CE IVD

G2M

Insight into Genetic Mutations

Next Generation Sequencing Solutions

CliSeq NGS

www.genes2me.com

Fully Automated IVD Kits Manufacturing Facility of 1,50,000 Sq. Ft. in Manesar, INDIA

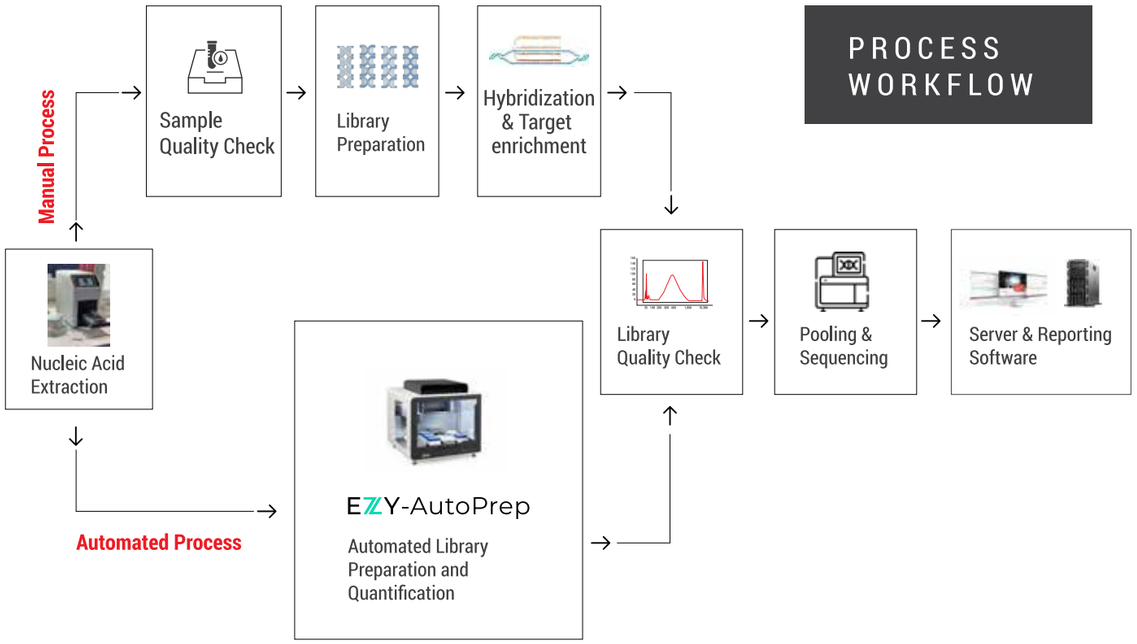
Spearheading Innovation in Genomics Solutions Manufacturing

Genes2Me developed

NGS based Clinical Panels

G2M panels are compatible with NGS platforms from Illumina, Thermo Fisher (Ion Torrent), Element Biosciences and MGI. Our target enrichment method is capable of specifically isolating your genomic loci of interest out of the whole genome & increasing the sensitivity of detecting genetic mutations by producing higher coverage & in-depth sequencing data.

PROCESS WORKFLOW



NEXT GENERATION SEQUENCING PANELS

G2M panels are compatible with NGS platforms from **Illumina, Thermo Fisher (Ion Torrent), Element Biosciences & MGI.**

INFECTIOUS

Pan Pathogen (7000+ Organisms)

ONCOLOGY PANELS

Pan Cancer (681 genes)
Common Hereditary Cancer (83 genes)
BRCA 1/2 (2 genes)
Onco-Check (53 genes)
Cancer Check 50 (67 genes)
Cancer Check 100 (148 genes)

BLOOD CANCERS

Lymphoid Leukemia (111 genes)
Myeloid Leukemia (75 genes)
Lymphoma (95 genes)

LIQUID BIOPSY PANELS

Pan Cancer (681 genes)
CtDNA Breast (37 genes)
CtDNA Colorectal (35 genes)
CtDNA Lung (48 genes)

HRD PANEL

CancerCheck Core (HRD Score)

EXOME SEQUENCING

Whole Exome Sequencing (>21,500 genes)
Clinical Exome Sequencing (8124 genes)

TRANSPLANT IMMUNOLOGY

HLA Typing (11 loci)

PRENATAL TESTING

NIPT (Non Invasive Prenatal Testing)

TARGETED THERAPIES

Neuromuscluar Panel (497 genes)
Cardiovascular Panel (357 genes)
Alzheimer-Parkinsons-Dementia (139 genes)

PHARMACOGENOMICS

Med4Me Standard (122 genes)

Key Features

CliSeq Interpreter

Robust Automated Data Analytics Platform

G2M NGS Panels are supported by in-house comprehensive cloud-based (or on site server) software and tertiary clinical reporting platform

Ease of Use

Most of the G2M NGS Panels share a common workflow

Hybridization Based Enrichment

- Less duplication rates
- Covers larger target region in one run

Quality Excellence

- Best On-Target Ratio
- Uniform Depth Coverage
- Low Bias Base Call

High Performance

Quality performance with complex sample types like FFPE and CtDNA

Reduced Overall Run-time

Short Hybridisation time of approx 4 hours

Maintaining High Quality standards

All 29+ NGS Panels are certified with CE-IVD Certifications

Platform agnostic clinical panels

illumina
ThermoFisher SCIENTIFIC
Element Biosciences
MGI

Wide range of Portfolio with Panels Specific to Germline & Somatic Mutations

Panels Rigorously Engineered to Target Hard to Capture Regions

Like homologous, repetitive sequences & GC rich regions

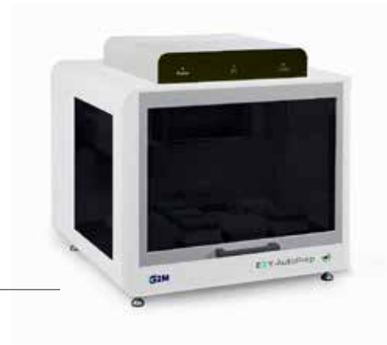
Multiple Panel Muliplexing

Adapters for upto 384 Unique Primers

Automated NGS Library Preparation Platform

With built-in fluorometer and thermal cycler

EZY-AutoPrep



G2M | NEXT GENERATION SEQUENCING PANELS

CliSeq Interpreter

Automated **Analysis Reporting Platform**

- Platform Independent
- GUI Driven
- Automated Pipelines
- FASTQ to CSM Reporting
- Optimised Data Mining
- GPU Accelerated Hardware System
- Linux Based
- Faster Than CPU Only Solution

Cliseq Interpreter is a cloud based NGS data analysis software which offers an unparallel platform performance designed to streamline and enhance the interpretation of complex biological data.

With a user-friendly interface, and advanced visualization capabilities, Cliseq empowers you to extract meaningful insights from vast genomic datasets with precision & efficiency.

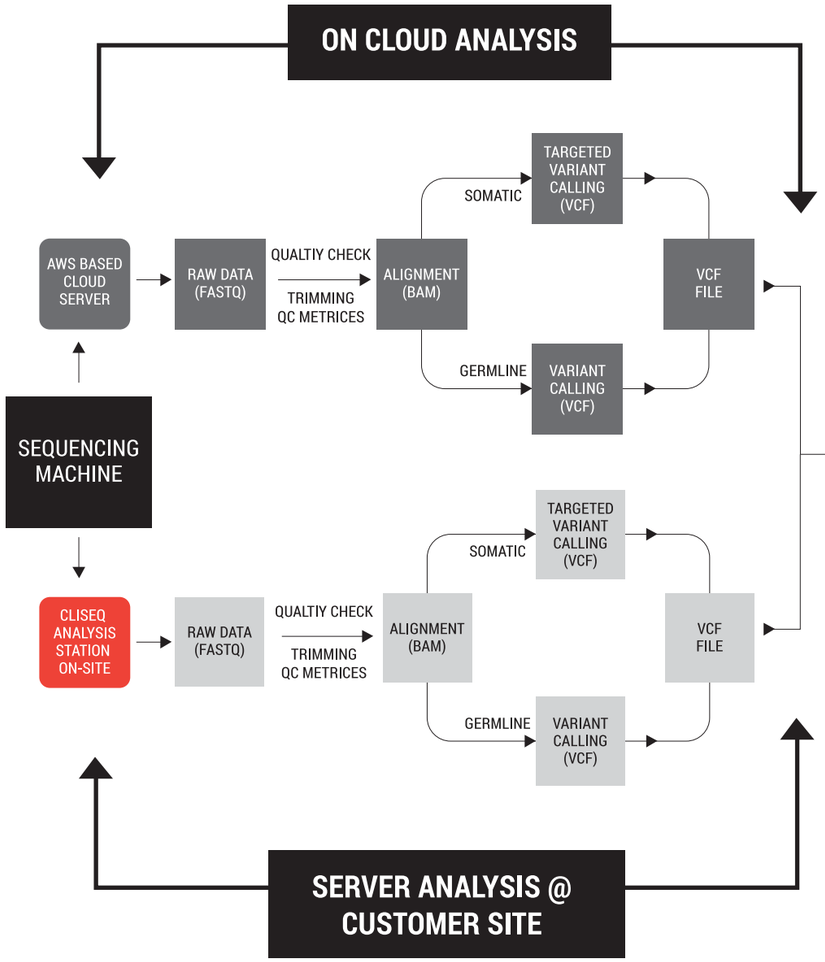
Cliseq algorithms seamlessly work with G2M NGS clinical panels allowing for effortless data import/-export & inter-operability with common sequencing platforms like Illumina, Thermo Fisher, MGI and Element.

Clinically Relevant Mutations

Abbreviated Report Time

User Friendly

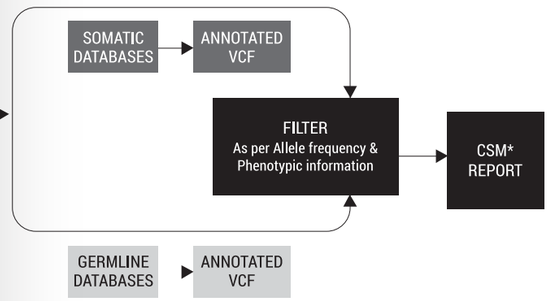
Multiple Parameter Analysis



PROCESS WORKFLOW

Cliseq Interpreter workflow pipelines are designed and tested to work seamlessly with variety of Cliseq NGS Clinical Panels developed by Genes2Me. Once Quality Check, Alignment, Variant calling, and annotations are achieved, the annotated VCF files will be available to download.

CSM reporting will be done as per ACMG & AMP guidelines and based on phenotypic details as provided.



