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ABScript Neo RT Master Mix for qPCR with gDNA Remover (RK20433)

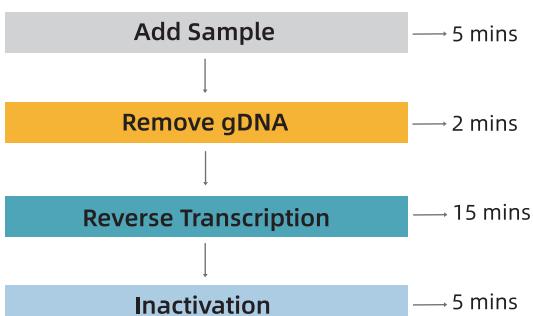


## // Product Features

- **Convenience:** It simplifies gDNA removal and reverse transcription, shortening the entire process to just 20 minutes.
- **gDNA removal:** It can effectively remove gDNA from samples without affecting reverse transcription efficiency.
- **Universality:** It exhibits stable reverse transcription efficiency for genes with varying levels of abundance and GC content.
- **Inhibitor tolerance:** It is highly tolerant to low-quality samples and inhibitors such as salts, ethanol, phenols, and SDS.

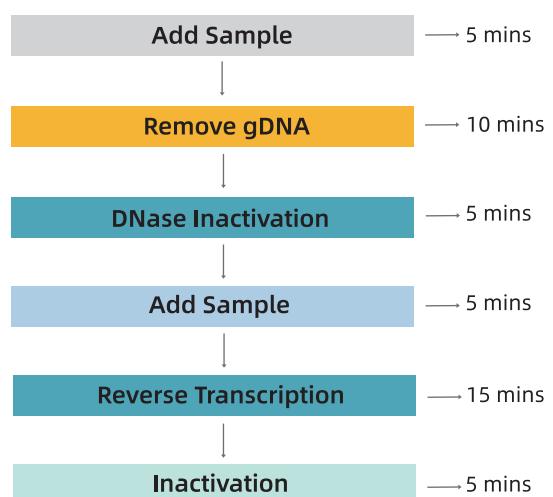
## // Different workflows of Reverse Transcription products

## ABScript Neo RT Master Mix for qPCR with qDNA Remover

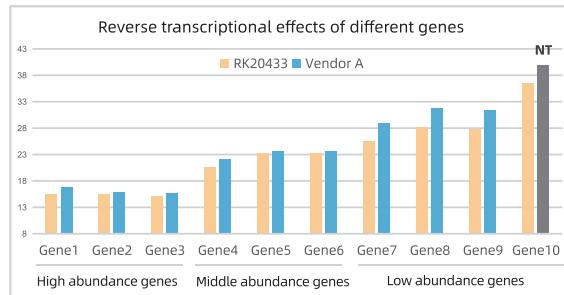


- Easy to use.
- gDNA Removal and Reverse Transcription can be performed in the same tube.
- Reduce the risk of RNA degradation and sample contamination.

### Traditional Multi-component Kits



## // Product Performance

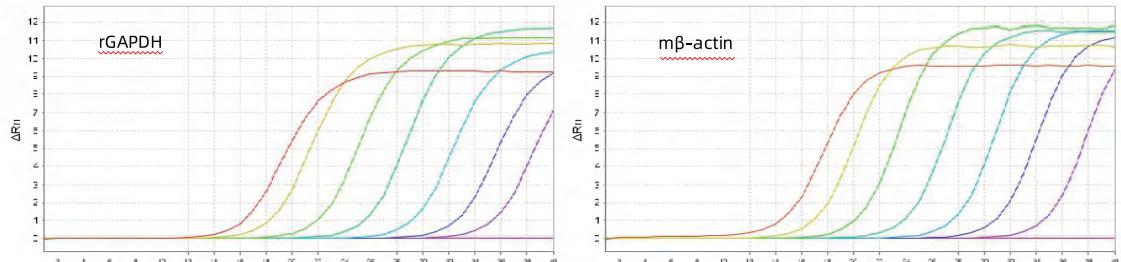
**Differential gene expression effects on reverse transcription**

**Template:** 1 µg human K562 cell RNA.

**Enzyme:** RK20433 ABScript Neo RT Master Mix for qPCR with gDNA Remover vs. Vendor A.

**Detection standard:** 10 genes with varying expression levels.

**Results:** For low abundance genes, RK20433 showed a lower Ct value. Additionally, one gene was detected only by RK20433 and not by the Vendor A product.

