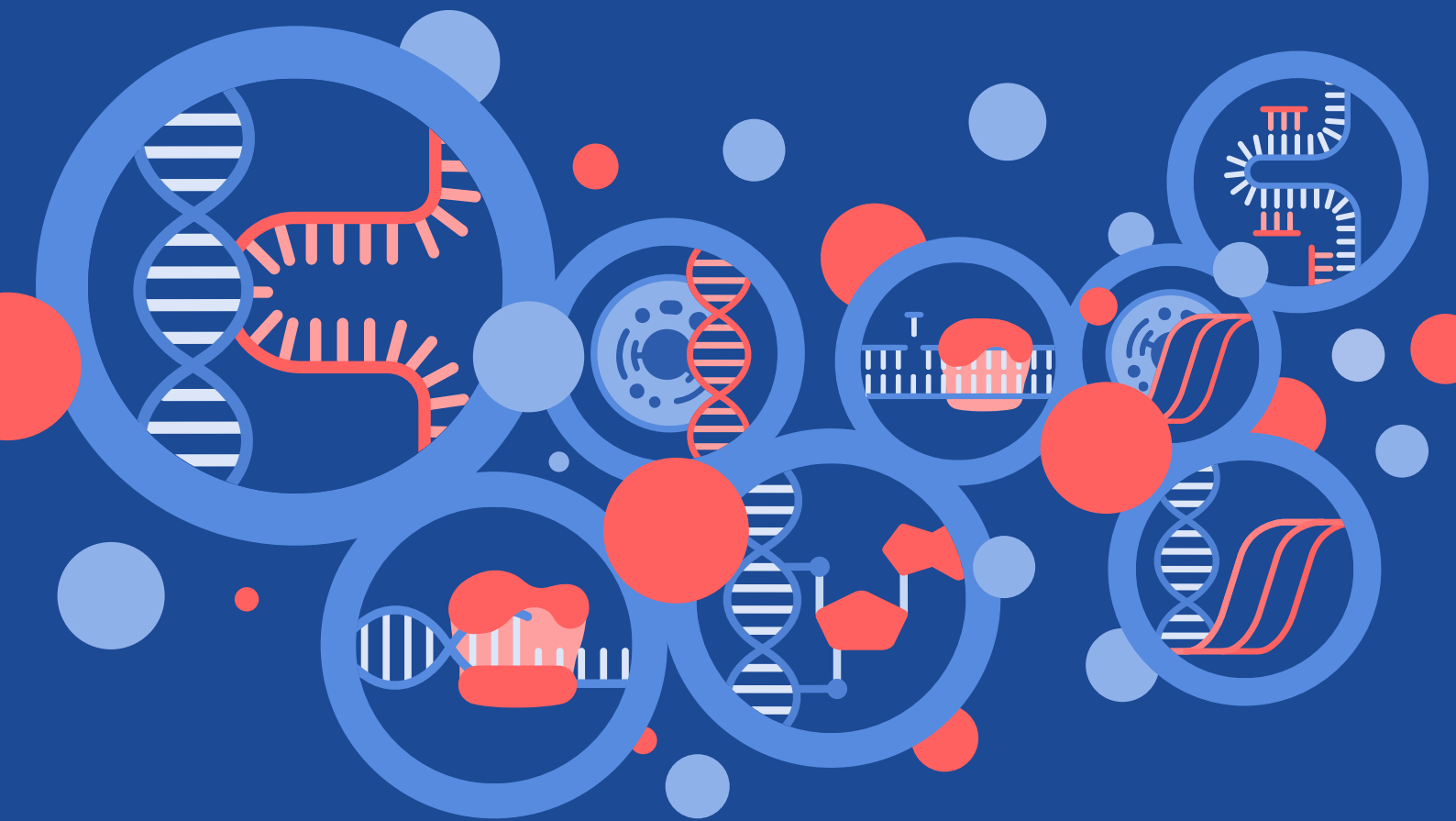




Molecular Biology Reagents



MULTIDISCIPLINARY EXPERTISE

Founded in 2018 as an academic spin-off based on unique DIANA technology for drug discovery and diagnostics, bringing deep expertise in molecular biology, chemistry and informatics. All operations are based in the heart of Europe: Prague, Czech Republic.



BREAKTHROUGH PCR DIAGNOSTICS

Our ultra-high throughput PCR COVID-19 tests gained over 40% of the Czech market. The key to this success lied in internally developed reagents, which enabled direct RT-PCR from saliva and screening of viral genetic variants.

EXPERTS IN MOLECULAR BIOLOGY REAGENTS

PCR and related applications became our passion. With our expertise in protein engineering, we develop and produce unique and high-performance reagents for PCR, RT-PCR, RNA production, NGS and sample preparation in research, development and diagnostics.

About DIANA Biotechnologies

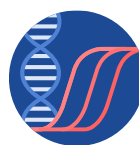
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Reagents for DNA analysis



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DBdirect™ PCR & qPCR Mixes SuperSens 2.0

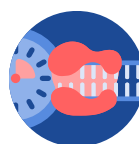
Ready-to-use mixes for direct PCR from biological samples 6

Reagents for RNA analysis



DBscript 2.0 Reverse Transcriptase

Ultra-sensitive reverse transcriptase and ready-to-use cDNA synthesis kit 10



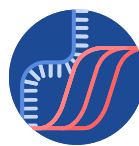
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DBdirect™ RT-PCR & RT-qPCR Mixes SuperSens 2.0

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DB RNase Inhibitors

Engineered human and bovine RNase inhibitors for RNA protection 20

Supplementary reagents and services



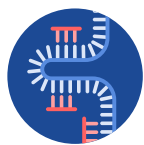
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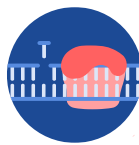
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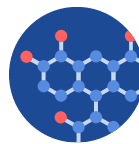
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Reagents for DNA analysis

DB Taq DNA Polymerases

DBdirect™ PCR & qPCR mixes
SuperSens 2.0



DB Taq DNA Polymerases

DB DNA Polymerases offer robust, precise amplification for both routine and challenging PCR. Featuring our proprietary **DB SuperSens Taq** and **DB AptaTaq**, these recombinant enzymes combine high thermostability with unprecedented sensitivity. Available in colorless and green (ready-to-load) formulations.

Key features

- **High thermostability**
Recombinant enzymes with a half-life of over 40 min at 95 °C suitable for amplification of DNA up to 5 kb.
- **Three enzymatic activities**
Possess intrinsic 5'-3' polymerase, 5'-3' exonuclease and 5' flap activities for various molecular biology applications.
- **All-inclusive formulation**
Supplied with a complete reaction buffer with enhancers, stabilizers, and optimal concentration of metal ions and dNTPs.

Applications

- Standard PCR
- High-yield PCR
- Colony PCR
- T/A cloning
- Genotyping
- GC-rich amplification

Ordering information

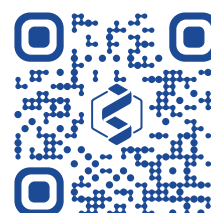
Catalogue number	Description	Size
DB-1326-0.4kU	DB AptaTaq DNA Polymerase	400 units
DB-1326-1.0kU	DB AptaTaq DNA Polymerase	1,000 units
DB-1326-5.0kU	DB AptaTaq DNA Polymerase	5,000 units
DB-1327-0.4kU	DB AptaTaq DNA Polymerase Green	400 units
DB-1327-1.0kU	DB AptaTaq DNA Polymerase Green	1,000 units
DB-1327-5.0kU	DB AptaTaq DNA Polymerase Green	5,000 units
DB-1328-0.4kU	DB SuperSens Taq DNA Polymerase	400 units
DB-1328-1.0kU	DB SuperSens Taq DNA Polymerase	1,000 units
DB-1328-5.0kU	DB SuperSens Taq DNA Polymerase	5,000 units
DB-1329-0.4kU	DB SuperSens Taq DNA Polymerase Green	400 units
DB-1329-1.0kU	DB SuperSens Taq DNA Polymerase Green	1,000 units
DB-1329-5.0kU	DB SuperSens Taq DNA Polymerase Green	5,000 units

Supplied with a complete reaction buffer, PCR Buffer B (5X), which contains enhancers, stabilizers, and optimal concentration of KCl, MgCl₂ and dNTPs. No other components need to be added to run a standard PCR reaction. For green variants, PCR Buffer B Green (5X) also includes a density reagent and two tracking dyes for direct loading of PCR products on a gel.

Storage and shelf-life

Store at -18 °C to -25 °C.
Shelf-life is 3 years from the date of manufacture.

Explore the
products
in detail





DBdirect™ PCR & qPCR mixes SuperSens 2.0

Our PCR mixes deliver top-tier performance. They are optimized for universal use and feature the **DBdirect™ technology** for direct PCR without DNA extraction and the **SuperSens technology** for superior robustness, sensitivity and specificity. Their single-component formulation ensures maximum simplicity. Enjoy reduced hands-on time, consistent results, and complete coverage of your PCR needs – from routine detection to ultrasensitive assays.

Key features

Unmatched sensitivity and specificity

DB SuperSens Taq DNA Polymerase provides the highest possible sensitivity and specificity, even in complex DNA mixtures.

User-friendly formulations

Single-component formulations for easy handling.
Gel mixes contain gel loading dyes, SYBR mixes include SYBR Green I.

Exceptional stability from fridge to bench

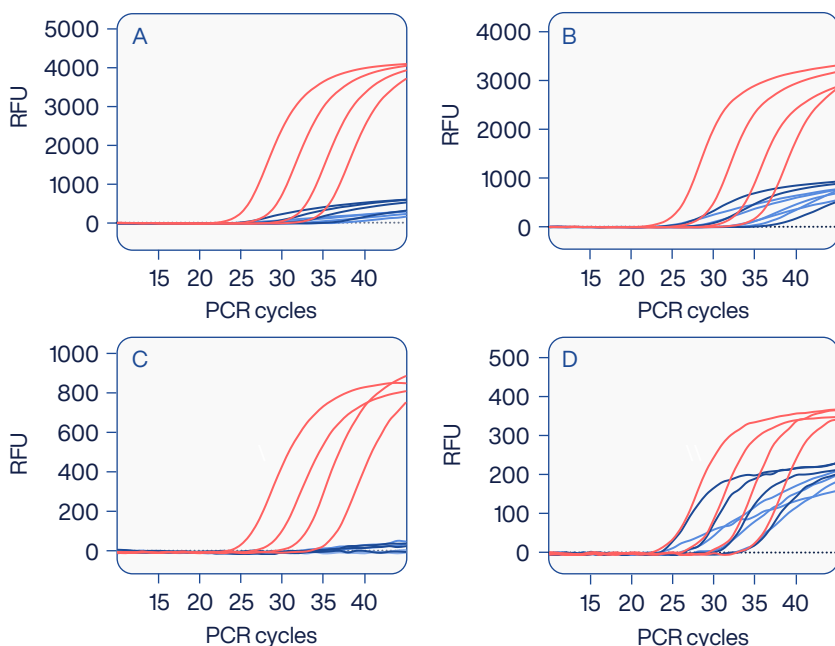
Maintain their performance for at least 4 weeks at 4 °C. Probe mixes retain full sensitivity after incubation for up to 5 days at 25 °C*.

Excellent robustness and inhibitor resistance

Deliver exceptional robustness and ultrasensitive detection, down to 1 DNA copy. Enable direct DNA detection from biological samples**.

Effective contamination control with UDG

Available in two versions: with or without UDG. UDG-versions include an optimized ratio of dUTP and dTTP, ensuring robust PCR amplification without compromising UDG efficiency.



Performance in bacterial and viral multiplex qPCR

- KAPA2G Fast HotStart Ready Mix (Roche)
- TaqMan™ Universal Master Mix II, with UNG (Thermo)
- DBdirect™ PCR Probe Mix SuperSens 2.0 UDG (DB-1309)

DBdirect™ qPCR mixes are remarkably robust and stable.

