




**ABclonal**<sup>®</sup>

Technology

| Leader in Biomolecular  
Solutions for Life Science

## STAR MOLECULAR BIOLOGY PRODUCTS





# ***LEADER IN BIOMOLECULAR SOLUTIONS FOR LIFE SCIENCE***

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EXPLORING THE MYSTERIES OF  
LIFE SCIENCE WITH YOU

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## 1. PCR

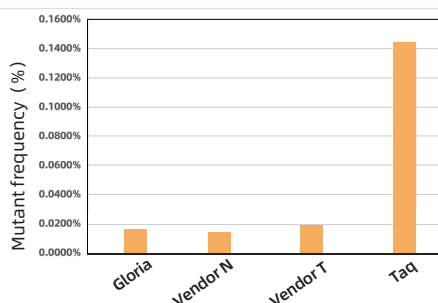
PCR is one of the most commonly used molecular biology techniques, which can achieve rapid amplification of specific DNA fragments. DNA polymerase is the core component of PCR reaction. According to different scenarios, it is usually necessary to select a suitable DNA polymerase for a specific experiment. ABclonal provides a variety of modified DNA polymerases to meet different application needs.

## STAR PRODUCTS

### PRODUCT RECOMMENDATION

#### Gloria Nova HS 2X Master Mix (RK20717) —— High Fidelity PCR Mix

##### // Demonstration Data

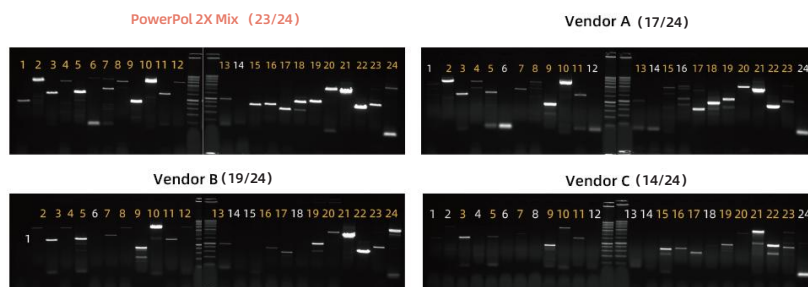


Gloria Nova HS 2X Master Mix shows high fidelity , significantly better than Taq and comparable to other high fidelity enzymes in the market.

### PRODUCT RECOMMENDATION

#### PowerPol 2X PCR Mix with Dye (RK20719) —— Super cost-effective universal PCR Mix

##### // Demonstration Data



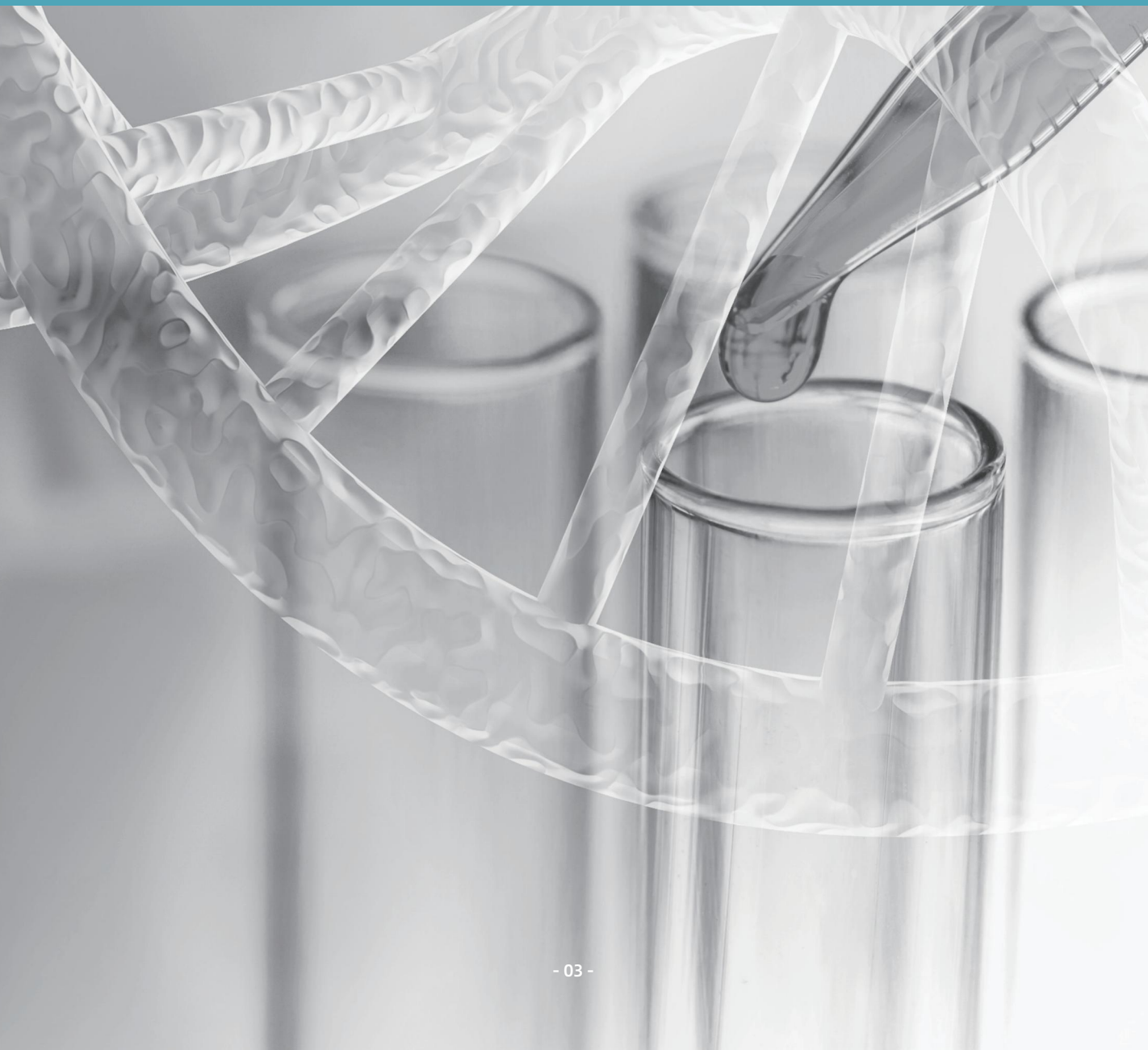
Using 24 pairs of representative primers to do the amplification , the success rate of PowerPol is 95.8% and significantly better than other vendors in the market.

