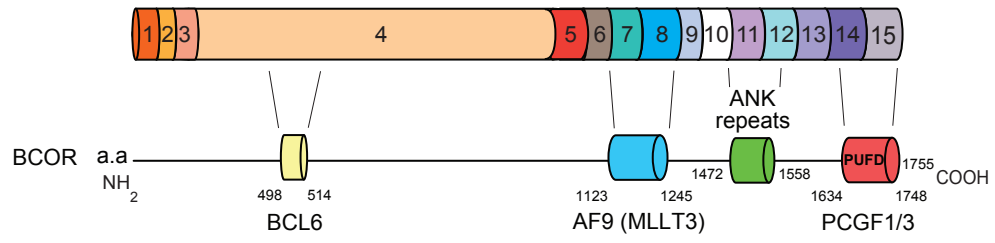
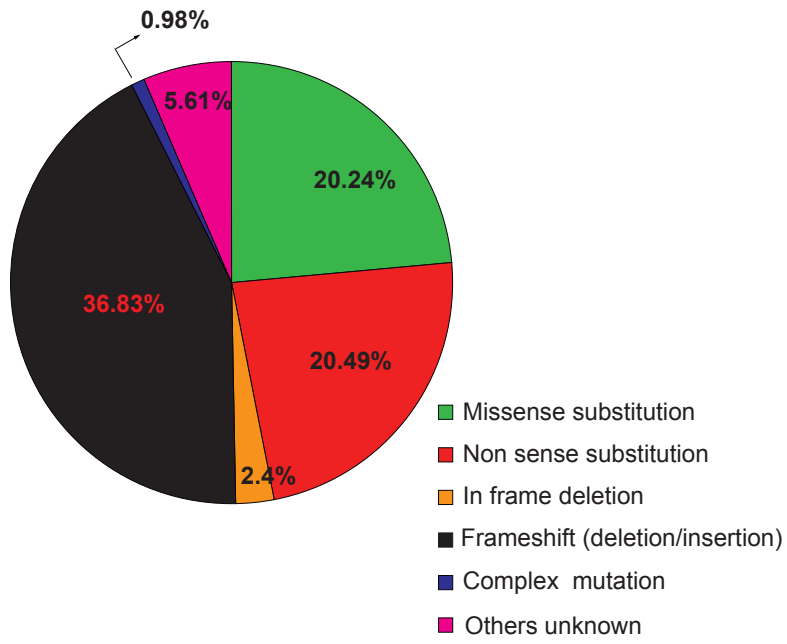
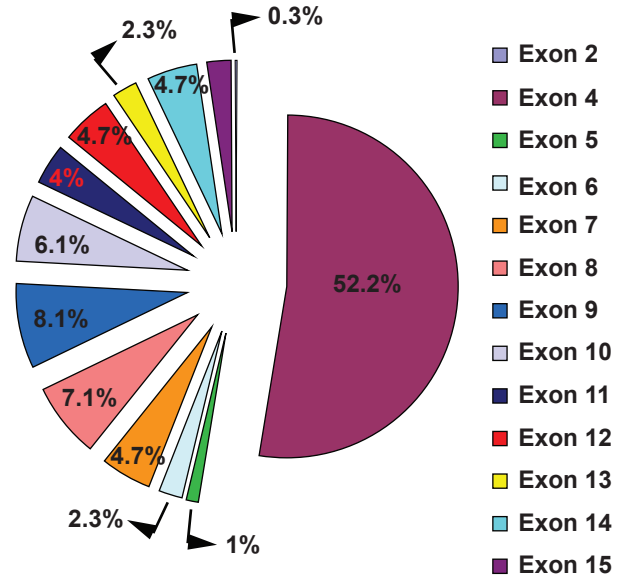


Supplementary Figure1: BCOR exons sequences. Schematic representation of BCOR exon sequences and corresponding functional domains of BCOR protein.

Supplementary Figure2: Characterization of BCOR gene mutation in heamatological cancer. A) Pie chart indicating the different types of BCOR mutations detected in heamtological cancer. B) Frequency of mutations in each BCOR exon detected heamtological cancer.



Supplementary Figure 1.

A**B**

Supplementary Figure 2.

