INNOVATIVE MOLECULAR RANGE FOR BILLIONS

Products Catalogue 2022-23

GENES2ME Pvt. Ltd.

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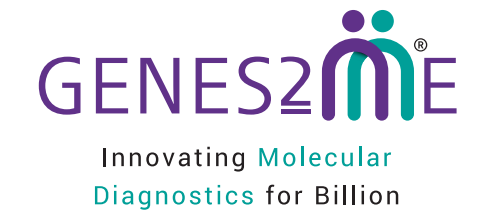lifesciences@genes2me.com
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ISO 13485:2016   ISO 9001:2015   GMP Quality

GENES2ME®

Innovating Molecular
Diagnostics for Billion

InGenious High Quality
Molecular
Biology Range

GENES2ME ®
Innovating Molecular
Diagnostics for Billion

Leading Genetic Diagnostics in India with Expertise in Innovative IVD Solutions Development & Advanced Genomic Testing Services.

Genes2Me is one of the leading player in Molecular Diagnostics and Genomics having NABL, 1509001, ISO14001 accredited State-of-Art testing lab based at Gurgaon, Haryana.
The lab is equipped with Advanced Genetic Testing Platforms including Next Generation Sequencing System, Sanger Sequencer, Microarrays, MassArrays, etc. Also, numerous Real Time PCR Instruments and Automated RNA Extraction Instruments have been recently included in the range of Platforms for performing COVID-19 and other infectious diseases testing.

With strong experience in Genomics, Genes2Me have expanded the scope of its operation into IVD Kits and Instruments Manufacturing. Backed with ISO 13485 certification, Genes2Me maintains high quality standards in its DCGI approved IVD manufacturing setup. Genes2Me developed India's 1st High Sensitivity RTPCR Kit with coverage of 3 SARS-COV-2 specific genes and RNA Extraction Kit compatible with almost every Automated RNA Extraction Instrument.

The kits have got International accreditations including European CE-IVD certification.

LE NEXT

Complete Range for
Next Generation Sequencing
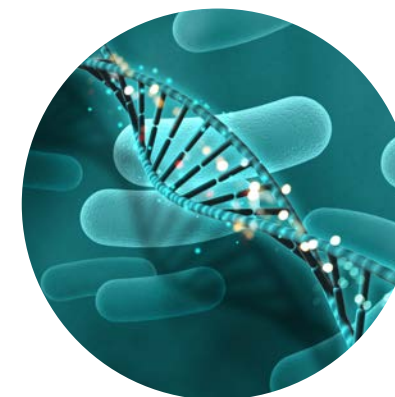
Complete Solution for
Nucleic Acid Purification

![Genes2Me logo]

GENES2ME®

Innovating Molecular
Diagnostics for Billion

InGenious High Quality

Molecular
Biology Range

- Fantom Hi-Fidelity DNA Polymerase & Master Mixes
- Conventional PCR & Master Mixes
- Hot-Start PCR & Master Mixes
- Long Range PCR
- Nucleotides
- Ladder & Marker
- Reverse Transcriptase
- Multiplex PCR
- Replica Express Cloning
- Isothermal Amplification
- NeoScript RT-PCR Kit
- NeoScript 1st Strand cDNA Synthesis Kit
- Green Eye qPCR Mastermix
- Velocity qRTPCR Readymix
- Genome Editing Reagents

Genes2Me® Molecular Products Range
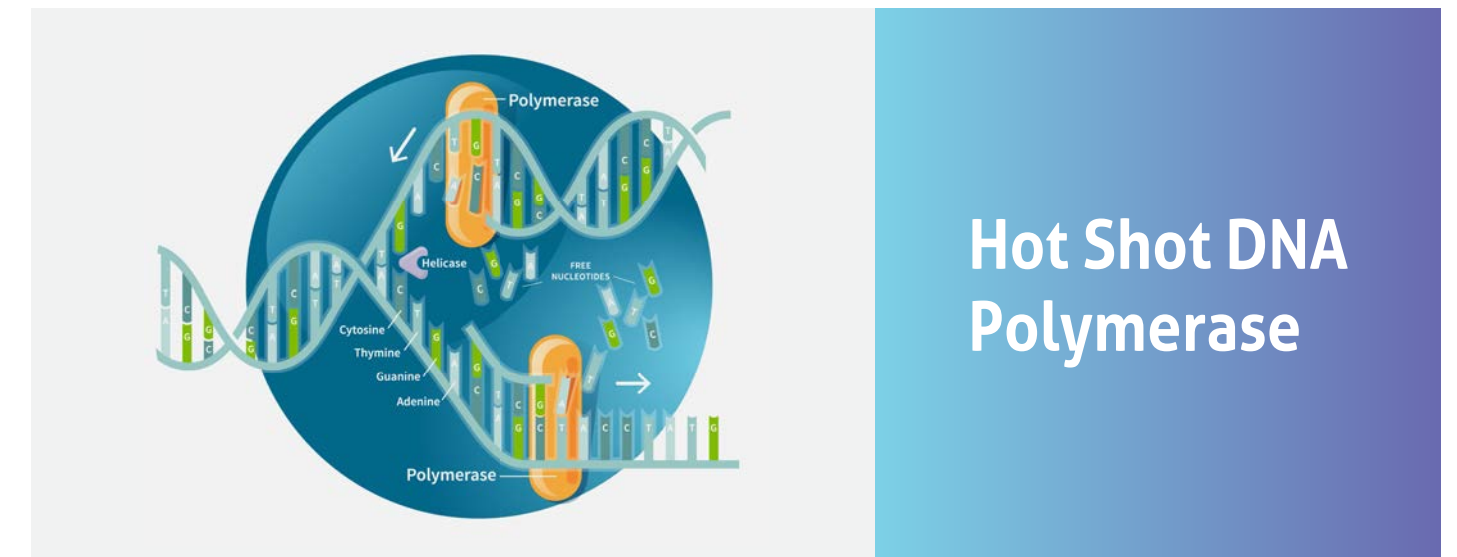
Conventional PCR

Taq DNA Polymerase

Taq DNA polymerase is a thermostable DNA polymerase that exhibits 5' - 3' polymerase and exonuclease, with no 3' - 5' exonuclease activity. Taq DNA Polymerase is purified from an *Escherichia coli (E.coli)* strain overexpressing the gene of Thermus aquaticus DNA polymerase. Neither the presence of endo- and exonuclease activities, nor bacterial DNA is detected in the product. PCR products amplified by Taq DNA polymerase contain Adenosine 'A' at the 3'-end and as a result can be directly cloned into T-Vectors.

Taq Master Mixes

Taq Master Mixes contains Taq DNA Polymerase, dNTP, and an optimised buffer system that improves reproducibility in data. The protector in the mix maintains the enzyme activity after repeated freezing and thawing. Dye plus version is also provided, which enables direct electrophoresis. The PCR products amplified by the reagent carry Adenosine 'A' at the 3' end and as a result can be directly cloned into T-Vectors. The products are also compatible with Replica Express One Step cloning Kit (#OSC)

| Cat#	Description	Size
M104-01-1000U	Taq DNA Polymerase (Mg2+)	1000 U
M104-01-5000U	Taq DNA Polymerase (Mg2+)	5000 U
M104-01-10000U	Taq DNA Polymerase (Mg2+)	10000 U
M104P-01-1000U	Taq DNA Polymerase (with Mg2+, dNTP)	1000 U
M104P-01-5000U	Taq DNA Polymerase (with Mg2+, dNTP)	5000 U
M104P-01-10000U	Taq DNA Polymerase (with Mg2+, dNTP)	10000 U
MM104-5ml	Taq Master Mix (2X)	5 ml
MM104-15ml	Taq Master Mix (2X)	15 ml
MM104-50ml	Taq Master Mix (2X)	50 ml
MM104D-5ML	Taq Master Mix (2X) with Dye	5 ml
MM104D-15ML	Taq Master Mix (2X) with Dye	15 ml
MM104D-50ML	Taq Master Mix (2X) with Dye	50 ml

Hot-Start PCR

Hot shot DNA Polymerase is a chemically modified Taq DNA polymerase that does not demonstrate non-specific amplification at room temperature. Similar to the wild-type Taq DNA polymerase, the enzyme is a thermostable DNA polymerase that exhibits 5'-3' polymerase and exonuclease, with no 3'-5' exonuclease activity. Neither the presence of endo- and exonuclease activities, nor bacterial DNA is detected in the product. PCR products amplified by Hot Shot DNA polymerase contain Adenosine 'A' at the 3' end and as a result can be directly cloned into T-Vectors.

Hot Shot Master Mix

Hot shot Master Mix contains Hot Shot DNA Polymerase, dNTP, and an optimised buffer system that strictly prohibits non-specific amplification at room temperature and improves reproducibility in data. The protector in the mix maintains the enzyme activity after repeated freezing and thawing. Dye plus version is also provided, which enables direct electrophoresis. The PCR products amplified by the reagent carry Adenosine 'A' at the 3' end and as a result can be directly cloned into T-Vectors. The products are also compatible with Replica Express One Step cloning Kit (#OSC).

Cat#	Description	Size
M101-250U	Hot Shot DNA Pol with dNTP Mix	250 U (100 rxn)
M101-1000U	Hot Shot DNA Pol with dNTP Mix	1000 U (400 rxn)
MM101-1ml	2x Hot Shot Master Mix	1 ml (40 rxn)
MM101-5ml	2x Hot Shot Master Mix	5 ml (200 rxn)
MM101-15ml	2x Hot Shot Master Mix	15 ml (600 rxn)
MM101D-1ml	2x Hot Shot Master Mix (Plus Dye)	1 ml
MM101D-5ml	2x Hot Shot Master Mix (Plus Dye)	5 ml
MM101D-15ml	2x Hot Shot Master Mix (Plus Dye)	15 ml

Fantom

Hi-Fidelity DNA Polymerase & Its Master Mixes

A Super Fidelity Polymerase that Fits all your PCR needs
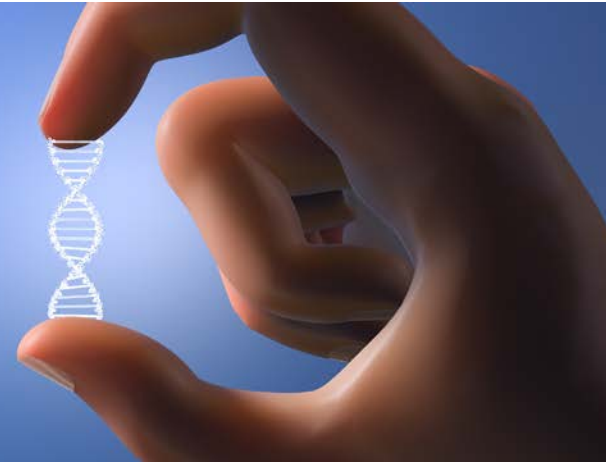
Features:

Good Resistance to PCR Inhibitors
Suitable for Direct - PCR using crude materials as templates.

Long Amplicons
Able to amplify long fragments (e.g. 40 kb λ DNA, 40 kb plasmid, 20 kb genomic DNA, and 10 kb cDNA).
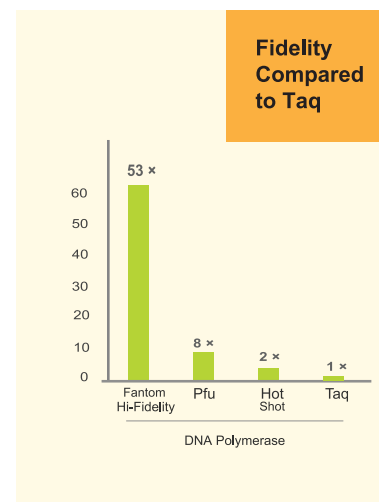
High-GC Content
Suitable for templates with high GC-content.

Super Fidelity
Ampification error rate is 53 fold lower than that of Taq and 6 fold lower than that of Pfu.

2X Fantom Master Mix
Ready to use format with an optimised buffer that enables the resistance to repeated freeze cycles.

Fidelity Compared to Taq

Cat#	Description	Size
M103-100U	Fantom Hi-Fidelity DNA Polymerase	100 U (100 rxn)
M103-500U	Fantom Hi-Fidelity DNA Polymerase	500 U (500 rxn)
M103-1000U	Fantom Hi-Fidelity DNA Polymerase	1000 U (1000 rxn)
MM103-1ml	2 × Fantom Master Mix	1 ml (40 rxn)
MM103-5ml	2 × Fantom Master Mix	5 ml (200 rxn)
MM103-15ml	2 × Fantom Master Mix	15 ml (600 rxn)
MM103D-1ml	2 × Fantom Master Mix (Plus Dye)	1 ml (40 rxn)
MM103D-5ml	2 × Fantom Master Mix (Plus Dye)	5 ml (200 rxn)
MM103D-15ml	2 × Fantom Master Mix (Plus Dye)	15 ml (600 rxn)

Long Range PCR

Lng Amp DNA polymerase

Lng Amp DNA polymerase is a mixed enzyme composed of Taq DNA polymerase and protein with 3'→5' exonuclease activity (proofreading activity), and its fidelity is 6 times that of Taq DNA polymerase. With a specially optimized buffer system, Lng Amp DNA polymerase is very suitable for the amplification of long fragments. It can amplify fragments up to 21 kb from the genome, and has high amplification capacity for different sources and templates of different lengths. The PCR products have an A-tailing at the 3' end, can be cloned into the T vector, and are suitable for Replica Express & Topological Cloning Kits. The attached PCR enhancer facilitates the amplification of fragments with high GC content.

Cat#	Description	Size
LAM-125U	Lng Amp DNA Polymerase	125 U
LAM-500 U	Lng Amp DNA Polymerase	500 U

Lng Amp Master Mix (2X)

Lng Amp DNA Polymerase is a mixed enzyme composed of Taq DNA Polymerase and a protein containing 3'→5' exonuclease activity (proofreading activity). The fidelity is Taq DNA 6 times that of Polymerase. With a specially optimized buffer system, Lng Amp DNA Polymerase is very suitable for the amplification of long fragments, which can amplify up to 21kb from the genome Fragments, and have high amplification efficiency for templates of different sources and different lengths. This product contains Lng Amp DNA Polymerase, dNTP and an optimized buffer system. It can be amplified by adding primers and templates, which reduces pipetting operations and improves throughput and results reproducibility. The protective agent added to the system allows Master Mix to maintain stable activity after repeated freezing and thawing. This product also provides a version containing electrophoresis buffer and dye, which can be directly electrophoresed after the reaction, which is convenient to use. The PCR product has an A at the 3'end, which can be cloned into the T vector and is suitable for cloning kits available with Genes2me.

Key Features :
• Efficient amplification of genome and cDNA fragments >20 kb
• Very high amplification sensitivity and strong tolerance to low purity templates
• Broad GC adaptability
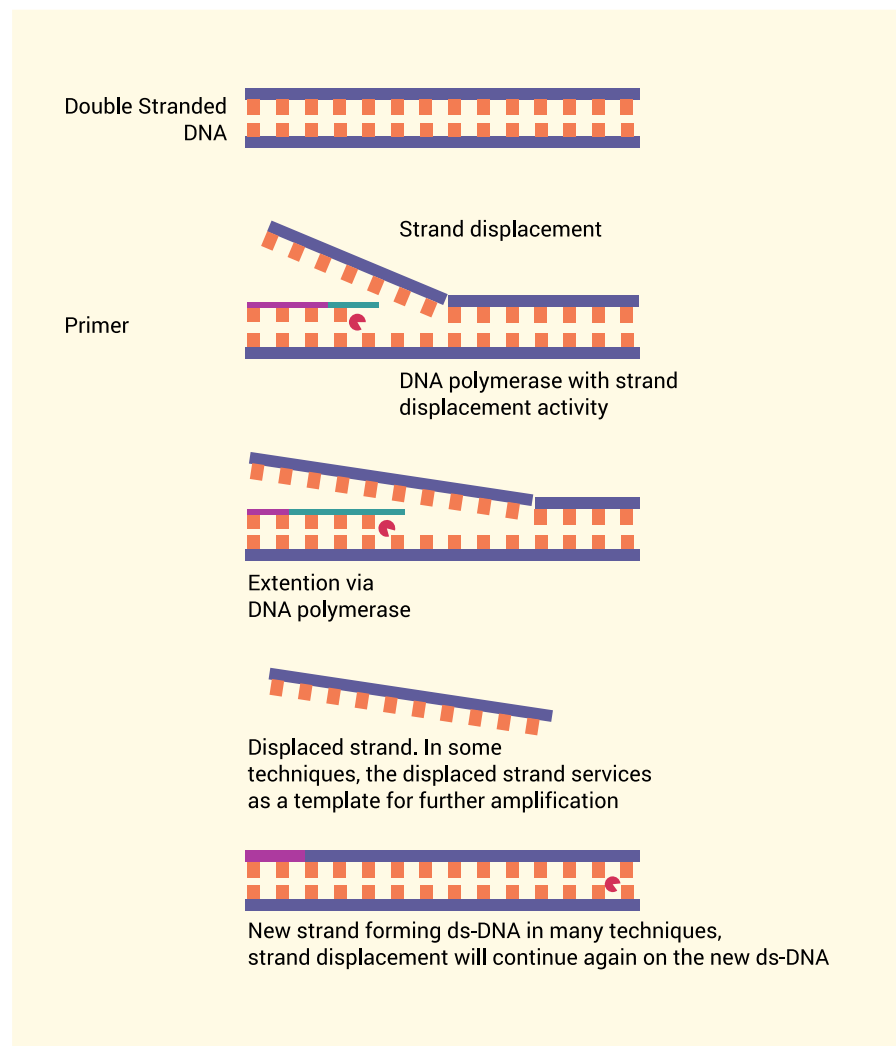• Provide ready-to-use premix to minimize experimental steps

Cat#	Description	Size
LAMM-1ml	2 × Lng Amp Master Mix	1 ml
LAMM-5ml	2 × Lng Amp Master Mix	5 ml
LAMM-15ml	2 × Lng Amp Master Mix	15 ml

Isothermal Amplification

Bst DNA polymerase is a large fragment of DNA polymerase derived from *Bacillus stearothermophilus*. It has 5'->3' DNA polymerase activity and strong strand displacement activity. Bst DNA Polymerase can be used for isothermal amplification reaction, such as loop-mediated isothermal amplification (LAMP) and rolling-circle amplification (RCA) etc.

Features

- It has 5'-3' polymerase activity but lacks 5'-3' exonuclease activity
- Strong strand displacement activity
- Applicable for isothermal amplification reaction and Rolling Circle amplification

Double Stranded DNA

Strand displacement

Primer

DNA polymerase with strand displacement activity

Extention via DNA polymerase

Displaced strand. In some techniques, the displaced strand services as a template for further amplification

New strand forming ds-DNA in many techniques, strand displacement will continue again on the new ds-DNA

Cat#	Description	Size
BST-800U	Bst DNA Polymerase	800 U
BST-8000U	Bst DNA Polymerase	8000 U

Guide to select Best Polymerase as per your research need

Components present in DNA Polymerases

Taq DNA Polymerase (Mg2+) – M104	Hot Shot DNA Polymerase with dNTP Mix – M101	Fantom Hi-Fidelity Polymerase – M103
10 × Taq Buffer (with Mg2+, dNTP) dNTP Mix (10 mM each) Taq DNA Polymerase (5 U/µl)	10 × Hot Shot Buffer (Mg2+Plus) dNTP Mix (10 mM each) Hot Shot DNA Polymerase (5 U/µl)	Fantom Hi-Fidelity DNA Polymerase 2 × Fantom Hi-Fi Buffer dNTP Mix (10 mM each) 10 × DNA Loading Buffer

Features in DNA Polymerases

	Fantom Hi-Fidelity DNA Polymerase	Hot Shot DNA Polymerase	Taq DNA Polymerase
5'→3' polymerase activity	Yes	Yes	Yes
3'→5' exonuclease activity	Yes	No	No
5'→3' exonuclease activity	No	Yes	Yes
Product end	Blunt end	A-tail	A-tail
Fidelity	Yes	No	No
Hot start	Yes	Yes	No
Long range PCR	Upto 40kb	5 kb or less	5 kb or less

PCR Conditions

Steps	Temperature	Time	Cycles
Pre-denaturation	95^{0}C	30sec*	1
Denaturation	95^{0}C	15 sec	
Annealing	56 ~ 72^{0}C	15 sec	25 - 35
Extension	72^{0}C	30 - 60 sec/kb	
Final Extension	72^{0}C	5 min**	1

*The duration of pre-denaturation step for Taq and Hot Shot DNA polymerase is 5 mins, where it is only 3 mins for Fantom Hi-Fidelity DNA polymerase.
**Extension time for Taq and Hot Shot DNA polymerase is 7 mins and, the extension time for Fantom Hi-Fidelity DNA polymerase is 5 mins.

PCR Selection Guide

Applications	Products (Cat.#)	Features	Applicable for
Conventional PCR	MM104 - Taq Master Mix (2X) MM104D- Taq Master Mix (2X) with Dye	No 3' → 5' exonuclease activity ; Excellent compatibility ; Products contain A at 3'-end ;	Colony PCR; Large-scale gene identification; TA Cloning for small fragments
Hot-Start PCR	MM101- 2x Hot Shot Master Mix MM101D-2x Hot Shot Master Mix (Plus Dye)	Excellent specificity	Amplification that requires higher sensitivity and specificity; Amplification of genes with low copy or qPCR assay from complex templates (genomic DNA, cDNA)
Multiplex PCR	MPK-50rxn - MultiPLEX PCR Kit (2x) MPK-200rxn- MultiPLEX PCR Kit (2x)	19-plex PCR in one single reaction	Detection or typing of pathogens
High-Fidelity PCR	MM103-2 × Fantom Master Mix MM103D- 2 × Fantom Master Mix (Plus Dye)	With super fidelity 53-fold higher than Taq; High resistance to PCR inhibitors	High-fidelity PCR Amplification of templates with high GC-content; Long-fragment (up to 40 kb) amplification

Characteristics of different types of DNA Polymerases

DNA Polymerases	Fidelity vs. Taq	Amplicon size	Extension Time	Resulting ends	3' – 5' exo	5' – 3' exo	Units/50µl rxn	Modifications & advantages
Taq DNA Polymerase (Mg2+)	1x	360bp	60sec/kb	3' A	No	Yes	1.25 - 2.5	NA
Hot Shot DNA Polymerase	1x	360bp	60sec/kb	3' A	No	Yes	1.25 – 2.5	Chemically modified and minimizes non-specific amplifications
Fantom Hi-Fidelity DNA Polymerase	53X	≥10Kb ≤40kb	30sec/kb	Blunt	Yes	No	1	Antibody-based modification that results in remarkable specific amplification

Characteristics of different types of DNA Polymerases

| Applications	Taq DNA Polymerase (Mg2+)	Hot Shot DNA Polymerase	Fantom Hi-Fidelity DNA Polymerase
Routine PCR	*	*	*
Colony PCR	*	*	*
Enhanced Fidelity			*
High-Fidelity			*
Fast			*
Long Amplicon			*
GC-rich template			*
High Throughput			*
Multiplex PCR			
Extraction-free buffer			*
DNA Labelling	*	*	Contains separate dye

Nucleotides

dNTP Set and Mix

Equimolar pre-mix, ready-to-use solution of dATP, dCTP, dGTP and dTTP.

- Compatible with all DNA polymerases in various applications (PCR, Sequencing, cDNA synthesis etc)
- Available in different concentrations (2.5mM, 10mM, 100mM)
- 99% pure determined by HPLC analysis
- Exceptional Stability

Template DNA Strand

T= dNTP   C= Taq DNA polymerase
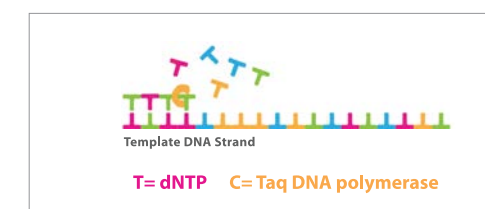
| Cat#	Description	Size
DNTPM-01	2.5 mM dNTP Mix	1 ml
DNTPM-02	10 mM dNTP Mix	1 ml
DNTPS-01	100 mM dNTP Set (4x1ml)	4ml
DNTPS-02	100 mM dNTP Set (4x250µl)	1ml

Multiplex PCR

Genes2Me MultiPLEX PCR Kit (2x) is specially designed for multiplex PCRs, which enables simultaneous amplification of multiple regions of a DNA template or multiple DNA templates. This kit, containing an optimized Hot-start MultiPLEX DNA Polymerase (2x) and 2X Multiplex Buffer, are suitable for almost all multiplex PCR reactions, with high specificity and sensitivity.

Multiplex : 19-plex PCR or even higher
Excellent Target-to-target amplification uniformity and extremely low target preference
Highly : Sensitive amplification from trace amount of genomic DNA (≥1 ng).

Validation Data

M | 1 ng | 10 ng | 100 ng | 500 ng
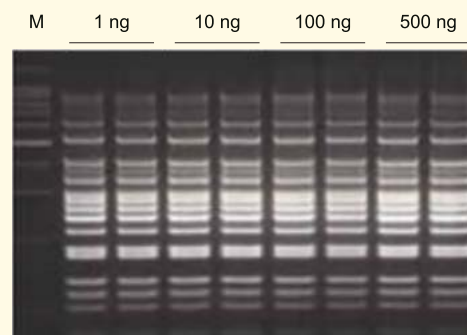
Uniform amplification coverage of different regions. Human genomic DNA was used as template for 19-plex PCR. The size of the amplicons ranged from 70 bp to 916 bp. The result indicated that *Multiplex PCR Kit (Genes2Me, #MPK)* has a uniform amplification coverage of different regions for 1 ng-500 ng of template.
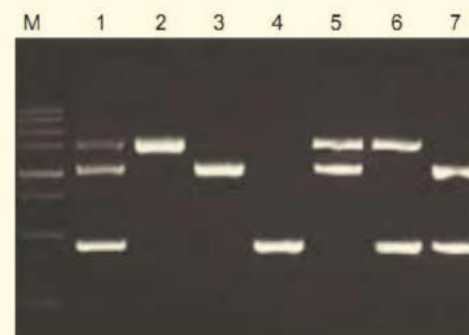
The Multiplex PCR Kit showed excellent compatibility with fragment length. Mouse genomic DNA was used as template for amplification of 1.55 kb, 1.07 kb, and 0.45 kb fragments, respectively. The result indicated that *Multiplex PCR Kit (Genes2Me, #MPK)* is compatible with amplicons of various lengths in one single reaction system.