##### // PCR Series

Category	Cat.No.	Product Name	Size
High-Fidelity PCR	RK20714 	Gloria Nova HS PCR Kit	50 RXN/200 RXN
	RK20717 	Gloria Nova HS 2X Master Mix	1 mL/5 mL
Universal PCR	RK20718 	PowerPol 2X PCR Mix	5 mL/25 mL/100 mL
	RK20719 	PowerPol 2X PCR Mix with Dye	5 mL/25 mL/100 mL
Nucleic acid electrophoresis	RM02852 	High purity agarose	100 g
	RM19009	Nucleic Acid stain (Safe Red)	500 µL
	RM19008	Nucleic Acid stain (Safe Green)	500 µL

## 2.Vector Construction

Vector construction is a technology of inserting exogenous DNA fragments into the target vector to form recombinant plasmids. ABclonal can provide T4 ligase for vector construction based on traditional method.

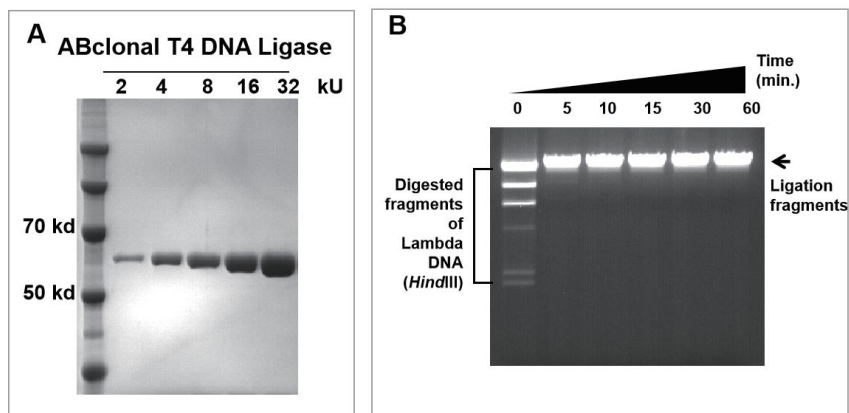




## PRODUCT RECOMMENDATION

### T4 DNA Ligase (High Conc.) (RK21500) —— High concentration T4 DNA ligase

#### // Demonstration Data







ABclonal T4 DNA Ligase has extreme purity and excellent DNA ligation activity

**A.** SDS-Page analysis of different amounts of ABclonal T4 DNA ligase.

**B.** Analysis of ligation activity of ABclonal T4 DNA ligase for different incubation time

(2000 U ABclonal T4 DNA ligase ligated 1  $\mu$ g HindIII-digested Lambda DNA fragment).

#### // Vector Construction Series

Category	Cat.No.	Product Name	Size
T4 DNA Ligase	RK21500 	T4 DNA Ligase (High Conc.) 2000 U/ $\mu$ L	80,000 U/400,000 U
	RK21501	T4 DNA Ligase 400 U/ $\mu$ L	16,000 U/80,000 U
Plasmid isolation	RK30101 	AFTSpin Plasmid Mini Kit	50 RXN
	RK30103 	AFTSpin EndoFree Plasmid Maxi Kit	10 RXN
Gel recovery and purification	RK30100 	AFTSpin Multifunction DNA Purification Kit	100 RXN




### **3.Restriction Enzymes**

Restriction enzymes developed by ABclonal have the same recognition sequence as those common restriction enzymes, which can achieve accurate digestion. Most ABclonal restriction enzymes are fast restriction enzymes, which can complete the digestion quickly and accurately in 5-15 minutes. The 4 reaction buffer systems are optimized to maximize the digestion effect. All ABclonal restriction enzymes are recombinant enzymes with extremely high purity, and free-contamination.



