TRANS®
TRANSGEN BIOTECH

Molecular Diagnosis

Molecular Diagnostic Products

Providing Innovative Reagents for Life Sciences since 2006

CONTENTS

TRANSGEN

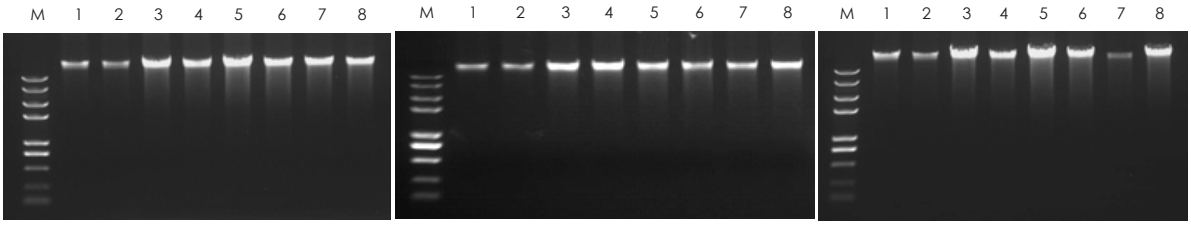
Nucleic Acid Purification

MagicPure® Blood Genomic DNA Kit
(EC101)

01

- Simple and fast, no centrifugation required.
- High yield and purity.
- Suitable for fresh, frozen or anticoagulated blood.

Comparison with Competitive Products



M: *Trans*2K® Plus II DNA Marker
1, 2: Purified nucleic acids from blood sample #A
3, 4: Purified nucleic acids from blood sample #B
5, 6: Purified nucleic acids from blood sample #C
7, 8: Purified nucleic acids from blood sample #D

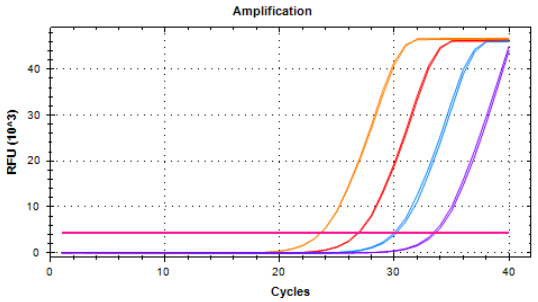
TransGen　　Company A　　Company B

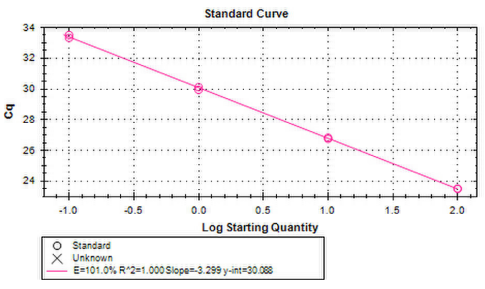
Genomic DNA was purified from 200 µl of human whole blood using purification kits from TransGen, Company A and Company B respectively. The purified nucleic acids were analyzed by 1.5% agarose gel electrophoresis.

MagicPure® Simple Viral DNA/RNA Kit
(EC311)

02

- Simple, no centrifugation required.
- Fast, high yield.
- Silica-based magnetic beads to specifically adsorb and purify viral DNA/RNA. No proteinase K treatment needed. It is suitable for high-throughput nucleic acid purification.
- Suitable for plasma, serum, whole blood, tissue homogenate, cell-free body fluid, nasopharyngeal or oropharyngeal aspirate/ wash, bronchoalveolar lavage fluid (BALF), tracheal aspirate, sputum.





MagicPure® Simple Viral DNA/RNA Kits were used to extract nucleic acids from 10^1 10^2, 10^3, 10^4-fold dilutions of porcine pseudorabies virus (PRV). The extracted nucleic acids were analyzed by qPCR.

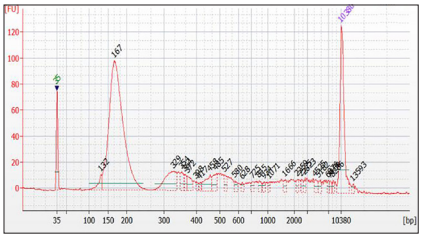
03

MagicPure® Cell-Free DNA Kit II
(EC211)

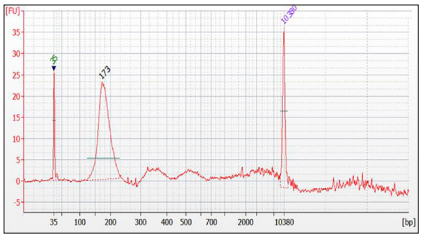
- Simple and fast, no centrifugation required.
- High yield and purity.
- Suitable for human serum or plasma.

Main cfDNA fragment concentration measured by Agilent 2100

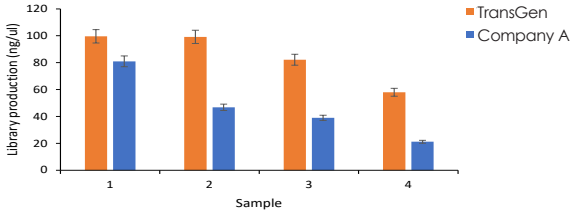
TransGen



Company A

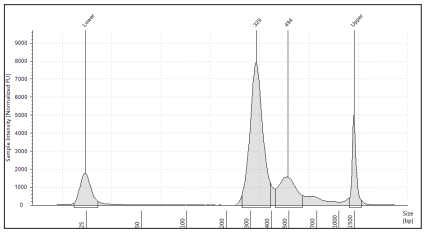


Library concentration measured by Qubit

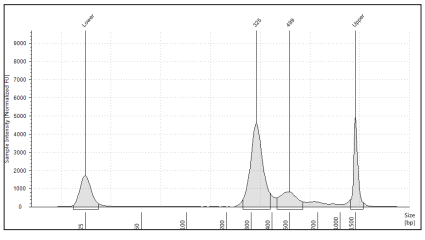


Library concentration measured by Agilent 4200

TransGen



Company A



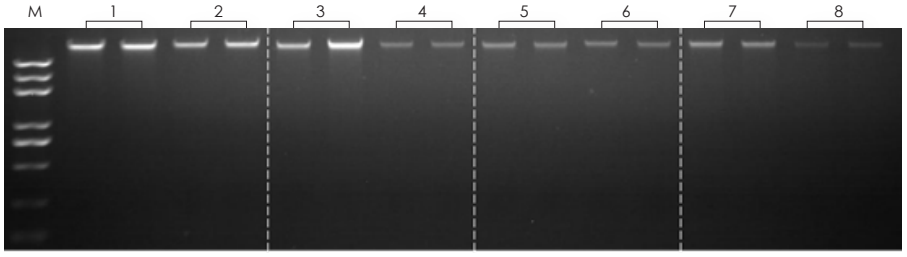
MagicPure® Stool and Soil Genomic DNA Kit (EC801)

04

- Fast extraction.
- High yield and high purity, combined optimized buffer with magnetic beads to achieve high yield and remove inhibitors.
- Suitable for fresh, frozen solid or liquid stool and soil.

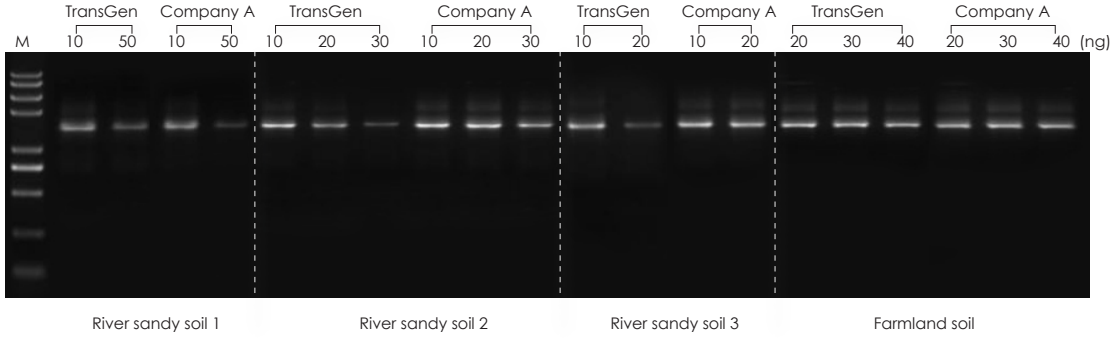
Comparison with Competitive Product

Soil Samples



M: *Trans*2K® Plus DNA Marker
1, 3, 5, 7: TransGen
2, 4, 6, 8: Company A

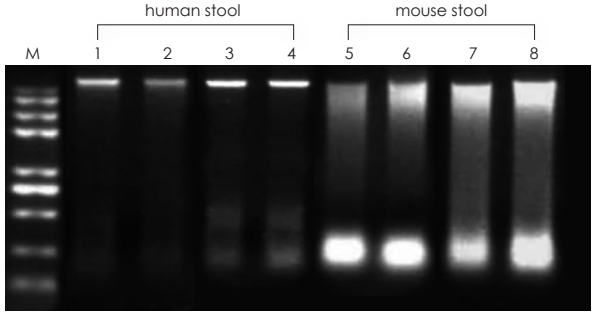
Genomic DNA was extracted from 250 mg of different types of soil samples using reagents from TransGen and Company A respectively. The extracted nucleic acids were analyzed by agarose gel electrophoresis.



