G2M

Insight

into Genetic
Mutations

CE IVD

CliSeq | NGS Clinical Panels

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Key Features

Cost Effective :
Pre-Capture Pooling Maintaing quality result

Uniform Coverage

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

Platform Compatibility:
Illumina, MGI, Thermo Fisher Scientific, and Element Biosciences

Low Input and ability to work with compromised sample quality

Robust and Rapid: 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.

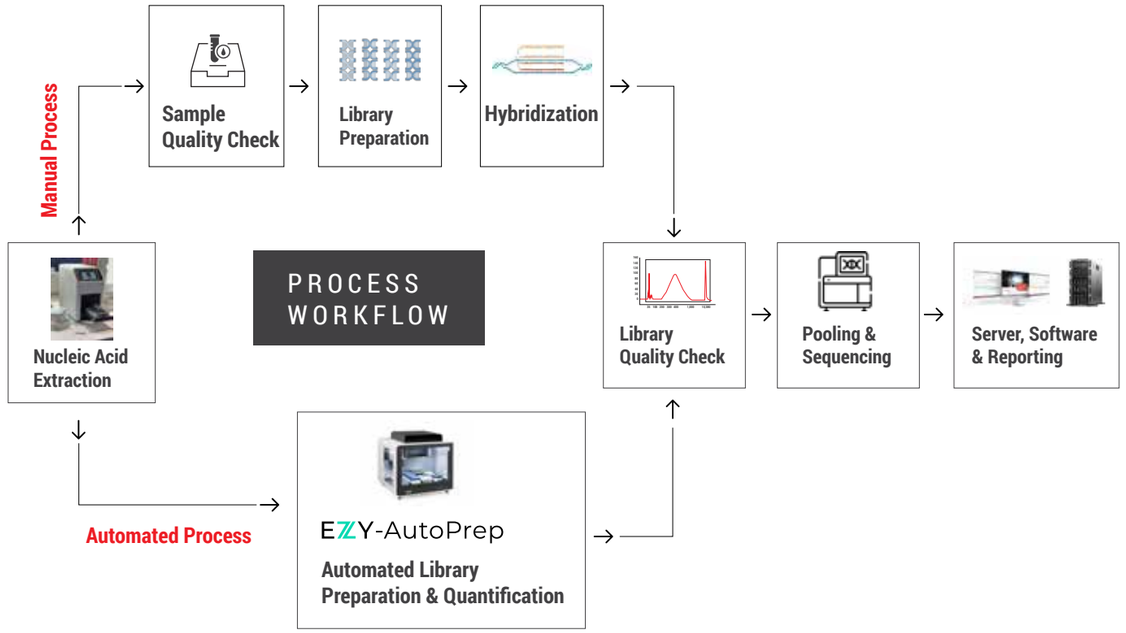
PANELS SPECIFICATIONS

Starting Material (DNA)	Library preparation time	Bioinformatics analysis	Databases used for Annotation
100-500 ng	1.5 days (including Target Capture & Enrichment) for manual process	Within 24hrs (Raw data to CSM report)	COSMIC, TCGA, ICGC, OncoDB, ClinVar, gnomAD 1000Genome, dbSNP
	With G2M Auto EzyPrep automated NGS Library preparation system: Minimum Hands-on required		

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.



CliSeq Interpreter

Automated **Analysis Reporting Platform**

- Cloud based analysis Software
- Global Software Access
- Strong customer Data Security

Clinically Relevant Mutations

Abbreviated Report Time

User Friendly

Multiple Parameter Analysis

- Platform Independent
- GUI Driven
- Automated Pipelines
- FASTQ to CSM* Reporting
- Optimised Data Mining

Cliseq Interpreter interface is browser based and simple clicks to select and upload the data. This pipeline implements typical NGS workflow by allowing fewer clicks and user's input data.

Cliseq Interpreter uses algorithms that are fine tuned to work with Genes2Me NGS Clinical panels designed for whole exome, cinical exome sequencing, oncology, liquid biopsy, pharmacogenomics, common and rare genetic diseases in detecting low frequency variants with high sensitivity to achieve clinical applications

- GPU Accelerated Hardware System
- Linux Based
- Data Analysis on Local Server
- Faster Than CPU Only Solution

KEY FEATURES

- Cancer & Rare Disease Diagnostics
- SNP, InDels, Copy Number Variation (CNV) Identification
- Tumor Mutation Burden (TMB), Microsatellite Instability (MSI)
- CSM Reporting according to ACMG & AMP Guidelines and 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