## STAR PRODUCTS

### // Restriction Enzymes Adaptation Table

Cat.No.	Product Name	CutA	CutB	CutC	CutS	Fast Digest	Heat inactivation	Temperature	Size
RK21121	Acc65I	10%	75%	100%	25%	Yes	65°C	37°C	2,000 U/10,000 U
RK21125	AgeI	100%	75%	25%	75%	No	65°C	37°C	300 U/1,500 U
RK21119	AvrII	100%	50%	50%	100%	Yes	No	37°C	100 U/500 U
 RK21101	BamHI	75%	100%	100%	100%	Yes	No	37°C	10,000 U/50,000 U
RK21114	BglI	10%	25%	100%	10%	Yes	65°C	37°C	2,000 U/10,000 U
 RK21109	DpnI	100%	100%	75%	100%	Yes	80°C	37°C	1,000 U/5,000 U
 RK21102	EcoRI	10%	100%	10%	100%	Yes	65°C	37°C	10,000 U/50,000 U
RK21106	EcoRV	10%	50%	100%	100%	Yes	80°C	37°C	4,000 U/20,000 U
 RK21108	HindIII	25%	100%	50%	50%	No	80°C	37°C	10,000 U/50,000 U
RK21104	KpnI	100%	75%	10%	50%	No	No	37°C	4,000 U/20,000 U
RK21122	MluI	10%	50%	100%	25%	Yes	80°C	37°C	1,000 U/5,000 U
RK21115	NcoI	100%	100%	100%	100%	Yes	80°C	37°C	1,000 U/5,000 U
RK21111	NheI	100%	100%	10%	100%	Yes	65°C	37°C	1,000 U/5,000 U
RK21103	NotI	10%	50%	100%	100%	Yes	65°C	37°C	500 U/2,500 U
RK21124	NspI	100%	100%	10%	100%	Yes	65°C	37°C	250 U/1,250 U
RK21300	Nt.BspQI	10%	25%	100%	10%	No	80°C	50°C	1,000 U/5,000 U
RK21126	SacI	100%	50%	10%	100%	Yes	65°C	37°C	2,000 U/10,000 U
RK21123	SalI	10%	10%	100%	10%	Yes	65°C	37°C	2,000 U/10,000 U
RK21128	SbfI	50%	25%	<10%	100%	Yes	80°C	37°C	500 U/2,500 U
RK21105	SfiI	25%	100%	50%	100%	Yes	No	50°C	3,000 U/15,000 U
RK21120	SgrAI	100%	100%	10%	100%	No	65°C	37°C	1,000 U/5,000 U
RK21116	SmaI	10%	10%	10%	100%	Yes	65°C	25°C	2,000 U/10,000 U
RK21113	SpeI	75%	100%	25%	100%	Yes	80°C	37°C	500 U/2,500 U
RK21117	StyI	10%	25%	100%	10%	Yes	65°C	37°C	3,000 U/15,000 U
RK21112	XbaI	10%	100%	75%	100%	Yes	65°C	37°C	3,000 U/15,000 U
 RK21100	XhoI	75%	100%	100%	100%	Yes	65°C	37°C	5,000 U/25,000 U

