

PerfectStart™ Green qPCR SuperMix (+Dye I / +Dye II)

Please read the datasheet carefully prior to use

Cat. No. AQ602

Storage: at -20°C in dark for two years

Description

This product is a ready-to-use qPCR cocktail. It contains a *PerfectStart™ Taq* DNA polymerase, optimized dual-cation buffer, SYBR Green I, dNTPs, PCR enhancer, PCR stabilizer and Passive Reference Dye I/II. *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. qPCR SuperMix is provided at 2× concentration and can 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	AQ602-11/21	AQ602-12/22	AQ602-13/23	AQ602-14/24
2× <i>PerfectStart™</i> Green qPCR SuperMix (+Dye I/ +Dye II)	1 ml	5×1 ml	15×1 ml	25×1 ml
Nuclease-free Water	1 ml	5 ml	3×5 ml	5×5 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 (+Dye I/ +Dye II)	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.

Passive Reference Dye Compatibility with Different Instruments

- 2×*PerfectStart*[™] Green qPCR SuperMix (+Dye I)
ABI Prism 7000/7300/7700/7900, ABI Step One, ABI Step One Plus, ABI 7900HT, ABI 7900HT Fast
- 2×*PerfectStart*[™] Green qPCR SuperMix (+Dye II)
ABI Prism 7500, ABI Prism 7500 Fast, ABI QuantStudio Dx/3/5, ABI QuantStudio 6/7/12K Flex, ABI ViiA 7, Stratagene Mx3000P/Mx3005P/Mx4000

Notes

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

FOR RESEARCH USE ONLY