0.52 1	1:2053223_A>T_chr12:53464852_53465932 $R = 0.76$ $p = 0.049$ 0.5	p = 0.14 0.55	1:2053226_T>C_chr19:18571909_18573293 $R = 0.61$ $p = 0.14$ 0.50	1:2055276_C>G_chr12:53462567_53464760 $R = 0.66$ $p = 0.0079$ 0.55	1:2055276_C>G_chr12:53464852_53465932 $R = -0.66$ $p = 0.0079$ 0.50	1:2055563_G>C_chr19:18571887_18573293 0.6 $R = -0.45$ $p = 0.11$	R = 0.45 $p = 0.11$ 0.75	1:2055563_G>C_chr19:49107712_49107795 0.33 $R = 0.45$ $p = 0.11$ 0.30	1:2055563_G>C_chr19:49107712_49107822 $R = -0.45$ $p = 0.11$ 0.5	1:2055927_A>G_chr12:53462567_53464760 $R = -0.15$ $p = 0.57$ 0.5	1:2055927_A>G_chr12:53464852_53465932 R = 0.15 p = 0.57	1:2057065_A>G_chr12:53462567_53464760 $R = -0.77 \qquad 0.56$ 0.51 - $P = 0.015$	p = 0.015
0.48 - 0.50 - 0.46 - 0.44 - 1:2092229_A>G_chr12:53462567_53464760	0.4 1:2092229_A>G_chr12:53464852_53465932	0.50 0.45 1:2092997_G>A_chr12:53462567_53464760	0.45 5- 1:2092997_G>A_chr12:53464852_53465932	0.50 1:2095090_G>A_chr12:53462567_53464760	0.45 0.40 1:2095090_G>A_chr12:53464852_53465932	0.5 0.4 1:2227252_C>A_chr12:53462567_53464760	0.72 0.72 0.69 1:2227252_C>A_chr12:53464852_53465932	0.27 0.24 1:2227629_G>A_chr12:53462567_53464760	0.44 1- 1:2227629_G>A_chr12:53464852_53465932	1:2227733_G>A_chr12:53462567_53464760		0.52 0.48 - 0.52 0.45 - 0.48 1:2229623_A>T_chr12:53462567_53464760	2- 0- 8- 1:2229623_A>T_chr12:53464852_53465932
R = 0.5	R = -0.5 $p = 0.12$ 0.5	R = 0.48 $p = 0.11$ 0.55	R = -0.48 $p = 0.11$ 0.50	R = 0.16 $p = 0.67$ 0.55	0.50	R = 0.16 $p = 0.67$ 0.5	R = -0.16 $p = 0.67$ 0.50	R = 0.55 $p = 0.13$ 0.55	R = -0.55 $p = 0.13$ 0.5	p = 0.16	R = -0.65 $p = 0.16$	R = 0.58 $p = 0.13$ 0.50 0.52	R = -0.58 $p = 0.13$
0.45 - 0.50 - 1:2229992_T>C_chr12:53462567_53464760	0.4 1:2229992_T>C_chr12:53464852_53465932	1:25275_A>G_chr12:56160320_56161387 0.56	0.45 1:25527_G>A_chr12:56160320_56160626	1:25527_G>A_chr12:56160320_56161387	0.45 1:25529_T>C_chr12:56160320_56161387	1:25529_T>C_chr12:56160670_56161387	1:25907_A>G_chr19:18571887_18573293	0.50 1:25907_A>G_chr19:18571909_18573293	0.44 0.46 1:26576_A>C_chr12:56160320_56160626		1:26576_A>C_chr12:56160670_56161387	0.48 - 0.	0- 8- 1:27729_G>T_chr19:18571909_18573293
0.52 - R = 0.85 $p = 0.034$ $0.50 - 0.52 - 0.48$	R = -0.85 $p = 0.034$ 0.3		R = -0.45 $p = 0.028$ 0.2	R = 0.52 $p = 0.0091$ 0.3	R = 0.45 $p = 0.027$ 0.40	R = -0.48 $p = 0.018$ 0.5	R = -0.59 $p = 0.003$ 0.56 0.56	R = 0.59 $p = 0.003$ 0.45	R = -0.38 $p = 0.096$ 0.3	R = 0.47 $p = 0.035$ 0.4	R = -0.4 p = 0.079	R = -0.49 $p = 0.016$ 0.50	R = 0.49 $p = 0.016$
