

Archer™ VARIANTPlex™ Myeloid v2 Panel Assay Solutions

Same chemistry, same workflow—expanded targets.

The molecular landscape of myeloid malignancies is rapidly evolving. An ideal research assay solution should be versatile and flexible to allow for easy scalability while empowering confidence in results.

The VARIANTPlex Myeloid v2 Panel is designed to meet these needs with expanded gene content, improved coverage, and flexible customization options in response to recent discoveries, heightened demand for biomarker detection, and updated guidelines (WHO, NCCN, ESMO). As always, our assays are bundled with our Archer Analysis secondary analytics platform and enabled on the Molecular Health tertiary analytics offering.

Archer VARIANTPlex Myeloid v2 panel offers comprehensive solutions for the characterization of SNVs, Indels, ITDs, structural variants, and CNVs from whole blood, PBMC, and bone marrow research samples.



Comprehensive

Identify mutations and genomic alterations like SNVs, indels, ITDs, and CNVs



Flexible

Add custom content to our NGS panels for state-of-the-art-assays



Fast results

1.5-day library preparation with 3.5 hours hands-on-time



AMP™ chemistry

Proven chemistry for dependable NGS libraries



Archer Analysis

Powerful analysis platform for actionable insights

Detect mutations in myeloid relevant targets

The VARIANTPlex Myeloid v2 panel detects SNVs, indels ITDs, and CNVs in 92 genes relevant for acute myeloid leukemia (AML), myeloproliferative neoplasms (MPN), myelodysplastic syndromes (MDS), Chronic Myeloid Leukemia (CML), Myeloid Sarcomas (MS), and select few lymphoid malignancies research (**Table 1**).

Table 1. Genes targeted by the VARIANTPlex Myeloid v2 panel. New genes and updated genes shown in table.

Gene Targets - VARIANTPlex Myeloid v2 panel				
ABL1	CUX1	IL7R	PDGFRA	STAT3
ANKRD26	CXCR4	JAK1	PHF6	STAT5B
ASXL1	DCK	JAK2	PPM1D	TET2
ATRX	DDX41	JAK3	PRPF8	TP53
BCOR	DHX15	KDM6A	PTEN	TPMT
BCORL1	DNMT3A	KIT	PTPN11	U2AF1
BRAF	EED	KMT2A	RAD21	U2AF2
BRCC3	ETNK1	KMT2D	RBBP6	UBA1
BTK	ETV6	KRAS	RPS14	UBTF
CALR	EZH2	LUC7L2	RUNX1	WT1
CBL	FBXW7	MAP2K1	SAMD9	XPO1
CBLB	FLT3	MPL	SAMD9L	ZRSR2
CBLC	GATA1	MYC	SETBP1	
CCND2	GATA2	MYD88	SF3B1	
CDC25C	GNAS	NF1	SH2B3	
CDKN2A	GNB1	NOTCH1	SLC29A1	
CEBPA	HRAS	NPM1	SMC1A	
CREBBP	IDH1	NRAS	SMC3	
CSF3R	IDH2	NUDT15	SRSF2	New genes
CTCF	IKZF1	PAX5	STAG2	Updated

Table 2. Updated reads and genes from VARIANTPlex Myeloid to VARIANTPlex Myeloid v2 panel.

	Reads	Genes	%VAF
VARIANTPlex Myeloid v2 panel	1.5-10 M	92	5%-1%

Variant-positive data: Enhanced coverage with exceptional performance

VARIANTPlex Myeloid v2 panel delivers high-confidence variant calls even at low DNA input amounts. The updated panel maintains high-confidence detection even for complex genomic variants like internal tandem duplications (i.e. FLT3-ITD), partial tandem duplications (i.e. KMT2A PTD), and difficult to cover high-GC genes (i.e. CEBPA). It now includes 92 genes as compared to 75 genes in the previous versions (Table 1), and reliably detects all expected variants, including complex mutations such as FLT3-ITDs across all lengths 3-300+ bp, through a wide input range (10–200 ng).