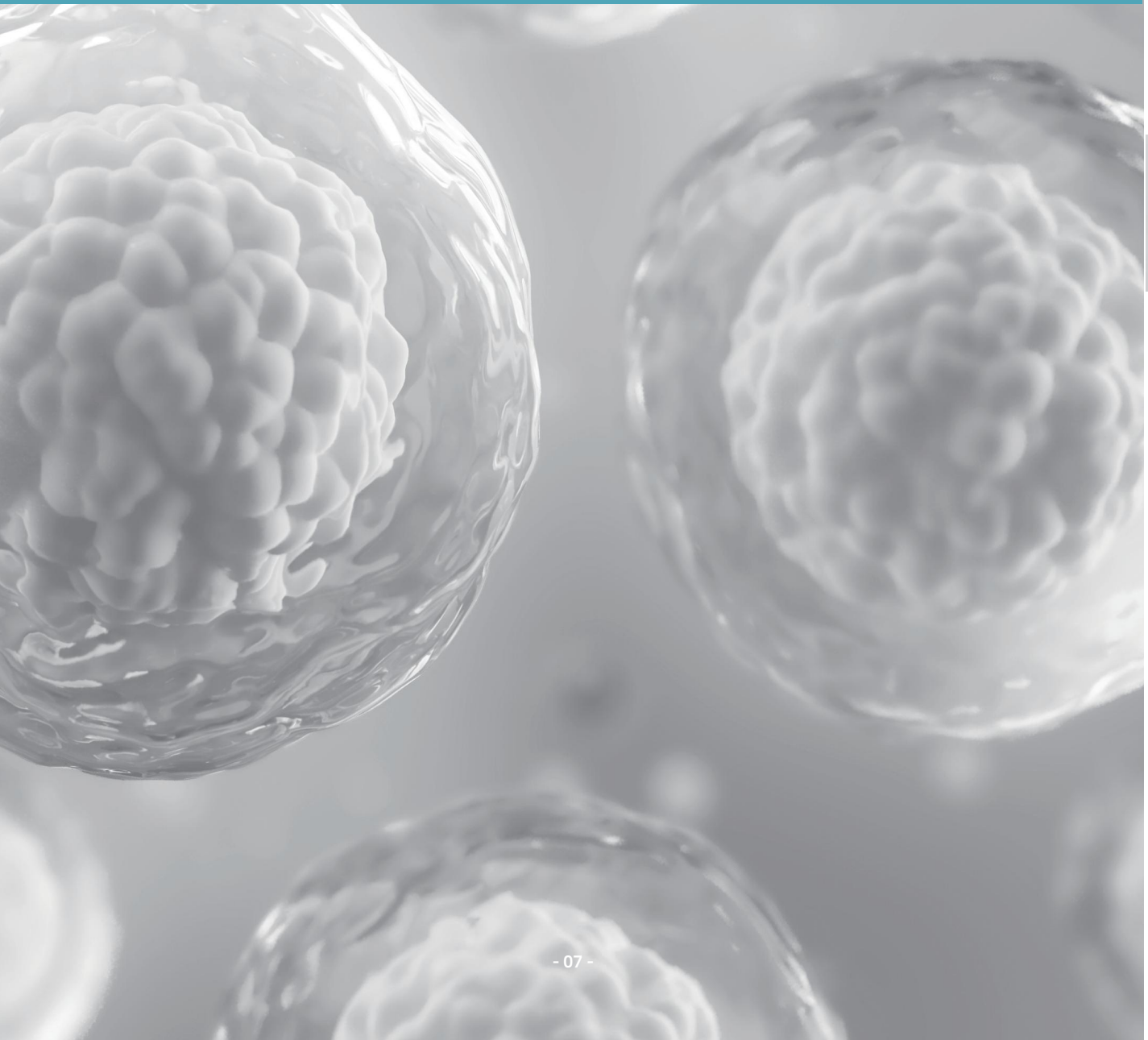
1.The activity values in the table are approximate

2.Please dissolve the buffer completely and mix well before use

CutA  CutB  CutC  CutS 

## 4.Reverse Transcription

Reverse transcriptase is a DNA polymerase that synthesizes single-stranded complementary DNA from RNA template. Currently, M-MLV is the most commonly used reverse transcriptase in the market. The reaction temperature of ABclonal RK20429 can reach to 55°C; Reaction time is shortened to 15 mins; The length of cDNA synthesis can reach more than 12 Kb; And the reverse transcription and removal of gDNA can be carried out in one tube at the same time, which makes it very easy to use.



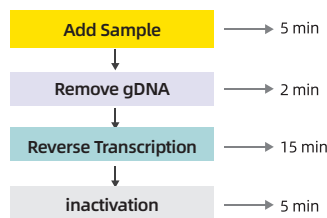
## STAR PRODUCTS

### PRODUCT RECOMMENDATION

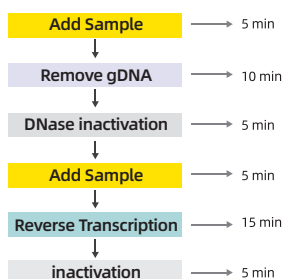
**ABScript III RT Master Mix for qPCR with gDNA Remover (RK20429)**  
 —— High-efficiency reverse transcription master mix

#### // Simplified operation steps:

##### ABScript III RT Master Mix for qPCR with gDNA Remover



##### Traditional RT Mix or Kits

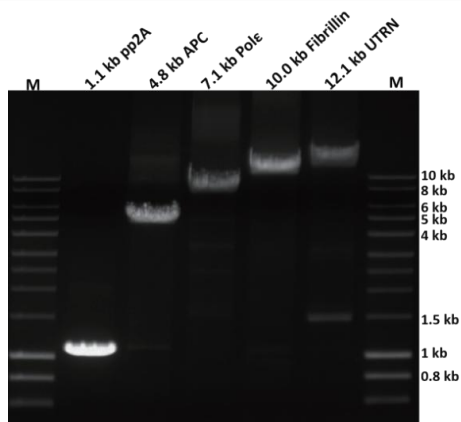


Easy to use, only need to add RNA template. gDNA remove and reverse transcription can perform in the same tube, no need to divide into two steps. Reduce the risk of RNA degradation and sample contamination

### PRODUCT RECOMMENDATION



**ABScript II cDNA First Strand Synthesis Kit (RK20400)**  
 —— Multifunctional reverse transcription kit

#### // Demonstration Data



Using 1µg of HeLa cell total RNA as template, reverse transcription was performed with ABScript II cDNA First-Strand Synthesis Kit, and 1µL of cDNA was used as template to obtain clear and specific electrophoresis bands for genes of different lengths

#### // Reverse Transcription Series

Category	Cat.No.	Product Name	Size
First-Strand Synthesis Kit	RK20400 	ABScript II cDNA First-Strand Synthesis Kit	50 RXN/100 RXN
RT Master Mix	RK20428 	ABScript III RT Master Mix for qPCR	10 RXN/100 RXN
	RK20429	ABScript III RT Master Mix for qPCR with gDNA Remover	10 RXN/100 RXN



## 5.qPCR

Quantitative fluorescence PCR, also known as qPCR, is a method for quantitative analysis of specific DNA molecules, which is widely used in experiments such as gene expression and gene detection. According to different signal sources, there are two commonly used methods- dye-based method and probe-based method. ABclonal provides a variety of qPCR reagents for scientific researchers.

