



Products Catalog

Nucleic Acid Amplification
DNA / RNA Purification
Molecular Biological Reagents
Molecular Detection

2014



Company Profile

[Wizbiosolutions](#) is a new finish biotechnology company that produces and markets high-quality molecular biological reagents for the international market. We recognized producer of high-quality nucleic acid amplification reagents for PCR and RT-PCR, nucleic acid purification and molecular diagnostic reagents and etc. We will go on developing the essential reagents used in biotechnology with continuous development and technical innovation. With such spirit and readiness, [Wizbiosolutions](#) is confident that its products will be used as the world standard in the field of biotechnology reagents. [Wizbiosolutions](#) will always do its best to keep its promise.

Business Area

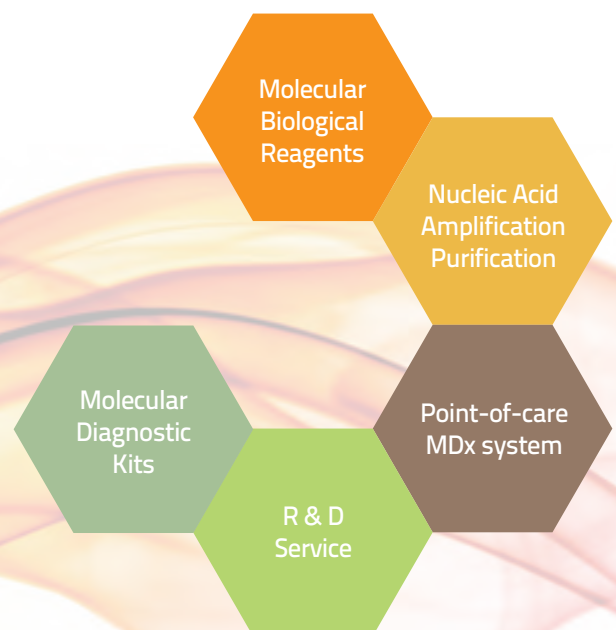
Molecular Biology Products

- Nucleic acid amplification kits
- Nucleic acid purification kits
- High quality enzymes, molecular weight markers and more

Molecular Diagnostics

- Conventional Molecular diagnostic kits
- Real-time Molecular diagnostics kits
- Ultra-fast thermal cycler
- Ultra-fast scanner
- Point-of-care molecular diagnostic system

OEM/ODM Service



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Selection guide for PCR

Products	PCR product size	Extension rate [kbp/min]	5'→3'/3'→5' Exonuclease activity	PCR product end	Specificity	Fidelity	Hot-start	Application	Convenience
Taq DNA Polymerase	<5 kb	2 ~ 4.5	Yes/No	3'-A	**	**	X	Routine PCR	*
Taq PCR 2X Master	<5 kb	2 ~ 4.5	Yes/No	3'-A	**	**	X	Routine PCR	***
Taq PCR 2X Premix	<5 kb	2 ~ 4.5	Yes/No	3'-A	**	**	X	Routine PCR	****
Taq PCR FDMix	<5 kb	2 ~ 4.5	Yes/No	3'-A	**	**	X	Routine PCR	*****
HS-Taq DNA Polymerase	<5 kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	Hot-start routine PCR	*
HS-PCR 2X Master	<5 kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	Hot-start routine PCR	***
HS-PCR 2X Premix	<5 kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	Hot-start routine PCR	****
HS-PCR FDMix	<5 kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	Hot-start routine PCR	*****
Pfu DNA Polymerase	<5 kb	1.3 x 10 ⁻⁶	Yes/Yes	blunt	****	****	X	95°C/95%	*
Pfu 2X Master	<5 kb	1.3 x 10 ⁻⁶	Yes/Yes	blunt	****	****	X	95°C/95%	***
MMLV (RNase H-)	<12kb	-	-	-	***		X	cDNA Synthesis	*
cDNA Synthesis Kit	<10kb	-	-	-	***		X	cDNA Synthesis	*
RT Master	<10kb	-	-	-	***		X	cDNA Synthesis	***
RT-PCR 2X Master	<3 kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	One-step RT-PCR	***
RT-PCR 2X Premix	<3Kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	One-step RT-PCR	****
RT-PCR FDMix	<3kb	2 ~ 4.5	Yes/No	3'-A	***	**	O	One-step RT-PCR	*****

Table 1. Guideline of PCR Enzymes & kit

Products	Taqman Probe	Interacting Dye	Anti-Carryover contamination	Hot-start	ROX reference dye	qPCR Set-up
WizPure™ qPCR Master (PROBE)	O	X	X	O	X	**
WizPure™ qPCR Master (PROBE) with ROX dye	O	X	X	O	X	**
WizPure™ qPCR Master-UDG (PROBE)	O	X	O	O	X	**
WizPure™ qPCR Master (SYBR)	X	O	X	O	X	**
WizPure™ qPCR Master (SYBR) with ROX Dye	X	O	X	O	O	**
WizPure™ qPCR Master (EVA)	X	O	X	O	X	**
WizPure™ qRT-PCR Master (PROBE)	O	X	X	O	X	**
WizPure™ qRT-PCR Master (SYBR)	X	O	X	O	X	**
WizPure™ qRT-PCR Master (EVA)	X	O	X	O	X	**
Q-Starter Pack™ : PROBE	O	X	X	O	X	****
Q-Starter Pack™ : PROBE (UDG)	O	X	O	O	X	****

Table 2. Guideline of Real-time PCR kit

Product Overview

PCR enzyme



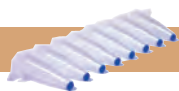
Products	Cat.no.	Package	Unit Conc.	Shelf Life	Storage
WizPure™ Taq DNA Polymerase	W1301	500 U	5 U/μl	2 years	-20°C
	W1301-5	2,500 U			
WizPure™ HS-Taq DNA Polymerase	W1311	500 U	5 U/μl	2 years	-20°C
	W1311-5	2,500 U			
WizPure™ Pfu DNA Polymerase	W1330	250 U	40 U/μl	2 years	-20°C
	W1331	500 U			
	W1331-5	2,500 U			

Master Mix (Solution mix)



Products	Cat.no.	Package	Spec.	Shelf Life	Storage
WizPure™ PCR 2X Master	W1401	1 ml	Standard	2 years	-20°C
	W1401-8	8 X 1 ml			
WizPure™ PCR 2X Master (UDG)	W1402	1 ml	Anti-carryover	2 years	-20°C
	W1402-8	8 X 1 ml			
WizPure™ HS-PCR 2X Master	W1411	1 ml	Hot-start	2 years	-20°C
	W1411-8	8 X 1 ml			
WizPure™ HS-PCR 2X Master (UDG)	W1412	1 ml	Hot-start Anti-carryover	2 years	-20°C
	W1412-8	8 X 1 ml			
WizPure™ Pfu 2X Master	W1451	1 ml	Proof reading	2 years	-20°C
	W1451-8	8 X 1 ml			
WizPure™ RT-PCR 2X Master	W2401	1 ml	One-step	1 year	-20°C
	W2401-8	8 X 1 ml			

FDmix (Dried mix)



Products	Cat.no.	Package	Spec.	Shelf Life	Storage
WizPure™ PCR FDmix	W1601	96 T	Standard	2 years	4°C / -20°C
	W1601-5	480 T			
WizPure™ PCR FDmix (UDG)	W1602	96 T	Anti-carryover	2 years	4°C / -20°C
	W1602-5	480 T			
WizPure™ HS-PCR FDmix	W1611	96 T	Hot-start	2 years	4°C / -20°C
	W1611-5	480 T			
WizPure™ HS-PCR FDmix (UDG)	W1612	96 T	Hot-start Anti-carryover	2 years	4°C / -20°C
	W1612-5	480 T			
WizPure™ RT-PCR FDmix	W2601	96 T	One-step	1 year	4°C / -20°C
	W2601-5	480 T			

Direct-PCR

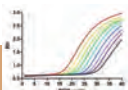


NEW

Products	Cat.no.	Package	Spec.	Shelf Life	Storage
EzDirect™ Buffer (3.0)	W5101	25 ml	Blood, tissue Swab	2 years	RT
	W5102	50 ml			
EzDirect™ PCR Master	W1441	2.5 ml	Blood, serum, plasma	1 year	-20°C
	W1441-4	10 ml			

Product Overview

Real-time PCR



Products	Cat.no.	Package	Spec.	Shelf Life	Storage
WizPure™ qPCR Master (PROBE)	W1701	1 ml	Taqman	2 years	-20°C
	W1701-8	8 X 1 ml			
WizPure™ qPCR Master (PROBE) With ROX Dye	W1701R	1 ml	Taqman	2 years	-20°C
	W1701R-8	8 X 1 ml	+ Rox dye		
WizPure™ qPCR Master-UDG (PROBE)	W1702	1 ml	Taqman	2 years	-20°C
	W1702-8	8 X 1 ml	Anti-carryover		
WizPure™ qPCR Master (SYBR)	W1711	1 ml	SYBR green	2 years	-20°C
	W1711-8	8 X 1 ml			
WizPure™ qPCR Master (SYBR) With ROX Dye	W1711R	1 ml	SYBR green	2 years	-20°C
	W1711R-8	8 X 1 ml	+ Rox dye		
WizPure™ qPCR Master (EVA)	W1721	1 ml	EvaGreen	2 years	-20°C
	W1721-8	8 X 1 ml			
WizPure™ qRT-PCR Master (PROBE)	W2701	1 ml	One-step	1 year	-20°C
	W2701-8	8 X 1 ml	Taqman		
WizPure™ qRT-PCR Master (SYBR)	W2711	1 ml	One-step	1 year	-20°C
	W2711-8	8 X 1 ml	SYBR green		
WizPure™ qRT-PCR Master (EVA)	W2721	1 ml	One-step	1 year	-20°C
	W2721-8	8 X 1 ml	EvaGreen		
NEW Q-Starter Pack™ : PROBE	W1201	8 X 0.5 ml	qPCR set-up	2 years	-20°C
NEW Q-Starter Pack™ : PROBE (UDG)	W1202	8 X 0.5 ml			
NEW ROX Reference Dye (50X)	W1100	1 ml		2 years	-20°C

cDNA Synthesis



Products	Cat.no.	Package	Spec.	Shelf Life	Storage
WizPure™ MMLV RTase (RNase H-)	W2302	10,000 U		2 years	-20°C
	W2302-5	50,000 U	>99%	2 years	-20°C
RNase Inhibitor	W2511	2,000 U	>99%	2 years	-20°C
	W2511-5	10,000 U	>99%	2 years	-20°C
WizScript™ cDNA Synthesis Kit	W2201	50 rxn	>99%	2 years	-20°C
	W2202	100 rxn	>99%	2 years	-20°C
WizScript™ RT Master	W2203	100 rxn	>99%	1 year	-20°C
	W2203-5	500 rxn		1 year	-20°C
WizScript™ RT FDmix (dT20) Comming soon	W2204	96 rxn		2 years	4°C / -20°C
	W2204-5	480 rxn		2 years	
WizScript™ RT FDmix (6mer) Comming soon	W2205	96 rxn		2 years	4°C / -20°C
	W2205-5	480 rxn		2 years	



dNTPs

Products	Cat.no.	Package	Spec.	Shelf Life	Storage
dNTP mix (2.5mM each)	W3120	1 ml		2 years	-20°C
dATP (100mM)	W3121	1 ml	>99%	2 years	-20°C
dCTP (100mM)	W3122	1 ml	>99%	2 years	-20°C
dGTP (100mM)	W3123	1 ml	>99%	2 years	-20°C
dTTP (100mM)	W3124	1 ml	>99%	2 years	-20°C
dUTP (100mM)	W3125	1 ml	>99%	2 years	-20°C
dNTP set (100mM each)	W3126	4 X 1 ml	>99%	2 years	-20°C

Product Overview

Reagents



	Products	Cat.no.	Package	Spec.	Shelf Life	Storage
	WizPure™ Agarose LE	W4001	500 g	Low EEO	2 years	R/T
	6X Loading Dye	W3201	8 X 1 ml		2 years	-20°C
	EtBr Solution	W3202	25 ml		2 years	-20°C
	100bp DNA Ladder	W3501	0.5 ml		2 years	-20°C
	1kb DNA Ladder	W3502	0.5 ml		2 years	-20°C
	Uracil DNA Glycosylase (UDG)	W6030	1,000 U		2 years	-20°C
	Proteinase K	W6050	20 mg		2 years	4°C
	RNase A	W6060	3 mg		2 years	4°C
NEW	GelStain-RED™	W3210	1 ml	Post-staining	2 years	4°C
NEW	GelStain-GREEN™	W3211	1 ml	Precast gel	2 years	4°C

Nucleic acid Extraction



	Products	Cat.no.	Package	Spec.	Shelf Life	Storage
	WizPrep™ Plasmid DNA Mini Kit	W70050-100	100 prep	Spin column	2 years	R/T
	WizPrep™ Gel/PCR Purification Mini Kit	W70150-100	100 prep	Spin column	2 years	R/T
	WizPrep™ Plant DNA Mini Kit	W71650-50	50 prep	Spin column	2 years	R/T
	WizPrep™ Plant RNA Mini Kit	W72650-50	50 prep	Spin column	2 years	R/T
NEW	WizPrep™ Viral DNA/RNA Mini Kit	W73050-100	100 prep	Spin column	2 years	R/T
	WizPrep™ gDNA Mini Kit (Blood)	W71050-100	100 prep	Spin column	2 years	R/T
	WizPrep™ gDNA Mini Kit (Cell/Tissue)	W71060-100	100 prep	Spin column	2 years	R/T
NEW	WizMag™ Blood gDNA Kit	W71055-100	100 prep	Magnetic bead	2 years	R/T
		W71055-250	250 prep			
NEW	WizMag™ Separator-8	W9055	ea			R/T

Molecular Detection Kits



	Products	Cat.no.	Package	Spec.	Shelf Life	Storage
	PVY RT-PCR Kit (Potato virus Y)	WP2001-96	96 T	Dried	2 years	4°C / -20°C
	PLRV RT-PCR Kit (Potato leafroll virus)	WP2002-96	96 T	Dried	2 years	4°C / -20°C
NEW	CMV RT-PCR Kit(Cucumber mosaic virus)	WP2003-96	96 T	Dried	2 years	4°C / -20°C
NEW	SYSV RT-PCR Kit (Shallot yellow stripe virus)	WP2004-96	96 T	Dried	2 years	4°C / -20°C
NEW	CABYV RT-PCR Kit (Cucurbit aphid-borne yellows virus)	WP2005-96	96 T	Dried	2 years	4°C / -20°C
NEW	ToCV RT-PCR Kit (Tomato chlorosis virus)	WP2006-96	96 T	Dried	2 years	4°C / -20°C
NEW	GMO (Bar gene) PCR Kit	WP2101-96	96 T	Dried	2 years	4°C / -20°C
	AHSV RT-PCR Kit (African horse sickness virus)	WA1100-96	96 T	Dried	2 years	4°C / -20°C
	VHS RT-PCR Kit (Viral Hemorrhagic Septicemia)	WF3001-96	96 T	Dried	2 years	4°C / -20°C
	TB PCR Kit	WD3001	100 T	Solution	2 years	-20°C
	TB/NTM PCR Kit	WD3002	100 T	Soution	2 years	-20°C
	TB/NTM Real-time PCR Kit	WD3003R	100 T	Solution	2 years	-20°C
	PRRS qRT-PCR Kit	WD1202R	100 T	Solution	2 years	-20°C

Comming soon



DNA Amplification

PCR Enzyme

WizPure™ Taq DNA Polymerase	7
WizPure™ HS-Taq DNA Polymerase	8
WizPure™ Pfu DNA Polymerase	9

PCR Master mix (Solution type)

WizPure™ PCR 2X Master	10
WizPure™ PCR 2X Master (UDG)	11
WizPure™ HS-PCR 2X Master	12
WizPure™ HS-PCR 2X Master (UDG)	13
WizPure™ Pfu 2X Master	14

PCR FDmix (Dried type)

WizPure™ PCR FDmix	15
WizPure™ PCR FDmix (UDG)	16
WizPure™ HS-PCR FDmix	17
WizPure™ HS-PCR FDmix (UDG)	18

WizPure™ Taq DNA Polymerase

Description

WizPure™ Taq DNA Polymerase is a thermally stable, processive, 5'→3' DNA polymerase. The 94 kDa protein possesses an inherent 5'→3' nick-translation moiety and lacks a 3'→5' proofreading function.

Contents

- WizPure™ Taq DNA Polymerase (5U/μl)
- 10X Reaction Buffer
- 2.5mM dNTP mix

Applications

- Amplification of DNA fragments shorter than 3 kb (Suitable for general PCR analysis)
- Primer extension
- Colony PCR
- Multiplex PCR
- Labeling of DNA fragments with radioactive-isotopes
- Nucleotide sequencing

Characteristics

- Error rate : 2.4×10^{-5}
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Source

Recombinant proteins expressed in *E. coli*

Properties

Activator : Mg^{2+}

Purity

Free of detectable non-specific nuclease

Unit Definition

1 unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.

Concentration

5 units/μl

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of Taq DNA Polymerase is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

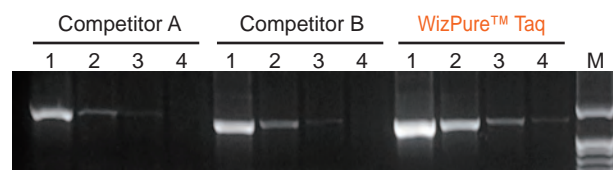


Fig 1. Comparison of PCR sensitivity with wizbiosolutions and competitor's taq DNA polymerase using a 1 kb fragment of human 18s rRNA gene.

Lane 1~4: 1/10 serial dilution sample, M: 100bp DNA ladder

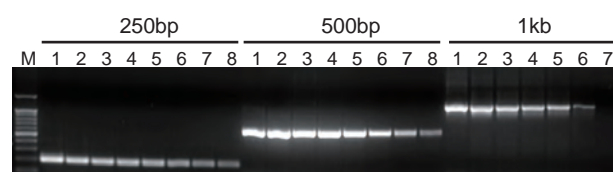


Fig 2. The enzyme activity of WizPure™ Taq DNA Polymerase was evaluated by the amplification of human gene from 100 ng human genomic DNA templates with various concentrations of enzyme.

Lane 1~8: 5U, 2U, 1U, 0.5U, 0.25U, 0.13U, 0.06U, 0.03U, M: 100bp DNA ladder,



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1301	WizPure™ Taq DNA Polymerase (5U/μl)	500 units	Taq DNA Polymerase (5U/μl), 10X Reaction
W1301-5		2,500 units	Buffer, 2.5mM dNTP mix

WizPure™ HS-Taq DNA Polymerase

Description

WizPure™ HS-Taq DNA Polymerase is a antibody based hot-start Taq DNA polymerase and quite suitable for high-specific hot-start PCR, real-time PCR and multiplex PCR. The enzyme is a highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function.

Contents

- WizPure™ HS-Taq DNA Polymerase (5U/μl)
- 10X Reaction Buffer
- 2.5mM dNTP mix

Advantage

- Reduced non-specific amplification and primer-dimer
- High PCR specificity and high sensitivity PCR amplification
- Antibody based hot-start PCR
- Room temperature reaction set-up

Applications

- Hot-start PCR
- High specific amplification of DNA fragments shorter than 3kb.
- Amplification of cDNA and genomic DNA.
- Amplification of template DNA with secondary or higher-ordered structure that is resistant to PCR amplification
- Primer extension
- Multiplex PCR

Characteristics

- Error rate : 2.4×10^{-5}
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Source

Recombinant proteins expressed in *E. coli*

Properties

Activator : Mg^{2+}

Purity

Free of detectable non-specific nuclease

Unit Definition

1 unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.

