Reagents for Molecular Biology Research

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2020 Product Catalogue

Reagents for Molecular Biology Research

Contents

Contents

P C R

High-Fidelity PCR

Product Name	Size	Cat. No.#
HOT Phanta Max Super-Fidelity DNA Polymerase	100 U / 500 U / 1,000 U	P505-d1/d2/d3
HOT 2 Phanta Max Master Mix	1 ml / 5 ml / 15 ml	P515-01/02/03
New 2 Phanta Max Master Mix (Dye Plus)	1 ml / 5 ml / 15 ml	P525-01/02/03

Conventional PCR

Product Name	Size	Cat. No.#
Taq DNA Polymerase (Mg^2 plus Buffer)	1,000 U / 5,000 U / 10,000 U	P101-01/02/03
Taq DNA Polymerase (Mg^2 free Buffer)	1,000 U / 5,000 U / 10,000 U	P102-01/02/03
Taq DNA Polymerase (Mg^2 plus Buffer, with dNTP)	1,000 U / 5,000 U / 10,000 U	P101-d1/d2/d3
Taq DNA Polymerase (Mg^2 free Buffer, with dNTP)	1,000 U / 5,000 U / 10,000 U	P102-d1/d2/d3
2 Taq Master Mix	5 ml / 15 ml / 50 ml	P111-01/02/03
HOT 2 Taq Master Mix (Dye Plus)	5 ml / 15 ml / 50 ml	P112-01/02/03
Green Taq Mix	5 ml / 15 ml / 50 ml	P131-01/02/03

High-Yield PCR

Product Name	Size	Cat. No.#
Taq Plus DNA Polymerase	250 U / 1,000 U / 3,000 U	P201-01/02/03
Taq Plus DNA Polymerase (with dNTP)	250 U / 1,000 U / 3,000 U	P201-d1/d2/d3
2 Taq Plus Master Mix	5 ml / 15 ml / 50 ml	P211-01/02/03
HOT 2 Taq Plus Master Mix II (Dye Plus)	5 ml / 15 ml / 50 ml	P213-01/02/03

Long-Fragment PCR

Product Name	Size	Cat. No.#
Vazyme LAmp DNA Polymerase (Mg^2 plus buffer)	125U/500U	P301-01/02
Vazyme LAmp DNA Polymerase (Mg^2 plus buffer, with dNTP)	125U/500U	P301-d1/d2
Vazyme LAmp DNA Polymerase (Mg^2 free buffer, with dNTP)	125U/500U	P302-d1/d2
2 Vazyme LAmp Master Mix	1 ml / 5 ml / 15 ml	P311-01/02/03
2 Vazyme LAmp Master Mix (Dye Plus)	1 ml / 5 ml / 15 ml	P312-01/02/03

Direct PCR

Product Name	Size	Cat. No.#
HOT ne Step Mouse Genotyping it	200 rxn	PD101-01
ne Step U Probe Mouse Genotyping it	200 rxn	PD104-01
Blood Direct PCR it V2	50 rxn / 200 rxn	PD103-01/02

Rapid PCR

Product Name	Size	Cat. No.#
	5 ml / 15 ml	P222-01/02
HOT 2 Rapid Taq Master Mix	50 ml (50 x 1 ml)	P222-03
	50 ml (10 x 5 ml)	P222-04

Hot-Start PCR

Product Name	Size	Cat. No.#
HOT AceTaq DNA Polymerase	250 U / 1,000 U / 3,000 U	P401-d1/d2/d3
2 AceTaq Master Mix	1 ml / 5 ml /15 ml	P411-01/02/03
2 AceTaq Master Mix (Dye Plus)	1 ml / 5 ml / 15 ml	P412-01/02/03
Champagne Taq antibody	500 U	P121-01
HOT Champagne Taq DNA Polymerase	500 U (2.5 / 5 / 10 U/ l)	P122-d1/d2/d3

Multiplex PCR

Product Name	Size	Cat. No.#
Multiplex PCR it	50 rxn / 200 rxn / 1,000 rxn	PM101-01/02/03

Isothermal Amplification

Product Name	Size	Cat. No.#
Bst DNA Polymerase Large Fragment	00U/ ,000U	P 01-01/02

PCR-Related

Product Name	Size	Cat. No.#
PCR Enhancer	500 l	P021-01
dNTP Mix (10 mM each)	1 ml / 5 ml	P031-01/02
dNTP Mix (2.5 mM each)	1 ml / 5 ml	P032-01/02
eat-labile UDG	100 U / 500 U	P051-01/02
E.coli UDG	500 U / 5,000 U	P061-01/02

C l o n i n g / M u t a g e n e s i s

Fast Cloning

Product Name	Size	Cat. No.#
ClonExpress II ne Step Cloning it	25 rxn / 50 rxn	C112-01/02
ClonExpress MultiS ne Step Cloning it	10 rxn / 25 rxn	C113-01/02
HOT ClonExpress Ultra ne Step Cloning it	25 rxn / 50 rxn	C115-01/02

Fast Mutagenesis

Product Name	Size	Cat. No.#
Mut Express II Fast Mutagenesis it V2	10 rxn / 25 rxn	C214-01/02
Mut Express MultiS Fast Mutagenesis it V2	10 rxn / 25 rxn	C215-01/02

TA Cloning

Product Name	Size	Cat. No.#
T4 DNA Ligase	40,000 U	C301-01
New 5min Universal Ligation Mix	50 rxn / 100 rxn	C311-01/02

TOPO Cloning

Product Name	Size	Cat. No.#
HOT 5min TA/Blunt- ero Cloning it	25 rxn / 50 rxn	C601-01/02

Nucleic Acid Electrophoresis

GelRed Nucleic Acid Stain

Product Name	Size	Cat. No.#
HOT Ultra GelRed Nucleic Acid Stain (10000)	0.5 ml / 5 ml / 50 ml	GR501-01/02/03

DNA Marker

Product Name	Size	Cat. No.#
DL2000 Plus DNA Marker	250 l / 500 l	MD101-01/02
DL5000 DNA Marker	250 l / 500 l	MD102-01/02
DL15000 DNA Marker	250 l / 500 l	MD103-01/02
100 bp DNA Ladder	250 l / 500 l	MD104-01/02

Reverse Transcription

Conventional RT-PCR

Product Name	Size	Cat. No.#
iScript III Reverse Transcriptase	10,000 U	R302-01
iScript II 1st Strand cDNA Synthesis it	50 rxn / 100 rxn (20 l / rxn)	R211-01/02
HOT iScript III 1st Strand cDNA Synthesis it (gDNA wiper)	50 rxn / 100 rxn (20 l / rxn)	R312-01/02
M-MLV(-) Reverse Transcriptase	10,000 U	R021-01
Murine RNase inhibitor	2,000 U / 10,000 U / 20,000 U	R301-01/02/03

RT-qPCR SuperMix

Product Name	Size	Cat. No.#
iScript II RT SuperMix for qPCR	100 rxn (20 l / rxn)	R222-01
HOT iScript III RT SuperMix for qPCR (gDNA wiper)	100 rxn (20 l / rxn)	R323-01
iScript II Select RT SuperMix for qPCR	100 rxn (20 l / rxn)	R232-01
iScript II Select RT SuperMix for qPCR (gDNA wiper)	100 rxn (20 l / rxn)	R233-01

One-Step RT-PCR

Product Name	Size	Cat. No.#
iScript II ne Step RT-PCR it	50 rxn (50 l / rxn)	P611-01
iScript II ne Step RT-PCR it (Dye Plus)	50 rxn (50 l / rxn)	P612-01

Single Cell Sequence Amplification

Product Name	Size	Cat. No.#
Single Cell Sequence Speci c Ampli cation it	200 rxn	P621-01

miRNA

miRNA Reverse Transcription

Product Name	Size	Cat. No.#
miRNA 1st Strand cDNA Synthesis it (by stem-loop)	50 rxn / 100 rxn (20 l / rxn)	MR101-01/02

miRNA qPCR

Product Name	Size	Cat. No.#
miRNA Universal S BR qPCR Master Mix	125 rxn / 500 rxn (20 l / rxn)	M 101-01/02

q P C R

qPCR Master Mix (SYBR)

Product Name	Size	Cat. No.#
HOT Cham Universal S BR qPCR Master Mix	500 rxn / 2,500 rxn (20 l / rxn)	11-02/03
Ace Universal S BR qPCR Master Mix	500 rxn / 2,500 rxn (20 l / rxn)	511-02/03
Ace qPCR S BR Green Master Mix	500 rxn / 2,500 rxn (20 l / rxn)	111-02/03

qPCR Master Mix (Probe)

Product Name	Size	Cat. No.#
Ace qPCR Probe Master Mix	500 rxn / 2,500 rxn (20 l / rxn)	112-02/03
HOT Ace Universal U Probe Master Mix V2	500 rxn / 2,500 rxn (20 l / rxn)	513-02/03
HOT Cham Geno-SNP Probe Master Mix	500 rxn / 2,500 rxn (20 l / rxn)	11-02/03

One-Step qRT-PCR Mix

Product Name	Size	Cat. No.#
iScript II ne Step qRT-PCR S BR Green it	250 rxn (20 l / rxn)	221-01
iScript II ne Step qRT-PCR Probe it	250 rxn (20 l / rxn)	222-01
iScript II U ne Step qRT-PCR Probe it	250 rxn (20 l / rxn)	223-01

G e n o m e E d i t i n g

Product Name	Size	Cat. No.#
Cas Nuclease	50 pmol / 250 pmol	EN301-01/02
T Endonuclease I	50 pmol / 250 pmol	EN303-01/02

In Vitro Transcription

Product Name	Size	Cat. No.#
T igh ield RNA Transcription it	50 rxn / 100 rxn	TR101-01/02
HOT T RNAi Transcription it	25 rxn / 50 rxn	TR102-01/02

N u c l e i c A c i d I s o l a t i o n

Rapid Sample Treatment

Product Name	Size	Cat. No.#
New RoomTemp Sample Lysis it	250 rxn (5 ml) / 1000 rxn (20 ml) / 5000 rxn (100 ml)	P0 3-01/02/03

RNA Isolation (Column)

Product Name	Size	Cat. No.#
HOT FastPure Cell / Tissue Total RNA Isolation Mini it	50 rxn	RC101
HOT FastPure Plant Total RNA Isolation it (Polysaccharides / Polyphenolics-Rich)	50 rxn	RC401

DNA Isolation (Column)

