CE IVD

GENES2ME DX

CliSeq NGS Clinical Panels

Insight into **Genetic Mutations**

Genes2Me has developed different NGS based **Clinical Panels** which are compatible with all **NGS platforms from Illumina, Thermo Fisher ION and MGI**

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CliSeq NGS Clinical Panels

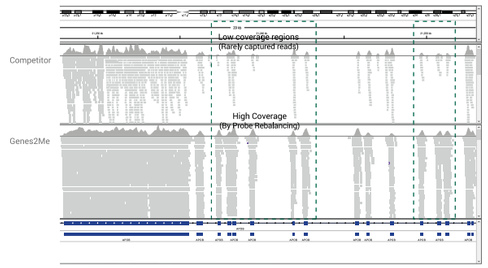
GENES2ME DX

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.

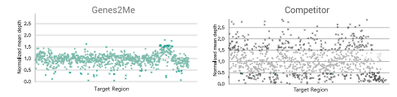
FEATURES & BENEFITS

1. Hybridization-based capture	2. Maximized Efficiency allows Market Leading Capture Performance	3. Hybridization Enhancer Technology and Enzymatic Library Preparation
4. User-friendly Bioinformatics Software	5. Reduced NGS costs by Pre-capture pooling with no compromise on quality	6. Molecular barcode and bioinformatics for ultra-low VAF mutations
7. CAS for bioinformatics analysis	8. Flexible panel content with Gene Add-on Service	9. Default wet-lab QC for every customized panel
10. Robust, Rapid, Reliable Customization	11. Compatible with all NGS instruments and automation platforms	12. Capture the 'Hard-to-Capture' regions

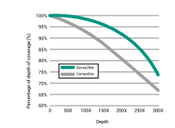
1. High Coverage Panel Compared to Competitor Products



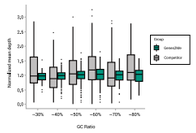
2. Higher Uniformity Across Target Regions



3. Superior Coverage Depth Over Target Regions



4. Superior Capture Performance Across GC Percentage



KEY FEATURES

- Complete Whole Exome Coverage
- Superior performance in the Market
- FASTQ to Clinical Interpretation Capability
- Rapid Same-Day Workflow
- No Need for Heavy Instruments
- Complete Walkaway Automation
- Flexible Integration with NGS Sequencers

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Whole Exome Sequencing Panel

Whole Exome Sequencing (WES) Panel is a comprehensive solution that covers all target regions of major WES panels available in the market. With a target size of 37.1 Mb, the panel does not compromise performance in terms of coverage and uniformity, enabling highly efficient and cost-effective sequencing of the human whole exome. The panel coverage spans across exon regions from RefSeq, CCDS, and GENCODE.

Panel Performance

WES panel shows exceptional performance when measured by On-target read ratio, 0.2X mean depth coverage uniformity, and Fold-80 base penalty.

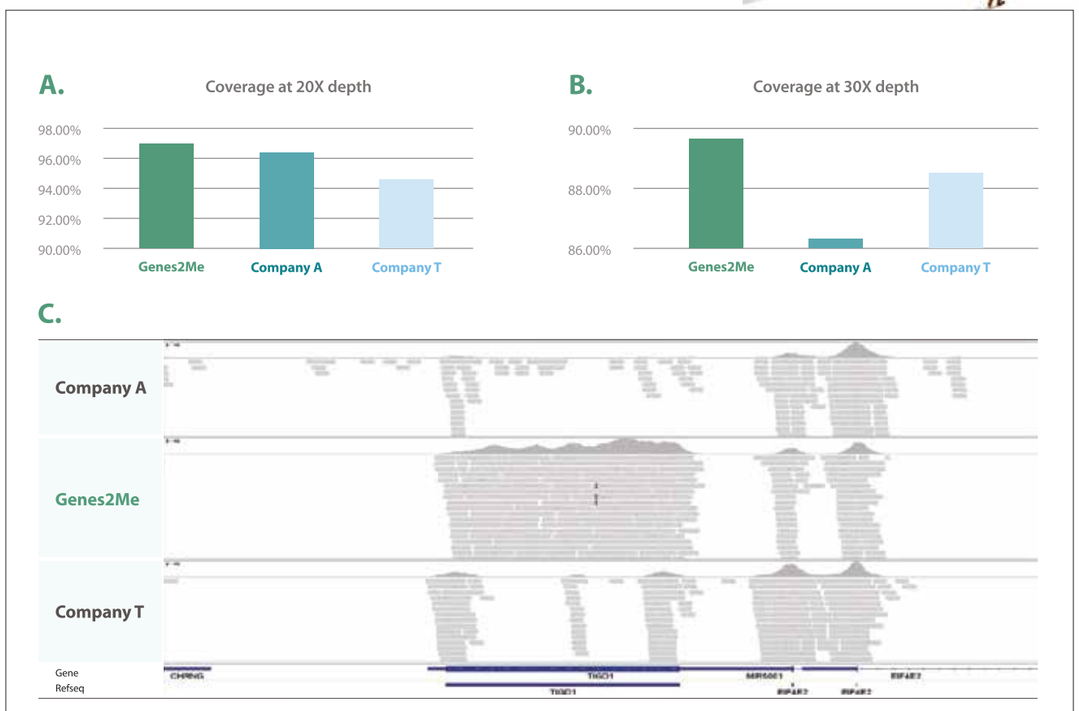


Figure 1. Exhaustive Coverage for Each Gene

The Genes2Me WES Panel covers each gene with thorough coverage in comparison to competitor products. The bar graphs indicate the percentage of genes that are covered at (A) 20X depth and (B) 30X depth. The data from the three panels were downsampled to 5.4 Gb. (C) The IGV figure demonstrates the superior coverage performance of the Genes2Me Whole Exome Sequencing Panel against the TGID1 gene compared to other competitor products.