Sequencing Machines

- **Illumina**
- **MGI**
- **Ion Torrent**
- **Element Bioscience**

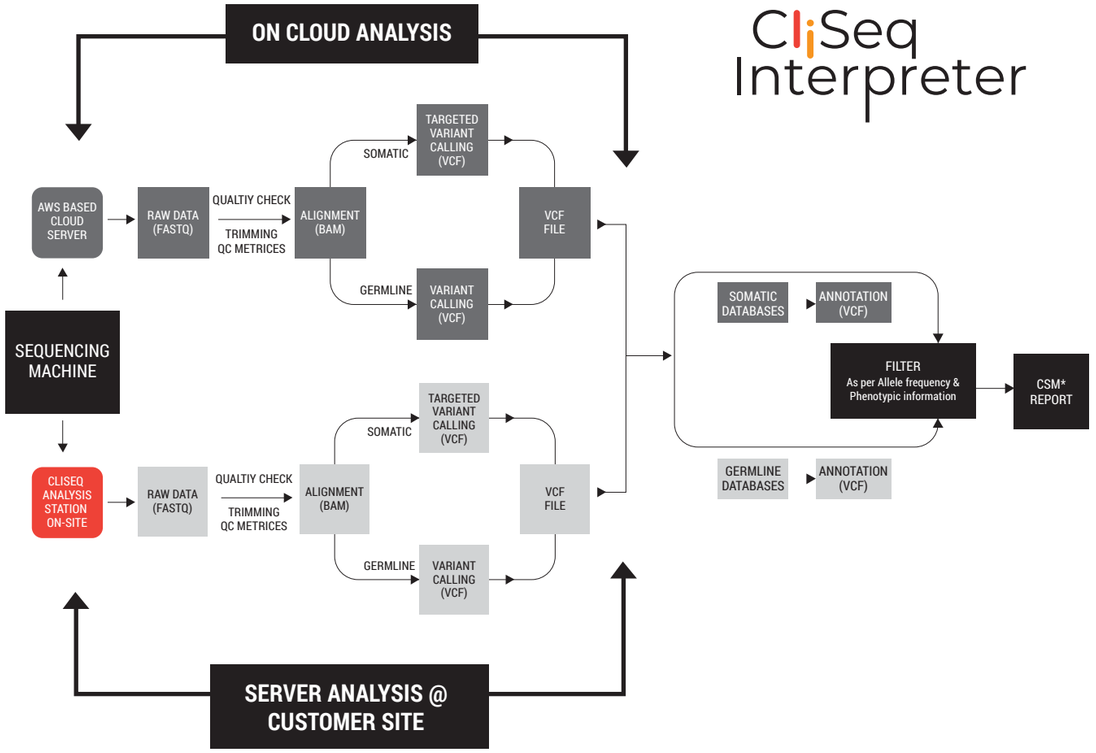
PROCESS WORKFLOW

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.

NGS Data Analysis
Just one-click away with

CliSeq Interpreter

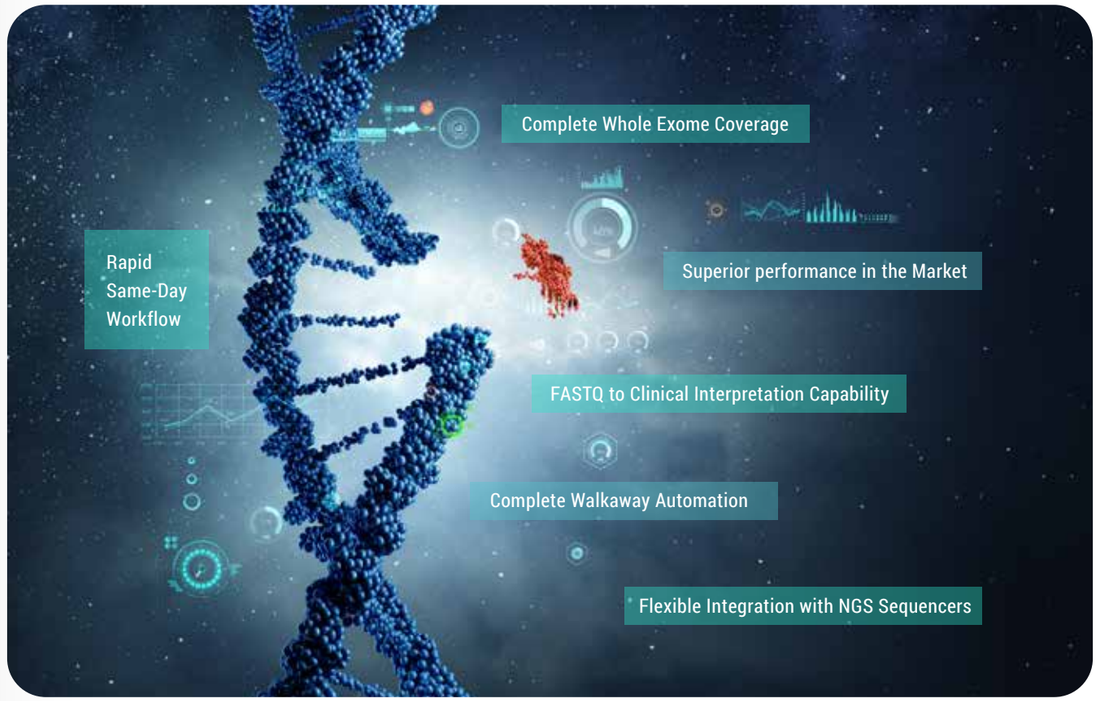


Whole Exome
Sequencing Panel

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 37.1 Mb with a hybridization-based target capture technique.

