

온라인용 Brochure입니다.

Labopass™

For Molecular Biology Solutions

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CONTENTS

DNA Purification Kit

Plasmid DNA Purification Kit Mini	4
Gel Extraction Kit	6
PCR Purification Kit	8
Gel and PCR Clean-up Kit	10
Tissue Genomic DNA Isolation Kit Mini	12
Blood Genomic DNA Isolation Kit Mini	14
Bacteria Genomic DNA Isolation kit Mini	16
Genomic DNA Isolation Kit	18

DNA Polymerase

IP- <i>Taq</i> DNA Polymerase	20
IP- <i>Taq</i> PCR Master mix & PCR Premix	21
IP pro- <i>Taq</i> DNA Polymerase	22
IP pro- <i>Taq</i> PCR Master mix & PCR Premix	23
IP- <i>Pfu</i> DNA Polymerase	24
IP- <i>Pfu</i> PCR Master mix & PCR Premix	25

qPCR Master

SYBR Green Q Master	26
EvaGreen Q Master	27

DNA Ladder / dNTPs

1 kb Labo & Labo Plus DNA Ladder	28
100 bp Labo & Labo Plus DNA Ladder	29
dNTPs	30

RNA Related Products

M-MuLV Reverse Transcriptase	31
RNase Inhibitor	32
cDNA Synthesis kit	33
Labozol Reagent	34
One-Step RT-PCR Kit	35

Modification Enzymes

T4 DNA ligase	36
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Ordering Information

38 - 39

Plasmid DNA Purification Kit Mini

LaboPass™ Plasmid DNA Purification Kit Mini is designed for rapid isolation of plasmid DNA and provides a fast and convenient tool for efficient purification of low or high copy plasmid DNA in a comfortable spin format or on a vacuum manifold. This plasmid mini purification kit is highly suitable for routine molecular biology applications.

Cat.No	Size
CMP0111	50 prep
CMP0112	200 prep
CMP0115	1,000 prep

High yield and superior purity

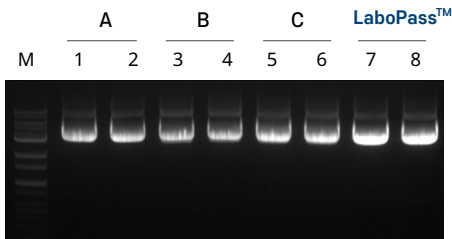
LaboPass™ Plasmid DNA Purification Kit Mini provides a rapid method for purification of up to 30 µg of plasmid DNA from 1 to 5 ml of bacteria culture. The purified plasmid DNA is ready to use in various molecular biology applications such as transfection, *in vitro* expression, enzyme digestion, PCR amplification, and DNA sequencing.

Fast and easy-to-use system

LaboPass™ Plasmid DNA Purification Kit Mini provides a fast and simple plasmid purification method for routine molecular biology applications. This kit does not require DNA phenol extraction or alcohol precipitation, and the entire procedure can be completed within 20 minutes.

High Yield

Compared with other companies' kits, LaboPass™ Plasmid DNA Purification Kit Mini produces higher DNA yield and purity.



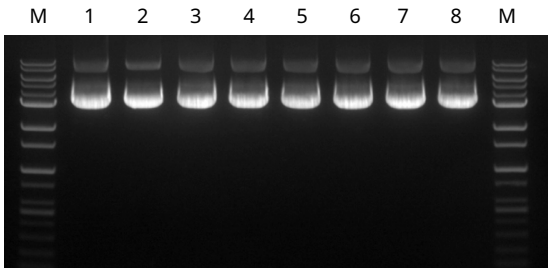
Lane M : 1kb Labo DNA ladder
Plasmid DNA : pcDNA3.1
E.coli strain : DH5α

Supplier	DNA Concentration (ng/µl)	
Company A	148.0	147.3
Company B	136.7	139.6
Company C	150.4	163.8
LaboPass™	292.6	330.2

Consistent performance

LaboPass™ Plasmid DNA Purification Kit Mini provides confidence in results. Especially, the lysis indicator dye in the kit helps to confirm cell lysis every time.

Plasmid DNAs were prepared from independent culture batches using LaboPass™ Plasmid DNA Purification Kit Mini. Each lane represents the purified plasmid DNA (pcDNA3.1). Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1kb Labo DNA ladder

Concentration(ng/µl) of purified plasmid DNA							
1	2	3	4	5	6	7	8
385.5	384.8	341.4	369.7	352.9	352.1	346.2	346.7

Superior Purity

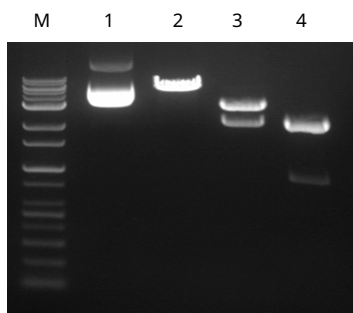
Plasmid DNA purified by LaboPass™ Plasmid DNA Purification Kit Mini is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

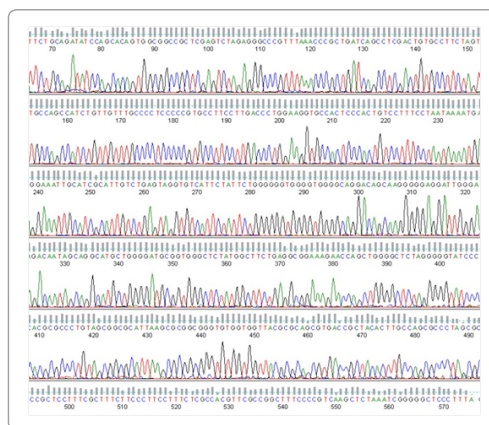
The purified plasmid DNA by LaboPass™ Plasmid DNA Purification Kit Mini was digested with several kinds of restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- Sequencing analysis**

Automated DNA sequencing was performed on plasmid DNA (pcDNA3.1) purified with LaboPass™ Plasmid DNA Purification Kit Mini. Sequencer Name : Applied Biosystems, Automatic Sequencer ABI 3730XL Applied Sequencing System : ABI BigDye® Terminator version 3.1



Lane M : 1kb Labo DNA ladder
Lane 1 : Purified pcDNA3.1 using LaboPass™ Plasmid DNA Purification Kit Mini
Lane 2 : BamHI digestion of purified pcDNA3.1
Lane 3 : SalI digestion of purified pcDNA3.1
Lane 4 : Double digestion of purified pcDNA3.1 with EcoRI and SalI



Gel Extraction Kit

LaboPass™ Gel Extraction Kit is designed to recover or concentrate DNA fragments from agarose gel. This kit provides a fast and convenient tool for efficient purification of DNA fragments directly from agarose gels in a comfortable spin filter format or on a vacuum manifold. The purification procedure removes agarose, ethidium bromide, and other impurities in DNA sample.

Cat.No	Size
CMG0111	50 prep
CMG0112	200 prep
CMG0115	1,000 prep

High Efficiency

LaboPass™ Gel Extraction Kit provides a rapid and efficient method for isolation of DNA fragments from 100 bp up to 10 kb.

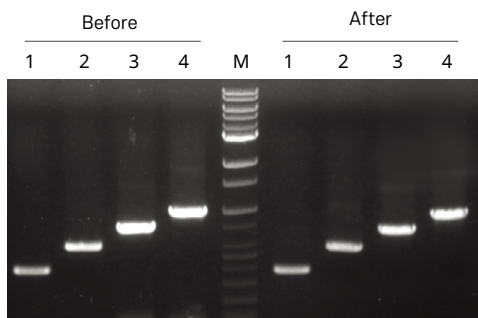
Fast and easy-to-use system

LaboPass™ Gel Extraction Kit provides a fast and simple purification method of DNA fragment for routine molecular biology applications. This kit does not require DNA phenol extraction or alcohol precipitation, and the entire procedure can be completed within 15 minutes.

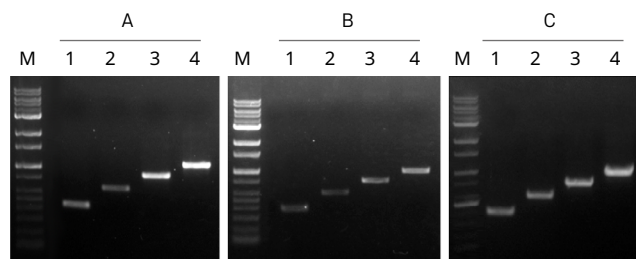
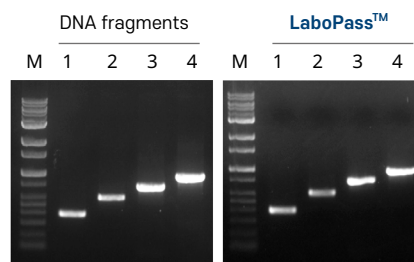
High Yield

DNA fragments before and after purification with LaboPass™ Gel Extraction Kit were compared. Samples were analyzed on 1% agarose gel in TAE buffer.

Compared with other companies' kits, LaboPass™ Gel Extraction Kit produced higher recovery yield for various DNA fragment size. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder
Lane 1 : 400 bp DNA fragment
Lane 2 : 600 bp DNA fragment
Lane 3 : 800 bp DNA fragment
Lane 4 : 1 kb DNA fragment



Lane M : 1 kb Labo DNA ladder
Lane 1 : 400 bp DNA fragment
Lane 2 : 600 bp DNA fragment

Lane 3 : 800 bp DNA fragment
Lane 4 : 1 kb DNA fragment

Supplier	DNA concentration (ng/μl)			
	400 bp	600 bp	800 bp	1 kb
Company A	15.6	13.4	18.9	21.2
Company B	13.2	12.6	18.2	20.4
Company C	16.3	14.2	21.2	23.7
LaboPass™	32.1	24.2	38.4	45.9

Superior Purity

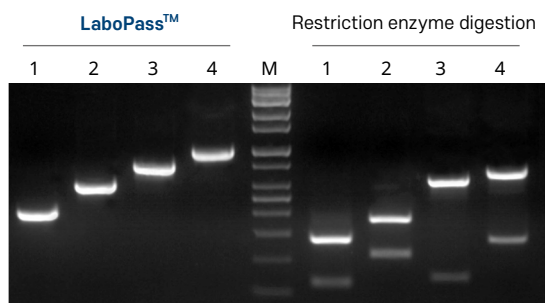
DNA fragments purified with LaboPass™ Gel Extraction Kit is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

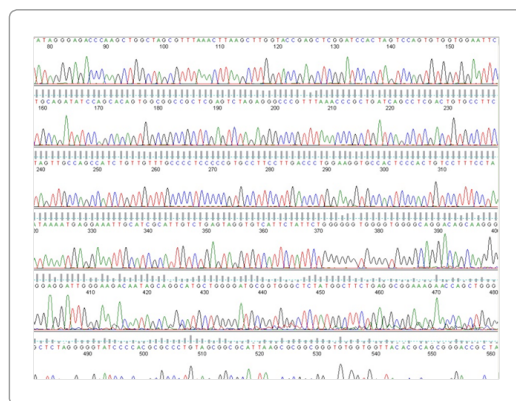
DNA fragments purified with LaboPass™ Gel Extraction Kit were digested with several kinds of restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- Sequencing analysis**

Automated DNA sequencing analysis was performed from purified DNA fragment (800 bp) using LaboPass™ Gel Extraction Kit. Sequencer Name : Applied Biosystems, Automatic Sequencer ABI 3730XL Applied Sequencing System : ABI BigDye® Terminator version 3.1



Lane M : 1 kb Labo DNA ladder
Lane 1 : 400 bp DNA fragment, digested with Sall
Lane 2 : 600 bp DNA fragment, digested with NdeI
Lane 3 : 800 bp DNA fragment, digested with HindIII
Lane 4 : 1 kb DNA fragment, digested with HindIII



PCR Purification Kit

LaboPass™ PCR Purification Kit is designed to recover or concentrate DNA fragments from PCR or other enzyme reactions. This kit provides a fast and convenient tool for efficient purification of DNA fragments from various enzyme reactions.

High Efficiency

LaboPass™ PCR Purification Kit provides a rapid and efficient method for purification of DNA fragments from 100 bp up to 20 kb.

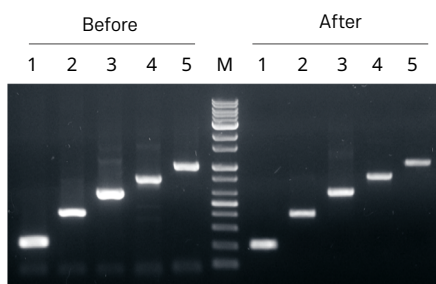
Fast and easy-to-use system

LaboPass™ PCR Purification Kit provides a fast and simple purification method of DNA fragment for routine molecular biology applications. This kit does not require DNA phenol extraction or alcohol precipitation and the entire procedure can be completed within 5 minutes.