DBdirect™ qPCR probe mixes demonstrate significantly higher amplification efficiency than competitor mixes. The data below show results from multiplex qPCR with freshly prepared reactions and without any pre-incubation: (A) Viral target A: FAM channel; (B) Viral target B: HEX channel; (C) Bacterial target A: TEX channel; (D) Bacterial target B: Cy5 channel.

PCR protocol: 2 min at 25 °C, 2 min at 95 °C***, 45 cycles: 10 sec at 95 °C, 15 sec at 60 °C, 15 sec at 72 °C.

Dilution series of the template: 10,000 – 1,000 – 100 – 10 copies per well (cDNA used for viral samples).

* Exact stability is assay and product-specific. Please refer to the individual Instructions for use for detailed conditions.

** To facilitate cell lysis for direct DNA detection from biological samples, we additionally offer DB Lysis Buffer A (page 23).

*** 10 min for TaqMan kit (required by the manufacturer's instructions).



DBdirect™ PCR & qPCR mixes SuperSens 2.0

Ordering information

Catalogue number	Description	Size
DB-1308-100rxns	DBdirect™ PCR Probe Mix SuperSens 2.0	100 reactions
DB-1308-1000rxns	DBdirect™ PCR Probe Mix SuperSens 2.0	1,000 reactions
DB-1308-5000rxns	DBdirect™ PCR Probe Mix SuperSens 2.0	5x1,000 reactions
DB-1309-100rxns	DBdirect™ PCR Probe Mix SuperSens 2.0 UDG	100 reactions
DB-1309-1000rxns	DBdirect™ PCR Probe Mix SuperSens 2.0 UDG	1,000 reactions
DB-1309-5000rxns	DBdirect™ PCR Probe Mix SuperSens 2.0 UDG	5x1,000 reactions

Catalogue number	Description	Size
DB-1310-100rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0	100 reactions
DB-1310-1000rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0	1,000 reactions
DB-1310-5000rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0	5x1,000 reactions
DB-1316-100rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0 UDG	100 reactions
DB-1316-1000rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0 UDG	1,000 reactions
DB-1316-5000rxns	DBdirect™ PCR SYBR Mix SuperSens 2.0 UDG	5x1,000 reactions

Catalogue number	Description	Size
DB-1311-100rxns	DBdirect™ PCR Gel Mix SuperSens 2.0	100 reactions
DB-1311-1000rxns	DBdirect™ PCR Gel Mix SuperSens 2.0	1,000 reactions
DB-1311-5000rxns	DBdirect™ PCR Gel Mix SuperSens 2.0	5x1,000 reactions
DB-1317-100rxns	DBdirect™ PCR Gel Mix SuperSens 2.0 UDG	100 reactions
DB-1317-1000rxns	DBdirect™ PCR Gel Mix SuperSens 2.0 UDG	1,000 reactions
DB-1317-5000rxns	DBdirect™ PCR Gel Mix SuperSens 2.0 UDG	5x1,000 reactions

Mix components

Component	Volume (μL)		
	100 rxns	1,000 rxns	5x1,000 rxns
PCR Mix SuperSens 2.0 (2X)	1,000	10,000	5x10,000
PCR grade water	1,000	10,000	5x10,000

PCR mix SuperSens 2.0 (2X) contains Hot-start DB SuperSens Taq DNA polymerase, dNTPs, MgCl₂, enhancers, and stabilizers. In addition:

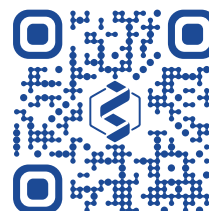
- SYBR mixes contain SYBR Green I dye;
- Gel mixes contain blue and yellow tracking dyes;
- UDG variants contain thermolabile uracil-DNA glycosylase and dUTP.

Larger and OEM sizes are available upon request to lifescience@bianabiotech.com.

Storage and shelf-life

Store at ≤ -18 °C and avoid freeze-thaw cycles for maximum performance. Up to four freeze-thaw cycles have been tested without a loss in performance. Stable for 2 years at ≤ -18 °C, up to 4 weeks at 4 °C and several days at 25 °C.

Explore the products in detail



Reagents for RNA analysis

DBscript 2.0 Reverse Transcriptase
and cDNA Synthesis Kit

DBscript Turbo Reverse Transcriptase
and cDNA Synthesis Kit

DBscript Reverse Transcriptase
and cDNA Synthesis Kit

DB RT-PCR & RT-qPCR Mixes SuperSens 2.0

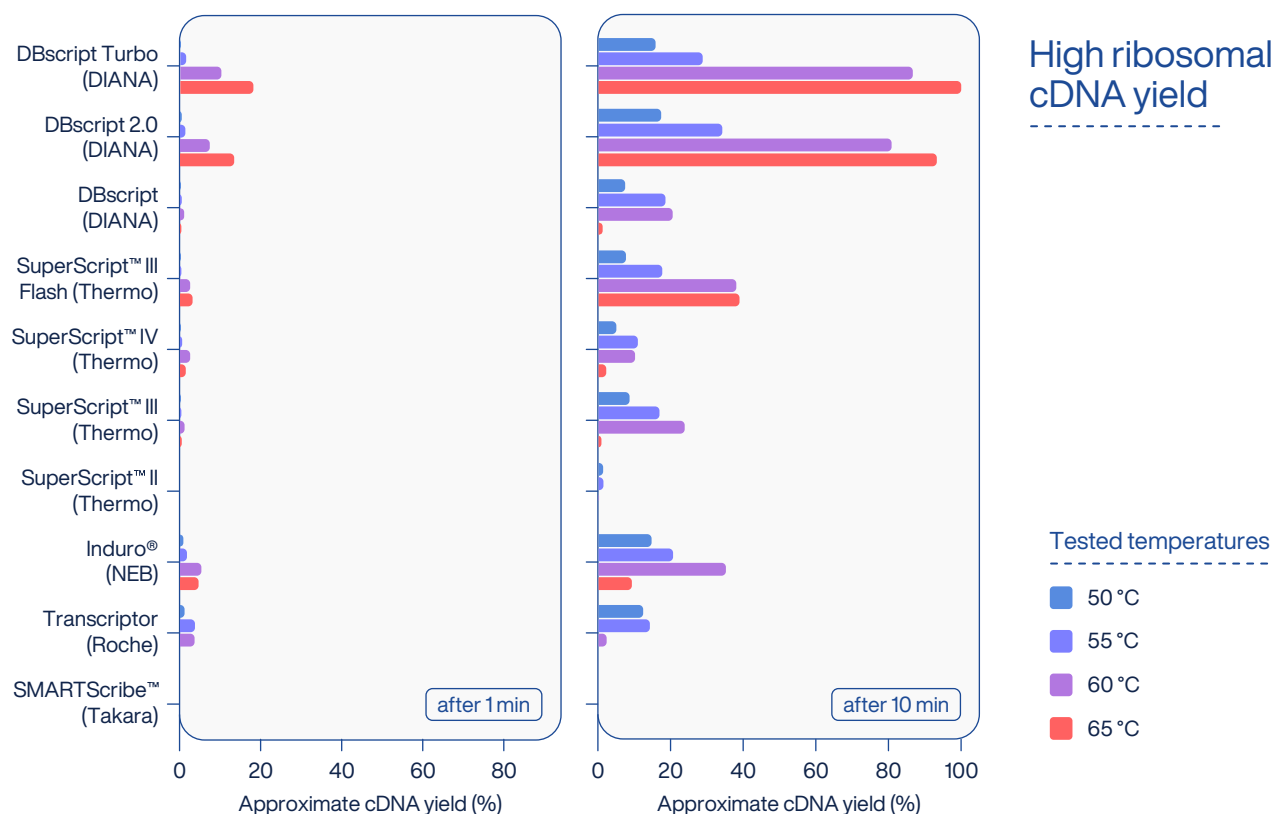
DBdirect™ RT-qPCR Mixes SuperSens 2.0

DB RNase Inhibitors

Next-Generation Reverse Transcriptases

DBscript 2.0 and **DBscript Turbo** are highly engineered M-MLV reverse transcriptases designed for increased processivity and thermostability. Developed from our established DBscript platform, they represent the next generation of DIANA's reverse transcriptase portfolio.

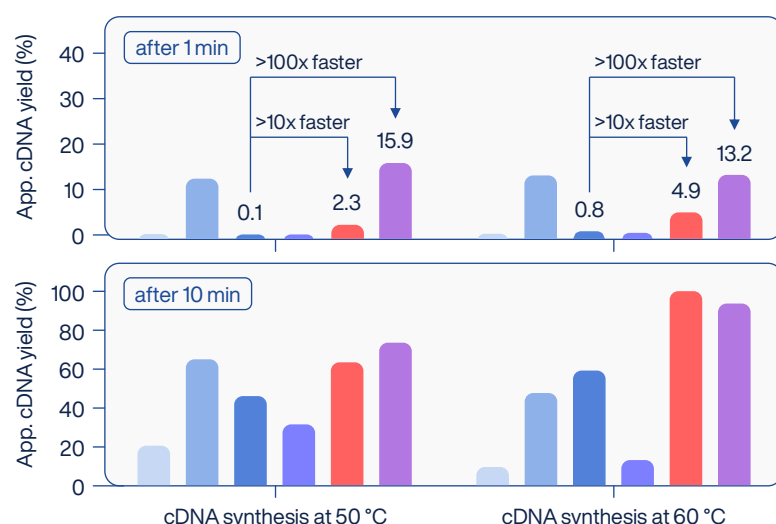
In internal comparative studies, DBscript 2.0 and DBscript Turbo outperformed leading commercially available reverse transcriptases in both singleplex and multiplex RT-qPCR



DBscripts yield more cDNA across all temperatures from bacterial ribosomal RNA.

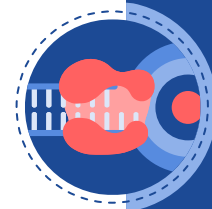
cDNA synthesis was performed for ribosomal RNA (~200 bases) at different elevated temperatures.

The results show that DBscript 2.0 and DBscript Turbo enable effective transcription at 60°C or even 65°C.



DBscripts are ultra-fast and processive on long RNAs.

cDNA synthesis was performed for 2000 nt long RNA template at different elevated temperatures. The results show that DBscript 2.0 is over 10 times faster than SuperScript™ III Flash. DBscript Turbo is over 100 times faster than SuperScript™ III Flash, and of same speed as SuperScript™ IV.



DBscript 2.0 Reverse Transcriptase

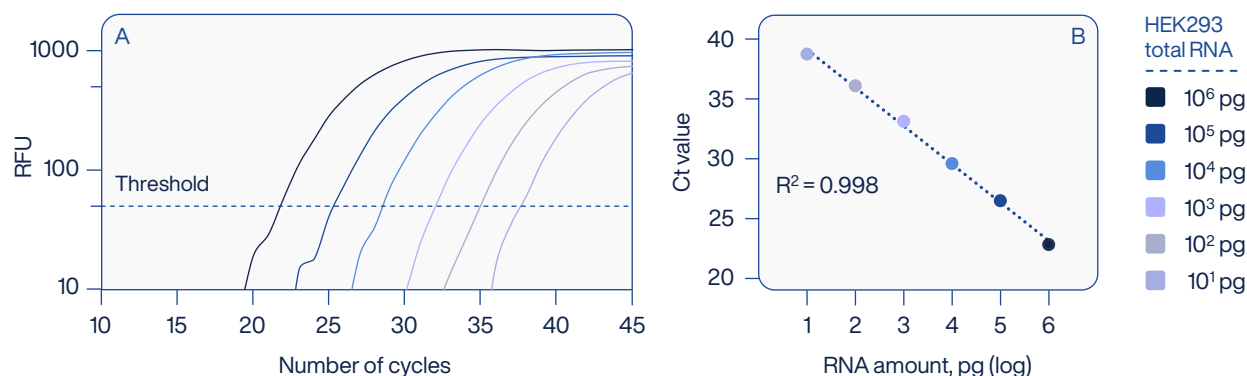
DBscript 2.0 is a next-generation M-MLV Reverse Transcriptase engineered for exceptional sensitivity, enhanced processivity and high thermostability. Designed to maximize cDNA yield from low-copy and challenging RNA samples, it delivers reliable performance across a broad range of reverse transcription workflows. Comparable to or exceeding the performance of SuperScript™ III and SuperScript™ III Flash, DBscript 2.0 provides outstanding sensitivity while maintaining robust performance for RT-qPCR, gene expression analysis, transcriptomics and demanding one-step RT-PCR applications.