1: 3-plex PCR
2-4: 1-plex PCR
5-7: 2-plex PCR
M: DNA Marker

Cat#	Description	Size
MPK-50rxn	MultiPLEX PCR Kit (2x)	50 rxn
MPK-200rxn	MultiPLEX PCR Kit (2x)	200 rxn

NeoScript 1st Strand cDNA Synthesis Kit # CSK01

Available in
50 rxn
& 1000 rxn

Features

With Improved thermal stability (50°C) and is very suitable for reverse transcription of RNA templates with complex secondary structures.

Extensive template compatibility :	compatible with various templates such as animals, plants, viruses, etc.
Super strong impurity tolerance :	It has super tolerance to common impurities (ethanol, isopropanol, water balance phenol, guanidine isothiocyanate, humic acid); Excellent reverse transcription efficiency

- Able to synthesize full-length cDNA up to 20kb for cloning
- The Oligo $(dT)_{23}$VN included in the kit has a stronger anchoring ability for Poly A^+ mRNA than Oligo $(dT)_{18}$, making reverse transcription more efficient
- A wide range of template starting amount, from 1 pg-5µg total RNA, and can amplify fragments up to 15 kb or more
- Application : Molecular cloning, hybridization PCR amplification and qPCR reaction, etc

Product	Cat No.	Size
NeoScript OneStep qRT-PCR Kit	OS03	50rxn
NeoScript OneStep qRT-PCR Kit with SYBR green	OS01	250 rxn
NeoScript III Reverse Transcriptase	RRT-02	10000 U

Reverse Transcriptase

M-MLV(-H) Reverse Transcriptase

- Loss of RNase H activity results in obtaining long cDNA products
- Stable and reliable reverse transcription performance for RNA templates above 100ng
- Synthetic fragment 5 kb
- Can be used for experiments such as 5'-RACE reaction and cDNA library construction
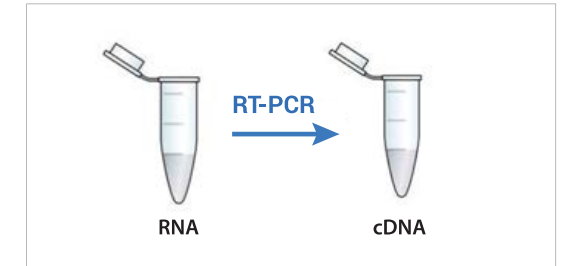
NeoScript III Reverse Transcriptase

Wide template compatibility and can be used with different templates from animals, plants, viruses etc. Stable up to 50°C - 55°C which is useful with RNA templates having complex secondary structures. Provides better tolerance to common impurities such as ethanol, isopropanol, water balance phenol, guanidine isothiocyanate and humic acid. High reverse transcription efficiency results high quality cDNA synthesis.

| Cat#	Description	Size
MRT-01	M-MLV(-H) Reverse Transcriptase	10000 U
RRT-02	NeoScript III Reverse Transcriptase	10000 U

NeoScript RT-PCR Kit

NeoScript RT SuperMix

SuperMix prepared by blending upgraded version of heat-stable Reverse Transcriptase with optimized buffer that facilitate cDNA synthesis. Designed for two-step RT-qPCR.

NeoScript One Step RT-PCR Kit

The major objective of the kit is for detecting RNA in the sample. The kit contains Enzyme Mix (Reverse transcriptase and Hot Shot DNA polymerase) and an optimised buffer, which enables RNA detection and amplification in one step. The master mix in the kit does not contain SYBR green. As a result, the kit is not for absolute quantification of the target in a sample.
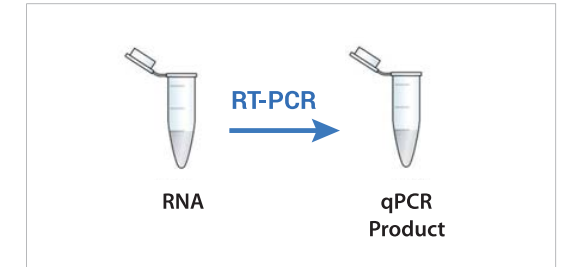
NeoScript One Step qRT-PCR Kit with SYBR Green

Designed for SYBR Green-based qPCR that directly use RNA as templates. NeoScript II Reverse Transcriptase and Champ-Taq DNA Polymerase, and an optimized buffer system enable high-sensitive total RNA detection (as little as 1 pg).

Cat#	Description	Size
CSK03-100rxn	NeoScript RT SuperMix	100 rxn
OS03-50rxn	NeoScript OneStep RT-PCR Kit	50 rxn
OS01-250rxn	NeoScript OneStep qRT-PCR Kit with SYBR green	250 rxn

Green Eye-Ab

Universal qPCR Master Mix

Based on SYBR® Green Chimeric Fluorescence Method with Special
ROX Passive Reference Dye, makes it compatible with
all qPCR instruments

Universal on all Platforms	Special ROX reference dye, suitable for all qPCR instruments, no need to adjust ROX concentration on different instruments
Rigorous hot-start Enzyme	Hot Shot DNA Polymerase (M101), based on chemical hot-start, provides perfect amplification specificity;
Optimized Reaction Body	Patented buffer formula, which minimizes non-specific amplification and primer dimerization, without repeated optimization of conditions;
Excellent Amplification Performance	Repeatable and reliable quantitative results to meet the data requirements of high-level magazines

Product	Cat No.	Size
Green Eye-Ab Universal qPCR Master Mix	SMM03-50	500 Rxn
Green Eye-Ab Universal qPCR Master Mix	SMM03-1000	2500 Rxn

Velocity qRT-PCR Ready Mix

Velocity qRT-PCR Ready Mix is specially designed for probe-based qPCR that directly use RNA (i.e. virus RNA) as templates. It consists of High Performance Reverse Transcriptase with Hot Start Taq DNA Polymerase in an unique combination.

This kit enables high-sensitive total RNA detection (as little as 0.1 pg or < 10 copies). Besides, it contains a dUTP/UDG anti-contamination system which could further increase the detection accuracy.
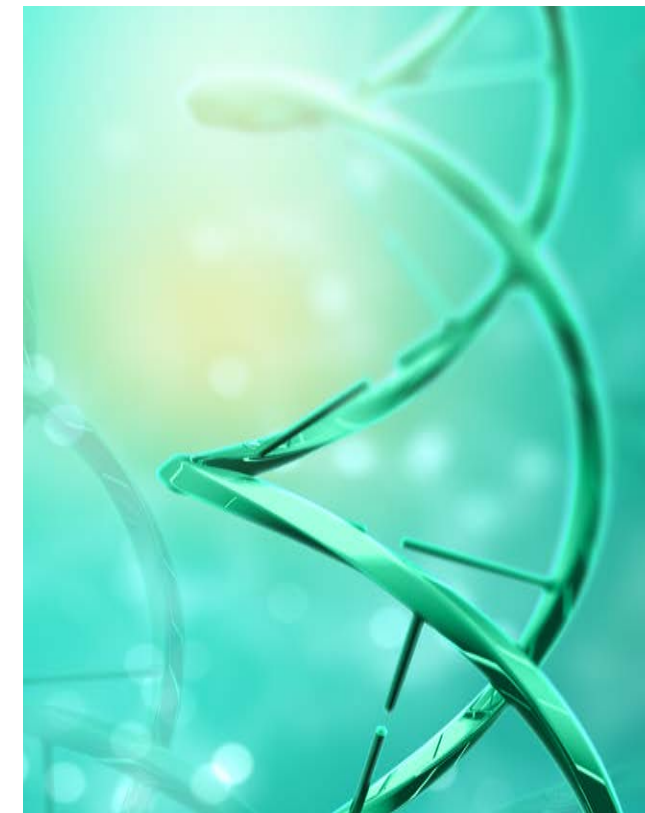
High Sensitivity
The material integrates the superior performance of reverse transcriptase and Hot-start Taq Polymerase Enzyme. Coordinate with the optimised buffer system, the detection sensitivity can achieve single-digit copy of RNA template.

Less Bench time
The reverse transcription & qPCR detection are performed in one tube with one enzyme mix which greatly reduces the bench time.

Anti-contamination
This material introduces the dUTP/UDG anti-contamination system without affecting the efficiency and sensitivity of qRT-PCR

Product	Cat No.	Size
Velocity qRT-PCR Ready Mix	MNQ105-1	100 Rxn
Velocity qRT-PCR Ready Mix	MNQ105-2	200 Rxn

Cloning

T4 DNA Ligase (TDL-01)

T4-DNA ligase catalyses the formation of a phosphodiester bond between the adjacent 5'-phosphate and 3'-hydroxyl on the blunt or cohesive end of dsDNA. However, it cannot establish a link between single stranded nucleic acid. The T4 DNA ligase can be used in labelling the 3'-end of RNA and DNA oligonucleotides, cloning and other manipulation of nucleic acids.
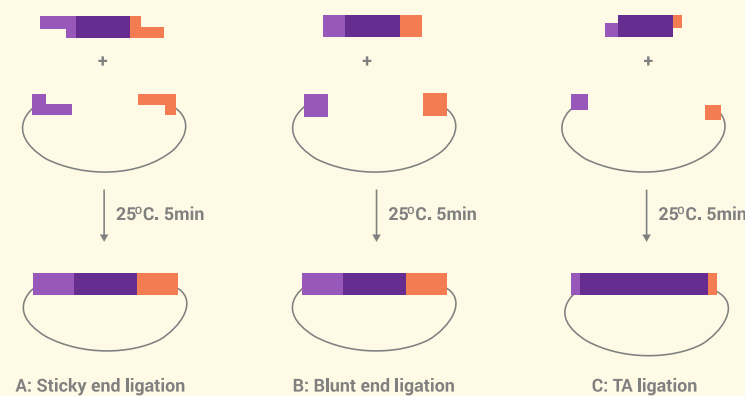
Features
- Catalyzes the formation of a phosphodiester bond between juxtaposed 5' phosphate & 3' hydroxyl termini in duplex DNA or RNA
- This enzyme will join blunt end and cohesive end of dsDNA
- It can also catalyze the connection between RNA and ssDNA or RNA strands in the double strand
- Purity is greater than 99%, no exogenous nuclease activity remains

Cat#	Description	Size
TDL-01	T4 DNA Ligase (100 rxn)	40,000 U

Rapi-5 Universal Ligation Mix (ULM)

Features
- **Versatile** : Suitable for TA cloning, blunt-end cloning, cohesive-end cloning, and ligation of linkers or adapters
- **Fast** : Cloning within 5 min at 25°C
- **Efficient** : Positive Clone Rate > 95%

25°C. 5min — A: Sticky end ligation
25°C. 5min — B: Blunt end ligation
25°C. 5min — C: TA ligation

Cat#	Description	Size
ULM-50rxn	Rapi-5 Universal Ligation Mix	50 rxn
ULM-100rxn	Rapi-5 Universal Ligation Mix	100 rxn

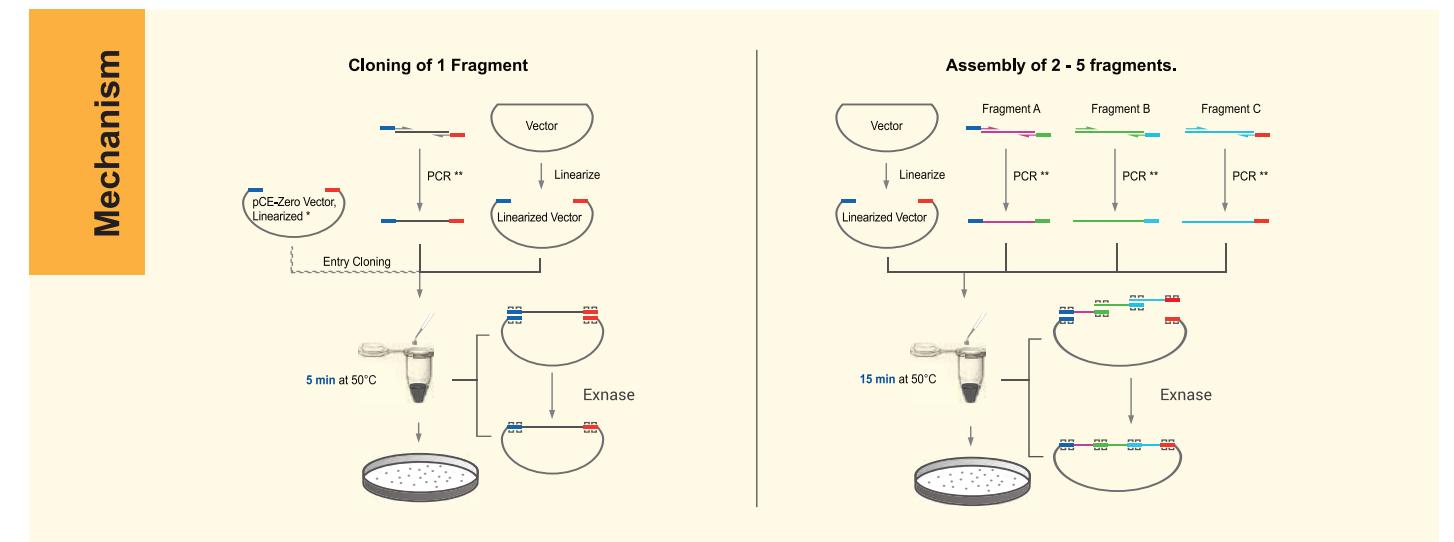# Replica Express a Seamless Cloning Technology

Replica Express technology facilitates quick and directionally clone the inserted fragments to any site of any vector.

Widely Applicable : It is suitable for targeted cloning to almost any vector at any site. It can efficiently clone 50 bp - 10 kb fragments and carry out one step multi-fragment seamless cloning

Convenient Operation : The linearized clone vector and PCR products can be cloned directly without purification. It only takes 5 - 30 min to complete the reaction

Simple Design : Enzyme digestion is unnecessary. It only needs to introduce the homologous sequence at the end of the vector at the 105' end of the primer

Highly Efficient Cloning : Achieved by using inefficient competent cells (DH5 α / XL10). Independent of ligase and phosphatase, the positive rate of cloning is more than 95%

Mechanism

Cloning of 1 Fragment

Assembly of 2 - 5 fragments.

Selection Guide

Applications	Products (Cat.#)	Features	Applicable for
Fast Cloning	ReplicaExpres One Step Cloning Kit (OSC-25/50 Rxn) ReplicaExpress Ultra One Step Cloning Kit (UOSC-25/50rxn)	Easy, Fast and efficient. No need to consider the restriction enzymes cutting Site on the Insert Ligase-independent Positive Clone Rate > 95% Efficient cloning of fragments of 50 bp - 10 kb	Cloning or assembly of 1-5 fragments

Cat#	Description	Size
OSC-25rxn	ReplicaExpress One Step Cloning Kit	25 rxn
OSC-50rxn	ReplicaExpress One Step Cloning Kit	50 rxn
UOSC-25rxn	ReplicaExpress Ultra One Step Cloning Kit	25 rxn
UOSC-50rxn	ReplicaExpress Ultra One Step Cloning Kit	50 rxn

DNA Ladder

50bp DNA Ladder RTU
(Ready-to-Use)

Cat# DLAD- 50 bp   Size: 50 µg / 500 µl

Range: 50-1,500 base pairs

2% TAE agarose gel

Number of Bands: 17   Concentration: 112 µg/ml
Recommended Load: 5 µl/well

Containing orange Gas tracking dyes.
100 Lanes

100bp DNA Ladder RTU
(Ready-to-Use)

Cat# DLAD- 100bp   Size : 50 µg / 500 µl

Range: 100-1,500 base pairs

1.7 % TAE agarose gel

Number of Bands: 11   Concentration: 100 µg/ml
Recommended Load: 5 µl / well

Containing orange G & xylene cyanol
FF as tracking dyes.
100 Lanes

1Kb DNA Ladder RTU
(Ready-to-Use)

Cat# DLAD-1 kb   Size: 50 µg / 500 µl

Range: 250-10,000 base pairs

1 % TAE agarose gel

Number of Bands: 13   Concentration: 100 µg/ml
Recommended Load: 5 µl/well

Containing bromophenol blue & xylene
cyanol FF as tracking dyes.
100 Lanes

Storage :

Store at 25°C for 6 months | Store at 4°C for 12 months | Store at -20°C for 24 month

Cat#	Description	Size
DLAD-100bp	100bp DNA Ladder RTU	500µl (100 lanes)
DLAD-1kb	1Kb DNA Ladder RTU	500µl (100 lanes)
DLAD-50bp	50bp DNA Ladder RTU	500µl (100 lanes)

Prestained Protein Ladder

Prestained Protein Ladder
(10-180 kDa)

Cat # PLAD -01   Size : 500 µl
(Tris-Glycine-SDS Running Buffer)

Number of Bands: 10   100 Lanes
Recommended Load: 5 µl / well for mini-gels,
2.5 µl per well for blots

Prestained Protein Ladder
(10-245 kDa)

Cat # PLAD -02   Size : 500 µl
(Tris-Glycine-SDS Running Buffer)

Number of Bands : 12   100 Lanes
Recommended Load: 5 µl / well for mini-gels,
2.5 µl per well for blots

Prestained Protein Ladder
(3.5-245 kDa)

Cat# PLAD -03   Size : 500 µl
(Tris-Glycine-SDS Running Buffer)

Number of Bands : 13   100 Lanes
Recommended Load: 5 µl / well for mini-gels,
2.5 µl per well for blots

Feature : Three-color (Blue, Green, Red dye), supplied in gel loading buffer and is ready to use.
Storage : Stable for up to 2 weeks at 25°C | Stable for up to 3 months at 4°C | For long term storage, store at -20°C

Cat#	Description	Size
PLAD01	Prestained Protein Ladder (10-180 kDa) 10 Bands	500µl (100 lanes)
PLAD02	Prestained Protein Ladder (10-245 kDa) 12 bands	500µl (100 lanes)
PLAD03	Prestained Protein Ladder (3.5-245 kDa) 13 bands	500µl (100 lanes)

Genome Editing

T7 Endonuclease I

T7 endonuclease I recognize and cuts mismatched DNA, cruciform DNA, Holliday structures or junctions, and heteroduplex DNA. It can detect double-strand DNA with low speed and can cut through nicks. The enzyme cleaves the first, second or third phosphodiester bond at the 5' end of the mismatch site. This product is a high-purity T7 endonuclease I protein with high activity, resulting from the expression of a recombinant T7 endonuclease I (T7 endonuclease I) gene in the *E. coli* expression system.

Key Features :
- High detection sensitivity
- Products can be directly detected by electrophoresis

Cat#	Description	Size
TEND-250U	T7 Endonuclease I	250 U
TEND-1250U	T7 Endonuclease I	1250 U

T7 High Yield RNA Transcription kit

The T7 High Yield Transcription Kit is an optimized system for high yield in vitro transcription of RNA from DNA templates containing T7 RNA Polymerase promoter. The kit contains T7 RNA Polymerase which can synthesize RNA quickly and easily from the downstream of the T7 promoter & obtains a large amount of RNA. Modified nucleotide can be added to the system to generate biotin or dye-labeled RNA. This kit can yield upto 150 - 200 µg of RNA with a template input of 0.5 µg. The RNA yield can be widely used in many downstream applications such as RNA structure and function studies, RNase protection, probe hybridization, RNAi, microinjection and in vitro translation

Key Features :
- Optimized reaction system;
- Each reaction produces up to 150-200 µg of RNA product

Application :
In vitro transcription of RNA

Cat#	Description	Size
THY-50 rxn	T7 High Yield RNA Transcription kit	50 rxn
THY-100 rxn	T7 High Yield RNA Transcription kit	100 rxn

Genome Editing

T7 RNAi Transcription Kit

Key Features :
- Can transcribe siRNA and long dsRNA;
- The yield is as high as 20-80 µg;
- RNA magnetic beads can quickly and efficiently purify transcription products

Application:
Suitable for *in vitro* transcription of siRNA and long-chain dsRNA. For the transcription of single-stranded RNA, T7 High Yield RNA Transcription Kit (Genes2me # THY-50 rxn) is recommended.

Cat#	Description	Size
TRT-50 rxn	T7 RNAi Transcription Kit	50 rxn
TRT-100 rxn	T7 RNAi Transcription Kit	100 rxn

Cas9 Nuclease

Cas9 Nuclease is a double-strand DNA endonuclease that uses a single guide RNA (sgRNA) to specify the site of cleavage. sgRNA contains complementary region for specific DNA binding, and can lead the Cas9 Nuclease to the target DNA. Cas9 Nuclease contains two nuclease domains, which can cut each strand of DNA duplex to produce double strand break. The cutting site locates at 3 bp from NGG PAM of the complementary region of target DNA.

Key Features:
• High purity and high activity Cas9 protein
• Convenient for in vitro sgRNA efficiency verification

Cat#	Description	Size
CAS-01	Cas9 Nuclease	50 pmol
CAS-02	Cas9 Nuclease	250 pmol

Deoxyribonuclease I (DNase I), RNase-free

Deoxyribonuclease I (DNase I), is an endo deoxyribonuclease that digests single- or double-stranded DNA. It recognizes and cleaves phosphodiester bonds to produce a single deoxynucleotide or single- or double-stranded oligodeoxynucleotide with a phosphate group at the 5'-end and a hydroxyl group at the 3'-end. DNase I depends on Ca2+ for activity, and it can also be activated by divalent metal ions such as Mg2+ and Mn2+. In the presence of Mg2+, DNase I nonspecifically recognizes and cleaves a double-stranded DNA at any site on either strand, and in the presence of Mn2+, it recognizes and cleaves almost the same sites on both strands of the DNA to produce DNA fragments with blunt ends or sticky ends with one or two nucleotide overhangs.

