

PerfectStart™ Universal Green qPCR SuperMix

Please read the user manual carefully prior to use

Cat. No. AQ602

Storage: at -20°C in dark

Description

This product is a ready-to-use 2x qPCR Master Mix. It contains a *PerfectStart™ Taq* DNA polymerase, an optimized dual-cation buffer, SYBR Green I, dNTPs, a PCR enhancer, and a PCR stabilizer. This reagent contains a Universal Passive Reference Dye, and is suitable for replacing those known as No ROX, Low ROX or High ROX master mixes, recommended depending on which real-time PCR systems you have in your lab.

PerfectStart™ Taq DNA polymerase is a hot-start *Taq* DNA polymerase containing *Taq* DNA polymerase and three kinds of monoclonal antibodies, effectively blocking DNA polymerase activity and preventing non-specific amplification at low temperature. The qPCR SuperMix is provided at 2× concentration and is validated to be used at 1× concentration by adding template, primers, and nuclease-free water.

Highlights

- *PerfectStart™ Taq* DNA Polymerase enables high specificity, high sensitivity, and high amplification efficiency.
- Dual-cation buffer enhances specificity and reduces primer-dimer formation.

Kit Contents

Component	AQ602-00	AQ602-01	AQ602-02	AQ602-03
2× <i>PerfectStart™</i> Green qPCR SuperMix	1 ml	5×1 ml	5×5 ml	10×5 ml

Recommended Reaction Components and Conditions (e.g. 20 µl)

Component	Volume	Final Concentration
Template	Variable	as required
Forward Primer (10 µM)	0.4 µl	0.2 µM
Reverse Primer (10 µM)	0.4 µl	0.2 µM
2× <i>PerfectStart™</i> Green qPCR SuperMix	10 µl	1×
Nuclease-free Water	Variable	-
Total Volume	20 µl	-

For genomic DNA, the recommended template amount is 10 pg-1 µg, while for plasmid DNA, the recommended template amount is 10-10⁷ Copies.

qPCR (three-step)

94°C 30 sec

94°C 5 sec

50-60°C 15 sec*

72°C 10 sec*

Dissociation Stage

40-45 cycles

qPCR (two-step)

94°C 30 sec

94°C 5 sec

60°C 30 sec*

Dissociation Stage

40-45 cycles



For ABI qPCR instrument, we suggest using the following exposure time (Fluorescence signals can be collected during the annealing or extension stage for three-step qPCR.):

- * For ABI Prism 7700/7900, set the exposure time to 30 seconds.
- * For ABI Prism 7000/7300, set the exposure time to 31 seconds.
- * For ABI Prism 7500, set the exposure time to 34 seconds.
- * For ABI ViiA 7, set the exposure time is at least 19 seconds.

Two-step qPCR is more suitable for higher specificity assay.

Three-step qPCR is more suitable for higher amplification efficiency assay.

Notes

Completely thaw the contents in the tube and mix well before each use.