TUMOR	SUBGROUP	EXON	Position a.a.	MUTATION	MUTATION TYPE	Pubmed
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	334	P334A	Substitution Missense	29386642
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	452	A452=	Substitution-coding silent	NA
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	479	G479R	Substitution Missense	29386642; 24030381
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	594	V594I	Substitution Missense	29386642; 25800665
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	720	L720V	Substitution Missense	29386642
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	918	Q918H	Deletion-Frameshift	28481359
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	4	956	K956N	Substitution Missense	24531327
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	8	1171	P1171S	Substitution Missense	26608593
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	11	1502	D1502N	Substitution Missense	26608593
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	12	1547	D1547N	Substitution Missense	26773734
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	15	1664	Y1664*	Substitution-Nonsense	28481359, 27276561
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	15	1698	E1698*	Substitution-Nonsense	26647218
Lymphoid neoplasm	Diffuse Large B cell Lymphoma	15	1702	L1702A	Deletion-Frameshift	26608593
Lymphoid neoplasm	Anaplastic Large cell Lymphoma in situ	4	191	W191*	Substitution-Nonsense	31774495
Lymphoid neoplasm	Breast implant associated anaplastic large cell lymphoma	10	1475	W1475*	Substitution-Nonsense	30546832
Lymphoid neoplasm	B cell Lymphoma unspecified	4	417	D417E	Deletion-Frameshift	28481359
Lymphoid neoplasm	B cell Lymphoma unspecified	4	907	S907N	Substitution Missense	28481359
Lymphoid neoplasm	Follicular Lymphoma	4	446	K446I	Substitution Missense	28481359
Lymphoid neoplasm	Follicular Lymphoma	5	1013	A1013T	Substitution Missense	28481359, 28671688
Lymphoid neoplasm	Mantle cell lymphoma	12	1543	K1543I	Insertion-Frameshift	28481359
Lymphoid neoplasm	Mantle cell lymphoma	13	1596	D1596=	Substitution-coding silent	29386642
Lymphoid neoplasm	Hodgkin Lymphoma	4	780	P780R	Substitution Missense	29386642
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	133	E133Gfs*	Deletion-Frameshift	24850867
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	200	T200N	Insertion-Frameshift	23415222
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	395	K395*	Substitution-Nonsense	NA
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	400	G400A	Deletion-Frameshift	27959900
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	463	P463H	Deletion-Frameshift	23415222
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	487	L487I	Deletion-Frameshift	25382417
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	536	I536D	Insertion-Frameshift	26675346
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	657	Y657*	Substitution-Nonsense	22158541; 26728869
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	657	Y657L	Deletion-Frameshift	NA
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	726	H726L	Insertion-Frameshift	NA
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	839	K839*	Substitution-Nonsense	25382417
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	4	881	D881E	Deletion-Frameshift	NA
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	7	1136	R1136H	Substitution Missense	27959900
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	7	1138	V1138S	Deletion-Frameshift	25382417
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	8	1183	R1183*	Substitution-Nonsense	27288520, 27276561, 24030381
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	8	1228	A1228E	Substitution Missense	30807786
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	9	1348	E1348*	Substitution-Nonsense	23415222
Lymphoid neoplasm	CLL/Small lymphocytic lymphoma	12	1541	M1541R	Deletion-Frameshift	27959900
Lymphoid neoplasm	NK-T cell Lymphoma	4	278	P278fs*	Frameshift	26773734
Lymphoid neoplasm	NK-T cell Lymphoma	4	342	R342*	Substitution-Nonsense	22012066; 30304655; 26773734; 29515765
Lymphoid neoplasm	NK-T cell Lymphoma	4	348	Q348*	Substitution-Nonsense	NA
Lymphoid neoplasm	NK-T cell Lymphoma	4	735	I735*	Deletion-Frameshift	26773734
Lymphoid neoplasm	NK-T cell Lymphoma	4	795	K795R	Deletion-Frameshift	26773734
Lymphoid neoplasm	NK-T cell Lymphoma	4	881	D881E	Deletion-Frameshift	NA
Lymphoid neoplasm	NK-T cell Lymphoma	4	940	T940Y	Insertion-Frameshift	26773734
Lymphoid neoplasm	NK-T cell Lymphoma	12	1549	L1549K	Deletion-Frameshift	26773734
Lymphoid neoplasm	NK cell Leukemia	4	191	W191*	Substitution-Nonsense	29674644
Lymphoid neoplasm	NK cell Leukemia	4	702	L702C	Deletion-Frameshift	29674644; 27276561
Lymphoid neoplasm	HCL	9	1337	Q1337*	Substitution-Nonsense	24241536
Lymphoid neoplasm	HCL	10	1430	E1430*	Substitution-Nonsense	29989227
Lymphoid neoplasm	ALL	4	154	G154E	Substitution-Nonsense	23856246