M: *Trans*2K® Plus II DNA Marker

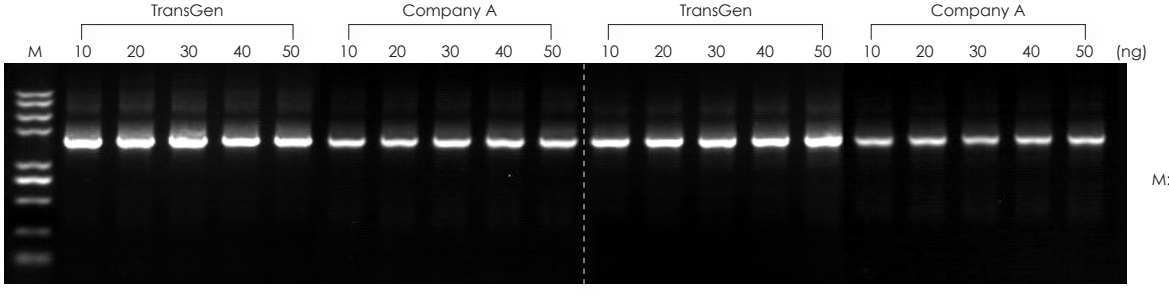
Genomic DNA was extracted from different types of soil samples using reagents from TransGen and Company A respectively. Extracted genomic DNA was used as template for 16s rRNA gene amplification by PCR. The amplified nucleic acids were analyzed by agarose gel electrophoresis.

Stool Samples



M: *Trans*2K® Plus II DNA Marker
1, 2, 5, 6: TransGen
3, 4, 7, 8: Company A

Genomic DNA was extracted from 200 mg of mouse and 200 µl of human stool using reagents from TransGen and Company A respectively. The extracted nucleic acids were analyzed by agarose gel electrophoresis.



M: *Trans*2K® Plus II DNA Marker

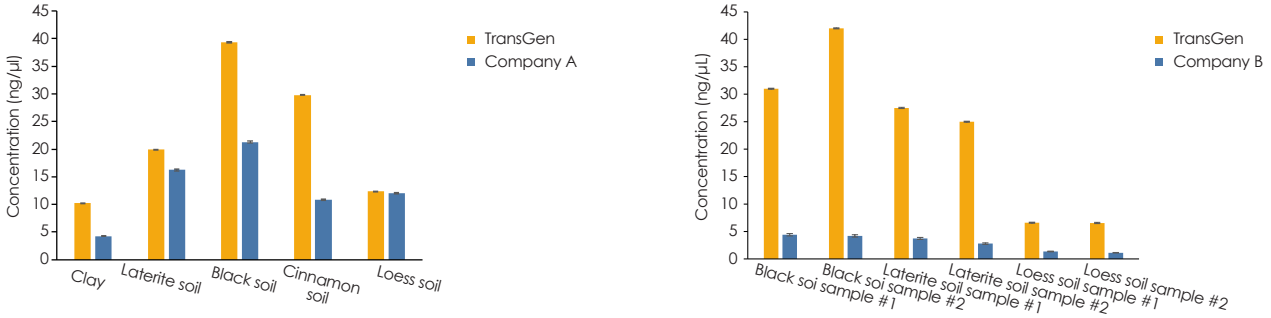
Genomic DNA was extracted from human and mouse stool samples using reagents from TransGen and Company A respectively. Extracted genomic DNA was used as template for 16s rRNA gene amplification by PCR. The amplified nucleic acids were analyzed by agarose gel electrophoresis.

MagicPure® Soil Genomic DNA Kit (EC802)

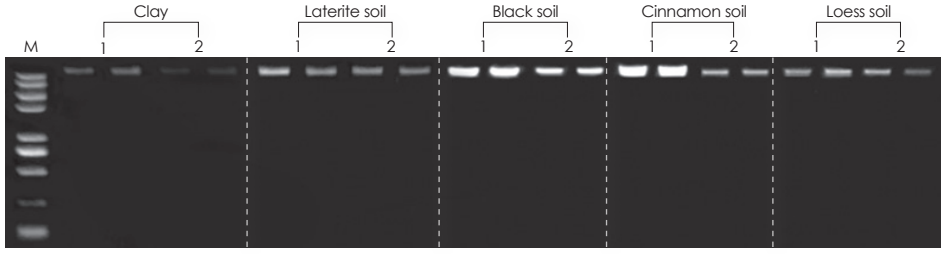
05

- High purity, the magnetic bead method is used to specifically adsorb DNA, which can efficiently remove inhibitors in the sample.
- High extraction efficiency: suitable for efficient extraction of soil DNA with low microbial content.
- Wide range of application: adding Lysis Enhancer components to improve the lysis ability of special soil samples, suitable for the extraction of various types of soil samples.

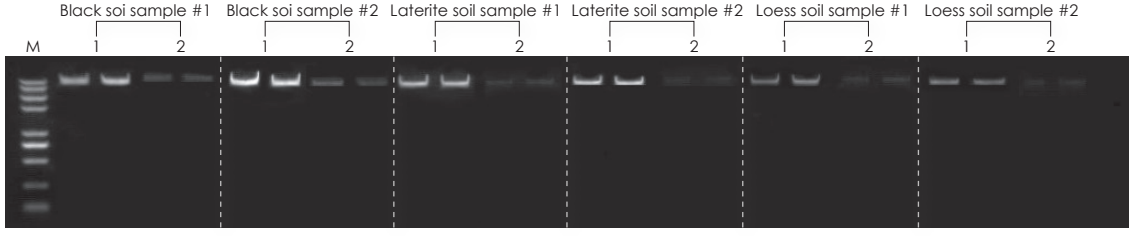
Results



Genomic DNA was extracted from 250 mg of different types of soil samples using kits from TransGen, Company A and Company B respectively. Extracted genomic DNA was used as template for 16s rRNA gene amplification by PCR. The amplification nucleic acids were analyzed by agarose gel electrophoresis.



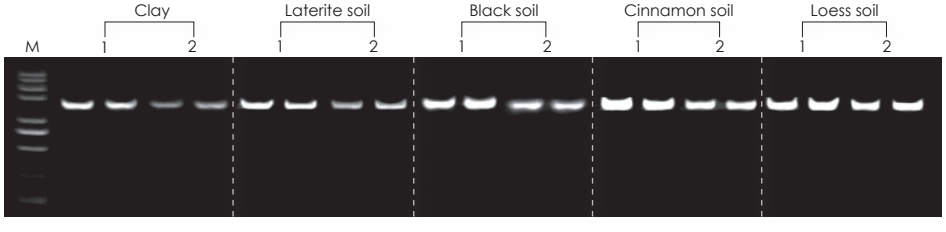
M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company A



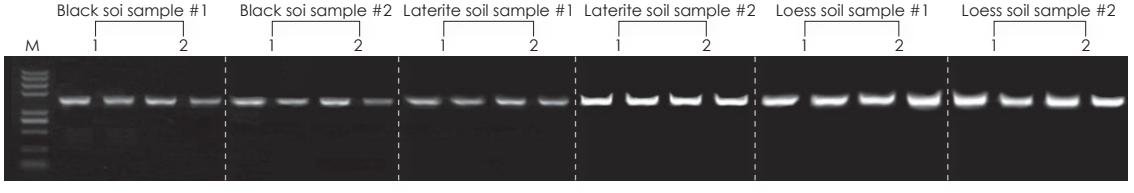
M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company B

Genomic DNA was extracted from 250 mg of different types of soil samples using kits from TransGen, Company A and Company B respectively. The extracted gDNA was analyzed by electrophoresis.

No Inhibition of Downstream PCR Amplification



M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company A



M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company B

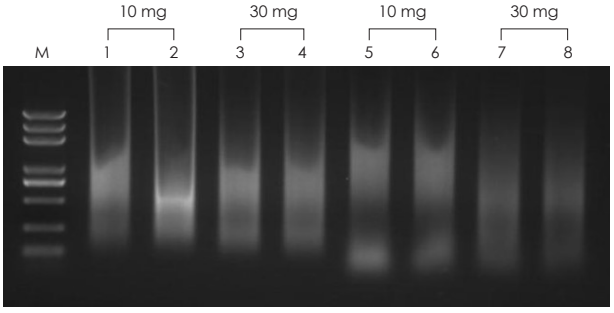
Different types of soil sample gDNA, extracted by reagents from TransGen, Company A and Company B, were used as templates to amplify 16S rDNA by PCR. The amplified nucleic acids were analyzed by agarose gel electrophoresis.

06

MagicPure® FFPE Tissue Genomic DNA Kit (EC701)

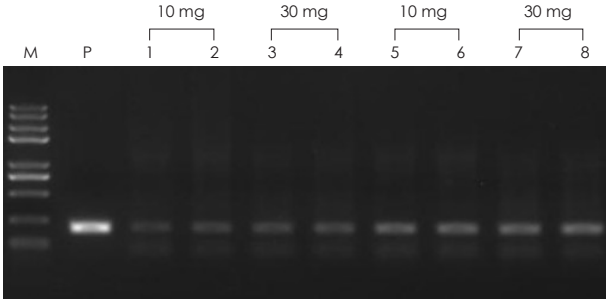
- Fast, high yield.
- High purity enabled by buffer optimized for paraffin-embedded tissue samples and magnetic beads allowing for high-efficiency and specific DNA adsorption, and effective removal of protein, salt, and other inhibitors.
- Suitable for fresh formalin-fixed and paraffin-embedded tissues and paraffin sections.

