GDSBio

Molecular Research & Diagnostic Products

Professional Supplier of PCR & NGS Reagents
Guangzhou Dongsheng Biotech Co., Ltd.

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COMPANY PROFILE

Founded in 2005, located in the Science City of Guangzhou, China, Guangzhou Dongsheng Biotech Co., Ltd (GDSBio) is a high-tech enterprise focusing on R&D, production and sales of high-quality life science products and in vitro diagnostic reagents.

Products related to PCR and NGS library preparation are GDSBio's key product lines and essential raw materials for molecular diagnostics.

Since 2010, when GDSBio was certified with ISO9001 and ISO13485 standards in sequence, it has opened up overseas markets. Over the past 18 years, our customers have spread all over the world.

GDSBio's international resource links and multi-dimensional biological research methods help it stand at the forefront of the industry.

Interpret the world with high-end technology, insight into the biological mystery.

ISO 9001 | ISO 13485

CONTENTS

Hot-Sale Products

GDSBio's star products offer high cost-performance ratios, low complaint rates, and large-capacity supply capabilities.

Product Name	Description	Cat. No.	Spec.
Taq Mix	Master mix with Taq DNA Polymerase	P2011/P2012/P2013/P2014/P2015	1 mL/1 mL×5/1 mL×10/500 mL/1 L
Taq Mix II	Higher sensitivity and specificity	P2011b/P2012b/P2013b/P2014b/P2015b	1 mL/1 mL×5/1 mL×10/500 mL/1 L
Optimus™ Hotstart Taq DNA Polymerase	Hotstart Taq DNA polymerase with high specificity	P1041/P1042/P1043/P1044/P1045/P1046	250 U/1,000 U/3,000 U/18,000 U/200,000 U/500,000 U
Multiplex Probe qPCR Mix Plus U	For Multiplex qPCR by probe method, introduced with dUTP/UDG anti-contamination system	P2701/P2702/P2703/P2704	1 mL/1 mL×5/50 mL/100 mL
SYBR Green qPCR Mix	Balanced amplification efficiency and specificity; hotstart Taq DNA polymerase with antibody modification	P2091/P2092	1 mL/1 mL×5
NGS Multiplex PCR Master MixII	Different ion concentration; Supports 1,000-plex PCR amplification	NM2001/NM2002/NM2003	40 rnxs/400 rnxs/2,000 rnxs
GDSPure DNA Selection Magbeads	DNA size selection and cleanup	NC1011/NC1012/NC1013	5 mL/60 mL/450 mL
100bp Ladder	DNA Ladder from 100bp to 1500bp	M1061/M1062	50 μg/50 μg×5
1kb Ladder	DNA Ladder from 500bp to 10kb	M1181/M1182	50 μg/50 μg×5
Low Ladder	DNA Ladder from 25bp to 700bp	M1031/M1032	50 μg/50 μg×5
Proteinase K Powder	Specific activity ≥30 U/mg	N9016/N9017	100 mg/1 g
RNase A Powder	Specific activity ≥3,000 U/mg	N9046/N9047	100 mg/1 g
DNase I Powder	Specific activity ≥2,000 Kunitz U/mg	N9066/N9067/N9068	1 g/10 g/20 g
Disposable Virus Sampling Tube (Inactivation Type)	CE certified, virus preservation solution with Patented technology	F4001a/F4002a/F4003a	50 pcs/box (2 mL/5 mL/10 mL tube)
Disposable Virus Sampling Tube (Non-inactivation Type)	CE certified, classic virus preservation solution	F6001a/F6002a/F6003a	50 pcs/box (2 mL/5 mL/10 mL tube)
Swab/Saliva Viral DNA/RNA Extraction Kit (Magnetic Beads)	Efficient extraction of various viral samples including SARS-CoV-2, using manual magnetic bead method/CE certified	V4002	200 preps
96 Deep-Well Plate Viral RNA/DNA Miniprep Kit (Magnetic Beads)	Efficient extraction of various viral samples including SARS-CoV-2, using automatic magnetic bead method, compatible with various models/CE certified	V4003	96 preps

PCR Products

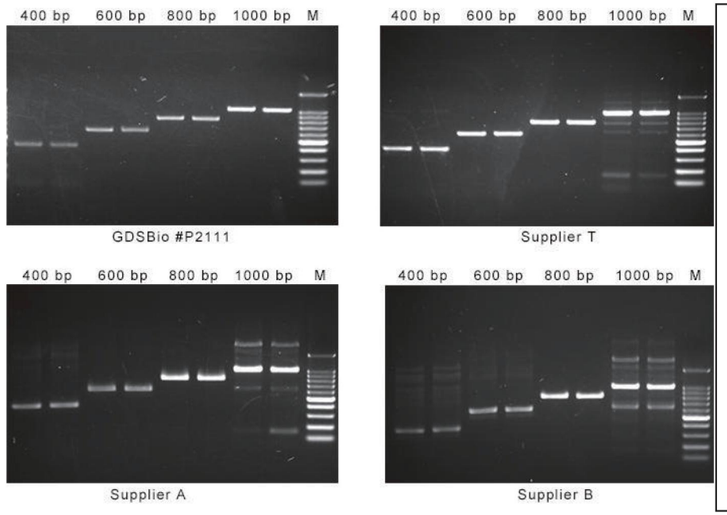
Zero Background PCR Breakthrough with Enhanced Dual Antibody Modification Hotstart Technology

Technical advantages:

① Enhanced dual antibody modification, with higher specificity than conventional dual antibody modification.

② Zero background products, no non-specific DNA bands, no primer dimers

③ No need for gel cutting, products can be directly recovered for cloning



Using the upgraded GDSBio #P2111 Super HIFI PCR Master Mix modified with dual antibodies and similar products from manufacturers T, A, and B, we amplified fragments of 400 bp, 600 bp, 800 bp, and 1000 bp using human genomic DNA as a template. The results showed that #P2111 could achieve zero background amplification in four different reactions.

Figure 1: Electrophoresis results. M: GDSBio #M1061 100bp Ladder

PCR reagents with enhanced dual antibody modification:

Application	Product Name	Cat. No.	Spec.
Ultra-high fidelity PCR	Super HIFI PCR Master Mix	P2111/P2112/P2113	1 ml/1 ml×10/10 ml×5
ARMS PCR	ARMS PCR Mix	P4011/P4012	1 ml/1 ml×5
KASP	KASP PCR Mix	P4021/P4022	1 ml/1 ml×5
High fidelity PCR	Hotstart Pfu Mix	P2051/P2052	1 ml/1 ml×5
Hotstart PCR	Optimus™ Hotstart Taq Mix	P2041/P2042	1 ml/1 ml×5
Multiplex PCR	Multiplex PCR Master Mix with UDG	PM2001/PM2002/PM2003	40rnxs/400rnxs/2000rnxs
NGS Multiplex PCR	NGS Multiplex PCR Master Mix	NM1001/NM1002/NM1003	40rnxs/400rnxs/2000rnxs
NGS Multiplex PCR	NGS Multiplex PCR Master MixII	NM2001/NM2002/NM2003	40rnxs/400rnxs/2000rnxs
NGS Multiplex PCR	DSPath NGS Multiplex PCR Master Mix	K030-A/K030-B	80rnxs/400rnxs
NGS Multiplex PCR	DSPath NGS Multiplex PCR Master MixII	K031-A/K031-B	80rnxs/400rnxs

Routine PCR

Product Name	Description	Cat. No.	Spec.
Taq DNA Polymerase	Classic Taq DNA Polymerase	P1011/P1012/P1013/P1014/P1015	500 U/500 U+dNTPs/1,000 U/1,000 U+dNTPs/18,000 U
Taq Plus DNA Polymerase	Efficient amplification of complex/high GC templates	P1031/P1032/P1033/P1034	250 U/250 U+dNTPs/500 U/500 U+dNTPs
Taq Mix	Master mix with Taq DNA Polymerase	P2011/P2012/P2013/P2014/P2015	1 mL/1 mL×5/1 mL×10/500 mL/1 L
Taq Mix II	Higher sensitivity and specificity	P2011b/P2012b/P2013b/P2014b/P2015b	1 mL/1 mL×5/1 mL×10/500 mL/1 L
HS Mix	Master mix with high specificity	P2081/P2082	1 mL/1 mL×5

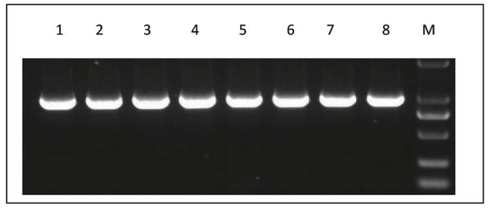
Taq Mix (P2011)

FEATURES

- Classical and conventional Taq DNA Polymerase
- Elongation speed: 2kb/min
- generates 3'-dA overhangs

VALIDATION DATA

The Taq Mix was able to maintain stable performance for 5 days at 37°C and successfully amplify 1000bp fragments.



1,2: batch A, 37°C, 5 days
3,4: batch A, -20°C, 5 days
5,6: batch B, 37°C, 5 days
7,8: batch B, -20°C, 5 days
M: DS2000 DNA Marker

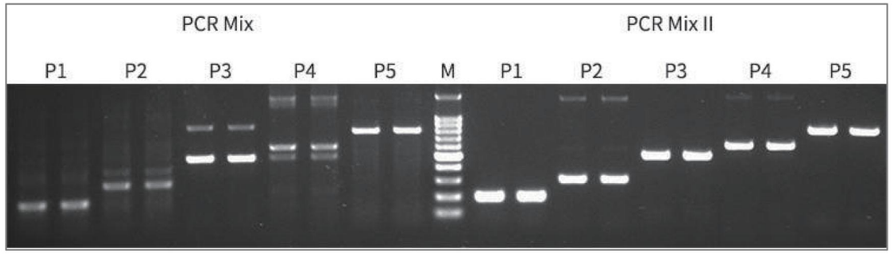
Taq Mix II (P2011b)

FEATURES

- Upgraded version of Taq Mix
- Higher sensitivity and specificity

VALIDATION DATA

Using five different primer pairs to amplify target fragments of varying sizes for testing, the results show that PCR Mix II has higher specificity and amplification efficiency, with a significant performance upgrade compared to PCR Mix.



P1, P2, P3, P4, P5: PCR products amplified with 5 different primer pairs
M: 100bp Ladder (GDSBio, #M1061)

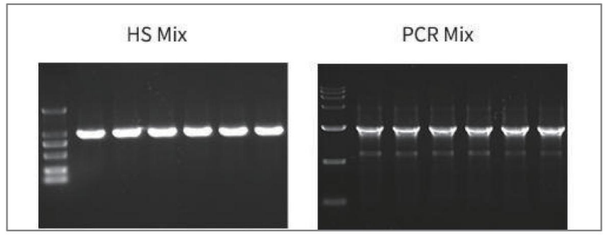
HS Mix (P2081)

FEATURES

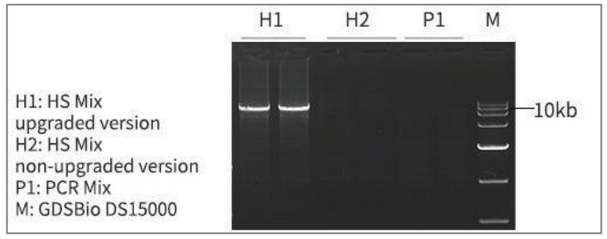
- Upgraded Hotstart for enhanced specificity
- Powerful amplification capabilities, suitable for long fragments and complex templates

VALIDATION DATA

HS Mix has high specificity, with innovative hotstart DNA polymerase technology combined with an optimized reaction buffer, which can effectively suppress the generation of non-specific products.



After the hotstart upgrade, HS Mix has enhanced amplification capabilities, making it suitable for amplifying long fragments and complex templates.



High Fidelity PCR

Product Name	Description	Cat. No.	Spec.
Pfu DNA Polymerase	10X fidelity of Taq DNA Polymerase	P1021/P1022/P1023/P1024	250 U/250 U+dNTPs/500 U/500 U+dNTPs
Super HIFI DNA Polymerase	50X fidelity of Taq DNA Polymerase	P1251/P1252	100 U/500 U
Pfu Mix	Master mix with Pfu DNA Polymerase	P2021/P2022	1 mL/1 mL×5
Hotstart Pfu Mix	Hotstart version of master mix	P2051/P2052	1 mL/1 mL×5
Super HIFI PCR Master Mix	100X fidelity of Taq DNA Polymerase	P2111/P2112/P2113	1 mL/1 mL×10/10 mL×5

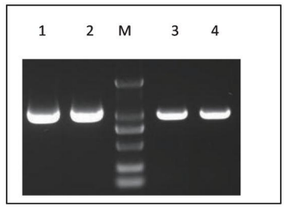
Pfu Mix (P2021)

FEATURES

- 10X high fidelity of Taq
- Elongation speed: 1kb/min
- generates blunt ends

VALIDATION DATA

After the upgrade, Pfu Mix significantly improves PCR amplification efficiency while maintaining fidelity.

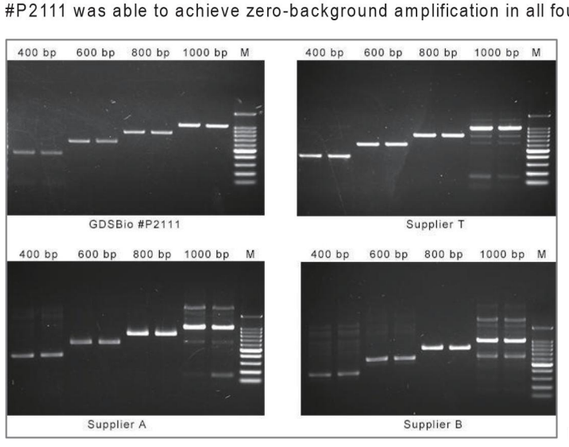


1,2: Upgraded version of P2021
M: DS2000 DNA Marker
3,4: Original P2021

- Tolerant to PCR inhibitors
- strong amplification capability for long fragments

VALIDATION DATA

Using the enhanced dual-antibody modified #P2111 Super HIFI PCR Master Mix and similar products from manufacturers T, A, and B, human genomic DNA was used as a template to amplify fragments of 400 bp, 600 bp, 800 bp, and 1000 bp. The results showed that #P2111 was able to achieve zero-background amplification in all four different reactions.