Cat.No	Size
CMR0111	50 prep
CMR0112	200 prep
CMR0115	1,000 prep

High Recovery Yield

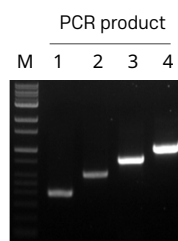
DNA fragments before and purification with LaboPass™ PCR Purification Kit were compared. Samples were analyzed on 1% agarose gel in TAE buffer.



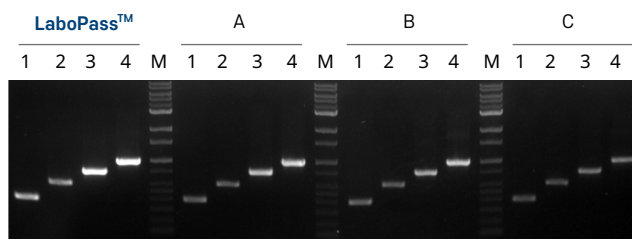
Lane M : 1 kb Labo DNA ladder
Lane 1 : PCR product (200 bp)
Lane 2 : PCR product (400 bp)
Lane 3 : PCR product (600 bp)
Lane 4 : PCR product (800 bp)
Lane 5 : PCR product (1 kb)

DNA Fragment Size	Recovery Rate (%)
200 bp	82
400 bp	82
600 bp	85
800 bp	89
1 kb	89
3 kb	85
5 kb	75
10 kb	60
20 kb	45

Compared with other companies' kits, LaboPass™ PCR Purification Kit showed high recovery yield for various PCR product size. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder
Lane 1 : 400 bp DNA fragment
Lane 2 : 600 bp DNA fragment
Lane 3 : 800 bp DNA fragment
Lane 4 : 1 kb DNA fragment



Supplier	DNA concentration (ng/μl)			
	400 bp	600 bp	800 bp	1 kb
Company A	37.6	28.4	56.5	68.6
Company B	29.2	23.8	39.4	49.7
Company C	25.2	21.2	33.0	37.5
LaboPass™	46.6	31.9	63.4	70.6

Superior Purity

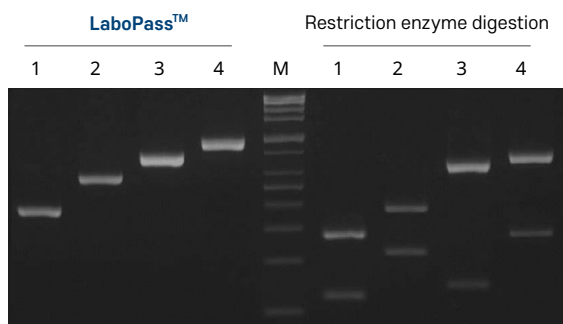
DNA fragments purified with LaboPass™ PCR Purification Kit is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

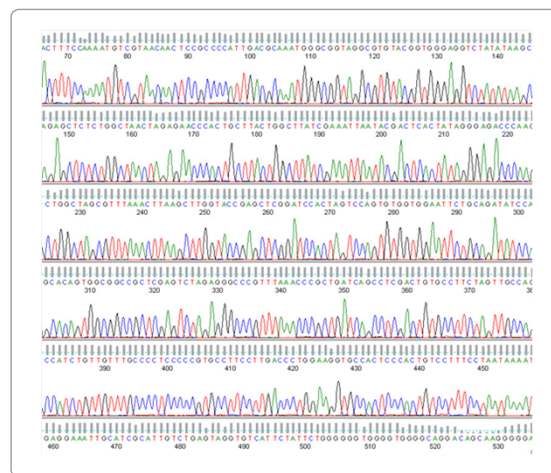
DNA fragments purified with LaboPass™ PCR Purification Kit were digested with several kinds of restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- Sequencing analysis**

Automated DNA Sequencing analysis was performed from purified PCR product (1 kb) using LaboPass™ PCR Purification Kit. Sequencer Name : Applied Biosystems, Automatic Sequencer ABI 3730XL Applied Sequencing System : ABI BigDye® Terminator version 3.1



Lane M : 1 kb Labo DNA ladder
Lane 1 : 400 bp DNA fragment, digested with Sall
Lane 2 : 600 bp DNA fragment, digested with NdeI
Lane 3 : 800 bp DNA fragment, digested with HindIII
Lane 4 : 1 kb DNA fragment, digested with HindIII



Gel and PCR Clean-up Kit

LaboPass™ Gel and PCR Clean-up Kit is designed to recover or concentrate DNA fragments from agarose gel or various enzyme reactions. This kit provides a fast and convenient tool for an efficient purification of DNA fragments directly from agarose gels or various enzyme reactions in a comfortable spin filter format or on a vacuum manifold. The purification procedure removes agarose, ethidium bromide and other impurities from the DNA sample.

Cat.No	Size
CMA0111	50 prep
CMA0112	200 prep
CMA0115	1,000 prep

Multipurpose

This kit is a single system for purification of DNA fragment from agarose gel and various reaction mixtures such as PCR and other enzyme reactions.

High Efficiency

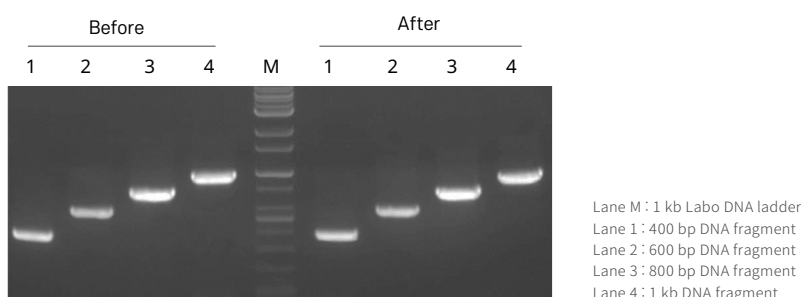
LaboPass™ Gel and PCR Clean-up Kit provides a rapid and efficient method for isolation of DNA fragments from 100 bp up to 20 kb.

Fast and easy-to-use system

LaboPass™ Gel and PCR Clean-up Kit provides a fast and simple purification method of DNA fragment for routine molecular biology applications. This kit does not require DNA phenol extraction or alcohol precipitation.

High Recovery Yield

DNA fragments before and after purification with LaboPass™ Gel and PCR Clean-up Kit was compared. Samples were analyzed on 1% agarose gel in TAE buffer.



Gel Extraction		PCR Purification	
DNA Fragment Size	Recovery (%)	DNA Fragment Size	Recovery (%)
200 bp	82	200 bp	82
400 bp	82	400 bp	82
600 bp	82	600 bp	85
800 bp	83	800 bp	89
1 kb	89	1 kb	89
3 kb	80	5 kb	81
5 kb	73	10 kb	75
10 kb	55	20 kb	45

Superior Purity

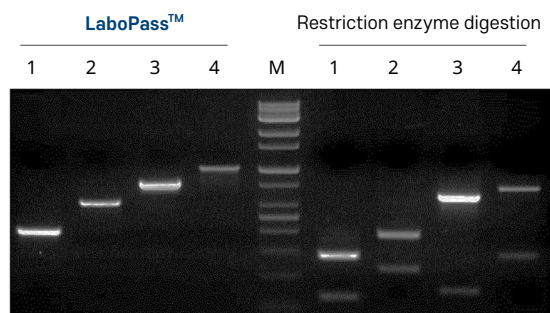
DNA fragments purified with LaboPass™ Gel and PCR Clean-up Kit is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

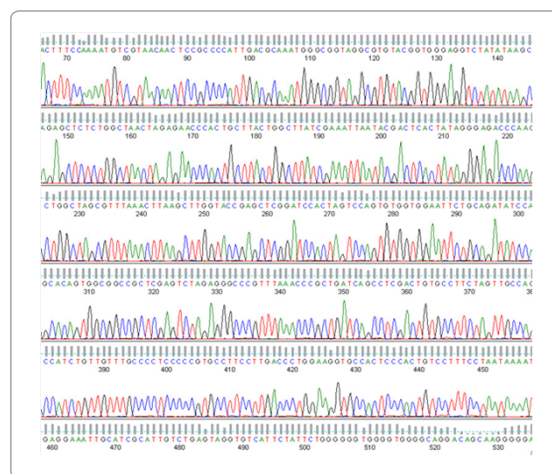
DNA fragments purified with LaboPass™ Gel and PCR Clean-up Kit were digested with several kinds of restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- Sequencing analysis**

Automated DNA Sequencing analysis was performed from purified PCR fragment using LaboPass™ Gel and PCR Clean-up Kit.
 Sequencer Name : Applied Biosystems, Automatic Sequencer ABI 3730XL Applied
 Sequencing System : ABI BigDye® Terminator version 3.1



Lane M : 1 kb Labo DNA ladder
 Lane 1 : 400 bp DNA fragment, digested with Sall
 Lane 2 : 600 bp DNA fragment, digested with NdeI
 Lane 3 : 800 bp DNA fragment, digested with HindIII
 Lane 4 : 1 kb DNA fragment, digested with HindIII



Tissue Genomic DNA Isolation Kit Mini

LaboPass™ Tissue Genomic DNA Isolation Kit Mini is optimized for isolation of genomic DNA from various tissue types (e.g. spleen, liver, heart, brain, tail or insects) or cells and provides a fast and convenient tool for efficient purification of genomic DNA in a comfortable spin format or on a vacuum manifold. This provides reproducible yields of highly purified genomic DNA and allows for the use of the purified genomic DNA in diverse applications.

Cat.No	Size
CME0111	50 prep
CME0112	200 prep
CME0115	1,000 prep

High yield and purity

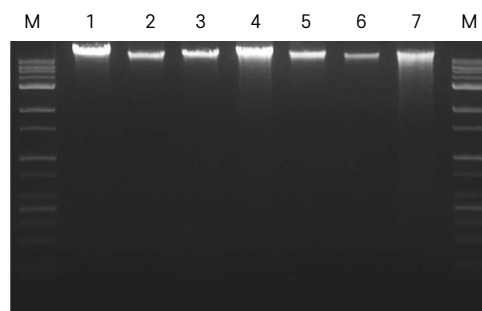
Genomic DNA can be prepared from 20 mg of tissue or 5×10^6 HEK293 cells using LaboPass™ Tissue Genomic DNA Isolation Kit Mini. The obtained genomic DNA is ready to use in various applications such as PCR, real-time PCR, SNP detection, Southern blotting, sequencing and cloning.

Fast and easy-to-use system

After lysis step, genomic DNA can be obtained within 10 minutes.

High Yield

Genomic DNA was purified from various mouse tissues (20 mg each) using the LaboPass™ Tissue Genomic DNA Isolation Kit Mini. The purified genomic DNA was analyzed on 1 % agarose gel in TAE buffer.

