

# PerfectStart® Green qPCR SuperMix (+Universal Passive Reference Dye)

Please read the datasheet carefully prior to use.

**Cat. No.** AQ602

**Version No.** Version 2.0

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

## Description

The kit contains a *PerfectStart*® Taq DNA Polymerase, optimized dual-cation buffer, SYBR Green I, dNTPs, PCR enhancer, PCR stabilizer and Universal Passive Reference Dye. **Three monoclonal antibodies bind to the hot-start Taq DNA Polymerase, effectively blocking DNA polymerase activity and inhibiting 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.

## Features

- Blocking by 3 antibodies; high specificity, sensitivity and amplification efficiency; applicable to a wide range of species.
- Dual-cation buffer enhances specificity, reduces primer-dimer formation, and ensures accurate data.

## Kit Contents

Component	AQ602-01	AQ602-02	AQ602-03	AQ602-04
2× <i>PerfectStart</i> ® Green qPCR SuperMix (+Universal Passive Reference Dye)	1 ml	5×1 ml	15×1 ml	25×1 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× <i>PerfectStart</i> ® Green qPCR SuperMix (+Universal Passive Reference Dye)	10 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 10-10<sup>7</sup> copies.)

### qPCR (three-step method)

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 method)

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

} 40-45 cycles

For ABI instruments, fluorescent signals can be collected during the annealing or extension stage in the three-step method.

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

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



**Passive Reference Dye is available for instruments**

• ABI Prism 7000/7300/7700/7900, ABI Step One, ABI Step One Plus, ABI 7900HT, ABI 7900HT Fast; 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, not for clinical diagnosis.**

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