Key features

- **High thermostability**
Display optimum RT activity at high temperatures (50–60°C).
- **Inhibitor resistance**
Highly resistant to common reverse transcription inhibitors.
- **High ribosomal cDNA yield**
Provides exceptional cDNA yield from complex RNAs (including rRNA).
- **Exceptional sensitivity**
Optimized for RT-qPCR workflows with low copy number RNAs.

Applications

- Reverse transcription (RT) at up to 70°C
- One-step RT-PCR and diagnostic applications
- RT with low copy number targets (down to ~1 copy)



DBscript 2.0 Reverse Transcriptase demonstrates sensitivity in a wide linear range.

Two-step RT-qPCR was performed for TATA-binding protein (TBP) using oligo(dT)₂₀-VN primers from HEK293 total RNA at 50 °C for 10 min. The results show that DBscript 2.0 enables efficient cDNA synthesis with 1 pg to 1 µg of RNA template in two-step RT-PCR protocols. (A) Amplification plot; (B) Standard curve.

Ordering information

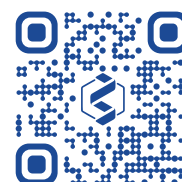
Catalogue number	Description	Size
DB-1332-2kU	DBscript 2.0 Reverse Transcriptase	2,000 units
DB-1332-10kU	DBscript 2.0 Reverse Transcriptase	10,000 units
DB-1332-40kU	DBscript 2.0 Reverse Transcriptase	40,000 units

Supplied with a reaction buffer RT Buffer B (5X) that contains all necessary components including DTT, dNTPs, optimal concentrations of MgCl₂ and KCl, enhancers and stabilizers.

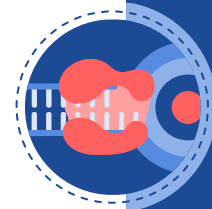
Storage and shelf-life

Store at -18 °C to -25 °C.
Shelf-life is 3 years from the date of manufacture.

Explore the product in detail



To further increase sensitivity in RT-PCR workflows with prolonged or ambient-temperature setup, we additionally offer DB Warm-Start Additive (page 24). To learn more about primers for cDNA synthesis, see page 25.



DBscript 2.0 cDNA Synthesis Kit

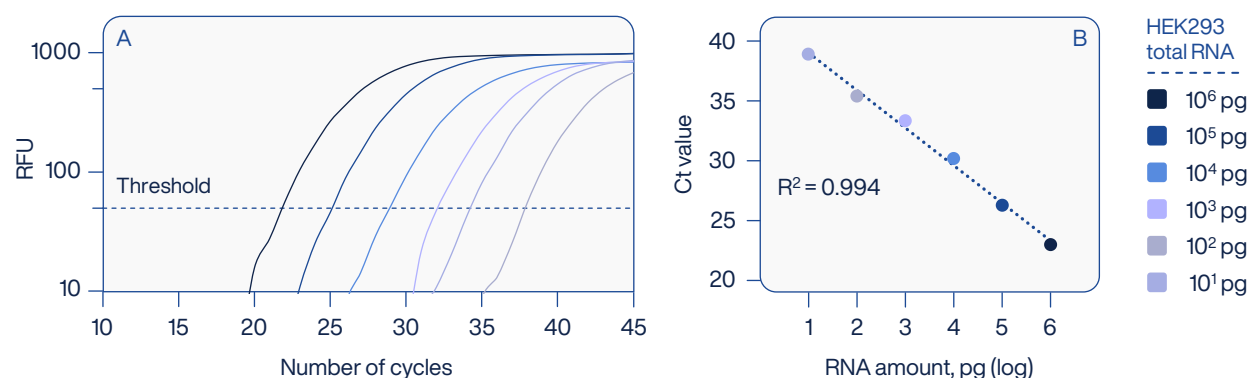
DBscript 2.0 cDNA Synthesis Kit is an all-inclusive, optimized solution for the highly efficient synthesis of first-strand cDNA from mRNA or total RNA templates. The kit features our unique, highly oxidation-resistant **DB Ultima H RNase inhibitor** paired with our proprietary ultra-sensitive **DBscript 2.0 Reverse Transcriptase**. All components necessary for cDNA synthesis are included into **a single reaction mix** for effortless and streamlined workflow.

Key features

- Exceptional sensitivity**
Ultra-sensitive DBscript 2.0 RT ensures reliable detection down to ~1 RNA copy.
- Complete RNA protection**
DB Ultima H RNase Inhibitor ensures robust and efficient RNA protection.
- High thermostability**
Optimized for cDNA synthesis at high temperatures (50–60°C).
- All-inclusive formulation**
Single-mix formulation for easy handling and minimal workflow time.

Applications

- First-strand cDNA synthesis at up to 70°C
- Two-step RT-PCR and diagnostic applications
- Low-copy RNA analysis (down to ~1 copy)



DBscript 2.0 cDNA Synthesis Kit demonstrates sensitivity in a wide linear range.

Two-step RT-qPCR was performed for TATA-binding protein (TBP) using oligo(dT)₂₀-VN primers from HEK293 total RNA at 50 °C for 10 min. The results show that DBscript 2.0 cDNA Synthesis Kit enables efficient cDNA synthesis with 1 pg to 1 µg of RNA template in two-step RT-PCR protocols. (A) Amplification plot; (B) Standard curve.

Ordering information

Catalogue number	Description	Size
DB-1334-10rxns	DBscript 2.0 cDNA Synthesis Kit	10 reactions
DB-1334-50rxns	DBscript 2.0 cDNA Synthesis Kit	50 reactions

Kit components

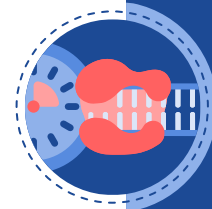
Component	Concentration	Volume (µL)
DBscript 2.0 cDNA Synthesis Mix (2X)	2X	100/500
Oligo(dT) ₂₀ Primer	50 µM	50/50
Random Hexamers A	125 µM	50/50
PCR Grade Water	N/A	1500/1500

Storage and shelf-life

Store all components at ≤ -18 °C for long-term storage. Shelf-life is 3 years from the date of manufacture.

Explore the product in detail





DBscript Turbo Reverse Transcriptase

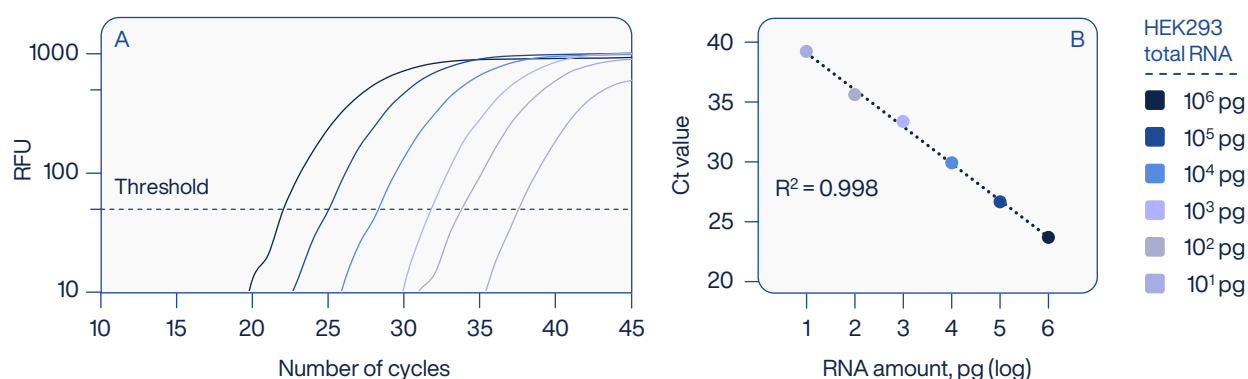
DBscript Turbo is a highly engineered M-MLV Reverse Transcriptase with enhanced processivity and thermostability. Optimized for ultra-fast reverse transcription, it enables cDNA synthesis at speed of up to 1 kb per 30 sec while maintaining outstanding sensitivity. Its excellent processivity makes it particularly well suited for the synthesis of long cDNA constructs (> 5 kb) and time-critical workflows. Comparable to or exceeding the performance of SuperScript™ IV, DBscript Turbo combines speed, sensitivity and robustness across a wide range of reverse transcription applications.

Key features

- **High thermostability**
Display optimum RT activity at high temperatures (50–60°C).
- **Inhibitor resistance**
Highly resistant to common reverse transcription inhibitors.
- **High ribosomal cDNA yield**
Provides exceptional cDNA yield from complex RNAs (including rRNA).
- **High speed for long transcripts**
High processivity ensures greater yields for longer cDNA transcripts.

Applications

- RT-PCR workflows with short protocols
- Full-length RNA-seq library preparation
- cDNA synthesis with long RNA templates (>5 kbs)



DBscript Turbo Reverse Transcriptase demonstrates sensitivity in a wide linear range.

Two-step RT-qPCR was performed for TATA-binding protein (TBP) using oligo(dT)₂₀-VN primers from HEK293 total RNA at 50 °C for 10 min. The results show that DBscript Turbo enables efficient cDNA synthesis with 1 pg to 1 µg of RNA template in two-step RT-PCR protocols. (A) Amplification plot; (B) Standard curve.

Ordering information

Catalogue number	Description	Size
DB-1333-2kU	DBscript Turbo Reverse Transcriptase	2,000 units
DB-1333-10kU	DBscript Turbo Reverse Transcriptase	10,000 units
DB-1333-40kU	DBscript Turbo Reverse Transcriptase	40,000 units

Supplied with a reaction buffer RT Buffer B (5X) that contains all necessary components including DTT, dNTPs, optimal concentrations of MgCl₂ and KCl, enhancers and stabilizers.

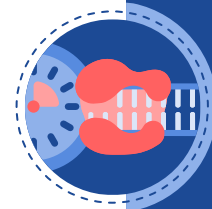
Storage and shelf-life

Store at –18 °C to –25 °C.
Shelf-life is 3 years from the date of manufacture.

Explore the product in detail



To further increase sensitivity in RT-PCR workflows with prolonged or ambient-temperature setup, we additionally offer DB Warm-Start Additive (page 24). To learn more about primers for cDNA synthesis, see page 25.



DBscript Turbo cDNA Synthesis Kit

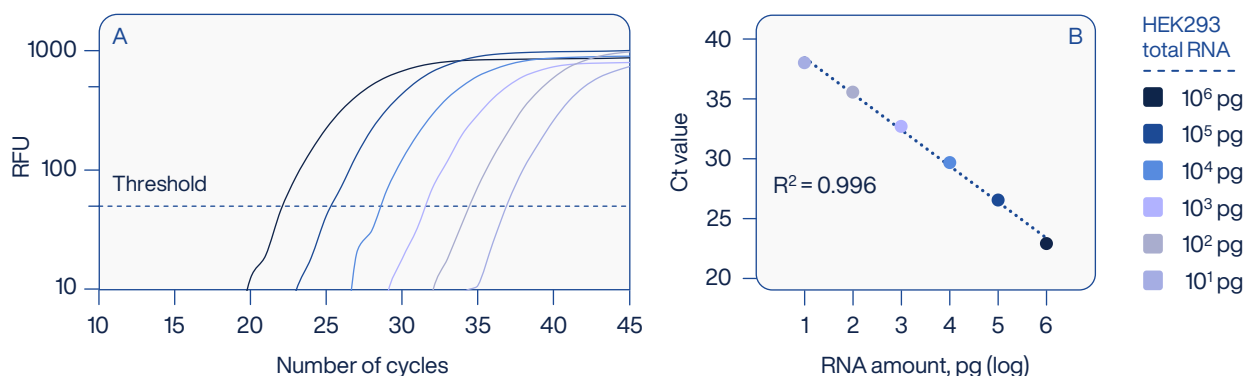
DBscript Turbo cDNA Synthesis Kit is an all-inclusive, optimized solution for the highly efficient synthesis of first-strand cDNA from mRNA or total RNA templates. The kit features our unique, highly oxidation-resistant **DB Ultima H RNase inhibitor** paired with our proprietary ultra-fast and processive **DBscript Turbo Reverse Transcriptase**. All components necessary for cDNA synthesis are included into a **single reaction mix** for effortless and streamlined workflow.

