AccuPower® KHV Master Mix

[Cat. No.] K-2915

Introduction

AccuPower® KHV Master Mix is a product which can detect koi herpesvirus (KHV), the cause of koi herpesvirus disease (KHVD), through real-time polymerase chain reaction (real-time PCR). This is the viral disease of carp and its clinical signs include pale or reddened body color, focal or total loss of epidermis, hemorrhage on the fin, endophthalmia, and excessive or reduced mucus secretion. KHVD occurs in Europe, Asia, the Middle East, Southern Africa, and North America.
This product contains all real-time PCR components specific to KHV, 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	KHV Forward primer	0.6 µM
	KHV Reverse primer	0.6 µM
	KHV 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

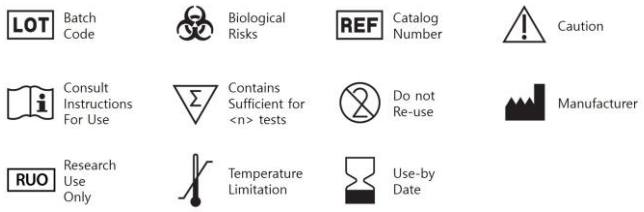
Ordering Information

Description	Cat. No.
AccuPower® KHV Master Mix, 1.5 ml of Master Mix solution, 100 tests	K-2915

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® KHV Master Mix on ice and mix them thoroughly. Then, briefly spin down all 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 (µl)</th></tr>
<tr><td>Master Mix</td><td>15</td></tr>
<tr><td>Oligo Mix</td><td>4</td></tr>
<tr><td>Template DNA (Positive Control)</td><td>5</td></tr>
<tr><td>Internal Positive Control</td><td>1</td></tr>
<tr><td>Total volume</td><td>25</td></tr>
</table></td></tr>
<tr><td>3</td><td> 
Real-time PCR</td><td>3. Place PCR tubes or a 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>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>
</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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