

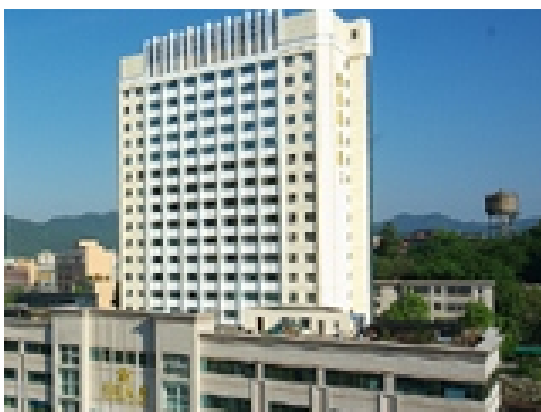


Dongsheng Biotech Co., Ltd. was established in 2005 in Guangzhou China.

We focus on R&D and produce fundamental molecular biology reagents. In the past 5 years, Dongsheng Biotech has successfully grown up from a start-up to a professional organization. Our products have worldwide sales and establish an excellent reputation.

We were ISO 9001:2008 certificated by BSI. We are also authorized import and export manufacture in China. With professional R&D group and strict control of the production process, we now have customers all over the world.

Our mission is to provide professional and high quality products for life science research. To make your research more professional and more accurate, we are always making our best efforts.



Make Your Research

More Professional

More Accurate





Dongsheng Biotech provides wide range of molecular biology products for life science research.

Product Line:

- 1. DNA Electrophoresis Products**
- 2. PCR Products**
- 3. DNA Purification Products**
- 4. RNA Purification Products**
- 5. Other Associative Reagents**

Key Products :

- **Taq DNA Polymerases**
- **PCR Mix**
- **DNA Ladders**
- **PCR & Gel Extraction Kits**
- **TRIzol**

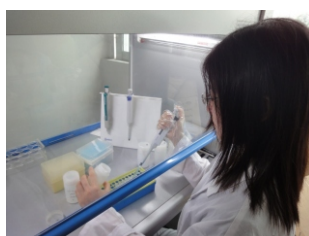
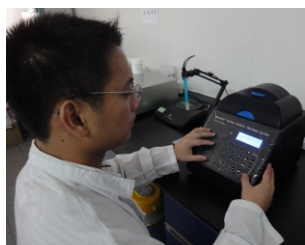
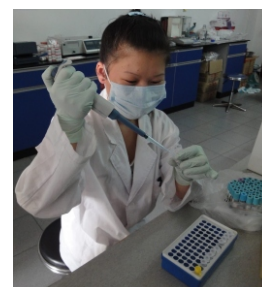
Additionally, **all product** provides custom synthesis.



Dongsheng Biotech Product Application area

Serve three major customer groups:

- (1)** Laboratory reagent kits producers, a smaller group of customers (<50 major customers worldwide) who purchase substantial quantities of nucleotide monomers as raw material for specialized laboratory kits for use in research laboratories.
- (2)** Diagnostic kits producers who use our nucleotide monomers as diagnostic agents in hospitals, blood collection agencies and pathology laboratories primarily for amplification.
- (3)** Research laboratories in universities, industries, governments and hospitals & medical schools.





1. DNA Electrophoresis Products

PCR and plasmid digestion by restriction enzymes are used for the production of DNA fragments for our ladders/markers.

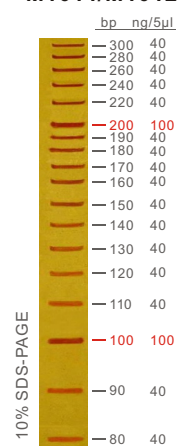
These products are stable during prolonged incubations at room temperature and multiple freeze-thaw cycles.

Distinguishing features

- Bright, sharp bands for highly accurate sizing
- Precise DNA concentration, quantitative
- High resolution, low-background
- Stable and uniform with different batches

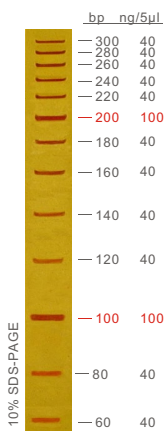


10bp ladder M1011/M1012



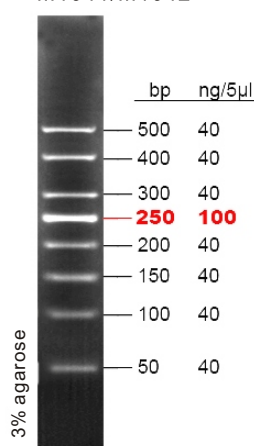
1 μl/lane, 20cm gel
1×TBE, 8V/cm, 3h

20bp ladder M1021/M1022



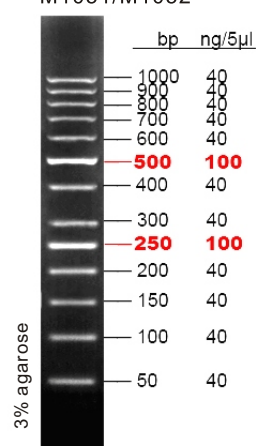
1 μl/lane, 20cm gel
1×TBE, 8V/cm, 3h

50bp ladder M1041/M1042



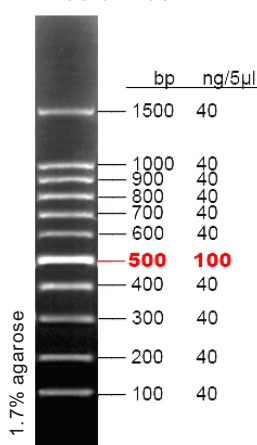
5 μl/lane, 8 cm gel
0.5×TBE, 5 V/cm, 1h

50bp ladder plus M1051/M1052



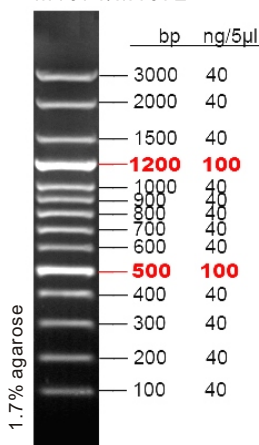
5 μl/lane, 8 cm gel
0.5×TBE, 5 V/cm, 1h

100bp ladder M1061/M1062



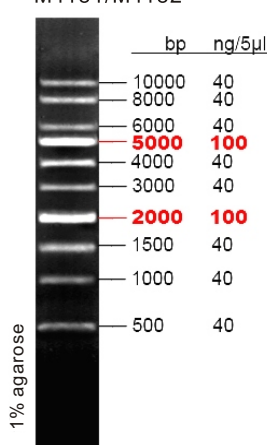
5 μl/lane, 8 cm gel
0.5×TBE, 5 V/cm, 1h

100bp ladder plus M1071/M1072



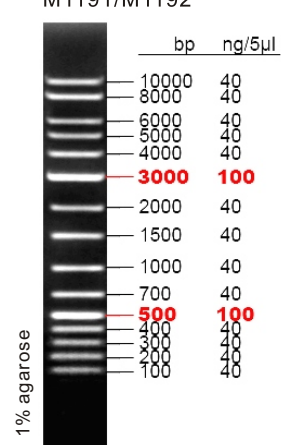
5 μl/lane, 8 cm gel
0.5×TBE, 5 V/cm, 1h

1kb ladder M1181/M1182



5 μl/lane, 8 cm gel
1×TAE, 7 V/cm, 45min

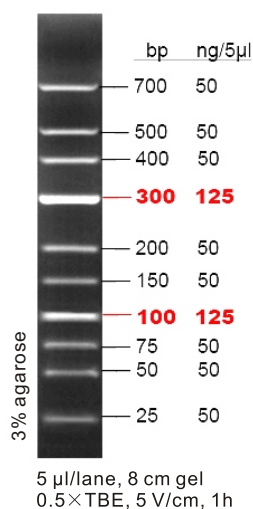
1kb ladder plus M1191/M1192



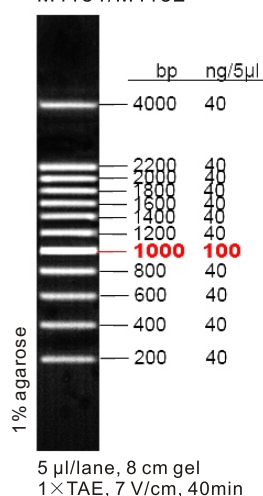
5 μl/lane, 8 cm gel
1×TAE, 7 V/cm, 45min