Lymphoid neoplasm	ALL	15	1721	W1721*	Substitution-Nonsense	23334668
Lymphoid neoplasm	B cell Prolymphocytic leukemia	4	924	F924C	Substitution Missense	31527074
Lymphoid neoplasm	B cell Prolymphocytic leukemia	8	1260	K1260N	Substitution Missense	28481359
Lymphoid neoplasm	B cell Prolymphocytic leukemia	14	1614	P1614T	Insertion-Frameshift	31527074
Lymphoid neoplasm	T cell Prolymphocytic leukemia	4	165	A165P	Substitution Missense	26917488
Lymphoid neoplasm	T cell Prolymphocytic leukemia	4	896	V896L	Substitution Missense	26917488
Lymphoid neoplasm	T-ALL	4	128	T128I	Substitution Missense	25595890
Lymphoid neoplasm	T-ALL	4	421	G421L	Insertion-Frameshift	28157215
Lymphoid neoplasm	T-ALL	4	421	G421R	Substitution Missense	28157215

Lymphoid neoplasm	T-ALL	4	430	Q430H	Substitution Missense	28157215
Lymphoid neoplasm	T-ALL	4	861	R861H	Substitution Missense	28157215
Lymphoid neoplasm	T-ALL	5	1013	A1013T	Substitution Missense	28481359, 28671688
Lymphoid neoplasm	T-ALL	6	1042	E1042D	Deletion-Frameshift	28157215
Lymphoid neoplasm	T-ALL	6	1050	D1050N	Substitution Missense	25595880
Lymphoid neoplasm	T-ALL	8	1175	R1175T	Insertion-Frameshift	23263491
Lymphoid neoplasm	T-ALL	8	1190	A1190V	Insertion-Frameshift	28157215
Lymphoid neoplasm	T-ALL	9	1341	R1341W	Substitution Missense	25595890
Lymphoid neoplasm	T-ALL	10	1425	N1425S	Substitution Missense	28671688
Lymphoid neoplasm	T-ALL	10	1426	K1426E	Substitution Missense	28671688
Lymphoid neoplasm	T-ALL	10	1448	C1448=	Substitution-coding silent	31697823
Lymphoid neoplasm	Plasmacytoma	4	312	Q312del	Deletion-In frame	30545397
Lymphoid neoplasm	Plasma cell Myeloma	4	252	Y252=	Substitution-coding silent	30545397
Lymphoid neoplasm	Plasma cell Myeloma	7	1157	L1157=	Substitution-coding silent	30545397
Myeloid neoplasm	Myelofibrosis	4	435	D435R	Deletion-Frameshift	30304655
Myeloid neoplasm	Myelofibrosis	7	1137	K1137S	Deletion-Frameshift	30304655
Myeloid neoplasm	Polycythaemia Vera	4	342	R342*	Substitution-Nonsense	22012066; 30304655; 26773734; 29515765
Myeloid neoplasm	Polycythaemia Vera	4	797	V797C	Deletion-Frameshift	30304655
Myeloid neoplasm	Polycythaemia Vera	6	1050	D1050G	Deletion-Frameshift	30304655
Myeloid neoplasm	Essential thrombocythaemia	14	1650	F1650C	Substitution Missense	30304655
Myeloid neoplasm	Chronic Eosinophilic Leukemia	4	154	G154E*fs7	Deletion-Frameshift	27174585
Myeloid neoplasm	MDS/Myeloproliferative disease	8	1263	S1263I	Deletion-Frameshift	26728869
Myeloid neoplasm	MDS Therapy related	14	1629	W1629*	Substitution-Nonsense	29386642
Myeloid neoplasm	MDS	2	5	T5xf*	Frameshift	24047651
Myeloid neoplasm	MDS	4	63	R63K	Substitution Missense	24030381
Myeloid neoplasm	MDS	4	151	T151D	Insertion-Frameshift	27127180
Myeloid neoplasm	MDS	4	222	L222Y	Deletion-Frameshift	24030381
Myeloid neoplasm	MDS	4	224	Q224*	Substitution-Nonsense	24030381
Myeloid neoplasm	MDS	4	231	Q231fs*	Frameshift	27884971
Myeloid neoplasm	MDS	4	286	S286A	Deletion-Frameshift	26728869
Myeloid neoplasm	MDS	4	312	Q312*	Substitution-Nonsense	24030381
Myeloid neoplasm	MDS	4	421	G421V	Substitution Missense	24030381
Myeloid neoplasm	MDS	4	462	A462L	Deletion-Frameshift	29515765
Myeloid neoplasm	MDS	4	479	G479R	Substitution Missense	29386642; 24030381
Myeloid neoplasm	MDS	4	463	P463S	Insertion-Frameshift	27628869
Myeloid neoplasm	MDS	4	534	W534*	Substitution-Nonsense	27047651
Myeloid neoplasm	MDS	4	534	W534Xfs*	Frameshift	27047651
Myeloid neoplasm	MDS	4	594	V594I	Substitution Missense	29386642; 25800665
Myeloid neoplasm	MDS	4	637	637fs*	Unknown	24850867
Myeloid neoplasm	MDS	4	657	Y657*	Substitution-Nonsense	22158541; 26728869
Myeloid neoplasm	MDS	4	663	P663T	Substitution Missense	24030381
Myeloid neoplasm	MDS	4	693	P693S	Insertion-Frameshift	30083851
Myeloid neoplasm	MDS	4	711	P711Q	Deletion-Frameshift	24030381
Myeloid neoplasm	MDS	4	738	T738K	Insertion-Frameshift	29515765
Myeloid neoplasm	MDS	4	788	N788K	Substitution Missense	27122718
Myeloid neoplasm	MDS	4	839	K839Q	Insertion-Frameshift	27288520; 24030381
Myeloid neoplasm	MDS	4	840	P840S	Substitution Missense	24030381
Myeloid neoplasm	MDS	4	861	R861X	Frameshift	24047651
Myeloid neoplasm	MDS	4	870	T870X	Frameshift	24850867
Myeloid neoplasm	MDS	4	921	P921X	Frameshift	24850867
Myeloid neoplasm	MDS	4	967	A967V	Substitution Missense	24030381
Myeloid neoplasm	MDS	4	997	A997H	Deletion-Frameshift	29780592
Myeloid neoplasm	MDS	6	1040	D1040X	Frameshift	24047651
Myeloid neoplasm	MDS	7	1105	Y1105*	Substitution-Nonsense	24850867
Myeloid neoplasm	MDS	7	1108	E1108*	Substitution-Nonsense	27276561
Myeloid neoplasm	MDS	7	1163	R1163*	Substitution-Nonsense	24047651
Myeloid neoplasm	MDS	8	1174	Q1174T	Insertion-Frameshift	27881874; 24030381
Myeloid neoplasm	MDS	8	1194	K1194R	Substitution Missense	24030381
Myeloid neoplasm	MDS	8	1239	E1239X	Frameshift	24850867
Myeloid neoplasm	MDS	8	1262	L1262X	Frameshift	24047651
Myeloid neoplasm	MDS	8	1282	R1282T	Deletion-Frameshift	24030381
Myeloid neoplasm	MDS	9	1299	L1299X	Frameshift	24850867
Myeloid neoplasm	MDS	9	1303	E1303X	Frameshift	24850867
