

[Cat. No.] **K-6923**

### Introduction

AccuPower® Mackerel Real-Time PCR Kit can specifically detect Mackerel DNA in food products.

There has been a rapid increase in the number of patients with food allergies. This is due to a hypersensitivity reaction of the immune system arising from an unbalanced diet and an unstable immune response. People allergic to any food must check every ingredient before having any processed food. Even a minor number of allergens can be fatal to them. This kit is highly sensitive to Mackerel DNA, which is one of the major allergies-triggering ingredients.

This product contains all Real-time PCR components specific to Mackerel, including DNA polymerase, dNTPs, and reaction buffer. The users can easily prepare reaction mixture simply by adding the template DNA, Oligo Mix and DEPC-D.W.

### Features & Benefits

- Convenience: All necessary reactants for real-time PCR are included in a tube (i.e., Master Mix Type), allowing the users to perform reaction simply by adding a template DNA, Oligo Mix, and DEPC-D.W.
- Sensitivity: By applying the HotStart Taq DNA Polymerase that minimizes non-specific reactions and maximizes reaction efficiency, only the target gene can be effectively amplified even with a trace amount of template DNA.

### Components

Components	Amount
2X Master Mix	625 µl x 2
Oligo Mix	500 µl
50X ROX dye†	100 µl
DEPC-D.W.	1.8 ml

\* **Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

† 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, but not required for BIONEER Exicycler™ 96 Real-Time PCR System.

### Composition

Composition	25 µl reaction
2X Master Mix	Taq DNA Polymerase 2 U dNTPs (dATP, dCTP, dGTP, dTTP) Each 300 µM Reaction buffer with 2 mM MgCl <sub>2</sub> 1X
Oligo Mix	Mackerel Forward primer 1.2 µM Mackerel Reverse primer 1.2 µM Mackerel Probe (FAM) 1.2 µM
50X ROX dye	1X
DEPC-D.W.	-

### Specifications

Taq DNA Polymerase	
5'→3' exonuclease activity	Yes
3'→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



English

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

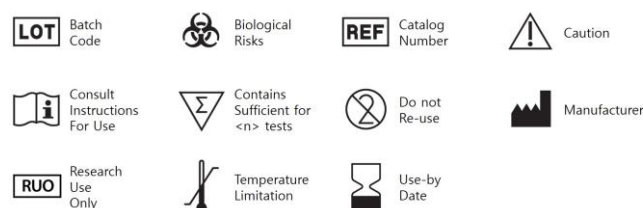
### Ordering Information

Description	Cat. No.
AccuPower® Mackerel Real-Time PCR Kit, 1.25 ml of 2X Master Mix solution, 100 tests	K-6923




### 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	 <b>Preparation of reaction mixture</b>	<p>1. Thaw all components of <i>AccuPower</i>® Mackerel Real-Time PCR Kit on ice and mix thoroughly before use. Then, briefly spin down all components.</p>															
2	 <b>Composition of reaction mixture</b>	<p>2. Add all component into PCR tubes (not provided) or a plate (not provided) under the following components (Based on 1 test).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Components</th> <th style="text-align: left;">Amount</th> </tr> </thead> <tbody> <tr> <td>2X Master Mix</td> <td>12.5 µl</td> </tr> <tr> <td>Oligo Mix</td> <td>5 µl</td> </tr> <tr> <td>Template DNA</td> <td>1-5 µl</td> </tr> <tr> <td>(Optional) 50X ROX dye</td> <td>1X</td> </tr> <tr> <td>DEPC-D.W.</td> <td>Variable</td> </tr> <tr> <td>Total volume</td> <td>25 µl</td> </tr> </tbody> </table>	Components	Amount	2X Master Mix	12.5 µl	Oligo Mix	5 µl	Template DNA	1-5 µl	(Optional) 50X ROX dye	1X	DEPC-D.W.	Variable	Total volume	25 µl	
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3	 <b>Real-time PCR</b>	<p>3. Place PCR tubes or plate on the Real-Time Quantitative thermal cycler.</p> <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>5 min</td> <td>1 cycle</td> </tr> <tr> <td>Denaturation</td> <td>95°C</td> <td>5 sec</td> <td rowspan="2">45 cycles</td> </tr> <tr> <td>Annealing &amp; Extension</td> <td>55°C</td> <td>5 sec</td> </tr> </tbody> </table> <p>* <b>Note:</b> Users can adjust the protocol according to their instrument and template 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	5 min	1 cycle	Denaturation	95°C	5 sec	45 cycles	Annealing & Extension	55°C	5 sec
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