Concentration

5 units/μl

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

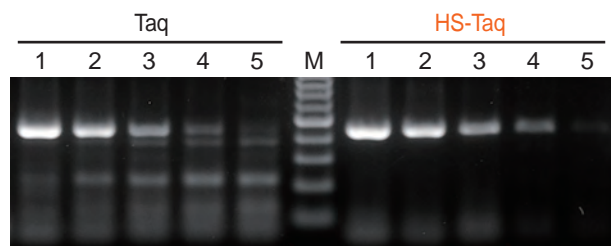
Quality Control

Each batch of HS-Taq DNA Polymerase is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Ordering Information

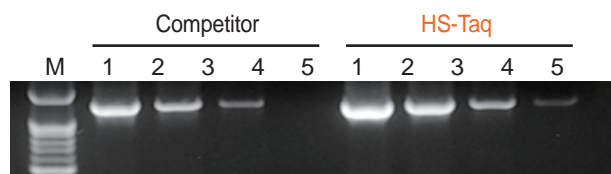
Cat. No.	Product Name	Pack Size	Kit Contents
W1412 W1412-8	WizPure™ HS-PCR 2X Master (UDG)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs(dUTP), HS-Taq DNA Polymerase, UDG and stabilizers

Technical Data



Comparison of PCR specificity with Taq and HS-Taq DNA polymerase using a 450bp fragment of human DNA gene.

M: 1kb DNA ladder, Lane 1~5: Serial diluted sample



Comparison of PCR sensitivity with wizbiosolutions and competitor's hot-start taq DNA polymerase using a 1 kb fragment of human lambda DNA gene.

M: 1kb DNA ladder, Lane 1~5: 1/10 serial diluted sample



WizPure™ Pfu DNA Polymerase

Description

WizPure™ Pfu DNA Polymerase is a highly thermostable DNA polymerase from the hyperthermophilic archaeum *Pyrococcus furiosus*. The enzyme catalyzes the template-dependent polymerization of nucleotides into duplex DNA in the 5'→3' direction. Pfu DNA Polymerase also possesses 3'→5' exonuclease (proofreading) activity. WizPure™ Pfu DNA Polymerase exhibits the lowest error rate of any thermostable DNA polymerase studied, is even up to ten fold more accurate than normal Taq DNA polymerase. Consequently, WizPure™ Pfu DNA Polymerase is useful for polymerization reactions requiring high-fidelity synthesis.

Contents

- WizPure™ Pfu DNA Polymerase (5U/μl)
- 10X Pfu Reaction Buffer
- 2.5mM dNTP mix

Applications

- High-fidelity PCR and primer-extension reactions
- Generation of PCR products for cloning and expression.
- PCR cloning and blunt-end amplification product generation
- RT-PCR for cDNA cloning and expression
- Site-directed mutagenesis
- Blunt-end PCR cloning

Characteristics

- Error rate : 1.3×10^{-6}
- Time to 1kb (72°C) : 60-120
- Thermal stability : Half life of 4 hrs at 95°C
- Blunt end products

Source

Recombinant proteins expressed in *E. coli*

Purity

Free of detectable non-specific nuclease

Unit Definition

1 unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble material in 30 minutes at 75°C.

Concentration

2.5 units/μl

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of Pfu DNA Polymerase is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1330 W1331 W1331-5	WizPure™ Pfu DNA Polymerase	250 U 500 U 2,500 U	Including 10X reaction buffer, dNTP mix, Pfu DNA Polymerase

Technical Data

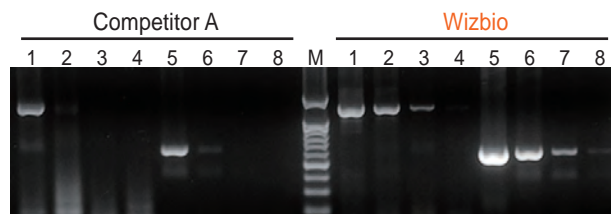


Fig 1. Comparison of PCR sensitivity with WizPure™ and competitor's pfu DNA polymerase.

M: 100bp DNA Ladder, Lane 1~4: 1.3kb of human 18s rRNA gene, 1/10 diluted sample, Lane 5~8: 650bp of human 18s rRNA gene, 1/10 diluted sample

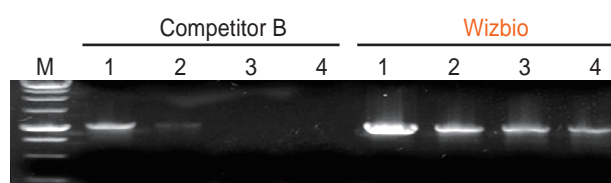


Fig 2. PCR amplification results a 10-fold serial dilution of Human lamda DNA (1kb).

M: 1kb DNA Ladder, Lane 1~4: 1/10 diluted sample



WizPure™ PCR 2X Master

Description

WizPure™ PCR 2X Master is an economical, highly efficient and ready-to-use PCR premix which can amplify templates of up to 5 kb. The amplification products are compatible with TA cloning. WizPure™ PCR 2X Master yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. WizPure™ PCR 2X Master is a highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function.

Contents

- WizPure™ PCR 2X Master : 20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM MgCl₂, 0.4mM dNTPs, Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- DNA sequencing template preparation

Characteristics

- Including loading dye for easy gel electrophoresis.
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of PCR 2X Master is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

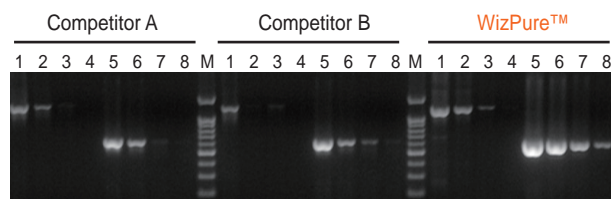


Fig 1. Comparison of PCR sensitivity with Wizbiosolutions and competitor's PCR Master mix kit using a human genomic DNA. M: 1kb DNA ladder, Lane 1~4 : 1.3kb, Lane 5~8 : 610bp, 1/10 diluted sample.



Fig 2. Comparison of PCR performance with Wizbiosolutions and competitor's PCR Master mix kit using different PCR product size. Lane M (100bp ladder), Lane 1~3 : 10-fold dilution of template DNA, PCR : 35 cycles.

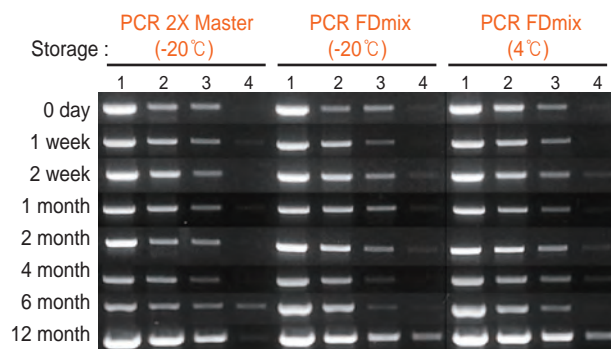


Fig 3. Stability test result with WizPure™ PCR series. Lane 1~4 : 10-fold dilution of template DNA, PCR : 35 cycles.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1401 W1401-8	WizPure™ PCR 2X Master	1 ml 8 X 1 ml	PCR 2X Master mix including reaction buffer, dNTPs, Taq DNA Polymerase and stabilizers



WizPure™ PCR 2X Master (UDG)

Description

WizPure™ PCR 2X Master (UDG) is ready-to-use PCR pre-mixes are the innovation for convenience of your routine PCR. The PCR 2X Master (UDG) is an optimized, ready-to-use PCR mixture of WizPure™ Taq DNA Polymerase, PCR buffer, MgCl₂ and dATP, dCTP, dGTP, dUTP and Uracil DNA Glycosylase (UDG), except DNA template and primers. The mixture is suitable for amplification of most of the DNA templates and highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function.

Contents

- WizPure™ PCR 2X Master (UDG)
: 20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM MgCl₂, 0.4mM dNTPs, Taq DNA Polymerase, Uracil DNA Glycosylase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup
- Prevent carryover contamination
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements

Applications

- High throughput PCR
- Routine diagnostic PCR requiring high reproducibility
- DNA sequencing template preparation

Characteristics

- Including loading dye for easy gel electrophoresis.
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of PCR 2X Master (UDG) is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

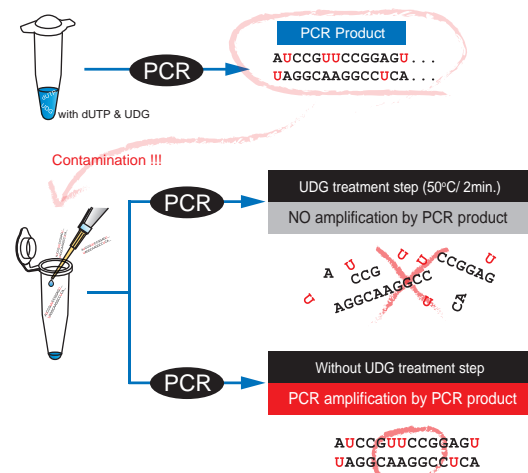


Fig 1. Principle of anti-carryover contamination using UDG (Uracil-DNA Glycosylase) technology.

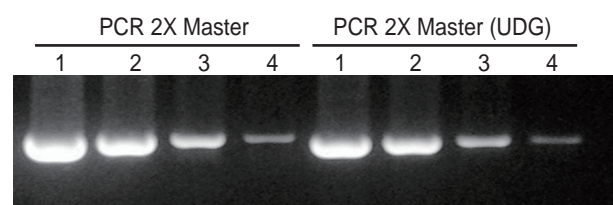


Fig 2. Comparison of PCR sensitivity with PCR 2X master and PCR 2X Master (UDG) using a 650bp fragment of human genomic DNA. M: 1kb DNA ladder, Lane 1~4: 1/10 diluted sample.

Number of Freeze-Thaw cycle :



Fig 3. Freeze-Thaw Stability test results of WizPure™ PCR 2X Master (UDG).

Amplification of a human genomic DNA. Following 25 freeze-thaw cycles, no significant effect on performance was observed. Lane M (100bp ladder), Lane 1~4 : 10-fold dilution of template DNA, PCR : 35 cycles.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1402 W1402-8	WizPure™ PCR 2X Master (UDG)	1 ml 8 X 1 ml	PCR 2X Master mix including reaction buffer, dNTPs (dUTP), Taq DNA Polymerase, UDG and stabilizers



WizPure™ HS-PCR 2X Master



Description

WizPure™ HS-PCR 2X Master is ready-to-use Hot-start PCR pre-mixes are the innovation for convenience of your routine PCR. The HS-PCR 2X Master is an optimized, ready-to-use PCR mixture of WizPure™ HS-Taq DNA Polymerase, PCR buffer, $MgCl_2$ and dNTP's, except DNA template and primers. The mixture is suitable for amplification of most of the DNA templates and highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Contents

- WizPure™ HS-PCR 2X Master :
20mM Tris-HCl (pH 8.6), 100mM KCl, 3mM $MgCl_2$, 0.4mM dNTPs (dATP, dCTP, dGTP, dTTP), 50 units/ml HS-Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup
- Reduced non-specific amplification and primer-dimer
- High PCR specificity and high sensitivity PCR amplification
- Antibody based hot-start PCR
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Hot-start PCR
- Primer extension
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

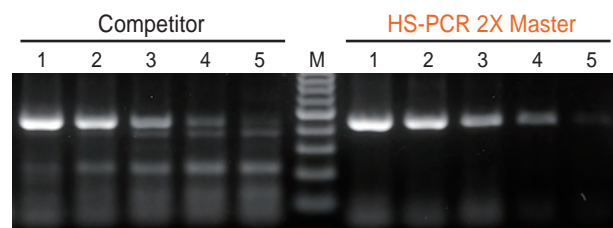
Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of HS-PCR 2X Master is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data



Comparison of PCR sensitivity with WizPure™ HS-PCR 2X Master and competitor's hot-start PCR Master kit using a 1 kb fragment of human 18s rRNA gene.

M: 100bp DNA Ladder, Lane 1~4: 1/10 diluted sample.



Fig 2. Comparison of PCR performance with Wizbiosolutions and competitor's PCR Master mix kit using different PCR product size. Lane M (100bp ladder), Lane 1~3 : 10-fold dilution of template DNA, PCR : 35 cycles.

Number of Freeze-Thaw cycle :



Fig 3. Stability of WizPure™ HS-PCR 2X Master through multiple freeze-thaw events. Freeze-thaw events were performed by allowing HS-PCR 2X Master to thaw from -20°C to room temperature. A 630bp fragment was amplified using the PCR 2X Master after 25 freeze-thaw cycles.

Lane M (100bp ladder), Lane 1~4 : 10-fold dilution of template DNA PCR : 35 cycles.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1411 W1411-8	WizPure™ HS-PCR 2X Master	1 ml 8 X 1 ml	HS-PCR 2X Master mix including reaction buffer, dNTPs, HS-Taq DNA Polymerase and stabilizers

WizPure™ HS-PCR 2X Master (UDG)



Description

WizPure™ HS-PCR 2X Master (UDG) is ready-to-use Hot-start PCR pre-mixes are the innovation for convenience of your routine PCR. The HS-PCR 2X Master is an optimized, ready-to-use PCR mixture of WizPure™ HS-Taq DNA Polymerase, PCR buffer, $MgCl_2$ and dATP, dCTP, dGTP, dUTP and Uracil DNA Glycosylase (UDG), except DNA template and primers. The mixture is suitable for amplification of most of the DNA templates and highly processive 5'→3' DNA polymerase that lacks 3'→5' exonuclease activity and lacks a 3'→5' proofreading function.

Contents

- WizPure™ HS-PCR 2X Master (UDG) :
20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM $MgCl_2$, 0.4mM dNTPs (dUTP), HS-Taq DNA Polymerase, Uracil DNA Glycosylase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup
- Reduced non-specific amplification and primer-dimer
- High PCR specificity and high sensitivity PCR amplification
- Prevent carryover contamination
- Antibody based hot-start PCR
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Hot-start PCR
- Primer extension
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of HS-PCR 2X Master (UDG) is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

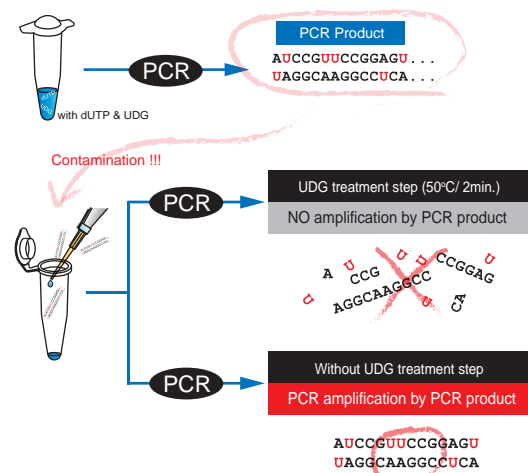


Fig 1. Principle of anti-carryover contamination using UDG (Uracil-DNA Glycosylase) technology.

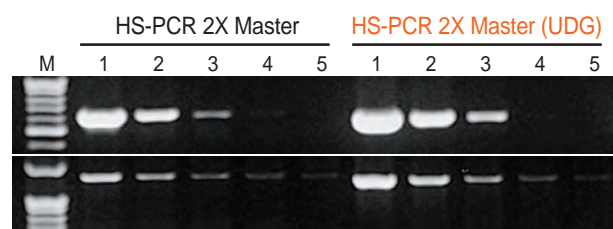
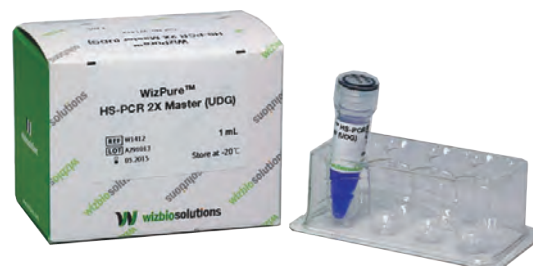


Fig 2. Comparison of PCR sensitivity with HS-PCR 2X Master and HS-PCR 2X Master (UDG) using a 1.3kb (up) & 650bp (down) fragment of human genomic DNA. M: 100bp DNA ladder, Lane 1-5: 1/10 diluted sample.

Number of Freeze-Thaw cycle :



Fig 3. Stability of WizPure™ HS-PCR 2X Master (UDG) through multiple freeze-thaw events. Freeze-thaw events were performed by allowing PCR 2X Master (UDG) to thaw from -20°C to room temperature. A 630bp fragment was amplified using the PCR 2X Master (UDG) after 25 freeze-thaw cycles. Lane M (100bp ladder), Lane 1~4 : 10-fold dilution of template DNA PCR : 35 cycles.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1412 W1412-8	WizPure™ HS-PCR 2X Master (UDG)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs(dUTP), HS-Taq DNA Polymerase, UDG and stabilizers

WizPure™ Pfu 2X Master

Description

WizPure™ Pfu 2X Master is ready-to-use Pfu DNA polymerase pre-mixes are the innovation for convenience of your routine PCR as you just have to add your template DNA besides your primers & put the tubes for amplifications.

WizPure™ Pfu 2X Master is an optimized, ready-to-use PCR mixture of Pfu DNA Polymerase, PCR buffer, $MgCl_2$ and dNTP's. This Pfu 2X Master contains all components for PCR, except DNA template and primers. The mixture is suitable for amplification of most of the DNA templates.

In addition to 5' to 3' DNA polymerase activity, Pfu DNA Polymerase also possesses 3' to 5' exonuclease (proofreading) activity. Pfu DNA Polymerase exhibits the lowest error rate of any thermostable DNA polymerase studied, is even up to ten fold more accurate than normal Taq DNA polymerase. Consequently, Pfu DNA Polymerase is useful for polymerization reactions requiring high-fidelity synthesis.

Contents

- WizPure™ Pfu 2X Master

Applications

- High-fidelity PCR and primer-extension reactions
- Generation of PCR products for cloning and expression.
- PCR cloning and blunt-end amplification product generation
- RT-PCR for cDNA cloning and expression
- Site-directed mutagenesis
- Blunt-end PCR cloning

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of Pfu 2X Master is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

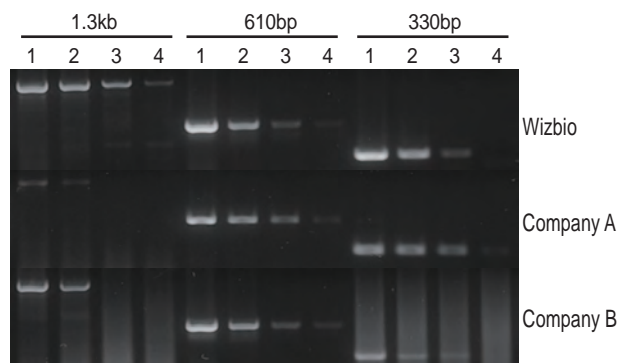


Fig 1. Comparison of PCR sensitivity with WizPure™ and competitor's Pfu 2X Master mix. Lane 1~4: 1/10 diluted sample.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1451 W1451-8	WizPure™ Pfu 2X Master	1 ml 8 X 1 ml	Pfu 2X Master mix including reaction buffer, dNTPs, Pfu DNA Polymerase and stabilizers



WizPure™ PCR FDmix

Description

WizPure™ PCR FDmix combines all the reagents necessary for successful routine PCR in a convenient individually aliquot and lyophilized in single-tube. WizPure™ PCR FDmix is an economical, highly efficient and ready-to-use PCR premix which can amplify templates of up to 5 kb. The amplification products are compatible with TA cloning. WizPure™ PCR FDmix yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes. WizPure™ PCR FDmix without gel loading dyes is also available for applications when loading dyes are undesired.