Low ladder

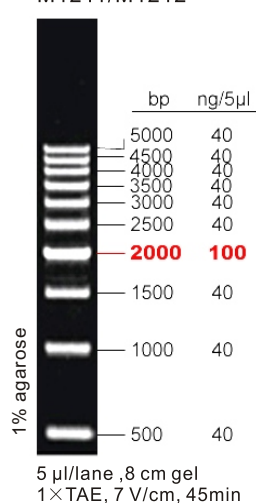
M1031/M1032

**200bp ladder**

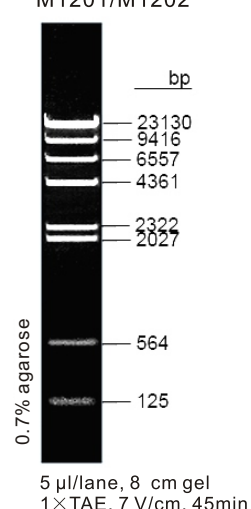
M1151/M1152

**500bp ladder**

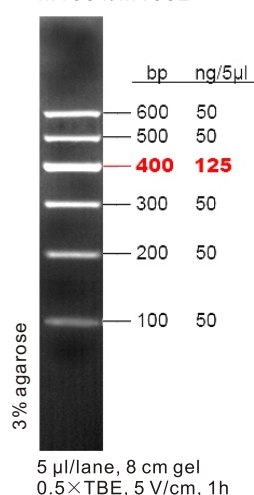
M1211/M1212

**Lambda DNA/Hind III**

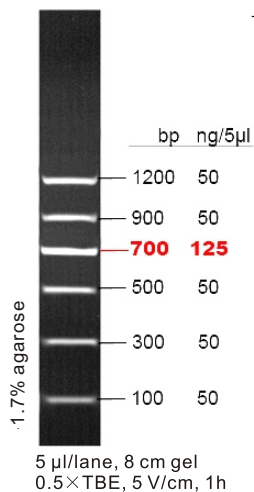
M1201/M1202

**Marker 1**

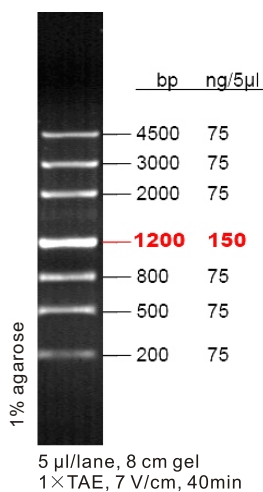
M1081/M1082

**Marker 2**

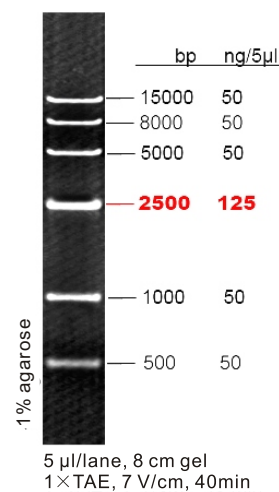
M1091/M1092

**Marker 3**

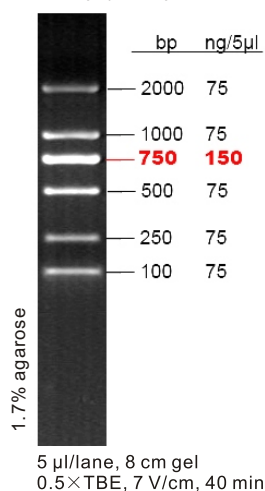
M1121/M1122

**Marker 4**

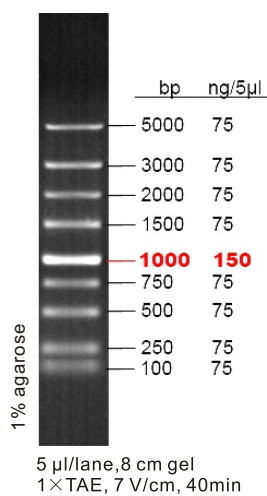
M1231/M1232

**DS™2000**

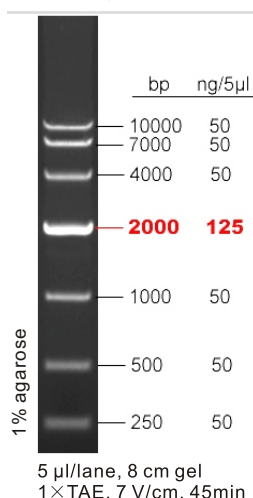
M1101/M1102

**DS™5000**

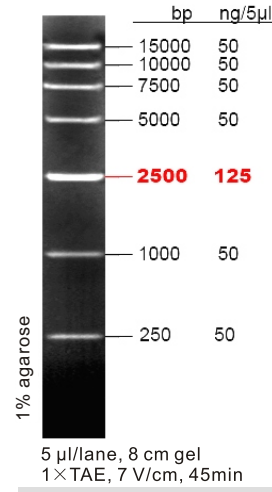
M1111/M1112

**DS™10000**

M1221/M1222

**DS™15000**

M1161/M1162





Product List

1

DNA Electrophoresis Products

Product name	Cat #	Size	Range
10bp ladder	M1011	50μg	80-300bp
	M1012	5x50μg	
20bp ladder	M1021	50μg	60-300bp
	M1022	5x50μg	
low ladder	M1031	50μg	25-700bp
	M1032	5x50μg	
50bp ladder	M1041	50μg	50-500bp
	M1042	5x50μg	
50bp ladder plus	M1051	50μg	50-1,000bp
	M1052	5x50μg	
100bp ladder	M1061	50μg	100-1,500bp
	M1062	5x50μg	
100 bp ladder plus	M1071	50μg	100-3,000bp
	M1072	5x50μg	
1kb ladder	M1181	50μg	500-10,000bp
	M1182	5x50μg	
1kb ladder plus	M1191	50μg	100-10,000bp
	M1192	5x50μg	
200 bp ladder	M1151	50μg	200-4,000bp
	M1152	5x50μg	
500bp ladder	M1251	50μg	500-5,000bp
	M1252	5x50μg	
λ DNA/ <i>Hind</i> III	M1201	50μg	125-23,130bp
	M1202	5x50μg	
Marker 1	M1081	50μg	100-600bp
	M1082	5x50μg	
Marker 2	M1091	50μg	100-1,200bp
	M1092	5x50μg	
Marker 3	M1121	50μg	200-4,500bp
	M1122	5x50μg	
Marker 4	M1231	50μg	500-15,000bp
	M1232	5x50μg	
DS™2000	M1101	50μg	100-2,000bp
	M1102	5x50μg	
DS™5000	M1111	50μg	100-5,000bp
	M1112	5x50μg	
DS™10000	M1221	50μg	250-10,000bp
	M1222	5x50μg	
DS™15000	M1161	50μg	250-15,000bp
	M1162	5x50μg	

Product name	Cat #	Size
20x Swift DNA Electrophoresis Buffer	M9011	500ml
50xTAE Buffer	M9021	500ml
10xTBE	M9031	500ml
Gel Loading Dye(6x)	M9041	5x1ml
Gel Loading Dye, Blue(6x)	M9051	5x1ml
Gel Loading Dye, Three-colour (6x)	M9061	5x1ml
Gel Loading Dye, Orange(6x)	M9071	5x1ml
Gel Loading Dye, SDS (6x)	M9081	5x1ml

DS™ is a collection of 30 highly-purified individual DNA fragments ranging from 10-15,000 bp.