Comparsion with Competitive Product



M: *Trans*2K® Plus DNA Marker
1, 2, 3, 4: TransGen
5, 6, 7, 8: Company A

Genomic DNA was extracted from different amounts of human paraffin samples using reagnets from TransGen and Company A respectively. The extracted nucleic acids were analyzed by agarose gel electrophoresis



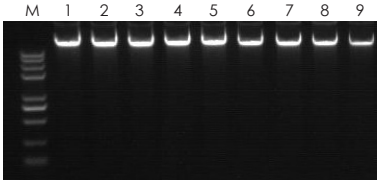
M: *Trans*2K® Plus II DNA Marker
P: Positive Control (Human Blood gDNA)
1, 2, 3, 4: TransGen
5, 6, 7, 8: Company A

Genomic DNA was extracted from different amounts of human paraffin samples using reagents from TransGen and Company A respectively. The extracted gDNAs (20 ng) were used as templates for PCR. The amplified nucleic acids were analyzed by agarose gel electrophoresis.

07

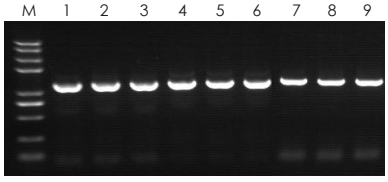
MagicPure® Fungi Genomic DNA Kit (EC103)

- Simple and fast.
- High yield and purity, with unique lysis buffer.
- Ideal for efficient extraction of genomic DNA from a variety of fungi such as Fusarium, yeast, anthrax and others.



M: *Trans*2K® Plus II DNA Marker
1-3: Fusarium
4-6:Yeast
7-9:Anthrax

Genomic DNA was extracted from Fusarium, yeast, and anthrax using *MagicPure*® Fungi Genomic DNA Kit. , The extracted nucleic acids were analyzed by agarose gel electrophoresis.



M: *Trans*2K® Plus II DNA Marker
1-3:Fusarium (NPS6)
4-6:Yeast(β-Actin)
7-9:Anthrax(RPOB)

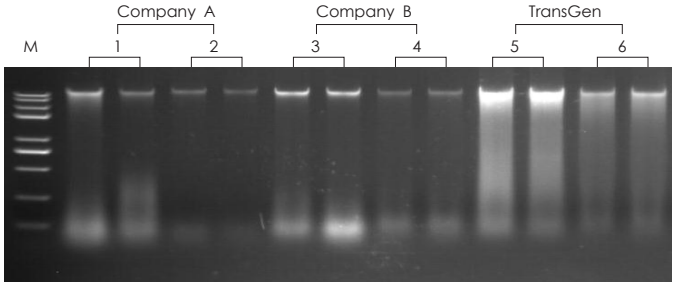
Genomic DNA was extracted from Fusarium, yeast, and anthrax using *MagicPure*® Fungi Genomic DNA Kit. The extracted gDNAs were used as templates for PCR. The amplified nucleic acids were analyzed by agarose gel electrophoresis.

EasyPure® Stool Genomic DNA Kit
(EE301)

08

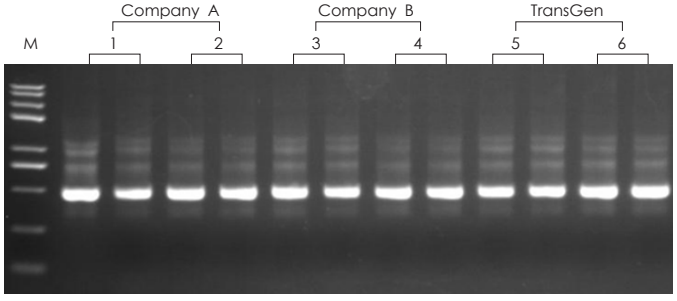
- Fast extraction, good DNA integrity, high yield.
- High purity, buffer optimized for stool samples, combined with magnetic beads which bind to DNA efficiently and specifically, can remove the inhibitors in the samples effectively.
- Suitable for fresh, frozen solid or liquid stool.

Comparison with Competitive Products



M: *Trans*2K® Plus II DNA Marker
1, 3, 5: Mouse stool
2, 4, 6: Human stool

Genomic DNA was extracted from stool samples of mouse and human using reagents from TransGen, Company A and Company B respectively. The extracted nucleic acids were analyzed by agarose gel electrophoresis.



M: *Trans*2K® Plus II DNA Marker
1, 3, 5: Mouse stool
2, 4, 6: Human stool

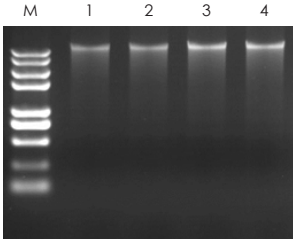
Genomic DNA was extracted from mouse and human stool samples using reagents from TransGen, Company A and Company B respectively. Genomic DNA for 16s rRNA gene was amplified. The amplification products were analyzed by agarose gel electrophoresis.

EasyPure® Buccal Swab Genomic DNA Kit
(EE201)

09

- Fast extraction, high yield.
- High purity, enabled by spin column with specific adsorption to DNA, effectively removing impurities as protein and salts, and others.

Comparsion with Competitive Product



M: *Trans*2K® Plus II DNA Marker
1, 2: Company A
3, 4: TransGen

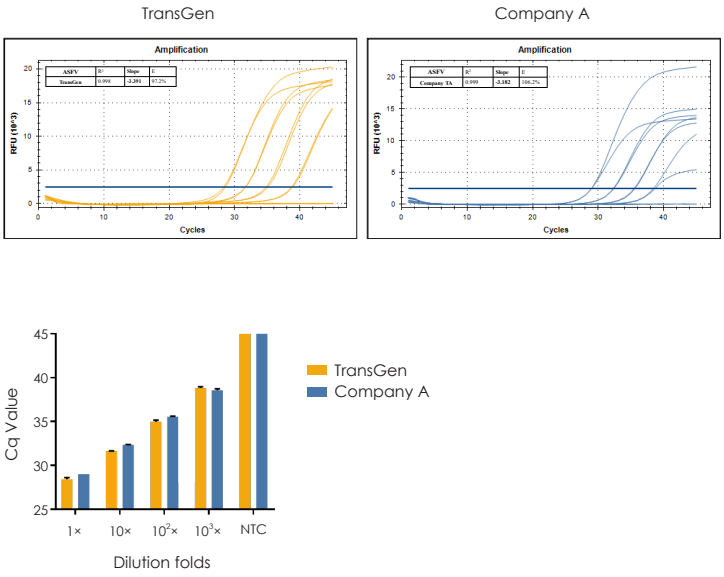
Genomic DNA was extracted from buccal swabs using reagents of TransGen and Company A respectively. The extracted nucleic acids were analyzed by 1.0% agarose gel electrophoresis.

10

EasyPure® Viral DNA/RNA Kit (ER201)

- Easy procedures and high yield.
- Use a unique lysis buffer to lyse virus and silica-based spin column to specifically adsorb DNA.
- Suitable for serum, plasma, whole blood, tissue homogenates, cell-free body fluids, nasopharyngeal or oropharyngeal aspirates or washes, alveolar lavage, tracheal aspirates and sputum, nasopharyngeal or oropharyngeal swabs, culture animal cell supernatant.

Comparsion with Competitive Product



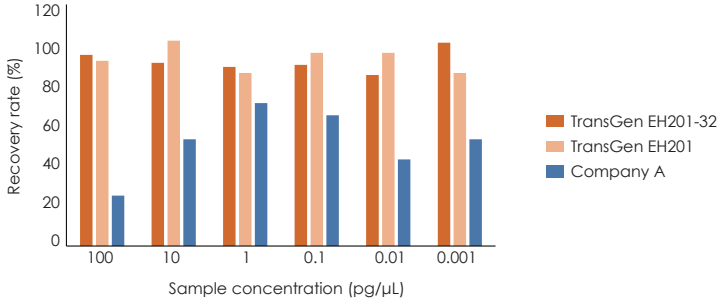
DNA was extracted from African Swine Fever Virus (ASFV) infected swine serum using reagents from TransGen and Company A. The extracted gDNAs were used as templates for qPCR.

11

MagicPure® Host Cell Residual DNA Kit (EH201)

- Use a unique lysate to release a small amount of DNA, and use silica-based magnetic beads to specifically adsorb and purify residual DNA from host cells.
- Simple operation, no need for centrifugation and fast extraction.
- High extraction yield, for the extraction of trace DNA fragments from host cells (CHO, Vero, NSO, MDCK, etc.) from ≤200 μL biological samples.
- High purity, suitable for experiments such as PCR, RT-PCR, qPCR and qRT-PCR.
- It is suitable for high-throughput magnetic rod-type nucleic acid extractors.

Comparsion with Competitive Product



A 10-fold gradient dilution of Vero fragmented DNA (sonicated DNA) containing a high concentration of protein was used to extract DNA with *MagicPure*® Host Cell Residual DNA Kit and with reagent from Company A. The extracted DNA concentrations were measured. TransGen EH201-32 is used with a 32-channel automatic nucleic acid extractor.