Product Name	Size	Cat. No.#
FastPure Blood DNA Isolation Mini it V2	50 rxn / 200 rxn	DC111-01/02
FastPure Cell/Tissue DNA Isolation Mini it	100 rxn	DC102
FastPure Bacteria DNA Isolation Mini it	100 rxn	DC103
FastPure Plant DNA Isolation Mini it	50 rxn	DC104
HOT FastPure FFPE DNA Isolation it	50 rxn	DC105
Lysozyme	200 mg	DE103

Tissue Stabilizer

Product Name	Size	Cat. No.#
RNA eeper Tissue Stabilizer	100 ml	R501-01

Exosome Isolation

Product Name	Size	Cat. No.#
VE Exosome Isolation Reagent (from cell culture media)	50 ml	R601
VE Exosome Isolation Reagent (from serum)	10 ml	R602
VE Exosome Isolation Reagent (from plasma)	10 ml	R603

C e l l B i o l o g y / P r o t e i n R e s e a r c h

C e l l C o u n t i n g

Product Name	Size	Cat. No.#
HOT CC - Cell Counting it	500 rxn / 1,000 rxn	A311-01/02

C e l l T r a n s f e c t i o n

Product Name	Size	Cat. No.#
ExFect 2000 Transfection Reagent	0.5 ml / 1 ml / 5 ml	T202-01/02/03

D u a l L u c i f e r a s e R e p o r t e r A s s a y

Product Name	Size	Cat. No.#
HOT Dual Luciferase Reporter Assay it	100 rxn	DL101-01

M y c o p l a s m a

Product Name	Size	Cat. No.#
HOT MycoBlue Mycoplasma Detector	20 rxn / 50 rxn	D101-01/02
Myco- ff Mycoplasma Cleaner	100 l / 500 l / 1,000 l	D103-01/02/03

PCR

Selection Guide

Applications	Products (Cat.#)	Features	Applicable for
Conventional PCR	2 Taq Master Mix (P111) 2 Taq Master Mix (Dye Plus) (P112) Green Taq Mix (P131)	No 3' -- 5' exonuclease activity. Excellent compatibility. Products contain A at 3'-end.	Colony PCR Large-scale gene identi cation TA Cloning for small fragments.
igh- ield PCR	2 Taq Plus Master Mix (P211) 2 Taq Plus Master Mix II (Dye Plus) (P213)	With delity 6-fold higher than Taq. Mixed products with 3'-end blunt or containing A.	PCR that requires some delity.
Rapid PCR	2 Rapid Taq Master Mix (P222)	Ampli cation speed up to 15 sec / kb.	Colony PCR.
Long-Fragment PCR	2 Vazyme LAmp Master Mix (P311) 2 Vazyme LAmp Master Mix (Dye Plus) (P312)	Ef ciently amplify fragments 20 kb.	Long-fragment ampli cation.
ot-Start PCR	2 AceTaq Master Mix (P411) 2 AceTaq Master Mix (Dye Plus) (P412) Champagne Taq Antibody (P121) Champagne Taq DNA Polymerase (P122)	Excellent speci city. Excellent sensitivity.	Ampli cation that requires higher sensitivity and speci city Ampli cation of genes with low copy or qPCR assay from complex templates (genomic DNA, cDNA).
Multiplex PCR	Multiplex PCR it (PM101)	1 -plex PCR in one single reaction.	Detection or typing of pathogens.
Direct PCR	ne Step Mouse Genotyping it (PD101) Blood Direct PCR it V2 (PD103)	Easy and fast, without DNA puri cation.	ne step mouse genotyping Direct PCR from plant tissues Direct PCR from blood.
igh-Fidelity PCR	Phanta Max Super-Fidelity DNA Polymerase (P505) 2 Phanta Max Master Mix (P515) 2 Phanta Max Master Mix (Dye Plus) (P525)	With super delity 53-fold higher than Taq igh resistance to PCR inhibitors.	igh- delity PCR. Ampli cation of templates with high GC-content Long-fragment (up to 40 kb) ampli cation.

High-Fidelity PCR

→ 2× Phanta Max Master Mix (#P515)

→ 2× Phanta Max Master Mix (Dye Plus) (#P525)

♡ Super-Fidelity

♡ igh Resistance to PCR Inhibitors

Super Fidelity 53-fold higher than Taq DNA Polymerase.

Long Fragment amplify fragments up to 40 kb.

Suitable for templates with high GC-content.

Suitable for Direct-PCR using crude materials as templates .

Validated crude materials bacteria, fungi, whole blood, cultured cells, plant or animal tissue lysate, food lysates, etc.

Selected Product Citations

hao , et al. Metabolic coupling of two small-molecule thiols programs the biosynthesis of lincomycin A. *Nature*, 2015, 51 (53)115- .

Tian , et al. An enzymatic 4 2 cyclization cascade creates the pentacyclic core of pyrroindomycins. *Nature Chemical Biology*, 2015, 11(4) 25 -65.

an , et al. Mapping the Mouse Cell Atlas by Microwell-Seq. *Cell*, 201 , 1 2(5) 10 1-10 .

Cheng , et al. Pacer Mediates the Function of Class III PI3 and PS Complexes in Autophagosome Maturation by Engaging Stx1 . *Molecular Cell*, 201 , 65(6) 102 -43.

Lv M, et al. Characterization of a C3 Deoxygenation Pathway Reveals a ey Branch Point in Aminoglycoside Biosynthesis. *Journal of the American Chemical Society*, 2016, 13 (20) 642 -35.

High-Yield PCR

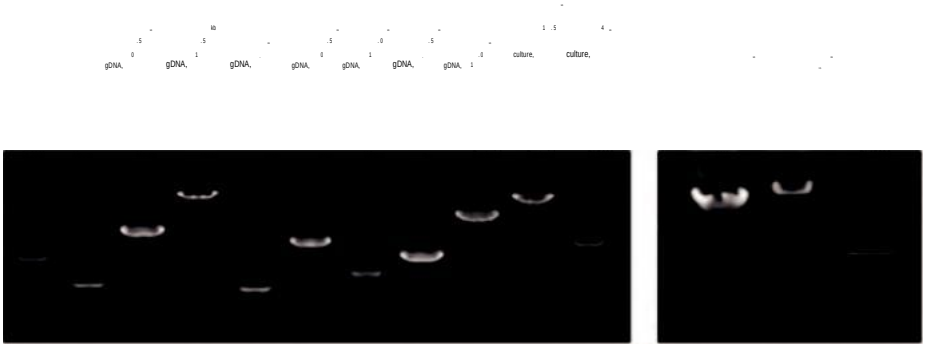
→ 2× Taq Plus Master Mix II (Dye Plus) (#P213)

Features

* Robust performance for high-yield PCR in most primer-template systems.
* Ready-to-use master mix with no need for operations on ice.

  PCR products can be directly loaded for electrophoresis with no need for loading buffer.

Validation Data



2× Taq Plus Master Mix II (Vazyme, #P213) demonstrated excellent template compatibility. Fragments (0.5 kb to 15 kb) were amplified from genomic DNA (mouse, human, wheat, rice), bacterial culture, and λDNA, respectively. A specific corresponding band was observed in each PCR.

Selected Product Citations

hang , et al. (2014) Complementary sequence-mediated exon circularization. *Cell*, 15 (1) 134-4 .

uan , et al. Gyrl-like proteins catalyze cyclopropanoid hydrolysis to confer cellular protection. *Nature Communications*, 201 , (1).14 5.

Rapid PCR

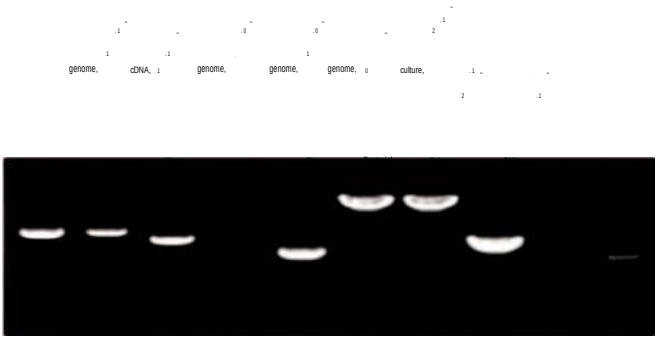
→ 2× Rapid Taq Master Mix (#P222)

Features

* Rapid ampli cation speed is 15 sec / kb, with an extreme speed of 1 sec / kb for fragments within 1 kb.
* Ready-to-use master mix with no need for operations on ice.

  PCR products can be directly loaded for electrophoresis with no need for loading buffer.
* Excellent stability: remains stable after 50 freeze-thaw cycles.

Validation Data



Fragments (1 kb - 2 kb) was amplified from genomic DNA (human, mouse, wheat, rice), cDNA (human), bacterial culture, colony, and λ DNA, respectively. The extension time was set as 1 sec / kb. Ten μl of PCR product was loaded for agarose gel electrophoresis. Specific bands were observed.

Selected Product Citations

hang B, et al. Enzyme-catalysed 6 4 cycloadditions in the biosynthesis of natural products. *Nature*, 201 , 56 (50) 122-6.

Wang S, et al. Molecular Basis for the Final xidative RearrangementSteps in Chartreusin Biosynthesis. *J Am Chem Soc*, 201 , 140(34) 10 0 -14.

Multiplex PCR

➔ Multiplex PCR it (#PM101)

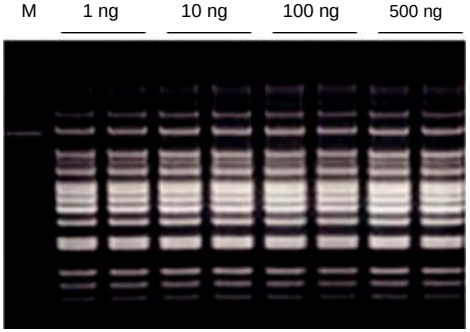
Features

* Multiplex 19-plex PCR or even higher.

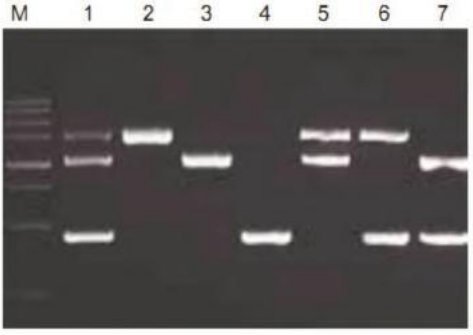
  Excellent target-to-target ampli cation uniformity and extremely low target preference.

* Highly sensitive ampli cation from trace amount of genomic DNA (1 ng).

Validation Data



Uniformamplificationcoverageofdifferentregions.Human genomic DNA was used as template for 19-plex PCR. The size of the amplicons ranged from 70 bp to 916 bp. The result indicated that Multiplex PCR Kit (Vazyme, #PM101) has a uniform amplification coverage of different regions for 1 ng-500 ng of template.