DNA Fragment Size	Cat #	Amount
10 bp	M8011	10µg
15 bp	M8021	10µg
20 bp	M8031	10µg
25 bp	M8041	10µg
35 bp	M8051	10µg
50 bp	M8061	10µg
75 bp	M8071	10µg
100 bp	M8081	10µg
150 bp	M8091	10µg
200 bp	M8101	10µg
250 bp	M8111	10µg
300 bp	M8121	10µg
400 bp	M8131	10µg
500 bp	M8141	10µg
600 bp	M8151	10µg
700 bp	M8161	10µg
800 bp	M8171	10µg
900 bp	M8181	10µg
1000 bp	M8191	10µg
1200 bp	M8201	10µg
1500 bp	M8211	10µg
2000 bp	M8221	10µg
2500 bp	M8231	10µg
3000 bp	M8241	10µg
4000 bp	M8251	10µg
5000 bp	M8261	10µg
6000 bp	M8271	10µg
8000 bp	M8281	10µg
10000 bp	M8291	10µg
15000 bp	M8301	10µg

We offer exceptionally pure DNA fragments that are free of any truncated or degraded molecules.

Concentration

0.5 µg/µl

Storage Buffer (TE Buffer)

10 mM Tris-HCl (pH 7.6) with 1 mM EDTA

Quality Control

Tested on an Agilent 2100 bioanalyzer and by appropriate gel electrophoresis. DNA concentration is determined by spectrophotometer. The absence of nucleases confirmed by appropriate tests..

Storage

Store at -20°C

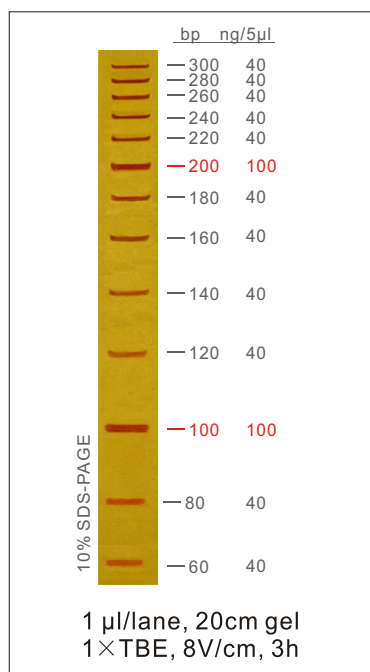
Custom DNA Ladders Service

*Bulk orders can be customized to fit your needs:
Individual DNA fragments or mixtures.
Custom ladders of any combination and concentration.
Reference bands in a custom-made DNA ladder.
Flexible formulations.
Ready-to-use versions premixed with any loading dye.
From microgram to gram quantities.*



20bp ladder

Cat.#	Size
M1021	50µg
M1022	5x50µg



Concentration: 128ng/µl

Recommended Loading: 2-5µl/lane

Concentration

Typical Bands 100ng/5µl

Other Bands 40ng/5µl

Recommended Electrophoresis Condition

5µl/lane, 8cm 5% Agarose Gel, 0.5xTBE,
5V/cm, 1h

Contents(bp)

60, 80, **100**, 120, 140, 160, 180, **200**, 220,
240, 260, 280, 300

Storage

1 year at room temperature, for long-time preservation, please store at -20°C.

Description

20bp ladder is ideal for determining the size of double-stranded DNA from 60 to 300bp base pairs. The ladder consists of 13 linear double-stranded fragments. The **100bp** and **200bp** fragment are present at increased intensity to allow easy identification. All fragments are precisely quantified and mixed during the production. For 5 ul loading, all fragments except 100bp and 200bp are 40ng. The 100bp and 200bp fragment are 100ng. This ladder is pre-mixed with loading dye and is ready to use.

Recommendation

Do not heat before loading

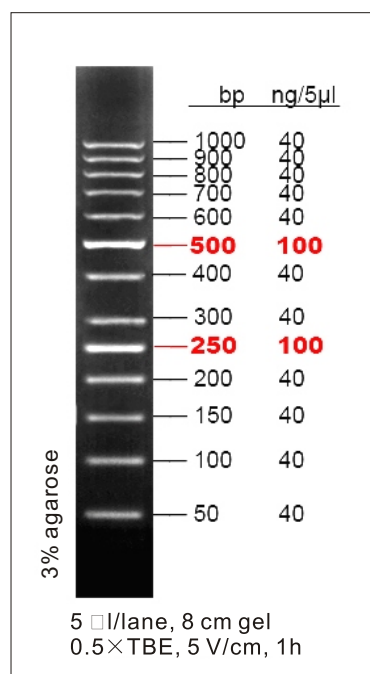
For quantification, adjust the concentration of the sample to equalize.

Visualize DNA by staining with ethidium bromide or with SYBY Green I.



50bp ladder plus

Cat.#	Size
M1051	50µg
M1052	5x50µg



Concentration: 128ng/µl

Recommended Loading: 2-5µl/lane

Concentration

Typical Bands 100ng/5µl

Other Bands 40ng/5µl

Recommended Electrophoresis Condition

5µl/lane, 8cm 3% Agarose Gel, 0.5xTBE,

5V/cm, 1h

Contents(bp)

50, 100, 150, 200, **250**, 300, 400, **500**, 600, 700, 800, 900, 1000

Storage

1 year at room temperature, for long-time preservation, please store at -20°C.

Description

50bp ladder plus is ideal for determining the size of double-stranded DNA from 50 to 1000bp base pairs. The ladder consists of 13 linear double-stranded fragments. The **250bp** and **500bp** fragment are present at increased intensity to allow easy identification. All fragments are precisely quantified and mixed during the production. For 5 µl loading, all fragments except 250bp and 500bp are 40ng. The 250bp and 500bp fragment are 100ng. This ladder is pre-mixed with loading dye and is ready to use.

Recommendation

Do not heat before loading

For quantification, adjust the concentration of the sample to equalize.

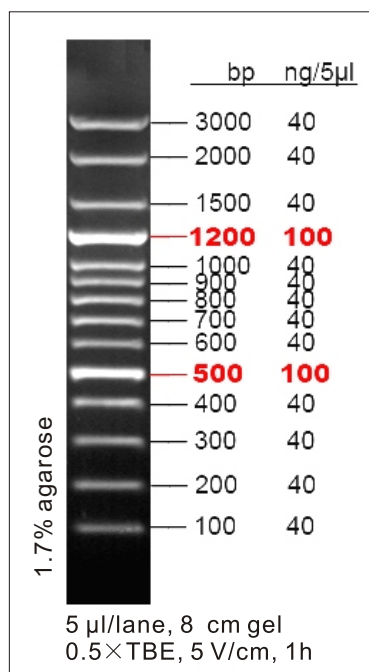
Visualize DNA by staining with ethidium bromide or with SYBY Green I.





100bp ladder plus

Cat.#	Size
M1071	50μg
M1072	5x50μg



Concentration: 136ng/μl

Recommended Loading: 2-5μl/lane

Concentration

Typical Bands 100ng/5μl

Other Bands 40ng/5μl

Recommended Electrophoresis Condition

5μl/lane, 8cm 1.7% Agarose Gel, 0.5xTBE,
5V/cm, 1h

Contents(bp)

100, 200, 300, 400, **500**, 600, 700, 800, 900,
1000, **1200**, 1500, 2000, 3000

Storage

1 year at room temperature, for long-time preservation, please store at -20°C.