Gene count	~21500
Covered region	Whole CDS
Target size	~37.1 Mb
Mutation type	SNV/InDels/CNV/ Hotspot
Sample type	Blood/AF/Tissue/CVS



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	Thermo Fisher
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 Panel (Whole Exome Sequencing)	G2MCES07001(WES)-ill; G2MCES07001(WES)-TF; G2MCES07001(WES)-MG

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.

Abnormalities Covered

Detects common Aneuploidies and Sex Chromosome Abnormalities

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

LeoNext CfDNA LibraryPrep Kit for **NIPT**

with analysis report using
our propritory Cliseq platform

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

- 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 9th week onwards of pregnancy.
- Highly advanced and validated bioinformatic pipeline to evaluate fetal DNA in maternal blood.

Key Highlights of CliSeq NIPT

Panoramic view of the Fetal Genome
- Screens the entire genome of the fetus covering all 23 pairs of chromosomes

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

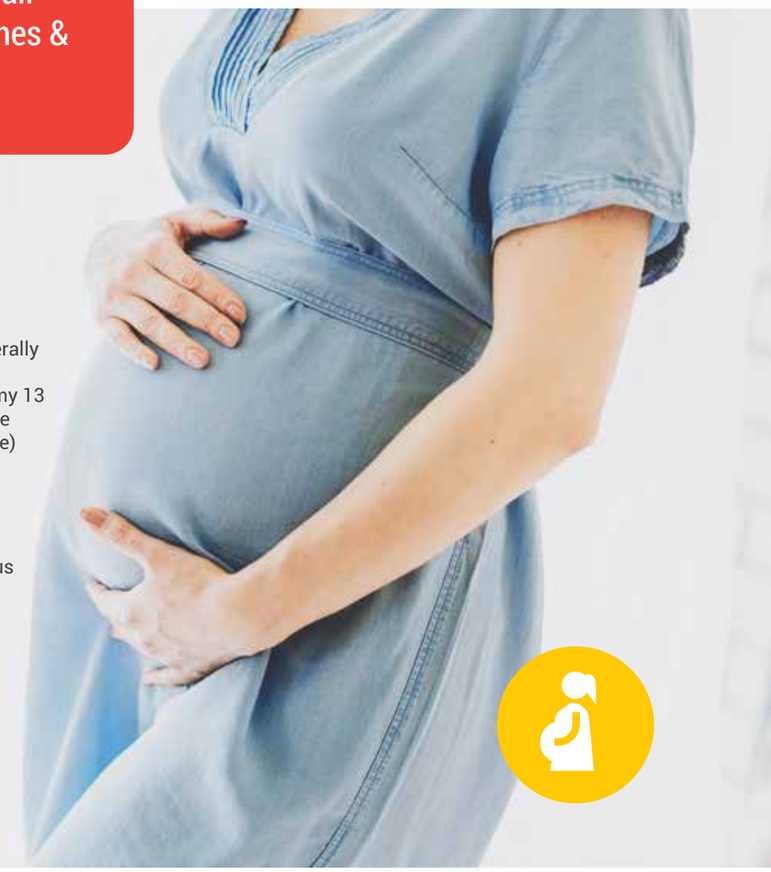
Extensively Validated on Clinical Samples

End-to-end solution

supported with automated report generation using Cliseq Interpretor

Sample	10 ml of peripheral blood in streck tube*
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	15 – 20 Million

CliSeq NIPT reports all
22 pairs of Autosomes &
Sex Chromosomes



Advantages of CliSeq NIPT

- Commercially available NIPT screening generally reports Trisomy 21 (T21; Down syndrome), Trisomy 18 (T18; Edwards syndrome), Trisomy 13 (T13; Patau syndrome), and sex chromosome abnormalities such as 45,X (Turner syndrome) and 47,XXY (Klinefelter syndrome).
- 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.

Process Workflow

ORDERING INFORMATION

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

NEWBORN SCREENING

"New Born Screening" utilizes the patented "All-in-one" multiplex PCR amplicon library preparation technology and NGS technology.

It performs sequencing of all exonic regions for 130 genes associated with metabolic and genetic diseases. The test is indicated for newborns and children. Offers early screening for genetic diseases that appear during the first stages of life, providing key information for preventive management, diet for early treatment.

Early detection, intervention & management could prove essential for the infant's overall health and quality of life.