Key features

- **High speed for long transcripts**
Ultra-fast DBscript Turbo RT ensures greater yields for long cDNA transcripts.
- **Complete RNA protection**
DB Ultima H RNase Inhibitor ensures robust and efficient RNA protection.
- **High thermostability**
Optimized for cDNA synthesis at high temperatures (50-60°C).
- **All-inclusive formulation**
Single-mix formulation for easy handling and minimal workflow time.

Applications

- First-strand cDNA synthesis at up to 70°C
- Two-step RT-PCR with short protocols
- cDNA synthesis with long RNAs (>5 kbs)



DBscript Turbo cDNA Synthesis Kit demonstrates sensitivity in a wide linear range.

Two-step RT-qPCR was performed for TATA-binding protein (TBP) using oligo(dT)₂₀-VN primers from HEK293 total RNA at 50 °C for 10 min. The results show that DBscript Turbo cDNA Synthesis Kit enables efficient cDNA synthesis with 1 pg to 1 µg of RNA template in two-step RT-PCR protocols. (A) Amplification plot; (B) Standard curve.

Ordering information

Catalogue number	Description	Size
DB-1335-10rxns	DBscript Turbo cDNA Synthesis Kit	10 reactions
DB-1335-50rxns	DBscript Turbo cDNA Synthesis Kit	50 reactions

Kit components

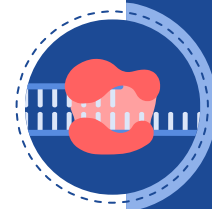
Component	Concentration	Volume (µL)
DBscript 2.0 cDNA Synthesis Mix (2X)	2X	100/500
Oligo(dT) ₂₀ Primer	50 µM	50/50
Random Hexamers A	125 µM	50/50
PCR Grade Water	N/A	1500/1500

Storage and shelf-life

Store all components at ≤ -18 °C for long-term storage. Shelf-life is 3 years from the date of manufacture.

Explore the product in detail





DBscript Reverse Transcriptase

DBscript is an engineered M-MLV reverse transcriptase designed for reliable and efficient cDNA synthesis. The highly active and thermostable DBscript Reverse Transcriptase provides high yields of full-length cDNA. Offered as a standalone enzyme or within the DBscript cDNA Synthesis Kit, it provides flexibility for any workflow. Complementary cDNA synthesis primers are also available separately.

Key features

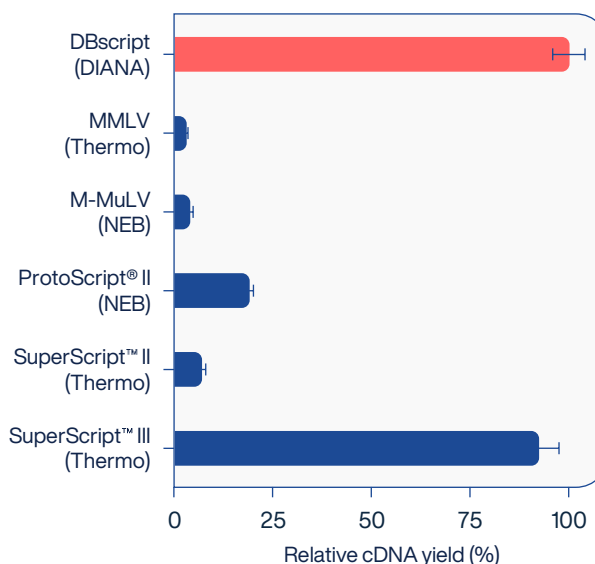
- **High performance**
Engineered M-MLV Reverse Transcriptase matching SuperScript™ III performance.
- **High thermostability**
Supports reverse transcription at 42–60 °C, ensuring higher specificity and cDNA yields.
- **Wide-range sensitivity**
Analyze 10 pg to 1 µg of RNA template with two-step RT-qPCR.

DBscript ensures higher cDNA yields than competitors.

cDNA synthesis from 1 kb RNA template was performed for 2 min at 60 °C using DBscript and five common competitors. The results show that DBscript matches SuperScript™ III performance and exceeds all other competitors.

Applications

- Two-step reverse transcription-qPCR
- cDNA cloning and library construction
- cDNA synthesis at high temperatures (> 50 °C)



Ordering information

Catalogue number	Description	Size
DB-1276-2kU	DBscript Reverse Transcriptase	2,000 units
DB-1276-10kU	DBscript Reverse Transcriptase	10,000 units
DB-1276-40kU	DBscript Reverse Transcriptase	40,000 units

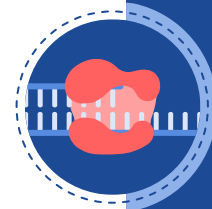
Supplied with reaction buffer, RT Buffer A (5X), and separate DTT solution (20X). RT buffer A (5X) contains dNTPs, MgCl₂, KCl, enhancers and stabilizers.

Storage and shelf-life

Store at –18 °C to –25 °C.
Shelf-life is 3 years from the date of manufacture.

Explore the product in detail





DBscript cDNA Synthesis Kit

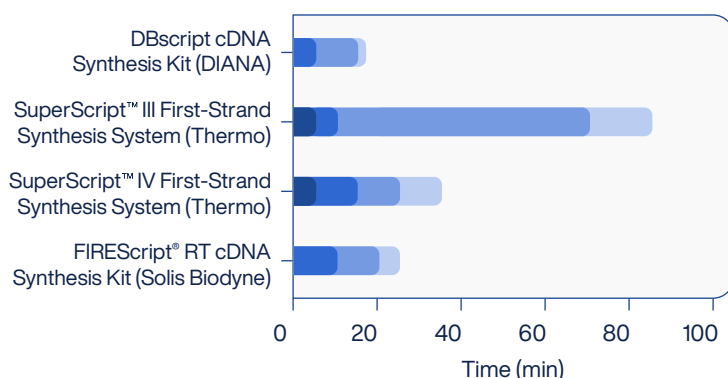
The ready-to-use kit provides all components required for efficient and reliable cDNA preparation from RNA templates. It includes our high-performance DBscript Reverse Transcriptase, optimized 5X Reaction Buffer, DTT, DB RNase Inhibitor Bovine, and cDNA synthesis primers, offering a complete and convenient solution for routine and high-sensitivity applications.

Key features

- High performance**
Engineered M-MLV Reverse Transcriptase matching SuperScript III performance.
- High thermostability**
Supports reverse transcription at 42–60 °C, ensuring higher specificity and cDNA yields.
- Wide-range sensitivity**
Analyze 1 pg to 1 µg of RNA with two-step RT-qPCR.
- Superfast and easy protocol**
10-minute workflow with minimal pipetting, time-saving format.

Applications

- Two-step reverse transcription-qPCR
- cDNA cloning and library construction
- cDNA synthesis at high temperatures (>50 °C)



DBscript offers the shortest protocol with minimum pipetting steps

- RNA denaturation 65 °C
- Primer annealing 23–25 °C
- cDNA synthesis 50–60 °C
- RT inactivation 70–95 °C

Ordering information

Catalogue number	Description	Size
DB-1285	DBscript cDNA Synthesis Kit	50 reactions

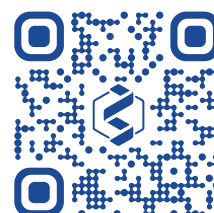
Kit components

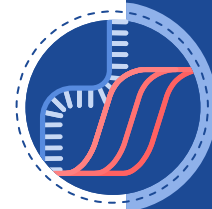
Component	Concentration	Volume (µL)
DBscript Reverse Transcriptase	200 U/µL	50
RT Buffer A	5X	1,000
DTT solution	20X	250
DB RNase Inhibitor Bovine	40 U/µL	100
Oligo(dT) ₂₀ Primer	50 µM	50
Random Hexamers	125 µM	50
PCR grade water	N/A	1,500

Storage and shelf-life

Store DBscript Reverse Transcriptase and DB RNase inhibitor Bovine at –18 °C to –25 °C. Store all other components at ≤ –18 °C. Shelf-life is 3 years from the manufacture date.

Explore the product in detail





DB RT-PCR & RT-qPCR Mixes SuperSens 2.0

Our RT-PCR and RT-qPCR mixes provide high performance across diverse applications. Built on SuperSens technology, they deliver unprecedented robustness, sensitivity, and specificity. Single-component formulation for maximum simplicity. Enjoy short hands-on time, consistent results, and complete coverage of your needs – from routine detection to ultrasensitive assays.

Key features

● Thermostable & specific reverse transcriptase

Thermostable and warm-start DBscript Reverse Transcriptase enables RT-PCR at high temperatures (up to 60°C).

● User-friendly formulations

Single-component formulations for easy handling.
Gel mixes contain gel loading dyes, SYBR mixes include SYBR Green I.

● Exceptional stability from fridge to bench

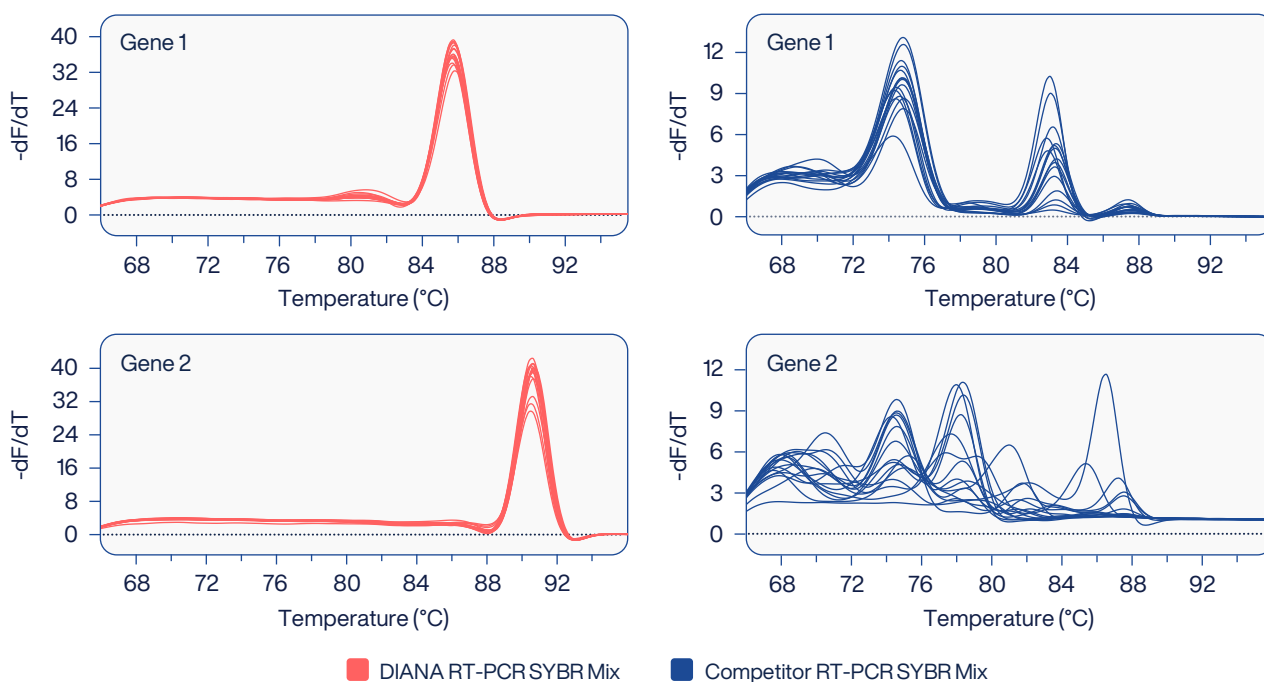
Maintain their performance for at least 4 weeks at 4 °C.

● Excellent robustness and inhibitor resistance

Deliver exceptional robustness and ultrasensitive detection, down to 1 RNA copy.