0.46 - 0.48 - 0.48 - 0.48 - 0.60 - 0.	0.2 0.1 1:295597_G>A_chr19:18571909_18573293 0.	0.40 5- 0.35 1:629229_A>G_chr10:78037304_78040204 0.5	0.1 - 0.1 -	1:629229_A>G_chr10:78040225_78040615 0.5	0.35 1:629275_G>A_chr10:78037304_78040204	0.4 1:629539_T>A_chr12:56160670_56161387 0.4	0.45 10 - 1:629723_T>C_chr10:78037304_78040204 .5 -	0.40 0.35 1:629723_T>C_chr10:78037304_78040615	0. 5- 1:629757_C>T_chr10:78040225_78040615 0.	0.3 1:629925_G>A_chr10:78037304_78040204	1:629925_G>A_chr10:78037304_78040615	0.45 - 0.40 - 1:629925_G>A_chr10:78040225_78040615	1:629963_A>G_chr3:13619831_13621775
	R = 0.39 $p = 0.059$ 0.	R = 0.59 $p = 0.03$ 0.3	R = -0.63 $p = 0.018$ 0.45	R = 0.64 $p = 0.015$	R = -0.45 $p = 0.08$ 0.40	R = -0.6 $p = 0.011$ 0.	R = 0.34 $p = 0.12$ 0.3 0.3	R = -0.36 $p = 0.089$ 0.45 0.45	R = -0.52 $p = 0.011$ 0.	R = -0.48 $p = 0.022$ 0.00.00.00.00.00.00.00.00.00.00.00.00.0	R = 0.49 $p = 0.02$	R = -0.45 $p = 0.031$ 0.40 0.35	R = -0.059 $p = 0.82$
0.45 - 0.40 - 0.45 - 0.7 - 1:629963_A>G_chr3:13621915_13626445	1:629995_A>G_chr19:18571887_18573293 0.6	0.7 1:629995_A>G_chr19:18571909_18573293 0.78	0.30 - 0.25 - 1:629995_A>G_chr19:49107712_49107795 8 -	1:629995_A>G_chr19:49107712_49107822 0.55		1:629997_A>G_chr12:56160320_56161387	1:629997_A>G_chr12:56160670_56161387	0.30 0.25 1:630020_C>T_chr12:53462567_53464760	0.3 0.3 1:630020_C>T_chr12:53464852_53465932	0. 1:630022_T>C_chr3:13619831_13621775 0.	1:630022_T>C_chr3:13621915_13626445	0.4 0.25 - 0.3 1:630039_C>G_chr10:78040225_78040615 0.58	1:630555_A>G_chr12:56160320_56160626
	R = -0.37 $p = 0.089$ 0.5	p = 0.089	R = 0.21 $p = 0.35$ 0.30	R = -0.21 $p = 0.35$ 0.50	R = -0.19 $p = 0.41$ 0.2	R = 0.33 $p = 0.13$ 0.4	R = -0.27 $p = 0.22$ 0.50	R = 0.11 $p = 0.63$ 0.55	R = -0.11 $p = 0.63$ 0.4	R = -0.64 $p = 0.0043$ 0.	R = 0.64 $p = 0.0043$	R = -0.49 $p = 0.014$ 0.40 0.45	R = -0.005 $p = 0.98$
0.4- 1:630555_A>G_chr12:56160320_56161387 0.45- $R = 0.077$	0.4 1:630555_A>G_chr12:56160670_56161387 0.8 $R = -0.13$	0.69 1:630590_T>C_chr10:78037304_78040615 $R = -0.47$	0.24 $1:630590_{T}>C_{chr10:78040225_{78040615}}$ $R = 0.54$ 0.304	0.40 0.35 1:630596_C>T_chr21:46126541_46129196 0.90 R = 0.5	0.1 $R = -0.5$	$ \begin{array}{c} 1:632235_C>T_chr12:56160320_56160626\\ R = -0.0089 \end{array} $	$1:632235_C>T_chr12:56160320_56161387$ $R = -0.023$	1:632235_C>T_chr12:56160670_56161387 0.78 $R = -0.24$	0.3 $R = 0.55$	0.3 $1:632253_C>T_chr19:49107712_49107822$ $R = -0.55$	1:632253_C>T_chr21:46126541_46129196 $R = -0.64$	0.30 0.35 0.25 1:632253_C>T_chr21:46126541_46131954 0.58 R = 0.64	5- $1:632356_{T}>C_{chr12:56160320_{56160626}}$ $R = -0.075$
