

[Cat. No.] Please refer to the **Ordering Information**

### Introduction

AccuPower® GreenStar™ qPCR PreMix enables accurate and rapid quantification of target genes in various kinds of samples through real-time PCR with intercalating dye-based method. By applying BIONEER's patented enzyme-mediate HotStart technology, non-specific reactions are reduced during zero cycles and amplification efficiency is improved even with a trace amount of template DNA. This product contains vacuum-dried components for real-time PCR, except for template DNA and target-specific primers. By just adding template DNA and target-specific primers, reproducible results with high sensitivity and specificity can be obtained. This product can be applied in real-time PCR experiments for the amplification and detection of genomic DNA and cDNA targets, differential gene expression profiling, and microbial/viral pathogen detection.

### Applications

- Real-time quantification of DNA/cDNA targets
- Quantification of gene expression
- Microbial/Viral pathogen detection

### Features & Benefits

- **Compatibility:** Wide choice of real-time PCR instruments for optimal results.
- **Convenience:** Reactants are individually packaged in each of the PCR tubes, it allows any user simply perform real-time PCR by adding template DNA and target-specific primers.
- **Stability:** Included stabilizer enables delivery at room temperature and 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	Tube/Plate	50X ROX dye	DEPC-D.W.
K-6210	96 tubes		1.2 ml x 2 ea
K-6200	96 tubes		1.2 ml x 4 ea
K-6213	96-well plate		1.2 ml x 2 ea
K-6203	96-well plate		1.2 ml x 4 ea
K-6211	96 tubes	0.2 ml	1.2 ml x 2 ea
K-6201	96 tubes	0.2 ml	1.2 ml x 4 ea
K-6214	96-well plate	0.2 ml	1.2 ml x 2 ea
K-6204	96-well plate	0.2 ml	1.2 ml x 4 ea
K-6212	96 tubes		1.2 ml x 2 ea
K-6202	96 tubes		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
Top DNA Polymerase	1 U
HotStart buffer with 1.5 mM MgCl <sub>2</sub>	1X
Intercalating dye	0.4X
dNTPs (dATP, dCTP, dGTP, dTTP)	1 mM

### Specifications

Top DNA Polymerase	
5' to 3' exonuclease activity	No
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

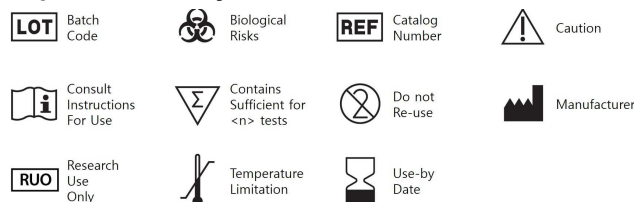
### Ordering Information

		Description	Cat. No.
Exicycler	8-tube strips	20 µl	96 rxn K-6210
		50 µl optical film included	96 rxn K-6200
	96-well plate	20 µl	96 rxn K-6213
		50 µl	96 rxn K-6203
ABI7500	8-tube strips	20 µl	96 rxn K-6211
		50 µl optical film included	96 rxn K-6201
	96-well plate	20 µl	96 rxn K-6214
		50 µl	96 rxn K-6204
CFX96	8-tube strips	20 µl optical film included	96 rxn K-6212
		50 µl	96 rxn K-6202



### 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																																
<p>Recommended protocol for <i>Exicycler™</i> 96 (BIONEER), Applied Biosystems 7500 Real-Time PCR System (Applied Biosystems), and CFX96 Real-Time PCR System (Bio-Rad).</p>																																	
<p><b>1</b></p> <div style="text-align: center;">  <p><b>Preparation of reaction mixture</b></p> </div>	<p>1. Add template DNA, primers, 50X ROX dye (optional), and DEPC-D.W. into <i>AccuPower® GreenStar™</i> qPCR PreMix tubes to make a total volume of 20 µl or 50 µl. Do not include the dried pellet.</p> <ul style="list-style-type: none"> <li>Amount of template</li> </ul> <table border="1" data-bbox="526 622 1468 784"> <thead> <tr> <th rowspan="2">Template DNA</th> <th colspan="2">Amount of template</th> </tr> <tr> <th>20 µl reaction</th> <th>50 µl reaction</th> </tr> </thead> <tbody> <tr> <td>Total genomic DNA</td> <td>100 pg-1 µg</td> <td>100 pg-1 µg</td> </tr> <tr> <td>cDNA</td> <td>10 pg-100 ng</td> <td>10 pg-100 ng</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Preparation of reaction mixture</li> </ul> <table border="1" data-bbox="526 851 1468 1131"> <thead> <tr> <th>Components</th> <th>20 µl reaction</th> <th>50 µl reaction</th> </tr> </thead> <tbody> <tr> <td>Template DNA</td> <td>Variable (5-10 µl)</td> <td>Variable (5-10 µl)</td> </tr> <tr> <td>Forward primer (10 pmol/µl)</td> <td>1-2 µl</td> <td>1-2 µl</td> </tr> <tr> <td>Reverse primer (10 pmol/µl)</td> <td>1-2 µl</td> <td>1-2 µl</td> </tr> <tr> <td>(Optional) 50X ROX dye</td> <td>0.4 µl</td> <td>1 µl</td> </tr> <tr> <td>DEPC-D.W.</td> <td>Variable</td> <td>Variable</td> </tr> <tr> <td>Total volume</td> <td>20 µl</td> <td>50 µl</td> </tr> </tbody> </table> <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>	Template DNA	Amount of template		20 µl reaction	50 µl reaction	Total genomic DNA	100 pg-1 µg	100 pg-1 µg	cDNA	10 pg-100 ng	10 pg-100 ng	Components	20 µl reaction	50 µl reaction	Template DNA	Variable (5-10 µl)	Variable (5-10 µl)	Forward primer (10 pmol/µl)	1-2 µl	1-2 µl	Reverse primer (10 pmol/µl)	1-2 µl	1-2 µl	(Optional) 50X ROX dye	0.4 µl	1 µl	DEPC-D.W.	Variable	Variable	Total volume	20 µl	50 µl
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<p><b>2</b></p> <div style="text-align: center;">  <p><b>Real-time PCR</b></p> </div>	<p>4. Perform the reaction under the following conditions.</p> <table border="1" data-bbox="526 1388 1468 1556"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> <th>Cycles</th> </tr> </thead> <tbody> <tr> <td>Pre-denaturation</td> <td>95°C</td> <td>1-5 min</td> <td>1 cycle</td> </tr> <tr> <td>Denaturation</td> <td>95°C</td> <td>5-20 sec</td> <td rowspan="2">40-45 cycles</td> </tr> <tr> <td>Annealing &amp; Extension</td> <td>55-60°C</td> <td>40-45 sec</td> </tr> </tbody> </table> <p>* <b>Note:</b> 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	1-5 min	1 cycle	Denaturation	95°C	5-20 sec	40-45 cycles	Annealing & Extension	55-60°C	40-45 sec																	
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