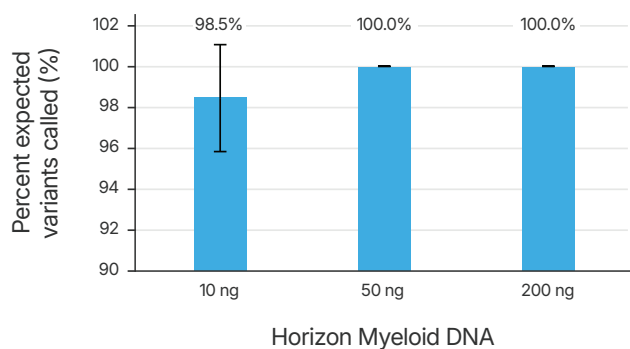


Figure 1. VariantPlex Myeloid v2 panel calls all expected variants in the Horizon Myeloid DNA input.

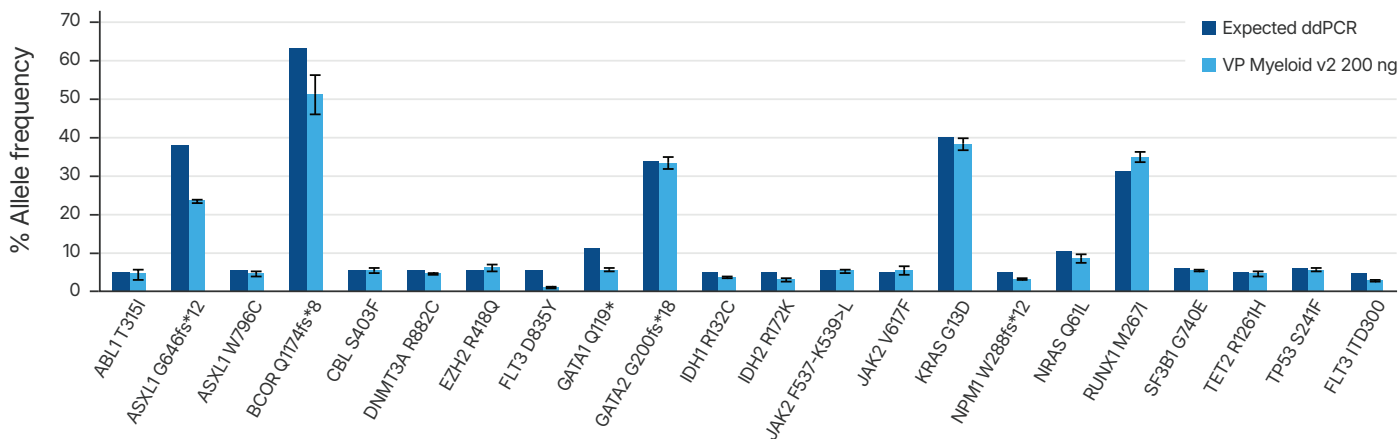


Figure 2. Assay powered to call variants present as low as indicated %AF across increasing library read depths (1M–20M) using 200 ng of HzMyeloidDNA input.

