

[Cat. No.] **K-2912**

Introduction

AccuPower® EUS Master Mix is a product which can detect *Aphanomyces invadans*, the cause of epizootic ulcerative syndrome (EUS) in freshwater fish, through real-time polymerase chain reaction (real-time PCR). *Aphanomyces invadans* mainly causes clinical symptoms such as darkening of the body, red spots or small-to-large ulcerative lesions on the body surface in freshwater fish. EUS occurs throughout the world, including Asia, Australia, North America, and South Africa.

This product contains all real-time PCR components specific to EUS (*Aphanomyces invadans*), including RTase, DNA polymerase, primers, dNTPs, and reaction buffer. The users can easily prepare a reaction mixture simply by adding template DNA, 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 DNA, 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 DNA.

Components

Components	Amount
Master Mix	1.5 ml
Oligo Mix	400 µl
Positive Control (2x10 ⁷ copies/µl)	50 µl
Internal Positive Control (1x10 ⁵ copies/µl)	100 µl
PC Dilution Buffer	1 ml
DEPC-DW	1.3 ml

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

Composition

Composition	25 µl reaction
Master Mix	
RocketScript™ Reverse transcriptase	1 U
Taq DNA polymerase	6 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 300 µM
Reaction buffer with 2 mM MgCl ₂	1X
Oligo Mix	
EUS Forward primer	0.6 µM
EUS Reverse primer	0.6 µM
EUS Probe (FAM)	0.6 µM
IPC Forward primer	0.4 µM
IPC Reverse primer	0.4 µM
IPC Probe (Cy5)	0.4 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® EUS Master Mix, 1.5 ml of Master Mix solution, 100 tests	K-2912




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

LOT Batch Code	Biological Risks	REF Catalog Number	Caution
Consult Instructions For Use	Contains Sufficient for <n> tests	Do not Re-use	Manufacturer
RUO Research Use Only	Temperature Limitation	Use-by Date	

Experimental Procedures

Steps		Procedure Details															
1	 Preparation of reaction mixture	<p>1. Before use, thaw all components of <i>AccuPower®</i> EUS Master Mix on ice and mix them thoroughly. Then, briefly spin down all components.</p>															
2	 Composition of reaction mixture	<p>2. Add all components into PCR tubes or a plate 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: left;">Components</th> <th style="text-align: right;">Volume (µl)</th> </tr> </thead> <tbody> <tr> <td>Master Mix</td> <td style="text-align: right;">15</td> </tr> <tr> <td>Oligo Mix</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Template DNA</td> <td style="text-align: right;">5</td> </tr> <tr> <td>Internal Positive Control</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Total volume</td> <td style="text-align: right;">25</td> </tr> </tbody> </table>	Components	Volume (µl)	Master Mix	15	Oligo Mix	4	Template DNA	5	Internal Positive Control	1	Total volume	25			
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3	 Real-time PCR	<p>3. Place PCR tubes or a 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 & Extension</td> <td>55°C</td> <td>5 sec</td> </tr> </tbody> </table> <p>* Note: 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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