The Multiplex PCR Kit showed excellent compatibility with fragment length. Mouse genomic DNA was used as template for amplification of 1.55 kb, 1.07 kb, and 0.45 kb fragments, respectively. The result indicated that Multiplex PCR Kit (Vazyme, #PM101) is compatible with amplicons of various lengths in one single reaction system.

1: 3-plex PCR
2-4: 1-plex PCR
5-7: 2-plex PCR
M: DL5000 DNA Marker

Cloning / Mutagenesis

Selection Guide

Applications	Products (Cat.#)	Features	Applicable for
Fast Cloning	ClonExpress Ultra ne Step Cloning it (C115) ClonExpress II ne Step Cloning it (C112) ClonExpress MultiS ne Step Cloning it (C113)	Easy, fast, and ef cient. No need to consider the restriction enzyme cutting sites on the inserts. Ligase-independent. Positive Clone Rate 5 . Ef cient cloning of fragments of 50 bp - 10 kb.	Cloning or assembly of 1-5 fragments.
Fast Mutagenesis	Mut Express II Fast Mutagenesis it V2 (C214) Mut Express MultiS Fast Mutagenesis it V2 (C215)	Ef cient ampli cation of any plasmids within 20 kb. Site-directed mutations of 1-5 discontinuous sites in one reaction.	1-5 separate site-directed mutagenesis on one plasmid.
T P Cloning	5min TA/Blunt- ero Cloning it (C601)	Cloning within 5 min. Positive Clone Rate 5	TA cloning. cloning with blunt ends.

TOPO Cloning

➔ 5min TA/Blunt- ero Cloning it (#C601)

Features

Ready-to-use master mix.

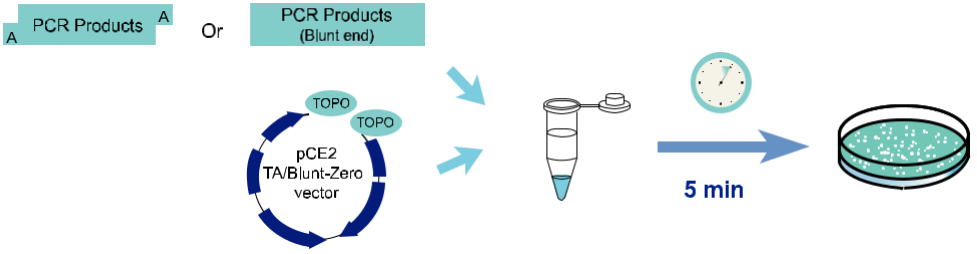
Suitable for both TA cloning and blunt-end cloning.

Rapid cloning within 5 min.

igh cloning ef ciency with Positive Clone Rate 5 .

Ampicillin and ana dual resistance vector.

ork ow



Fast Cloning

→ ClonExpress ltra One Step Cloning it (#C115)

Features

Cloning within 5 min.

Ready-to-use super mix in one tube.

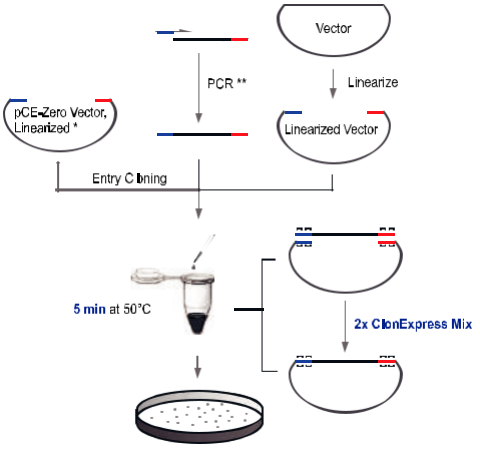
Ef cient cloning of fragments of 50 bp - 10 kb with Positive Clone Rate 5 .

Suitable for cloning of 1 fragment, assembly of 2 - 5 fragments, and entry cloning.

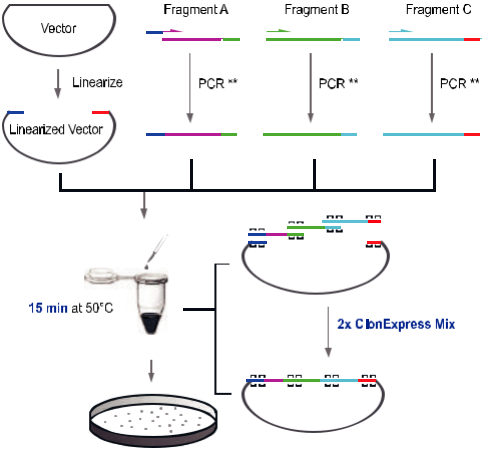
Independent of DNA ligase, signi cantly reducing the self-ligated colonies.

Mechanism

Cloning of 1 Fragment



Assembly of 2 - 5 fragments.



** pCE- ero Vector, Linearized, is supplied with ClonExpress Ultra ne Step Cloning Kit (Vazyme, #C115).*
*** It is highly recommended to use Vazyme s APP - CE Design - for easy primer design.*

Selected Product Citations of ClonExpress

Wu N, et al. TB 6 null variants and a common hypomorphic allele in congenital scoliosis. *New England Journal of Medicine*, 2015, 3 2(4) 341-50.

Ge , et al. Architecture of the mammalian mechanosensitive Piezo1 channel. *Nature*, 2015, 52 (5 6) 64- .

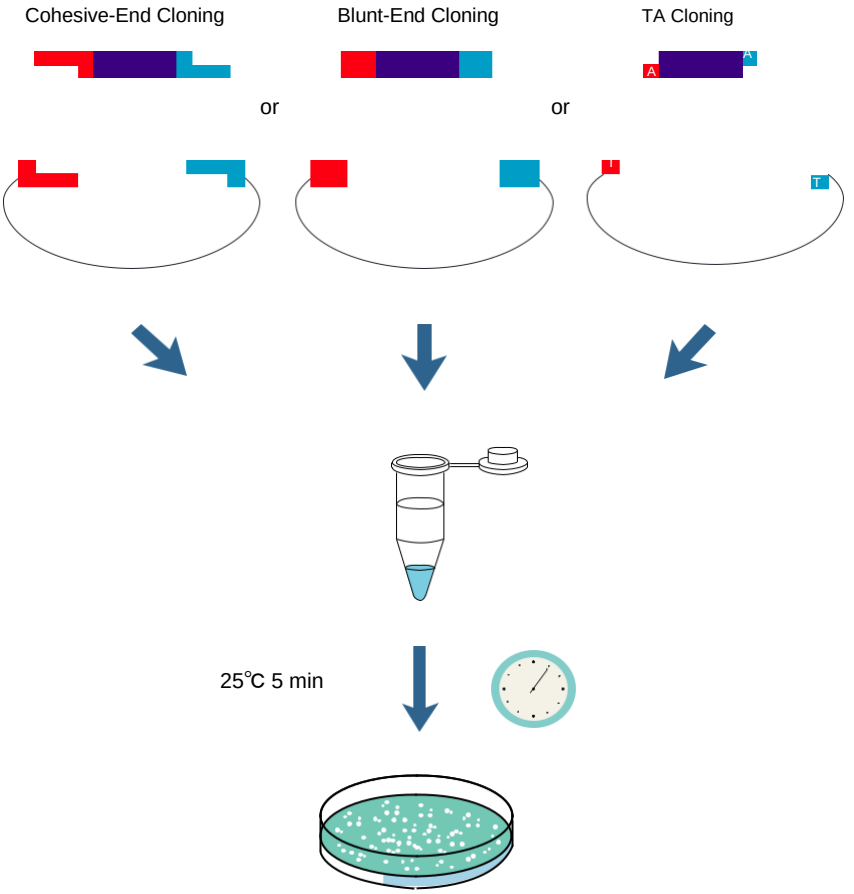
→ 5min niversal Ligation Mix (#C311)

Features

* Versatile Suitable for TA cloning, blunt-end cloning, cohesive-end cloning, and ligation of linkers or adapters. Fast Cloning within 5 min at 25℃.

* Ef cient Positive Clone Rate 5 .

Mechanism

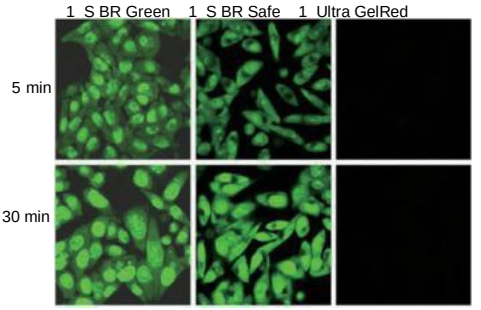


GelRed

→ ltra GelRed Nucleic Acid Stain (10000×) (#GR501)

Perfect substitute for ethidium bromide (EB)

No toxicity



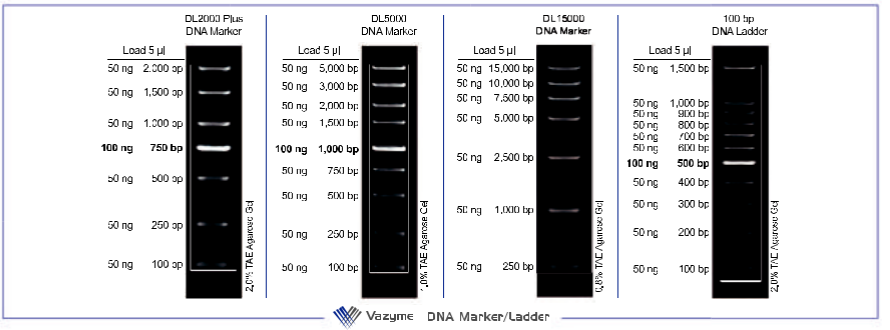
Ultra GelRed is unable to cross cell membranes.

