

# Next-gen fusion and mutation detection for hematological malignancies

Comprehensive and disease-specific NGS panels powered by Anchored Multiplex PCR to detect known and novel fusions along with point mutations and relative expression levels

## ARCHER® FUSIONPlex® Heme v2 Panel

RNA-based panel detects fusions, point mutations and relative expression levels of 87 genes associated with blood cancers

- Includes Ph-like ALL fusions
- Expression imbalance enables fusion verification
- Requires <2 million reads

ABL1	●◆▲	CEBPE	■	GLIS2	●	MYC	●■	PTK2B	●
ABL2	●	CEBPG	■	ID4	■	MYH11	●▲	RARA	●◆▲
ALK	●◆	CHD1	●	IKZF1	●	NF1	●	RBM15	●
BCL11B	●	CHIC2	●	IKZF2	●	NFKB2	●	ROS1	●▲
BCL2	●◆■	CIITA	●	IKZF3	●◆	NOTCH1	●◆	RUNX1	●▲
BCL3	■	CREBBP	●◆	IRF4	■	NTRK3	●▲	RUNX1T1	●▲
BCL6	●■	CRLF2	●◆■	IRF8	■	NUP214	●	SEMA6A	●
BCR	●	CSF1R	●	JAK2	●◆	NUP98	●	SETD2	●
BIRC3	●◆	CTLA4	■	KAT6A	●	P2RY8	●	STIL	●
CBFB	●	DEK	●	KLF2	●	PAG1	●	TAL1	●■
CCND1	●◆■	DUSP22	●	KMT2A	●	PAX5	●◆	TCF3	●
CCND2	■	EBF1	●	MALT1	●	PDCD1	■	TFG	●
CCND3	●■	EIF4A1	●	MECOM	●■	PDCD1LG2	●■	TP63	●
CD274	■	EPOR	●	MKL1	●	PDGFRA	●◆	TYK2	●◆
CDK6	●	ERG	●	MLF1	●	PDGFRB	●	ZCCHC7	●
CDKN2A	■	ETV6	●◆	MLLT10	●	PICALM	●		
CEBPA	●■	FGFR1	●	MLLT4	●	PML	●◆		
CEBPD	■	FOXP1	■	MUC1	■	PRDM16	●		

## ARCHER® FUSIONPlex® ALL Panel

RNA-based panel detects fusions, point mutations and relative expression levels of 81 genes associated with ALL

- Comprehensive and cutting-edge content
- Includes Ph-like ALL fusions
- Requires <2 million reads

ABL1	●◆▲	EBF1	●	JAK1	◆	NUP214	●	SETD2	●
ABL2	●	EPOR	●	JAK2	●◆	NUP98	●	SH2B3	◆
AICDA	■	ETV6	●◆	JAK3	◆	P2RY8	●	SOX11	■
BCL11B	●	EZH2	◆	KDM6A	◆	PAG1	●	STAT3	◆
BCL2	●◆■	FBXW7	◆	KLF2	●	PAX5	●◆	STAT5B	◆
BCL6	●■	FGFR1	●	KMT2A	●	PBX1	●▲	STIL	●
BCR	●	FLT3	◆■	KRAS	◆	PDCD1	■	TAL1	●■
BLNK	■	HOXA10	■	LMO1	■	PDCD1LG2	●■	TCF3	●
BRAF	◆	HOXA9	■	LYL1	■	PDGFRA	●◆	TLX1	■
CD274	■	IDH1	◆	MLLT4	●	PDGFRB	●	TLX3	■
CHD1	●	IDH2	◆	MPL	●	PICALM	●	TYK2	●◆
CREBBP	●◆	IKZF1	●	MYC	●■	PTK2B	●	WT1	◆■
CRLF2	●◆■	IKZF2	●	NF1	●	PTPN11	◆	ZCCHC7	●
CSF1R	●	IKZF3	●◆	NOTCH1	●◆	RAG1	■		
CTLA4	■	IL7R	◆	NRAS	◆	RAG2	■		
DNM2	◆	IRF4	■	NT5C2	◆	RUNX1	●▲		
DNTT	■	IRF8	■	NTRK3	●▲	SEMA6A	●		

● Fusion, splicing or exon skipping  
 ◆ Mutation  
 ■ Expression  
 ▲ Expression imbalance

\*Fusions involving BCR and TCR loci, including IGH, IGL and IGK, are targeted for expression and may not be explicitly called as a fusion because these often do not result in chimeric transcripts.