Key Features :
• High activity
• Very low RNase residue
• Good stability

Cat#	Size	Description	Size
DRF-01		DNase1, RNase-free (1U/ul)	1000 U
DRF-02		DNase1, RNase-free (50U/ul)	1000 U

Proteinase K

## High-End Proteinase K Active Proteinase K of Enhanced Stability

High Sensitivity

• Higher stability and enzyme activity based on directed evolution technologies
• Tolerant of Guanidine salt
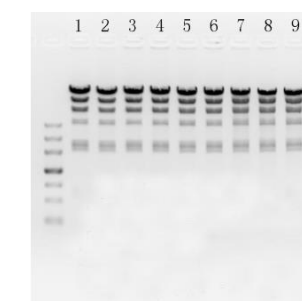• Free of enzyme impurities and heavy metal ions, DNA <5 pg/mg
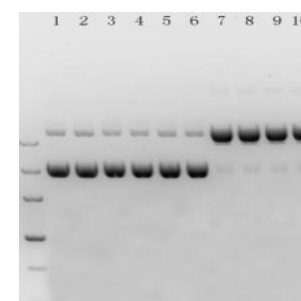
Free of Nickase

1-2: Nickase Free Water;
3-4: Proteinase K Storage Buffer;
5-6: G2M Proteinase K;
7-10: Proteinase K From X Company
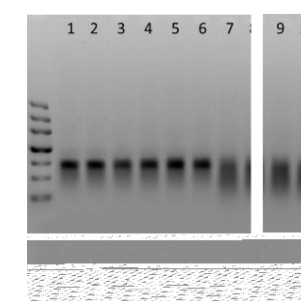
Free of RNase

1-2: RNase Free Water;
3-4: Proteinase K Storage Buffer;
5-6: G2M Proteinase K;
7-10: Proteinase K From X Company

Free of DNase

1-2: DNase Free Water;
3-4: Proteinase K Storage Buffer;
5-6: G2M Proteinase K;
7-10: Proteinase K From X Company

Product	Cat No.	Size
Proteinase K	PK1037-100mg	100mg
Proteinase K	PK1037-200mg	200mg
Proteinase K	PK1037-1gm	1gm

GENES2ME
Innovating Molecular
Diagnostics for Billion

LE NEXT

Complete Range
for Next Generation Sequencing

DNA Sequencing

DNA Library Preparation for **Illumina®**

DNA Library Preparation for **Ion Torrent®**

DNA Library Preparation for **MGI®**

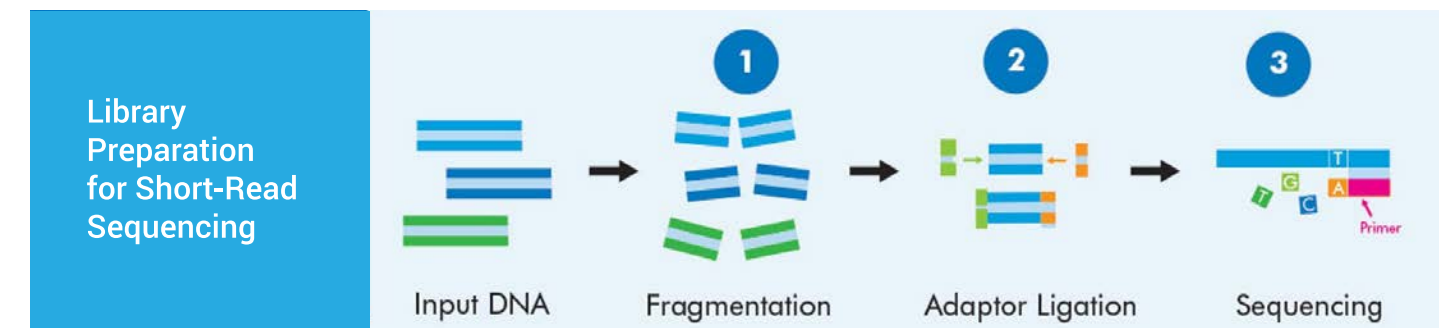**Modules** for DNA Library Preparation

Enzymes for DNA Library Preparation

DNA Library Preparation for **Illumina®**

Application	Description	Cat#	Size
Universal DNA Library Preparation	LeoNext Universal DNA Library Prep Kit for Illumina® V3 LeoNext Universal DNA Library Prep Kit for Illumina® V3 (PCR-Free) LeoNext Universal DNA Library Prep Kit for Illumina® V5	NGS3101-01/02 NGS3102-03/04 NGS3103-01/02	24 rxn/96 rxn 24 rxn/96 rxn 24 rxn/96 rxn
DNA Lib Prep Kits for Enzymatic Fragmentation	LeoNext Universal Plus DNA Library Prep Kit for Illumina®	NGS3104-01/02	24 rxn/96 rxn
FFPE DNA Library Prep Kit	LeoNext Universal Pro DNA Library Prep Kit for Illumina®	NGS3105-01/02	24 rxn/96 rxn
ssDNA Library Prep Kits	LeoNext ssDNA Library Prep Kit for Illumina®	NGS3106-01/02	24 rxn/96 rxn
MP DNA Library Prep Kits	LeoNext Mate Pair Library Prep Kit for Illumina®	NGS3107-01	48 rxn
Single-Indexed Adapter	LeoNext DNA Adapters Set1 for Illumina® LeoNext DNA Adapters Set 2 for Illumina® LeoNext DNA Adapters Set 3 for Illumina® LeoNext DNA Adapters Set 4 for Illumina® LeoNext DNA Adapters Set 5 for Illumina® LeoNext DNA Adapters Set 6 for Illumina® LeoNext Multiplex Oligos Set 4 for Illumina®	NGS3108-01/02 NGS3109-01/02 NGS3110 NGS3111 NGS3112 NGS3113 NGS3114	10 µl each/40 µl each 10 µl each/40 µl each 20 µl each 20 µl 20 µl 20 µl each 192 rxn
Dual-Indexed Adapter UMI Adapters	LeoNext Multiplex Oligos Set 5 for Illumina® LeoNext Dual Index UMI DNA Adapters Set 1 for Illumina®	NGS3115 NGS3116	192 rxn 20 µl each
Dual-Indexed Adapter UMI Adapters	LeoNext Dual Index UMI DNA Adapters Set 2 for Illumina® LeoNext Dual Index UMI DNA Adapters Set 3 for Illumina® LeoNext Dual Index UMI DNA Adapters Set 4 for Illumina®	NGS3117 NGS3118 NGS3119	20 µl each 20 µl each 20 µl each
Amplicon Lib Prep Kits	LeoNext AmpSeq Library Prep Kit V2 LeoNext AmpSeq Library Prep Kit V3	NGS3120-01/02 NGS3121-01/02	24 rxn/96 rxn 24 rxn/96 rxn
Amplicon Lib Prep Adapter	LeoNext AmpSeq Adapters 1 -12 for Illumina®	NGS3122-01	12 ×10 rxn
Amplicon Lib Prep Adapter	LeoNext AmpSeq Adapters 13 - 24 for Illumina®	NGS3122-02	12 ×10 rxn
Amplicon Lib Prep Adapter	LeoNext AmpSeq Adapters 25 - 48 for Illumina®	NGS3122-03	24 ×10 rxn
Amplicon Lib Prep Adapter	LeoNext AmpSeq Adapters 49 - 72 for Illumina®	NGS3122-04	24 ×10 rxn
Amplicon Lib Prep Adapter	LeoNext AmpSeq Adapters 73 - 96 for Illumina®	NGS3122-05	24 ×10 rxn
Cancer Panel	LeoNext AmpSeq Cancer HotSpot Panel	NGS3123	24 rxn
Transposase-based DNA Lib Prep Kits	Leo-Prep DNA Library Prep Kit V2 for Illumina® (50 ng) Leo-PrepDNA Library Prep Kit V2 for Illumina® (5 ng) Leo-Prep DNA Library Prep Kit V2 for Illumina® (1 ng) Leo-Prep Homo-N7 DNA Library Prep Kit for Illumina®	NGS3124 NGS3125 NGS3126 NGS3127/3128/3129	24 rxn/96 rxn 24 rxn/96 rxn 24 rxn/96 rxn 96 rxn
Single-Indexed Adapter	Leo-Prep Index Kit V4 for Illumina®	NGS3130/3131/3132/3133	192 rxn
Dual-Indexed Adapter	Leo-Prep Index Kit V2 / V3 for Illumina®	NGS3134/NGS3135	96 kinds/384 kinds

DNA Library Preparation for **Ion Torrent®**

Application	Description	Cat#	Size
Universal DNA Lib Prep Kits	LeoNext Universal DNA Library Prep Kit for Ion Torrent®	NGS3136-01/02	24 rxn/96 rxn
Amplicon Lib Prep Kits	LeoNext AmpSeq Library Prep Kit V2 LeoNext AmpSeq Library Prep Kit V3	NGS3137-01/02 NGS3138-01/02	24 rxn/96 rxn 24 rxn/96 rxn
Amplicon Lib Prep Adapters	LeoNext AmpSeq Adapters 1 - 24 for Ion Torrent® LeoNext AmpSeq Adapters 25 - 96 for Ion Torrent®	NGS3139-01/02 NGS3140-03/04/05	12 ×10 rxn 24 ×10 rxn
Cancer Hotspot Panel	LeoNext AmpSeq Cancer Hotspot Panel	NGS3141	24 rxn

Library Preparation for Short-Read Sequencing

Input DNA · Fragmentation · Adaptor Ligation · Sequencing

DNA Library Preparation for **MGI®**

Application	Description	Cat#	Size
Universal DNA Lib Prep Kits	LeoNext Universal DNA Library Prep Kit for MGI® LeoNext Universal DNA Library Prep Kit for MGI® V5	NGS3142-01/02 NGS3143-01/02	24 rxn/96 rxn 24 rxn/96 rxn
DNA Lib Prep Kits	LeoNext Universal Plus DNA Library Prep Kit for MGI®	NGS3144-01/02	24 rxn/96 rxn
Enzymatic Fragmentation	LeoNext Universal Pro DNA Library Prep Kit for MGI®	NGS3145-01/02	24 rxn/96 rxn
FFPE DNA Lib Prep Kits	LeoNext DNA Adapters Set 8 for MGI®	NGS3146-01/02	10 µl each/40 µl each
Single-Indexed Adapters	LeoNext Dual UMI Adapters for MGI®	NGS3147-01/02	10 µl each/40 µl each
Dual-Indexed UMI Adapters	LeoNext Circularization Kit for MGI®	NGS3148-01/02	16 rxn/48 rxn
Circularization Kit	LeoNext HiFi Amplification Mix for MGI®	NGS3149-01/02	24 rxn/96 rxn
Amplification Module	LeoNext AmpSeq General Library Prep Kit for MGI®	NGS3150-01/02	24 rxn/96 rxn

Modules for DNA Library Preparation

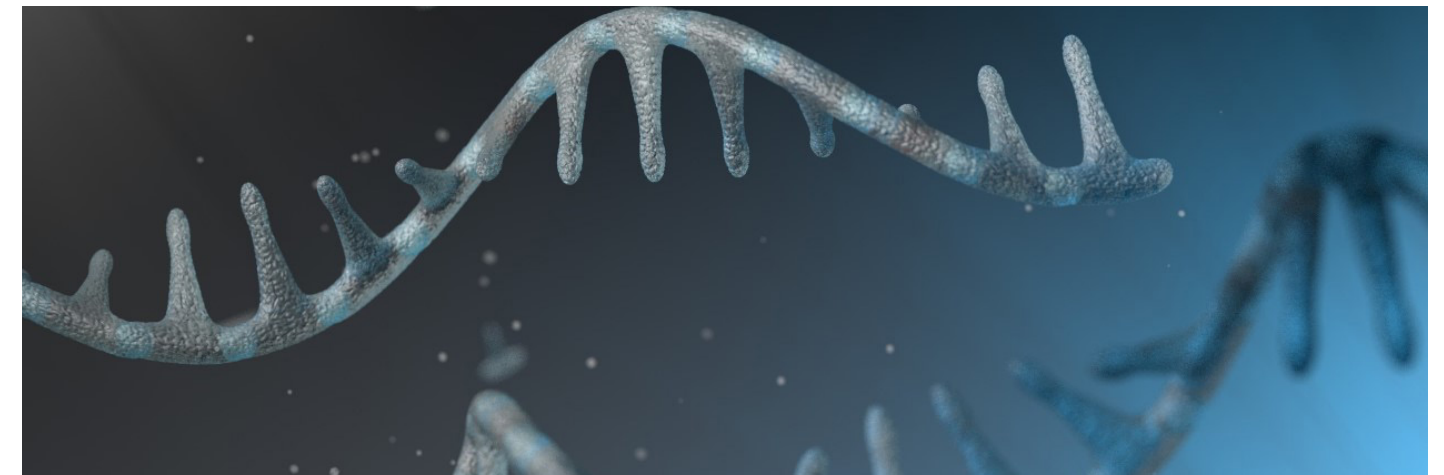| Application	Description	Cat#	Size
LeoPrep Lib Amplification	Leo-Prep Amplify Enzyme	NGS3151	96 rxn
FFPE Repair	LeoNext DNA Damage Repair Kit	NGS3152-01/02	24 rxn/96 rxn
Enzymatic Fragmentation	LeoNext Universal Plus Fragmentation Module	NGS3153-01/02	24 rxn/96 rxn
DNA Lib Prep Modules	LeoNext Universal End preparation Module for Illumina® LeoNext Universal Adapter Ligation Module for Illumina® LeoNext HiFi Amplification Mix	NGS3154-01/02 NGS3155-01/02 NGS3156-01/02	24 rxn/96 rxn 24 rxn/96 rxn 24 rxn/96 rxn
AmpSeq Multi-PCR	LeoNext AmpSeq Multi-PCR Module V2	NGS3157-01/02	24 rxn/96 rxn

Enzymes for DNA Library Preparation

Application	Description	Cat#	Size
Transposase-based RNA Lib Prep Kits	Leo-Prep RNA Library Prep Kit for Illumina®	NGS3158/3159/3160-01/02	24 rxn/96 rxn
Single-Indexed Adapters	Leo-Prep Index Kit V4 for Illumina®	NGS3162/3163/3164/3165	192 rxn
Dual-Indexed Adapters	Leo-Prep Index Kit V2 / V3 for Illumina®	NGS3166/NGS3167	96 rxn / 384 rxn
Ultra Fast & Universal RNA Lib Prep Kits	LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® LeoNext Universal V8 RNA-Seq Library Prep Kit for Illumina®	NGS3168-01/02 NGS3169-01/02	24 rxn/96 rxn 24 rxn/96 rxn
Single-Indexed Adapters	LeoNext RNA Adapters Set 1 / Set 2 for Illumina® LeoNext RNA Adapters Set 3 - Set 6 for Illumina®	NGS3170/3171-01/02 NGS3172/3173/3174/3175	10 µl each/40 µl each 20 µl each
Dual-Indexed Adapters	LeoNext RNA Multiplex Oligos Set 1 / Set 2 for Illumina®	NGS3176 / 3177	192 rxn each
Small RNA Lib Prep Kits	LeoNext Small RNA Library Prep Kit for Illumina®	NGS3178-01/02	24 rxn/96 rxn

RNA Sequencing

RNA Library Preparation for **Illumina**

RNA Library Preparation for **MGI®**

Modules for RNA Library Preparation

RNA Library Preparation for **Illumina®**

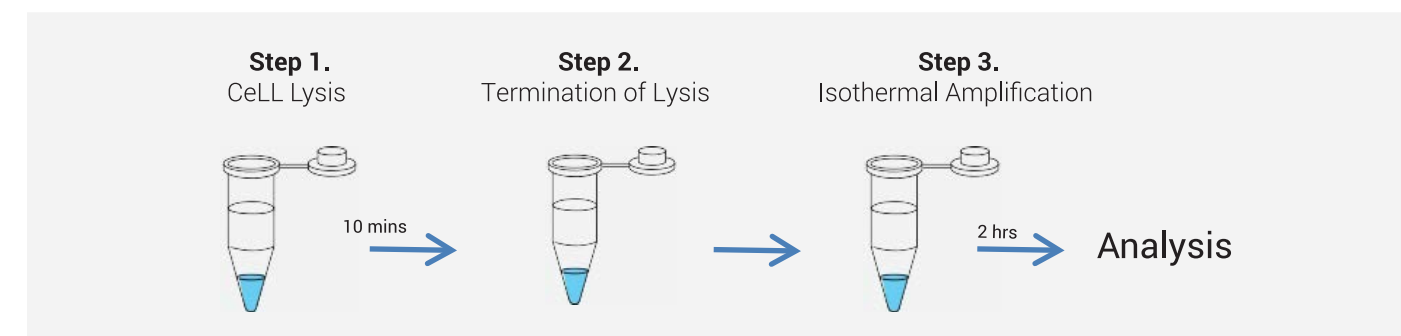| Application	Description	Cat#	Size
Transposase-based RNA Lib Prep Kits	Leo-Prep RNA Library Prep Kit for Illumina®	NGS3158/3159/3160-01/02	24 rxn/96 rxn
Single-Indexed Adapters	Leo-Prep Index Kit V4 for Illumina®	NGS3162/3163/3164/3165	192 rxn
Dual-Indexed Adapters	Leo-Prep Index Kit V2 / V3 for Illumina®	NGS3166/NGS3167	96 rxn / 384 rxn
Ultra Fast & Universal RNA Lib Prep Kits	LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® LeoNext Universal V8 RNA-Seq Library Prep Kit for Illumina®	NGS3168-01/02 NGS3169-01/02	24 rxn/96 rxn 24 rxn/96 rxn
Single-Indexed Adapters	LeoNext RNA Adapters Set 1 / Set 2 for Illumina® LeoNext RNA Adapters Set 3 - Set 6 for Illumina®	NGS3170/3171-01/02 NGS3172/3173/3174/3175	10 µl each/40 µl each 20 µl each
Dual-Indexed Adapters	LeoNext RNA Multiplex Oligos Set 1 / Set 2 for Illumina®	NGS3176 / 3177	192 rxn each
Small RNA Lib Prep Kits	LeoNext Small RNA Library Prep Kit for Illumina®	NGS3178-01/02	24 rxn/96 rxn
Small RNA Lib Prep Adapters	LeoNext Small RNA Index Primer Kit for Illumina®	NGS3179/3180/3181/3182	48 rxn each

RNA Library Preparation for **MGI®**

Application	Description	Cat#	Size
Ultra Fast & Universal RNA Lib Prep Kits	LeoNext Universal V6 RNA-Seq Library Prep Kit for MGI® LeoNext Universal V8 RNA-Seq Library Prep Kit for MGI®	NGS3183-01/02 NGS3184-01/02	24 rxn/96 rxn 24 rxn/96 rxn
Single-Indexed Adapters	LeoNext RNA Adapters Set 8 for MGI®	NGS3185-01/02	10 µl each/40 µl each

Modules for RNA Library Preparation

Application	Genes2me Description	Cat#	Size
mRNA Capture Beads	LeoNext mRNA Capture Beads	NGS3186-01/02	24 rxn/96 rxn
RNA Fragmentation	LeoNext 2 × Frag / Prime Buffer	NGS3187-01	96 rxn
rRNA Depletion Kits	LeoNext rRNA Depletion Kit (Human / Mouse / Rat) LeoNext rRNA Depletion Kit (Bacteria) LeoNext rRNA Depletion Kit (Plant) LeoNext Globin & rRNA Depletion Kit (Human / Mouse / Rat)	NGS3188-01/02 NGS3189-01/02 NGS3190-01/02 NGS3191-01/02	24 rxn / 96 rxn 12 rxn / 24 rxn 12 rxn / 24 rxn 24 rxn / 96 rxn

Single Cell-Seq

Single Cell WGA	LeoNext Single Cell WGA Kit	NGS3192-01/02	24 rxn/96 rxn
Single Cell WTA	LeoNext Single Cell Full Length mRNA-Amplification Kit	NGS3193-01/02/03	12 rxn/24 rxn/96 rxn

Step 1. CeLL Lysis → 10 mins → **Step 2.** Termination of Lysis → **Step 3.** Isothermal Amplification → 2 hrs → Analysis

Beads

DNA Clean-up & Size-Selection	LeoNext DNA Clean Beads	NGS3194-01/02/03	5 ml/60 ml/450 ml
RNA Clean-up	LeoNext RNA Clean Beads	NGS3195-01/02/03	5 ml/40 ml/450 ml

DNA / RNA Fragments — Clean Beads — Separation — Transfer Supernatant — Clean Beads — Separation — Ethanol Rinse — Elution — Size Selected DNA/RNA

Discard Larger fragments Binding on Beads

Discard Smaller fragments In supernatant

Library Quantification

Application	Description	Cat#	Size
Library Quantification Kits	LeoNext Library Quantification Kit for Illumina® DNA Standard 1-6 Library Dilution Buffer	NGS3196/3197/3198/3199 NGS3200 NGS3201	500 rxn 8 rxn 50 ml
Equalbit Assay Kits	LeoNext dsDNA HS Assay Kit LeoNext 1x dsDNA HS Assay Kit LeoNext RNA HS Assay Kit LeoNext RNA BR Assay Kit	NGS3202-01/02 NGS3203-01/02 NGS3204-01/02 NGS3205-01/02	100 / 500 assays 100 / 500 assays 100 / 500 assays 100 / 500 assays

LE❍NEXT

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.

DNA – Sequencing Library Preparation for Illumina®

Genome Sequencing

Enzymatic Fragmentation

LeoNext Universal Plus DNA Library Prep Kit for Illumina® # NGS3104

Physical Shearing

LeoNext Universal DNA Library Prep Kit for Illumina® V3 (PCR-Free) # NGS3102
LeoNext Universal Pro DNA Library Prep Kit for Illumina® # NGS3105
LeoNext Universal DNA Library Prep Kit for Illumina® V5 # NGS3103

Transposase (Tn5) Fragmentation

Leo-Prep DNA Library Prep Kit V2 for Illumina® # NGS3124/NGS3126

FFPE DNA Seq. — LeoNext Universal Pro DNA Library Prep Kit for Illumina® # NGS3105

cfDNA Seq. — LeoNext Universal DNA Library Prep Kit for Illumina® V3 / V5 # NGS3102/3103

Chip-Seq. — LeoNext Universal DNA Library Prep Kit for Illumina® V3 / V5 # NGS3102/3103

ATAC Seq. — Leo Prep DNA Library Prep Kit V2 for Illumina® # NGS3124/NGS3126

Target-Seq — Leo Prep DNA Library Prep Kit V2 for Illumina® # NGS3124/NGS3126
LeoNext Universal DNA Library Prep Kit for Illumina® V3 (PCR-Free) # NGS3102
LeoNext Universal DNA Library Prep Kit for Illumina® V5 # NGS3103
LeoNext Universal Plus DNA Library Prep Kit for Illumina® # NGS3104
LeoNext Universal Pro DNA Library Prep Kit for Illumina® # NGS3105
LeoNext AmpSeq Library Prep Kit V2 # NGS3137
LeoNext AmpSeq Library Prep Kit V3 # NGS3138

16S/ITS-Seq. — LeoNext Universal DNA Library Prep Kit for Illumina® V3 / V5 # NGS3102/3103

ssDNA-Seq. — LeoNext ssDNA Library Prep Kit for Illumina® # NGS3106

LeoNext Universal Plus DNA Library Prep Kit for Illumina
(Cat #NGS3104-01/1)
DNA Library Prep Kit with Enzymatic Fragmentation

UNIVERSAL : Applicable for 100 pg - 1 µg of input DNA from many species

EASY : Enzymatic fragmentation with no need for physical shearing / sonication

TIME-SAVING : Fragmentation, end repair, dA-tailing are performed in one step

RELIABLE : Generate high-quality DNA libraries with high yields

LeoNext Universal V6 RNA-seq Library Prep Kit for Illumina
(Cat # NGS3183-01/02)
Fast & Effective RNA Library Prep Kit

FAST : The 2nd strand cDNA synthesis, end-repair, and dA-Tailing in one reaction

HIGH-QUALITY : library prepared from enriched RNA within 4 hours

FLEXIBLE : Compatible with a variety of RNA enrichment modules

UNIVERSAL : Options for the preparation of stranded or non-stranded RNA-Seq libraries

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LeoPrep DNA Library Prep Kit V2 for Illumina (Cat# NGS3125/3126)
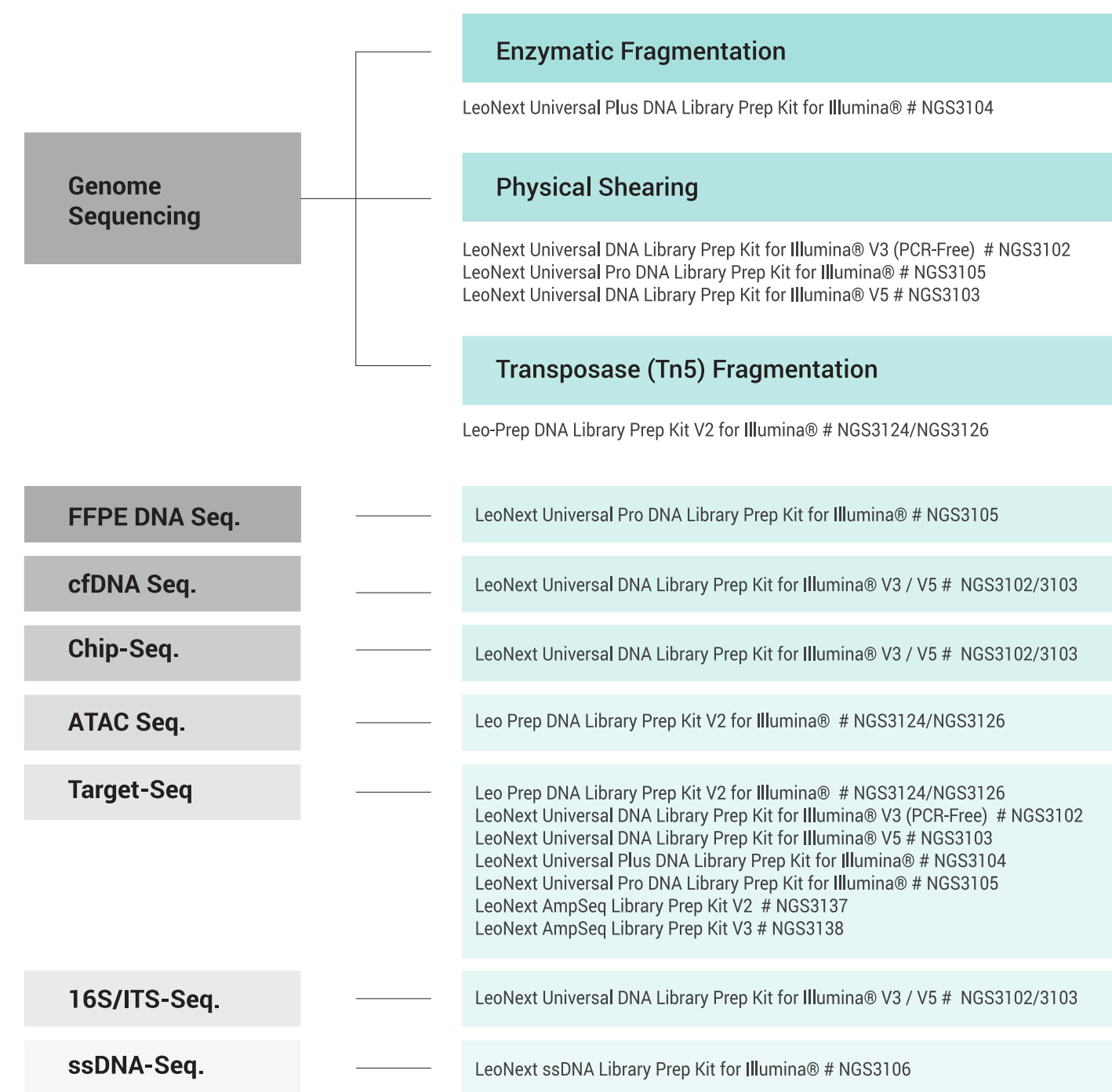Transposase (Tn5)-based Ultra-Fast DNA Library Prep Kit

EASY TO USE : One-step enzymatic reaction

ULTRA-FAST : Library preparation within 90 min

VERSATILE : Applicable for genomic DNA, single cell-seq, and epigenetics (i.e. ATAC-Seq)

RELIABILITY : Optimized Polymerase & buffer to achieve high efficiency and uniformity

DNA – Seq Library Preparation for MGI

Genome Re- Seq.

Enzymatic Fragmentation

LeoNext Universal Plus DNA Library Prep Kit for MGI® # NGS3144

Physical Shearing

LeoNext Universal DNA Library Prep Kit for MGI® # NGS3142
LeoNext Universal Pro DNA Library Prep Kit for MGI® # NGS3145
LeoNext Universal DNA Library Prep Kit for MGI® V5 # NGS3143

FFPE DNA Seq.

LeoNext Universal Pro DNA Library Prep Kit for MGI® # NGS3145

cfDNA Seq.

LeoNext Universal DNA Library Prep Kit for MGI® # NGS3142
LeoNext Universal DNA Library Prep Kit for MGI® V5 # NGS3143

ChIP-Seq.

LeoNext Universal DNA Library Prep Kit for MGI® # NGS3142
LeoNext Universal DNA Library Prep Kit for MGI® V5 # NGS3143

Targeted Sequencing

LeoNext Universal DNA Library Prep Kit for MGI® # NGS3142
LeoNext Universal DNA Library Prep Kit for MGI® V5 # NGS3143
LeoNext Universal Plus DNA Library Prep Kit for MGI® # NGS3144
LeoNext Universal Pro DNA Library Prep Kit for MGI® # NGS3145

16S/ITS-Seq.