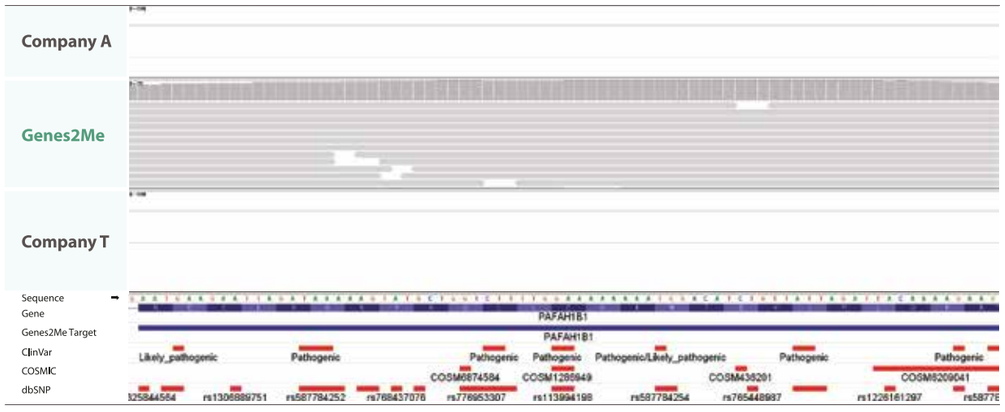


Figure 2. Superior Capture Performance and Coverage

A mutation in PAFAH1B1 causes Isolated Lissencephaly Sequence (ILS) & Miller-Dieker syndrome. While other competitor panels fail to capture the A-T rich regions in this gene, the Genes2Me WES Panel successfully covers the region.

List of Diseases category assessed byClinical Exome Sequencing (CES) Expanded Panel

- Cardiology
- Dermatology
- Endocrinology
- ENT
- GI/Hepatology
- Hematology
- Immunology
- Metabolism
- Nephrology
- Neurology
- Oncology
- Ophthalmology
- Pulmonology
- Skeletal disorders

1. High Coverage Panel Compared to Competitor Products

Clinical Exome Sequencing (CES) Expanded Panel

The Clinical Exome Sequencing (CES) Expanded Panel has overcome the limitations of analyzing clinical diseases with whole exome sequencing. By selectively targeting the clinically significant genes, the panel enables comprehensive analysis with the most effective sequencing throughput.

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

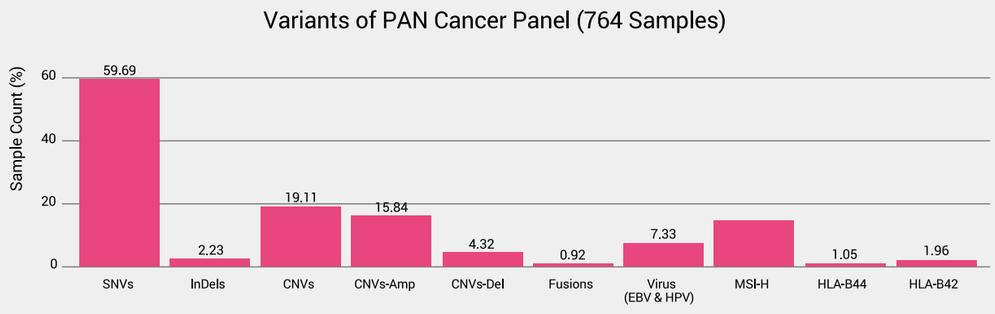
Specification

- Gene count- 7,513 genes
- Covered region- CDS, hotspots, Mitochondrial genome
- Target size- 19.6 Mb
- Mutation type- SNV, Indel, CNV
- Sample type- Blood (> 50 ng of fragmented DNA)
- Platform- All sequencers from Illumina, Thermo Fisher, MGI
- Bioinformatics pipeline- Primary, Secondary and Tertiary analysis result (FASTQ to VCF, VCF to Clinical report)

Commercial Name	Cat No.
Clinical Exome Sequencing (CES) Expanded Panel	G2MCES07001-ill; G2MCES07001-TF; G2MCES07001-MG
Whole Exome Sequencing (WES) Panel	G2MWGS32001-ill; G2MWGS32001-MG

Panel Performance

The probes are designed to include the intron regions as well as clinically significant biomarkers. By conducting extensive validation studies with clinical samples, the panel was examined to show its performance with high sensitivity and specificity in detecting the variants in cancer-associated genes.

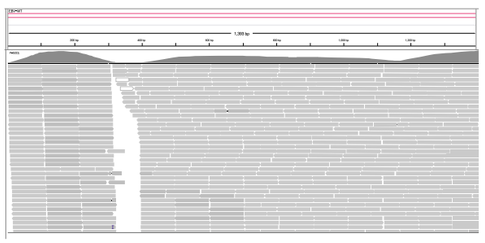


ANALYSIS OF EBV & HPV

EBV (Epstein-Barr Virus)

- Related disease – Lymphoma
- Genes – EBV type 1 (EBNA-2)

Validation for detection of EBV type 1 (EBNA-2) in control specimens



HPV (Human Papillomavirus)

- Related disease – Cervical cancer
- Genes – HPV L1 gene (Analysis of a total of 24 types is possible)

Analysis of the following 11 types of HPV types was completed using clinical specimens

Human infection HPV list

- Human papillomavirus type 178
- Human papillomavirus type 136
- Human papillomavirus type 140
- Human papillomavirus type 154
- Human papillomavirus type 156
- Human papillomavirus type 179
- Human papillomavirus type 201
- Human papillomavirus type 49
- Human papillomavirus type 9
- Human papillomavirus type 92
- Human papillomavirus type 96

PAN Cancer Panel

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

PanCan

Specification

- Gene count- 524 genes
- Covered region- Whole CDS, custom regions of oncogenes, immune response genes, and EBV & HPV viruses
- Target size- 2.5 Mb
- Mutation type- SNV, Indel, CNV, Rearrangment, TMB, MSI, EBV, HPV
- Sample type- FFPE, Fresh frozen tissue (> 50 ng of fragmented DNA)
- Platform- All sequencers from Illumina, Thermo Fisher & MGI
- Bioinformatics pipeline- Primary, Secondary and Tertiary analysis result (FASTQ to VCF, VCF to Clinical report)

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

KEY FEATURES

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

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Liquid Biopsy Panels

Colorectal/ Breast/ Lung

CliSeq LiqBio

The detection sensitivity for low-frequency variants from a limited amount of sample is of great importance to ctDNA analysis kits. The panels are thoroughly validated and ready to use for clinical diagnosis.

ctDNA Lung Panel

- Gene count- 28 genes
- Covered region- Whole CDS
- Target size- 47 kb
- Mutation type- SNV, Indel
- Sample type (amount)- Plasma (> 20 ng of cfDNA)

