

Single nucleotide polymorphisms of matrix metalloproteinase 9 (MMP9) and tumor protein 73 (TP73) interact with Epstein-Barr virus in chronic lymphocytic leukemia: results from the European case-control study EpiLymph

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[Online Supplementary Material \(SEE PDF\)](#)

Supplementary Appendices:

Supplementary appendix 1: Full list of SNPs & genes that were examined.

Supplementary appendix 2: Adjusted odds ratio (and 95%CI) for CLL by SNPs and ab_EBV positivity, restricted by Rai stages.

Supplementary appendix 3: Odds ratio (and 95%CI) for CLL by SNPs and ab_EBV positivity using a matched analysis (age +/- 2years, sex and centre).

Supplementary appendix 4: List of SNPs with H_{A0} and/or H_{M0} rejected at the 10% level in Spain and Germany separately.

Supplementary appendix 5: Association of aberrant Epstein Barr virus positivity and chronic lymphocytic leukaemia by *MMP9* haplotype pairs.

Supplementary appendix 6: Linkage disequilibrium graph of *MMP9* from Hapmap.

Supplementary appendix 7: Linkage disequilibrium graph of *TP73* from Hapmap.

Supplementary appendix 8: Adjusted odds ratio (and 95% CI) for ab_EBV positivity by controls and stage of CLL using German and Spanish data.

Supplementary appendix 9: Adjusted odds ratio (95% CI) for chronic lymphocytic leukemia in relation to the four SNPs interacting with ab_EBV positivity.

Supplementary appendix 1. Full list of SNPs & genes that were examined.

Gene	SNPs	chromosomename	position on chromosome basepair	ensemblgeneid	location	wild	rare	MAF in controls	pHWE
ABCF1	rs1264440	6	30659265	ENSG00000204574	intronic	C	T	32%	0.067
ACAA1	rs4988453	3	38154258	ENSG00000060971	5upstream	C	A	6%	0.664
ACTR8	rs2083127	3	53891977	ENSG00000113812	5upstream	G	A	46%	0.477
AFMID	rs3764384	17	73719323	ENSG00000183077	3downstream	G	A	33%	0.617
AFMID	rs744120	17	73719119	ENSG00000183077	3downstream	G	C	27%	0.309
AICDA	rs11046349	12	8648058	ENSG00000111732	3utr	T	G	10%	0.225
AICDA	rs12306110	12	8651276	ENSG00000111732	intronic	C	G	7%	0.156
AICDA	rs2028373	12	8648748	ENSG00000111732	coding	A	G	36%	0.151
AICDA	rs2580873	12	8652941	ENSG00000111732	intronic	C	T	6%	0.391
AICDA	rs2580874	12	8650077	ENSG00000111732	intronic	G	A	40%	0.359
AICDA	rs3794318	12	8649810	ENSG00000111732	intronic	T	C	8%	0.103
AIRE	rs1003854	21	44534535	ENSG00000160224	intronic	T	C	27%	0.821
AIRE	rs2850166	21	44525252	ENSG00000160224	5upstream	C	T	36%	0.703
AIRE	rs760426	21	44540242	ENSG00000160224	intronic	A	G	12%	1.000
AIRE	rs941405	21	44534838	ENSG00000160224	intronic	C	G	35%	0.559
AKT1	rs1130214	14	104330779	ENSG00000142208	intronic	G	T	31%	0.836
AKT1	rs2494738	14	104317731	ENSG00000142208	intronic	G	A	6%	0.245
AKT1	rs2494750	14	104333957	ENSG00000142208	5upstream	C	G	7%	0.291
AKT1	rs2498804	14	104304140	ENSG00000142208	3downstream	G	T	32%	0.265
AKT2	rs12460555	19	45464304	ENSG00000105221	5upstream	C	G	50%	0.332
AKT2	rs16974157	19	45464764	ENSG00000105221	5upstream	C	A	15%	1.000
AKT2	rs7247515	19	45447755	ENSG00000105221	intronic	C	T	7%	0.751
AKT2	rs7250897	19	45475073	ENSG00000105221	intronic	C	T	27%	0.366
AKT3	rs1121276	1	241777030	ENSG00000117020	intronic	A	G	33%	0.689
AKT3	rs12045585	1	241739722	ENSG00000117020	intronic	G	A	14%	1.000
AKT3	rs12753750	1	242083988	ENSG00000117020	5upstream	T	C	33%	0.617
AKT3	rs3006928	1	241724653	ENSG00000117020	intronic	G	A	12%	0.835
AKT3	rs6429433	1	241924617	ENSG00000117020	intronic	C	T	18%	0.880
AKT3	rs6656918	1	241772847	ENSG00000117020	intronic	A	G	23%	0.806

AKT3	rs6672195	1	242026166	ENSG00000117020	intronic	C	T	30%	0.675
AKT3	rs7523742	1	241754773	ENSG00000117020	intronic	G	A	6%	0.697
AKT3	rs884328	1	241720901	ENSG00000117020	intronic	A	G	23%	0.899
AKT3	rs9428576	1	241728650	ENSG00000117020	intronic	T	C	42%	0.786
ALAS1	rs352162	3	52228009	ENSG00000023330	3downstream	C	T	46%	0.182
ALS2CR12	rs1035140	2	201860736	ENSG00000155749	3downstream	A	T	47%	0.215
ALS2CR12	rs11674814	2	201862091	ENSG00000155749	intronic	G	A	43%	0.418
ALS2CR12	rs17468277	2	201862445	ENSG00000155749	coding	C	T	13%	0.849
ANPEP	rs10152918	15	88152578	ENSG00000166825	5upstream	G	A	41%	0.172
ANPEP	rs12442778	15	88161042	ENSG00000166825	5upstream	A	G	42%	0.786
ANPEP	rs16943605	15	88137377	ENSG00000166825	intronic	T	C	30%	0.466
ANPEP	rs17239917	15	88134855	ENSG00000166825	intronic	G	A	18%	0.649
ANPEP	rs25653	15	88150562	ENSG00000166825	coding	A	G	50%	0.930
ANPEP	rs7168849	15	88147231	ENSG00000166825	intronic	A	G	8%	0.562
ANPEP	rs753362	15	88141538	ENSG00000166825	intronic	C	G	28%	0.829
ANPEP	rs8041622	15	88153073	ENSG00000166825	5upstream	G	A	7%	
ANPEP	rs8192297	15	88145356	ENSG00000166825	coding	A	G	15%	0.154
ANPEP	rs893616	15	88128414	ENSG00000166825	3downstream	T	C	45%	0.929
AP1M2	rs17677316	19	10541241	ENSG00000129354	3downstream	G	A	24%	1.000
AP1M2	rs4804509	19	10542641	ENSG00000129354	3downstream	A	G	18%	0.554
APBA2BP	rs3213183	20	31726623	ENSG00000125967	5upstream	C	T	28%	0.009
AYTL1	rs1861320	16	54098541	ENSG00000087253	5upstream	G	T	44%	0.420
AYTL1	rs9922534	16	54100180	ENSG00000087253	5upstream	T	C	48%	0.112
B3GNT3	rs12462622	19	17788285	ENSG00000179913	3downstream	T	G	7%	1.000
B3GNT3	rs722429	19	17785753	ENSG00000179913	3downstream	C	T	34%	0.239
B3GNT3	rs7409343	19	17787385	ENSG00000179913	3downstream	C	T	32%	0.838
BAX	rs11667229	19	54147813	ENSG00000087088	5upstream	T	C	46%	0.594
BAX	rs11667351	19	54147966	ENSG00000087088	5upstream	T	G	13%	0.704
BAX	rs1805419	19	54150916	ENSG00000087088	intronic	G	A	28%	0.826
BAX	rs4645900	19	54156175	ENSG00000087088	intronic	C	T	6%	0.395
BBC3	rs2032809	19	52428056	ENSG00000105327	5upstream	G	A	40%	0.521
BCL10	rs12068788	1	85514322	ENSG00000142867	intronic	A	T	10%	0.457
BCL10	rs12726649	1	85512337	ENSG00000142867	intronic	T	C	16%	0.614

BCL10	rs2647396	1	85511018	ENSG00000142867	intronic	T	C	30%	0.916
BCL10	rs4949927	1	85512612	ENSG00000142867	intronic	T	C	26%	0.065
BCL10	rs6698331	1	85519517	ENSG00000142867	5upstream	T	C	18%	0.544
BCL10	rs962409	1	85505529	ENSG00000142867	3utr	T	G	48%	0.479
BCL2L7P1	rs11757379	6	33650639	ENSG00000030110	intronic	G	T	23%	0.706
BCL2L7P1	rs210137	6	33650456	ENSG00000030110	intronic	C	T	21%	0.225
BCL2L7P1	rs5745582	6	33654476	ENSG00000030110	intronic	G	A	19%	0.779
BCL3	rs4803750	19	49939467	ENSG00000069399	5upstream	A	G	6%	1.000
BCL3	rs8100239	19	49944944	ENSG00000069399	intronic	T	A	39%	0.460
BCL3	rs8103315	19	49946008	ENSG00000069399	intronic	C	A	11%	0.820
BCL6	rs1474326	3	188925221	ENSG00000113916	intronic	G	T	44%	0.283
BCL6	rs1523475	3	188926904	ENSG00000113916	intronic	G	A	17%	0.641
BCL6	rs3172469	3	188941782	ENSG00000113916	5upstream	A	C	23%	0.063
BCL6	rs3733017	3	188939403	ENSG00000113916	5upstream	A	C	5%	0.387
BCL6	rs9865102	3	188918861	ENSG00000113916	3downstream	T	C	14%	0.371
BIRC2	rs10219215	11	101743447	ENSG00000110330	intronic	G	A	8%	0.763
BIRC2	rs10895290	11	101736936	ENSG00000110330	intronic	G	A	15%	0.377
BIRC2	rs11225237	11	101755737	ENSG00000110330	3downstream	A	G	7%	0.714
BIRC2	rs1943781	11	101740351	ENSG00000110330	intronic	C	T	14%	0.274
BIRC2	rs523356	11	101752886	ENSG00000110330	intronic	C	G	6%	0.005
BIRC3	rs11602147	11	101695376	ENSG00000023445	intronic	C	G	34%	0.203
BIRC3	rs3460	11	101713600	ENSG00000023445	3utr	G	C	12%	0.128
BIRC5	rs11655650	17	73729440	ENSG00000089685	intronic	C	T	39%	0.645
BIRC5	rs2071214	17	73731186	ENSG00000089685	coding	A	G	4%	0.565
BIRC5	rs2856271	17	73728800	ENSG00000089685	intronic	G	A	36%	0.848
BIRC5	rs4789551	17	73722674	ENSG00000089685	intronic	T	C	6%	0.447
BLNK	rs10491068	10	97946892	ENSG00000095585	intronic	G	C	8%	0.763
BLNK	rs10491070	10	97943276	ENSG00000095585	intronic	A	G	44%	0.282
BLNK	rs10786273	10	97999322	ENSG00000095585	intronic	T	A	7%	0.184
BLNK	rs10882755	10	97984005	ENSG00000095585	intronic	G	A	13%	1.000
BLNK	rs10882757	10	97988199	ENSG00000095585	intronic	T	C	16%	0.406
BLNK	rs11188660	10	97947314	ENSG00000095585	intronic	G	A	37%	0.704
BLNK	rs11188661	10	97950983	ENSG00000095585	intronic	G	A	29%	0.289

BLNK	rs11591959	10	97978644	ENSG00000095585	intronic	A	G	29%	0.196
BLNK	rs12357751	10	97978443	ENSG00000095585	intronic	C	T	25%	0.727
BLNK	rs12761346	10	97965262	ENSG00000095585	intronic	T	C	21%	0.348
BLNK	rs12772113	10	97958138	ENSG00000095585	intronic	C	T	22%	0.191
BLNK	rs1574394	10	97981551	ENSG00000095585	intronic	C	A	13%	1.000
BLNK	rs17111461	10	97970638	ENSG00000095585	intronic	G	C	14%	0.719
BLNK	rs1902711	10	97989870	ENSG00000095585	intronic	T	C	36%	0.701
BLNK	rs2125062	10	97970711	ENSG00000095585	intronic	T	G	48%	0.791
BLNK	rs2290714	10	97959684	ENSG00000095585	intronic	T	C	5%	0.340
BLNK	rs2861304	10	97947875	ENSG00000095585	intronic	A	C	8%	0.018
BLNK	rs3789928	10	97992875	ENSG00000095585	intronic	G	C	33%	0.689
BLNK	rs3789929	10	97994687	ENSG00000095585	intronic	A	G	5%	1.000
BLNK	rs3789930	10	98001354	ENSG00000095585	intronic	A	G	10%	1.000
BLNK	rs6584061	10	98016172	ENSG00000095585	intronic	T	C	8%	1.000
BLNK	rs7076978	10	97970425	ENSG00000095585	intronic	T	C	8%	0.516
BLNK	rs7099132	10	97951779	ENSG00000095585	intronic	G	A	8%	1.000
BLNK	rs727852	10	97980573	ENSG00000095585	coding	G	A	26%	0.908
BLNK	rs747259	10	97957259	ENSG00000095585	intronic	G	A	50%	0.536
BLNK	rs7911684	10	97961918	ENSG00000095585	intronic	T	C	46%	1.000
BRAF	rs10487888	7	140145576	ENSG00000157764	intronic	A	G	47%	0.425
BRAF	rs11771946	7	140079362	ENSG00000157764	3downstream	T	C	8%	0.562
BRAF	rs1267622	7	140174786	ENSG00000157764	intronic	A	G	27%	0.911
BRAF	rs1476868	7	140151658	ENSG00000157764	intronic	C	T	8%	1.000
BRAF	rs2365151	7	140207704	ENSG00000157764	intronic	T	C	8%	0.563
BRAF	rs9648716	7	140258632	ENSG00000157764	intronic	A	T	17%	1.000
BYSL	rs3218097	6	42013253	ENSG00000112578	3downstream	C	T	24%	0.553
BYSL	rs3218100	6	42012461	ENSG00000112578	3downstream	G	A	9%	0.796
BYSL	rs3828855	6	42008384	ENSG00000112578	coding	G	A	10%	0.477
C11orf31	rs9420	11	57266870	ENSG00000211450	3downstream	G	A	32%	0.311
C16orf70	rs13312735	16	65744712	ENSG00000125149	3downstream	C	A	3%	1.000
C17orf46	rs1047841	17	40696414	ENSG00000184361	5upstream	G	A	6%	1.000
C20orf30	rs3729558	20	5043321	ENSG00000089063	5upstream	C	G	45%	0.129
C3orf1	rs1599795	3	120726545	ENSG00000113845	3downstream	T	A	19%	0.885

C3orf1	rs17281703	3	120726239	ENSG00000113845	3downstream	G	A	13%	0.695
C3orf1	rs9877854	3	120728437	ENSG00000113845	3downstream	T	G	20%	1.000
C9orf53	rs11515	9	21958199	ENSG00000173515	3downstream	C	G	16%	0.632
C9orf53	rs3731257	9	21956221	ENSG00000173515	5upstream	C	T	25%	0.289
C9orf9	rs10491534	9	134759509	ENSG00000165698	3downstream	A	G	12%	0.039
C9orf9	rs2040557	9	134755385	ENSG00000165698	3downstream	G	A	7%	0.500
C9orf9	rs2073869	9	134753637	ENSG00000165698	coding	C	T	16%	0.873
C9orf9	rs2231410	9	134755082	ENSG00000165698	intronic	C	T	12%	0.679
CASP1	rs11226613	11	104477728	ENSG00000137752	5upstream	T	A	20%	0.223
CASP1	rs12417470	11	104438772	ENSG00000137752	intronic	G	A	7%	1.000
CASP1	rs1623342	11	104469059	ENSG00000137752	intronic	T	C	36%	0.443
CASP1	rs1699089	11	104400742	ENSG00000137752	3downstream	T	C	16%	0.739
CASP1	rs1785883	11	104429456	ENSG00000137752	intronic	G	A	7%	1.000
CASP1	rs1785884	11	104432290	ENSG00000137752	intronic	G	A	31%	0.537
CASP1	rs1977989	11	104402054	ENSG00000137752	intronic	A	G	26%	0.734
CASP1	rs488992	11	104401727	ENSG00000137752	intronic	C	T	11%	0.040
CASP1	rs508760	11	104429161	ENSG00000137752	intronic	C	A	10%	0.214
CASP1	rs7934239	11	104423727	ENSG00000137752	intronic	G	A	5%	0.643
CASP10	rs12693932	2	201801640	ENSG00000003400	intronic	C	T	48%	0.724
CASP3	rs12507711	4	185808770	ENSG00000164305	5upstream	C	T	16%	0.419
CASP3	rs2696057	4	185792828	ENSG00000164305	intronic	G	C	14%	0.374
CASP3	rs2705881	4	185809719	ENSG00000164305	5upstream	G	A	16%	0.070
CASP3	rs2705897	4	185790092	ENSG00000164305	intronic	G	T	24%	0.145
CASP3	rs2720376	4	185791294	ENSG00000164305	intronic	T	C	45%	0.722
CASP3	rs4647603	4	185806724	ENSG00000164305	5utr	G	A	19%	0.662
CASP3	rs4647610	4	185804925	ENSG00000164305	intronic	G	A	13%	0.029
CASP3	rs4647688	4	185789129	ENSG00000164305	intronic	G	A	21%	0.599
CASP8	rs10931934	2	201828034	ENSG00000064012	5upstream	C	T	38%	0.006
CASP8	rs11899004	2	201822271	ENSG00000064012	intronic	G	A	15%	0.122
CASP8	rs2293554	2	201839832	ENSG00000064012	intronic	A	C	9%	0.413
CASP8	rs3769825	2	201819625	ENSG00000064012	intronic	C	T	45%	0.284
CASP8	rs6736233	2	201827219	ENSG00000064012	5upstream	G	C	8%	0.236
CASP8	rs7608692	2	201819204	ENSG00000064012	intronic	G	A	22%	0.796

CASP9	rs2020902	1	15706947	ENSG00000132906	intronic	T	C	14%	0.039
CASP9	rs4646075	1	15700048	ENSG00000132906	intronic	A	G	23%	0.902
CASP9	rs6429746	1	15688166	ENSG00000132906	3downstream	G	A	27%	0.654
CASR	rs1129055	3	123321009	ENSG00000036828	intronic	G	A	26%	0.204
CASR	rs11717893	3	123289515	ENSG00000036828	intronic	T	C	24%	0.020
CASR	rs13064913	3	123297201	ENSG00000036828	intronic	A	G	12%	1.000
CASR	rs17281995	3	123322331	ENSG00000036828	intronic	G	C	15%	0.163
CASR	rs1915092	3	123306065	ENSG00000036828	intronic	A	T	45%	0.858
CASR	rs2254911	3	123311527	ENSG00000036828	intronic	C	T	8%	0.245
CASR	rs2332096	3	123303833	ENSG00000036828	intronic	G	T	44%	0.720
CASR	rs2715262	3	123283591	ENSG00000036828	5upstream	A	T	11%	0.660
CASR	rs3804588	3	123306847	ENSG00000036828	intronic	G	T	11%	0.003
CASR	rs9848900	3	123314187	ENSG00000036828	intronic	A	G	28%	1.000
CBL	rs11217191	11	118599857	ENSG00000110395	intronic	G	A	15%	0.053
CBL	rs1893033	11	118594265	ENSG00000110395	intronic	C	T	8%	0.123
CBL	rs2511837	11	118684217	ENSG00000110395	3downstream	T	C	48%	0.377
CBL	rs7113047	11	118613322	ENSG00000110395	intronic	A	G	27%	0.736
CBL	rs7914	11	118685526	ENSG00000110395	3downstream	C	T	22%	0.799
CBL	rs7937454	11	118626014	ENSG00000110395	intronic	T	C	47%	0.092
CCDC75	rs1060957	2	37179284	ENSG00000152133	3downstream	A	G	37%	1.000
CCND2	rs1049612	12	4283023	ENSG00000118971	3utr	A	G	46%	0.423
CCND2	rs12299509	12	4276542	ENSG00000118971	intronic	A	G	41%	0.011
CCND2	rs3217805	12	4258345	ENSG00000118971	coding	C	G	40%	0.854
CCND2	rs3217810	12	4258532	ENSG00000118971	intronic	C	T	11%	0.251
CCND2	rs3217852	12	4268027	ENSG00000118971	intronic	G	C	20%	0.006
CCND2	rs3217862	12	4269348	ENSG00000118971	intronic	T	G	18%	0.651
CCND2	rs3217863	12	4269757	ENSG00000118971	intronic	C	T	8%	0.345
CCND2	rs3217881	12	4272949	ENSG00000118971	intronic	G	A	39%	0.354
CCND2	rs3217898	12	4274637	ENSG00000118971	intronic	A	G	42%	0.045
CCND2	rs3217901	12	4275650	ENSG00000118971	intronic	A	G	36%	0.149
CCND2	rs3217906	12	4276065	ENSG00000118971	intronic	A	G	22%	0.151
CCND2	rs3217907	12	4277097	ENSG00000118971	intronic	C	A	29%	0.667
CCND2	rs3217933	12	4283261	ENSG00000118971	3utr	T	C	22%	0.799

