

PerfectStart™ Green qPCR SuperMix

Cat. No. AQ601

Storage: at -20°C in dark for one year

Description

PerfectStart™ Green qPCR SuperMix is a ready-to-use qPCR cocktail. It contains a PerfectStart™ Taq DNA Polymerase, optimized dual-cation buffer, SYBR Green I, dNTPs, PCR enhancer and PCR stabilizer. 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, passive reference dye (optional) and nuclease-free water.

Highlights

- PerfectStart™ Taq DNA Polymerase enables high specificity, high sensitivity, high amplification efficiency.
- Dual-cation buffer enhances specificity and reduces primer-dimer formation.
- Passive reference dyes (to normalize tube-to-tube differences due to pipetting errors) are provided for different qPCR instruments.

Kit Contents

Component	AQ601-01	AQ601-02	AQ601-03	AQ601-04
2×PerfectStart™ Green qPCR SuperMix	1 ml	5×1 ml	15×1 ml	25×1 ml
Passive Reference Dye (50×)	40 µl	200 µl	600 µl	1 ml
Nuclease-free Water	1 ml	5 ml	3×5 ml	5×5 ml

Reaction Components (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×PerfectStart™ Green qPCR SuperMix	10 µl	1×
Passive Reference Dye (50×) (optional)	0.4 µl	1×
Nuclease-free Water	Variable	-
Total Volume	20 µl	-

For genomic DNA, we suggest using 10 pg-1 µg template, while for plasmid DNA, we suggest using 10-10⁷ copies.

Thermal cycling conditions (three-step)

94°C 30 sec
 94°C 5 sec
 50-60°C 15 sec*
 72°C 10 sec*
 Dissociation Stage

40-45 cycles

Thermal cycling conditions (two-step)

94°C 30 sec
 94°C 5 sec
 60°C 30 sec*
 Dissociation Stage

40-45 cycles

Fluorescent signals can be collected during the annealing or extension stage. For ABI qPCR instrument, we suggest using the following exposure time:

- * 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 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

- Passive Reference Dye I (50×)
ABI Prism 7000/7300/7700/7900, ABI Step One, ABI Step One Plus, ABI 7900HT, ABI 7900HT Fast
- Passive Reference Dye II (50×)
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
- No Passive Reference Dye
Roche LightCycler 480, Roche Light Cycler 96, MJ Research Chromo4, MJ Research Opticon 2, Takara TP-800, Bio-Rad iCycler iQ, Bio-Rad iCycler iQ5, Bio-Rad CFX96, Bio-Rad C1000 Thermal Cycler, Thermo Scientific Pikoreal 96, Qiagen Corbett Rotor-Gene 6000, Qiagen Corbett Rotor-Gene G, Qiagen Corbett Rotor-Gene Q, Qiagen Corbett Rotor-Gene 3000, Mastercycler ep realplex.

Note

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

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