

New Comprehensive Myeloid NGS Panel: The Oncomine™ Myeloid Assay GX

Myeloid neoplasms are increasingly being diagnosed, classified and risk stratified, based on their unique genomic profile. Providing comprehensive, timeous and cost-effective cancer genetic testing within the rapidly evolving world of precision oncology is a challenge faced by diagnostic genetic laboratories across the world.

The Oncomine™ Myeloid Assay GX (OMAGEN) offers a unique solution to this challenge by using targeted next-generation sequencing (NGS) to detect all clinically relevant myeloid genetic biomarkers, mutations and fusions, all in one assay. Genes (DNA) and fusions (RNA) included in this assay are listed in Table 1. This assay covers all diagnostic mutations and rearrangements listed in the AML with Recurrent Genetic Abnormalities Category of the 2016 World Health Organization's Classification of Haematopoietic and Lymphoid Tumours, and therefore negates the need for additional fluorescent in-situ hybridisation (FISH) testing in many of these cancers.

TABLE 1: GENES AND FUSIONS COVERED IN OMAGEN

Genes (DNA) [53]							Fusions (RNA) [30]			
ABL1	CEBPA	FLT3 (ITD/TKD)	KRAS	PHF6	SETBP1	TP53	ABL1	FGFR1	MILLT10	PDGFRB
ANKRD26	CSF3R	GATA2	MECOM	PPM1D	SF3B1	TRIM27	ALK	FGFR2	MILLT3	RARA
ASXL1	DDX41	HRAS	MPL	PRPF8	SH2B3	U2AF1	BCL2	FUS	MYBL1	RBM15
BAALC	CNMT3A	IDH1	MYC	PSMB2	SMC1A	WT1	BRAF	HMGA2	MYH11	RUNX1
BCOR	EIF2B1	IDH2	MYD88	PTPN11	SMC3	ZRSR	CCND1	JAK2	NTRK3	TCF3
BRAF	ETV6	IKZF1	NF1	PUM1	SRSF2		CREBBP	KMT2A	NUP214	TFE3
CALR	EZH2	JAK2	NPM1	RB1	STAG2		EGFR	MECOM	NUP98	
CBL	FBXW2	KIT	NRAS	RUNX1	TET2		ETV6	MET	PDGFRA	

TABLE 2: ADDITIONAL INFORMATION ON OMAGEN

Test mnemonic(s)	OMAGEN OMAHOLD (for DNA/RNA extraction on hold)
Clinical indications	Acute myeloid leukaemia Chronic myeloid leukaemia Myeloproliferative neoplasms Clonal eosinophilia Myelodysplastic syndromes Other myeloid disorders
Specimen type	One EDTA tube: • Bone marrow aspirate or • Peripheral blood
Special sample requirements	Samples must reach the lab within 72 hours of sample collection for RNA extraction
Turnaround time	Two weeks (10 working days)
Cost (2022 cash price)	R13 519.00

For more information, contact us at ngs@ampath.co.za