GENE LIST

ctDNA Lung Panel	AKT1	ALK	ARAF	ARID1A	BRAF	CBL	CDKN2A	EGFR	ERBB2	HRAS	KEAP1	KRAS	MAP2K1
	MET	MTOR	NF1	NRAS	NTRK1	NTRK2	PIK3CA	PTEN	RB1	RIT1	ROS1	SETD2	STK11
	TP53	U2AF1											

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

ctDNA Colorectal Panel

- Gene count- 16 genes
- Covered region- Whole CDS
- Target size- 18 kb
- Mutation type- SNV, Indel
- Sample type (amount)- Plasma (> 20 ng of cfDNA)

GENE LIST

ctDNA Colorectal Panel	APC	BRAF	EGFR	ERBB2	ERBB3	FGFR1	HRAS	IRS1	KRAS	KRAS	MET	NRAS	PDGFRB
	PIK3CA	PTEN	TP53										

ctDNA Breast Panel

- Gene count- 27 genes
- Covered region- Whole CDS
- Target size- 99 kb
- Mutation type- SNV, Indel
- Sample type (amount)- Plasma (> 20 ng of cfDNA)

GENE LIST

ctDNA Breast Panel	AKT1	APC	AR	BRCA1	BRCA2	CCND1	CDH1	EGFR	ERBB2	ESR1	FGFR1	FGFR2	GATA3
	IGF1R	KIT	KRAS	MAP2K4	MAP3K1	MDM2	MYC	NF1	PIK3CA	PIK3R1	PTEN	RB1	TOP2A
	TP53												

Lymphoid Leukemia NGS Panel

Lymphoid Leukemia NGS Panel is an NGS assay designed to detect all types of variants in 75 genes associated with Lymphoid Leukemia.

GENE LIST

Lymphoid Leukemia NGS Panel	AARS	ABCA13	ABCB11	ABL1	BRAF	BTG1	CDKN2A	COG1	COL4A4
	CREBBP	CRLF2	DNM2	DNMT1	DNMT3A	EP300	ETV6	EVC	EZH2
	FBXW7	FERMT1	FLT3	FREM2	GATA3	GRM1	HPSE2	IDH1	IDH2
	IKZF1	IL12RB2	IL7R	JAK1	JAK2	JAK3	KDM6A	KMT2A	KMT2D
	KRAS	L2HGDH	LAMA3	LEF1	LMO1	MAPK1	NDUFV3	NF1	NOTCH1
	NPHS2	NRAS	NSD2	NT5C2	NUDT15	PAX5	PDP1	PHF6	PTEN
	PTPN11	RB1	RUNX1	SERPIND1	SETD2	SH2B3	SLC12A6	SOX6	SRY
	STAG2	STAT3	STAT5B	SUMF1	TBL1XR1	TCF3	TDRD7	TP53	TPMT
	VCAN	WNK1	WT1						

Lymphoma NGS Panel

Lymphoma NGS Panel is an NGS assay designed to detect all types of variants in 75 genes associated with Lymphoma.

GENE LIST

Lymphoma NGS Panel	AARS	ABCA13	ABCB11	ALK	ATM	B2M	BCL6	BIRC3	BRAF
	BTK	CARD11	CD79A	CD79B	COG1	COL4A4	CREBBP	CXCR4	DNMT1
	EGR2	EP300	EVC	EZH2	FAS	FAT4	FBXO11	FERMT1	FREM2
	GRM1	HPSE2	ID3	IDH2	IKBKB	IKZF1	IL12RB2	JAK3	KLF2
	L2HGDH	LAMA3	MYC	MYD88	NDUFV3	NFKBIE	NOTCH1	NOTCH2	NPHS2
	PDP1	PLCG1	PLCG2	POT1	PRDM1	RHOA	RPS15	RRAGC	SERPIND1
	SF3B1	SLC12A6	SOCS1	SOX6	SRY	STAT3	STAT5B	SUMF1	TBL1XR1
	TCF3	TDRD7	TET2	TNFAIP3	TNFRSF14	TP53	TP63	TRAF3	UBR5
	VCAN	WNK1	XPO1						

Myeloid Leukemia NGS Panel

Myeloid Leukemia NGS Panel is an NGS assay designed to detect all types of variants in over 49 genes associated with Myeloid Leukemia.

GENE LIST

Myeloid Leukemia NGS Panel	ANKRD26	ASXL1	ATRX	BCOR	BCORL1	BRAF	CALR	CBL	CBLB
	CEBPA	CSF3R	DDX41	DNMT3A	ETV6	EZH2	FLT3	GATA1	GATA2
	HRAS	IDH1	IDH2	JAK2	JAK3	KDM6A	KIT	KRAS	MPL
	NOTCH1	NPM1	NRAS	PDGFRA	PHF6	PPM1D	PTPN11	RAD21	RUNX1
	SETBP1	SF3B1	SMC1A	SMC3	SRSF2	STAG1	STAG2	STAT3	TET2
	TP53	U2AF1	WT1	ZRSR2					

Oncology Panels

CliSeq Onco

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

BRCA 1/2 Panel *Germline & Somatic Cancer*

BRCA Screen

- Targets the whole CDS (+/- 40) and promoter regions of BRCA 1/2 with high specificity
- Compatible with a variety of sample types
- Designed to target whole exon regions of BRCA 1, 2 gene with 100% coverage (RefSeq) and validated to yield 100% coverage

Oncogenes	BRCA 1/2 genes
Target size	23 kb
Mutation type	SNV, Indel, CNV
Sample type(amount)	Blood (> 50 ng of fragmented DNA), FFPE

Common Hereditary Cancer NGS Panel

Common Hereditary Cancer NGS Panel is an NGS assay designed to detect all types of variants in 61 genes associated with Common Hereditary Cancers.

