

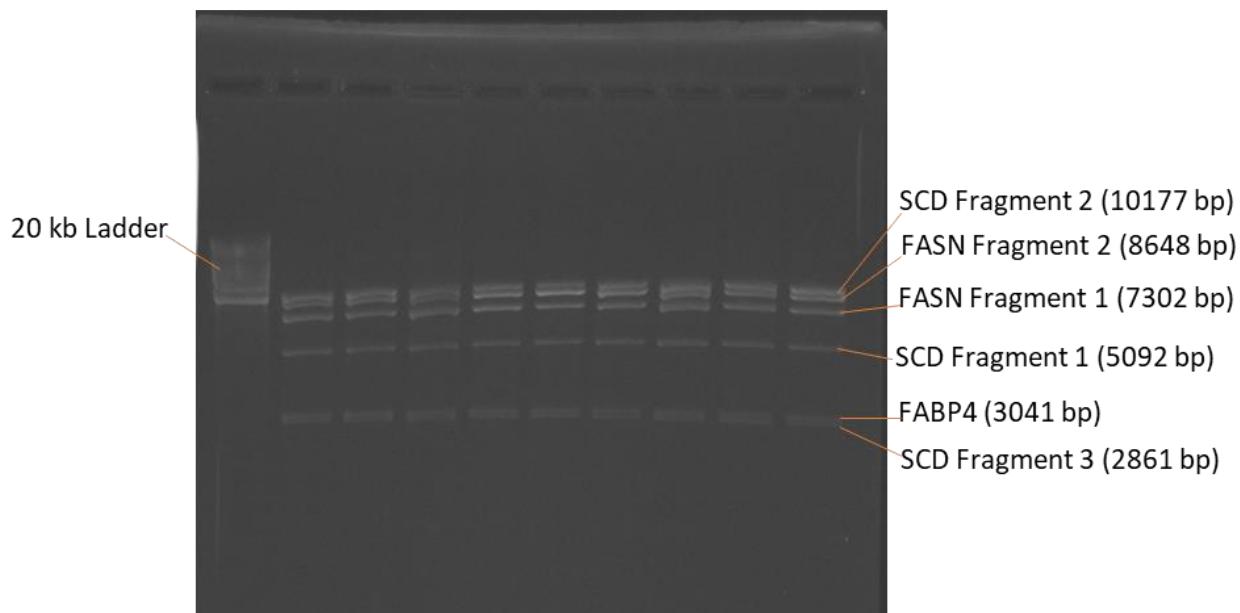


## Supplementary materials

**Table S1.** Primer sequences for target gene amplification

Gene <sup>1</sup>	Fragment	Primer	Sequence (5' to 3')	Annealing temp (°C)	Product size (bp)
SCD	1	Forward	GGAAGAACATCCGCCCTGAAAT	60	5092
		Reverse	AGGAAGCGAGATTGGCACTGTATG	60	
SCD	2	Forward	GGAAGAACATCCGCCCTGAAAT	60	10177
		Reverse	TGCCTCTGAGGGGATCTATTGGT	60	
SCD	3	Forward	ATGAGCCACACTGTGAACAAACCT	60	2861
		Reverse	TTCTTTCTGGACAGGCAAGCCT	60	
FASN	1	Forward	TTGAGCTTCTGAGTATGATGGGAG	68	7302
		Reverse	ACCATCTATTATGCCTCCCTAAC	68	
FASN	2	Forward	CTATAAGATCGGTGAGTCCTTGCA	68	8648
		Reverse	TAGTATTATTACAGCTCCCTGGC	68	
FABP4	-	Forward	GCTAAGACTGCCTGTATGTTCCCC	60	3041
		Reverse	ACCTAGAGAAAATAGACAATCGCCC	60	

<sup>1</sup>SCD, stearoyl-CoA desaturase; FASN, fatty acid synthase; FABP4, fatty acid binding protein 4

