Canvax Reagents, S.L.U.
Luis de Mercado Street, 19
Boecillo Technological Park
47151, Boecillo
Valladolid, Spain.

Tlf: +34 983 54 85 63
info@canvaxbiotech.com

www.canvaxbiotech.com

DATA SHEET

Version: 03
Revision date: 20/03/2023

1. Identification

Product name **qMAXSen™ Probe 2X qPCR Mastermix (Low ROX™)**

500 rxn

Cat. No E0342

2. Description

qMAXSen™ Probe 2X qPCR Mastermix (Low ROX) a mixture of recombinant Taq polymerase over expressed in E. coli and a highly specific monoclonal anti-Taq antibody. Based on the TaqMan® probe detection principle, the 5'- reporter dye and 3'-quencher duallabelled oligonucleotide hybridizes on a specific region within the amplified fragment. During amplification, the probe is cleaved, and the reporter dye (fluorophore) is released. The fluorescent signal intensity detected is proportional to the number of amplicons. The Ct value is used for quantification purposes.

3. Composition

Item	Quantity
qMAXSen™ Probe 2X qPCR Mastermix (Low ROX)	4 x 1.25 ml

4. Storage specifications

qMAXSen™ Probe 2X qPCR Mastermix (Low ROX) is shipped on dry/blue ice. The Master Mix should bestored at **-20°C** upon receipt. Avoid repeated freezing and thawing.

5. Features

- Ready-to-use Master Mix.
- Allow accurate quantification of a variety of gene targets.
- Stable: no loss of activity after 6 successive freeze/thaw cycles.
- Reduce pipetting steps to minimize the risk of contamination
- Antibody hot-start technology provides superior specificity

Canvax Reagents, S.L.U.
Luis de Mercado Street, 19
Boecillo Technological Park
47151, Boecillo
Valladolid, Spain.

Tlf: +34 983 54 85 63
info@canvaxbiotech.com

www.canvaxbiotech.com

6. Applications

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Virus detection and quantification
- SNP genotyping assays
- High throughput applications

7. Recommended Protocol

1. Thaw qPCR Master Mix (2X), template DNA, primers, probes and nuclease-free H2O on ice. Mix each solution well.

The following protocol is recommended for a 20 µl reaction volume:

2. Set up the following reaction mixture:

Component	Volume reaction 20 µL	Final concentration
qMAXSen™ Probe 2X qPCR Mastermix (Low ROX)	10 µL	1X
Forward Primer	X µL	100-400 nM(1)
Reverse Primer	X µL	100-400 nM(1)
Specific Probe	X µL	200 nM(2)
Template DNA	X µL	0.01 pg to 1 µg (3)
Nuclease-Free Water to a final volume of	20 µL	

(1) The recommendation for final primer concentration is 0.5 µM but it can be varied in a range of 0.1-0.8 µM if needed.

(2) Optimal results may require a titration of DNA probe concentration between 50 and 800 nM.

(3) cDNA Template <100 ng or DNA Template 1µg.

3. Mix reagents completely, and then transfer to a thermocycler.

Canvax Reagents, S.L.U.
Luis de Mercado Street, 19
Boecillo Technological Park
47151, Boecillo
Valladolid, Spain.

Tlf: +34 983 54 85 63
info@canvaxbiotech.com

www.canvaxbiotech.com

4. Perform the following cycling conditions:

Suggested thermal cycling conditions (amplicons in a range of 80-200, max 400 bp)

Step	Temperature	Duration	Cycles
Enzyme Activation	95°C	3 min	1
Denaturation	95°C	10 sec	35-40
Annealing/Extension	60°C- 65°C	30-40 sec	

Notes:
• The annealing temperature depends on the melting temperature of the primers and DNA probe used. You can use gradient PCR to optimize the annealing temperature.
• Denaturation and Annealing/Extension times can vary between thermocyclers and qPCR master mixes.
• The elongation time depends on the length of the amplicon. Longer amplicons (> 400 bp) can be used but may require optimization of elongation times.
• For low copy number genes, it might be necessary to use cycle number of up to 45.

For optimal specificity and amplification an individual optimization of the recommended parameters may be necessary. You may be able to adjust your PCR conditions to optimize reaction.

8. Further information

Product Use Limitations This product is developed, designed, and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Disclaimer The information provided in this Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide and should not be taken as a warranty or quality specification. **Canvax Reagents S.L.U**. shall not be held liable for any damage resulting from handling or from contact with the above product.