Check the product label for actual catalog number, lot and expiry date.

ORA™ UDG Multiplex qPCR Probe Mix, 4X

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
QPM0201	200 r of 20 µl	1 ml - ORA™ UDG Multiplex qPCR Probe Mix, 4X 3 x 1 ml - PCR Water	4X concentrated qPCR master mix with Hot Start Taq DNA Polymerase, dNTPs, magnesium and optimized buffer with enhancers and stabilizers. ROX is not included. Includes dUTP and UDG (uracil-DNA glycosylase) to prevent PCR carryover contamination.
QPM0205	1000 r of 20 µl	5 x 1 ml - ORA™ UDG Multiplex qPCR Probe Mix, 4X 15 x 1 ml - PCR Water	
QPM0250	5 000 r of 20 µl	5 x 5 ml - ORA™ UDG Multiplex qPCR Probe Mix, 4X supplied without water	
Storage	*In the dark at -20°C.*		

APPLICATIONS

- qPCR assays based on specific probes: including TaqMan®, Molecular Beacons, Scorpions™ Probes
- Quantification of gDNA, cDNA, viral DNA, low copy number genes, gene expression analysis

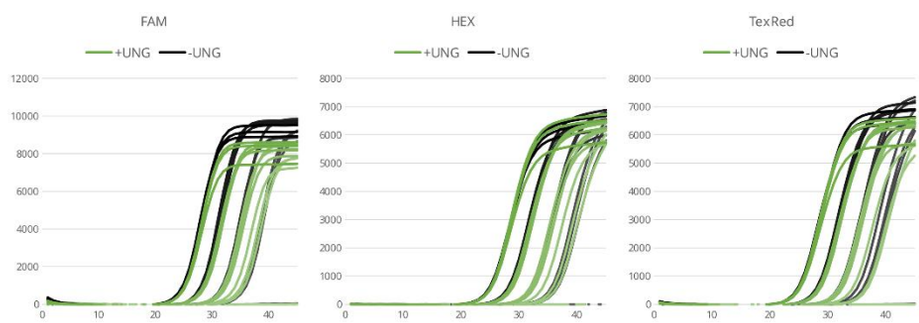
BENEFITS

- Highly concentrated master mix with UDG and dUTP for use with maximum template volume, and multiple primers and probes
- Great for multiplexing, excellent performance on GC-rich templates
- Universal – standard and fast cycling, GC- or AT-rich templates
- Rapid extension, early Ct

PRODUCT DETAILS

The 4X concentrated ORA™ UDG Multiplex qPCR Probe Mix is an excellent solution for demanding qPCR assays that require the quantification of multiple targets from minimal template amounts. The mix can be used with all probe types and with a wide range of sample amounts, from very low-copy-number targets in diluted samples to abundant templates.
The mix contains all components required for a robust qPCR; only template, primers and probes need to be added. Its high concentration enables the use of maximal template volume as well as multiple primers and probes. The UDG version includes dUTP and UDG (uracil-DNA glycosylase), which degrades dUTP-containing contaminating DNA and prevents PCR carryover contamination. highQu qPCR master mixes are based on a small-molecule inhibitor Hot Start technology, which provides the highest sensitivity and specificity under both standard and fast cycling conditions.

The ORA™ UDG Multiplex qPCR Probe Mix contains no ROX; a version with low ROX concentration is available as ORA™ UDG Multiplex qPCR Probe ROX L Mix (Cat.# QPM0301, QPM0305, QPM0350). If a high ROX concentration or more ROX flexibility is required, ROX for qPCR Mixes, 50 µM (Cat.# ROX0105) can be obtained separately and added directly to the qPCR mix.



ORA™ UDG Multiplex qPCR Probe Mix – comparable 3-plex performance with and without UNG
Targets A, B and C amplified from cDNA. The performance of ORA™ UDG Multiplex qPCR Probe Mix is similar with and without UNG in multiplex qPCR reactions. 3-plex reactions on a cDNA dilution series of 100000, 10000, 1000, 100 and NTC target copies per reaction, three technical replicates per target concentration. Target A (FAM), target B (HEX), target C (TexRed). Cycling: 95 °C 3 min (initial denaturation), followed by 45 two-step cycles of 95 °C 15 s (denaturation) and 60 °C 30 s (annealing/extension).

FAM, HEX and Texas Red (TexRed) are trademarks of Thermo Fisher Scientific Inc. and its subsidiaries.

PROTOCOL

- Use primer design software for good assay planning.
- Work with amplicons of 80-200 bp (max. 400 bp).
- Take typical measures to prevent PCR cross-contamination: keep your bench clean, wear gloves, use sterile tubes and filter pipette tips.
- Run reactions in triplicate; include a no-template control and a positive control in parallel.
- Thaw and keep reagents on ice. Mix well before use.
- When starting with a new template-primer system, always run an annealing temperature gradient to determine the best-fitting annealing temperature. Note that it might differ from the theoretically calculated one.
- Do not perform annealing/extension for longer than 30 seconds or at temperatures below 60 °C.

IN VITRO RESEARCH USE ONLY

✓ Prepare a 20 µl reaction:

Reverse Primer	400-800 nM final c.
Forward Primer	400-800 nM final c.
Specific Probe	200-500 nM final c. (0.4 µl of 10 µM)
cDNA Template *or* gDNA Template	<100 ng *or* 1 µg
PCR Water	to 15 µl
ORA™ UDG Multiplex qPCR Probe Mix, 4X	5 µl

✓ Mix gently, avoid bubbles.

✓ Place into the instrument and set as follows:

UDG step	25°C - 2 min (or ambient temperature)
Initial denaturation	1 cycle: 95°C - 2 min for cDNA, or 1 cycle: 95°C - 3 min for gDNA
Denaturation	40-50 cycles: 95°C - 5-15 sec
Anneal./extension	40-50 cycles: 60-65°C – 20-30 sec

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