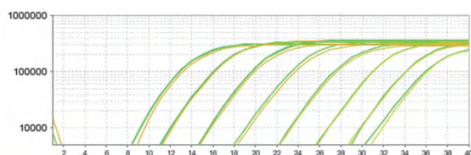
PRODUCT  
RECOMMENDATION

**2X Universal SYBR Green Fast qPCR Mix (RK21203)**

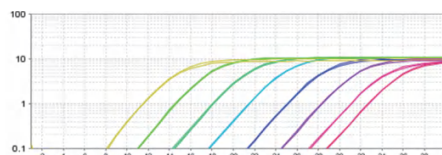
— Universal SYBR Green qPCR Mix for all qPCR instruments

// Demonstration Data

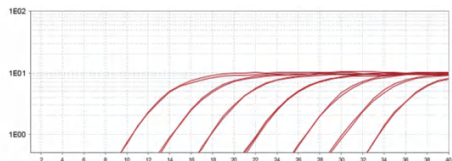
(A) ABI StepOne Plus no ROX mode



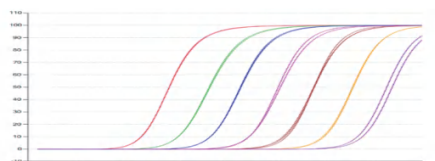
(B) ABI StepOne Plus high ROX mode



(C) ABI QuantStudio3 low ROX mode





(D) Quantagene q225



qPCR results from different instruments of 2X Universal SYBR Green Fast qPCR Mix

Using E.coli genomic DNA as a template, qPCR experiments were carried out in different instruments. The results show that Universal SYBR Green Fast qPCR Mix is suitable for all types of instruments in the market.

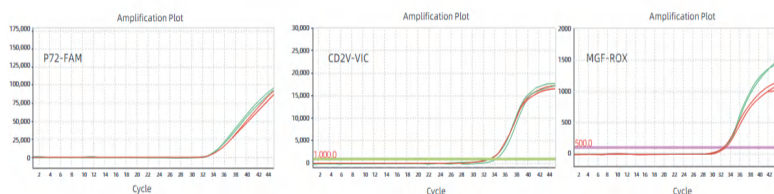
// Dye-based qPCR Series

Catagory	Cat.No.	Product Name	Size
Dye-based qPCR	RK21203 	2X Universal SYBR Green Fast qPCR Mix	5 mL/25 mL
	RK21204 	Genious 2X SYBR Green Fast qPCR Mix	5 mL/25 mL
	RK21205	Genious 2X SYBR Green Fast qPCR Mix (No ROX)	5 mL/25 mL
	RK21206	Genious 2X SYBR Green Fast qPCR Mix (Low ROX Premixed)	5 mL/25 mL
	RK21207	Genious 2X SYBR Green Fast qPCR Mix (High ROX Premixed)	5 mL/25 mL
One Step RT-qPCR	RK20404	ABScript II One Step SYBR Green RT-qPCR Kit	10 RXN/100 RXN

PRODUCT  
RECOMMENDATION

Entrans 2X qPCR Probe Master Mix with UDG (RK21222)  
—— Anti-contamination qPCR Probe Mix

// Demonstration Data

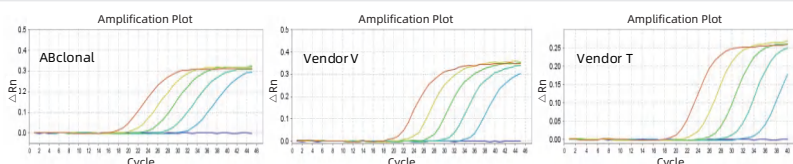


In the application scenario of African Swine fever, after RK21222 was stored at 37°C for 10 days, the P72, CD2V, and MGF gene fragments of African Swine fever virus DNA were simultaneously detected by the multiple probe system, and the detection signal did not change significantly (green is -20°C, red is 37°C)

PRODUCT  
RECOMMENDATION

ABScript III One Step RT-qPCR Probe Kit with UDG V5 (RK20412)  
—— Anti-contamination One-step RT-qPCR probe Mix




// Demonstration Data



log	2	1	0	-1	-2	E (%)	R <sup>2</sup>
ABclonal	21.061922	24.343271	27.594267	31.290552	35.469372	90.38	0.997
Vendor V	23.228533	26.459255	29.930073	33.623936	37.719734	89.08	0.9979
Vendor T	23.345409	26.746599	30.082512	33.610199	37.866066	89.89	0.9975

Using mouse RNA as the template (100 ng/μl as the initial concentration), the 5'-end TAMRA fluorescently labeled probe, five 10-fold gradient dilutions, RK21222 can detect the target gene with better performance and high detection sensitivity compared with other manufacturers' products.