Description

100bp ladder plus is ideal for determining the size of double-stranded DNA from 100 to 3000bp base pairs. The ladder consists of 14 linear double-stranded fragments. The **500bp** and **1200bp** fragment are present at increased intensity to allow easy identification. All fragments are precisely quantified and mixed during the production. For 5 ul loading, all fragments except 500bp and 1200bp are 40ng. The 500bp and 1200bp fragment are 100ng. This ladder is pre-mixed with loading dye and is ready to use.

Recommendation

Do not heat before loading

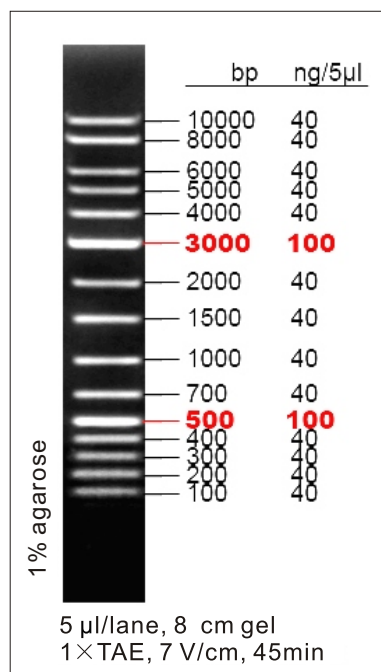
For quantification, adjust the concentration of the sample to equalize.

Visualize DNA by staining with ethidium bromide or with SYBY Green I.



1kb ladder plus

Cat.#	Size
M1191	50µg
M1192	5x50µg



Concentration: 144ng/µl

Recommended Loading: 2-5µl/lane

Concentration

Typical Bands 100ng/5µl

Other Bands 40ng/5µl

Recommended Electrophoresis Condition

5µl/lane, 8cm 1% Agarose Gel, 1xTAE,
7V/cm, 45min

Contents(bp)

100, 200, 300, 400, **500**, 700, 1000, 1500,
2000, **3000**, 4000, 5000, 6000, 8000, 10000

1

Storage

1 year at room temperature, for long-time preservation, please store at -20°C.

Description

1kb ladder plus is ideal for determining the size of double-stranded DNA from 100 to 10,000bp base pairs. The ladder consists of 15 linear double-stranded fragments. The **500bp** and **3,000bp** fragment are present at increased intensity to allow easy identification. All fragments are precisely quantified and mixed during the production. For 5 µl loading, all fragments except 500bp and 3,000bp are 40ng. The 500bp and 3,000bp fragment are 100ng. This ladder is pre-mixed with loading dye and is ready to use.

Recommendation

Do not heat before loading

For quantification, adjust the concentration of the sample to equalize.

Visualize DNA by staining with ethidium bromide or with SYBY Green I.





2. PCR Product

PCR (polymerase chain reaction) is a technique that is central to molecular biology research. It is used in applications such as cloning, gene expression analysis, genotyping, sequencing, and mutant genes.

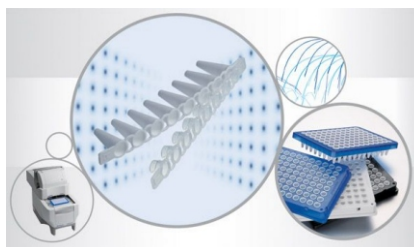
Dongsheng Biotech offers different series of products to help you achieve PCR success. For enzymes, our Taq Polymerase, *HS*TM Taq DNA Polymerase, *FS*TM Taq DNA Polymerase, Pfu DNA Polymerase and Fusion Pfu DNA Polymerase provide high fidelity, efficient, sensitivity PCR performance. We also have Long Taq DNA Polymerase for long DNA amplification.

We provide three series of PCR products for different uses:

Taq Polymerase Series

Taq Mix Series

PCR Kit Series



Properties of PCR enzymes

Enzyme	Feature	Amplification size	Fidelity	Sensitivity	PCR Product ends	Application
Taq	• 5'→3' Activity	++	+	++	3'-dA	General PCR/RT-PCR DNA Mark/DNA Sequence TA Clone
HS™ Taq	• 5'→3' Activity	+++	+	++++	3'-dA	General PCR/RT-PCR DNA Mark/DNA Sequence TA Clone
FS™ Taq	• 5'→3' Activity • Fast-3 times of Taq	+++	+	++++	3'-dA	General PCR/RT-PCR DNA Mark/DNA Sequence TA Clone
Pfu	• 5'→3' Activity • 5'-3' Exonclease activity	++	+++++	+++	Blunt end	High fidelity PCR Blunt end vector cloning RT-PCR/cDNA clone and express/SNP
Taq Plus	• 5'→3' Activity • 5'-3' Exonclease activity • High fidelity-4 times of Taq	++++	+++	+++	3'-dA/ Blunt end	GC rich template Complicated template High repeat sequences
LongTaq	• 5'→3' Activity • 5'-3' Exonclease activity • High fidelity-4 times of Taq	+++++	+++	++	3'-dA/ Blunt end	GC rich template Long template Sequencing
Fusion pfu	• 5'→3' Activity • 5'-3' Exonclease activity	++++	+++++	++++	Blunt end	High fidelity PCR Long fragment PCR

2

PCR Products





Product List

Taq Polymerase Series

2

PCR Products

Product Name	Cat #	Size	Description
Taq DNA Polymerase	P1011	500U	Robust Taq DNA Polymerase for routine use incl. 10x PCR Buffer, 6x loading buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl packages.
	P1012*	500U	
	P1013	1,000U	
	P1014*	1,000U	
	P1015	18,000U	
HS™ Taq DNA Polymerase	P1081	250U	High specificity, incl. 10x HS™ PCR buffer, 6x loading buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl two packages.
	P1082	500U	
	P1083	1,000U	
	P1084	18,000U	
Pfu DNA Polymerase	P1021	250U	High fidelity, incl. 10x pfu buffer, 6x loading buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl two packages.
	P1022*	250U	
	P1023	1,000U	
	P1024*	1,000U	
Taq Plus DNA Polymerase	P1031	250U	Mix with Taq Polymerase and Pfu Polymerase, long amplification and high fidelity. Incl. 10x Taq Plus buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl two packages.
	P1032*	250U	
	P1033	1,000U	
	P1034*	1,000U	
Long Taq DNA Polymerase	P1061	250U	For long PCR, incl. 10x Long Taq buffer, 6x loading buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl two packages.
	P1062*	250U	
	P1063	1,000U	
	P1064*	1,000U	
FS™ Taq DNA Polymerase	P1071	250U	Fast, incl. 10x FS™ PCR buffer, 6x loading buffer, Mg2+ plus or free. Supply with 5U/μl and 2.5U/μl two packages.
	P1072*	250U	
	P1073	1,000U	
	P1074*	1,000U	

Taq Mix Series

Product Name	Cat #	Size	Description
Taq Mix	P2011	1ml	Pre mix with Taq DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations
	P2011	5x1ml	
HS™ Mix	P2081	1ml	Pre mix with HS™ Taq DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations
	P2082	5x1ml	
Pfu Mix	P2021	1ml	Pre mix with Pfu DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations.
	P2022	5x1ml	

