716	CCCCACAACCCA TAGCCTAA	GAACTAACCGCCATCCAAGA
ORS728	CTCCATAGCAAC CACCTGAAA	CCAAACTCTGAATGATACTTGTGAC
ORS728	GAGATTTGAGCTT CGTGTTGC	CCAAACTCTGAATGATACTTGTGAC
ORS78	GTT CGT CGA GTA CAT GTT CTGC	TTT CCC TCT GGA AAG TTG TCA
ORS781	GTCAACCCATGA CCCAAACC	GATGTGGAGGAGAGAGGGTGT
ORS799	ATATTAAGTTTTG GTTTTAGCCAGA A	ACTCCCTCCCATTCTCGTCT
ORS811	CCTTCTCCTCAAT CTTTGGCTA	AGGAATGAAATGGGTGTGTGT
ORS815	GGAAAGCAGCAA TGGTTCATAA	CACCAAGTGCAAACCCTAGAAA
ORS889	ATCAACTACGTC ACGATACTCC	GTTCTCATGGATTCTCACAATC
ORS963	CCTCCTAGGGTGT GAGGATGAG	TCGAACTCTGGCTCTTGTAGTTG
RS1008	AGCGGTTATGGT GAGGTCAG	AGCGGTTATGGTGAGGTCAG
ORS1036	CCCTTCACTTCC TATTTTCTATTCA	CTAAGAGGGGTCGGTATGATTC
ORS1040	CTGCTGATCGTTT CTTGGATAGA	TGCTAATCCTTCTAATCAACTCCAC
ORS1114	AGATGGTGGCAG GAGAGTTAAAG	GCAGAAACAGATCAGGAGGGTAT
S8-100385559	CTAGTTTAATCTATTAGATCATATATAATATATATGTGATCTACTTAATGG TTATGCAACAAGAAAAGATAGGAGTTGGAGGTATTAATAGTTACATTGGC AGGAATAGTTTTTTCAAGAAAACGCTTGCTAGGAGCGGTGTGATCAGTGA GCGAAGGTAATCTGAACTCATGCATCATCCAGTCGGTTTTGACACCCTT[C/ A]GCAGCTCTCCCTTTGTAGAACACAAGTGATTTCTTCAAGCCAATGCATT TCGAACCCTCAGATGCATAGATCGGCCGGTCTGTACCTGTCGCTTTCCAA AATCCTGCTCCGGTTACGCGGTTTGGCCTTGCCTGTTGCGGTACTTCCGG TCCCTTGACAGTAGAAGTACCACTCTTTTTCTCCGGTCATCGCCAATC allele [C/A]	
SCT06-950	CAAGGGCAGAAAAC AAAACCTACAC	CAAGGGCAGAGAGTTTTCCAC
SFW00211	TTTTGTGTGCGGTTAACTTGATTCCGCCGCCCTTAGCCCAGATCACTGGACC AATGGAGTA[T/G]GGAGCATCATTCAACACCTNNTNNTTCCCTNNTAACA TNCATATATGAAATCTTTAGC	
SFW01272	GCTACCGGCGAACGAAAACGGACATCTTAAACCTCATCCGTCGCAACAAA ATCCGTCTGC[A/G]AAGTTGCTGACGTTGCCACNATTTTACTATTGCTC GAGTCGCATCTGTTCTCTTTT	
ZVG53	CGTCCGATCAACCTCCACCATGCCGATCCGTTCAATCGCCATCGGACAAC	