M: GDSBio DNA Marker #M1061 100bp Ladder

High Efficiency PCR

Product Name	Description	Cat. No.	Spec.
Plus Mix	Master mix with high efficiency Taq Plus DNA Polymerase	P2031/P2032/P2033/P2034/P2035	1 mL/1 mL×5/1 mL×10/500 mL/1 L
Super TaqGreen PCR Mix	Uitra-high efficiency PCR Master mix	K033-A/K033-B/K033-C	40 rxns/200 rxns/4000 rxns
Super TaqPlus Green PCR Mix	Uitra-high efficiency PCR Master mix with 150X fidelity of Taq	K034-A/K034-B/K034-C	40 rxns/200 rxns/4000 rxns
Super LongTaq Green PCR Mix	Uitra-high efficiency PCR Master mix for long fragment amplification	K035-A/K035-B/K035-C	40 rxns/200 rxns/4000 rxns

High Efficiency PCR

Super TaqGreen PCR Mix (K033)

FEATURES

- Universal primer annealing temperature (60°C)—reduces tedious PCR optimization steps and enables simultaneous amplification of different PCR reactions
- Rapid DNA synthesis and inhibitor tolerance—using engineered Taq polymerase
- Platinum hot-start technology – provides excellent specificity, sensitivity, and yield; The reaction system can be prepared at room temperature
- Green buffer – enables direct gel loading of PCR products to help reduce pipetting errors

VALIDATION DATA

Super TaqGreen PCR Mix has consistent functionality with T-brand's similar products, allowing for the use of a universal annealing temperature, which can reduce reaction optimization steps and enable simultaneous amplification of different PCR reactions. By innovatively combining a novel buffer, high-performance Taq DNA polymerase, and an excellent hot start technology, outstanding PCR results can be achieved even in the most demanding experimental applications.

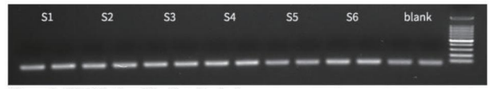


Figure 1 - PCR Mix Amplification Product:
No target bands, only primer dimers present.

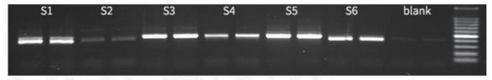


Figure 2 - Super TaqGreen PCR Mix Amplification Product:
The target fragment is efficiently amplified.

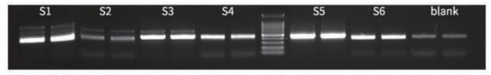


Figure 3 - T-brand Hot Start Green PCR Premix Amplification Products (Control)

Using Super TaqGreen PCR Mix, fungal detection was conducted on 7 plant eluate samples with varying concentrations, with GDSBio PCR Mix #P2011 and T-brand's similar PCR Master Mix used for simultaneous detection as controls. Agarose gel electrophoresis results showed that PCR Mix failed to amplify, while Super TaqGreen PCR Mix could effectively amplify, and the amplification results were consistent with those of T-brand's similar PCR Master Mix.

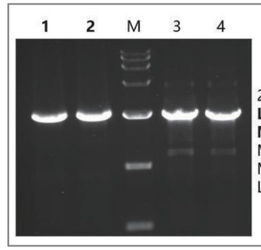
Plus Mix (P2031)

FEATURES

- Long PCR with high fidelity
- High reproducible PCR for complex templates
- High throughput PCR for complex templates
- Generation of PCR products for TA cloning

VALIDATION DATA

After the hot start upgrade, it significantly improved specificity while ensuring the efficiency of PCR amplification.



2500bp DNA fragment
Lane 1/2: upgraded Plus Mix
M: GDSBio DS15000 DNA Marker, #M1161
Lane 3/4: original Plus Mix

Hotstart PCR

Product Name	Description	Cat. No.	Spec.
Optimus™ Hotstart Taq DNA Polymerase	Hotstart Taq DNA polymerase with high specificity	P1041/P1042/P1043/P1044/P1045/P1046	250 U/1,000 U/3,000 U/18,000 U/200,000 U/500,000 U
Optimus™ Hotstart Taq Mix	Hotstart PCR Mix with dual-antibody modification	P2041/P2042/P2043/P2044	1 mL/1 mL×5/100 mL/500 mL
HS Hotstart Taq DNA Polymerase	Hotstart Taq DNA Polymerase with antibody modification	P1091	500 U
qPCR Hotstart Taq DNA Polymerase	Applicable to fluorescence quantitative PCR	P1101/P1102/P1103/P1104	250 U/1,000 U/3,000 U/18,000 U
Super Hotstart Taq Polymerase	Hotstart polymerase for IVD development with dual-antibody modification	P1201/P1202/P1203/P1204	250 U/1,000 U/5,000 U/50,000 U
Hotstart KnTaq Polymerase	N-truncated Taq DNA polymerase for SNP analysis with a stable hotstart system	P1221/P1222/P1223/P1224	250 U/1,000 U/5,000 U/50,000 U
CSM Taq Polymerase	Cold Sensitive Mutant enzyme with low activity at RT	P1231/P1232/P1233/P1234	250 U/1,000 U/5,000 U/50,000 U
GDSIyo Hotstart Taq Polymerase	Hotstart Taq DNA Polymerase for the preparation of lyophilized reagents	P1241/P1242/P1243/P1244	250 U/1,000 U/5,000 U/50,000 U

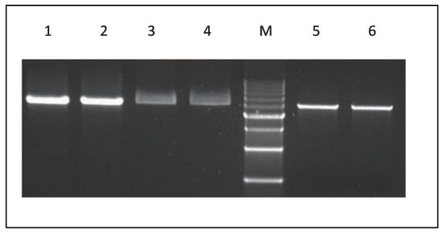
Optimus™ Hotstart Taq Mix (P2041)

FEATURES

- High specificity
- hotstart with dual-antibody modification
- Elongation speed: 1kb/min
- generates 3'-dA overhangs

VALIDATION DATA

After the upgrade, Optimus™ Hotstart Taq Mix (P2041) further improves the amplification efficiency on the basis of ensuring high specificity.



1,2: Upgraded version of P2041

3,4: Original P2041

M: 500bp Ladder DNA Marker

5,6: Taq Mix (P2021)

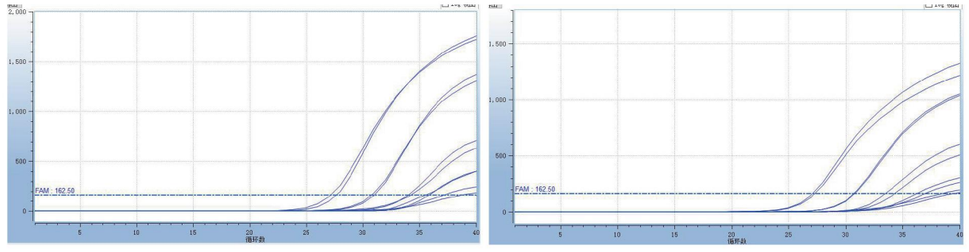
HS Hotstart Taq DNA Polymerase (P1091)

FEATURES

- High specificity
- hotstart with antibody modification
- Elongation speed: 1kb/min
- generates 3'-dA overhangs

VALIDATION DATA

HS Hotstart Taq Polymerase is a hot start Taq DNA polymerase modified with antibodies. The polymerase activity is strictly sealed below 55° C, and the activity can be fully released after a 30-second pre-denaturation at 95° C, which makes the PCR reaction highly specific and more suitable for multiplex PCR reactions. The reaction buffer has also been optimized to ensure high sensitivity, making it suitable for amplifying target fragments from low copy and complex templates. It is an ideal raw material for fluorescent quantitative PCR diagnostic reagents.



The gradient amplification comparison between P1091 (left) and the international brand T (right) shows that P1091 has comparable amplification performance to brand T, demonstrating excellent results.

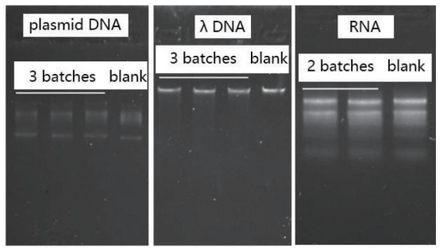
qPCR Hotstart Taq DNA Polymerase (P1101)

FEATURES

- hot-start polymerase with antibody modification
- Thermostable: half-life over 40 min at 95°C incubation
- Generates 3'-dA overhangs PCR products

VALIDATION DATA

qPCR Hotstart Taq Polymerase is an innovative antibody-modified hot start enzyme. The enzyme's activity is completely sealed at room temperature and relies on temperature to activate its activity, effectively reducing non-specific amplification and offering very high specificity and sensitivity. Manufactured using advanced production technology, qPCR Hotstart Taq Polymerase has zero animal-derived DNA contamination and stronger stability, making it a specialized enzyme for probe-based and dye-based qPCR applications.



P1101 was incubated with plasmid DNA, λ DNA, and RNA. The agarose gel electrophoresis results showed no significant degradation of plasmid DNA, λ DNA, and RNA, indicating that there is no significant residual deoxyribonuclease or ribonuclease in P1101.

High Specificity PCR

Product Name	Description	Cat. No.	Spec.
HS Taq DNA Polymerase	Taq DNA Polymerase with high specificity	P1081/P1082/P1083/P1084	250 U/500 U/1,000 U/18,000 U
ARMS PCR Mix	Gene detection by ARMS PCR	P4011/P4012	1 mL/1 mL×5
ARMS qPCR Mix	ARMS Master Mix for qPCR	P4031/P4032	1 mL/1 mL×5
KASP PCR Mix	Genotyping by KASP technology	P4021/P4022	1 mL/1 mL×5
KASP PCR MixPlus	KASP PCR Mix with FAM and HEX labeled probes	P4041/P4042	1 mL/60 mL

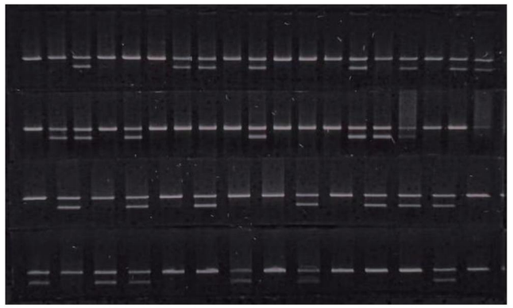
ARMS PCR Mix (P4011)

FEATURES

- Enhanced dual antibody modification hotstart technology
- one-tube master mix, easy to use
- Simple and fast genotyping

VALIDATION DATA

GDSBio's customers used ARMS PCR Mix for bird sex identification, and the genetic testing results met the expected results.



Long PCR

Product Name	Description	Cat. No.	Spec.
Long Taq DNA Polymerase	Amplification of DNA fragments up to 20 kb	P1061/P1062/P1063/P1064	250 U/250 U+dNTPs/1,000 U/1,000 U+dNTPs
Long Taq Mix	Master mix with Long Taq DNA Polymerase	P2061/P2062	1 mL/1 mL×5/1 mL×10/500 mL/1 L
Super LongTaq Green PCR Mix	Uitra-high efficiency PCR Master mix for long fragment amplification	K035-A/K035-B/K035-C	40 rxns/200 rxns/4000 rxns

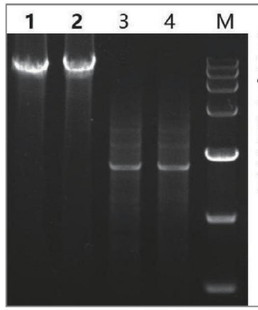
Long Taq Mix (P2061)

FEATURES

- Convenient: only primers and template are needed to add when preparing PCR system
- Longer fragment: amplify long templates as long as 20 kb
- High efficiency: saving your time by simplifying the process
- Reproducible: lower contamination and pipetting error risk
- Amplification of complex template (GC-rich or repetitive sequence)

VALIDATION DATA

The amplification performance of the Long Taq Mix is further enhanced after the hot start upgrade. Using a 10 kb complex DNA template for amplification, the original Long Taq Mix was unable to complete effective amplification, while the upgraded Long Taq Mix can efficiently complete the amplification.



10kb complex DNA fragment
Lane 1/2: upgraded Long Taq Mix
Lane 3/4: original Long Taq Mix
M: GDSBio DS15000 DNA Marker, #M1161

Fast PCR

Product Name	Description	Cat. No.	Spec.
FS Taq DNA Polymerase	Extension speed 3kb/min	P1071/P1072/P1073/P1074	250 U/250 U+dNTPs/1,000 U/1,000 U+dNTPs
FS Mix	Master mix with FS Taq DNA Polymerase	P2071/P2072	1 mL/1 mL×5

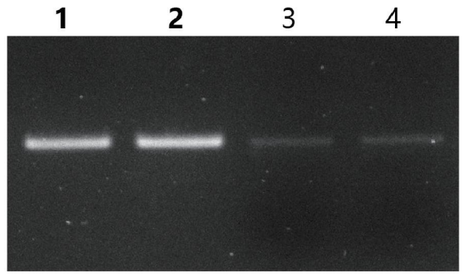
FS Mix (P2071)

FEATURES

- Convenient: only primers and template DNA are added when preparing PCR system
- Fast elongation: elongation rate can reach to 3kb/min, 3 times rate of Taq DNA Polymerase
- Thermostable: half-life over 40 min at 95° C incubation
- Generates 3'-dA overhangs PCR products

VALIDATION DATA

The amplification efficiency of the FS Mix has significantly improved after the hot start upgrade. Using whole blood as a template to amplify a 250 bp DNA fragment, the amplification efficiency of the upgraded FS Mix is noticeably higher than that of the original version.