DNA Marker/ Ladder

→ DNA Markers / Ladders

Stable

Clear Bands



Reverse Transcription

Selection Guide

	HiScript® II 1st Strand cDNA Synthesis Kit (R211)	HiScript® II 1st Strand cDNA Synthesis Kit (+gDNA wiper) (R212)	HiScript® II Q RT SuperMix for qPCR (R222)	HiScript® II Q RT SuperMix for qPCR (+gDNA wiper) (R223)	HiScript® II Q Select RT SuperMix for qPCR (R232)	HiScript® II Q Select RT SuperMix for qPCR (+gDNA wiper) (R233)	HiScript® III 1st Strand cDNA Synthesis Kit (R312)	HiScript® III RT SuperMix for qPCR (+gDNA wiper) (R323)
Applications								
RT-qPCR			■	■	■	■		■
RT-PCR	■	■					■	
Features								
SuperMix			■	■	■	■		■
Long-fragment cDNA	■	■					■	
Rapid removal of Genomic DNA		■		■		■	■	■
Primers								
ligo dT_{23} VN / N6 Mix			■	■				■
ptional	■	■			■	■	■	

	M-MLV (H-) (#R021)	HiScript II Reverse Transcriptase (#R201)	HiScript III Reverse Transcriptase (#R302)
Reaction temperature	3 ℃-42℃	42℃ - 55℃	3 ℃-50℃
Thermal stability	☆☆☆	☆☆☆☆☆	☆☆☆☆
RNase activity	No	No	No
cDNA length	2 kb-3 kb	Up to 20 kb	Up to 20 kb
Template adaptability	☆☆☆	☆☆☆☆	☆☆☆☆☆

RT-qPCR SuperMix

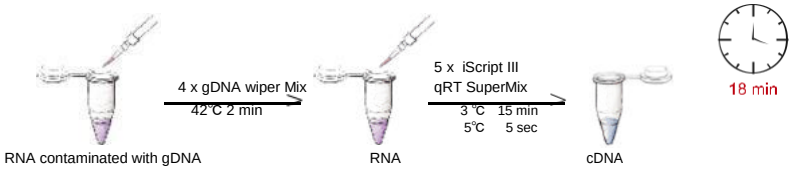
HiScript III RT SuperMix for qPCR (gDNA wiper) (#R323)

Features

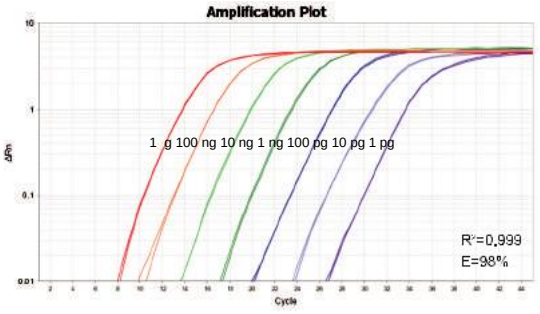
* Ready-to-use SuperMix reverse transcription within 20 min by only adding template RNA.
* Excellent ef ciency for low-input RNA or degraded RNA.
* Excellent tolerance for impurities (i.e. ethanol, isopropanol, phenol water, guanidine thiocyanate, humic acid). Lower C_T value and higher ef ciency than most other commercially available reverse transcription reagents.

Validation Data

1. Easy Fast



2. Excellent Sensitivity



RNA of HeLa cells was serially diluted and reverse transcribed using HiScript III RT SuperMix for qPCR (gDNA wiper) (Vazyme, #R323), followed by qPCR detection of gene ACT . The results show an excellent linear relationship across a wide range of RNA concentrations. The target gene (ACT) was detected in 1 pg of RNA.

qPCR

Selection Guide

Applications	Products (Cat.#)
S BR	Cham Universal S BR PCR Master Mix (11)
Probe	Ace Universal U Probe Master Mix V2 (513)
SNP (TaqMan MGB Probe)	Cham Geno-SNP Probe Master Mix (11)

qPCR Master Mix (SYBR)

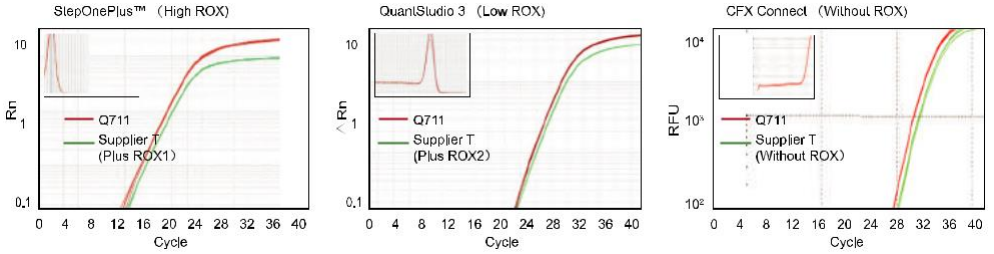
Cham niversal
SYBR qPCR Master Mix (# 711)

Best Combination of Specificity Sensitivity

- Unique ot-Start Taq
- Unique specificity-promoting Factors
- ptimal Concentrations of Mg^2 and Dye
- Universal

Validation Data

Applicable for almost all qPCR instruments.



Selected Product Citations

u L, et al. The transcription factor TCF-1 initiates the differentiation of TF cells during acute viral infection. *Nature Immunology*, 2015, 4 (3) 53 -51.

Guo C, et al. Cholesterol omeostatic Regulator SCAP-SREBP2 Integrates NLRP3 Inflammasome Activation and Cholesterol Biosynthetic Signaling in Macrophages. *Immunity*, 201 , 4 (5) 42-56.

qPCR Master Mix (Probe)

→ Ace niversal Probe Master Mix V2 (# 513)

Features

* Excellent sensitivity: ot-start AceTaq and optimal buffer ensure high sensitivity and effectively inhibit non-speci c ampli cation.

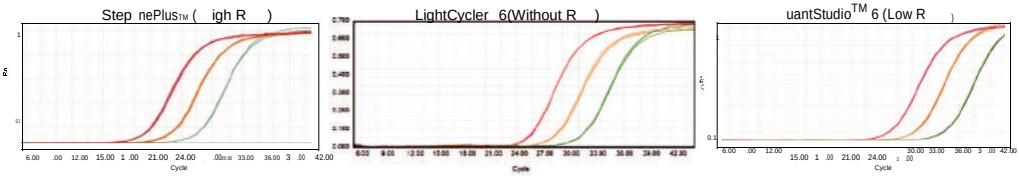
Excellent linear relationship over a large range of input amount of template. Suitable for the detection of single-copy templates.

* Anti-contamination: the dUTP/UDG system eliminates possible contaminations and ensures reliable results.

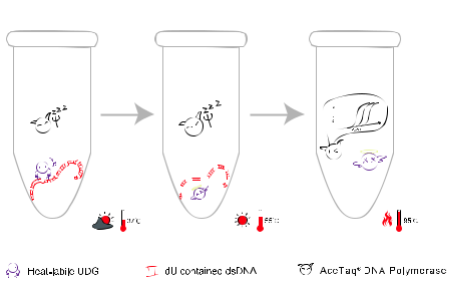
* niversal: applicable for almost all qPCR instruments.

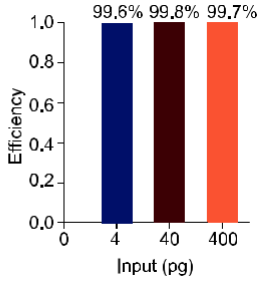
Validation Data

1. Applicable for almost all qPCR instruments.



2. d TP/ DG system.





For Vazyme # 513, the removal rate of the contaminated template is as high as 99.6 , effectively ensuring the accuracy of experimental results. U-containing templates (4 pg, 40 pg, 400 pg) were added respectively to the reaction system to evaluate the removal efficiency of the contaminated template by Vazyme # 513.

qPCR Master Mix (Probe)

➔ Cham Geno-SNP Probe Master Mix (# 811)

Advantages

Compatible with 1 ng - 10 ng of input genomic DNA.

Accurate genotyping of SNP sites with GC-content of 25 - 3 .

Excellent stability stable signal and accurate genotyping results can be obtained both 2 hr pre-PCR and 2 hr post-PCR.

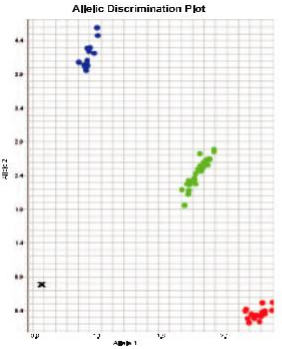
72 hr pre-PCR PCR reaction solutions were prepared and left in darkness (at room temperature) for 2 hr before PCR

72 hr post-PCR after PCR, the samples were left in darkness (at room temperature) for 2 hr.

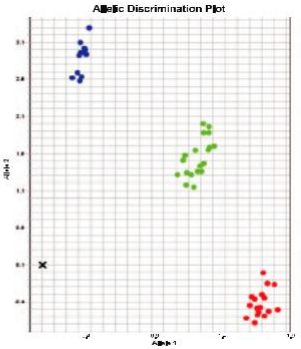
* Blood lysate can be directly used as a template for SNP genotyping, with no need for blood genomic DNA extraction.

Validation Data

1. Flexible input amounts.

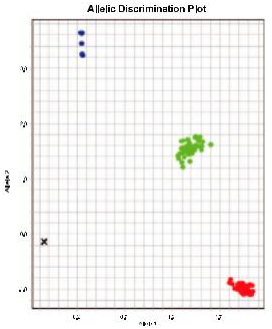


10 ng gDNA

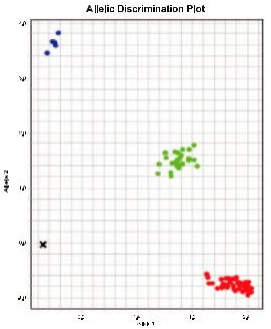


1 ng gDNA

2. Direct genotyping with blood lysate.



Blood genomic DNA



Blood lysate

Nucleic Acid Isolation

Selection Guide

Category	Series	Sample / Application	Products	Cat.#
DNA Isolation Purification	Rapid Sample Treatment	Blood	RoomTemp Sample Lysis it	P0 3
	DNA Extraction (Column)	Blood	FastPure Blood DNA Isolation Mini it V2	DC111
		Cell/tissue	FastPure Cell/Tissue DNA Isolation Mini it	DC102
		Bacterial	FastPure Bacteria DNA Isolation Mini it	DC103
		Plant	FastPure Plant DNA Isolation Mini it	DC104
		FFPE	FastPure FFPE DNA Isolation it	DC105
		Lysozyme	Lysozyme	DE103
RNA Isolation Purification	RNA tissue eeper	RNA eeper for fresh tissue	RNA eeper Tissue Stabilizer	R501
	Column RNA Extraction	Cell/tissue total RNA	FastPure Cell/Tissue Total RNA Isolation Mini it	RC101
		Polysaccharide & Polyphenol-rich Plant total RNA	FastPure Plant Total RNA Isolation it (Polysaccharides & Polyphenolics-rich)	RC401
Exosome Isolation	Cell supernatant		VE Exosome Isolation Reagent (from cell culture media)	R601
	Serum		VE Exosome Isolation Reagent (from serum)	R602
	Plasma		VE Exosome Isolation Reagent (from plasma)	R603

Plant RNA and DNA Isolation

→ FastPure Plant Total RNA Isolation it (Polysaccharides Polyphenolics-rich) (#RC401)

Features

High purity.