Myeloid neoplasm	MDS	9	1333	H1333D	Substitution Missense	24030381
Myeloid neoplasm	MDS	9	1341	R1341Q	Substitution Missense	24030381
Myeloid neoplasm	MDS	9	1342	G1342*	Substitution-Nonsense	24047651

Myeloid neoplasm	MDS	9	1351	V1351R	Insertion-Frameshift	21909114
Myeloid neoplasm	MDS	9	1351	V1351G	Insertion-Frameshift	21909114
Myeloid neoplasm	MDS	9	1351	V1351X	Frameshift	24047651
Myeloid neoplasm	MDS	9	1361	R1361Q	Substitution Missense	24030381
Myeloid neoplasm	MDS	10	1396	Q1396*	Substitution-Nonsense	29515765
Myeloid neoplasm	MDS	10	1435	R1435W	Substitution Missense	24030381
Myeloid neoplasm	MDS	10	1474	G1474X	Frameshift	24850867
Myeloid neoplasm	MDS	11	1480	R1480*	Substitution-Nonsense	24030381
Myeloid neoplasm	MDS	11	1494	Q1494*	Substitution-Nonsense	24030381
Myeloid neoplasm	MDS	11	1503	A1503T	Substitution Missense	24030381
Myeloid neoplasm	MDS	11	1507	D1507X	Frameshift	24047651
Myeloid neoplasm	MDS	11	1513	R1513*	Substitution-Nonsense	24850867
Myeloid neoplasm	MDS	12	1566	F1566del	Deletion in frame	24030381
Myeloid neoplasm	MDS	12	1572	C1572W	Deletion-Frameshift	24030381
Myeloid neoplasm	MDS	13	1582	V1582X	Frameshift	24047651
Myeloid neoplasm	MDS	13	1587	P1587Q	Deletion-Frameshift	24030381
Myeloid neoplasm	MDS	14	1612	L1612P	Deletion-Frameshift	26728869
Myeloid neoplasm	MDS	14	1614	P1614X	Frameshift	24850867
Myeloid neoplasm	MDS	15	1680	E1680*	Substitution-Nonsense	26728869
Myeloid neoplasm	Blast phase chronic myeloid leukaemia	10	1412	S1412V	Insertion-Frameshift	35381062
Myeloid neoplasm	CMML	4	342	R342*	Substitution-Nonsense	22012066; 30304655; 26773734; 29515765
Myeloid neoplasm	CMML	4	542	S542*	Substitution-Nonsense	27628869
Myeloid neoplasm	CMML	4	670	P670S	Substitution Missense	27486981
Myeloid neoplasm	CMML	4	890	E890R	Deletion-Frameshift	26648538
Myeloid neoplasm	CMML	4	941	K941*	Substitution-Nonsense	24047651
Myeloid neoplasm	CMML	4	995	Q995*	Substitution-Nonsense	24047651
Myeloid neoplasm	CMML	8	1187	Q1187*	Substitution-Nonsense	21909114
Myeloid neoplasm	CMML	8	1222	K1222N	Insertion-Frameshift	29515765
Myeloid neoplasm	CMML	11	1510	E1510K	Substitution Missense	24030381
Myeloid neoplasm	CMML	12	1572	C1572X	Frameshift	24047651
Myeloid neoplasm	CMML	13	1589	P1589T	Insertion-Frameshift	29515765
Myeloid neoplasm	CMML	14	1610	T1610I	Substitution Missense	24030381
Myeloid neoplasm	CML	4	214	S214S	Substitution-coding silent	27733357
Myeloid neoplasm	CML	4	549	G549S	Substitution Missense	27733357
Myeloid neoplasm	CML	4	906	G906fs	Insertion-Frameshift	32045476
Myeloid neoplasm	AML Therapy related	4	826	F826A	Insertion-Frameshift	29386642
Myeloid neoplasm	AML Therapy related	4	826	F826A	Insertion-Frameshift	29386642
Myeloid neoplasm	AML Therapy related	12	1564	W1564L	Insertion-Frameshift	29386642
Myeloid neoplasm	AML Therapy related	12	1580	Y1580*	Insertion-Frameshift	27288520
Myeloid neoplasm	AML associated with MDS	10	1462	A1462P	Substitution Missense	27884971
Myeloid neoplasm	AML associated with MDS	14	1612	L1612P	Insertion-Frameshift	22012066, 27288520, 24030381
Myeloid neoplasm	AML associated with MDS	4	629	N629S	Substitution-Nonsense	24030381
Myeloid neoplasm	AML associated with MDS	5	1002	G1002A	Insertion-Frameshift	24030381
Myeloid neoplasm	AML/MDS	4	336	S336L	Insertion-Frameshift	25381062; 24030381
Myeloid neoplasm	AML/MDS	4	461	M461D	Insertion-Frameshift	24030381; 26438511
Myeloid neoplasm	AML	4	60	T60M	Substitution Missense	25596268
Myeloid neoplasm	AML	4	86	G86E	Substitution Missense	25596268
Myeloid neoplasm	AML	4	154	G154*	Substitution-Nonsense	24522528
Myeloid neoplasm	AML	4	158	S158Rfs*28	Insertion-Frameshift	27276561
Myeloid neoplasm	AML	4	165	A165V	Substitution Missense	27881874
Myeloid neoplasm	AML	4	175	K175R	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	177	S177P	Deletion-Frameshift	25381062
Myeloid neoplasm	AML	4	177	S177T	Substitution Missense	27288520
Myeloid neoplasm	AML	4	179	K175R	Deletion-Frameshift	24923295
Myeloid neoplasm	AML	4	195	Y195Xfs*	Insertion-Frameshift	27470916
Myeloid neoplasm	AML	4	202	A202S	Substitution Missense	27288520
Myeloid neoplasm	AML	4	209	S209L	Substitution Missense	27881874
Myeloid neoplasm	AML	4	238	C238*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	4	245	L245T	Deletion-Frameshift	22012066
Myeloid neoplasm	AML	4	248	P248R	Deletion-Frameshift	22237025
Myeloid neoplasm	AML	4	289	W289L	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	4	298	P298L	Deletion-Frameshift	26728869
Myeloid neoplasm	AML	4	316	P316S	Substitution Missense	27881874
Myeloid neoplasm	AML	4	340	S340*	Substitution-Nonsense	27276561

Myeloid neoplasm	AML	4	342	R342*	Substitution-Nonsense	22012066; 30304655; 26773734; 29515765
Myeloid neoplasm	AML	4	346	P346G	Complex-Frameshift	27288520
Myeloid neoplasm	AML	4	346	P346A	Substitution Missense	24923295; 27288520
Myeloid neoplasm	AML	4	346	P346R	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	355	S355R	Deletion-Frameshift	27881874