**Figure S1.** Gel image of the amplification products of the three target genes visualised in 0.8 % agarose gel.

**Table S2.** Genetic variants detected in the FABP4, SCD and FASN genes of tropically adapted crossbred steers.

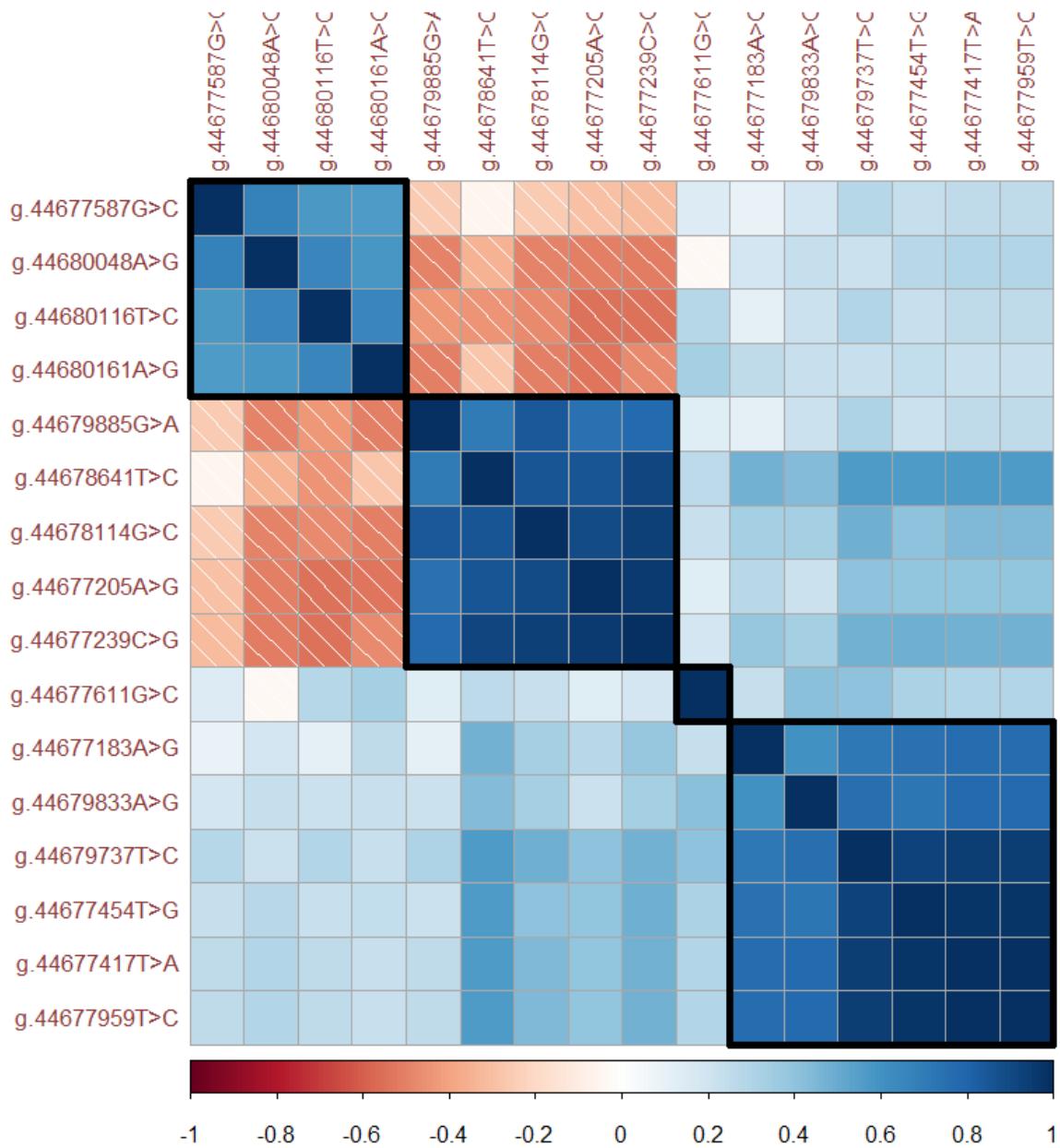
Gene/SNP <sup>1</sup>	dbSNP ID	Location	Genetic diversity <sup>2</sup>				
			MAF	He	PIC	HWE ( $\chi^2$ )	HWE p-value
<b>FABP4</b>							
g.44677183A>G	rs109346428	Intron 3	0.29	0.41	0.33	0.01	0.996
g.44677205A>G	rs109388335	Intron 3	0.44	0.49	0.37	2.72	0.257
g.44677239C>G	rs110383592	Exon 3	0.41	0.48	0.37	1.55	0.462
g.44677417T>A	rs109014985	Intron 2	0.25	0.38	0.30	0.00	1.000
g.44677454T>G	rs134173517	Intron 2	0.24	0.36	0.30	0.04	0.981
g.44677587G>C	rs723716479	Intron 2	0.14	0.23	0.21	0.02	0.989
g.44677611G>C	rs41729172	Intron 2	0.16	0.26	0.23	9.59	0.008
g.44677959T>C	rs110757796	Exon 2	0.25	0.38	0.30	0.00	1.000
g.44678114G>C	-	Intron 1	0.36	0.46	0.36	1.02	0.601
g.44678641T>C	rs110490217	Intron 1	0.46	0.50	0.37	0.28	0.868
g.44679737T>C	rs137643896	Intron 1	0.27	0.40	0.32	0.12	0.941
g.44679833A>G	rs133333024	Intron 1	0.16	0.26	0.23	0.04	0.983
g.44679885G>A	-	Intron 1	0.36	0.46	0.36	1.02	0.601
g.44680048A>G	rs468994137	Intron 1	0.22	0.34	0.28	0.35	0.838