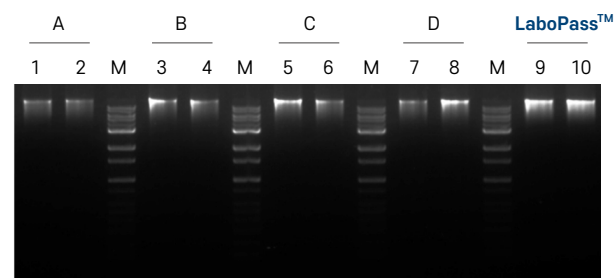


Lane M : 1 kb Labo DNA ladder
Lane 1 : Mouse Lung
Lane 2 : Mouse Liver
Lane 3 : Mouse Kidney

Lane 4 : Mouse Spleen
Lane 5 : Mouse Brain
Lane 6 : Mouse Heart
Lane 7 : Mouse Tail

Samples	Amounts	Yield	Purity
Lung (Mouse)	20 mg	10 ~ 20 µg	1.8 ~ 1.9
Liver (Mouse)	20 mg	20 ~ 40 µg	1.8 ~ 1.9
Kidney (Mouse)	20 mg	30 ~ 40 µg	1.8 ~ 1.9
Spleen (Mouse)	20 mg	20 ~ 30 µg	1.8 ~ 1.9
Brain (Mouse)	20 mg	15 ~ 20 µg	1.8 ~ 1.9
Heart (Mouse)	20 mg	15 ~ 20 µg	1.8 ~ 1.9
Tail (Mouse)	20 mg	10 ~ 20 µg	1.8 ~ 1.9
QBI Cell (Human)	5×10^6 cells	15 ~ 20 µg	1.8 ~ 1.9

Compared with other companies' kits, LaboPass™ Tissue Genomic DNA Isolation Kit Mini showed higher for genomic DNA yields. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder

Supplier	Mouse Liver (20 mg)	
	DNA concentration (ng/µl)	
Company A	15.2	14.9
Company B	21.8	17.1
Company C	21.1	16.3
Company D	15.8	27.8
LaboPass™	30.1	29.4

Superior Purity

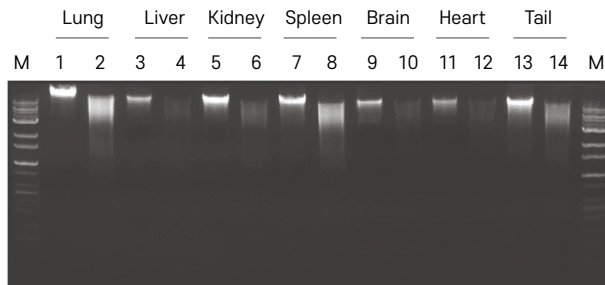
Genomic DNA purified by LaboPass™ Tissue Genomic DNA Isolation Kit Mini is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

Genomic DNA purified by LaboPass™ Tissue Genomic DNA Isolation Kit Mini from various mouse tissues were digested with restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- PCR amplification**

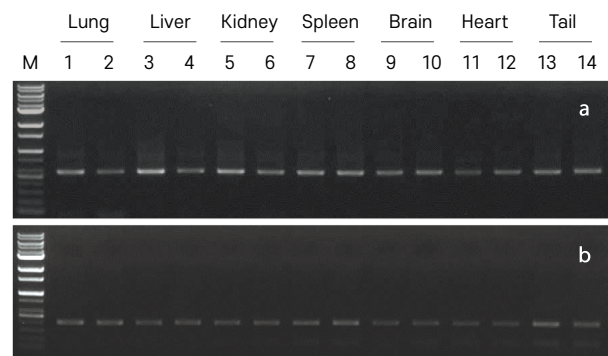
PCR amplification was performed with purified genomic DNA using LaboPass™ Tissue Genomic DNA Isolation Kit Mini from various tissue of mouse. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder

Lane 1, 3, 5, 7, 9, 11, 13 : Purified genomic DNA from each mouse tissue

Lane 2, 4, 6, 8, 10, 12, 14 : Restriction enzyme digestion (HindIII) of Purified genomic DNA from each mouse tissue



a : Mouse Actin (700 bp)

b : Mouse GAPDH (400 bp)

Lane M : 1 kb Labo DNA ladder



Blood Genomic DNA Isolation Kit Mini

LaboPass™ Blood Genomic DNA Isolation Kit Mini is optimized for isolation of genomic DNA from whole blood, buffy coat, and cultured cell samples, and provides a fast and convenient tool for efficient purification of genomic DNA in a comfortable spin format or on a vacuum manifold. The kits provide reproducible yields of highly purified genomic DNA and allow, for the use of the purified genomic DNA in diverse applications.

Cat.No	Size
CMB0111	50 prep
CMB0112	200 prep
CMB0115	1,000 prep

High yield and purity

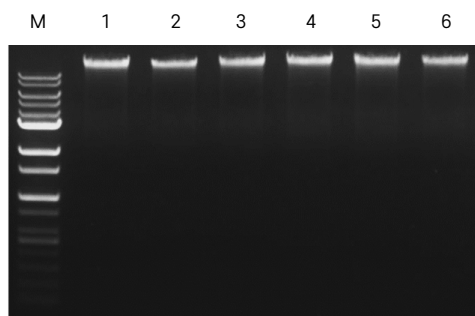
Genomic DNA is yielded an average 6 µg from 200 µl of human whole blood using LaboPass™ Blood Genomic DNA Isolation Kit Mini. The obtained genomic DNA is ready to use in various applications such as PCR, real-time PCR, SNP detection, Southern blotting, sequencing and cloning.

Fast and easy-to-use system

All procedure for genomic DNA purification can be completed within 20 minutes.

High Yield

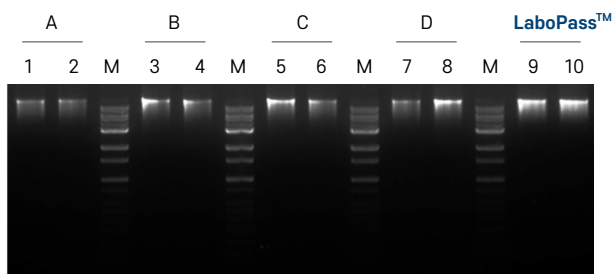
Genomic DNA was purified from whole blood samples (200 µl each) using the LaboPass™ Blood Genomic DNA Isolation Kit Mini. The obtained genomic DNA was analyzed on 1 % agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder
Lane 1~6 : Human blood sample

Samples	Amounts	Yield	Purity
Whole blood	200 µl	5 ~ 15 µg	1.8 ~ 1.9
Buffy coat	200 µl	20 ~ 50 µg	1.8 ~ 1.9
Lymphocytes	200 µl	20 ~ 30 µg	1.8 ~ 1.9

Compared with other companies' kits, LaboPass™ Blood Genomic DNA Isolation Kit Mini showed high yield for genomic DNA. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder

Supplier	Human whole blood (200 µl)	
	DNA concentration (ng/µl)	
Company A	30.3	29.7
Company B	32.4	30.2
Company C	35.1	33.4
LaboPass™	46.2	47.0

Superior Purity

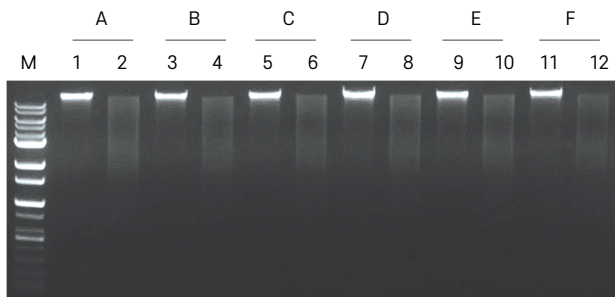
Genomic DNA purified by LaboPass™ Blood Genomic DNA Isolation Kit Mini is ready to use for various molecular biology applications.

- Restriction enzyme digestion**

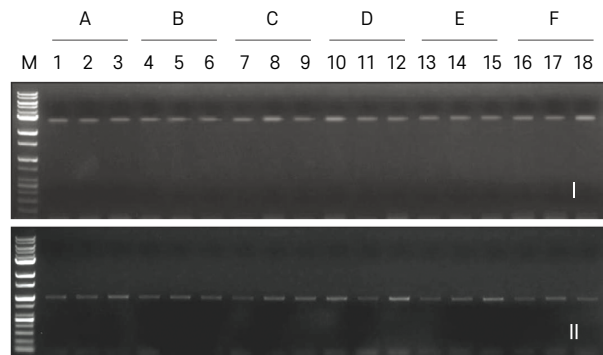
Genomic DNA purified by LaboPass™ Blood Genomic DNA Isolation Kit Mini was digested with restriction enzyme. Samples were analyzed on 1% agarose gel in TAE buffer.

- PCR amplification**

PCR amplification was performed with purified genomic DNA using LaboPass™ Blood Genomic DNA Isolation Kit Mini from human whole blood. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder
Lane 1, 3, 5, 7, 9, 11 : Purified genomic DNA from human whole blood
Lane 2, 4, 6, 8, 10, 12 : Restriction enzyme digestion (HindIII) of purified genomic DNA from human whole blood



I : Human β -globulin (1 kb)
II : Human GAPDH (3 kb)
Lane M : 1 kb Labo DNA ladder



Bacteria Genomic DNA Isolation kit Mini

LaboPass™ Bacteria Genomic DNA Isolation kit Mini optimized for isolation of genomic DNA from a variety of bacteria including gram-positive/negative bacteria and provides a fast and convenient tool for efficient purification of genomic DNA in a comfortable spin format or on a vacuum manifold. Typical DNA recovery is 1~10 µg from 1 mL of microbial culture. This provides reproducible yields of highly purified genomic DNA and allows for the use of the purified genomic DNA in diverse applications.

Cat.No	Size
CMBA0111	50 prep
CMBA0112	200 prep
CMBA0115	1,000 prep

High yield and purity

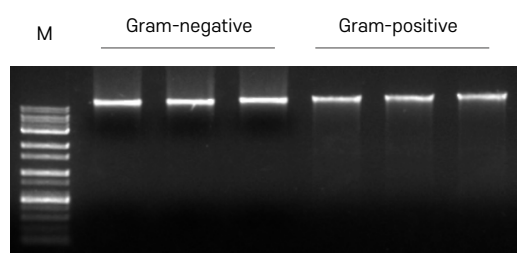
Genomic DNA is yielded from up to $2\sim5 \times 10^8$ Bacterial cells using LaboPass™ Bacteria Genomic DNA Isolation kit Mini. The obtained genomic DNA is ready to use in various applications such as PCR, real-time PCR, SNP detection, Southern blotting, sequencing and cloning.

Fast and easy-to-use system

After lysis step, genomic DNA can be obtained within 10 minute.

High yield and purity

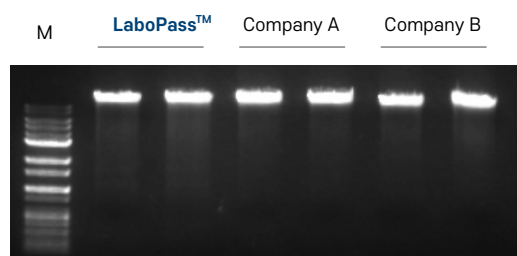
Genomic DNA was purified from gram-positive/negative bacteria using the LaboPass™ Bacteria Genomic DNA Isolation kit Mini. The purified genomic DNA was analyzed on 1 % agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder

Samples	Bacteria		
	DNA concentration (ng/µl)		
Gram-negative	46.7	48.5	48.0
Gram-positive	42.9	44.0	44.5

Compared with other company kits, LaboPass™ Bacteria Genomic DNA Isolation kit Mini showed high yield for genomic DNA. Samples were analyzed on 1% agarose gel in TAE buffer.



Lane M : 1 kb Labo DNA ladder

Supplier	Bacteria	
	DNA concentration (ng/µl)	
Company A	33.5	30.5
Company B	32.9	35.8
LaboPass™	39.6	43.5

Superior Purity

Genomic DNA purified by LaboPass™ Bacteria Genomic DNA Isolation kit Mini is ready to use for various molecular biology applications.

- **PCR amplification**

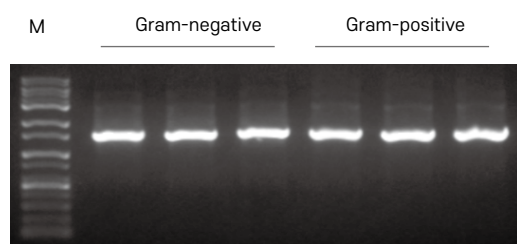
PCR amplification was performed with purified genomic DNA using LaboPass™ Bacteria Genomic DNA Isolation kit Mini from gram-positive/negative bacteria. Samples were analyzed on 1% agarose gel in TAE buffer.

- **Sequencing analysis**

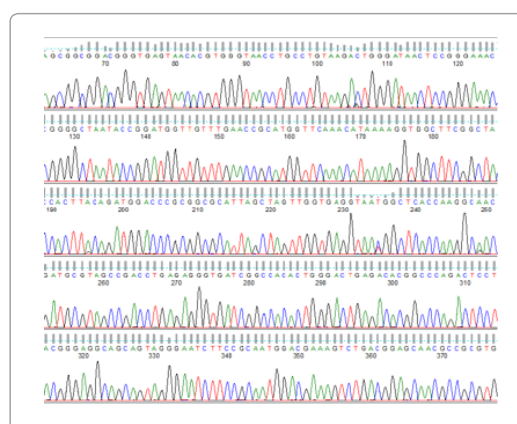
Automated DNA sequencing analysis was performed from purified DNA fragment (1.5 kb) using LaboPass™ Bacteria Genomic DNA Isolation kit Mini.

Sequencer Name : Applied Biosystems, Automatic Sequencer ABI 3730XL Applied

Sequencing System : ABI BigDye® Terminator version 3.1



Lane M : 1 kb Labo DNA ladder
16S rRNA gene Sequence (27F/1492R)



Genomic DNA Isolation Kit (Solution type)

LaboPass™ Genomic DNA Isolation Kit provides a method for the isolation of genomic DNA from various organisms without using toxic chemical such as phenol and chloroform.