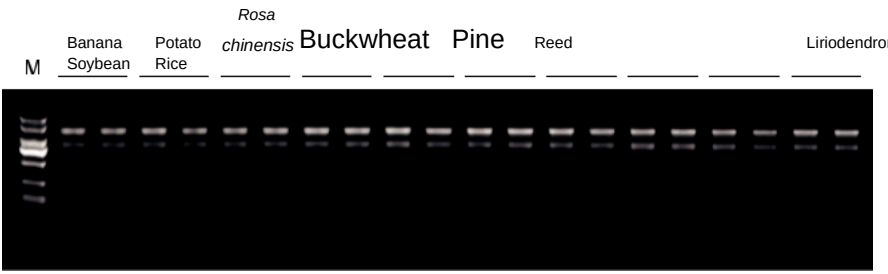
Rapid extraction of total RNA from plant tissues, especially from those rich in polysaccharide & polyphenol.

Low genomic DNA residue.

Validated Samples

Pine needles, *Eriobotrya aponica* leaves, potato tubers, grape fruits, apples, pears, tobacco leaves, mature leaves and roots of wheat, peach fruit, lotus, chrysanthemum rhizome, bananas, *Rosa chinensis*, buckwheat leaves and seeds, poplar, *Catharanthus roseus* leaves, liriodendron, reed, rice plant, roots and leaves of cotton, strawberry leaf, *Phoebe neurantha* leaves, ginkgo (root, leaf, ower and fruits), Arabidopsis seeds, corn seeds, fungal hyphae, etc.

Validation Data



Total RNA was extracted using Vazyme #RC401 from 50 mg of banana fruit, potato tubers, rose petals, pine needles, reed leaves, Liriodendron leaves, cotton roots, soybean leaves, rice leaves, or 20 mg of buckwheat seed, respectively. The RNA products were loaded for agarose gel electrophoresis. Vazyme #RC401 showed great compatibility to above plants, especially to those that were rich in polysaccharide polyphenol, and the RNA extracted using Vazyme #RC401 was with good integrity and high yield.

M: DL2000 Plus DNA Marker (Vazyme, #MD101). The elution volume was 100 μl and the loading amount was 4 μl-10 μl for agarose gel electrophoresis.

Rapid Sample Treatment

RoomTemp Sample Lysis it (#P073)

Features

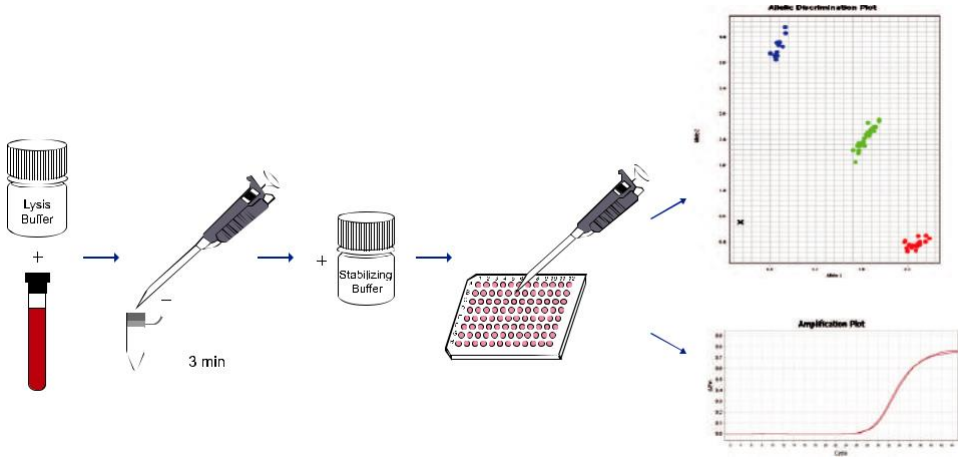
Replace cumbersome template extraction protocols with a simple one-step cell lysis procedure.

Lyse samples in just 3 min at room temperature. qPCR reagent is compatible with the fast program, total operation time is less than 1 hr.

Lyse different anticoagulant blood, FTA card, buccal swab and other samples.

The lysis reagent is consistent with the traditional kit for extracting the genome.

ork ow



Work ow of RoomTemp Sample Lysis it

Exosome Isolation

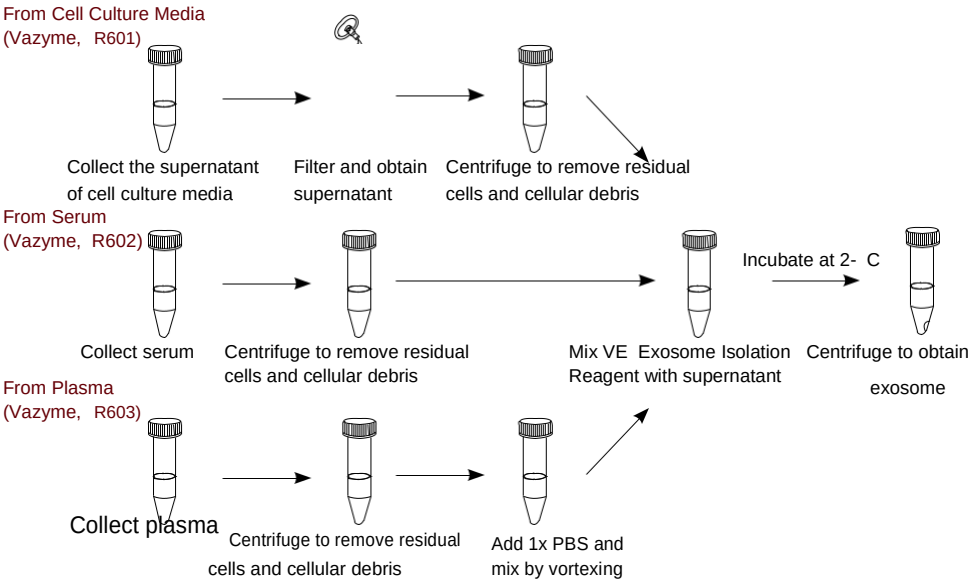
VE Exosome Isolation Reagents

Features

Easy isolation of exosomes by one-step precipitation, avoiding time-consuming ultra-centrifugation.

Intact exosomes with high yield obtained by low-speed centrifugation.

ork ow



Cell Counting

➔ CC -8 Cell Counting it (#A311)

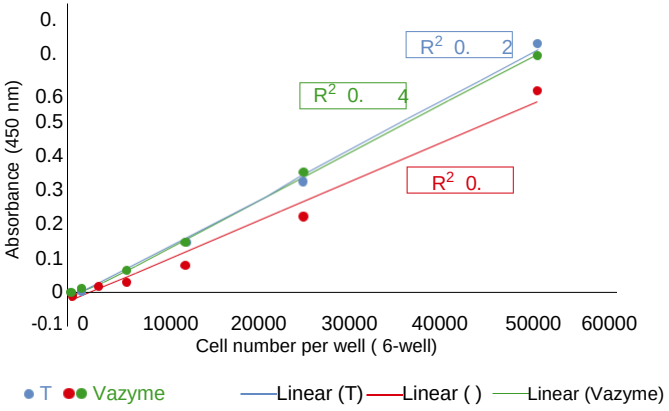
Features

Ready-to-use solution.

igh sensitivity, with excellent linear correlation and repeatability.

Low cytotoxicity.

Validation Data



HEK293 suspension cells were serially diluted and inoculated to a 96-well plate. The cell density in each group (n 3) is: 0, 400, 00, 1600, 3200, 6400, 12 00, 25600, 51200 cells per well. CCK- reagents from Vazyme (#A311, green), Supplier T (blue), and Supplier (red) were used for cell counting, respectively. The R value of Vazyme #A311 is 0.99.

Selected Product Citations

heng , et al. Thiopeptide antibiotics exhibit a dual mode of action against intracellular pathogens by affecting both host and microbe. *Chemistry & Biology*, 2015, 22( ) 1002- .

Liu , et al. Adiponectin reduces ER stress-induced apoptosis through PPAR transcriptional regulation of ATF2 in mouse adipose. *Cell Death & Disease*, 2016, (11) e24 .

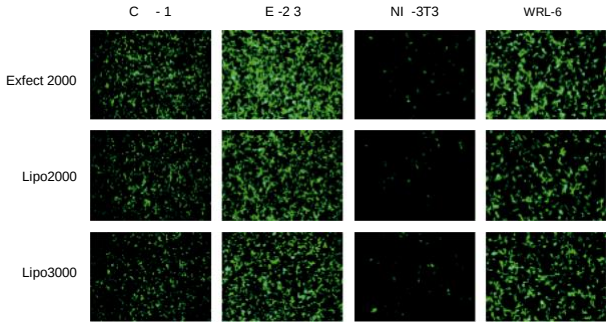
Cell Transfection

→ ExFect 2000 Transfection Reagent (#T202)

Features

* High transfection ef ciency in a variety of cell lines.
* Low cytotoxicity to avoid damaging the normal physiological state of cells.
* Add directly to cells in culture medium, in the presence or absence of serum.
* Applicable for co-transfection with multiple plasmids.

Validation Data



ExFect 2000 exhibits higher transfection efficiency than that of Lipo2000 and Lipo3000. CH K1, HEK293, NIH3T3 and RL6 cells were transfected using various reagents in a 24-well plate, respectively. The expression of FP was analyzed after transfection for 24 h.

Selected Product Citations

Sun , et al. Usp regulates ippo pathway through deubiquitinating the transcriptional coactivator orkie. *Nature Communications,* 201 , 10(1) 411.

Liu , et al. 1-L-MT, an ID inhibitor, prevented colitis-associated cancer by inducing CDC20 inhibition-mediated mitotic death of colon cancer cells. *International Journal of Cancer*, 201 , 143(6) 1516-2 .

Luciferase Assay

→ Dual Luciferase Reporter Assay it (#DL101)

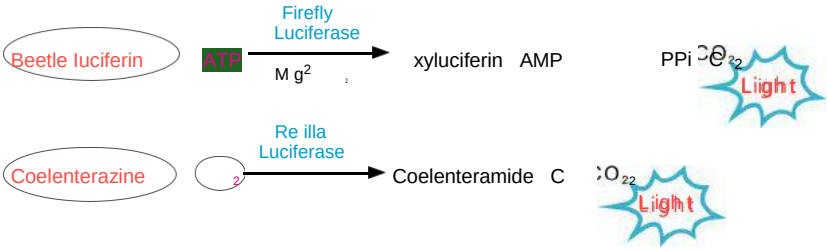
Features

Robust luminescent signals applicable for analysis of weak promoters and other genetic regulatory elements.