**Broad range of starting sample quantities**

Log	3	2	1	0	-1	-2	-3	E	R <sup>2</sup>
rGAPDH	17.116	19.05	22.736	26.315	29.99	32.46	36.19	96.51%	0.9954
mβ-actin	15.34	17.74	20.91	24.62	28.32	31.60	35.35	92.55%	0.9992

**Sample1:** Rat liver - RNA input amounts of 1000 ng, 100 ng, 10 ng, 1 ng, 100 pg, 10 pg, 1 pg, H<sub>2</sub>O.

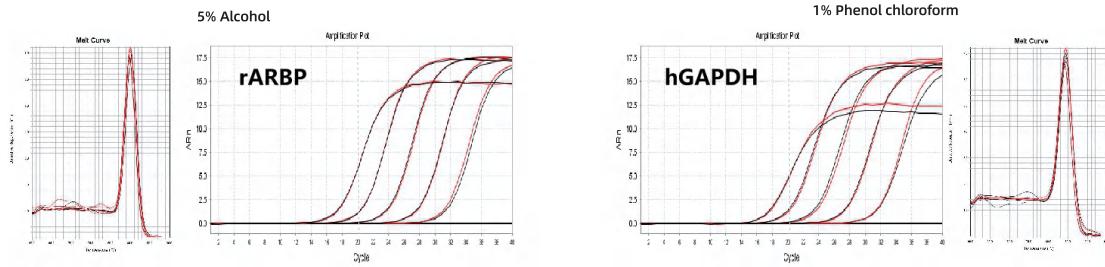
**Sample2:** Mouse liver - RNA input amounts of 1000 ng, 100 ng, 10 ng, 1 ng, 100 pg, 10 pg, 1 pg, H<sub>2</sub>O.

**Template:** Rat and mouse RNA with 7 ten-fold gradient dilutions

**Enzyme:** RK20433 ABScript Neo RT Master Mix for qPCR with gDNA Remover vs. Vendor A.

**Results:** RK20433 shows consistently high reverse transcription efficiency across a wide range of input amounts, from 1 µg to 1 pg.

### The impact of gDNA removal on reverse transcription efficiency



**Sample:** Human blood and rat tissue

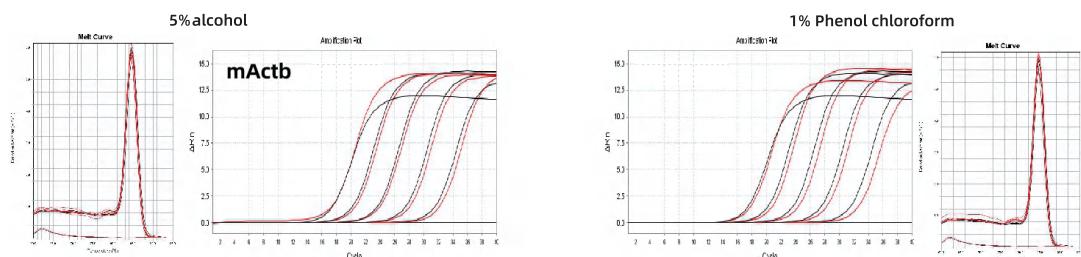
**Template:** Human and rat RNA, the cDNA products were diluted in 5 ten-fold gradient: 1X, 0.1X, 0.01X, 0.001X, 0.0001X, H<sub>2</sub>O.