CCND2	rs7133323	12	4287388	ENSG00000118971	3downstream	C	A	34%	0.843
CCND3	rs11967378	6	42126861	ENSG00000112576	5upstream	G	T	25%	1.000
CCND3	rs3218086	6	42018042	ENSG00000112576	intronic	G	A	15%	0.001
CCND3	rs4554318	6	42120137	ENSG00000112576	intronic	T	C	51%	0.596
CCND3	rs9381100	6	42019163	ENSG00000112576	intronic	A	G	26%	0.909
CCNE1	rs3218076	19	35007110	ENSG00000105173	3downstream	T	G	24%	0.720
CCNE1	rs7257330	19	34993663	ENSG00000105173	5upstream	G	A	40%	0.646
CCR7	rs2023906	17	35967212	ENSG00000126353	intronic	A	G	27%	0.505
CCR7	rs2290065	17	35969886	ENSG00000126353	intronic	C	T	7%	0.291
CCR7	rs3136685	17	35973325	ENSG00000126353	intronic	G	A	17%	0.873
CCR7	rs588019	17	35968633	ENSG00000126353	intronic	G	A	7%	0.492
CD14	rs2569190	5	139993100	ENSG00000170458	5utr	G	A	48%	0.723
CD14	rs2569193	5	139995679	ENSG00000170458	5upstream	G	A	27%	0.658
CD180	rs1697142	5	66531603	ENSG00000134061	5upstream	A	G	40%	1.000
CD180	rs1697143	5	66516825	ENSG00000134061	intronic	C	A	24%	0.715
CD180	rs2230525	5	66514382	ENSG00000134061	3utr	A	G	9%	0.008
CD180	rs3756561	5	66528836	ENSG00000134061	5upstream	C	T	6%	1.000
CD180	rs5744463	5	66528168	ENSG00000134061	coding	G	C	12%	0.668
CD180	rs5744478	5	66525321	ENSG00000134061	intronic	T	C	8%	0.117
CD180	rs6449850	5	66531045	ENSG00000134061	5upstream	G	A	29%	1.000
CD180	rs6893629	5	66533075	ENSG00000134061	5upstream	G	C	29%	0.667
CD2	rs3136701	1	117100995	ENSG00000116824	intronic	G	C	40%	0.198
CD2	rs3136706	1	117106599	ENSG00000116824	intronic	C	T	29%	0.831
CD2	rs6701046	1	117099257	ENSG00000116824	intronic	A	G	21%	0.793
CD2	rs798044	1	117104136	ENSG00000116824	intronic	T	C	11%	0.494
CD27	rs11064196	12	6426947	ENSG00000139193	intronic	T	A	38%	0.574
CD27	rs11569358	12	6423765	ENSG00000139193	5upstream	C	T	6%	0.255
CD27	rs11569360	12	6424053	ENSG00000139193	5upstream	C	G	30%	0.596
CD27	rs2041386	12	6432799	ENSG00000139193	3downstream	C	T	16%	0.872
CD27	rs2041388	12	6433097	ENSG00000139193	3downstream	G	A	30%	0.671
CD27	rs2250246	12	6423277	ENSG00000139193	5upstream	C	T	41%	0.236
CD27	rs2267966	12	6427453	ENSG00000139193	intronic	A	T	30%	0.464
CD27	rs2286598	12	6422777	ENSG00000139193	5upstream	C	G	42%	0.320

CD27	rs2286721	12	6432326	ENSG00000139193	3downstream	G	A	19%	0.389
CD27	rs2532501	12	6433014	ENSG00000139193	3downstream	C	T	32%	0.476
CD27	rs25680	12	6424889	ENSG00000139193	coding	G	A	20%	0.330
CD27	rs3136551	12	6424121	ENSG00000139193	5upstream	A	G	4%	1.000
CD28	rs10490573	2	204291408	ENSG00000178562	intronic	G	A	19%	0.772
CD28	rs10932017	2	204286150	ENSG00000178562	intronic	T	C	44%	0.530
CD28	rs1879877	2	204278245	ENSG00000178562	5upstream	C	A	23%	0.104
CD28	rs3116494	2	204300266	ENSG00000178562	intronic	A	G	27%	1.000
CD28	rs3769683	2	204287042	ENSG00000178562	intronic	G	A	15%	0.598
CD33	rs200656	19	56416138	ENSG00000105383	5upstream	C	T	22%	0.900
CD33	rs2455069	19	56420453	ENSG00000105383	coding	A	G	45%	0.858
CD33	rs273653	19	56432651	ENSG00000105383	intronic	T	C	51%	0.427
CD33	rs3865444	19	56419774	ENSG00000105383	5upstream	G	T	31%	0.410
CD4	rs1045261	12	6799898	ENSG00000010610	3utr	T	C	12%	0.532
CD4	rs1075835	12	6775678	ENSG00000010610	intronic	C	T	23%	0.902
CD4	rs10774451	12	6793279	ENSG00000010610	intronic	G	A	39%	0.002
CD4	rs11064393	12	6769843	ENSG00000010610	intronic	T	C	13%	0.848
CD4	rs2707210	12	6772263	ENSG00000010610	intronic	C	A	47%	0.091
CD4	rs2707212	12	6771395	ENSG00000010610	intronic	G	A	34%	0.116
CD4	rs3213427	12	6799008	ENSG00000010610	3utr	T	C	48%	0.077
CD4	rs7296859	12	6764425	ENSG00000010610	5upstream	G	C	36%	1.000
CD4	rs7966029	12	6765822	ENSG00000010610	5upstream	C	G	38%	1.000
CD5	rs3862667	11	60631605	ENSG00000110448	intronic	T	G	27%	0.910
CD5	rs527407	11	60629204	ENSG00000110448	intronic	T	G	37%	0.255
CD5	rs572350	11	60633787	ENSG00000110448	intronic	C	T	36%	0.101
CD5	rs574843	11	60649898	ENSG00000110448	intronic	C	G	10%	0.616
CD5	rs616340	11	60632877	ENSG00000110448	intronic	G	A	37%	0.220
CD5	rs7104333	11	60652109	ENSG00000110448	3downstream	A	G	48%	0.077
CD5	rs7342164	11	60639670	ENSG00000110448	intronic	C	G	12%	0.542
CD80	rs13064589	3	120748046	ENSG00000121594	intronic	A	C	17%	1.000
CD80	rs1385521	3	120758029	ENSG00000121594	intronic	C	T	6%	0.215
CD80	rs1485332	3	120757611	ENSG00000121594	intronic	C	G	19%	0.777
CD80	rs16829984	3	120761230	ENSG00000121594	5upstream	G	C	11%	1.000

CD80	rs1880661	3	120761538	ENSG00000121594	5upstream	C	T	45%	0.859
CD80	rs2049502	3	120737075	ENSG00000121594	intronic	T	C	16%	0.618
CD80	rs2629396	3	120731657	ENSG00000121594	intronic	A	C	42%	0.587
CD80	rs2670289	3	120757276	ENSG00000121594	intronic	A	C	25%	1.000
CD80	rs3915165	3	120762041	ENSG00000121594	5upstream	C	A	14%	0.858
CD80	rs4688014	3	120733580	ENSG00000121594	intronic	G	A	34%	0.434
CD80	rs624035	3	120739769	ENSG00000121594	intronic	G	A	27%	0.741
CD80	rs626364	3	120755573	ENSG00000121594	intronic	C	T	44%	0.788
CD80	rs6807532	3	120757531	ENSG00000121594	intronic	C	T	7%	0.479
CD80	rs6810204	3	120757788	ENSG00000121594	intronic	C	T	9%	0.295
CD80	rs7648642	3	120744065	ENSG00000121594	intronic	A	C	47%	1.000
CD81	rs708155	11	2353571	ENSG00000110651	5upstream	G	A	15%	0.475
CD81	rs731909	11	2365200	ENSG00000110651	intronic	C	G	10%	0.458
CD86	rs13082681	3	123257824	ENSG00000114013	intronic	C	T	9%	0.572
CD86	rs2715267	3	123253548	ENSG00000114013	5upstream	A	C	36%	0.504
CD86	rs9831894	3	123283177	ENSG00000114013	intronic	A	C	38%	0.513
CDC6	rs13706	17	35710677	ENSG00000094804	coding	G	A	12%	0.048
CDK2	rs1045435	12	54652427	ENSG00000123374	3utr	G	C	8%	0.562
CDK2	rs2069398	12	54647143	ENSG00000123374	coding	G	A	8%	0.562
CDK2	rs2069408	12	54650588	ENSG00000123374	intronic	A	G	35%	0.772
CDK2	rs773107	12	54655773	ENSG00000123374	3downstream	A	G	35%	0.627
CDK4	rs2069502	12	56430932	ENSG00000135446	intronic	G	A	28%	0.912
CDK4	rs2270777	12	56431423	ENSG00000135446	intronic	G	A	50%	0.017
CDKN1A	rs1977172	6	36749732	ENSG00000124762	5upstream	G	T	13%	0.437
CDKN1A	rs3176352	6	36760317	ENSG00000124762	intronic	C	G	28%	0.047
CDKN1A	rs733590	6	36753181	ENSG00000124762	5upstream	T	C	39%	0.782
CDKN1A	rs762623	6	36753444	ENSG00000124762	5upstream	G	A	15%	0.288
CDKN1B	rs12229100	12	12757103	ENSG00000111276	5upstream	C	T	20%	1.000
CDKN1B	rs3093736	12	12764568	ENSG00000111276	intronic	G	A	3%	
CDKN1B	rs34329	12	12764500	ENSG00000111276	intronic	C	G	31%	1.000
CDKN1B	rs3759216	12	12759353	ENSG00000111276	5upstream	G	A	42%	0.588
CDKN1B	rs3759217	12	12759719	ENSG00000111276	5upstream	C	T	11%	0.821
CDKN1C	rs10832869	11	2867197	ENSG00000129757	5upstream	T	C	38%	0.576

CDKN1C	rs11024437	11	2865232	ENSG00000129757	5upstream	G	A	9%	0.595
CDKN1C	rs3864883	11	2858681	ENSG00000129757	3downstream	C	T	10%	1.000
CDKN2A	rs3218009	9	21988757	ENSG00000147889	5upstream	G	C	10%	0.304
CDKN2A	rs4074785	9	21971583	ENSG00000147889	intronic	G	A	7%	0.266
CDKN2B	rs1063192	9	21993367	ENSG00000147883	3utr	T	C	41%	0.234
CDKN2B	rs10811640	9	22003411	ENSG00000147883	5upstream	G	T	45%	0.859
CDKN2B	rs3217986	9	21995330	ENSG00000147883	3utr	A	C	7%	0.274
CDKN2B	rs3217992	9	21993223	ENSG00000147883	3utr	G	A	41%	0.466
CDKN2B	rs3218002	9	21990841	ENSG00000147883	3downstream	C	T	11%	0.823
CDKN2B	rs495490	9	22000412	ENSG00000147883	5upstream	T	C	10%	0.049
CDKN2C	rs3176466	1	51210953	ENSG00000123080	intronic	C	T	10%	0.621
CFLAR	rs12620435	2	201704024	ENSG00000003402	intronic	A	G	10%	0.813
CFLAR	rs1594	2	201733866	ENSG00000003402	coding	C	T	49%	0.724
CFLAR	rs719125	2	201726105	ENSG00000003402	intronic	C	A	20%	0.579
CHKA	rs17597141	11	67600238	ENSG00000110721	intronic	G	C	19%	0.393
CHKA	rs2511439	11	67610611	ENSG00000110721	intronic	C	T	12%	0.831
CHKA	rs2512611	11	67598945	ENSG00000110721	intronic	T	C	38%	0.925
CHKA	rs3794186	11	67577612	ENSG00000110721	3utr	C	T	6%	0.712
CHKA	rs3819255	11	67594347	ENSG00000110721	intronic	T	A	31%	0.607
CHUK	rs12269373	10	101962368	ENSG00000213341	intronic	C	T	50%	1.000
CHUK	rs12764370	10	101969472	ENSG00000213341	intronic	T	C	3%	0.354
CPT1B	rs131746	22	49372461	ENSG00000205560	5upstream	G	C	50%	0.094
CPT1B	rs131749	22	49371490	ENSG00000205560	5upstream	G	A	38%	0.925
CPT1B	rs5770913	22	49360638	ENSG00000205560	intronic	A	G	16%	0.317
CPT1B	rs6009931	22	49370018	ENSG00000205560	5upstream	T	G	6%	0.456
CSDE1	rs10489525	1	115065208	ENSG00000009307	intronic	G	A	28%	0.446
CSDE1	rs1065634	1	115061291	ENSG00000009307	3utr	A	G	9%	0.786
CSDE1	rs12136312	1	115099988	ENSG00000009307	intronic	T	G	25%	0.480
CSDE1	rs6671984	1	115059044	ENSG00000009307	3downstream	T	C	35%	0.923
CSDE1	rs6692870	1	115065314	ENSG00000009307	intronic	T	C	20%	1.000
CSDE1	rs8453	1	115061122	ENSG00000009307	3utr	C	A	14%	0.712
CYBA	rs2254073	16	87233305	ENSG00000051523	3downstream	C	T	27%	0.651
DLL3	rs7257526	19	44695584	ENSG00000090932	3downstream	G	A	47%	0.184

DPAGT1	rs1784304	11	118468026	ENSG00000172269	3downstream	C	A	27%	0.024
DPAGT1	rs640603	11	118469540	ENSG00000172269	3downstream	G	A	35%	0.209
DPAGT1	rs643788	11	118472968	ENSG00000172269	coding	T	C	44%	0.180
E2F2	rs2038027	1	23720629	ENSG0000007968	intronic	G	A	46%	0.929
E2F2	rs3218135	1	23728009	ENSG0000007968	intronic	C	T	8%	0.758
E2F2	rs3218203	1	23710147	ENSG0000007968	intronic	G	C	21%	0.031
E2F2	rs760607	1	23735240	ENSG0000007968	5upstream	A	G	42%	0.586
E2F3	rs10946384	6	20603525	ENSG00000112242	3downstream	C	T	23%	0.211
E2F3	rs11964747	6	20593877	ENSG00000112242	intronic	C	T	19%	0.469
E2F3	rs12192975	6	20539720	ENSG00000112242	intronic	G	A	6%	1.000
E2F3	rs16883824	6	20563543	ENSG00000112242	intronic	C	T	15%	0.394
E2F3	rs2328489	6	20526382	ENSG00000112242	intronic	C	G	25%	1.000
E2F3	rs2328524	6	20596213	ENSG00000112242	intronic	G	A	39%	1.000
E2F3	rs3806114	6	20590314	ENSG00000112242	intronic	A	G	33%	0.614
E2F3	rs4134938	6	20589657	ENSG00000112242	intronic	G	C	23%	0.616
E2F3	rs4134945	6	20591582	ENSG00000112242	intronic	C	T	13%	0.323
E2F3	rs4134950	6	20592708	ENSG00000112242	intronic	C	T	1%	
E2F3	rs6909633	6	20581052	ENSG00000112242	intronic	G	T	8%	0.116
E2F3	rs6938550	6	20570117	ENSG00000112242	intronic	A	G	9%	0.263
E2F3	rs744143	6	20526697	ENSG00000112242	intronic	C	T	7%	1.000
E2F3	rs749215	6	20509888	ENSG00000112242	5upstream	T	C	16%	0.868
E2F3	rs7747931	6	20590390	ENSG00000112242	intronic	G	A	45%	1.000
E2F3	rs7752992	6	20533437	ENSG00000112242	intronic	G	A	42%	0.470
E2F3	rs7760528	6	20550333	ENSG00000112242	intronic	T	C	31%	0.607
E2F3	rs911361	6	20523032	ENSG00000112242	intronic	C	T	41%	0.927
E2F3	rs9295466	6	20540215	ENSG00000112242	intronic	C	T	8%	0.074
E2F3	rs9368188	6	20521700	ENSG00000112242	intronic	G	A	32%	1.000
E2F3	rs942042	6	20535448	ENSG00000112242	intronic	G	A	8%	0.116
E2F3	rs9465755	6	20569281	ENSG00000112242	intronic	C	T	26%	0.361
E2F4	rs3729639	16	65783002	ENSG00000205250	5upstream	C	T	6%	1.000
E2F4	rs3730406	16	65787923	ENSG00000205250	intronic	C	T	7%	1.000
E2F5	rs2403086	8	86300456	ENSG00000133740	intronic	G	C	33%	0.137
E2F5	rs3808538	8	86308563	ENSG00000133740	intronic	A	C	28%	0.036