LeoNext Universal DNA Library Prep Kit for MGI® # NGS3142
LeoNext Universal DNA Library Prep Kit for MGI® V5 # NGS3143

Leo Prep DNA Library Preparation (Transposase-Based)

Leo Prep DNA Library Prep Kit V2 for Illumina®
Cat# NGS3124/3125/3126

Rapid & Easy	· Time-Saving : Library prepared within 90 min. · Easy-to-Use : one-step enzymatic reaction, no need for physical shearing / sonication
High Amplification Uniformity	· Optimized polymerase and buffer to achieve high efficiency and uniformity in library amplification
High Adaptability to Input DNA	· Applicable for genomic DNA, cDNA, and amplicons from multiple species. Input DNA: 1ng – 50ng

Mechanism of Leo Prep DNA Library Preparation

Leo Prep Tagment Enzyme Mix (LTE Mix) contains transposase and two kinds of adapters (Adapter 1 and Adapter 2) with equal molar. Input DNA are fragmented and linked with adapters on both ends just by mixing with LTE Mix, followed by a 10- minute incubation at 55°C.

The tagged DNA fragments can be further amplified with two pairs of primers N5 (N5XX) / N7 (N7XX) and P5 / P7 (PCR Primer Mix, PPM). After size selection and clean-up, the library is ready for sequencing on Illumina platforms.
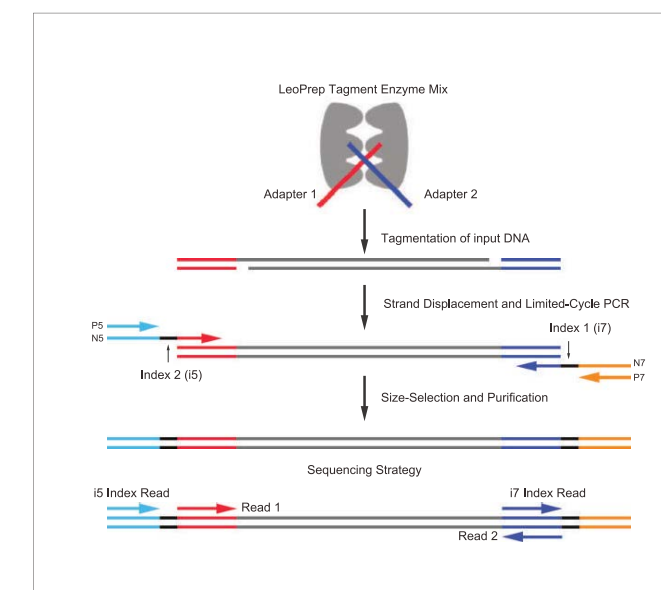

Adapter 1 and Adapter 2, two oligos embedded in Leo-Prep Tagment Enzyme
P5 and P7, two universal PCR Primers
N5 and N7, two index primers containing index 2 (i5) and index 1 (i7) respectively

# LeoNext Universal Plus DNA Library Prep Kit for Illumina® (Cat# NGS3104) (For Enzymatic Fragmentation)

Universal	• Application for 100 pg-1 μg of input DNA (e.g. genomic DNA, FFPE DNA) from many species
Easy	• Enzymatic fragmentation with a single protocol, with no need for physical shearing / sonication
Time Saving	• Fragmentation, end repair, dA-tailing are performed in one step. No clean-ups needed before adapter ligation
Reliable	• Generate high-quality DNA libraries with high yields

1. Broad Input Amount Compatibility
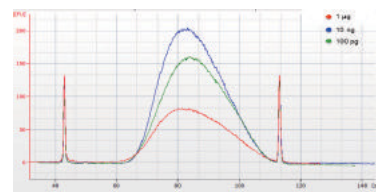
Size distribution of library fragments constructed with different DNA input. For different input mounts of salmon sperm gDNA (100 pg, 10 ng, 1 ug, respectively) with the same fragmentation time, the size distribution of these libraries were identical

2. Extensive Species Compatibility
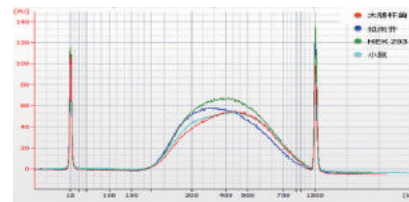
Size distribution of library fragments constructed by gDNA of different species. For the same input of 100 ng, the size distribution of these libraries from different species were identical.

3. Excellent Library Conversion Rate
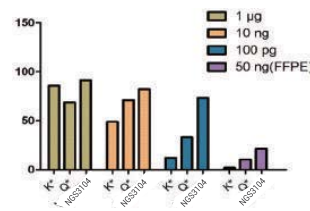
Comparison of library conversion rates. For different input amount of gDNA libraries, Genes2me #NGS3104 has a higher library conversion rate than that of other competitors.
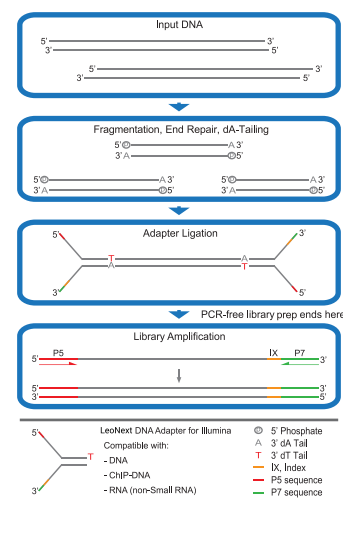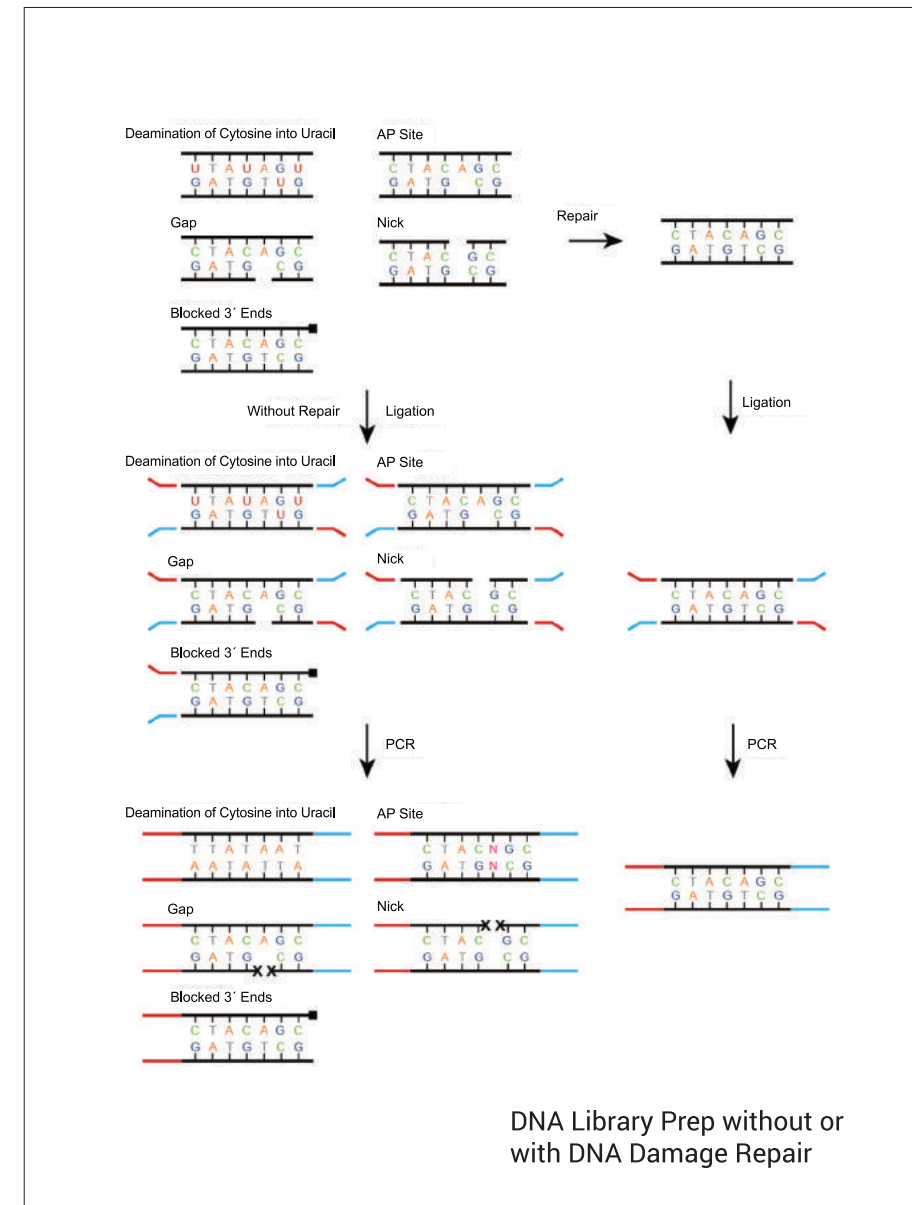

4. High Sequencing Data Quality
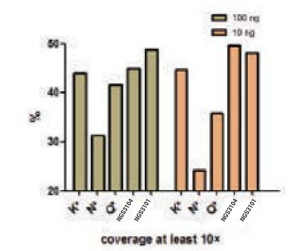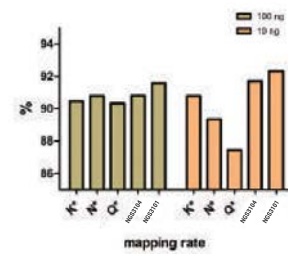
Comparison of sequencing data quality. The Arabidopsis thaliana gDNA library constructed using Genes2me #NGS3104, followed by sequencing on Hiseq X10 PE150

Mechanism of FFPE DNA Library Preparation

DNA Library Prep without or with DNA Damage Repair

LeoNext Universal Pro DNA Library Prep Kit for Illumina® (Genes2me, #NGS3105) is specially designed for library preparation from 100 pg - 1 μg of input DNA for NGS on Illumina® platforms. This kit contains a DNA damage repair module that can effectively repair DNA damage caused by formalin-fixed paraffin-embedded (FFPE), including deamination of cytosine, nicks and gaps, oxidized bases, blocked 3′ ends, compatible with common DNA samples without affecting the quality of normal DNA sample libraries.

The overall optimization of the module of end-repair, ligation and library amplification leads to excellent library conversion rate and amplification output. It is widely applicable to PCR or PCR-Free library construction of multiple samples, and is compatible with targeted capture process.

LeoNext Universal Pro DNA Library Prep Kit for Illumina® (Cat#NGS3105)

Repairable Types of DNA Damage

Types of DNA Damage in FFPE Samples	Deamination of Cytosine into Uracil	Nicks & Gaps	Oxidized Bases	Blocked 3´ Ends	DNA Fragmentation	DNA-Protein Crosslinks
Whether Can Be Repaired by #NGS3105	YES	YES	YES	YES	NO	NO

Validation Data
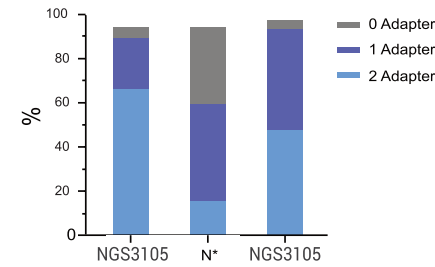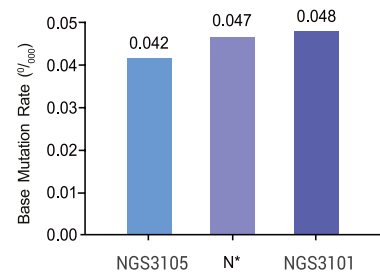
(1) Efficient Repair of Base Damage

The DNA Repair Module of the NGS3105 has the ability to repair base damage efficiently, significantly reducing the number of base aberrant mutations introduced during FFPE sample preparation and storage.

(2) Efficient Library Conversion

The library conversion rate of NGS3105 is higher than that of N* company and LeoNext Universal Plus DNA Library Prep Kit for Illumina (Genes2me, #NGS3102, without FFPE repair module), and the library conversion rate is as high as 67%.
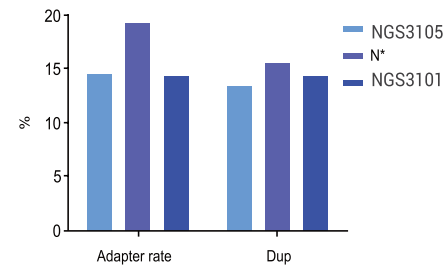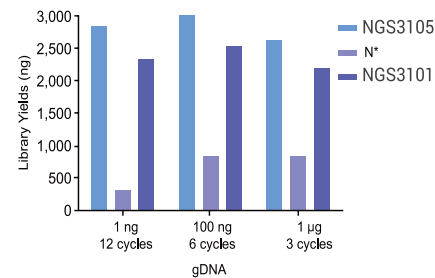
(3) Excellent Library amplification Efficiency

For amplification, the yield of the library constructed by NGS3105 is increased by 3-9 times compared with other kits under the same cycle number; the number of cycles required for competing products is reduced by 2-3 cycles under the same yield

(4) Excellent Raw Data Quality

The library conversion rate of NGS3105 is higher than that of N* company and LeoNext Universal Plus DNA Library Prep Kit for Illumina (Genes2me, #NGS3102, without FFPE repair module), and the library conversion rate is as high as 67%.

LeoNext Universal DNA Library Prep Kit for Illumina® V3 (Cat#NGS3101)

| Time-Saving	• Library prepared within 75 min.
High Adaptability to Input Amount	• Effective library preparation from 100 pg - 4 µg of Input DNA.
Applicable to Most Samples	• Genomic DNA, cfDNA, ctDNA, FFPE DNA, ChIP DNA, and Amplicons.
Excellent Adapter Ligation Efficiency	• Suitable for library preparation with PCR or PCR-free.

LeoNext HiFi Amplification Mix Cat# NGS3156

Excellent Template Adaptability
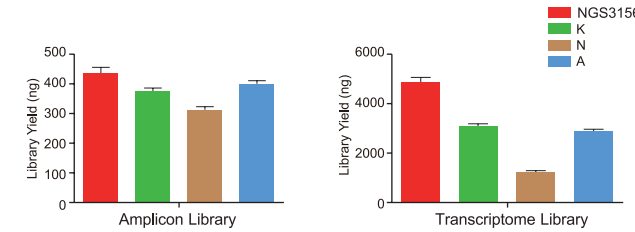
The amplification performance of LeoNext HiFi Amplification Mix # NGS3156, in multiple samples is significantly better than that of competitors. Amplicon library (80ng) and transcriptome library (5 ng) was used as template and amplified for 4 and 13 cycles, respectively. The library concentrations were determined by Qubit.

Super High Plateau of Amplification
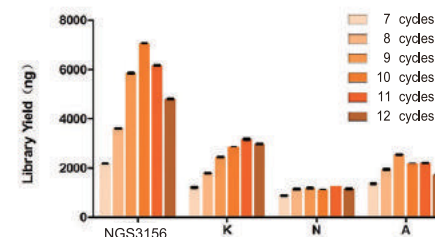
The amplification plateau of LeoNext HiFi Amplification Mix # NGS3156, can reach 7 µg, which is significantly superior to that of competitors. Fragmented DNA (50 ng, approximately 350 bp) was ligated with adapters and then amplified. The library concentrations were determined by Qubit.

RNA – Seq Library Preparation for Illumina

Ultra-Fast & Universal RNA Seq.

Kit
LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® (Cat# NGS3168)
LeoNext Universal V8 RNA-Seq Library Prep Kit for Illumina® (Cat# NGS3169)

Module
LeoNext mRNA Capture Beads – (Cat #NGS3186)
LeoNext rRNA Depletion Kit (Human / Mouse / Rat) – (Cat# NGS3188)
LeoNext rRNA Depletion Kit (Bacteria) – (Cat# NGS3189)
LeoNext rRNA Depletion Kit (Plant) – (Cat# NGS3190)
LeoNext Globin & rRNA Depletion Kit (Human / Mouse / Rat) – (Cat#NGS3191)

Adapter
LeoNext RNA Adapters Set 1 - Set 6 for Illumina® -
(NGS3170/3171/3172/3173/3174/3175)
LeoNext RNA Multiplex Oligos Set 1 / Set 2 for Illumina® - (Cat# NGS3176 / 3177)

Transposase Based Ultra- Fast RNA Seq.

Kit
Leo-Prep RNA Library Prep Kit for Illumina® - (Cat # NGS3158/3159/3160)

Adapter
Leo-Prep Index Kit V4 for Illumina® (Cat#NGS3130/3131/3132/3133)
Leo-Prep Index Kit V2 / V3 for Illumina® (Cat# NGS3134/NGS3135)

Small RNA Seq.

Kit
LeoNext Small RNA Library Prep Kit for Illumina® (Cat# NGS3178)

Adapter
LeoNext Small RNA Index Primer Kit for Illumina® - (Cat# NGS3179-3182)

RNA – Seq Library Preparation for MGI

Ultra-Fast & Universal RNA Seq.

Kit
LeoNext Universal V6 RNA-Seq Library Prep Kit for MGI® - (Cat# NGS3183)
LeoNext Universal V8 RNA-Seq Library Prep Kit for MGI® - (Cat# NGS3184)

Module
LeoNext mRNA Capture Beads – (Cat #NGS3186)
LeoNext rRNA Depletion Kit (Human / Mouse / Rat) – (Cat# NGS3188)
LeoNext rRNA Depletion Kit (Bacteria) – (Cat# NGS3189)
LeoNext rRNA Depletion Kit (Plant) – (Cat# NGS3190)
LeoNext Globin & rRNA Depletion Kit (Human / Mouse / Rat) – (Cat#NGS3191)

Adapter
LeoNext RNA Adapters Set 8 for MGI® (Cat# NGS3185)

Transposase-Based Ultra Fast RNA-Seq Lib Preparation
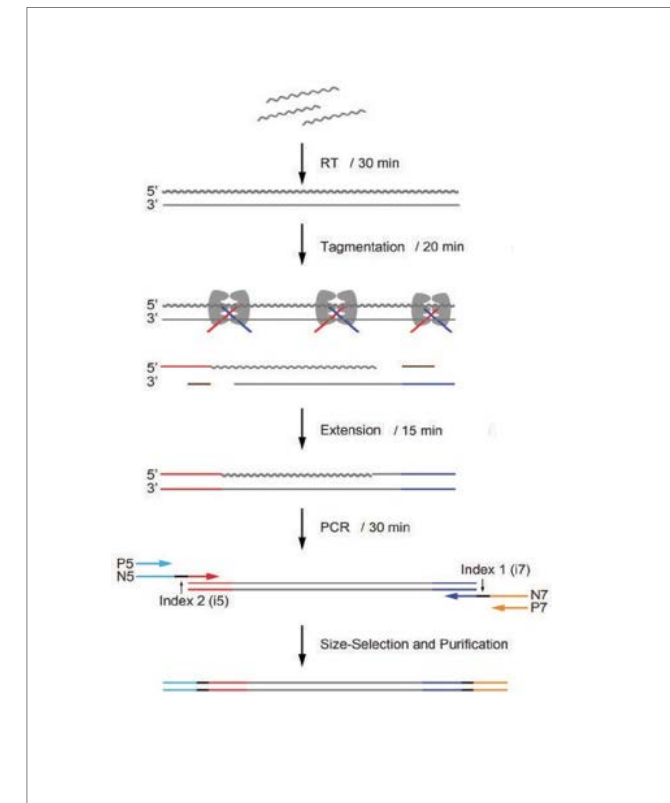
LeoPrep RNA Library Prep Kit for Illumina is transposase based RNA Library construction Kit that specifically designed for next-generation sequencing (NGS) on Illumina platforms. Compared with the traditional methods of RNA library construction. A novel transposase-based method was used to fragment the the RNA/cDNA hybrid strand, which transformed the tedious steps of DNA fragmentation, 2nd-strand synthesis, end repair, dA-Tailing and adaptor ligation into a simple one-step enzymatic reaction.

Therefore, it significantly reduces the input amount of the initial template and greatly shortens the time of library construction.

Leo-Prep RNA Library Prep Kit for Illumina®
(Cat# NGS3158/3159/3160)

| FAST	• Ultra-fast RNA library prep within 2 hours.
SENSITIVE	• Minimal amount of input RNA: 1 ng.
FLEXIBLE	• Compatible with rRNA depletion kits

Validation Data

(1) Perfect Compatibility with Low Input

There are three specifications of the kit, which are suitable for the preparation of libraries with RNA input of 100 ng, 10 ng and 1 ng.

| #NGS3158 (100 ng) | # NGS3159 (10 ng | # NGS3160 (1 ng) |
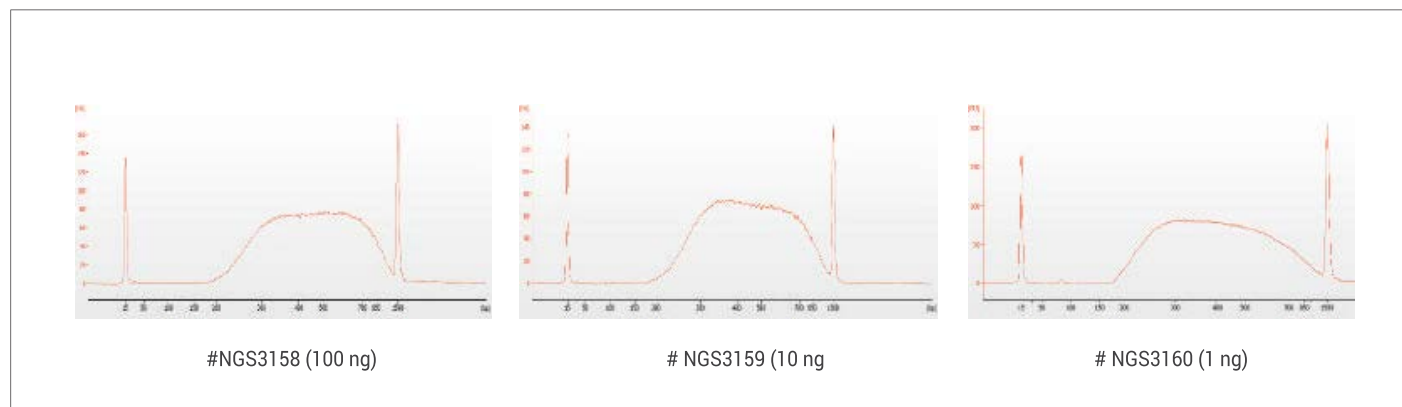
(2) Excellent Gene Detection Rate and Correlation of Expression Repetition

For the prep of libraries with different RNA input, the gene detection rate and the correlation of expression repetition is excellent.
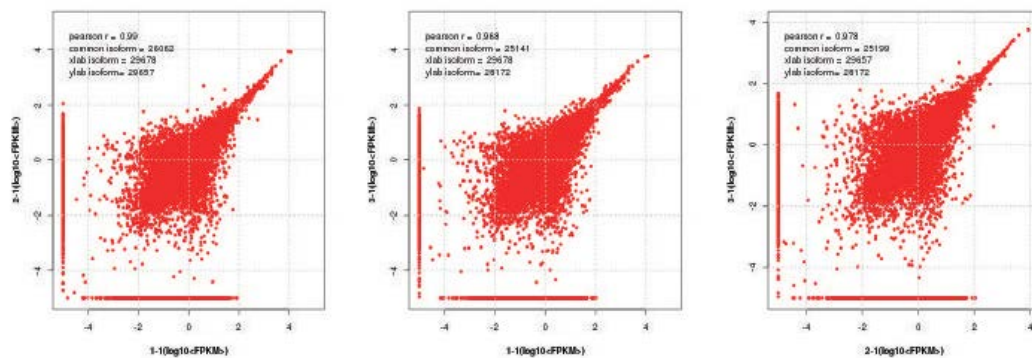
Solutions of Ultra Fast RNA-Seq Library Preparation

LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® # NGS3168 is specially designed for the preparation of transcriptome libraries for NGS platforms of Illumina®. This kit combines 2nd Strand cDNA synthesis, end-repair, and dA-Tailing into one step, with no need of clean-ups, which greatly simplifies the process of library construction and shortens the operation time. The kit also can be used for non-stranded or stranded transcriptome analysis.

(1) Starting Materials

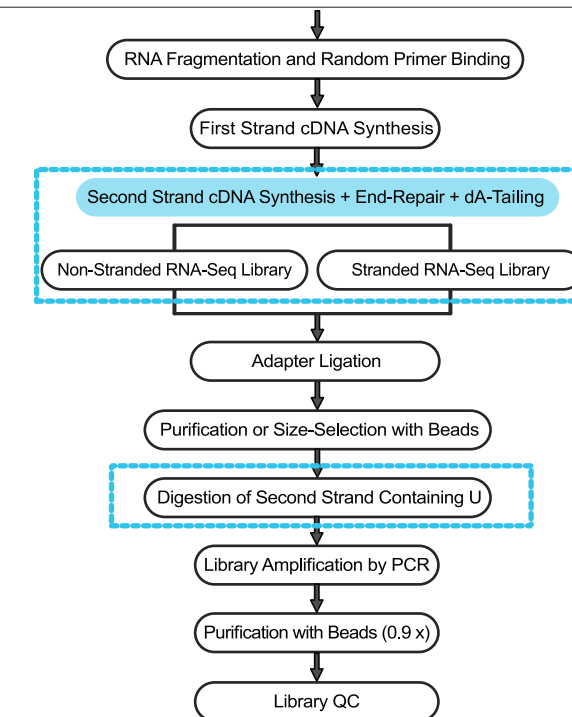| Total RNA(RIN>7) | Total RNA | FFPE RNA |

(2) RNA Enrichment

| mRNA Capture | rRNA Depletion | rRNA Depletion |

LeoNext mRNA Capture Beads (Genes2me NGS N3186)

LeoNext rRNA Depletion Kit (H/ M/ R) - (Genes2Me# NGS3188) LeoNext rRNA Depletion Kit (Bacteria) - (Genes2Me# NGS3189) LeoNext rRNA Depletion Kit (Plant) - (Genes2Me# NGS3190) LeoNext Globin & rRNA Depletion Kit (H/ M/ R) - (Genes2Me#NGS3191)

LeoNext rRNA Depletion Kit (Human / Mouse / Rat) (Genes2Me NGS3188)

(3) cDNA Library Preparation with LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® (Genes2me # NGS3168)

- The second strand cDNA Synthesis, end-repair and dA-Tailing are completed in one reaction.
- Option for non-stradned or stranded RNA-Seq Library preparation.