**Enzyme:** RM21485 (the reverse transcription component in RK20433, it's the black curve)

RM21486 and RM21483 (the reverse transcription component in RK20433 and gDNA Remover components, both are the red curve)

**Results:** With or without gDNA remover, there is no effect on downstream experimental results.

### Strong inhibitor tolerance



Log	2	1	0	-1	-2	E	R <sup>2</sup>
<b>Control</b>	18.35	21.08	24.54	28.41	32.45	91.24%	0.9946
<b>5% alcohol</b>	18.35	21.49	24.88	28.81	32.94	87.87%	0.9965
<b>1% Phenol chloroform</b>	18.74	21.68	25.29	28.94	33.14	89.38%	0.9963

**Black curve:** No inhibitor

**Red curve:** Respectively adding inhibitors of 5% ethanol and 1% phenol chloroform

**Template:** 200 ng Mouse liver RNA, the cDNA product were diluted in 5 ten-fold gradients: 1X, 0.1X, 0.01X, 0.001X, 0.0001X, H<sub>2</sub>O.

**Enzyme:** RK20433 ABScript Neo RT Master Mix for qPCR with gDNA Remover

**Results:** With or without inhibitors, there is no significant effect on downstream experiments. It indicated that RK20433 had strong inhibitor tolerance.

## BrightCycle Universal SYBR Green qPCR Mix with UDG (RK21219)

— SYBR Green qPCR Mix with high sensitivity



■ Size 5 mL/25 mL

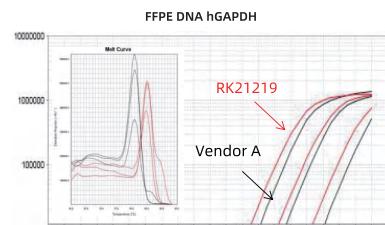
### // Product Features

- **Upgraded Detection Sensitivity:** Particularly well-suited for detecting low-abundance genes and difficult samples.
- **Contamination Prevention:** The use of dUTP-UDG reduces the risk of aerosol contamination during PCR.
- **Stability:** It maintained stable performance even after being stored at 37°C for one week.
- **Universality:** It is premixed with universal reference dyes (ROX), making it suitable for use with all types of fluorescence quantitative PCR instruments on the market.

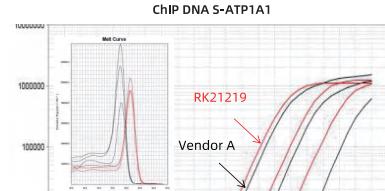
### // Product Performance

#### ■ Detection of difficult samples

Log	1	0	-1	E	R <sup>2</sup>
RK21219	29.97	33.44	37.59	83.02%	0.9974
Vendor A	30.95	34.10	38.91	78.29%	0.9859



Log	1	0	-1	E	R <sup>2</sup>
RK21219	27.96	31.64	35.33	86.81%	0.9986
Vendor A	28.61	32.57	38.04	62.98%	0.9915



**Template:** FFPE DNA and Chip DNA, which were considered complex samples due to their poor DNA integrity and low concentration.

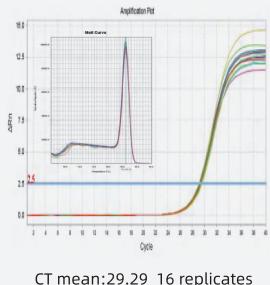
**Enzyme:** RK21219 BrightCycle Universal SYBR Green qPCR Mix with UDG vs. Vendor A.

**Results:** RK21219 has higher sensitivity and amplification efficiency compared to other products for the detection of difficult samples.

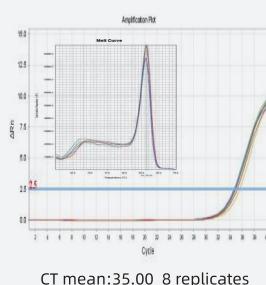
## // Product Performance

## Detection of low abundance genes

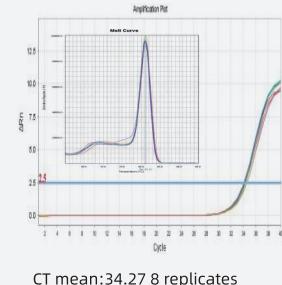
mGAPDH 10pg RNA



S-ATP1A1-ChIP DNA



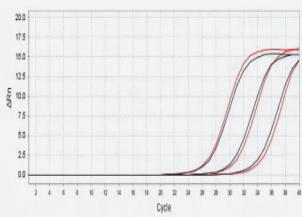
hPPIA-FFPE DNA 10pg



If the Ct value is  $>30$ , the reagent has poor reproducibility and tends to generate inaccurate results. In the test, if using RK1219 for the detection of different types of low abundance samples, the Ct values between different replicates are highly consistent and detection results are stable.