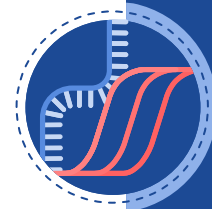
● Effective contamination control with UDG

Available in two versions: with or without UDG. UDG-versions include an optimized ratio of dUTP and dTTP, ensuring robust PCR amplification without compromising UDG efficiency.



Ultra-specific RNA detection with our DB RT-qPCR mixes.

In a customer study, the relative expression of two *Arabidopsis thaliana* genes was analyzed under different light conditions. Quantitative RT-PCR was performed with our DB RT-PCR SYBR Mix and a leading competitor mix. Melting curve analysis revealed multiple non-specific products for the competitor mix; in contrast, DB RT-PCR SYBR Mix produced a single specific amplicon. The high specificity of our mixes simplifies primer design and ensures reliable quantification across experiments.



DB RT-PCR & RT-qPCR Mixes SuperSens 2.0

Ordering information

Catalogue number	Description	Size
DB-1312-100rxns	DB RT-PCR Probe Mix SuperSens 2.0	100 reactions
DB-1312-1000rxns	DB RT-PCR Probe Mix SuperSens 2.0	1,000 reactions
DB-1312-5000rxns	DB RT-PCR Probe Mix SuperSens 2.0	5x1,000 reactions
DB-1313-100rxns	DB RT-PCR Probe Mix SuperSens 2.0 UDG	100 reactions
DB-1313-1000rxns	DB RT-PCR Probe Mix SuperSens 2.0 UDG	1,000 reactions
DB-1313-5000rxns	DB RT-PCR Probe Mix SuperSens 2.0 UDG	5x1,000 reactions
DB-1314-100rxns	DB RT-PCR Probe Mix SuperSens 2.0 dUTP	100 reactions
DB-1314-1000rxns	DB RT-PCR Probe Mix SuperSens 2.0 dUTP	1,000 reactions
DB-1314-5000rxns	DB RT-PCR Probe Mix SuperSens 2.0 dUTP	5x1,000 reactions

Catalogue number	Description	Size
DB-1315-100rxns	DB RT-PCR SYBR Mix SuperSens 2.0	100 reactions
DB-1315-1000rxns	DB RT-PCR SYBR Mix SuperSens 2.0	1,000 reactions
DB-1315-5000rxns	DB RT-PCR SYBR Mix SuperSens 2.0	5x1,000 reactions
DB-1318-100rxns	DB RT-PCR SYBR Mix SuperSens 2.0 UDG	100 reactions
DB-1318-1000rxns	DB RT-PCR SYBR Mix SuperSens 2.0 UDG	1,000 reactions
DB-1318-5000rxns	DB RT-PCR SYBR Mix SuperSens 2.0 UDG	5x1,000 reactions

Catalogue number	Description	Size
DB-1319-100rxns	DB RT-PCR Gel Mix SuperSens 2.0	100 reactions
DB-1319-1000rxns	DB RT-PCR Gel Mix SuperSens 2.0	1,000 reactions
DB-1319-5000rxns	DB RT-PCR Gel Mix SuperSens 2.0	5x1,000 reactions
DB-1320-100rxns	DB RT-PCR Gel Mix SuperSens 2.0 UDG	100 reactions
DB-1320-1000rxns	DB RT-PCR Gel Mix SuperSens 2.0 UDG	1,000 reactions
DB-1320-5000rxns	DB RT-PCR Gel Mix SuperSens 2.0 UDG	5x1,000 reactions

Mix components

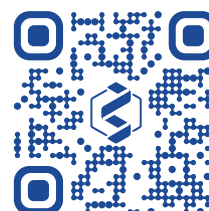
Component	Volume (μL)		
	100 rxns	1,000 rxns	5x1,000 rxns
RT-PCR Mix SuperSens 2.0 (2X)	1,000	10,000	5x10,000
PCR grade water	1,000	10,000	5x10,000

RT-PCR mix SuperSens 2.0 (2X) contains Hot-start DB SuperSens Taq DNA polymerase, thermostable DBscript Reverse Transcriptase, DB RNase Inhibitor Bovine, dNTPs, MgCl₂, enhancers, and stabilizers. Larger and OEM sizes are available upon request to lifescience@dianabio.com.

Storage and shelf-life

Store at ≤ -18 °C and avoid freeze-thaw cycles for maximum performance. Up to four freeze-thaw cycles have been tested without a loss in performance. Stable for 2 years at ≤ -18 °C and up to 4 weeks at 4 °C.

Explore the products in detail





DBdirect™ RT-qPCR Mixes SuperSens 2.0

Our RT-PCR and RT-qPCR mixes provide high performance across diverse applications. Built on SuperSens™ technology, they deliver unprecedented robustness, sensitivity, and specificity. Selected mixes include DBdirect™ technology for direct RT-PCR without RNA extraction. Single-component formulation for maximum simplicity. Enjoy short hands-on time, consistent results, and complete coverage of your needs – from routine detection to ultrasensitive assays.

Key features

● Thermostable & specific reverse transcriptase

Thermostable and warm-start DBscript Reverse Transcriptase enables RT-PCR at high temperatures (up to 60°C).

● User-friendly formulations

Single-component formulations for easy handling. SYBR mixes include SYBR Green I.

● Exceptional stability from fridge to bench

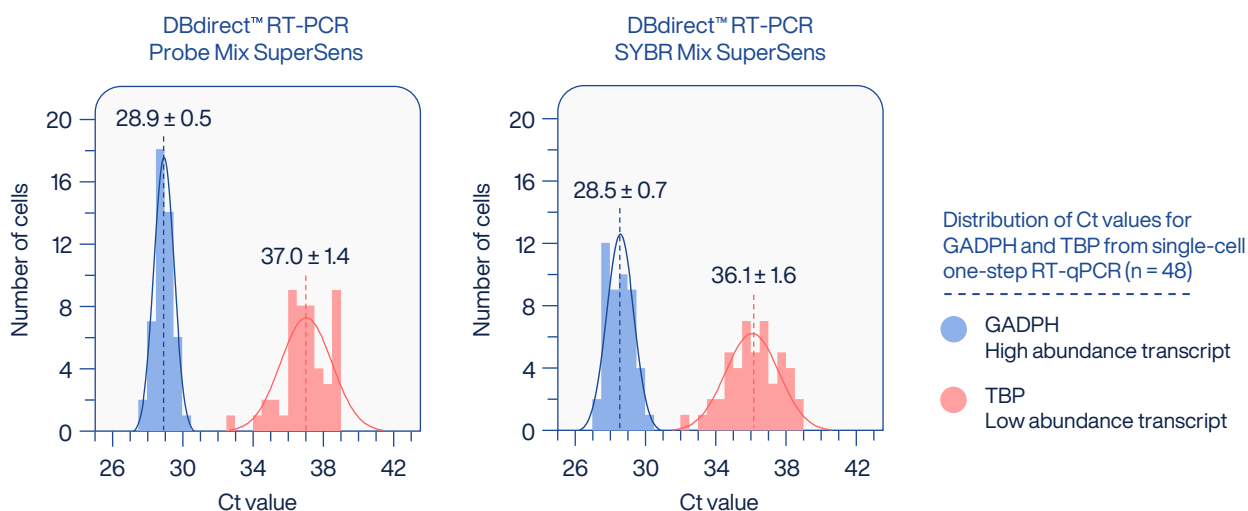
Maintain their performance for at least 4 weeks at 4 °C.

● Excellent robustness and inhibitor resistance

Deliver exceptional robustness and ultrasensitive detection, down to 1 RNA copy. Enable direct RNA detection from biological samples*.

● Effective contamination control with UDG

Available in two versions: with or without UDG. UDG-versions include an optimized ratio of dUTP and dTTP, ensuring robust PCR amplification without compromising UDG efficiency.



DBdirect™ mixes enable direct RT-PCR from biological samples down to single-cell gene expression analysis.

CCRF-CEM human cells were FACS-sorted directly into PCR plates containing 10 µL of RT-PCR mix and processed by one-step RT-qPCR. Two transcripts (GAPDH and TBP) were detected using either sequence-specific TaqMan probes or SYBR Green I dye. DBdirect™ RT-PCR mixes enable precise mRNA quantification from single cells without RNA extraction, allowing rapid, cost-efficient RNA profiling at single-cell resolution.

* To facilitate cell lysis for direct RNA detection from biological samples, we additionally offer DB Lysis Buffer B (page 23).



DBdirect™ RT-qPCR Mixes SuperSens 2.0

Ordering information

Catalogue number	Description	Size
DB-1321-100rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0	100 reactions
DB-1321-1000rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0	1,000 reactions
DB-1321-5000rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0	5x1,000 reactions
DB-1322-100rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0 UDG	100 reactions
DB-1322-1000rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0 UDG	1,000 reactions
DB-1322-5000rxns	DBdirect™ RT-PCR Probe Mix SuperSens 2.0 UDG	5x1,000 reactions

Catalogue number	Description	Size
DB-1323-100rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0	100 reactions
DB-1323-1000rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0	1,000 reactions
DB-1323-5000rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0	5x1,000 reactions
DB-1324-100rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0 UDG	100 reactions
DB-1324-1000rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0 UDG	1,000 reactions
DB-1324-5000rxns	DBdirect™ RT-PCR SYBR Mix SuperSens 2.0 UDG	5x1,000 reactions

Mix components

Component	Volume (µL)		
	100 rxns	1,000 rxns	5x1,000 rxns
DBdirect™ RT-PCR Mix SuperSens 2.0 (2X)	1,000	10,000	5x10,000
PCR grade water	1,000	10,000	5x10,000

DBdirect™ RT-PCR mix SuperSens 2.0 (2X) contains Hot-start DB SuperSens Taq DNA polymerase, thermostable DBscript Reverse Transcriptase (engineered M-MLV), DB Ultima H RNase Inhibitor, dNTPs, MgCl₂, enhancers, and stabilizers. In addition:

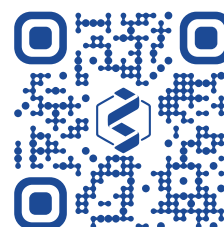
- SYBR mixes contain SYBR Green I dye;
- UDG variants contain thermolabile uracil-DNA glycosylase and dUTP.

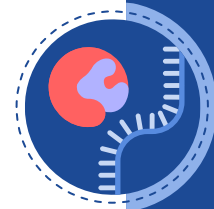
Larger and OEM sizes are available upon request to lifescience@dianabiotech.com.

Storage and shelf-life

Store at ≤ -70 °C and avoid freeze-thaw cycles for maximum performance. Up to 4 freeze-thaw cycles have been tested without a loss in performance. Stable for 2 years at ≤ -70 °C and up to 4 weeks at 4 °C.

Explore the products In detail





DB Ultima H RNase Inhibitor

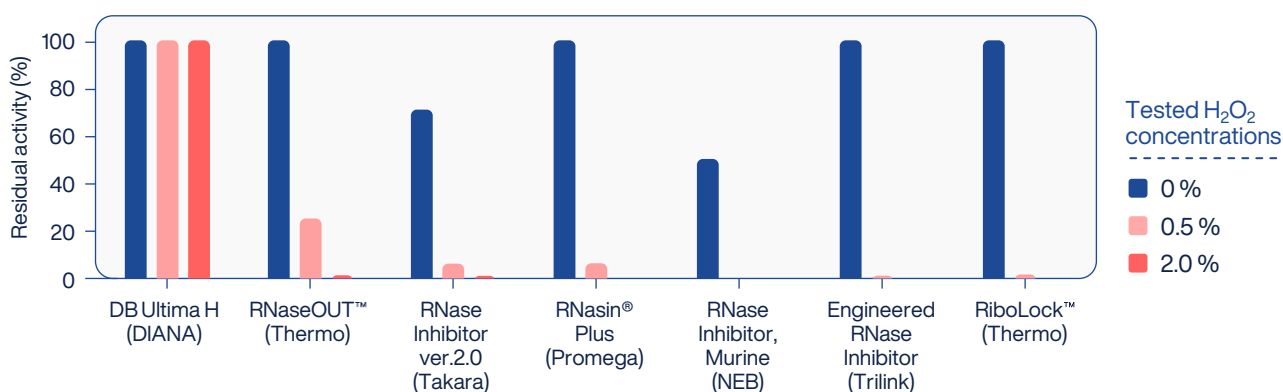
DB Ultima H is a highly-engineered RNase inhibitor with the highest thermal stability and almost absolute oxidation resistance, leading to robust performance across diverse assay environments. It does not interfere with enzymes used in RNA applications. DB Ultima H thus sets a new benchmark for reliability in RNA protection across various workflows.