// Probe-based qPCR Series

Catagory	Cat.No.	Product Name	Size
Probe-based qPCR	RK21208 	Entrans 2X qPCR Probe Master Mix	100 RXN/500 RXN
	RK21222 	Entrans 2X qPCR Probe Master Mix with UDG	50 RXN/250 RXN
	RK20412 	ABScript III One Step RT-qPCR Probe Kit with UDG V5	50 RXN/250 RXN



## 6.qPCR Consumables

ABclonal qPCR consumable series are produced in extremely high-standard production workshops, which make the tube wall of our qPCR consumables thinner and more uniform, thus the heat conduction efficiency is higher, and the sample heating is more stable. Through an innovative mold design and injection molding process, our qPCR consumables have higher stability and lower adsorption of samples and reagents, thereby ensuring the accuracy and precision of reaction system during the experiment. The excellent quality makes it a good choice for your real-time PCR experiments.

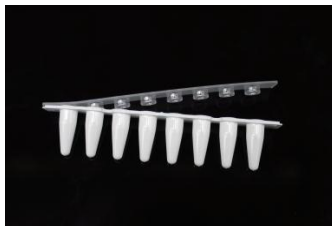




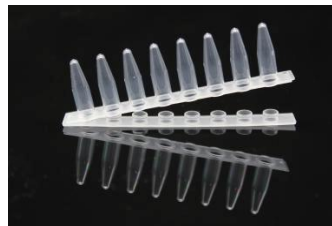
## // Product Photos



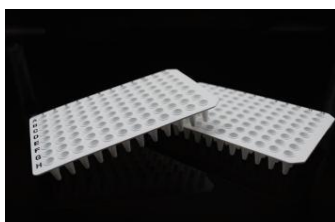
AI02082



AI02082



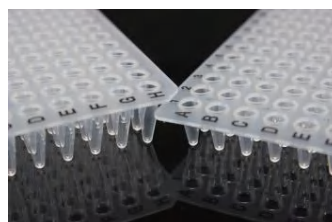
AI02082



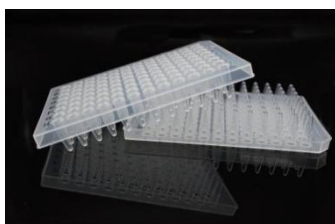
AI02001S



AI02003



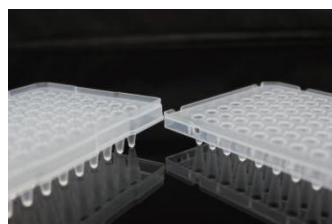
AI02001T & AI02009



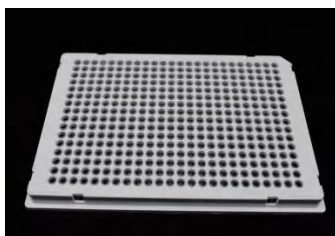
AI02008



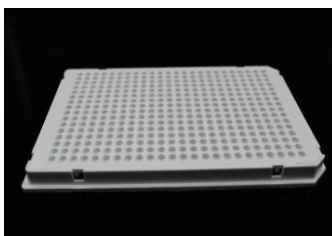
AI02010T



AI02006 & AI02007



AI02011



AI02012



AI02021S

Through the excellent mold design, each qPCR plate is more suitable for the real-time PCR instruments. Together with ABclonal series pressure-sensitive sealing film or adhesive sealing film, it can ensure the best sealing and extremely low evaporation rate during the experiment.

## STAR PRODUCTS

### // qPCR Consumable Series

Category	Cat.No.	Product Name	Size
8-Tube Strip	AI02082	8-Tube Strip with Attached Optical Flat Caps, 0.1mL	125 Strips/Box
	AI02083	8-Tube Strip with Attached Optical Flat Caps, White, 0.1mL	125 Strips/Box
	AI02085	8-Tube Strip with Attached Optical Flat Caps, 0.2mL	125 Strips/Box
qPCR plate	AI02001S	96-well qPCR Plates, 0.1 mL, Non-Skirted, White, Cut Corners A12 and H12	10 Plates/Box
	AI02001T	96-well qPCR Plates, 0.1 mL, Non-Skirted, Clear, Cut Corners A12 and H12	10 Plates/Box
	AI02003	96-well qPCR Plates, 0.1 mL, Semi-Skirted, White, Cut Corner H12	10 Plates/Box
	AI02006	96-well qPCR Plates, 0.2mL, Semi-Skirted, Frosted, Cut Corner A12	10 Plates/Box
	AI02007	96-well qPCR Plates, 0.1mL, Semi-Skirted, Frosted, Cut Corner A1	10 Plates/Box
	AI02008	96-well qPCR Plates, 0.2mL, Semi-Skirted, Clear, Cut Corner A12	10 Plates/Box
	AI02009	96-well qPCR Plates, 0.2mL, Non-Skirted, Clear, Cut Corner H1	10 Plates/Box
	AI02010T	96-well qPCR Plates, 0.1 mL, Full-Skirted, Clear, Cut Corner H1	10 Plates/Box
	AI02011	384-well qPCR Plate, 40µL, Skirted, White Frame with Clear Tube, Cut Corner A24	10 Plates/Box
	AI02012	384-well qPCR Plate, 40µL, Skirted, White Frame with White Tube, Cut Corners A24 and P24	10 Plates/Box
qPCR Sealing Film	AI02021S	Pressure-sensitive qPCR Plate Sealing Film	50 Pieces/Box
	AI02021M	Pressure-sensitive qPCR Plate Sealing Film	100 Pieces/Box
	AI02022	Adhesive qPCR Plate Sealing Film	100 Pieces/Box