E2F5	rs4150880	8	86288703	ENSG00000133740	intronic	A	T	25%	0.155
E2F5	rs4150895	8	86292487	ENSG00000133740	intronic	C	A	6%	0.405
E2F5	rs4150944	8	86303149	ENSG00000133740	intronic	A	G	45%	0.182
E2F6	rs6709507	2	11518655	ENSG00000169016	intronic	G	A	5%	1.000
E2F6	rs6724463	2	11527533	ENSG00000169016	5upstream	A	G	40%	0.098
EIF2AK2	rs11124578	2	37403108	ENSG00000055332	intronic	A	C	15%	0.110
EIF2AK2	rs1158219	2	37400324	ENSG00000055332	intronic	A	T	44%	0.720
EIF2AK2	rs12620426	2	37233373	ENSG00000055332	intronic	T	A	42%	0.587
EIF2AK2	rs12712526	2	37236819	ENSG00000055332	intronic	A	G	50%	0.930
EIF2AK2	rs13410628	2	37210059	ENSG00000055332	intronic	C	A	11%	0.249
EIF2AK2	rs2287350	2	37221956	ENSG00000055332	intronic	A	G	43%	0.320
EIF2AK2	rs2307466	2	37229818	ENSG00000055332	5utr	C	G	5%	1.000
EIF2AK2	rs3856500	2	37240790	ENSG00000055332	5upstream	A	T	43%	0.368
EIF2AK2	rs4648174	2	37222554	ENSG00000055332	intronic	A	G	43%	0.320
EIF2AK2	rs4648186	2	37220611	ENSG00000055332	intronic	C	T	14%	1.000
EIF2AK2	rs4648212	2	37206515	ENSG00000055332	intronic	G	A	5%	0.387
EIF2AK2	rs4670185	2	37209038	ENSG00000055332	intronic	A	G	6%	1.000
EIF2AK2	rs6544067	2	37409770	ENSG00000055332	5upstream	G	C	33%	0.422
EIF2AK2	rs6711685	2	37402261	ENSG00000055332	intronic	G	C	10%	0.214
EIF2AK2	rs759460	2	37401640	ENSG00000055332	intronic	G	A	8%	1.000
EIF2AK2	rs9309006	2	37402083	ENSG00000055332	intronic	C	T	5%	1.000
ERLIN1	rs10509741	10	101907356	ENSG00000107566	intronic	G	A	8%	0.516
ERLIN1	rs11190405	10	101907510	ENSG00000107566	intronic	C	T	6%	0.697
ERLIN1	rs11595238	10	101920399	ENSG00000107566	intronic	A	G	6%	0.456
FADD	rs10898847	11	69723570	ENSG00000168040	5upstream	G	A	38%	1.000
FADD	rs7939734	11	69732593	ENSG00000168040	3downstream	A	T	43%	0.471
FAM82B	rs7018083	8	87550254	ENSG00000176623	3downstream	C	A	30%	0.754
FAS	rs1571013	10	90748329	ENSG00000026103	intronic	A	G	40%	0.927
FAS	rs1926188	10	90767091	ENSG00000026103	3downstream	G	A	30%	0.532
FAS	rs3758483	10	90738716	ENSG00000026103	5upstream	A	G	12%	0.405
FAS	rs6586165	10	90745036	ENSG00000026103	intronic	A	T	47%	0.723
FAS	rs9658706	10	90747600	ENSG00000026103	intronic	A	G	11%	0.119
FAS	rs9658742	10	90754871	ENSG00000026103	intronic	C	G	47%	0.723

FAS	rs9658767	10	90762252	ENSG00000026103	intronic	G	T	12%	0.831
FAS	rs9658786	10	90766329	ENSG00000026103	3downstream	C	T	14%	0.017
FAS	rs982764	10	90759978	ENSG00000026103	intronic	A	G	31%	0.917
FAS	rs983751	10	90736673	ENSG00000026103	5upstream	G	T	12%	0.405
FCGR2A	rs10800309	1	159738782	ENSG00000143226	5upstream	G	A	31%	1.000
FCGR2A	rs10919033	1	159754641	ENSG00000143226	3utr	T	C	12%	1.000
FCGR2A	rs1801274	1	159746369	ENSG00000143226	coding	T	C	50%	0.331
FCGR2A	rs4656308	1	159745375	ENSG00000143226	intronic	T	C	18%	0.288
FGF1	rs13179022	5	141951465	ENSG00000113578	3downstream	G	A	44%	0.073
FGF1	rs13188142	5	141982416	ENSG00000113578	intronic	T	A	35%	0.332
FGF1	rs152523	5	141963107	ENSG00000113578	intronic	C	T	24%	0.005
FGF1	rs17099029	5	141954717	ENSG00000113578	3utr	C	T	9%	1.000
FGF1	rs17208929	5	142050137	ENSG00000113578	5upstream	A	T	16%	1.000
FGF1	rs2282797	5	141970825	ENSG00000113578	intronic	T	C	9%	0.431
FGF1	rs250092	5	141958427	ENSG00000113578	intronic	C	T	13%	0.565
FGF1	rs34003	5	141955251	ENSG00000113578	intronic	T	G	43%	0.012
FGF1	rs34006	5	141958818	ENSG00000113578	intronic	A	G	32%	0.006
FGF1	rs34013	5	141978564	ENSG00000113578	intronic	A	T	19%	0.886
FGF1	rs34016	5	141979150	ENSG00000113578	intronic	G	A	14%	0.856
FGF1	rs34021	5	141982526	ENSG00000113578	intronic	G	A	37%	0.635
FGF1	rs3457	5	142040675	ENSG00000113578	intronic	C	T	23%	0.804
FGF1	rs4912868	5	141952897	ENSG00000113578	3downstream	T	C	34%	0.554
FGF1	rs6891913	5	141984606	ENSG00000113578	intronic	C	T	41%	0.055
FGF10	rs10473352	5	44344009	ENSG00000070193	intronic	A	G	19%	0.191
FGF10	rs10512849	5	44419980	ENSG00000070193	intronic	C	T	20%	0.334
FGF10	rs10512852	5	44429326	ENSG00000070193	5upstream	C	T	11%	0.493
FGF10	rs11750845	5	44408817	ENSG00000070193	intronic	C	T	48%	0.426
FGF17	rs1078363	8	21960158	ENSG00000158815	intronic	C	T	33%	0.842
FGF17	rs7813392	8	21952043	ENSG00000158815	5upstream	A	G	39%	0.405
FGF17	rs900781	8	21957030	ENSG00000158815	intronic	C	T	12%	0.521
FGF18	rs10077350	5	170802024	ENSG00000156427	intronic	T	C	19%	0.664
FGF18	rs10077440	5	170802187	ENSG00000156427	intronic	T	C	42%	0.085
FGF18	rs11740426	5	170808050	ENSG00000156427	intronic	A	G	3%	1.000

FGF18	rs12519454	5	170801778	ENSG00000156427	intronic	C	T	15%	1.000
FGF18	rs2043278	5	170815212	ENSG00000156427	intronic	C	T	26%	0.107
FGF18	rs3806929	5	170777664	ENSG00000156427	5upstream	C	T	41%	0.523
FGF18	rs4076077	5	170796114	ENSG00000156427	intronic	T	C	45%	0.423
FGF18	rs4559013	5	170784229	ENSG00000156427	intronic	G	A	46%	0.657
FGF18	rs4620037	5	170807702	ENSG00000156427	intronic	A	C	21%	0.046
FGF18	rs6887323	5	170780729	ENSG00000156427	intronic	A	G	43%	0.125
FGF18	rs6891250	5	170807781	ENSG00000156427	intronic	T	C	16%	0.411
FGF18	rs734840	5	170819073	ENSG00000156427	3downstream	C	T	46%	0.016
FGF2	rs10000779	4	124005564	ENSG00000138685	intronic	A	G	17%	0.637
FGF2	rs11938826	4	123992064	ENSG00000138685	intronic	C	G	14%	0.855
FGF2	rs12644427	4	124002837	ENSG00000138685	intronic	A	G	15%	0.861
FGF2	rs167428	4	123992889	ENSG00000138685	intronic	T	C	26%	1.000
FGF2	rs17407577	4	123998791	ENSG00000138685	intronic	T	C	6%	0.245
FGF2	rs17408557	4	124020067	ENSG00000138685	intronic	A	G	14%	0.261
FGF2	rs17472986	4	123994282	ENSG00000138685	intronic	G	A	9%	0.297
FGF2	rs308382	4	124002644	ENSG00000138685	intronic	A	G	16%	1.000
FGF2	rs308388	4	124006529	ENSG00000138685	intronic	C	T	34%	0.695
FGF2	rs308395	4	123966392	ENSG00000138685	5upstream	C	G	15%	0.081
FGF2	rs308417	4	123987787	ENSG00000138685	intronic	A	C	9%	1.000
FGF2	rs308435	4	123991468	ENSG00000138685	intronic	C	A	18%	0.765
FGF2	rs308439	4	123993029	ENSG00000138685	intronic	T	G	4%	0.218
FGF2	rs308443	4	123995217	ENSG00000138685	intronic	G	A	3%	0.297
FGF2	rs3789138	4	124004171	ENSG00000138685	intronic	G	A	39%	0.268
FGF2	rs3804158	4	124034350	ENSG00000138685	3utr	A	G	42%	0.587
FGF23	rs10744643	12	4345455	ENSG00000118972	3downstream	T	C	38%	0.188
FGF23	rs10774227	12	4363712	ENSG00000118972	5upstream	G	A	40%	0.034
FGF23	rs10849047	12	4344924	ENSG00000118972	3downstream	G	C	9%	1.000
FGF23	rs11063112	12	4348341	ENSG00000118972	3utr	T	A	26%	0.299
FGF23	rs12812339	12	4361106	ENSG00000118972	5upstream	A	C	29%	0.746
FGF23	rs13312789	12	4351305	ENSG00000118972	intronic	C	T	9%	0.025
FGF23	rs13312810	12	4346430	ENSG00000118972	3downstream	G	C	3%	0.373
FGF23	rs17700494	12	4357652	ENSG00000118972	intronic	G	T	3%	1.000

FGF23	rs2075317	12	4362576	ENSG00000118972	5upstream	A	G	44%	0.049
FGF23	rs3812822	12	4359496	ENSG00000118972	5upstream	T	C	11%	0.249
FGF4	rs3740640	11	69296764	ENSG00000075388	3downstream	A	G	12%	0.211
FGF4	rs871346	11	69294968	ENSG00000075388	3downstream	G	A	16%	0.873
FGF8	rs4919593	10	103530508	ENSG00000107831	5upstream	C	A	42%	0.928
FGF9	rs10047718	13	21172442	ENSG00000102678	intronic	T	C	46%	0.091
FGF9	rs1886861	13	21141370	ENSG00000102678	5upstream	A	C	42%	0.471
FGF9	rs263931	13	21139766	ENSG00000102678	5upstream	T	G	24%	0.629
FGF9	rs263932	13	21139354	ENSG00000102678	5upstream	G	A	11%	0.013
FGF9	rs4770192	13	21167455	ENSG00000102678	intronic	C	T	17%	0.428
FGF9	rs6490667	13	21161950	ENSG00000102678	intronic	T	C	33%	0.274
FGF9	rs7317625	13	21176137	ENSG00000102678	3downstream	G	C	12%	0.837
FGFR2	rs1047057	10	123229102	ENSG00000066468	intronic	T	C	49%	0.251
FGFR2	rs10510097	10	123317866	ENSG00000066468	intronic	C	T	12%	0.679
FGFR2	rs1219639	10	123348302	ENSG00000066468	5upstream	G	A	9%	0.111
FGFR2	rs1649200	10	123233720	ENSG00000066468	intronic	T	C	17%	0.112
FGFR2	rs1649204	10	123226115	ENSG00000066468	intronic	T	C	26%	0.730
FGFR2	rs1863741	10	123317018	ENSG00000066468	intronic	C	G	41%	0.172
FGFR2	rs2420941	10	123219616	ENSG00000066468	3downstream	G	T	48%	0.595
FGFR2	rs2556537	10	123231784	ENSG00000066468	intronic	G	A	29%	0.335
FGFR2	rs2912753	10	123247392	ENSG00000066468	intronic	C	A	5%	
FGFR2	rs2912759	10	123259701	ENSG00000066468	intronic	C	T	27%	0.179
FGFR2	rs2912762	10	123266280	ENSG00000066468	intronic	G	A	29%	0.455
FGFR2	rs2912770	10	123286309	ENSG00000066468	intronic	T	G	24%	1.000
FGFR2	rs2981428	10	123319419	ENSG00000066468	intronic	C	A	45%	0.859
FGFR2	rs2981451	10	123268904	ENSG00000066468	intronic	C	A	48%	0.027
FGFR2	rs2981452	10	123315387	ENSG00000066468	intronic	C	G	18%	0.765
FGFR2	rs3135715	10	123344716	ENSG00000066468	intronic	A	C	17%	0.262
FGFR2	rs3135758	10	123267859	ENSG00000066468	intronic	G	A	8%	0.563
FGFR2	rs3135761	10	123266081	ENSG00000066468	intronic	C	T	19%	0.468
FGFR2	rs3135772	10	123253606	ENSG00000066468	intronic	G	A	14%	0.278
FGFR2	rs3135812	10	123232711	ENSG00000066468	intronic	T	C	5%	1.000
FGFR2	rs3135818	10	123231201	ENSG00000066468	intronic	A	G	1%	

FGFR2	rs3135819	10	123231112	ENSG00000066468	intronic	G	C	6%	0.231
FGFR2	rs4412700	10	123352565	ENSG00000066468	5upstream	G	A	2%	0.173
FGFR2	rs4752566	10	123257621	ENSG00000066468	intronic	G	T	46%	1.000
FGFR3	rs2301293	4	1771664	ENSG00000068078	intronic	C	T	13%	0.554
FGFR3	rs743682	4	1767650	ENSG00000068078	intronic	G	A	11%	0.484
FRAP1	rs11121704	1	11216546	ENSG00000198793	intronic	T	C	28%	0.097
FRAP1	rs12732063	1	11113819	ENSG00000198793	intronic	G	A	7%	0.500
FRAP1	rs1770345	1	11137167	ENSG00000198793	intronic	A	C	49%	0.657
FRAP1	rs2295080	1	11245215	ENSG00000198793	5upstream	T	G	32%	0.263
FRS2	rs10784784	12	68166150	ENSG00000166225	intronic	T	C	34%	0.921
FRS2	rs10878994	12	68146963	ENSG00000166225	5upstream	G	T	27%	0.366
FRS2	rs11177694	12	68180241	ENSG00000166225	intronic	G	A	23%	0.172
FRS2	rs221068	12	68146473	ENSG00000166225	5upstream	C	T	46%	0.130
FRS2	rs536065	12	68215694	ENSG00000166225	intronic	T	C	29%	0.829
FRS2	rs536721	12	68196752	ENSG00000166225	intronic	T	C	14%	1.000
FRS2	rs580180	12	68183894	ENSG00000166225	intronic	C	T	14%	1.000
FRS2	rs710780	12	68248311	ENSG00000166225	intronic	G	A	50%	0.724
G6PC3	rs3815076	17	39507629	ENSG00000141349	coding	C	T	7%	1.000
G6PC3	rs850857	17	39509537	ENSG00000141349	3downstream	A	G	45%	0.790
GADD45A	rs2815266	1	67919581	ENSG00000116717	5upstream	G	A	6%	0.706
GADD45A	rs520820	1	67920941	ENSG00000116717	5upstream	C	T	20%	0.093
GADD45A	rs532446	1	67925026	ENSG00000116717	intronic	T	C	32%	0.311
GADD45A	rs624790	1	67920362	ENSG00000116717	5upstream	A	C	14%	1.000
GATA3	rs1244186	10	8132689	ENSG00000107485	5upstream	C	T	28%	0.378
GATA3	rs369421	10	8139183	ENSG00000107485	intronic	T	C	19%	1.000
GATA3	rs3781093	10	8141933	ENSG00000107485	intronic	A	G	16%	0.147
GATA3	rs3802600	10	8148818	ENSG00000107485	intronic	T	A	21%	0.788
GATA3	rs3802604	10	8142278	ENSG00000107485	intronic	T	C	39%	0.402
GATA3	rs4444929	10	8150030	ENSG00000107485	intronic	T	C	23%	0.620
GATA3	rs477461	10	8160149	ENSG00000107485	3downstream	A	G	17%	0.087
GF11B	rs11243940	9	134811193	ENSG00000165702	intronic	A	G	25%	0.811
GMPR2	rs17102265	14	23777020	ENSG00000100938	intronic	G	A	18%	0.220
GPX1	rs3448	3	49371755	ENSG00000197582	5upstream	C	T	28%	0.272

GRB2	rs12600908	17	70839969	ENSG00000177885	intronic	G	A	13%	0.842
GRB2	rs17490675	17	70825380	ENSG00000177885	3downstream	G	C	5%	1.000
GRB2	rs4350602	17	70867364	ENSG00000177885	intronic	T	C	29%	0.107
GRB2	rs4789172	17	70853307	ENSG00000177885	intronic	C	T	50%	0.252
GRB2	rs4789181	17	70886235	ENSG00000177885	intronic	A	T	18%	0.101
GRB2	rs7207618	17	70833282	ENSG00000177885	intronic	C	T	26%	0.255
HAVCR2	rs13170556	5	156455166	ENSG00000135077	intronic	T	C	16%	0.245
HAVCR2	rs919746	5	156463894	ENSG00000135077	intronic	T	C	18%	0.657
HDAC5	rs11079983	17	39553696	ENSG00000108840	intronic	C	T	30%	0.113
HDAC5	rs615070	17	39532117	ENSG00000108840	intronic	T	C	28%	0.050
HDAC5	rs8065686	17	39549423	ENSG00000108840	intronic	C	T	9%	1.000
HDAC7A	rs11831940	12	46476433	ENSG00000061273	intronic	G	A	30%	0.170
HDAC7A	rs12820931	12	46477252	ENSG00000061273	intronic	C	T	8%	1.000
HDAC7A	rs17122326	12	46486006	ENSG00000061273	intronic	A	C	5%	
HDAC7A	rs2240108	12	46466775	ENSG00000061273	intronic	G	A	15%	0.377
HDAC7A	rs2301783	12	46468508	ENSG00000061273	intronic	T	G	11%	1.000
HDAC7A	rs2525051	12	46482206	ENSG00000061273	intronic	C	G	50%	0.093
HDAC7A	rs2525053	12	46481615	ENSG00000061273	intronic	A	G	31%	0.125
HDAC7A	rs3759407	12	46481336	ENSG00000061273	intronic	C	T	8%	0.006
HDAC7A	rs3815138	12	46464732	ENSG00000061273	intronic	G	A	23%	0.457
HDAC7A	rs4760653	12	46462058	ENSG00000061273	3downstream	T	C	12%	0.841
HDAC7A	rs7958910	12	46498049	ENSG00000061273	intronic	A	T	34%	0.434
HS2ST1	rs1407131	1	87151215	ENSG00000153936	5upstream	T	C	13%	0.175
ICBR_HUMAN	rs1503394	11	104512387	ENSG00000118168	3downstream	A	T	26%	0.819
ICBR_HUMAN	rs3736149	11	104513625	ENSG00000118168	3downstream	T	C	45%	0.213
ICBR_HUMAN	rs7117758	11	104512965	ENSG00000118168	3downstream	C	G	6%	0.712
ICBR_HUMAN	rs7934633	11	104511960	ENSG00000118168	3downstream	G	C	33%	0.547
IGF1R	rs1058696	15	97320050	ENSG00000140443	3utr	C	T	3%	0.451
IGF1R	rs11247380	15	97258254	ENSG00000140443	intronic	G	A	31%	0.303
IGF1R	rs11630259	15	97248471	ENSG00000140443	intronic	T	C	35%	0.242
IGF1R	rs11635251	15	97298194	ENSG00000140443	intronic	A	G	21%	0.008
IGF1R	rs12442170	15	97294667	ENSG00000140443	intronic	A	G	42%	0.856
IGF1R	rs12591122	15	97315935	ENSG00000140443	intronic	G	C	14%	0.344