	<p>ACCATGAGTTCAGTCACCCGGATACTATTAAGGCCGGGTTAGCTGAGTTC  ATCTCCACCCTCATTTTC  GTGTTTGCCGGTTCAGGTTCTGGCATGGCATTTCGCCAAGCTTACTAACGAT  GGTGCGGCAACCCCAACTGGCCTCTTGGCGGCTGCGATCGCTCACGCACT  TGCCCTGTTTCGTTGCGGTTTCGGTTGGTGCCAATATCTCTGGTGGACATGT  TAACCCTGCTGTCACCTTTGGCGCCTTTGTTGGTGGGAACATCAGTTTTAT  TCGTGGTGTGTTTATGTTATTGCTCAGTTGCTTGGATCTACTGTCGCTTGC  TTGCTACTTAAGTTTGTCACTAATGACATGGCTGTTGGCGCTTTCTCCTTA  TCCGCGGGTGTGGGGTTTCAAACGCTTTGGTCTTTGAGATCGTGATGACA  TTCGGGCTTGTCTACACCGTCTATGCAACCGCAGTTGACCCCAAGAAGGG  TACTTTGGGAACAATTGCACCAATTGCAATTGGTTTCATTGTTGGAGCAA  ACATTTTGGCTGGTGGAGCATTACCGGTGCATCAATGAACCCAGCTGTG  TCTTTTGGACCCGCTTTGGTGGAGCTGGACCTGGGCCAATCACTGGATTTAC  TGGGTTGGGCCTTTGGTGGTGGTGGTCTTGGCTGGGCTTATCTATGAGCTC  CTCTCATTAAACAACTCATGACCATTGCCCCATCTGCCTAAATTTGTT  GGTTTTCTAGTTTTTTGAATTTTCGTCAGCTTGGCTTGGATTGATTGTCATT  TGTCGATATTGGTTGTGAATTTCCATATCATTTGATGTATTGGAAAAAT  TCTGGGTTGGGTTGAATATTGATGGGCTTTCTGGTT</p>		
ZVG61	<p>CGTTTTTGGAAACAAGTGCGAAGATGCCACCAATGTCGAACAGGCTTTC  ATGGCCATGACTGCATCCATCAAAGATAGGATGGCTAGTCAACCAGCTAT  GAACGCGTCGAAGCCTCCAACGGTCAACATTCGTGGTCAACCCGCTCAC  AGAACAGTGGATGCTGCTCTTAGTGGTTGTGTTTGTGGTGGCAGTGTAC  AAGTATTATCCTTGTTAGGGTTGGATTCTTTTACTTTCTTTGTTTCTGACTG  TTTTGGATTGTATAAAGTTCAAGAATTGTTAATTAATGTTTCGACTATGT  TATGTCAAAAAAACATAGATATGTTGTCGTTTCAATTTAAATATCATGT  TTTTATCCGTCG</p>		
NSA_008457	<p>GCAAGTCGTGCTTGAGCTAAGGCTCGGCTCATTTACACCCCTAAAAAGAT  CTGTGTAAGTCAAGTCAAGAAAACATTATACGC[A/G]TATACCTTTCGC  GGTTTTTATCAGCTGAGGAGTGCTTAGATGAAGAATAATGTGTTCTTCT  TTCAGTATCTTCTCATCAAACAACAGCAGACTTTTCAGTTTCTTTCTCTT  TTATCTTTTCAGTTTTGTTAACTTTACCTCCAGTAGTAACTTCTCAACTGT  TTTAGTCTCTGAAACAGCTCCCCAAGTGATGTTCTATGCTCCTTTTCTTTC  TTAACCGTCACTGTTTCCGACAGTTCAATTACCGAACCAACAGATAATC  TTGAAGCGGACAAACAACCGCTGCATTCTCCTTTCCTTCGGGTTCTAAAAAC  CTTCTCTAACTCATCATTAAATGAGCTTCAGTTCA</p>		
ORS1008	<table border="1"> <tr> <td>GATCAC CTT CAC TAT CCA CAA CC</td> <td>CAT GAG GGC ATT CTT GTC ATT T</td> </tr> </table>	GATCAC CTT CAC TAT CCA CAA CC	CAT GAG GGC ATT CTT GTC ATT T
GATCAC CTT CAC TAT CCA CAA CC	CAT GAG GGC ATT CTT GTC ATT T		
SNP SFW-04052	<p>CCTGGAGATGGACCAATTGTGTTGGTTTTAGC[T/C]CCGACTCGTGAAC TG  GCGGTTCAAATACAACAAGAAGCAACTAAATTTGGCGCATCGTC</p>		