# NGS assays for myeloid- and lymphoid-lineage mutations

## ARCHER® FUSIONPlex® Myeloid Panel

RNA-based panel detects fusions, point mutations and relative expression levels of 84 genes associated with myeloid malignancies

- Targets key point mutations
- Expression markers for more comprehensive profiling
- Requires <2 million reads

ABL1	●◆▲	DNM2	◆	IKZF1	●	MUC1	■	PTPN11	◆
AKT3	◆	DNMT3A	◆	IKZF3	●◆	MYC	●■	RARA	●◆▲
ASXL1	◆	ERG	●	IRF4	■	MYD88	●	RBM15	●
BCR	●	ETV6	●◆	IRF8	■	MYH11	●▲	ROS1	●▲
BRAF	◆	EZH2	◆	JAK1	◆	NF1	●	RUNX1	●▲
CALR	◆	FBXW7	◆	JAK2	●◆	NOTCH1	●◆	RUNX1T1	●▲
CBFB	●	FGFR1	●	JAK3	◆	NPM1	◆	SETBP1	◆
CBL	◆	FGFR2	◆	KAT6A	●	NRAS	◆	SETD2	●
CD274	■	FGFR3	◆	KDM6A	◆	NUP214	●	SF3B1	◆
CEBPA	◆■	FLT3	◆■	KIT	●	NUP98	●	SLC29A1	◆
CHD1	●	GATA1	◆	KMT2A	◆	PDCD1	■	SRSF2	◆
CHIC2	●	GATA2	◆	KRAS	◆	PDCD1LG2	●■	TCF3	●
CREBBP	●◆	GLIS2	●	MECOM	●■	PDGFRA	●◆	TFG	●
CSF1R	●	GNAS	◆	MKL1	●	PDGFRB	●	U2AF1	◆
CSF3R	◆	ID4	■	MLLT10	●	PHF6	◆	WT1	◆■
CTLA4	■	IDH1	◆	MLLT4	●	PICALM	●	XPO1	◆
DCK	◆	IDH2	◆	MPL	◆	PML	●◆		

## ARCHER® FUSIONPlex® Lymphoma Panel

RNA-based panel to detect fusions, point mutations and relative expression levels of 125 genes associated with lymphomas

- Includes GBC/ABC DLBCL expression markers
- Comprehensive and cutting edge content
- Targets key point mutations

● Fusion, splicing or exon skipping  
◆ Mutation  
■ Expression  
▲ Expression imbalance

AICDA	■	CD44	■	EXOC2	■	MAML3	■	PPAT	■
AKT3	◆	CDC25A	■	EZH2	◆	MKL1	●	PRDM16	●
ALK	●◆	CDK6	●	FAM216A	■	MLF1	●	PRKAR2B	■
ASB13	■	CDKN2A	■	FBXW7	◆	MLLT10	●	PTPN1	■
BATF3	■	CDKN2B	■	FGFR1	●	MME	■	PYCR1	■
BAX	◆	CEBPD	■	FOXP1	■	MUC1	■	RAB29	■
BCL2	●■	CEBPE	■	FUT8	■	MYBL1	■	RAG1	■
BCL2A1	■	CEBPG	■	IDH1	◆	MYC	●■	RAG2	■
BCL3	●■	CHIC2	●	IDH2	◆	MYD88	◆	RANBP1	■
BCL6	●■	CIITA	●	IL16	■	NEK6	■	RHOA	◆
BCR	●	CREB3L2	■	IRF4	■	NFKB1	■	S1PR2	■
BIRC3	●◆	CREBBP	●■	IRF8	■	NFKB2	●	SERPINA9	■
BLNK	■	CTLA4	■	ITPKB	■	NME1	■	SF3B1	◆
BMF	■	CYB5R2	■	JAK1	◆	NOTCH1	●◆	SH3BP5	■
BMP7	■	DEK	●	JAK2	●◆	NOTCH2	◆	STAT3	◆
BRAF	◆	DENND3	■	JAK3	◆	NRAS	◆	STAT5B	◆
BTK	◆	DLEU1	■	KIAA0101	■	P2RY8	●	STAT6	◆
CARD11	◆	DNMT3A	◆	KMT2A	●	PAICS	■	STIL	●
CBFB	●	DNMT3B	■	KRAS	◆	PDCD1	■	STRBP	■
CCDC50	■	DNTT	■	LIMD1	■	PDCD1LG2	●■	TCF3	●
CCND1	●◆	DUSP22	●	LMO2	■	PDGFRA	●◆	TNFRSF13B	■
CCND2	■	E2F2	■	LRMP	■	PIM1	■	TNFSF4	■
CCND3	●■	EIF4A1	●	LZTS1	■	PIM2	■	TP63	●
CD274	■	ENTPD1	■	MAL	■	PLCG1	◆	WT1	◆■
CD79B	◆	ETV6	●◆	MALT1	●	PLCG2	◆	XPO1	◆

## ARCHER® FUSIONPlex® Pan-Heme Panel

Need a comprehensive panel?

The FusionPlex Pan-Heme Panel contains the targets from all other FusionPlex blood cancer panels. That's 199 genes of known relevance in leukemias and lymphomas.



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