

Hematolymphoid Next Generation Multi-Gene Sequencing Panel (51 genes)

Indication: Targeted next generation sequencing assay for detection of hot spot mutations in cancer-related genes. Individual genes will be evaluated when requested.

Gene Target Region (exon):

Hematolymphoid Panel (tumor suppressor genes and hot spots)			
Gene	Target Region (exon)	Gene	Target Region (exon)
ABL	4-6	KDM6A	full
ASXL1	12	KIT	2, 8-11, 12 + 17
ATRX	8-10 and 17-31	KRAS	2 + 3
BCOR	full	MLL	5-8
BCORL1	full	MPL	10
BRAF	15	MYD88	3-5
CALR	9	NOTCH1	26-28 + 34
CBL	8 + 9	NPM1	12
CBLB	9, 10	NRAS	2 + 3
CBLC	9, 10	PDGFRA	12, 14, 18
CEBPA	variable	PHF6	full
CSF3R	14-17 (partial)	PTEN	5 + 7
CUX1	full	PTPN11	3 + 13
DNMT3A	full	RAD21	full
ETV6/TEL	full	RUNX1	full
EZH2	full	SETBP1	4 (partial)
FBXW7	9 + 10 + 11	SF3B1	13-16
FLT3	TKD only	SMC1A	2, 11, 16 + 17
GATA2	2-6	SMC3	10, 13, 19, 23, 25 + 28
GNAS	8 + 9	SRSF2	1
HRAS	2 + 3	STAG2	full
IDH1	4	TET2	3-11
IDH2	4	TP53	2-11
IKZF1	full	USAF1	2 + 6
JAK2	12 +14	WT1	7 + 9
		ZRSR2	full

Testing Method: Amplicon based targeted next generation sequencing. TruSight Myeloid next generation sequencing (NGS) assay from Illumina is a targeted massive parallel sequencing assay for detection of hot spot mutations in genes associated with hematolymphoid malignancies (tumor suppressor genes and oncogenic hot spots).

Fluorescently-labeled primers are used to detect the *FLT3* ITD mutations. Capillary electrophoresis and gene scan analysis are done to distinguish the wild type.

Test Parameters:

Diagnostic sensitivity: This assay is designed to detect known single nucleotide variants only within defined regions. Nucleotide insertions and deletions more than 25bp or outside of the defined regions may not be detected. Gene rearrangements are not detected.

Technical sensitivity: This assay may not detect certain mutations if the proportion of tumor cells in the sample studied is less than 5%.

Turnaround Time: 5-7 business days

Sample Requirements:

Blood - Specimen stability: Ambient - 72 hours; Refrigerated - 1 week

- 3 ml peripheral blood in lavender top tube (EDTA)

Bone marrow aspirates (anticoagulated with either heparin or EDTA and, if possible, placed into tissue culture medium) - **Specimen stability: Refrigerated - 1 week** (ship cold)

Billing codes: 81455, G0452