

[Cat. No.] **K-6605, K-6606, K-6607**

### Introduction

AccuPower® Plus DualStar™ qPCR PreMix (with UDG) 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. It also helps to minimize carryover contamination, which may cause severe problems in clinical diagnosis by using uracil DNA glycosylase (UDG). UDG catalyzes the hydrolysis of N-glycosylic bond between the uracil and sugar. In the following heating at 95°C, contaminants (uracil-containing DNA) are degraded and consequently not amplified. 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

- Carryover contamination prevention: Minimized false positives caused by a carryover contamination through application of uracil DNA glycosylase system.
- Dynamic range: A wide range of 8 logs up to 10<sup>-10</sup> 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, 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-6605	K-6606	K-6607
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
Uracil DNA glycosylase	1 U
dNTP with dUTP	1.2 mM
Reaction buffer with 1.5 mM MgCl <sub>2</sub>	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 strips	50 µl	optical film included	96 rxn	K-6605
ABI7500	8-tube strips	50 µl	optical film included	96 rxn	K-6606
CFX96	8-tube strips	50 µl	optical film included	96 rxn	K-6607

### 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



Batch Code



Biological Risks



Catalog Number



Caution



Consult Instructions For Use



Contains Sufficient for <n> tests



Do not Re-use



Manufacturer



Research Use Only





Temperature Limitation



Use-by Date

**Experimental Procedures**

Steps		Procedure Details																			
1	 <b>Preparation of reaction mixture</b>	<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 (with UDG) tubes to make a total volume of 50 µl. Do not include the dried pellet.</p> <ul style="list-style-type: none"> <li>Preparation of reaction mixture</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Components</th> <th style="text-align: center;">50 µl reaction</th> </tr> </thead> <tbody> <tr> <td>Template DNA (10 pg-100 ng)</td> <td style="text-align: center;">Variable</td> </tr> <tr> <td>Forward primer (10 pmol/µl)</td> <td style="text-align: center;">0.5-5 µl</td> </tr> <tr> <td>Reverse primer (10 pmol/µl)</td> <td style="text-align: center;">0.5-5 µl</td> </tr> <tr> <td>Hydrolysis probe (10 pmol/µl)</td> <td style="text-align: center;">0.5-5 µl</td> </tr> <tr> <td>(Optional) 50X ROX dye</td> <td style="text-align: center;">1 µl</td> </tr> <tr> <td>DEPC-D.W.</td> <td style="text-align: center;">Variable</td> </tr> <tr> <td>Total volume</td> <td style="text-align: center;">50 µl</td> </tr> </tbody> </table> <p>* <b>Note:</b> 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			
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