IGF1R	rs12592205	15	97308119	ENSG00000140443	intronic	A	T	15%	0.236
IGF1R	rs12901570	15	97071145	ENSG00000140443	intronic	C	T	5%	0.133
IGF1R	rs12910200	15	97262992	ENSG00000140443	intronic	A	T	26%	0.649
IGF1R	rs12916884	15	97305411	ENSG00000140443	intronic	G	T	26%	0.354
IGF1R	rs1521483	15	97253338	ENSG00000140443	intronic	T	C	3%	
IGF1R	rs1546713	15	97289389	ENSG00000140443	intronic	C	T	32%	0.611
IGF1R	rs1879613	15	97251880	ENSG00000140443	intronic	C	T	17%	0.262
IGF1R	rs2016347	15	97321323	ENSG00000140443	3utr	A	C	46%	0.478
IGF1R	rs2139924	15	97272793	ENSG00000140443	intronic	T	G	17%	0.356
IGF1R	rs2684790	15	97309063	ENSG00000140443	intronic	C	T	17%	1.000
IGF1R	rs2684794	15	97302476	ENSG00000140443	intronic	A	G	12%	0.839
IGF1R	rs2684796	15	97300915	ENSG00000140443	intronic	G	A	13%	0.696
IGF1R	rs2684806	15	97282808	ENSG00000140443	intronic	G	A	44%	0.032
IGF1R	rs2684807	15	97281977	ENSG00000140443	intronic	A	G	47%	0.330
IGF1R	rs2684811	15	97271086	ENSG00000140443	intronic	C	T	19%	0.260
IGF1R	rs2715416	15	97271554	ENSG00000140443	intronic	C	G	29%	0.160
IGF1R	rs2715428	15	97285955	ENSG00000140443	intronic	G	A	47%	0.249
IGF1R	rs2871865	15	97012419	ENSG00000140443	intronic	C	G	13%	0.842
IGF1R	rs3743254	15	97317453	ENSG00000140443	intronic	G	A	8%	0.769
IGF1R	rs3743262	15	97282996	ENSG00000140443	coding	C	T	3%	1.000
IGF1R	rs3784604	15	97275830	ENSG00000140443	intronic	T	C	12%	0.381
IGF1R	rs4966015	15	97065655	ENSG00000140443	intronic	G	T	18%	0.880
IGF1R	rs4966039	15	97275338	ENSG00000140443	intronic	A	G	22%	0.611
IGF1R	rs4966044	15	97283721	ENSG00000140443	intronic	G	A	38%	0.778
IGF1R	rs4966046	15	97292798	ENSG00000140443	intronic	T	C	20%	0.270
IGF1R	rs702497	15	97319104	ENSG00000140443	3utr	C	T	23%	0.383
IGF1R	rs7162336	15	97293049	ENSG00000140443	intronic	G	A	3%	
IGF1R	rs7166348	15	97065318	ENSG00000140443	intronic	G	A	23%	0.712
IGF1R	rs7166565	15	97307458	ENSG00000140443	intronic	G	A	42%	0.018
IGF1R	rs7167580	15	97312731	ENSG00000140443	intronic	C	T	25%	1.000
IGF1R	rs7168671	15	97272485	ENSG00000140443	intronic	C	T	18%	0.050
IGF1R	rs7169544	15	97275275	ENSG00000140443	intronic	G	A	40%	0.712
IGF1R	rs7173377	15	97306251	ENSG00000140443	intronic	A	C	41%	0.101

IGF1R	rs8030050	15	97300426	ENSG00000140443	intronic	C	T	10%	0.806
IGF1R	rs8032477	15	97072077	ENSG00000140443	intronic	T	C	40%	0.100
IGF1R	rs8034284	15	97313771	ENSG00000140443	intronic	C	T	48%	0.595
IGF1R	rs871335	15	97297469	ENSG00000140443	intronic	G	T	23%	0.268
IGF1R	rs874305	15	97013768	ENSG00000140443	intronic	G	A	38%	0.135
IGF1R	rs951715	15	97274076	ENSG00000140443	intronic	A	G	34%	0.922
IGF1R	rs9672254	15	97315608	ENSG00000140443	intronic	C	T	47%	0.658
IGF1R	rs9920651	15	97280163	ENSG00000140443	intronic	C	T	19%	0.673
IKBKB	rs10958713	8	42299873	ENSG00000104365	intronic	C	T	36%	0.703
IKBKB	rs11986055	8	42254335	ENSG00000104365	intronic	A	C	4%	
IKBKB	rs17875671	8	42260542	ENSG00000104365	intronic	A	G	9%	0.790
IKBKB	rs3747811	8	42248662	ENSG00000104365	intronic	T	A	49%	0.216
IKBKB	rs4560769	8	42259961	ENSG00000104365	intronic	T	C	9%	0.576
IKBKB	rs5029748	8	42259706	ENSG00000104365	intronic	C	A	24%	0.632
IKBKB	rs6474388	8	42306311	ENSG00000104365	intronic	G	A	6%	1.000
IKZF1	rs10230193	7	50335171	ENSG00000185811	intronic	G	A	31%	0.211
IKZF1	rs12533940	7	50430452	ENSG00000185811	intronic	G	A	47%	0.051
IKZF1	rs4132601	7	50438098	ENSG00000185811	3downstream	T	G	26%	0.171
IKZF1	rs6421315	7	50325753	ENSG00000185811	intronic	G	C	36%	0.775
IKZF1	rs7791054	7	50333578	ENSG00000185811	intronic	G	A	13%	0.442
IKZF1	rs7797772	7	50427702	ENSG00000185811	intronic	G	A	7%	0.011
IKZF1	rs7802443	7	50328511	ENSG00000185811	intronic	G	C	40%	1.000
IKZF1	rs7805434	7	50311296	ENSG00000185811	5upstream	G	C	29%	0.519
IKZF1	rs7809377	7	50410220	ENSG00000185811	intronic	G	A	11%	0.818
IL15	rs12510514	4	142820946	ENSG00000164136	intronic	C	A	10%	0.805
IL15	rs13112582	4	142835456	ENSG00000164136	intronic	C	T	47%	0.536
IL15	rs1519552	4	142795473	ENSG00000164136	intronic	G	A	31%	0.838
IL15	rs17461269	4	142792798	ENSG00000164136	intronic	T	A	28%	0.587
IL15	rs1907949	4	142866773	ENSG00000164136	intronic	C	T	10%	1.000
IL15	rs3806798	4	142776729	ENSG00000164136	5upstream	T	A	13%	0.695
IL17A	rs12204016	6	52164462	ENSG00000112115	3downstream	C	T	26%	0.063
IL17A	rs1974226	6	52163294	ENSG00000112115	3utr	G	A	18%	0.658
IL17A	rs2275913	6	52158992	ENSG00000112115	5upstream	G	A	35%	0.172

IL17A	rs3819024	6	52158745	ENSG00000112115	5upstream	A	G	34%	0.430
IL17A	rs3819025	6	52159233	ENSG00000112115	intronic	G	A	5%	0.624
IL17A	rs4711998	6	52158312	ENSG00000112115	5upstream	G	A	28%	0.659
IL17A	rs7747909	6	52162208	ENSG00000112115	3utr	G	A	24%	0.473
IL17A	rs8193036	6	52158452	ENSG00000112115	5upstream	T	C	25%	0.018
IL17A	rs9395767	6	52154729	ENSG00000112115	5upstream	A	T	39%	0.263
IL17C	rs899729	16	87229281	ENSG00000124391	5upstream	C	A	37%	0.506
IL21	rs12508721	4	123764114	ENSG00000138684	5upstream	C	T	26%	0.052
IL21	rs13143866	4	123760208	ENSG00000138684	intronic	G	A	29%	0.389
IL21	rs925549	4	123750443	ENSG00000138684	3downstream	A	G	34%	0.693
IL21R	rs179762	16	27345472	ENSG00000103522	intronic	A	G	32%	0.479
IL21R	rs2107357	16	27318330	ENSG00000103522	5upstream	C	T	14%	0.108
IL21R	rs2189521	16	27321067	ENSG00000103522	5upstream	A	G	43%	0.787
IL21R	rs2285452	16	27368398	ENSG00000103522	3utr	G	A	23%	0.617
IL21R	rs3093308	16	27350155	ENSG00000103522	intronic	C	T	26%	1.000
IL21R	rs3093317	16	27351579	ENSG00000103522	intronic	C	T	5%	0.157
IL21R	rs3093321	16	27352572	ENSG00000103522	intronic	C	A	30%	0.058
IL21R	rs3093330	16	27353555	ENSG00000103522	intronic	C	T	6%	0.712
IL21R	rs3093363	16	27362063	ENSG00000103522	intronic	A	G	29%	0.289
IL21R	rs3093366	16	27362655	ENSG00000103522	intronic	A	C	7%	1.000
IL21R	rs3093406	16	27360201	ENSG00000103522	intronic	C	T	4%	
IL21R	rs3093412	16	27369022	ENSG00000103522	3utr	C	T	9%	0.051
IL21R	rs8049804	16	27344284	ENSG00000103522	intronic	T	C	29%	0.457
IL21R	rs8057464	16	27350794	ENSG00000103522	intronic	C	A	27%	0.741
IL21R	rs8060368	16	27319915	ENSG00000103522	5upstream	C	T	36%	0.084
IL2RA	rs12244380	10	6093380	ENSG00000134460	intronic	A	G	44%	0.419
IL2RA	rs12359875	10	6091113	ENSG00000134460	intronic	C	T	27%	1.000
IL2RA	rs12722486	10	6143768	ENSG00000134460	intronic	G	A	7%	0.336
IL2RA	rs12722588	10	6100439	ENSG00000134460	intronic	G	A	17%	0.086
IL2RA	rs12722596	10	6096300	ENSG00000134460	intronic	A	G	8%	1.000
IL2RA	rs12722605	10	6093169	ENSG00000134460	intronic	A	T	20%	0.676
IL2RA	rs2025345	10	6107694	ENSG00000134460	intronic	A	G	42%	0.365
IL2RA	rs2031229	10	6106574	ENSG00000134460	intronic	G	A	19%	0.320

IL2RA	rs2076846	10	6103259	ENSG00000134460	intronic	A	G	31%	0.535
IL2RA	rs2274037	10	6102114	ENSG00000134460	intronic	G	A	6%	0.680
IL2RA	rs3134883	10	6140731	ENSG00000134460	intronic	C	T	26%	0.495
IL2RA	rs7072793	10	6146272	ENSG00000134460	5upstream	T	C	41%	0.927
IL2RA	rs9663421	10	6095610	ENSG00000134460	intronic	C	T	32%	0.763
IL7	rs11777205	8	79814689	ENSG00000104432	intronic	G	A	9%	0.786
IL7	rs1441850	8	79820221	ENSG00000104432	intronic	T	C	33%	0.920
IL7	rs16906063	8	79822356	ENSG00000104432	intronic	T	C	15%	0.861
IL7	rs16906090	8	79852310	ENSG00000104432	intronic	C	T	6%	0.104
IL7	rs17505589	8	79852190	ENSG00000104432	intronic	C	T	14%	0.709
IL7	rs2583759	8	79807519	ENSG00000104432	3downstream	T	C	24%	0.112
IL7	rs2583763	8	79825963	ENSG00000104432	intronic	G	A	9%	0.425
IL7	rs2919921	8	79824891	ENSG00000104432	intronic	T	A	17%	0.755
IL7	rs2919935	8	79846503	ENSG00000104432	intronic	A	T	8%	0.546
IL7	rs6993386	8	79816700	ENSG00000104432	intronic	A	G	38%	0.709
IL7	rs7007634	8	79882152	ENSG00000104432	5upstream	A	G	13%	0.841
IRAK2	rs11465853	3	10181981	ENSG00000134070	intronic	G	C	30%	0.532
IRAK2	rs11465886	3	10225783	ENSG00000134070	intronic	A	G	2%	
IRAK2	rs1169670	3	10198607	ENSG00000134070	intronic	C	G	39%	0.228
IRAK2	rs11706450	3	10252866	ENSG00000134070	intronic	C	T	48%	0.723
IRAK2	rs1619378	3	10192965	ENSG00000134070	intronic	A	G	23%	0.617
IRAK2	rs1642736	3	10240057	ENSG00000134070	intronic	A	G	23%	0.902
IRAK2	rs2302859	3	10236689	ENSG00000134070	intronic	G	C	22%	0.900
IRAK2	rs2619508	3	10190950	ENSG00000134070	intronic	G	T	45%	0.040
IRAK2	rs263408	3	10212297	ENSG00000134070	intronic	T	C	9%	0.789
IRAK2	rs263412	3	10217671	ENSG00000134070	intronic	A	C	10%	0.454
IRAK2	rs3844283	3	10239480	ENSG00000134070	coding	G	C	40%	0.783
IRAK2	rs4462945	3	10246265	ENSG00000134070	intronic	C	T	9%	0.410
IRAK2	rs457414	3	10177884	ENSG00000134070	5upstream	T	G	28%	0.827
IRAK2	rs708033	3	10224720	ENSG00000134070	intronic	G	A	14%	0.850
IRAK2	rs713016	3	10253696	ENSG00000134070	intronic	G	A	11%	1.000
IRAK2	rs7373858	3	10224984	ENSG00000134070	intronic	G	A	38%	0.577
IRAK2	rs776514	3	10250475	ENSG00000134070	intronic	G	A	45%	0.326

JAG2	rs2072673	14	104695738	ENSG00000184916	intronic	G	A	34%	0.169
JAG2	rs2239283	14	104702955	ENSG00000184916	intronic	C	G	11%	0.376
JAG2	rs909236	14	104677201	ENSG00000184916	3downstream	A	G	25%	0.552
JAK1	rs10889513	1	65206628	ENSG00000162434	5upstream	G	A	11%	0.650
JAK1	rs11208559	1	65207871	ENSG00000162434	5upstream	C	G	23%	1.000
JAK1	rs11585932	1	65107683	ENSG00000162434	coding	T	C	5%	1.000
JAK1	rs12129819	1	65076247	ENSG00000162434	coding	C	T	14%	0.574
JAK1	rs12135754	1	65115093	ENSG00000162434	intronic	A	C	7%	0.714
JAK1	rs17127114	1	65108419	ENSG00000162434	intronic	G	A	11%	0.645
JAK1	rs17127117	1	65111363	ENSG00000162434	intronic	C	T	10%	1.000
JAK1	rs2256298	1	65103270	ENSG00000162434	intronic	C	T	28%	0.324
JAK1	rs2780816	1	65075001	ENSG00000162434	intronic	C	A	28%	0.583
JAK1	rs310201	1	65122196	ENSG00000162434	intronic	T	C	20%	0.218
JAK1	rs310244	1	65078465	ENSG00000162434	intronic	C	T	24%	0.226
JAK1	rs310245	1	65078770	ENSG00000162434	intronic	C	T	37%	0.777
JAK1	rs4916004	1	65076098	ENSG00000162434	intronic	G	A	7%	0.735
JAK3	rs11888	19	17796626	ENSG00000105639	5upstream	T	C	36%	0.150
JAK3	rs2072496	19	17807054	ENSG00000105639	intronic	G	A	8%	0.565
JAK3	rs2110586	19	17818309	ENSG00000105639	intronic	C	T	17%	0.641
JAK3	rs2286662	19	17793138	ENSG00000105639	coding	C	T	40%	0.142
JAK3	rs2382987	19	17795018	ENSG00000105639	5upstream	G	A	26%	0.908
JAK3	rs3212701	19	17818024	ENSG00000105639	intronic	G	A	29%	0.161
JAK3	rs3212711	19	17816021	ENSG00000105639	intronic	C	T	32%	0.920
JAK3	rs3212741	19	17812178	ENSG00000105639	intronic	C	T	23%	0.901
JAK3	rs3212752	19	17809732	ENSG00000105639	intronic	A	G	6%	0.427
JAK3	rs867174	19	17813930	ENSG00000105639	intronic	A	G	9%	1.000
KCNH6	rs12940055	17	59075874	ENSG00000173826	intronic	C	T	14%	0.140
KCNH6	rs3785574	17	59116917	ENSG00000173826	intronic	A	G	30%	0.293
KCNH6	rs7209435	17	59066696	ENSG00000173826	intronic	T	C	29%	0.522
KIAA1984	rs2784075	9	138912747	ENSG00000196642	intronic	G	A	23%	0.709
KIAA1984	rs4880160	9	138928460	ENSG00000196642	intronic	C	T	25%	0.722
KIAA1984	rs908831	9	138942363	ENSG00000196642	intronic	A	G	38%	0.457
KRAS	rs11047917	12	25287843	ENSG00000133703	intronic	C	T	7%	0.735

KRAS	rs11047921	12	25299314	ENSG00000133703	5upstream	C	A	6%	1.000
KRAS	rs12305513	12	25256490	ENSG00000133703	intronic	A	G	13%	0.168
KRAS	rs12320328	12	25299731	ENSG00000133703	5upstream	A	G	8%	0.063
KRAS	rs12579073	12	25267066	ENSG00000133703	intronic	A	C	51%	0.597
KRAS	rs17329025	12	25275080	ENSG00000133703	intronic	A	G	43%	0.472
KRAS	rs17388893	12	25285132	ENSG00000133703	intronic	A	C	7%	1.000
KRAS	rs2970531	12	25298992	ENSG00000133703	5upstream	C	A	4%	0.471
KRAS	rs4963857	12	25247667	ENSG00000133703	3downstream	G	A	8%	0.241
KRAS	rs7133640	12	25279583	ENSG00000133703	intronic	G	C	22%	0.363
KRAS	rs7312175	12	25295871	ENSG00000133703	5upstream	G	A	12%	0.522
KRAS	rs7315339	12	25292968	ENSG00000133703	intronic	T	C	29%	0.288
LY96	rs11786591	8	75078898	ENSG00000154589	intronic	C	T	27%	1.000
LY96	rs16938758	8	75082303	ENSG00000154589	intronic	A	T	23%	0.209
LY96	rs17226566	8	75082466	ENSG00000154589	intronic	T	C	24%	0.720
LY96	rs1905045	8	75062568	ENSG00000154589	5upstream	T	C	21%	1.000
LY96	rs2114169	8	75103440	ENSG00000154589	intronic	A	T	20%	0.682
LY96	rs7822407	8	75070367	ENSG00000154589	intronic	G	A	20%	1.000
MAP1LC3A	rs6059918	20	32614164	ENSG00000101460	3downstream	T	C	48%	0.596
MAP2K3	rs10468608	17	21126953	ENSG00000034152	5upstream	C	T	37%	0.850
MAP2K3	rs1466314	17	21130191	ENSG00000034152	intronic	G	T	32%	0.838
MAP2K3	rs3744222	17	21147033	ENSG00000034152	intronic	G	A	23%	0.527
MAP2K3	rs9899521	17	21145470	ENSG00000034152	intronic	C	A	27%	0.574
MAP2K3	rs9901404	17	21154375	ENSG00000034152	intronic	G	A	50%	0.659
MAP2K4	rs11655727	17	11899396	ENSG00000065559	intronic	T	C	22%	0.698
MAP2K4	rs12603036	17	11884426	ENSG00000065559	intronic	C	T	11%	0.484
MAP2K4	rs12942507	17	11978533	ENSG00000065559	intronic	C	T	31%	0.534
MAP2K4	rs17541897	17	11888103	ENSG00000065559	intronic	C	G	35%	0.770
MAP2K4	rs1787	17	11935595	ENSG00000065559	intronic	G	C	24%	0.903
MAP2K4	rs2108496	17	11965072	ENSG00000065559	intronic	G	C	25%	1.000
MAP2K4	rs4791489	17	11989001	ENSG00000065559	3downstream	C	T	38%	0.925
MAP2K4	rs4791490	17	11989069	ENSG00000065559	3downstream	C	A	21%	0.354
MAP2K4	rs7207011	17	11984298	ENSG00000065559	intronic	A	G	3%	
MAP2K4	rs8065164	17	11971834	ENSG00000065559	intronic	T	C	29%	1.000