Cat.No	Size
CMX0112	200 prep
CMX0115	1,000 prep

High yield and easy-to-use system

This kit can be used to isolate genomic DNA from animal and bacterial cells with the modification of cell lysis step and purified genomic DNA is ready to use in various applications such as PCR, restriction enzyme digestion, Southern blotting and cloning.

LaboPass™ DNA Purification Kit Catalog

Cat. No.	제 품 명	Size
CMP0111	LaboPass™ Plasmid DNA Purification Kit Mini	50 prep
CMP0112		200 prep
CMP0115		1,000 prep
CMG0111	LaboPass™ Gel Extraction Kit	50 prep
CMG0112		200 prep
CMG0115		1,000 prep
CMR0111	LaboPass™ PCR Purification Kit	50 prep
CMR0112		200 prep
CMR0115		1000 prep
CMA0111	LaboPass™ Gel and PCR Clean-up Kit	50 prep
CMA0112		200 prep
CMA0115		1,000 prep
CME0111	LaboPass™ Tissue Genomic DNA Isolation Kit Mini	50 prep
CME0112		200 prep
CME0115		1000 prep
CMB0111	LaboPass™ Blood Genomic DNA Isolation Kit Mini	50 prep
CMB0112		200 prep
CMB0115		1,000 prep
CMBA0111	LaboPass™ Bacteria Genomic DNA Isolation Kit Mini	50 prep
CMBA0112		200 prep
CMBA0115		1,000 prep
CMX0112	LaboPass™ Genomic DNA Isolation Kit (solution type)	200 prep
CMX0115		1,000 prep

LaboPass™ Kit box is designed for ease of use
Quick guide protocol is provided for all LaboPass™ Kits



All buffer and column in LaboPass™ kits is available to purchase separately.
For more information, please contact us on

labopass@cosmogenetech.com or www.cosmogenetech.com

IP-Taq DNA Polymerase

LaboPass™ IP-Taq DNA Polymerase is a thermostable DNA polymerase cloned from *Thermus aquaticus* and a recombinant form expressed in *E.coli*. This enzyme possesses 5' to 3' exonuclease activity, but lacks a 3' to 5' exonuclease proofreading activity. The enzyme purified with high purity contains a very low level of contaminating *E.coli* DNA, which minimizes false positive results, especially when the amplicon is bacterial sequence (e.g. 16S rRNA).

Product Name	Cat.No	Size
IP-Taq DNA Polymerase	CMT1002	500 unit (2.5 unit/μl)
IP-Taq Master mix	CMT7006	200 μl X 5, 100 reactions
IP-Taq Premix	CMT6004	96 tube

Applications

- General PCR for detection
- Colony PCR
- Real-time PCR
- A-tailing for TA-cloning

Supplied reagents

LaboPass™ IP-Taq DNA Polymerase is provided with an optimized buffer to improve PCR yield.

• 10X IP-Taq buffer I and II (with MgCl₂)

LaboPass™ IP-Taq DNA Polymerase is supplied with two types of reaction buffer with different salt formulation. Generally, Buffer I works well in most PCR reaction. The use of Buffer II can be tried if PCR products are not satisfactory (nonspecific, little or no products) using Buffer I.

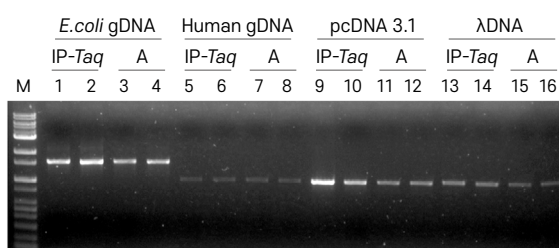
• 5X Tuning buffer

Tuning buffer can improve PCR efficiency in reaction containing problematic template DNA such as high GC contents or stable secondary structures. Thus, it is advantageous to amplify complicated long target sequences.

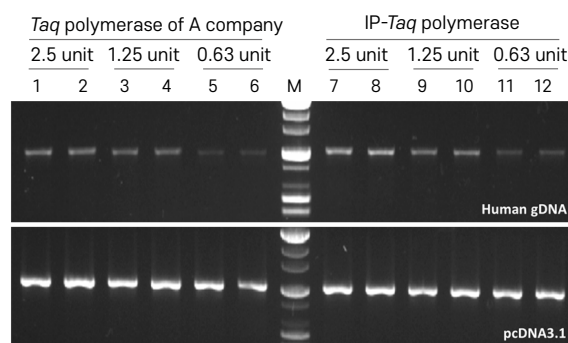
Component	Volume
IP-Taq Polymerase (2.5 unit/μl)	250 unit X 2
10X IP-Taq buffer I (with MgCl ₂)	1 ml X 2
10X IP-Taq buffer II (with MgCl ₂)	1 ml
dNTPs (2.5 mM each)	500 μl X 2
5X Tuning buffer	1 ml

High amplification efficiency

The PCR amplification efficiency was compared with other commercial *Taq* polymerase. LaboPass™ IP-Taq Polymerase shows comparable or superior quality.



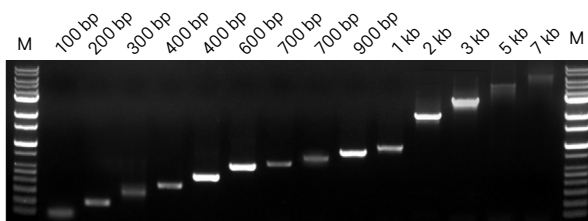
Lane M : 1 kb Labo DNA ladder



Lane M : 1 kb Labo DNA ladder

PCR performance

Various sizes of PCR produces can be amplified using LaboPass™ IP-Taq DNA Polymerase.



Lane M : 1 kb Labo DNA ladder
DNA template : λ DNA

Standard Reaction (50 μl)	Volume
10x IP-Taq buffer I or II	5 μl
dNTPs (each 2.5 mM)	4 μl
5X Tuning buffer	10 μl (optional)
Forward primer	10~50 pmoles
Reverse primer	10~50 pmoles
DNA template	Variable *
IP-Taq Polymerase	1 μl
Distilled water	up to 50 μl

Quality control

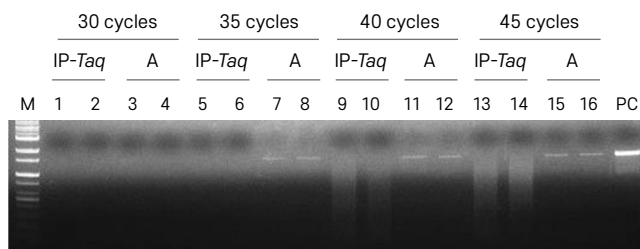
Each lot of IP-*Taq* Polymerase, 10X IP-*Taq* buffer and dNTPs are tested for contamination such as *E.coli* genomic DNA, nicking, endo-nuclease and exo-nuclease.

• Test for nuclease activity

Nicking, endonuclease and exonuclease activities were not detected after the incubation of 0.5 µg of supercoiled pUC19, λ DNA or HindIII digested λ DNA with 10 units of this enzyme for 4 hours at 37°C or 72°C.

• Test for *E.coli* genomic DNA contamination

When compared with a competitor's DNA polymerase, LaboPass™ IP-*Taq* Polymerase was verified to have no *E.coli* genomic DNA contamination.



Lane M : 1 kb Labo DNA ladder
Lane PC : Positive control (*E.coli* gDNA, 10 ng)

IP-*Taq* PCR Master Mix

LaboPass™ IP-*Taq* PCR Master Mix is a 2x concentrated, ready to use reaction mixture containing optimized amount of IP-*Taq* Polymerase, dNTPs, reaction buffer, loading dye and stabilizers. This mixture is designed for ease of use, greater reproducibility and time savings. The user simply adds template DNA, primers and DW to start the reaction.

Specifications

Components	IP- <i>Taq</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 ~ 100 µl (PCR Master mix is 2x concentrated)
Storage	-20°C

IP-*Taq* PCR Premix

LaboPass™ IP-*Taq* PCR Premix is an optimized 2X PCR master mix that contains IP-*Taq* Polymerase, dNTPs, MgCl₂, reaction buffer, loading dye and stabilizers and is aliquoted into thin-wall 8-strip PCR tube. This premix formulation simplifies PCR setup. The user simply adds template, primers and DW to start the reaction.

Specificatio

Components	IP- <i>Taq</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 µl (2X PCR Master mix is aliquoted (10 µl each) into the PCR tube)
Storage	-20°C

IP pro-*Taq* DNA Polymerase

LaboPass™ IP pro-*Taq* DNA Polymerase is a modified version of *Taq* polymerase which improves the reliability and specificity of PCR reaction. The IP pro-*Taq* Polymerase has proofreading activity and is more thermostable than wild type *Taq* DNA polymerase, which allows for the amplification of DNA up to 20 kb with high accuracy. The amplified products contain a mixture of blunt ends and 3' A-plus ends.

Product Name	Cat.No	Size
IP pro- <i>Taq</i> DNA Polymerase	CMT2002	500 unit (2.5 unit/μl)
IP pro- <i>Taq</i> Master mix	CMT7007	200 μl X 5, 100 reactions
IP pro- <i>Taq</i> Premix	CMT6005	96 tube

Applications

- General PCR for difficult template
- Long range PCR
- Real-time PCR
- TA-cloning
- Blunt-end cloning

Supplied reagents

LaboPass™ IP pro-*Taq* DNA Polymerase is provided with an optimized buffer to improve PCR yield.

• 10X IP pro-*Taq* buffer (with MgCl₂)

LaboPass™ IP pro-*Taq* DNA Polymerase is supplied with an optimized reaction buffer to improve PCR yield.

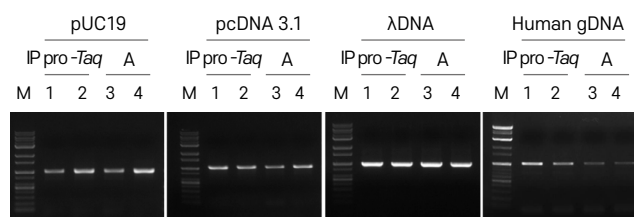
• 5X Tuning buffer

Tuning buffer can improve PCR efficiency in reaction containing problematic template DNA with, e.g. high GC contents or stable secondary structures. Thus, it is advantageous to amplify complicated long target sequences.

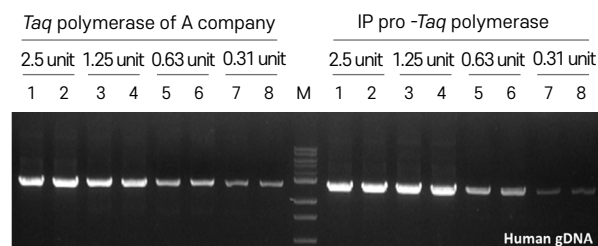
Component	Volume
IP pro- <i>Taq</i> Polymerase (2.5 unit/μl)	250 unit X 2
10X IP pro- <i>Taq</i> buffer (with MgCl ₂)	1 ml X 2
dNTPs (2.5 mM each)	500 μl X 2
5X Tuning buffer	1 ml

High amplification efficiency

The PCR amplification efficiency was compared with other commercial *Taq* polymerase. LaboPass™ IP pro-*Taq* Polymerase shows comparable or superior quality.



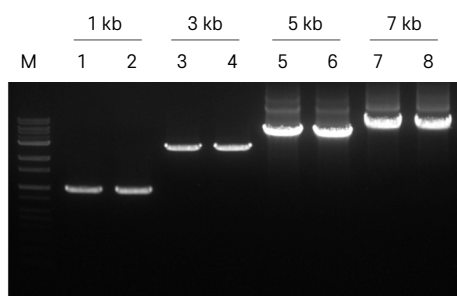
Lane M : 1 kb Labo DNA ladder



Lane M : 1 kb Labo DNA ladder

PCR performance

Various sizes of PCR products can be amplified using LaboPass™ IP pro-*Taq* DNA Polymerase.

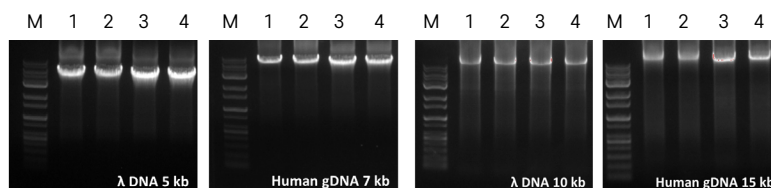


Lane M : 1 kb Labo DNA ladder
DNA template : λ DNA

Standard Reaction (50 μl)	Volume
10x IP pro- <i>Taq</i> buffer	5 μl
dNTPs (each 2.5 mM)	4 μl
5X Tuning buffer	10 μl (optional)
Forward primer	10~50 pmoles
Reverse primer	10~50 pmoles
DNA template	Variable *
IP pro- <i>Taq</i> Polymerase	1 μl
Distilled water	up to 50 μl

• Long range PCR

IP pro-*Taq* Polymerase has proofreading activity and is more thermostable than wild type *Taq* DNA polymerase. Thus, IP pro-*Taq* is ideal for long range PCR.