Key features

- Excellent storage and assay stability**
 Stable for at least 2 months with 1 mM DTT and at least one week without DTT (at 25 °C).
- Exceptional thermostability**
 The only RNase inhibitor active at temperatures above 55 °C.
- Complete oxidation resistance**
 The only truly oxidatively resistant RNase inhibitor (retains activity at 2.0% H₂O₂).

Applications

- One-step reverse transcription-qPCR
- In vitro* transcription and translation
- RNA structural and functional studies
- cDNA synthesis at high temperatures (>50 °C)
- Two-step reverse transcription-qPCR
- cDNA synthesis for subsequent cloning
- Expression profiling from single cells
- RNA isolation from biological samples



Residual inhibitor activity after pre-incubation with hydrogen peroxide (H₂O₂) for 20 min (no DTT).

Residual activity of RNase Inhibitors was tested after pre-incubation with various concentrations of hydrogen peroxide. The results show that DB Ultima H is the only oxidatively resistant RNase inhibitor.

Ordering information

Catalogue number	Description	Size
DB-1306-2.5kU	DB Ultima H RNase Inhibitor	2,500 units
DB-1306-10kU	DB Ultima H RNase Inhibitor	10,000 units
DB-1306-40kU	DB Ultima H RNase Inhibitor	40,000 units

Provided as 40 U/μL solution in storage buffer. Recommended working concentration is 0.5 unit per 1 μL reaction, lower concentration might be sufficient for some applications (e.g., one step RT-qPCR). Storage buffer: 20 mM HEPES pH 7.5, 50 mM KCl, 8 mM DTT, 0.5 mM EDTA, 50 % (v/v) glycerol.

Storage and shelf-life

Store at -18 °C to -25 °C. Stable for 3 years under these conditions. The stock solution of Ultima H RNase Inhibitor is stable for at least 2 months at 25 °C.

Explore the product in detail





DB RNase Inhibitor Bovine

RNase inhibitors are indispensable for maintaining RNA integrity during analysis. **DB RNase Inhibitor Bovine** offers potent inactivation of ribonucleases to protect your samples. Designed to overcome common stability challenges, it ensures efficient RNA protection at a budget-friendly cost.

Key features

- **Broad assay compatibility**
Does not inhibit polymerase activity of common enzymes and ensures RNA protection across all applications.
- **Increased oxidation resistance**
Demonstrates higher oxidative stability and longer shelf-life than inhibitors from other species.
- **All-inclusive formulation**
Provides efficient RNA protection at a highly competitive price.

Applications

- One-step reverse transcription-qPCR
- *In vitro* transcription and translation
- RNA structural and functional studies
- cDNA synthesis at high temperatures (>50 °C)
- Two-step reverse transcription-qPCR
- cDNA synthesis for subsequent cloning
- Expression profiling from single cells
- RNA isolation from biological samples

Ordering information

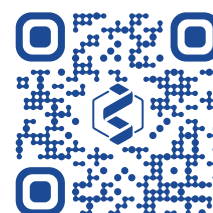
Catalogue number	Description	Size
DB-1260-2.5kU	DB RNase Inhibitor Bovine	2,500 units
DB-1260-10kU	DB RNase Inhibitor Bovine	10,000 units
DB-1260-40kU	DB RNase Inhibitor Bovine	40,000 units

Provided as 40 U/μL solution in storage buffer. Recommended working concentration is 1 unit per 1 μL reaction, lower concentration might be sufficient for some applications (e.g., one step RT-qPCR). Storage buffer: 20 mM HEPES pH 7.5, 50 mM KCl, 8 mM DTT, 0.5 mM EDTA, 50 % (v/v) glycerol.

Storage and shelf-life

Store at -18 °C to -25 °C.
Under these conditions,
the product remains stable
for 3 years.

Explore the
product
in detail



Supplementary Reagents and Services

DB Lysis Buffers

DB Warm-Start Additive

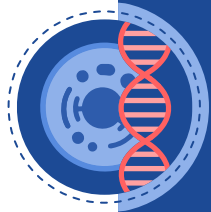
Primers for cDNA Synthesis

AF Fluorescent Dyes

Other Fluorescent Dyes

DB Uracil-DNA Glycosylases

Custom Services



DB Lysis Buffers

DB Lysis Buffers are remarkable tools for easy and straightforward extraction of genomic DNA and total RNA for your application. They enhance the efficiency and sensitivity of our DB PCR and RT-PCR mixes and are suitable for a wide range of biological matrices and samples.

DB Lysis Buffer A

Solution for fast and easy extraction of genomic DNA from cells. Supplementary reagent for DBdirect™ PCR Mixes.

Store at 2–8 °C for long-term storage. DB Lysis Buffer A can be stored at room temperature (up to 25 °C) for 2 weeks.

Catalogue number	Size
DB-1281-5ml	5 mL

DB Lysis Buffer B

Solution for fast and easy extraction of total RNA from cells. Supplementary reagent for DB and DBdirect™ RT-PCR Mixes.

Store at ≤ -70 °C for long-term storage. Stable for 2 years under these conditions.

Catalogue number	Size
DB-1330-5ml	5 mL

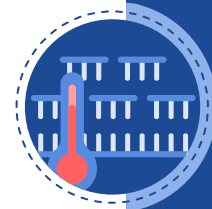
Explore the products in detail



DB Lysis Buffer A enhances sensitivity of DBdirect™ PCR mixes

Selected viruses, bacteria, or cells can be added directly into PCR mix, while a simple one-step pre-treatment with DB Lysis Buffer A is available for more complex organisms and tissues.

Sample	PCR sensitivity		
	without DB Lysis Buffer A	with DB Lysis Buffer A	
Human cells	● ● ●	● ● ●	
Gram-negative bacteria <i>E. coli</i>	● ● ●	● ● ●	
Gram-positive bacteria <i>Lactobacillus</i>	● ● ●	● ● ●	
Gram-positive bacteria <i>Rhodococcus</i>	● ● ●	● ● ●	
Yeasts <i>S. cerevisiae</i>	● ● ●	● ● ●	
Unenveloped viruses ADV	● ● ●	● ● ●	
Enveloped viruses HSV-1	● ● ●	● ● ●	

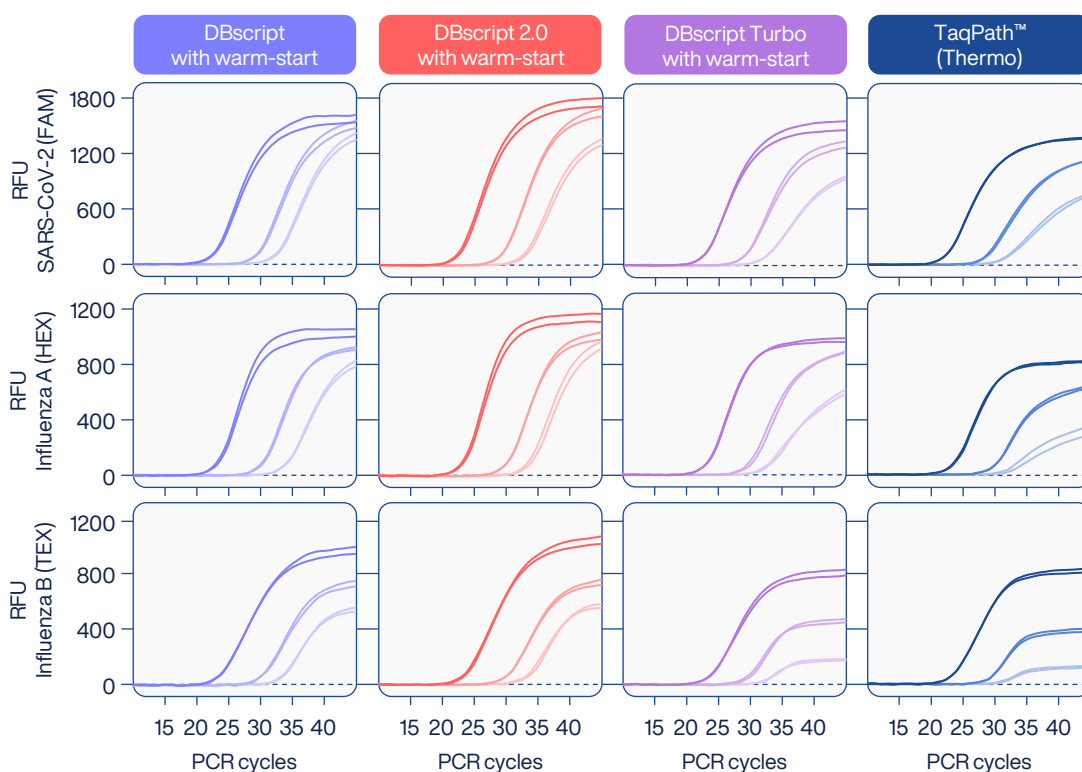


DB Warm-Start RT Additive

DB Warm-Start RT Additive is a complementary reagent that adds temperature-gated control to reverse transcriptase activity. Used with DBscript 2.0, DBscript Turbo, or other M-MLV reverse transcriptases, it reversibly inhibits RT activity at ambient temperature, preventing non-specific primer extension and primer-dimer formation during reaction setup. Inhibition is fully released at $\geq 50^{\circ}\text{C}$, restoring full enzyme activity for efficient cDNA synthesis. Designed for assays requiring a warm-start step, prolonged setup times, room-temperature handling, or maximum specificity.

Key features

- Fully reversible inhibition**
 Complete reverse transcriptase activity is restored at $\geq 50^{\circ}\text{C}$, no loss of yield.
- Add to your RT of choice**
 Compatible with all DBscript and other M-MLV RTs both in one- and two-step RT-PCR.
- Improved specificity**
 Increases specificity in assays with prolonged or ambient-temperature setup.



DB Warm-Start RT Additive increase sensitivity of multiplex RT-PCR.

Multiplex one-step RT-PCR was performed after 24 h pre-incubation with primers and no RNA template (UDG + dUTP included). RT-PCR was performed in duplicates for 20,000; 200; and 20 copies of viral RNA template per reaction. The results show that addition of DB Warm-Start RT Additive enables detection of low copy number targets even after 24-hour pre-incubation with the primers.

Ordering information

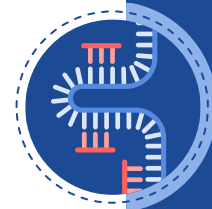
Catalogue number	Description	Size
DB-1336-50rxns	DB Warm-Start RT Additive	50 reactions
DB-1336-250rxns	DB Warm-Start RT Additive	250 reactions

Storage and shelf-life

Store at $\leq -18^{\circ}\text{C}$. Shelf-life is 5 years from the manufacture date.

Explore the
product
in detail





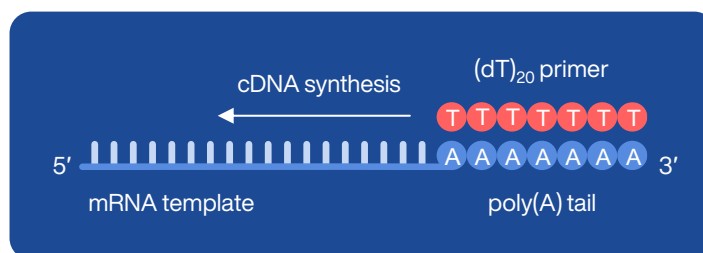
Primers for cDNA Synthesis

We provide the complete set of reliable and efficient reagents for cDNA synthesis. In addition to our DBscript reverse transcriptases and cDNA synthesis kits, we offer a selection of high-quality, pre-designed primers commonly used in cDNA synthesis and RT-PCR applications. These products include random hexamers and oligo(dT)₂₀ primers (available in two formats) suitable for first-strand cDNA synthesis.

