

# Data of Genetic Testing

## Supplementary 808 tumor related hot spot genes

### Point mutation/insertion deletion

ABCB1	ABCC1	ABCC2	ABCC3	ABCC6	ABCC9	ABCG2	ABL1	ABL2
ACTB	ACTG1	ACVR1	ACVR1B	ACVR2A	ADAMTS12	ADGRA2	ADGRG4	ADH1C
AGO2	AKT1	AKT2	AKT3	ALDOC	ALK	ALOX12B	AMER1	AMOT
ANK2	ANKRD11	APC	APCDD1	APOB	APOE	AR	ARAF	ARFRP1
ARID1A	ARID1B	ARID2	ARID5B	ASB18	ASTN1	ASTN2	ASXL1	ASXL2
ASXL3	ATIC	ATM	ATP7A	ATR	ATRIP	ATRX	AURKA	AURKB
AXIN1	AXIN2	AXL	B2M	BABAM1	BACH1	BAP1	BARD1	BBC3
BCL10	BCL2	BCL2L1	BCL2L11	BCL2L2	BCL6	BCOR	BCORL1	BCR
BIRC3	BLM	BMPR1A	BORCS8-MEF2B	BRAF	BRCA1	BRCA2	BRD4	BRINP3
BRIP1	BTG1	BTBK	C14orf177	C6orf118	CA10	CALR	CARD11	CARM1
CASP7	CASP8	CBBF	CBL	CBR1	CBR3	CCDC6	CCND1	CCND2
CCND3	CCNE1	CD274	CD276	CD74	CD79A	CD79B	CDA	CDC42
CDC73	CDH1	CDH10	CDH12	CDH18	CDH9	CDK12	CDK4	CDK6
CDK8	CDKN1A	CDKN1B	CDKN2A	CDKN2B	CDKN2C	CEBPA	CENPA	CFTR
CHD2	CHD4	CHEK1	CHEK2	CHRM2	CHST3	CHUK	CIC	CNTNAP2
CNTNAP5	COL22A1	CRBN	CREBBP	CRKL	CRLF2	CSDE1	CSF1R	CSF3R
CSMD3	CTCF	CTLA4	CTNNA1	CTNNA2	CTNNB1	CUL3	CUL4A	CUL4B
CXCR4	CYBA	CYLD	CYP17A1	CYP2B6	CYP2C19	CYP2C8	CYP2C9	CYP2D6
CYP2E1	CYP3A4	CYSLTR2	DAXX	DCAF12L1	DCAF12L2	DCAF4L2	DCK	DCLRE1C
DCUN1D1	DDB1	DDR2	DICER1	DIS3	DMD	DNAJB1	DNMT1	DNMT3A
DNMT3B	DOT1L	DPYD	DROSHA	DUSP27	DUSP4	E2F3	EED	EGF
EGFL7	EGFR	EIF1AX	EIF4A2	EIF4E	ELF3	EML4	EMSY	ENG
EP300	EPAS1	EPCAM	EPHA2	EPHA3	EPHA5	EPHA7	EPHB1	EPHX1
ERBB2	ERBB3	ERBB4	ERCC1	ERCC2	ERCC3	ERCC4	ERCC5	ERF
ERG	ERICH3	ERRF1	ESR1	ESR2	ETV1	ETV4	ETV5	ETV6
EWSR1	EZH1	EZH2	EZR	F3	FAM135B	FAM175A	FAM46C	FAM58A
FANCA	FANCB	FANCC	FANCD2	FANCE	FANCF	FANCG	FANC	FANCL
FANCM	FAS	FAT1	FAT3	FBN2	FBXL7	FBXW7	FCGR3A	FES
FGD1	FGF10	FGF12	FGF14	FGF19	FGF23	FGF3	FGF4	FGF6
FGF7	FGFR1	FGFR2	FGFR3	FGFR4	FH	FIP1L1	FLCN	FLT1
FLT3	FLT4	FOLR3	FOXA1	FOXL2	FOXO1	FOXP1	FRK	FRS2
FRYL	FUBP1	FYN	G6PC3	GABRA2	GABRA6	GALNT12	GAPDH	GAST
GATA1	GATA2	GATA3	GATA4	GATA6	GEN1	GGH	GID4	GLI1
GNA11	GNA13	GNAQ	GNAS	GOPC	GPR158	GPS2	GREM1	GRID1
GRIK3	GRIN2A	GRM3	GRM8	GSK3B	GSTA1	GSTM1	GSTM3	GSTP1
GSTT1	H3F3A	H3F3AP4	H3F3B	H3F3C	HAPLN1	HCN1	HDAC9	HFE
HGF	HIST1H1C	HIST1H2BD	HIST1H3A	HIST1H3B	HIST1H3C	HIST1H3D	HIST1H3E	HIST1H3F
HIST1H3G	HIST1H3H	HIST1H3I	HIST1H3J	HIST2H3A	HIST2H3C	HIST2H3D	HIST3H3	HLA-A
HLA-B	HNF1A	HOXB13	HRAS	HSD3B1	HSP90AA1	HTR1A	ICOSLG	ID3
IDH1	IDH2	IFNGR1	IFNL3	IGF1	IGF1R	IGF2	IGFL3	IKBKE
IKZF1	IL10	IL7R	INHA	INHBA	INPP4A	INPP4B	INPPL1	INSR
INSRR	IQCJ	IRF2	IRF4	IRS1	IRS2	ITPA	JAK1	JAK2
JAK3	JUN	KAT6A	KCNA4	KCND2	KCNJ3	KCNT2	KDM5A	KDM5C
KDM6A	KDR	KEAP1	KEL	KIF2B	KIF5B	KIT	KLC1	KLF4
KLHL1	KLHL6	KMT2A	KMT2B	KMT2C	KMT2D	KMT5A	KNSTRN	KRAS
LATS1	LATS2	LEPR	LIG3	LIG4	LMO1	LOC349160	LPL	LPPR4
LRFN5	LRIG3	LRP1B	LRRRC4C	LRRRIQ3	LRRK2	LRRTM4	LTK	LYN

