

## DB-1270 DBdirect™ PCR Probe Mix

## DB-1273 DBdirect™ PCR Probe Mix SuperSens

### General description

DBdirect™ PCR Probe Mix and DBdirect™ PCR Probe Mix SuperSens are designed for use in TaqMan probe-based, real-time quantification of DNA sequences. This can be done not only from a purified template but also directly from a range of sample types. Both mixes contain hot-start Taq DNA polymerase (aptamer-mediated in DBdirect™ PCR Probe Mix, and antibody-mediated in DBdirect™ PCR Probe Mix SuperSens), dNTPs, MgCl<sub>2</sub>, enhancers and stabilizers.

Both DBdirect™ PCR Probe Mix and DBdirect™ PCR Probe Mix SuperSens are well-suited for ultrasensitive detection in purified DNA. The DNA can be purified either manually or automatically using standard column-based or magnetic bead-based approaches. Its unique composition also enables the direct detection of DNA in human cells, bacteria (both gram-positive and gram-negative), viruses (both enveloped and non-enveloped), or direct detection of DNA in different biological matrices such as human serum, saliva, or cell cultivation media (user must validate its use in his/her application). It is also possible to detect DNA from single cells, but a separate preincubation step is needed for some cell types to achieve enough sensitivity. For more information, please refer to the application notes on the product website, which will be updated on a regular basis.

Please use the chart “PCR Mixes” at <https://www.dianabiotech.com/enzymes/> for selection of the optimal PCR Probe mix for your application. You will also find information about our other PCR mixes optimized for various applications, including mixes with SYBR™ Green I dye or mixes for direct loading of the PCR product on a gel.

### Applications and Features

The use of DBdirect™ PCR Probe Mix and DBdirect™ PCR Probe Mix SuperSens is designed for research studies and recommended for all applications with TaqMan probe-based PCR settings, both in monoplex and multiplex reactions.

- Quantitative real-time PCR from cDNA, genomic DNA (also for genotyping), or plasmid DNA.
- Preparation of DNA product for T/A cloning (Taq DNA polymerase adds a single A onto the ends of the PCR product).
- Robustness: both purified nucleic acids or various types of cells (human, bacterial, viral), biological matrices (human serum, saliva) or cell cultivation media can be used as a starting material for PCR.
- Sensitivity: detects low copy number targets in single or multiplex with TaqMan probes.
- Easy to use design reduces the pipetting steps and therefore the risk of contamination: add primer/probe solution and sample straight to the PCR mix and start PCR.
- Ideal for routine and high-throughput PCR.
- Stability: prepare your reaction at laboratory temperature (up to 25 °C) without the need for mixing on ice.
- Compatible with common PCR instruments (BioRad CFX, BioRad CFX Opus, Roche LightCycler® 480 II, Roche LightCycler 96, MIC, RotorGene, Thermo QuantStudio and others...).



## Kit Components

### DB-1270 DBdirect™ PCR Probe Mix

Kit component	REF code	Volume (µL)			Storage temperature	Cap colour + label
		100 rxns	1000 rxns	5000 rxns		
PCR Probe mix (2x)	RF05225	1 000	10 000	5 x 10 000	≤ -18 °C	2x
PCR grade water	RF08842	1 000	10 000	5 x 10 000	≤ -18 °C	W

### DB-1273 DBdirect™ PCR Probe Mix SuperSens

Kit component	REF code	Volume (µL)			Storage temperature	Cap colour + label
		100 rxns	1000 rxns	5000 rxns		
PCR Probe mix SuperSens (2x)	RF06744	1 000	10 000	5 x 10 000	≤ -18 °C	2x
PCR grade water	RF08842	1 000	10 000	5 x 10 000	≤ -18 °C	W

Reaction preparation: add primers and probe(s) diluted in PCR grade water into the PCR Probe mix (2x) or PCR Probe mix SuperSens (2x). Then add the sample (maximum volume to be added up to final reaction volume of 20 µL) and add PCR grade water to final volume of 20 µL. Both mixes are stable for up to 1 week at laboratory temperature (up to 25 °C).

### Quality Control

For each lot, the activity of Taq DNA polymerase is tested and detection of a low copy number target with amplicon length of 600 bps in challenging matrix (viral transport medium) is tested. For each lot, the activity of DNases is also tested.

Each lot is also assayed for *E. coli* genomic DNA (gDNA). In DBdirect™ PCR Probe Mix SuperSens Kit, amount of *E. coli* gDNA is usually not detectable and this kit is thus suitable for applications where *E. coli* gDNA may interfere. On the other hand, low amounts are usually detected in DBdirect™ PCR Probe Mix Kit.

### Storage

Keep all components at ≤ -18 °C for long-term storage. Avoid repeated freezing/thawing, do not exceed four cycles. If you intend to use the components more than once, aliquot them after the first thawing.

PCR Probe mix (2x) and PCR Probe mix SuperSens (2x) can be stored at 4 °C for up to 4 weeks after the first thawing. However, using the component as soon as possible after thawing is recommended.

**Shelf life:** 2 years

**Shipment:** Dry ice



## Products

### DB-1270 DBdirect™ PCR Probe Mix

Catalogue No	Size
DB-1270-100rxns	100 x 20 µL reaction
DB-1270-1000rxns	1 000 x 20 µL reaction
DB-1270-5000rxns	5 000 x 20 µL reaction

### DB-1273 DBdirect™ PCR Probe Mix SuperSens

Catalogue No	Size
DB-1273-100rxns	100 x 20 µL reaction
DB-1273-1000rxns	1 000 x 20 µL reaction
DB-1273-5000rxns	5 000 x 20 µL reaction

## Disclaimer

For research use only.

It is the user's responsibility to validate the specific use of the kit.

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