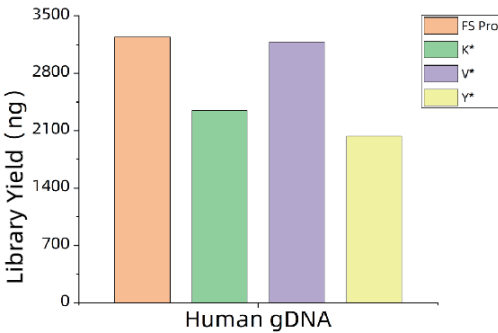
## 7.NGS library Preparation

ABclonal has been focusing on the product development of NGS library preparation kits and related enzyme raw materials for a long time. We have a complete product portfolio, including various DNA and RNA library preparation kits based on Illumina and MGI sequencing platforms and corresponding sequencing adapters. Products can be applied to resequencing, methylation sequencing, ChIP-seq, mRNA sequencing, whole transcriptome sequencing, small RNA sequencing, etc. Our original damaged DNA repair module (DDRE) technology can greatly improve the success rate of library preparation for clinical samples such as FFPE and cf/ctDNA. Users can purchase flexibly either whole kit or different modules , according to their own needs. Moreover, ABclonal provides various personalized services such as product consulting, technical training, system optimization, etc., to provide clients with professional solutions.

PRODUCT  
RECOMMENDATION

**FS Pro DNA Lib Prep Kit for Illumina(RK20261)**  
—— Enzymatic Digestion DNA Library Prep Kit

// Demonstration Data

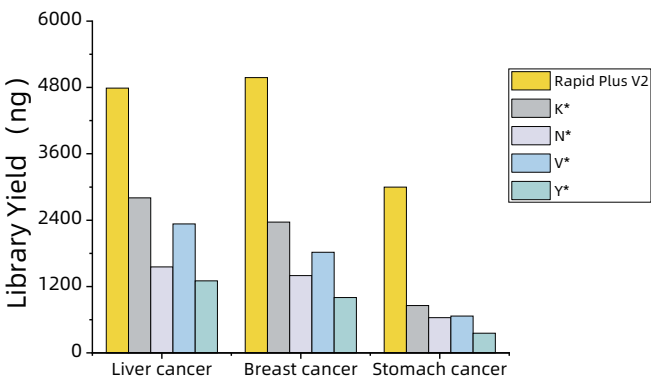


Using Human gDNA as template, libraries were constructed using RK20261 and similar products from other companies. The results show a higher volume of libraries than other companies.

PRODUCT  
RECOMMENDATION

**Rapid Plus DNA Lib Prep Kit for Illumina V2(RK20255)**  
—— Universal DNA Library Prep Kit

// Demonstration Data

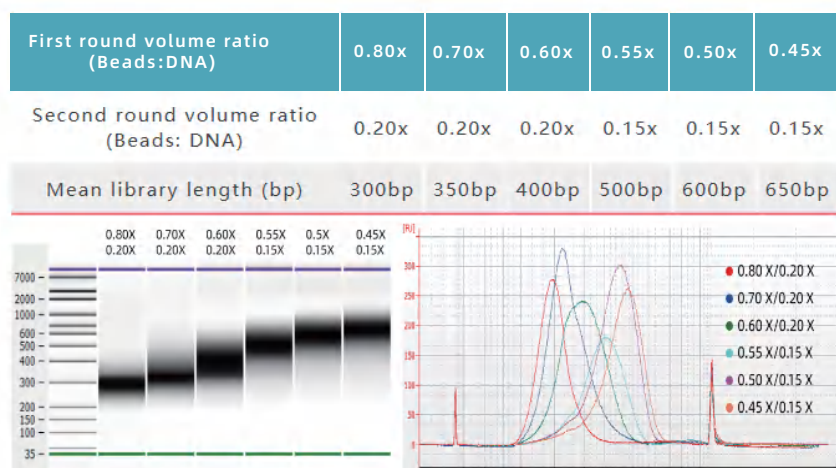


FFPE DNA samples from different tumor sources, the input amount is 100 ng, and RK20255 is used to construct the library (the number of cycles is 8). The results show that the yield of the library constructed by RK20255 is higher than that of other manufactures' products.