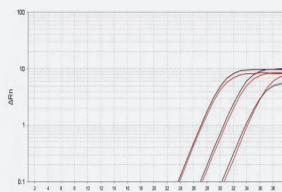
## Great stability

Stored at 37°C for one week



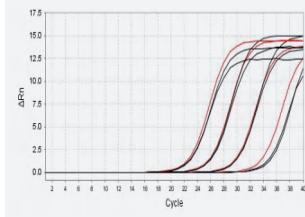
RK1219 adopts an optimized reagent formula and has good stability, even if it had been stored at 37°C for 1 week, its performance will not be significantly affected. Therefore, RK1219 can be transported with short-time ice packs, which greatly reduces the transportation cost.

Exposed to light for 1 day



RK1219 can be exposed to light for at least 1 day without significantly affecting its performance, and there is no need to avoid light when conducting experiments with RK1219.

Stored RK1219 (pre-mixed with primers) at 4°C for 3 days



RK1219 is blocked by specific antibodies, completely blocking the polymerase and exonuclease activity of Taq enzyme before pre-denaturation. Experimental results showed that the performance of RK1219 (pre-mixed with primers) did not significantly change even after it had been stored at 4°C for 3 days.

**Note:** Mouse liver RNA was reverse transcribed into cDNA, and mGAPDH was detected. The results show that RK1219 remained unchanged and showed good stability, even after being stored at 37°C for one week, exposed for one day, and pre-mixed with primers at 4°C for three days.

( The black curve: control sample;The red curve:test sample )

## Trending products for RT-qPCR

RK30120

AFTSpin Tissue/Cell Fast RNA Extraction Kit for Animal



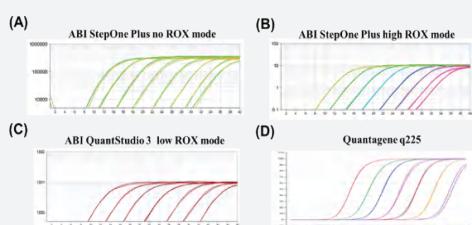
Safe and non-toxic

Operation for each sample can be completed within 15 minutes

Suitable for various animal tissues and cell samples

RK21203

2X Universal SYBR Green Fast qPCR Mix



Suitable for all machines without adding ROX reference dyes

Antibody-blocked Taq enzyme for good specificity

Cost-effective

Cited by over 200 articles

RK20412

ABScript III One Step RT-qPCR Probe Kit with UDG V5



RT and qPCR can be performed in one tube, less operation steps

Contains dUTP/UDG

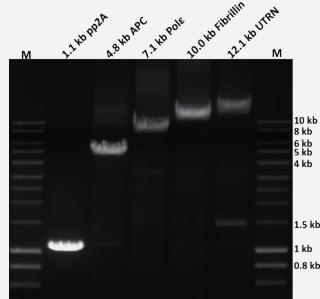
Compatible with multiple-probe systems

Can be stored at 37°C for one week without significant impact on activity

## ABCLONAL RT & SYBR GREEN

### RK20400

### ABScript II cDNA First-Strand Synthesis Kit



Has two types of RT primers that can be flexibly selected based on downstream applications

Reverse transcripts are suitable for gene cloning, qPCR, and RNA seq

Synthesized cDNA product can be up to 12 kb with high yield

Cited by Cell, Nature, and Sciences journal articles

### RK20404

### ABScript II One Step SYBR Green RT-qPCR Kit



RT and qPCR can be performed in one tube, less operation steps

The detection sensitivity can reach 0.1pg of total RNA

Store at 37°C for one week without significant impact on activity

### RK21212

### Entrans 2X qPCR Probe Master Mix V2



Chemical-antibody modified Hot start Taq DNA polymerase with good specificity

Compatible with multiple-probe systems

Used for SNP detection

Store at 37°C for one week without significant impact on activity

## Products for quantitative gene expression research

### RNA extraction

Product Category	Cat.No.	Product Name	Size
Universal plant RNA extraction kit (compatible with polysaccharide and polyphenol samples)	RK30121	AFTSpin Universal Plant Fast RNA Extraction Kit	50 RXN
Universal Animal tissue/cell RNA extraction kit	RK30120	AFTSpin Tissue/Cell Fast RNA Extraction Kit for Animal	50 RXN
Viral (DNA/RNA) extraction kit	RK30113	AFTSpin Viral DNA/RNA Extraction Kit	50 RXN