LZTR1	MAD1L1	MAGI2	MALT1	MAP2K1	MAP2K2	MAP2K4	MAP3K1	MAP3K13
MAP3K14	MAP4K3	MAPK1	MAPK3	MAPKAP1	MAX	MBD4	MCL1	MDC1
MDH2	MDM2	MDM4	MED12	MEF2B	MEN1	MET	MGA	MITF
MKRN3	MLH1	MLH3	MNAT1	MOCS2	MPL	MRE11A	MS4A3	MSH2
MSH3	MSH6	MSI1	MSI2	MST1	MST1R	MTHFD1	MTHFR	MTOR
MUTYH	MYB	MYC	MYCL	MYCN	MYD88	MYOD1	NAT2	NAV3
NBN	NCAM1	NCOA3	NCOA4	NCOR1	NEGR1	NEIL1	NEIL3	NF1
NF2	NFE2L2	NFKBIA	NKX2-1	NKX3-1	NLRP3	NLRP5	NOS3	NOTCH1
NOTCH2	NOTCH3	NOTCH4	NPM1	NQO1	NRAS	NSD1	NTHL1	NTM
NTRK1	NTRK2	NTRK3	NUF2	NUP93	NUTM1	PAK1	PAK3	PAK6
PAK7	PALB2	PALLD	PAPPA2	PARK2	PARP1	PARP2	PARP3	PARP4
PAX5	PAX8	PBRM1	PCDH10	PCDH17	PDCD1	PDCD1LG2	PDGFRA	PDGFRB
PDHA2	PKD1	PDPK1	PDYN	PDZRN3	PER1	PGR	PHOX2B	PIK3C2B
PIK3C2G	PIK3C3	PIK3CA	PIK3CB	PIK3CD	PIK3CG	PIK3R1	PIK3R2	PIK3R3
PIM1	PIP5K1A	PLCG2	PLK2	PMAIP1	PML	PMS1	PMS2	PNRC1
POLD1	POLDIP2	POLE	POLM	POM121L12	PPARD	PPARG	PPM1D	PPP2R1A
PPP4R2	PPP6C	PRDM1	PRDM14	PREX2	PRIM2	PRKACA	PRKAR1A	PRKCI
PRKD1	PRKDC	PRSS1	PRSS8	PTCH1	PTEN	PTP4A1	PTPN11	PTPRD
PTPRS	PTPRT	PXDNL	QKI	RAB35	RAC1	RAC2	RAD21	RAD50
RAD51	RAD51B	RAD51C	RAD51D	RAD52	RAD54L	RAF1	RANBP2	RARA
RASA1	RB1	RBBP8	RBM10	RECQL	RECQL4	REG3A	REL	RET
REV1	REV3L	RFWD2	RHBDF2	RHEB	RHOA	RICTOR	RINT1	RIT1
RNF43	ROCK1	ROS1	RP1L1	RPA1	RPL11	RPL35A	RPL5	RPP30
RPS10	RPS17	RPS19	RPS24	RPS26	RPS6KA4	RPS6KB2	RPS7	RPTOR
RRAGC	RRAS	RRAS2	RRM1	RRM2	RTEL1	RUNX1	RUNX1T1	RXRA
RYBP	RYR2	SALL1	SDC4	SDHA	SDHAF2	SDHB	SDHC	SDHD
SESN1	SESN2	SESN3	SETBP1	SETD2	SETMAR	SF3B1	SH2B3	SH2D1A
SHMT1	SHOC2	SHQ1	SLC14A2	SLC19A1	SLC22A2	SLC22A4	SLC34A2	SLC45A2
SLC8A1	SLCO1B1	SLCO1B3	SLIT2	SLIT3	SLITRK1	SLITRK2	SLITRK3	SLX4
SMAD2	SMAD3	SMAD4	SMARCA4	SMARCB1	SMARCD1	SMO	SMYD3	SNCAIP
SOCS1	SOS1	SOX10	SOX17	SOX2	SOX9	SPEN	SPG7	SPHKAP
SPINK1	SPOP	SPRED1	SPTA1	SRC	SRSF2	ST6GAL2	STAG2	STAT3
STAT4	STAT5A	STAT5B	STK11	STK19	STK40	STT3A	SUFU	SUZ12
SYK	TAF1	TAP1	TAP2	TBP	TBX3	TCEB1	TCF3	TCF7L2
TDG	TEK	TEKT4	TERC	TERT	TET1	TET2	TFE3	TFEB
TG	TGFB1	TGFBR1	TGFBR2	TGFBR3	TIPARP	TLR4	TMEM127	TMPRSS2
TNFAIP3	TNFRSF14	TNFRSF17	TOP1	TOP2A	TOPBP1	TP53	TP53BP1	TP63
TPM3	TPMT	TRAF2	TRAF7	TRIM58	TRPC5	TRRAP	TSC1	TSC2
TSHR	TSHZ3	TYK2	TYMP	TYMS	U2AF1	UGT1A1	UGT1A8	UPF1
USP1	VEGFA	VHL	VTGN1	WHSC1	WHSC1L1	WISP3	WRN	WT1
WWTR1	XIAP	XIRP2	XPO1	XRCC1	XRCC2	XRCC3	YAP1	YES1
ZAN	ZBTB2	ZFHX3	ZFHX4	ZIC1	ZIC4	ZIM2	ZNF217	ZNF423
ZNF521	ZNF536	ZNF703	ZNF804A	ZNF804B	ZNF831	ZRSR2		