- Optional for Stranded RNA-Seq Library preparation

🐼 It takes about 4-8 hours to prepare 8 library simultaneously.

RNA Fragmentation and Random Primer Binding

First Strand cDNA Synthesis

Second Strand cDNA Synthesis + End-Repair + dA-Tailing

Non-Stranded RNA-Seq Library | Stranded RNA-Seq Library

Adapter Ligation

Purification or Size-Selection with Beads

Digestion of Second Strand Containing U

Library Amplification by PCR

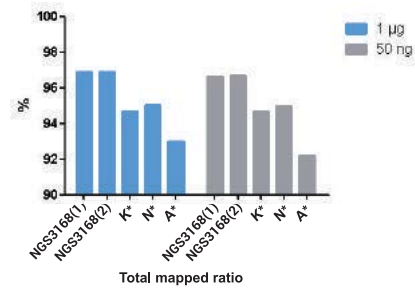Purification with Beads (0.9 x)

Library QC

Mechanism of LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® (Genes2me # NGS3168)

# LeoNext Universal V6 RNA-Seq Library Prep Kit for Illumina® (Cat# NGS3168)

FAST	• The second strand cDNA synthesis, end-repair, and dA-Tailing are completed in one reaction ! High-quality library prepared from enriched RNA within 4 hours
FLEXIBLE UNIVERSAL	• Compatible with a variety of RNA enrichment modules • Options for the preparation of stranded or non-stranded RNA-Seq libraries

Validation Data

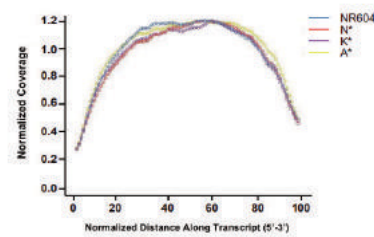**Total mapped ratio**

Expression Genes

(1) High Mapped Rate

Compared with several similar kits, Genes2me, #NGS3168 performed better in mapped ratio
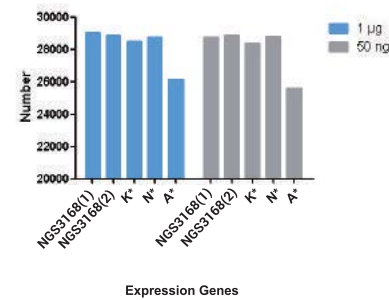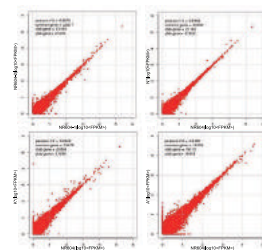
(2) High Gene Detection Number

Compared with several similar kits on the market, Genes2me, #NGS3168 showed higher gene detection number

(3) Excellent Uniformity

The data of library prepared using Genes2me, #NGS3168 was evenly distributed, with no 5'- or 3'- preference, and is highly consistent with several similar kits.

(4) High Expression Repeat Correlation

The correlation coefficient r2 between Genes2me, #NGS3168 and several similar kits on the market is higher than 0.94

LeoNext rRNA Depletion Kit (Plant) (Cat# NGS3190)

Extensive Species compatibility	• Compatible with Arabidopsis, cotton, corn, soybean, rice, tomato, peanut, apple, wheat, Selaginella, Cuscuta, etc
High rRNA Removal Efficiency	• Effective removal of cytoplasmic rRNA, mitochondrial rRNA, and chloroplast rRNA
Wide Range of input Compatibility	• 1 µg - 5 µg total RNA
Easy & Fast Procedures	• Using with #NGS3190 , library preparation and quality control can be completed within one day

Validation Data

The transcriptome libraries of Arabidopsis thaliana, rice, tomato, and maize were prepared using Genes2me, #NGS3190 and RNA-Seq library prep kit, respectively. The quality-controlled libraries were sequenced using an Illumina Hiseq X10 platform for PE150 sequencing. High-quality clean reads obtained from the raw data was analysed
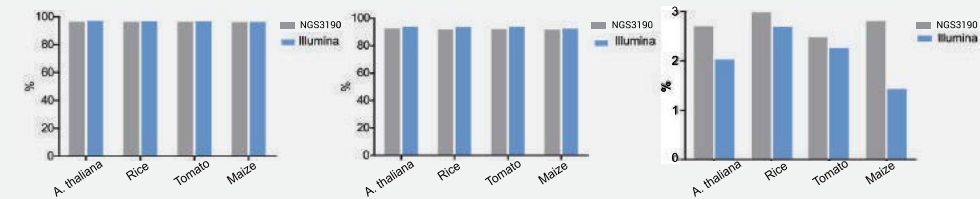
(1) Excellent Data Quality

Compared with several similar kits on the market, Genes2me, #NGS3190showed higher gene detection number`

rRNA ratio
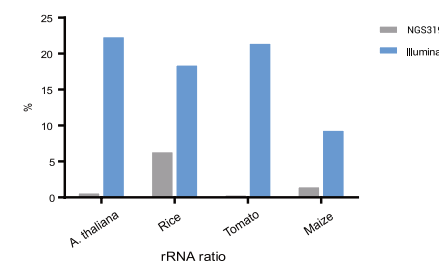
Total Mapped ratio

(2) High rRNA Removal Efficiency

For different species, #NGS3190 can effectively remove rRNA and minimize the waste of data caused by rRNA residues
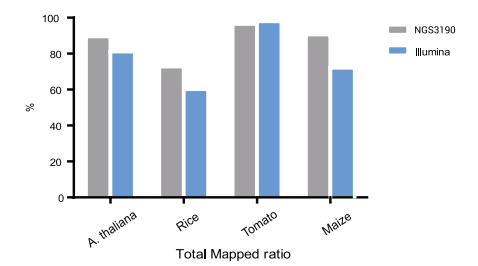
(3) High Mapped Ratio

The data obtained by sequencing the library prepared using Genes2me, #NGS3190 and RNA-Seq library prep kit showed high mapped ratio.

Single Cell Whole Genome Amplification (WGA) Kit

LeoNext Single Cell WGA Kit (#NGS3190) is an isothermal amplification system based on the multiple displacement amplification (MDA) using Phi29. The Phi29 DNA polymerase is cloned from phage and has extremely strong strand- displacement activity and can be used for in vitro MDA polymerization at a constant temperature, with no need for thermal cycling.

One single polymerization reaction using Phi29 can achieve continuous polymerization extension up to 100 kb. This kit is suitable for the whole genome amplification (WGA) from a single cell, small amount of tissues, or even trace purified genomic DNA, to obtain a large amount of genomic DNA with high coverage

Random Primers

DNA Template

Random primers bind to multiple sites of the DNA template

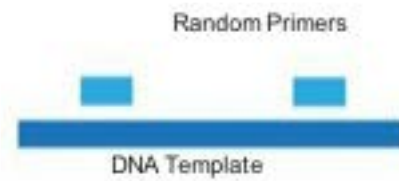Replaced single strand DNA is bind by random primers as template

Phi29 DNA polymerase simultaneously initiates DNA replication at multiple primer binding sites

Random primers initiate new DNA synthesis and chain replacement reaction, to synthesize double strand DNA of high molecular size

Chain synthesis reaction in process replaces encountered DNA chain in synthesis and continue elongation, and produces replaced single strand DNA.

LeoNext Single Cell WGA Kit (#NGS3192)

Wide Sample Compatibility	· Applicable to animal and plant cells, bacteria or blastomeres, trophectoderm cells, sperm and other samples.
High Coverage	· Single cell genome can reach more than 95% coverage after amplification.
High Uniformity	· Chromosome copy number variation analysis from > 1 Mb of the read depth.
High Fideity	· The fidelity of Phi29 DNA polymerase is 1000 folds than Taq polymerase.
Easy Operation	· React at single tube, operate within 10 min, not required for purification of amplification product.

Cell Lysis — 10 min — Termination of Lysis — Isothermal Amplification — 2 hr — Analysis
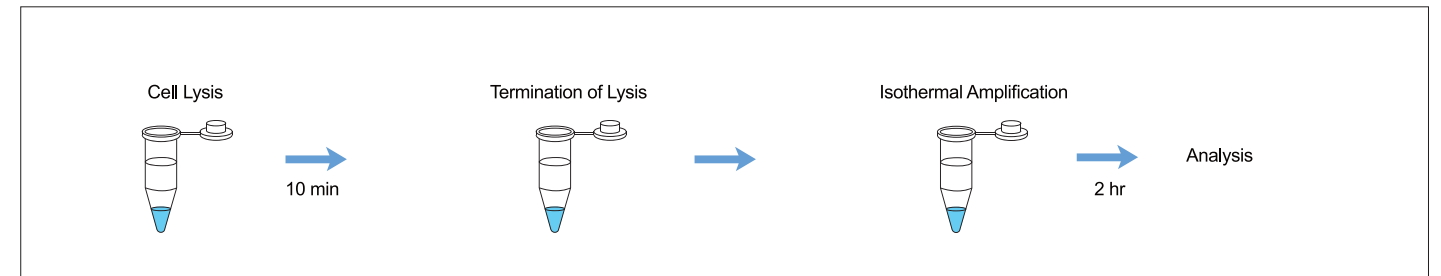
Step 1. CeLL Lysis
· Prepare a mixture of cell lysis buffer.
· Add the cell to lysis buffer.
· Incubate at 65^0C for 10 min

Step 2. Termination of Lysis
· Add a neutral solution to stop the reaction from previous step

Step 3. Isothermal Amplification
· Prepare the mixture of amplification.
· Add the mixture of amplification to the system from Step 2.
· Amplify at 30^0C for 2 hours.

Single cell (using trophectoderm cells and sperm as a template, respectively) genomic amplification was performed using Genes2Me #NGS3192. Then libraries were prepared for sequencing, which was performed in Illumina MiniSeq after pooling according to the effective concentration and the 0.01X of sequencing depth. The data showed that the distribution of the reads was uniform in all parts of the genome, indicating that the amplification uniformity of Genes2Me #NGS3192 was excellent

Scatter Plots of whole genome copy numbers
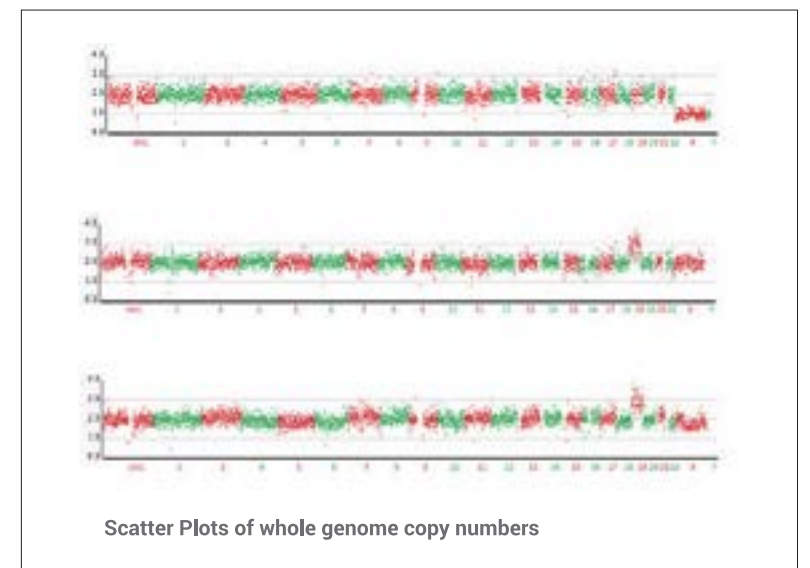
Beads
LeoNext DNA Clean Beads (Cat# NGS3194)

- Applicable for DNA purification and size selection in NGS library preparation.
- Compatible with almost all library prep protocols provided by all manufacturers

DNA Fragments | LeoNext DNA Clean Beads | Separation | Transfer Supernatant | LeoNext DNA Clean Beads | Separation | Ethanol Rinse | Elution | Size-selected DNA

Discard Larger Fragements Binding on Beads

Discard Smaller Fragements in Supernatant
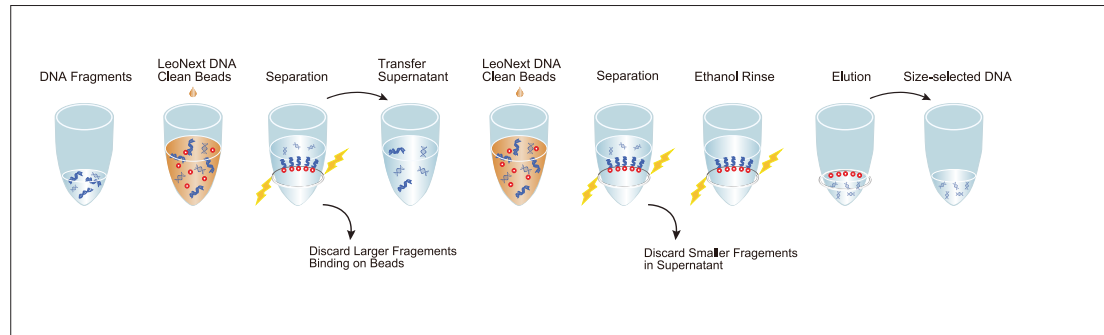
Validation Data

A DNA library (200 bp - 1,500 bp) was prepared using Leo-Prep DNA Library Prep Kit V2 for Illumina® (50 ng) (Genes2Me, #NGS3124). Size-selection was performed using LeoNext DNA Clean Beads (Genes2Me, #NGS3194) according to the different parameters in the following table, respectively.
Size distribution was detected using an Agilent 2100 Bioanalyzer

Ratio of 1st-round (Beads: DNA)	0.80 ×	0.70 ×	0.60 ×	0.55 ×	0.50 ×	0.45 ×	1.0 ×
Ratio of 2nd-round (Beads: DNA)	0.20 ×	0.20 ×	0.20 ×	0.15 ×	0.15 ×	0.15 ×	
Average Size (bp)	300	350	400	500	600	700	200–1500

- 0.80 × / 0.20 ×
- 0.70 × / 0.20 ×
- 0.60 × / 0.20 ×
- 0.55 × / 0.15 ×
- 0.50 × / 0.15 ×
- 0.45 × / 0.15 ×
- 1.0 ×

LeoNext 1x dsDNA HS Assay Kit (Cat# NGS3203)

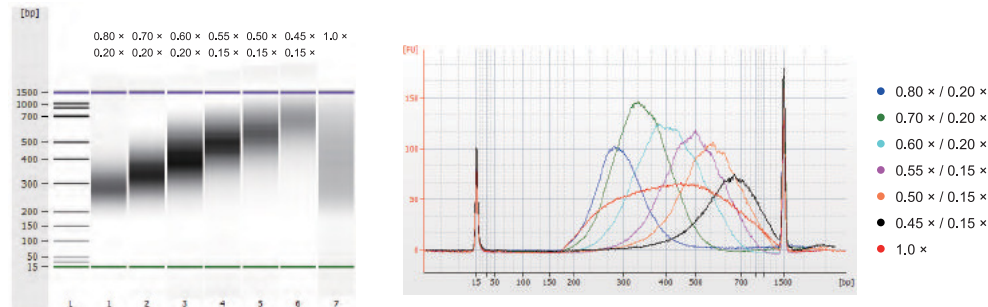| Easy to Use	• Premixed reagent that is ready to use.
Hyper Sensitive	• Accurate Quantification of 0.2 ng – 100 ng of dsDNA
Super Specificity	• Excellent Specificity to dsDNA
Excellent Stability	• Strictly quality controlled standards, ensuring batch to batch consistency.

Validation Data

1. Hyper Sensitive
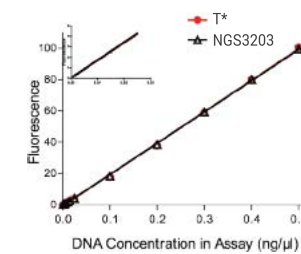
Linearity Analysis (0.2 ng-100 ng): dsDNA samples with 12 different concentrations were tested using Genes2me, #NGS3203 or a similar reagent from vendor T*, respectively. Fluorescence signals were read using a QubitTM Fluorometer 3.0. The result showed a excellent linear relationship between fluorescence and DNA concentration when the amount of dsDNA ranged from 0.2 ng to 100 ng

Results and deviation rate obtained from different operators: the standard of Genes2me, #NGS3203 was serial-diluted to 0.2 ng / µl (theoretical concentration), and then tested by 6 different operators (A, B, C, D, E, F), respectively. The results are showed on the left, and the deviation rate, calculated as [result of Genes2me, #NGS3203 - result of T*] / test result of T* x 100%, are all within 10%.
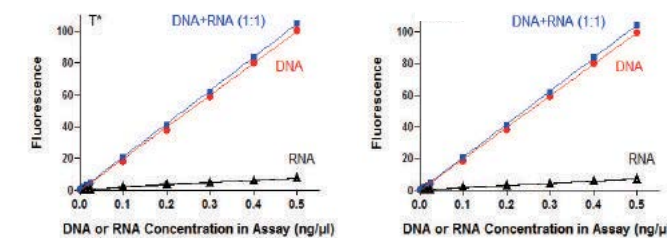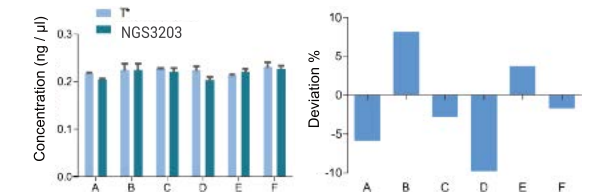
2. Super Specificity to dsDNA

Samples of dsDNA, RNA, and DNA + RNA (1:1) were tested with Genes2me, #NGS3203 and a similar reagent from vendor T*. The results showed that Similar to products from T*, Genes2me, #NGS3203 specifically binds to dsDNA, even in the presence of RNA

Methods	Spin Column	Magnetic Beads
Chemistry	Separation via silica based column filtration membrane	Magnetic beads Separation via magnetic beads which act as charged surfaces to attract nucleic acid
Sample type(s)	All sample types	All sample types
Technique	Centrifugation	Magnetic separation
Purity	Highest	High
Throughput	Medium-high	High
Advantages	• Convenient, quick and non-toxic method • Higher yield and purity • Can process various sample types • Silica bound to solid support, which eliminates glass-bead contamination of nucleic acids • Reproducibility	• Large surface area of beads allows highly efficient binding of nucleic acids • Better binding and washing efficiency • Can be used for samples of varying viscosities • No risk of clogging • Highest yields • Reproducibility
Difficulties	• Incomplete cellular lyses can lead to low yields • Liability to clog • Fixed binding capacity	• Risk of contamination of RNA samples with residual magnetic beads • Magnetic stand required
Recommended for	Spin column-ideal for low to medium throughput processing i.e. 12-24 samples	High throughput processing i.e. >24 samples

Nucleic Acid Purification

Genes2me offers convenient, optimized solutions to meet the complex needs of many molecular biology applications. Our purification technology ranges all the way from spin columns to magnetic beads. Isolate pure, intact nucleic acids from a variety of biological samples with our optimized buffer systems and user friendly protocols.

Simple 4-step protocol for spin column purification

Fig 1: Spin column purification protocol – The protocol for purifying genomic DNA from various samples using "SpiNXT" purification kits using 4 simple steps- lyses, wash, elute, and purify.

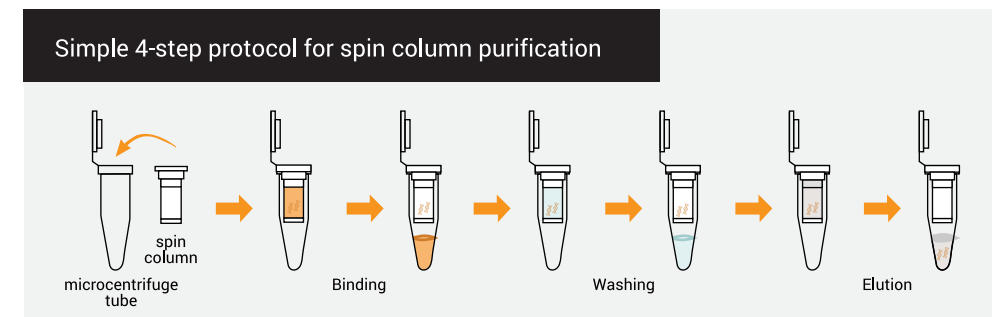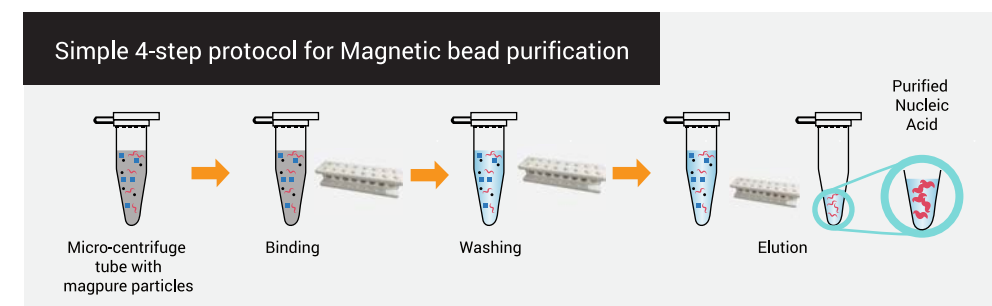**Simple 4-step protocol for Magnetic bead purification**

Fig 2: Magnetic bead based purification protocol – The protocol for purifying genomic DNA from various samples using "MagNXT" purification kits using 4 simple steps- bind, wash, elute, and purify.

Plant DNA Extraction Kit

The SpiNXT Plant DNA Extraction kit is designed to purify high-quality total DNA in less than an hour with reliable performance in downstream applications.

Our SpiNXT Plant DNA purification procedure is designed for purifying plant DNA using a centrifuge in a total time of ~40 minutes with a variety of samples such as Leaves of Chickpea, Wheat, Soya Bean, Rice, Marigold leaves, Chickpea green seed, stems, Tulsi leaves with sample sizes of 10-50 mg tissue.

Features:

Recommended Input Amount : ~10-50mg tissue
Binding Capacity : 30-40µg genomic DNA
Elution Volume : ≥40µl (100µl is recommended)
Purity : A260/280 -1.8±0.1
Compatible Downstream Applications : PCR, qPCR, Sequencing, etc
Expected Yield : ≥5µg (depending upon the type, quality & quantity of the starting material used

CAT #	DESCRIPTION	UNITS
G2M161721	SpiNXT Plant DNA Extraction Kit	50 Rxn
G2M161621	SpiNXT Plant DNA Extraction Kit	250 Rxn

To obtain high yield of DNA, fresh plant samples should be used immediately after collection and should be stored in low temperature conditions to prevent the degradation of DNA.

FIGURE 1:
Genomic DNA was obtained from 50mg plant tissues from various sources. 1µl of the extracted DNA was loaded and visualized on 0.8% agarose gel.

MARKER (1KB DNA LADDER)
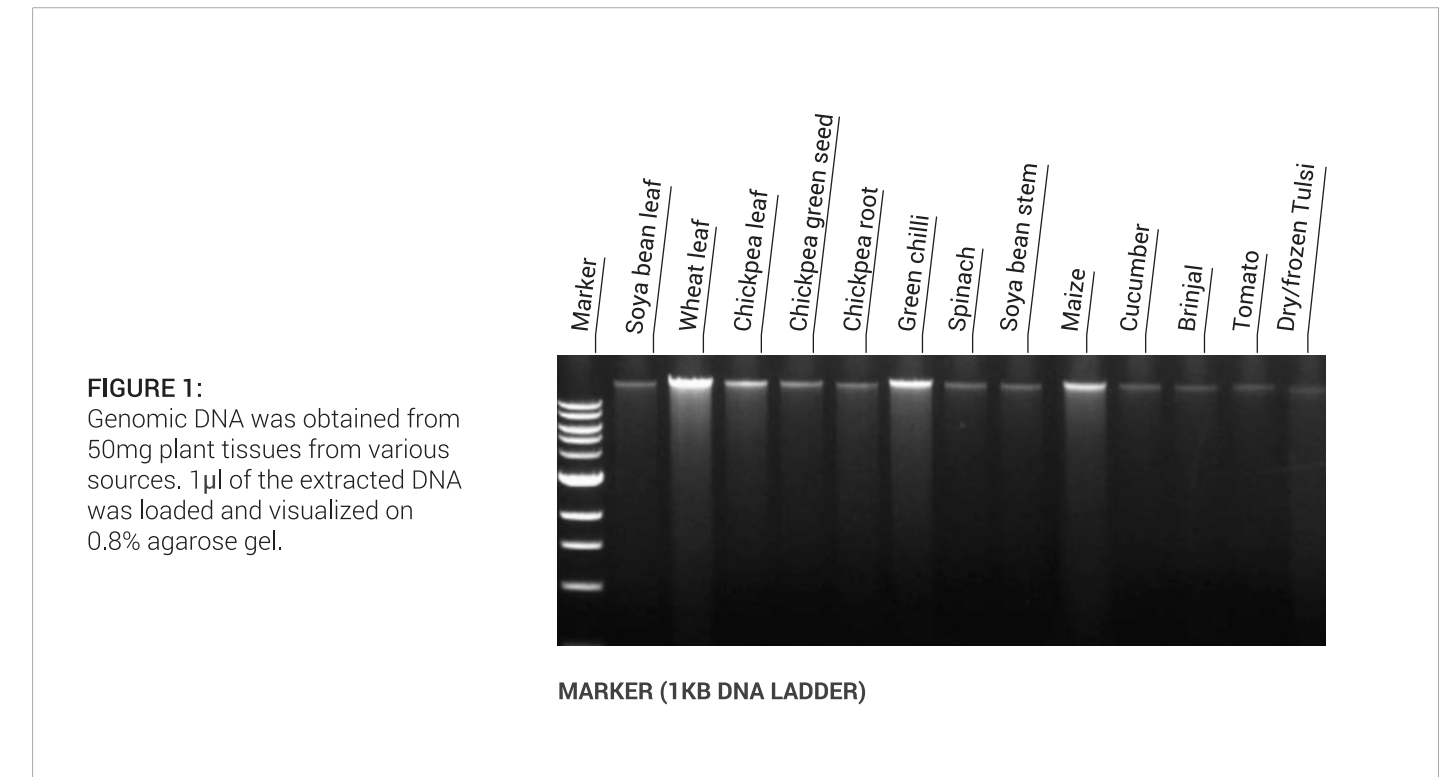
Plant Type	Concentration (ng/µl)	260/280	260/230	Yield (µg)
Glycine max (Soya Bean) Leaf	169	1.83	2.13	16.9
Triticum (Wheat)Leaf	235	1.82	2.17	23.5
Cicer arietinum (Chickpea)Leaf	118	1.78	2.15	11.8
Cicer arietinum (Chickpea) Green seed	146	1.9	2.20	14.6
Cicer arietinum (Chickpea) Root	218	1.89	2.17	21.8
Capsicum annuum (Green chilli)	103	1.79	2.19	10.3
Spinacia oleracea (Spinach)	94	1.90	2.2	9.4
Glycine max (soya bean) Stem	92	1.84	2.1	9.2
Zea mays subsp. Mays (Maize)	393	1.90	2.18	39
Cucumis Sativus (Cucumber)	59	1.82	2.20	5.9
Solanum melongena (Brinjal)	54	1.83	2.17	5.4
Solanum lycopersicum (Tomato)	44.5	1.75	2.19	4.45
Ocimum tenuiflorum (Dry/Frozen Tulsi)	131.227	1.8	1.72	13.1

SPINXT

Plant RNA Extraction Kit

The SpiNXT Plant RNA Extraction Kit is designed to purify high-quality total RNA in less than an hour with reliable performance in downstream applications.