Myeloid neoplasm	AML	4	355	S355L	Substitution Missense	27881874
Myeloid neoplasm	AML	4	369	S369W	Complex-Frameshift	22012066
Myeloid neoplasm	AML	4	378	T368S	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	379	V379A	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	4	400	G400A	Deletion-Frameshift	22012066
Myeloid neoplasm	AML	4	408	G408R	Substitution Missense	27881874
Myeloid neoplasm	AML	4	416	Q416*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	4	434	K434L	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	460	K460R	Deletion-Frameshift	27435003
Myeloid neoplasm	AML	4	482	I482del	Deletion in frame	27288520
Myeloid neoplasm	AML	4	488	S488L	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	491	G491S	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	502	I502*	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	524	S524K	Insertion-Frameshift	24056718
Myeloid neoplasm	AML	4	534	W534*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	4	541	S541F	Insertion-Frameshift	25381062; 27276561
Myeloid neoplasm	AML	4	543	S543*	Substitution-Nonsense	25381129
Myeloid neoplasm	AML	4	554	I554S	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	555	T555L	Deletion-Frameshift	26438511
Myeloid neoplasm	AML	4	572	P572T	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	586	S586T	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	591	T591R	Substitution Missense	NA
Myeloid neoplasm	AML	4	591	T591=	Substitution-coding silent	NA
Myeloid neoplasm	AML	4	596	Q596*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	4	654	P654H	Substitution Missense	24056718
Myeloid neoplasm	AML	4	674	H674M	Deletion-Frameshift	22012066; 27276561
Myeloid neoplasm	AML	4	677	G677H	Complex-Frameshift	27288520
Myeloid neoplasm	AML	4	699	K699S	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	702	L702C	Deletion-Frameshift	29674644; 27276561
Myeloid neoplasm	AML	4	704	Y704W	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	729	L729Y	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	733	T733A	Deletion-Frameshift	22012066
Myeloid neoplasm	AML	4	755	Y755*	Insertion-Frameshift	26728869
Myeloid neoplasm	AML	4	755	Y755*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	4	756	E756*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	4	765	S765P	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	4	793	Q793*	Substitution-Nonsense	22012066
Myeloid neoplasm	AML	4	810	R810*	Substitution Missense	27288520
Myeloid neoplasm	AML	4	830	S830C	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	4	830	S830K	Insertion-Frameshift	27276561
Myeloid neoplasm	AML	4	836	E836S	Deletion-Frameshift	26728869
Myeloid neoplasm	AML	4	839	K839Q	Insertion-Frameshift	27288520; 24030381
Myeloid neoplasm	AML	4	854	A854T	Substitution Missense	25596268
Myeloid neoplasm	AML	4	871	F871*	Insertion-Frameshift	31648334
Myeloid neoplasm	AML	4	876	F876L	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	886	G886R	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	4	895	P859R	Insertion-Frameshift	27276561
Myeloid neoplasm	AML	4	997	A997H	Deletion-Frameshift	29780592
Myeloid neoplasm	AML	4	939	Y939L	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	4	957	P957L	Substitution Missense	27288520
Myeloid neoplasm	AML	4	965	R965D	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	4	968	N968T	Deletion-Frameshift	27881874
Myeloid neoplasm	AML	4	975	D975G	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	4	976	R976*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	5	1005	E1005K	Substitution Missense	27288520
Myeloid neoplasm	AML	6	1035	H1035Q	Insertion-Frameshift	26728869
Myeloid neoplasm	AML	6	1051	W1051*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	6	1074	Q1074*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	7	1089	R1089H	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	7	1107	V1107G	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	7	1110	Q1110*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	7	1115	P1115T	Deletion-Frameshift	22012066

Myeloid neoplasm	AML	7	1122	S1122L	Substitution Missense	24030381
Myeloid neoplasm	AML	7	1131	R1131L	Substitution Missense	27276561
Myeloid neoplasm	AML	7	1164	R1164*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	8	1169	L1169H	Substitution Missense	NA
Myeloid neoplasm	AML	8	1174	Q1174T	Insertion-Frameshift	27881874; 24030381
Myeloid neoplasm	AML	8	1174	Q1174*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	8	1183	R1183*	Substitution-Nonsense	27288520, 27276561, 24030381
Myeloid neoplasm	AML	8	1190	A1190G	Insertion-Frameshift	27276561
Myeloid neoplasm	AML	8	1210	E1210H	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	8	1216	T1216S	Substitution Missense	26980726
Myeloid neoplasm	AML	8	1233	N1233S	Substitution Missense	27288520
Myeloid neoplasm	AML	8	1236	W1236*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	9	1288	Q1288*	Substitution-Nonsense	27881874
Myeloid neoplasm	AML	9	1302	D1302E	Substitution Missense	25596268