KEY FEATURES

- Cancer & Rare Disease Diagnostics
- SNP, InDels, Copy Number Variation (CNV) Identification, Fusion & Gene rearrangements
- Tumor Mutation Burden (TMB), Microsatellite Instability (MSI), HRD score
- CSM Reporting according to ACMG & AMP Guidelines based on provided Phenotypic information
- Analysis using updated databases & automated pipeline
- Annotated VCF with MAF, Gene Name, Location etc.
- Clinically significant variants with associated diseases
- Cloud Based Data storage on regional AWS Servers: Middle East, Europe, India, US respectively

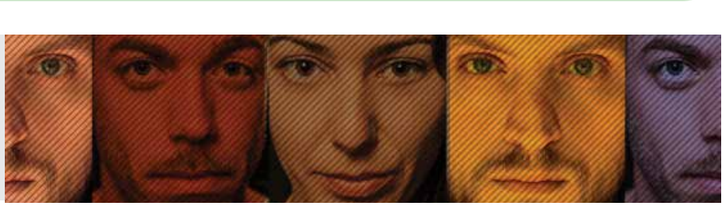
Whole Exome
Sequencing Panel

The Genes2Me Whole Exome Sequencing (WES) Expanded NGS panel is a hybridization based solution for screening ~21500 clinically relevant genes (coding regions of the genome) for diseases associated with genetic mutations and mitochondrial genome.

It covers all major mutations like SNV, CNV, and Indels with hotspots adding up to a target size of 38.2 Mb with a hybridization-based target capture enrichment.

Gene count/ family	~21500
Covered region	Whole CDS, Mitochondrial Genome, hotspots
Target size	38.2 Mb
Mutation type	SNV/InDels/CNV
Sample type	Blood/AF/Tissue/CVS

KNOW THE GENES THAT
CODE YOU



Whole exome Sequencing

Key Features of Whole Exome Sequencing Panel

- Complete Exome Coverage
- Superior performance in the Market
- FASTQ to Clinical Interpretation Capability
- Rapid, Same-Day Workflow
- Complete Walkaway Automation
- Flexible Integration with NGS Sequencers

SPECIFICATIONS

- More than 90% of bases with ≥ Q30 quality score
- Recommended sequencing depth for Mendelian disorder/rare disease: ≥ 80-100x
- Mitochondrial genome is included in the panel design.
- Databases used for Annotation : ClinVar, OMIM, gnomAD 1000Genome, dbSNP

PANEL PERFORMANCE

Features	Illumina	MGI	Thermofisher
Coverage uniformity	96%	96%	87%
Precision	94%	94%	87%
Reproducibility	97%	97%	93%
Sensitivity	94%	94%	87%
On Target Ratio	85-95 %	85-95%	80-85%

List of Diseases category assessed by Whole Exome Sequencing (WES) Panel*

Disease Class	List Of Diseases
Cardiac disorders	Dyslipidemia, Aortopathy, Congenital heart defect, cardiovascular diseases
Dermatological disorders	Ectodermal dysplasia, Albinism, Xeroderma pigmentosum, Ichthyosis
Endocrinological disorders	Pancreatitis, Premature ovarian failure, Adrenal hyperplasia, Hyperparathyroidism
Bone disorders	Arthrogryposis, Osteopetrosis, Cleft lip palate, Amelogenesis imperfecta
Immunological disorders	Immune dysregulation, Defects in intrinsic and innate immunity
Hepatological disorders	Polycystic liver disease, Cholestasis, Congenital hepatic fibrosis
Hematological disorders	Bleeding & Thrombotic disorder, Bone marrow failure, Anemia
Metabolic disorders	Aminoacidopathies, Purine/Pyrimidine disorders, Creatine biosynthesis disorders
Eye disorders	Ectopia lentis, Retinoblastoma, Corneal dystrophy, Optic atrophy
Pulmonological disorders	Bronchiectasis, Cystic fibrosis, Primary ciliary dyskinesia
Neurological disorders	Neuromuscular disorders, Autism, Seizures & Brain abnormalities, Neurodegenerative disorders
Oncological disorders	Hematological malignancy, Brain cancer, Colorectal cancer, Breast cancer, Ovarian cancer

*Limited disease details mentioned

ORDERING INFORMATION

Commercial Name	Cat No.
Clinical Exome Sequencing Expanded Panel (Whole Exome Sequencing)	G2MCES07001(WES)-ill; G2MCES07001(WES)-MG, G2MCES07001(WES)-TF

Clinical Exome Sequencing (CES)

Expanded Panel

Exome is a subset of the genome that covers sequences of all the exons, reflecting the protein-coding region of the genome. In humans, the exome is about 1% of the genome. Clinical Exome Sequencing is a comprehensive DNA test to identify disease causing variants within the whole exome. Advances in next-generation sequencing technologies have decreased the cost of sequencing per base pair about 10-fold, improved accuracy, and greatly increased the speed of generating sequence data. This improved accuracy has enabled development of CES at a faster and cheaper rate of variant identification. It is rapidly becoming a common molecular diagnostic test for individuals with genetic disorders.

The Genes2Me Clinical Exome Panel screens a range of disease causing genes to identify germline mutations in DNA.

No. of Genes	8124
Gene count/ family	~7600
Covered region	Whole CDS, Hotspots, Mitochondrial Genome
Target size	19.6 Mb
Mutation type	SNV/InDels/CNV
Sample type	Blood/ AF/ Tissue/ CVS

Key Features

- Comprehensive genomic profiling of a variety of genetic diseases
- Includes a wide range of target regions
- Cost-effective analysis : Able to provide accurate analysis with reduced sequencing costs compared to WES

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	97%	97%	86%
Precision	95%	95%	85%
Reproducibility	98%	98%	95%
Sensitivity	95%	95%	89%
On Target Ratio	87-95 %	86-95%	76-85%

Cross Platform Performance

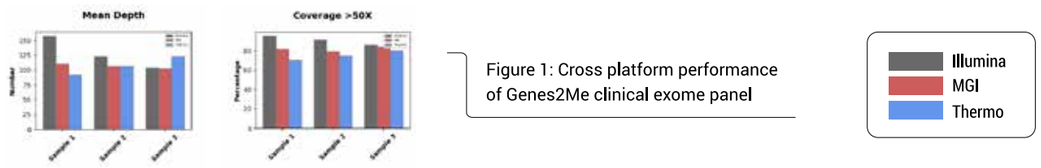


Figure 1: Cross platform performance of Genes2Me clinical exome panel

Scan me for CES Gene List

ORDERING INFORMATION

Commercial Name	Cat No.
Clinical Exome Sequencing (CES) Expanded Panel	G2MCES07001-ill; G2MCES07001-MG; G2MCES07001-TF

LeoNext cfDNA
LibraryPrep Kit for NIPT

Discover more about your Baby's Health

LeoNext CfDNA Library Preparation Kit for NIPT is used for detection of trisomies using next generation sequencing.

NIPT is a non-invasive and accurate approach for prenatal testing of the baby to screen for chromosomes abnormalities.

- Provides accurate genetic information of the baby before birth and helps in early diagnosis for common chromosomal abnormalities.
- Traditional approach to screen common chromosomal abnormalities involves invasive sampling from the fetus which is complex and involves risk.
- CliSeq NIPT works with ~10 ml of peripheral blood collected from the mother from 10th week onwards of pregnancy.
- Highly advanced and validated bioinformatic pipeline to evaluate fetal DNA in maternal blood.

Abnormalities Covered

Detects common Aneuploidies and Sex Chromosome Abnormalities | Microdeletions

• Trisomy 21 (Down Syndrome)	• Klinefelter Syndrome (XXY)
• Trisomy 18 (Edwards' Syndrome)	• Triple X (XXX)
• Trisomy 13 (Patau syndrome)	• Jacob's Syndrome (XYY)
• Turner Syndrome (Monosomy X/XO)	• Other high-prevalence genetic anomalies

Key Highlights of CliSeq NIPT

Panoramic view of the Fetal Genome
- Screens the entire genome of the fetus covering all 23 pairs of chromosomes
- Detection of 80+ microdeletions & duplications

Enhanced Test Performance
- Low false postives or negative results
- Sensitivity and specificity of >99.9% for Trisomy 21, 18, 13
- >99% call rate

Fastest Test results
- Fast automated workflow
- Processing time ≤ 4 days

Extensively Validated on Clinical Samples

End-to-end solution

Supported with automated report generation using Cliseq Interpretor

A sensitive, accurate & non-invasive prenatal genetic screening.

LeoNext cfDNA LibraryPrep Kit for **NIPT**

with analysis report using our proprietary Cliseq platform

CliSeq Interpreter

LeoNext cfDNA
LibraryPrep Kit for NIPT

NIPT Workflow

Maternal Plasma	G2M CfDNA Extraction Kit	LeoNext CfDNA library preparation kit	Sequencing	Data Analysis
10 ml of maternal whole blood	CfDNA extraction with G2M's cell-free DNA extraction kit and extraction platform	Using G2M's LeoNext CfDNA library preparation kit on G2M's Ezy Autoprep - automated NGS library preparation workstation	On the sequencing platform of your choice	G2M's proprietary NIPT data analysis software
				 CliSeq Interpreter

Specifications

Sample	10 ml of Whole blood EDTA
Disorders Tested	Trisomies 13, 18 , 21, Aneuploidy and chromosomal microdeletions/ microduplications in 22 pairs of autosomes + sex chromosomes
Methodology	Low-depth whole-genome sequencing
Number of Reads	10 – 15 Million (for all chromosomes) 20 - 25 Million (for all chromosomes & microdeletions)

CliSeq NIPT reports aneuploidies in all 22 pairs of Autosomes, Sex Chromosomes & Microdeletions

Advantages of NIPT

- Non-invasive genetic screening test
- Allows early accessibility of highly accurate data on all chromosomes to the patient.
- Helps to identify fetuses at risk of any serious chromosomal abnormalities.
- Completely safe and empowers expecting parents to support, manage and access early medical help if required.