MAP2K4	rs8067785	17	11871706	ENSG00000065559	intronic	T	G	14%	1.000
MAP3K14	rs16939948	17	40714201	ENSG0000006062	intronic	T	C	5%	0.618
MAP3K14	rs17686001	17	40744196	ENSG0000006062	intronic	G	A	15%	0.234
MAP3K14	rs2074292	17	40717274	ENSG0000006062	intronic	T	C	48%	0.657
MAP3K14	rs3785803	17	40716996	ENSG0000006062	intronic	C	T	13%	1.000
MAP3K14	rs7214657	17	40705703	ENSG0000006062	intronic	T	G	29%	1.000
MAP3K14	rs721579	17	40726264	ENSG0000006062	intronic	G	A	29%	0.595
MAP3K14	rs7216796	17	40747991	ENSG0000006062	intronic	A	G	48%	0.791
MAP3K7	rs1144159	6	91304421	ENSG00000135341	intronic	T	C	18%	0.656
MAP3K7	rs13208824	6	91301450	ENSG00000135341	intronic	C	A	12%	0.209
MAP3K7	rs150126	6	91289850	ENSG00000135341	intronic	A	G	25%	0.026
MAP3K7	rs157428	6	91335203	ENSG00000135341	intronic	A	G	2%	0.205
MAP3K7	rs157682	6	91311683	ENSG00000135341	intronic	C	T	30%	0.091
MAP3K7	rs3799912	6	91305464	ENSG00000135341	intronic	A	G	11%	0.494
MAP3K7	rs812606	6	91291080	ENSG00000135341	intronic	T	C	31%	0.838
MAP3K7IP2	rs1900300	6	149683320	ENSG00000055208	intronic	C	T	47%	0.008
MAP3K7IP2	rs2789489	6	149769038	ENSG00000055208	intronic	T	A	9%	1.000
MAP3K7IP2	rs556335	6	149712571	ENSG00000055208	intronic	C	T	9%	0.786
MAP3K7IP2	rs562428	6	149689218	ENSG00000055208	intronic	T	C	35%	0.009
MAP3K7IP2	rs6911411	6	149729783	ENSG00000055208	intronic	A	C	23%	0.131
MAP3K7IP2	rs6920383	6	149719190	ENSG00000055208	intronic	A	G	27%	0.055
MAPK14	rs12199654	6	36117473	ENSG00000112062	intronic	A	G	6%	0.136
MAPK14	rs13196204	6	36106754	ENSG00000112062	intronic	T	G	19%	0.399
MAPK14	rs16884660	6	36168189	ENSG00000112062	intronic	G	A	8%	1.000
MAPK14	rs17714205	6	36127314	ENSG00000112062	intronic	C	T	12%	0.132
MAPK14	rs2237094	6	36116122	ENSG00000112062	intronic	A	G	5%	1.000
MAPK14	rs3804454	6	36114976	ENSG00000112062	intronic	A	C	20%	0.334
MAPK14	rs6457879	6	36188031	ENSG00000112062	3downstream	G	A	10%	1.000
MAPK14	rs851006	6	36173163	ENSG00000112062	intronic	G	A	23%	1.000
MAPK14	rs851020	6	36118128	ENSG00000112062	intronic	G	C	41%	0.785
MAPK14	rs851027	6	36098853	ENSG00000112062	5upstream	C	T	25%	0.643
MAPK14	rs9348986	6	36117565	ENSG00000112062	intronic	G	C	9%	0.412
MDM2	rs1470383	12	67493429	ENSG00000135679	intronic	T	C	19%	0.673

MDM2	rs1690916	12	67521673	ENSG00000135679	3downstream	G	A	36%	0.924
MDM2	rs1846402	12	67494845	ENSG00000135679	intronic	G	T	21%	0.793
MDM2	rs3730581	12	67505759	ENSG00000135679	intronic	G	A	34%	0.843
MDM2	rs769412	12	67519482	ENSG00000135679	coding	A	G	8%	0.555
MKRN2	rs3729931	3	12601516	ENSG00000075975	3downstream	C	T	37%	0.925
MMP1	rs11604098	11	102164017	ENSG00000196611	3downstream	C	T	17%	0.532
MMP1	rs17293761	11	102164443	ENSG00000196611	3downstream	C	T	6%	1.000
MMP1	rs2408489	11	102162896	ENSG00000196611	3downstream	C	A	28%	0.662
MMP1	rs470358	11	102173912	ENSG00000196611	intronic	C	T	36%	0.151
MMP1	rs475007	11	102174522	ENSG00000196611	5upstream	A	T	42%	0.718
MMP1	rs484915	11	102178458	ENSG00000196611	5upstream	A	T	43%	0.528
MMP1	rs514921	11	102174440	ENSG00000196611	5upstream	A	G	26%	0.172
MMP1	rs7945189	11	102165774	ENSG00000196611	3downstream	C	T	10%	0.459
MMP11	rs738791	22	22447525	ENSG00000099953	intronic	T	C	48%	0.112
MMP11	rs738792	22	22451378	ENSG00000099953	coding	T	C	9%	0.576
MMP12	rs11225442	11	102244529	ENSG00000110347	intronic	G	A	13%	0.848
MMP12	rs12808148	11	102238373	ENSG00000110347	3downstream	T	C	16%	0.746
MMP12	rs17368814	11	102253905	ENSG00000110347	5upstream	A	G	13%	0.423
MMP12	rs660727	11	102236284	ENSG00000110347	3downstream	T	C	7%	0.155
MMP12	rs674546	11	102235849	ENSG00000110347	3downstream	T	C	19%	1.000
MMP13	rs10895373	11	102325865	ENSG00000137745	intronic	C	T	17%	0.524
MMP13	rs2252070	11	102331749	ENSG00000137745	5upstream	A	G	34%	0.167
MMP13	rs597315	11	102332994	ENSG00000137745	5upstream	T	A	37%	0.925
MMP13	rs655044	11	102329270	ENSG00000137745	intronic	A	G	17%	0.529
MMP13	rs675392	11	102335015	ENSG00000137745	5upstream	G	C	45%	0.247
MMP14	rs17211964	14	22374112	ENSG00000157227	5upstream	G	C	6%	0.400
MMP14	rs17243048	14	22381320	ENSG00000157227	intronic	G	A	18%	0.543
MMP14	rs2236302	14	22382394	ENSG00000157227	coding	C	G	12%	0.522
MMP14	rs2236303	14	22382558	ENSG00000157227	intronic	C	T	31%	0.536
MMP14	rs2269213	14	22377111	ENSG00000157227	intronic	G	T	13%	0.841
MMP14	rs3751488	14	22373934	ENSG00000157227	5upstream	G	A	23%	0.377
MMP14	rs762052	14	22378826	ENSG00000157227	intronic	G	A	16%	0.508
MMP14	rs8003217	14	22374256	ENSG00000157227	5upstream	C	A	17%	0.428

MMP16	rs10094702	8	89403625	ENSG00000156103	intronic	T	C	19%	1.000
MMP16	rs10097366	8	89125685	ENSG00000156103	intronic	G	A	24%	0.220
MMP16	rs10110977	8	89283125	ENSG00000156103	intronic	A	G	18%	0.770
MMP16	rs1031827	8	89115862	ENSG00000156103	3downstream	C	A	14%	0.579
MMP16	rs10504853	8	89158542	ENSG00000156103	intronic	A	G	18%	0.770
MMP16	rs11785236	8	89158151	ENSG00000156103	intronic	A	G	32%	0.761
MMP16	rs11986591	8	89265005	ENSG00000156103	intronic	C	G	50%	0.724
MMP16	rs12677791	8	89412060	ENSG00000156103	5upstream	C	T	48%	0.930
MMP16	rs1477917	8	89199069	ENSG00000156103	intronic	A	G	5%	0.637
MMP16	rs1519938	8	89245729	ENSG00000156103	intronic	A	G	44%	0.283
MMP16	rs1519942	8	89277738	ENSG00000156103	intronic	A	G	7%	1.000
MMP16	rs17666091	8	89279952	ENSG00000156103	intronic	A	G	16%	0.739
MMP16	rs17719609	8	89133284	ENSG00000156103	intronic	T	C	31%	0.018
MMP16	rs1903836	8	89193723	ENSG00000156103	intronic	T	C	25%	1.000
MMP16	rs2054414	8	89156483	ENSG00000156103	intronic	G	T	18%	0.880
MMP16	rs2616487	8	89153400	ENSG00000156103	intronic	A	G	39%	0.926
MMP16	rs2616488	8	89153095	ENSG00000156103	intronic	T	C	23%	0.620
MMP16	rs2616506	8	89157125	ENSG00000156103	intronic	T	C	36%	0.775
MMP16	rs2664346	8	89150556	ENSG00000156103	intronic	T	C	26%	0.909
MMP16	rs2664350	8	89158751	ENSG00000156103	intronic	C	G	14%	0.453
MMP16	rs2664369	8	89118647	ENSG00000156103	3utr	T	G	38%	0.019
MMP16	rs2664371	8	89126078	ENSG00000156103	intronic	A	T	31%	0.404
MMP16	rs2681300	8	89247103	ENSG00000156103	intronic	T	C	46%	0.477
MMP16	rs4961080	8	89280312	ENSG00000156103	intronic	T	C	14%	0.712
MMP16	rs4961087	8	89413738	ENSG00000156103	5upstream	G	C	34%	0.843
MMP16	rs6469206	8	89153807	ENSG00000156103	intronic	T	G	42%	0.650
MMP16	rs7001079	8	89281150	ENSG00000156103	intronic	C	G	25%	0.727
MMP16	rs7826929	8	89153953	ENSG00000156103	intronic	A	G	10%	0.623
MMP2	rs1053605	16	54077108	ENSG00000087245	coding	C	T	7%	0.745
MMP2	rs11541998	16	54094264	ENSG00000087245	coding	C	G	12%	0.832
MMP2	rs11639960	16	54090771	ENSG00000087245	intronic	A	G	32%	0.543
MMP2	rs17301608	16	54076111	ENSG00000087245	intronic	C	T	35%	0.080
MMP2	rs243839	16	54086912	ENSG00000087245	intronic	A	G	20%	0.416

MMP2	rs243845	16	54083988	ENSG00000087245	intronic	C	T	39%	0.079
MMP2	rs243865	16	54069307	ENSG00000087245	5upstream	C	T	23%	0.802
MMP2	rs9928731	16	54080512	ENSG00000087245	intronic	T	C	43%	0.015
MMP3	rs522616	11	102220258	ENSG00000149968	5upstream	A	G	22%	0.244
MMP3	rs650108	11	102213997	ENSG00000149968	intronic	G	A	28%	0.824
MMP7	rs10502002	11	101904593	ENSG00000137673	intronic	A	T	5%	1.000
MMP7	rs10895304	11	101895202	ENSG00000137673	3downstream	A	G	22%	0.793
MMP7	rs12184413	11	101894798	ENSG00000137673	3downstream	C	T	10%	1.000
MMP7	rs12285347	11	101901817	ENSG00000137673	intronic	T	C	46%	0.214
MMP7	rs17098318	11	101908068	ENSG00000137673	5upstream	G	A	34%	1.000
MMP7	rs2156528	11	101897866	ENSG00000137673	intronic	C	A	22%	0.054
MMP7	rs7935378	11	101895031	ENSG00000137673	3downstream	T	C	20%	0.677
MMP7	rs7945819	11	101894697	ENSG00000137673	3downstream	C	A	9%	0.786
MMP7	rs880197	11	101910881	ENSG00000137673	5upstream	A	T	19%	0.110
MMP8	rs10750653	11	102105216	ENSG00000118113	5upstream	G	A	41%	0.467
MMP8	rs1276284	11	102087078	ENSG00000118113	3downstream	G	A	29%	0.330
MMP8	rs17099443	11	102097800	ENSG00000118113	intronic	G	C	44%	1.000
MMP8	rs2508383	11	102090906	ENSG00000118113	intronic	G	A	23%	0.314
MMP8	rs3740938	11	102092272	ENSG00000118113	coding	G	A	7%	0.323
MMP8	rs6590984	11	102099637	ENSG00000118113	intronic	C	T	8%	0.160
MMP8	rs7105686	11	102104151	ENSG00000118113	5upstream	G	T	8%	0.536
MMP9	rs17576	20	44073632	ENSG00000100985	coding	A	G	36%	0.564
MMP9	rs2250889	20	44075813	ENSG00000100985	coding	C	G	5%	1.000
MMP9	rs3787268	20	44075138	ENSG00000100985	intronic	G	A	23%	0.312
MMP9	rs3918270	20	44078746	ENSG00000100985	3downstream	G	A	13%	0.848
MMP9	rs8113877	20	44068452	ENSG00000100985	5upstream	T	G	40%	0.169
MS4A1	rs1051593	11	59994567	ENSG00000156738	3utr	T	C	46%	0.658
MS4A1	rs11230335	11	59996348	ENSG00000156738	3downstream	C	A	7%	0.740
MS4A1	rs2000636	11	59977523	ENSG00000156738	5upstream	C	T	37%	0.395
MS4A1	rs3802954	11	59994714	ENSG00000156738	3utr	A	G	8%	0.758
MS4A1	rs4471445	11	59989414	ENSG00000156738	intronic	G	A	46%	0.534
MS4A1	rs4939364	11	59988901	ENSG00000156738	intronic	G	A	32%	0.476
MS4A1	rs7126354	11	59987642	ENSG00000156738	intronic	T	C	36%	0.773

MYC	rs16902364	8	128814448	ENSG00000136997	5upstream	A	C	3%	0.296
MYC	rs17187428	8	128815526	ENSG00000136997	5upstream	G	A	9%	0.594
MYC	rs3891248	8	128819321	ENSG00000136997	intronic	T	A	15%	0.236
MYC	rs4645943	8	128816653	ENSG00000136997	5upstream	C	T	4%	0.511
MYD88	rs6853	3	38159374	ENSG00000172936	3utr	A	G	15%	0.862
MYD88	rs7744	3	38159025	ENSG00000172936	3utr	A	G	14%	0.063
NDUFA3	rs11669029	19	59288431	ENSG00000170906	intronic	A	G	42%	0.318
NDUFA3	rs3760698	19	59296006	ENSG00000170906	intronic	C	G	48%	0.377
NF1	rs2953014	17	26520021	ENSG00000196712	intronic	A	C	25%	0.478
NF1	rs2953016	17	26518819	ENSG00000196712	intronic	C	G	20%	0.683
NF1	rs7350943	17	26708679	ENSG00000196712	intronic	T	C	37%	0.130
NFKB1	rs13117745	4	103697738	ENSG00000109320	intronic	C	T	16%	0.247
NFKB1	rs230540	4	103715705	ENSG00000109320	intronic	T	C	32%	0.840
NFKB1	rs3774933	4	103645369	ENSG00000109320	intronic	T	C	35%	0.246
NFKB1	rs3774934	4	103646506	ENSG00000109320	intronic	G	A	11%	0.660
NFKB1	rs4648006	4	103680588	ENSG00000109320	intronic	C	T	3%	0.432
NFKB1	rs4648022	4	103715475	ENSG00000109320	intronic	C	T	10%	0.459
NFKB1	rs4648133	4	103755459	ENSG00000109320	intronic	T	C	28%	0.157
NFKBIA	rs3138045	14	34947472	ENSG00000100906	5upstream	A	G	21%	0.145
NFKBIA	rs3138053	14	34944605	ENSG00000100906	5upstream	A	G	29%	0.914
NFKBIA	rs3138056	14	34938265	ENSG00000100906	3downstream	G	A	31%	0.300
NFKBIA	rs696	14	34940844	ENSG00000100906	3utr	G	A	38%	0.191
NLRP12	rs10403709	19	58988606	ENSG00000142405	3downstream	A	G	35%	0.385
NLRP12	rs10406354	19	59022044	ENSG00000142405	5upstream	G	A	15%	0.608
NLRP12	rs10410581	19	58989046	ENSG00000142405	3utr	G	T	5%	1.000
NLRP12	rs11671984	19	59023483	ENSG00000142405	5upstream	C	T	25%	1.000
NLRP12	rs17273183	19	58988000	ENSG00000142405	3downstream	T	C	12%	1.000
NLRP12	rs17305227	19	58986294	ENSG00000142405	3downstream	C	T	4%	1.000
NLRP12	rs2042296	19	58990826	ENSG00000142405	intronic	T	C	49%	0.860
NLRP12	rs3859503	19	58986212	ENSG00000142405	3downstream	T	G	13%	0.129
NLRP12	rs889163	19	59003917	ENSG00000142405	intronic	A	G	18%	1.000
NOD1	rs11536450	7	30434089	ENSG00000106100	intronic	C	G	14%	0.589
NOD1	rs1558068	7	30469888	ENSG00000106100	intronic	A	T	38%	0.852

NOD1	rs2256023	7	30481516	ENSG00000106100	intronic	T	C	44%	0.371
NOD1	rs2893375	7	30477378	ENSG00000106100	intronic	A	C	16%	0.424
NOD1	rs2907749	7	30452266	ENSG00000106100	intronic	A	G	29%	0.396
NOD1	rs2970503	7	30479734	ENSG00000106100	intronic	G	A	8%	1.000
NOD1	rs3823773	7	30466486	ENSG00000106100	intronic	A	G	11%	0.820
NOD1	rs6949758	7	30468204	ENSG00000106100	intronic	G	C	29%	0.522
NOD1	rs7789045	7	30460547	ENSG00000106100	intronic	T	A	46%	0.658
NP_001074306,1	rs2227728	17	23718610	ENSG00000126656	5upstream	T	C	9%	0.568
NP_071395,1	rs10790980	11	128322547	ENSG00000120471	5upstream	A	G	36%	0.633
NP_071395,1	rs2155548	11	128309999	ENSG00000120471	3downstream	A	C	23%	0.261
NP_071395,1	rs2604228	11	128320532	ENSG00000120471	5upstream	C	T	13%	1.000
NP_071395,1	rs2846690	11	128314137	ENSG00000120471	intronic	G	A	24%	0.468
NP_071395,1	rs3740831	11	128321516	ENSG00000120471	5upstream	T	C	17%	0.755
NP_071395,1	rs4937395	11	128321813	ENSG00000120471	5upstream	G	T	27%	0.428
NTHL1	rs8059880	16	2041592	ENSG00000065057	5upstream	T	C	7%	1.000
P2RY5	rs2227311	13	47885033	ENSG00000139679	5utr	T	C	12%	0.832
P2RY5	rs2854344	13	47895694	ENSG00000139679	intronic	G	A	6%	0.419
P2RY5	rs4151551	13	47883440	ENSG00000139679	3utr	G	T	12%	0.000
PDK1	rs11890159	2	173150335	ENSG00000152256	intronic	C	T	15%	0.861
PDK1	rs1920978	2	173124142	ENSG00000152256	5upstream	C	T	41%	0.927
PDK1	rs4972842	2	173137279	ENSG00000152256	intronic	T	A	18%	0.770
PDK1	rs6433368	2	173137120	ENSG00000152256	intronic	C	T	18%	0.054
PIGU	rs6087613	20	32702642	ENSG00000101464	intronic	G	A	10%	0.047
PIGU	rs6142199	20	32625959	ENSG00000101464	intronic	C	G	12%	0.406
PIGU	rs6142210	20	32686673	ENSG00000101464	intronic	C	T	41%	0.716
PIGU	rs910873	20	32635433	ENSG00000101464	intronic	G	A	5%	0.615
PIK3CA	rs11706842	3	180355049	ENSG00000121879	intronic	C	T	6%	1.000
PIK3CA	rs13320527	3	180424017	ENSG00000121879	intronic	A	G	9%	0.014
PIK3CA	rs2677760	3	180385958	ENSG00000121879	intronic	T	C	43%	1.000
PIK3CA	rs2677764	3	180406501	ENSG00000121879	intronic	G	A	8%	0.236
PIK3CA	rs2699905	3	180367031	ENSG00000121879	intronic	G	A	24%	0.904
PIK3CA	rs3729692	3	180430019	ENSG00000121879	intronic	A	C	7%	0.184
PIK3CA	rs7640662	3	180384695	ENSG00000121879	intronic	C	G	16%	0.614