Contents

- WizPure™ PCR FDmix :
20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM MgCl₂, 0.4mM dNTPs, Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use dried type
- Easy reaction setup (pre-aliquot in 8-strip tube)
- High PCR specificity and high sensitivity PCR amplification
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements
- Eliminating extra pipetting steps and multiple reagents reduces contamination risk and provides better reproducibility

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Primer extension
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of PCR FDmix is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Technical Data

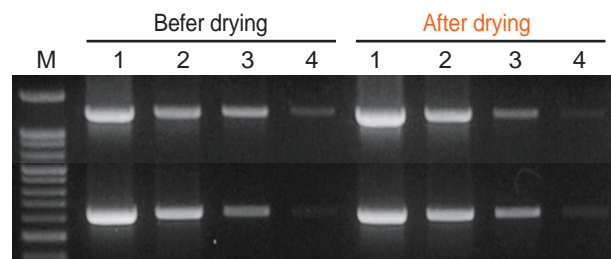


Fig 1. Comparison of PCR performance with Taq and PCR FDmix using different PCR product size. M: 1kb DNA ladder, Lane 1~5: Serial diluted sample.

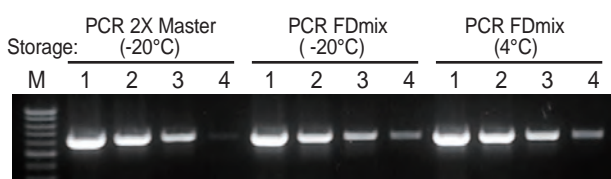


Fig 2. Comparison of stability with PCR 2X Master mix and PCR FDmix storage after 6 months. Lane M (100bp ladder), Lane 1~4 : 10-fold dilution of template DNA, PCR : 35 cycles. Lane M: 100bp ladder.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1601	WizPure™ PCR FDmix	96 T	Including reaction buffer, dNTPs, Taq DNA Polymerase, and stabilizers
W1601-5		480 T	



WizPure™ PCR FDMix (UDG)



Description

WizPure™ PCR FDMix (UDG) combines all the reagents necessary for successful routine PCR in a convenient individually aliquoted and lyophilized in single-tube. WizPure™ PCR FDMix (UDG) is an economical, highly efficient and ready-to-use PCR premix of WizPure™ Taq DNA Polymerase, PCR buffer, MgCl₂ and dATP, dCTP, dGTP, dUTP and Uracil DNA Glycosylase (UDG), except DNA template and primers. UDG and dUTP are included in the mixture to prevent the reamplification of carryover PCR products between reactions. dUTP in the mix ensures that any amplified DNA will contain uracil. UDG removes uracil residues from single- or double-stranded DNA, preventing dU-containing DNA from serving as template in future PCRs. Incubation of subsequent PCRs with UDG before cycling destroys any contaminating dU-containing PCR product from previous reactions.

WizPure™ PCR FDMix (UDG) yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Contents

- WizPure™ PCR FDMix (UDG) :
20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM MgCl₂, 0.4mM dNTPs (dUTP), Taq DNA Polymerase, Uracil DNA Glycosylase and stabilizers.

Advantage

- Ready-to-use dried type
- Easy reaction setup (pre-aliquot in 8-strip tube)
- Prevent carryover contamination
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements
- Eliminating extra pipetting steps and multiple reagents reduces contamination risk and provides better reproducibility

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Primer extension
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of PCR FDMix (UDG) is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1602 W1602-5	WizPure™ PCR FDMix (UDG)	96 T 480 T	Including reaction buffer, dNTPs, Taq DNA Polymerase, Uracil DNA Glycosylase and stabilizers

Technical Data

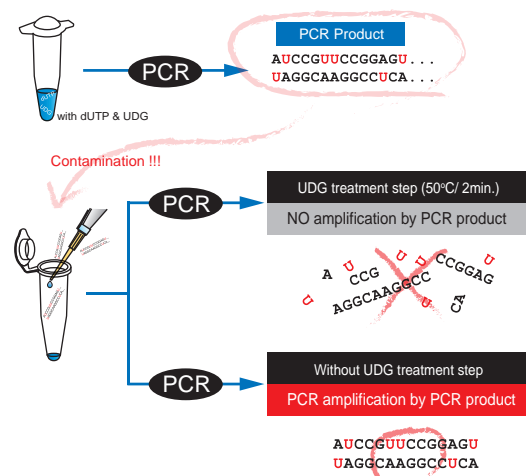


Fig 1. Principle of anti-carryover contamination using UDG (Uracil-DNA Glycosylase) technology.

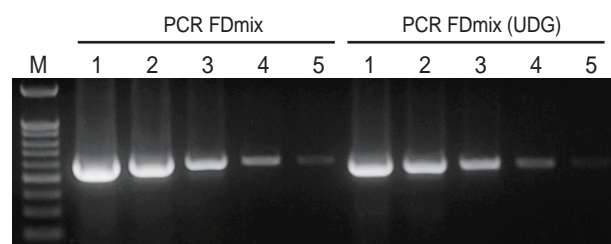


Fig 2. Comparison of PCR performance with PCR FDMix and PCR FDMix (UDG). Lane M (100bp ladder), Lane 1~5 : 10-fold dilution of template DNA, PCR : 35 cycles. Lane M: 100bp ladder



WizPure™ HS-PCR FDMix



Description

WizPure™ HS-PCR FDMix combines all the reagents necessary for successful hot-start PCR in a convenient individually aliquot and lyophilized in single-tube. WizPure™ HS-PCR FDMix is an optimized, economical, highly efficient and ready-to-use hot-start PCR premix which can amplify templates of up to 5 kb. The PCR mixture of hot-start Taq DNA Polymerase, PCR buffer, $MgCl_2$ and dNTP's. This HS-PCR FDMix contains all components for PCR, except DNA template and primers. The mixture is suitable for amplification of most of the DNA templates. Tested for absence of endo nucleases & exo nucleases and is also tested for amplification of single gene copy.

WizPure™ HS-PCR FDMix yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning. PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Contents

- WizPure™ HS-PCR FDMix :
20mM Tris-HCl (pH 8.6), 100mM KCl, 2mM $MgCl_2$, 0.4mM dNTPs, HS-Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use dried type
- Easy reaction setup (pre-aliquot in 8-strip tube)
- High PCR specificity and high sensitivity PCR amplification
- Reduced non-specific amplification and primer-dimer
- Antibody based hot-start PCR
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements
- Eliminating extra pipetting steps and multiple reagents reduces contamination risk and provides better reproducibility

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Hot-start PCR
- Primer extension
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

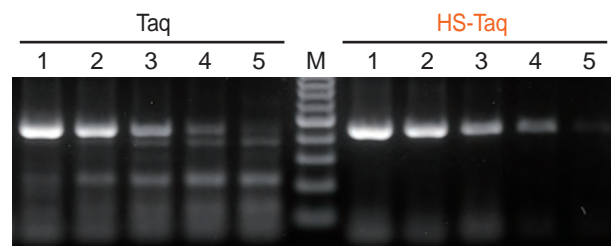
Quality Control

Each batch of HS-PCR FDMix is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1611	WizPure™ HS-PCR FDMix	96 T	Including reaction buffer, dNTPs, HS-Taq DNA
W1611-5		480 T	Polymerase, and stabilizers

Technical Data



Comparison of PCR specificity with Taq and HS-Taq DNA polymerase using a 450bp fragment of human DNA gene.

M: 1kb DNA ladder, Lane 1~5: Serial diluted sample



Fig 2. Comparison of PCR performance with Wizbiosolutions and competitor's PCR Master mix kit using different PCR product size. Lane M (100bp ladder), Lane 1~3 : 10-fold dilution of template DNA, PCR : 35 cycles.

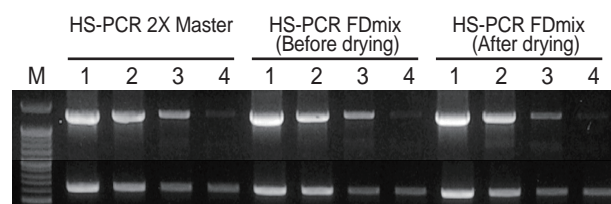


Fig 2. Comparison of PCR performance with HS-PCR Master mix and HS-PCR FDMix using different PCR product size.

Lane M (100bp ladder), Lane 1~4 : 10-fold dilution of template DNA, PCR : 35 cycles. Lane M: 100bp ladder



WizPure™ HS-PCR FDMix (UDG)



Description

WizPure™ HS-PCR FDMix (UDG) combines all the reagents necessary for successful routine hot-start PCR in a convenient individually aliquot and lyophilized in single-tube. WizPure™ HS-PCR FDMix (UDG) is an economical, highly efficient and ready-to-use PCR premix of WizPure™ HS-Taq DNA Polymerase, PCR buffer, MgCl₂ and dATP, dCTP, dGTP, dUTP and Uracil DNA Glycosylase (UDG), except DNA template and primers. UDG and dUTP are included in the mixture to prevent the reamplification of carryover PCR products between reactions. dUTP in the mix ensures that any amplified DNA will contain uracil. UDG removes uracil residues from single- or double-stranded DNA, preventing dU-containing DNA from serving as template in future PCRs. Incubation of subsequent PCRs with UDG before cycling destroys any contaminating dU-containing PCR product from previous reactions. WizPure™ HS-PCR FDMix (UDG) yields excellent and consistent results in routine PCR reactions as well as high-throughput PCR genotyping, colony PCR, RT-PCR and PCR cloning.

Contents

- WizPure™ HS-PCR FDMix (UDG) : Tris-HCl, KCl, MgCl₂, dNTPs (dUTP), HS-Taq DNA Polymerase, Uracil DNA Glycosylase and stabilizers.

Advantage

- Ready-to-use dried type
- Easy reaction setup (pre-aliquot in 8-strip tube)
- Prevent carryover contamination
- High PCR specificity and high sensitivity PCR amplification
- Antibody based hot-start PCR
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements
- Eliminating extra pipetting steps and multiple reagents reduces contamination risk and provides better reproducibility

Applications

- High through-put PCR
- Routine diagnostic PCR requiring high reproducibility
- Primer extension
- Hot-start PCR
- Multiplex PCR
- High specific amplification of DNA fragments shorter than 3kb.

Characteristics

- Including loading dye for easy gel electrophoresis.
- Thermal stability : Half life of 40 min at 95°C
- A-tail formation at 3' ends of amplified duplex DNA.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of HS-PCR FDMix (UDG) is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by DNA amplification in comparison with two previous batches.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1612	WizPure™ HS-PCR FDMix (UDG)	96 T	Including reaction buffer, dNTPs, HS-Taq DNA Polymerase, Uracil DNA Glycosylase and stabilizers
W1612-5		480 T	

Technical Data

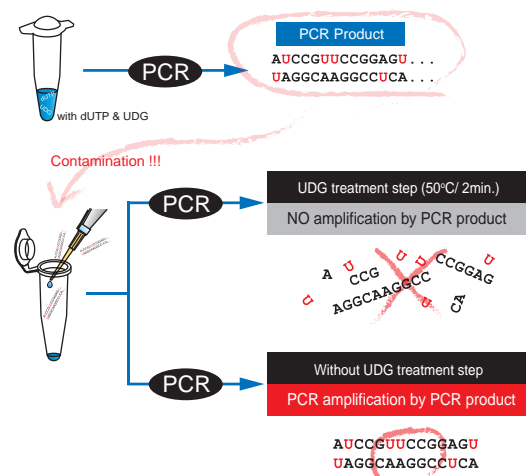


Fig 1. Principle of anti-carryover contamination using UDG (Uracil-DNA Glycosylase) technology.

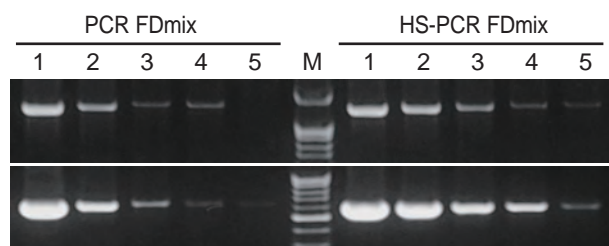


Fig 2. Comparison of PCR specificity with PCR FDMix and HS-PCR FDMix using a 1.2kb (upper) and 650bp (lower) fragment of gene. M: 100bp DNA ladder, Lane 1-5: Serial diluted sample.





RT-PCR / cDNA Synthesis

Enzyme

WizPure™ MMLV RTase (RNase H-) 20

RT-PCR Master mix (Solution type)

WizPure™ RT-PCR 2X Master 21

RT-PCR FDmix (Dried type)

WizPure™ RT-PCR FDmix 22

cDNA Synthesis

WizScript™ cDNA Synthesis Kit 23

WizScript™ RT Master 24

WizScript™ RT FDmix (dT20) *Comming soon*

WizScript™ RT FDmix (6mer) *Comming soon*

WizPure™ MMLV RTase (RNase H-)

Description

WizPure™ MMLV RTase (RNase H-) is a genetically modified M-MLV Reverse Transcriptase which exhibits RNA or DNA dependent DNA polymerase, but lacks ribonuclease H activity. This enzyme can synthesize a complementary DNA strand initiating from a primer using RNA or DNA templates. Removal of the RNase H activity results in an increase of full-length cDNA products. The RNase H activity degrades the RNA part of the cDNA/RNA hybrid following reverse transcription, which may prevent its inhibition during subsequent PCR steps.

Contents

- MMLV RTase (RNase H-) (200U/μl)
- 5X Reaction Buffer

Applications

- cDNA synthesis
- RNA analysis by primer extension
- DNA labeling

Characteristics

- RNase H negative
- Molecular weight : 71 kDa
- Reaction temperature : 37°C ~ 42°C
- Heat inactivation : 70°C / 10 min

Unit Definition

1 unit is defined as the amount of enzyme required to incorporate 1 nmol of dTTP into acid insoluble material in 10 minutes at 37°C using poly r(A)/oligo (dT) as a substrate.

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of MMLV RTase is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by cDNA synthesis and PCR amplification in comparison with two previous batches.

Technical Data

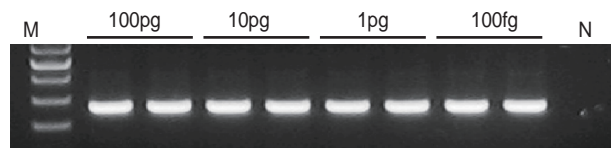


Fig 1. Sensitivity of WizPure™ M-MuLV RTase. A 259 bp fragment of the human beta-actin gene was RT-PCR amplified from the indicated amounts of human total RNA.

M: 100bp DNA ladder, N: negative control.

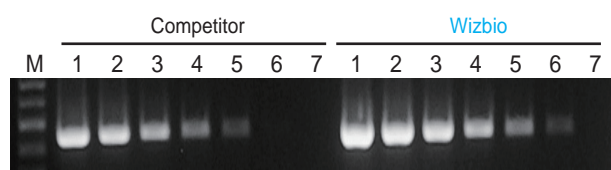


Fig 2. Comparison of MMLV RTase sensitivity with Wizbiosolutions and competitor's by a 10-fold serial dilution of PRRSV (450bp).

M : 100bp DNA ladder.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2302	WizPure™ MMLV RTase (RNase H-)	10,000 U	Including 5X Reaction buffer, MMLV RTase
W2302-5		50,000 U	



WizPure™ RT-PCR 2X Master



Description

WizPure™ RT-PCR 2X Master combines all the reagents necessary for successful routine RT-PCR in a convenient one-step format. The RT-PCR 2X Master is an optimized, ready-to-use PCR mixture of WizPure™ MMLV RTase (RNase H-), HS-Taq DNA Polymerase, PCR buffer, MgCl₂ and dNTP's, except RNA template and primers.

The master-mixed formulation saves time and reduces potential contaminating errors by eliminating several pipetting steps. WizPure™ RT-PCR 2X Master is specifically designed to amplify targets up to 1.0 kb and is free of detectable nonspecific nucleases. An enhanced buffer allows for RT reaction temperatures up to 50°C. This can improve detection of more difficult targets as higher RT temperatures reduce nonspecific priming and facilitate melting of RNA secondary structures.

RT-PCR converts and amplifies single-stranded RNA template yielding double-stranded DNA product. In the RT step, reverse transcriptase synthesizes single-stranded DNA molecules complementary to the RNA template (first-strand cDNA). During the PCR step, a thermostable DNA polymerase first synthesizes second-strand DNA complementary to the first-strand cDNA molecules. This generates a double-stranded DNA template which is exponentially amplified in subsequent rounds of thermal cycling. RT-PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Contents

- WizPure™ RT-PCR 2X Master

Applications

- Routine and direct RT-PCR amplification of RNA templates
- Multiple band detection or genotyping

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of RT-PCR 2X Master is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by RT-PCR amplification in comparison with two previous batches.

Technical Data

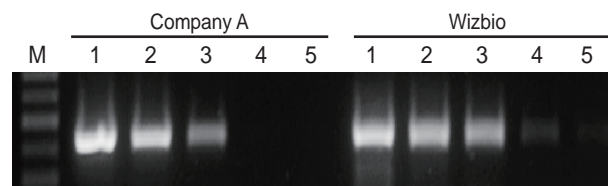


Fig 1. Comparison of RT-PCR sensitivity with WIZBIO and competitor's by a 10-fold serial dilution of Influenza virus M gene.

RT : 45°C/30min, PCR : 35 cycles, Lane 1~5 : 10-fold dilution of Influenza viurs RNA, M : 100bp DNA ladder.

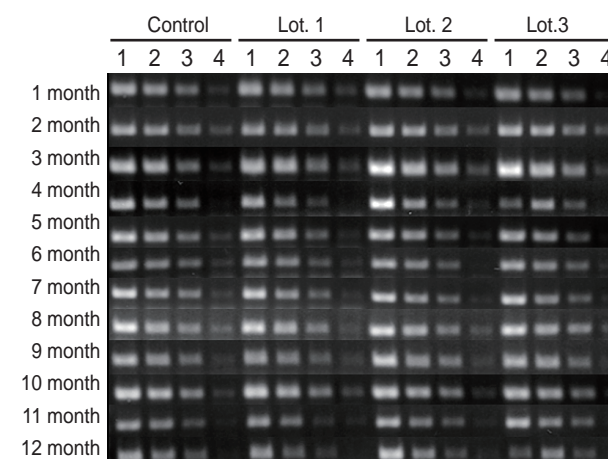


Fig 2. Stability test WizPure™ RT-PCR 2X Master mix with Influenza virus M gene.

Control : RT-PCR 2X Master mix prepared just before each test. RT : 45°C/30min, PCR : 35 cycles, Lane 1~5 : 10-fold dilution of Influenza viurs RNA, M : 100bp DNA ladder.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2401 W2401-8	WizPure™ RT-PCR 2X Master	1 ml 8 X 1 ml	RT-PCR 2X Master mix including reaction buffer, dNTPs, MMLV RTase (RNase H-), HS-Taq DNA Polymerase and stabilizers



WizPure™ RT-PCR FDMix



Description

WizPure™ RT-PCR FDMix combines all the reagents necessary for successful routine RT-PCR in a convenient individually aliquot and lyophilized in single-tube, one-step format. The RT-PCR FDMix is an optimized, ready-to-use PCR mixture of WizPure™ MMLV RTase (RNase H-), HS-Taq DNA Polymerase, PCR buffer, $MgCl_2$ and dNTP's, except RNA template and primers. The premixed formulation saves time and reduces potential contaminating errors by eliminating several pipetting steps. WizPure™ RT-PCR FDMix produces fast, highly-specific and ultra-sensitive one-step RT-PCR, from either total RNA or mRNA using gene-specific primers. An enhanced buffer allows for RT reaction temperatures up to 50°C. This can improve detection of more difficult targets as higher RT temperatures reduce nonspecific priming and facilitate melting of RNA secondary structures.

In addition, the RT-PCR FDMix includes the hot-start Taq DNA polymerase, which has been shown to improve the sensitivity and specificity for certain targets.