Rapid Newborn Genetic Screening for

130 Genes by NGS

ADVANTAGES

Expert Specially designed gene detection kit for newborn screening

Rapid Releasing report within 5 working days, quickly meeting clinical demand

Accurate Multiple quality control, multi-center verification, Leading phenotypic-genotypic database

Potential Benefits

Identify potential health risks before symptoms arise	**Screens for over 140 diseases**	**Early detection known to have a positive impact**

Specimen Required

Dry Blood Spots
(size 3.2mm, 5 pieces)
by heel prick test

Peripheral Blood (1ml)

Metabolic Diseases* (133)

- Amino Acids Metabolic Diseases
- Organic Acid Metabolism Diseases
- Fatty Acid β Oxidation Disorder Diseases
- Lysosomal Storage Diseases
- Carbohydrate Metabolic
- Treatable Metabolic Epilepsy Diseases
- Other Genetic And Metabolism Diseases

Genetic Diseases* (7)

- Deafness
- Hemophilia B

*Limited disease details mentioned

ORDERING INFORMATION

Commercial Name	Cat No.
Genome Kundali NGS Panel (New Born Screening)	G2MGK29001-ill

PAN Cancer

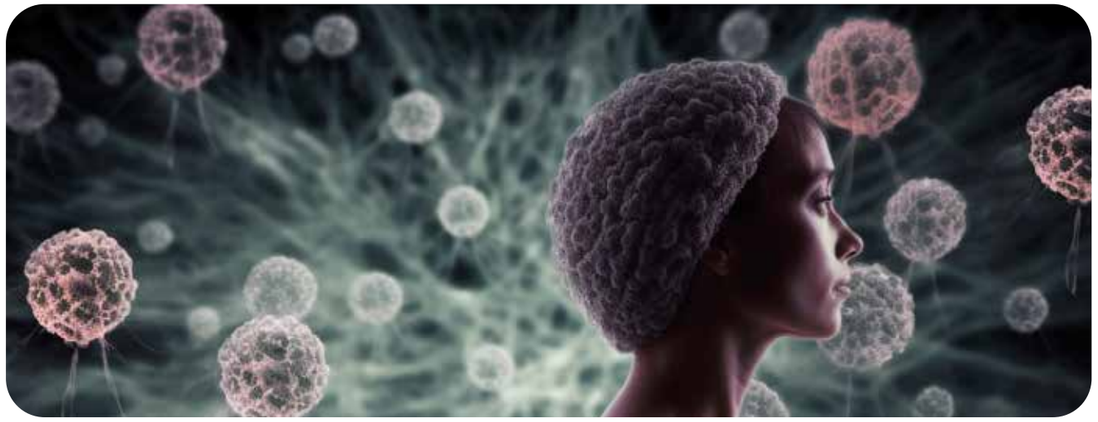
Panels

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) & HRR (Homologous Recombination Repair) 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.

Gene count	524
Covered region	Whole CDS, Hotspots
Target size	~3Mb
Mutation type	SNV/ InDels/ CNV, Rearrangement (DNA/RNA)
Biomarkers	TMB, MSI, HRR, Fusion genes
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

MAJOR CANCER

Genes which play critical role in solid tumers includes :

Breast	Cervix Uteri	Ovary
Prostate	Stomach	Thyroid
Lung	Liver	Oesophajus
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	95%	95%	95%
On Target Ratio	86-95%	85-95%	74-85%

ORDERING INFORMATION

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

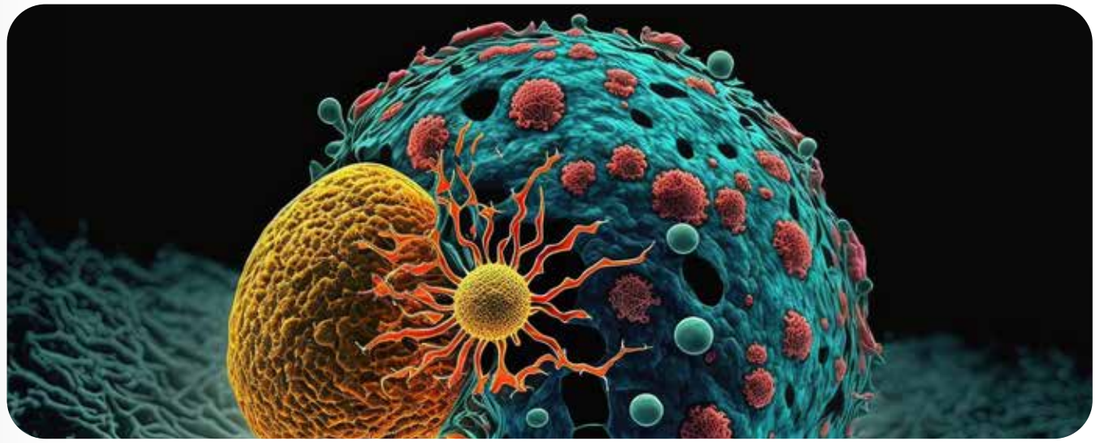
Liquid Biopsy

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	25
Covered region	Whole CDS, Hotspots
Target size	79 kb
Mutation type	SNV/ 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

ctDNA Breast Panel

Gene count	29
Covered region	Whole CDS, Hotspots
Target size	107 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

ctDNA Lung Panel

Gene count	32
Covered region	Whole CDS, Hotspots
Target size	120 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

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**	**Illumina**	**MGI**	**Illumina**
Coverage uniformity	98%	97%	98%	98%	97%	98%
Precision	96%	97%	94%	95%	93%	93%
Reproducibility	99%	99%	96%	96%	98%	98%
Sensitivity	<5%VAF at 95%	<5%VAF at 95%	<5%VAF at 95%	<5%VAF at 95%	<5%VAF at 95%	<5%VAF at 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 Leukemia NGS Panel

