CE IVD

Lymphoma

NGS Panel

NGS Clinical Panels

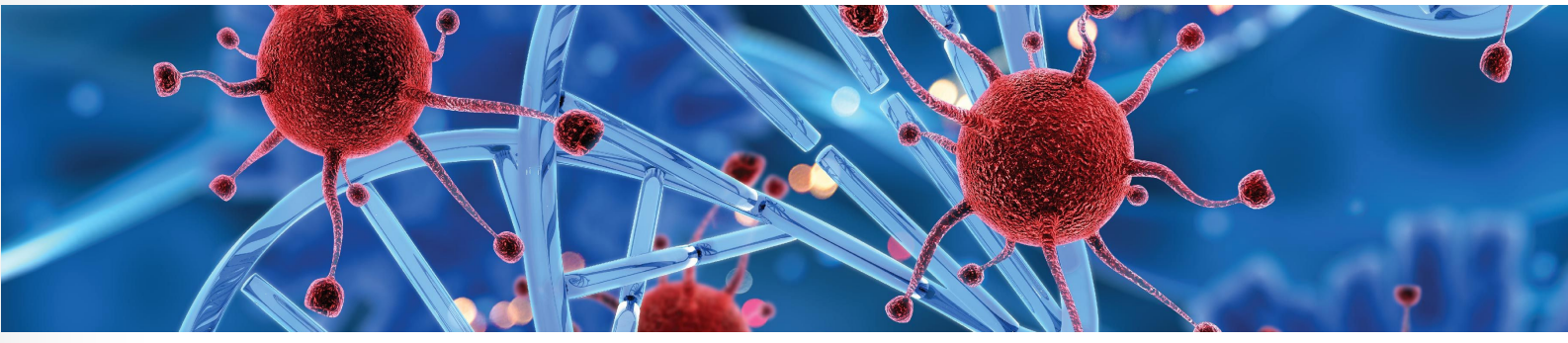
The Genes 2Me Lymphoma Panel is a hybridization based solution for targeted sequencing employing NGS. With a fast turnaround time this product provides detection of 95 clinically relevant genes spanning a region of 0.54 Mb (whole CDS and hotspots) which covers major somatic mutations (SNVs/ CNVs, InDels/-Fusions, Gene rearrangement) linked to Lymphoma.

Focused Comprehensive Panel: Targets genes reported for causing cancer encapturing ultra-low VAF mutations

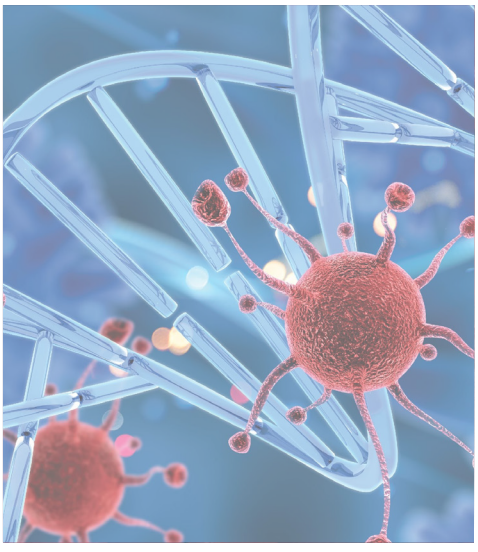
Low Input: Process compatible with low input quality compromised samples

Robust and Rapid Workflow: Hybridization enhancer technology and enzyme based library preparation enables quick turn around time.

CliSeq Interpreter: User friendly companion software for automated & cloud based analysis and reporting.



Lymphoma
NGS Panel



Lymphoma attributes to the cancer of the cells from lymph system. Understanding a genomic profile of an individual can prove to be therapeutic advantage for controlling the disease severity. Sequencing the complete coding regions and hotspots, covering clinically relevant genes in order to identify clinically relevant genes has been a tool of interest to develop personalise treatment and timely manage the disease severity.

No. of Genes	95
Gene count /family	~75
Covered region	Whole CDS, Hotspots
Target size	0.54 Mb
Mutation type	SNV/InDels/CNVs/Fusions* Gene Rearrangement
Sample type	Blood, Bone marrow

The Genes 2Me Lymphoma Panel detects somatic mutations in the coding regions and gene hotspots. A comprehensive genomic insight always acts as an effective tool in understanding altered gene expressions.

Gene List

AARS1	ABCA13	ABCB11	ALK	ARHGEF12	ARID1A	B2M	BCL2
CREBBP	CXCR4	DNMT1	DNMT3A	EGR2	EP300	ETS1	EVC
IDH1	IDH2	IKBKB	IKZF1	IL12RB2	JAK3	KMT2D	L2HGDH
NOTCH1	NOTCH2	NPHS2	PDP1	PIM1	PLCG1	PMS2	POT1
STAT5B	SUMF1	TBL1XR1	TCF3	TDRD7	TET2	TNFRSF14	TP53
BCL6	BIRC3	BLM	BRAF	BTK	CARD11	CD79B	CDKN2A
EZH2	FAS	FAT4	FBXO11	FERMT1	FREM2	GRM1	H1-4
LAMA3	LMO2	MLH1	MSH2	MSH6	MTOR	MYD88	NBN
PRDM1	RHOA	RPS15	RRAGC	SERPIND1	SF3B1	SOCS1	SOX6
TP63	TRAF3	UBR5	VCAN	WNK1	XPO1	COL4A4	HPSE2
ID3	NDUFV3	NFKBIE	SRY	STAT3			