Myeloid neoplasm	AML	9	1323	P1323H	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	9	1329	C1329Q	Substitution Missense	22012066
Myeloid neoplasm	AML	9	1337	Q1337S	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	9	1343	L1343I	Insertion-Frameshift	22012066
Myeloid neoplasm	AML	9	1350	Y1350T	Deletion-Frameshift	26728869
Myeloid neoplasm	AML	9	1371	S1371*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	9	1375	L1375R	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	9	1389	Q1389*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	10	1411	Q1411*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	10	1419	A1419S	Substitution Missense	27288520
Myeloid neoplasm	AML	10	1425	N1425S	Substitution Missense	28671688
Myeloid neoplasm	AML	10	1451	N1451K	Deletion-Frameshift	22012066
Myeloid neoplasm	AML	10	1452	K1452G	Complex-Frameshift	27288520
Myeloid neoplasm	AML	10	1454	C1454V	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	10	1460	D1460G	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	10	1462	A1462T	Substitution Missense	27881874
Myeloid neoplasm	AML	10	1464	Y1467del	Deletion in frame	27288520
Myeloid neoplasm	AML	11	1480	R1480*	Substitution-Nonsense	27288520, 27276561
Myeloid neoplasm	AML	11	1513	R1513*	Substitution-Nonsense	18772396, 22012066, 24923295, 27288520
Myeloid neoplasm	AML	11	1516	L1516del	Deletion in frame	24047651
Myeloid neoplasm	AML	11	1518	Y1518W	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	11	1518	Y1518*	Substitution-Nonsense	27288520
Myeloid neoplasm	AML	12	1541	M1541I	Insertion-Frameshift	24047651
Myeloid neoplasm	AML	12	1547	D1547H	Substitution Missense	27435003
Myeloid neoplasm	AML	12	1561	S1561M	Deletion-Frameshift	27881874
Myeloid neoplasm	AML	12	1564	W1564*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	12	1576	D1576V	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	13	1583	L1583*	Substitution-Nonsense	27276561
Myeloid neoplasm	AML	13	1595	D1595V	Deletion-Frameshift	27881874
Myeloid neoplasm	AML	13	1596	D1596R	Deletion-Frameshift	27288520
Myeloid neoplasm	AML	14	1608	S1608*	Substitution-Nonsense	22012066
Myeloid neoplasm	AML	14	1611	P1611H	Substitution Missense	27881874
Myeloid neoplasm	AML	14	1612	L1612P	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	14	1627	R1627T	Insertion-Frameshift	27288520
Myeloid neoplasm	AML	14	1637	K1637*	Substitution-Nonsense	22012066
Myeloid neoplasm	AML	14	1651	P1651Q	Deletion-Frameshift	27276561
Myeloid neoplasm	AML	15	1664	Y1664*	Substitution-Nonsense	28481359, 27276561
Myeloid neoplasm	AML	15	1664	Y1664I	Deletion-Frameshift	27276561
no tumor	Aplastic anemia	4	176	Q176*	Substitution-Nonsense	25139356
no tumor	Aplastic anemia	4	304	Y304*	Substitution-Nonsense	25139356
no tumor	Aplastic anemia	13	1587	P1587fs	Deletion-Frameshift	25139356
no tumor	Aplastic anemia	14	1611	W1611*	Substitution-Nonsense	25139356
no tumor	Aplastic anemia	14	1612	L1612fs	Insertion-Frameshift	25139356

Supplementary Table1. BCOR Mutations detected in hematological disease

Supplementary Table2. BCORL1 Mutations detected in hematological disease.

TUMOR	SUBGROUP	EXON	Position a.a.	MUTATION	MUTATION TYPE	Pubmed
Lymphoid neoplasm	Diffuse large B cell lymphoma	4	440	G440=	Substitution - coding silent	29386642
Lymphoid neoplasm	Diffuse large B cell lymphoma	4	928	P928A	Substitution - Missense	21796119
Lymphoid neoplasm	Diffuse large B cell lymphoma	5	1161	K1161*	Substitution nonsense	29386642
Lymphoid neoplasm	Diffuse large B cell lymphoma	7	1332	R1332*	Substitution nonsense	24531327
Lymphoid neoplasm	Diffuse large B cell lymphoma	11	1560	Y1560D	Substitution - Missense	29386642
Lymphoid neoplasm	Breast implant associated anaplastic large cell lymphoma in situ	4	604	P604L	Substitution - Missense	31774495
Lymphoid neoplasm	Breast implant associated anaplastic large cell lymphoma invasive	7	1324	E1324del	Deletion - In frame	31774495
Lymphoid neoplasm	Lymphoid neoplasm	4	945	R945G	Substitution - Missense	-
Lymphoid neoplasm	Lymphoid neoplasm	4	971	A971S	Substitution - Missense	-
Lymphoid neoplasm	Chronic lymphocytic leukaemia-small lymphocytic lymphoma	4	208	P208=	Substitution - coding silent	-
Lymphoid neoplasm	Chronic lymphocytic leukaemia-small lymphocytic lymphoma	13	1693	E1693K	Substitution - Missense	23415222
Lymphoid neoplasm	Acute lymphoblastic B cell leukaemia	2	6	P6=	Substitution - coding silent	31697823
Lymphoid neoplasm	Acute lymphoblastic B cell leukaemia	4	216	S216A	Substitution - Missense	25207766
Lymphoid neoplasm	Acute lymphoblastic B cell leukaemia	4	1096	V1096I	Substitution - Missense	31697823
Lymphoid neoplasm	Acute lymphoblastic B cell leukaemia	13	1673	G1673P	Insertion-frameshift	25790293
Lymphoid neoplasm	Acute lymphoblastic B cell leukaemia	2	6	P6=	Substitution - coding silent	31697823
Lymphoid neoplasm	Acute lymphoblastic leukaemia	4	503	P503S	Substitution - Missense	26189108