DB Oligo(dT)₂₀ Primer

DB Oligo(dT)₂₀ primer anneals to poly(A) tail of mRNAs promoting synthesis of full-length cDNAs.
Provided as 50 µM (20X) solution.
Store at ≤ -18 °C. Stable for up to 3 years.

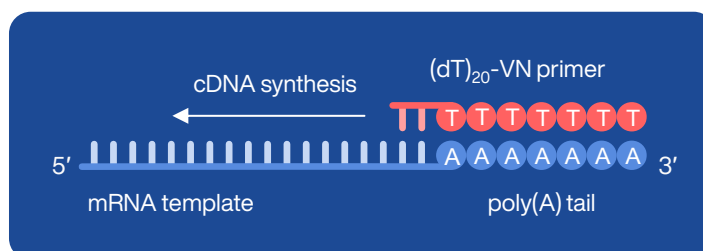
Catalogue number	Size
DB-1282-2.5nmol	2.5 nmol



DB Anchored Oligo(dT)₂₀-VN Primer

DB Anchored oligo(dT)₂₀-VN primer for maximum efficiency of full-length cDNA synthesis from poly(A) tail.
Provided as 50 µM (20X) solution.
Store at ≤ -18 °C. Stable for up to 3 years.

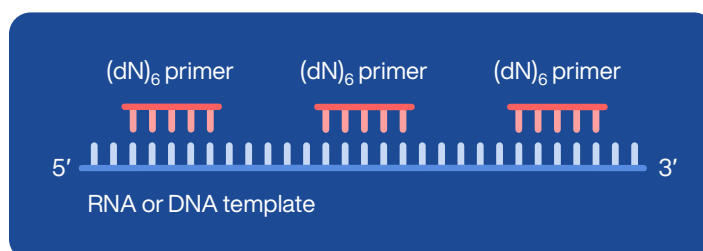
Catalogue number	Size
DB-1283-2.5nmol	2.5 nmol



DB Random Hexamers

DB Random hexamers anneal and start cDNA synthesis at random complementary regions of the mRNA template, resulting in shorter cDNA fragments.
Provided as 25 or 125 µM solution.
Store at ≤ -18 °C. Stable for up to 3 years.

Catalogue number	Size
DB-1284-1.25nmol	1.25 nmol
DB-1284-6.25nmol	6.25 nmol



Explore the
product
in detail





DB Uracil-DNA Glycosylases

Uracil-DNA glycosylases (UDG) remove uracil from DNA molecules. UDGs have found widespread use in qPCR and RT-qPCR applications as supplementary reagents for removal of carry-over contaminants from previous PCR reactions. We provide three UDG enzymes for OEM production that are suitable for various applications:

DB Cod Uracil-DNA Glycosylase

Supplementary thermolabile enzyme that prevents carry-over contamination during (RT)-qPCR. Best suitable for RT-qPCR with reverse transcription at 42 °C.

- Quantitative PCR (qPCR)
- Two-step RT-qPCR
- One-step RT-qPCR

Glycerol form	Glycerol-free form	Availability
Yes	Yes	Upon request

DB Thermolabile Uracil-DNA Glycosylase

Supplementary thermolabile enzyme that prevents carry-over contamination during (RT)-qPCR. Best suitable for qPCR and RT-qPCR with RT at 50°C or higher. Stable at 25 °C in qPCR and RT-qPCR mixes.

- Quantitative PCR (qPCR)
- Two-step RT-qPCR
- One-step RT-qPCR

Glycerol form	Glycerol-free form	Availability
Yes	Yes	Upon request

DB Thermostable Uracil-DNA Glycosylase

Supplementary thermostable enzyme suitable for special applications.

- DNA damage-repair studies
- DNA assembly and cloning

Glycerol form	Glycerol-free form	Availability
Yes	Yes	Upon request

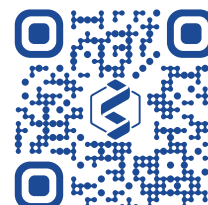
Custom Services

Reliable tools are the foundation of reproducible science. We provide high-quality custom services tailored to your specific needs, including custom oligonucleotide synthesis, protein expression, and complete mRNA production workflows. Let us handle the complex manufacturing so you can focus on your research goals.



Custom Oligonucleotide Synthesis

Synthetic oligonucleotides are indispensable tools for molecular diagnostics, therapeutics and genetic research. We deliver top-quality custom DNA and RNA oligonucleotides tailored to your needs. With a wide range of modifications, we guarantee the highest purity, quality, and yield at competitive prices.



Types of oligonucleotides

- Standard RNA oligos
- Fluorescent probes
- Modified oligos
- Locked nucleic acids
- Standard DNA oligos
- Large-scale oligos
- Complex oligos
- Chimeric oligos

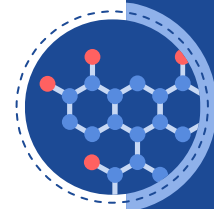


Custom Protein Synthesis

Recombinant protein production is essential for academic research and drug discovery. We provide fast and cost-effective protein synthesis services ranging from gene synthesis to up-scale recombinant protein expression and purification at highly competitive prices.

Key features

- Various host species: bacteria to human cells
- Post-translational modifications
- *In vitro* protein modifications
- Up-scaled protein production



AF Fluorescent Dyes

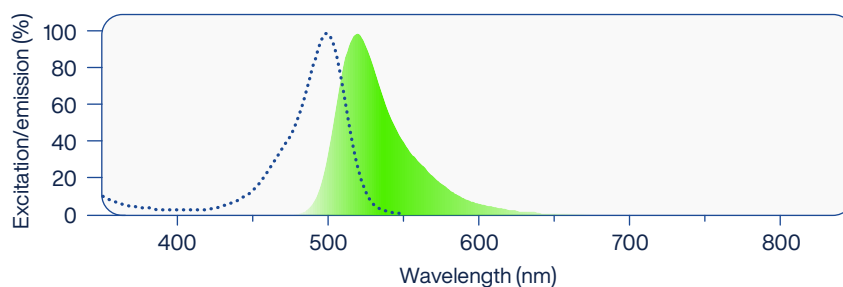
AF Dyes are a range of sulfonated fluorescent dyes designed for efficient labelling of biomolecules, including nucleic acids, proteins, antibodies and lipids. Structurally identical to the corresponding Alexa Fluor™ dyes, they provide comparable brightness, photostability and pH tolerance across a wide range of imaging and detection applications, including confocal microscopy and flow cytometry.

AF 488 Dye

AF 488 dye is a bright green fluorescent dye structurally identical to Alexa Fluor™ 488.

Excitation: 490 nm

Emission: 525 nm

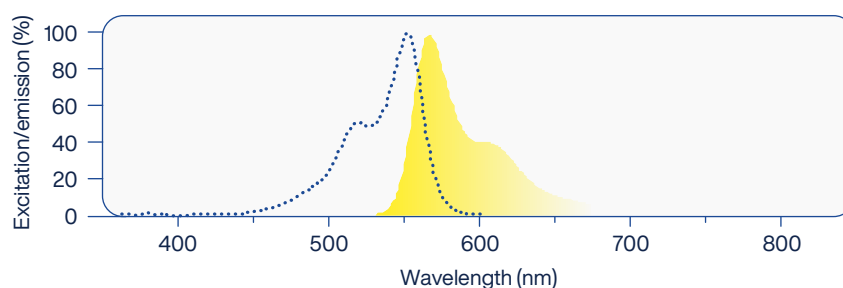


AF 555 Dye

AF 555 dye is a bright yellow fluorescent dye structurally identical to Alexa Fluor™ 555.

Excitation: 552 nm

Emission: 566 nm

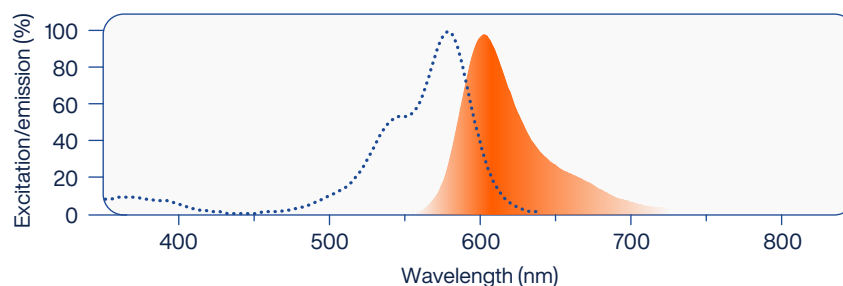


AF 568 Dye

AF 568 dye is a bright orange fluorescent dye structurally identical to Alexa Fluor™ 568.

Excitation: 579 nm

Emission: 603 nm

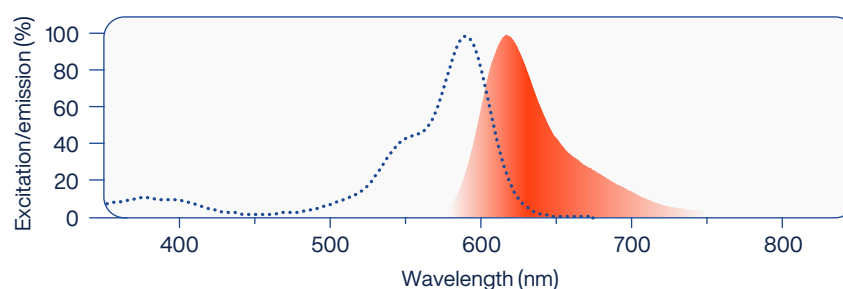


AF 594 Dye

AF 594 dye is a bright red fluorescent dye structurally identical to Alexa Fluor™ 594.

Excitation: 590 nm

Emission: 618 nm

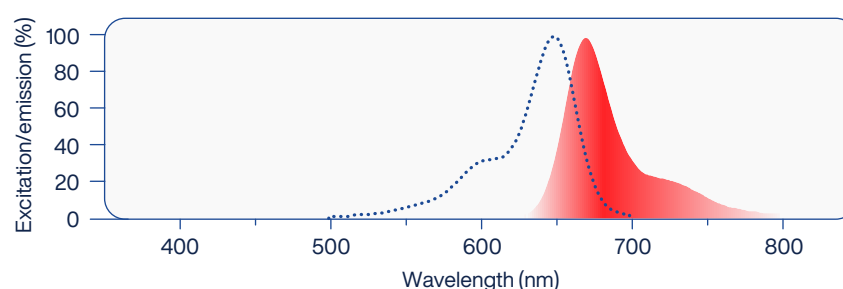


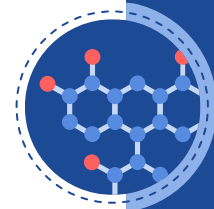
AF 647 Dye

AF 647 dye is a bright red fluorescent dye structurally identical to Alexa Fluor™ 647.

Excitation: 650 nm

Emission: 671 nm





AF Fluorescent Dyes

Key features

- **Exceptional performance**
Structurally identical to Alexa Fluor™ dyes and provide same brightness and photostability at a significantly lower cost.
- **High compatibility**
Water-soluble dyes with high pH stability (4–10) suitable for labeling of biomolecules or small ligands under various conditions.
- **Various modifications**
Available in multiple chemical forms, allowing you to select the option which is best suited for your specific application.