PIK3CA	rs7644648	3	180373344	ENSG00000121879	intronic	A	G	22%	0.013
PKD1	rs1051771	16	2078585	ENSG00000008710	3downstream	G	C	9%	0.107
PKD1	rs30259	16	2073902	ENSG00000008710	3downstream	G	A	8%	0.562
PMAIP1	rs1041978	18	55721313	ENSG00000141682	3utr	G	T	8%	0.562
PMAIP1	rs11663656	18	55718618	ENSG00000141682	intronic	G	C	15%	0.394
PMAIP1	rs1942919	18	55723779	ENSG00000141682	3downstream	G	T	46%	0.790
PMAIP1	rs4558496	18	55717819	ENSG00000141682	5upstream	T	G	20%	1.000
POT1	rs12706628	7	124355946	ENSG00000128513	intronic	A	G	17%	1.000
POT1	rs4360236	7	124313975	ENSG00000128513	intronic	C	T	10%	0.620
POT1	rs7778956	7	124314969	ENSG00000128513	intronic	T	C	41%	0.008
POT1	rs7784168	7	124279274	ENSG00000128513	intronic	T	C	27%	0.652
POT1	rs929365	7	124251667	ENSG00000128513	intronic	A	G	5%	0.387
PRF1	rs10999423	10	72024122	ENSG00000180644	3downstream	G	A	8%	0.773
PRF1	rs10999426	10	72030044	ENSG00000180644	intronic	G	A	36%	0.055
PRF1	rs12773662	10	72026203	ENSG00000180644	3downstream	A	C	31%	0.838
PRF1	rs17527619	10	72025812	ENSG00000180644	3downstream	G	A	8%	1.000
PRF1	rs7080373	10	72026772	ENSG00000180644	3downstream	C	T	5%	1.000
PRF1	rs885821	10	72028661	ENSG00000180644	coding	C	T	16%	0.247
PRG3	rs10400305	11	56905307	ENSG00000156575	5upstream	A	G	17%	0.122
PRG3	rs11229017	11	56902074	ENSG00000156575	intronic	C	T	11%	0.661
PRKAA1	rs10074991	5	40826308	ENSG00000132356	intronic	G	A	31%	0.534
PRKAA1	rs12188129	5	40817316	ENSG00000132356	intronic	G	A	15%	0.860
PRKAA1	rs3805486	5	40831802	ENSG00000132356	intronic	T	C	16%	0.329
PRKAA1	rs3805490	5	40827910	ENSG00000132356	intronic	A	T	23%	1.000
PRKAA1	rs6882903	5	40801619	ENSG00000132356	intronic	C	A	29%	0.671
PRKRAP1	rs10207436	2	179002857	ENSG00000180228	3downstream	A	G	24%	0.715
PRKRAP1	rs2059691	2	179010130	ENSG00000180228	intronic	G	A	33%	1.000
PRKRAP1	rs2288320	2	179016748	ENSG00000180228	intronic	A	C	15%	0.863
PTENP1	rs11202596	10	89637134	ENSG00000171862	intronic	G	A	8%	0.758
PTENP1	rs1234218	10	89640739	ENSG00000171862	intronic	G	A	6%	1.000
PTENP1	rs1234220	10	89635453	ENSG00000171862	intronic	T	C	11%	1.000
PTENP1	rs17431184	10	89710231	ENSG00000171862	intronic	T	C	18%	0.233
PTENP1	rs2673832	10	89702453	ENSG00000171862	intronic	A	G	12%	0.059

PTENP1	rs478839	10	89721850	ENSG00000171862	3downstream	A	G	40%	0.196
PTPN11	rs11066320	12	111390798	ENSG00000179295	intronic	G	A	43%	1.000
PTPN11	rs17822304	12	111373075	ENSG00000179295	intronic	C	A	5%	1.000
PTPN11	rs7953150	12	111425954	ENSG00000179295	intronic	G	A	27%	0.502
PTPN11	rs7958372	12	111419936	ENSG00000179295	intronic	C	T	9%	0.594
Q8IXA0_HUMAN	rs3750919	11	1249407	ENSG00000212792	5upstream	G	A	22%	0.444
Q8IXA0_HUMAN	rs3829223	11	1256982	ENSG00000212792	3downstream	C	T	47%	0.929
RAF1	rs11128607	3	12648275	ENSG00000132155	intronic	A	G	20%	0.166
RAF1	rs11710163	3	12671288	ENSG00000132155	intronic	A	G	8%	1.000
RAF1	rs11923427	3	12638835	ENSG00000132155	intronic	C	G	18%	0.170
RAF1	rs13099808	3	12649172	ENSG00000132155	intronic	G	A	12%	0.839
RAF1	rs1532533	3	12610706	ENSG00000132155	intronic	G	A	45%	0.929
RAF1	rs3773353	3	12629653	ENSG00000132155	intronic	T	C	22%	0.195
RAF1	rs5746223	3	12616425	ENSG00000132155	intronic	A	G	12%	0.128
RB1	rs1981434	13	47779155	ENSG00000139687	intronic	C	G	25%	0.641
RB1	rs4151467	13	47817924	ENSG00000139687	intronic	T	C	6%	1.000
RB1	rs7329938	13	47829980	ENSG00000139687	intronic	T	C	12%	0.381
RB1	rs9568036	13	47869937	ENSG00000139687	intronic	A	G	37%	0.396
RELA	rs11820062	11	65186512	ENSG00000173039	intronic	T	C	45%	0.285
RELA	rs1466462	11	65175940	ENSG00000173039	3downstream	G	C	37%	0.506
RELA	rs7101916	11	65187936	ENSG00000173039	5upstream	C	T	11%	1.000
RHEB	rs12669535	7	150791535	ENSG00000106615	3downstream	A	G	4%	
RHEB	rs13224450	7	150816589	ENSG00000106615	intronic	A	G	19%	0.028
RHEB	rs17635967	7	150815853	ENSG00000106615	intronic	A	G	7%	0.274
RHEB	rs17713451	7	150793405	ENSG00000106615	3downstream	G	A	16%	1.000
RHEB	rs2058495	7	150852869	ENSG00000106615	5upstream	C	T	17%	0.644
RHEB	rs3789817	7	150837572	ENSG00000106615	intronic	A	G	45%	0.475
RHEB	rs6972955	7	150802595	ENSG00000106615	intronic	G	T	49%	0.133
RHEB	rs6973428	7	150793886	ENSG00000106615	3downstream	C	T	16%	0.315
RHEB	rs717775	7	150797185	ENSG00000106615	intronic	A	C	30%	0.091
RIPK1	rs10498658	6	3049695	ENSG00000137275	intronic	G	A	26%	0.910
RIPK1	rs2326173	6	3020552	ENSG00000137275	5upstream	G	A	33%	0.619
RIPK1	rs4959774	6	3021335	ENSG00000137275	5upstream	A	G	12%	0.052

RIPK1	rs6596945	6	3016912	ENSG00000137275	intronic	C	A	18%	0.458
RIPK1	rs6907943	6	3023265	ENSG00000137275	intronic	A	C	6%	0.069
RIPK1	rs6920337	6	3018911	ENSG00000137275	5upstream	G	A	26%	0.646
RIPK1	rs7765221	6	3053287	ENSG00000137275	intronic	G	A	11%	0.492
RIPK1	rs9328140	6	3009982	ENSG00000137275	5upstream	A	G	20%	0.677
RIPK1	rs9392454	6	3032514	ENSG00000137275	intronic	A	G	11%	0.153
RIPK1	rs9405191	6	3031952	ENSG00000137275	intronic	G	C	7%	0.274
RIPK2	rs10097279	8	90864909	ENSG00000104312	intronic	G	A	10%	1.000
RIPK2	rs390993	8	90842346	ENSG00000104312	intronic	G	A	21%	0.507
RIPK2	rs39761	8	90842056	ENSG00000104312	intronic	C	T	44%	0.721
RIPK2	rs39764	8	90849478	ENSG00000104312	intronic	T	C	34%	0.693
RIPK2	rs40454	8	90873873	ENSG00000104312	3downstream	A	G	45%	0.929
RNF175	rs7656411	4	154847105	ENSG00000145428	3downstream	T	G	30%	0.599
ROCK1	rs11874761	18	16945764	ENSG00000067900	5utr	G	A	3%	1.000
ROCK1	rs17202375	18	16875271	ENSG00000067900	intronic	A	G	8%	0.563
ROCK1	rs288980	18	16863578	ENSG00000067900	intronic	C	T	44%	0.050
ROCK1	rs8085504	18	16925096	ENSG00000067900	intronic	G	A	4%	0.203
RPL3L	rs1003904	16	1936076	ENSG00000140986	intronic	G	A	33%	0.046
RPL3L	rs2252523	16	1937615	ENSG00000140986	intronic	G	A	30%	0.834
RPS6KB1	rs180515	17	55379057	ENSG00000108443	3utr	T	C	34%	0.430
RPS6KB1	rs180520	17	55369931	ENSG00000108443	intronic	A	G	46%	0.790
RPS6KB1	rs180523	17	55368691	ENSG00000108443	intronic	T	C	18%	0.125
RPS6KB1	rs2526354	17	55331440	ENSG00000108443	intronic	A	G	16%	0.014
RPS6KB1	rs8071475	17	55328702	ENSG00000108443	intronic	T	C	29%	0.748
SARM1	rs2027993	17	23731073	ENSG00000004139	intronic	A	C	46%	0.076
SARM1	rs2269742	17	23731722	ENSG00000004139	intronic	C	G	9%	0.568
SARM1	rs4795430	17	23724597	ENSG00000004139	intronic	G	A	6%	0.688
SCNN1A	rs4149570	12	6321851	ENSG00000111319	3downstream	G	T	39%	0.053
SELK_HUMAN	rs2276847	3	53900815	ENSG00000113811	intronic	C	T	5%	1.000
SELK_HUMAN	rs2304576	3	53897297	ENSG00000113811	intronic	T	C	34%	0.843
SELM_HUMAN	rs1004243	22	29827879	ENSG00000198832	3downstream	C	T	46%	0.534
SELM_HUMAN	rs2283875	22	29831833	ENSG00000198832	intronic	C	T	12%	0.522
SELM_HUMAN	rs9621188	22	29836761	ENSG00000198832	5upstream	G	A	47%	0.156

SELV_HUMAN	rs4802035	19	44705760	ENSG00000186838	3downstream	C	G	28%	1.000
SEP15_HUMAN	rs527281	1	87145731	ENSG00000183291	intronic	C	G	7%	0.162
SEP15_HUMAN	rs561104	1	87144350	ENSG00000183291	intronic	A	G	38%	0.925
SEP15_HUMAN	rs565469	1	87128230	ENSG00000183291	intronic	C	T	21%	0.793
SEPN1	rs10794511	1	26013766	ENSG00000162430	intronic	C	G	19%	1.000
SEPN1	rs11247709	1	25994684	ENSG00000162430	5upstream	T	G	47%	0.480
SEPN1	rs2072749	1	26003608	ENSG00000162430	intronic	A	G	28%	0.189
SEPN1	rs4659382	1	26007513	ENSG00000162430	intronic	C	G	28%	0.028
SEPX1	rs9928312	16	1927059	ENSG00000198736	3downstream	A	G	24%	0.328
SERPINB5	rs11662387	18	59297821	ENSG00000206075	intronic	G	A	21%	0.285
SERPINB5	rs12965580	18	59316735	ENSG00000206075	intronic	T	G	14%	0.593
SERPINB5	rs1455555	18	59321762	ENSG00000206075	coding	T	C	48%	0.479
SERPINB5	rs1509476	18	59313339	ENSG00000206075	intronic	A	G	25%	0.560
SERPINB5	rs1509478	18	59315112	ENSG00000206075	intronic	G	C	35%	0.333
SERPINB5	rs17071220	18	59322883	ENSG00000206075	3utr	C	T	28%	0.278
SERPINB5	rs2289520	18	59311300	ENSG00000206075	coding	G	C	9%	0.411
SERPINB5	rs6567355	18	59296577	ENSG00000206075	intronic	A	G	28%	0.581
SERPINB5	rs7228507	18	59298016	ENSG00000206075	intronic	A	G	48%	0.479
SERPINB5	rs9962338	18	59326059	ENSG00000206075	3downstream	A	C	19%	0.259
SFN	rs1883660	1	27063998	ENSG00000175793	3downstream	T	A	15%	0.864
SIGIRR	rs7482596	11	409167	ENSG00000185187	5upstream	C	A	19%	1.000
SLC20A1	rs1053652	2	113126308	ENSG00000144136	intronic	G	C	27%	0.911
SLC20A1	rs17647908	2	113130855	ENSG00000144136	intronic	C	T	14%	0.013
SLC20A1	rs4849091	2	113121179	ENSG00000144136	coding	A	G	44%	0.929
SLC20A1	rs6751117	2	113132427	ENSG00000144136	intronic	T	G	17%	1.000
SLC44A2	rs1560707	19	10611738	ENSG00000129353	intronic	C	A	40%	0.231
SOCS2	rs3816997	12	92494917	ENSG00000120833	3downstream	T	G	19%	1.000
SOCS2	rs768775	12	92492328	ENSG00000120833	intronic	T	C	21%	0.595
SOCS5	rs10167561	2	46821555	ENSG00000171150	intronic	T	C	33%	0.921
SOCS5	rs11695058	2	46831853	ENSG00000171150	intronic	A	G	34%	0.769
SOCS5	rs11889273	2	46814871	ENSG00000171150	intronic	T	A	15%	0.122
SOCS5	rs12151534	2	46783070	ENSG00000171150	intronic	A	G	15%	0.302
SOCS5	rs13402099	2	46800944	ENSG00000171150	intronic	G	A	13%	0.442

SOCS5	rs17771942	2	46842766	ENSG00000171150	3utr	A	T	6%	1.000
SOCS5	rs4522653	2	46786301	ENSG00000171150	intronic	A	T	34%	0.557
SOCS5	rs6741642	2	46788412	ENSG00000171150	intronic	T	C	43%	0.471
SOCS5	rs897529	2	46801679	ENSG00000171150	intronic	A	G	43%	0.857
SOCS6	rs1020161	18	66129836	ENSG00000170677	intronic	A	G	37%	0.510
SOCS6	rs12962853	18	66139087	ENSG00000170677	intronic	C	G	7%	0.154
SOCS6	rs13381747	18	66122954	ENSG00000170677	intronic	T	C	10%	0.309
SOCS6	rs17235950	18	66129583	ENSG00000170677	intronic	G	C	16%	0.741
SOCS6	rs17809666	18	66134737	ENSG00000170677	intronic	A	G	9%	1.000
SOCS6	rs713129	18	66111384	ENSG00000170677	intronic	C	G	14%	1.000
SOCS6	rs723279	18	66111294	ENSG00000170677	intronic	C	T	24%	0.543
SOCS6	rs9950023	18	66122678	ENSG00000170677	intronic	C	G	25%	0.405
SOS1	rs10204958	2	39096207	ENSG00000115904	intronic	T	C	18%	0.880
SOS1	rs1377862	2	39147520	ENSG00000115904	intronic	T	C	43%	0.005
SOS1	rs297158	2	39182144	ENSG00000115904	intronic	C	T	7%	0.507
SPRY1	rs300564	4	124532521	ENSG00000164056	5upstream	A	G	10%	0.471
SPRY1	rs300572	4	124540374	ENSG00000164056	intronic	G	A	31%	1.000
STK11	rs8111699	19	1160714	ENSG00000118046	intronic	C	G	48%	0.133
TBK1	rs10878176	12	63156800	ENSG00000183735	intronic	G	C	30%	0.248
TBK1	rs10878178	12	63172218	ENSG00000183735	intronic	T	C	49%	0.860
TBK1	rs11175419	12	63183369	ENSG00000183735	3downstream	T	G	12%	0.094
TBK1	rs11837890	12	63150250	ENSG00000183735	intronic	G	T	14%	0.259
TEP1	rs1108613	14	19918803	ENSG00000129566	intronic	C	T	19%	0.310
TEP1	rs11160462	14	19938591	ENSG00000129566	intronic	G	A	40%	0.519
TEP1	rs12895477	14	19923852	ENSG00000129566	intronic	A	G	14%	1.000
TEP1	rs1713417	14	19933651	ENSG00000129566	intronic	C	T	7%	0.506
TEP1	rs1713418	14	19904649	ENSG00000129566	3downstream	T	C	44%	0.244
TEP1	rs1713423	14	19929913	ENSG00000129566	intronic	C	T	48%	0.860
TEP1	rs1713425	14	19928014	ENSG00000129566	intronic	G	A	42%	0.103
TEP1	rs1713455	14	19919854	ENSG00000129566	intronic	G	A	13%	0.335
TEP1	rs1713458	14	19922610	ENSG00000129566	coding	G	T	14%	0.279
TEP1	rs1760889	14	19954140	ENSG00000129566	5upstream	C	A	12%	0.531
TEP1	rs1760891	14	19951264	ENSG00000129566	intronic	C	A	16%	0.423

TEP1	rs1760893	14	19950500	ENSG00000129566	intronic	T	G	11%	0.660
TEP1	rs1760897	14	19946093	ENSG00000129566	coding	T	C	32%	0.545
TEP1	rs1760898	14	19942721	ENSG00000129566	coding	C	A	23%	0.902
TEP1	rs1760904	14	19921869	ENSG00000129566	coding	T	C	51%	0.930
TEP1	rs1760907	14	19914699	ENSG00000129566	intronic	A	G	24%	0.112
TEP1	rs2151753	14	19950168	ENSG00000129566	intronic	C	T	16%	0.415
TEP1	rs2275009	14	19942580	ENSG00000129566	intronic	C	T	13%	0.258
TEP1	rs2297614	14	19921680	ENSG00000129566	intronic	T	C	29%	0.084
TEP1	rs2297615	14	19916361	ENSG00000129566	intronic	T	A	23%	0.805
TEP1	rs2678685	14	19949151	ENSG00000129566	intronic	G	T	46%	0.787
TEP1	rs3762146	14	19943364	ENSG00000129566	intronic	A	G	20%	0.205
TEP1	rs8009925	14	19941485	ENSG00000129566	intronic	C	A	38%	0.513
TEP1	rs938892	14	19937329	ENSG00000129566	intronic	C	T	9%	0.183
TERF1	rs10095169	8	74092275	ENSG00000147601	intronic	T	C	30%	0.341
TERF1	rs10098931	8	74079430	ENSG00000147601	5upstream	C	A	12%	1.000
TERF1	rs2975842	8	74088145	ENSG00000147601	intronic	G	A	44%	0.788
TERF2	rs3785074	16	67964487	ENSG00000132604	intronic	A	G	27%	0.371
TERT	rs2242652	5	1333028	ENSG00000164362	intronic	C	T	21%	0.294
TERT	rs2736100	5	1339516	ENSG00000164362	intronic	G	T	47%	0.535
TERT	rs2853668	5	1353025	ENSG00000164362	5upstream	C	A	28%	0.278
TERT	rs2853676	5	1341547	ENSG00000164362	intronic	G	A	28%	0.384
TERT	rs4246742	5	1320356	ENSG00000164362	intronic	A	T	14%	0.274
TICAM1	rs4807650	19	4772612	ENSG00000127666	intronic	C	T	47%	0.791
TICAM1	rs4807651	19	4773855	ENSG00000127666	intronic	A	G	35%	0.440
TICAM1	rs4807653	19	4780250	ENSG00000127666	intronic	A	G	13%	0.565
TIRAP	rs1786704	11	125670967	ENSG00000150455	3downstream	T	C	20%	1.000
TIRAP	rs3802814	11	125667817	ENSG00000150455	coding	G	A	15%	0.478
TIRAP	rs625413	11	125669559	ENSG00000150455	3downstream	C	T	26%	0.817
TIRAP	rs8177376	11	125668822	ENSG00000150455	coding	T	G	22%	0.374
TIRAP	rs8177382	11	125671678	ENSG00000150455	3downstream	C	A	9%	0.198
TLR1	rs4286521	4	38471701	ENSG00000174125	3downstream	C	T	14%	0.589
TLR1	rs4833095	4	38476105	ENSG00000174125	coding	T	C	38%	0.511
TLR1	rs5743594	4	38479146	ENSG00000174125	intronic	C	T	14%	0.856