Our SpiNXT Plant RNA purification procedure is designed for purifying Plant RNA using a centrifuge in a total time of ~40 minutes with a variety of samples such as Leaves of Chickpea, Wheat, Soya Bean, Marigold leaves, Rice, Chickpea green seed, stems, Tulsi leaves with sample sizes of 10-50 mg tissue without organic extraction.

FIGURE 1:
RNA isolated from 50 mg plant tissues from various sources. 2μl of the extracted RNA was loaded and visualized on 2.5% agarose gel.

MARKER (1KB DNA LADDER)

Features:

Recommended Input Amount : ~10-50mg tissue
Binding Capacity : 15-30μg RNA
Elution Volume : ≥40μl (100μl is recommended)
Purity : A260/280 :-2±0.1
Compatible Downstream Applications : Northern Blotting, expression analysis, endpoint PCR, qRT-PCR, Sequencing, other RNA based analysis etc
Expected Yield : ≥5μg (depending upon the type, quality & quantity of the starting material used

CAT #	DESCRIPTION	UNITS
G2M161921	SpiNXT Plant RNA Extraction Kit	50 Rxn
G2M161821	SpiNXT Plant RNA Extraction Kit	250 Rxn

Sample Name	Concentration (ng/μl)	260/280	260/230	Yield (μg)
Cicer Arietinum (Chickpea)	279	2.04	2.20	27.9
Triticum (Wheat) Leaf	161	2.04	2.17	16.1
Glycine Max (Soya-bean)	127	2.02	2.19	12.7
Glycine Max (Soya-bean)	243	1.94	2.2	24.3
Cicer Arietinum (Chickpea) Green Seed	179	1.92	2.1	17.9
Cicer Arietinum (Chickpea) Green Seed	220	1.93	2.18	22

SPINXT

Blood DNA Extraction Kit

A Comprehensive Solution for Cell lysis and obtaining intact Genomic DNA
with high purity and high yield.

SpiNXT Blood DNA Extraction kit provides a convenient way to isolate pure genomic DNA from fresh or frozen Whole blood, buffy coat, lymphocytes as well as plasma & serum. The kit combines the features and advantages of silica binding with a micro spin format and can be used directly in the down-stream applications such as PCR, Southern Blot, virus DNA detection, restriction endonuclease digestions, enzymatic reactions and so on.

Features:

Binding Capacity : 30-40µg genomic DNA

Recommended input amount : ~ 200 µl whole blood

Elution Volume : ≥40µl (100µl is recommended)

Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : Endpoint PCR, qPCR, Sequencing, etc

Expected Yield : Up to 10 µg (depending upon the type,quality & quantity of the starting material used)

Compatiblity : Many anticoagulants including EDTA, Heparin, and Sodium Citrate

CAT #	DESCRIPTION	UNITS
G2M181820	SpiNXT Blood DNA Extraction Kit	50 Rxn
G2M181720	SpiNXT Blood DNA Extraction Kit	250 Rxn

MARKER (1KB DNA LADDER)
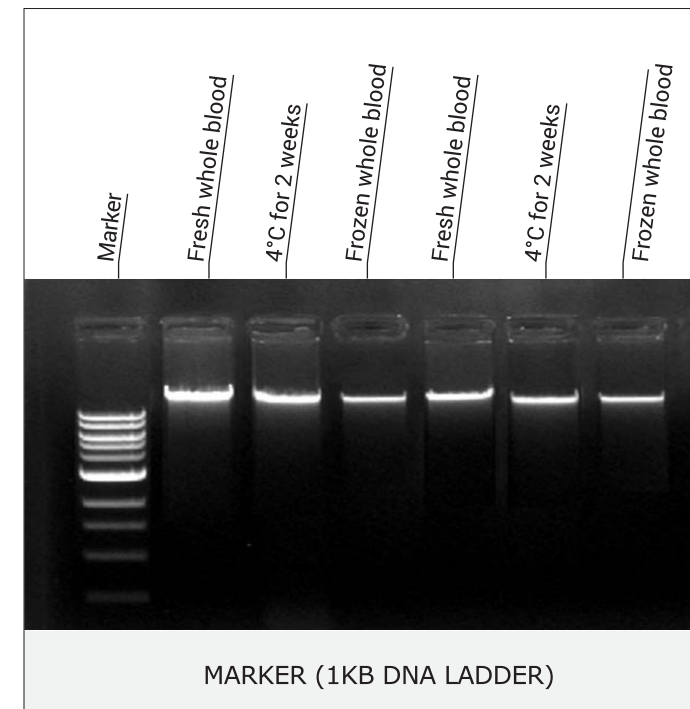
Figure 1:

Genomic DNA obtained from 200µl human blood samples and visualized on 0.8% agarose gel.

Fresh whole blood samples were collected in an EDTA (Ethylene diamine tetra acetate) coated vial & comparison of 2 blood samples at three different storage conditions were shown :

A. Fresh whole blood, **B.** 4°C for 2 weeks, **C.** -20°C as frozen whole blood

The genomic DNA was isolated from all the 3 conditions shown in Lane 1 & Lane 4 as two different fresh whole blood samples, Lane 2 & Lane 5 as 4°C samples and Lane 3 & Lane 6 as frozen whole blood samples (kept at -20°C) respectively.

	Purity		Yield (µg)
Sample#	260/280	260/230	
Lane **1**	1.82	2	9.5
Lane **2**	1.78	1.93	8.4
Lane **3**	1.7	2.1	6.3
Lane **4**	1.8	1.9	8.0
Lane **5**	1.75	1.99	7.4
Lane **6**	1.71	1.69	6.3

Figure 2 :
The SpiNXT Blood DNA Extraction kit generates high quality genomic DNA suitable for sensitive applications like qPCR and long range PCR with Excellent purity.

Nanodrop Absorbance Spectrum

Conc.	Unit	Factor	A260	mm	260/280	260/230
187.313	ng/µl	50.00	3.7463	10	1.92	2.16

Figure 3 :
Whole Blood genomic DNA was isolated using SpiNXT Blood DNA Extraction kit and Gel electrophoresis was performed on 0.8% agarose gel as shown in Lane 1. DNA quality was checked on Nanodrop (Model no: DS-11 FX).

Figure 4 :
Genomic DNA was extracted using SpiNXT Blood DNA Extraction kit and representative image of PCR analysis from 2 different sample types i.e. A. Plasma, B. Blood are shown.

MARKER : 50 bp DNA Ladder
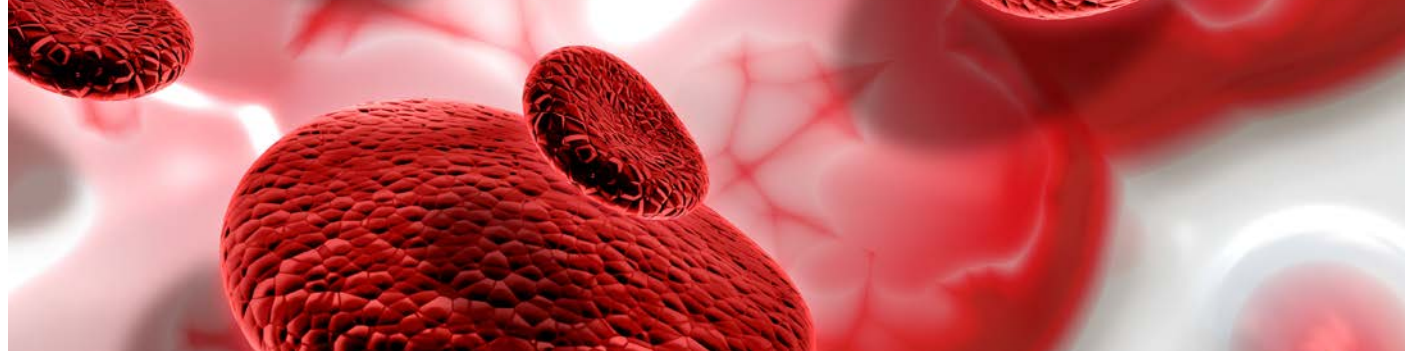
Blood DNA Extraction Kit

An extensive solution for various applications such as sequencing or restriction digestion based on paramagnetic particles help ensure the best balance of high yield & reproducibility with low non-specific binding.

MagNXT Blood DNA Extraction kit is designed for the purification of genomic DNA from fresh whole blood or blood stabilized with anticoagulants. The kit provides unique buffer systems that efficiently lyse the red blood cells and simultaneously white blood cells are recovered by centrifugation.

Features:

Binding Capacity : Super paramagnetic beads

Recommended input amount : ~ 200µl of whole blood

Elution Volume : 50-100 µl

Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : Restriction endonuclease digestion, qPCR, Sequencing, autosomal STR analysis, viral DNA detection

Expected Yield : >7-12 µg.

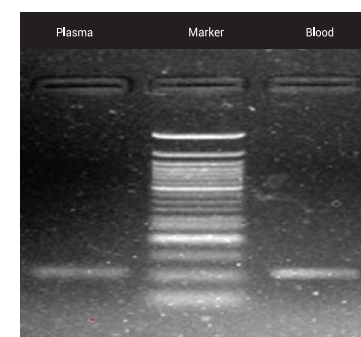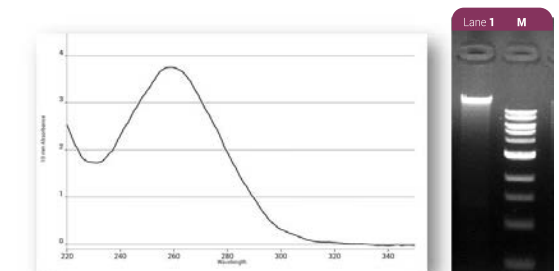| CAT #	DESCRIPTION	UNITS
G2M181921	MagNXT Blood DNA extraction kit	50 Rxn
G2M182021	MagNXT Blood DNA Extraction Kit	200 Rxn
G2M182121	MagNXTBlood DNA Extraction Kit	500 Rxn

Figure 1:

Genomic DNA obtained from 200µl human whole blood samples and visualized on 0.8% agarose gel.

MARKER (1KB DNA LADDER)

	Purity	Yield(µg)
Fresh whole blood	1.76	7.2
Fresh whole blood	1.85	8.4
Fresh whole blood	1.9	8.6
Fresh whole blood	1.84	9.6

Figure 2:

The MagNXT Blood DNA Extraction kit allows better binding and washing efficiency of nucleic acid by utilizing the large surface area of the beads and generates high quality genomic DNA suitable for sensitive applications like qPCR, Sequencing, autosomal STR analysis, etc.

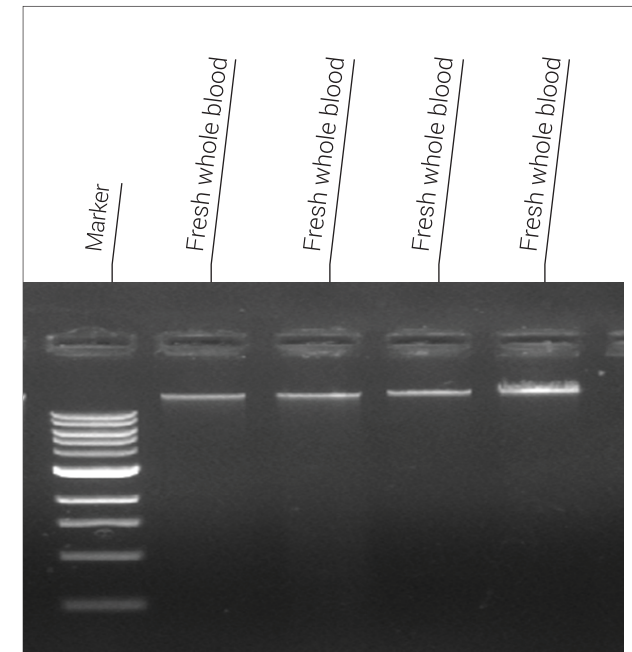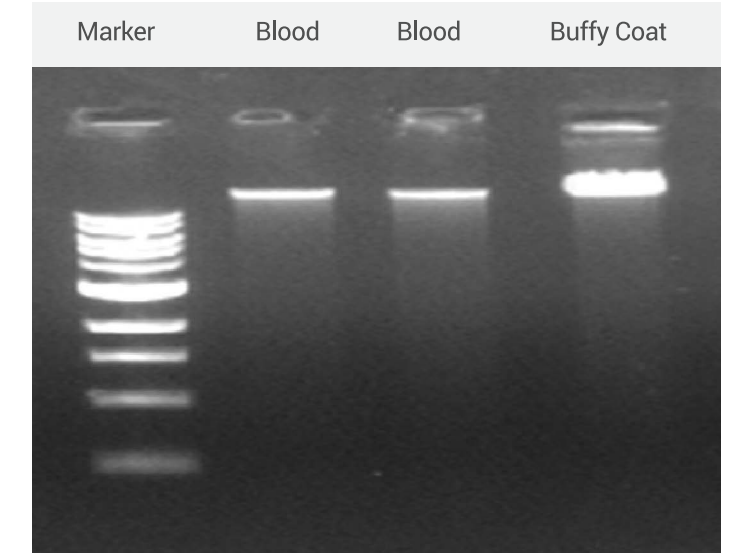
Figure 3:
Genomic DNA obtained from 200µl human whole blood samples and visualized on 0.8% agarose gel.

MARKER (1KB DNA LADDER)

Purity and Yield for the extracted DNA from MagNXT Blood DNA Extraction kit is listed below :

	Purity	Yield(µg)
	260/280	
Fresh whole blood	1.78	9.5
Fresh whole blood	1.84	9.2
Buffy coat	1.9	11.4

SpiNXT Tissue & Body Fluid DNA Extraction Kit

Tissue & Body Fluid DNA Extraction Kit

The SpiNXT Tissue & Body Fluid DNA Extraction kit provides excellent yields of higher quality and process sample input up to ~25mg using silica spin column technology.

The SpiNXT Tissue and Body Fluid DNA Extraction kit is a comprehensive solution optimized for cell/tissue lyses and purification of intact genomic DNA (gDNA) from a broad range of biological samples such as mammalian/human cells/tissues, product of conception, chorionic villi sample, cell culture pellet, amniotic fluid, rodent tail, ear punches and many biological fluids such as urine, saliva and so on.

Features:

Recommended Input Amount : ~25mg tissue/200µl for body fluids
Binding Capacity : 30 - 40µg genomic DNA
Elution Volume : ≥ 40µl (100µl is recommended)
Expected Yied : ≥ 5µg (depending upon the type, & quantity of the starting material used)
Purity : A260/280 - 1.8±0.1, A260/230 - 2.0 ± 0.1
Compatible Downstream Applications : AFLP, RFLP, Southern Blotting, Endpoint PCR, qPCR, Sequencing, etc

CAT #	DESCRIPTION	UNITS
G2M131420	SpiNXT Tissue & Body Fluids DNA Extraction Kit	50 Rxn
G2M131320	SpiNXT Tissue & Body Fluids DNA Extraction Kit	250 Rxn

Sample type	Recommended input amount
Tissue samples	~25mg
Product of conception	~25mg
Cell culture pellet	~5×10^6 cells
Chorionic Villi sample	~25mg
Amniotic fluid	15ml
Rodent tail (mouse)	1.2 cm
Rat tail	0.6 cm
Ear punches	~25mg
Urine	200µl
Saliva	200µl
Other body fluids	200µl

TABLE 1 :
Shows recommended starting amount of the samples used with the **SpiNXT Tissue & Body Fluids DNA Extraction Kit.**

	Purity		Yield(µg)
Sample#	260/280	260/230	
Lane 1	1. 87	2.09	4.4
Lane 2	1. 82	1.95	4.88
Lane 3	1.75	1.97	13.4
Lane 4	1.79	2.1	5.2
Lane 5	1.77	1.95	9.4
Lane 6	1. 83	2.08	4
Lane 7	1.85	1.99	4.6

The SpiNXT Tissue & body fluids DNA Extraction kit generates high quality genomic DNA suitable for sensitive applications like AFLP, RFLP, Southern Blotting, endpoint PCR, qPCR, Sequencing, etc with excellent purity.
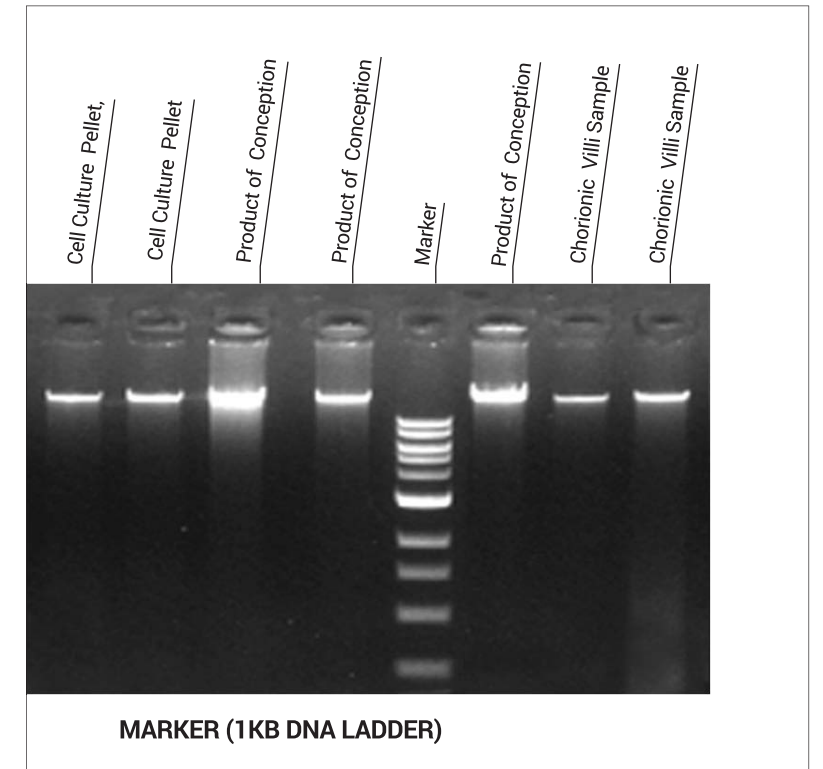
MARKER (1KB DNA LADDER)

FIGURE 1:
Representative image of genomic DNA obtained from various tissue samples using SpiNXT Tissue and Body Fluid DNA Extraction kit.

Fresh Tissue samples were collected and washed with the help of 1XPBS and grinded with mortar pestle for efficient lyses as shown.

Sample Name	Conc.	Units
32042 POC	235.068	ng/µl
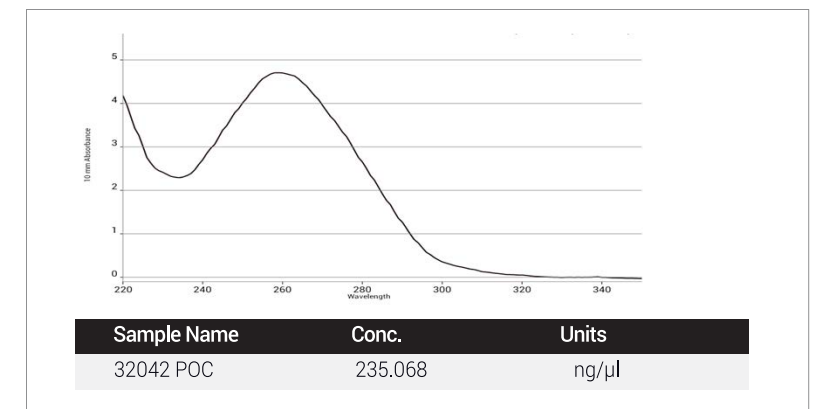
NANODROP ABSORBANCE SPECTRUM
Genomic DNA was isolated and gel electrophoresis was performed on 0.8% agarose gel as shown in Figure 1. DNA Quality was checked on Nanodrop (Model no: DS-11 FX).
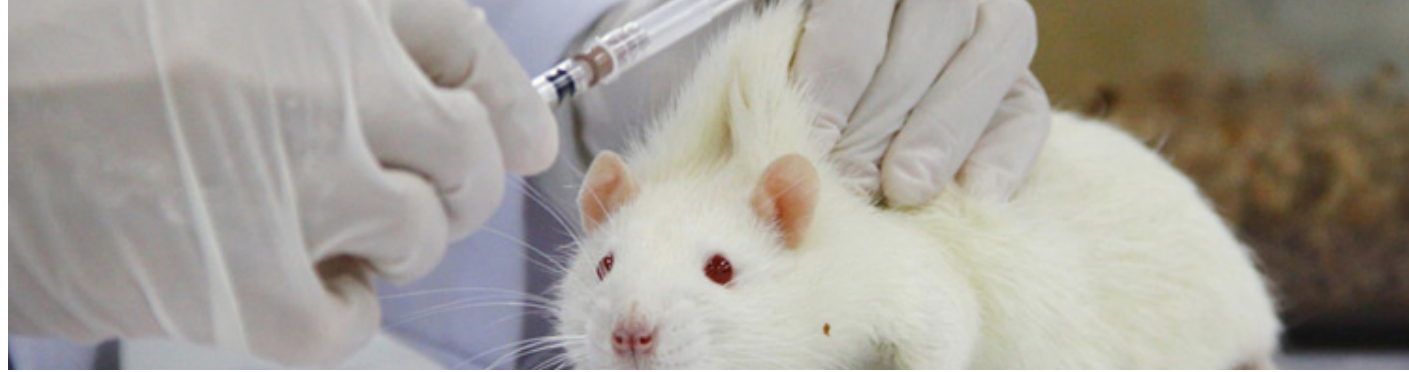
Tissue & Body Fluid DNA Extraction Kit

MagNXT Tissue and Body Fluid DNA Extraction kit is suitable for extraction of high quality & intact genomic DNA from various tissue types and body fluids such as mammalian cells/tissues, product of conception, chorionic villi sample, cell culture pellet, amniotic fluid, rodent tail, ear punches, urine, saliva and many other biological fluids/tissues which can be used for in-vitro clinical tests and many other downstream applications.

The MagNXT Tissue and body fluid DNA Extraction kit utilizes large surface area of the beads and generates highly purified genomic DNA suitable for sensitive applications like qPCR, Sequencing, autosomal STR analysis, etc.

Features:

Binding Capacity : ~ 25mg tissue/200µl for body fluids
Recommended input Amount : ~ 200 µl whole blood
Elution Volume : 50-100 µl
Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1
Compatible Downstream Applications : Restriction endonuclease digestion, qPCR, Sequencing, autosomal STR analysis, viral DNA detection
Expected Yield : >7 µg
Compatiblity : Many anticoagulants including EDTA, Heparin, and Sodium Citrate

CAT #	DESCRIPTION	UNITS
G2M212121	MagNXT Tissue & Body Fluids DNA Extraction Kit	50 Rxn
G2M212021	MagNXT Tissue & Body Fluids DNA Extraction Kit	250 Rxn
G2M211921	MagNXT Tissue & Body Fluids DNA Extraction Kit	500 Rxn

Sample type	Recommended input amount
Tissue Sample	~25mg
Product of Conception	~25mg
Cell Culture Pellet	~5×10^6 cells
Chorionic Villi Sample	~25mg
Amniotic Fluid	15ml
Rodent Tail (mouse)	1.2 cm
Rat Tail	0.6 cm
Ear Punches	~25mg
Urine	200µl
Saliva	200µl
Other Body Fluids	200µl

Table 1:
Shows recommended starting amount of the samples used with the MagNXT Tissue & body fluid DNA Extraction kit.