Applications

- Confocal microscopy
- Super resolution microscopy
- Flow cytometry
- Cell cultures and tissue labeling
- Fluorescence-activated cell sorting (FACS)

Available AF dye modifications

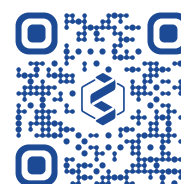
Modification	Coupling group	AF 488	AF 555	AF 568	AF 594	AF 647
NHS ester	Amine	DB410102	DB410502	DB410202	DB410302	DB410402
Carboxylic acid	Amine (EDC)	DB410103	DB410503	DB410203	DB410303	DB410403
Amine	NHS ester	DB410104	DB410504	DB410204	DB410304	DB410404
Alkyne	Azide	DB410105	DB410505	DB410205	DB410305	DB410405
Azide	Alkyne	DB410106	DB410506	DB410206	DB410306	DB410406
PEG4 Alkyne	Azide	DB410107	DB410507	DB410207	DB410307	DB410407
PEG4 Azide	Alkyne	DB410108	DB410508	DB410208	DB410308	DB410408
DBCO	Azide	DB410109	DB410509	DB410209	DB410309	DB410409
Maleimide	Thiol	DB410110	DB410510	DB410210	DB410310	DB410410
PEG5 Biotin	Streptavidin	DB410111	DB410511	DB410211	DB410311	DB410411
TCO	Tetrazine	DB410112	DB410512	DB410212	DB410312	DB410412

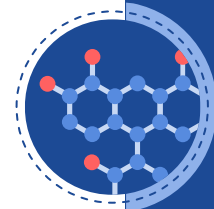
All AF modifications are available in 1, 5, 10, 25, 50 and 100 mg quantities.

Storage and shelf-life

Store in dark at –20 °C. Shelf-life is 2 years since the manufacture date.

Explore the products in detail





Other Fluorescent Dyes

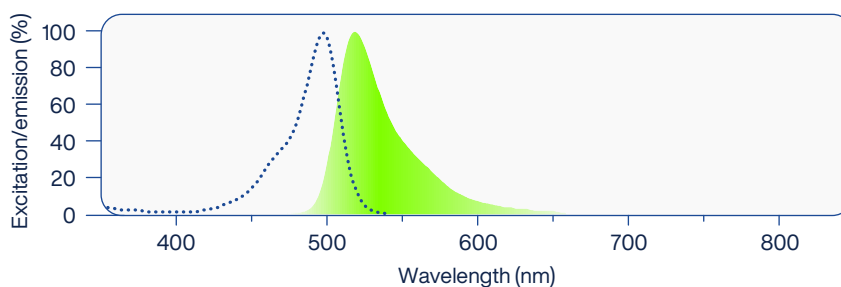
We offer a panel of other fluorescent dyes that are recognized as the gold standard in labeling and imaging applications. Fluorescent dyes are available in diverse chemical forms, making them ideal for labeling a wide variety of small ligands and biomolecules.

AT 488 Dye

AT 488 dye is a green fluorescent dye structurally identical to ATTO™ 488.

Excitation: 499 nm

Emission: 520 nm

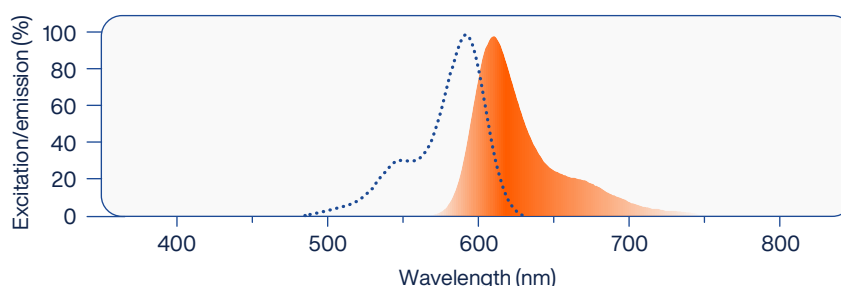


txRED Dye

txRED dye is an orange fluorescent dye structurally identical to Texas Red-X™.

Excitation: 595 nm

Emission: 613 nm

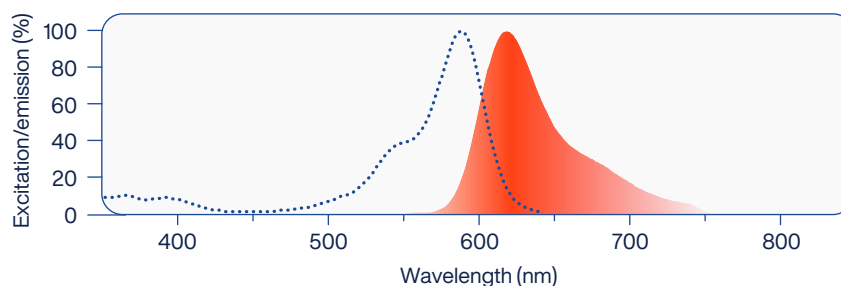


AT 590 Dye

AT 590 dye is an orange fluorescent dye structurally identical to ATTO™ 590.

Excitation: 592 nm

Emission: 621 nm

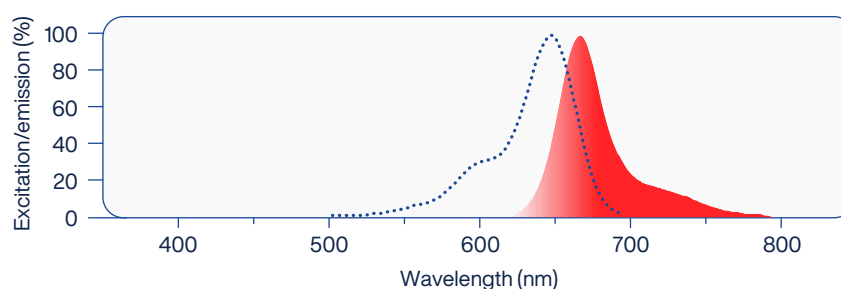


Cyanine 5 Dye

Cyanine 5 dye is a red fluorescent dye structurally identical to Cy5™.

Excitation: 647 nm

Emission: 665 nm

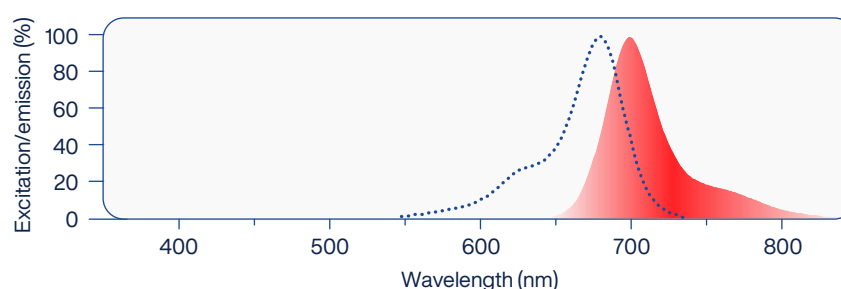


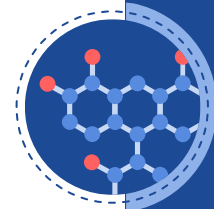
Cyanine 5.5 Dye

Cyanine 5.5 dye is a far-red fluorescent dye structurally identical to Cy5.5™.

Excitation: 678 nm

Emission: 695 nm





Other Fluorescent Dyes

Key features

- **Reliable performance**
txRED, Cyanines 5 and 5.5 are common fluorescent dyes routinely used for labeling of nucleic acids and membrane proteins.
- **Exceptional photostability**
AT 488 and 590 dyes provide excellent photostability and quantum yield for single-molecule applications.
- **Various modifications**
Available in multiple chemical forms, allowing you to select the option which is best suited for your specific application.

Applications

- Confocal microscopy
- Super resolution microscopy
- Flow cytometry
- Cell cultures and tissue labeling
- Fluorescence-activated cell sorting (FACS)

Available Dye Modifications

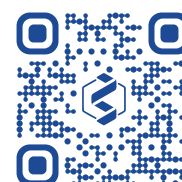
Modification	Coupling group	AT 488	Cyanine 5	Cyanine 5.5	txRED	AT 590
NHS ester	Amine	DB410702	DB410902	DB411002	DB411102	DB411202
Carboxylic acid	Amine (EDC)	DB410703	DB410903	DB411003	DB411103	DB411203
Amine	NHS ester	DB410704	DB410904	DB411004	DB411104	DB411204
Alkyne	Azide	DB410705	DB410905	DB411005	DB411105	DB411205
Azide	Alkyne	DB410706	DB410906	DB411006	DB411106	DB411206
PEG4 Alkyne	Azide	DB410707	DB410907	DB411007	DB411107	DB411207
PEG4 Azide	Alkyne	DB410708	DB410908	DB411008	DB411108	DB411208
DBCO	Azide	DB410709	DB410909	DB411009	DB411109	DB411209
Maleimide	Thiol	DB410710	DB410910	DB411010	DB411210	DB411210
PEG5 Biotin	Streptavidin	DB410711	DB410911	DB411011	DB411211	DB411211
TCO	Tetrazine	DB410712	DB410912	DB411012	DB411212	DB411212

All AF modifications are available in 1, 5, 10, 25, 50 and 100 mg quantities.

Storage and shelf-life

Store in dark at -20 °C. Shelf-life is 2 years since the manufacture date.

Explore the products in detail



Products overview

DNA polymerases

Product	Cat No
DB AptiTaq DNA Polymerase	DB-1326
DB AptiTaq DNA Polymerase Green	DB-1327
DB SuperSens Taq DNA Polymerase	DB-1328
DB SuperSens Taq DNA Polymerase Green	DB-1329

PCR and qPCR Mixes

Product	Cat No
DBdirect™ PCR Probe Mix SuperSens 2.0	DB-1308
DBdirect™ PCR Probe Mix SuperSens 2.0 UDG	DB-1309
DBdirect™ PCR SYBR Mix SuperSens 2.0	DB-1310
DBdirect™ PCR SYBR Mix SuperSens 2.0 UDG	DB-1316
DBdirect™ PCR Gel Mix SuperSens 2.0	DB-1311
DBdirect™ PCR Gel Mix SuperSens 2.0 UDG	DB-1317

RNase Inhibitors

Product	Cat No
DB Ultima H RNase Inhibitor	DB-1306
DB RNase Inhibitor Bovine	DB-1260

Primers for cDNA Synthesis

Product	Cat No
DB Oligo(dT) ₂₀ Primer	DB-1282
DB Oligo(dT) ₂₀ -VN Primer	DB-1283
DB Random Hexamers	DB-1284

Reverse Transcriptases

Product	Cat No
DBscript Reverse Transcriptase	DB-1276
DBscript cDNA Synthesis Kit	DB-1285
DBscript 2.0 Reverse Transcriptase	DB-1332
DBscript 2.0 cDNA Synthesis Kit	DB-1334
DBscript Turbo Reverse Transcriptase	DB-1333
DBscript Turbo cDNA Synthesis Kit	DB-1335

RT-PCR and RT-qPCR Mixes

Product	Cat No
DB RT-PCR Probe Mix SuperSens 2.0	DB-1312
DB RT-PCR Probe Mix SuperSens 2.0 UDG	DB-1313
DB RT-PCR Probe Mix SuperSens 2.0 UDG (dUTP only)	DB-1314
DB RT-PCR SYBR Mix SuperSens 2.0	DB-1315
DB RT-PCR SYBR Mix SuperSens 2.0 UDG	DB-1318
DB RT-PCR Gel Mix SuperSens 2.0	DB-1319
DB RT-PCR Gel Mix SuperSens 2.0 UDG	DB-1320
DBdirect™ RT-PCR Probe Mix SuperSens 2.0	DB-1321
DBdirect™ RT-PCR Probe Mix SuperSens 2.0 UDG	DB-1322
DBdirect™ RT-PCR SYBR Mix SuperSens 2.0	DB-1323
DBdirect™ RT-PCR SYBR Mix SuperSens 2.0 UDG	DB-1324

Products overview

Supplementary reagents

Product	Cat No
DB Lysis Buffer A	DB-1281
DB Lysis Buffer B	DB-1330
DB Warm-Start Additive	DB-1336
DB Cod Uracil-DNA Glycosylase	OEM
DB Thermolabile Uracil-DNA Glycosylase	OEM
DB Thermostable Uracil-DNA Glycosylase	OEM

Fluorescent Dyes

Product	Cat No
AF 488 Dye	DB-4101
AF 555 Dye	DB-4105
AF 568 Dye	DB-4102
AF 594 Dye	DB-4103
AF 647 Dye	DB-4104
AT 488 Dye	DB-4107
Cyanine 5 Dye	DB-4109
Cyanine 5.5 Dye	DB-4110
txRED Dye	DB-4111
AT 590 Dye	DB-4112

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