ORDERING INFORMATION

Commercial Name	Cat No.
LeoNext cfDNA LibraryPrep Kit for NIPT	NGS3105-01; NGS3105-02

Scan me for NIPT Sample Report

PAN Cancer

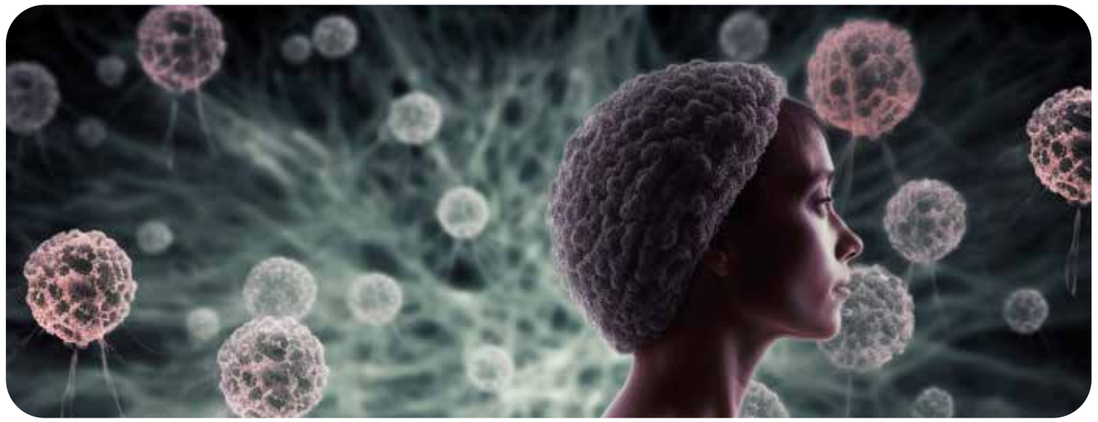
Panels

The PAN Cancer Panel detects all variant types and immuno-oncology markers (MSI and TMB), which are crucial biomarkers for cancer immunotherapy.

For CNV analysis, different cut-offs are applied according to the ratio of cancer cells. The panel is also designed to detect Epstein-Barr virus (EBV) and Human Papillomaviruses (HPV), allowing for the comprehensive analysis of cancer-associated genes

Cancer-associated Biomarkers

- TMB, MSI, HRD (Homologous Recombination Deficiency) & Fusion genes



PanCan

The Genes2Me Pan Cancer Panel screens broad range of cancer causing genes to identify somatic mutations in the tumor tissue. It provides comprehensive detail of the cancer and helps to decide the best course of treatment.

No. of Genes	681
Gene count/ family	524
Covered region	Whole CDS, Hotspots, Fusion genes
Target size	~1.7 Mb
Mutation type	SNV/ InDels/ CNV
Biomarkers	TMB, MSI, HRD
Sample type	FFPE & Fresh Frozen Tissue

TYPE OF CANCER*	GENE	DRUG
Gilioma, Acute Myeloid Leukemia	IDH1	Olutasidenib
Breast Cancer, Ovarian Cancer	BRCA1	Olaparib
NSCLC, Colorectal Cancer	EGFR	Osimertinib
Colorectal Cancer, NSCLC	KRAS	Cetuximab
NSCLC, Melanoma, Metastatic Colorectal Cancer	BRAF	Encorafenib
Follicular Lymphoma Tumor	EZH2	Tazemetostat
Medullary Thyroid Cancer, Thyroid Cancer	RET	Selpercatinib
Prostate Cancer	BRCA2	Niraparib
Breast Cancer, Gastroesophageal Cancer	ERBB2	Trastuzumab
Non-Small Cell Lung Cancer	ALK	Alectinib
Esophageal, colorectal, Lung cancer	TP53	Venetoclax
Breast Cancer, Ovary, stomach cancer	PIK3CA	Alpelisib
Gastrointestinal Stromal Tumors, glioblastoma, melanoma	PDGFRA	Avapritinib
Urothelial Cancer, multiple myeloma, bladder cancer	FGFR3	Erdafitinib
NSCLC, Metastatic cancer	MET	Capmatinib
Myeloma , lung adenocarcinoma, colon adenocarcinoma, melanoma, breast carcinoma	PDGFRB	Imatinib Mesylate
Acute Myelogenous Leukemia, Bone Marrow cancer	FLT3	Quizartinib
Aggressive Systemic Mastocytosis, lung adenocarcinoma,	KIT	Imatinib
colon adenocarcinoma	ESR1	Elacestrant
Breast Cancer, endometrial and prostate cancer Solid Tumors, lung cancer, colorectal cancer	NTRK1	Entrectinib

*Limited cancer type details mentioned

Scan me for PanCan Gene List

MAJOR CANCER

Genes which play critical role in solid tumers includes :

- Breast
- Cervix Uteri
- Ovary
- Prostate
- Stomach
- Thyroid
- Lung
- Liver
- Oesophagus
- Colorectal
- Corpus Uteri
- Non-Hodgkin Lymphoma
- Prostate
- Leukemia
- Bladder

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>98%	>98%	>84%
Precision	>95%	>96%	>89%
Reproducibility	97%	97%	95%
Sensitivity	1% *VAF @ 95%	1% VAF @ 95%	1% VAF @ 95%
On Target Ratio	86-95%	85-95%	74-85%

*VAF - Variant Allele Frequency

ORDERING INFORMATION

Commercial Name	Cat No.
PAN Cancer Panel	G2MPC06001-ill; G2MPC06001-TF; G2MPC06001-MG

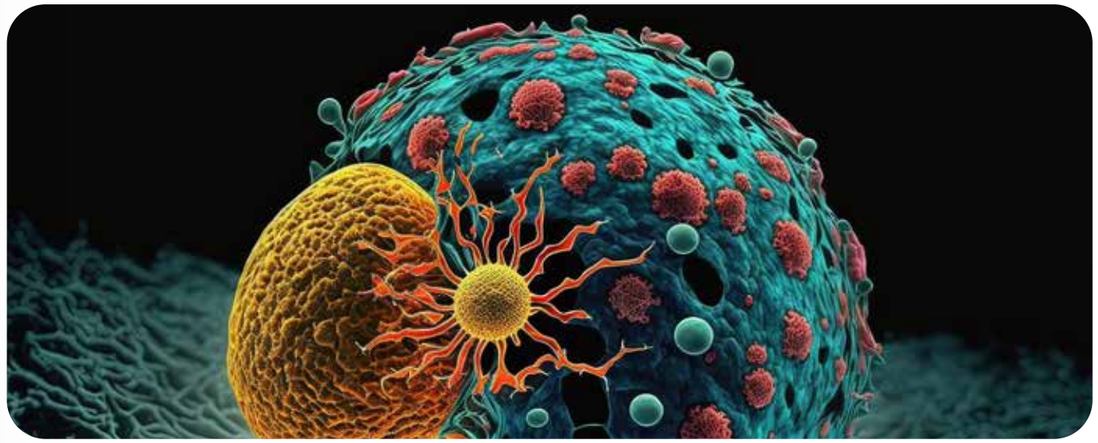
Liquid Biopsy

Panels

Lung/ Breast/ Colorectal

The Genes2Me Liquid biopsy Panels screens lung/ breast/ colorectal cancer causing genes to identify somatic mutations in DNA from blood tissue. It provides comprehensive detail of the cancer and helps to decide the best course of treatment. The screening method involves using circulating tumor cells that are used as biomarkers to detect respective cancer. Circulating tumor DNA (ctDNA) is released from apoptotic and necrotic tumor cells. Applications of ctDNA in cancer include early diagnosis and detection, prognosis prediction, detecting mutations & structural alterations, minimal residual disease, tumor mutational burden, and tumor evolution tracking.

- Highly optimized panel for clinical testing with exceptional accuracy
- Receive high-quality data and analysis software, enabling efficient duplication removal and minimizing sequencing noise



ctDNA Colorectal Panel

Gene count/ family	35
Covered region	Whole CDS, Hotspots, DNA Fusions*
Target size	75 kb
Mutation type	SNVs/ InDels
Sample type	Blood/ Plasma

GENE LIST

•APC	•ASXL1	•BRAF	•CHEK2	•CTNNB1	•DNMT3A	•EGFR	•ERBB2	•ERBB3
•FBXW7	•FGFR1	•GNAS	•HRAS	•IDH1	•IRS1	•KRAS	•MAP2K1	•MET
•NRAS	•PDGFRB	•PIK3CA	•PTEN	•SMAD4	•TET2	•TP53		

***DNA Fusion Genes**

• ALK • C2orf44 • CSNK1G1 • ETV6 • LMNA • NTRK1 • NTRK3 • RUNX1 • TPM3 • TPR

ctDNA Breast Panel

Gene count/ family	37
Covered region	Whole CDS, Hotspots, DNA Fusions*
Target size	115 kb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/Plasma

GENE LIST

•AKT1	•APC	•AR	•BRCA1	•BRCA2	•CCND1#	•CDH1	•EGFR	•ERBB2#
•ESR1	•FBXW7	•FGFR1#	•FGFR2#	•GATA3	•IGF1R#	•KIT	•KRAS	•MAP2K4
•MAP3K1	•MDM2#	•MYC#	•NF1	•PIK3CA	•PIK3R1	•PTEN	•RB1	•SF3B1
•TOP2A#	•TP53							

CNVs

***DNA Fusion Genes**

• AKAP12 • CDK13 • ESR1 • LMNA • NKAIN2 • NTRK1 • TPM3 • TPR

ctDNA Lung Panel

Gene count/ family	48
Covered region	Whole CDS, Hotspots, DNA Fusions*
Target size	110 kb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/ Plasma

GENE LIST

•AKT1	•ALK	•ARAF	•ARID1A	•BRAF	•CBL	•CDKN2A	•CTNNB1	•EGFR#
•ERBB2#	•HRAS	•KEAP1	•KMT2D	•KRAS	•MAP2K1	•MET#	•MTOR	•NF1
•NRAS	•NTRK1	•NTRK2	•PIK3CA#	•PTEN	•RB1	•RET	•RIT1	•ROS1
•SETD2	•SOX2#	•STK11	•TP53#	•U2AF1				

CNVs

***DNA Fusion Genes**

• ALK • CCDC6 • CD74 • EML4 • EZR • IRF2B2P • KIF5B • NTRK1 • RABGAP1L • RET
• ROS1 • SCD4 • SLC34A2 • SQSTM1 • TP53 • TPM3

The detection sensitivity for low-frequency variants from a limited amount of sample is of great importance to ctDNA analysis kits.