GENE LIST

Common Hereditary Cancer NGS Panel	APC	ATM	ATRX	BARD1	BMPR1A	BRAF	BRCA1	BRCA2	BRIP1
	CDH1	CDKN2A	CHEK2	EGLN1	EGLN2	EPAS1	EPCAM	FGFR1	FH
	H3F3A	HRAS	IDH2	KIF1B	KMT2D	MAX	MDH2	MEN1	MERTK
	MET	MLH1	MRE11	MSH2	MSH6	MUTYH	NBN	NF1	NF2
	PALB2	PMS2	POLD1	POLE	PRSS1	PTEN	RAD50	RAD51C	RAD51D
	RB1	RET	SDHA	SDHAF2	SDHB	SDHC	SDHD	SMAD4	SPINK1
	STK11	TMEM127	TP53	TSC1	TSC2	VHL	WT1		

Commercial Name	Cat No.
BRCA 1/2 Panel	G2MBR00001-ill; G2MBR00001-TF; G2MBR00001-MG
Common Hereditary Cancer NGS Panel	G2MCHC24001-ill; G2MCHC24001-MG; G2MCHC24001-TF
Myeloid Leukemia NGS Panel	G2MML28001-ill; G2MML28001-MG; G2MML28001-TF
Lymphoid Leukemia NGS Panel	G2MLL30001-ill; G2MLL30001-MG; G2MLL30001-TF
Lymphoma NGS Panel	G2MLYM31001-ill; G2MLYM31001-MG; G2MLYM31001-TF

Oncology Panels

CliSeq Onco

OncoCheck Panel *Hereditary Cancer (Germline Cancer Risk)*

- Analyze 31 oncogenes associated with inherited cancer and precisely selected from contract research organizations and numerous research studies
- Robust bioinformatics system for large deletion analysis
- Provides information for HDR grade computation to aid precision medicine for tumor treatment

Gene count	31 genes
Target size	96 kb
Mutation type	SNV, Indel, CNV, Rearrangment
Sample type(amount)	Blood (> 50 ng of fragmented DNA), FFPE

GENE LIST

OncoCheck Panel	APC	ATM	BARD1	BLM	BMPR1A	BRCA1	BRCA2	BRIP1	CDH1	CDK4	CDKN2A	CHEK2	EPCAM
	MLH1	MRE11A	MSH2	MSH6	MUTYH	NBN	PALB2	PMS2	PRSS1	PTEN	RAD50	RAD51C	RAD51D
	SLX4	SMAD4	STK11	TP53	VHL								

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

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CancerCheck Panel *Somatic Cancer*

Cancer Check Panels are NGS assays designed to detect all types of variants associated with somatic 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

The CancerCheck 50 Panel is an expanded NGS assay designed to detect all types of variants in over 50 genes associated with somatic cancer.

GENE LIST

CancerCheck 50	ABL1	AKT1	ALK	APC	ATM	BRAF	BRCA1	BRCA2	CDH1	CDK4	CDK6	CDKN2A	CSF1R
	CTNNB1	DDR2	EGFR	ERBB2	ERBB4	ESR1	FGFR1	FGFR2	FGFR3	GNA11	GNAQ	GNAS	HRAS
	IDH1	IDH2	JAK2	KDR	KIT	KRAS	MAP2K1	MET	MLH1	MTOR	MYC	MYCN	NOTCH1
	NRAS	NTRK1	PDGFRA	PIK3CA	PTCH1	PTEN	PTPN11	RB1	RET	ROS1	SMAD4	SMO	SRC
	STK11	TP53											

CancerCheck 100 Panel

The CancerCheck 100 Panel is an NGS assay for the comprehensive analysis of around 100 genes associated with somatic cancer.

GENE LIST

CancerCheck 100	ABL1	AKT1	AKT2	AKT3	ALK	APC	ARID1A	ARID1B	ARID2	ATM	ATRX	AURKA	AURKB
	BARD1	BCL2	BLM	BMPR1A	BRAF	BRCA1	BRCA2	BRIP1	CDH1	CDK4	CDK6	CDKN2A	CHEK2
	CSF1R	CTNNB1	DDR2	EGFR	EPCAM	EPHB4	ERBB2	ERBB3	ERBB4	EZH2	FBXW7	FGFR1	FGFR2
	FGFR3	FLT3	GNA11	GNAQ	GNAS	HNF1A	HRAS	IDH1	IDH2	IGF1R	ITK	JAK1	JAK2
	JAK3	KDR	KIT	KRAS	MDM2	MET	MLH1	MPL	MRE11	MSH2	MSH6	MTOR	MUTYH
	NBN	NF1	NOTCH1	NPM1	NRAS	NTRK1	PALB2	PDGFRA	PDGFRB	PIK3CA	PIK3R1	PMS2	PRSS1
	PTCH1	PTCH2	PTEN	PTPN11	RAD50	RAD51C	RAD51D	RB1	RET	ROS1	SLX4	SMAD4	SMARCB1
	SMO	SRC	STK11	SYK	TERT	TOP1	TP53	VHL					

Commercial Name	Cat No.
CancerCheck 50 Panel	G2MCC03001-ill; G2MCC03001-TF; G2MCC03001-MG
CancerCheck 100 Panel	G2MCC04001-ill; G2MCC04001-TF; G2MCC04001-MG

Med4Me Epilepsy Panel

The Med4Me Epilepsy Panel consists of 91 genes associated with anti-epileptic drugs. Although over 20 different anti-epileptic drugs have been developed, most of the drugs failed to prevent seizures, or faced challenges of determining the proper dosage for an individual patient. The genetic factor is one of clinical factors to be considered.

GENE LIST

Med4Me Epilepsy Panel	ANKK1	CACNA1A	CACNA1B	CACNA1D	CACNA1E	CACNA1F	CACNA1G	CACNA1H	CACNA1I	CACNA1S	CACNA2D1	CACNA2D2	CACNA2D3
	CACNA2D4	CACNB1	CACNB2	CACNB3	CACNB4	CACNG1	CACNG2	CACNG3	CACNG4	CACNG5	CACNG6	CACNG7	CACNG8
	CDH13	CLCN2	EFHC1	GABRA1	GABRA2	GABRA3	GABRA4	GABRA5	GABRA6	GABRB1	GABRB2	GABRB3	GABRD
	GABRE	GABRG1	GABRG2	GABRG3	GABRP	GABRQ	GABRR1	GABRR2	GABRR3	GRIA1	GRIA2	GRIA3	GRIA4
	GRIK1	GRIK2	GRIK3	GRIK4	GRIK5	GRIN1	GRIN2A	GRIN2B	GRIN2C	GRIN2D	GRIN3A	GRIN3B	HNF4A
	HTR1B	KCNA2	KCNB1	KCNC1	KCND3	KCNH1	KCNJ10	KCNQ2	KCNQ3	KCNT1	KCNTD7	LEPR	MAOA
	MAOB	RBFOX1	SCN1A	SCN2A	SCN3A	SCN8A	STS	TPH1	TPH2	UGT1A10	UGT1A6	UGT1A7	UGT1A9

Med4Me Anti-tuberculosis Panel

The Med4Me Anti-tuberculosis Panel assesses 132 genes associated with liver injury. Drug-induced liver injury (DILI), which is an important cause of acute liver failure, can be a threat to a patient and a common reason why some drug development projects are discontinued.