g.44680116T>C	-	Intron 1	0.25	0.38	0.30	0.59	0.744
g.44680161A>G	rs468130226	Intron 1	0.32	0.44	0.34	0.00	1.000
<b>SCD</b>							
g.21266045C>T	-	Intron 2	0.34	0.45	0.35	0.04	0.978
g.21266286C>T	-	Intron 2	0.35	0.46	0.35	0.38	0.826
g.21266629G>T	-	Intron 2	0.46	0.50	0.37	0.28	0.868
g.21266904A>G	-	Intron 2	0.29	0.41	0.33	1.79	0.408
g.21267450C>A	-	Intron 2	0.33	0.44	0.35	0.05	0.977
g.21268549G>A	rs208238577	Intron 2	0.28	0.40	0.32	0.02	0.990
g.21269019A>G	rs41255688	Intron 3	0.33	0.44	0.35	0.05	0.977
g.21269378A>G	rs210411417	Intron 3	0.36	0.46	0.36	0.15	0.928
g.21269494G>C	-	Intron 3	0.33	0.44	0.35	0.05	0.977
g.21270336A>G	rs41255689	Intron 3	0.25	0.38	0.30	0.00	1.000
g.21270739A>G	rs41255690	Intron 4	0.38	0.47	0.36	0.21	0.899
g.21271111A>G	rs132709487	Intron 4	0.25	0.38	0.30	0.00	1.000
g.21271263C>A	rs378548458	Intron 4	0.31	0.43	0.34	0.04	0.978
g.21271392G>A	rs211294052	Intron 4	0.31	0.43	0.34	0.04	0.978
g.21271645G>A	rs380628677	Intron 4	0.31	0.43	0.34	0.04	0.978
g.21271725C>G	rs378000803	Intron 4	0.31	0.43	0.34	0.04	0.978
g.21271813A>G	rs517923141	Intron 4	0.16	0.26	0.23	0.82	0.663
g.21272246A>G	rs41255691	Exon 5	0.25	0.38	0.30	0.00	1.000
g.21272306T>C	-	Exon 5	0.31	0.43	0.34	0.04	0.978