RT-PCR converts and amplifies single-stranded RNA template yielding doublestranded DNA product. In the RT step, reverse transcriptase synthesizes single-stranded DNA molecules complementary to the RNA template (first-strand cDNA). During the PCR step, a thermostable DNA polymerase first synthesizes second-strand DNA complementary to the first-strand cDNA molecules. This generates a double-stranded DNA template which is exponentially amplified in subsequent rounds of thermal cycling. RT-PCR reactions can be directly loaded onto an agarose gel without the additional need of loading buffer and dyes.

Contents

- WizPure™ RT-PCR FDMix :
Reaction buffer, MMLV RTase (RNase H-), HS-Taq DNA Polymerase, Stabilizers.

Advantage

- Ready-to-use dried type
- Easy reaction setup (pre-aliquot in 8-strip tube)
- High PCR specificity and high sensitivity PCR amplification
- Room temperature reaction set-up
- Contains loading dye for visual confirmation and quick electrophoresis
- Minimal optimization requirements
- Eliminating extra pipetting steps and multiple reagents reduces contamination risk and provides better reproducibility

Applications

- High through-put RT-PCR
- Routine and direct RT-PCR amplification of RNA templates
- Multiple band detection or genotyping

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of RT-PCR FDMix is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by RT-PCR amplification in comparison with two previous batches.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2601	WizPure™ RT-PCR FDMix	96 T	Including reaction buffer, dNTPs, HS-Taq Polymerase, MMLV RTase (RNase H-), and stabilizers.
W2601-5		480 T	

Technical Data

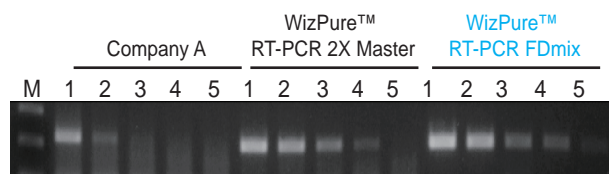


Fig. Comparison of sensitivity with WIZBIO and competitor's by a 10-fold serial dilution of FCV capsid gene.

RT : 45°C/30min, PCR : 35 cycles, Lane 1~5 : 10-fold dilution of FCV RNA, M : 100bp DNA ladder.

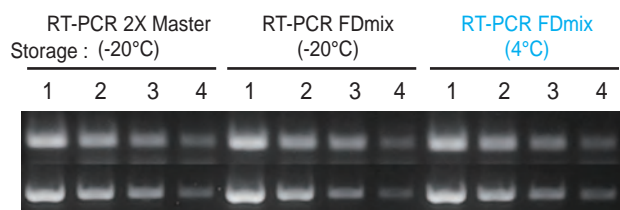


Fig. Stability test result with WizPure™ RT-PCR FDMix after 1 year, Target : FCV (216bp), Influenza virus (430bp)

RT : 45°C/30min, PCR : 35 cycles, Lane 1~4 : 10-fold dilution of template RNA.



WizScript™ cDNA Synthesis Kit

Description

WizScript™ cDNA Synthesis Kit is a complete system for the efficient synthesis of first strand cDNA from RNA templates. The recombinant Ribonuclease Inhibitor, supplied with the kit effectively protects RNA template from degradation. The kit is also supplied with both oligo dT and random primers. The oligo dT anneals selectively on the poly(A) tail of mRNA. Random primers do not require the presence of poly(A). Therefore, they can be used for transcription of the 5'-end regions of mRNA. Gene-specific primers may also be used with the kit. The first strand of cDNA can be directly used as a template in PCR.

Contents

- WizScript™ RTase (200U/μl)
- 10X Reaction Buffer
- RNase Inhibitor (40U/μl)
- dNTP mix (2.5mM)
- Oligo dT₂₀ primer (50pM)
- Random hexamer (50pM)
- DTT (100 mM)
- RNase free water

Applications

- First Strand cDNA synthesis for RT-PCR
- Construction of cDNA libraries
- Generation of probes for hybridization
- Antisense RNA synthesis

Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of cDNA Synthesis Kit is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by cDNA synthesis and PCR amplification in comparison with two previous batches.

Technical Data

Diagram of cDNA synthesis

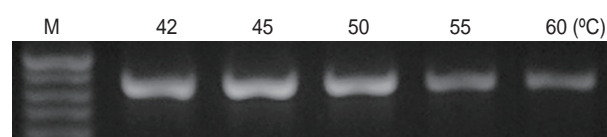
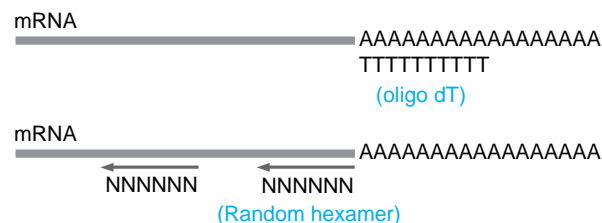


Fig 1. 600ng of Total Human heart muscle RNA were used in a reverse transcription reaction with WizScript™ cDNA Synthesis Kit at different temperatures from 42°C to 60°C and PCR was performed using of 4ul of cDNA synthesized at temperature up to 60°C with WizPure™ PCR 2X Master.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2201	WizScript™ cDNA Synthesis Kit	10,000 U	Including Reaction buffer, MMLV RTase, dNTP mix, Random Hexamer, Oligo dT, RNase Inhibitor, DTT.
W2202		50,000 U	



WizScript™ RT Master

Description

WizScript™ RT Master is a complete system for the efficient synthesis of first strand cDNA from RNA templates.

WizScript™ RT Master included MMLV RTase (RNase H-) which is an RNA-dependent DNA polymerase that is used in cDNA synthesis with long RNA templates. The lack of RNase H activity is important in this application in that RNase H activity will start to degrade template during long incubation times which are required for producing long cDNAs. RNase H minus RT enables preparation of long cDNAs and libraries containing a high percentage of full-length cDNA.

The kit is also supplied with both oligo dT and random primers. The oligo dT anneals selectively on the poly(A) tail of mRNA. Random primers do not require the presence of poly(A). Therefore, they can be used for transcription of the 5'-end regions of mRNA. Gene-specific primers may also be used with the kit. The first strand of cDNA can be directly used as a template in PCR.

Contents

- WizScript™ RT Master
: containing WizScript™ RTase, RNase inhibitor, stabilizer and reaction buffer containing optimized concentrations of $MgCl_2$, dNTPs and DTT.

Applications

- First Strand cDNA synthesis for RT-PCR
- Construction of cDNA libraries
- Generation of probes for hybridization
- Antisense RNA synthesis

Shipping & Storage Conditions

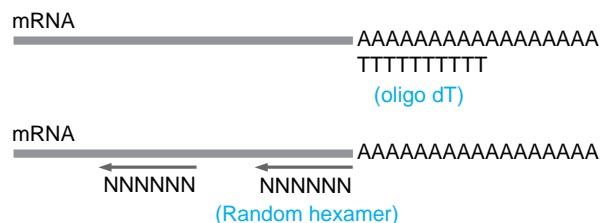
Store all components at -20°C in a non-frost-free freezer.

Quality Control

Each batch of RT Master is tested for absence of unspecific exonuclease, endonuclease, and ribonuclease activities. The function of the enzyme is checked by cDNA synthesis and PCR amplification in comparison with two previous batches.

Technical Data

Diagram of cDNA synthesis



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2203	WizScript™ RT Master	100 rxn	Including Reaction buffer, MMLV RTase, dNTP mix, Random Hexamer, Oligo dT, RNase Inhibitor, DTT.





Direct-PCR

Direct-PCR Buffer

EzDirect™ Buffer (3.0) 26

Direct-PCR Master mix (Solution type)

EzDirect™ PCR Master 27

EzDirect™ Buffer (3.0)

Description

EzDirect™ Buffer (3.0) is designed to perform PCR directly from various samples with no prior DNA purification. Samples such as blood, plasma, serum, buccal swabs, saliva, tissue and plant (leaf & seed) are suitable materials. This kit is extremely easy and simple, just mix with the sample and buffer for preparing PCR.

Contents

- EzDirect™ Buffer (3.0)

Advantage

- No DNA/RNA preparation step
- Easy and fast (>10min)
- Simple protocol
- No need proteinase K step

Applications

- Direct-PCR for blood, plasma, serum, buccal swabs, saliva, tissue and plant (leaf & seed)

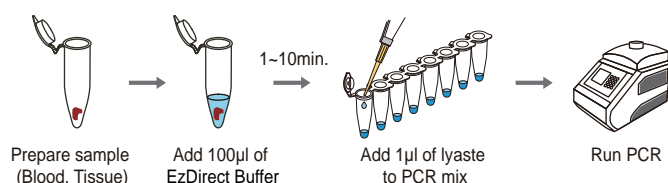
Shipping & Storage Conditions

Store at room temperature.

Quality Control

Sensitivity and reproducibility in direct-PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Simple Protocol



Technical Data

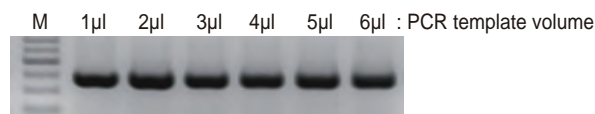


Fig 1. Whole blood direct PCR results with WizPure™ EzDirect Buffer. 10µl of whole blood mixed with WizPure™ EzDirect Buffer and after incubation step 1~6µl of supernatant used as PCR template. Lane M : 100bp DNA marker.

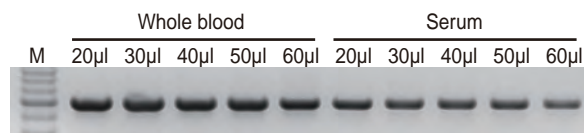


Fig 2. Whole blood direct PCR results with WizPure™ EzDirect Buffer. 20~60µl of whole blood and serum mixed with WizPure™ EzDirect Buffer and store at R/T for 10min. After incubation step 1µl of supernatant used as PCR template. Lane M : 100bp DNA marker.

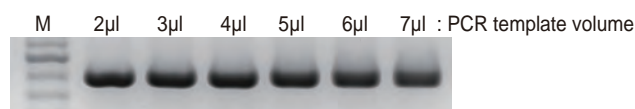


Fig 3. Animal tissue direct PCR results with WizPure™ EzDirect Buffer. After incubation step (10 min.) 2~7µl of supernatant used as PCR template. Lane M : 100bp DNA marker.

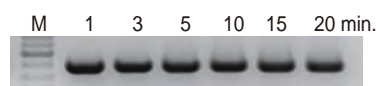


Fig 4. Animal tissue direct PCR results with WizPure™ EzDirect Buffer. 10mg of porcine tissue mixed with WizPure™ EzDirect Buffer and store at different time from 1min to 20min. After incubation step 1µl of supernatant used as PCR template. Lane M : 100bp DNA marker.

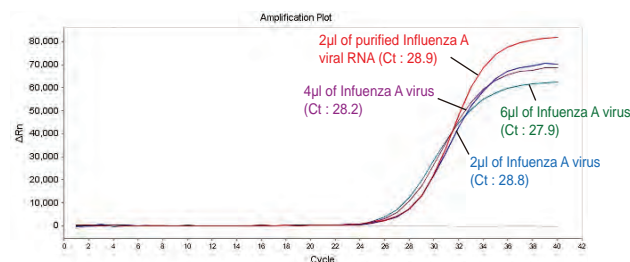


Fig 5. Direct and one-step real-time RT-PCR test results of Influenza A virus by EzDirect™ Buuffer & WizPure™ qRT-PCR 2X Master (Probe) kit.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W5101	EzDirect™ Buffer (3.0)	25 ml	
W5102		50 ml	

EzDirect™ PCR Master

Description

EzDirect™ PCR Master is designed to perform PCR directly from biological sample such including such as whole blood, plasma and serum are suitable materials. This kit is extremely easy and simple, just add the sample and primer for PCR.

Contents

- EzDirect™ PCR Master mix

Advantage

- All-in-on solution
- Ready-to-use solution
- Easy reaction setup

Applications

- Direct-PCR for blood, plasma, serum and other fluidic sample

Characteristics

- No DNA/RNA preparation step
- Easy and fast
- Simple protocol

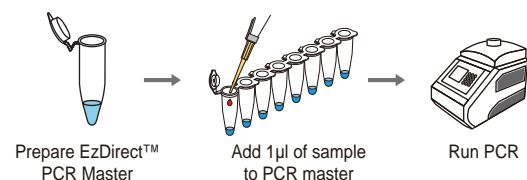
Shipping & Storage Conditions

Store all components at -20°C in a non-frost-free freezer.

Quality Control

Sensitivity and reproducibility in direct-PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Simple Protocol



Technical Data

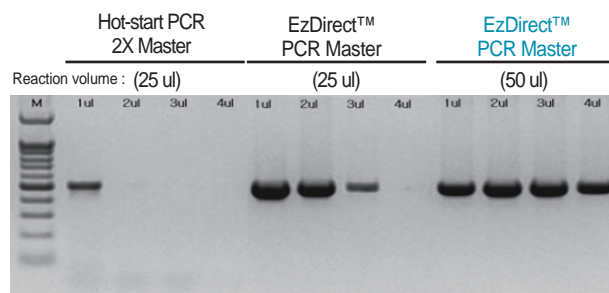


Fig 1. Whole blood direct PCR results with WizPure™ EzDirect Buffer. 10µl of whole blood mixed with WizPure™ EzDirect Buffer and after incubation step 1~6µl of supernatant used as PCR template. Lane M : 100bp DNA marker.

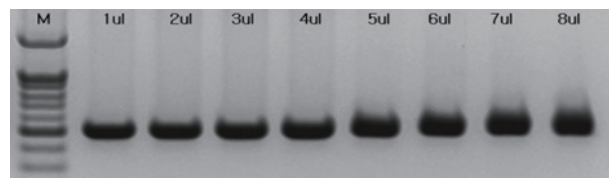


Fig 2. Serum direct-PCR results with EzDirect™ PCR Master. Add 1~8ul of serum were place directly into EzDirect™ PCR Master and run PCR reaction. Lane M : 100bp DNA marker

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1441	EzDirect™ PCR Master	2.5 ml	
W1441-4		10 ml	



Real-time PCR

Real-time PCR

WizPure™ qPCR Master (PROBE)	29
WizPure™ qPCR Master-UDG (PROBE)	30
WizPure™ qPCR Master (SYBR)	31
WizPure™ qPCR Master (EVA)	32

Real-time RT-PCR

WizPure™ qRT-PCR Master (PROBE)	33
WizPure™ qRT-PCR Master (SYBR)	34
WizPure™ qRT-PCR Master (EVA)	35

Real-time PCR Set-up

Q-Starter Pack™ : PROBE	36
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Reference Dye

ROX Reference Dye (50X)	37
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WizPure™ qPCR Master (PROBE)

Description

WizPure™ qPCR Master (PROBE) is ready-to-use 2X reagent ideal for most quantitative Real-time PCR applications. The master mix is recommended for use with Labeled Fluorescent Probes, e.g. for 5'-Nuclease Assays or Hybridization probes. The qPCR Master (PROBE) is an optimized, ready-to-use PCR mixture of WizPure™ HS-Taq DNA Polymerase, PCR buffer, MgCl₂ and dNTP's, except DNA template and primers. The kit includes the components necessary for performing PCR amplification, and have been successfully used to amplify and detect a variety of DNA targets such as genomic DNA, cDNA and plasmid DNA.

Contents

- WizPure™ qPCR Master (PROBE)
: including reaction buffer, dNTPs, HS-Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup

Applications

- Real-time PCR
- Gene expression profiling
- Gene knockdown verification
- Array validation
- Bacterial & Viral detection

Characteristics

- Reversible Hot-start Technology
- For universal Real-time PCR master mix
- Include ultra-pure hot-start Taq DNA polymerase
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.
Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

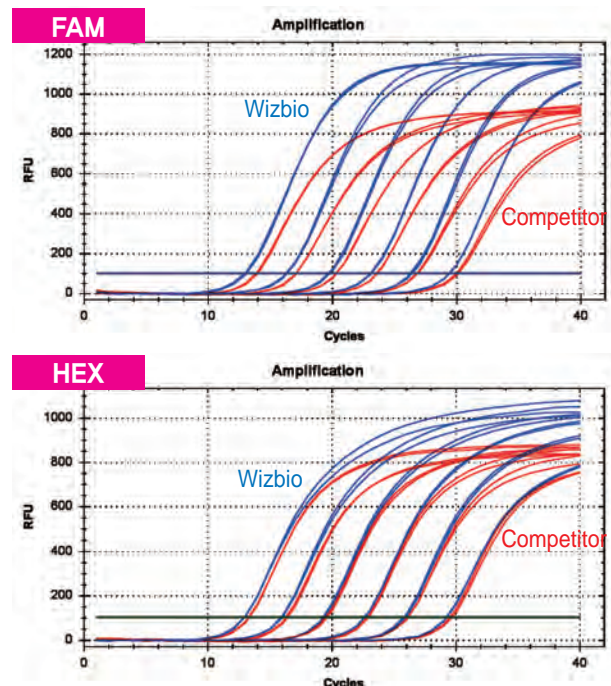


Fig 1. Comparison of sensitivity with Wizbiosolutions and competitor's Real-time PCR Master mix kit using a different fluorescence probe. Blue line : Wizbiosolutions, Red line : Competitor.

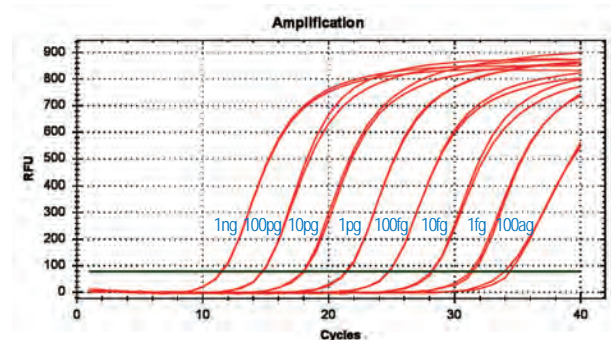


Fig 2. Real-time PCR sensitivity test with WizPure™ qPCR Master (PROBE) kit using a human genomic DNA from 1ng to 100ag.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1701 W1701-8	WizPure™ qPCR Master (PROBE)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs, HS-Taq DNA Polymerase and stabilizers
W1701R W1710R-8	WizPure™ qPCR Master (PROBE) with ROX	1 ml 8 X 1 ml	Including qPCR Master (PROBE), ROX Reference dye



WizPure™ qPCR Master-UDG (PROBE)



Description

WizPure™ qPCR Master (PROBE) is ready-to-use 2X reagent ideal for most quantitative Real-time PCR applications. The master mix is recommended for use with Labeled Fluorescent Probes, e.g. for 5'-Nuclease Assays or Hybridization probes. The qPCR Master (PROBE) is an optimized, ready-to-use PCR mixture of WizPure™ HS-Taq DNA Polymerase, PCR buffer, MgCl₂ and dNTP's, except DNA template and primers. The kit includes the components necessary for performing PCR amplification, and have been successfully used to amplify and detect a variety of DNA targets such as genomic DNA, cDNA and plasmid DNA.