GENE LIST

Med4Me Anti-tuberculosis Panel	ABHD5	ADA	ADORA2A	ALAS1	ALPK2	ANO10	ASAH1	BACH1	BAX	BCL2	BTLA	CARD8	CASP1
	CASP3	CASP8	CASP9	CAT	CCL2	CD274	CD276	CD28	CD40	CD40LG	CD80	CD86	CPA6
	CTLA4	CYBA	DDX10	DPP4	ENTPD1	FAHD2A	FAS	FASLG	FBXW8	FOXP3	GCLC	GCLM	GGT1
	GPX1	GPX3	GPX4	GSR	GSS	GSTA1	GSTA2	GSTA3	GSTA4	GSTA5	GSTK1	GSTM2	GSTM3
	GSTM4	GSTM5	GSTO1	GSTO2	GSTT2	GSTZ1	HAVCR2	HIF1A	HMOX1	HMOX2	HSPA1L	ICOS	ICOSLG
	IDO1	IDO2	IFNG	IFNGR1	IFNGR2	IL10	IL10RA	IL12A	IL12B	IL12RB1	IL12RB2	IL17A	IL17RA
	IL18	IL18R1	IL18RAP	IL1A	IL1B	IL1R1	IL4	IL4R	IL6	IL6R	KCNE3	KCNIP3	KEAP1
	KSR2	LAG3	LGALS9	MAFK	MIR4272	MPO	NFE2L2	NLRP3	NOS1	NOS2	NOS3	NT5E	PDCD1
	PDCD1LG2	PLXNA4	POLD3	PROM2	PSD3	SOD1	SOD3	SRXN1	STAT3	TGFB1	TGFBR1	THSD7B	TNFRSF4
	TNF	TNFAIP3	TNFRSF14	TNFRSF1A	TNFRSF1B	TNFRSF9	TNFSF10	TNFSF14	TNFSF4	TNFSF9	TRIM43	TXNRD1	USP44
	VTCN1	ZNF804B											

Commercial Name	Cat No.
Med4Me Standard Panel	G2MMSP08001-ill; G2MMSP08001-TF; G2MMSP08001-MG
Med4Me Epilepsy Panel	G2MMEP09001-ill; G2MMEP09001-TF; G2MMEP09001-MG
Med4Me Anti-tuberculosis Panel	G2MMAP10001-ill; G2MMAP10001-TF; G2MMAP10001-MG

PGx PHARMACOGENOMICS INSIGHTS

Med4Me Precision Medicine Panels

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 drugs, and detection of genetic variants associated with drug metabolism, epilepsy and anti-tuberculosis.

Key Features

- Assess extensive target regions associated with pharmacogenomics
- Validated panel performance: Complete validation for clinical application
- Flexible panel contents: Med4Me Panels for drug metabolism, epilepsy, and antituberculosis
- Mutation Type- SNV, Indel, CNV
- Covered region- Whole CDS + UTR (-50 bp, +10 bp)

Med4Me Panel

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

med4me Truly Personalized Medicine

Types of Drugs Covered

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

GENE LIST

Med4Me Panel	ABCA1	ABCB1	ABCB11	ABCC2	ABCC4	ABCG1	ABCG2	ACE	ADH1A	ADH1B	ADH1C	ADRB1	ADRB2
	AHR	ALDH1A1	ALOX5	APOA1	ARID5B	BDNF	BRCA1	CACNA1C	CES1	CES2	CFTR	COMT	CPS1
	CRHR1	CYP1A1	CYP1A2	CYP27A1	CYP2A6	CYP2B6	CYP2C19	CYP2C8	CYP2C9	CYP2D6	CYP2E1	CYP2J2	CYP2R1
	CYP3A4	CYP3A5	CYP4F2	CYP7A1	DBH	DPYD	DRD1	DRD2	EGFR	EPHX1	ESR1	F5	FKBP5
	G6PD	GLCCI1	GRK4	GRK5	GSTM1	GSTP1	GSTT1	HMGCR	HTR1A	HTR2A	KCNH2	KCNJ11	LDLR
	MAOA	MTHFR	NAT1	NAT2	NQO1	NR1I2	NR1I3	NR3C2	NTRK2	P2RY1	P2RY12	PEAR1	PON1
	POR	PTGIS	PTGS1	PTGS2	RYR1	RYR2	SCN1A	SCN2A	SCN5A	SLC15A1	SLC15A2	SLC19A1	SLC22A1
	SLC22A2	SLC22A3	SLC22A6	SLC47A1	SLC47A2	SLC6A3	SLC6A4	SLCO1A2	SLCO1B1	SLCO1B3	SLCO2B1	SOD2	SULT1A1
	TBXAS1	TPMT	TYMS	UGT1A	UGT1A1	UGT1A10	UGT1A3	UGT1A4	UGT1A5	UGT1A6	UGT1A7	UGT1A8	UGT1A9
	UGT2B15	UGT2B7	VDR	VKORC1	ZNF423								

CE IVD

Comprehensive Respiratory Virus Panel (CRVP)

CliSeq CRVP

The Comprehensive Respiratory Virus Panel (CRVP) was developed to detect and sequence respiratory disease-causing viruses in humans using the NCBI RefSeq database as its foundation.

It enables simultaneous testing of 9 different virus types and its 39 strains of clinically significant and prevalent respiratory viruses, including Coronavirus and Influenza.