Lymphoid neoplasm	Plasma cell myeloma	4	407	T407=	Substitution - coding silent	29386642
Lymphoid neoplasm	Plasma cell myeloma	4	479	P479H	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	4	530	S530=	Substitution - coding silent	29563506
Lymphoid neoplasm	Plasma cell myeloma	4	587	T587N	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	4	671	A671D	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	4	673	G673V	Substitution - Missense	30545397
Lymphoid neoplasm	Plasma cell myeloma	4	688	V688=	Substitution - coding silent	30545397
Lymphoid neoplasm	Plasma cell myeloma	7	1251	P1251H	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	7	1299	R1299=	Substitution - coding silent	29563506
Lymphoid neoplasm	Plasma cell myeloma	7	1301	M1301I	Substitution - Missense	29386642
Lymphoid neoplasm	Plasma cell myeloma	7	1337	S1337=	Substitution - coding silent	30545397
Lymphoid neoplasm	Plasma cell myeloma	7	1349	Q1349H	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	12	1594	D1594E	Substitution - Missense	29563506
Lymphoid neoplasm	Plasma cell myeloma	13	1638	I1638L	Substitution - Missense	29386642
Lymphoid neoplasm	Plasma cell myeloma	13	1664	Q1664E	Substitution - Missense	29563506
Lymphoid neoplasm	Peripheral T cell lymphoma unspecified	4	353	P353L	Substitution - Missense	25257991
Lymphoid neoplasm	Angioimmunoblastic T cell lymphoma	4	866	V866I	Substitution - Missense	27203213
Lymphoid neoplasm	Angioimmunoblastic T cell lymphoma	4	954	E954G	Insertion-frameshift	28671688
Lymphoid neoplasm	Angioimmunoblastic T cell lymphoma	4	1070	G1070R	Substitution - Missense	27203213
Lymphoid neoplasm	Acute lymphoblastic T cell leukaemia	4	533	G533V	Deletion-frameshift	28671688
Lymphoid neoplasm	Acute lymphoblastic T cell leukaemia	7	1349	Q1349*	Substitution nonsense	21989985
Lymphoid neoplasm	Acute lymphoblastic T cell leukaemia	13	1679	S1679F	Insertion-frameshift	28671688
Myeloid neoplasm	Acute leukaemia of ambiguous lineage	4	327	T327A	Substitution - Missense	-
Myeloid neoplasm	Acute lymphoblastic B cell leukaemia					27470916
Myeloid neoplasm	Acute myeloid leukaemia	4	945	R945*	Substitution nonsense	31697823
Myeloid neoplasm	Acute myeloid leukaemia therapy related					25652455
Myeloid neoplasm	Acute lymphoblastic T cell leukaemia	4	1001	Q1001P	Insertion-frameshift	28671688
Myeloid neoplasm	Myelodysplastic syndrome					27127180
Myeloid neoplasm	Peripheral T cell lymphoma unspecified	4	1111	T1111M	Substitution - Missense	25257991
Myeloid neoplasm	Myelofibrosis	5	1150	K1150R	Substitution - Missense	24325359
Myeloid neoplasm	Myelodysplastic-myeloproliferative neoplasm	8	1432	S1432*	Substitution nonsense	26728869
Myeloid neoplasm	Myelodysplastic syndrome therapy related	4	165	R165L	Insertion-frameshift	29386642
Myeloid neoplasm	Myelodysplastic syndrome therapy related	4	397	M397I	Substitution - Missense	29386642
Myeloid neoplasm	Myelodysplastic syndrome	4	371	T371P	Substitution - Missense	30083851
Myeloid neoplasm	Myelodysplastic syndrome	5	1196	R1196*	Substitution nonsense	24047651
Myeloid neoplasm	Myelodysplastic syndrome	7	1265	R1265H	Substitution - Missense	27127180
Myeloid neoplasm	Myelodysplastic syndrome	12	1601	S1601F	Insertion-frameshift	26728869
Myeloid neoplasm	Chronic myelomonocytic leukaemia	4	72	R72FS	Frameshift	24047651
Myeloid neoplasm	Acute myeloid leukaemia					21989985
Myeloid neoplasm	Chronic myelomonocytic leukaemia	4	1001	Q1001R	Deletion-frameshift	25652455
Myeloid neoplasm	Acute leukaemic transformation of myeloproliferative neoplasm	12	1599	E1599D	Deletion-frameshift	29148089
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	4	188	T188D	Insertion-frameshift	21989985
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	4	239	V239S	Insertion-frameshift	29780592
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	4	644	M644H	Insertion-frameshift	21989985
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	4	754	I754fs	Frameshift	24047651
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	4	810	P810T	Substitution - Missense	21989985
Myeloid neoplasm	Acute myeloid leukaemia associated with MDS	13	1679	S1679fs	Frameshift	24047651
Myeloid neoplasm	Acute leukaemic transformation of myeloproliferative neoplasm	12	1599	E1599D	Deletion-frameshift	29148089
Myeloid neoplasm	Acute myeloid leukaemia	4	96	Q96R	Substitution - Missense	-
Myeloid neoplasm	Acute myeloid leukaemia	4	114	P114L	Substitution - Missense	27470916
Myeloid neoplasm	Acute myeloid leukaemia	4	127	S127F	Substitution - Missense	28063196
Myeloid neoplasm	Acute myeloid leukaemia	4	149	S149G	Insertion-frameshift	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	149	S149G	Insertion-frameshift	26980726

Myeloid neoplasm	Acute myeloid leukaemia	4	158	G158*	Substitution nonsense	25596268
Myeloid neoplasm	Acute myeloid leukaemia	4	174	F174W	Insertion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	209	G209S	Substitution - Missense	26438511
Myeloid neoplasm	Acute myeloid leukaemia	4	226	S229R	Deletion-frameshift	27470916
