SNP Settings otal number of SNPs: lumber of SNPs in rea 'hread Compensation .ength Value:	iction:	88 75		Run	Tm settings TnT Tm min: TnT Tm max: PrASE Tm min: PrASE Tm max:		°C 6 °C
INTP Combinations		104		Run		r	
AGC/AGT Number of AGC:	36	AGC/CTA Number of AGC: Number of CTA:	46	CTG/AGT Number of CTG:	39	CTG/CTA Number of CTG:	54
Number of AGT: Score:	39 2736	Score:	29 2086	Number of AGT: Score:	36 2968	Number of CTA: Score:	21 2396
Chosen		Chosen		Chosen		Chosen	
			Solor	ct Primers			

**Supplementary Figure 1a -** The 'Data and Scoring' tab included in the TnT software. Settings, SNP distributions and the total score of the four different 3-dNTP combinations are presented.

Data and Scoring 3-dNTP Extensio		nsion	IS	Tht and PrAS	Е ргіп	ners														
	-			-													-			
SNP Id	ype		3-dN				3-d		Ext.	. Ext	3-dN.		Ext.			. <u>Sc.</u>	. E		Exclude	
rs8679		СЛ	CTA	16	4	YACT	TGC	_	1		GTA	8	3	RTT	AGC	_	1	R		
rs10847	R	A/G	AGC	16	4	RGAC	GTA		3	RGA	TGC	8	3	YTG	CTA	_	2	YT		
rs14804	Y	СЛ	CTA	8	3	YAT	TGC		1	Y	GTA	8	3	RTG	AGC	-	1	R		
rs875233	Y	СЛ	CTA	8	3	YCC	TGC		4	YCCG	GTA	2	1	R	AGC		2	RC		
rs2273267	W	A/T	CTA	2	1	W	GTA	-	3	WGA	GTA	8	3	WTG	CTA	4	2	WT		
rs3021094	M	A/C	CTA	2	1	M	AGC	32	9	MGGAGGACC	GTA	2	1	K	TGC		5	KCCTC		
rs3024496	Y	сл	CTA	16	4	YATA	TGC		1	Y	GTA	32	10	RAGAGAGGTA	AGC	_	8	RAGAGAGG		
rs3765702	Y	сл	CTA	2	1	Y	TGC		12	YGGCTCGGTCTC		4	2	RT	AGC		1	R		
rs3765713	R	A/G	AGC	64	6	RCAGAG		2	1	R	TGC	32	9	YTCGTTCTG	CTA		3	YTC		
rs6166	R	A/G	AGC	2	1	R	GTA		6	RTGGTT	TGC	64	6	YTGGTG	CTA	-	2	YT		
rs17561	K	GЛ	GTA	2	1	K	TGC	4	2	KC	CTA	4	2	MT	AGC	2	1	M		
rs1042821	Y	СЛ	CTA	4	2	YC	TGC	32	8	YCGGGGGC	GTA	8	3	RGG	AGC	64	5	RGGCC		
rs1800587	Y	СЛТ	CTA	64	5	YCATT	TGC	4	2	YC	GTA	64	6	RTGTTG	AGC	2	1	R		
rs2229571	S	C/G	AGC	32	9	SAAAAACAG	TGC	2	1	S	TGC	32	8	SCTCCCTG	AGC	4	2	SC		
rs3136228	K	GЛ	GTA	2	1	K	TGC	32	10	KCTCCTTGCG	CTA	4	2	MC	AGC	0	21	MCGGAGCGA		
rs3210400	R	A/G	AGC	64	7	RCAGAGG	GTA	2	1	R	TGC	16	11	YCTGCCCGCTC	CTA	8	3	YCT		
rs1464645	Y	сл	CTA	2	1	Y	TGC	4	2	YG	GTA	4	2	RT	AGC	2	1	R		
rs2286940	Y	СЛТ	CTA	4	2	YA	TGC	2	1	Y	GTA	64	6	RGTAGA	AGC	4	2	RG		1
rs11466512	W	A/T	CTA	8	3	WCA	GTA	2	1	W	GTA	32	9	WTGGGGAAA	CTA	4	2	WT		1
rs2254514	Y	сл	CTA	2	1	Y	TGC	64	5	YGTGG	GTA	16	4	RATG	AGC	4	2	RA		11