Copy number variation								
ACVR1B	AKT1	AKT2	AKT3	ALK	AMER1	APC	AR	ARAF
ARID1A	ARID1B	ARID2	ASXL1	ATM	ATR	ATRX	AURKA	AXIN1
B2M	BAP1	BCL2	BCOR	BCL2L11	BRAF	BRCA1	BRCA2	BRD4
BTK	CALR	CARD11	CASP8	CBL	CCND1	CCND2	CCNE1	CCND3
CD274	CDC73	CDH1	CDK12	CDK4	CDK6	CDKN1A	CDKN1B	CDKN2A
CDKN2B	CDKN2C	CEBPA	CHEK2	CIC	CREBBP	CRLF2	CSF1R	CSF3R
CTNNB1	CYLD	DAXX	DDR2	DNMT1	DNMT3A	EGFR	EP300	EPAS1
EPHA2	ERBB2	ERBB3	ERBB4	ERCC4	ESR1	EZH2	FANCA	FANCC
FBXW7	FGF3	FGFR1	FGFR2	FGFR3	FGFR4	FLT1	FLT3	FOXL2
FRK	FUBP1	GATA1	GATA2	GATA3	GNA11	GNAQ	GNAS	H3F3A
HGF	HIST1H3B	HNF1A	HRAS	IDH1	IDH2	IGF1R	IKZF1	IGF2
IL7R	JAK1	JAK2	JAK3	KDM5C	KDM6A	KDR	KIT	KLF4
KRAS	LMO1	LRP1B	MAP2K1	MAP2K2	MAP2K4	MAP3K1	MAPK1	MDM2
MDM4	MED12	MEN1	MET	MLH1	MPL	MSH2	MSH6	MTOR
MYC	MYCL	Mycn	MYD88	NCOA3	NCOR1	NF1	NF2	NFE2L2
NKX2-1	NOTCH1	NOTCH2	NPM1	NRAS	NTRK1	NTRK2	NTRK3	PALB2
PARP1	PAX5	PBRM1	PDCD1LG2	PDGFRA	PDGFRB	PGR	PIK3CA	PIK3CB
PIK3R1	PIK3R2	PLCG2	PMS2	POLD1	POLE	PPP2R1A	PRDM1	PTCH1
PTEN	PTPN11	PTPRD	RAC1	RAD51	RAF1	RB1	RICTOR	RIT1
RNF43	ROCK1	RUNX1	SETBP1	SETD2	SF3B1	SMAD2	SMAD4	SMARCA4
SMARCB1	SMO	SOCS1	SOX10	SOX9	SPOP	SRSF2	STAG2	STK11
SYK	TEK4	TET2	TNFAIP3	TOP1	TOP2A	TP53	TRAF7	TSC1
TSC2	TSHR	TYK2	U2AF1	VEGFA	VHL	WT1		