Myeloid neoplasm	Acute myeloid leukaemia	4	260	P260S	Substitution - Missense	28063196
Myeloid neoplasm	Acute myeloid leukaemia	4	265	V265M	Substitution - Missense	25962120
Myeloid neoplasm	Acute myeloid leukaemia	4	324	S324*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	389	I389L	Substitution - Missense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	437	F437fs	Frameshift	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	447	T447fs	Frameshift	28063196
Myeloid neoplasm	Acute myeloid leukaemia	4	452	I452S	Deletion-frameshift	26980726
Myeloid neoplasm	Acute myeloid leukaemia	4	477	T477fs	Frameshift	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	521	L521R	Deletion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	538	Q538*	Substitution nonsense	21989985
Myeloid neoplasm	Acute myeloid leukaemia	4	553	L553P	Insertion-frameshift	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	559	K559N	Substitution - Missense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	590	Q590*	Substitution nonsense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	596	V596fs	Frameshift	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	609	R609*	Substitution nonsense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	613	S613P	Substitution - Missense	26438511
Myeloid neoplasm	Acute myeloid leukaemia	4	614	P614T	Deletion-frameshift	26438511
Myeloid neoplasm	Acute myeloid leukaemia	4	616	E616*	Substitution nonsense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	644	M644C	Deletion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	657	L657F	Substitution - Missense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	702	W702*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	703	V703M	Substitution - Missense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	765	T765M	Substitution - Missense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	767	G767A	Deletion-frameshift	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	780	S780N	Substitution - Missense	27881874
Myeloid neoplasm	Acute myeloid leukaemia	4	784	R784*	Substitution nonsense	21989985
Myeloid neoplasm	Acute myeloid leukaemia	4	784	R784*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	784	R784*	Substitution nonsense	28825729
Myeloid neoplasm	Acute myeloid leukaemia	4	851	Q851K	Substitution - Missense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	916	E916*	Substitution nonsense	26980726
Myeloid neoplasm	Acute myeloid leukaemia	4	948	Q948fs	Frameshift	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	971	A971G	Insertion-frameshift	27435003
Myeloid neoplasm	Acute myeloid leukaemia	4	1006	M1006I	Insertion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	1048	R1048*	Substitution nonsense	28063196
Myeloid neoplasm	Acute myeloid leukaemia	4	1085	K1085R	Deletion-frameshift	21989985
Myeloid neoplasm	Acute myeloid leukaemia	4	1090	R1090*	Substitution nonsense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	1102	K1102*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	4	1111	T1111M	Substitution - Missense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	4	1112	E1112*	Substitution nonsense	25652455
Myeloid neoplasm	Acute myeloid leukaemia	4	1115	P1115S	Substitution - Missense	-
Myeloid neoplasm	Acute myeloid leukaemia	4	1116	P1116S	Substitution - Missense	27470916
Myeloid neoplasm	Acute myeloid leukaemia	4	1137	K1137*	Substitution nonsense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	5	1158	S1158A	Substitution - Missense	25652455
Myeloid neoplasm	Acute myeloid leukaemia	5	1166	A1166G	Insertion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	5	1196	R1196*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	5	1201	E1201A	Substitution - Missense	26980726
Myeloid neoplasm	Acute myeloid leukaemia	7	1257	E1257del	Deletion - In frame	29663558
Myeloid neoplasm	Acute myeloid leukaemia	7	1297	R1297*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	8	1370	S1370P	Substitution - Missense	26438511
Myeloid neoplasm	Acute myeloid leukaemia	8	1391	G1391R	Substitution - Missense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	8	1420	R1420N	Insertion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	8	1420	R1420*	Substitution nonsense	27288520
Myeloid neoplasm	Acute myeloid leukaemia	8	1431	S1431P	Substitution - Missense	27798625
Myeloid neoplasm	Acute myeloid leukaemia	10	1520	Y1520*	Substitution nonsense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	11	1542	L1542F	Substitution - Missense	29663558
Myeloid neoplasm	Acute myeloid leukaemia	11	1551	G1551V	Deletion - In frame	27881874
Myeloid neoplasm	Acute myeloid leukaemia	13	1655	E1655A	Insertion-frameshift	26980726
Myeloid neoplasm	Acute myeloid leukaemia	13	1655	E1655S	Complex- frameshift	26980726
Myeloid neoplasm	Acute myeloid leukaemia	13	1659	Q1659P	Insertion-frameshift	27288520
Myeloid neoplasm	Acute myeloid leukaemia	13	1681	P1681Q	Deletion-frameshift	26438511