

Supplementary Table 1: Panel Design, Gene Mutations

ABCD4	BTG1	DOT1L	HIST1H1D	LRRK2	PANK3	PTPRD	TP53
ABCF1	C8orf34	DPYD	HIST1H1E	LTB	PARK2	RAD50	TRAF2
ACTG1	CARD11	DUSP2	HIST1H1E	MAF	PCLO	RAG2	TRAF3
ADAM29	CCND1	DUOX2	HLA-A	MAFB	PEG3	RASA2	TSHZ3
ADCY2	CCND3	EGFR	HLA-B	MAML2	PIGO	RB1	U2AF1
AKAP1	CD36	EGR1	HLA-C	MAML3	PIK3CA	RBX1	UBR5
ARHGEF12	CD79A	EP300	HUWE1	MAN2C1	PIM1	RFTN1	USP29
ARID1A	CDK4	EPHA3	IDH1	MAP3K1	PIM3	ROBO1	USP7
ARID2	CDKN1B	ETV6	IDH2	MAP3K14	PKHD1	RPL5	WHSC1
ASAP2	CDKN2A	EVI5	IGF1R	MAST4	PLCE1	RPS3A	WHSC1L1
ASXL1	CDKN2B	EZH1	IKZF1	MAX	POT1	SAMHD1	WWOX
ATM	CDKN2C	EZH2	IKZF3	MCL1	PRDM1	SETD2	XBP1
ATP13A4	CHD1	FAF1	IKZF4	MKI67	PRDM9	SF3B1	XPO1
ATR	CHD2	FAM46C	IL6ST	MLL	PRKD2	SHC1	ZFHX3
ATRX	CHD4	FANCA	IRF4	MYC	PRMT5	SMARCA4	ZFHX4
BCL10	CHEK1	FANCD2	JAK1	MYD88	PSMB1	SNX7	ZFP36L1
BCL6	CHEK2	FANCI	JAK2	NCKAP5	PSMB10	SP140	ZNF292
BCL7A	CKS1B	FANCM	JAK3	NCOR1	PSMB11	SPEN	ZRSR2
BCL9	CRBN	FAT1	KAT6A	NEDD9	PSMB2	STAT3	
BCORL1	CREBBP	FAT4	KDM2B	NF1	PSMB3	TAF1	
BIRC2	CUL4A	FBXW7	KDM3B	NFKB1	PSMB4	TBX15	
BIRC3	CUL4B	FCHSD2	KDM5A	NFKB2	PSMB6	TCL1A	
BIRC5	CXCR4	FGFR3	KDM5C	NFKBIA	PSMB7	TDG	
BMP2K	CYLD	FLT3	KDM6A	NOTCH1	PSMB8	TET1	
BRAF	DDB1	FUBP1	KLHL6	NOTCH3	PSMD1	TET2	
BRCA1	DDX3X	GPC5	KMT2B	NOTCH4	PSMG2	TET3	
BRCA2	DIS3	HDAC1	KMT2C	NPM1	PSPC1	TGDS	
BRD4	DNAH5	HDAC4	KMT2D	NR3C1	PTEN	TIAM2	
ABCD4	DNMT3A	HDAC7	KRAS	NRAS	PTPN11	TLR4	
BRF1	DOCK5	HIST1H1C	LRP1B	PABPC1	PSMD1	TET3	