PANEL PERFORMANCE	ctDNA Lung Panel		ctDNA Colorectal Panel		ctDNA Breast Panel	
Features	**Illumina**	**MGI**	**Illumina**	**MGI**	**Illumina**	**MGI**
Coverage uniformity	98%	97%	98%	98%	97%	98%
Precision	96%	97%	94%	95%	93%	93%
Reproducibility	99%	99%	96%	96%	98%	98%
Sensitivity	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%	<1%VAF @ 95%
On Target Ratio	86-95 %	87-95%	85-95%	86-95%	88-95%	87-95%

Gene & Drug Details

TYPE OF CANCER*	GENE	DRUG	
Non–small cell lung cancer (NSCLC)	ALK	Alectinib, crizotinib, ceritinib, lorlatinib, dabrafenib+trametinib	ctDNA Lung Panel
Non–small cell lung cancer (NSCLC)	BRAF	Dabrafenib+trametinib	
Non–small cell lung cancer (NSCLC)	EGFR	Erlotinib, Osimertinib, gefitinib, erlotinib, afatinib, mobocertinib, amivantamb	
Non–small cell lung cancer (NSCLC)	ERBB2	Fam-trastuzumab deruxtecan-nxki	
Colorectal Cancer	EGFR	Cetuximab, Panitumumab	ctDNA Colorectal Panel
Gastric and Gastroesophageal Cancer	ERBB2	Trastuzumab	
Colorectal Cancer	KRAS	Cetuximab, Panitumumab	
Breast cancer, Metastatic Castrate Resistant Prostate Cancer, Ovarian Cancer	BRCA1	Olaparib, rucaparib, niraparib + abiraterone acetate	ctDNA Breast Panel
Ovarian Cancer, Breast cancer	BRCA2	Talazoparib	
Breast Cancer	ERBB2	Trastuzumab, pertuzumab, ado-trastuzumab emtansine	
Breast Cancer	ESR1	Elacestrant (Orserdu)	

*Limited cancer type details mentioned

ORDERING INFORMATION	
Commercial Name	**Cat No.**
ctDNA Colorectal Panel	G2MCTCP11001-ill; G2MCTCP11001-MG
ctDNA Breast Panel	G2MCTBP12001-ill; G2MCTBP12001-MG
ctDNA Lung Panel	G2MCTLP13001-ill; G2MCTLP13001-MG

Oncology
Panels

The Oncology Panel are NGS assays designed to detect all types of variants in genes associated with different cancer types

- Common Hereditary Cancer NGS Panel
- OncoCheck Panel
  Hereditary Cancer (Germline Cancer Risk)
- BRCA 1/2 Panel
  Germline & Somatic Cancer
- Lymphoma NGS Panel
- Lymphoid Leukaemia NGS Panel
- Myeloid Leukaemia NGS Panel

Common Hereditary Cancer NGS Panel

Gene count/ family	~83
Covered region	Whole CDS, Hotspots
Target size	0.24 Mb
Mutation type	SNV/ InDels/ CNV
Sample type	Blood

The Genes2Me Common Hereditary Panel screens a comprehensive set of genes to identify germline mutations in DNA from blood. It provides comprehensive detail of the cancer and helps physicians and geneticists to decide the best course of treatment.

GENE LIST

•APC#	•ATM#	•ATRX	•AXIN2	•BAP1	•BARD1	•BLM	•BMPR1A	•BRAF
•BRCA1#	•BRCA2#	•BRIP1	•CDH1#	•CDK4	•CDKN1C	•CDKN2A#	•CHEK2	•CTR9
•EGLN1	•EGLN2	•EPAS1	•EPCAM#	•EXT1	•EXT2	•FGFR1	•FH	•FLCN
•GREM1	•H3-3A	•HRAS	•IDH2	•KIF1B	•KIT	•KMT2D	•MAX	•MDH2
•MEN1	•MERTK	•MET	•MLH1#	•MRE11	•MSH2#	•MSH3	•MSH6#	•MTAP
•MUTYH	•NBN	•NF1	•NF2	•NTHL1	•PALB2#	•PDGFRA	•PMS2#	•POLD1
•POLE	•PRSS1	•PTEN#	•RAD50	•RAD51C#	•RAD51D	•RB1	•RECQL4	•REST
•RET	•RNF43	•SDHA	•SDHAF2	•SDHB	•SDHC	•SDHD	•SLX4	•SMAD4
•SPINK1	•SQSTM1	•STK11#	•TMEM127	•TP53#	•TRIM28B1	•TSC11	•TSC2#	•VHL
•WT1	•XRCC2							

CNVs

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	98%	98%	85%
Precision	97%	96%	95%
Reproducibility	98%	98%	97%
Sensitivity	93%	94%	88%
On Target Ratio	85-95 %	85-95%	76-85%

ORDERING INFORMATION

Commercial Name	Cat No.
Common Hereditary Cancer NGS Panel	G2MCHC24001-ill; G2MCHC24001-MG; G2MCHC24001-TF

OncoCheck Panel

Gene count/ family	~53
Covered region	Whole CDS, Hotspots
Target size	0.17 Mb
Mutation type	SNV/InDels/CNV
Sample type	Blood/ FFPE

- Analyze 53 oncogenes associated with breast cancer
- Robust bioinformatics system for large deletion analysis

GENE LIST

•ATM#	•ATRIP	•BARD1	•BMPR1A	•BRCA1#	•BRCA2#	•BRIP1	•CCND1	•CD274
•CDH1#	•CDK12	•CHEK2	•EGFR	•ERBB2	•ESR1	•FANCD2	•FGFR1	•FGFR2
•GATA3	•KRAS	•LZTR1	•MAP3K1	•MKI67	•MLH1#	•MLH3	•MRE11	•MSH2#
•MSH6#	•NBN	•NF1	•PALB2#	•PIK3CA	•PMS2#	•PPP2R2A	•PTEN#	•RAD50
•RAD51B	•RAD51C#	•RAD51D	•RAD54L	•STK11#	•TOP2A	•TP53#	•APC	•BLM
•CDK4	•CDKN2A	•EPCAM	•MUTYH	•PRSS1	•SLX4	•SMAD4	•VHL	

CNVs

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>96%	>96%	>86%
Precision	>96%	>96%	>92%
Reproducibility	99%	99%	99%
Sensitivity	96%	97%	90%
On Target Ratio	86-95 %	85-95%	77-85%

ORDERING INFORMATION

Commercial Name	Cat No.
OncoCheck Panel	G2MOC01001-ill; G2MOC01001-TF; G2MOC01001-MG

BRCA 1/2 Panel

Gene count/ family	2
Covered region	Whole CDS,
Target size	0.02 Mb
Mutation type	SNV/InDels/CNV
Sample type	Blood/ FFPE

Germline & Somatic Cancer

The Genes2Me BRCA1/2 NGS Panel is a panel for breast cancer which enables diagnosis of germline and somatic cancer in the whole CDS (+/-40bp) and promoter regions of breast cancer associated BRCA 1 & BRCA 2 genes with high specificity.

Gene & Drug Details

TYPE OF CANCER	GENE	DRUG
Breast Cancer	BRCA1	Olaparib, Talazoparib
Breast Cancer	BRCA2	Talazoparib, Olaparib

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	97%	98%	82%
Precision	92%	93%	89%
Reproducibility	97%	98%	95%
Sensitivity	<1%VAF@95%	<1%VAF@95%	<1%VAF@95%
On Target Ratio	87-95 %	85-95%	75-85%

ORDERING INFORMATION

Commercial Name	Cat No.
BRCA 1/2 Panel	G2MBR00001-ill; G2MBR00001-TF; G2MBR00001-MG

Lymphoid Leukemia NGS Panel

No. of Genes	111
Gene count/ family	~75
Covered region	Whole CDS, Hotspots
Target size	0.37 Mb
Mutation type	SNV/InDels/CNVs/Fusions*
*Sample type	Blood, Bone marrow

The Genes2Me Lymphoid Leukemia Panel is a hybridization based solution for targeted sequencing employing NGS. With a fast turnaround time this product provides detection and identification of 111 clinically relevant genes spanning 0.37 Mb of genome size (whole coding sequence and hotspots) that covers all major mutations like SNV, InDels, & CNV linked to lymphoid leukaemia.

GENE LIST

- AARS1
- BIRC3
- COG1
- ETV6
- HPSE2
- KRAS
- NDUFV3
- PIK3CA
- TNFAIP3
- ABCA*
- BRAF
- COL4A4
- EVC
- ID3
- L2HGDH
- NF1
- PIM1*
- TRAF3
- ABL1
- BTG1
- CREBBP
- EZH2
- IDH*
- LAMA3
- NOTCH1*
- PLCG2
- XPO1
- AKT1
- BTK
- CRLF2
- FBXW7
- IKZF1
- LEF1
- NPHS2
- RHOA
- ALK
- CALR
- CTNNB1
- FERMT1
- IL12RB2
- LMO1
- NPM1
- SF3B1
- ATM
- CARD11
- DDX3X
- FLT3
- IL7R
- MAP2K1*
- NRAS
- STAT*
- B2M
- CCND3
- DNM2
- FREM2
- JAK*
- MEF2B
- NSD2
- STK11
- BCL*
- CD79*
- DNMT*
- GATA3
- KDM6A
- MPL
- NT5C2
- SYK
- BCOR
- CDKN2A
- EP300
- GRM1
- KMT2*
- MYD88
- NUDT15
- TET2

* Gene family

Additional genes covered

- PAX5
- SH2B3
- TP53
- KMT2A
- STIL
- PDP1
- SLC12A6
- TPMT
- MLLT10
- TAL1
- PHF6
- SOX6
- VCAN
- MN1
- TCF7L1
- PTEN
- SRY
- WNK1
- MRTFA
- PTPN11
- STAG2
- WT1
- NUP214
- RB1
- SUMF1
- ABL1
- PAX5
- RUNX1
- TBL1XR1
- BCR
- PBX1
- SERPIND1
- TCF3
- ETV6
- RBM15
- SETD2
- TDRD7
- JAK2
- RUNX1

***DNA/RNA Fusion Genes**

• BCR • TCF3 • JAK2 • NUP214 • MRTFA • MLLT10 • AML1 • ETV6 • STIL • RBM15 • KMT2A • ABL1, PBX1 • PAX5 • RUNX1 • JAK2 • MN1 • TAL1

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>98%	>96%	>85%
Precision	>95%	>96%	>90%
Reproducibility	99%	99%	99%
Sensitivity	5%VAF@>95%	5%VAF@>95%	5%VAF@>95%
On Target Ratio	85-95 %	83-95%	70-80%

ORDERING INFORMATION

Commercial Name	Cat No.
Lymphoid Leukemia NGS Panel	G2MLL30001-ill; G2MLL30001-MG; G2MLL30001-TF

Myeloid Leukemia NGS Panel

No. of Genes	75
Gene count/ family	~49
Covered region	Whole CDS, Hotspots
Target size	0.28 Mb
Mutation type	SNV/InDels/CNVs/Fusions*
Sample type	Blood, Bone marrow

The Genes2Me Myeloid Leukemia Panel is a hybridization based solution for targeted sequencing employing NGS. With a fast turnaround time this product provides detection and identification of 75 clinically relevant genes spanning 0.28 Mb genome size that covers the whole coding sequence and hotspots linked to Myeloid Leukemia.