**Supplementary Figure 1b** - The second tab in the software displaying all possible in silico extensions for each SNP. The first three columns represent SNP Id, SNP Type and SNP variation. In the following columns, the score, the number of incorporated bases (Extension length) and the bases incorporated (Extension) in each possible in silico 3-dNTP extension are indicated. Note that self-complimentary SNPs (W and S) generate two different dNTP extensions, while all others generate four. Marking of the last column excludes the SNP.

ata and Scoring	3-dNTP Extensions	Tnt and PrASE primers			
nT Primers				PrASE Primers	
rs3021094_1_ph	D AGAGTCAAGTTATTTA	AAAAATCTGGCCgctctgaaggc	ggtgta 🔺	rs3021094_1_pho AGAGTCAAGTTATTTAAAAAATCTGGCCgctctgaaggcggtgta	
rs6166_2_pho C	CACTTACATACTTGTCC	CTCTAAGgctctgaaggcggtgta	tgacat	rs6166_2_pho CCACTTACATACTTGTCCCTCTAAGgctctgaaggcggtgtatgacat	
rs1800587_3_ph	o CCTGGTTACTATTAT	FAAAGAATTTCTCgctctgaaggo	ggtgta	rs1800587_3_pho CCTGGTTACTATTATTAAAGAATTTCTCgctctgaaggcggtgt	
rs2286940_4_ph	o CTGCTTATCTGACAA	CCCTCAGATCgctctgaaggcgg	gtgtatg	rs2286940_4_pho CTGCTTATCTGACAACCCTCAGATCgctctgaaggcggtgtatg	
rs2254514_5_ph	o ATGGATGGCTGCTG	3AAACCCCTgctctgaaggcggtg	itatgad	rs2254514_5_pho ATGGATGGCTGCTGGAAACCCCTgctctgaaggcggtgtatgac	
rs1042124_6_ph	o CCGATCCCTATCTAC	CTTTCTCTCCgctctgaaggcggt	gtatga	rs1042124_6_pho CCGATCCCTATCTACTTTCTCCCgctctgaaggcggtgtatga	
rs1295686_7_ph	acctctttgtcctgc	AGCAGTTTTCgctctgaaggcgg	gtgtatg	rs1295686_7_pho ACCTCTTTGTCCTGCAGCAGTTTTCgctctgaaggcggtgtatg	
rs172520_8_pho	ATTTTGTGGTGAAAGT	GCCTAAATTTGgctctgaaggcg	gtgtatg	rs172520_8_pho ATTTTGTGGTGAAAGTGCCTAAATTTGgctctgaaggcggtgtatg	
rs998074_9_pho	ATCGCGCTCCCTGAG	GATACTCAgctctgaaggcggtgt	atgaca	rs998074_9_pho ATCGCGCTCCCTGAGGATACTCAgctctgaaggcggtgtatgaca	
		AGTTGTGCATAgetetgaaggegg		rs1998206_10_pho CCAGCTTCCCAGAAGTTGTGCATAgctctgaaggcggtgtatg	
		TGCAAAGTAGATAgctctgaagg		rs2301635_11_pho AAAGAAACCAATGTTTGCAAAGTAGATAgctctgaaggcggtg	
		CGCCTGCGATgctctgaaggcgg		rs3824120_12_pho AGGGCAGCTGTTCCGCCTGCGATgctctgaaggcggtgtatg	
		ACAAAGGGAgctctgaaggcggt		rs17658_13_pho CCTTGGAGTTTGAAAGACAAAGGGAgctctgaaggcggtgtatga	
		TGGTTGCTGgctctgaaggcggtg		rs1111350_14_pho CTGAGTTGGGGGGGGGGTGGTTGCTGgctctgaaggcggtgtatga	
		GAACTCGAATTgctctgaaggcg		rs2228527_15_pho CGCCAAGTTTGAAGGAACTCGAATTgctctgaaggcggtgtat	
		CCGACACTGTTgctctgaaggc		rs2235128_16_pho CCCCCACATTTGTGCCGACACTGTTgctctgaaggcggtgta	
rs2227973_17_p	ho CCCAATGCTTCCAA	AGAGGAAAGGgctctgaaggcgg	gtgtatg	rs2227973_17_pho CCCAATGCTTCCAAAGAGGAAAGGgctctgaaggcggtgtatg	
rs144848_18_ph	0 ACATTTGAATCTAATG	GATCAGTATCATgctctgaaggo	:ggtgta 🚽	rs144848_18_pho ACATTTGAATCTAATGGATCAGTATCATgctctgaaggcggtgtt	

**Supplementary Figure 1c** - Primer selection for the TnT and PrASE reactions. Tags are marked as lowercase and primer sequences as uppercase letters.