Detection linear range covers up to orders of magnitude (R_2 0.).

Detection sensitivity of 10^{-1} mole.

Mechanism



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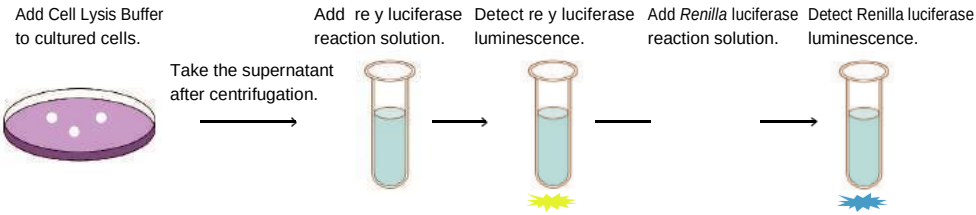


Selected Product Citations

Liu , et al. Circular RNA hsa circ 001 3 regulates breast cancer progression via sponging miR-200c-3p. *Cell Death & Disease*, 201 , 10 55

Wu , et al. Ubiquitination is essential for avibirnavirus replication by supporting VP1 Polymerase activity. *Journal of Virology*, 201 , 3(3) e01 -1 .

Wu , et al. SUM 1 Modification Facilitates Avibirnavirus Replication by Stabilizing Polymerase VP1. *Journal of Virology*, 201 , VI. 0222 -1 .

Mycoplasma Detection

→ Myco-Blue Mycoplasma Detector (#D101)

Features

Cell culture supernatant can be used directly for detection.

Results are obtained after incubation at 60℃ for 1 hr and can be determined by visual observation.

Accuracy is higher than PCR method, and comparable to qPCR method.

Suitable for detection of all kinds of mycoplasma that are commonly found in cell culture.

Validated Cell Lines

Validated cells and media serum include (but are not limited to)

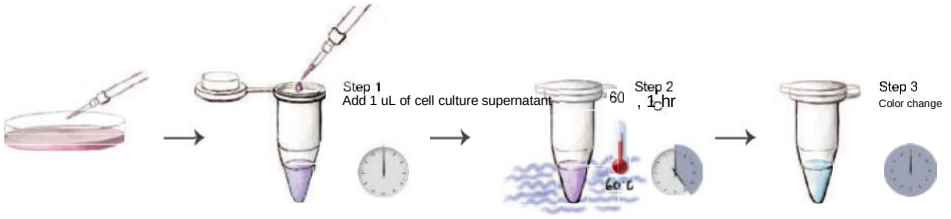
Suspension cells C , NS0, 2 3F, mouse hybridoma, Sf , B 21, etc.

Adherent cells Vero, MDC , SP2/0, 2 3T, epG2, eLa, A54 , MB-MDA231, L 2 , MEF, etc.

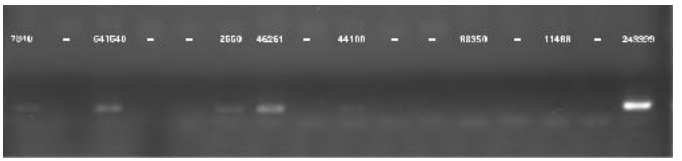
Medium CD FortiC , CDM4, Expi 2 3 Medium, CD ybridoma, Grace, DMEM, 1640, F12, etc.

Serum fetal calf / calf serum horse serum Gibco SR serum replacement, etc.

ork ow



Validated Data



q C results Positive is indicated by copy number (copies / µl supernatant) negative is indicated by - .

C results

Myco Blue results

Randomly selected 16 cell cultures, and mycoplasma were detected by three methods.

In Vitro Transcription

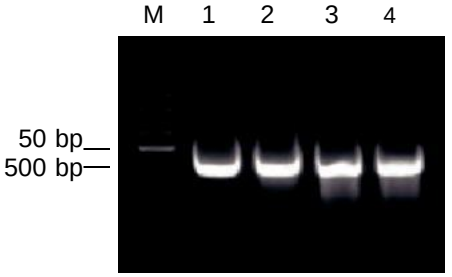
→ T7 RNAi Transcription it (#TR102)

Features

* High yield yields up to 80 g of dsRNA in a single reaction.
* Magnetic bead puri cation: recovery ef ciency up to 0 .
* Able to transcribe both siRNA (21 bp) and dsRNA (long fragment).

Validation Data

1. Excellent transcription ef ciency.



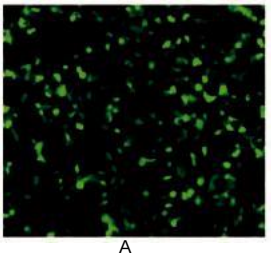
Agarose gel electrophoresis (2) of 500 bp dsRNA.

M: DL2000 Plus DNA Maker.

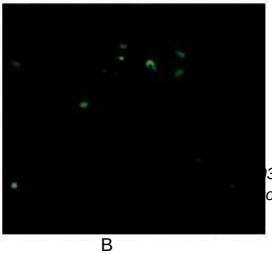
and : products before and after enzymatic hydrolysis of dsRNA, respectively

and : products before and after enzymatic hydrolysis of dsRNA, respectively.

2. nock-down of GFP expression by transcribed siRNA.



A



B

3T cells were co-transfected for 24 hrs with both FP plasmid ontrol FP siRNA (A) or positive FP siRNA ( ).

High-Fidelity PCR

hao , Wang M, u D, et al. Metabolic coupling of two small-molecule thiols programs the biosynthesis of lincomycin A . *Nature*. 2015 Feb5 51 (53) 115- . IF: 42.351

hang B, Wang B, Wang W, et al. Enzyme-catalysed 6 4 cycloadditions in the biosynthesis of natural products . *Nature*. 201 Apr 56 (50) 122-126. IF: 41.577

Ma , hu L, Song T, et al. A paralogous decoy protects Phytophthora sojae apoplastic effector Ps EG1 from a host inhibitor . *Science*. 201 Feb 1 355(6326) 10- 14. IF: 34.661

an , Wang R, hou , et al. Mapping the MouseCell Atlas by Microwell-Seq . Cell. 201 May1 1 3(5) 130 . IF: 31.398

hang B, Li , ang , et al. Crystal Structures of Membrane Transporter MmpL3, an Anti-TB Drug Target . *Cell*. 201 an 24 1 6(3) 636-64 .e13. IF: 31.398

Wang S, hang B, hu , et al. Molecular Basis for the Final xidative Rearrangement Steps in Chartreusin Biosynthesis . *Am Chem Soc*. 201 Aug 2 140(34) 10 0 -10 14. IF: 14.357

Cheng , Ma , Ding , et al. Pacer Mediates the Function of Class III PI3 and PS Complexes in Autophagosome Maturation by Engaging Stx1 . *Mol Cell*. 201 Mar 16 65(6) 102 -1043.e5. IF: 14.248

Wu , in F, Luo , et al. Unusual Processing Generates SPA LncRNAs that Sequester Multiple RNA Binding Proteins . *Mol Cell*. 2016 Nov 3 64(3) 534-54 . IF: 13.958

Tian , Sun P, an , et al. An enzymatic 4 2 cyclization cascade creates the pentacyclic core of pyrroindomycins . *Nat Chem iol*. 2015 Apr 11(4) 25 -65. IF: 13.217

hang M, hou C, Wei , et al. uman cleaving embryos enable robust homozygotic nucleotide substitutions by base editors . *enome iol*. 201 May 22 20(1) 101. IF: 13.214

Wang M, hao , hang , et al. Differences in PLP-Dependent Cysteinyl Processing Lead to Diverse S-Functionalization of Lincosamide Antibiotics . *Am Chem Soc*. 2016 May 25 13 (20) 634 -51. IF: 13.038

Lv M, i , hao , et al. Characterization of a C3 Deoxygenation Pathway Reveals a ey Branch Point in Aminoglycoside Biosynthesis . *Am Chem Soc*. 2016 May 25 13 (20) 642 -35. IF: 13

Sun , Ding , han M, et al. Usp regulates ippo pathway through deubiquitinating the transcriptional coactivator orkie . *Nature Communications*. 201 an 24 10(1) 411. IF: 12.353

Duan GF, e , u S, et al. Signal peptide represses Glu 1 surface and synaptic traf cking through binding to amino-terminal domain . *Nature Communications*. 201 Nov 1 (1) 4 . IF: 12.353

Chen T, iang F, hu S, et al. ADAR1 is required for differentiation and neural induction by regulating microRNA processing in a catalytically independent manner . *Cell Res*. 2015 Apr 25(4) 45 - 6. IF: 12.413

Ding W, i W, Wu , et al. Biosynthesis of the nosiheptide indole side ring centers on a cryptic carrier protein Nos . *Nature Communications*. 201 Sep 5 (1) 43 . IF: 12.124

uan , hang , Cai , et al. GyrI-like proteins catalyze cyclopropanoid hydrolysis to confer Cellular protection . Nature Communications. 201 Nov 14 (1) 14 5. IF: 12.124

hang , Wang TT, u L, et al. Genome Mining and Comparative Biosynthesis of Meroterpenoids from Two Phylogenetically Distinct Fungi . *Angew Chem Int Ed Engl*. 201 ul 2 5 (2) 14-1 . IF: 12.102

i , Li , ie L, et al. Expanding Radical SAM Chemistry by Using Radical Addition Reactions and SAM Analogues . *Angew Chem Int Ed Engl*. 2016 Sep 1 55(3) 11 45- . IF: 11.71

i , Li , Ding W, et al. Substrate-Tuned Catalysis of the Radical S-Adenosyl-L-Methionine Enzyme NosL Involved in Nosiheptide Biosynthesis . Angew Chem Int Ed Engl. 2015 ul 2 54(31) 021-4. IF: 11.261

in , Chen C, ang , et al. istone acetyltransferase Mo at1 acetylates autophagy-related proteins MoAtg3 and MoAtg to orchestrate functional appressorium formation and pathogenicity in Magnaporthe oryzae .