SFW06597	<p>GAAGAACGGGATTTGGGATTTGGTTGCGAAAGAAATAGGGTGCGATTTCG  AAGTCTTCGGC[A/G]AGCTTGAAGGTGGTTTACGTTAAGTATCTAGACTTG  TTGGATGAGTGGTTTTTGA</p>		
SFW04358	<p>AATGCGATACGCAAGAATAGATCGACGATGGGGTTTCAGTCATTGCCATA  TGTGGTGTCT[T/C]TATTTAGCGCGTTGATGTGGTTACTACGCGTTAATC  AAAGGAGCGACGGCACATT</p>		
NSA_003564	<p>CTATATATCATATAGCGGACCTTGACCGCTATTCAATTTTGGACCGCTTTA  ACTGCATAGGGATAGCTATGTACATTGTAAGTATTCATGAAATTTTCAGCT  ACCGTACAGCAAGA[A/G]ATGATATTTACTCATAAAAATTTGTGGTGCATG  TGACATTTTTTACTGGTATTTGACGAAACATAATGGGTCAATTTGAGAACCG  GAAAAGAAGCGTTCGCTGGTGCACATTTTTGTTTTGTATCCCTACGTAAAT  TTACGACAATCATCATCTAAGAAATCTCTCATGTTGA allele AA/GG</p>		
NSA_006089	<p>TTTTATAAATATTAATGTGTTACTTATGTTTATATGAAAGTTTTGTTCTTAC  AATCATAAATTTCTAAACCTTTAAGTGAAACGATTTAGTGAGTTTAGCTTTT  TATTATATATATTAGTTTTCTCCGGGTTGGGTTGCTCCTCAAATAATTCAG</p>		

	CCTTTTATTTTA[- /G]TTTTATAAATATTTAATGTGTAAATATGACTATGAAAACAACTTTAAC AAAATAATAGTATAATTCTTTGTATAAACTACTTTGGGCTACTAGTGACC CGTTCAACGTGTTCTCCTTTTAGTTTTTTTTTTGAATTTTGAATGAACCAT CTGATCCGTTTGA	
67N04_R	GGCTGCCATTAGTGAAGGAG	
PPR621.5_R	CCGGATTGTGTTCCGATTAG	
C3_9713	CAAGTGGAGCAGCGATTACA	CTGAAGCAAACCATGCAAGA
C3_9702	TTCAAATGGAACCTGAAATGC	TGTCAAGAGTTTGGAGGTGTG
p-AHAS19	CGCCGCCCTGTTCGTGAC	TTCCTCCCCGTTTCGCATTAC
p-AHASNidF/ pAHAS122TMU	TGTTCTCTCCGACTCCAAA	TGGTGGATCTCCATTGAGTT
p-AHASNidF/ pAHAS122TWT	TGTTCTCTCCGACTCCAAA	TGGTGGATCTCCATTGAGTC
AHAS16 / AHAS17	CCCCGTTTCGCATTACCC ATCACT	ACCAACA CGTCTGCGCCTTTTCTC
ORS1093	CATATATGTGGGTTCGCATATAAC C	CCTGTGGATCTTTCTAGCAACAA
ORS222	AATTGAGCTTCAATTTGGTGGA	ATCCGTGCGAATTAACCATCAG
ORS598	ATAGTCCCTGACGTGGATGG	CCAAATGTGAGGTGGGAGAA
ORS716	CCCCACAACCCATAGCCTAA	GAACTAACCGCCATCCAAGA
ORS312	GCACGCCTCAAGAGTTTTTTT	TGCTCATCTGCTTTGCTTTG
ORS599	GAAAGGAAGTAGCGGTGGTG	TTCCCTATCACACGCCTCTC
γ-TMT F1 (Forward)	ATGTCTATTTGAACACCACGTA	
γ-TMT F2 (Forward)	ACGTGCCATTGTTGACACACA	
γ-TMT F9 (Forward)	ACTCTCCGATCACCGTTCTG	
γ-TMT R24 (Reverse)	ACCACACCCGACATCAACTA	