g.21272422C>T	rs41255693	Exon 5	0.31	0.43	0.34	0.04	0.978
g.21272423G>A	rs208932125	Exon 5	0.28	0.40	0.32	0.02	0.990
g.21272529A>G	rs383175036	Intron 5	0.31	0.43	0.34	0.04	0.978
g.21272815A>G	rs207511283	Intron 5	0.36	0.46	0.36	0.15	0.928
g.21272968C>T	rs209994060	Intron 5	0.44	0.49	0.37	1.13	0.568
g.21272984C>T	-	Intron 5	0.31	0.43	0.34	0.04	0.978
g.21272993T>C	-	Intron 5	0.44	0.49	0.37	1.13	0.568
g.21273051C>G	rs208495936	Intron 5	0.36	0.46	0.36	0.15	0.928
g.21273073C>A	rs211681261	Intron 5	0.24	0.36	0.30	0.04	0.981
g.21273403G>T	rs209591043	Intron 5	0.24	0.36	0.30	0.04	0.981
g.21273598C>T	-	Intron 5	0.24	0.36	0.30	0.04	0.981
g.21273692T>C	rs208058585	Intron 5	0.24	0.36	0.30	0.04	0.981
g.21273866C>T	-	Intron 5	0.38	0.47	0.36	0.59	0.744
g.21273968T>C	rs211184136	Intron 5	0.28	0.40	0.32	0.02	0.990
g.21274425G>T	rs384532210	Intron 5	0.31	0.43	0.34	0.04	0.978
g.21274555A>G	rs456785055	Intron 5	0.44	0.49	0.37	1.13	0.568
g.21274609C>T	rs209423801	Intron 5	0.44	0.49	0.37	1.13	0.568
g.21275001G>C	rs211483324	Intron 5	0.31	0.43	0.34	0.04	0.978
g.21275659G>T	rs41255694	Exon 6	0.31	0.43	0.34	0.04	0.978
g.21275732G>C	-	Exon 6	0.31	0.43	0.34	0.04	0.978
g.21276306C>T	rs521409231	Exon 6	0.28	0.40	0.32	0.02	0.990
g.21276672A>G	rs41255698	Exon 6	0.23	0.35	0.29	0.15	0.926
g.21276808C>T	-	Exon 6	0.35	0.46	0.35	0.38	0.826
<b>FASN</b>							
g.50782658G>T	rs519685521	Exon 9	0.39	0.47	0.36	3.06	0.217
g.50782773G>A	rs715140536	Exon 9	0.39	0.47	0.36	3.06	0.217
g.50783660T>G	-	Intron 11	0.40	0.48	0.36	4.41	0.110
g.50783803G>A	-	Intron 11	0.38	0.47	0.36	0.59	0.744
g.50783866C>A	-	Intron 11	0.24	0.36	0.30	0.97	0.615
g.50784242C>T	rs800844468	Exon 12	0.32	0.44	0.34	0.00	1.000
g.50784533C>G	rs481622676	Exon 13	0.32	0.44	0.34	3.91	0.142
g.50784824G>A	rs209227647	Exon 14	0.50	0.50	0.38	12.00	0.002
g.50785253C>T	-	Intron 15	0.43	0.49	0.37	6.27	0.044
g.50785330C>T	-	Intron 15	0.40	0.48	0.36	4.41	0.110
g.50785474C>T	rs209214391	Exon 16	0.40	0.48	0.36	4.41	0.110
g.50786221A>G	rs518879624	Exon 19	0.48	0.50	0.37	2.97	0.227
g.50786496A>G	-	Exon 20	0.39	0.47	0.36	3.06	0.217
g.50786977A>G	-	Intron 21	0.17	0.28	0.24	7.68	0.021
g.50787009A>G	-	Intron 21	0.11	0.20	0.18	3.80	0.150
g.50787362C>T	-	Intron 21	0.46	0.50	0.37	2.88	0.238
g.50787774G>A	-	Intron 22	0.40	0.48	0.36	2.24	0.327
g.50787886A>G	-	Intron 22	0.24	0.37	0.30	2.98	0.226