Lane M : 1 kb Labo DNA ladder

Quality control

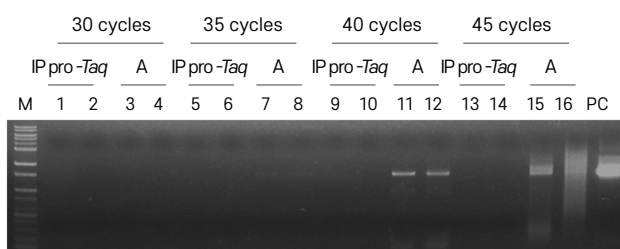
Each lot of IP pro-*Taq* Polymerase, 10X IP pro-*Taq* buffer and dNTPs are tested for contamination such as *E.coli* genomic DNA, endo-nuclease and exo-nuclease.

• Test for nuclease activity

Endonuclease, and exonuclease activities were not detected after incubation of 0.5 µg of supercoiled pUC19, λ DNA or HindIII digested λ DNA with 10 units of this enzyme for 4 hours at 37°C or 72°C.

• Test for *E.coli* genomic DNA contamination

When compared with a competitor's DNA polymerase, LaboPass™ IP pro-*Taq* Polymerase was verified to have no *E.coli* genomic DNA contamination.



Lane M : 1 kb Labo DNA ladder

Lane PC : Positive control (*E.coli* gDNA, 10 ng)

IP pro-*Taq* PCR Master Mix

LaboPass™ IP pro-*Taq* PCR Master Mix is a 2x concentrated, ready to use reaction mixture containing optimized amount of IP pro-*Taq* Polymerase, dNTPs, reaction buffer and stabilizers.

Specifications

Components	IP pro- <i>Taq</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 ~ 100 µl (PCR Master mix is 2x concentrated)
Storage	-20°C

IP pro-*Taq* PCR Premix

LaboPass™ IP pro-*Taq* PCR Premix is an optimized 2X PCR master mix that contains IP pro-*Taq* Polymerase, dNTPs, MgCl₂, reaction buffer, loading dye and stabilizers and is aliquoted into the Thin-Wall 8-strip PCR tube. This premix formulation simplifies PCR setup. The user simply adds template, primers and DW to start the reaction.

Specifications

Components	IP pro- <i>Taq</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 µl (2X PCR Master mix is aliquoted (10 µl each) into the PCR tube)
Storage	-20°C

IP-*Pfu* DNA Polymerase

LaboPass™ IP-*Pfu* DNA Polymerase is a thermostable DNA polymerase cloned from *Pyrococcus furiosus* and a recombinant form expressed in *E.coli*. This archaeal polymerase possesses 3'→5' exonuclease proofreading activity as well as 5'→3' polymerase activity, which allows high fidelity DNA amplification. *Pfu* polymerase retains its polymerase activity during extended exposure at 98°C unlike *Taq* polymerase. Therefore, this enzyme can be used to amplify difficult templates. (e.g. DNA with high GC content or stable secondary structure)

Product Name	Cat.No	Size
IP- <i>Pfu</i> DNA Polymerase	CMT4002	500 unit (2.5 unit/μl)
IP- <i>Pfu</i> Master mix	CMT7008	200 μl X 5, 100 reactions
IP- <i>Pfu</i> Premix	CMT6006	96 tube

Applications

- High fidelity PCR
- Preparation of PCR products for cDNA cloning
- Site-directed mutagenesis
- Blunting of DNA ends

Supplied reagents

LaboPass™ IP-*Pfu* DNA Polymerase is provided with an optimized buffer to improve PCR yield.

• 10X IP-*Pfu* buffer (with MgCl₂)

LaboPass™ IP-*Pfu* DNA Polymerase is supplied with an optimized reaction buffer to improve PCR yield.

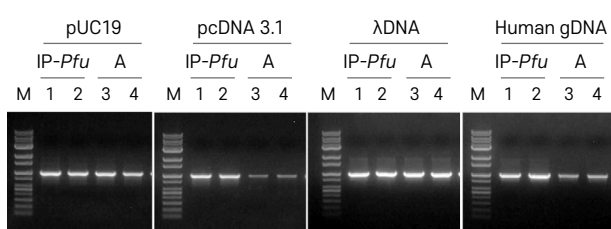
• 5X Tuning buffer

Tuning buffer can improve PCR efficiency in a reaction where template DNA contains high GC contents or stable secondary structures. Thus, it is advantageous to amplify complicated long target sequences.

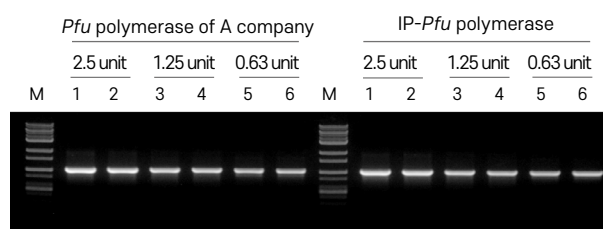
Component	Volume
IP- <i>Pfu</i> Polymerase (2.5 unit/μl)	250 unit X 2
10X IP- <i>Pfu</i> buffer (with MgCl ₂)	1 ml X 2
dNTPs (2.5 mM each)	500 μl X 2
5X Tuning buffer	1 ml

High amplification efficiency

PCR amplification efficiency was by comparing with a competitor's *Pfu* polymerase. LaboPass™ *Pfu* DNA Polymerase showed comparable or superior quality.



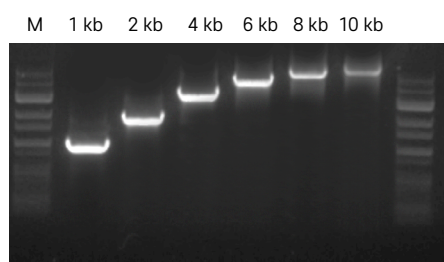
Lane M : 1 kb Labo DNA ladder



Lane M : 1 kb Labo DNA ladder

PCR performance

Various sizes of PCR products can be amplified using LaboPass™ IP-*Pfu* DNA Polymerase.



Lane M : 1 kb Labo DNA ladder
DNA template : λ DNA

Standard Reaction (50 μl)	Volume
10X IP- <i>Pfu</i> buffer	5 μl
dNTPs (each 2.5 mM)	4 μl
5X Tuning buffer	10 μl (optional)
Forward primer	10~50 pmoles
Reverse primer	10~50 pmoles
DNA template	Variable *
IP- <i>Pfu</i> Polymerase	1 μl
Distilled water	up to 50 μl

Quality control

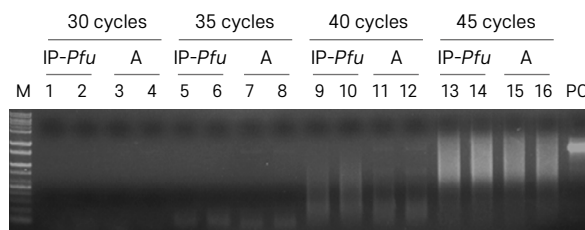
LaboPass™ IP-*Pfu* DNA Polymerase is represented by a very low error rate, determined based on β -galactosidase PCR mutation assay. Each lot of IP-*Pfu* polymerase, 10X *Pfu* buffer and dNTPs are tested for contamination such as *E.coli* genomic DNA, nicking, endo-nuclease, and exo-nuclease.

• Test for nuclease activity

Nicking, endonuclease and exonuclease activity were not detected after incubation of 0.5 μ g of supercoiled pUC19, λ DNA or HindIII-digested λ DNA with 10 units of the enzyme for 4 hours at 37°C or 72°C.

• Test for *E.coli* genomic DNA contamination

When compared with a competitor's DNA polymerase, LaboPass™ IP-*Pfu* Polymerase was verified to have no *E.coli* genomic DNA contamination.



Lane M : 1 kb Labo DNA ladder
Lane PC : Positive control (*E.coli* gDNA, 10 ng)

IP-*Pfu* PCR Master Mix

LaboPass™ IP-*Pfu* PCR Master Mix is a 2x concentrated, ready-to-use reaction mixture containing optimized amount of IP-*Pfu* DNA polymerase, dNTPs, reaction buffer, loading dye and stabilizers. These mixture is designed for ease of use, greater reproducibility and time savings. The user simply adds template DNA, primers and DW to start the reaction.

Specifications

Components	IP- <i>Pfu</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 ~ 100 μ l (PCR Master mix is 2x concentrated)
Storage	-20°C

IP-*Pfu* PCR Premix

LaboPass™ IP-*Pfu* PCR Premix is an optimized 2X PCR master mix that contains IP-*Pfu* DNA polymerase, dNTPs, MgCl₂, reaction buffer, loading dye and stabilizers and is aliquoted into thin-wall 8-strip PCR tube. This premix formulation simplifies PCR setup. The user simply adds template, primers and DW to start the reaction.

Specifications

Components	IP- <i>Pfu</i> Polymerase, dNTPs, reaction buffer, loading dye and stabilizers
Type	Ready-to-use (Only DNA template and primers are needed)
Reaction volume	20 μ l (2X PCR Master mix is aliquoted (10 μ l each) into the PCR tube)
Storage	-20°C

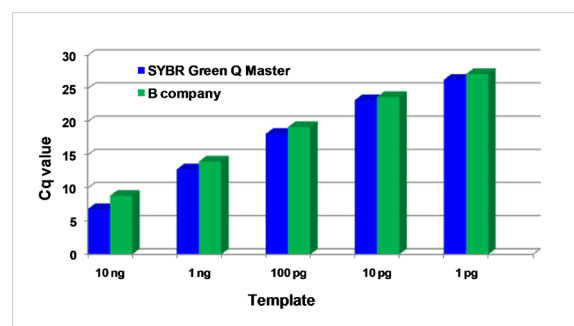
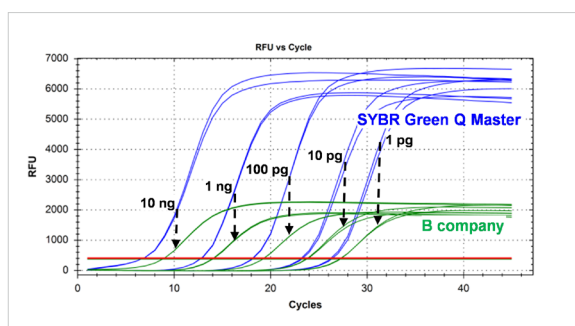
SYBR Green Q Master

LaboPass™ SYBR Green Q Master is a specifically formulated reaction mixture for quantitative real-time PCR (qPCR) with a fluorescent DNA-binding dye, SYBR Green I. Compared to probe-based systems, SYBR Green I-based qPCR system is cost effective and simple method because it is not necessary any fluorescent dye, labeled probes and effort for probe design.

Cat.No		Size
No ROX	CMQS200	1 ml x 2 vials (200 reactions)
	CMQS500	1 ml x 5 vials (500 reactions)
	CMQS1000	1 ml x 10 vials (1,000 reactions)
ROX	CMQSR200	1 ml x 2 vials (200 reactions)
	CMQSR500	1 ml x 5 vials (500 reactions)
	CMQSR1000	1 ml x 10 vials (1,000 reactions)

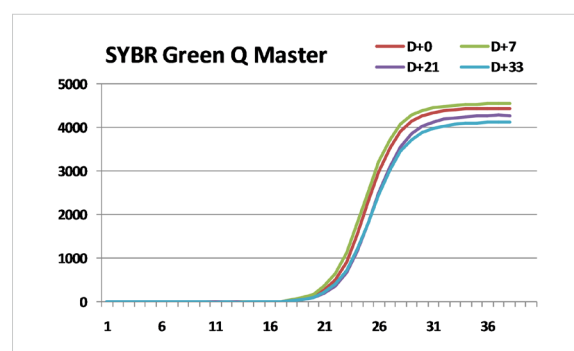
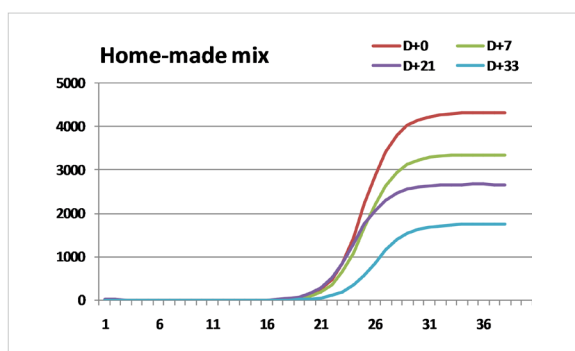
High sensitivity & strong fluorescence signal

LaboPass™ SYBR Green Q Master contains modified *Taq* polymerase and specific PCR enhancer to achieve high sensitivity and specificity of PCR performance. Compared to product of well-known company, SYBR Green Q Master is far superior in amplification efficiency and signal intensity.