Common Hereditary Cancer NGS Panel

Gene count	~83
Covered region	Whole CDS, Hotspots
Target size	0.35 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	~43
Covered region	Whole CDS, Hotspots
Target size	0.2 Mb
Mutation type	SNV/InDels/CNV
Sample type	Blood

- Analyze 43 oncogenes associated with breast cancer and precisely selected from contract research organizations and numerous research studies
- 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#		

CNVs

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>96%	>96%	>86%
Precision	>96%	>96%	>92%
Reproducibility	99%	99%	99%
Sensitivity	95%	95%	95%
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	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 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	5%VAF at 95%	5%VAF at 95%	5%VAF at 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

Gene count	~75
Covered region	Whole CDS, Hotspots
Target size	0.2 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 75 clinically relevant genes spanning 0.2 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	ABCA*	•ABL1	•AKT1	•ALK	•ATM	•B2M	•BCL*	•BCOR
•BIRC3	•BRAF	•BTG1	•BTK	•CALR	•CARD11	•CCND3	•CD79*	•CDKN2A
•COG1	•COL4A4	•CREBBP	•CRLF2	•CTNNB1	•DDX3X	•DNM2	•DNMT*	•EP300
•ETV6	•EVC	•EZH2	•FBXW7	•FERMT1	•FLT3	•FREM2	•GATA3	•GRM1
•HPSE2	•ID3	•IDH*	•IKZF1	•IL12RB2	•IL7R	•JAK*	•KDM6A	•KMT2*
•KRAS	•L2HGDH	•LAMA3	•LEF1	•LMO1	•MAP2K1*	•MEF2B	•MPL	•MYD88
•NDUFV3	•NF1	•NOTCH1*	•NPHS2	•NPM1	•NRAS	•NSD2	•NT5C2	•NUDT15
•PIK3CA	•PIM1*	•PLCG2	•RHOA	•SF3B1	•STAT*	•STK11	•SYK	•TET2
•TNFAIP3	•TRAF3	•XPO1						

* Gene family

Additional genes covered

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

** Fusions

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	>98%	>96%	>85%
Precision	>95%	>96%	>90%
Reproducibility	99%	99%	99%
Sensitivity	95%	95%	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

Gene count	~49
Covered region	Whole CDS, Hotspots
Target size	0.2 Mb
Mutation type	SNV/InDels/CNV/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 49 clinically relevant genes spanning 0.2 Mb genome size that covers the whole coding sequence and hotspots linked to Myeloid Leukemia.

GENE LIST

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

* Gene family

Additional genes covered

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

** Fusions

PANEL PERFORMANCE

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

ORDERING INFORMATION

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

Lymphoma NGS Panel

Gene count	~75
Covered region	Whole CDS, Hotspots
Target size	0.2 Mb
Mutation type	SNV/InDels/CNV/ Fusion
Sample type	Blood, Bone marrow

Lymphoma NGS Panel is an NGS assay designed to detect all types of variants in 75 genes spanning 0.2 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
•DNMT1	•EGR2	•EP300	•EPCAM	•ETS1	•EVC	•EZH2	•FAS	•FAT4
•FBXO11	•FERMT1	•FREM2	•GNA13	•GRM1	•H1-4	•HPSE2	•ID3	•IDH2
•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						

** Fusions

PANEL PERFORMANCE

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

ORDERING INFORMATION

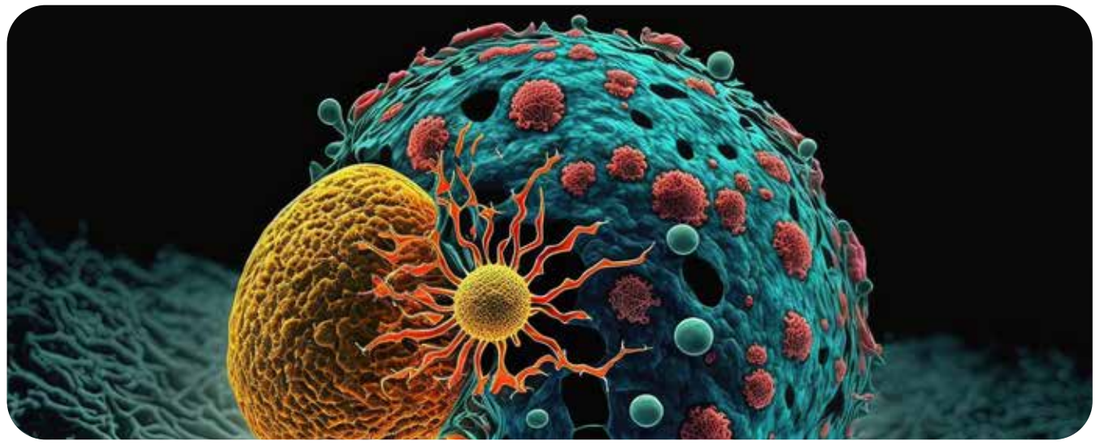
Commercial Name	Cat No.
Lymphoma NGS Panel	G2MLYM31001-ill , G2MLYM31001-MG, G2MLYM31001-TF