Contents

- WizPure™ qPCR Master (PROBE)
: including reaction buffer, dNTPs, HS-Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup

Applications

- Real-time PCR
- Gene expression profiling
- Gene knockdown verification
- Array validation
- Bacterial & Viral detection

Characteristics

- Reversible Hot-start Technology
- For universal Real-time PCR master mix
- Include ultra-pure hot-start Taq DNA polymerase
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

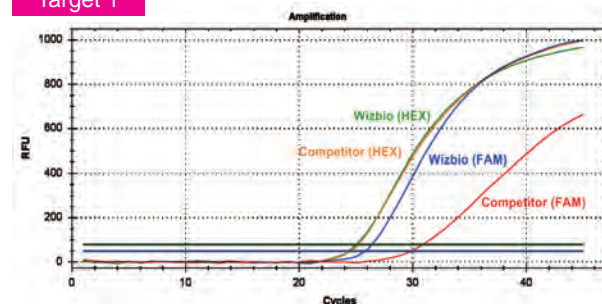
Upon receipt, store all components at -20°C.
Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

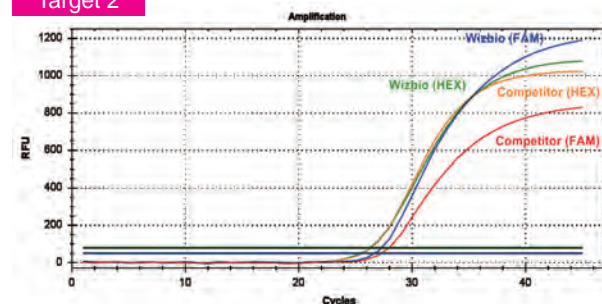
Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

Target 1



Target 2



Target 3

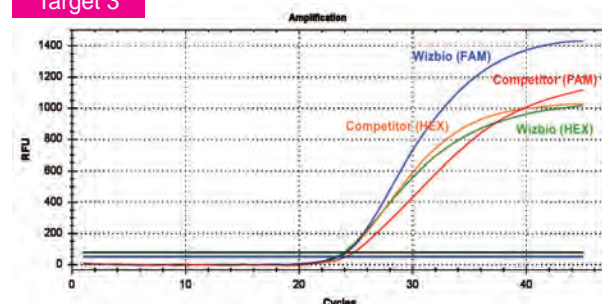


Fig 1. Comparison of Real-time PCR amplification with Wizbiosolutions and competitor's Real-time PCR Master mix kit using a different HLA target gene and fluorescence probe.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1702 W1702-8	WizPure™ qPCR Master-UDG (PROBE)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs(dUTP), UDG, HS-Taq DNA Polymerase and stabilizers



WizPure™ qPCR Master (SYBR)

Description

WizPure™ qPCR Master (SYBR) is an optimized ready-to-use solution for real-time quantitative PCR assays, incorporating SYBR Green I dye. It comprises all the components necessary to perform qPCR: WizPure™ HS-Taq DNA Polymerase, ultrapure dNTPs, MgCl₂ and SYBR Green I dye. The user simply needs to add water, template and primers. Hot start DNA Polymerase is activated by a 5 minutes incubation step at 95°C. This prevents extension of nonspecifically annealed primers and primer-dimers formed at low temperatures during qPCR setup.

The kit includes the components necessary for performing PCR amplification, and have been successfully used to amplify and detect a variety of DNA targets such as genomic DNA, cDNA and plasmid DNA.

Contents

- WizPure™ qPCR Master (PROBE)
: including reaction buffer, dNTPs, HS-Taq DNA Polymerase, SYBR green I, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup

Applications

- Real-time PCR
- Detection and quantification of DNA and cDNA targets
- Gene expression profiling
- Gene knockdown verification
- Microbial detection
- Viral load determination
- Array validation
- SNP genotyping

Characteristics

- Reversible Hot-start Technology
- For universal Real-time PCR master mix
- Include ultra-pure hot-start Taq DNA polymerase
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.

Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

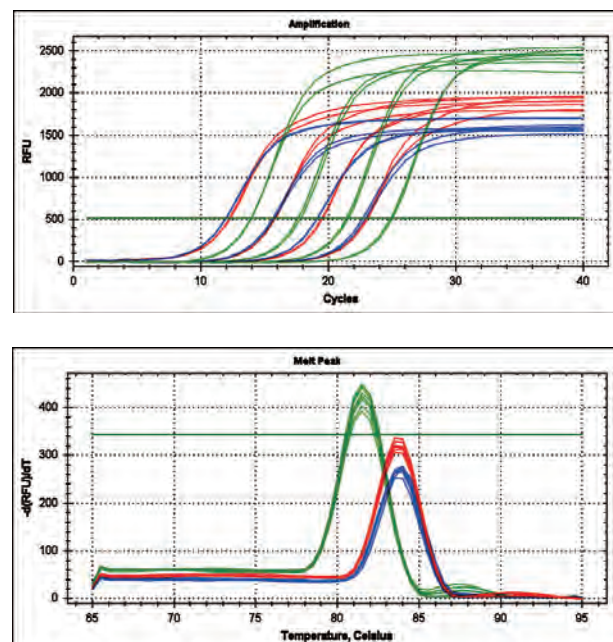


Fig 1. Comparison test results of WizPure™ qPCR Master (SYBR) and competitor's SYBR green I Real-time-PCR kit using a human beta-actin gene by CFX96 system (Bio-Rad).

Red : WizPure™ qPCR Master (SYBR), Green : Roche's SYBR green kit, Blue : Bio-Rad's SYBR green kit.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1711 W1711-8	WizPure™ qPCR Master (SYBR)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs, SYBR green I, HS-Taq DNA Polymerase and stabilizers
W1711R W1711R-8	WizPure™ qPCR Master (SYBR) with ROX	1 ml 8 X 1 ml	Including qPCR Master (SYBR), ROX Reference dye



WizPure™ qPCR Master (EVA)



Description

WizPure™ qPCR Master (PROBE) is ready-to-use 2X reagent ideal for most quantitative Real-time PCR applications. The master mix is recommended for use with Labeled Fluorescent Probes, e.g. for 5'-Nuclease Assays or Hybridization probes. The qPCR Master (PROBE) is an optimized, ready-to-use PCR mixture of WizPure™ HS-Taq DNA Polymerase, PCR buffer, MgCl₂ and dNTP's, except DNA template and primers. The kit includes the components necessary for performing PCR amplification, and have been successfully used to amplify and detect a variety of DNA targets such as genomic DNA, cDNA and plasmid DNA.

Contents

- WizPure™ qPCR Master (PROBE)
: including reaction buffer, dNTPs, HS-Taq DNA Polymerase, stabilizers.

Advantage

- Ready-to-use solution
- Easy reaction setup

Applications

- Real-time PCR
- Gene expression profiling
- Gene knockdown verification
- Array validation
- Bacterial & Viral detection

Characteristics

- Reversible Hot-start Technology
- For universal Real-time PCR master mix
- Include ultra-pure hot-start Taq DNA polymerase
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.
Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

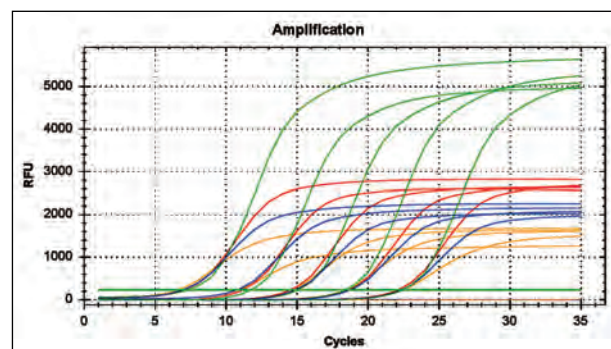


Fig 1. Comparison test results of WizPure™ qPCR Master (SYBR), WizPure™ qPCR Master (EVA) and competitor's SYBR green I Real-time-PCR kit using human beta-actin gene by CFX96 system (Bio-Rad).

Green : WizPure™ qPCR Master (EVA)
Red : WizPure™ qPCR Master (SYBR)
Blue : Roche's SYBR green kit
Orange : Bio-Rad's SYBR green kit



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1721 W1721-8	WizPure™ qPCR Master (EVA)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs(dUTP), Eva green, HS-Taq DNA Polymerase and stabilizers

WizPure™ qRT-PCR Master (PROBE)

Description

WizPure™ qRT-PCR Master (PROBE) is an optimised ready-to-use solution for one-step quantitative RT-PCR assays. The master mix is recommended for use with Labeled Fluorescent Probes, e.g. for 5'-Nuclease Assays or Hybridization probes. It comprises all the components necessary to perform qRT-PCR: MMLV RTase (RNase H-), antibody based hot-start Taq DNA Polymerase, ultrapure dNTPs and MgCl₂. The user simply needs to add water, template and primers. An enhanced buffer allows for RT reaction temperatures up to 50°C. This can improve detection of more difficult targets as higher RT temperatures reduce nonspecific priming and facilitate melting of RNA secondary structures. The kit includes the components necessary for performing RT-PCR amplification, and have been successfully used to DNA amplify and detect a variety of RNA targets. The kit provides a one-step, simple, robust, inexpensive assay for detection and quantitative analysis of gene expression directly from cells or RNA with intercalator format.

Contents

- WizPure™ qRT-PCR Master (PROBE)
: including reaction buffer, dNTPs, MMLV RTase, RNase Inhibitor, HS-Taq DNA Polymerase, stabilizers.

Advantage

- All-in-one solution
- Ready-to-use solution
- Easy reaction setup

Applications

- Routine and direct RT-PCR amplification of RNA templates
- Multiple band detection or genotyping
- Virus detection
- Gene-expression analysis
- cDNA library construction
- 3 and 5 RACE, RT-PCR

Characteristics

- Reversible Hot-start Technology
- Modified thermostable reverse transcriptase with remove RNase H activity
- For universal Real-time RT-PCR master mix
- Include ultrapure enzymes
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.
Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

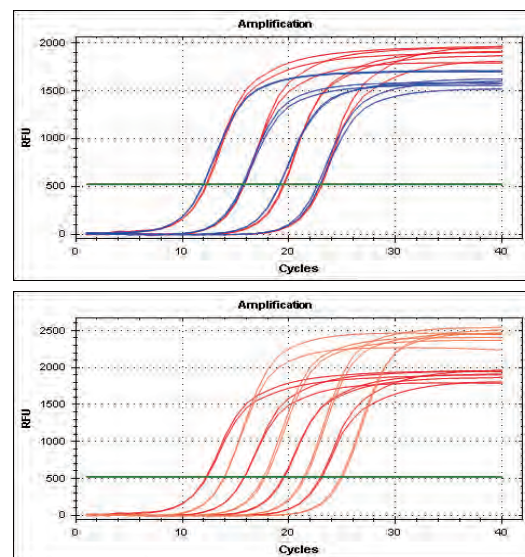


Fig 1. Comparison of sensitivity with Wizbiosolutions and competitor's Real-time PCR Master mix kit using a human GAPDH gene.
Red : Wizbiosolution, Blue : Bio-Rad, Orange : Roche.

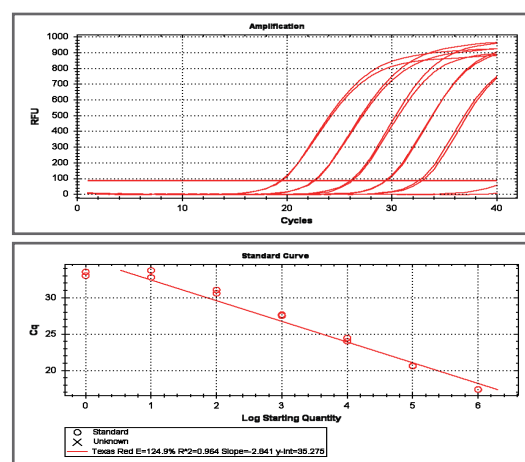
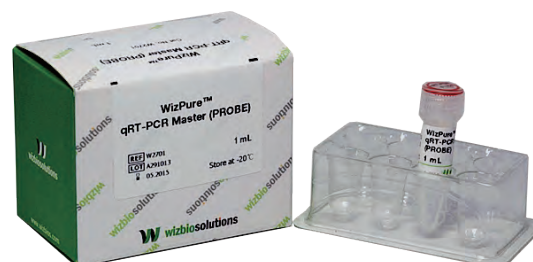


Fig 2. One-step quantitative RT-PCR reaction using the WizPure™ qRT-PCR Master (PROBE) Kit.
Human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) was detected in total RNA samples (n=2) ranging from 100 ng to 10 fg on the Bio-Rad CFX96 System.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2701 W2701-8	WizPure™ qRT-PCR Master (PROBE)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs, HS-Taq Polymerase, MMLV RTase, RNase Inhibitor and stabilizers

WizPure™ qRT-PCR Master (SYBR)

Description

WizPure™ qRT-PCR Master (SYBR) is an optimised ready-to-use solution for one-step quantitative RT-PCR assays, incorporating SYBR Green I dye. It comprises all the components necessary to perform qRT-PCR: WizPure™ MMLV RTase (RNase H-), WizPure™ HS-TaQ DNA Polymerase, ultrapure dNTPs, MgCl₂ and SYBR Green I dye. The user simply needs to add water, template and primers. An enhanced buffer allows for RT reaction temperatures up to 50°C. This can improve detection of more difficult targets as higher RT temperatures reduce nonspecific priming and facilitate melting of RNA secondary structures.

The kit includes the components necessary for performing RT-PCR amplification, and have been successfully used to DNA amplify and detect a variety of RNA targets.

The kit provides a one-step, simple, robust, inexpensive assay for detection and quantitative analysis of gene expression directly from cells or RNA with intercalator format.

Contents

- WizPure™ qRT-PCR Master (SYBR)

Advantage

- All-in-on solution
- Ready-to-use solution
- Easy reaction setup

Applications

- Routine and direct RT-PCR amplification of RNA templates
- Multiple band detection or genotyping
- Virus detection
- Gene-expression analysis
- cDNA library construction
- 3 and 5 RACE, RT-PCR

Characteristics

- Reversible Hot-start Technology
- Modified thermostable reverse transcriptase with remove RNase H activity
- For universal Real-time RT-PCR master mix
- Include ultrapure enzymes
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.

Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

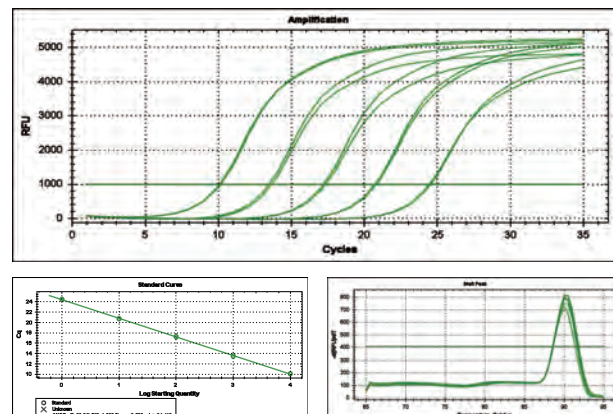


Fig 1. One-step real-time RT-PCR amplification of Human GAPDH RNA was detected in total RNA samples ranging from 1 µg to 100 fg.

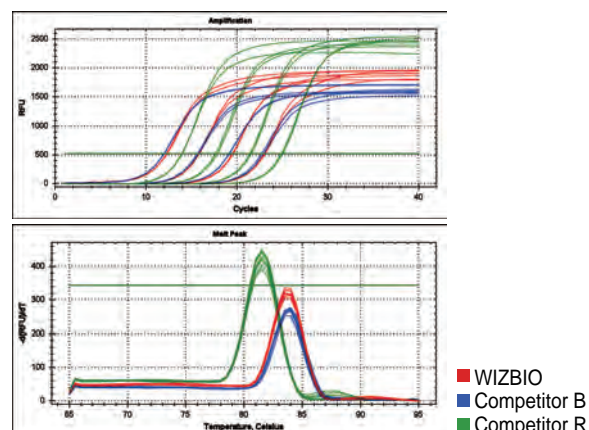


Fig 2. Comparison test results of WizPure™ qRT-PCR Master (SYBR) and competitor's SYBR green I Real-time PCR kit using a human beta-actin gene.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2711 W2711-8	WizPure™ qRT-PCR Master (SYBR)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs, HS-TaQ Polymerase, MMLV RTase, SYBR green I, RNase Inhibitor and stabilizers



WizPure™ qRT-PCR Master (EVA)

Description

WizPure™ qRT-PCR Master (EVA) is an optimised ready-to-use solution for one-step quantitative RT-PCR assays, incorporating EVA Green I dye. It comprises all the components necessary to perform qRT-PCR : WizPure™ MMLV RTase (RNase H-), WizPure™ HS-Taq DNA Polymerase, ultrapure dNTPs, MgCl₂ and EVA Green I dye. The user simply needs to add water, template and primers. An enhanced buffer allows for RT reaction temperatures up to 50°C. This can improve detection of more difficult targets as higher RT temperatures reduce nonspecific priming and facilitate melting of RNA secondary structures.

The kit includes the components necessary for performing RT-PCR amplification, and have been successfully used to DNA amplify and detect a variety of RNA targets.

The kit provides a one-step, simple, robust, inexpensive assay for detection and quantitative analysis of gene expression directly from cells or RNA with intercalator format.

Contents

- WizPure™ qRT-PCR Master (EVA)

Advantage

- All-in-on solution
- Ready-to-use solution
- Easy reaction setup

Applications

- Routine and direct RT-PCR amplification of RNA templates
- Multiple band detection or genotyping
- Virus detection
- Gene-expression analysis
- cDNA library construction
- 3 and 5 RACE, RT-PCR

Characteristics

- Reversible Hot-start Technology
- Modified thermostable reverse transcriptase with remove RNase H activity
- For universal Real-time RT-PCR master mix
- Include ultrapure enzymes
- Suitable for most Real-time PCR machine
- Applied unique Enhancing-Stabilizing-Technology

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.

Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

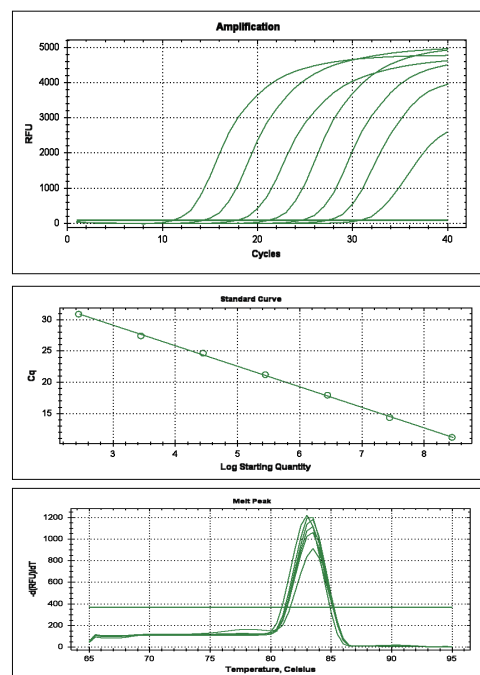


Fig 1. Increased sensitivity using the WizPure™ qRT-PCR Master (EVA) Kit. Real-time amplification of Human GAPDH RNA was detected in total RNA samples ranging from 1 µg to 1 fg on the Bio-Rad CFX96 System.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2721 W2721-8	WizPure™ qRT-PCR Master (EVA)	1 ml 8 X 1 ml	Including reaction buffer, dNTPs, HS-Taq Polymerase, MMLV RTase, GvaGreen, RNase Inhibitor and stabilizers



Q-Starter Pack™ : PROBE

(Easy and quick start package for Real-time PCR setup)



Description

Q-Starter Pack™ : PROBE kit is ideal for start-up of Real-time PCR setup. The Q-Starter Pack™ : PROBE kit is composed 8 different type of qPCR master mix for use with Labeled Fluorescent Probes, e.g. for 5'-Nuclease Assays or Hybridization probes. All of qPCR Master mix includes the components necessary for performing Real-time PCR amplification, and have been successfully used to amplify and detect a variety of DNA targets such as genomic DNA, cDNA and plasmid DNA

Contents

- Q-Starter Pack™ : PROBE, 8 vial

Advantage

- Ready-to-use solution
- Easy reaction setup

Applications

- Real-time PCR set-up
- Gene expression profiling
- Gene knockdown verification
- Array validation
- Bacterial & Viral detection

Characteristics

- Contained 8 different types of qPCR Master mix
- Easy and Fast setup for Real-time PCR condition

Shipping & Storage Conditions

Upon receipt, store all components at -20°C.