Autophagy. 201 ul 15( ) 1234-125 . IF: 11.1

u D, Shan B, Sun , et al. USP14 regulates autophagy by suppressing 63 ubiquitination of Beclin1 . *enes Dev*. 2016 Aug 1 30(15) 1 1 -30. IF: 10.042

Conventional PCR

hang B, Wang B, Wang W, et al. Enzyme-catalysed 6 4 cycloadditions in the biosynthesis of natural products . *Nature*. 201 Apr 56 (50) 122-126. IF: 41.577

hang , Wang B, hang , et al. Complementary sequence-mediated exon circularization . *Cell*. 2014 Sep 25 15 (1) 134-14 . IF: 33.116

Wang S, hang B, hu , et al. Molecular Basis for the Final xidative Rearrangement Steps in Chartreusin Biosynthesis . *Am Chem Soc*. 201 Aug 2 140(34) 10 0 -10 14. IF: 14.357

Sun , Liu , heng , et al. Distinct chemokine signaling regulates integrin ligand speci city to dictate tissue-speci c lymphocyte homing . *Dev Cell*. 2014 ul 14 30(1) 61- 0. IF: 12.86

uan , hang , Cai , et al. Gyrl-like proteins catalyze cyclopropanoid hydrolysis to confer Cellular protection . *Nature Communications*. 201 Nov 14 (1) 14 5. IF: 12.124

hang , Wang T T, u L, et al. Genome Mining and Comparative Biosynthesis of Meroterpenoids from Two Phylogenetically Distinct Fungi . *Angew Chem Int Ed Engl*. 201 ul 2 5 (2) 1 4- 1 . IF: 12.102

Chen C, hai S, hang L, et al. Uhrf1 regulates germinal center B Cell expansion and af nity maturation to control viral infection . *Exp Med*. 201 May 215(5) 143 -144 . IF: 11.991

Bai D, hang , Li T, et al. The ATPase hCINAP regulates 1 S rRNA processing and is essential for embryogenesis and tumour growth . *Nature Communications*. 2016 Aug 1 12310. IF: 11.33

hang , Dong R, hang , et al. Diverse alternative back-splicing and alternative splicing landscape of circular RNAs *enome* . *Res*. 2016 Sep 26( ) 12 - . IF: 11.351

Sun , hu , Chen , et al. The mediator subunit Med23 contributes to controlling T-Cell activation and prevents autoImmunity . *Nature Communications*. 2014 ct 10 5 5225. IF: 10.742

Fast Cloning

Wu N, Ming , et al. TB 6 null variants and a common hypomorphic allele in congenital scoliosis . *N Engl Med*. 2015 an 22 3 2(4) 341-50. IF: 54.42

Ge , Li W, et al. Architecture of the mammalian mechanosensitive Piezo1 channel . *Nature*. 2015 Nov 5 52 (5 6) 64- . IF: 42.351

Li , Wang , et al. Base editing with a Cpf1-cytidine deaminase fusion . *Nat iotechnol*. 201 Apr 36(4) 324-32 . IF: 41.667

in S, ong , et al. Cytosine, but not adenine, base editors induce genome-wide off-target mutations in rice . *Science*. 201 Apr 1 364(643)2 2-2 5. IF: 41.058

Wang , Li , Wang , et al. Ef cient base editing in methylated regions with a human AP BEC3A-Cas fusion . *Nat iotechnol*. 201 Nov 36(10) 46- 4 . IF: 35.724

ong , Song , Li C, et al. Ef cient C-to-T base editing in plants using a fusion of nCas and human AP BEC3A . *Nat iotechnol*. 201 ct 1. IF: 35.724

Li T, ang , et al. Domestication of wild tomato is accelerated by genome editing . *Nat iotechnol*. 201 ct 1. IF: 35.724

hang , Li W, et al. Structural damage in the C. elegans epidermis causes release of STA-2 and induction of an innate immune response . *Immunity*. 2015 Feb 1 42(2) 30 -320. IF: 19.748

Li , Li , ang S, et al. CRISPR-Cas -mediated base-editing screening in mice identi es DND1 amino acids that are critical for primordial germ Cell development . *Nat Cell iol*. 201 Nov 20(11) 1315-1325. IF: 19.064

Wang L, ue W, an L, et al. Enhanced base editing by co-expression of free uracil DNA glycosylase inhibitor . *Cell Res*. 201 ct 2 (10) 12 -12 2. IF: 15.606

hao , Wu , Geng , et al. Ion Permeation and Mechanotransduction Mechanisms of Mechanosensitive Piezo Channels . *Neuron*. 2016 Mar 16 (6) 124 -1263. IF: 15.054

Mo F, huang , Liu , et al. Acetylation of Aurora B by TIP60 ensures accurate chromosomal segregation . *Nat Chem iol*. 2016 Apr 12(4) 226-32. IF: 14.273

Cheng , Ma , Ding , et al. Pacer Mediates the Function of Class III PI3 and PS Complexes in Autophagosome Maturation by Engaging Stx1 . *Mol Cell*. 201 Mar 16 65(6) 102 -1043.e5. IF: 14.248

ing , Pan C, Shao T, et al. Mixed Lineage inase Domain-like Protein ML L Breaks Down Myelin following Nerve Injury . *Mol Cell*. 201 Nov 1 2(3) 45 -46 .e5. IF: 14.248

u S, Wang , Shan G. Insertion of an Alu element in a lncRNA leads to primate-speci c modulation of alternative splicing . *Nat Struct Mol iol*. 2016 Nov 23(11) 1011-101 . IF: 13.338

i , Si , hang , et al. Conferring DNA virus resistance with high speci city in plants using virus-inducible genome-editing system . *enome iol*. 201 Nov 15 1 (1) 1 . IF: 13.214

uang , Gu L, hang , et al. An oomycete plant pathogen reprograms host pre-mRNA splicing to subvert Immunity . *Nature Communications*. 201 Dec 12 (1) 2051. IF: 12.124

uang C, ang F, hang , et al. Mrg15 stimulates Ash1 3 36 methyltransferase activity and facilitates Ash1 Trithorax group protein function in Drosophila . *Nature Communications*. 201 Nov21 (1) 164 . IF:12.124

in , Liu , Luo D, et al. DELLA proteins are common components of symbiotic rhizobial and mycorrhizal signalling pathways . *Nature Communications*. 2016 Aug 12 12433. IF: 11.33

e M, u , Chen , et al. MoSnt2-dependent deacetylation of histone 3 mediates MoTor-dependent autophagy and plant infection by the rice blast fungus Magnaporthe oryzae . *Autophagy*. 201 14( ) 1543-1561. IF: 11.1

Tan L M, hang C , ou M, et al. The PEAT protein complexes are required for histone deacetylation and heterochromatin silencing . *EM* . 201 ct 1 3 (1). pii e 0. IF: 10.557

Fast Mutagenesis

ing , ao R W, hang , et al. SLERT Regulates DD 21 Rings Associated with Pol I Transcription . *Cell*. 201 May 4 16 (4) 664-6 .e16. IF: 30.409

Li , Liu C , ue W, et al. Coordinated circRNA Biogenesis and Function with NF 0/NF110 in Viral Infection . *Mol Cell*. 201 ul 20 6 (2) 214-22 .e . IF: 14.713

Mo F, huang , Liu , et al. Acetylation of Aurora B by TIP60 ensures accurate chromosomal segregation . *Nat Chem iol*. 2016 Apr 12(4) 226-32. IF: 14.273

u D, hang T, iao , et al. Modi cation of BECN1 by ISG15 plays a crucial role in autophagy regulation by type I IFN/interferon . *Autophagy*. 2015 Apr 3 11(4) 61 -2 . IF: 11.753

uang W , Liu , McCormick S, et al. Tomato Pistil Factor STIG1 Promotes in Vivo Pollen Tube Growth by Binding to Phosphatidylinositol 3-Phosphate and the ExtraCellular Domain of the Pollen Receptor inase LePR 2 . *Plant Cell*. 2014 un 26(6) 2505-2523. IF: 10.125

Traditional Total RNA Isolation

Chen B, ou W, u , et al. Ef cient labeling and imaging of protein-coding genes in living cells using CRISPR-Tag . *Nature Communications*, 201 , (1) 5065. IF: 12.353

RNA Tissue eeper

ang L,Li ,Gong R, et al.The Long Non-coding RNA- RLNC1 Regulates Bone Mass by Directing Mesenchymal Stem Cell Fate .201 , *Mol Ther*, 2 (2) 3 4-410. IF: 7.008

miRNA

Wang M, Wu W, Li L, et al. Analysis of the miRNA Expression Pro les in the earalenone-Exposed TM3 Leydig Cell Line . *International ournal of molecular sciences*, 201 , 20(3) 635. IF: 3.687

Reverse Transcription

hou , Liu , hou C, et al. In vivo simultaneous transcriptional activation of multiple genes in the brain using CRISPR-dCas -activator transgenic mice . *Nat Neurosci*. 201 Mar 21(3) 440-446. IF: 17.839

Meng , Wang , Brunetti T, et al. The DGCR5 long noncoding RNA may regulate expression of several schizophrenia-related genes . *Sci Transl Med*. 201 Dec 1 10(4 2). pii eaat6 12. IF: 16.71

in S, Tian S, Luo M, et al. Tetherin Suppresses Type I Interferon Signaling by Targeting MAVS for NDP52-Mediated Selective Autophagic Degradation in uman Cells . *Mol Cell*. 201 ct 1 6 (2) 30 -322.e4. IF: 14.248

Guo M, Li C, Lei , et al . Role of the adipose PPAR -adiponectin axis in susceptibility to stress and depression/anxiety-related behaviors . *Mol Psychiatry*. 201 ul 22( ) 1056-106 . IF: 13.3

ang L, Wang W , iu W L, et al. A single-Cell transcriptomic analysis reveals precise pathways and regulatory mechanisms underlying hepatoblast differentiation . *Hepatology*. 201 Nov 66(5) 13 -1401. IF: 13.246

Chen B, ou W, u , et al. Ef cient labeling and imaging of protein-coding genes in living Cells using CRISPR-Tag . *Nature Communications*. 201 Nov 2 (1) 5065. IF: 12.353

Liu , in , Wu C, et al. Downregulated NDR1 protein kinase inhibits innate immune response by initiating an miR146a-STAT1 feedback loop . *Nature Communications*. 201 ul 1 (1) 2 . IF: 12.353

Sun , Ding , han M, et al. Usp regulates ippo pathway through deubiquitinating the transcriptional coactivator orkie . *Nature Communications*. 201 an 24 10(1) 411. IF: 12.353

ian , ie W, ang S, et al. Strati ed ubiquitination of RIG-I creates robust immune response and induces selective gene expression . *Sci Adv*. 201 Sep 22 3( ) e1 01 64. IF: 11.511