## PRODUCT RECOMMENDATION




## AFTMag NGS DNA Clean Beads (RK20257) —— DNA Clean Beads

### // Demonstration Data



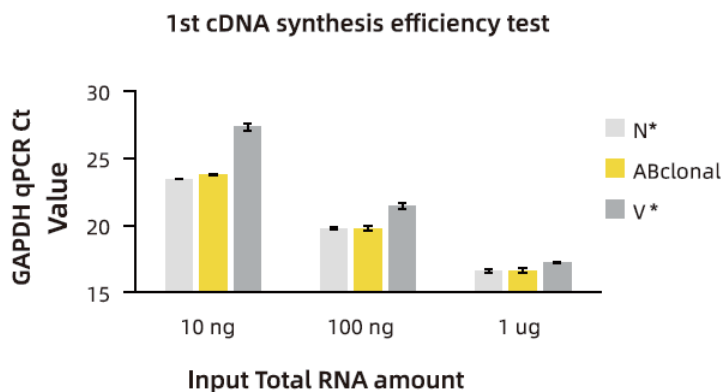
DNA library was constructed using Tn5 Transposase (1 mg/mL) with Dual DNA Adapter 96 Kit for One-step DNA Lib Prep . First purified by 1 × Beads, then sorted by Beads according to different conditions, and analyzed by Agilent 2100. The results showed that the sizes of the DNA fragments met expectations, and the peak shape was good.

### // DNA Library Preparation Series

Category	Cat.No.	Product Name	Size
Rapid Series (Conventional Lib Prep)	RK20254 	Rapid CE DNA Lib Prep Kit for Illumina V2	24 RXN/96 RXN
	RK20255 	Rapid Plus DNA Lib Prep Kit for Illumina V2	24 RXN/96 RXN
	RK20256	Rapid Plus DNA Lib Prep Kit for MGI V2	8 RXN/24 RXN/96 RXN
	RK20261	FS Pro DNA Lib Prep Kit for Illumina	8 RXN/24 RXN/96 RXN
	RK20260	DNA Frag Module	24 RXN/96 RXN
FFPE QC Kit	RK20229	FFPE DNA QC Kit	24 RXN/96 RXN
DNA Clean Beads	RK20257 	AFTMag NGS DNA Clean Beads	5 mL/60 mL


PRODUCT  
RECOMMENDATIONmRNA-seq Lib Prep Module for Illumina(RK20350)  
—— High-efficiency mRNA lib Prep Module

## // Demonstration Data



The result of our product is the cDNA synthesis efficiency of ABclonal first strand synthesis kit was similar to ventor N, and significantly better than vendor V. The smaller ct value means the higher cDNA synthesis efficiency.


## // RNA Library Preparation Series

Category	Cat.No.	Product Name	Size
mRNA Lib Prep	RK20350 	mRNA-seq Lib Prep Module for Illumina	24 RXN/96 RXN
	RK20353	First Strand Synthesis Module	24 RXN/96 RXN
	RK20346	Second Strand Synthesis Module	24 RXN/96 RXN
RNA enrichment Module	RK20341	Poly(A) mRNA Purification Module	24 RXN/96 RXN
	RK20348	rRNA Depletion Module (H/M/R)	8 RXN/24 RXN/96 RXN

## 8. Representative Citations

- 1 Proteogenomic characterization identifies clinically relevant subgroups of intrahepatic  
Published on **Cancer Cell** 2022 Pubmed ID:34971568 IF: 31.743  
Cat.No.:ABScript II RT Master Mix for qPCR (RK20402) (has been upgraded to RK20428)
- 2 N6-methyldeoxyadenine and histone methylation mediate transgenerational survival advantages  
induced by hormetic heat stress  
Published on **Sci Adv** 2021 Pubmed ID:33523838 IF: 14.136  
Cat.No.:ABScript II cDNA First-Strand Synthesis Kit (RK20400)
- 3 Endonuclease G promotes autophagy by suppressing mTOR signaling and activating the DNA damage response  
Published on **Nat Commun** 2021 Pubmed ID:33473107 IF: 14.919  
Cat.No.:ABScript II cDNA First-Strand Synthesis Kit (RK20400)
- 4 Tet2 inactivation enhances the anti-tumor activity of tumor-infiltrating lymphocytes  
Published on **Cancer Res** 2021 Pubmed ID:33589517 IF: 12.701  
Cat.No.:2X Universal SYBR Green Fast qPCR Mix (RK21203)
- 5 LARP7-Mediated U6 snRNA Modification Ensures Splicing Fidelity and Spermatogenesis in Mice  
Published on **Molecular Cell** 2020 Pubmed ID:32017896 IF: 15.584  
Cat.No.:ABScript II cDNA First-Strand Synthesis Kit (RK20400)
- 6 Protein kinase CK2 participates in estrogen-mediated endothelial progenitor cell homing to  
Integrated Proteogenomic Characterization of HBV-Related Hepatocellular Carcinoma  
Published on **Cell** 2019 Pubmed ID:31585088 IF: 36.21  
Cat.No.:ABScript II cDNA First-Strand Synthesis Kit (RK20400)





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E-mail: [cn.market@abclonal.com](mailto:cn.market@abclonal.com)

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unit 4, Baglan Bay Innovation Centre,  
Port Talbot, SA12 7AX  
E-mail: [info@abclonal.com](mailto:info@abclonal.com)

Korea  
#A103 Hyundai Knowledge Industry Center,  
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