0.3 $R = 0.077$ $p = 0.73$ 0.40- 0.1-		$ \begin{array}{c} $.)	p = 0.015 0.85 0.75	p = 0.015 0.40		p = 0.92 0.40		p = 0.0073 0.30 0.20	p = 0.0073			p = 0.73 $p = 0.73$
1:632356_T>C_chr12:56160320_56161387 0.3- $R = 0.15$ $p = 0.5$	1:632356_T>C_chr12:56160670_56161387 0.7 $R = -0.37$ $p = 0.08$ 0.7	R = 0.56 $p = 0.02$ 0.25 0.33	R = -0.56 $p = 0.02$ 0.10	p = 0.35	0.35 1:632739_A>C_chr12:10704148_10709908 0.8 $R = -0.55$ $p = 0.0071$ 0.7	1:632739_A>C_chr12:10704148_10713211 0.5 $R = 0.55$ $\rho = 0.0071$	$R = -0.23$ $p = 0.29$ 1:632952_A>G_chr12:56160320_56160626 0.3	1:632952_A>G_chr12:56160320_56161387 $R = 0.19$ $p = 0.37$	1:632952_A>G_chr12:56160670_56161387 0.5 $R = -0.071$ $p = 0.75$	R = -0.12 $p = 0.67$	p = 0.0016	0.38 1:633753_G>A_chr19:18571887_18573293 0.60 R = -0.31 p = 0.16 0.55	5- $1:633753_G>A_chr19:18571909_18573293$ $0-$ $R = 0.31$ $p = 0.16$
0.2- 0.1- 0.35- 1:633753_G>A_chr19:49107712_49107795	0.7 0.6 1:633753_G>A_chr19:49107712_49107822	0.27 0.24 1:633767_T>C_chr10:78037304_78040204	0.20 0.15 4- 1:633925_C>T_chr19:18571887_18573293	0.4 0.3 0.2 1:633925_C>T_chr19:18571909_18573293	0.6 0.5 2- 1:633932_T>C_chr19:49107712_49107795	0.4 0.4 1:633932_T>C_chr19:49107712_49107822	0.2 40 - 35 - 1:635390_A>G_chr12:56160320_56160626	0.40 0.35 1:635390_A>G_chr12:56160320_56161387	1:635390_A>G_chr12:56160670_56161387	0.3 1:635559_G>A_chr12:56160320_56160626		0.45 - 0.45 - 0.46 - 0.	0- 5- 1:635725 G>A chr19:18571909 18573293
0.33- R = 0.13	R = -0.13 $p = 0.57$.5	R = -0.38 $p = 0.077$ 0.55 0.45	R = 0.38		R = -0.6 $p = 0.0025$ 0.5	R = 0.12 $p = 0.6$ 40 0.2	R = -0.21 $p = 0.34$ 0.45	R = 0.073	R = -0.26 $p = 0.24$ 0.	R = 0.25 $p = 0.26$	0.66 $R = 0.3$ $p = 0.17$ 0.56 0.45	R = -0.3 $Q = 0.17$
	1:635939_A>C_chr12:53464852_53465932 $R = 0.56$ $\rho = 0.008$ 0.	R = -0.56 $p = 0.0081$ 0.40 0.40 0.40 0.40 0.60		$R = -0.59$ $\rho = 0.0036$ 0.6	$R = 0.59$ $\rho = 0.0036$ 0.45	1:727035_C>T_chr12:53462567_53464760 $R = 0.53$ $\rho = 0.014$ 0.5	$R = -0.53$ $\rho = 0.014$ 0.2	1:727205_T>C_chr12:56160320_56161387 $R = -0.26$ $p = 0.3$ 0.45	••	R = -0.73 $p = 0.00027$ 0.	1:727229_T>C_chr4:118279137_118279389 $R = 0.73$ $p \neq 0.00027$	0.40 = 0.40 = 0.47 $0.4 = 0.47$ $0.4 = 0.04$ $0.3 = 0.3$	1:727292_T>C_chr10:78037304_78040615 $R = -0.47$ $p = 0.04$