TRANSGEN

Common Used Enzymes

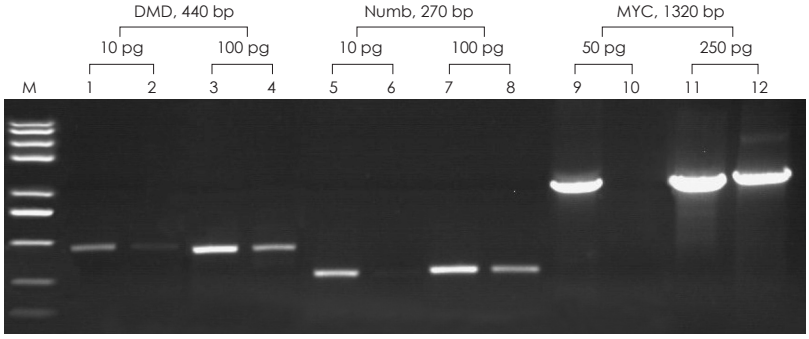
B

PerfectStart® Taq DNA Polymerase
(AP401)

01

- Hot start and high specificity.
- High sensitivity.
- High amplification efficiency.
- Low E. coli genomic DNA residue.
- Suitable for low copy number templates, complex templates, GC/AT-rich templates, real-time quantitative PCR (qPCR), and multiplex PCR and single nucleotide polymorphisms (SNPs)

Comparsion with Competitive Product

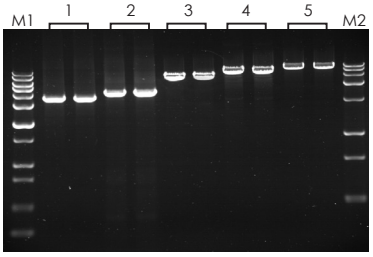


M: *Trans*2K® Plus II DNA Marker
1, 3, 5, 7, 9, 11: TransGen
2, 4, 6, 8, 10, 12: Company A

Genomic DNA of different genes at various concentrations were used as templates for PCR using reagents from TransGen and Company A. The amplification products were analyzed by 1.0% agarose gel electrophoresis.

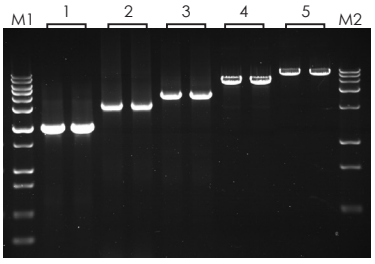
TransStart® FastPfu DNA Polymerase
(AP221)

- Fast: 4 kb/min extension speed.
- High fidelity: 54 times higher fidelity than common Taq enzymes and 3 times higher than common Pfu enzymes.
- Long fragment amplification: Up to 15 kb of genomic DNA fragments and up to 20 kb of Plasmid DNA fragments can be amplified.
- High specificity: Using the "TransStart" double-blocking method novel hot-start technology, primers and templates are simultaneously blocked.
- Strong amplification ability: the unique PCR Stimulant enhances the enzyme's ability to amplify complex templates.
- The amplified product is blunt-ended and can be directly cloned into pEASY®-Blunt series vectors.

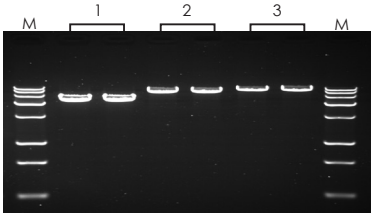


M1: 1Kb Plus DNA Ladder
M2: *Trans*15K DNA Marker
1: ACTR 3.5 kb;
2: VIN 4.6 kb;
3: Pol 6.8 kb;
4: APC 8.5 kb;
5: Dynein 12.3 kb;
cDNA：Amplification of cDNA with *TransStart* ® FastPfu DNA Polymerase

02



M1: 1Kb Plus DNA Ladder
M2: *Trans*15K DNA Marker
1: Rhod 2.0 kb;
2: β-globin 3.0 kb;
3: Rhod 4.17 kb;
4: Factor IX 7.5 kb;
5: Serum albumin 12.4 kb;
Genomic DNA：Amplification of Genomic DNA with *TransStart* ® FastPfu DNA Polymerase



M: *Trans*15K DNA Marker
1: UDG 7.0 kb;
2: LN 10.0 kb;
3: Fang 14.7 kb;
Plasmid DNA：Amplification of Plasmid DNA with *TransStart* ® FastPfu DNA Polymerase

TransStart® *FastPfu* Fly DNA Polymerase (AP231)

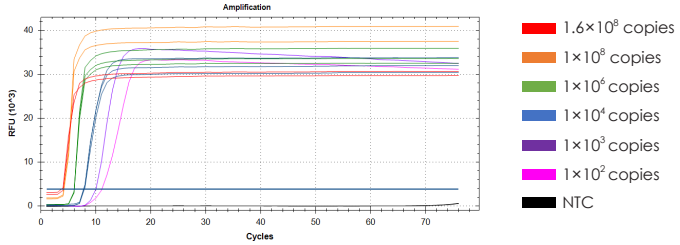
03

- Fast: 6 kb/min extension speed, 1kb extension takes only 10 seconds.
- High fidelity: 108 times higher fidelity than common Taq enzymes and 6 times higher than common Pfu enzymes.
- Long fragment amplification: Up to 15 kb of genomic DNA fragments and up to 20 kb of Plasmid DNA fragments can be amplified.
- High specificity: Using the "TransStart" double-blocking method novel hot-start technology, primers and templates are simultaneously blocked.
- Strong amplification ability: the unique PCR Stimulant enhances the enzyme's ability to amplify complex templates.
- The amplified product is blunt-ended and can be directly cloned into *pEASY*®-Blunt series vectors.

Bst II DNA Polymerase (LP301)

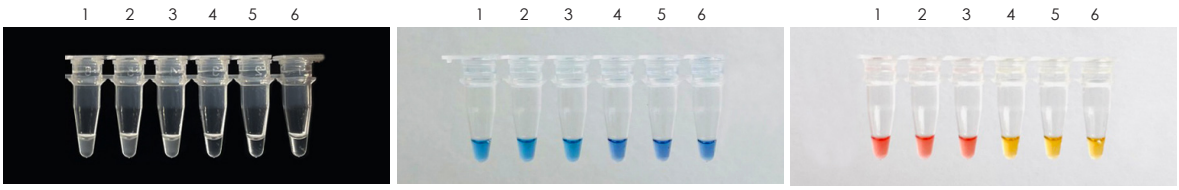
04

- Optimized Buffer and enzyme SuperMix for Loop-Mediated Isothermal DNA Amplification (LAMP). Just add template and primers.
- Visualization: amplification results can be visualized by the color changing.
- Compatible with dUTP/UDG: good resistance to dUTP, adding dUTP/UDG to effectively prevent LAMP product contamination.



LAMP Amplification results from plasmid containing muscovy duck parvovirus (MDPV) as templats using TransGen Bst II DNA Polymerase.

Reaction Visualization



Turbidity method | HNB visualization dye | Neutral red visualization dye

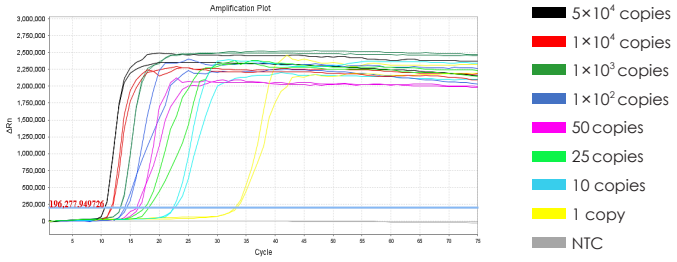
1-3: Plasmid containing ASFV-P72 gene 4-6: No Template Control (NTC)

Bst III DNA Polymerase

(LP311)

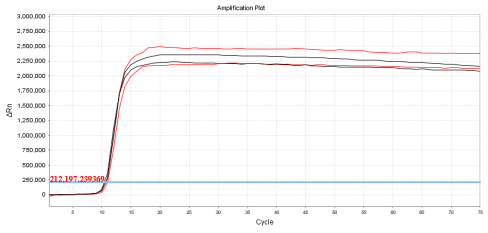
05

- Optimized Buffer and enzyme SuperMix for Loop-Mediated Isothermal DNA Amplification (LAMP). Just add template and primers.
- High efficiency: one-step method for reverse transcription and LAMP amplification.
- Lyophilized format is available.

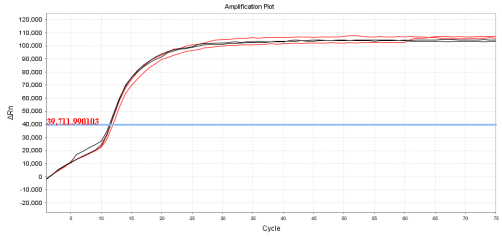


Different concentrations of *in vitro* transcribed duck and goose reovirus (DuRV) RNA were used as template for RT-LAMP amplification using TransGen Bst III DNA polymerase.

Amplification with Dye

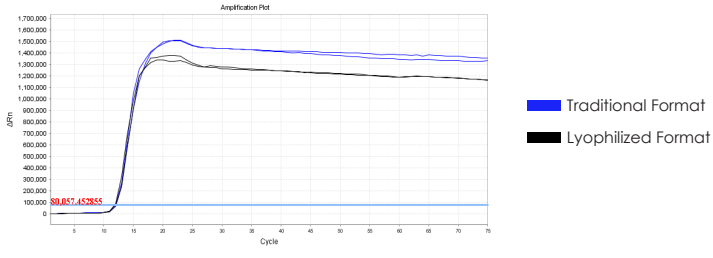


Amplificaition with Target Specific Probe



In vitro transcribed Duck and goose reovirus (DuRV) RNA was used as template for RT-LAMP amplification using TransGen Bst III DNA polymerase.