Store the Master mix at 4°C after thawing for up to 6 months, depending on the expiration date, without showing any reduction in performance.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Technical Data

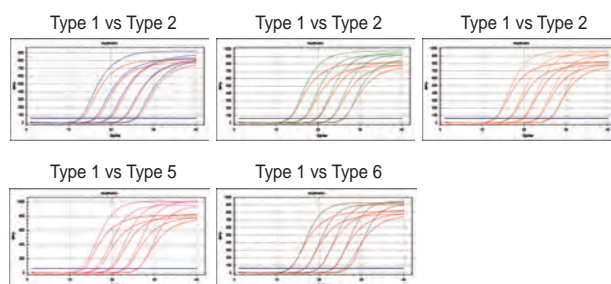
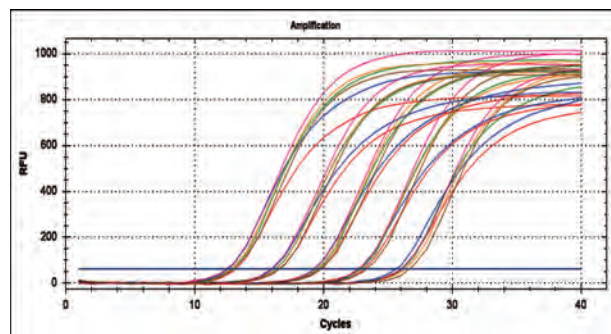


Fig 1. Comparison test results of Q-Starter Pack™ : PROBE series using human beta-actin gene by CFX96 system (Bio-Rad).



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W1201	Q-Starter Pack™ : PROBE	8 X 0.5 ml	Including 8 types of qPCR Master mix
W1202	Q-Starter Pack™ : PROBE (UDG)	8 X 0.5 ml	

ROX Reference Dye (50X)

Description

ROX Reference Dye (50X) is specially formulated for use on Applied Biosystems (ABI) and Stratagene real-time PCR instruments. This inert dye, whose fluorescence does not change during the reaction, may be added to quantitative, real-time PCR reactions to normalize the well-to-well differences that may occur due to artifacts such as pipetting errors or instrument limitations.

ROX Reference Dye (50X) is specially formulated for use on Applied Biosystems (ABI) and Stratagene real-time PCR instruments. This inert dye, whose fluorescence does not change during the reaction, may be added to quantitative, real-time PCR reactions to normalize the well-to-well differences that may occur due to artifacts such as pipetting errors or instrument limitations.

Contents

- ROX Reference Dye (50X)

Characteristics

- Passive reference dye for real-time PCR
- 50X concentrated solution

Spectral Characteristics:

- Excitation Maximum λ : ≈ 575 nm
- Emission Maximum λ : ≈ 600 nm

ROX™ Final Concentration for Different Instruments:

Instrument	Amount per 50 μ l reaction	Final ROX Concentration
ABI 7000, 7300, 7700, 7900HT 7900HT Fast, StepOnePlus™	1.0 μ l (0.6-1.0 μ l)	500nM (300-500nM)
ABI 7500, ABI 7500 Fast, Stratagene Mx3000™, Mx3005P™, Mx4000™	0.1 μ l (0.06-0.1 μ l)	50nM (30-50nM)

Shipping & Storage Conditions

Upon receipt, store all components at -20°C . Protect from light.

Quality Control

Sensitivity and reproducibility in real-time PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Ordering Information

Cat. No.	Product Name	Pack Size	
W1100	ROX Reference Dye (50X)	1 ml	



Nucleic Acid Purification

DNA Purification

WizPrep™ Plasmid DNA Mini Kit	39
WizPrep™ Gel/PCR Purification Mini Kit	40
WizPrep™ gDNA Mini Kit (Blood)	41
WizPrep™ gDNA Mini Kit (Cell/Tissue)	42
WizPrep™ Plant DNA Mini Kit	43
WizMag™ Blood gDNA Kit	NEW

RNA Purification

WizPrep™ Plant RNA Mini Kit	45
WizPrep™ Viral DNA/RNA Mini Kit	46

Instrument

WizMag™ Separator-8	NEW
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WizPrep™ Plasmid DNA Mini Kit

Description

The WizPrep™ Plasmid DNA Mini Kit provides a fast and simple means of isolating plasmid DNA from bacteria cells. The technique does not require any organic solvents and eliminates the need for repeated centrifugation, vacuum filtration or column separation. The kit is suitable for the isolation and purification of any plasmid, the size range for most effective purification is < 10 Kb. Good results have also been obtained with 20 Kb and bigger size plasmids although the obtained yield is reduced.

The obtained plasmid DNA is ready to use for a broad panel of downstream applications like PCR, restriction enzyme digestion, labeling, cloning, capillary sequencing.

Contents

- PD1 Buffer
- PD2 Buffer
- PD3 Buffer
- Wash Buffer (concentrate)
- Elution Buffer
- RNase A (lyophilized)
- DNA Spin Columns
- Collection Tubes (2.0ml)

Advantage

- Silica membrane spin column
- No phenol and chloroform
- Fast and easy processing using a rapid spin-column format
- High column binding capacity – up to 25 µg
- High yield of plasmid DNA – up to 20 µg from 1.5 ml of culture.

Applications

- Plasmid DNA purification

Characteristics

- Optimized for fast and efficient plasmid DNA isolation based on silica membrane columns
- Fast protocol : 15 minute
- Effective purification is < 10 Kb and good results with 20 Kb and bigger.
- Up to 30 µg of high quality plasmid DNA.
- Isolated plasmid DNA can be used directly in restriction digestion, sequencing, PCR, in vitro transcription and transfection of robust cell lines.

Parameter	Characteristics
Format	Silica-membrane spin column
Amount of Starting Material	0.5 ~ 2 ml of bacterial cultures
Typical yield	Up to 20 µg (2 ml culture)
A _{260/280}	1.8 ~ 2.1
Elution volume	50 ~ 100 µl
Preparation time	15 min. / 6 prep

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

Sensitivity and reproducibility in direct-PCR are tested in parallel reactions containing 10-fold dilutions of nucleic acid template.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W70050-100	WizPrep™ Plasmid DNA Mini Kit	100 prep	PD1 Buffer, PD2 Buffer, PD3 Buffer, Wash Buffer, Elution Buffer, RNase A, Spin Column, Collection Tube

Technical Data

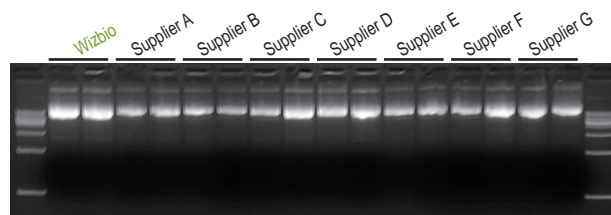


Fig 1. Comparison of plasmid DNA purification with Wizbio and competitor's kit. the results showed that plasmid DNA extraction recovery rate is same or higher than of competitors.

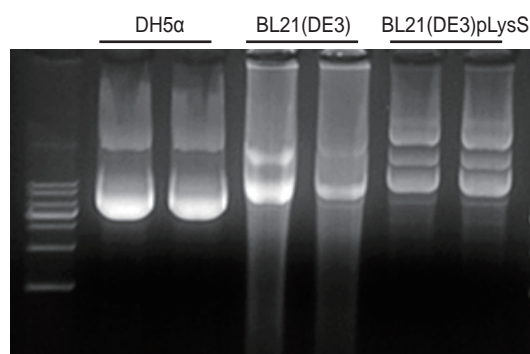
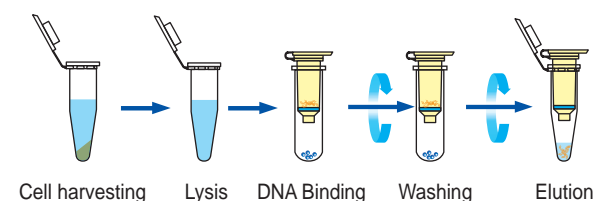


Fig 2. Isolation of various competent cell line with WizPrep™ Plasmid DNA Mini Kit.

Easy and Fast Protocol



WizPrep™ Gel/PCR Purification Kit

Description

The WizPrep™ Gel/PCR Purification Mini Kit was designed to recover or concentrate DNA fragments (100 bp→10 Kb) from agarose gel, PCR, or other enzymatic reactions. Chaotropic salt is used to dissolve agarose gel and denature enzymes. DNA fragments in the chaotropic salt are bound by the glass fiber matrix of the spin column.

The unique dual purpose application and high yield DNA/minicolumn make this kit an exceptional value. The method uses a chaotropic salt, guanidine thiocyanate to dissolve agarose gel and denature enzymes. DNA fragments in chaotropic salt solution bind to the glass fiber matrix of the spin column. Following washing off of contaminants, the purified DNA fragments are eluted by addition of low salt elution buffer or water. Salts, enzymes and unincorporated nucleotides are effectively removed from reaction mixtures without phenol extraction or alcohol precipitation.

Contents

- GP Buffer
- Wash Buffer
- Elution Buffer
- DNA Spin Column
- Collection Tube

Advantage

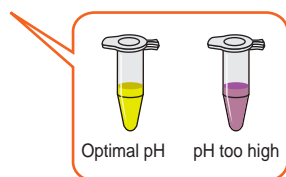
- Silica membrane spin column
- No phenol and chloroform
- Fast and easy processing using a rapid spin-column format

Applications

- PCR clean-up
- Gel extraction

Characteristics

- Optimized for fast and efficient DNA isolation based on silica membrane spin columns
- High Efficiency : up to 90% recovery from agarose gels up to 95% recovery from PCR products or other enzymatic reactions
- Convenient : gel extraction and PCR cleanup in one
- Fast protocol : 10 minute
- Broad Fragment Size Range: 100 bp ~ 20 kb
- pH indicator is included in the GP Buffer to ensure optimal pH, facilitate DNA binding, allow for easy observation of undissolved agarose gel.



Shipping & Storage Conditions

Store all components at room temperature

Quality Control

WizPrep™ Gel/PCR Purification Mini Kit was tested in the purification of 100 bp, 1kb and 5 kb PCR products, and the extraction of 100 bp, 1kb and 5 kb DNA fragment from a agarose gel according to the protocol described in the manual.

The quality of the purified DNA was evaluated spectrophotometrically, by agarose gel electrophoresis, digestion with restriction enzymes and automated fluorescent sequencing.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W70150-100	WizPrep™ Gel/PCR Purification Kit	100 prep	GP Buffer, Wash Buffer, Elution, Spin Column, Collection Tube

Technical Data

PCR clean-up

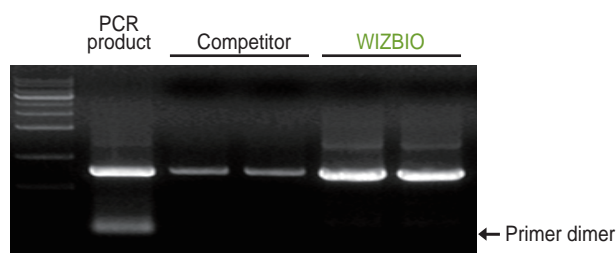


Fig 1. Comparison of plasmid DNA purification with Wizbio and competitor's kit. the results showed that short fragment DNA extraction recovery rate is higher than of competitor, and efficient removal of primers.

Gel elution

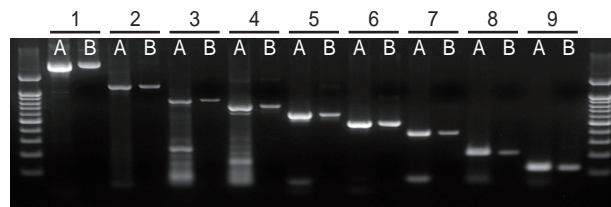
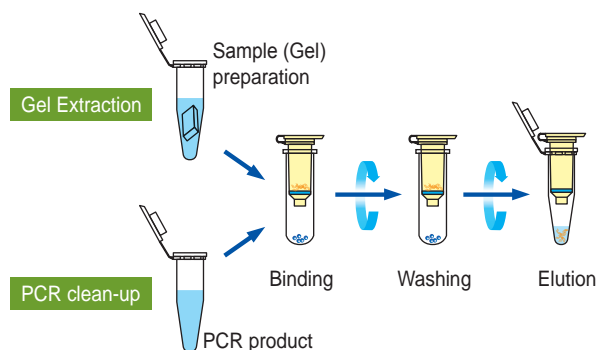


Fig 2. Analysis of PCR product recovery after purification with the WizPrep™Gel/PCR Purification gel extraction Kit.

1: 2.5kb, 2: 1.25kb, 3: 857bp, 4: 759bp, 5: 610bp, 6: 500bp, 7: 382bp, 8: 216bp, 9: 123bp.

A: No extraction, B: After extraction

Easy and Fast Protocol



WizPrep™ gDNA Mini Kit (Blood)

Description

The WizPrep™ gDNA Mini Kit (Blood) provides a fast and simple method to isolate genomic DNA from various blood sample including fresh whole blood, frozen blood, blood dried spot, serum and plasma etc.

The WizPrep™ gDNA Mini Kit (Blood) uses silica-membrane technology to eliminate the cumbersome steps associated with loose resins or slurries. The kit is ready for use and can purify the genomic DNA from a wide variety of blood source samples, and the whole process is completed in less than 20 minutes. Purified DNA is suitable for PCR, restriction endonuclease digestion and Southern Hybridization.

Contents

- GB Buffer
- W1 Buffer
- W2 Buffer
- Elution Buffer
- Proteinase K (lyophilized)
- DNA Spin Column
- Collection Tube

Advantage

- Silica membrane spin column
- No phenol and chloroform
- Fast and easy processing using a rapid spin-column format
- High yield and high quality genomic DNA isolation

Applications

- Genomic DNA extraction from blood, serum, plasma

Characteristics

Parameter	Characteristics
Format	Silica-membrane spin column
Sample materials	< 100mg tissue
Fragment size	> 200nt
Typical yield	3~12µg from 200µl whole blood 20~30µg from 200µl buffy coat 15-25µg from 5 X 10 ⁶ cultured cells
A _{260/280}	1.7 ~ 1.9
Elution volume	50µl
Preparation time	< 20 minutes
Binding capacity	200ug

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

The kit was qualified by isolating genomic DNA from 200µl of blood following the protocols outlined in the manual. The purified genomic DNA has an A260/280 ratio between 1.7~ 1.9.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W71050-100	WizPrep™ gDNA Mini Kit (Blood)	100 prep	GB Buffer, W1 Buffer, W2 Buffer, Elution, Proteinase K, Spin Column, Collection Tube

Technical Data

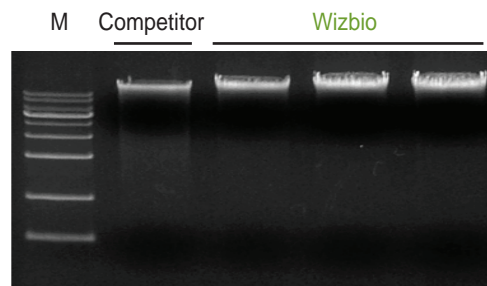


Fig 1. Genomic DNA was purified from 200 µl of whole blood using the WizPrep™ gDNA Mini Kit (Blood) and competitors. 7µl of the eluate (elution volume 50 µl) were analyzed on a 1.5% agarose gel. Lane M : 1kb DNA ladder.

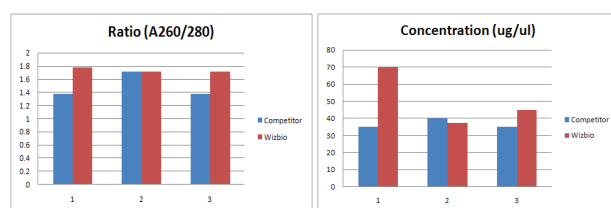
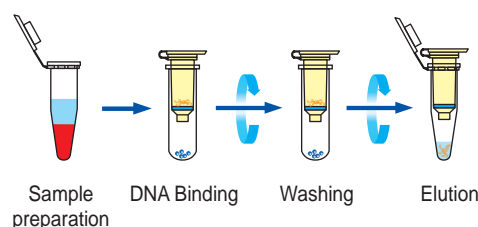


Fig 2. Genomic DNA was purified from 200 ul of whole blood from various sample. Genomic DNA concentration and purity determined by spectrophotometer. No. 1: Human blood, No. 2 : Porcine blood, No. 3 : Equine Blood.

Easy and Fast Protocol



WizPrep™ gDNA Mini Kit (Cell/Tissue)

Description

The WizPrep™ gDNA Mini Kit (Cell/Tissue) provides a fast and simple method to isolate genomic DNA from various animal tissue, cultured cells and bacteria. The WizPrep™ gDNA Mini Kit (Cell/Tissue) uses silica-membrane technology to eliminate the cumbersome steps associated with loose resins or slurries. The kit is ready for use and can purify the genomic DNA from a wide variety of animal cell and tissue samples, and the whole process is completed in less than 20 minutes. Purified DNA is suitable for PCR, restriction endonuclease digestion and Southern Hybridization.

Contents

- GT1 Buffer
- GT2 Buffer
- W1 Buffer
- W2 Buffer
- Elution Buffer
- Proteinase K (lyophilized)
- DNA Spin Column
- Collection Tube

Advantage

- Silica membrane spin column
- No phenol and chloroform
- Fast and easy processing using a rapid spin-column format
- High yield and high quality genomic DNA isolation

Applications

- Genomic DNA extraction from Cell, Tissue and Bacteria

Characteristics

Parameter	Characteristics
Format	Silica-membrane spin column
Sample materials	< 25mg tissue, $10^2 \sim 10^6$ cultured cells
Typical yield	10~35µg (depending on sample)
Elution volume	50~100µl
Preparation time	< 20 minutes

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

The kit was qualified by isolating genomic DNA from 20mg of animal tissue and Gram-negative bacterial cell following the protocols outlined in the manual.

Technical Data

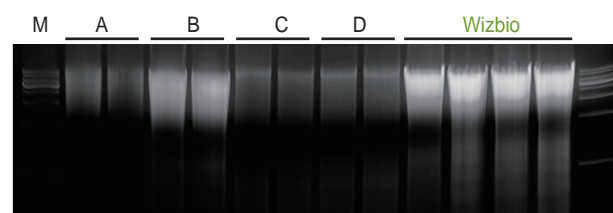
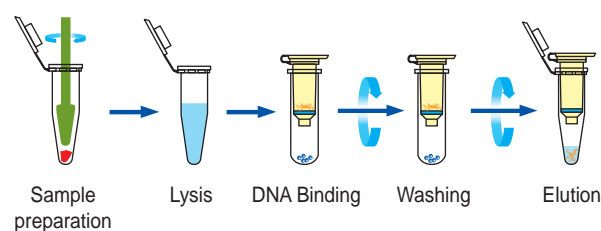


Fig 1. Genomic DNA was purified from 20mg of animal tissue using the WizPrep™ gDNA Mini Kit (Cell/Tissue) and competitors. 7µl of the eluate (elution volume 50 µl) were analyzed on a 1.5% agarose gel. Lane M : 1kb DNA ladder, A : Supplier A, B : Supplier B, C : Supplier C, D : Supplier D.

Easy and Fast Protocol



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W71060-100	WizPrep™ gDNA Mini Kit (Cell/Tissue)	100 prep	GT1 Buffer, GT2 Buffer, W1 Buffer, W2 Buffer, Elution, Proteinase K, Spin Column, Collection Tube

WizPrep™ Plant DNA Mini Kit

Description

The WizPrep™ Plant DNA Mini Kit provides a fast and simple method to isolate total DNA (genomic DNA, mitochondrial and chloroplast) from plant tissue and cells including leaves, stems, buds, flowers, fruit, seeds etc. The WizPrep™ Plant DNA Mini Kit uses silica-membrane technology to eliminate the cumbersome steps associated with loose resins or slurries. The kit is ready for use and can purify the genomic DNA from a wide variety of plant species and tissues, and the whole process is completed in less than 60 minutes. Purified DNA is suitable for PCR, restriction endonuclease digestion and Southern Hybridization.