250bp DNA fragment, whole blood sample
Lane 1/2: upgraded FS™ Mix
Lane 3/4: original FS™ Mix

Direct PCR

Product Name	Description	Cat. No.	Spec.
FS Mix Direct for Blood	Direct amplification of blood samples without extraction of nucleic acids	P2071a/P2072a	1 mL/1 mL×5
FS Mix Direct for Tissue	Direct amplification of tissue samples without extraction of nucleic acids	P2071b/P2072b	1 mL/1 mL×5

Isothermal Amplification

Product Name	Description	Cat. No.	Spec.
Bst DNA Polymerase, Exonuclease Minus	Strong chain displacement activity for LAMP	P1111/P1112/P1113/P1114	1,000U/2,000U/8,000U/40,000U
T4 gene 32 protein	Stabilizes single-stranded regions of DNA	P1121	100 μL
Bsu DNA Polymerase (Large Fragment)	Strong chain displacement activity for RPA	P1131	100 μL
T4 UvsX Recombinase	Together with other DNA-binding proteins, nucleic acid protein complexes are formed with ssDNA to further complete the chain replacement reaction	P1141	100 μL
T4 UvsY	Enhance the ATPase activity of UvsX protein , promoting the chain replacement reaction	P1151	40 μL

PCR Related Products

Product Name	Description	Cat. No.	Spec.
dNTPs	4 dNTPs mixture of 2.5 mM each	P9011	1 mL
dNTPs	4 dNTPs mixture of 10 mM each	P9013/P9014/P9015/P9016	1 mL/100 mL/1 L/10 L
dNTP Set	4 individual dNTPs of 100 mM each	P9061	250 μL×4
dATP	100 mM	P9071	1 mL
dTTP	100 mM	P9081	1 mL
dCTP	100 mM	P9091	1 mL
dGTP	100 mM	P9101	1 mL
dUTP	100 mM	P9111	1 mL
dNTP Mix (RNase free)	4 dNTPs mixture of 10 mM each	R2051/R2052	0.5 mL/100 mL
10X PCR Buffer (Mg^{2+} Plus)	PCR Buffer with 15 mM Mg^{2+}	P5011	1.25 mL×4
10X PCR Buffer(Mg^{2+} Free)	PCR Buffer without Mg^{2+}	P5011a	1.25 mL×4
10X PCR Buffer with Mg^{2+} Set	PCR Buffer Set with 6 different concentrations of Mg^{2+}	P5011b	1.25 mL×6
Water (Nuclease-free)	PCR-grade ultrapure water	P9021/P9022/P9023	1 mL×5/100 mL/500 mL
25 mM $MgCl_2$	Applicable to PCR and other enzymatic reactions	P9031	1.25 mL×4
PCR Enhancer	Increase the sensitivity and specificity of PCR	P9041	500 μL
PCR Sample Preparation Solution	Efficient pre-treatment of samples for direct PCR	P9051/P9052	50 preps/200 preps
Heat Labile UDG	Control PCR residual contamination	R5001/R5002	500U/100U
NA-Off Reagent	Quick and effective removal of nucleic acid contamination in the environment	P9121/P9122	250 mL/500 mL
Taq Antibody	monoclonal antibody against Taq DNA polymerase used in Hotstart modification	P9131/P9132	500U/5,000U
GDS Green I, 10,000X in DMSO	luorescent dye with Green emission used in qPCR	P6011	500 μl

qPCR Products

Probe-based qPCR Mix

Product Name	Description	Cat. No.	Spec.
Multiplex Probe qPCR Mix	For Multiplex probe qPCR	P2601/P2602/P2603/P2604	1 mL/1 mL×5/50 mL/100 mL
Multiplex Probe qPCR Mix Plus U	Introduced with dUTP/UDG anti-contamination system	P2701/P2702/P2703/P2704	1 mL/1 mL×5/50 mL/100 mL
Multiplex Probe qPCR Mix Plus U (Low ROX+)	Introduced with ROX reference dye at low concentration	P2701a/P2702a/P2703a/P2704a	1 mL/1 mL×5/50 mL/100 mL
Direct Multiplex Probe qPCR Mix Plus U	Direct qPCR detection of crude samples such as blood, swabs, and tissue homogenates	P2801/P2802/P2803/P2804	1 mL/1 mL×5/50 mL/100 mL
Super Probe qPCR Mix Plus U	Ultra-high sensitivity for multiplex probe qPCR	P2711/P2712/P2713/P2714	1 mL/1 mL×5/50 mL/100 mL

Multiplex Probe qPCR Mix (P2601)/Multiplex Probe qPCR Mix Plus U (P2701)

FEATURES

- Hotstart DNA Polymerase with antibody modification
- Special reaction buffer
- High specificity
- Suitable for multiplex qPCR
- High amplification efficiency
- Introduced with dUTP/UDG anti-contamination system (P2701)

VALIDATION DATA

Using human genomic DNA (0.1ng/μl) as a template, gene detection is performed through Multiplex Probe qPCR Mix Plus U. Figures 1 and 2 are the amplification curves detected after the reaction system is prepared (0 hr) and after being placed at room temperature (25° C) for 48 hours (48 hr), respectively; at the same time, a comparative test is conducted with the manufacturer T's similar product, with Figures 3 and 4 being the amplification curves of manufacturer T's assembly completed at 0 hr and 48 hr, respectively. Table 2 shows the Ct values of Multiplex Probe qPCR Mix Plus U and manufacturer T at 0 hr and 48 hr. It can be seen that after the pre-assembled system is placed at room temperature for 48 hours, Multiplex Probe qPCR Mix Plus U still has excellent amplification performance.

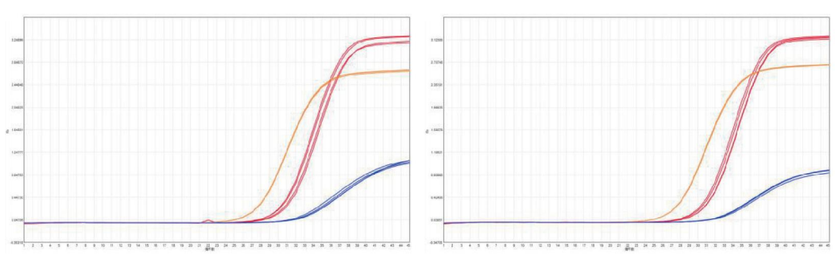
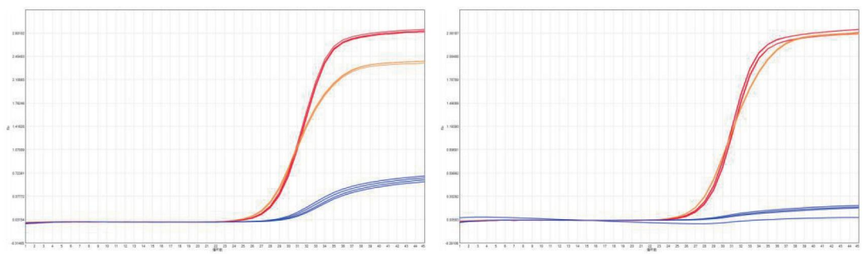


Fig.1: P2701-0hr | Fig.2: P2701-48hr

Fig.3: supplier T-0hr | Fig.4: supplier T-48hr



Target	Ct Value-P2701		Ct Value-supplier T	
	0 hr	48hr	0 hr	48hr
CY5	29.18	29.26	27.01	27.05
FAM	33.05	33.09	33.15	36.28
ROX	26.24	26.21	26.46	26.45

Table 2, Ct value

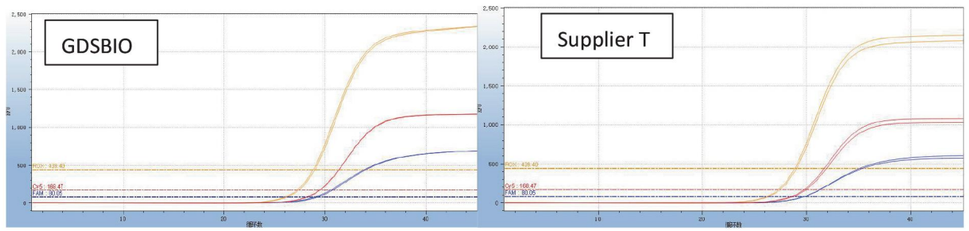
Direct Multiplex Probe qPCR Mix Plus U (P2801)

FEATURES

- Crude samples such as blood, swab and tissue homogenate can be amplified directly
- Simplified detection process
- Hotstart DNA Polymerase with antibody modification
- Special reaction buffer
- High specificity
- Suitable for multiplex qPCR
- High amplification efficiency
- Introduced with dUTP/UDG anti-contamination system

VALIDATION DATA

Human hair follicle samples were directly tested for 3-plex amplification, respectively, and compared with supplier T. The results showed that GDSBio performed better in terms of sensitivity and multiple amplification.



Dye-based qPCR Mix

Product Name	Description	Cat. No.	Spec.
SYBR Green qPCR Mix (NO ROX)	Balanced amplification efficiency and specificity; hotstart Taq DNA polymerase with antibody modification	P2091/P2092	1 mL/1 mL×5
SYBR Green qPCR Mix (Low ROX+)	Premixed with ROX reference dye of low concentration; hotstart Taq DNA polymerase with antibody modification	P2091a/P2092a	1 mL/1 mL×5
SYBR Green qPCR Mix (High ROX+)	Premixed with ROX reference dye of high concentration; hotstart Taq DNA polymerase with antibody modification	P2091b/P2092b	1 mL/1 mL×5
SYBR Green qPCR Mix (with ROX+)	Individual ROX reference dye of both low and high concentrations; hotstart Taq DNA polymerase with antibody modification	P2091c/P2092c	1 mL/1 mL×5
Power Green qPCR Mix (NO ROX)	Further optimized specificity; hotstart Taq DNA polymerase with antibody modification	P2101/P2102	1 mL/1 mL×5
Power Green qPCR Mix (Low ROX+)	Premixed with ROX reference dye of low concentration; hotstart Taq DNA polymerase with antibody modification	P2101a/P2102a	1 mL/1 mL×5
Power Green qPCR Mix (High ROX+)	Premixed with ROX reference dye of high concentration; hotstart Taq DNA polymerase with antibody modification	P2101b/P2102b	1 mL/1 mL×5
Power Green qPCR Mix (with ROX+)	Individual ROX reference dye of both low and high concentrations; hotstart Taq DNA polymerase with antibody modification	P2101c/P2102c	1 mL/1 mL×5
SYBR Green Blue qPCR Mix (Universal ROX+)	Mixed with blue sample indicator and universal ROX reference dye	P2121/P2122	1 mL/1 mL×5
Super SYBR Green qPCR Mix	Innovative hotstart qPCR Master mix with universal ROX reference dye	P2131/P2132	1 mL/1 mL×5

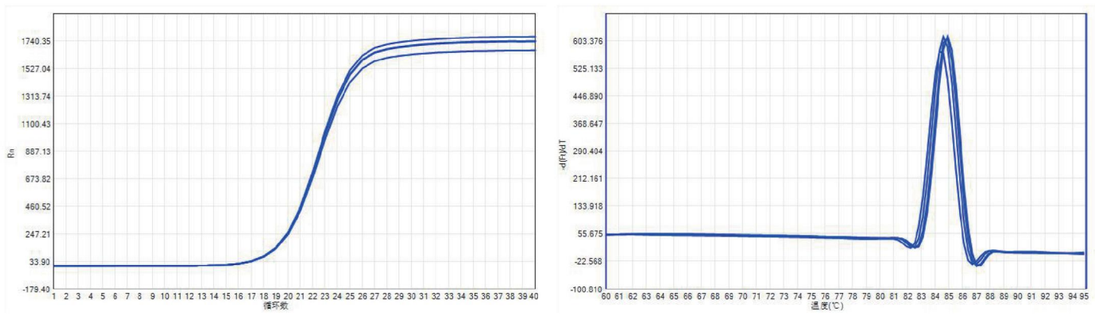
Power Green qPCR Mix (P2101)

FEATURES

- Compatible with many Real-time systems which not require ROX reference dye
- Exceptional specificity with hot-start mechanism
- Tight reproducibility in Ct values over a broad dynamic range
- Universal instrument compatibility

VALIDATION DATA

Power Green qPCR Mix utilizes an antibody-modified hot start Taq DNA polymerase to enhance the specificity of the reaction, ensuring precise gene quantification analysis. After special optimization, this product can be prepared without the need for an ice box, allowing for the direct preparation of PCR Mix, primers, templates, and other components at room temperature. The prepared PCR reaction system can be placed at room temperature for 24 hours without loss of amplification efficiency, ensuring the stability of the workbench for large-scale testing.



qPCR amplification curve (left) and melting curve (right)

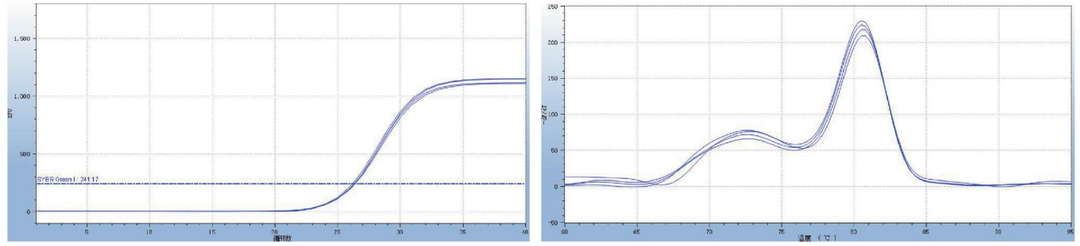
SYBR Green Blue qPCR Mix (Universal ROX+) (P2121)

FEATURES

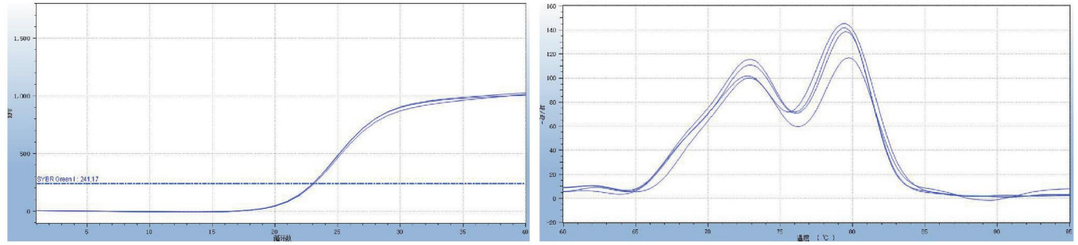
- Contains sample adding indicator to reduce sample adding errors
- Compatible with many Real-time systems
- Hot-start technology brings high specificity and reproducible amplification
- Contains universal ROX reference dye