GENE LIST

- ABL1
- GATA*
- PTEN
- ANKRD26
- DDX41
- KIT
- CBFB
- GNAS
- RB1
- ASXL1
- DNMT3A
- MPL
- CDC23
- IKZF1
- SAMD9L
- ATRX
- ETV6
- NOTCH1
- CDKN2A
- KAT6A
- SH2B3
- BCOR*
- EZH2
- NPM1
- CUX1
- KMT2A
- SMARCB1
- BRAF
- FLT3
- PDGFRA
- DAXX
- LYL1
- SMC*
- CALR
- HRAS*
- DEK
- MYD88
- STAG*
- CBL*
- IDH1*
- EED
- NF1
- TERC*
- CEBPA
- JAK2*
- FBXW7
- PRPF8
- U2AF*
- CSF3R
- KDM6A

* Gene family

Additional genes covered

- APHF6
- ABL1
- MRTFA
- PPM1D
- AML
- MYH11
- PTPN11
- BCR
- NUP214
- RAD21
- CBFA2T3
- PDGFRB
- RUNX1
- CBFB
- PML
- SETBP1
- DEK
- RARA
- SF3B1
- ETV6
- RBM15
- SRSF2
- GLIS2
- RPN1
- STAT3
- JAK2
- RUNX1
- TET2
- KMT2A
- RUNX1T1
- TP53
- MECOM
- SET
- WT1
- MLLT10

***DNA/RNA Fusion Genes**

• BCR • PM • CBFB • KMT2A • RUNX1 • DEK • SET • ETV6 • CBFA2T3 • RBM15 • AML • RPN1 • ABL1 • RARA • MYH11 • MLLT10 • RUNX1T1 • NUP214 • PDGFRB • JAK2 • GLIS2 • MKL1 • ETO • EVI1

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>96%	>96%	>83%
Precision	>90%	>90%	>90%
Reproducibility	99%	99%	99%
Sensitivity	5%VAF@95%	5%VAF@95%	5%VAF@95%
On Target Ratio	85-95 %	85-95%	76-85%

ORDERING INFORMATION

Commercial Name	Cat No.
Myeloid Leukemia NGS Panel	G2MML28001-ill; G2MML28001-MG; G2MML28001-TF

Lymphoma NGS Panel

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

Lymphoma NGS Panel is an NGS assay designed to detect all types of variants in 95 genes spanning 0.54 Mb of genome size that covers all major mutations associated with Lymphoma.

GENE LIST

•ABCA13*	•ALK	•ARHGEF12	•ARID1A	•ATM	•B2M	•BCL*	•BIRC3	•BLM
•BRAF	•BTK	•CARD11	•CD79A*	•CDKN2A	•COG1	•COL4A4	•CREBBP	•CXCR4
•DNMT*	•EGR2	•EP300	•EPCAM	•ETS1	•EVC	•EZH2	•FAS	•FAT4
•FBXO11	•FERMT1	•FREM2	•GNA13	•GRM1	•H1-4	•HPSE2	•ID3	•IDH*
•IKBKB	•IKZF1	•IL12RB2	•JAK3	•KLF2	•KMT2D	•L2HGDH	•LAMA3	•LMO2
•MLH1	•MSH2*	•MTOR	•MYC	•MYD88	•NBN	•NDUFV3	•NFKBIE	•NOTCH1*
•NPHS2	•PDP1	•PIM1	•PLCG1*	•PMS2	•POT1	•PRDM1	•RHOA	•RPS15
•RRAGC	•SERPIND1	•SF3B1	•SLC12A6	•SOCS1	•SOX6	•SRY	•STAT3*	
•SUMF1	•TBL1XR1	•TCF3	•TNF*					

* Gene family

Additional genes covered

•TDRD7	•TET2	•TP53	•TP63#	•TRAF3	•UBR5	•VCAN	•WNK1	•XPO1	•ALK	•ATXN2L	•CARS1
•CD28	•CLTC	•CTLA4	•ICOS	•ITK	•JAK2	•MSN	•NPM1	•RNF213	•S100A7	• SEC31A	•STAP2
•SYK	•TFG	•TPM3	•TPM4	•TRAF1	• VAV1	•CCND1#	•IRF4#	•Ig genes#	•T cell receptors#		

Gene Rearrangements

***DNA/RNA Fusion Genes**

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

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%

ORDERING INFORMATION

Commercial Name	Cat No.
Lymphoma NGS Panel	G2MLYM31001-ill , G2MLYM31001-MG, G2MLYM31001-TF

Cancercheck Panel

The changes (mutations) in the DNA within the cell may inhibit the cell to function normally and allow it to become cancerous. Most of the cancer mutations are somatic in nature as the changes in DNA occur in cell of any part of the body. These mutations can be caused by many factors such as radiations, tobacco smoking and other chemicals. Some of the cancers such as breast, ovary, colorectal etc. can also be hereditary since it can be inherited from parent.

Cancer Check Panels are NGS assays designed to detect all types of variants associated with somatic/germline cancer. Targeting the selected genes with high sensitivity and specificity enables saving cost and effort.

The report consists of the primary, secondary, and tertiary results for the In-depth understanding and interpretation of sequencing data.

CancerCheck 50 Panel

No. of Genes	67
Gene count/ family	~54
Covered region	Whole CDS, hotspot
Target size	0.2 Mb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/FFPE

The Genes2Me CancerCheck 50 Panel screens niche set of ~67 cancer causing genes that are most prone to cancerous mutations, to identify both germline and somatic mutations in blood or tumor tissue. It provides comprehensive detail of the cancer and helps to decide the best course of treatment.

GENE LIST

- ABL1
- CDK*
- FGFR*
- MAP2K1
- PDGFRA
- RET
- AKT1
- CDKN2A
- GNA*
- MET#
- PIK3CA#
- ROS1
- ALK
- CRNKL1
- H3-3A
- MLH1
- PIK3R1
- SF3B1
- APC
- CSF1R
- RAS*
- MTOR
- PPP2R1A
- SMAD4
- ARID1A
- CTNNB1
- IDH*
- MYC#
- PTCH1
- SMO
- ATM
- DDR2
- JAK2
- MYCN
- PTEN#
- SRC
- BRAF#
- ERBB (EGFR)*#
- KDR
- MYD88
- PTPN11
- STK*
- BRCA*#
- EP300
- KIT
- NOTCH1
- RAC1
- TP53 #
- CDH1
- ESR1
- KNSTRN
- NTRK1#
- RB1
- U2AF1

* Gene family / # CNVs

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	93%	94%	85%
Precision	90%	90%	93%
Reproducibility	98%	98%	98%
Sensitivity	1%VAF@95%	1%VAF@95%	1%VAF@95%
On Target Ratio	89-95 %	88-95%	77-85%

ORDERING INFORMATION

Commercial Name	Cat No.
CancerCheck 50 Panel	G2MCC03001-ill; G2MCC03001-TF; G2MCC03001-MG

CancerCheck 100 Panel

No. of Genes	148
Gene count/ family	~99
Covered region	Whole CDS, hotspot
Target size	0.48 Mb
Mutation type	SNV/ InDels/ CNVs
Biomarkers	MSI, HRR Genes
Sample type	Blood/ FFPE

The Genes2Me CancerCheck 100 Panel screens niche set of ~148 cancer causing genes that are most prone to cancerous mutations, to identify both germline and somatic mutations in blood or tumor tissue.
It provides comprehensive detail of the biomarkers such as MSIs & HRR genes in cancer and helps to decide the best course of treatment.

GENE LIST

- ABL1
- ATRX
- BRAF#
- CSF1R*
- ERCC1*
- GNA*
- KRAS*#
- MRE11
- NTRK1
- PYCARD
- SETBP1
- AKT*
- AURK*
- BRCA*
- CTNNB1
- ESR1
- HNF1A
- LRP1B
- MSH2*
- PALB2#
- RAD50
- SF3B1
- ALK
- BAP1
- BRIP1#
- DAPK1
- EWSR1
- IDH1*
- LZTR1
- MTOR
- PI3KC*#
- RAD51*
- SLX4
- APC#
- BARD1#
- CALR
- DDR2
- EZH2
- IGF1R
- MAP3K1
- MUTYH
- PMS2
- RASSF1
- SMAD4
- ARID1*
- BCL2
- CCND*#
- EGFR*#
- FBXW7
- ITK
- MDM2
- NBN
- POLD1*
- RB1#
- SMO
- ASXL1
- BCOR
- CDH1
- EIF1AX
- FGF*
- JAK*
- MET#
- NF1
- PRSS1
- RET#
- SRC
- ATM#
- BCR
- CDK*#
- EP300
- FGFR*#
- KDR
- MGMT
- NFE2L2
- PTCH1*
- ROS1
- SRSF2
- ATR
- BLM
- CDKN2A#
- EPCAM
- FLI1
- KIT
- MLH1
- NOTCH*
- PTEN#
- RUNX*
- STAG2
- ATRIP
- BMPR1A
- CHEK2#
- EPHB4
- FLT3
- KMT2*
- MPL
- NPM1
- PTPN11
- SEMA3B
- STK11

ADDITIONAL GENES

- SYK
- TERT
- TOP1
- TP53#
- TSC*
- U2AF1
- VHL
- ZMYM3

* Gene family / # CNVs

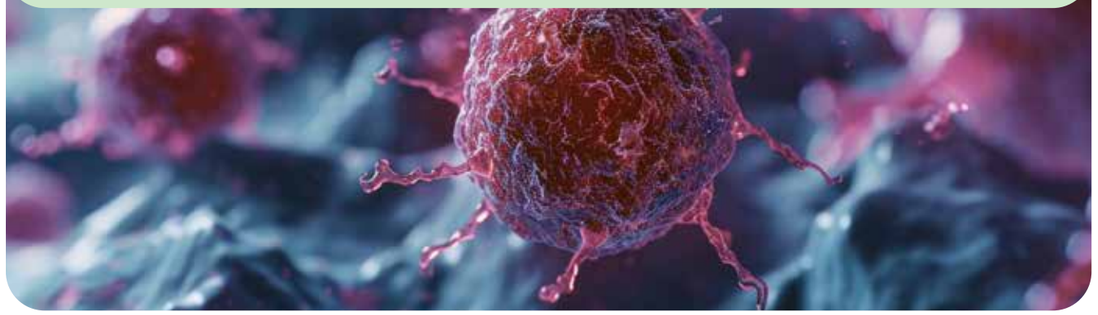
PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	95%	95%	87%
Precision	96%	96%	92%
Reproducibility	99%	99%	99%
Sensitivity	1%VAF@95%	1%VAF@95%	1%VAF@95%
On Target Ratio	89-95 %	88-95%	77-85%

ORDERING INFORMATION

Commercial Name	Cat No.
CancerCheck 100 Panel	G2MCC04001-ill; G2MCC04001-TF; G2MCC04001-MG

CancerCheck Core
(HRD Panel)



There are various DNA repairs pathways, HRR or Homologous Recombination Repair being one of them. It is a fundamental cellular process that repairs double-strand breaks (DSBs) in DNA. This repair process ensures that the genetic information is restored correctly, thus maintaining genomic stability and preventing mutations that could lead to diseases like cancer.