Key Features

- Coverage of wide range of respiratory pathogens
- Double pandemic/coinfection detection
- Inclusion of stand-alone BI analysis software (Virus Verifier)
- Clear results even from low quality clinical specimens
- High detection sensitivity and consensus sequence
- One day workflow using hybridization enhancer technology
- Inclusion of all required kit components (RNA to cDNA, cDNA to captured library)

Virus Species	Number of Strains Covered
Human Adenovirus	8
Bocavirus	4
Human Rhinovirus (A/B/C)	3
Coronavirus	5
Human Enterovirus	7
Influenza A	3
Influenza B	1
Parainfluenza Virus	5
Respiratory Syncytial Virus	3

Commercial Name	Cat No.
Comprehensive Respiratory Virus Panel	G2MCRVP17001-ill; G2MCRVP17001-TF

Cardiovascular Disorders

CliSeq Cardio

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.

Cardiovascular NGS Panel

Coverage of 174 genes with Whole CDS and hotspots as Target Regions

List Of Diseases Assessed

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

GENE LIST

Cardiovascular NGS Panel	ABCC9	ABCG5	ABCG8	ACTA1	ACTA2	ACTC1	ACTN2	AKAP9	ALMS1
	ANK2	ANKRD1	APOA4	APOA5	APOB	APOC2	APOE	BAG3	BRAF
	CACNA1C	CACNA2D1	CACNB2	CALM1	CALR3	CASQ2	CAV3	CBL	CBS
	CETP	COL3A1	COL5A1	COL5A2	COX15	CREB3L3	CRELD1	CRYAB	CSRP3
	CTF1	DES	DMD	DNAJC19	DOLK	DPP6	DSC2	DSG2	DSP
	DTNA	EFEMP2	ELN	EMD	EYA4	FBN1	FBN2	FHL1	FHL2
	FKRP	FKTN	FXN	GAA	GATAD1	GCKR	GJA5	GLA	GPD1L
	GPIHBP1	HADHA	HCN4	HFE	HRAS	HSPB8	ILK	JAG1	JPH2
	JUP	KCNA5	KCND3	KCNE1	KCNE2	KCNE3	KCNH2	KCNJ2	KCNJ5
	KCNJ8	KCNQ1	KLF10	KRAS	LAMA2	LAMA4	LAMP2	LDB3	LDLR
	LDLRAP1	LMF1	LMNA	LPL	LTBP2	MAP2K1	MAP2K2	MIB1	MURC
	MYBPC3	MYH11	MYH6	MYH7	MYL2	MYL3	MYLK	MYLK2	MYO6
	MYOZ2	MYPN	NEXN	NKX2-5	NODAL	NOTCH1	NPPA	NRAS	PCSK9
	PDLIM3	PKP2	PLN	PRDM16	PRKAG2	PRKAR1A	PTPN11	RAF1	RANGRF
	RBM20	RYR1	RYR2	SALL4	SCN1B	SCN2B	SCN3B	SCN4B	SCN5A
	SCO2	SDHA	SEPN1	SGCB	SGCD	SGCG	SHOC2	SLC25A4	SLC2A10
	SMAD3	SMAD4	SNTA1	SOS1	SREBF2	TAZ	TBX20	TBX3	TBX5
	TCAP	TGFB2	TGFB3	TGFBR1	TGFBR2	TMEM43	TMPO	TNNC1	TNNI3
	TNNT2	TPM1	TRDN	TRIM63	TRPM4	TTN	TTR	TXNRD2	VCL
	ZBTB17	ZHX3	ZIC3						

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

Neurological Disorders

CliSeq Neuro

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.

Neuromuscular NGS Panel

Coverage of 293 genes with Whole CDS and hotspots as Target Regions

List Of Diseases Assessed

- Movement disorders • Neuromuscular disorders
- Charcot-Marie-Tooth disease • Muscular dystrophy

GENE LIST

Neuromuscular NGS Panel	AARS	ABCB7	ABCD1	ABHD12	ACAD9	ACADL	ACADM	ACO2	ACTA1
	ADCK3	AFG3L2	AGL	AIFM1	ALDH3A2	AMPD1	ANO10	ANO5	AP4B1
	AP4E1	AP4M1	AP4S1	AP5Z1	APTX	ARSA	ATCAY	ATL1	ATM
	ATP2A1	ATP7A	ATP7B	ATP8A2	BAG3	BEAN1	BIN1	BSCL2	C10orf2
	C12orf65	C19orf12	CACNA1A	CACNA1S	CACNB4	CAPN3	CASK	CAV3	CCDC78
	CCDC88C	CFL2	CHAT	CHRNA1	CHRNB1	CHRND	CHRNE	CHRNG	CLCN1
	CLCN2	CLN5	CNTN1	COL6A1	COL6A2	COL6A3	COLQ	CPT1B	CPT2
	CRYAB	CTDP1	CWF19L1	CYP27A1	CYP2U1	CYP7B1	DAG1	DCTN1	DDHD1
	DDHD2	DES	DMD	DNAJB2	DNAJB6	DNM2	DNMT1	DOK7	DYNC1H1
	DYSF	EEF2	EGR2	ELOVL4	ELOVL5	EMD	ERLIN2	ETFA	ETFB
	FA2H	FAM134B	FGD4	FGF14	FHL1	FIG4	FKRP	FKTN	FLNC
	FLVCR1	FRMD7	FUS	FXN	GAA	GAD1	GALC	GAN	GARS
	GBA2	GDAP1	GJB1	GJC2	GLA	GLE1	GNB4	GNE	GOSR2
	GPR143	GRID2	GRM1	GYS1	HADHA	HADHB	HINT1	HOXD10	HSPB1
	HSPB8	HSPD1	HSPG2	IGHMBP2	IKBKAP	ISPD	ITGA7	ITPR1	JPH3
	KBTBD13	KCNA1	KCNC3	KCND3	KCNE3	KCNJ10	KCNJ18	KIAA0196	KIF1A
	KIF1B	KIF1C	KIF5A	KLHL40	KLHL41	L1CAM	LAMA1	LAMA2	LARGE
	LDB3	LITAF	LMNA	LPIN1	LRSAM1	MARS	MARS2	MATR3	MED25
	MFN2	MPZ	MRE11A	MTM1	MTMR14	MTMR2	MTPAP	MTTP	MUSK
	MYF6	MYH2	MYH7	MYOT	NDRG1	NEB	NEFL	NGF	NIPA1
	NOP56	NTRK1	OPA1	OPA3	OPHN1	PABPN1	PANK2	PDK3	PDYN
	PEX7	PFKM	PGAM2	PHKA1	PHYH	PLEC	PLEKHG5	PLP1	PMM2
	PMP22	PNKP	PNPLA6	POLG	POLG2	POMGNT1	POMT1	POMT2	PRKCG
	PRPS1	PRX	PTF1A	PTRF	PYGM	RAB7A	RAPSN	REEP1	RNF216
	RRM2B	RTN2	RUBCN	RYR1	RYR2	SACS	SBF2	SCN4A	SCN9A
	SEPN1	SETX	SGCA	SGCB	SGCD	SGCE	SGCG	SH3TC2	SIL1
	SLC12A6	SLC16A2	SLC1A3	SLC33A1	SLC39A4	SLC52A2	SLC9A1	SLC9A6	SMN1
	SNX14	SOD1	SPAST	SPG11	SPG20	SPG21	SPG7	SPTBN2	SPTLC1
	SPTLC2	STAC3	STUB1	SUCLA2	SYNE1	SYNE2	SYT14	TBP	TCAP
	TDP1	TECPR2	TGM6	TK2	TMEM240	TNNI2	TNNT1	TPM2	TPM3
	TPP1	TRIM32	TRPV4	TTBK2	TTN	TTPA	TTR	TUBB4A	TYMP
	VAMP1	VCP	VLDLR	VPS13A	VPS37A	VRK1	WFS1	WNK1	WWOX
	XK	YARS	ZFYVE26	ZFYVE27	ZNF592				