FS™ Taq Mix	P3011	1ml	Pre mix with FS™ Taq DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations.
	P3012	5x1ml	
Long Taq Mix	P2041	1ml	Pre mix with Long Taq DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations.
	P2042	5x1ml	
FS™ Taq Mix Direct for Blood	P3021	1ml	Pre mix with FS™ Taq DNA Polymerase, dNTPs, Mg2+ and Reaction buffer at optional concentrations.
	P3022	5x1ml	
FS™ Taq Mix Direct for Tissue	P3031	1ml	Contains FS™ Taq Mix T(2x) and sample preparation solution (Extraction solution and Neutralization solution)
	P303	5x1ml	
SYBR Green qPCR Mix	P2091	1ml	Mix reaction (2x) for Real Time PCR
	P2092	5x1ml	

PCR Kit and Relative Solution

Product Name	Cat #	Size	Description
Taq Mix Kit	P2052	5x1ml	Contains 250U Taq DNA Polymerase and 5x1ml CR Reaction Mix (2x)
HS™ Kit	P2101	5x1ml	Contains 250U HS Taq DNA Polymerase and 5x1ml HS Reaction Mix (2x)
FS™ Kit	P3042	5x1ml	Contains 250U FS Taq DNA Polymerase and 5x1ml FS Reaction Mix (2x)
Long Taq Kit	P2072	5x1ml	Contains 250U Long Taq DNA Polymerase and 5x1ml Long Reaction Mix (2x)
Water (nuclease-free, molecular biology grade)	P9021	5x1ml	
	P9022	100ml	
	P9023	500ml	
MgCl ₂ (25mM)	P9031	4x1.25ml	
PCR Enhancer	P9041	500ul	
10xPCR buffer	P9051	4x1.25ml	With 15mM Mg2+
	P9052	4x1.25ml	Without 15mM Mg2+
	P9053	6x1ml	With Mg2+ concentration set
PCR Sample Preparation Solution	P9061	50 preps	To prepare blood or tissue sample for fast PCR
	P9062	250 preps	
dNTP Mix (2.5mM)	P9011	1ml	
dNTP Mix (10mM)	P9012	0.5ml	
	P9013	1ml	
dATP (100mM)	P9071	0.5ml	
dTTP (100mM)	P9081	0.5ml	
dCTP (100mM)	P9091	0.5ml	
dGTP (100mM)	P9101	0.5ml	



Taq DNA Polymerase_(recombinant)

P1011

Taq DNA Polymerase (5U/μl)	100μl
10xPCR Buffer (Mg ²⁺ plus)	1.4ml
6xloading buffer	1ml

P1012

Taq DNA Polymerase (5U/μl)	100μl
10xPCR Buffer (Mg ²⁺ plus)	1.4ml
dNTP Mix (2.5mM each)	1ml
6xloading buffer	1ml

P1013

Taq DNA Polymerase (5U/μl)	200μl
10xPCR Buffer (Mg ²⁺ plus)	2x1.4ml
6xloading buffer	1ml

P1014

Taq DNA Polymerase (5U/μl)	200μl
10xPCR Buffer (Mg ²⁺ plus)	2x1.4ml
dNTP Mix (2.5mM each)	2x1ml
6xloading buffer	1ml

P1015

Taq DNA Polymerase (5U/μl)	36x100μl
10xPCR Buffer (Mg ²⁺ plus)	36x1.4ml

Store at -20°C

Feature

Thermostable-half life is more than 40 min at 95°C

Generates PCR products with 3'-dA overhangs

Incorporates modified nucleotides (e.g. Tiotin-, digoxigenin-, fluorescently-labeled nucleotides)

**Description**

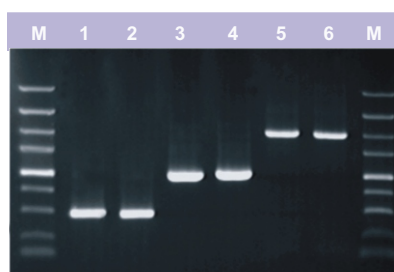
Taq DNA Polymerase is a thermostable recombinant DNA Polymerase derived from *Thermus aquaticus*. Its molecular weight is 94 kDa. Taq DNA Polymerase can amplify DNA target up to 5kb (simple template). The elongation velocity is 0.9~1.2kb/min (70~75°C). It has 5' → 3' exonuclease activity but lacks 3' → 5' exonuclease activity that results in a 3'-dA overhangs PCR product.

Storage Buffer

20mM Tris-HCl(pH 8.0), 100mM KCl, 3mM Mg²⁺, 1mM DTT, 0.1% NP-40, 0.1% Tween20, 0.2mg/ml BSA, 50% (v/v) glycerol.

10xPCR Buffer

120mM Tris-HCl (pH 8.8), 500mM KCl, 1% Triton-X-100, 100mM Lysine, 25mM Mg²⁺



Lane M: DSTM 5000
Lane 1 and 2: 0.5 kb
Lane 3 and 4: 1 kb
Lane 5 and 6: 2 kb

Figure. Optimal results with different fragments using Taq DNA Polymerase

Taq Mix (2x)

2

PCR Products

P2011

2xPCR Mix	1ml
Nuclease-free Water	1ml

P2012

2xPCR Mix	5x1ml
Nuclease-free Water	5x1ml

Composition of Taq Mix(2x)

Taq Mix(2x) is a mixture of Taq DNA Polymerase, 2x Taq buffer, dNTPs, 3mMMg²⁺ and bromophenol blue. Taq mix buffer is a proprietary formulation optimized for robust performance in PCR.

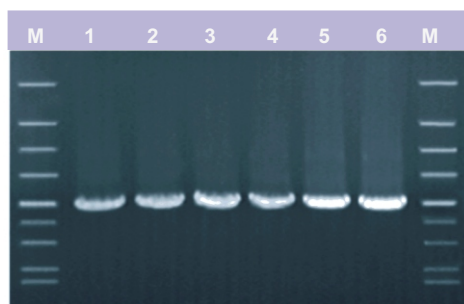
Feature

Convenient-Taq DNA Polymerase in a ready-to-use mix
Fast- save time due to reduced number of pipetting steps
High yield of PCR products with minimal optimization
Reproducible- lower contamination and pipetting error risk

Description

Taq Mix (2x) is a premixed, ready-to-use solution containing Taq DNA Polymerase, dNTPs, Mg²⁺ and Reaction Buffer at optional concentrations for efficient amplification of DNA templates by PCR. To prepare the final PCR, only primers and template DNA are added. This pre-mixed formulation saves time and reduces contamination due to the fewer pipetting steps required for PCR set up. The mix retains all features of Taq DNAPolymerase.

Store at -20°C



Lane M: DS™ 5000

Lane 1 and 2: PCR product generated with Taq Mix (at room temperature after 1 week)

Lane 3 and 4: PCR product generated with Taq Mix (after 15 freeze-thaw cycles)

Lane 5 and 6: PCR product generated with Taq Mix (stored at -20°C)

Figure. Stability of Taq Mix (2X).



