

[Cat. No.] **K-2979**

### Introduction

AccuPower® Aeromonas salmonicida Real-Time PCR Kit is a product that can specifically detect *Aeromonas salmonicida* (*A. salmonicida*) by real-time PCR.

*A. salmonicida* is a gram-negative bacterium known as one of the causative agents of sepsis. *A. salmonicida* is only pathogenic to fish. Infected fish express symptoms, such as hemorrhagic sepsis, tail rot, and gastroenteritis.

This product contains all Real-time PCR components specific to *A. salmonicida*, including DNA polymerase, dNTPs, and reaction buffer. The users can easily prepare reaction mixture simply by adding 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 template DNA, Oligo Mix, and DEPC-D.W.
- Sensitivity: By using BIONEER's 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
DEPC-D.W.	1.8 ml
Positive Control (1x10 <sup>8</sup> copies/µl)	50 µl

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

### 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	<i>A. salmonicida</i> Forward primer	0.6 µM
	<i>A. salmonicida</i> Reverse primer	0.6 µM
	<i>A. salmonicida</i> Probe (FAM)	0.6 µM
	ROX dye	1X

### 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



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

### Ordering Information

Description	Cat. No.
AccuPower® Aeromonas salmonicida Real-Time PCR Kit, 1.25 ml of 2X Master Mix solution, 100 tests	K-2979




### 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. Thaw all components of <i>AccuPower® Aeromonas salmonicida</i> 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 components into PCR tubes (not provided) or a plate (not provided) referring to the following list of components (Based on 1 test).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Components</th> <th style="text-align: center;">Amount</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2X Master Mix</td> <td style="text-align: center;">12.5 µl</td> </tr> <tr> <td style="text-align: center;">Oligo Mix</td> <td style="text-align: center;">5 µl</td> </tr> <tr> <td style="text-align: center;">Template DNA</td> <td style="text-align: center;">1-5 µl</td> </tr> <tr> <td style="text-align: center;">DEPC-D.W.</td> <td style="text-align: center;">Variable</td> </tr> <tr> <td style="text-align: center;">Total volume</td> <td style="text-align: center;">25 µl</td> </tr> </tbody> </table>	Components	Amount	2X Master Mix	12.5 µl	Oligo Mix	5 µl	Template DNA	1-5 µl	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: center;">Step</th> <th style="text-align: center;">Temperature</th> <th style="text-align: center;">Time</th> <th style="text-align: center;">Cycles</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Pre-denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">5 min</td> <td style="text-align: center;">1 cycle</td> </tr> <tr> <td style="text-align: center;">Denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">10 sec</td> <td style="text-align: center;">45 cycles</td> </tr> <tr> <td style="text-align: center;">Annealing &amp; Extension</td> <td style="text-align: center;">55°C</td> <td style="text-align: center;">20 sec</td> <td style="text-align: center;">45 cycles</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	10 sec	45 cycles	Annealing & Extension	55°C	20 sec	45 cycles
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