Lyophilized Format vs Traditional Format



In vitro transcribed Duck and goose reovirus (DuRV) RNA was used as template for RT-LAMP amplification using conventional and lyophilized TransGen Bst III DNA polymerase. The results show that TransGen Bst III DNA polymerse can be lyophilized without lost its activity.

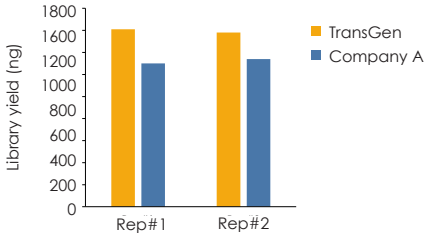
T4 DNA Ligase for NGS
(LL101)

06

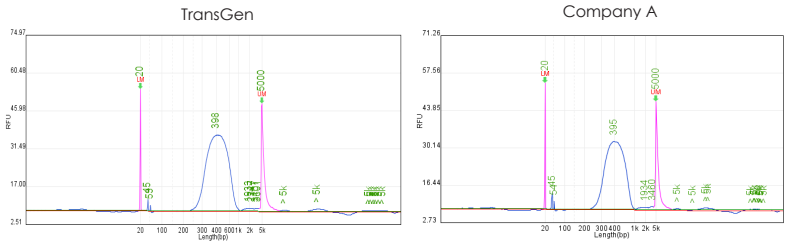
- Optimized for adapter ligation during NGS library construction.
- Can be used for cloning of restriction enzyme digested nucleic acid fragments.

Comparison with Competitive Product

Library Yield



Peak Shape



DNA Polymerase I Klenow Fragment
(LE201)

07

- Engineered from *E.coli* DNA polymerase that retains polymerase and 3' —> 5' exonuclease activity.
- Filling in at the 5' overhang of double-stranded DNA, and excision of the 3' overhang in double-stranded DNA to form blunt-ends.

T4 DNA Polymerase
(LP201)

08

- Catalyzes the synthesis of 3' to 5' DNA, and removes 3' overhangs or fills-in 5' overhangs to form blunt ends.
- Synthesis of labeled DNA probes by displacement reactions.

T4 Polynucleotide Kinase
(LK101)

09

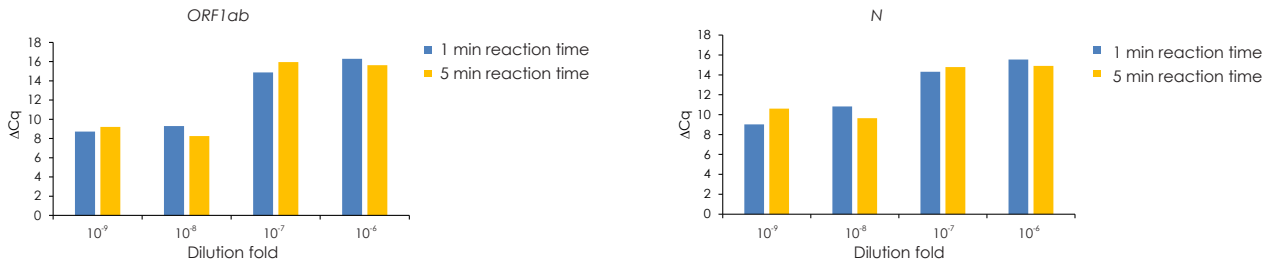
- Catalyzes the phosphorylation of the 5' end of oligonucleotides, DNA or RNA.
- 5' end labeling of oligonucleotides, DNA or RNA. The labeled nucleic acids can used as probes for Southern blot, Northern blot, etc.

Uracil-DNA Glycosylase (Low Temperature)

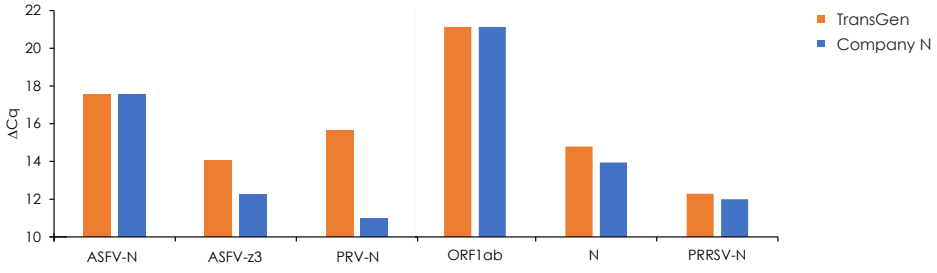
(LU201)

10

- Efficiency: the dU-containing template can be degraded as fast as 1 minute at room temperature.
- Mininum inhibition to PCR reaction: No inhibition was observed when up to 4 Units of UDG was added to 50 μl of PCR reaction.
- Wide range of applications: suitable for PCR/qPCR, RT-PCR/RT-qPCR, LAMP/RT-LAMP and other applications.

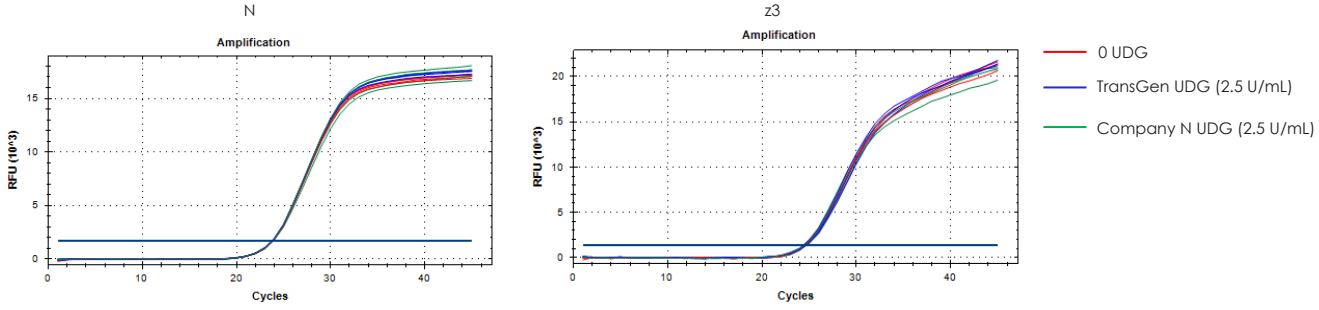


DNA fragments for ORFlab and N genes were amplified with PCR using dUTP to substitute dTTP. The amplified DNAs were diluted 10^{-9}, 10^{-8}, 10^{-7}, 10^{-6} folds, then treated with TransGen Uracil-DNA Glycosylase. The treated nucleic acids were used as templates for qPCR.



DNA fragments were amplified by PCR using dUTP to substitute dTTP. The amplified DNAs were treated with Uracil-DNA Glycosylase from TranGen or from Company N . The treated nucleic acids were used as templates to qualtify six genes by qPCR. (ΔCq represents the Cq difference of the three reaction systems of TransGen 2.5 U/mL UDG, Company N 2.5 U/mL UDG and 0 UDG)

Low Inhibition of PCR Reactions

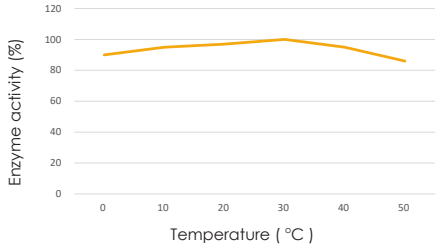


11

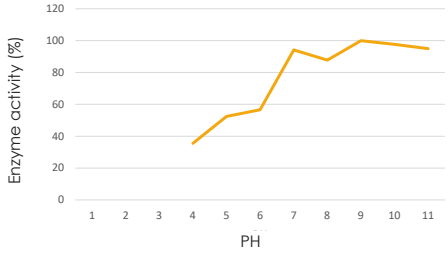
Universal Nuclease (GMP Grade)

(LN201)

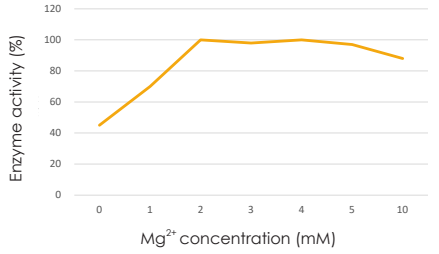
- Purity ≥99%, specific activity ≥1.0×10^6 U/mg.
- Maintain the its activity under the following tested conditions: 6 M Urea, 0.1 M Guanidine HCl, 0.4% Triton X-100, 0.1% SDS, 1 mM EDTA, 1 mM PMSF.
- Compatible with various cell lysates (such as RIPA based) or protein extraction reagents.
- Compliant with pharmacopoeia requirements: no animal origin, no antibiotics, no endotoxin.
- Wide range of applications: degrades all forms of DNA and RNA and is widely used to remove nucleic acids from biological



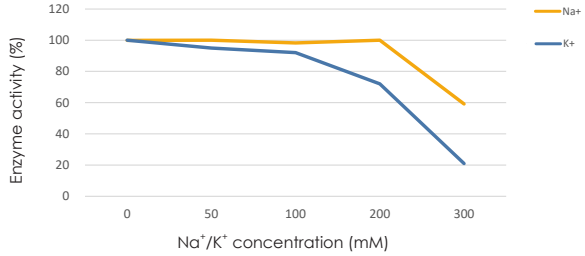
Universal Nuclease is active from temperature of 0-50°C.