Epilepsy NGS Panel

Coverage of 142 genes with Whole CDS and hotspots as Target Regions

GENE LIST

Epilepsy NGS Panel	AARS	ABCA13	ABCB11	ADGRV1	ADSL	ALDH7A1	ALG13	ARHGEF15	ARHGEF9
	ARX	ASAH1	ATP1A2	ATP6AP2	CACNA1A	CASK	CDKL5	CHD2	CHRNA2
	CHRNA4	CHRNA7	CHRNB2	CLCN4	CLN3	CLN5	CLN6	CLN8	CNTNAP2
	COG1	COL4A4	CSTB	CTSD	DCX	DEPDC5	DLG3	DNAJC5	DNM1
	DNMT1	DOCK7	DYRK1A	EEF1A2	EPM2A	EVC	FERMT1	FOLR1	FOXG1
	FREM2	GABRA1	GABRA2	GABRB3	GABRG2	GAMT	GATM	GNAO1	GOSR2
	GRIN1	GRIN2A	GRIN2B	GRM1	HCN1	HDAC4	HNRNPU	HPSE2	IL12RB2
	IQSEC2	KANSL1	KCNA2	KCNB1	KCNH5	KCNJ10	KCNMA1	KCNQ2	KCNQ3
	KCNT1	KCTD7	L2HGDH	LAMA3	LGI1	MAGI2	MBD5	MECP2	MEF2C
	MFSD8	NDUFV3	NECAP1	NHLRC1	NPHS2	NR2F1	NRXN1	PCDH19	PDP1
	PIGA	PIGO	PIGQ	PIGV	PLCB1	PNKP	PNPO	POLG	PPT1
	PRICKLE1	PRICKLE2	PRRT2	QARS	RELN	SCARB2	SCN1A	SCN1B	SCN2A
	SCN8A	SCN9A	SERPIND1	SLC12A6	SLC13A5	SLC25A22	SLC2A1	SLC35A2	SLC6A8
	SLC9A6	SMS	SOX6	SPTAN1	SRPX2	SRY	ST3GAL3	STXBP1	SUMF1
	SYN1	SYNGAP1	SYNJ1	SZT2	TBC1D24	TCF4	TDRD7	TPP1	TSC1
	TSC2	UBE3A	VCAN	WDR45	WNK1	WWOX	ZEB2		

Alzheimer-Parkinson-Dementia NGS Panel

Coverage of 101 genes with Whole CDS and hotspots as Target Regions

List Of Diseases Assessed

- Alzheimer's disease • Parkinson's disease • Dementia • Dystonia

GENE LIST

Alzheimer-Parkinson-Dementia NGS Panel	AARS	ABCA13	ABCA7	ABCB11	ADCY5	ALS2	ANG	ANO3	APP
	ATP13A2	ATP1A3	ATP7B	C19orf12	CACNA1B	CHCHD10	CHMP2B	CHRNA4	CIZ1
	COG1	COL4A4	COL6A3	DAO	DCTN1	DNMT1	EVC	FERMT1	FIG4
	FREM2	FUS	GBA	GCH1	GNAL	GNAO1	GRM1	GRN	HNRNPA1
	HNRNPA2B1	HPCA	HPSE2	IL12RB2	KCTD17	KMT2B	L2HGDH	LAMA3	LRRK2
	MAPT	MATR3	MECR	NDUFV3	NEK1	NPHS2	OPTN	PANK2	PARK7
	PDP1	PINK1	PLA2G6	PNKD	PRKN	PRKRA	PRNP	PRRT2	PSEN1
	PSEN2	RELN	SERPIND1	SETX	SGCE	SIGMAR1	SLC12A6	SLC19A3	SLC2A1
	SLC30A10	SLC6A3	SNCA	SOD1	SORL1	SOX6	SPG11	SQSTM1	SRY
	SUMF1	TAF1	TAF15	TARDBP	TBK1	TDRD7	TH	THAP1	TIMM8A
	TOR1A	TREM2	TUBA4A	TUBB4A	UBQLN2	VAC14	VAPB	VCAN	VCP
	VPS13A	WNK1							

Commercial Name	Cat No.
Neuromuscular NGS Panel	G2MNM14001-ill; G2MNM14001-MG; G2MNM14001-TF
Epilepsy NGS Panel	G2MEP20001-ill; G2MEP20001-MG; G2MEP20001-TF
Alzheimer-Parkinson-Dementia NGS Panel	G2MAPD23001-ill; G2MAPD23001-MG;G2MAPD23001-TF

Genes2Me have developed different panels for assessing genes of related diseases (Disease specific Panel) and HLA typing NGS panel for donor selection

Other Panels

It includes comprehensive analysis of a broad range of diseases associated with Skin, Bleeding disorder/ Coagulation and Inborn errors of metabolism.