HSTM Taq DNA Polymerase

P1011

HS TM Taq DNA Polymerase (5U/μl)	50μl
10xHS TM PCR Buffer(Mg ²⁺ Plus)	1.4ml
6xloading buffer	1m

P1012

HS TM Taq DNA Polymerase (5U/μl)	100μl
10xHS TM PCR Buffer(Mg ²⁺ Plus)	1.4ml
6xloading buffer	1ml

P1013

HS TM Taq DNA Polymerase (5U/μl)	200μl
10xHS TM PCR Buffer(Mg ²⁺ Plus)	2x1.4ml
6xloading buffer	1ml

P1014

Taq DNA Polymerase (5U/μl)	36x100μl
10xHS TM PCR Buffer(Mg ²⁺ Plus)	36x1.4ml

Store at -20°C

10xPCR buffer

120mM Tris-HCl (PH 8.8), 500mM KCl, 1% Triton-X-100, 100mM Lysine, 25mM Mg²⁺

Feature

High yield amplification of complex templates

High PCR specificity-reduced effects of mispriming and primer-dimer formation

Enhanced PCR sensitivity

Convenient room temperature PCR set-up

Generates PCR products with 3'-dA overhangs

Description

HSTM Taq DNA Polymerase(High Specificity Taq DNA Polymerase) is a thermostable recombinant DNA Polymerase derived from *Thermus aquaticus*. It contains the different reaction buffer that is designed to provide highly specific amplification of nucleic acid templates by PCR. It has 5' → 3' exonuclease activity but lacks of 3' → 5' exonuclease activity. The elongation velocity is 0.9~1.2kb/min (70~75°C). It is heat-stable and will synthesize DNA at elevated temperatures from single-stranded templates in the presence of a primer.

Storage Buffer

20mM TrisCl(PH 8.0), 100mM KCl, 3mM Mg²⁺, 1mM DTT, 0.1%NP-40, 0.1%Tween20, 0.2mg/ml BSA, 50% (v/v) glycerol.

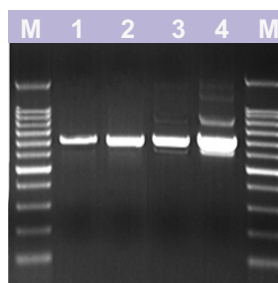


Figure . Comparison of PCR sensitivity and yield with different HSTM Taq DNA Polymerase concentrations.

HSTM Mix (2X)

P2011

2xHS TM Mix	1ml
Nuclease-free Water	1ml

P2012

2xHS TM Mix	5x1ml
Nuclease-free Water	5x1ml

Composition of HSTM Mix (2x)

HSTM Mix(2x) is a mixture of HSTM Taq DNA Polymerase, 2x HSTM buffer, dNTPs, 3mMMg²⁺ and bromophenol blue. HSTM Taq mix buffer is a proprietary formulation optimized for robust performance in PCR.

Feature

Convenient-HSTM Taq DNA Polymerase in a ready-to-use mix

Fast- save time due to reduced number of pipetting steps

High yield of PCR products with minimal optimization

Reproducible- lower contamination and pipetting error risk

Higher sensitivity compared to conventional Taq DNA Polymerase



Store at -20°C

High PCR Specificity:

-- reduced effects of mispriming and primer-dimer formation.

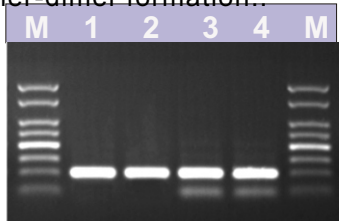


Figure. Robust amplification of λ DNA(100bp) with HSTM Mix and Taq Mix

Lane M: 1kb ladder
Lane 1 and 2: HSTM Mix
Lane 3 and 4: Taq Mix

Long PCR products:

-- up to 8 kb with viral DNA as template;
-- up to 5 kb with genomic DNA as template.

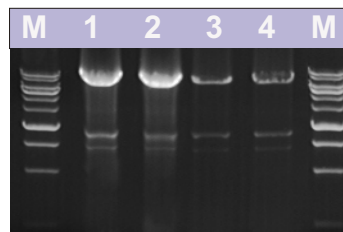


Figure. Robust amplification of human genomic DNA(8kb) with HSTM Mix and Taq Mix

Lane M: 1kb ladder
Lane 1 and 2: HSTM Mix
Lane 3 and 4: Taq Mix



3. DNA Purification Kits

Dongsheng Biotech offers a broad range of kits for the isolation and purification of genomic and plasmid DNA from a wide variety of samples, including tissue, cells, blood, serum, bacterial, yeast, and plants samples.

We provide three series for different materials' purification:

Plasmid DNA Extraction Kits

DNA Product Purification Kits

Genimic DNA Purification Kits



Guides of DNA Purification Kits

Application	Material	Experimental requirement	Product Choose
Plasmid DNA Extraction	Bacteria	Sample size:1-5ml	High Purity Plasmid Miniprep Kit
		Sample size:1-5ml Safe, Healthy	Eco-Friendly Plasmid Miniprep Kit
		Sample size:100-200ml Simple, Convenient	Plasmid DNA Maxiprep Kit (High Purify, Silica-membrant Spin Column)
		Sample size:100-200ml	Plasmid DNA Maxiprep Kit (High Purify, Silica-precipitation)
		Sample size:100-200ml Endotoxin-Free	Plasmid DNA Maxiprep Kit (Endotoxin-Free)
	Yeast	Sample size:1-5ml	Yeast Plasmid DNA Miniprep Kit
DNA Product Purification	Standard Agarose Gel	—	Gel Extraction Kit
		Safe, Healthy	Eco-Friendly Gel Extraction Kit
	PCR Product/ DNA Fragment Solution	—	PCR and DNA Fragment Purification Kit
		Safe, Healthy	Eco-Friendly PCR and DNA Fragment Purification Kit
Genomic DNA Purification	Insect/ Animal Nematoda	Sample size: less than 10mg tissue	Quick Genomic DNA Extraction Kit
	Blood	Sample size: 0.1-1ml flesh blood/ frozen blood	Blood Genomic DNA Extraction Kit
		Sample size: less than 200ul whole blood	Quick Blood Genomic DNA Extraction Kit
	Tissue/ Cell	Sample size: less than 10mg tissue/ 10^6 - 10^7 culture cell	Quick Tissue/Culture Cells Genomic DNA Extraction Kit
	Bacteria	Sample size: 0.5-2ml/ less than 10^6 - 10^7 bacteria	Quick Bacteria Genomic DNA Extraction Kit
	Yeast	Sample size: less than $1-5 \times 10^7$ Yeast	Quick Yeast Genomic DNA Extraction Kit



Product List

Plasmid Extraction Series

Product Name	Cat #	Size
High Purity Plasmid Miniprep kit	N1011	50 preps
	N1012	100 preps
Eco-Friendly Plasmid Miniprep Kit	N1021	50 preps
	N1022	100 preps
Plasmid DNA Maxiprep Kit (High Purity, Silica-mimbrane Spin Column)	N1031	10 preps
Plasmid DNA Maxiprep Kit (High Purity, Silica precipitation)	N1041	10 preps
Plasmid DNA Maxiprep Kit (Endotoxin-free)	N1051	10 preps
Yeast Plasmid DNA Miniprep Kit	N1061	50 preps
	N1062	100 preps

PCP Product Purification Series

Product Name	Cat #	Size
Gel Extraction Kit	N1071	50 preps
	N1072	100 preps
Eco-Friendly Gel Extraction Kit	N1081	50 preps
	N1082	100 preps
PCR and DNA Fragment Purification Kit	N1091	50 preps
	N1092	100 preps

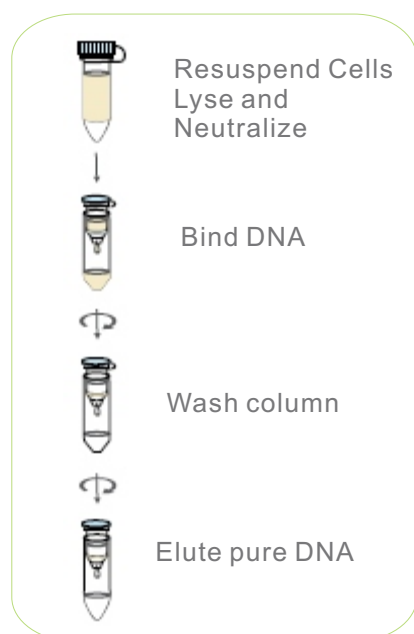
Genomic DNA Purification Series

Product Name	Cat #	Size
Quick Genomic DNA Extraction Kit	N1111	50 preps
	N1112	100 preps
Blood Genomic DNA Extraction Kit	N1121	50 preps
	N1122	100 preps
Quick Blood Genomic DNA Extraction Kit	N1131	50 preps
	N1132	100 preps
Quick Tissue/Culture Cells Genomic DNA Extraction Kit	N1141	50 preps
	N1142	100 preps
Quick Bacteria Genomic DNA Extraction Kit	N1151	50 preps
	N1152	100 preps
Quick Yeast Genomic DNA Extraction Kit	N1161	50 preps
	N1162	100 preps
Marine Animal Tissue Genomic DNA Extraction Kit	N1171	50 preps
	N1172	100 preps

