

Table S7. Sequencing gene content of the prospective cohort.

ABCB1	BTK	CRIP1	FER	HRAS	KMT2B	MEN1	OR2L2	PREX2	RPGR	TEP1
ABL1	BUB1B	CRK	FES	HSP90AA1	KMT2C	MERTK	OR6A2	PRKAA1	RPS6KA1	TERT
ADA	CACNA1D	CSF1R	FGFR1	HSP90AB1	KMT2D	MET	PAK1	PRKACA	RPS6KA3	TET2
AFF2	CAMK2G	CSF3R	FGFR2	HSP90B1	KRAS	MICA	PAK2	PRKACB	RPS6KA5	TGFBR1
AKAP3	CASP8	CSNK1E	FGFR3	HSPA4	LCK	MIEN1	PAK3	PRKCA	RPS6KB1	TKTL1
AKT1	CAV3	CSNK2A1	FGFR4	IGF1	LPL	MLH1	PALB2	PRKCB	RPTOR	TLR4
AKT2	CBFB	CTCF	FGR	IGF1R	LYN	MLLT4	PARP1	PRKCD	RRM1	TLR9
AKT3	CBL	CTCFL	FH	IKBKB	MAP1A	MMP1	PARP2	PRKCE	RRM2	TNFRSF11A
ALDH1A1	CBLB	CUL4A	FLT1	IL15RA	MAP1B	MMP14	PBRM1	PRKCG	RUNX1	TNK2
ALK	CCL1	CUX1	FLT3	IL2	MAP2	MMP2	PCID2	PRKCQ	RYR2	TNKS2
ALOX5	CCL2	CYP19A1	FLT4	IL7R	MAP2K1	MMP3	PDE4B	PRKCZ	S100B	TOP1
ANKRD11	CCL20	CYP2C8	FOXA1	INSR	MAP2K2	MMP9	PDE4C	PRKDC	S1PR2	TOP2A
APC	CCL7	CYP2C9	FOXO3	INSRR	MAP2K4	MSH2	PDE4D	PRKG1	SETD2	TOP2B
APP	CCL8	CYP3A4	FOXP1	IRAK1	MAP3K1	MST1R	PDGFB	PRKX	SF3B1	TOP3A
ARAF	CCND1	DCAF4L2	FOXQ1	IRF4	MAP3K13	MTAP	PDGFRA	PRMT2	SGK1	TOP3B
ARID1A	CCND2	DEK	FRK	IRS1	MAP3K2	MTHFR	PDGFRB	PTEN	SGK2	TP53
ARID1B	CCND3	DGKG	FSIP1	IRS2	MAP3K4	MTOR	PDPK1	PTGS2	SHC1	TPMT
ARID2	CCNE1	DNMT1	FYN	ITCH	MAP3K5	MYB	PEG10	PTK2	SHH	TPRX1
ASXL1	CD274	DNMT3A	GAB2	ITGB3	MAP3K6	MYC	PFKFB3	PTK2B	SIK2	TRIM47
ATM	CDC25A	DNMT3B	GATA3	ITGB4	MAP3K7	NCOA1	PGR	PTK6	SIRT1	TRIM65
ATN1	CDC25B	DUSP7	GHRL	ITK	MAP4	NCOR1	PHF6	PTPN22	SIRT7	TRIM6- TRIM34
ATP2B2	CDC25C	DYRK1A	GLIS3	JAK1	MAP4K3	NEK2	PHKA2	PTPRD	SLC19A3	TRPS1
ATR	CDH1	ECT2L	GNAS	JAK2	MAP4K4	NF1	PI4K2A	PTPRN2	SLC5A1	TSC1
ATRX	CDH16	EGFR	GOLPH3L	JAK3	MAP4K5	NF2	PI4KB	PVT1	SMAD4	TSC2
AURKA	CDK16	EHMT2	GPR32	JUN	MAP7	NFIB	PIK3C3	RAB25	SMARCA4	TTK
AURKB	CDK2	EPAS1	GPS2	KAT6A	MAPK1	NFKB1	PIK3CA	RAC1	SMO	TUSC5
AURKC	CDK4	EPHA1	GRB7	KAT8	MAPK10	NFKB2	PIK3CB	RAC2	SMYD3	TYK2
AXIN1	CDK6	EPHA2	GRIN2A	KCNB2	MAPK13	NFKBIA	PIK3CD	RAD18	SOCS2	TYRO3
AXL	CDKN1B	EPHA3	GSK3A	KCNJ12	MAPK14	NOS1	PIK3CG	RAD20	SOX9	UNC13D
BAK1	CDKN2A	EPHB1	GSK3B	KCNJ14	MAPK3	NOS2	PIK3R1	RAD51	SPEN	USH2A
BAX	CDKN2B	EPHB2	HDAC1	KCNJ2	MAPK4	NOS3	PIK3R2	RAF1	SRC	USP9X
BCL2	CETP	EPHB4	HDAC2	KCNJ3	MAPK6	NOTCH1	PIKFYVE	RASAL1	SRMS	VHL
BCL2A1	CHEK1	EPST11	HDAC4	KCNJ5	MAPK7	NOTCH2	PIM1	RB1	SSTR5	VPS4B
BCL2L2	CHEK2	ERBB2	HDAC5	KCNJ6	MAPK8	NOTCH3	PIWIL1	RBM17	ST8SIA4	WEE1
BCOR	CHML	ERBB3	HDAC6	KCNJ9	MAPRE2	NR1H2	PKD1	RECQL5	STAG2	WHSC1L1
BCR	CHRNA4	ERBB4	HDAC7	KDM1B	MAPRE3	NR1H4	PLCG1	REL	STAT1	WNK3
BIRC2	CHUK	ERCC4	HDAC9	KDM4A	MAPT	NR2F2	PLK2	RET	STAT5A	WNT7A
BIRC3	CIC	ESR1	HIF1A	KDM5A	MAST2	NR3C1	PLK3	RFC1	STAT5B	XBP1
BLK	CLEC19A	EXO1	HIST1H1C	KDM6A	MCL1	NRAS	PMS2	RGMB	STK11	XDH
BMP7	CNOT3	FAAH	HIST1H2BC	KDR	MDM2	NTRK1	PNPLA3	RHOA	SYK	YES1
BMX	CNR1	FAM47C	HIST1H3B	KIF11	MDM4	NTRK2	PPAPDC1B	RICTOR	TBL1XR1	ZAP70
BRAF	COL1A1	FANCD2	HK2	KIF26B	MECOM	OGG1	PPARA	RIPK1	TBX3	ZBP1
BRCA1	COL2A1	FASN	HK3	KIT	MECP2	OPCML	PPARG	ROCK1	TEC	ZFP36L1
BRCA2	CREBBP	FBXW7	HMGCR	KLLN	MED23	OR2G3	PRDM1	ROCK2	TEK	ZHX2