There are certain genes that are responsible for HRR which if mutated, can lead to a dysfunction in the HRR process leading to chromosomal structural changes across the cells. The accumulation of these variants are also known as genomic instabilities. These biomarkers (LOH (Loss of heterozygosity), TOI (Telomeric imbalances), LSTs (Large scale transitions)), can be measured and used to evaluate the HRD Status and Genomic scar score (GSS).

The HRD Panel from G2M enriches non-exonic, single-nucleotide polymorphism (SNP)-based on targeted next generation sequencing. This targets more than 50,000 SNPs enriched across whole genome making it capable of detecting the genomic instabilities and calculate the Genomic Scar Score.

This panel helps in maximizing diagnostics insights for clinicians to guide for PARP inhibitors or platinum drugs used in the treatment of various cancers.

SNP Count	> 50,000	
Test Approach	Tumor only	Matched sample
Sample type and data size	Tumor sample (7 GB)	Tumor sample (7 GB)
		Blood or peripheral normal tissue (3 GB)

- OVARIAN CANCER
- BREAST CANCER
- PROSTATE CANCER
- PANCREATIC CANCER

ORDERING INFORMATION

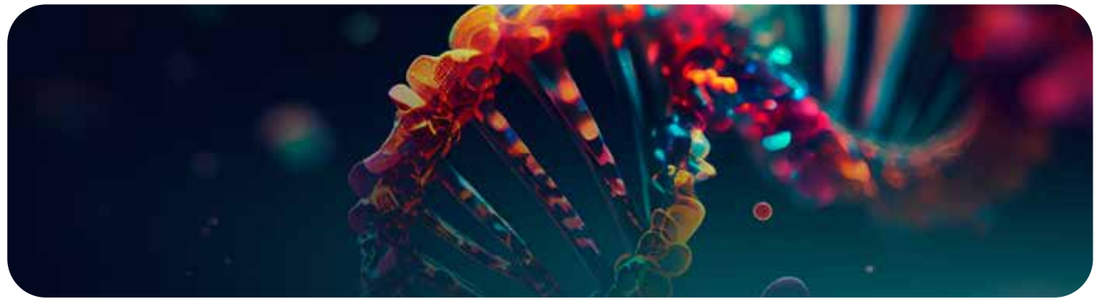
Commercial Name	Cat No.
CancerCheck Core Panel	G2MCC02001-ill; G2MCC02001-TF; G2MCC02001-MG

HLA TYPiNG
BY NGS

Genes2me HLA typing NGS panel generates unambiguous, phase-resolved HLA typing results and can provide critical insight into immune disorders. DNA extracted from the blood of transplant recipients or donors is evaluated for histocompatibility antigens, such as Class HLA-A, B, C; Class II: HLA DPA1,DPB1, DQA1, DAQB1, DRB1/3/4/5.

It is a high-resolution allele identification precision diagnostic panel that aids in the selection of the best donor. The HLA region which is the most densely polymorphic region of the genome can be sequenced accurately with our HLA typing NGS panels.

Loci	11
Covered region	Whole CDS
Target size	71 kb
Mutation type	Allelic Polymorphism
Sample type	Blood



PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	97%	97%	86%
Precision	95%	95%	85%
Reproducibility	98%	98%	95%
Sensitivity	95%	95%	89%
On Target Ratio	87-95 %	86-95%	76-85%

Description and Features

Complete Description

Human leukocyte antigen (HLA) typing is a germline panel aimed to perform genetic test that is used to match patients and donors for tissue transplants, to identify mutations in DNA from human source targeting 11 loci covering all the coding sequences enriched by probes based enrichment technology. This panel uncovers the coding region compiling to the size of ~71kb. The genomic DNA sample from blood & saliva is considered for library preparation and enrichment that further can be sequenced on NGS sequencer.

Principle of Operation

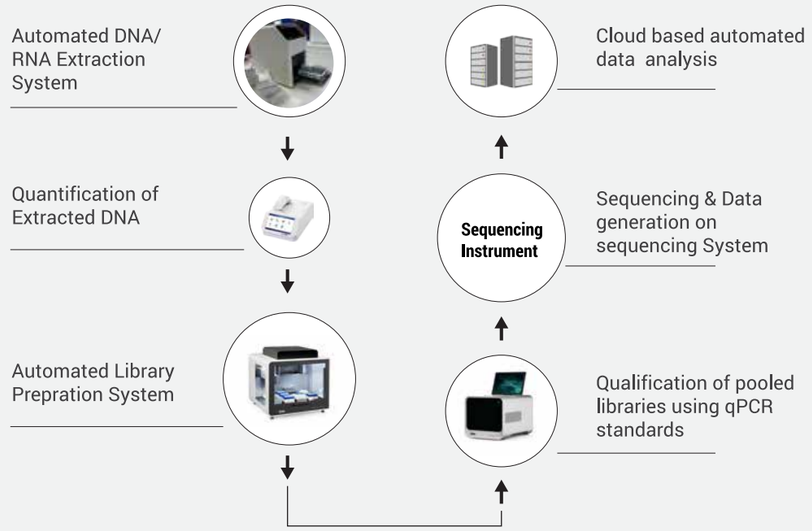
This panel is based on Hybridization capture-based target enrichment employs probes to select sequences of interest in an NGS library. Genes2Me sequencing panels are highly sensitive and enable detection of single nucleotide, structural and copy number variants and insertions and deletions. Next-generation sequencing (NGS) is a type of DNA sequencing technology that uses parallel sequencing of multiple small fragments of DNA to determine sequence. This "high-throughput" technology has allowed a dramatic increase in the speed (and a decrease in the cost) at which an individual's genome can be sequenced.

Genes Targets

Class I: HLA-A, HLA-B, HLA-C;

Class II: HLADPA1, HLADPB1, HLADQA1, HLADAQB1, HLADRB1, HLADRB3, HLADRB4, HLADRB5.

Workflow for HLA Typing Sequencing Panel



ORDERING INFORMATION

Commercial Name	Cat No.
HLA Typing NGS Panel	G2MHLA32001-ill; G2MHLA32001-MG; G2MHLA32001-TF

Med4Me
Panel

The main target of Med4Me Panels are the genes associated with prescribed drugs of the corresponding diseases. The assay allows for precise selection and dosage of prescribed FDA approved drugs, and detection of genetic variants associated with drug metabolism in Oncology, Neurology, Cardiology, tuberculosis and many diseases.

Covered Region

Whole CDS + UTR (-50 bp, +10 bp)

- Assess extensive target regions associated with pharmacogenomics
- Validated panel performance: Complete validation for clinical application
- Mutation Type- SNV, Indel, CNV

Med4Me Panel

Gene count	~122
Covered region	Whole CDS + UTR (-50bp, +10 bp)
Target size	0.6 Mb
Mutation type	SNV / InDels
Sample type	Blood

PGx
PHARMACOGENOMICS INSIGHTS

Types of Drugs Covered

- Oncology
- Transplantation Biology
- Pain Management
- Cardiovascular function
- Hematology
- Urology
- Anesthesiology
- Internal Medicine
- Psychiatry
- Neurology
- Infectology
- Endocrinology
- Recreational Drugs

*Limited drug details mentioned

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	94%	93%	83%
Precision	98%	98%	84%
Reproducibility	98%	98%	98%
Sensitivity	>90%	>91%	>77%
On Target Ratio	88-95 %	87-95%	74-85%

ORDERING INFORMATION

Commercial Name	Cat No.
Med4Me Standard Panel	G2MMSP08001-ill; G2MMSP08001-TF; G2MMSP08001-MG

PAN Pathogen
Panel

Genes2Me PAN Pathogen Panel uses hybridization based enrichment technology and second-generation high-throughput sequencing technology for high-precision detection of trace pathogenic microbial nucleic acids in samples, and can quickly identify viruses, bacteria, fungi, parasites and other pathogenic microorganisms, and also can detect multiple drug resistance genes, which can help the rapid identification and detection of pathogenic microorganisms.

Covering more than **7000** Pathogens

Advantages

Ultra-Broad Spectrum
One test covers more than 95% of common clinical pathogen infections

High Sensitivity
High-throughput targeted sequencing, no host DNA interference, trace pathogens can be accurately detected

High detection rate of fungi and intracellular bacteria
Significantly improved the detection rate of fungi and intracellular bacteria

Fast Detection
16-hour rapid test for identification of critical infection

Clinical Applications

- Respiratory infections
- Urinary tract infection
- Bloodstream infection
- Other infections
- Central nervous system infections
- Cardiogenic infections
- Reproductive system infections
- Skin infections

Number of Organism:- 7000 +	**Target Size**: ~8000 probes	**Target Regions**:- 16S and internal transcribed spacer (ITS)	**Sample Type**:- Blood, Sputum, Saliva, Stool, Swab, Fresh tissue, Body fluid	**Genes**:- Housekeeping genes, drug-resistant related genes	**Data Required**: 1 Million reads
Bacteria - ~88	Fungus - ~ 31	Parasites - ~ 27	Viruses - ~ 22	Obligate Intracellular Parasite - ~8	Spirochete - ~ 3

** Minimum data output from sequencing depends on the content of pathogenic microorganism in clinical specimen. Whether a particular pathogen is detected in the report depends on the number of supporting reads detected for the pathogen, and not solely on the total amount of data obtained from sequencing.

ORDERING INFORMATION

Commercial Name	Cat No.
LeoNext PP LibraryPrep Kit for PAN Pathogen	NGS3104-01; NGS3104-02

Cardiovascular
NGS Panel

NGS has revolutionized the genetic study of cardiovascular disease allowing unprecedented opportunities to detect mutations in disease-genes with high accuracy in a fast and cost-efficient manner in daily clinical practice.

The Genes2Me Cardiovascular disorders NGS panel is a hybridization based solution for targeted sequencing. With a fast turnaround time this product provides detection and identification of ~357 clinically relevant genes spanning 1.2 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

No. of Genes	357
Gene count/ family	~174
Covered region	Whole CDS, hotspot
Target size	1.2 Mb
Mutation type	SNV/InDels/CNVs
Sample type	Blood

CARDIO

List of Diseases Assessed*

- Aortopathy & connective tissue disorders
- Arrhythmia
- Cardiomyopathy
- Congenital heart defect
- Dyslipidemia
- Other cardiovascular diseases
- Pulmonary hypertension

**Limited diseases mentioned*

Scan me for Cardio Gene List

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	90%	90%	87%
Precision	94%	95%	80%
Reproducibility	96%	96%	96%
Sensitivity	95%	95%	85%
On Target Ratio	85-95 %	86-95%	76-85%

ORDERING INFORMATION

Commercial Name	Cat No.
Cardiovascular NGS Panel	G2MCV15001-ill; G2MCV15001-TF; G2MCV15001-MG

Neuromuscular
NGS Panel

Many neurological conditions are caused by immensely heterogeneous gene mutations. The diagnostic process is often long and complex with most patients undergoing multiple invasive and costly investigations without ever reaching a conclusive molecular diagnosis. NGS has shortened the 'Diagnostic Odyssey' for many of these patients.