MARKER (1KB DNA LADDER)

Figure 1 : Representative image of genomic DNA obtained from Saliva using MagNXT Tissue & body fluid Extraction kit.
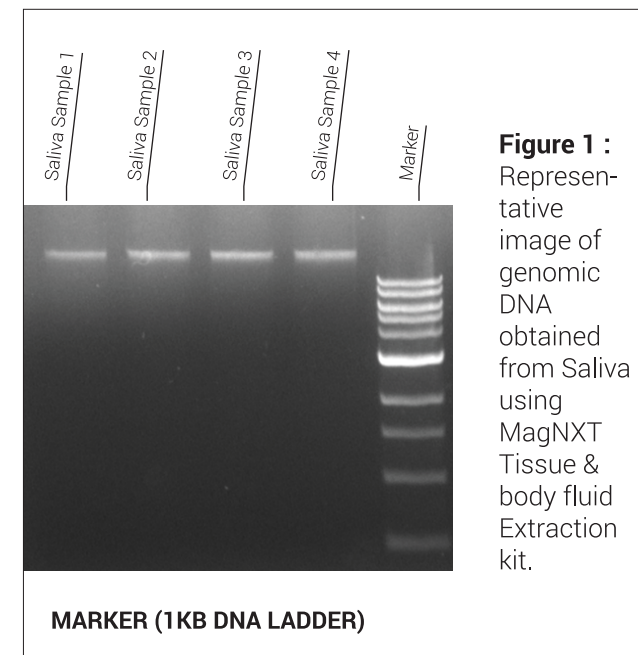
|	Purity	Yield(µg)
Sample #	260/280	
Saliva Sample 1	1.7	4.6
Saliva Sample 2	1.71	5
Saliva Sample 3	1.75	5.5
Saliva Sample 4	1.69	5.2

Figure 2 :
Representative image of genomic DNA obtained from various tissue samples using MagNXT Tissue & Body fluid Extraction kit.
Fresh Tissue samples were collected and washed with the help of 1XPBS and grinded with mortar pestle for efficient lyses as shown. The genomic DNA was isolated from the tissue samples i.e.

A. Product of conception, B. Chorionic Villi sample

MARKER 1KB DNA LADDER

NANODROP ABSORBANCE SPECTRUM
Genomic DNA was isolated and gel electrophoresis was performed on 0.8% agarose gel as shown in Figure 1. DNA Quality was checked on Nanodrop (Model no : DS-11 FX).

Sample Name	Conc.	Units
Product of Conception	200.822	ng/µl
Chorionic Villi Sample	253.972	ng/µl

MagNXT Plant DNA Extraction Kit

Plant DNA Extraction Kit

A magnetic bead based purification format which allows easy scaling of the number of samples processed.

Our MagNXT Plant DNA Extraction kit relies on magnetic bead technology which enables reproducible and more consistent yield as compared to traditional CTAB method. Total DNA can be purified from fresh or frozen plant tissues, plant cells such as leaves of Chickpea, Wheat, Soya bean, Marigold leaves, Rice, Chickpea green seed, stems and Tulsi leaves using this kit.

FIGURE 1:
Genomic DNA was obtained from 50mg plant tissues from various sources. 1μl of the extracted DNA was loaded and visualized on 0.8% agarose gel.

MARKER 1KB DNA LADDER

Features:

Recommended Input Amount : ~10-50mg tissue sample
Binding Mechanism : Super paramagnetic Beads
Elution Volume : 50-100 μl
Purity : A260/280 - 1.8±0.1
Compatible Downstream Applications : PCR, qPCR, Sequencing
Expected Yield : ≥ 7μg
Versatile : Suitable for most plant types and parts

Sample Name	Concentration (ng/μl)	260/280	Yield (μg)
Tulsi Leaf	180	1.79	7.2
Soya Bean Leaf	255	1.82	10.2
Wheat Leaf	262	1.85	10.4
Chickpea Leaf	290	1.86	11.6

CAT #	DESCRIPTION	UNITS
G2M151421	MagNXT plant DNA extraction kit	50 Rxn
G2M151521	MagNXT plant DNA extraction kit	250 Rxn

Plant RNA Extraction Kit

A magnetic bead based purification format which allows easy scaling of the number of samples processed using a magnetic stand.

Features:

Recommended Input Amount : ~10-50mg tissue sample
Binding Mechanism : Super paramagnetic beads
Elution Volume : 50-100 µl
Purity : A260/280 − 2.0±0.1, A260/230 - 2.0±0.1
Compatible Downstream Applications : RT-PCR, RT-qPCR, and other enzymatic reactions
Expected Yield : ≥ 7µg
Versatile: Suitable for most plant types and parts

CAT #	DESCRIPTION	UNITS
G2M556621	MagNXT plant RNA extraction kit	50 Rxn
G2M556721	MagNXT plant RNA extraction kit	250 Rxn

Our MagNXT Plant RNA Extraction kit relies on magnetic bead technology which enables reproducible and more consistent yield. Total RNA can be purified from fresh or frozen plant tissues, plant cells such as leaves of Chickpea, Wheat, Soya bean, Marigold leaves, Rice, Chickpea green seed, stems and Tulsi leaves using this kit. The resulting high quality purified RNA is free of proteins, and other contaminants or inhibitors, and can be used in a wide range of downstream applications, such as RT-PCR, RT-qPCR, and other enzymatic reactions.

FIGURE 1:
RNA isolated from 50 mg plant tissues from various sources. 2µl of the extracted RNA was loaded and visualized on 2.5% agarose gel.

MARKER 1KB DNA LADDER

Sample Name	Concentration (ng/µl)	260/280	260/230	Yield (µg)
Chick Pea Leaf	310	2.05	2.11	12.4
Tulsi Leaf	120	1.97	2.08	4.8
Soya Bean Leaf	295	1.92	2.15	11.8
Wheat Leaf	115	1.90	2.19	4.6
Maize	298	2.07	2.05	11.9
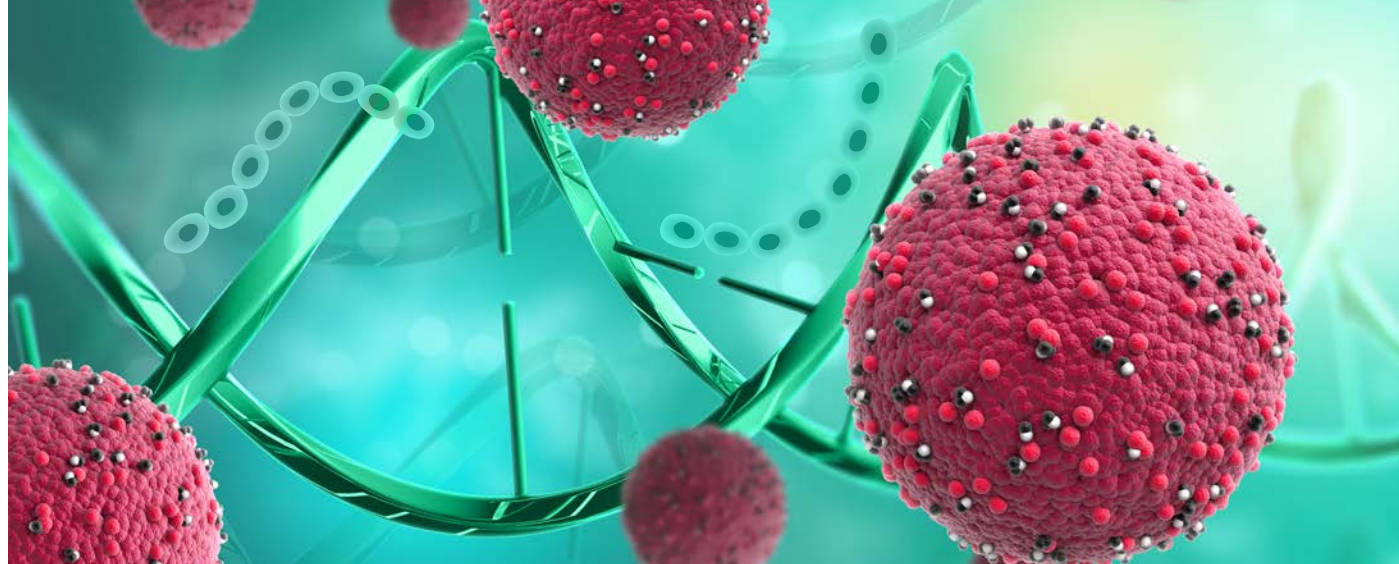
Bacterial DNA Extraction Kit

MagNXT Bacterial DNA Extraction Kit utilizes paramagnetic beads to isolate (gDNA) from both Gram negative (-) and Gram positive (+) bacterial cells; resulting in high quantity and quality DNA usable in various downstream applications.

Features:

Recommended Input Amount : ~1.2ml of bacterial culture

Binding Mechanism : super paramagnetic beads

Elution Volume : ≥40µl (100µl is recommended)

Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : PCR, Cloning, Next generation sequencing etc

Expected Yield : >5 µg (depending upon the type, quality & quantity of the starting material used)

CAT #	DESCRIPTION	UNITS
G2M262621	MagNXT Bacterial DNA Extraction Kit	50 Rxn
G2M262721	MagNXT Bacterial DNA Extraction Kit	250 Rxn

MagNXT Bacterial DNA Extraction kit is suitable for extraction of high quality & intact genomic DNA from $2x10^9$ viable bacterial cells. It allows isolation of gDNA from both gram negative and gram positive cultures.

The kit is based on super paramagnetic particle purification technology. The purified DNA is suitable for various down-streaming molecular biology applications such as PCR, Cloning, Next generation sequencing and many other downstream applications.

FIGURE 1:
Genomic DNA obtained from 1.2ml of Dh5α strain *(E. coli)* Bacterial culture grown in LB Broth. 2µl of the purified gDNA was loaded on to the gel and visualized on 0.8% agarose gel.

MARKER (1KB DNA LADDER)

	Purity		Yield(µg)
SAMPLE#	260/280	260/230	
Sample 1	1.87	2.03	8.2
Sample 2	1.79	1.98	6.5
Sample 3	1.82	2.09	7.8

The MagNXT Bacterial DNA Extraction kit utilizes large surface area of the beads and generates highly purified genomic DNA suitable for sensitive applications like qPCR, Sequencing, etc.
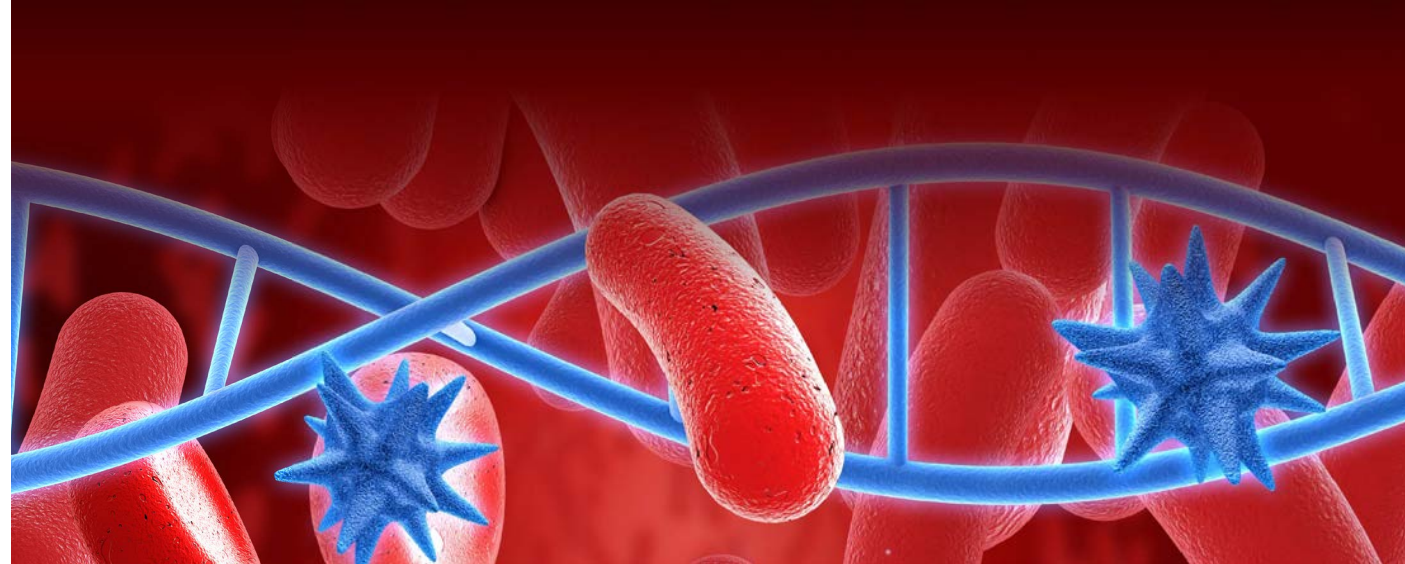
SPINXT

Bacterial DNA Extraction Kit

A comprehensive solution for cell lyses and obtaining intact genomic DNA with high purity and high yield.

Features:

Recommended Input Amount : ~1.2ml of bacterial culture
Binding Mechanism : Silica membrane spin column technology
Binding Capacity : 20-30µg genomic DNA
Elution Volume : ≥40µl (100µl is recommended)
Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1
Compatible Downstream Applications : PCR, Cloning, Next generation sequencing etc.

Expected Yield : >4µg
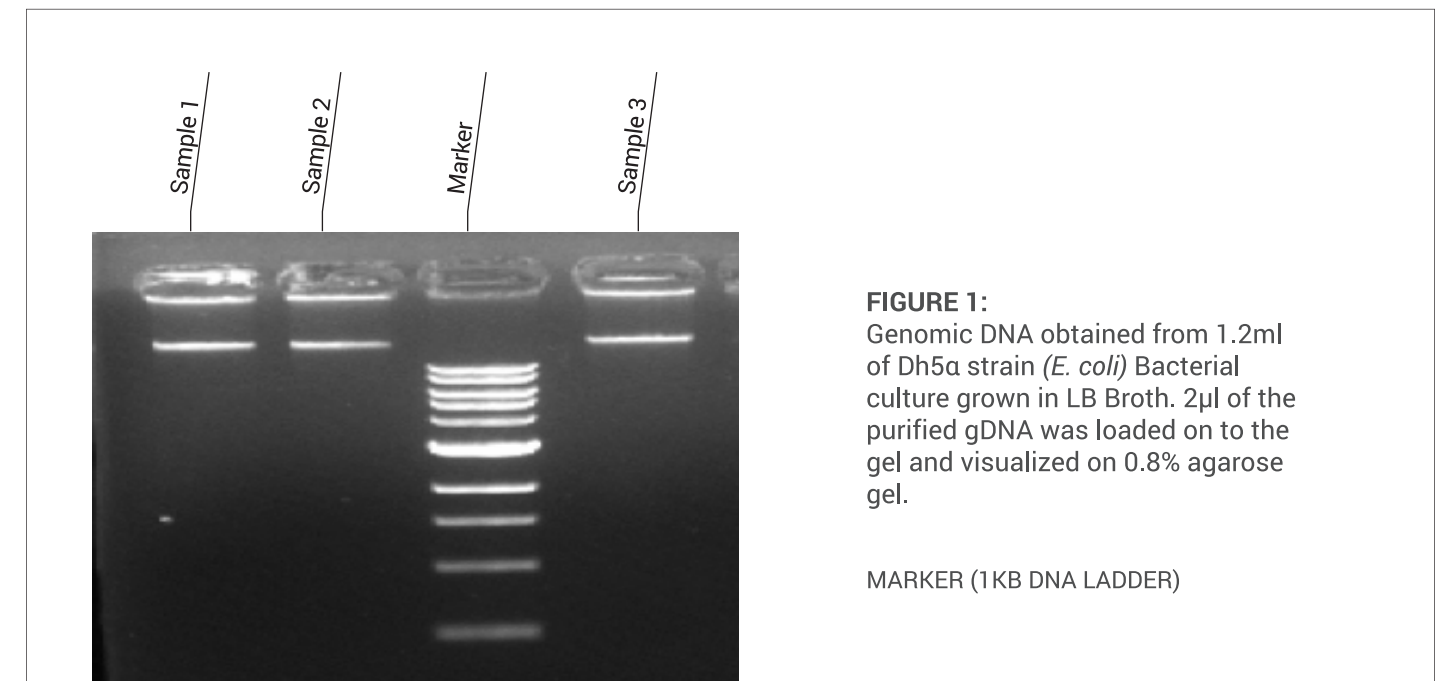depending upon the type, quality & quantity of the starting material used.

CAT #	DESCRIPTION	UNITS
G2M141421	SpiNXT Bacterial DNA Extraction kit	50 Rxn
G2M141521	SpiNXT Bacterial DNA Extraction kit	250 Rxn

SpiNXT Bacterial DNA Extraction kit provides a convenient technique to isolate high quality DNA from Gram negative (-) and Gram positive (+) bacteria. It allows purification from $2x10^9$ viable bacterial cells. Purification is based on silica membrane based spin columns as the separation matrix.

The purified DNA is suitable for various downstream molecular biology applications such as PCR, Cloning, Next generation sequencing etc.

FIGURE 1:
Genomic DNA obtained from 1.2ml of Dh5α strain *(E. coli)* bacterial culture grown in LB Broth. 2µl of the purified gDNA was loaded on to the gel and visualized on 0.8% agarose gel.

MARKER (1KB DNA LADDER)

	Purity		Yield(µg)
SAMPLE#	260/280	260/230	
Lane 1	1.82	2.05	4.8
Lane 2	1.85	2.01	5.2
Lane 3	1.8	2.00	5.8
Lane 4	1.86	2.08	8.2

Circulating Cell-free DNA (cf-DNA) Extraction Kit

Reliable Cell free DNA extraction solution to deliver high quality cell-free DNA from human serum, plasma and urine for research tailored to one's need

Features:

Recommended Input Amount : ~500µl (Depends upon the type of sample used)

Binding Capacity : Super paramagnetic beads

Elution Volume : ≥40µl (100µl is recommended)

Purity : A260/280 – 1.8±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : PCR, qPCR, Southern blot analysis, microarrays and NGS.

Expected Yield : >0.6µg Depending upon the type, quality & quantity of the starting material used.

CAT #	DESCRIPTION	UNITS
G2M313121	MagNXT Circulating cell-free DNA Extraction Kit	50 Rxn
G2M313221	MagNXT Circulating cell-free DNA Extraction Kit	250 Rxn

The MagNXT Circulating cell-free DNA extraction kit enables efficient purification of these circulating nucleic acids from human plasma, serum, or urine utilizing MagPure particles (MPN) that bind DNA under optimized binding conditions. Utilizing circulating Cell-free DNA (cf-DNA) can serve as biomarker and provides real time mutational information that can be used to diagnose/prognosis & monitor the therapy for several cancer types and autoimmune diseases. Additionally, cell free circulating DNA is widely being used as a non-invasive method for prenatal diagnosis with cell free detection of fetal chromosomal abnormalities.

The purified Cell-free DNA is eluted in low salt elution buffer that is compatible with all downstream applications including PCR, qPCR, Southern blot analysis, microarrays and NGS.

FIGURE 1:
Circulating DNA was purified from plasma of pregnant females. Representative image of PCR performed for male genes (SRY) in mother's plasma to ensure that the purified DNA is circulating cell free DNA.

Amplified PCR product size is 108 bp.
MARKER (100bp DNA Ladder)

MagNXT Bacterial RNA Extraction kit is suitable for extraction of high quality, reproducible and consistent yield from $2x10^9$ viable bacterial cells. It allows isolation of RNA from both gram negative and gram positive cultures.

The kit is based on super paramagnetic particle purification technology. The purified RNA is suitable for various down-streaming molecular biology applications such as microarray analysis, Real-Time Quantitative PCR (qPCR), Reverse Transcriptase PCR (RT-PCR), Northern Blotting, cDNA Library construction or other RNA based analysis etc.
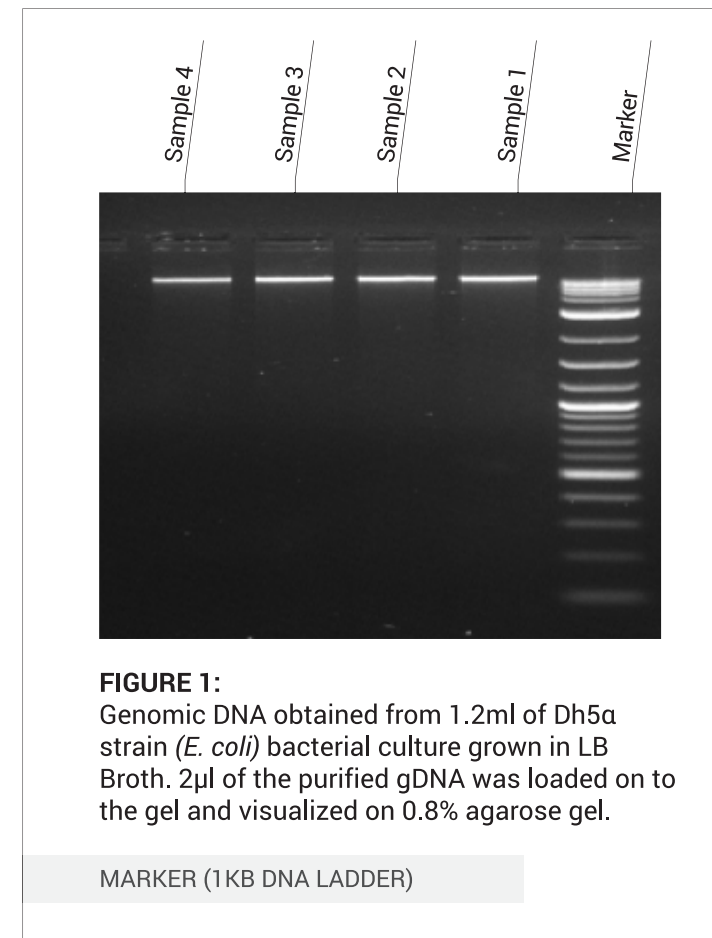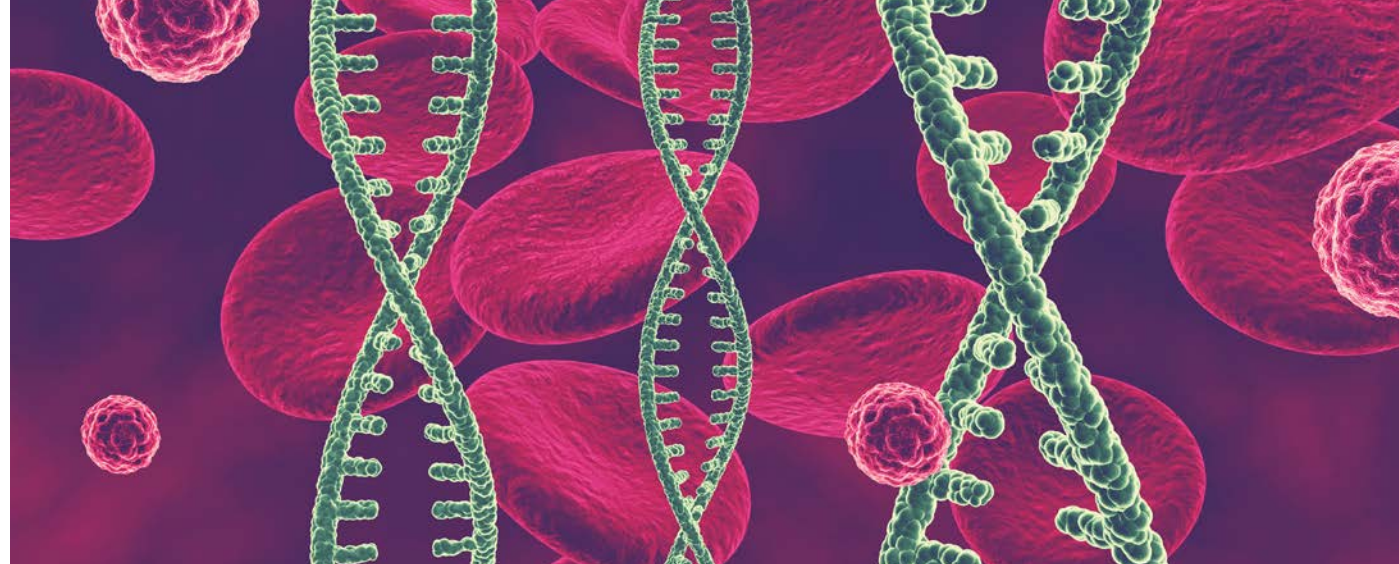

Figure 1:

RNA isolated from 1.2ml of Dh5α strain (*E. coli*) bacterial culture grown in LB Broth. 2μl of the purified RNA was loaded on to the gel and visualized on 2% agarose gel.