Stable fluorescence intensity

SYBR Green I can be easily decomposed in aqueous solution, resulting in a significant reduction of fluorescent signal. LaboPass™ SYBR Green Q Master contains a specific stabilizer to prevent the decomposition of SYBR Green I and so ensure stable retention of fluorescence intensity during long-term storage can be ensured.



Convenient, easy-to-use reaction mixture

LaboPass™ SYBR Green Q Master is a 2x concentrated, ready-to-use reaction mixture containing all the necessary components, except primers, template and passive reference dye required on some real-time PCR instruments.

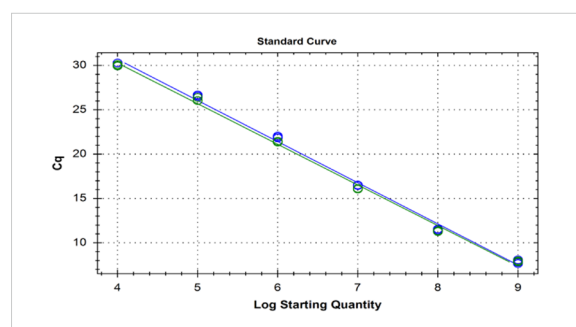
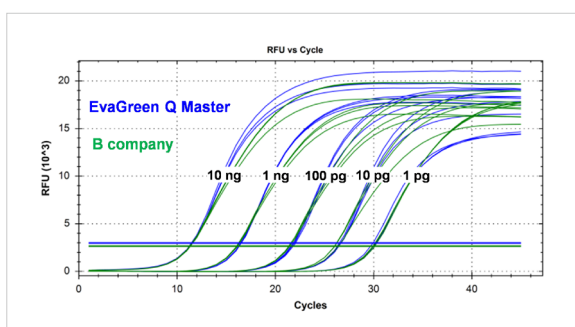
EvaGreen Q Master

LaboPass™ EvaGreen Q Master is a specifically formulated reaction mixture for quantitative real-time PCR (qPCR) with a fluorescent DNA-binding dye, EvaGreen. EvaGreen dye has excitation and emission spectra very close to SYBR Green I used widely in qPCR. Unlike SYBR Green I, EvaGreen dye is extremely stable both thermally and hydrolytically. Especially, EvaGreen dye exhibits very low PCR inhibition permitting the use of saturation dye concentration for maximal signal and high resolution melting (HRM) analysis.

Cat.No		Size
No ROX	CMQE200	1 ml x 2 vials (200 reactions)
	CMQE500	1 ml x 5 vials (500 reactions)
	CMQE1000	1 ml x 10 vials (1,000 reactions)
ROX	CMQER200	1 ml x 2 vials (200 eactions)
	CMQER500	1 ml x 5 vials (500 reactions)
	CMQER1000	1 ml x 10 vials (1,000 reactions)

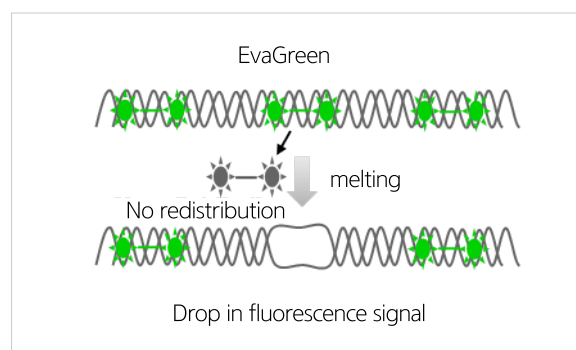
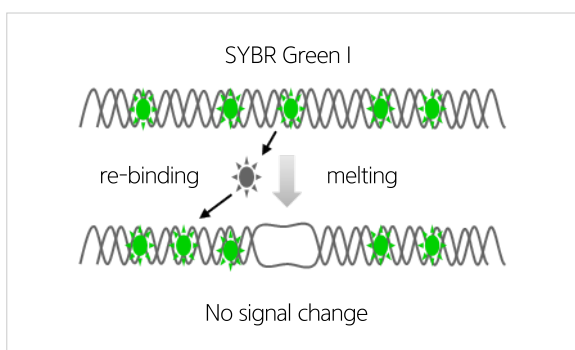
High sensitivity & strong fluorescence signal

LaboPass™ EvaGreen Q Master contains modified *Taq* polymerase and specific PCR enhancer to achieve high sensitivity and specificity of PCR performance. Compared with other commercial kits, EvaGreen Q Master shows comparable or superior quality in amplification efficiency and signal intensity.



High Resolution Melt (HRM) Analysis

LaboPass™ EvaGreen Q Master can be used not only for general qPCR but also for high resolution melting analysis to detect unknown mutation, SNP or DNA methylation. EvaGreen dye, which shows no inhibition of PCR at a near saturating concentration and binds to dsDNA via a novel “release-on-demand” mechanism, is more suitable than SYBR Green I for HRM analysis.



Convenient, easy-to-use reaction mixture

LaboPass™ EvaGreen Q Master is a 2x concentrated, ready-to-use reaction mixture containing all the necessary components, except primers, template and passive reference dye required on some real-time PCR instruments.

1 kb Labo DNA Ladder

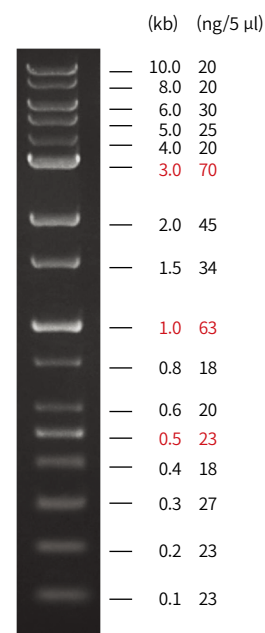
LaboPass™ 1 kb Labo DNA Ladder is designed to determine the size of double stranded DNA fragments ranging from 100 bp to 10 kb.

The 1 kb Labo DNA Ladder consists of 16 double stranded molecular weight markers. The 500 bp, 1 kb and 3 kb bands are brighter for easy identification.

Cat.No	Size
CMM7001	100 µl X 5 (100 lane)

Specifications

- Type : Ready-to-use
- Recommended loading volume : 5 µl
- Size range : 100 bp ~ 10 kb
- Number of bands : 16
- Storage (Stable for at least 3 months at 4 °C) : -20 °C



1 kb Labo plus DNA Ladder

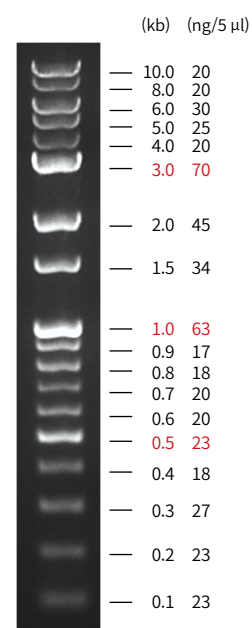
LaboPass™ 1 kb Labo plus DNA Ladder is designed to determine the size of double stranded DNA fragments ranging from 100 bp to 10 kb.

The 1 kb Labo plus DNA Ladder consists of 18 double stranded molecular weight markers, where DNA fragments from 100 bp to 1 kb are in 100 bp increments, and additional fragments of 1.5, 2, 3, 4, 5, 6, 8 and 10 kb are included. The 500 bp, 1 kb and 3 kb bands are brighter for easy identification.

Cat.No	Size
CMM7002	100 µl X 5 (100 lane)

Specifications

- Type : Ready-to-use
- Recommended loading volume : 5 µl
- Size range : 100 bp ~ 10 kb
- Number of bands : 18
- Storage (Stable for at least 3 months at 4 °C) : -20 °C



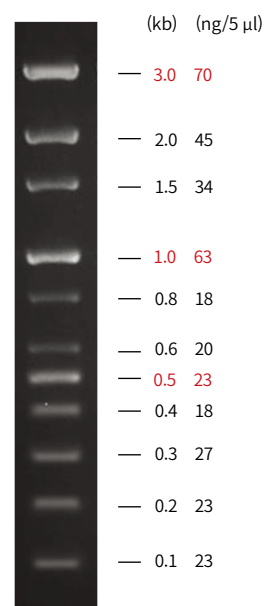
100 bp Labo DNA Ladder

LaboPass™ 100 bp Labo DNA Ladder is designed to determine the size of double stranded DNA fragments ranging from 100 bp to 3 kb. The 100 bp Labo DNA Ladder consists of 11 double stranded molecular weight markers. The 500 bp, 1 kb and 3 kb bands are brighter for easy identification.

Cat.No	Size
CMM7004	100 µl X 5 (100 lane)

Specifications

- Type : Ready-to-use
- Recommended loading volume : 5 µl
- Size range : 100 bp ~ 3 kb
- Number of bands : 11
- Storage (Stable for at least 3 months at 4 °C) : -20 °C



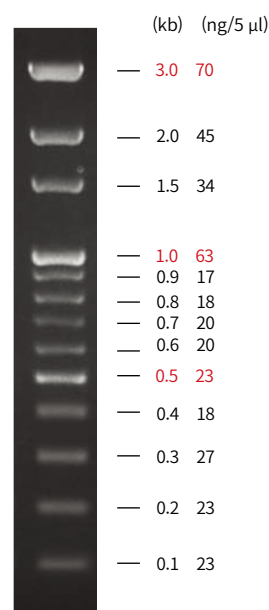
100 bp Labo plus DNA Ladder

LaboPass™ 100 bp Labo plus DNA Ladder is designed to determine the size of double stranded DNA fragments ranging from 100 bp to 3 kb. The 100 bp Labo plus DNA Ladder consists of 13 double stranded molecular weight markers, where DNA fragments from 100 bp to 1 kb are in 100 bp increments, and additional fragments of 1.5, 2 and 3 kb are induced. The 500 bp, 1 kb and 3 kb bands are brighter for easy identification.

Cat.No	Size
CMM7005	100 µl X 5 (100 lane)

Specifications

- Type : Ready-to-use
- Recommended loading volume : 5 µl
- Size range : 100 bp ~ 3 kb
- Number of bands : 13
- Storage (Stable for at least 3 months at 4 °C) : -20 °C



dNTPs

LaboPass™ dNTPs are available individually, as a set of four individual nucleotides, or as nucleotide mixtures at convenient concentrations for direct use in PCR, reverse transcription, labeling, and other applications.

Product	Cat.No	Size	Conc	Purity	Remarks
dATP	NT010	1.0 ml	100 mM	> 98%	2' - Deoxyadenosine 5' - triphosphate, sodium salt (molecular biology grade)
dCTP	NT020	1.0 ml	100 mM	> 98%	2' - Deoxycytidine 5' - triphosphate, sodium salt (molecular biology grade)
dGTP	NT030	1.0 ml	100 mM	> 98%	2' - Deoxyguanosine 5' - triphosphate, sodium salt (molecular biology grade)
dTTP	NT040	1.0 ml	100 mM	> 98%	2' - Deoxythymidine 5' - triphosphate, sodium salt (molecular biology grade)
dUTP	NT070	1.0 ml	100 mM	> 98%	2' - Deoxyuridine 5' - triphosphate, sodium salt (molecular biology grade)
dNTP Set	NT050	0.25 ml	Each 100 mM	> 98%	Set of dATP, dCTP, dGTP, and dTTP in separate tubes (molecular biology grade)
dNTP Mix	NT060	1.0 ml	Each 2.5 mM	> 98%	Mixture of dATP, dCTP, dGTP, and dTTP (molecular biology grade)

For Laboratory Use

- * Applications : For use in all molecular biology applications, including PCR, long PCR, Real-time PCR, high fidelity PCR, RT-PCR, cDNA synthesis, Primer extension, DNA sequencing and DNA labeling.
- * Storage Conditions : Store at -20 C. Avoid exposure to frequent temperature changes.