1:727377_T>C_chr19:49107712_49107795 0.74- $R = 0.76$		$ \begin{array}{c} 1:729955_A>G_chr12:56160320_56161387\\ 3-R=0.25 \end{array} $	$0.2 = \frac{1:750957_T>C_chr12:53462567_53464760}{R = 0.5/1}$	1:750957_T>C_chr12:53464852_53465932 $R = -0.51$	1:750995_T>C_chr21:46126541_46129196 $R = 0.71$	1:750995_T>C_chr21:46126541_46131954 $R = -0.71$	R = 0.67 0.1 0.1 0.1	1:769577_G>A_chr19:49107712_49107822 0.78 $R = -0.67$	0.1 1:769579_C>T_chr19:49107712_49107795 $R = 0.64$	$ \begin{array}{c} 1:769579_C>T_chr19:49107712_49107822\\ R = -0.64 \end{array} $	1:797279_T>C_chr12:56160320_56160626 0- $R = -0.65$	0.6 $1:797279_{T>C_chr12:56160320_56161387}$ 0.30 $R = 0.65$	1:920395_G>A_chr12:56160320_56161387 R = 0.65
0.72- 0.70- 0.68- 0.68-	R = -0.76 $p = 0.037$ 0.	$ \begin{array}{c} p \neq 0.29 & 0.500 \\ 0.475 \\ 0.450 \\ 0.425 \end{array} $	$ \begin{array}{c} 0 - p = 0.087 \\ \hline 0.550 \\ \hline 0.525 \\ \hline 0.500 \\ \hline 0.475 \\ \hline 0.500 \\ \hline 0.475 \\ \hline 0.475 \\ \hline 0.500 \\ 0.475 \\ \hline 0.475 \\ 0.475 \\ 0.500 \\ 0.475 \\ 0.$	p = 0.087 0.3	p = 0.031 0.8	p = 0.031 0.7 0.7	p = 0.024 0.30 0.27 0.24 0.24		p = 0.025 0.30 0.20	$ \begin{array}{c} $	p = 0.16	p = 0.1/6 0.25 0.20 0.15 0.10	p = 0.16 5- 0-
0.301	1:925236_C>A_chr3:13619831_13621775 $R = -0.58$ $p = 0.13$ 0.6	R = 0.58 $p = 0.13$ 0.78	1:925590_A>G_chr19:49107712_49107795 $R = 0.78$ $p = 0.1/2$ 0.30	p = 0.12	1:926395_G>A_chr12:56160320_56161387 0.78 $P = 0.35$ $p = 0.17$ 0.75	1:926502_A>C_chr19:49107712_49107795 $R = 0.55$ $p = 0.019$ 0.3	1:926502_A>C_chr19:49107712_49107822 $R = -0.55$ $p = 0.019$ 0.50	1:927303_C>T_chr12:56160320_56160626 $R = -0.55$ $p = 0.13$	1:927303_C>T_chr12:56160320_56161387 $R = 0.55$ $\rho = 0.13$ 0.56	1:927572_G>T_chr19:18571887_18573293 0.6 $R = -0.58$ $p = 0.13$ 0.5	5-	1:929209_G>A_chr12:56160320_56160626 $R = -0.52$ $p = 0.12$	1:929209_G>A_chr12:56160320_56161387 $R = 0.52$ $p = 0.12$
0.20- 0.15- 0.10- 0.35- 0.30-	0.5	0.72	0.27	0.1	0.72	0.2	0.40	0.2	0.4	0.5	5-	0.40 - 0.35 -	1-
0.5	1:929272_G>A_chr12:56160320_56161387 $R = 0.55$ $p = 0.13$ 0.4	1:929799_C>T_chr12:56160320_56160626 $R = -0.61$ $p = 0.14$ 0.3		p = 0.13	1:929799_G>A_chr12:56160320_56161387 0.6 $R = 0.55$ $p = 0.13$ 0.5	1:935935_C>G_chr3:13619831_13621775 $R = -0.078$ $p = 0.83$	R = 0.078 $p = 0.83$ 0.3	1:952229_C>G_chr12:56160320_56161387 0.55 $R = 0.2$ $p = 0.45$ 0.45	p = 0.16	1:952657_T>C_chr12:56160320_56161387 $R = 0.65$ $p = 0.16$ 0.3	1:952657_T>C_chr12:56160670_56161387 $R = -0.65$ $p = 0.16$	1:952657_T>C_chr4:118278792_118279389 $R = 0.65$ $p = 0.16$ 0.4	1:952657_T>C_chr4:118279137_118279389 $R = -0.65$ $p = 0.16$