Universal Nuclease is active in the PH of 7-11.



Universal Nuclease is active at Mg^{2+} concentrations of 2-5 mM



Universal Nuclease is active at Na^+ concentration of 0-200 mM and K^+ concentration of 0-100 mM.

Quality Control

Item	Standard	Method
Appearance	Colorless and transparent	Visual inspection
Purity	≥99%	HPLC
Enzyme activity	≥ 250U/μl	General substrate method
Specific activity	≥1.0×106 U/mg	Enzymatic activity/protein concentration
Bacteria residue	Not detectable	Culture method
Protease activity	Not detectable	General substrate method
Endotoxin content	< 0.25 EU/1000 U	Gel clot
Host protein residue	≤10 ppm (μg/mL)	ELISA
Mycoplasma residue	Not detectable	Mycoplasma detection kit (qPCR method)
Pathogen detection (HCV/HBV/HIV)	Not detectable	PCR

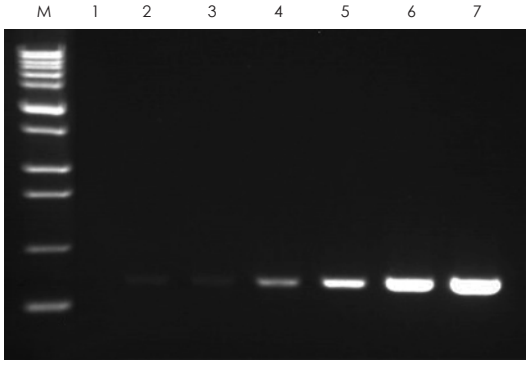
TRANSGEN

RT-PCR

01

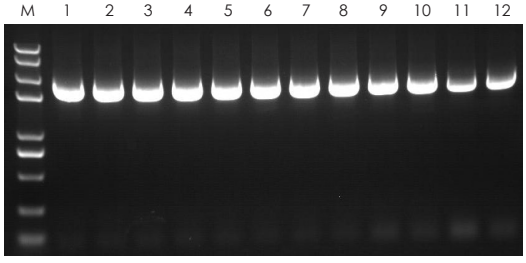
TransScript® IV One-Step gDNA Removal and cDNA Synthesis SuperMix
(AW311)

- One reaction for gDNA remove and RT: Unique gDNA Remover for simultaneous reverse transcription and genomic DNA removal.
- 5 seconds to inactive gDNA remover and RT: gDNA Remover and reverse transcriptase are simultaneously heat-inactivated at 85°C for 5 seconds.
- High thermal stability: reverse transcription reaction temperature at 42°C - 65°C.
- High synthesis ability: up to 20 kb cDNA in length.



M: *Trans2K*® Plus II DNA Marker
Total RNA used for RT-PCR:
lane #1, 1 pg; lane #2,10 pg;
lane #3, 100 pg; lane #4, 1ng;
lane #5, 10 ng; lane #6,100 ng;
lane #7, 1 μg.

RT-PCR were performed using *TransScript*® IV OneStep gDNA Removal and cDNA Synthesis SuperMix with different concentrations of human total RNA as templates. The amplified nucleic acids were analyzed by agarose gel electrophoresis.



M: *Trans2K*® Plus II DNA Marker
Amplified gene: BACH1
1-2: 50 ˚C
3-4: 55 ˚C
5-6: 56.4 ˚C
7-8: 60 ˚C
9-10: 62.5 ˚C
11-12: 65 ˚C

RT-PCR was performed with 100 ng of human total RNA at different temperature.

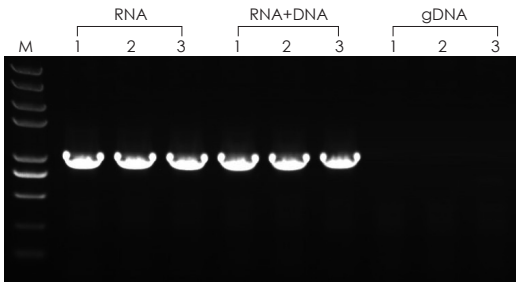
TransScript® One-Step gDNA Removal and cDNA Synthesis SuperMix

(AT311)

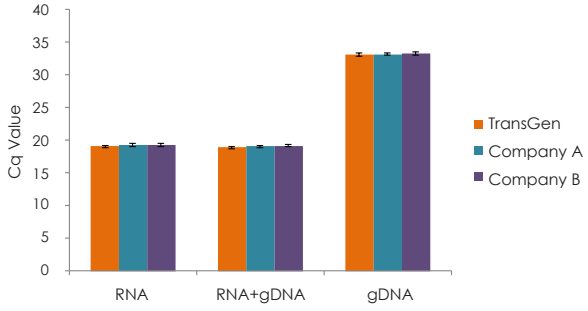
02

- One reaction for gDNA remove and RT: Unique gDNA Remover for simultaneous reverse transcription and genomic DNA removal.
- 5 seconds to inactive gDNA remover and RT: gDNA Remover and reverse transcriptase are simultaneously heat-inactivated at 85°C for 5 seconds.
- Thermal stability: reverse transcriptase reaction temperature at 42°C.
- Up to 12 kb cDNA in length.

Comparsion with Competitive Products



M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company A
3: Company B



RT-PCR was performed with (1), 100 ng of human total RNA, (2), 100 ng of human total RNA and 200 ng gDNA, (3), 200 ng gDNA, using reagents from TransGen, Company A and Company B.

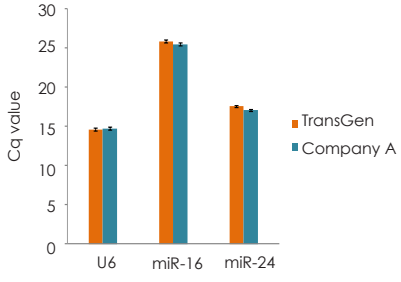
TransScript® miRNA First-Strand cDNA Synthesis SuperMix

(AT351)

03

- Optimized buffer for poly(A) polymerase and reverse transcriptase in optimized buffer, ensuring overall efficiency.
- Poly(A) tailing and cDNA synthesis in one reaction.
- Applicable for miRNA detection.

Comparsion with Competitive Product



qRT-PCR was performed for miRNA extracted from human plasma using reagens from TransGen and Company A respectively.

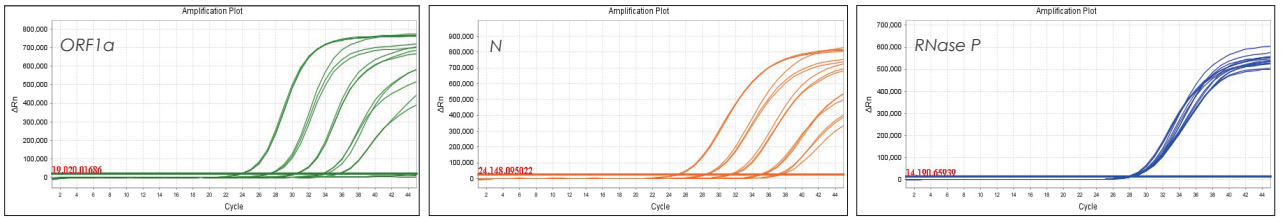
TRANSGEN

qPCR&qRT-PCR

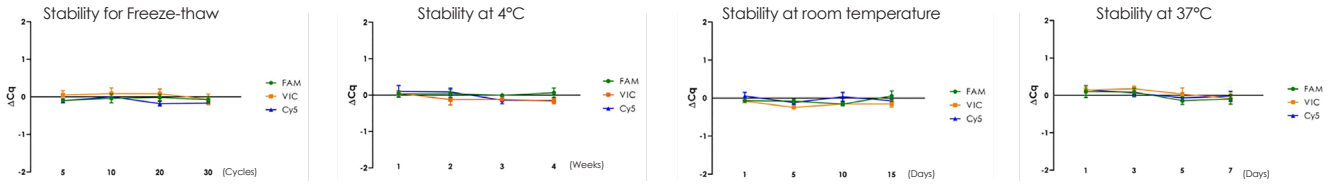
TransScript® II Multiplex Probe One-Step qRT-PCR SuperMix UDG (AQ322)

01

- UDGase and dUTP to effectively prevent PCR contamination.
- Optimized for multiplex probe based qRT-PCR.
- High stability: reagents have been tested for repeated freezing and thawing for 30 cycles, stored at room temperature for 15 days, stored at 37°C for 7 days.
- Lyophilized format is also available.



A serial of dilution of *in vitro* transcribed RNAs (5×10^6 copies/mL to 5×10^2 copies/mL, 10-fold dilution) were used as templates for qRT-PCR using *TransScript*® II Multiplex Probe One-Step qRT-PCR SuperMix UDG.