M-MuLV Reverse Transcriptase

LaboPass™ M-MuLV Reverse Transcriptase is a recombinant form of reverse transcriptase from the Moloney Murine Leukemia Virus (M-MuLV) which possesses an enhanced cDNA synthesis activity and a reduced RNase H activity as well. Reduction of RNase H activity enables higher yield of full-length cDNA transcripts and increased thermostability over wild type enzyme. The enzyme can synthesize cDNA using either RNA or single stranded DNA as a template. It is expressed in *E.coli* and purified with high purity.

Cat.No	Size
CMRT010	10,000 unit (200 unit/μl)
CMRT050	50,000 unit (200 unit/μl)

Applications

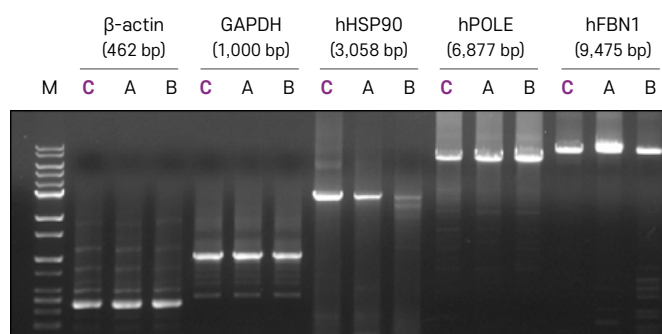
- First strand cDNA synthesis
- RT-PCR or qRT-PCR
- cDNA labeling for microarray or other applications

Supplied reagents

- M-MuLV Reverse Transcriptase : 200 unit/μl
- 5X RT reaction buffer (containing Mg²⁺)
- dNTPs : 10 mM each

High efficiency of cDNA synthesis

Efficiency of first strand cDNA synthesis was compared with other commercial enzyme. LaboPass™ M-MuLV Reverse Transcriptase shows comparable or superior quality.

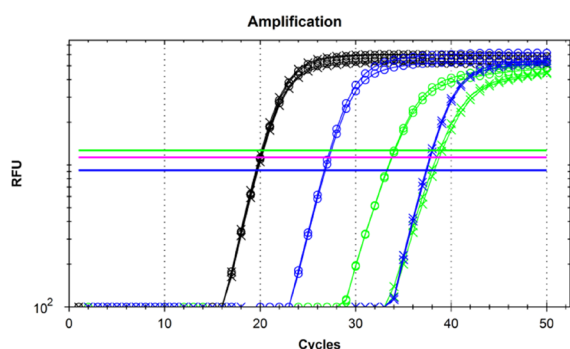


Lane M : 1 kb Labo DNA ladder
Lane C : LaboPass™ M-MuLV Reverse Transcriptase
Lane A : A company Reverse Transcriptase
Lane B : B company Reverse Transcriptase

M C I P C I P C I P C I P C I P

Reliable gene expression analysis

LaboPass™ M-MuLV Reverse Transcriptase produces a reliable results in quantitative RT-PCR for gene expression analysis.



X : Untreated HEK293T
O : Interferon treated HEK293T

Actin, OAS1, RIG-I

RNase Inhibitor

LaboPass™ RNase Inhibitor is a 50 kDa recombinant protein of murine origin which is purified from a recombinant *E.coli* strain expressing a cloned murine gene. The inhibitor specifically inhibits RNase A, B and C by binding at a 1:1 ratio with high affinity, but not RNase 1, RNase T1, S1 nuclease or RNase H. Additionally, it does not interfere with the activity of *Taq* polymerase, SP6, T7 and T3 RNA Polymerases, AMV or M-MLV Reverse Transcriptase. Murine RNase inhibitor which lacks a pair of cysteines identified in the human/porcine inhibitor is more resistant to oxidation. So it is more stable at low reducing condition (2-mercaptoethanol, DTT, DTE, etc) compared to inhibitors from other sources.

Cat.No	Size
CMRN002	2,000 unit (40 unit/μl)
CMRN010	10,000 unit (40 unit/μl)

Applications

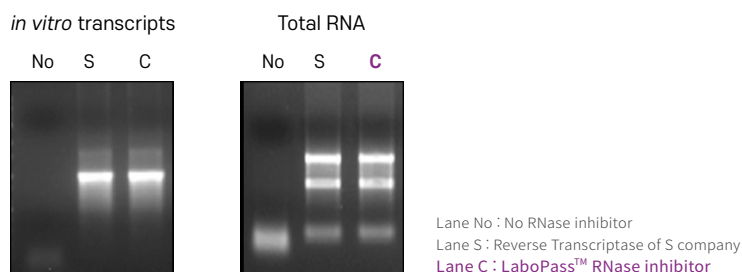
- cDNA synthesis
- RT-PCR or qRT-PCR
- *in vitro* transcription
- *in vitro* translation
- Other applications where the integrity of RNA is required

Supplied reagents

- RNase inhibitor : 40 unit/μl

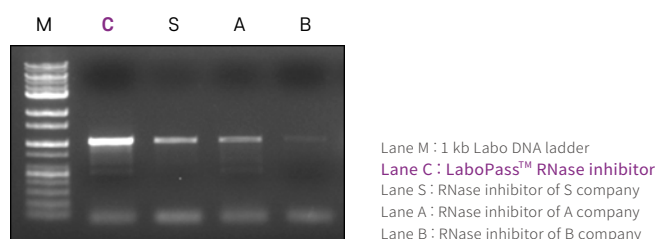
Complete protection of RNA from RNase degradation

Purified RNA (*in vitro* transcripts or mammalian total RNA) was incubated with RNase A in the absence or presence of RNase inhibitor. LaboPass™ RNase inhibitor completely protects RNA from RNase A degradation. Compared with other commercial enzymes, LaboPass™ RNase inhibitor shows comparable or superior quality in inhibition activity.



High yield of cDNA synthesis

The yield of cDNA synthesis was compared with other commercial RNase inhibitors in reverse transcription reaction. LaboPass™ RNase inhibitor produces a far superior yield, in comparison.



cDNA Synthesis kit

LaboPass™ cDNA Synthesis kit is optimized for synthesizing first strand cDNA from total RNA or poly(A) RNA in an efficient and reproducible way. This kit provides all the components necessary for synthesis of cDNA including reverse transcriptase, dNTPs, reaction buffer, RNase inhibitor, primers and nuclease-free water. M-MuLV Reverse Transcriptase included in this kit is a recombinant form of reverse transcriptase from the Moloney Murine Leukemia Virus (M-MuLV) which possesses an enhanced cDNA synthesis activity and a reduced RNase H activity as well. Reduction of RNase H activity enables higher yield of full-length cDNA transcripts and increased thermostability.

Cat.No	Size
CMRTK001	50 reaction
CMRTK002	100 reaction

Applications

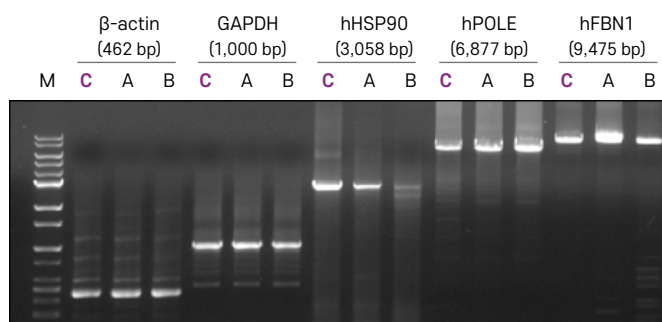
- cDNA synthesis for RT-PCR and RT-qPCR
- cDNA synthesis for gene cloning

Supplied reagents

	50 rxn	100 rxn
Reverse transcriptase (200 U/μl)	50 μl	100 μl
5X RT buffer	250 μl	500 μl
dNTP (each 10 mM)	50 μl	100 μl
RNase inhibitor (40 U/μl)	50 μl	100 μl
Oligo (dT)18 (100 μM)	50 μl	100 μl
Random hexamer (0.2 μg/μl)	50 μl	100 μl
Nuclease-free water	1 ml	1.5 ml

High efficiency

Efficiency of first strand cDNA synthesis was compared with other commercial enzyme. LaboPass™ M-MuLV Reverse Transcriptase shows comparable or superior quality.



Lane M : 1 kb Labo DNA ladder

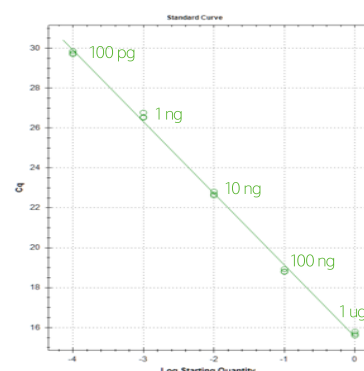
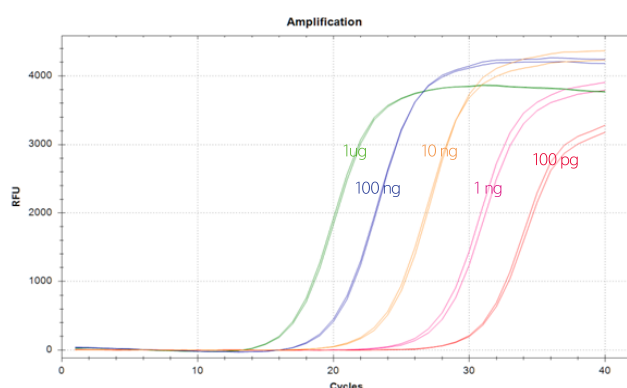
Lane C : LaboPass™ M-MuLV Reverse Transcriptase

Lane A : A company Reverse Transcriptase

Lane B : B company Reverse Transcriptase

Highly sensitivity and accuracy

First strand cDNA was generated from 1 μg to 100 pg of total HepG2 cell RNA with LaboPass™ cDNA Synthesis Kit for RT-qPCR. The synthesized cDNA was used as a template in subsequent qPCR with LaboPass™ SYBR Green Q Master Mix on Bio-rad CFX96 Real-Time PCR instrument. Parallel RT reactions demonstrated sensitive and reliable cDNA synthesis over a wide dynamic range of input RNA.



Labozol Reagent

LaboPass™ Labozol Reagent is a ready-to-use reagent, designed to isolate total RNA including miRNA from cell and tissue samples of human, animal, plant, yeast and bacteria. Labozol Reagent shows superior performance in extraction of total RNA with high integrity due to effective inhibition of RNase by phenol and guanidine thiocyanate, which are the major components in this reagent. The extracted RNA can be used in downstream applications such as cDNA synthesis, Northern blot, mRNA isolation, RNase protection assay and other RNA-based assay.

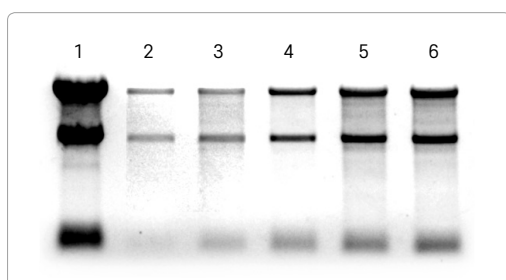
Cat.No	Size
CMRZ001	100 ml

Applications

- mRNA isolation
- cDNA synthesis for RT-PCR, RT-qPCR and gene cloning
- Northern blot and RNase protection assay
- Other RNA-based experiments

Superior performance in total RNA extraction

Total RNA was isolated from various cells and tissues with Labozol Reagent and run on denaturing agarose gel electrophoresis.



Lane 1 : HEK293T
Lane 2 : NIH3T3
Lane 3 : mouse brain
Lane 4 : mouse liver
Lane 5 : mouse kidney
Lane 6 : mouse spleen

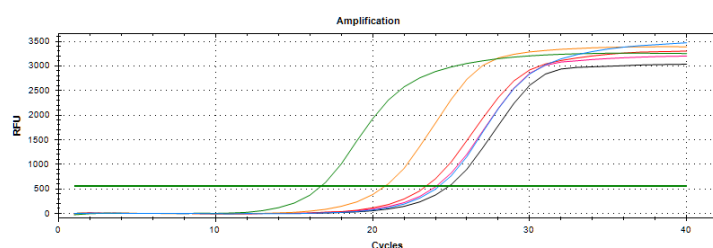
Expected yields

The table below presents typical yields of RNA (A260/280 of >1.8) from various materials.

Material	Quantity	RNA (Yield)
Epithelial cells	1 X 10 ⁶ cells	10 ~ 20 µg
Fibroblast cells	1 X 10 ⁶ cells	7~ 8.5 µg
Brain	1 mg	1~ 1.4 µg
Spleen	1 mg	3~ 4.5 µg
Kidney	1 mg	4~ 6 µg
Liver	1 mg	5~ 5 µg

Application to real-time quantitative RT-PCR

Total RNA extracted with Labozol Reagent can be successfully used in real-time qRT-PCR assay.