### Reverse transcription reagent

Product Category	Cat.No.	Product Name	Size
qPCR specific reverse transcription premix	RK20432 RK20428	ABScript Neo RT Master Mix for qPCR ABScript III RT Master Mix for qPCR	100 RXN 100 RXN
qPCR specific reverse transcription premix with gDNA Remover	RK20433 RK20429	ABScript Neo RT Master Mix for qPCR with gDNA Remover ABScript III RT Master Mix for qPCR with gDNA Remover	100 RXN 100 RXN

### SYBR Green qPCR reagent

Product Category	Cat.No.	Product Name	Size
Universal SYBR Green qPCR Mix	RK21203	2X Universal SYBR Green Fast qPCR Mix	5 mL
High sensitivity SYBR Green qPCR Mix	RK21219	BrightCycle Universal SYBR Green qPCR Mix with UDG	5 mL

### Probe qPCR reagent

Product Category	Cat.No.	Product Name	Size
Probe qPCR reagent	RK21212	Entrans 2X qPCR Probe Master Mix V2	250 RXN
Pollution prevention Probe qPCR reagent	RK21222	Entrans 2X qPCR Probe Master Mix with UDG	250 RXN

### One step RT qPCR reagent

Product Category	Cat.No.	Product Name	Size
one-step SYBR Green RT qPCR reagent	RK20404	ABScript II One Step SYBR Green RT-qPCR Kit	100 RXN
one-step probe RT qPCR reagent	RK20412	ABScript III One Step RT-qPCR Probe Kit with UDG V5	250 RXN

# Featured Citations

## Referencing products: ABScript II One Step SYBR Green RT-qPCR Kit (RK20404)

Large-scale multiplexed mosaic CRISPR perturbation in the whole organism  
Published on Cell 2022 PMID:35870449 IF: 66.85

## Referencing products: ABScript II cDNA First-Strand Synthesis Kit (RK20400)

Integrated Proteogenomic Characterization of HBV-Related Hepatocellular Carcinoma  
Published on Cell 2022 PMID:31585088 IF: 66.85

## Referencing products: 2X Universal SYBR Green Fast qPCR Mix (RK21203)

Negative supercoils regulate meiotic crossover patterns in budding yeast  
Published on Nucleic Acids Research 2022 PMID:36107772 IF: 19.16

## Referencing products: 2X Universal SYBR Green Fast qPCR Mix (RK21203)

Engineered PROTAC-CID Systems for Mammalian Inducible Gene Regulation  
Published on Journal of the American Chemical Society 2023 PMID:36626587 IF: 16.38