The Genes2Me Neuromuscular disorders NGS panel is a hybridization based solution for targeted sequencing employing NGS. With a fast turnaround time this product provides detection and identification of 497 clinically relevant genes spanning 1.4 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

No. of Genes	497
Gene count/ family	~293
Covered region	Whole CDS, hotspot
Target size	1.4 Mb
Mutation type	SNV/InDels/CNVs
Sample type	Blood

Scan me for NEURO Gene List

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	97%	97%	86%
Precision	95%	95%	85%
Reproducibility	98%	98%	95%
Sensitivity	>94%	>95%	>83%
On Target Ratio	87-95 %	86-95%	76-85%

ORDERING INFORMATION

Commercial Name	Cat No.
Neuromuscular NGS Panel	G2MNM14001-ill; G2MNM14001-MG; G2MNM14001-TF

Alzheimer-Parkinson Dementia NGS Panel

The Genes2Me Alzheimer Parkinson's Dementia NGS panel is a hybridization based solution for targeted sequencing employing NGS. With a fast turnaround time this product provides detection and identification of ~139 clinically relevant genes spanning 0.4 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

No. of Genes	139
Gene count/ family	~101
Covered region	Whole-CDS, Hotspots
Target size	0.39 Mb
Mutation type	SNV/InDels/CNVs
Sample type	Blood

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	92%	92%	86%
Precision	95%	94%	87%
Reproducibility	97%	96%	96%
Sensitivity	>90%	>91%	>80%
On Target Ratio	87-95 %	86-95%	78-85%

GENE LIST

•A2M	•AAAS	•AARS1	•ABCA*	•ACE	•ADCY5	•ALS2	•ANG	•ANO3
•ANXA11	•APOE	•APP	•ATP*	•C19orf12	•C9orf72	•CACNA1B	•CHCHD*	•CHMP2B
•CHRNA4	•CIZ1	•COG1	•COL*	•CSF1R	•DAO	•DCTN1	•DNAJC*	•DNMT1
•EIF4G1	•ERBB4	•EVC	•FBXO7	•FERMT1	•FIG4	•FREM2	•FTL	•FUS
•GBA1	•GCH1	•GIGYF2	•GNAL*	•GRM1	•GRN	•HEXA	•HNRNPA*	•HPCA
•HPSE2	•HTRA2	•IL12RB2	•ITM2B	•KCTD17	•KIF5A	•KMT2B	•L2HGDH	•LAMA3
•LRRK2	•MAPT	•MATR3	•MECR	•MPO	•NDUFV3	•NEK1	•NOTCH3	•NPHS2
•OPTN	•PANK2	•PARK7	•PDE8B	•PDP1	•PFN1	•PINK1	•PLA2G6	•PNKD
•POLG	•PRKN*	•PRNP	•PRRT2	•PSAP	•PSEN*	•RAB39B	•RELN	•SERPIND1
•SETX	•SGCE	•SIGMAR1	•SLC12A6*	•SLC30A10*	•SNCA*	•SOD1	•SORL1	•SPR
•SRY	•SYNJ1	•TAF*	•TFG	•TIMM8A*	•TUBA4A*	•TYROBP	•UCHL1	•VAC14*
•VPS13*	•XPR1							

* Gene family

Additional genes covered														
•SOX6	•SPG11	•SQSTM1	•SUMF1	•TARDBP	•TBK1	•TDRD7	•TH	•THAP1	•TOR1A	•TREM2	•UBQLN2	•VCAN	•VCP	•WNK1

ORDERING INFORMATION

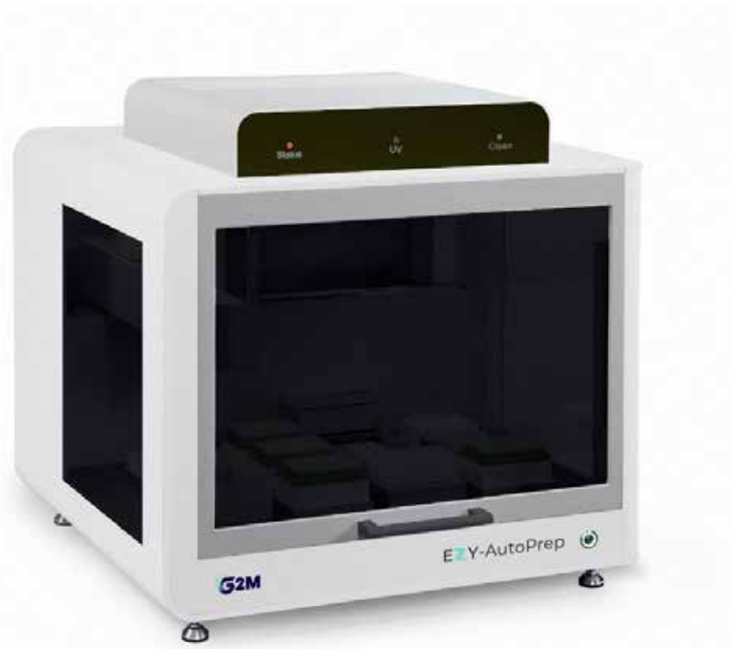
Commercial Name	Cat No.
Alzheimer-Parkinson-Dementia NGS Panel	G2MAPD23001-ill; G2MAPD23001-MG;G2MAPD23001-TF

EZY-AutoPrep

AUTOMATED NGS LIBRARY PREPARATION WORKSTATION

NGS sequencing is the mainstream gene sequencing technology, and the market will continue to expand rapidly in 2022-2026. With the continuous progress of NGS sequencing technology and the declining cost, it has gradually replaced the first generation sequencing technology to become the mainstream of the market.

It can be widely used in prenatal testing, disease screening, disease diagnosis, etc. Based on this, we launched EZY-AutoPrep automated NGS library preparation workstation. EZY-AutoPrep is based on the direct loading of nucleic acid samples to realize the full-automatic library construction process of fragmentation, end repair, adaptor connectionand PCR amplification.



EZY - AutoPrep
can construct 24 sample libraries in one run

Friendly software, supporting hardware and professional team ensure that you can run the actual samples in a short time, thus providing you with a good library preparation experience.

EZY-AutoPrep

AUTOMATED NGS LIBRARY PREPARATION WORKSTATION

INSTRUMENT FUNCTION

Library Preparation

Fragmentation (Enzymatic Method) → Purification → End Repair + A-Tailing Adding → Adaptor Ligation → Purification → PCR Amplification → Purification

Quantitation, Pooling

Concentration Determination → Homogenisation → Pooling

Hybrid Capture

Sample Concentration (Magnetic Bead Method) → Probe Hybridization → Magnetic Bead Preparation → Magnetic Bead Capture → PCR Amplification → Purification

PRODUCT FEATURES

Flexible Matching Experiment Needs

- Equipped with several temperature control modules to meet the special temperature requirements such as reagent and sample storage.
- High efficiency magnetic module by rising and falling to avoid loss or residual of magnetic beads.
- The fully automatic thermal cycling module can effectively prevent cross-contamination and meet the nucleic acid amplification process in the process of library construction.

Efficient Pollution Prevention

- Equipped with efficient purification and filter system (positive pressure HEPA system) and UV sterilization to prevent cross-contamination of the experimental cabin.
- The PCR module in EZY-AutoPrep can use dispos - able automatic cover or conventional sealing cover to avoid condensation on the top and reduce the risk of cross-infection.

Precise Pipetting

- The self-developed high-precision 8-channel pipettor can be used as a single channel.
- A variety of liquid parameters setting ensure accurate control of liquid aspirating and dispensing process.
- Capacitive and air pressure detection function can sensitively detect the liquid level, residual liquid and blockage, ensuring accurate control of the pipetting volume.

Multiple Functional Modules

- 9 tiles (including TIP area, sample area, reagent area) + (TIP off box and waste liquid container) are designed to meet the needs of various library construction kits.
- The experimental platform can customize different modules according to the actual needs of customers to meet various experimental solutions.
- The program design feature that can be saved separately enables the same program to quickly run the experimental process only by changing the number of samples.

Simple Operation, Get Started Quickly

- Multi-level account management system supports the different needs of new users and advanced users.
- Drag-and-drop flows simplifies program setting.
- GUI is easy to understand and edit.
- New users can also quickly master the operation methods of library construction.

Intelligent & Visual

- Allow users to freely choose running part or all of the experimental processes.
- Program setting error reporting and prompt functions ensure that users can quickly find programming errors.
- TIP area prompts the experimental demand, current available amount and whether it is sufficient to ensure the smooth progress of the experiment.
- The PC simulation operation experiment function can enable users to find problems at any time and avoid wasting samples, reagents and time.

LEONEXT

a Complete Range
for Next Generation Sequencing

NGS-based applications have considerable applicative reach across a broad spectrum of Clinical and basic research areas including **Genetics, Microbiology & Oncology**.

LeoNext Provides a complete portfolio of NGS Library preparation kits and barcodes designed to increase the flexibility and speed of library preparation for the Illumina, Ion Torrent & MGI Sequencing platforms.

Complete Range for Next Generation Sequencing - LEONEXT

DNA Library Preparation for Illumina®

Cat #	Product Name		Application	Size
NGS3104-01/02	LeoNext Universal Plus DNA Library Prep Kit for Illumina®	The LeoNext Universal Plus DNA Library Prep Kit is designed for DNA library preparation for Next Generation Sequencing (NGS) on Illumina® platforms with fast and robust workflow. The kit combines DNA fragmentation, end repair and dA tailing into one step there by reducing the time to 3 hrs. The kit is suitable for library preparation from 50 ng - 500 ng of input DNA.	DNA Lib Prep Kits for Enzymatic Fragmentation	24 rxn/96 rxn
NGS3114	LeoNext Multiplex Oligos Set 4 for Illumina®	The LeoNext Multiplex Oligos set 4 for Illumina® is designed for DNA library preparation for Illumina high throughput sequencing platform. The each kit contains LeoNext Adapter-S for Illumina, 8 LeoNext i5 PCR Primers and 12 LeoNext i7 PCR Primers. With LeoNext Universal Plus DNA Library Prep Kit for Illumina® (Genes2Me #NGS3104-01/02), it is used for generating up to 96 different combinations of double-ended Indexed libraries. Both kits together can generate up to 384 different combinations of double-ended Indexed libraries.	Dual-Indexed Adapter	192 rxn
NGS3115	LeoNext Multiplex Oligos Set 5 for Illumina®		Dual-Indexed Adapter	192 rxn
NGS3116	LeoNext Dual Index UMI DNA Adapters Set 1 for Illumina®	The LeoNext Dual Index UMI DNA Adapters for Illumina is specially designd for DNA library preparation to minimize index hopping and index misassignment. The kit contains unique and completely independent dual indexes along with 10 nt Unique Molecular Identifier (UMI) attached to adapter sequence after the i7 index, to detect low frequency mutations.	Dual-Indexed Adapter UMI Adapters	20 µl each
NGS3117	LeoNext Dual Index UMI DNA Adapters Set 2 for Illumina®		Dual-Indexed Adapter UMI Adapters	20 µl each
NGS3118	LeoNext Dual Index UMI DNA Adapters Set 3 for Illumina®		Dual-Indexed Adapter UMI Adapters	20 µl each
NGS3119	LeoNext Dual Index UMI DNA Adapters Set 4 for Illumina®		Dual-Indexed Adapter UMI Adapters	20 µl each