Total RNA extracted from various cultured cells and tissues with Labozol Reagent was reverse-transcribed into cDNA using LaboPass™ cDNA synthesis kit (Cat.No.CMRTK001). The resulting cDNA was applied to real-time qPCR for GAPDH mRNA using LaboPass™ SYBR green Q master (Cat.No. CMQS200).

Green : HEK293T
Blue : NIH3T3
Pink : mouse brain
Red : mouse liver
Orange : mouse kidney
Black : mouse spleen

One-Step RT-PCR Kit

LaboPass™ One-Step RT-PCR Kit offers a convenient system to perform both cDNA synthesis and PCR amplification with gene-specific primers and RNA templates in a single tube. The system consists of two major components : Enzyme Mix and 2X Reaction Mix. Enzyme Mix is a blend of Labopass™ M-MuLV Reverse transcriptase, IP-*taq* polymerase and RNase inhibitor. 2X Reaction mix is formulated to enable both reverse transcription and PCR amplification efficiently. Therefore, this kit will offer a rapid and easy method to detect a broad size range of RNA targets with high sensitivity.

Cat.No	Size
CMRO050	50 reactions (50 µl/reaction)
CMRO100	100 reactions (50 µl/reaction)

Applications

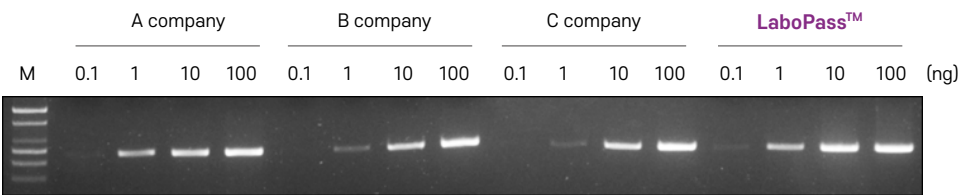
- Qualitative or quantitative analysis of gene expression
- Detection or quantification of RNA viruses
- cDNA amplification for gene cloning

Supplied reagents

- 2X Reaction Mix
- Enzyme Mix
- Nuclease-free water

High sensitivity and yield

LaboPass™ One-Step RT-PCR kit was compared with other suppliers' kits in amplification of beta-actin mRNA from a serially diluted total RNA. Labopass™ One-Step RT-PCR kit shows comparable or better quality in sensitivity and yield.



T4 DNA ligase

LaboPass™ T4 DNA ligase is isolated from a recombinant source. This enzyme catalyzes the formation of a phosphodiester bond between neighboring 5' phosphate and 3' hydroxyl termini of double-stranded DNA in either a cohesive or blunt-ended configuration. Single strand break in dsDNA is repaired by T4 DNA ligase. T4 DNA ligase can also catalyze the ligation of RNA to duplex DNA or RNA, but the activity toward single stranded DNA or RNA is very low.

Cat.No	Size
CMX0101	20,000 unit (400 unit/μl)
CMX0105	100,000 unit (400 unit/μl)

Applications

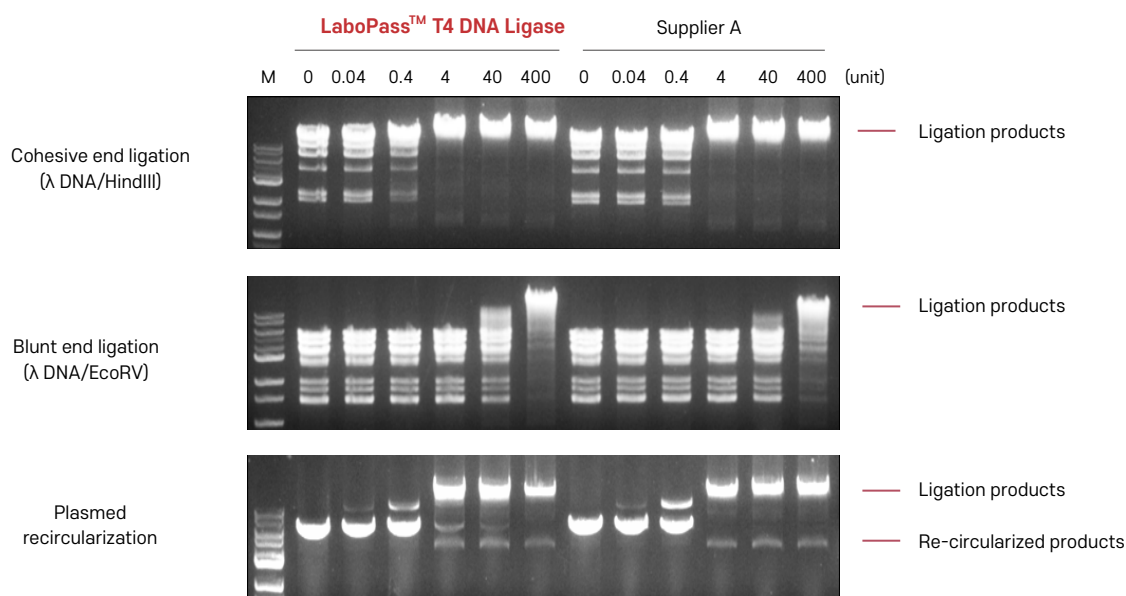
- Cohesive or blunt termini ligation
- Repair of nicks in duplex DNA or RNA
- Linker or adaptor joining to DNA fragments

Supplied reagents

- T4 DNA Ligase
- 10X T4 DNA Ligase buffer

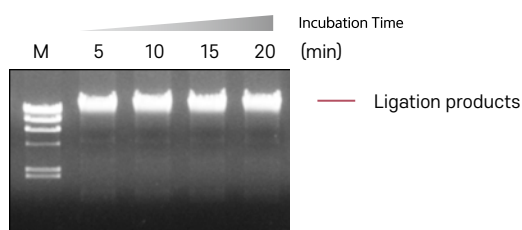
High ligation efficiency

1 μg of cohesive ended (λ DNA/HindIII), blunt ended (λ DNA/EcoRV) or linearized plasmid DNAs were incubated with one unit of T4 DNA Ligase in 1X Ligase Buffer for 30 min at 16°C. When compared with a competitor's product, Labopass™ T4 DNA Ligase shows comparable or better quality in ligation activity.



Very fast ligation

1 μg of λ DNA/HindIII DNA was incubated for indicated time with 400 units of T4 DNA Ligase in 1X Ligase Buffer at 16°C. All DNA fragments is ligated in just 5 min.



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Oligo Synthesis

- Modified Oligo
- Fluorescence-labeled Oligo
- Dual-labeled DNA probe
- Custom siRNA / miRNA Synthesis
- Gene Synthesis Service

Gene Synthesis

- DNA Synthesis
- RNAi Synthesis
- Gene Synthesis
- Peptide Synthesis

Gene Cloning

- Custom Cloning
- TA Cloning
- Subcloning
- In-fusion Cloning / Gateway Cloning
- Mutagenesis - Substitution / Insertion / Deletion
- Plasmid large prep
- 5'/3' RACE
- in vitro transcription
- Other customized service

Protein Purification

- Bacterial Expression
- Mammalian Cell Expression
- Baculovirus Expression
- Yeast Expression

DNA Sequencing

- Normal sequencing
- Difficult sequencing
- Additional Services
- Microbial Identification
- Full sequencing
- Viral genome sequencing
- Mitochondrial DNA sequencing
- Bisulfite sequencing
- Fragment Analysis
- Cell line authentication service

PCR-related Services

- PCR optimization
- Realtime PCR
- SNP genotyping
- STR genotyping

Cell line Services

- Transient expression test
- Stable cell line service
- Cell line authentication service
- Mycoplasma contamination test

Immunological Services

- Western blotting
- ELISA
- Luminex

LaboPass™ Ordering Information

DNA Purification Kit

Cat. No.	제 품 명	Size
CMP0111	LaboPass™ Plasmid DNA Purification Kit Mini	50 prep
CMP0112		200 prep
CMP0115		1,000 prep
CMG0111	LaboPass™ Gel Extraction Kit	50 prep
CMG0112		200 prep
CMG0115		1,000 prep
CMR0111	LaboPass™ PCR Purification Kit	50 prep
CMR0112		200 prep
CMR0115		1000 prep
CMA0111	LaboPass™ Gel and PCR Clean-up Kit	50 prep
CMA0112		200 prep
CMA0115		1,000 prep
CME0111	LaboPass™ Tissue Genomic DNA Isolation Kit Mini	50 prep
CME0112		200 prep
CME0115		1000 prep
CMB0111	LaboPass™ Blood Genomic DNA Isolation Kit Mini	50 prep
CMB0112		200 prep
CMB0115		1,000 prep
CMBA0111	LaboPass™ Bacteria Genomic DNA Isolation Kit Mini	50 prep
CMBA0112		200 prep
CMBA0115		1,000 prep
CMX0112	LaboPass™ Genomic DNA Isolation Kit (solution type)	200 prep
CMX0115		1,000 prep

DNA Polymerase

Cat. No.	제 품 명	Size
CMT1002	IP- <i>Taq</i> DNA polymerase (2.5 u/ul)	500 unit
CMT2002	IP pro- <i>Taq</i> DNA polymerase (2.5 u/ul)	500 unit
CMT4002	IP- <i>Pfu</i> DNA polymerase (2.5 u/ul)	500 unit
CMT6004	IP- <i>Taq</i> PCR Premix	96 tube, 20 ul
CMT6005	IP pro- <i>Taq</i> PCR Premix	96 tube, 20 ul
CMT6006	IP- <i>Pfu</i> PCR Premix	96 tube, 20 ul
CMT7006	IP- <i>Taq</i> PCR Mastermix	0.2 ml x5, 100 reaction
CMT7007	IP pro- <i>Taq</i> PCR Mastermix	0.2 ml x5, 100 reaction
CMT7008	IP- <i>Pfu</i> PCR Mastermix	0.2 ml x5, 100 reaction

qPCR Master

Cat. No.	제 품 명	Size
CMQE200	EvaGreen Q Master mix (No ROX)	1 ml x2, 200 reaction
CMQE500		1 ml x5, 200 reaction
CMQE1000		1 ml x10, 200 reaction

Cat. No.	제 품 명	Size
CMQER200	EvaGreen Q Master mix (ROX)	1 ml x2, 200 reaction
CMQER500		1 ml x5, 200 reaction
CMQER1000		1 ml x10, 200 reaction
CMQS200	SYBR Green Q Master mix (No ROX)	1 ml x2, 200 reaction
CMQS500		1 ml x5, 200 reaction
CMQS1000		1 ml x10, 200 reaction
CMQSR200	SYBR Green Q Master mix (ROX)	1 ml x2, 200 reaction
CMQSR500		1 ml x5, 200 reaction
CMQSR1000		1 ml x10, 200 reaction

DNA Ladder / dNTPs

Cat. No.	제 품 명	Size
CMM7001	1 kb DNA Ladder	100 µl X 5 (100 lane)
CMM7002	1 kb plus DNA Ladder	100 µl X 5 (100 lane)
CMM7004	100 bp DNA Ladder	100 µl X 5 (100 lane)
CMM7005	100 bp plus DNA Ladder	100 µl X 5 (100 lane)
dATP	NT010	100mM, 1ml
dCTP	NT020	100mM, 1ml
dGTP	NT030	100mM, 1ml
dTTP	NT040	100mM, 1ml
dUTP	NT070	100mM, 1ml
dNTP Set	NT050	each 100mM, 0.25ml
dNTP Mix	NT060	each 2.5mM, 0.5ml x 2

RNA Related Products

Cat. No.	제 품 명	Size
CMRT010	M-MuLV Reverse Transcriptase	10,000 unit
CMRT050		50,000 unit
CMRN002	RNase Inhibitor	2,000 unit
CMRN010		10,000 unit
CMRTK001	cDNA synthesis kit	50 prep
CMRTK002		100 prep
CMRO050	One-Step RT-PCR kit	50 prep
CMRO100		100 prep
CMRZ001	Labozol reagent	100 ml

Modification enzymes

Cat. No.	제 품 명	Size
CMX0101	T4 DNA ligase	20,000 unit
CMX0105		100,000 unit



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시퀀싱 02-465-6265
클로닝 02-465-6216
LaboPass 02-465-6215
연구개발 02-465-6277

대전지사 042-867-7308 (영업)
042-826-6265 (시퀀싱)
070-4771-7694 (학술문의)

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