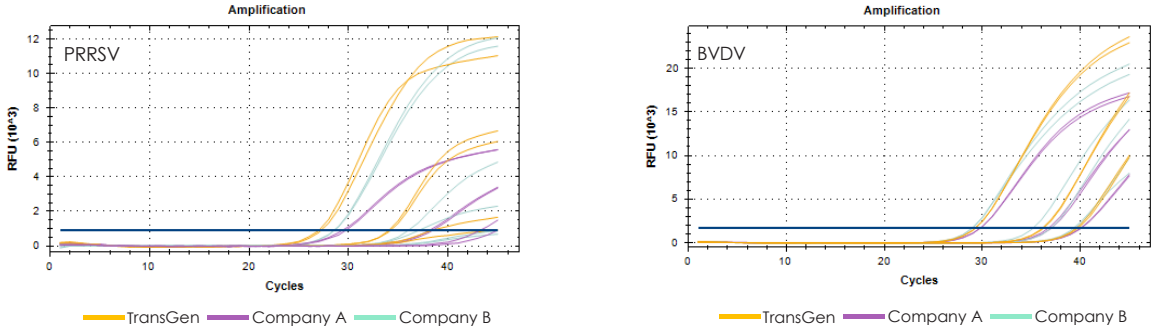


PerfectStart® II Probe qPCR SuperMix UDG (AQ712)

02

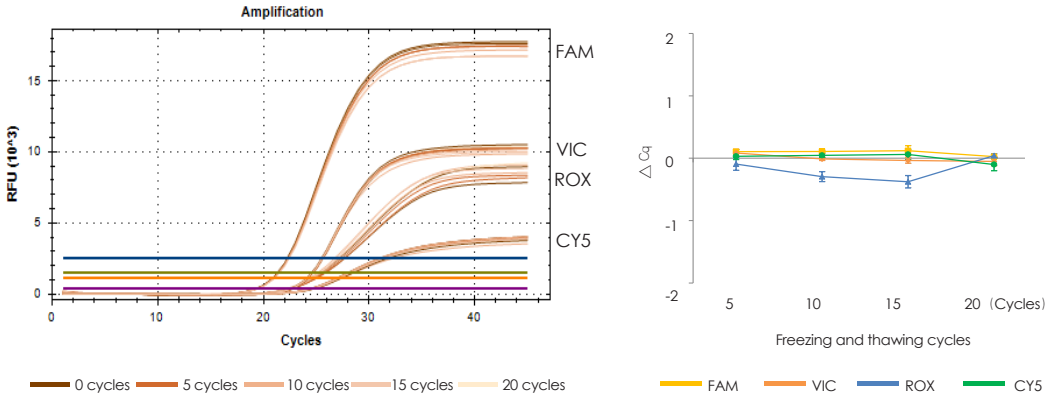
- UDGase and dUTP to effectively prevent PCR contamination.
- Three different antibodies used for high specificity, high sensitivity, and high amplification efficiency.
- Optimized for probe based qPCR.
- High stability: reagents have been tested for repeated freezing and thawing for 20 cycles.
- Lyophilized format is also available.

Comparsion with Competitive Products



Different concentrations of cDNA (10 pg, 0.1 pg, 0.01 pg) from porcine reproductive and respiratory syndrome virus (PRRSV) and cDNA (100 pg, 1 pg, 0.1 pg) from bovine viral diarrhea virus (BVDV) were used as templates to perform probe based qPCR using reagents from TransGen, Company A, and Company B.

Freeze-Thaw Study (Quadruplex)

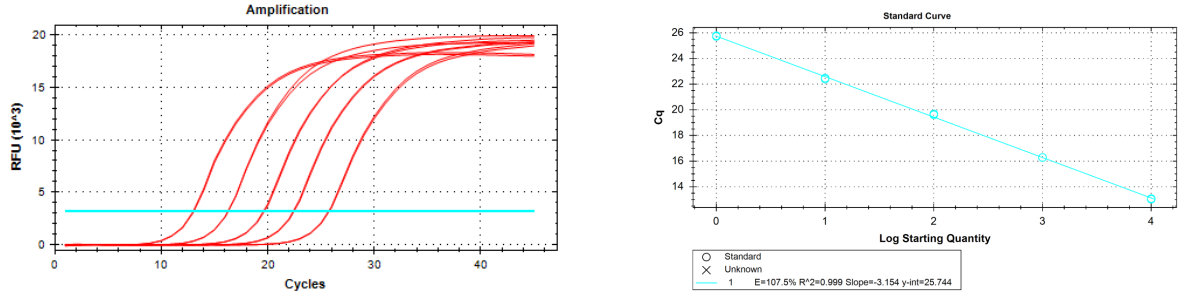


Quadruplex qPCR assays were performed using *PerfectStart*® II Probe qPCR SuperMix UDG after 5, 10, 15, and 20 cycles of freeze-thaw.

PerfectStart® Fast Green qPCR SuperMix
(AQ611)

03

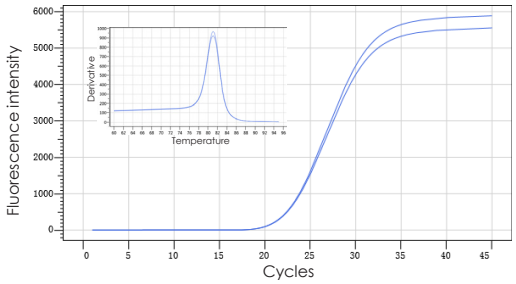
- Optimized for dye based qPCR.
- Three antibodies used for high specificity, high sensitivity, and high amplification efficiency.
- Fast amplification with 15 seconds extension time.
- Enhance specificity and reduce primer dimer formation with double cationic buffer.



With 10 fold diluted plasmid DNA (1 ng to 0.1 pg) as template, qPCR was performed with *PerfectStart*® Fast Green qPCR SuperMix.

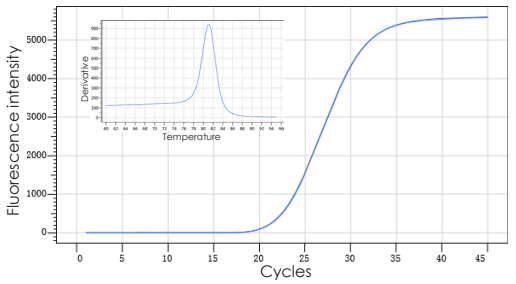
Standard two-step qPCR:

94 ˚C	30 sec	
94 ˚C	5 sec	40-45 cycles
60 ˚C	30 sec ★	
Dissociation Stage		



Two-step qPCR with *PerfectStart*® Fast Green qPCR SuperMix:

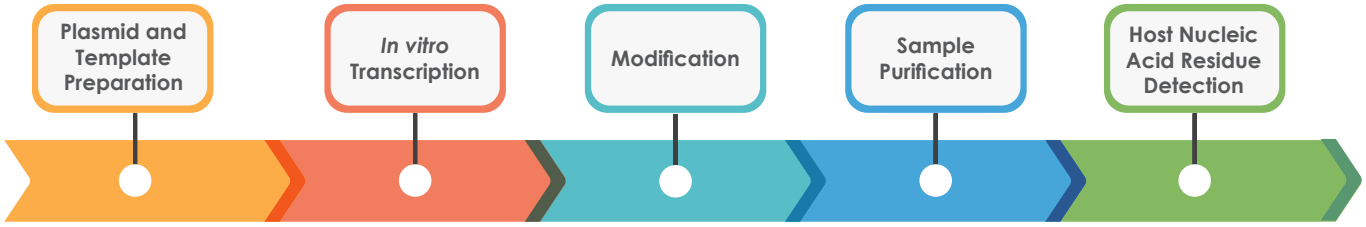
95 ˚C	1 min	
95 ˚C	5 sec	40-45 cycles
60 ˚C	15 sec ★	
Dissociation Stage		



TRANSGEN

In Vitro mRNA Synthesis

TransGen *In Vitro* mRNA Synthesis Related Products



- *EasyPure*® HiPure PlasmidMaxiPrep/ MiniPrep Kit
- Phi29 DNA Polymerase
- *FlyCut*®Series Fast Endonucleases

- T7 High Efficiency Transcription Kit
- Ribonuclease Inhibitor
- DNase I (RNase-free)
- Ppase

- mRNA Poly(A) Tailing Kit
- mRNA Capping Kit

- *MagicPure*® Size Selection DNA Beads
- *MagicPure*® RNA Beads
- *MagicPure*® mRNA Kit
- *EasyPure*® RNA Purification Kit

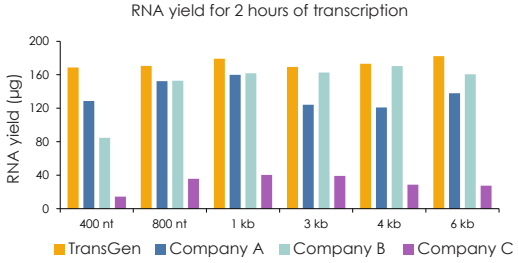
- *PerfectStart*® *E.coli* DNA Quantification Kit

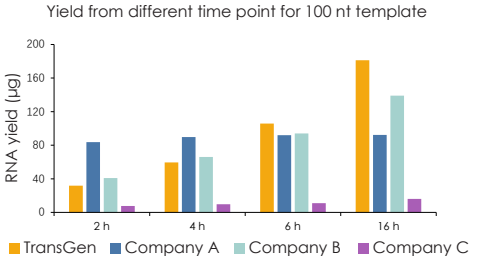
01

T7 High Efficiency Transcription Kit
(JT101)

- High yields: more than 200 μg of RNA can be produced in a 20 μL reaction volume, and milligrams of mRNA can be prepared in a single 1 mL reaction.
- Good for a variety of templates and different amount of templates: templates can be plasmids, PCR purified products, and synthetic DNA. Different amount of templates (1 ng to 2 μg) can be used for each reaction. Up to 6 kb of the transcription fragments can be obtained.