Contents

- GP1 Buffer
- GP2 Buffer
- GP3 Buffer
- PW1 Buffer
- PW2 Buffer
- Elution Buffer
- RNase A (lyophilized)
- Filter Column
- DNA Spin Column
- Collection Tube

Advantage

- Silica membrane spin column
- No phenol and chloroform
- Fast and easy processing using a rapid spin-column format
- High yield and high quality genomic DNA isolation

Applications

- Genomic DNA extraction from plant tissue and cell

Characteristics

Parameter	Characteristics
Format	Silica-membrane spin column
Sample materials	< 100 mg tissue
Fragment size	> 200 nt
Typical yield	1~30 ug from 100 mg plant material
A _{260/280}	1.7 ~ 1.9
Elution volume	50 µl
Preparation time	<60 minutes
Binding capacity	200 ug

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

The kit was qualified by isolating genomicDNA from 100 mg of plant tissue following the protocols outlined in the manual. The purified genomic DNA has an A260/280 ratio between 1.7 and 1.9.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W71650-50	WizPrep™ Plant DNA Mini Kit	50 prep	GP1 Buffer, GP2 Buffer, GP3 Buffer, PW1 Buffer, PW2 Buffer, Elution, RNase A, Filter Column, Spin Column, Collection Tube

Technical Data

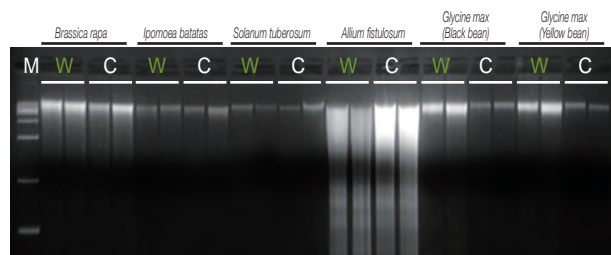


Fig 1. Genomic DNA was purified from 100 mg samples using the WizPrep™ Plant DNA Mini Kit and competitors. 7µl of the eluate (elution volume 50 µl) were analyzed on a 1.5% agarose gel.

Lane M : 1kb DNA ladder, Lane W : Wizbio, Lane C : Competitor.

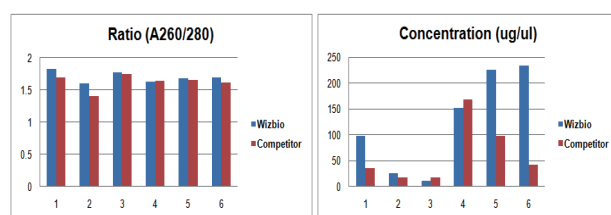
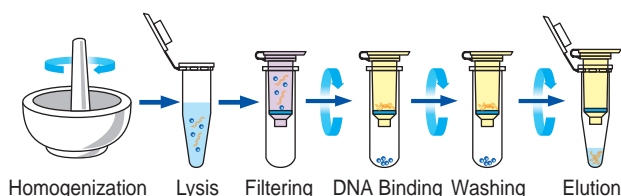


Fig 2. Genomic DNA was purified from 100 mg samples of various plant tissues. Genomic DNA concentration and purity determined by spectrophotometer. No. 1: *Brassica rapa*, 2: *Ipomoea batatas*, 3: *Solanum tuberosum*, 4: *Allium fistulosum*, 5: *Glycine max*(Black bean), 6: *Glycine max*(Yellow bean).

Easy and Fast Protocol



WizPrep™ Plant RNA Mini Kit

Description

The WizPrep™ Plant RNA Mini Kit provides for rapid isolation of RNA from various plant samples (e.g. leaves, stems, buds, flowers, fruit, seeds etc.). For purification of total RNA (~25 µg), the WizPrep™ Plant RNA Mini Kit features a specially formulated RNA Lysis Buffer. The RNA Spin Column allows for high-capacity DNA elimination and the subsequent RNA Spin Column efficiently adsorbs total RNA. The RNA is washed and then eluted with DNase/RNase-Free Water. The RNA is suitable for use in various subsequent procedures including RT-PCR. The entire RNA isolation procedure typically takes about 15 minutes.

Contents

- RPL1 Buffer
- RPW1 Buffer
- RPW2 Buffer
- DNase/RNase-Free Water
- Filter Column
- RNA Spin Column
- Collection Tube

Advantage

- No phenol, No chloroform, No need DNase treatment
- Silica-membrane based
- High yield and high quality total RNA isolation
- Purification time : > 15 min.
- Minimized DNA contamination

Applications

- Total RNA extraction from plant tissue and cell

Characteristics

Generally, 1~10% of the eluate of total RNA prepared from 10mg of plant tissue is sufficient as template for RT-PCR. If possible, intron-spanning primers should be used for RT-PCR. Hands-on time for RNA preparation from plant tissue with WizPrep™ Plant RNA Mini Kit is less than 30 min.

Parameter	Characteristics
Format	Silica-membrane spin column
Sample materials	< 100 mg tissue
Fragment size	> 200 nt
Typical yield	3~70 µg from 100 mg plant material
A _{260/280}	1.9 ~ 2.1
Elution volume	50 µl
Preparation time	20 min. / 6 prep
Binding capacity	200 µg

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

The kit was qualified by isolating total RNA from 100 mg of plant tissue following the protocol outlined in the manual. The quality of isolated RNA is evaluated spectrophotometrically and by agarose gel electrophoresis. The purified RNA has an A_{260/280} ratio between 1.9 and 2.1.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W72650-50	WizPrep™ Plant RNA Mini Kit	50 prep	RPL1 Buffer, RPW1 Buffer, RPW2 Buffer, Filter Column, RNase-Free Water, Spin Column, Collection Tube

Technical Data

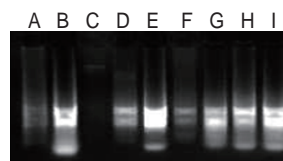


Fig 1. Total RNA purified from various plant tissue. Lane A: *Oryza sativa*, Lane B: *Cucurbita pepo*, Lane C: *Allium fistulosum*, Lane D: *Chrysanthemum x morifolium*, Lane E: *Lactuca sativa*, Lane F: *Fabaceae*, Lane G: *Capsicum annuum*, Lane H: *Nicotiana tabacum*, Lane I: *Solanum melongena*.



Fig 2. Total RNA was purified from 100 mg leaf samples of *Brassica rapa* var. *glabra* using the WizPrep™ Plant RNA Mini Kit and competitors. 7 µl of the eluate (elution volume 50 µl) were analyzed on a 1.5% agarose gel. M: 1kb DNA ladder, W: Wizbio, Q: Competitor Q, M: Competitor M, T: Competitor T, I: Competitor I.

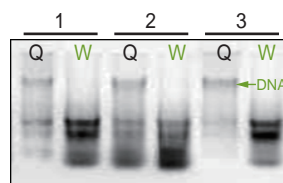


Fig 3. Comparison results of total RNA extraction from leaf samples using the WizPrep™ Plant RNA Mini Kit & Competitor Q. Lane 1,2: *Capsicum annuum*, Lane 3: *Nicotiana tabacum* Lane Q: Competitor Q, Lane W: Wizbio.

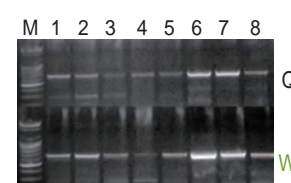


Fig 4. RT-PCR results of total RNA extracted from CMV infected leaf samples using the WizPrep™ Plant RNA Mini Kit and Competitor Q. 1 µl of total RNA used as template for one-step RT-PCR reaction. Q: Competitor Q, W: Wizbio. Lane 1-5: *Capsicum annuum*, Lane 6-8: *Nicotiana abacum*.

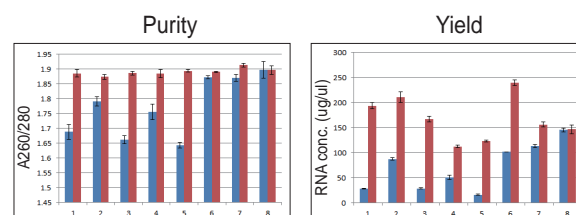
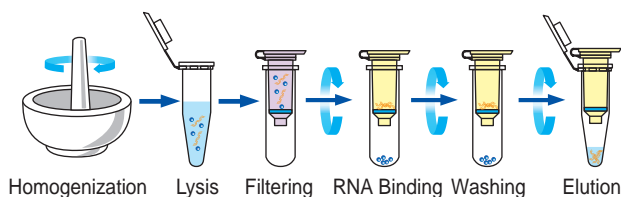


Fig 5. Total RNA was purified from 100 mg leaf samples of *Capsicum annuum* and *Nicotiana tabacum* using the WizPrep™ Plant RNA Mini Kit and competitor Q. Total RNA concentration and purity determined by spectrophotometer. No.1-5: *Capsicum annuum*, No.6-8: *Nicotiana tabacum*.

Easy and Fast Protocol



WizPrep™ Viral DNA/RNA Mini Kit

Description

The WizPrep™ Viral DNA/RNA Mini Kit provides a fast and simple method to isolate viral DNA and/or RNA from various sample including blood, serum, plasma, body fluid or the supernatant of viral infected cell cultures. The WizPrep™ Viral DNA/RNA Mini Kit uses silica-membrane technology to eliminate the cumbersome steps associated with loose resins or slurries. The kit is ready for use and can purify the viral nucleic acid from a wide variety of virus infected samples, and the whole process is completed in less than 20 minutes. Purified viral DNA and/or RNA is suitable for PCR or RT-PCR assay.

Contents

- VL Buffer
- W1 Buffer
- W2 Buffer
- RNase-Free Water
- Proteinase K
- Spin Column
- Collection Tube

Advantage

- Does not use phenol and chloroform.
- Simple and fast by using silica membrane column.
- Optimized Buffer system can extract high purity of viral nucleic acid and minimized contamination of host cell DNA and/or RNA.
- No need carrier RNA.

Applications

- Viral DNA and/or RNA extraction from blood, serum, plasma, tissue and cell

Characteristics

Parameter	Characteristics
Format	Silica-membrane spin column
Sample materials	200ul of biological sample
Elution volume	50µl
Preparation time	< 20 minutes
Binding capacity	200ug

Shipping & Storage Conditions

Store all components at room temperature

Quality Control

The kit was qualified by isolating viral DNA or RNA from virus infected sample following the protocols outlined in the manual. The purified viral DNA or RNA has tested PCR or RT-PCR method.

Technical Data

PCR

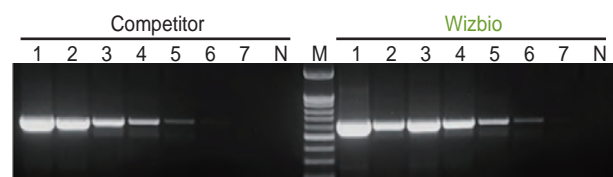


Fig 1. Viral DNA was extracted from 200ul of CPV positive whole blood sample using WizPrep™ Viral DNA/RNA Mini Kit and Competitor's. PCR reactions are used 2ul of purified viral DNA as template and analyzed in a 1.2% (w/v) agarose gel. Lane 1~7 : 1/10 serial dilution sample, Lane N : negative control, Lane M : 100bp DNA Ladder.

RT-PCR

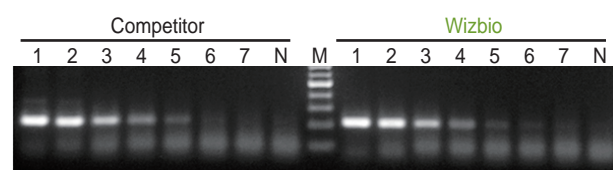
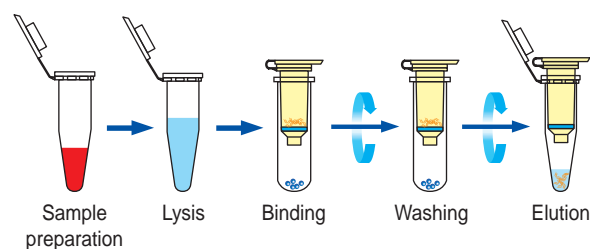


Fig 2. Viral RNA was extracted from 200ul of FCV positive whole blood sample using WizPrep™ Viral DNA/RNA Mini Kit and Competitor's. RT-PCR reactions are used 2ul of purified viral RNA as template and analyzed in a 1.2% (w/v) agarose gel. Lane 1~7 : 1/10 serial dilution sample, Lane N : negative control, Lane M : 100bp DNA Ladder.

Easy and Fast Protocol



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W73050-100	WizPrep™ Viral DNA/RNA Mini Kit	100 prep	VL Buffer, W1 Buffer, W2 Buffer, RNase-Free Water, Proteinase K, Spin Column, Collection Tube





Molecular Biological Reagents

Enzymes

RNase Inhibitor	47
Uracil DNA Glycosylase (UDG)	48
Proteinase K	49
RNase A	50

DNA Marker

100bp DNA Ladder	51
1kb DNA Ladder	52

Reagents

dNTPs	53
WizPure™ Agarose LE	54
GelStain RED™	55
GelStain GREEN™	56

RNase Inhibitor

Description

RNase Inhibitor is an acidic, 52 kDa protein that is a potent non-competitive inhibitor of pancreatic-type ribonucleases such as RNase A, RNase B, and RNase C. The enzyme is provided as a fusion of the porcine RNase Inhibitor gene with a proprietary, 22.5 kDa protein tag.

Contents

- RNase Inhibitor (40 U/μl)

Advantage

- Complete inhibition - of RNase A, B and C
- Pure - DNase/RNase and Nickase free
- Free from contaminants - no inhibition of polymerase/transcriptase activity
- Stable - over a wide range of pH, temperatures and DTT concentrations

Applications

- RNA purification
- cDNA preparation by reverse transcription
- RNA sequencing
- in vitro RNA transcription
- in vitro protein synthesis

Unit Definition

One unit is defined as the amount of enzyme required to inhibit by 50% the hydrolysis of cytidine 2',3'-cyclic monophosphate by 5 ng of RNase A.

Characteristics

Unit Concentration	40,000 U/ml
Protein Concentration	0.1 mg/ml
Purity (SDS-PAGE)	>99%
SS Exonuclease	2,000 U <5.0% released
DS Exonuclease	2,000 U <0.5% released
Endonuclease	2,000 U <10% converted
E.coli 16S rDNA Contamination	2,000 U <10 copies

Shipping & Storage Conditions

Store at -20°C.

Quality Control

Specific activity was measured using a 2-fold serial dilution method. Dilutions of enzyme were made in 1X reaction buffer. Reactions were incubated 10 minutes at 75°C, plunged on ice, and analyzed using the method of Sambrook and Russell.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W2511	RNase Inhibitor	2,000 U	
W2511-10		20,000 U	

Uracil DNA Glycosylase (UDG)

Description

Uracil-DNA Glycosylase (UDG) catalyzes the hydrolysis of the N-glycosylic bond between the uracil and sugar, leaving an abasic site in uracil-containing single or double-stranded DNA. The enzyme shows no measurable activity on short oligonucleotides (<6 bases), or RNA substrates.

Contents

- Uracil DNA Glycosylase (10 U/μl)
- UDG Reaction Buffer (10X)

Source of Protein

A recombinant *E. coli* strain carrying the Uracil DNA Glycosylase gene from *E. coli* K-12.

Unit Definition

1 unit is defined as the amount of enzyme that catalyzes the release of 1.8 nmol of Uracil in 30 minutes from double-stranded, tritiated, Uracil containing-DNA at 37°C in 1X UDG Reaction Buffer.

Applications

- Control of carry-over contamination in PCR
- Site-directed mutagenesis
- As a probe for protein-DNA interaction studies
- SNP genotyping
- Cloning of PCR products
- Generation of single strand overhangs of PCR products and cDNA

Shipping & Storage Conditions

Store at -20°C.

Quality Control

UDG is evaluated by the removal of PCR product using dUTP with 1 unit of this enzyme.

Technical Data

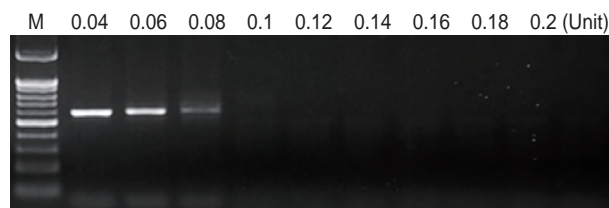


Fig 1. PCR products of WizPure PCR 2X Master (UDG) were used in a UDG activity test. 5 ul of PCR product was incubation at 50°C for 5 minutes with UDG enzyme at a different unit from 0.04U to 0.2U.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W6030	Uracil-DNA Glycosylase (UDG)	1,000 U	Uracil-DNA Glycosylase (UDG), 10X reaction buffer

Proteinase K, Recombinant

Description

Proteinase K is a subtilisin-related serine protease that will hydrolyze a variety of peptide bonds. Proteinase K is active in a wide range of temperatures and buffers with optimal activity between 20 and 60°C and a pH between 7.5 and 12.0. Activity is stimulated when up to 2% SDS or up to 4 M urea are included in the reaction. Calcium is important for thermostability of Proteinase K but it is not required for catalysis, therefore Proteinase K is also active in buffers containing chelating agents such as EDTA.

Contents

- Proteinase K (powder)

Source of Protein

Mutated gene from *Tritirachium album limber*, Recombinant.

Unit Definition

1 unit is defined as the amount of enzyme that catalyzes the release of 1.8 nmol of Uracil in 30 minutes from double-stranded, tritiated, Uracil containing-DNA at 37°C in 1X UDG Reaction Buffer.

Applications

- Isolation of plasmid and genomic DNA
- Isolation of RNA
- Inactivation of RNases, DNases and enzymes in reactions
- Removal of enzymes from DNA to improve cloning efficiency (5)
- PCR purification

Shipping & Storage Conditions

Store at 4 to -20°C recommended; Mutated Proteinase K powder is stable at room temperature in two years.

Quality Control

Activity Assay and Unit Definitions:

One unit is defined as the amount of enzyme that will liberate 1 µmol of tyrosine per minute at 37° C, pH7.5.

DNase Activity:

None detectable enzyme activity with λ DNA after 6 hours incubation at 37°C.

RNase Activity:

None detectable of ribnuclease activity after 16 hours incubation at 25° C

Protein Purity:

Over 99% (Native-PAGE and SDS-PAGE assay)

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W6050	Proteinase K, Recombinant	22 mg	

RNase A, DNase and protease-free

Description

RNase A (ribonuclease A) is a bovine pancreatic ribonuclease that cleaves single-stranded RNA; it is used for the isolation of RNA-free DNA.

Contents

- RNase A (powder)

Source of Protein

Bovine Pancreas

Molecular Weight

13.7 kDa monomer

Activity

> 50 Kunitz U/mg protein

Applications

- Plasmid and genomic DNA preparation
- Removal of RNA from recombinant protein preparations
- Ribonuclease protection assays. Used in conjunction with RNase T1
- Mapping single-base mutations in DNA or RNA

Shipping & Storage Conditions

- Shipping : room temperature
 - Storage : 4°C recommended
- RNase A powder is stable at room temperature in two years.

Quality Control

The absence of endo-, exodeoxyribonucleases, and proteases confirmed by appropriate quality tests.