High Purity Plasmid Miniprep Kit

Content	N1011	N1012
Size	50preps	100preps
RNase A	150ul	300ul
Resuspension Solution	15ml	30ml
Lysis Solution	15ml	30ml
Neutralization Solution	20ml	40ml
Wash Buffer PB	30ml	50ml
Wash Buffer W	30ml	2x30ml
Elution Buffer (10mM Tris-HCl, pH 8.5)	5ml	10ml
Spin Columns	50each	100each

For the initial use of the kit, dilute the Wash Buffer W with ethanol 1:1.5 (v/v).



Description

High Purity Plasmid Miniprep Kit is designed for rapid and cost-effective small-scale preparation of high quality plasmid DNA from recombinant *E. Coli* cultures. The kit utilizes an exclusive silicabased membrane technology in the form of a convenient spin column. Each spin column can recover up to 40ug of plasmid DNA. The kit can be used for any size plasmid and cosmids purification efficiently.

Feature

Fast-procedure takes only 30 min

Efficient-can get 10-40ug high copy plasmid DNA in one prep

High purity-purified DNA is ready for downstream applications

Application

Fast isolation of high purity plasmid DNA are ready for direct use in all applications, including:

- Restriction digestion
- DNA Sequencing
- In vitro transcription

Storage

Store RNase at -20°C.

Other solutions can be stored for up to 1 year at RT (15-25°C)

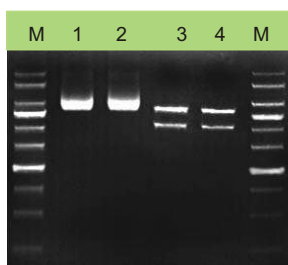


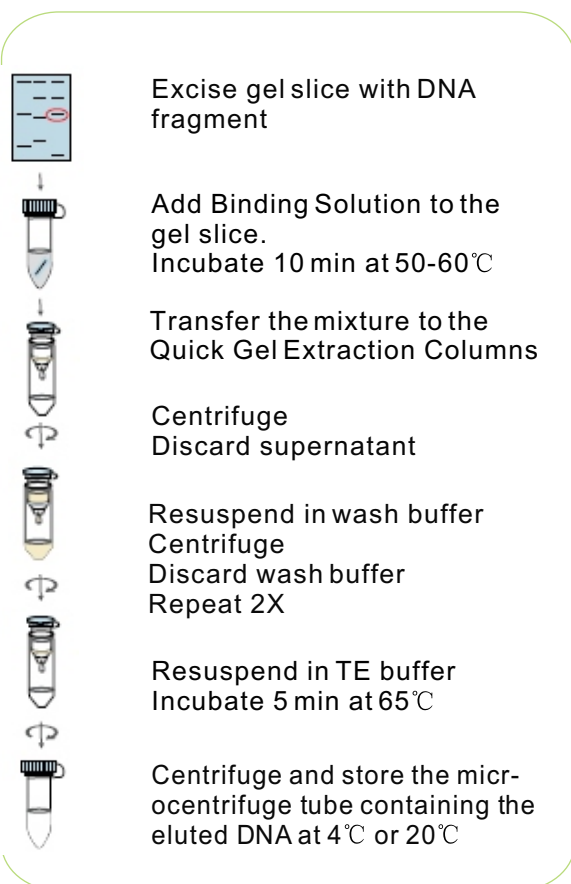
Figure .A 5 kb PCR fragment was cloned into pCMV vector.
Lane M: 1kb ladder
Lane 1 and 2 :Plasmid DNA from overnight bacterial cultures of recombinant clones was purified using the Plasmid Miniprep Kit (N1011).
Lane 3 and 4: analyzed by double digestion with *EcoRI* and *HindIII* in 30 min at 37°C.



Gel Extraction Kit

Content	N1711	N1712
Size	50preps	100preps
Binding Buffer BD	20ml	40ml
Wash Buffer PE	15ml	2x15ml
Elution Buffer (10mM Tris-HCl,pH8.5)	2.5ml	5ml
Spin Columns	50each	100each

For the initial use of the kit, dilute the Wash Buffer PE with ethanol 1:4 (v/v)



Description

Gel Extraction Kit is designed to extract and purify DNA fragments of 50bp to 40kb from standard or low-melt agarose gels in either Tris acetate (TAE) or Tris borate (TBE). This membrane-based system, which can bind up to 40ug DNA, allows recovery of isolated DNA fragments in as little as 20 minutes.

Feature

Fast-procedure takes only 15 min.

Efficient-gather up to 85% recoveries in the range of 50bp-40kb.

Safe-not involve phenol extraction

High Purity-purified DNA is ready for downstream applications.

Application

Fast and efficient extraction of high purity DNA fragments are ready for direct use in all applications, including:

Restriction digestion

PCR

DNA sequencing

In vitro transcription

Storage

All solutions can be stored for up to 1year RT (15-25°C).

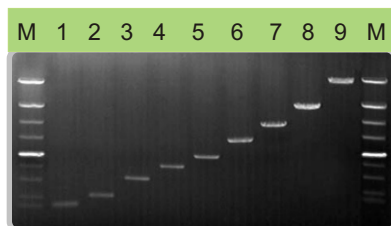


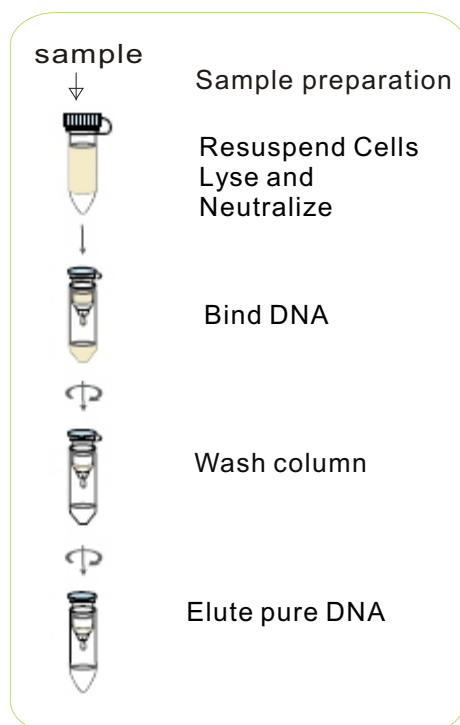
Figure . Recovery of DS™5000 individual 100-5000 bp DNA fragments from a 1% agarose gel using the DNA Gel Extraction Kit.

Lane M: DS™5000 ; Lane1:100bp; Lane 2: 250bp;
Lane 3: 500bp; Lane 4: 750bp; Lane 5: 1000bp;
Lane 6: 1500bp; Lane 7: 2000bp; Lane 8: 3000bp
Lane 9: 5000bp.