VALIDATION DATA

Using porcine genomic DNA as a template, the detection of a certain gene was carried out using SYBR Green Blue qPCR Mix (Universal ROX+) and a similar product from brand V. The melting curve of SYBR Green Blue qPCR Mix showed a distinct single peak, indicating a very specific reaction with precise quantitative results. In contrast, the melting curve of brand V showed a double peak, suggesting the presence of a large amount of non-specific products or primer dimers, leading to inaccurate quantitative results.



amplification curve (left) and melting curve (right) of SYBR Green Blue qPCR Mix (Universal ROX+)



amplification curve (left) and melting curve (right) of brand V

Droplet Digital PCR (ddPCR) Mix

Product Name	Description	Cat. No.	Spec.
Super Probe ddPCR Mix	ddPCR Master mix contains Hotstart Taq DNA polymerase modified by dual-antibody technology	P2901/P2902/P2903	1 mL/1 mL×5/50 mL
4X RT-ddPCR Master Mix	One-step RT-ddPCR Master Mix	P2911/P2912	1 mL/1 mL×5

RT-qPCR/RT-PCR & RT Products

One-step RT-qPCR Kit/Mix (probe-based)

Selection Guide

Cat. No.	V5001/V5002	V5005/V5006	V5005L/V5006L	V5009/V5010	V5011/V5011-2	V5012-A/V5012-B	V5013-A/V5013-B/V5013-C
Product Name	One-step Probe RT-qPCR Kit	DSPath™ 4X One-Step Multiplex Master Mix	DSPath™ 4X One-Step Multiplex Master Mix (Lyophilized)	One-step Probe RT-qPCR Kit V2	One-step Probe RT-qPCR Kit V3	Super 4X One-Step Multiplex Master Mix	GDSlyo One-step Probe RT-qPCR Kit
Spec.	200 rxns/5,000 rxns	200 rxns/5,000 rxns	200 rxns/5,000 rxns	200 rxns/5,000 rxns	200 rxns/1,000 rxns	200 rxns/5,000 rxns	200 rxns/1,000 rxns/5,000 rxns
Mixture	Enzyme Mix+2X Buffer Mix	4X All-in Mix	4X All-in Lyophilized Powder	Enzyme Mix+2X Buffer Mix	Enzyme Mix+5X Buffer Mix	4X All-in Mix	Enzyme Mix+5X Buffer Mix For lyophilization
Format	Buffer Mix						
Mode/Time	F: ~60 min/S: ~120 min	F: ~60 min/S: ~120 min	F: ~60 min/S: ~120 min	F: ~60 min/S: ~88 min	F: ~45 min/S: ~80 min	F: ~70 min/S: ~130 min	F: ~45 min/S: ~120 min
RT TEMP	48~55°C	48~55°C	48~55°C	50~55°C	50~55°C	55°C	48~55°C
Hotstart Taq	Antibody-modified	Antibody-modified	Antibody-modified	Antibody-modified	Antibody-modified	Antibody-modified	Antibody-modified
Heat-labile UDG	+	+	+	+	+	+	+
Sensitivity	***	****	****	****	****	****	***
Specificity	****	****	****	***	****	****	****

F: fast mode; S: standard mode

DSPath™ 4X One-Step Multiplex Master Mix (V5005)

FEATURES

- Robust one-step, all-in-one master mix system for easy reaction assembly
- Detect multiple targets in one reaction
- High sensitivity to detect low-copy targets
- Tolerance of inhibitors commonly found in clinical samples
- Eliminates the risk of cross contamination associated with two-step RT-qPCR protocols

VALIDATION DATA

Compare with 6 different brands of similar products to detect samples containing the SARS-CoV-2 simulated sample at low or high concentrations, DSPath™ 4X One-Step Multiplex Master Mix has excellent detection rate and accuracy for all 3 targets simultaneously.

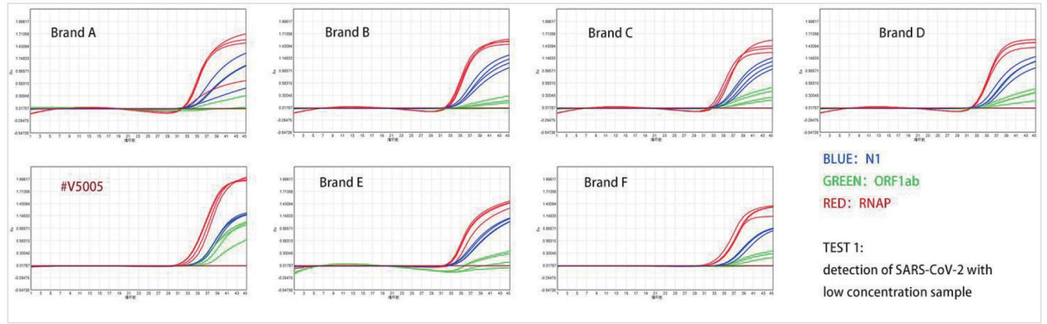


Figure 2. detection of low SARS-CoV-2 sample (compared with other brands)

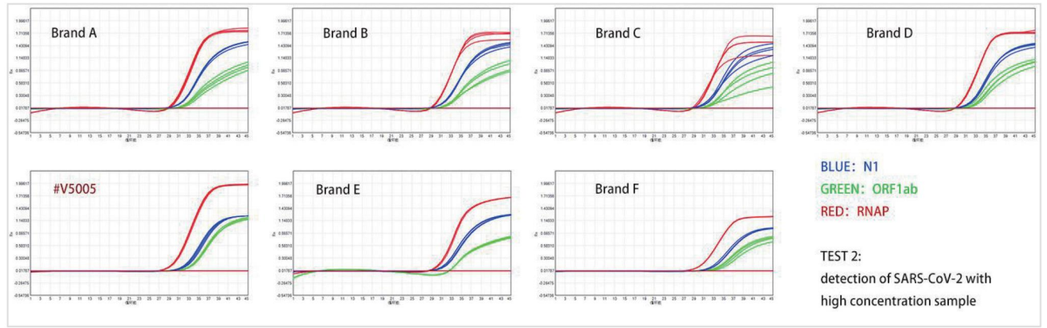


Figure 3. detection of high SARS-CoV-2 sample (compared with other brands)

The stability test of DSPath™ 4X One-Step Multiplex Master Mix/MixB/MixC/MixD was performed at 37°C for 8 days by detecting four targets of SARS-CoV-2. The amplification efficiency of the four products did not change significantly, which means all of them could maintain high stability, and are easy to be transported and stored for a long time.

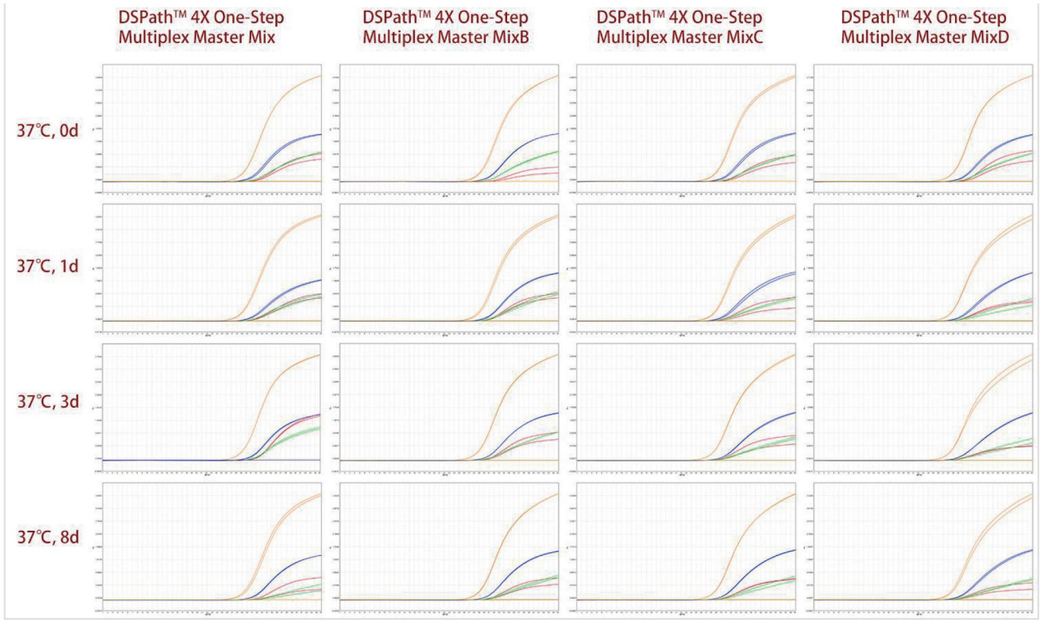


Figure 4. amplification curve of stability test of DSPath™ 4X One-Step Multiplex Master Mix/MixB/MixC/MixD

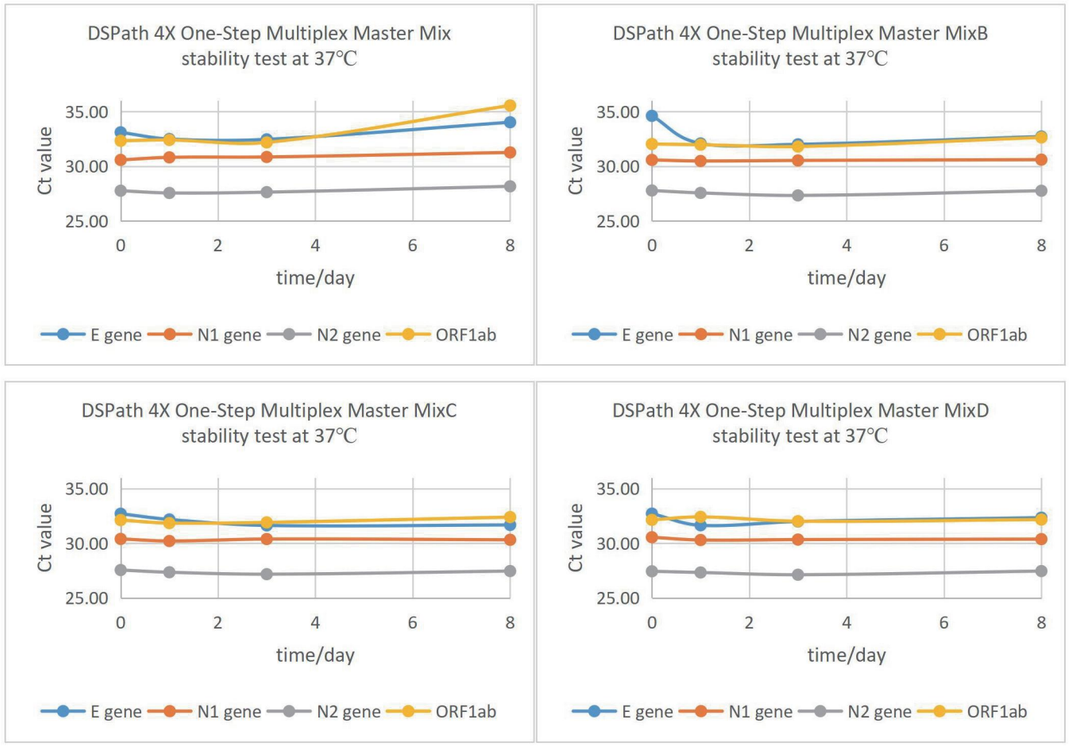


Figure 5. Ct value of stability test of DSPath™ 4X One-Step Multiplex Master Mix/MixB/MixC/MixD

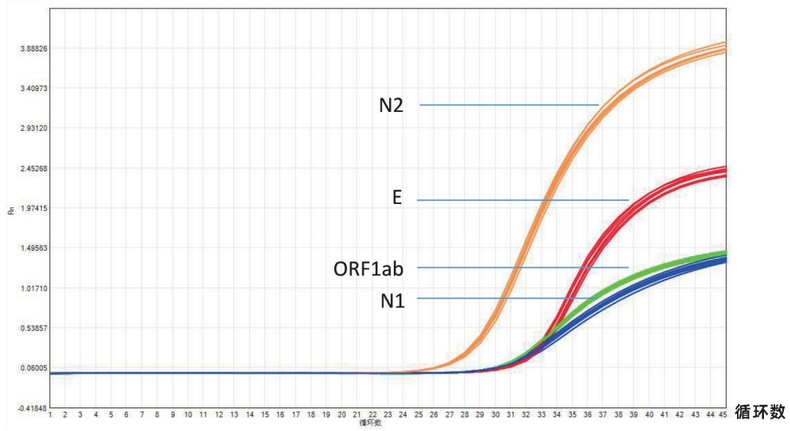
One-step Probe RT-qPCR Kit V3 (V5011)

FEATURES

- Fast start-up, 30s hot start
- Reverse transcription at 55 °C to accommodate complex RNA templates
- Contains heat-labile UDG to reduce false-positive contamination
- High sensitivity for detection of low-abundance genes
- High stability, unchanged performance at 4°C and 37°C for one week
- The reaction system can be formulated up to 30 minutes in advance without changing performance
- Saves time by supporting fast program

VALIDATION DATA

The detection of RNA viruses using the quadruple probe method yields accurate results without interference. Using the SARS-CoV-2 pseudovirus RNA as a template, the detection targets include the E gene sequence, two N gene sequences, and the ORF1ab sequence of SARS-CoV-2. The amplification efficiency is high, and the repeatability is good.