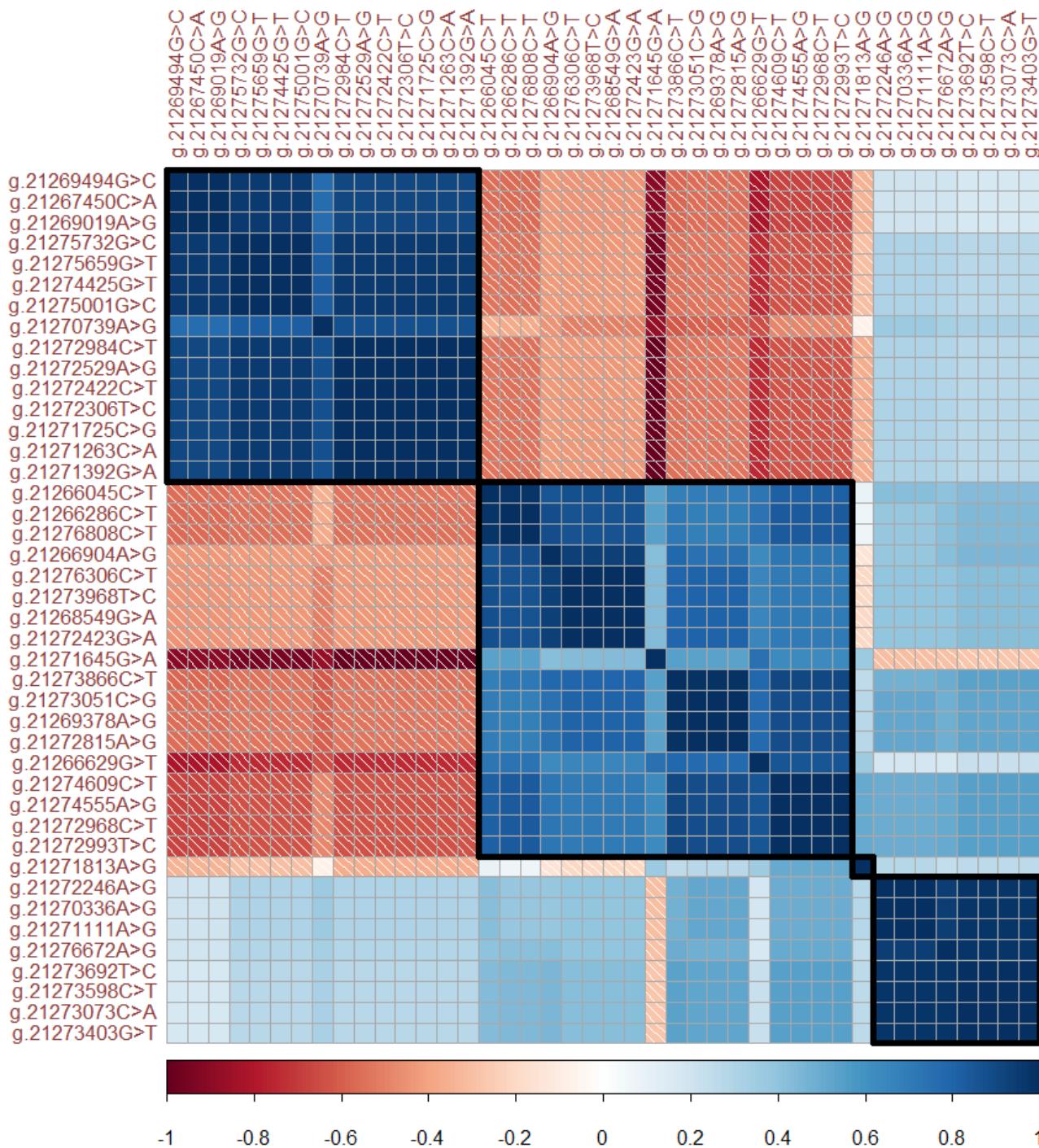
g.50788319C>T	-	Exon 23	0.23	0.35	0.29	0.18	0.913
g.50788575T>C	rs41919993	Exon 24	0.17	0.28	0.24	7.68	0.021
g.50788691T>C	rs526036338	Exon 24	0.26	0.39	0.31	4.23	0.121
g.50788956C>T	-	Intron 25	0.26	0.39	0.31	4.23	0.121
g.50789448C>T	rs516607144	Exon 27	0.31	0.43	0.34	4.95	0.084
g.50789882T>C	-	Intron 28	0.11	0.20	0.18	3.80	0.150
g.50790973C>A	rs109149276	Exon 32	0.17	0.28	0.24	7.68	0.022
g.50791045G>A	-	Intron 32	0.23	0.35	0.29	0.18	0.913
g.50792445C>T	-	Intron 37	0.40	0.48	0.36	0.80	0.671
g.50792548T>G	-	Intron 37	0.43	0.49	0.37	3.66	0.160
g.50793475C>T	-	Intron 39	0.40	0.48	0.36	2.24	0.327
g.50793872G>A	-	Exon 41	0.44	0.49	0.37	5.00	0.082