RNA yield from 2 hours reaction time

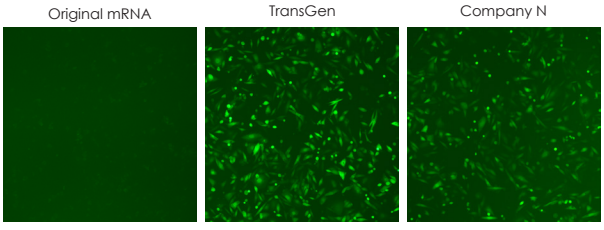




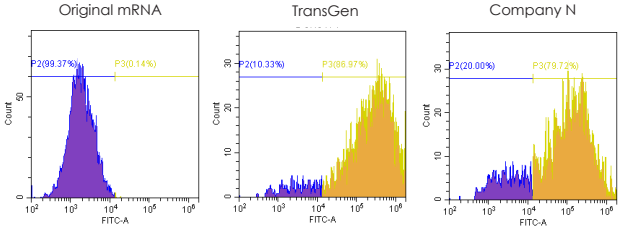
02

mRNA Capping Kit
(LC101)

- Adding vaccinia virus capping enzyme and cap structure 2'-O-methyltransferase to the target mRNA in the same reaction. Cap1 capped products can be obtained within 1 hour.



Fluorescent microscopy 48 hours post transfection



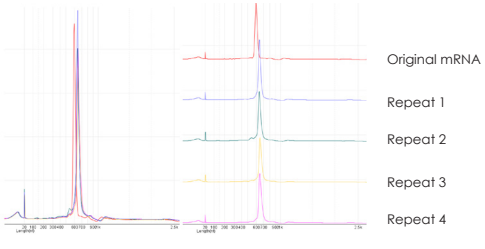
Transfection efficiency:0.14% Transfection efficiency:86.97% Transfection efficiency:79.72%

Flow cytometric sorting 48 hours post transfection

03

mRNA Poly(A) Tailing Kit
(LA201)

- Adds a poly(A) tail of at least 150 nucleotides in length to the 3' termini of RNA.
- Reaction time can be adjusted to control for tail length.
- Capped mRNA from TransGen mRNA Capping Kit (LA201) can be directly used for the tailing reaction.
- Suitable for the polyadenylation of in vitro transcribed RNA to enhance translation efficiency.



Classification	Product Name	Cat. No.	Specification
Nucleic Acid Purification	*MagicPure*® Blood Genomic DNA Kit (with Magnetic Stand)	EC101-01	50 rxns
	MagicPure® Blood Genomic DNA Kit (without Magnetic Stand)	EC101-11	50 rxns
	MagicPure® 32 Blood Genomic DNA Kit	EC101-32-11/12	32/64 rxns
	MagicPure® 96 Blood Genomic DNA Kit	EC101-96-11	96 rxns
	MagicPure® Fungi Genomic DNA Kit	EC103-01	50 rxns
	MagicPure® 32 Fungi Genomic DNA Kit	EC103-32-11/12	32/64 rxns
	MagicPure® Cell-Free DNA Kit II (with Magnetic Stand)	EC211-01	50 rxns
	MagicPure® Cell-Free DNA Kit II (without Magnetic Stand)	EC211-11	50 rxns
	MagicPure® Viral DNA/RNA Kit (with Magnetic Stand)	EC301-01	50 rxns
	MagicPure® Viral DNA/RNA Kit (without Magnetic Stand)	EC301-11	50 rxns
	MagicPure® 32 Viral DNA/RNA Kit	EC301-32-11/12	32/64 rxns
	MagicPure® 96 Viral DNA/RNA Kit	EC301-96-11	96 rxns
	MagicPure® Simple Viral DNA/RNA Kit (with Magnetic Stand)	EC311-01	50 rxns
	MagicPure® Simple Viral DNA/RNA Kit (without Magnetic Stand)	EC311-11	50 rxns
	MagicPure® Simple 32 Viral DNA/RNA Kit	EC311-32-11/12	32/64 rxns
	MagicPure® Simple 96 Viral DNA/RNA Kit	EC311-96-11	96 rxns
	MagicPure® FFPE Tissue Genomic DNA Kit	EC701-01	50 rxns
	MagicPure® Stool and Soil Genomic DNA Kit	EC801-11	50 rxns
	EasyPure® Stool Genomic DNA Kit	EE301-01	50 rxns
	EasyPure® Micro Genomic DNA Kit	EE181-01	50 rxns
	EasyPure® FFPE Tissue Genomic DNA Kit	EE191-01	50 rxns
	EasyPure® Buccal Swab Genomic DNA Kit	EE201-01	50 rxns
	EasyPure® Viral DNA/RNA Kit	ER201-01/02	50/200 rxns
	MagicPure® Host Cell Residual DNA Kit (with Magnetic Stand)	EH201-01	50 rxns
	MagicPure® Host Cell Residual DNA Kit (without Magnetic Stand)	EH201-11	50 rxns
	EasyPure® miRNA Kit	ER601-01	50 rxns
Common Used Enzymes	*TransStart*® *TopTaq* DNA Polymerase	AP151-01/02/03	250/500/6×500 units
	TransStart® *TopTaq* DNA Polymerase (with 2.5 mM dNTPs)	AP151-11/12/13	250/500/6×500 units
	PerfectStart® *Taq* DNA Polymerase	AP401-01/02/03	250/500/6×500 units
	PerfectStart® *Taq* DNA Polymerase (with 2.5 mM dNTPs)	AP401-11/12/13	250/500/6×500 units
	TransStart® *FastPfu* DNA Polymerase	AP221-01/02/03	250/500/6×500 units
	TransStart® *FastPfu* DNA Polymerase (with 2.5 mM dNTPs)	AP221-11/12/13	250/500/6×500 units
	TransStart® *FastPfu* Fly DNA Polymerase	AP231-21/22/23	250/500/6×500 units
	Phi29 DNA Polymerase	LP101-01/02	250/5×250 units
	Bst II DNA Polymerase	LP301-01/02	100/200 rxns
	Bst III DNA Polymerase	LP311-01/02	100/200 rxns
	Universal Nuclease (GMP Grade)	LN201-01/02	25/50 KU
	Uracil-DNA Glycosylase (Low Temperature)	LU201-01/02	100/500 units
	T4 DNA Ligase(for NGS)	LL101-01/02	200 μL / 1 mL
	T4 DNA Polymerase	LP201-01/02	150 units / 5×150 units
	T4 Polynucleotide Kinase	LK101-01/02	500 units / 4×500 units
	DNA Polymerase I Klenow Fragment	LE201-01	500 units
RT-PCR	*TransScript*® II Reverse Transcriptase[M-MLV,RNaseH⁻](High Temperature RT)	AH101-02	10000 units
	TransScript® One-Step gDNA Removal and cDNA Synthesis SuperMix	AT311-02/03/04	50/100/500 rxns×20 μl reaction
	TransScript® One-Step RT-PCR SuperMix	AT411-02	200 rxns×20 μl reaction
	TransScript® Uni One-Step RT-PCR SuperMix	AU411-02	200 rxns×20 μl reaction
	TransScript® IV One-Step gDNA Removal and cDNA Synthesis SuperMix	AW311-02/03	50/100 rxns
	TransScript® miRNA First-Strand cDNA Synthesis SuperMix	AT351-01	20 rxns×20 μl reaction
qPCR & qRT-PCR	*TransScript*® Green miRNA Two-Step qRT-PCR SuperMix	AQ202-01	RT reaction/qPCR reaction 20 rxns×20 μl/500 rxns×20 μl
	TransScript® Green One-Step qRT-PCR SuperMix	AQ211-01/02	100/400 rxns×20 μl reaction
	PerfectStart® II Probe qPCR SuperMix UDG	AQ712-01/02/03	1/5×1/15×1 ml
	TransScript® II Multiplex Probe One-Step qRT-PCR SuperMix UDG	AQ322-01/02	100/400 rxns×20 μl reaction
	PerfectStart® Green qPCR SuperMix	AQ601-01/02/03/04	1/5×1/15×1/25×1 ml
	PerfectStart® Fast Green qPCR SuperMix	AQ611-01/02/03/04	1/5×1/15×1/25×1 ml
	TransScript® Probe One-Step qRT-PCR SuperMix	AQ221-01/02	100/400 rxns×20 μl reaction
In Vitro mRNA Synthesis	*EasyPure*® HiPure Plasmid MiniPrep Kit	EM111-01	50 rxns
	EasyPure® HiPure Plasmid MaxiPrep Kit	EM121-01-V2	10 rxns
	FlyCut® Fast Endonuclease	See catalog	See catalog
	T7 High Efficiency Transcription Kit	JT101-01/02	25/100 rxns×20 μl
	mRNA Capping Kit	LC101-01/02	25/100 rxns
	mRNA Poly(A) Tailing Kit	LA201-01/02	25/100 rxns
	MagicPure® Size Selection DNA Beads	EC401-01/02/03/04	1/5/60/450 ml
	MagicPure® RNA Beads	EC501-01/02/03	1/5/60 ml
	MagicPure® mRNA Kit	EC511-01/02	24/96 rxns
	EasyPure® RNA Purification Kit	ER701-01	25 rxns
Related Products	*RNAhold*®	EH101-01	100 ml
	High Pure dNTPs (2.5 mM)	AD101-01/02	1/5×1 ml
	High Pure dNTPs (10 mM)	AD101-11/12	1/5×1 ml
	Ribonuclease Inhibitor	AI101-01/02	2000/5×2000 units
	DNase I (RNase-free)	GD201-01	1500 units
	Proteinase K	GE201-01	1 ml

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