MARKER 1KB DNA LADDER
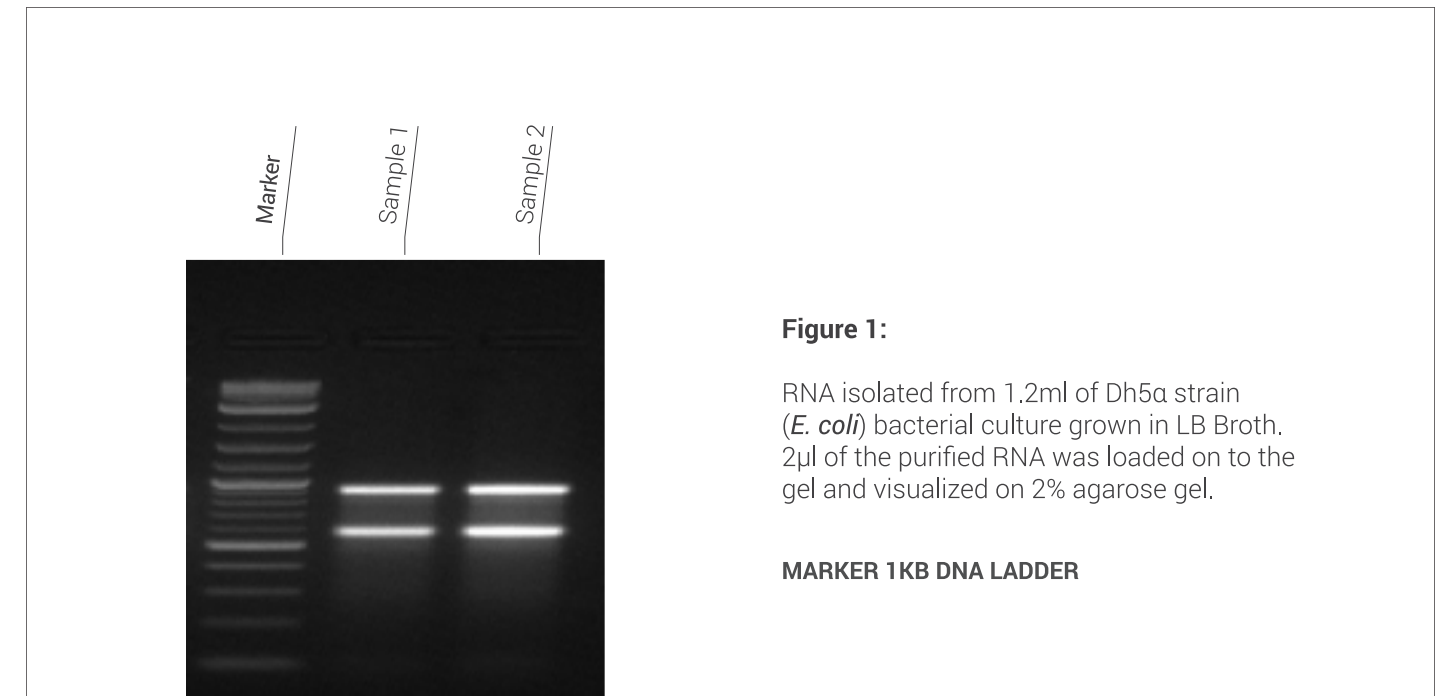
The MagNXT Bacterial RNA Extraction kit generates high quality RNA suitable for sensitive applications like qPCR and cDNA Library Construction with excellent purity.

	Purity		Yield(μg)
Sample	260/280	260/230	
Sample 1	1.99	2.03	8
Sample 2	2.03	2.0	9.2

MAGNXT

Bacterial RNA Extraction Kit

MagNXT Bacterial RNA Extraction Kit utilizes paramagnetic beads to isolate RNA from both Gram negative (-) and Gram positive (+) bacterial cells; resulting in high quantity and quality DNA usable in various downstream applications.

Features:

Recommended Input Amount : ~ 1.2ml of bacterial culture

Binding mechanism : Super paramagnetic beads

Elution Volume : ≥40μl (100μl is recommended)

Purity : A260/280 - 2±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : Reverse Transcriptase PCR (RT-PCR), Northern Blotting, cDNA Library construction or other RNA based analysis etc.

Expected Yield : >7μg

CAT #	DESCRIPTION	UNITS
G2M282821	MagNXT Bacterial RNA Extraction kit	50 Rxn
G2M282921	MagNXT Bacterial RNA Extraction kit	250 Rxn

Bacterial RNA Extraction Kit

Designed to purify high-quality total RNA in less than an hour with reliable performance in downstream applications

Features:

Recommended Input Amount : ~1.2ml of bacterial culture
Binding Mechanism : Silica membrane spin column technology
Binding Capacity : 15-20µg RNA
Elution Volume : ≥40µl (100µl is recommended)
Purity : A260/280 - 2±0.1, A260/230 - 2.0±0.1
Compatible Downstream Applications : Reverse Transcriptase PCR (RT-PCR), Northern Blotting, cDNA Library construction or other RNA based analysis etc.
Expected Yield : Up to 5µg (depending upon the type, quality & quantity of the starting material used)

CAT #	DESCRIPTION	UNITS
G2M121220	SpiNXT Bacterial RNA Extraction Kit	50 Rxn
G2M121320	SpiNXT Bacterial RNA Extraction Kit	250 Rxn
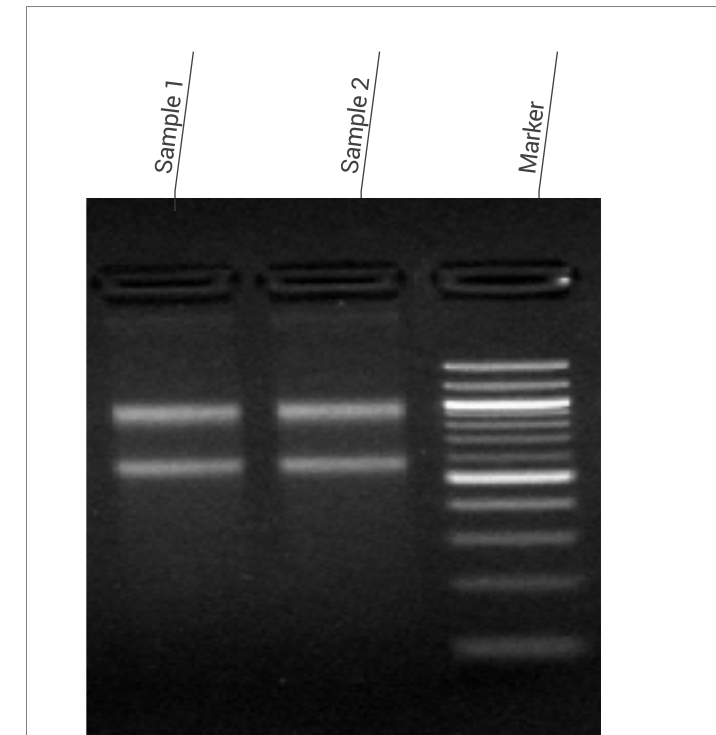
FIGURE 1:
RNA isolated from 1.2ml of Dh5α strain *(E. coli)* bacterial culture grown in LB Broth. 2µl of the purified RNA and visualized on 2% agarose gel.

MARKER (1KB DNA LADDER)

SpiNXT Bacterial RNA Extraction kit provides a convenient technique to isolate high quality RNA from Gram negative (-) and Gram positive (+) bacteria. It allows purification from $2x10^9$ viable bacterial cells. The kit makes use of silica membrane based spin column technology using a convenient column format. The purified RNA is suitable for various down-stream molecular biology applications such as microarray analysis, Real-Time Quantitative PCR (qPCR), Reverse Transcriptase PCR (RT-PCR), Northern Blotting, cDNA Library construction or other RNA based analysis etc.

The SpiNXT Bacterial RNA Extraction kit generates high quality RNA suitable for sensitive applications like qPCR and cDNA Library construction with excellent purity.

	Purity		Yield(µg)
Sample	260/280	260/230	
Sample 1	1.95	2.05	210ng/µl
Sample 2	1.97	2.09	230ng/µl

Forensic DNA Extraction Kit

SPINXT

Forensic DNA Extraction Kit

One kit with optimized protocols for a broad range of sample types and sizes by which excellent results are achieved even from challenging samples

Features:

Binding Capacity : 30-40µg genomic DNA

Recommended input Amount : Depends upon the type of sample used

Elution Volume : ≥40µl (100µl is recommended)

Purity : A260/280 - 1.8±0.1, A260/230 - 2.0±0.1

Compatible Downstream Applications : Endpoint PCR, qPCR, Sequencing, autosomal STR analysis, etc

Expected Yield : Depending upon the type, quality & quantity of the starting material used

CAT #	DESCRIPTION	UNITS
G2M242421	SpiNXT Forensic DNA Extraction Kit	50 Rxn
G2M242521	SpiNXT Forensic DNA Extraction Kit	250 Rxn

Sample type	Recommended input amount
Whole blood	~200µl
Dried blood spots	3x3 mm diameter punches
Cell culture pellet	~5×10^6 cells
Cigarette butts	~8mm from the end
Buffy coat/ Lymphocytes	~200µl
Plasma/ serum	~200µl
Tissue samples	~25mg
Bone/tooth	Up to 100 mg
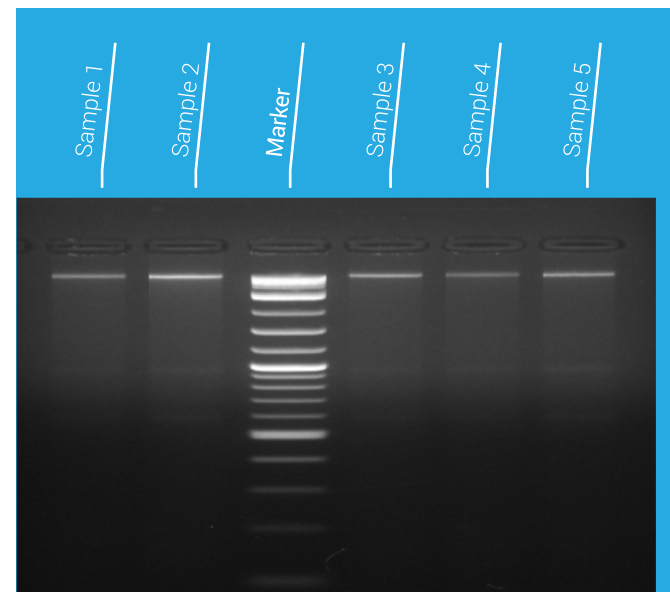
Figure 1 :
Genomic DNA obtained from 200µl of sample and run on 0.8% agarose gel.
A sterile swab was scraped 5-6 times against the inside cheek and swirled for 30-60 seconds in 1-2 ml of 1XPBS. 200µl of sample was collected and DNA was purified using SpiNXT Forensic DNA extraction kit.

MARKER (1KB DNA LADDER)

	Purity		Yield(µg)
SAMPLE#	260/280	260/230	
Sample 1	1.78	1.97	3.8
Sample 2	1.82	2.03	5.2
Sample 3	1.8	2.09	4.3
Sample 4	1.82	1.95	3.2
Sample 5	1.87	2.00	4.0

The SpiNXT Forensic DNA Extraction kit is a complete solution for human cells or tissue lyses and isolation of intact and high quality genomic DNA from a large variety of forensic samples such as mammalian/Human cells, tissues, fresh or frozen whole blood or blood which has been treated with citrate, heparin or EDTA, dried blood spots, cell culture pellet, Swabs, Buccal cells, Buffy coat, plasma, serum, Lymphocytes, Challenging body fluids, Vaginal and semen stains, bone, tooth, hair, chewing gum, cigarette butts & other forensic samples.
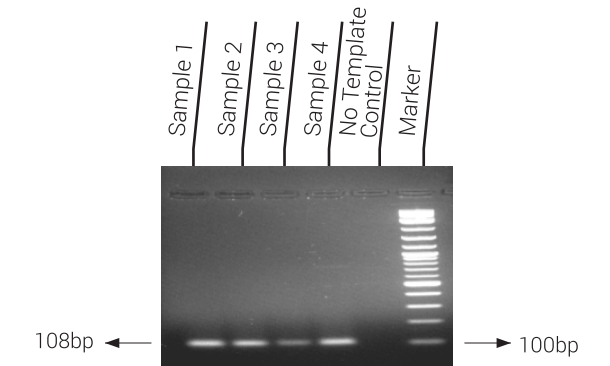
Figure 2 :
Genomic DNA was extracted using SpiNXT Forensic DNA extraction kit and representative image of β globin gene PCR analysis from cigarette butts are shown.

M MARKER (1 KB DNA LADDER)
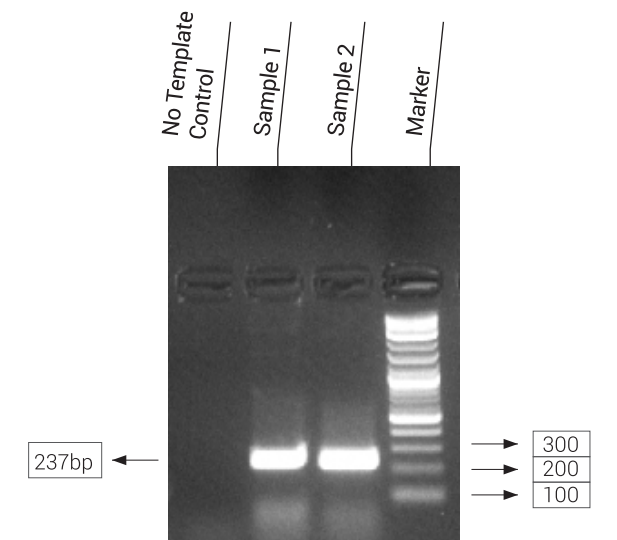
Figure 3 :
Genomic DNA was extracted from chewing gum as a challenging sample using SpiNXT Forensic DNA extraction kit and representative image of PCR analysis is shown.

M MARKER (1 KB Plus DNA LADDER)

Column Purification

Cat#	Description	Size
G2M161721	SpiNXT Plant DNA Extraction kit	50 Rxn
G2M161621	SpiNXT Plant DNA Extraction kit	250 Rxn
G2M161921	SpiNXT Plant RNA Extraction kit	50 Rxn
G2M161821	SpiNXT Plant RNA Extraction kit	250 Rxn
G2M181820	SpiNXT Blood DNA Extraction kit	50 Rxn
G2M181720	SpiNXT Blood DNA Extraction kit	250 Rxn
G2M242421	SpiNXT Forensic DNA Extraction kit	50 Rxn
G2M242521	SpiNXT Forensic DNA Extraction kit	250 Rxn
G2M131420	SpiNXT Tissue & body Fluids DNA Extraction kit	50 Rxn
G2M131320	SpiNXT Tissue & body Fluids DNA Extraction kit	250 Rxn
G2M232421	SpiNXT DBS DNA Extraction kit (Dried Blood Spot)	50 Rxn
G2M232321	SpiNXT DBS DNA Extraction kit (Dried Blood Spot)	250 Rxn
G2M080820	SpinRNA Viral RNA Extraction Kit	250 Rxn
G2M080920	SpinRNA Viral RNA Extraction Kit	50 Rxn
G2M171721	SpiNXT Saliva DNA Extraction Kit	50 Rxn
G2M171821	SpiNXT Saliva DNA Extraction Kit	250 Rxn
G2M141421	SpiNXT Bacterial DNA Extraction Kit	50 Rxn
G2M141521	SpiNXT Bacterial DNA Extraction Kit	250 Rxn
G2M121220	SpiNXT Bacterial RNA Extraction Kit	50 Rxn
G2M121320	SpiNXT Bacterial RNA Extraction Kit	250 Rxn

Magnetic Beads Purification

Cat#	Description	Size
G2M151421	MagNXT Plant DNA extraction kit	50 Rxn
G2M151521	MagNXT Plant DNA extraction kit	250 Rxn
G2M181921	MagNXT Blood DNA extraction kit	50 Rxn
G2M182021	MagNXT Blood DNA extraction kit	200 Rxn
G2M182121	MagNXT Blood DNA extraction kit	500 Rxn
G2M241921	MagNXT Forensic DNA extraction kit	250 Rxn
G2M242021	MagNXT Forensic DNA extraction kit	50 Rxn
G2M211921	MagNXT Tissue & body fluids DNA extraction kit	500 Rxn
G2M212021	MagNXT Tissue & body fluids DNA extraction kit	250 Rxn
G2M212121	MagNXT Tissue & body fluids DNA extraction kit	50 Rxn
G2M030320	MagRNA-II Viral RNA Extraction kit	200 Rxn
G2M030420	MagRNA-II Viral RNA Extraction kit	500 Rxn
G2M030520	MagRNA-II Viral RNA Extraction kit	480 Rxn
G2M030620	MagRNA-II Viral RNA Extraction kit	960 Rxn
G2M191821	MagNXT Saliva DNA Isolation Kit	50 Rxn
G2M191921	MagNXT Saliva DNA Isolation Kit	250 Rxn
G2M556621	MagNXT plant RNA extraction kit	50 Rxn
G2M556721	MagNXT plant RNA extraction kit	250 Rxn
G2M271921	MagNXT DBS DNA Extraction kit	50 Rxn
G2M272021	MagNXT DBS DNA Extraction kit	250 Rxn
G2M262621	MagNXT Bacterial DNA Extraction Kit	50 Rxn
G2M262721	MagNXT Bacterial DNA Extraction Kit	250 Rxn
G2M282821	MagNXT Bacterial RNA Extraction Kit	50 Rxn
G2M282921	MagNXT Bacterial RNA Extraction Kit	250 Rxn

RAPi-⚡96

Automated Nucleic Acid Extraction System

High Throughput : 96 samples can be extracted within 10-20 mins based on Kit & Its Application

- **Light Weight & Compact**
  Easy to handle

- **10 inch Large Display** :
  Simple interface & easy operation.

Features:

- **Open Platform**: Suitable for many types of magnetic bead kits.
- **Unique Structure** : the instrument has 4 plate positions, 2 plate positions are heated as standard, pre-heating system.
- **Pollution Control** : UV sterilization device and 11 level HEPA high efficiency air filter screen effectively eliminate aerosol pollution.

RAPi-⚡16
Automated Nucleic Acid Extraction System

Rapi-X 16 Automated Nucleic Acid Extraction System is a product that is further miniaturized on the basis of Rapi-X 96. The overall size of the instrument is only about one-fourth of the common nucleic acid extractor on the market. Moreover, the instrument has the function of unlimited data transmission. With the mobile phone App, it can perform the remote editing and transmission of the instrument's program and real-time view of the running log.

RapiCycler 96

Real-Time PCR System

Tailored for High-End Laboratory Needs

Areas of Applications:

RapiCycler 96 Real-Time PCR System is designed for experimental analyses characterized by Polymerase Chain Reaction (PCR) for the purpose of DNA/RNA detection, and can be widely used in a variety of areas including :-

- Clinical Diagnosis
- Epidemiological Monitoring
- Food Safety
- Forensics & Scientific
- Research, etc.
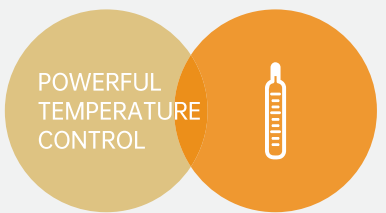
POWERFUL TEMPERATURE CONTROL

The maximum heating ramp rate is ≥ 6.1°C/s, and the maximum cooling ramp rate is ≥5.0°C/s, for quicker completion of your assays; the temperature accuracy is ≤ 0.1°C to ensure accurate results.
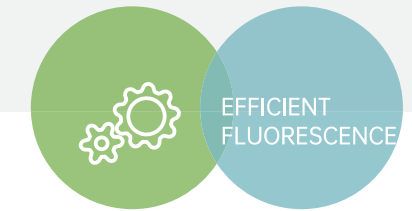
EFFICIENT FLUORESCENCE

The 6 fluorescence channels compatible with most of the common fluorescent dyes and probes of regular detection reagents. Specifically, the FRET (Fluorescence Resonance Energy Transfer) channel enables lower background fluorescence value and higher sensitivity for your detection needs. Also, the high-brightness, long-life LED light source can be maintenance-free for life.
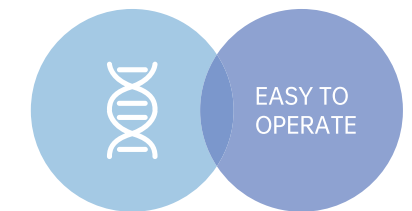
EASY TO OPERATE

Automated Sample Chamber ; cloud-enabled control from PC via network connection; or stand-alone operation with the built-in 10.4-inch touch screen; data storage of at least 1,000 experiments within the instrument.
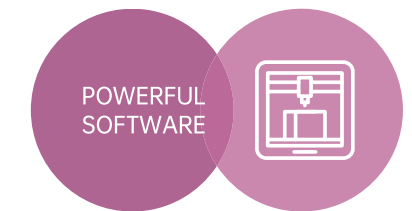
POWERFUL SOFTWARE

Capable of various data analyses to meet the needs of most experiments, including qualitative analysis, absolute quantitative analysis, relative quantitative analysis, end-point fluorescence analysis, melting curve analysis, etc. Featured Power Failure Protection design, no more concern about instantaneous power failure.

Features:

From Direct Swab Samples to Results in **30 Minutes**

Pipette Free Operation Eliminating the need of Technically Skilled Person
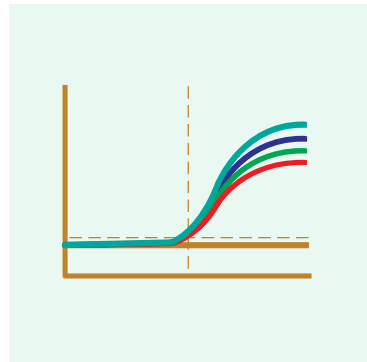
Multi-Gene 3-Targets allowing accurate results even with emergence of New Variants

Lyophilized Format* making the kit stable at Room Temperature

*Coming Soon

High Sensitivity (99%), Specificity and Accuracy in results

AI Driven Solution with automated analysis, Interpretation & Reporting

Name	CT Value	Result
Sample 2	31.2	Positive
	29.8	
	30.6	

Applications:

- On Site emergency testing of COVID-19 and other Infectious conditions.
- Clinical medical testing to develop various diagnostic reagents and POC emergency detection on this platform.
- PCR Technology Development and Application Tools for Research institutes. Fast and efficient PCR experiments to improve the efficiency and level of scientific research.

4 Channels & Double 16-Well Blocks Design, can run two different programs at the same time

Thermal Printer

Barcode Reader

RAPi-Q HT

Compact Size • **Light** Weight • **Easy** to Carry

WORLD'S First Innovative & Compact
Point-of-Care RTPCR Solution for Rapid Reporting

- **Delivers Result** Interpretation as Positive / Negative along with CT values
- **Highly Accurate** Fluorscent probes based detection method which supports one-step PCR Method for different applications

Standalone Operation with Direct Connectivity to Printer, Barcode Scanner & LIS

CE IVD

NGS
Clinical Panels

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

- PAN Cancer Panel
- Liquid Biopsy Panels
- Oncology Panels
- CancerCheck Panel
- Med4Me Precision Medicine Panels
- Comprehensive Respiratory Virus Panel (CRVP)
- Clinical Exome Sequencing (CES) Expanded Panel
- Neuromuscular NGS Panel

GENES2ME
Innovating Molecular
Diagnostics for Billion

PAN Cancer Panel

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

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

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.

Variants of PAN Cancer Panel (764 Samples)
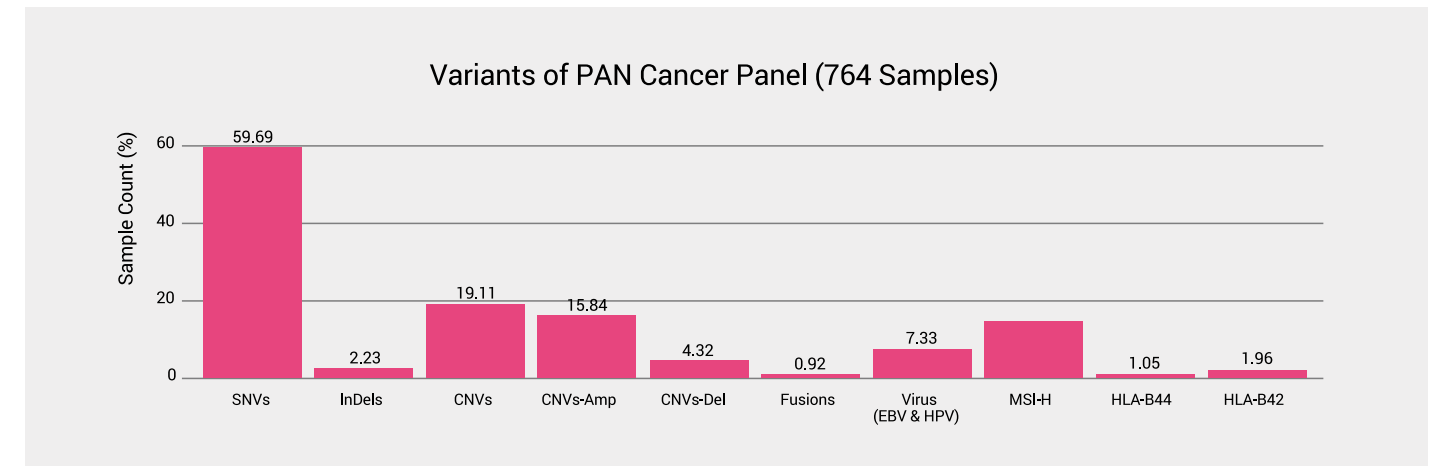
ANALYSIS OF EBV & HPV

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
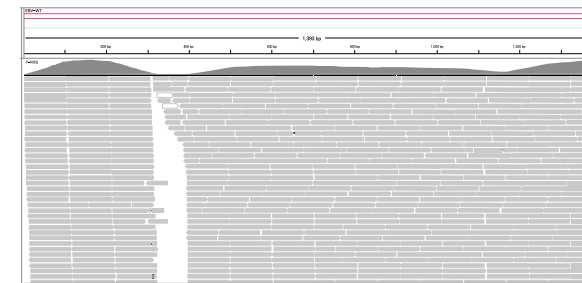
HPV (Human Papillomavirus)

- 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

Liquid Biopsy Panels

Colorectal/ Breast/ Lung

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

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 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 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											

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												

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.

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					

BRCA 1/2 Panel   *Germline & Somatic Cancer*

- 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

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, & 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											

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

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.
OncoCheck Panel	G2MOC01001-ill; G2MOC01001-TF; G2MOC01001-MG
CancerCheck 50 Panel	G2MCC03001-ill; G2MCC03001-TF; G2MCC03001-MG
CancerCheck 100 Panel	G2MCC04001-ill; G2MCC04001-TF; G2MCC04001-MG

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 Standard Panel

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

Types of Drugs Covered

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

GENE LIST

Med4Me Standard 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								

Med4Me Precision Medicine Panels

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

Comprehensive Respiratory Virus Panel (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

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	G2MCRVP17001-ill; G2MCRVP17001-TF

Neurological Disorders

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

Epilepsy NGS Panel

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

Alzheimer-Parkinson-Dementia NGS Panel

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

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

Cardiovascular Disorders

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

GENE LIST

Panel									
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

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

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

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	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	

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					

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.

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	

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