## Referencing products: ABScript II cDNA First-Strand Synthesis Kit (RK20400)

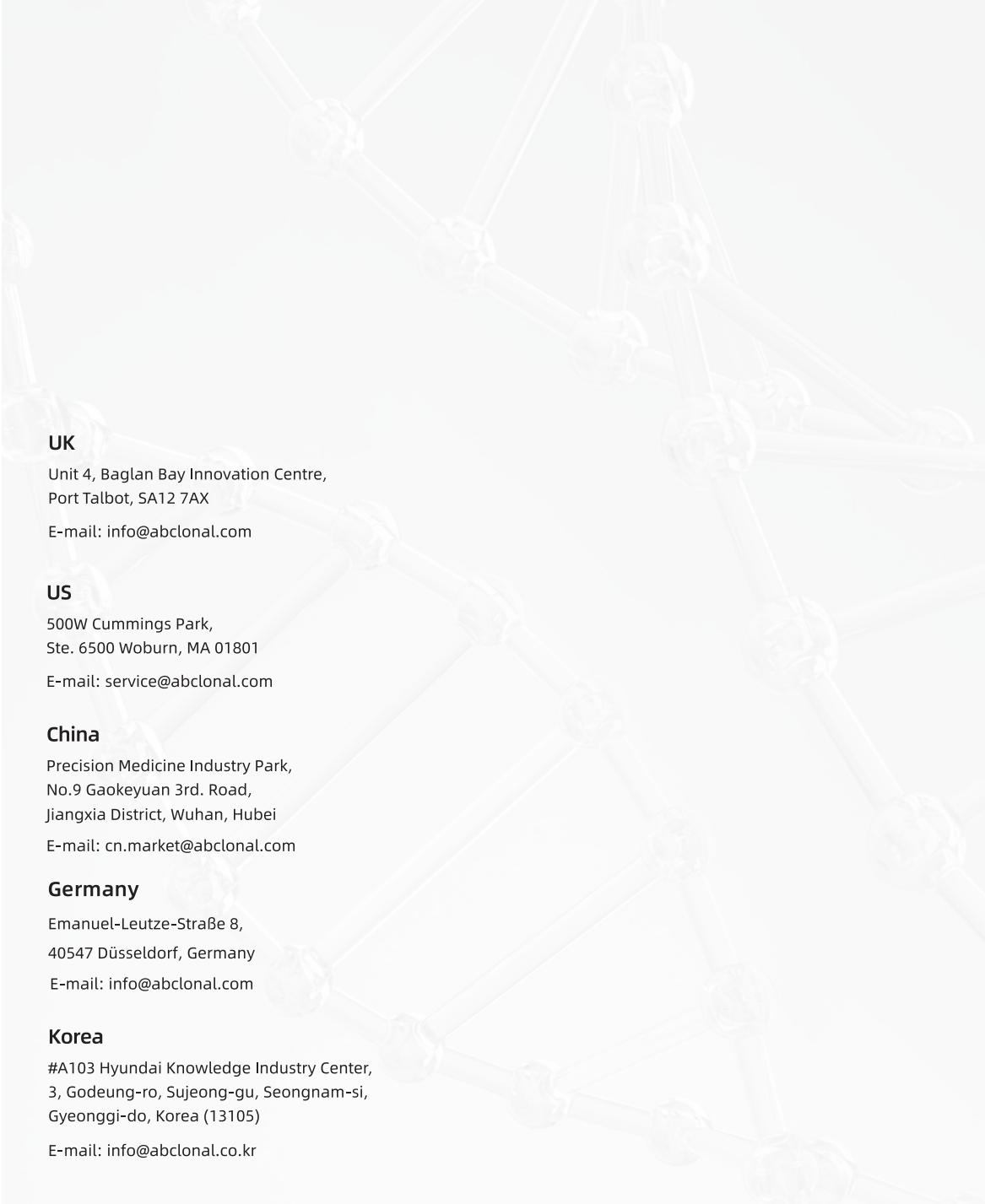
LARP7-Mediated U6 snRNA Modification Ensures Splicing Fidelity and Spermatogenesis in Mice  
Published on Molecular Cell 2020 PMID:32017896 IF: 19.328

## Referencing products: Genious 2X SYBR Green Fast qPCR Mix (Low ROX Premixed) (RK21206), ABScript III RT Master Mix for qPCR with gDNA Remover (RK20429)

Oroxylin A regulates cGAS DNA hypermethylation induced by methionine metabolism to promote HSC senescence  
Published on Pharmacological Research 2022 PMID:36464146 IF: 10.33

## Referencing products: Entrans 2X qPCR Probe Master Mix (RK21208); ABScript II cDNA First-Strand Synthesis Kit (RK20400); ABScript III One Step RT-qPCR Probe Kit with UDG V5 (RK20412)

Tetramethylpyrazine Protects Endothelial Injury and Antithrombosis via Antioxidant and Antiapoptosis in HUVECs and Zebrafish - PMC  
Published on Oxidative medicine and cellular longevity 2022 PMID:35898617 IF: 7.31



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