TLR1	rs5743611	4	38476609	ENSG00000174125	coding	G	C	6%	1.000
TLR2	rs11938228	4	154841396	ENSG00000137462	5upstream	C	A	35%	0.382
TLR2	rs3804099	4	154844106	ENSG00000137462	coding	T	C	47%	0.156
TLR2	rs3804100	4	154844859	ENSG00000137462	coding	T	C	7%	1.000
TLR4	rs11536869	9	119509653	ENSG00000136869	intronic	A	G	5%	1.000
TLR4	rs11536889	9	119517952	ENSG00000136869	3utr	G	C	16%	0.179
TLR4	rs11536897	9	119519831	ENSG00000136869	3downstream	G	A	7%	1.000
TLR4	rs11536898	9	119520031	ENSG00000136869	3downstream	C	A	14%	0.857
TLR4	rs1554973	9	119520633	ENSG00000136869	3downstream	T	C	28%	0.912
TLR4	rs1927906	9	119519936	ENSG00000136869	3downstream	A	G	10%	0.302
TLR4	rs2737191	9	119502536	ENSG00000136869	5upstream	A	G	26%	0.083
TLR4	rs5030717	9	119513655	ENSG00000136869	intronic	A	G	11%	0.823
TLR6	rs3775073	4	38506227	ENSG00000174130	coding	A	G	32%	0.838
TLR6	rs5743810	4	38506745	ENSG00000174130	coding	C	T	34%	0.769
TLR9	rs187084	3	52236071	ENSG00000173366	intronic	T	C	41%	0.648
TLR9	rs352143	3	52239947	ENSG00000173366	5utr	A	G	23%	0.802
TLR9	rs4082828	3	52249782	ENSG00000173366	5upstream	T	G	12%	1.000
TMED7	rs17138030	5	114976143	ENSG00000134970	intronic	G	C	10%	0.612
TMED7	rs171774	5	114963138	ENSG00000134970	intronic	G	T	45%	0.929
TMED7	rs17395548	5	114958194	ENSG00000134970	intronic	T	G	5%	1.000
TMED7	rs256946	5	114959509	ENSG00000134970	intronic	T	C	13%	0.454
TMED7	rs419939	5	114954320	ENSG00000134970	intronic	T	C	28%	0.270
TMEM189	rs13040401	20	48176431	ENSG00000124208	intronic	A	G	6%	1.000
TMEM189	rs17725000	20	48151058	ENSG00000124208	intronic	G	A	6%	
TMEM189	rs2269217	20	48139802	ENSG00000124208	intronic	C	G	21%	0.793
TMEM189	rs232736	20	48197702	ENSG00000124208	intronic	G	A	47%	0.288
TMEM189	rs232738	20	48188963	ENSG00000124208	intronic	A	G	48%	0.596
TMEM189	rs6020257	20	48144977	ENSG00000124208	intronic	G	T	24%	0.052
TMEM189	rs6122877	20	48177203	ENSG00000124208	intronic	C	T	10%	1.000
TMEM189	rs6125888	20	48133058	ENSG00000124208	intronic	T	G	8%	0.236
TNFAIP3	rs5029933	6	138233755	ENSG00000118503	intronic	A	G	6%	1.000
TNFAIP3	rs610604	6	138241110	ENSG00000118503	intronic	A	C	34%	0.322
TNFAIP3	rs661561	6	138239024	ENSG00000118503	intronic	G	T	34%	0.001

TNFRSF1A	rs4149576	12	6319376	ENSG00000067182	intronic	G	A	40%	0.197
TNFRSF1A	rs4149577	12	6317783	ENSG00000067182	intronic	T	C	50%	0.860
TNFRSF1A	rs4149578	12	6317698	ENSG00000067182	intronic	G	A	9%	0.420
TNFRSF1A	rs4149579	12	6317618	ENSG00000067182	intronic	G	A	7%	1.000
TNFSF14	rs12609318	19	6614916	ENSG00000125735	3downstream	G	A	26%	0.649
TNFSF14	rs8106574	19	6622142	ENSG00000125735	5upstream	C	T	24%	0.714
TNKS2	rs10509637	10	93577712	ENSG00000107854	intronic	A	G	14%	0.719
TNKS2	rs10881985	10	93617138	ENSG00000107854	3downstream	T	C	29%	0.670
TNKS2	rs1539041	10	93567121	ENSG00000107854	intronic	G	T	34%	0.203
TNKS2	rs1772180	10	93587141	ENSG00000107854	intronic	G	A	46%	0.287
TNKS2	rs1772183	10	93592585	ENSG00000107854	intronic	G	A	46%	0.425
TNKS2	rs2421698	10	93575629	ENSG00000107854	intronic	G	A	8%	1.000
TOLLIP	rs5743867	11	1284927	ENSG00000078902	intronic	T	C	10%	0.340
TOLLIP	rs5743890	11	1282405	ENSG00000078902	intronic	A	G	17%	0.873
TOLLIP	rs5743899	11	1280140	ENSG00000078902	intronic	A	G	21%	0.431
TOLLIP	rs7481967	11	1289978	ENSG00000078902	5upstream	T	C	18%	0.882
TP53	rs2287497	17	7533505	ENSG00000141510	5upstream	C	T	8%	0.776
TP53	rs8073498	17	7510423	ENSG00000141510	3downstream	A	C	39%	0.164
TP63	rs11715710	3	191003886	ENSG00000073282	intronic	A	G	30%	0.601
TP63	rs12107036	3	191082854	ENSG00000073282	intronic	G	A	44%	0.009
TP63	rs12489753	3	191012503	ENSG00000073282	intronic	C	T	7%	
TP63	rs13063446	3	191007795	ENSG00000073282	intronic	G	A	7%	1.000
TP63	rs13321831	3	190987185	ENSG00000073282	intronic	G	A	7%	0.346
TP63	rs1515489	3	191071070	ENSG00000073282	intronic	G	A	16%	0.738
TP63	rs1515496	3	190991260	ENSG00000073282	intronic	A	G	39%	0.926
TP63	rs16864811	3	191013428	ENSG00000073282	intronic	A	G	13%	0.695
TP63	rs17514925	3	191100243	ENSG00000073282	intronic	C	T	30%	0.094
TP63	rs1913721	3	191063687	ENSG00000073282	intronic	G	A	38%	0.454
TP63	rs3773928	3	191066399	ENSG00000073282	intronic	T	C	46%	0.535
TP63	rs4429607	3	190936945	ENSG00000073282	intronic	C	T	28%	0.587
TP63	rs4607088	3	190933984	ENSG00000073282	intronic	C	T	38%	0.707
TP63	rs4687093	3	191011472	ENSG00000073282	intronic	C	T	35%	0.698
TP63	rs6763020	3	190834306	ENSG00000073282	intronic	T	C	7%	1.000

TP63	rs6765015	3	190940900	ENSG00000073282	intronic	T	A	40%	0.927
TP63	rs6779677	3	190941798	ENSG00000073282	intronic	C	A	43%	0.528
TP63	rs6790731	3	190827143	ENSG00000073282	5upstream	C	G	14%	0.108
TP63	rs6797409	3	190829216	ENSG00000073282	5upstream	C	A	7%	0.097
TP63	rs7612589	3	191062292	ENSG00000073282	intronic	A	G	13%	0.447
TP63	rs7619549	3	191004952	ENSG00000073282	intronic	G	A	43%	0.590
TP63	rs7624324	3	191069570	ENSG00000073282	intronic	C	T	26%	0.038
TP63	rs7637586	3	190986041	ENSG00000073282	intronic	A	G	11%	0.343
TP63	rs9681004	3	191093888	ENSG00000073282	intronic	T	C	42%	1.000
TP63	rs9830151	3	190827808	ENSG00000073282	5upstream	A	G	16%	0.178
TP63	rs9876702	3	190937034	ENSG00000073282	intronic	G	A	3%	
TP73	rs1009345	1	3576288	ENSG00000078900	intronic	C	T	48%	0.929
TP73	rs12731705	1	3627319	ENSG00000078900	intronic	C	T	46%	0.722
TP73	rs1885859	1	3573552	ENSG00000078900	intronic	G	C	36%	1.000
TP73	rs1885861	1	3569688	ENSG00000078900	intronic	A	T	19%	0.779
TP73	rs2236365	1	3634718	ENSG00000078900	intronic	C	G	9%	0.576
TP73	rs3753211	1	3622468	ENSG00000078900	intronic	T	C	18%	0.287
TP73	rs3765692	1	3574631	ENSG00000078900	intronic	T	C	27%	0.824
TP73	rs3765695	1	3577237	ENSG00000078900	intronic	C	A	19%	0.198
TP73	rs3765696	1	3577365	ENSG00000078900	intronic	T	C	9%	0.410
TP73	rs3765701	1	3578861	ENSG00000078900	intronic	A	T	38%	1.000
TP73	rs3765702	1	3582047	ENSG00000078900	intronic	C	T	36%	0.010
TP73	rs3765705	1	3586877	ENSG00000078900	intronic	G	A	5%	1.000
TP73	rs3765731	1	3601752	ENSG00000078900	intronic	G	A	29%	0.331
TP73	rs3765753	1	3612166	ENSG00000078900	intronic	G	T	31%	0.123
TP73	rs3765767	1	3625325	ENSG00000078900	intronic	C	G	49%	0.930
TP73	rs3819967	1	3623240	ENSG00000078900	intronic	C	T	29%	0.915
TP73	rs4648553	1	3638739	ENSG00000078900	intronic	A	G	26%	0.908
TP73	rs7523732	1	3574901	ENSG00000078900	intronic	T	C	10%	0.813
TRAF1	rs10985085	9	122705118	ENSG00000056558	3utr	C	T	10%	0.806
TRAF1	rs13440146	9	122721272	ENSG00000056558	intronic	G	T	5%	1.000
TRAF1	rs2239658	9	122711658	ENSG00000056558	intronic	C	T	30%	0.248
TRAF1	rs7021049	9	122723803	ENSG00000056558	intronic	T	G	41%	0.649

TRAF5	rs11119729	1	209597952	ENSG00000082512	intronic	G	A	20%	0.889
TRAF5	rs12723208	1	209577517	ENSG00000082512	intronic	A	G	16%	0.614
TRAF5	rs12734687	1	209606255	ENSG00000082512	intronic	G	A	6%	0.230
TRAF5	rs17017432	1	209611717	ENSG00000082512	intronic	T	C	15%	0.121
TRAF5	rs4951523	1	209596667	ENSG00000082512	intronic	G	T	42%	0.468
TRAF6	rs3740961	11	36466647	ENSG00000175104	3downstream	A	G	10%	0.071
TRAF6	rs5030411	11	36490329	ENSG00000175104	5upstream	T	C	41%	0.855
TRAF6	rs5030416	11	36489064	ENSG00000175104	5upstream	A	C	14%	0.461
TSC1	rs1076160	9	134765855	ENSG00000165699	intronic	G	A	46%	0.594
TSC1	rs11243929	9	134763985	ENSG00000165699	intronic	T	C	24%	0.468
TSC1	rs13295430	9	134789597	ENSG00000165699	intronic	G	A	9%	0.787
TSC1	rs2250057	9	134765024	ENSG00000165699	intronic	T	G	37%	0.219
TSC1	rs2519757	9	134768688	ENSG00000165699	intronic	T	C	7%	0.282
TSC1	rs2809246	9	134770109	ENSG00000165699	intronic	G	A	3%	
TSC1	rs4419933	9	134805090	ENSG00000165699	intronic	C	T	29%	0.830
TSC2	rs17654678	16	2054645	ENSG00000103197	intronic	T	G	9%	1.000
TSC2	rs7190284	16	2056084	ENSG00000103197	intronic	A	C	6%	0.712
TSC2	rs8050755	16	2059188	ENSG00000103197	intronic	T	C	18%	0.763
UBE2N	rs4020454	12	92331008	ENSG00000177889	intronic	C	T	13%	1.000
UBE2N	rs7309933	12	92338377	ENSG00000177889	intronic	T	C	14%	1.000
UBE2N	rs7311222	12	92335403	ENSG00000177889	intronic	A	G	45%	1.000
ULBP1	rs4425606	6	150326128	ENSG00000111981	5upstream	A	G	15%	1.000
ULBP1	rs4870163	6	150331400	ENSG00000111981	intronic	C	T	9%	0.091
ULBP2	rs12524576	6	150313637	ENSG00000131015	3downstream	G	A	18%	0.882
ULBP2	rs4343924	6	150304879	ENSG00000131015	5utr	C	A	3%	
ULBP2	rs9479184	6	150303054	ENSG00000131015	5upstream	G	A	5%	0.049
ULBP3	rs12202737	6	150429439	ENSG00000131019	intronic	C	T	26%	0.908
ULBP3	rs9397137	6	150423695	ENSG00000131019	3downstream	G	A	42%	0.276
ULBP3	rs945194	6	150427955	ENSG00000131019	intronic	G	A	9%	0.167
ULBP3	rs9478409	6	150427579	ENSG00000131019	intronic	C	T	11%	0.110
WWP1	rs10504824	8	87487380	ENSG00000123124	intronic	G	A	9%	0.786
WWP1	rs11994508	8	87537373	ENSG00000123124	intronic	C	T	18%	0.650
WWP1	rs4332109	8	87454736	ENSG00000123124	5upstream	A	G	2%	

WWP1	rs4490816	8	87454054	ENSG00000123124	5upstream	C	T	27%	0.502
WWP1	rs9642913	8	87459064	ENSG00000123124	intronic	A	G	48%	0.724
YY1	rs10151514	14	99816955	ENSG00000100811	3downstream	C	T	3%	
YY1	rs3783339	14	99788409	ENSG00000100811	intronic	T	C	43%	0.207
YY1	rs8021068	14	99808485	ENSG00000100811	intronic	G	A	24%	0.715
	rs1044183	1	26017132	ENSG00000177515	3downstream	A	T	6%	0.712
	rs10510079	10	122473101			A	T	28%	0.327
	rs10640					C	T	32%	0.919
	rs10788116	10	122473397			C	T	33%	0.688
	rs10886747	10	122472521			C	T	34%	0.556
	rs11199512	10	122471078			C	T	10%	1.000
	rs11668224	19	10570594			T	C	29%	0.236
	rs12357319	10	122473217			C	T	30%	0.344
	rs12784022	10	122476687			C	A	6%	0.437
	rs1619436	10	123216934			C	T	32%	0.545
	rs17112705	10	101927184	ENSG00000203488	5upstream	T	C	37%	0.925
	rs17797517	3	188948176			T	C	26%	0.909
	rs2043305	19	10589320			C	T	24%	0.190
	rs2997262	10	122473818			G	A	37%	0.448
	rs4686467	3	188944990			G	A	49%	0.027
	rs6585740	10	123218199			T	G	22%	0.075
	rs6872	1	26017261	ENSG00000177515	3downstream	G	A	22%	0.040

Supplementary appendix 2. Adjusted¹ odds ratio (and 95%CI) for CLL by SNPs and ab_EBV positivity, restricted by Rai stages.

Ab_EBV status ²	Gene (SNPs) - model and genotype	ALL COUNTRIES		SPAIN & GERMANY (GRADE RAI <= 2)		SPAIN & GERMANY (GRADE RAI <= 1)	
		Cases – controls Number (%) (N= 240/513)	OR ¹ (95% CI)	Cases – controls Number (%) (N= 93/430)	OR ¹ (95% CI)	Cases – controls Number (%) (N= 79/430)	OR ¹ (95% CI)
MMP9 (rs8113877) – recessive							
Neg	TT/TG	129 (54%) - 332 (65%)	Ref	50 (54%) - 271 (63%)	Ref	45 (56%) - 271 (63%)	Ref
Neg	GG	17 (7%) - 80 (16%)	0.54 (0.30 to 0.99)	7 (8%) - 67 (16%)	0.56 (0.24 to 1.30)	6 (8%) - 67 (16%)	0.53 (0.22 to 1.31)
Pos	TT/TG	72 (30%) - 87 (17%)	2.16 (1.45 to 3.22)	28 (30%) - 78 (18%)	1.89 (1.10 to 3.24)	22 (28%) - 78 (18%)	1.62 (0.91 to 2.90)
Pos	GG	22 (9%) - 11 (2%)	6.25 (2.81 to 13.90)	8 (9%) - 11 (3%)	5.94 (2.12 to 16.61)	6 (8%) - 11 (3%)	4.78 (1.58 to 14.45)
P-value_{HA0 or HMO}			0.08 / 0.002 (A)		0.2 / 0.02		0.2 / 0.03
MMP9 (rs17576) – recessive							
Neg	AA/AG	131 (55%) - 351 (69%)	Ref	50 (54%) - 287 (67%)	Ref	44 (56%) - 287 (67%)	Ref
Neg	GG	14 (6%) - 62 (12%)	0.62 (0.32 to 1.19)	7 (8%) - 52 (12%)	0.72 (0.30 to 1.70)	7 (9%) - 52 (12%)	0.83 (0.35 to 1.96)
Pos	AA/AG	77 (32%) - 94 (18%)	2.26 (1.53 to 3.34)	31 (33%) - 85 (20%)	2.08 (1.23 to 3.50)	24 (30%) - 85 (20%)	1.80 (1.02 to 3.16)
Pos	GG	16 (7%) - 6 (1%)	8.83 (3.22 to 24.17)	5 (5%) - 6 (1%)	6.54 (1.80 to 23.84)	4 (5%) - 6 (1%)	5.74 (1.47 to 22.41)
P-value_{HA0 or HMO}			0.1 / 0.004 (A)		0.3 / 0.08		0.3 / 0.1
TP73 (rs3765701) – dominant							
Neg	AA	44 (18%) - 167 (33%)	Ref	19 (20%) - 135 (31%)	Ref	17 (22%) - 135 (31%)	Ref
Neg	AT/TT	102 (43%) - 245 (48%)	1.74 (1.13 to 2.67)	38 (41%) - 203 (47%)	1.48 (0.81 to 2.70)	34 (43%) - 203 (47%)	1.48 (0.79 to 2.77)
Pos	AA	40 (17%) - 26 (5%)	6.68 (3.53 to 12.62)	18 (19%) - 21 (5%)	6.59 (2.90 to 14.96)	13 (16%) - 21 (5%)	5.18 (2.15 to 12.48)
Pos	AT/TT	54 (22%) - 72 (14%)	3.09 (1.83 to 5.21)	18 (19%) - 69 (16%)	2.02 (0.98 to 4.15)	15 (19%) - 69 (16%)	1.83 (0.86 to 3.96)
P-value_{HA0 or HMO}			0.07 / 0.005 (A)		0.08 / 0.01		0.1 / 0.03
TP73 (rs1885859) – dominant							
Neg	GG	46 (19%) - 174 (34%)	Ref	21 (23%) - 139 (32%)	Ref	18 (23%) - 139 (32%)	Ref
Neg	GC/CC	99 (41%) - 237 (46%)	1.72 (1.12 to 2.62)	36 (39%) - 198 (46%)	1.36 (0.76 to 2.46)	33 (42%) - 198 (46%)	1.43 (0.77 to 2.67)
Pos	GG	48 (20%) - 34 (7%)	6.13 (3.42 to 10.99)	22 (24%) - 30 (7%)	5.19 (2.48 to 10.88)	18 (23%) - 30 (7%)	4.85 (2.22 to 10.60)
Pos	GC/CC	46 (19%) - 66 (13%)	2.75 (1.62 to 4.68)	14 (15%) - 61 (14%)	1.71 (0.80 to 3.65)	10 (13%) - 61 (14%)	1.36 (0.59 to 3.18)
P-value_{HA0 or HMO}			0.04 / 0.003 (B)		0.07 / 0.02		0.06 / 0.01

OR: odds ratio, CI: confidence interval, ref: reference. ¹: based on logistic regression adjusted for age, sex and country (if appropriate). ²: Neg and Pos: negative and positive to aberrant antibodies against EBV respectively. ³: All interactions were tested for additive and multiplicative effects. Two tests of significance, H_{A0} and H_{M0}, were used to assess departure towards multiplicative or additive interactions respectively. Based on these two derived P-values, interactions were defined as additive (A), multiplicative (M), both (B) or neither (N). Information on clinical stage was available only in Spain and Germany with overall 39% (64/166) of missing Rai stage information.