* Gene family / # CNVs

Fusion Genes (DNA & RNA)

ALK	ATXN2L	CARS1	CD28	CLTC	CTLA4	ICOS	ITK	JAK2
VAV1	MSN	NPM1	RNF213	S100A7	SEC31A	STAP2	SYK	TFG
TPM3	TPM4	TRAF1						

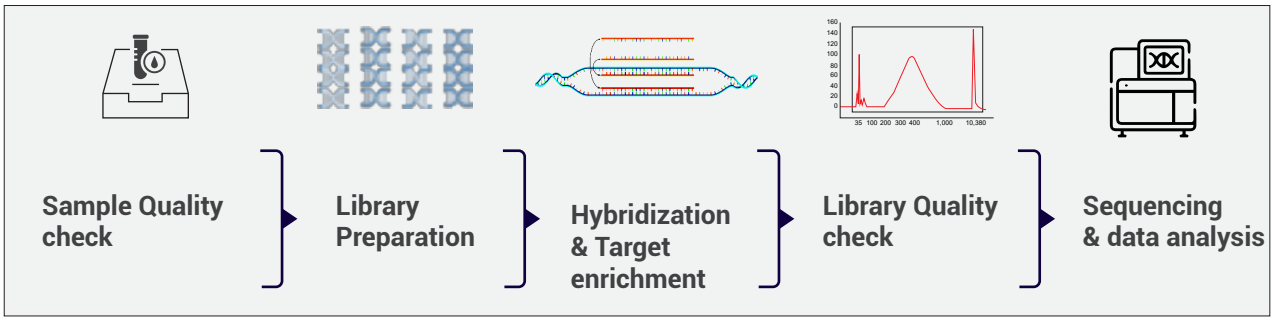
HotSpots

BCL2	BCL6	BRAF	CD79B	CDKN2A	CREBBP	EZH2	ID3	KMT2D
MYD88	NOTCH1	NOTCH2	STAT3	TET2	TNFAIP3	TNFRSF14		

Process Workflow

A. Platform Agnostic

Sequencing on multiple platforms (Thermo Ion-Torrent, Illumina, MGI and Element Biosciences)



B. Bioinformatics Solutions

Data Analysis and Interpretation using Genes 2Me Cliseq Interpreter software

RAW DATA (FASTQ) → **QUALTIY CHECK** TRIMMING QC METRICES → **ALIGNMENT** (BAM) → **TARGETED VARIANT CALLING** (VCF) → **SOMATIC DATABASES** → **ANNOTATION** (VCF) → **FILTER** As per Allele frequency & Phenotypic information → **CSM** (Clinical Significant Mutations) **REPORT**

Panel Performance

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>90%	>90%	>85%
Precision	>95%	>95%	>95%
Reproducibility	99%	99%	99%
Sensitivity	5% VAF @>95%	5% VAF @>95%	5% VAF @>95%
On Target Ratio	85-90 %	80-90%	75-85%

Specifications

Starting Material (DNA)	Library preparation time	Bioinformatics analysis	Databases used for Annotation
50-500 ng	1.5 days (including Target Capture & Enrichment) for manual process With **G2M Auto EzyPrep automated NGS Library preparation system:** Minimum Hands-on required	Within 24hrs (Raw data to CSM report)	COSMIC, TCGA,ICGC, FusionDB, OncoDB, ClinVar, gnomAD, 1000Genome, dbSNP, FDA

Gene & Drug details

Type of Cancer	Gene	Drug
ALCL, NSCLC, neuroblastoma, inflammatory myofibroblastic tumor, Spitzoid tumor	ALK	Ceritinib
T-PLL	ATM	Caffeine
DLBCL, melanoma, colorectal adenocarcinoma	B2M	Doxycycline
Melanoma, Colorectal, Papillary thyroid, Borderline ovarian, NSCLC, Cholangiocarcinoma, Pilocytic astrocytoma, Spitzoid tumor, Pancreas acinar carcinoma, Melanocytic nevus, Prostate, Gastric	BRAF	Dabrafenib
CLL, Mantle cell lymphoma, WM	BTK	Inositol 1,3,4,5-Tetrakisphosphate
WM	CXCR4	Framycetin
Glioblastoma	IDH2	Isocitric Acid
SMZL	IKBKB	Mesalazine
Acute megakaryocytic leukemia, ETP ALL	JAK3	Tofacitinib
Burkitt lymphoma, amplified in other cancers, B-CLL	MYC	Nadroparin
Diffuse gastric, T cell lymphomas, Paediatric Burkitt lymphoma	RHOA	Guanosine-5'-Diphosphate
Large granular lymphocytic leukaemia, skin basal cell, APL	STAT5B	Dasatinib

References

- J Thorac Oncol. 2022 Dec;17(12):1404-1414.
- Exp Hematol Oncol. 2015; 4: 5.
- Nat Genet. 2014 Apr;46(4):376-379

Ordering Details

Commercial Name	Cat No.	Pack Size
Lymphoma NGS Panel	G2MLYM31001-ill	96T
	G2MLYM31001-MG	96T
	G2MLYM31001-TF	96T

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