One-step RT-qPCR Kit (dye-based)

Product Name	Description	Cat. No.	Spec.
Power Green One-step RT-qPCR Kit	One-step completion of RNA reverse transcription and SYBR green I dye-based qPCR	V6001-A/V6001-B	200 rxns/5,000 rxns

One-step RT-PCR Mix

Product Name	Description	Cat. No.	Spec.
2X One Step RT-PCR Mix	One-step completion of RNA reverse transcription and end-point PCR; One-tube Mix	RP1001	50 rxns
2X One Step RT-PCR Mix	Separated Enzyme Mix and Reaction Mix	RP1001B	50 rxns

Two-step Reverse Transcription Products

Product Name	Description	Cat. No.	Spec.
RT-PCR Kit	Non-premixed RNA reverse transcription kit	R1011/R1012	20 rxns/100 rxns
RT-PCR Mix for qPCR	Form: reverse transcriptase + highly premixed reaction buffer	R1031	100 rxns
M-MLV Reverse Transcriptase	Optimal activity temperature 37~42°C	R1041/R1042	5,000 U/10,000 U
PowerScript RT SuperMix	All-in-one reverse transcription mix	R1081/R1082/R1083	100 rxns/500 rxns/2,500 rxns
Gold Reverse Transcriptase	Optimal activity temperature 50~55°C	R3001/R3002	2,000 U/10,000 U
RNase Inhibitor (Murine)	Recombinant protein of murine origin	R4001	20,000 U
Oligo $d(T)_{15}$ Primer	Reverse transcription using eukaryotic mRNA as template	R2021	20 μL
Random Primer	Reverse transcription using all types of RNA as template	R2031	20 μL

NGS Target PCR Products

NGS Target PCR

Product Name	Description	Cat. No.	Spec.
HIFI Multiplex RT-PCR Master Mix	One-step RT-PCR premix for high-throughput sequencing	K006-A/K006-B/K006-C	100 rxns/1,000 rxns/5,000 rxns
HIFI Library PCR Master Mix	For PCR amplification of high-throughput sequencing libraries	K007-A/K007-B/K007-C	40 rxns/400 rxns/2,000 rxns
DSPath NGS Multiplex PCR Master Mix	Multiplex PCR premix for NGS (high throughput sequencing) library preparation	K030-A/K030-B	80 rxns/400 rxns
DSPath NGS Multiplex PCR Master Mix Ⅱ	Different ion concentration from #K030	K031-A/K031-B	80 rxns/400 rxns
Super TaqGreen PCR Mix	Uitra-high efficiency PCR Master mix	K033-A/K033-B/K033-C	40 rxns/200 rxns/4,000 rxns
Super TaqPlus Green PCR Mix	Uitra-high efficiency PCR Master mix with 150X fidelity of Taq	K034-A/K034-B/K034-C	40 rxns/200 rxns/4,000 rxns
Super LongTaq Green PCR Mix	Uitra-high efficiency PCR Master mix for long fragment amplification	K035-A/K035-B/K035-C	40 rxns/200 rxns/4,000 rxns
Multiplex PCR Master Mix with UDG	For Multiple genetic tests, compatible with complex samples	PM2001/PM2002/PM2003	40 rnxs/400 rnxs/2,000 rnxs
NGS Multiplex PCR Master Mix	For PCR enrichment in NGS library preparation; Supports hundreds-plex of PCR amplification	NM1001/NM1002/NM1003	40 rnxs/400 rnxs/2,000 rnxs
NGS Multiplex PCR Master MixII	Different ion concentration; Supports 1,000-plex PCR amplification	NM2001/NM2002/NM2003	40 rnxs/400 rnxs/2,000 rnxs
NGS Multiplex PCR Master MixIII	Contains electrophoresis indicator; Supports 10,000-plex PCR amplification	NM3001/NM3002/NM3003	40 rnxs/400 rnxs/2,000 rnxs

DSPath NGS Multiplex PCR Master Mix (K030)

FEATURES

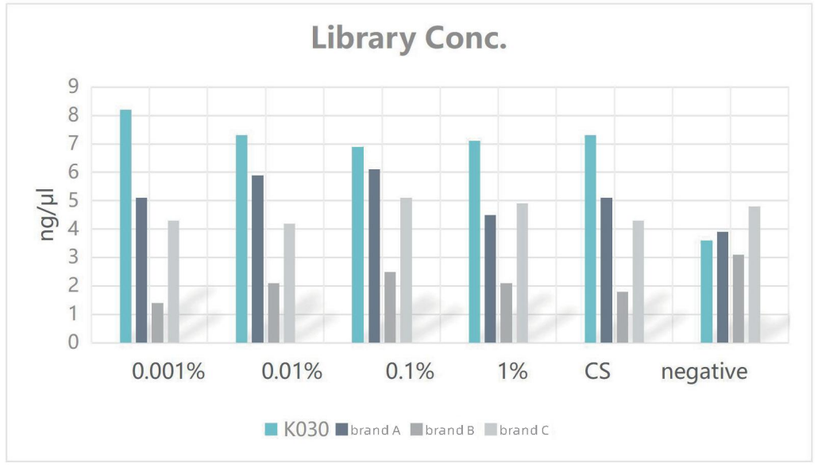
- Excellent amplification performance: low mismatch rate and high specificity, capable of conducting super multiple amplification to construct high-quality DNA libraries.
- Easy to use: all-in-one master mix, reducing operation and saving time in library preparation.
- Wide applicability: compatible with various samples such as blood, nasal / throat swabs, viral cultures, and is widely used in pathogenic microorganism detection, cancer gene detection, scientific research, and other fields.

VALIDATION DATA

DSPath NGS Multiplex PCR Master Mix, which can greatly reduce the difficulty of primer design and improve the quality of the kit, requires only ordinary PCR primers without modification to achieve an excellent detection rate.

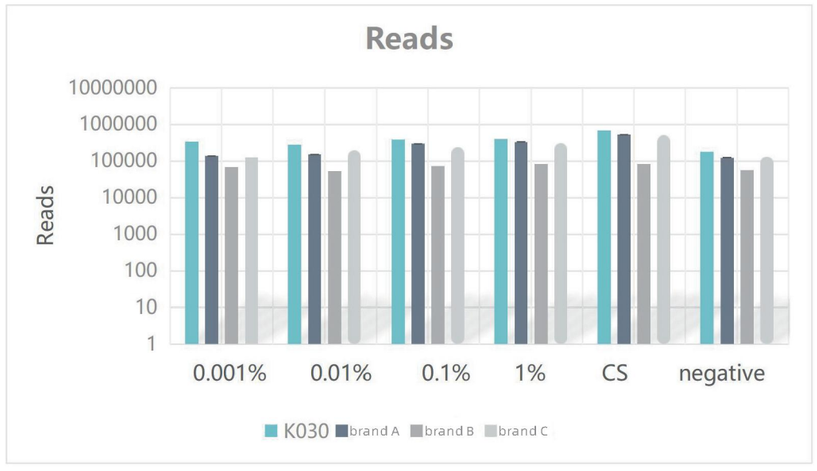
Sample source: A mixture of genomic materials from five pathogenic microorganisms' standards, diluted to 1%, 0.1%, 0.01%, and 0.001% (Pseudomonas aeruginosa / PA, Staphylococcus aureus / SA, Streptococcus pneumoniae / SP, Salmonella enterica / SE, Enterococcus faecalis /EF). Clinical samples (CS) were collected from four patients with confirmed infections, containing Pseudomonas aeruginosa, Haemophilus influenzae, Mycobacterium abscessus, Acinetobacter baumannii, Candida albicans, Streptococcus pneumoniae, and EBV.

① Library Concentration Comparison:



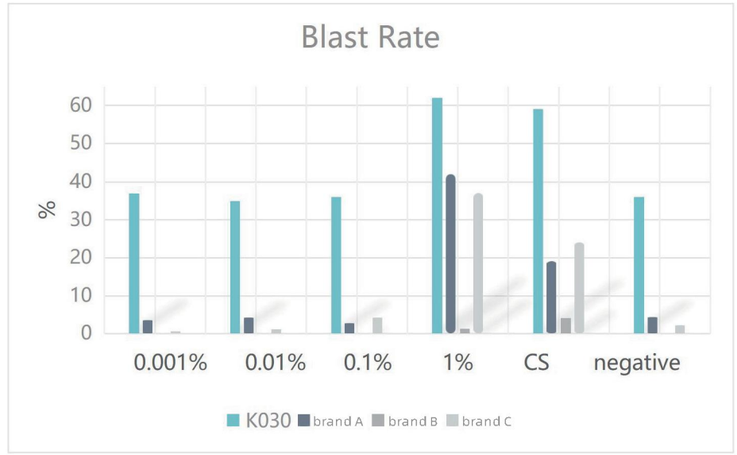
Result 1: The library concentrations of both the standard and clinical samples after library construction are higher than those of the comparative manufacturers.

② Data Comparison from Sequencer Output:



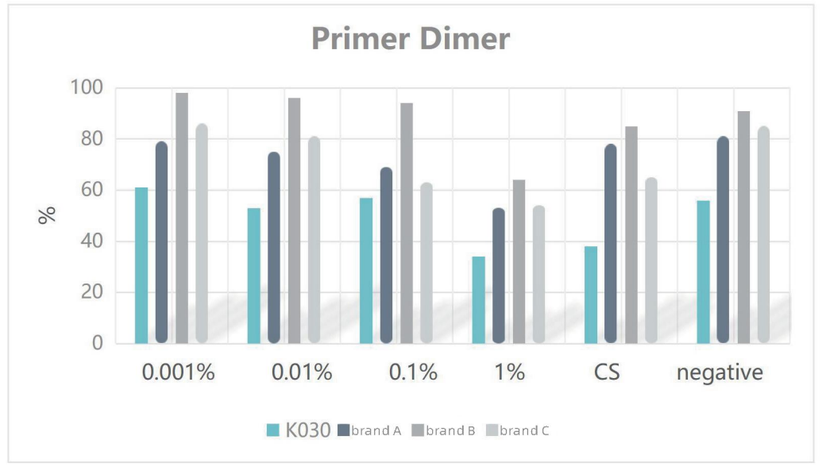
Result 2: The sequencer output data is normal, all above 100,000 except for Brand B, with K030 slightly higher than other manufacturers.

③ Comparison of Blast Rates:



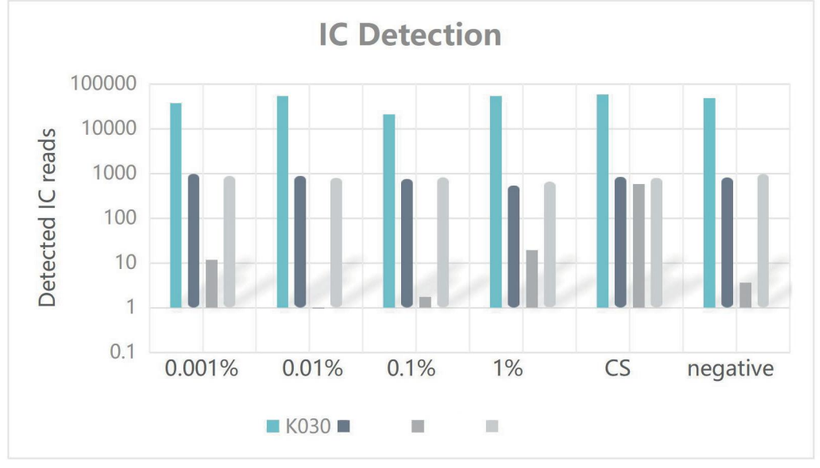
Result 3: At different pathogen loads, the mapping rate is significantly higher than other manufacturers.

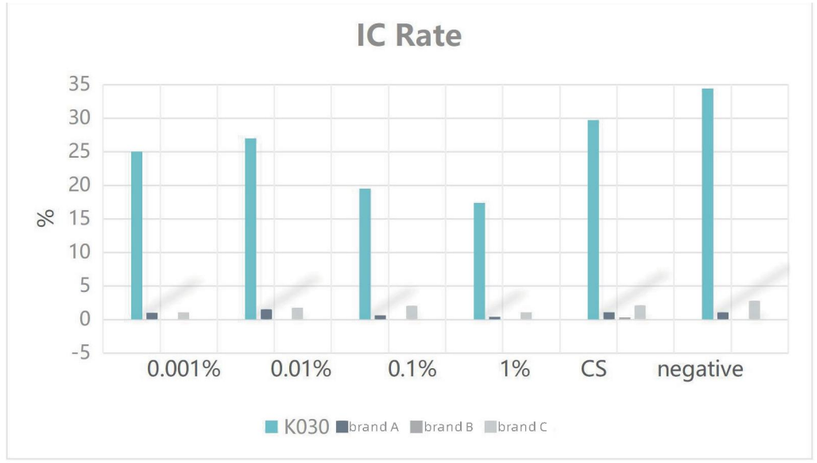
④ Primer Dimer Comparison:



Result 4: At different pathogen loads, the proportion of primer dimers is significantly lower than other manufacturers.