0.40 - 0.35 - 0.1 - 0.35 - 0.575 - 0.5	0.4 0.3 1:955220_T>G_chr12:53464852_53465932	1:955252_G>A_chr3:13619831_13621775	0.40 d 1 - 0.35 d 7 - 1:955252_G>A_chr3:13621915_13626445	1:955652_G>A_chr12:53462567_53464760	0.4 0.3 1:955652_G>A_chr12:53464852_53465932	0. 1:955662_G>A_chr10:78037304_78040204	.5 - 0.1 .4 - 1:955662_G>A_chr10:78037304_78040615	0.40 0.35 1:955662_G>A_chr12:10704148_10709908	0. 5- 1:955662_G>A_chr12:10704148_10713211	0.3 0.3 0.3 1:955939_C>A_chr12:56160320_56160626	1:955939_C>A_chr12:56160320_56161387	0.2 - 0.4 1:955939_C>A_chr12:56160670_56161387	1:955997_G>A_chr12:56160320_56160626
R = 0.52 $p = 0.019$ 0.525 0.525 0.525	R = -0.52 $p = 0.019$	R = -0.58 $p = 0.13$ 0.7	$R \neq 0.58$	$R = -0.74 \qquad 0.56$ $\rho = 0.037 \qquad 0.54$ 0.52	0.4	R = 0.5	R = -0.5 $p = 0.12$ 0.6 0.6	R = 0.52 $p = 0.12$ 0.8 0.8	R = -0.52	R = -0.33 $p = 0.35$	R = 0.58 $p = 0.082$	R = -0.58 $p = 0.082$ 0.40	0 - R = -0.52 $p = 0.12$
0.500- 0.450- 0.425- 1:955997_G>A_chr12:56160320_56161387	0. 1:955997_G>A_chr12:56160670_56161387	0.5 3 1:956993_A>G_chr12:56160320_56161387	0.45 1:956993_A>G_chr12:56160670_56161387	0.50 0.48 1:962295_T>C_chr12:53462567_53464760	0.3 1:962295_T>C_chr12:53464852_53465932	0. 0. 1:962955_G>C_chr12:53462567_53464760	0.3 .1- .1- 1:962955_G>C_chr12:53464852_53465932	0.5 0.4 1:963233_C>T_chr12:53462567_53464760	0.46 0.36 1:963233_C>T_chr12:53464852_53465932	0. 5- 1:965350_G>A_chr12:53462567_53464760	1:965350_G>A_chr12:53464852_53465932	0.46 0.35 - 1:996229_T>A_chr12:56160320_56161387	1:999390_G>A_chr12:56160320_56161387
$ \begin{array}{c} 0.30 \\ \hline 0.25 \\ \hline 0.20 \end{array} $ $ \begin{array}{c} 0.40 \\ \hline 0.20 \end{array} $	p = 0.12 0.2	p = 0.044 0.40	0.50	R = -0.49 $p = 0.078$ 0.55			R = 0.58 $p = 0.017$ 0.50	0.00			p = 0.003	p = 0.78 0.25 - 0.2	R = 0.57 $p = 0.0037$
0.15- 0.10- 1:999520_G>A_chr12:56160320_56160626 0.50- R = 0.51	0.1 0.1 1:999520_G>A_chr12:56160320_56161387 0.	$0 - \frac{3:13621920_A>G_chr3:13619831_13621775}{R} = -0.77$	5-	0.50		0.50 0.50 0.75 1.00		0.30		0.5	0.00 0.25 0.50 0.75 1.00	0.15 - 0.10 - 0.00 0.25 0.50 0.75 1.00	0.00 0.25 0.50 0.75 1.00
0.50 $R = 0.51$ 0.30 $p = 0.13$ 0.25 0.20 0.40		p = 0.23	R = 0.77 $p = 0.23$										
0.15- 0.00 0.25 0.50 0.75 1.00 0	0.00 0.25 0.50 0.75 1.00	3 0.00 0.25 0.50 0.75 1.00 0.4	0.00 0.25 0.50 0.75 1.00			Variant allele	fraction						