<sup>1</sup>SNP, single nucleotide polymorphism; FABP4, Fatty acid binding protein 4; SCD, stearoyl-CoA desaturase; FASN, fatty acid synthase.

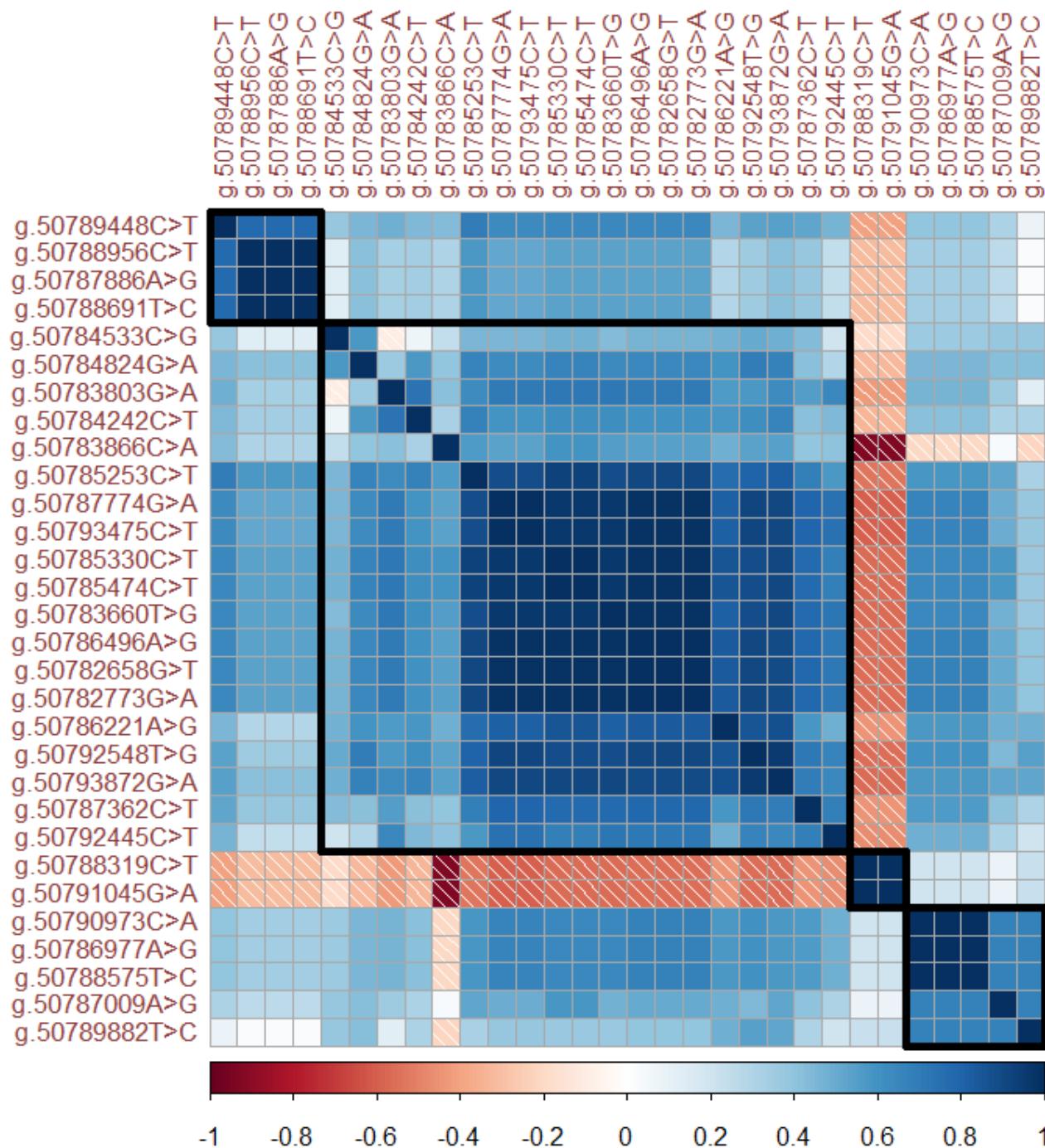
<sup>2</sup>MAF: Minor allele frequency, (He): Expected heterozygosity, PIC: polymorphism information content, HWE: Hardy–Weinberg disequilibrium



**Figure S2.** Correlation coefficients for all pairs of SNP loci of the FABP4 gene. The rectangles represent distance-based clustering of SNP loci.



**Figure S3.** Correlation coefficients for all pairs of SNP loci of the SCD gene. The rectangles represent distance-based clustering of SNP loci.



**Figure S4.** Correlation coefficients for all pairs of SNP loci of the FASN gene. The rectangles represent distance-based clustering of SNP loci.