Cancercheck Panel

Somatic Cancer

Cancer is a term referred to a large group of diseases that can occur in any part of the body and have the capacity to invade or spread to other parts of the body. This happens when the molecular changes make normal cells to undergo uncontrollable growth converting them to abnormal cells that spread at a faster rate than usual. The changes (mutations) to 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

Gene count	~54
Covered region	Whole CDS
Target size	0.3 Mb
Mutation type	SNV/ InDels/ CNVs
Sample type	Blood/FFPE

The Genes2Me CancerCheck 50 Panel screens niche set of ~54 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	95%	95%	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

Gene count	~99
Covered region	Whole CDS
Target size	0.5 Mb
Mutation type	SNV/ InDels/ CNVs
Biomarkers	MSI, HRR Genes
Sample type	Blood/ FFPE

The Genes2Me CancerCheck 100 Panel screens niche set of ~99 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 biomarket 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
- SYK
- AKT*
- AURK*
- BRCA*
- CTNNB1
- ESR1
- HNF1A
- LRP1B
- MSH2*
- PALB2#
- RAD50
- SF3B1
- TERT
- ALK
- BAP1
- BRIP1#
- DAPK1
- EWSR1
- IDH1*
- LZTR1
- MTOR
- PI3KC*#
- RAD51*
- SLX4
- TOP1
- APC#
- BARD1#
- CALR
- DDR2
- EZH2
- IGF1R
- MAP3K1
- MUTYH
- PMS2
- RASSF1
- SMAD4
- TP53#
- ARID1*
- BCL2
- CCND*#
- EGFR*#
- FBXW7
- ITK
- MDM2
- NBN
- POLD1*
- RB1#
- SMO
- TSC*
- ASXL1
- BCOR
- CDH1
- EIF1AX
- FGF*
- JAK*
- MET#
- NF1
- PRSS1
- RET#
- SRC
- U2AF1
- ATM#
- BCR
- CDK*#
- EP300
- FGFR*#
- KDR
- MGMT
- NFE2L2
- PTCH1*
- ROS1
- SRSF2
- VHL
- ATR
- BLM
- CDKN2A#
- EPCAM
- FLI1
- KIT
- MLH1
- NOTCH*
- PTEN#
- RUNX*
- STAG2
- ZMYM3
- ATRIP
- BMPR1A
- CHEK2#
- EPHB4
- FLT3
- KMT2*
- MPL
- NPM1
- PTPN11
- SEMA3B
- STK11

* Gene family / # CNVs

PANEL PERFORMANCE

Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	95%	95%	87%
Precision	96%	96%	92%
Reproducibility	99%	99%	99%
Sensitivity	95%	95%	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

Gene & Drug Details

TYPE OF CANCER*	GENE	DRUG
Colorectal Cancer, Melanoma, NSCLC	BRAF	Trametinib, dabrafenib, encorafenib
Ovarian Cancer, Metastatic Castrate Resistant Prostate Cancer, Prostate Cancer	BRCA1, BRCA2	Niraparib, olaparib, rucaparib
Breast Cancer, Gastric and Gastroesophageal Cancer, NSCLC	ERBB2	Trastuzumab, pertuzumab
NSCLC	ALK	Crizotinib, brigatinib, lorlatinib,alectinib, ceritinib,
Cholangiocarcinoma	FGFR2	Pemigatinib, infigratinib
Cholangiocarcinoma, Acute Myeloid Leukemia - Peripheral Blood or Bone Marrow	IDH1	Lvosidenib, olutasidenib
NSCLC, Colorectal Cancer	KRAS	Adagrasib, cetuximab, panitumumab, sotorasib
NSCLC	MET	Capmatinib
NSCLC, Medullary Thyroid Cancer, Thyroid Cancer	RET	Pralsetinib, selpercatinib,
NSCLC,	ROS1	Entrectinib, crizotinib
B-cell Chronic Lymphocytic Leukemia - Peripheral Blood	TP53	Venetoclax

*Limited cancer type details mentioned

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

Gene count	~122
Covered region	Whole CDS + UTR (-50bp, +10 bp)
Target size	0.9 Mb
Mutation type	SNV / InDels / CNVs
Sample type	Blood

PGx

PHARMACOGENOMICS
INSIGHTS

The Med4Me Panel is a NGS assay, designed to assess 122 genes associated with pharmacogenomics.