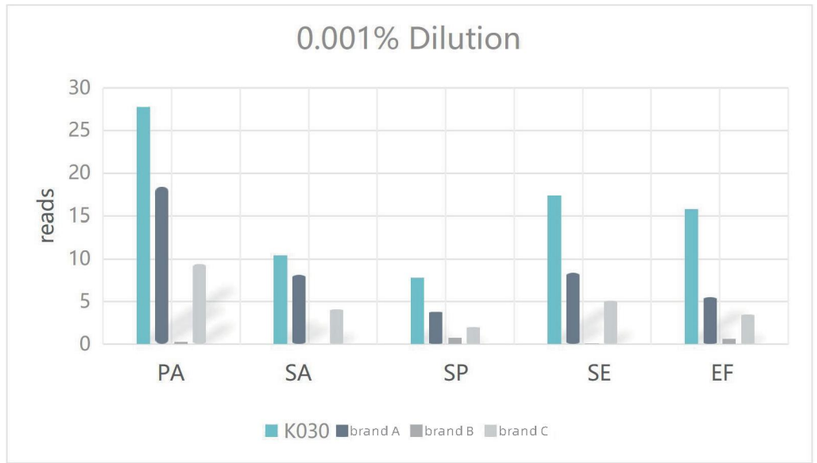
⑤ Comparison of Internal Standard Detection and Proportion:

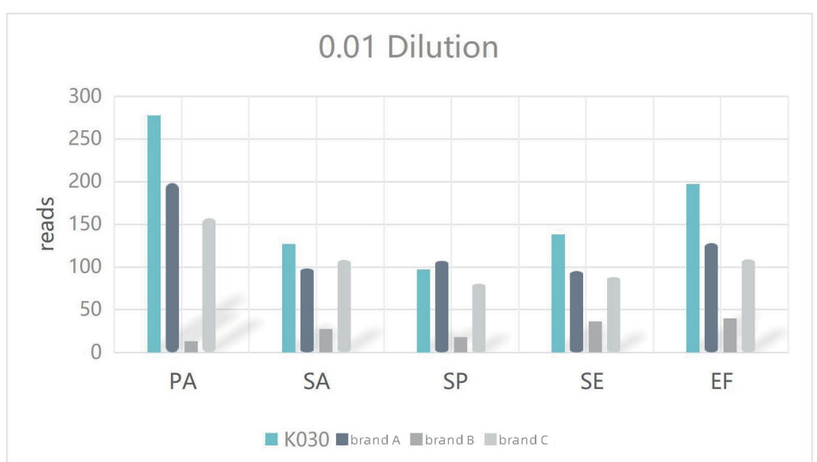


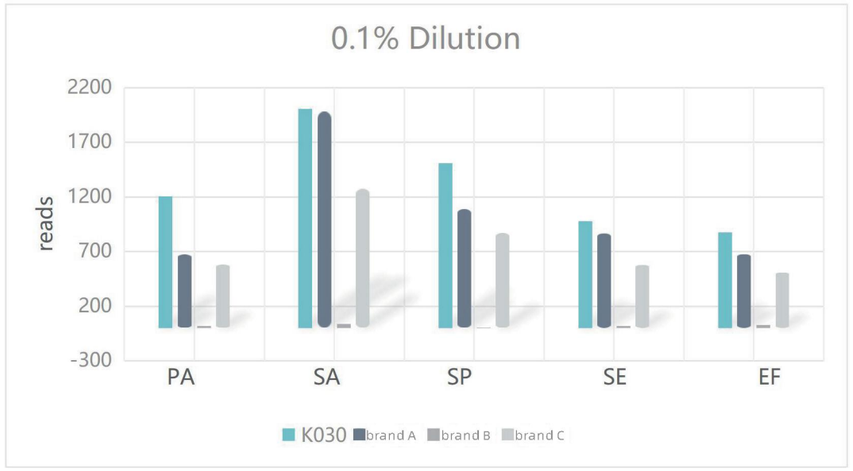


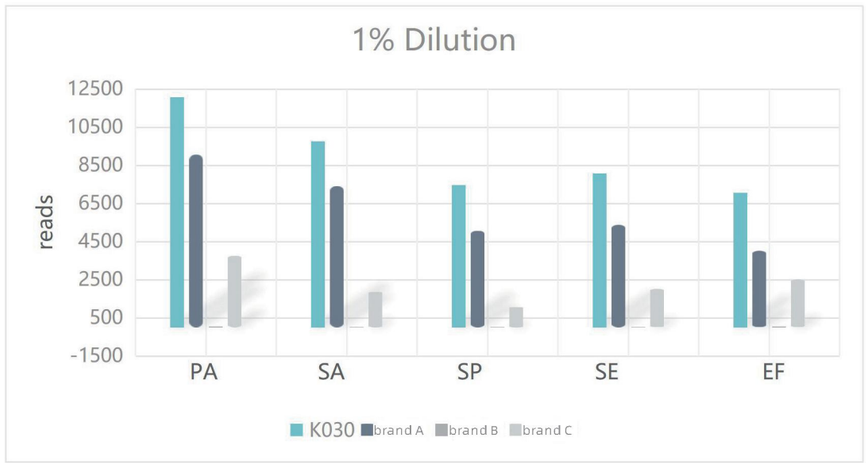
Result 5: The detection and proportion of internal standards are both higher than other manufacturers, with some manufacturers almost unable to detect the internal standards.

⑥ Comparison of Detected Sequence Numbers at Different Pathogen Loads:









Result 6: At different pathogen loads, the number of detected sequences is higher than other manufacturers.

⑦ Result 7: In the detection of clinical samples, K030 did not miss any detections, and the difference with mNGS detection results is the smallest among all manufacturers.

Pathogen	K030	Brand A	Brand B	Brand C	mNGS detection
Pseudomonas aeruginosa	76516	34567	69	21644	68074
Haemophilus influenzae	8	2	0	4	7
Mycobacterium abscessus	8465	6438	36	6870	8034
Acinetobacter baumannii	642	531	3	486	684
Candida albicans	435	135	0	384	513
Streptococcus pneumoniae	543	435	0	196	406
EBV	614	534	57	348	486

NGS Multiplex PCR Master MixII (NM2001)

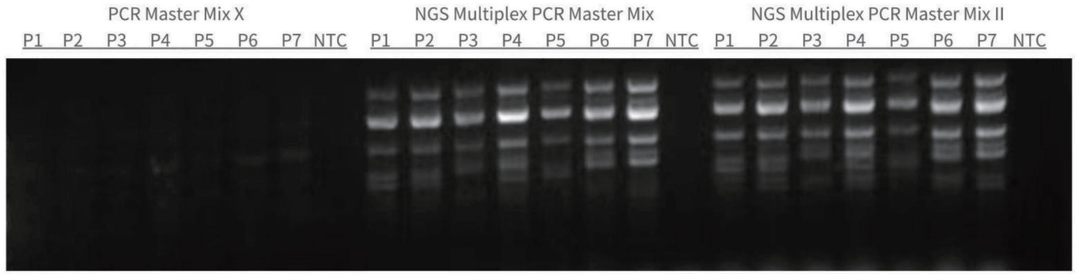
FEATURES

- PCR Master Mix for High-Throughput Sequencing
- High-fidelity DNA polymerase with chemical modification, 100 times more accurate than Taq
- Low mispriming rate, ultra-high specificity
- One-tube master mix, easy to use

- Low mispriming rate, ultra-high specificity
- One-tube master mix, easy to use
- Support for large quantities and OEM services

VALIDATION DATA

Using DNA extracted from peripheral blood samples as a template, multiplex PCR was performed using NGS Multiplex PCR Master Mix (GDSBio, NM1001/NM1002/NM1003), NGS Multiplex PCR Master Mix II (GDSBio, NM2001/NM2002/NM2003), and PCR Master Mix X. The results showed that the amplification products of NGS Multiplex PCR Master Mix and NGS Multiplex PCR Master MixII were accurate and specific.



P1, P2, P3, P4, P5, P6, P7: PCR products amplified with 7 different templates; NTC: no template control

In the study of constructing and sequencing the full genome of the novel coronavirus, the library enrichment effects of GDSBio NGS Multiplex PCR Master MixII and a well-known international brand N's PCR reagent on 12 sets of samples were compared. Through capillary electrophoresis (CE) detection and analysis, all samples met the quality standards, and 3 sets of PCR samples were selected for further library construction and sequencing. Performance analysis of GDSBio NGS Multiplex PCR Master MixII:

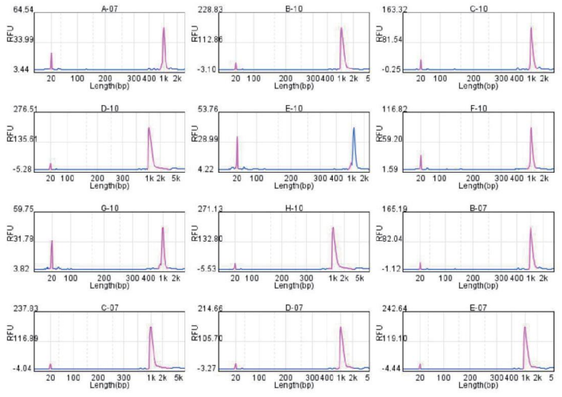
Integrity and Yield: Exceptional amplification efficiency and high yield ensure the integrity and abundance of the target fragments in the samples, providing a solid foundation for subsequent library construction and sequencing.

Comprehensive Coverage: Achieving 100% gene coverage ensures the comprehensiveness and depth of sequencing data, offering a panoramic view of the genome withoutany blind spots.

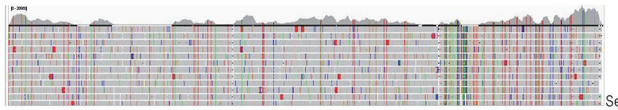
Sensitivity and Specificity: High sensitivity and specificity accurately capture target sequences, effectively reducing the risk of false positives and false negatives, ensuring the accuracy of experimental results.

Uniformity and Consistency: Good coverage uniformity ensures that each gene region receives balanced sequencing depth, thereby enhancing the reliability of the data and the reproducibility of the experiments.

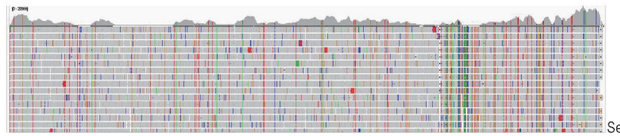
Stability and Reproducibility: Demonstrates excellent stability and reproducibility in multiple experiments, ensuring the consistency of experimental results.



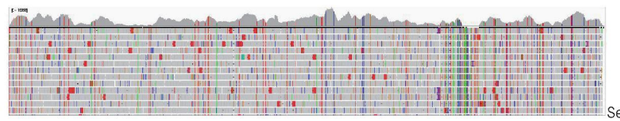
CE Plot of GDSBio PCR sample



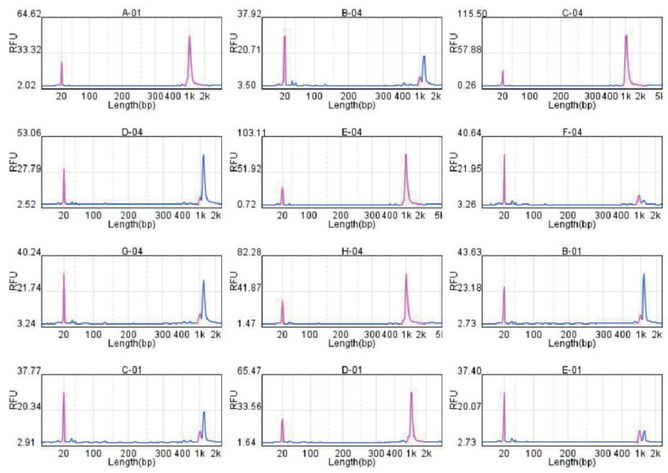
Sequencing Result of GDSBio Library A



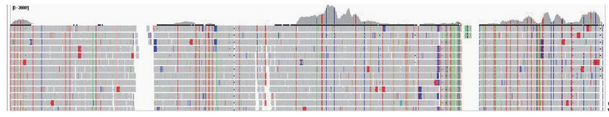
Sequencing Result of GDSBio Library B



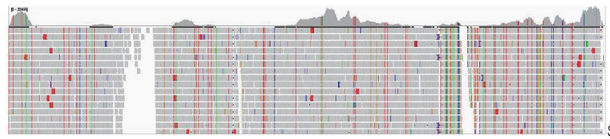
Sequencing Result of GDSBio Library C



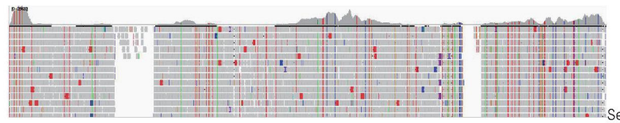
CE Plot of Brand N PCR sample



Sequencing Result of Brand N Library A



Sequencing Result of Brand N Library B



Sequencing Result of Brand N Library C

NGS Library Preparation Products

NGS Library Prep Kit

Product Name	Description	Cat. No.	Spec.
Fast DNA Library Prep Kit	Common library preparation kit for Illumina platform	K001-A/K001-B	24 rxns/96 rxns
Fast DNA Library Prep Kit V2	The enzyme and buffer for end repair are separated	K001S-A/K001S-B	24 rxns/96 rxns
Fast DNA Library Plus Prep Kit	Enzyme digestion library preparation kit for Illumina platform	K004-A/K004-B	24 rxns/96 rxns
ShortSeq Library Prep Kit	Fast library preparation kit for Illumina platform	K009-A/K009-B	24 rxns/96 rxns
Fast DNA Library Prep Kit for MGI	Common library preparation kit for MGI platform	KM001-A/KM001-B	24 rxns/96 rxns
Fast DNA Library Prep Kit for MGI V2	The enzyme and buffer for end repair are separated	KM001S-A/KM001S-B	24 rxns/96 rxns
Fast DNA Library Plus Prep Kit for MGI	Enzyme digestion library preparation kit for MGI platform	KM004-A/KM004-B	24 rxns/96 rxns

FEATURES

Library Preparation Kits	#K001/K001S/KM001/KM001S	#K004/KM004	#K009
Features	1 Wide sample compatibility 2 High efficiency in library preparation 3 Compatible with PCR-free workflow 4 Complete Fragmentation and End Repair simultaneously (#K004/K004M)		1 Short time for library preparation 2 Easy to operate 3 No need to design and synthesize primers

VALIDATION DATA (#K001/K004)

1. High conversion rate of library.

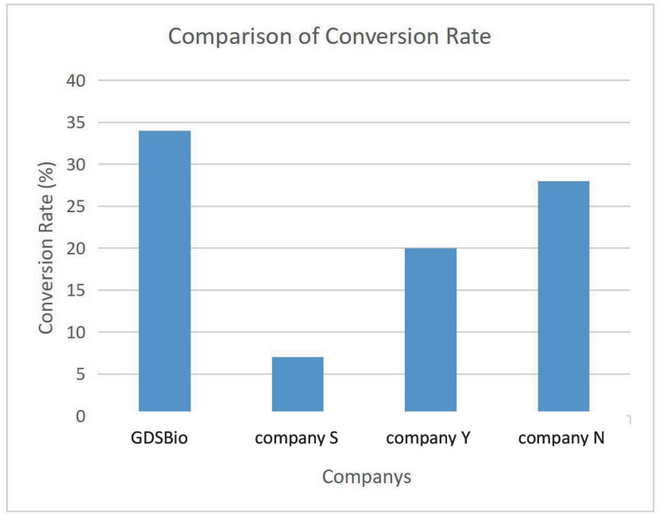


Figure 1 Library conversion rate when DNA input was 60ng.

