qLUMEN™ MasterMix for qPCR (2x) with probe

QPCR-PHR-001 / QPCR-PLR-001

Introduction

qLUMEN™ MasterMix for qPCR, has been formulated specifically for TaqMan® probe-based real-time PCR analysis of DNA samples. The 5'-reporter dye and 3'-quencher dual-labelled 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. Available with the option of ROX™ as the internal passive reference dye.

Features

- ✓ Ready-to-use Master Mix
- ✓ Allow accurate quantification of a variety of gene targets
- ✓ Reduce pipetting steps to minimize the risk of contamination
- ✓ ROX™ as reference dye (1x concentrated)

Applications

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

Quality Control

Functionally tested in Real Time PCR on Applied Biosystems StepOne® Real-Time PCR System.

Storage

The MasterMix should be stored at -20°C upon receipt. Avoid repeated freezing and thawing.

Product use limitation

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

Basic reaction conditions for real time PCR amplifications

1. Thaw qLUMEN™ MasterMix for qPCR (2x), template DNA, primers and nuclease-free H_2O on ice. Mix each solution well.

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

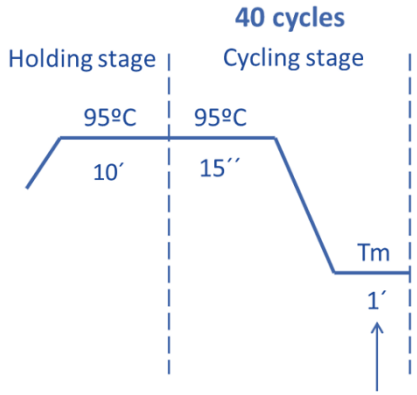
2. Set up the following reaction mixture

Component	Reaction Volume 20 µL	Final concentration
qLUMEN™ MasterMix (2x)	10 µL	1X
Forward Primer	X µL	100 - 800 nM(1)
Reverse Primer	X µL	100 – 800 nM(1)
Template DNA	X µL	≤10 ng/reaction (2)
Probe	X µL	100- 300 nM
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) For gDNA used 100-300 ng DNA

3. Mix reagents completely, and then transfer to a thermocycler.
4. Program the appropriate PCR cycling protocol on your real-time PCR instrument



✓ As with all Real-Time PCR reactions, conditions may need to be optimized. You may be able to adjust your PCR conditions to optimize reaction.