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

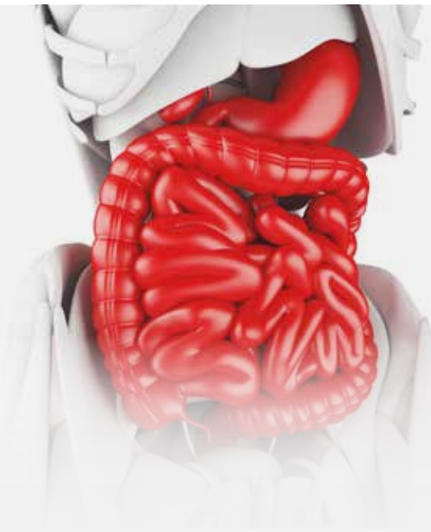
Features	Illumina	MGI	Thermo Fisher
Coverage uniformity	94%	93%	83%
Precision	98%	98%	84%
Reproducibility	98%	98%	98%
Sensitivity	>90%	>91%	>77%
On Target Ratio	88-95 %	87-95%	74-85%

ORDERING INFORMATION

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

PAN Pathogen Panel

Genes2Me PAN Pathogen Panel use "All-In-One" ultra-high-weight PCR amplicon capture technology and second-generation high-throughput sequencing technology, 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
200
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 rapid 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

Sample Details

Sample Type	Blood	Cerebrospinal fluid	Alveolar lavage fluid	Sputum	Other sterile body fluids (thoracoabdominal fluid, herpes fluid and pus, etc.)	Urine	Swabs	Tissue specimens
Sample Size	Adult: ≥2mL Infant: ≥1mL	≥1mL	3mL or more			≥5mL	≥2 swabs to fully absorb the sample	Mung bean size (saline not over the specimen)
Collection	Free DNA Collection Tubes	10mL sterile screw-top tube, Note: must be tightly sealed to prevent leakage					Sterile swab and storage tube (Note: need to be tightly sealed to prevent leakage)	Aseptic containers
Storage Conditions	Storage at room temperature (5- 37°C)							
Transportation	Transport at room temperature, and use ice packs for transport in high temperature weather (the blood collection tubes should be wrapped with bubble wrap or thermal insulation material to avoid direct contact with the ice pack).	Dry ice/ice box shipping (<-20°C)						

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 employing NGS. With a fast turnaround time this product provides detection and identification of ~174 clinically relevant genes spanning 2 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

Gene count	~174
Covered region	Whole CDS
Target size	~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

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 293 clinically relevant genes spanning 2.5 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

Gene count	~293
Covered region	Whole CDS
Target size	~2.5 Mb
Mutation type	SNV/InDels/CNVs
Sample type	Blood

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 ~101 clinically relevant genes spanning 0.4 Mb of genome size (whole coding sequence) that covers all major mutations like SNV, InDels, & CNV.

Gene count	~101
Covered region	Whole-CDS, Hotspots
Target size	~0.34 Mb
Mutation type	SNV/InDels/CNVs
Sample type	Blood, Bone marrow

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

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 from blood tissue. It provides comprehensive detail of the cancer and helps to decide the best course of treatment

Gene count	~7600
Covered region	Whole CDS, Hotspots, Mitochondrial Genome
Target size	19.6 Mb
Mutation type	SNV/InDels/CNVs
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

Cross Platform Performance

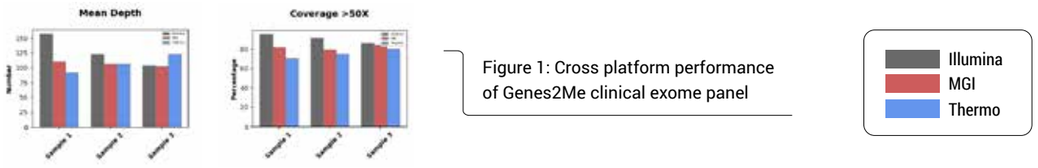


Figure 1: Cross platform performance of Genes2Me clinical exome panel

ORDERING INFORMATION

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

EZY-AutoPrep

Automated NGS Library Preparation Workstation

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.

- **Intelligent & Visual**
- **Multiple Functional Modules**
- **Precise Pipetting**
- **Simple Operation, Get Started Quickly**
- **Flexible Matching Experiment Needs**

Introduction of DNA Library Construction Workflow

Note: EZY-AutoPrep can achieve the whole process of library construction except for "quality control"

Product Features

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.

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.

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.

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.

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.

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 disposable automatic cover or conventional sealing cover to avoid condensation on the top and reduce the risk of cross-infection.

Plate Layout

1 Tip Area

1.1 200 µL / 50 µL TIP holders, supporting simultaneous use of 8-channel pipettor.

1.2 200 µL / 50 µL TIP holders, mainly used for single channel and X-channel pipettor.

3 Temp. Control Block

Temperature control range: 4~105 °C, can store reagents with refrigeration needs.

12×1.5 / 2.0 mL frozen storage tube+6×8×0.2 mL PCR tube, and customization is available.

5 Magnetic Bead Mixer

Used for mixing magnetic beads.

4×5 mL centrifuge tube.

7 Fluorometer

The quality control block can simultaneously detect 8 samples, requiring 1 to 20 µL of samples to obtain accurate sample concentrations, with a minimum detection limit of down to 1 pg/µL (dsDNA).

2 PCR Block

Mainly used for the PCR amplification step during the library preparation process. Can place 96×0.1 mL full-skirted PCR consumables.

4 Reagent Area

Used for storage of room temperature reagents.

24×0.6 mL (special consumables)+2×8×1.1 mL deepwell tube+2×8 PCR caps (special consumables)+3×8×0.2 mL PCR tube.

