AccuPower® PRV Master Mix

[Cat. No.] K-2992

Introduction

AccuPower® PRV Master Mix is a product that can detect Piscine orthoreovirus, which causes the disease heart and skeletal muscle inflammation (HSMI) in farmed Atlantic salmon, by real-time PCR.
Piscine orthoreovirus (PRV) is a serious virus in salmon aquaculture belonging to the family Reoviridae. PRV has been found present at higher concentration in fish with various diseases. This disease includes HSMI, jaundice syndrome, proliferative darkening syndrome and erythrocytic body inclusion syndrome. PRV is thought to mainly affect aquacultured and maricultured fish stocks.
This product contains all real-time PCR components specific to Piscine orthoreovirus, including RTase, DNA polymerase, primers, dNTPs, Reaction buffer. The users can easily prepare reaction mixture simply by adding template RNA, internal positive control (IPC), 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 RNA, oligo mix, and DEPC-D.W.
- Sensitivity: By using BIONEER's PyroHotStart RT reaction and 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 RNA.

Components

Components	Amount
2X Master Mix	625 µl x 2ea
Oligo Mix	500 µl
Positive control (1*10^8 copies/µl)	50 µl
DEPC-D.W.	1.3 ml

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

Composition

Composition		25 µl reaction
2X Master Mix	*RocketScript*™ Reverse transcriptase	0.5 U
	Taq DNA Polymerase	3.5 U
	dNTPs (dATP, dCTP, dGTP, dTTP)	Each 300 µM
	Reaction buffer with 2 mM $MgCl_2$	1X
Oligo Mix	PRV Forward primer	0.4 µM
	PRV Reverse primer	0.4 µM
	PRV Probe (FAM)	0.4 µM

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.

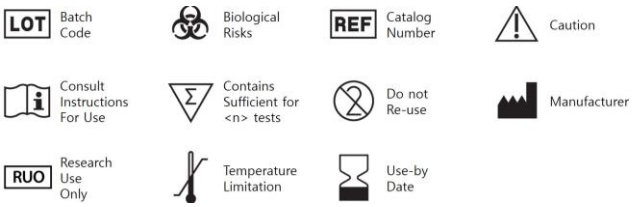
Ordering Information

Description	Cat. No.
AccuPower® PRV Master Mix 1.25 ml of 2X Master Mix solution, 100 tests	K-2992

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

<table>
<tr><th colspan="2">Steps</th><th>Procedure Details</th></tr>
<tr><td>1</td><td> 
Preparation of reaction mixture</td><td>1. Before use, thaw all components of AccuPower® PRV Master Mix on ice and mix them thoroughly. Then, briefly spin down components.</td></tr>
<tr><td>2</td><td> 
Composition of reaction mixture</td><td>2. Add all components into PCR tubes or a plate referring to the following list of components. (based on 1 test)
<table>
<tr><th>Components</th><th>Volume (ul)</th></tr>
<tr><td>2X Mater Mix</td><td>12.5</td></tr>
<tr><td>Oligo Mix</td><td>5</td></tr>
<tr><td>Template RNA (Positive Control)</td><td>1~5</td></tr>
<tr><td>DEPC-DW</td><td>Up to 25</td></tr>
<tr><td>Total reaction volume</td><td>25</td></tr>
</table></td></tr>
<tr><td>3</td><td> 
Real-time PCR</td><td>3. Place PCR tubes or plate on the real-time quantitative thermal cycler.
4. Perform the reaction under the following conditions.
<table>
<tr><th>Step</th><th>Temperature</th><th>Time</th><th>Cycles</th></tr>
<tr><td>Reverse Transcription</td><td>50 °C</td><td>15 min</td><td>1 cycle</td></tr>
<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>10 sec</td><td rowspan="3">45 cycles</td></tr>
<tr><td>Annealing& Extension</td><td>60 °C</td><td>20 sec</td></tr>
<tr><td>Scan</td><td></td><td></td></tr>
</table>
* Note: Users can adjust the protocol according to their instrument and template sequences to get optimal results.
5. After the reaction is completed, analyze the results.</td></tr>
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