

[Cat. No.] **K-6600, K-6601, K-6602**

Introduction

AccuPower® Plus DualStar™ qPCR PreMix is a product for real-time PCR with enhanced specificity and sensitivity by applying hydrolysis probe method and antibody-based HotStart Taq DNA Polymerase. By applying antibody-based HotStart Taq DNA Polymerase, it provides reduced non-specific reactions such as mis-priming and primer dimer during PCR at a low temperature. This product contains vacuum-dried all components for real-time PCR, except for template DNA, target-specific primers, and fluorogenic probe. By just adding template DNA, target-specific primers, and probe, reproducible results with high sensitivity and specificity can be obtained. This product can be used for hydrolysis probe-based real-time PCR experiments for the amplification and detection of genomic DNA and cDNA targets, differential gene expression profiling, single nucleotide polymorphism (SNP) analysis, and evaluation of RNAi products.

Applications

- Gene expression profiling
- Target DNA quantification
- Microbial detection
- Viral/bacterial pathogen load determination
- Evaluation of primer pair performance for probe-based real-time PCR

Features & Benefits

- Dynamic range: A wide range of 8 logs up to 10-10⁸ copies.
- Specificity: Optimized amplification of target gene using HotStart Taq DNA Polymerase.
- Comprehensiveness: Effective real-time PCR regardless of gene types, including DNA, cDNA and high GC templates.
- Convenience: Reactants are individually packaged in each of the PCR tubes, it allows any user simply perform real-time PCR by adding template DNA, target-specific primers, and probe.
- Stability: Included stabilizer provides increased stability compared to solution-type products.
- Reproducibility: Mass production under ISO 9001 quality system allows minimized deviation between lots and reproducible results in replicated tests performed under same conditions and variation.

Components

Components	K-6600	K-6601	K-6602
Tube/Plate	96 tubes	96 tubes	96 tubes
50X ROX dye	-	0.1 ml	-
DEPC-D.W.	1.2 ml x 4 ea	1.2 ml x 4 ea	1.2 ml x 4 ea

* **Note:** ROX dye is used for normalization of intensity by background subtraction. The use of ROX dye is recommended for Applied Biosystems 7500 Real-Time PCR System (Applied Biosystems), but not required for *Exicycler*™ 96 Real-Time PCR System (BIONEER) and CFX96 Real-Time PCR System (Bio-Rad).

Composition

Composition	Concentration
HotStart Taq DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	1.2 mM
Reaction buffer with 2 mM MgCl ₂	1X
Stabilizer	1X

Specifications

HotStart Taq DNA Polymerase	
5' to 3' exonuclease activity	Yes
3' to 5' exonuclease activity	No
3'-A overhang	Yes

Storage

Store at -20°C. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

Online Resources



Korean



English

Visit our **product page** for additional information and protocols

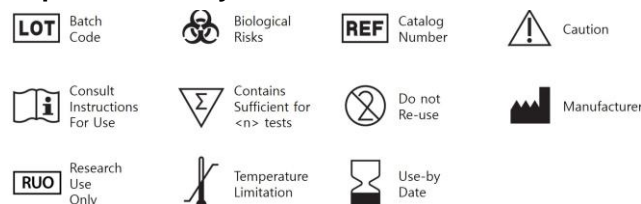
Ordering Information

Description					Cat. No.
Exicycler	8-tube strip	50 µl	optical film included	96 rxn	K-6600
ABI7500	8-tube strip	50 µl	optical film included	96 rxn	K-6601
CFX96	8-tube strip	50 µl	optical film included	96 rxn	K-6602



Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



Experimental Procedures

Steps		Procedure Details																
1	 Preparation of reaction mixture	<p>1. Add template DNA, target-specific primers, hydrolysis probe (not provided), 50X ROX dye (optional), and DEPC-D.W. into <i>AccuPower® Plus DualStar™</i> qPCR PreMix tubes to make a total volume of 50 µl. Do not include the dried pellet.</p> <ul style="list-style-type: none"> Preparation of reaction mixture <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Components</th> <th style="text-align: left;">50 µl reaction</th> </tr> </thead> <tbody> <tr> <td>Template DNA (10 pg-100 ng)</td> <td>Variable</td> </tr> <tr> <td>Forward primer (10 pmol/µl)</td> <td>0.5-5 µl</td> </tr> <tr> <td>Reverse primer (10 pmol/µl)</td> <td>0.5-5 µl</td> </tr> <tr> <td>Hydrolysis probe (10 pmol/µl)</td> <td>0.5-5 µl</td> </tr> <tr> <td>(Optional) 50X ROX dye</td> <td>1 µl</td> </tr> <tr> <td>DEPC-D.W.</td> <td>Variable</td> </tr> <tr> <td>Total volume</td> <td>50 µl</td> </tr> </tbody> </table> <p>* Note: This protocol was validated with the TaqMan® probe as a hydrolysis probe.</p> <p>2. Seal real-time PCR tubes or plate with adhesive optical sealing film (Cat. No. 3111-4110, provided).</p> <p>3. Dissolve the vacuum-dried pellet by vortexing, and briefly spin down.</p>	Components	50 µl reaction	Template DNA (10 pg-100 ng)	Variable	Forward primer (10 pmol/µl)	0.5-5 µl	Reverse primer (10 pmol/µl)	0.5-5 µl	Hydrolysis probe (10 pmol/µl)	0.5-5 µl	(Optional) 50X ROX dye	1 µl	DEPC-D.W.	Variable	Total volume	50 µl
Components	50 µl reaction																	
Template DNA (10 pg-100 ng)	Variable																	
Forward primer (10 pmol/µl)	0.5-5 µl																	
Reverse primer (10 pmol/µl)	0.5-5 µl																	
Hydrolysis probe (10 pmol/µl)	0.5-5 µl																	
(Optional) 50X ROX dye	1 µl																	
DEPC-D.W.	Variable																	
Total volume	50 µl																	
2	 Real-time PCR	<p>4. Perform the reaction under the following conditions.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Step</th> <th style="text-align: left;">Temperature</th> <th style="text-align: left;">Time</th> <th style="text-align: left;">Cycles</th> </tr> </thead> <tbody> <tr> <td>Pre-denaturation</td> <td>95°C</td> <td>3-5 min</td> <td>1 cycle</td> </tr> <tr> <td>Denaturation</td> <td>95°C</td> <td>5-30 sec</td> <td rowspan="2">40-45 cycles</td> </tr> <tr> <td>Annealing & Extension</td> <td>55-60°C</td> <td>30-35 sec</td> </tr> </tbody> </table> <p>* Note: Users can adjust the protocol according to their instrument and template DNA sequences to get optimal results.</p> <p>5. After the reaction is completed, analyze the results.</p>	Step	Temperature	Time	Cycles	Pre-denaturation	95°C	3-5 min	1 cycle	Denaturation	95°C	5-30 sec	40-45 cycles	Annealing & Extension	55-60°C	30-35 sec	
Step	Temperature	Time	Cycles															
Pre-denaturation	95°C	3-5 min	1 cycle															
Denaturation	95°C	5-30 sec	40-45 cycles															
Annealing & Extension	55-60°C	30-35 sec																