Liu M, Shi , hang , et al. Inducible overexpression of Ideal Plant Architecture1 improves both yield and disease resistance in rice . *Nat Plants*. 201 Apr 5(4) 3 -400. IF: 11.471

in , Chen C, et al. istone acetyltransferase Mo at1 acetylates autophagy-related proteins MoAtg3 and MoAtg to orchestrate functional appressorium formation and pathogenicity in Magnaporthe oryzae . *Autophagy*. 201 ul 15( ) 1234-125 . IF: 11.1

Liu , Wei W, Li , et al. BMI1 and MEL1 Promote Colitis-Associated Cancer in Mice via REG3B and STAT3 . *astroenterology*. 201 Dec 153(6) 160 -1620. IF: 18.392

Cheng , Ma , hu , et al. Pacer Is a Mediator of mT RC1 and GS 3-TIP60 Signaling in Regulation of Autophagosome Maturation and Lipid Metabolism . *Mol Cell*. 201 Feb 21 3(4) -02.e . IF: 14.248

u , Chen A, Deng , et al. NatD promotes lung cancer progression by preventing histone 4 serine phosphorylation to activate Slug expression . *Nature Communications*. 201 ct 13 (1) 2 . IF: 12.124

an , u , uang D, et al. A molecular roadmap for induced multi-lineage trans-differentiation of broblasts by chemical combinations . *Cell Res*. 201 un 2 (6) 43. IF: 15.393

PCR

Guo C, Chi , et al. Cholesterol omeostatic Regulator SCAP-SREBP2 Integrates NLRP3 In ammasome Activation and Cholesterol Biosynthetic Signaling in Macrophages . *Immunity*. 201 Nov 20 4 (5) 42- 56.e . IF: 19.734

hou , Liu , hou C, et al. In vivo simultaneous transcriptional activation of multiple genes in the brain using CRISPR-dCas -activator transgenic mice . *Nat Neurosci*. 201 Mar 21(3) 440-446. IF: 17.839

Meng , Wang , Brunetti T, et al. The DGCR5 long noncoding RNA may regulate expression of several schizophrenia-related genes . *Sci Transl Med*. 201 Dec 1 10(4 2). pii eaat6 12. IF: 16.71

uang, Li T, Wang L, et al. epatoCellular carcinoma redirects to ketolysis for progression under nutrition deprivation stress . *Cell Res*. 2016 ct 26(10) 1112-1130. IF: 14.812

Cheng , Ma , hu , et al. Pacer Is a Mediator of mT RC1 and GS 3-TIP60 Signaling in Regulation of Autophagosome Maturation and Lipid Metabolism . *Mol Cell*. 201 Feb 21 3(4) - 02.e . IF: 14.248

Liu , Fu , Wang , et al. Proteomic pro ling of IV-1 infection of human CD4( ) T Cells identi es PSGL-1 as an IV restriction factor . *Nat Microbiol*. 201 May 4(5) 13- 25. IF: 14.174

ang L, Wang W , iu W L, et al. A single-Cell transcriptomic analysis reveals precise pathways and regulatory mechanisms underlying hepatoblast differentiation . *Hepatology*. 201 Nov 66(5) 13 -1401. IF: 13.246

an , Chen , uang D, et al. Mapping human pluripotent stem Cell differentiation pathways using high throughput single-Cell RNA-sequencing . *enome iol*. 201 Apr 5 1 (1) 4 . IF: 13.214

Chen B, ou W, u , et al. Ef cient labeling and imaging of protein-coding genes in living Cells using CRISPR-Tag . *Nature Communications*. 201 Nov 2 (1) 5065. IF: 12.353

Liu , in , Wu C, et al. Downregulated NDR1 protein kinase inhibits innate immune response by initiating an miR146a-STAT1 feedback loop . *Nature Communications*. 201 ul 1 (1) 2 . IF: 12.353

Sun , Ding , han M, et al. Usp regulates ippo pathway through deubiquitinating the transcriptional coactivator orkie . *Nature Communications*. 201 an 24 10(1) 411. IF: 12.353

Cao M , hang L, Liu , et al. Combining chemical and genetic approaches to increase drought resistance in plants . *Nature Communications*. 201 ct 30 (1) 11 3. IF: 12.124

Chen C, hai S, hang L, et al. Uhrf1 regulates germinal center B Cell expansion and af nity maturation to control viral infection . *Exp Med*. 201 May 215(5) 143 -144 . IF: 11.991

Sun L, Song L, Wan , et al. cMyc-mediated activation of serine biosynthesis pathway is critical for cancer progression under nutrient deprivation conditions . *Cell Res*. 2015 Apr 25(4) 42 -44. IF: 11.981

Liu , Wu C, Pan , et al. NDR2 promotes the antiviral immune response via facilitating TRIM25-mediated RIG-I activation in macrophages . *Sci Adv*. 201 Feb 6 5(2) eaav0163. IF: 11.511

Liu M, Shi , hang , et al. Inducible overexpression of Ideal Plant Architecture1 improves both yield and disease resistance in rice . *Nat Plants*. 201 Apr 5(4) 3 -400. IF: 11.471

in , Chen C, et al. istone acetyltransferase Mo at1 acetylates autophagy-related proteins MoAtg3 and MoAtg to orchestrate functional appressorium formation and pathogenicity in Magnaporthe oryzae . *Autophagy*. 201 ul 15( ) 1234-125 . IF: 11.1

u S B, iang F, Li , et al. Protein arginine methyltransferase CARM1 attenuates the paraspeckle-mediated nuclear retention of mRNAs containing IRAlus . *enes Dev*. 2015 Mar 15 2 (6) 630-45. IF: 10.798

Liu , Gan L, hang T, et al. Melatonin alleviates adipose inflammation through elevating -ketoglutarate and diverting adipose-derived exosomes to macrophages in mice . *Pineal Res*. 201 an 64(1). IF: 10.391

Liu , Gan L, Luo D, et al. Melatonin promotes circadian rhythm-induced proliferation through Clock/histone deacetylase 3/c-Myc interaction in mouse adipose tissue . *Pineal Res*. 201 May 62(4). IF: 10.39

In Vitro Transcription

uang , Cui R, ia , et al. Salivary DN ase II from Laodelphax striatellus acts as an effector that suppresses plant defense . *New Phytologist*, 201 . IF: 7.433

Apoptosis

Ma , Bao , hang , et al. Mammalian Near-Infrared Image Vision through Injectable and Self-Powered Retinal Nanoantennae . Cell. 201 Apr 4 1 (2) 243-255.e15. IF 31.3

Wang , u S B, Wang M R, et al. Genome-wide screening of NEAT1 regulators reveals cross-regulation between paraspeckles and mitochondria . Nat Cell Biol. 201 ct 20(10) 1145-115 . IF 1 .064

su P , hu , Ma , et al. thdc2 is an N(6)-methyladenosine binding protein that regulates mammalian spermatogenesis . Cell Res. 201 Sep 2( ) 1115-112 . IF 15.606

Li D, hang , Wang M, et al. Activity dependent LoNA regulates translation by coordinating rRNA transcription and methylation . Nature Communications. 201 Apr 30 (1) 1 26. IF 12.353

Liu , Gan L, u , et al. Melatonin alleviates in ammasome-induced pyroptosis through inhibiting NF- B/GSDMD signal in mice adipose tissue . Pineal Res. 201 Aug 63(1). IF 10.3

Cell Transfection

Sun , Ding , han M, et al. Usp regulates ippo pathway through deubiquitinating the transcriptional coactivator orkie . *Nature Communications*. 201 an 24 10(1) 411. IF: 12.353

Liu , hou W, hang , et al. 1-L-MT, an ID inhibitor, prevented colitis-associated cancer by inducing CDC20 inhibition-mediated mitotic death of colon cancer Cells . *Int Cancer*. 201 Sep 15 143(6) 1516-152 . IF: 6.513

Du , Wang , Liu C, et al. Chemopreventive activity of GEN-2 , a genistein derivative, in colitis-associated cancer is mediated by p65-CD 2- -catenin axis . *ncotarget*. 2016 Apr 5 (14) 1 0- 4. IF: 6.359

ao M, ou S, ue L, et al. Further Developments of the Phenyl-Pyrrolyl Pentane Series of Nonsteroidal Vitamin D Receptor Modulators as Anticancer Agents . *Med Chem*. 201 Apr 12 61( ) 305 -30 5. IF: 6.259

hang , Liu , hou W, et al. Fasudil increases temozolomide sensitivity and suppresses temozolomide-resistant glioma growth via inhibiting R C 2/ABCG2 . *Cell Death Dis*. 201 Feb (2) 1 0. IF: 5.965

Lin , Ma , ou , et al. Construction and immunogenicity of a recombinant swinepox virus expressing a multi-epitope peptide for porcine reproductive and respiratory syndrome virus . *Sci Rep*. 201 Mar 43 0. IF: 5.228

Cell Counting it

Liu , Gan L, Chen , et al. Mark4 promotes oxidative stress and in ammation via binding to PPAR and activating NF- B pathway in mice adipocytes . *Sci Rep*. 2016 Feb 1 6 213 2. IF: 5.268

Gan L, Liu , Wu T, et al. MS promotes preadipocyte proliferation by alleviating ER stress-induced leptin resistance and by activating Notch1 signal in mice . *iochim iophys Acta Mol asis Dis*. 201 an 1 63(1) 231-23 . IF: 5.158

Song , Rui C, Meng L, et al. Long non-coding RNA RPAIN regulates the invasion and apoptosis of trophoblast Cell lines via complement protein C1q . *ncotarget*. 201 an 31 (5) 63 - 646. IF: 5.008

Li , Chen L, Cao C, et al. The Long Non-Coding RNA LncRNA 5-1 is Upregulated in ypertrophic Scar Fibroblasts and Controls Collagen Expression . *Cell Physiol iochem*. 2016 40(1-2) 326-334. IF: 4.652

Liu , Gan L, Liu G, et al. Sirt1 decreased adipose in ammation by interacting with Akt2 and inhibiting mT R/S6 1 pathway in mice . *Lipid Res*. 2016 Aug 5 ( )13 3- 1. IF: 4.368

Dual Luciferase Reporter Assay it

Liu , hou , Liang G, et al. Circular RNA hsa circ 001 3 regulates breast cancer progression via sponging miR-200c-3p . *Cell death disease*, 201 , 10(2). IF: 5.638

Wu , Shi L, hang , et al. Ubiquitination is essential for avibirnavirus replication by supporting VP1 Polymerase activity . *ournal of virology*, 201 , 3(3) e01 -1 . IF: 4.368

Wu , ang , i G, et al. SUM 1 Modi cation Facilitates Avibirnavirus Replication by Stabilizing Polymerase VP1 . *ournal of virology*, 201 VI. 0222 -1 . IF: 4.368

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