Bleeding Disorder/ Coagulopathy NGS Panel

Coverage of 139 genes with Whole CDS and hotspots as Target Regions

GENE LIST

Bleeding Disorder-Coagulopathy NGS Panel

AARS	ABCA1	ABCA13	ABCB11	ACTN1	ANKRD26	ANO6	AP3B1	BLOC1S3
BLOC1S6	BRCA1	BRCA2	BRIP1	CD36	CDAN1	COG1	COL4A4	CYCS
DDX41	DKC1	DNMT1	DTNBP1	ELANE	ERCC4	ETV6	EVC	F10
F11	F13A1	F13B	F2	F5	F7	F8	F9	FANCA
FANCB	FANCC	FANCD2	FANCE	FANCF	FANCG	FANCI	FANCL	FANCM
FERMT1	FERMT2	FGA	FGB	FGG	FLI1	FREM2	FYB1	GATA1
GATA2	GFI1	GFI1B	GP1BA	GP1BB	GP6	GP9	GRM1	HAX1
HOXA11	HPS1	HPS3	HPS4	HPS5	HPS6	HPSE2	IFNG	IL12RB2
ITGA2B	ITGB3	L2HGDH	LAMA3	LMAN1	LYST	MASTL	MCFD2	MLPH
MPL	MYH9	MYO5A	NBEAL2	NBN	NDUFV3	NHP2	NOP10	NPHS2
P2RY12	PALB2	PDP1	PLA2G4A	PLAU	PRF1	PRKACG	RAB27A	RAD51C
RASGRP2	RBM8A	RPL11	RPL35A	RPL5	RPS10	RPS19	RPS24	RPS26
RPS7	RUNX1	SBDS	SEC23B	SERPIND1	SERPINE1	SERPINF2	SLC12A6	SLFN14
SLX4	SOX6	SRC	SRP72	SRY	STIM1	SUMF1	TBXA2R	TBXAS1
TDRD7	TERC	TERT	TINF2	UBE2T	VCAN	VIPAS39	VPS33B	VWF
WAS	WIPF1	WNK1	XRCC2					

Skin Disorders NGS Panel

Coverage of 152 genes with Whole CDS and hotspots as Target Regions

GENE LIST

Skin Disorder NGS Panel

ABCA12	ABCB6	ABCC6	ABHD5	ADAMTS2	ADAR	ALAD	ALAS2	ALDH3A2
ALOX12B	ALOXE3	AP1S1	ATM	ATP2A2	ATP2C1	ATP6V0A2	BLM	CARD14
CDH3	CDSN	CLDN1	COL17A1	COL1A1	COL1A2	COL3A1	COL5A1	COL5A2
COL7A1	CPOX	CTC1	CTSC	CYP4F22	DDB2	DKC1	DOCK8	DSG1
DSG4	DSP	DST	EBP	ECM1	EDA	EDAR	EDARADD	EFEMP2
ELN	ERCC2	ERCC3	ERCC4	ERCC5	EXPH5	FANCA	FANCC	FANCG
FECH	FERMT1	FLCN	FLG	GJB2	GJB3	GJB4	GJB6	GNAS
GORAB	GPR143	GSN	GTF2H5	HFE	HMBS	HR	IL36RN	ITGA3
ITGA6	ITGB4	JUP	KIT	KRT1	KRT10	KRT14	KRT16	KRT17
KRT2	KRT5	KRT6A	KRT6B	KRT6C	KRT81	KRT83	KRT86	KRT9
LAMA3	LAMB3	LAMC2	LIPH	LIPN	LOR	LPAR6	LYST	MBTPS2
NF1	NF2	NHP2	NIPAL4	NOP10	NSDHL	OCA2	PKP1	PLEC
PLOD1	PNPLA1	POFUT1	POGLUT1	POLH	POMP	PPOX	PRKAR1A	PTCH1
PTCH2	PYCR1	RECQL4	RTEL1	SLC27A4	SLC39A4	SLC45A2	SLURP1	SNAP29
SPINK5	SPRED1	ST14	STAT3	STS	SUFU	TERC	TERT	TGM1
TGM5	TINF2	TNXB	TRPV3	TSC1	TSC2	TTR	TYK2	TYR
TYRP1	UROD	UROS	WAS	WRAP53	XPA	XPC	ZMPSTE24	

Metabolic Disorders NGS Panel

Coverage of 71 genes with Whole CDS and hotspots as Target Regions

GENE LIST

Metabolic Disorders NGS Panel

ABCD1	ACAD8	ACADM	ACADS	ACADSB	ACADVL	ACAT1	AHCY	ARG1
ASL	ASS1	AUH	BCKDHA	BCKDHB	BTD	CBS	CPS1	CPT1A
CPT2	DBT	DECR1	DHCR7	DLD	ETFA	ETFB	ETFDH	FAH
GALE	GALK1	GALT	GAMT	GATM	GCDH	GCH1	GNMT	HADH
HADHA	HADHB	HLCS	HMGCL	HPD	HSD17B10	IVD	LMBRD1	MAT1A
MCCC1	MCCC2	MLYCD	MMAA	MMAB	MMACHC	MMADHC	MMUT	MTHFR
MTR	MTRR	OPA3	OTC	PAH	PCBD1	PCCA	PCCB	PTS
QDPR	SLC22A5	SLC25A13	SLC25A20	SLC6A8	TAT	TAZ	TCN2	

HLASEQ

HLA Typing NGS Panel for Donor Selection

HLA typing is a kind of genetic test that looks into factors related to immune system. This test is specific to figure out safe donors of organ, bone marrow, stem cell or tissue transplant to the desired recipient. It is performed on the samples from both the recipient and donor(s). More the mis-match, higher becomes the chances of rejection. Thus, it is important to perform the test prior to transplants.

Our, HLA Typing Panel features amplification of six specific Human Leukocyte Antigen (HLA) genes present in Major Histocompatibility Complex (MHC) region with deep coverage (≥1000x) and ultra high-allelic resolution.

Commercial Name	Cat No.
Bleeding Disorder/ Coagulopathy NGS Panel	G2MBD21001-ill; G2MBD21001-MG; G2MBD21001-TF
Skin Disorders NGS Panel	G2MSD19001-ill; G2MSD19001-MG; G2MSD19001-TF
Metabolic Disorders NGS Panel	G2MMD26001-ill; G2MMD26001-MG; G2MMD26001-TF
HLA Typing NGS Panel	G2MHLA32001-ill; G2MHLA32001-MG; G2MHLA32001-TF

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