2. Whether before or after amplification, compared with other manufacturers, the amplification is very superior.

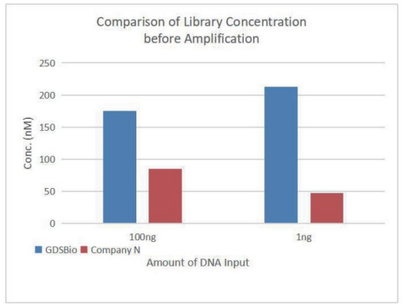


Figure 2 The concentration of unamplified library obtained when the DNA sample was 100ng and 1ng, and the end repair and adapter ligation were performed with the library construction kits of different manufacturers.

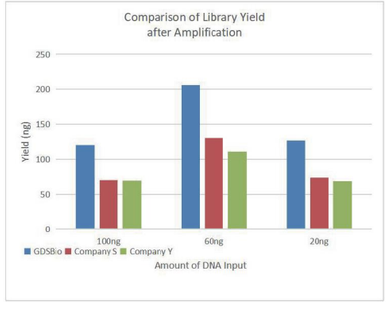


Figure 3 The total amount of library obtained after amplified with the same cycles when the DNA sample was 100ng, 60ng, and 20ng, and the end repair and adapter ligation were performed with the library construction kits of different manufacturers.

3. The time of fragmentation is flexible and controllable. (#K004)

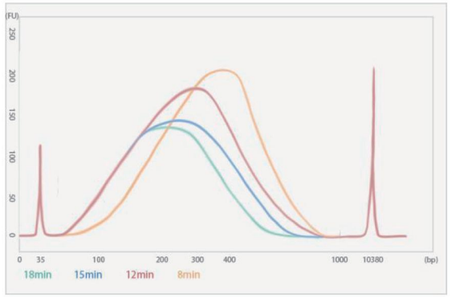


Figure 4 The input DNA was 500ng, and the fragmentation time was 8min, 12min, 15min, 18min, respectively. Image obtained by fragment size analysis and processing with Agilent Bioanalyzer 2100.

4. Strong product stability. The fragmentation effect is equally significant whether compared with the same batch or across batches. (#K004)

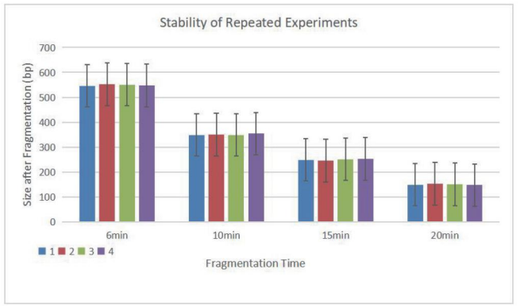


Figure 5 Fragmentation effect between the same batch for 6min, 10min, 15min and 20min respectively.

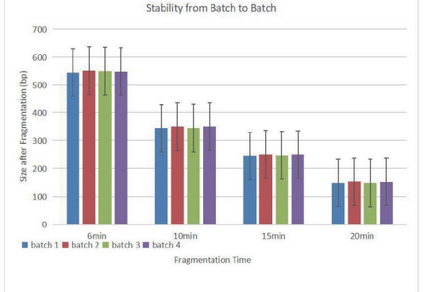


Figure 6 Fragmentation effects between four different batches for 6min, 10min, 15min and 20min respectively.

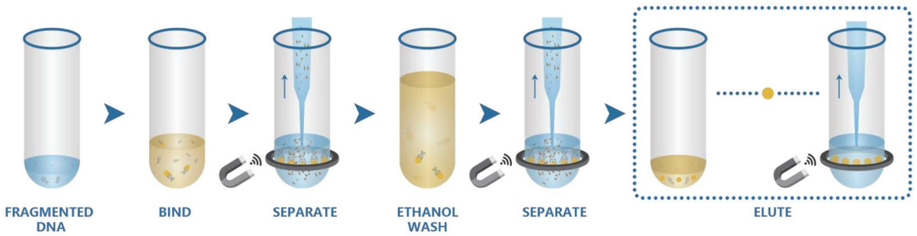
NGS Library Prep Module

Product Name	Description	Cat. No.	Spec.
GDS RNA First Strand Synthesis Module	cDNA first strand synthesis	K020-A/K020-B	24 rxns/96 rxns
GDS Directional RNA Second Strand Synthesis Module	cDNA second strand synthesis	K021-A/K021-B	24 rxns/96 rxns
GDS Non-Directional RNA Second Strand Synthesis Module	cDNA second strand synthesis	K022-A/K022-B	20 rxns/100 rxns
GDS Fragmentation & End Prep Module	DNA fragmentation & end repair/dA-tailing	K023-A/K023-B	24 rxns/96 rxns
GDS dsDNA Fragmentase	DNA fragmentation	K024-A/K024-B	50 rxns/250 rxns
GDS End Preparation Module	End repair/dA-tailing	K025-A/K025-B	24 rxns/96 rxns
GDS Ligation Module	Adaptor ligation	K026-A/K026-B	24 rxns/96 rxns
GDS Fast Fragmentation & End Prep Module	DNA fast fragmentation & end repair/dA-tailing	K032-A/K032-B	24 rxns/96 rxns

NGS Library Prep Adaptor & Seclection Beads

Product Name	Description	Cat. No.	Spec.
Multiplex Oligos 1 for Illumina	Short Adapter for different combinations of dual index libraries	K002-A02/K002-A	24 rxns/192 rxns
Multiplex Oligos 2 for Illumina	For another 96 different combinations of dual index libraries	K002-B	192 rxns
UDI UMI Adapters Primers for Illumina	UDI UMI Adapter	K003-A/K003-B/K003-C/K003-D	96 rxns/96 rxns/96 rxns/96 rxns
TN Primer Index list-A	Primers for ShortSeq Library Prep Kit	K211-A	100 rxns
GDSPure DNA Selection Magbeads	DNA size selection and cleanup	NC1011/NC1012/NC1013	5 mL/60 mL/450 mL

GDSPure DNA Selection Magbeads

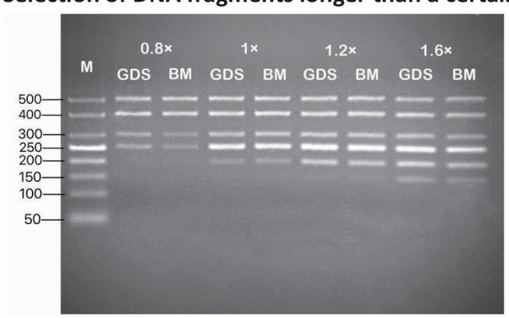


FEATURES:

- High recovery of amplicons ≥ 150bp
- Efficient removal of unincorporated dNTPs, primers, primer dimers, salts and other contaminants
- Predictable and consistent size selection
- Compatible with manual and automated processing
- Support for large quantities (over 100L/month) and OEM services

VALIDATION DATA

Selection of DNA fragments longer than a certain size (single round of selection/purification)

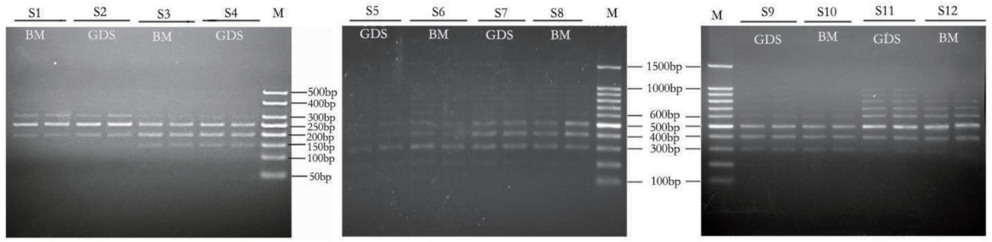


GDS: GDSPure DNA Selection Magbeads,BM: A foreign brand similar reagent

M:GSDBio 50 bp Ladder

0.8X, 1X, 1.2X, 1.6X: Respectively use 0.8X, 1X, 1.2X, 1.6X GDSPure magnetic bead to recover nucleic acid fragments of various sizes

Selection of DNA fragments in a certain size range (two rounds of selection)



GDS: GDSPure DNA Selection Magbeads, BM: A foreign similar reagent

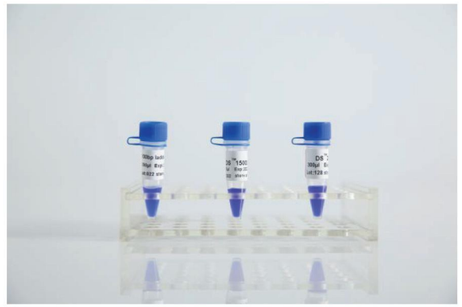
M: GSDBio 50 bp Ladder, 100bp Ladder

S1,S2: Recovery range near 250 bp; S3,S4: Recovery range near 200 bp; S5,S6:Recovery range near 300 bp; S7,S8: Recovery range near 400 bp; S9,S10: Recovery range near 500 bp; S11,S12: Recovery range near 600 bp

NGS Library Prep Enzyme

Product Name	Description	Cat. No.	Spec.
Klenow Fragment (3´→5´ exo-)	5U/μL	K010-A/K010-B/K010-C	100 U/200 U/1,000 U
T4 DNA Polymerase (5U/μL)	End repair	K011-A/K011-B/K011-C/K011-D	100 U/500 U/2,000 U/5,000 U
T4 DNA Ligase (Fast) (5U/μL)	Adaptor ligation	K012	1,000 U
T4 Polynucleotide Kinase (10U/μL)	Phosphorylation of DNA or RNA 5' terminal	K013-A/K013-B/K013-C	50 U/2,500 U/10,000 U

DNA Electrophoresis Products



GDSBio provides two series of DNA Markers/Ladders (DNA Molecular Weight) to indicate the base pairs and the concentration of DNA at the range of 25bp~23kb: Classic DNA Marker, and LD DNA Marker, they are designed to be used with different electrophoretic nucleic acid dyes.

Suggestions on Staining Method

Type of DNA Marker	Suggested staining method of DNA gel	
	Traditional staining dye (such as EB)	Novel staining dye (such as GelRed)
Classic DNA Marker	Precast or post-electrophoresis gel staining	Post-electrophoresis gel staining
LD DNA Marker	Not suggested	Precast

DNA Molecular Weight

Indicating Range	Classic DNA Marker			LD DNA Marker		
	Product Name	Cat. No.	Spec.	Product Name	Cat. No.	Spec.
80~300bp	10bp Ladder	M1011/M1012	50 μg/50 μg×5	/	/	/
60~300bp	20bp Ladder	M1021/M1022	50 μg/50 μg×5	/	/	/
25~700bp	Low Ladder	M1031/M1032	50 μg/50 μg×5	LD Low Ladder	LM1031/LM1032	300 μL/300 μL ×3
50~500bp	50bp Ladder	M1041/M1042	50 μg/50 μg×5	LD 50bp Ladder	LM1041/LM1042	300 μL/300 μL ×3
50~1000bp	50bp Ladder Plus	M1051/M1052	50 μg/50 μg×5	LD 50bp Ladder Plus	LM1051/LM1052	300 μL/300 μL ×3
100~1,500bp	100bp Ladder	M1061/M1062	50 μg/50 μg×5	LD 100bp Ladder	LM1061/LM1062	300 μL/300 μL ×3
100~3,000bp	100bp Ladder Plus	M1071/M1072	50 μg/50 μg×5	LD 100bp Ladder Plus	LM1071/LM1072	300 μL/300 μL ×3
100~600bp	Marker 1	M1081/M1082	50 μg/50 μg×5	LD Marker 1	LM1081/LM1082	300 μL/300 μL ×5
100~1,200bp	Marker 2	M1091/M1092	50 μg/50 μg×5	LD Marker 2	LM1091/LM1092	300 μL/300 μL ×3
100~2,000bp	DS2000	M1101/M1102	50 μg/50 μg×5	LD DS2000	LM1101/LM1102	300 μL/300 μL ×5
100~5,000bp	DS5000	M1111/M1112	50 μg/50	LD DS5000	LM1111/LM1112	300 μL/300

			μg×5			μL ×5
200~4,500bp	Marker 3	M1121/M1122	50 μg/50 μg×5	LD Marker 3	LM1121/LM1122	300 μL/300 μL ×5
200~1,500bp	Marker 11	M1131/M1132	50 μg/50 μg×5	/	/	/
200~2,000bp	Marker 12	M1141/M1142	50 μg/50 μg×5	/	/	/
200~4,000bp	200bp Ladder	M1151/M1152	50 μg/50 μg×5	LD 200bp Ladder	LM1151/LM1152	300 μL/300 μL ×3
250~15,000bp	DS15000	M1161/M1162	50 μg/50 μg×5	LD DS15000	LM1161/LM1162	250 μL/250 μL ×5
500~10,000bp	1kb Ladder	M1181/M1182	50 μg/50 μg×5	LD 1kb Ladder	LM1181/LM1182	250 μL/250 μL ×5
100~10,000bp	1kb Ladder Plus	M1191/M1192	50 μg/50 μg×5	LD 1kb Ladder Plus	LM1191/LM1192	300 μL/300 μL ×3
125~2,3130bp	Lambda DNA/Hind Ⅲ	M1201/M1202	50 μg/50 μg×5	LD Lambda DNA/Hind Ⅲ	LM1201/LM1202	300 μL/300 μL ×3
250~10,000bp	DS10000	M1221/M1222	50 μg/50 μg×5	LD DS10000	LM1221/LM1222	300 μL/300 μL ×5
500~15,000bp	Marker 4	M1231/M1232	50 μg/50 μg×5	LD Marker 4	LM1231/LM1232	250 μL/250 μL ×5
100~1,5000bp	DS15000+2000	M1241/M1242	50 μg/50 μg×5	/	/	/
500~5,000bp	500bp Ladder	M1251/M1252	50 μg/50 μg×5	LD 500bp Ladder	LM1251/LM1252	300 μL/300 μL ×3

DSRed+LD *

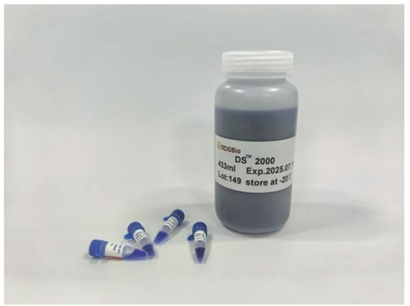
Match the Dye with Marker to Obtain Perfect Electrophoresis Results

*DSRed refers to GDSBio DSRed Nucleic Acid Stain; LD refers to GDSBio LD DNA marker

"DSRed+LD" significantly reduces the impact of large molecular dyes in pre-stained gels on DNA fragment migration, achieving effective separation of DNA fragments in electrophoresis results.