DNA Library Preparation for Ion Torrent®

Cat #	Product Name		Application	Size
NGS3136-01/02	LeoNext Universal DNA Library Prep Kit for Ion Torrent®	The LeoNext Universal Plus DNA Library Prep Kit is designed for DNA library preparation for Next Generation Sequencing (NGS) on Ion Torrent® sequencing platforms with fast and robust workflow. The kit combines end repair and dA tailing of input fragmented DNA into one step there by reducing the time to 3 hrs. The kit is suitable for library preparation from 50 ng - 100 ng of input fragmented DNA.	Universal DNA Lib Prep Kits	24 rxn/96 rxn
NGS3139-01/02	LeoNext AmpSeq Adapters 1 - 24 for Ion Torrent®	The LeoNext AmpSeq Adapters for Ion Torrent is a kit developed by AmpSeq technology for library preparation of the Ion Torrent high-throughput sequencing platform. Along with LeoNext Universal DNA Library Prep Kit for Ion Torrent®, this kit can prepare multi-sample targeted sequencing DNA libraries. The kits NGS3139-01 and NGS3139-02 contains 12 different adapter barcodes each from adapter barcode 1-12 and adapter barcode 13-24 respectively. The kits NGS3140-03, NGS3139-04 and NGS3139-05 contains 24 different adapter barcodes each from adapter barcode 25-48, adapter barcode 49-72 and adapter barcode 73-96 respectively.	Amplicon Lib Prep Adapters	12 ×10 rxn
NGS3140-03/04/05	LeoNext AmpSeq Adapters 25 - 96 for Ion Torrent®		Amplicon Lib Prep Adapters	24 ×10 rxn

Complete Range for Next Generation Sequencing - LEONEXT

DNA Library Preparation for MGI®

Cat #	Product Name		Application	Size
NGS3144-01/02	LeoNext Universal Plus DNA Library Prep Kit for MGI®	The LeoNext Universal Plus DNA Library Prep Kit is designed for DNA library preparation for Next Generation Sequencing (NGS) on MGI® platforms with fast and robust workflow. The kit combines DNA fragmentation, end repair and dA tailing into one step there by reducing the time to 3 hrs. The kit is suitable for library preparation from 50 ng - 500 ng of input DNA.	DNA Lib Prep Kits for Enzymatic Fragmentation	24 rxn/96 rxn
NGS3146-01/02	LeoNext DNA Adapters Set 8 for MGI®	The LeoNext DNA Adapters Set 8 for MGI is a kit for MGI high-throughput sequencing platform. It is suitable for preparing multi-sample DNA libraries for MGI high-throughput sequencing platform. This kit contains 96 different types of single-index adapters.	Single-Indexed Adapters	10 µl each/ 40 µl each

RNA Library Preparation for Illumina®

Cat #	Product Name		Application	Size
NGS3169-01/02	LeoNext Universal V8 RNA-Seq Library Prep Kit for Illumina®	The LeoNext Universal V8 RNA-seq Library Prep Kit for Illumina is designed for the preparation of RNA libraries for Illumina platform. The kit is suitable for library construction of RNA that have been obtained by rRNA depletion. This kit combines 2nd Strand cDNA synthesis, end-repair and dA Tailing into one step that greatly simplifies the process of library construction and shortens the operation time.	Ultra Fast & Universal RNA Lib Prep Kits	24 rxn/96 rxn
NGS3170/ 3171-01/02	LeoNext RNA Adapters Set 1 / Set 2 for Illumina®	The LeoNext RNA Adapters for Illumina is a kit for high-throughput sequencing on Illumina platform. It is suitable for preparing multi-sample RNA libraries for Illumina high-throughput sequencing platform. The kit LeoNext RNA Adapters Set 1 / Set 2 for Illumina® (NGS3170/3171-01/02) contains 12 kinds of indexed adapters each. The kit LeoNext RNA Adapters Set 3 - Set 6 for Illumina® (NGS3172/3173/3174/3175) contains 24 kinds of indexed adapters each.	Single-Indexed Adapters	10 µl each/ 40 µl each
NGS3172/3173/ 3174/3175	LeoNext RNA Adapters Set 3 - Set 6 for Illumina®		Single-Indexed Adapters	20 µl each

Complete Range for Next Generation Sequencing - LEONEXT

RNA Library Preparation for MGI®

Cat #	Product Name		Application	Size
NGS3183-01/02	LeoNext Universal V6 RNA-Seq Library Prep Kit for MGI®	The LeoNext Universal V6 RNA-Seq Library Prep Kit for MGI® is designed for the preparation of RNA libraries for MGI platform. The kit is suitable for library construction of RNA that have been obtained by rRNA depletion. This kit combines 2nd Strand cDNA synthesis, end-repair and dA Tailing into one step that greatly simplifies the process of library construction and shortens the operation time.	Ultra Fast & Universal RNA Lib Prep Kits	24 rxn/96 rxn
NGS3185-01/02	LeoNext RNA Adapters Set 8 for MGI®	The LeoNext RNA Adapters Set 8 for MGI® is a kit for high-throughput sequencing on MGI platform. It is suitable for preparing multi-sample RNA libraries for MGI high-throughput sequencing platform. The kit LeoNext RNA Adapters Set 8 for MGI® (NGS3185-01/02) contains 96 kinds of indexed adapters each.	Single-Indexed Adapters	10 µl each/40 µl each

Modules for RNA Library Preparation

Cat #	Product Name		Application	Size
NGS3188-01/02	LeoNext rRNA Depletion Kit (Human / Mouse / Rat)	The LeoNext rRNA Depletion Kit (Human) is designed to deplete rRNA (including cytoplasmic 28S, 18S, 5S rRNA, and mitochodrial 12S, 5.8S rRNA) from human total RNA preparations, while leaving mRNA and non-coding RNA. This kit is suitable for both intact and degraded RNA samples (i.e. FFPE RNA). The obtained rRNA-depleted RNA can be used for analysis applications of mRNA and non-coding RNA.	rRNA Depletion Kit	24 rxn / 96 rxn

Beads

Cat #	Product Name		Application	Size
NGS3194-01/02/03	LeoNext DNA Clean Beads	The LeoNext DNA Clean Beads utilizes SPRI (Solid-Phase Reversible Immobilization) paramagnetic bead technology for High-throughput purification of nucleic acids. LeoNext DNA Clean Beads is compatible with all DNA/RNA library construction protocols.	DNA Clean-up & Size-Selection	5 ml/60 ml/ 450 ml

Additional Reagents

Cat #	Product Name		Application	Size
NGS3148-01/02	LeoNext Circularization Kit for MGI®	The LeoNext Circularization Kit for MGI is a kit optimized for the high-throughput sequencing specifically on MGI platform. This kit can convert final libraries with adapters to single-stranded circularized DNA libraries dedicated to MGI high-throughput sequencer.	Circularization Kit	16 rxn/48 rxn

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through distributors across

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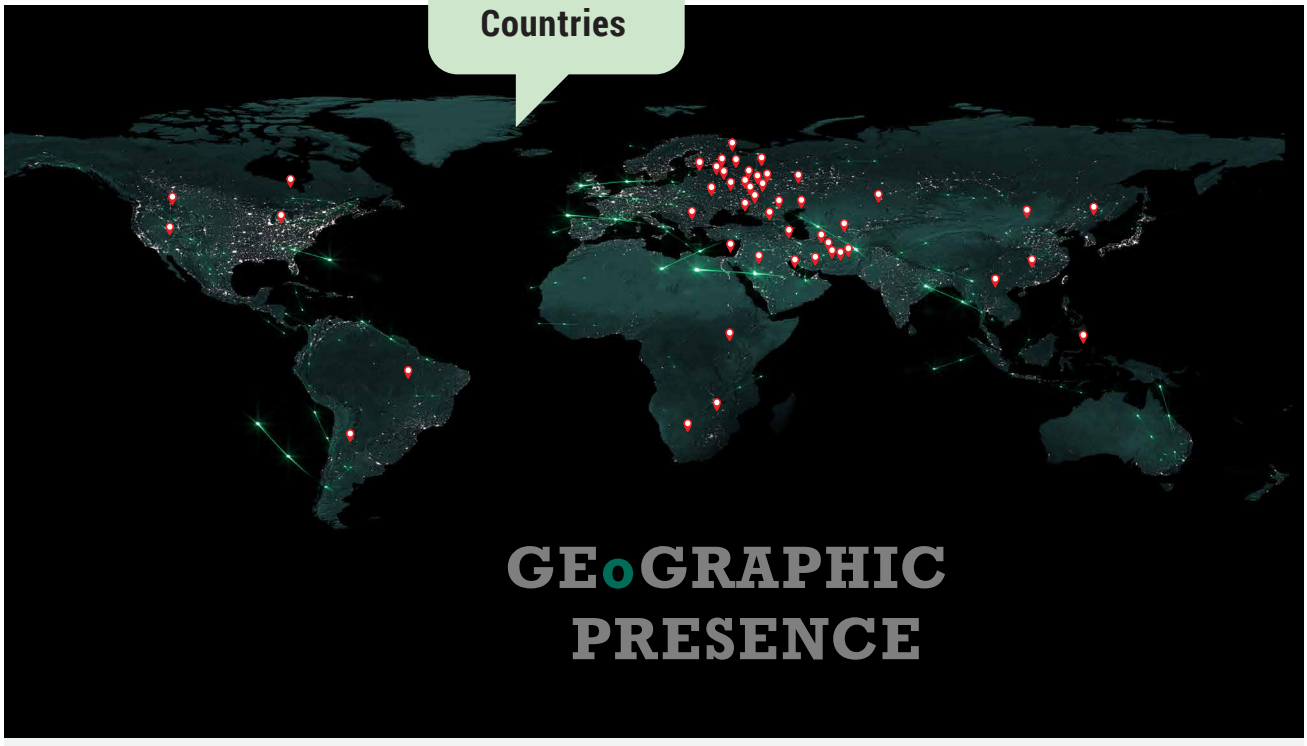

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