Fusion mutation								
ABL1	ALK	AKT3	BCL2	BCR	BRAF	BRD4	EGFR	ERBB4
ESR1	ETV1	ETV4	ETV6	ETV5	EWSR1	FGFR1	FGFR3	FGFR2
JAK2	KIT	KMT2A	MET	MSH2	MYB	MYC	NOTCH2	NTRK1
NTRK2	NTRK3	PDGFRA	RAF1	RARA	RET	ROS1	TFE3	TFEB
TMPRSS2								

Genetic tumor germline variation								
ALK	APC	ATM	ATR	AXIN2	BAP1	BARD1	BLM	BMPR1A
BRCA1	BRCA2	BRIP1	CASP8	CDKN2A	CDH1	CDKN2B	CHEK2	CTLA4
ENG	EPAS1	EPCAM	FAM175A	FANCA	FANCB	FANCC	FANCE	FANCD2
FANCG	FAS	FH	FLCN	GALNT12	GEN1	GPC3	GREM1	HFE
HNF1B	HOXB13	KIT	KRAS	MAX	MDH2	MEN1	MET	MITF
MLH1	MLH3	MRE11A	MSH2	MSH3	MSH6	MUTYH	NBN	NF1
NF2	NRAS	NTHL1	PALB2	PALLD	PBRM1	PDGFRA	PHOX2B	PMS2
POLD1	POLE	PRKAR1A	PRSS1	PTCH1	PTEN	RAD50	RAD51C	RAD51D
RB1	RECQL4	RET	RHBDF2	RINT1	RPL11	RPL35A	RPL5	RPS10
RPS17	RPS19	RPS24	RPS26	RPS7	SDHA	SDHAF2	SDHB	SDHC
SDHD	SLX4	SMAD4	SMARCA4	SPINK1	STK11	TGFBR2	TMEM127	TP53
TSC1	TSC2	VHL	WRN	WT1	XRCC2	CDK12	CDK4	CHEK1
EGFR	FANCI	FANCL	PPP2R2A	RAD51B	RAD54L			

## Summary of test results

Num	Item	Result
1	Tumor mutation Burden,TMB	9.02 Mut/Mb
2	Micro Satellite Instability,MSI	MSS
3	MLH1	-
4	MSH2	-
5	MSH6	-
6	PMS2	-
7	PD-L1 score	TPS: < 1%
8	TET2	P.I1873L
9	BRCA1	-
10	BRCA2	-