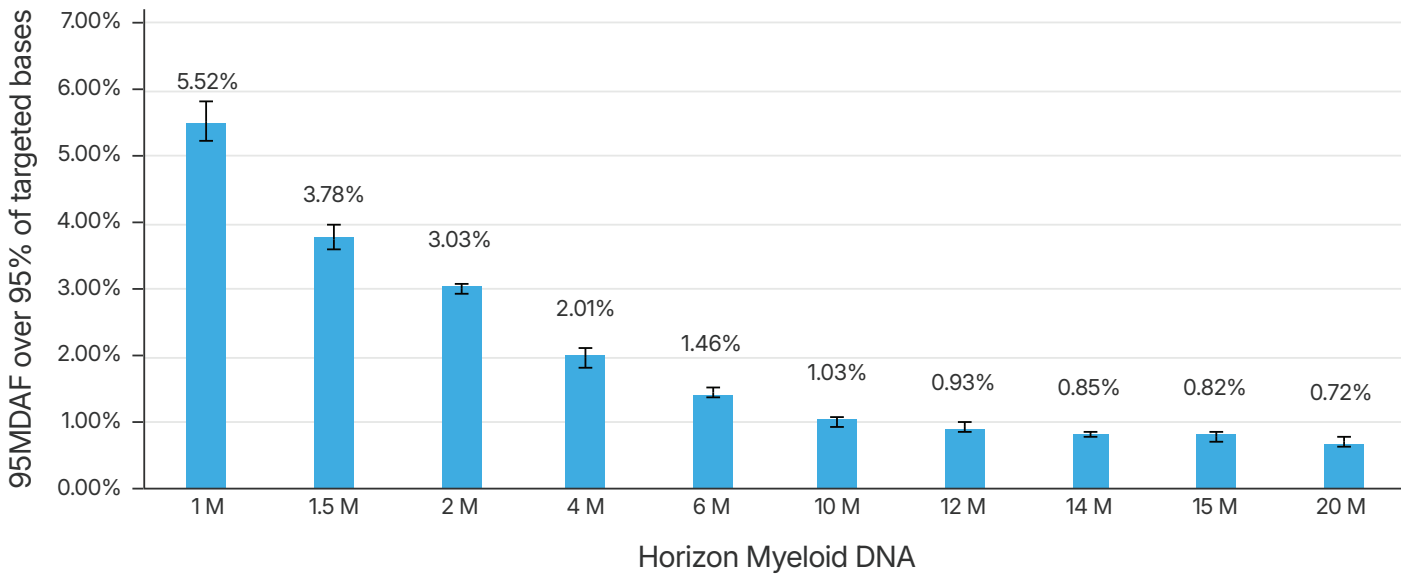


Figure 3. Percentage of expected variants called across increasing library read depths (1M–20M) using 200 ng of HzMyeloidDNA input. Input: Myeloid DNA Reference Standard (HD829), 200 ng, n = 3 per input mass

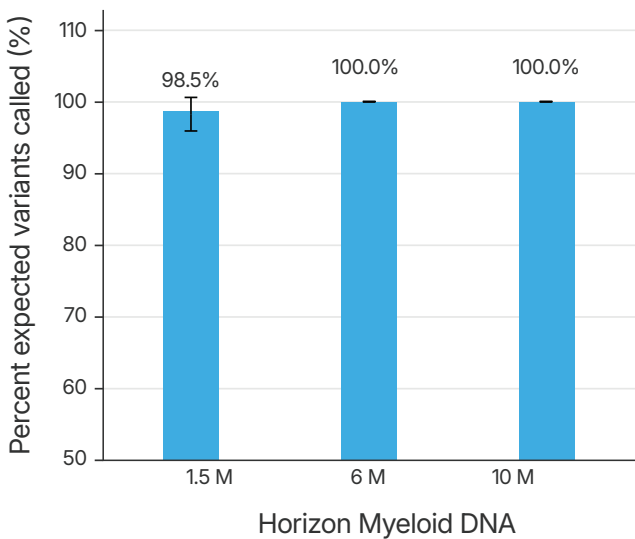


Figure 4. Comparison of percent expected variants called to library read depth. Input: Myeloid DNA Reference Standard (HD829), 200 ng, n = 3 per input mass

Sequencing to a depth of 10 million reads enables confident detection of variants at a 1% allele frequency, with 100% of expected variants successfully called. For targets at a 5% allele frequency, sequencing to approximately 1.5 million reads achieves 98.6% of expected variant calls, offering to meet the unique needs of each lab when ultra-low frequency detection is not required (**Figure 3 and 4**).

Comprehensive solutions with customization

The VARIANT*Plex* Myeloid v2 panel can be used as-is, paired with other Archer research panels, or customized to fit your unique research needs. Combine the VARIANT*Plex* Myeloid v2 panel with the FUSION*Plex*™ Pan-Heme Panel or with the IMMUNO*Verse*™ BCR Panel for a comprehensive myeloid research solution.

Product	Genes or target regions	Recommended reads	Product number*
VARIANT <i>Plex</i> Myeloid v2 Panel	92	1.5–10 M	10028437
VARIANT <i>Plex</i> Myeloid v2 panel and FUSION <i>Plex</i> Pan-HemePanel	291	6–14.5 M	10028437 & AB0017
VARIANT <i>Plex</i> Comprehensive Tissue and Blood Panel	460	61 M	AB0200
IMMUNO <i>Verse</i> BCR Panel	BCR heavy (IGH) and light (kappa/lambda) chains	250 K to 10 M	DB0221

* Product numbers listed are for lyophilized panels.



Don't see your desired targets? Work with our expert designers on the ideal panel without compromising on performance. Get started at idtdna.com/AssayMarketplace.

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