Supplementary appendix 3. Odds¹ ratio (and 95%CI) for CLL by SNPs and ab_EBV positivity using a matched analysis (age +/- 2years, sex and centre).

Ab_EBV status ²	Gene (SNPs) - model and genotype	ALL COUNTRIES		SPAIN		GERMANY	
		Cases – controls		Cases – controls		Cases – controls	
		Number (%) (N= 208/208)	OR ¹ (95% CI)	Number (%) (N= 71/71)	OR ¹ (95% CI)	Number (%) (N= 93/93)	OR ¹ (95% CI)
MMP9 (rs8113877) – recessive							
Neg	TT/TG	109 (52%) - 137 (66%)	Ref	41 (58%) - 42 (59%)	Ref	45 (48%) - 67 (72%)	Ref
Neg	GG	12 (6%) - 31 (15%)	0.46 (0.22 to 0.95)	6 (8%) - 14 (20%)	0.36 (0.11 to 1.18)	2 (2%) - 9 (10%)	0.27 (0.05 to 1.41)
Pos	TT/TG	65 (31%) - 35 (17%)	2.46 (1.49 to 4.07)	18 (25%) - 14 (20%)	1.33 (0.53 to 3.35)	32 (34%) - 13 (14%)	3.67 (1.65 to 8.19)
Pos	GG	22 (11%) - 5 (2%)	6.26 (2.24 to 17.49)	6 (8%) - 1 (1%)	7.91 (0.83 to 75.4)	14 (15%) - 4 (4%)	4.77 (1.44 to 15.81)
P-value_{HA0 or HMO}			0.2 / 0.01 (A)		0.4 / 0.04 (A)		0.2 / 0.04 (A)
MMP9 (rs17576) – recessive							
Neg	AA/AG	110 (53%) - 141 (68%)	Ref	40 (56%) - 45 (63%)	Ref	45 (48%) - 68 (73%)	Ref
Neg	GG	10 (5%) - 27 (13%)	0.46 (0.21 to 0.99)	6 (8%) - 11 (15%)	0.58 (0.20 to 1.68)	2 (2%) - 8 (9%)	0.33 (0.06 to 1.78)
Pos	AA/AG	70 (34%) - 39 (19%)	2.41 (1.48 to 3.92)	19 (27%) - 15 (21%)	1.52 (0.63 to 3.67)	35 (38%) - 16 (17%)	3.21 (1.53 to 6.74)
Pos	GG	16 (8%) - 1 (0%)	24.32 (3.11 to 189.99)	5 (7%) - 0 (0%)	-	10 (11%) - 1 (1%)	14.09 (1.69 to 117.38)
P-value_{HA0 or HMO}			0.4 / 0.007 (A)		Not available		0.3 / 0.05 (A)
TP73 (rs3765701) – dominant							
Neg	AA	33 (16%) - 67 (32%)		16 (23%) - 16 (23%)	Ref	11 (12%) - 36 (39%)	Ref
Neg	AT/TT	88 (42%) - 101 (49%)	1.69 (1.02 to 2.8)	31 (44%) - 40 (56%)	0.71 (0.27 to 1.84)	36 (39%) - 40 (43%)	3.00 (1.25 to 7.17)
Pos	AA	37 (18%) - 9 (4%)	8.09 (3.48 to 18.79)	13 (18%) - 1 (1%)	10.84 (1.29 to 90.92)	15 (16%) - 3 (3%)	19.96 (4.22 to 94.52)
Pos	AT/TT	50 (24%) - 30 (14%)	3.47 (1.85 to 6.51)	11 (15%) - 14 (20%)	0.85 (0.27 to 2.71)	31 (33%) - 14 (15%)	6.82 (2.54 to 18.34)
P-value_{HA0 or HMO}			0.1 / 0.02 (A)		0.4 / 0.1 (N)		0.3 / 0.03 (A)
TP73 (rs1885859) – dominant							
Neg	GG	38 (18%) - 78 (38%)	Ref	18 (25%) - 23 (32%)	Ref	14 (15%) - 37 (40%)	Ref
Neg	GC/CC	82 (39%) - 90 (43%)	1.69 (1.02 to 2.8)	29 (41%) - 33 (46%)	1.11 (0.50 to 2.43)	33 (35%) - 39 (42%)	2.14 (0.94 to 4.86)
Pos	GG	44 (21%) - 13 (6%)	8.09 (3.48 to 18.79)	15 (21%) - 5 (7%)	3.69 (1.09 to 12.54)	22 (24%) - 4 (4%)	14.49 (3.93 to 53.36)
Pos	GC/CC	43 (21%) - 27 (13%)	3.47 (1.85 to 6.51)	9 (13%) - 10 (14%)	1.34 (0.40 to 4.55)	24 (26%) - 13 (14%)	4.50 (1.72 to 11.80)
P-value_{HA0 or HMO}			0.1 / 0.01 (A)		0.3 / 0.3 (N)		0.2 / 0.03 (A)

OR: odds ratio, CI: confidence interval, NA: not available, ref: reference. ¹: based on conditional (age +/- 2years, sex and centre) logistic regression. ²: Neg and Pos: negative and positive to aberrant antibody response against EBV respectively. ³: All interactions were tested for additive and multiplicative effects. Two tests of significance, H_{A0} and H_{M0}, were used to assess departure towards multiplicative or additive interactions respectively. Based on these two derived P-values, interactions were defined as additive (A), multiplicative (M), both (B) or neither (N).

Supplementary appendix 4. List of SNPs with H_{A0} and/or H_{M0} rejected at the 10% level in Spain and Germany separately.

P-values		Interaction type	Gene	Chromosome	rs	Country	Model
H_{A0}	H_{M0}						
$PH_{A0} \leq 0.05$ or $PH_{M0} \leq 0.05$							
0.1	0.02	additive	TP73	1	rs3765701	SPAIN	dominant
0.3	0.03	additive	TP73	1	rs3765701	GERMANY	dominant
<i>0.07</i>	<i>0.005</i>	<i>additive</i>	<i>TP73</i>	<i>1</i>	<i>rs3765701</i>	<i>OVERALL</i>	<i>dominant</i>
0.2	0.01	additive	MMP9	20	rs8113877	SPAIN	recessive
0.2	0.04	additive	MMP9	20	rs8113877	GERMANY	recessive
<i>0.08</i>	<i>0.002</i>	<i>additive</i>	<i>MMP9</i>	<i>20</i>	<i>rs8113877</i>	<i>OVERALL</i>	<i>recessive</i>
0.3	0.03	additive	MMP9	20	rs17576	SPAIN	recessive
0.3	0.05	additive	MMP9	20	rs17576	GERMANY	recessive
<i>0.1</i>	<i>0.004</i>	<i>additive</i>	<i>MMP9</i>	<i>20</i>	<i>rs17576</i>	<i>OVERALL</i>	<i>recessive</i>
$PH_{A0} \leq 0.1$ or $PH_{M0} \leq 0.1$							
0.1	0.06	additive	TP73	1	rs1885859	SPAIN	dominant
0.2	0.03	additive	TP73	1	rs1885859	GERMANY	dominant
<i>0.04</i>	<i>0.003</i>	<i>both</i>	<i>TP73</i>	<i>1</i>	<i>rs1885859</i>	<i>OVERALL</i>	<i>dominant</i>
0.1	0.1	both	RAF1	3	rs5746223	GERMANY	dominant
0.04	0.1	both	RAF1	3	rs5746223	SPAIN	dominant
<i>0.003</i>	<i>0.008</i>	<i>both</i>	<i>RAF1</i>	<i>3</i>	<i>rs5746223</i>	<i>OVERALL</i>	<i>dominant</i>
0.2	0.1	additive	MAP3K7	6	rs1144159	SPAIN	dominant
0.3	0.08	additive	MAP3K7	6	rs1144159	GERMANY	dominant
<i>0.1</i>	<i>0.03</i>	<i>additive</i>	<i>MAP3K7</i>	<i>6</i>	<i>rs1144159</i>	<i>OVERALL</i>	<i>dominant</i>
0.2	0.04	additive	CSDE1	1	rs1065634	SPAIN	dominant
0.3	0.06	additive	CSDE1	1	rs1065634	GERMANY	dominant
<i>0.5</i>	<i>0.08</i>	<i>additive</i>	<i>CSDE1</i>	<i>1</i>	<i>rs1065634</i>	<i>OVERALL</i>	<i>dominant</i>
0.2	0.02	additive	ERLIN1	10	rs17112705	SPAIN	recessive
0.05	0.2	multiplicative	ERLIN1	10	rs17112705	GERMANY	recessive
<i>0.9</i>	<i>0.5</i>	<i>neither</i>	<i>ERLIN1</i>	<i>10</i>	<i>rs17112705</i>	<i>OVERALL</i>	<i>recessive</i>
0.07	0.07	both	MMP8	11	rs10750653	GERMANY	recessive
0.2	0.04	additive	MMP8	11	rs10750653	SPAIN	recessive
<i>0.5</i>	<i>0.7</i>	<i>Neither</i>	<i>MMP8</i>	<i>11</i>	<i>rs10750653</i>	<i>OVERALL</i>	<i>recessive</i>
0.2	0.03	additive	KRAS	12	rs7133640	GERMANY	dominant
0.1	0.08	both	KRAS	12	rs7133640	SPAIN	dominant
<i>0.9</i>	<i>0.5</i>	<i>neither</i>	<i>KRAS</i>	<i>12</i>	<i>rs7133640</i>	<i>OVERALL</i>	<i>dominant</i>
0.1	0.3	multiplicative	TRAF1	9	rs10985085	SPAIN	dominant
0.5	0.08	additive	TRAF1	9	rs10985085	GERMANY	dominant
<i>0.6</i>	<i>0.8</i>	<i>neither</i>	<i>TRAF1</i>	<i>9</i>	<i>rs10985085</i>	<i>OVERALL</i>	<i>dominant</i>

Supplementary appendix 5. Association of aberrant Epstein Barr virus positivity and chronic lymphocytic leukaemia by *MMP9* haplotype pairs.

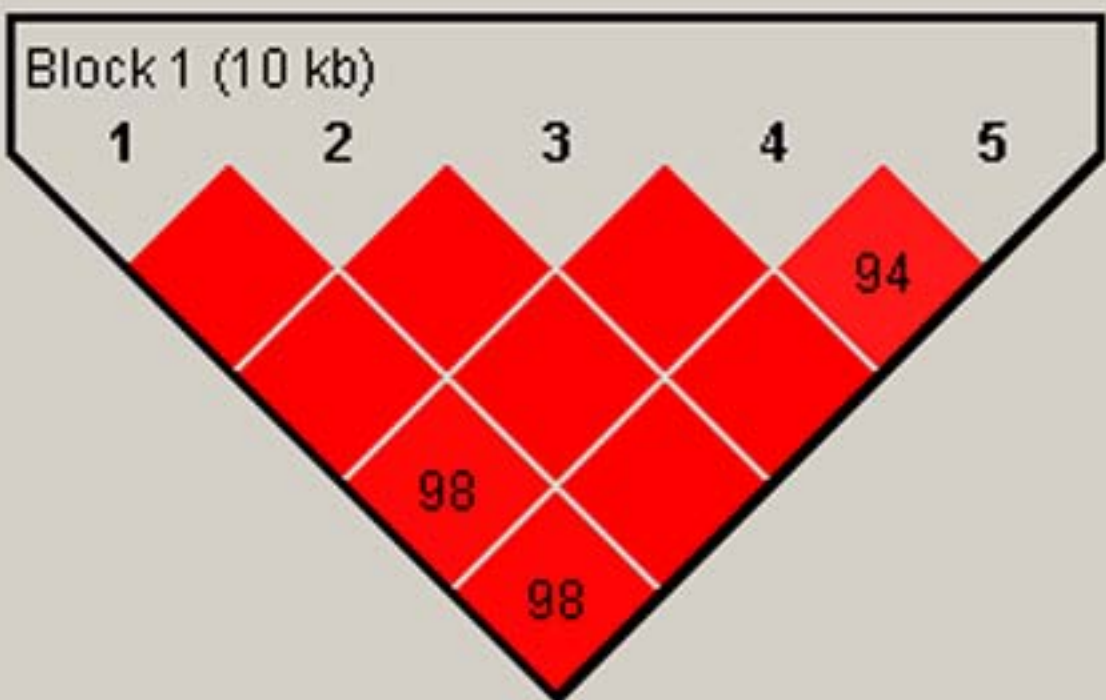
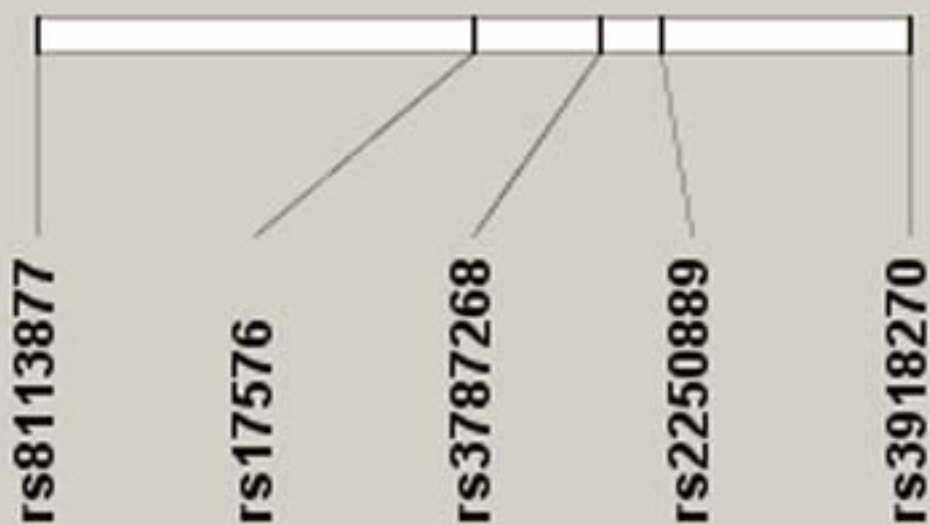
MMP9 Haplotype pairs ¹	Estimated Frequency (%) Ab_EBV negative			Estimated Frequency (%) Ab_EBV positive			OR ² (95% CI) in ab_EBV positive compared to ab_EBV negative patients	Wald test p
	Overall	Cases	Controls	Overall	Cases	Controls		
HAP2-HAP2	6	3	7	3	4	2	15.24 (1.03 to 225.42)	0.05
HAP2-HAP3	4	5	3	5	7	2	11.64 (1.23 to 110.10)	0.03
HAP2-HAP1	10	12	9	11	11	12	1.65 (0.52 to 5.22)	0.4
HAP3-HAP2	3	1	3	3	4	1	NA	-
HAP3-HAP3	1	1	1	1	1	1	NA	-
HAP3-HAP1	8	8	8	9	7	10	3.17 (0.75 to 13.33)	0.1
HAP1-HAP2	14	14	14	14	12	17	2.33 (0.85 to 6.38)	0.1
HAP1-HAP3	6	8	6	9	9	10	2.94 (0.56 to 15.43)	0.2
HAP1-HAP1	36	36	36	36	37	35	2.77 (1.48 to 5.20)	0.002
One HAP2 HAP3	42	45	41	49	44	55	1.98 (1.16 to 3.36)	0.01
Two HAP2 HAP3	13	9	15	11	17	6	26.21 (5.41 to 127.12)	0.00005

Ab_EBV: aberrant antibody response against EBV, NA: Not applicable, OR: odds ratio, CI: confidence interval.

¹: Haplotypes with a frequency less than 5% were removed. HAP1 = TAGCG (overall frequency=59%); HAP2 = GGACG (22%); HAP3 = GGCA (13%) based on rs8113877 (T/G), rs17576 (A/G), rs3787268 (G/A), rs2250889 (C/G), rs3918270 (G/A) respectively

²: Adjusted for age, sex and country.

Supplementary appendix 6



Supplementary appendix 8. Adjusted odds ratio¹ (and 95% CI) for ab_EBV positivity by controls and stage of CLL using German and Spanish data.

	Number Ab_EBV Neg/ Pos	OR¹ (95% CI)
Controls (N=430)	339/91	Ref
CLL (N=166) of whom 102 with stage information)²		
<i>Rai 0</i>	43/20	1.77 (0.98-3.18)
<i>Rai 1 or 2</i>	14/16	4.65 (2.13-10.17)
<i>Rai 3 or 4</i>	4/5	5.75 (1.47-22.46)
		P-trend < 0.00001

Ref: Reference, N: number, Neg and Pos: negative and positive to aberrant antibodies against EBV respectively (ab_EBV), CLL: chronic lymphocytic leukaemia, OR: odds ratio, CI: confidence interval. ¹: based on logistic regression adjusted for age, sex and centre. P-value for interaction between age and CLL stage was 0.16. ²: Rai stage was missing for 6% (4/72) of CLL Spanish patients and 64% (60/94) of CLL German patients.

Supplementary appendix 9. Adjusted¹ odds ratio (95% CI) for chronic lymphocytic leukemia in relation to the four SNPs interacting with ab_EBV positivity.

	Frequency	OR ¹ (95% CI)	
		Controls (%) / Cases (%)	Recessive model
MMP9-rs8113877			
TT	188 (37%) / 86 (36%)	TT vs TG+GG	Ref
TG	231 (45%) / 115 (48%)	1.01 (0.72 to 1.42)	1.02 (0.72 to 1.47)
GG	91 (18%) / 39 (16%)		0.98 (0.60 to 1.58)
Per G allele			1.00 (0.79 to 1.25)
P-value		P= 0.9	P-trend= 1.0
MMP9-rs17576			
AA	216 (42%) / 103 (43%)	AA vs AG+GG	Ref
AG	229 (45%) / 105 (44%)	0.91 (0.65 to 1.26)	0.89 (0.63 to 1.26)
GG	68 (13%) / 30 (13%)		0.97 (0.58 to 1.63)
Per G allele			0.96 (0.75 to 1.22)
P-value		P= 0.6	P-trend= 0.7
TP73-rs3765701			
AA	193 (38%) / 84 (35%)	AA vs AT+TT	Ref
AT	242 (47%) / 121 (50%)	1.19 (0.85 to 1.67)	1.20 (0.84 to 1.72)
TT	75 (15%) / 35 (15%)		1.15 (0.70 to 1.91)
Per T allele			1.10 (0.87 to 1.40)
P-value		P= 0.3	P-trend = 0.4
TP73-rs1885859			
GG	208 (41%) / 94 (39%)	GG vs GC+CC	Ref
GC	237 (46%) / 121 (51%)	1.10 (0.79 to 1.53)	1.16 (0.82 to 1.64)
CC	66 (13%) / 24 (10%)		0.87 (0.50 to 1.51)
Per C allele			1.00 (0.78 to 1.28)
P-value		P= 0.6	P-trend = 1.0

Ab_EBV: aberrant antibody response against EBV, NA: Not applicable, OR: odds ratio, CI: confidence interval.

¹: Adjusted for age, sex and country.