Electrophoresis Band Pattern of DNA Markers

Product Customization



GDSBio provides DNA Marker/Ladder customization services, we have the following advantages:

1. Nearly 20 years of production experience, mature technology
2. Clear and bright bands, accurate molecular weight
3. Stable quality, suitable for use at room temperature
4. Support personalized customization with different DNA band numbers, molecular weight, concentration and others

Electrophoresis Related Products

Product Name	Description	Cat. No.	Spec.
50X TAE Buffer	Suitable for isolation of nucleic acids larger than 1,500bp	M9021	500 mL
10X TBE Buffer	Suitable for isolation of nucleic acids small than 1,500bp	M9031	500 mL
6X Gel Loading Dye	Indicating dye: bromophenol blue, xylene gyand FF	M9041	1 mL×5
6X Gel Loading Dye, Blue	Indicating dye: bromophenol blue	M9051	1 mL×5
6X Gel Loading Dye, Three-color	Indicating dye: orange G, bromophenol blue, xylene gyand FF	M9061	1 mL×5
6X Gel Loading Dye, Orange	Indicating dye: orange G, xylene gyand FF	M9071	1 mL×5
6X Gel Loading Dye, SDS+	Electrophoresis of DNA with high protein; Indicating dye: bromophenol blue, xylene gyand FF	M9081	1 mL×5
DSView Nucleic Acid Stain 20,000X	Suggested Marker: Classic DNA Makers (precast or post-electrophoresis gel staining)	M7011/M7012	1 mL/10 mL
DSRed Nucleic Acid Stain 10,000X	Suggested Marker: LD DNA Makers (precast)	M7021/M7022	0.5 mL/0.5 mL×5
Agarose	High purity and Low EEO	N9051/N9052	500g/100g

Nucleic Acid Extraction Products

DNA Extraction

Product Name	Description	Cat. No.	Spec.
General DNA Extraction Kit	Suitable for extracting high-purity DNA from various samples such as animal tissues, cultured cells, and blood	N1211/N1212	24 preps/100 preps
Plant DNA Extraction Kit	Suitable for extracting high-purity DNA from plant tissues and fungi samples	N1221/N1222	24 preps/100 preps

RNA Extraction

Product Name	Description	Cat. No.	Spec.
TRAzol Reagent	Classic RNA Lysis Solution	R1021/R1022	20 mL/100 mL
General RNA Extraction Kit	High-efficiency extraction of RNA using TRAzol and silica gel purification column	R1051	50 preps

Virus DNA/RNA Extraction

Product Name	Description	Cat. No.	Spec.
Swab/Saliva Viral DNA/RNA Extraction Kit (Magnetic Beads)	Efficient extraction of various viral samples including SARS-CoV-2, using manual magnetic bead method/CE certified	V4002	200 preps
96 Deep-Well Plate Viral RNA/DNA Miniprep Kit (Magnetic Beads)	Efficient extraction of various viral samples including SARS-CoV-2, using automatic magnetic bead method, compatible with various models/CE certified	V4003	96 preps

Specimen Collection

Product Name	Description	Cat. No.	Spec.
Disposable Virus Sampling Tube (Inactivation Type)	CE certified, virus preservation solution with Patented technology	F4001a/F4002a/F4003a	50 pcs/box (2 mL/5 mL/10 mL tube)
Disposable Virus Sampling Tube (Non-inactivation Type)	CE certified, classic virus preservation solution	F6001a/F6002a/F6003a	50 pcs/box (2 mL/5 mL/10 mL tube)

Nucleic Acid Extraction Related Products

Product Name	Description	Cat. No.	Spec.
Mag Beads A	① Extract genomic DNA/RNA from blood, tissues, plants, swabs, bloodstains, feces, soil, etc. ② Viral DNA/RNA extraction	N8011/N8011-2	380 mL/800 mL

	③ Gel DNA recovery		
Mag Beads B	① Extract DNA/RNA from samples with low nucleic acid content ② Plasmid extraction ③ DNA/RNA purification	N8021/N8021-2	380 mL/800 mL
Mag Beads C	① Free DNA extraction ② Viral nucleic acid extraction ③ Genomic DNA extraction ④ FFPE (Formalin-Fixed Paraffin-Embedded) DNA/RNA extraction	N8031/N8031-2	380 mL/800 mL
Mag Beads D	① DNA/RNA purification and enrichment ② Extraction of DNA/RNA from samples with low nucleic acid content ③ Immunological analysis research	N8041	100 mL
Proteinase K Solution	20 mg/mL	N9011	1 mL
Proteinase K Solution	100 mg/mL	N9012	1.6 L
Proteinase K Powder	Specific activity ≥30 U/mg	N9016/N9017	100 mg/1 g
Lysozyme	50 mg/mL	N9021	1 mL×5
Lyticase	10 U/μL	N9031/N9032	150 μL/300 μL
RNase A	10 mg/mL	N9041	1 mL
RNase A	100 mg/mL	N9042	1 mL
RNase A Powder	Specific activity ≥3,000 U/mg	N9046/N9047	100 mg/1 g
DNase I Powder	Specific activity ≥2,000 Kunitz U/mg	N9066/N9067/N9068	1 g/10 g/20 g
DNase I Powder	Specific activity ≥500 Kunitz U/mg	N9069/N9070	1 g/10 g
DEPC-treated Water	RNase-free ultrapure water	R2042	100 mL
RNA Stabilization Solution	Transportation at RT and long-term storage of RNA samples	R2072	100 mL

Tool Enzyme & Protein Ladder

Basic Tool Enzyme

Molecular tool enzymes have a wide range of applications in molecular biology and genetic engineering. They can perform operations such as cutting, ligating, amplifying, and modifying nucleic acid molecules due to their specific sequence recognition capabilities and efficient biocatalytic activity. GDSBio provides tool enzymes such as DNA ligases to meet the needs of molecular experiments like gene cloning.

Product Name	Scope of Application (partial)	Cat. No./Spec.
Dszonase Endonuclease	Remove nucleic acid contaminants from recombinant protein preparations	E1011-A/5 KU E1011-B/25 KU
Taq DNA Ligase	Using ligase chain reaction (LCR) and ligase detection reaction (LDR) to specifically detect alleles	E1012-A/1000 U E1012-B/2000 U E1012-C/10000 U
Thermosensitive Alkaline Phosphatase	Dephosphorylation of cloned vector DNA to prevent re-circularization during ligation	E1013-A/300 U E1013-B/1000 U E1013-C/5000 U
T4 DNA Ligase	Ligation of double-stranded oligonucleotides or adapters to DNA	E1014-A/200 U (5 Weiss U/μL) E1014-B/1000 U (5 Weiss U/μL) E1014-C/5000 U (5 Weiss U/μL) E1014-D/5000 U (30 Weiss U/μL) E1014-E/1000 U (1 Weiss U/μL)
T4 RNA Ligase	RNA-to-RNA ligation	E1015-A/1000 U
RNase H	Removal of mRNA before the synthesis of the second-strand cDNA	E1016-A/100 U E1016-B/500 U
S1 Nuclease	Removal of single-stranded overhangs from DNA fragments	E1017-A/10000 U
DNase I, RNase-Free, HC	To prepare DNA-free RNA before RT-PCR and RT-qPCR	E1018-A/1000 U
Proteinase K (recombinant), PCR grade	Eliminate DNase and RNase during the isolation of DNA and RNA from tissues or cell lines	E1019-A/1 mL E1019-B/1 mL×5
T4 B-Glucosyltransferase	Site-specific detection of 5-hmC	E1020-B/500 U
DNA Polymerase I	Used in conjunction with DNase, for DNA labeling through nick translation	E1021-A/500 U E1021-B/2500 U
T7 RNA Polymerase	synthesis of unlabeled and labeled RNA	E1022-B/5000 U

Restriction Endonuclease

Restriction Endonucleases are a class of enzymes that recognize specific sequences in DNA and cleave double-stranded DNA

at or near the recognition site. Restriction Endonucleases play a crucial role in molecular cloning, gene diagnosis, and genetic engineering. GDSBio provides 16 commonly used, efficient, and rapid restriction endonucleases.

Product Features:

① All GDSBio restriction endonucleases exhibit 100% activity in universal buffer
② 100% buffer compatibility with downstream applications
③ Enzymatic digestion can be completed within 5-15 minutes
④ Direct loading onto a gel
⑤ No star activity

Applicable Scope:

① Molecular cloning
② Restriction mapping
③ Genotyping
④ Southern blotting
⑤ Restriction Fragment Length Polymorphism (RFLP)
⑥ SNP analysis

Product Name	Digestion Site	Cat. No./Spec.
BglII	5' A↓GATCT 3' / 3' TCCAGA↑ 5'	E1023-A/100 rxns
EcoRI	5' G↓AATTC 3' / 3' CTTAA↑G 5'	E1024-A/800 rxns E1024-B/2500 rxns
HindIII	5' A↓AGCTT 3' / 3' TTCGA↑A 5'	E1025-A/800 rxns E1025-B/2500 rxns
NcoI	5' C↓CATGG 3' / 3' GGTAC↑C 5'	E1026-A/20 rxns E1026-B/100 rxns
NotI	5' GC↓GGCCGC 3' / 3' CGCCGG↑CG 5'	E1027-A/20 rxns E1027-B/50 rxns
PvuI	5' CGAT↓CG 3' / 3' GC↑TAGC 5'	E1028-A/20 rxns
XhoI	5' C↓TCGAG 3' / 3' GAGCT↑C 5'	E1029-A/400 rxns E1029-B/1200 rxns
NheI	5' G↓CTAGC 3' / 3' CGATC↑G 5'	E1030-A/50 rxns E1030-B/100 rxns
BamHI	5' G↓GATCC 3' / 3' CCTAG↑G 5'	E1031-A/800 rxns E1031-B/2500 rxns
Bsu15I	5' AT↓CGAT 3' / 3' TAGC↑TA 5'	E1032-A/50 rxns E1032-B/100 rxns
Esp3I	5' CGTCTC N1↓ 3' / 3' GCAGAG N5↑ 5'	E1033-A/20 rxns
KpnI	5' GGTAC↓C 3' / 3' C↑CATGG 5'	E1034-A/300 rxns
NdeI	5' CA↓TATG 3' / 3' GTAT↑AC 5'	E1035-A/100 rxns E1035-B/300 rxns
SmaI	5' CCC↓GGG 3' / 3' GGG↑CCC 5'	E1036-A/100 rxns E1036-B/200 rxns
SacI	5' GAGCT↓C 3' / 3' C↑TCGAG 5'	E1037-A/100 rxns
BcuI	5' A↓CTAGT 3' / 3' TGATC↑A 5'	E1038-A/50 rxns

Protein Ladder

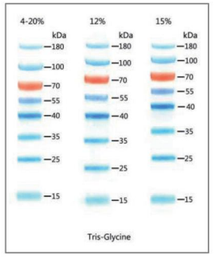
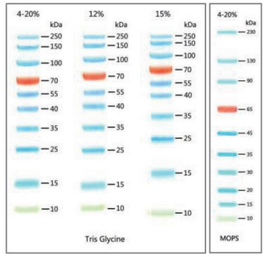
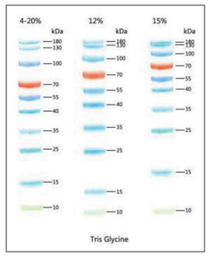
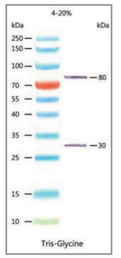
GDSBio offers four commonly used protein molecular weight markers ranging from 10KD to 250KD, meeting various experimental needs.

Features:

Ready-to-use, multicolor pre-stained
Bright colors, clear bands
High purity protein, accurate molecular weight
Multiple bands, wide range
Good consistency between batches

Application:

For SDS-PAGE, Western Blot.
Monitor the electrophoresis process throughout,
Assess the efficiency of transfer,
Precisely locate the target protein.

Prestained Protein Ladder	15-180KD Prestained Protein Ladder	10-250KD Prestained Protein Ladder	10-180KD Prestained Protein Ladder	10-250KD Prestained Immunoblotting Protein Ladder
				
Molecular weight range	15-180 kDa	10-250 kDa	10-180 kDa	10-250 kDa
Band quantity	8	10	10	12
Band molecular weight (kDa)	15, 25, 35, 40, 55, 70, 100, 180	10, 15, 25, 35, 40, 55, 70, 100, 150, 250	10, 15, 25, 35, 40, 55, 70, 100, 130, 180	10, 15, 25, 30, 35, 40, 55, 70, 80, 100, 150, 250
Color	Blue, orange	Blue, orange, green	Blue, orange, green	Blue, orange, green. IgG binding sites are located on 2 bands (80 and 30 kDa).
Imaging method	Visual color comparison	Visual color comparison	Visual color comparison	Visual color comparison. bands at 80 and 30 kDa can be visualized by Western Blot and Coomassie Brilliant Blue staining.
Recommended gel system	Tris-Glycine	Tris-Glycine，MOPS	Tris-Glycine	Tris-Glycine
Cat. No. / Spec.	D1011-A/250 μl D1011-B/250 μl×5	D1012-A/250 μl D1012-B/250 μl×5	D1013-A/250 μl D1013-B/250 μl×5	D1014-A/250 μl D1014-B/250 μl×5