The block area has an automatic flip function to store fluorescent reagents in a dark place.

6 Magnetic Area

The bottom 96-well magnetic area can closely fit with the 2.0 mL / 1.0 mL 96-well plate, and use rising and falling function of the magnetic area to achieve the combination and separation with the magnetic beads.

8 Waste Area

TIP off box; the waste liquid container is freely accessible.

Special Function Module

Single-channel / 8-channel Pipettor

- 8-channel 1-200 μL fixed spacing pipettor can be used as a single channel to meet the needs of reagent dispensing and pipetting of multiple samples in the same process.
- PLLD / CLLD function, which can sensitively detect liquid level, residual liquid volume and blockage to ensure precise control of pipetting process; equipped with the software related reminder function to ensure that there will be no abnormal experimental results due to insufficient liquid volume during the library construction.

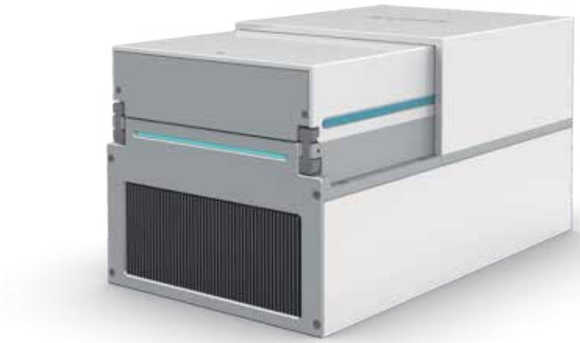
Pipetting range	Pipetting precision	Pipetting accuracy
1 - 200 μL	1 μL: ≤ 5%	1 μL: ±12%
	2 μL: ≤ 5%	2 μL: ±10%
	20 μL: ≤2 %	20 μL: ±2%
	100 μL: ≤ 1%	100 μL: ±1%
	200 μL: ≤ 1%	200 μL: ±1%

Thermal Cycling Module

EZY-AutoPrep is equipped with a built-in thermal cycling module, which can cooperate with the software to automatically realize amplification int the library construction process.

In order to prevent cross-contamination from affecting the experimental results, you can choose to use a reusable cover plate or a disposable PCR sealing film to seal the PCR plate during the experiment.

Module temperature control range	4 °C~99 °C
Max. temperature of thermo lid	110 °C
Max. heating rate	4.5 °C/s
Max. cooling rate	4.5 °C/s
Temperature precision	±0.3°C @55°C
Temperature accuracy	≤ ±0.2°C @55°C
Temperature uniformity	±0.2°C (@55°C, 72°C, 95°C)



Temperature Control Module

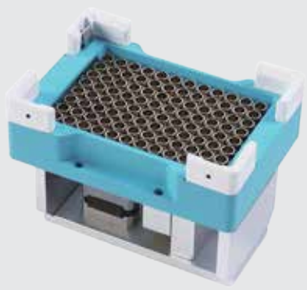
Can be freely set at 0-105 °C, the reagent temperature control module of EZY-AutoPrep : can place 3×8×0.2 mL PCR tube + 20×2.0 mL centrifuge tube; various requirements can be realized by changing the module adapter according to the purpose of the module.

Temperature accuracy: 0.5 °C, @55 °C

Temperature uniformity: 0.5 °C, @55 °C

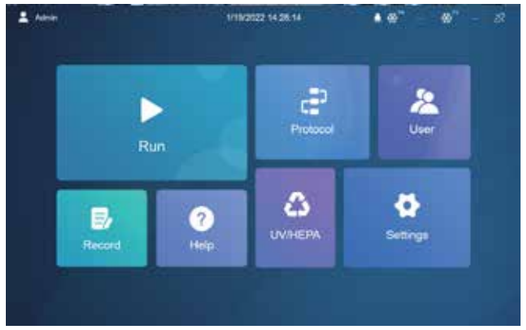
Magnetic Plate Module

The magnetic plate module with freely adjustable height can be used for magnetic bead separation of various plates by cooperation with software.



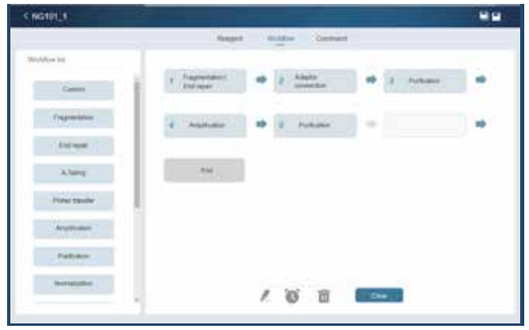
Software

In order to facilitate the use of EZY-AutoPrep, our R&D team can customize the design according to the needs of customers for common NGS library construction methods. Simple and intuitive GUI ensures that you can quickly run the library construction program after the system is installed and makes the software convenient to help you create and run the automated liquid handling protocols.



Main Page

The main page has a simple layout, which is convenient, reasonable and easy to be understood.



Program Interface

The program settings are open and flexible. Different processes such as reagent transfer, sample transfer and PCR can be set up according to different kits to meet the needs of different experimental steps.

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