Functionally tested for RNA digestion in a plasmid DNA purification procedure.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W6060	RNase A	3 mg	

100bp DNA Ladder Marker, Ready-to-use

Description

The 100bp DNA Ladder is a mixture of specially designed double-stranded DNA fragments for determining the exact size of PCR products and engineered DNA fragments. The 100bp DNA ladder marker consists of 11 DNA fragments ranging in size from 100 to 1,000 bp in 100 bp increment, and additional 1,500 bp fragment. For easy size reference on the gel electrophoresis, the 500 bp and 1,000 bp are two to three times more brighter than the other bands. The 100bp DNA ladder marker is supplied in a ready-to-use format. This ladder marker can be stained with ethidium bromide or any other known DNA staining methods.

Contents

- 100bp DNA Ladder Marker

Usage Information

- Concentration : 330 ng/10 μ l (33 μ g/ml)
- Recommended loading : 5 μ l (100 lanes, ready-to-use)
- Range : 100 – 1,500 bp
- Number of bands : 11

Storage Conditions

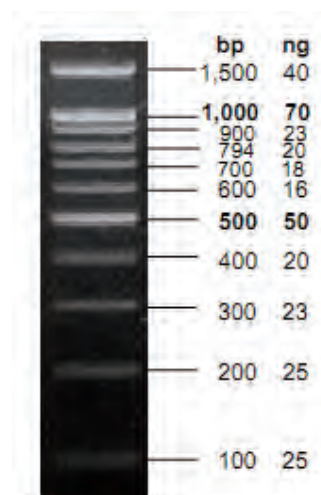
- -20°C for 2 year
- 4°C for 6 months
- Room temperature (20-25°C) for 2 months.

Recommended Gel Percentages for Separation of Linear DNA

Agarose gel (%)	Range of separation (bp)	Polyacrylamide gel (%)	Range of separation (bp)
0.5	1,000 - 30,000	3.5	100 - 1,000
0.7	800 - 12,000	5.0	80 - 500
1.0	500 - 10,000	8.0	60 - 400
1.2	400 - 7,000	12.0	40 - 200
1.4	200 - 4,000	20.0	5 - 100
2.0	50 - 2,000		

DNA Size Migration with Sample Loading Dyes

Agarose gel (%)	Xylene cyanol FF	Bromophenol blue	Orange G
0.7 - 1.7	~ 4,000 bp	~ 300 bp	~ 50
2.5 - 3.0	~ 800 bp	~ 100 bp	~ 30



10 μ l (330 ng)/lane ;
2% agarose in 0.5 X TBE, stained with ethidium bromide

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W3501	100bp DNA Ladder Marker	500 μ l	
W3502	1kb DNA Ladder Marker	500 μ l	

1kb DNA Ladder Marker, Ready-to-use

Description

1Kbp DNA Ladder is a mixture of specially designed double-stranded DNA fragments for determining the exact size of DNA fragments. The 1Kbp DNA ladder marker consists of 9 DNA fragments ranging in size from 500 to 10,000 bp. The 1Kbp DNA ladder marker is supplied in a ready-to-use format. This ladder can be stained with ethidium bromide or radiolabeled at 5'-ends. DNA ladder marker is premixed with loading buffer. The ladders are not intended for use in quantitative analysis.

Contents

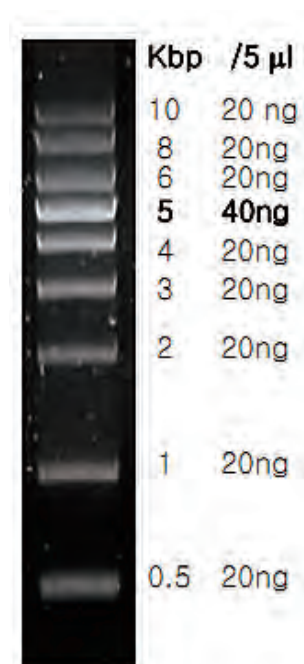
- 1kb DNA Ladder Marker

Usage Information

- Concentration : 200 ng/5 µl (40 mg/ml)
- Recommended loading : 5 µl (100 lanes, ready-to-use)
- Range : 500 – 10,000 bp
- Number of bands : 9

Storage Conditions

- -20°C for 2 year
- 4°C for 6 months
- Room temperature (20-25°C) for 2 months.



5 µl/200 ng/lane ; 0.7% agarose in 0.5x TAE stained with ethidium bromide

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W3501	100bp DNA Ladder Marker	500 ul	
W3502	1kb DNA Ladder Marker	500 ul	

dNTPs

Description

As with all of Wizbiosolutions products, our PCR-grade dNTP Solutions (including: dATP, dCTP, dGTP, and dTTP) are produced using strict quality control guidelines to ensure the highest purity possible.

Our PCR Grade Nucleotides are conveniently available as nucleotide sets (all 4 nucleotides in separate vials), or as single nucleotides in ready to use mixes (premixed solutions of all 4 nucleotides).

Advantages

- Greater than 99% purity confirmed by HPLC
- Free of human and E. coli DNA

Quality Control Analysis

- Purity : > 99.9% triphosphate.
- Base Purity : > 99.5% deoxynucleoside.
- Pyrophosphate : 0.003 pmol/pmol nucleotide.
- ATP : None detected.

Nuclease Contamination Tests

- Nicking Activity : None detected.
- DNase Activity : None detected.
- RNase Activity : None detected.

Storage

-20°C



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W3120	dNTP mix (2.5mM each)	1 ml	
W3121	dATP (100mM)	1 ml	
W3122	dCTP (100mM)	1 ml	
W3123	dGTP (100mM)	1 ml	
W3124	dTTP (100mM)	1 ml	
W3125	dUTP (100mM)	1 ml	
W3126	dNTP set (100mM each)	4 X 1 ml	dATP, dCTP, dGTP, dTTP (100mM each)

WizPure™ Agarose LE (Electrophoresis grade, Low EEO)

Description

WizPure™ Agarose LE is highly purified agarose suitable for analytical and preparative electrophoresis of nucleic acids.

WizPure™ Agarose LE provides optimal concentration between 0.7 to 2% in all typical buffer systems. It is a highly purified agarose with very low EEO values certified by strict quality control test procedures.

Contents

- Agarose LE (powder)

Characteristics

- Gel Strength (1% Gel) 1,320 g/cm
- EEO (Electroendosmosis(-Mr) 0.06
- Gelling Point (1.5% Gel) 36°C±1.5°C
- Melting Point (1.5% Gel) 88°C±1.5°C
- DNase/RNase/Protease Free

Application

- Analytical electrophoresis of nucleic acids
- Preparative electrophoresis
- Blotting assays

Storage Conditions

Room temperature (20-25°C) for 2 years.



Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W4001	WizPure™ Agarose LE	500 g	

GelStain-RED™, Nucleic acid Staining Solution (10,000X) (For Post-staining Gel)

Description

GelStain-RED™ is a safe nucleic acid stain for detection of double-stranded DNA, single-stranded DNA and RNA in agarose gels. GelStain-RED™ replaces ethidium bromide (EtBr, a potent mutagen and toxic) for visualization of DNA or RNA in agarose gel. GelStain-RED™ is non-carcinogenic, is as sensitive as ethidium bromide and is used the same way as EtBr in agarose gel electrophoresis.

Contents

- GelStain-RED™

Precautions

GelStain-RED™ is non-carcinogenic, but may cause skin and eye irritation. Always wear gloves when working with it.

Application

- Alternative EtBr staining for electrophoresis

Characteristics

- Safer than EtBr: Nonmutagenic and noncytotoxic
- Easy disposal: Direct disposal down the drain or in regular trash
- Ultra-sensitive: More sensitive than EtBr
- Extremely stable: Available in water, stable at room temperature for long-term storage and microwavable
- Simple-to-use
- Compatible with a standard UV transilluminator
- Compatible with downstream applications : Compatible with gel purification, restriction digest, sequencing and cloning

Storage Conditions

Store at dark at 4°C for 1 year and store at -20°C for 2 years.

Technical Data

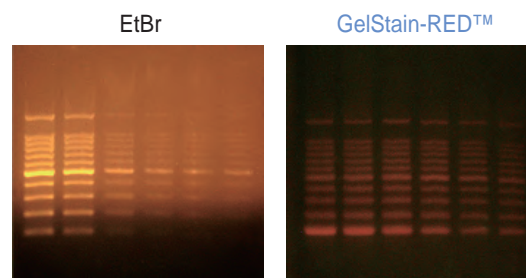


Fig 1. Comparison of ethidium bromide (EtBr) and GelStain-RED™ in 2% agarose gel in TAE buffer. Serial dilution of 100 bp DNA Ladder were loaded in the amount of 650ng, 390ng, 130ng, 65ng, 32.5ng and 13ng. Gels were imaged using UV transilluminator and photographed with 590nm filter.

Spectral properties

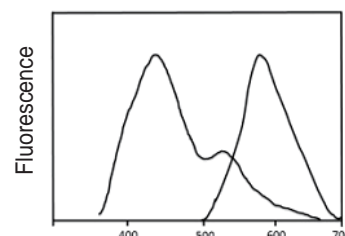


Fig 2. Excitation (left) and emission (right) profiles of GelStain-RED™ bound to dsDNA.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W3210	GelStain-RED™ (For post-staining)	1 ml	
W3211	GelStain-GREEN™ (For precast gel)	1 ml	

GelStain-GREEN™, Nucleic acid Staining Solution (10,000X) (For Precast Gel or Post-staining Method)

Description

GelStain-GREEN™ is a safe nucleic acid stain for detection of double-stranded DNA, single-stranded DNA and RNA in agarose gels. GelStain-GREEN™ replaces ethidium bromide (EtBr, a potent mutagen and toxic) for visualization of DNA or RNA in agarose gel. GelStain-GREEN™ is non-carcinogenic, is as sensitive as ethidium bromide and is used the same way as EtBr in agarose gel electrophoresis.

Contents

- GelStain-GREEN™

Precautions

GelStain-GREEN™ is non-carcinogenic, but may cause skin and eye irritation. Always wear gloves when working with it.

Application

- Alternative EtBr staining for electrophoresis

Characteristics

- Safer than EtBr: Nonmutagenic and noncytotoxic
- Easy disposal: Direct disposal down the drain or in regular trash
- Ultra-sensitive: More sensitive than EtBr
- Extremely stable: Available in water, stable at room temperature for long-term storage and microwavable
- Simple-to-use
- Compatible with a standard UV transilluminator
- Compatible with downstream applications : Compatible with gel purification, restriction digest, sequencing and cloning

Storage Conditions

Store at dark at 4°C for 1 year and store at -20°C for 2 years.

Technical Data

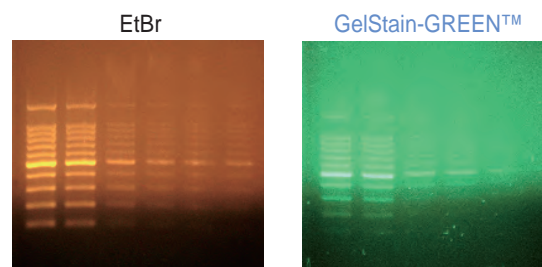


Fig 1. Comparison of ethidium bromide (EtBr) and GelStain-GREEN™ in 2% agarose gel in TAE buffer. Serial dilution of 100 bp DNA Ladder were loaded in the amount of 650ng, 390ng, 130ng, 65ng, 32.5ng and 13ng. Gels were imaged using UV transilluminator and photographed with 590nm (EtBr) and 520nm (GelStain-GREEN™) filter.

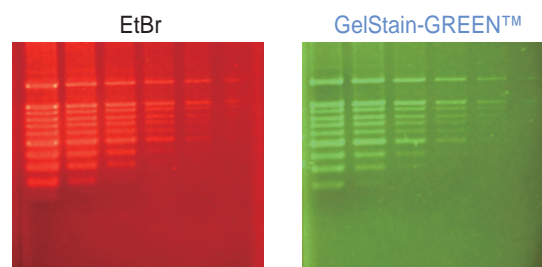


Fig 2. Comparison of ethidium bromide (EtBr) and GelStain-GREEN™ in 2% agarose gel in TAE buffer. Serial dilution of 100 bp DNA Ladder were loaded in the amount of 650ng, 330ng, 165ng, 82ng, 41ng and 20ng. Gels were imaged using UV transilluminator and photographed with 590nm filter.

Spectral properties

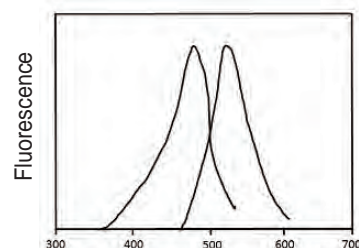


Fig 1. Excitation (left) and emission (right) profiles of GelStain-GREEN™ bound to dsDNA.

Ordering Information

Cat. No.	Product Name	Pack Size	Kit Contents
W3210	GelStain-RED™ (For post-staining)	1 ml	
W3211	GelStain-GREEN™ (For precast gel)	1 ml	



Molecular Detection Kits

Human
Animal
Fishery
Plant
GMO ...

1-tube, 1-step PCR system
High sensitivity, specificity
High reproducibility
Aliquot and lyophilized
Maximum stability
Easy and fast protocol
RHS Technology
Thermostable RTase
Minized RNase H activity

WizCheck™ Molecular Detection Kits

Simple & Easy protocol
1-tube, 1-step system
All-on-one
Quality guarantee

WizCheck™ Molecular Detection Kits are ready-to-use master mix for molecular detections of infectious biological samples such as virus. WizCheck™ Molecular Detection are included DNA polymerase, dNTPs, reaction buffer, target primer, stabilizer and dye. The Kits are aliquot per each reaction in 0.2ml PCR 8-strip tube and lyophilized by smart freeze drying technology. So it can be use directly by just add template and D.W for PCR or RT-PCR. WizCheck™ Molecular Detection Kits are fully quality controlled and produced by mechanically, therefore, our kits are maximum reproducibility and also the kits are included several special technology for enhancement of sensitivity such as hot-start PCR technology, ultra pure enzymes, optimized buffer system, PCR enhancers, smart drying technology and qualified primers.

Shipping & Storage Conditions

Solution type : Store at -20°C

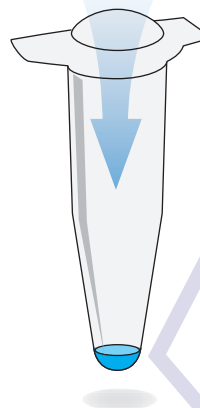
Dried type : Store at 4 or -20°C

Features

- 1-tube, 1-step PCR (RT-PCR) system
- High sensitivity, specificity and reproducibility
- Single sene target
- Aliquot and lyophilized per each test
- Maximum stability
- Easy and fast protocol
- Positive control supply
- Reversible Hot-Start Technology
- Thermostable RTase and minized RNase H activity

1-tube, 1-step system

Add only
Template & D.W.



All-in-one

Enzyme
dNTP
Stabilizer
Reaction buffer
Primers
Enhancer

Simple protocol



Add sample
(Template and D.W)



Mix



Run PCR

From prepare to start, only need 5 min.

Minimized errors and non-specific reactions in preparation step !!

Ordering Information

Cat. No.	Product Name	Pack Size	Format	Shelf Life	Storage
WP2001-96	PVY RT-PCR Kit (Potato virus Y)	96 T	Dried	2 years	4°C / -20°C
WP2002-96	PLRV RT-PCR Kit (Potato leafroll virus)	96 T	Dried	2 years	4°C / -20°C
NEW WP2003-96	CMV RT-PCR Kit(Cucumber mosaic virus)	96 T	Dried	2 years	4°C / -20°C
NEW WP2004-96	SYSV RT-PCR Kit (Shallot yellow stripe virus)	96 T	Dried	2 years	4°C / -20°C
NEW WP2005-96	CABYV RT-PCR Kit (Cucurbit aphid-borne yellows virus)	96 T	Dried	2 years	4°C / -20°C
NEW WP2006-96	ToCV RT-PCR Kit (Tomato chlorosis virus)	96 T	Dried	2 years	4°C / -20°C
NEW WP2101-96	GMO (Bar gene) PCR Kit	96 T	Dried	2 years	4°C / -20°C
WA1100-96	AHSV RT-PCR Kit (African horse sickness virus)	96 T	Dried	2 years	4°C / -20°C
WF3001-96	VHS RT-PCR Kit (Viral Hemorrhagic Septicemia)	96 T	Dried	2 years	4°C / -20°C
WD3001	TB PCR Kit	100 T	Solution	2 years	-20°C
WD3002	TB/NTM PCR Kit	100 T	Soution	2 years	-20°C
WD3003R	TB/NTM Real-time PCR Kit	100 T	Solution	2 years	-20°C
WD1202R	PRRS qRT-PCR Kit Comming soon	100 T	Solution	2 years	-20°C

For more detailed information about our molecular detection kit, please contact by e-mail (wizbios@yahoo.com)

Troubleshooting guide of PCR reactions

No PCR product

Cause	Solution
Template DNA that could not be amplified (e.g., Template DNA with a high GC content)	<ul style="list-style-type: none"> - Add DMSO (2-5%) and reduce the enzyme concentration to 0.5 unit. - Use other organic solvents that reduce T_m.
Problems with template DNA.	<ul style="list-style-type: none"> - Examine concentration, quality and purity of template DNA. - Confirm that template DNA is not degraded by agarose gel analysis. - Carry out test PCR with a pair of other primers that were successful. - Prepare a new template DNA.
Low concentrations of polymerase	<ul style="list-style-type: none"> - Increase the amount of enzyme concentration by 0.5 unit. - If necessary, increase the amount of enzyme up to 5 units in 100-μl reaction
Low concentrations of MgCl ₂	<ul style="list-style-type: none"> - Increase MgCl₂ concentration by 0.25 mM.
Inadequate PCR cycles	<ul style="list-style-type: none"> - Reduce annealing temperature. - Increase the number of PCR cycles. - Check whether the final elongation step (72°C, 5 min) is carried out.
Unsuitable primers	<ul style="list-style-type: none"> - Prepare a new pair of primers.
Inadequate primer concentration.	<ul style="list-style-type: none"> - Use of equal concentration of two primers. - Titrate primers for their optimal concentrations (from 0.1 to 0.6 μM).
Primer quality and storage	<ul style="list-style-type: none"> - Confirm that the primers are not degraded. - Store primers at -15°C to -30°C.
Formation of primer dimers	<ul style="list-style-type: none"> - Carry out hot-start PCR - Divide the PCR mixture into two submixtures, each of which is inactive, and combine them together just before PCR reaction.

Multiple or smeared PCR products

Cause	Solution
Low annealing temperature.	<ul style="list-style-type: none"> - Increase the annealing temperature based upon the length of primers and their nucleotide sequences.
Low concentration of primers or inappropriate primers	<ul style="list-style-type: none"> - Check whether primers are optimally designed. - Determine the optimal primer concentration by titration between 0.1 to 0.6 mM. - Use the same concentrations of the two primers - Carry out nested PCR
Template DNA that could not be amplified (e.g., Template DNA with a high GC content)	<ul style="list-style-type: none"> - Add DMSO (2-5%) and reduce the enzyme concentration to 0.5 unit. - Use other organic solvents that reduce T_m.
Problem with DNA template	<ul style="list-style-type: none"> - Use template DNA after serial dilution.

Terms and Conditions

Orders

You can send orders by e-mail or fax.

Wizbiosolutions

#608, BI Center, Shingu University,
Gwangmyung-ro 377, Seongnam,
462-743, South Korea.

Tel : +82 707 013 5066

Fax : +82 31 624 3066

wizbios@yahoo.com

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- PO number (if applicable)
- Catalog number of products and quantity needed
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Swift Code:	NACFKRSE
Beneficiary:	WIZBIO SOLUTIONS
Account #	452-0002-2945-41



Wizbiosolutions

#608, BI Center, Shingu University, Gwangmyung-ro 377, Seongnam, 462-743, South Korea.

TEL : +82 707 013 5066 FAX : +82 31 624 3066

e-mail : wizbios@yahoo.com

URL : www.wizbios.com