Quick Genomic DNA Extraction Kit

Content	N1111	N1112
Size	50preps	100preps
Solution DS	15ml	30ml
Solution MS	20ml	40ml
Proteinase K	1ml	2ml
Wash Buffer PS	30ml	60ml
Wash Buffer PE	15ml	30ml
Elution Buffer (10mM Tris-HCl, pH 8.5)	5ml	10ml
Spin Columns	50each	100each

For the initial use of the kit, dilute the Wash Buffer PE with ethanol 1:3 (v/v).



Description

Quick Genomic DNA Extraction Kit provides a simple and rapid method for high quality genomic DNA purification from insect, nematode, mamalian tissue. The Genomic DNA system uses the silica-gel-membrane technology for simple and fast isolation for genomic DNA without phenol/choroform.

Feature

Fast--procedure takes only 30 min

High Efficient--gather 3-35ug of genomic DNA from 10mg of tissue

Universal--purifies genomic DNA from various sources

High Purity--purified DNA is ready for downstream applications

Application

Fast and efficient extraction of high purity DNA fragments are ready for direct use in all applications, including:
Restriction digestion

PCR

labeling

In vitro transcription

Storage

Store proteinase K at -20°C. Other solutions can be stored for up to 1year at RT (15-25°C).

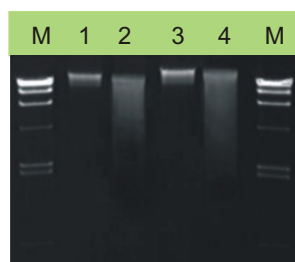


Figure . Extract chicken blood DNA and human blood DNA by using the Quick Genomic DNA Extraction Kit.

Lane M: Lambda DNA/*Hind* III

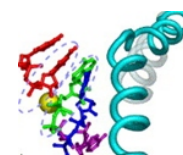
Lane 1: chicken blood DNA

Lane 2: *EcoR* I restriction product for purified chicken blood DNA

Lane 3: human blood DNA

Lane 4: *EcoR* I restriction product for purified human blood DNA

4. RNA Purification Kits

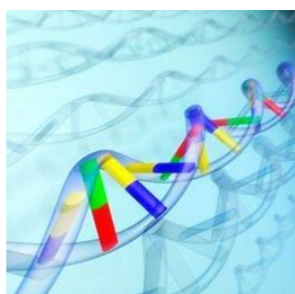


RNA Summarization

Ribonucleic acid (RNA) is a biologically important type of molecule that consists of a long chain of nucleotide units. RNA is transcribed from DNA by enzyme called RNA Polymerase and is generally further processed by other enzymes. RNA is central to Protein synthesis.

Obtaining high quality, intact RNA is the first and often the most critical step in performing many fundamental molecular biology experiments, including Northern analysis, nuclease protection assays, RT-PCR, RNA mapping, in vitro translation and cDNA library construction. To be successful, however, the RNA isolation procedure should include some important steps both before and after and actual RNA purification.

Dongsheng Biotech offers an expansive portfolio of RNA Purification products that now includes purification and stabilization products. Our unique and trusted TRIzol, General RNA Extraction technologies provide high yields and quantity demanded by our RNA Research team. We offer products for RNA extraction and stabilization, as well as for purifying total RNA from animals, plants, bacterias and cells.



Product List

RNA Purification Product

Product Name	Cat #	Size
TRIzol	R1021	20ml
	R1022	100ml
General Eco-Friendly RNA Extraction Kit	R1031	50 preps
	R1032	100 preps
General RNA Extraction Kit	R1051	50 preps
	R1052	100 preps

4

RNA Purification Products

Reverse Transcription Series

Product Name	Cat #	Size
M-MLV (recombinant)	R1041	5,000U
RT-PCR Kit	R1011	20 preps
	R1012	100 preps

Other Products

Product Name	Cat #	Size
RNasin (RNase inhibitor)	R2011	1,000U
Oligo d(T) ₁₅ Primer	R2021	20μl
Random Primer (6mer)	R2031	20μl
DEPC-treated Water	R2041	100m
dNTPs (RNase-free)	R2051	20μl
RNA Stabilization	R2071	100ml
Proteinase K	N9011	100mg
RNase A	N9041	100mg
Agarose	N9051	500g
Dnase I	N9061	1ml
Mini Spin Column	C1021	1000pcs
Midi Spin Column	C2011	100pcs
Maxi Spin Column	C3011	100pcs





TRIzol

	R1021	R1022
TRIzol	20ml	100ml

Reagents required, but not supplied.

Chloroform

Isopropyl alcohol

75% ethanol (RNA-free)

DEPC-treated water

Application

The isolated RNA is suitable for any downstream application, including:

RT-PCR

Amplification for array analysis

Hybridization assays

In vitro translation

Storage

Store at 2-8°C, protect from light.

TRIzol is stable for up to 12 months when properly stored.

Description

TRIzol Reagent is a ready-to-use reagent for the isolation of total RNA from cells and tissues. The reagent, a mono-phasic solution of phenol and guanidine isothiocyanate, is an improvement of the single-step RNA isolation method. During sample homogenization or lysis, TRIzol Reagent maintains the integrity of the RNA, while disrupting cells and dissolving cell components. TRIzol Reagent facilitates isolation of a variety of RNA species of large or small molecular size. Starting material can be either fresh or frozen tissue, or cell samples of almost any size.

Feature

Classical-used for classical RNA isolation step

High Efficient-stable RNA yield

High Purity-purified RNA is ready for any downstream application

RNA yield with different starting materials.

Starting Material	RNA Yield
Liver tissue	6-10 µg/mg tissue
Spleen tissue	6-10 µg/mg tissue
Kidney tissue	3-4 µg/mg tissue
Skeletal muscle or brain tissue	1-1.5 µg/mg tissue
Placenta	1-4 µg/mg tissue
Cultured epithelial cells	8-15 µg/10 ⁶ cells
Fibroblasts	5-7 µg/10 ⁶ cells



General RNA Extraction Kit

Content	R1051	R1052
Size	50preps	100preps
Solution RL	60ml	2x60ml
Wash Buffer RPI	18ml	36ml
Wash Buffer RW	12ml	24ml
DEPC-treated water	10ml	20ml
Rnase-free spin column	50each	100each
RNase-free microcentrifuge tube	50each	100each

For the initial use of the kit, dilute the Wash Buffer RPI with ethanol 3:2 (v/v), and dilute the Wash Buffer RW with ethanol 1:4(v/v).

Reagents required, but not supplied.

Chloroform

Ethanol (96-100%)

Application

The isolated RNA is suitable for any downstream application, including:

RT-PCR

Amplification for microarray analysis

Hybridization assays

In vitro transation

Description

General RNA Extraction Kit can isolate total RNA from a wide range of sample types and amounts. In general, samples are lysed and then homogenized in the presence of guanidinium isothiocyanate, a chaotropic salt capable of protecting the RNA from endogenous RNase. After homogenization, ethanol is added to the sample. The sample is then processed through a spin column containing a clean silica-based membrane to which the RNA binds. Any impurities are effectively removed by subsequent washing. The purified total RNA is then eluted in RNase-free water.

Feature

High Efficient-Stable RNA yield.

Reliable performance of high-quality purified total RNA in downstream applications.

Storage

Store at 2-8°C, protect from light.

Kit contents are stable for up to 12 months when properly stored.

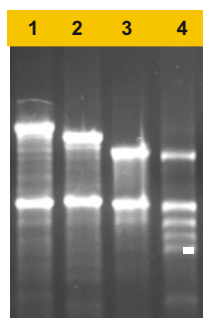


Figure . Extract different species of total RNA by using the Quick Genomic DNA Extraction Kit.

Lane1: Mouse tissue RNA

Lane 2: Zebrafish tissue RNA

Lane3: Leguminosae leaf tissue RNA

Lane4: Nicotianatabacum leaf tissue RNA