

[Cat. No.] **K-2920**

### Introduction

AccuPower® Streptococcus 3-plex PCR Kit is a ready-to-use premix for multiplex PCR that can be used to detect three major strains of *Streptococcus iniae*, *Streptococcus parauberis*, and *Lactococcus garvieae* from farmed flounder.

Streptococcal infections occur sporadically in marine and freshwater aquaculture farms around the world. It can infect marine animals such as flounders and red snappers, causing serious economic losses to the farmers. When infected, the fish can show symptoms such as cloudy and prominent eyeballs, peritoneal adhesions, bleeding, and body bending.

This product contains vacuum-dried components specific to *Streptococcus* including DNA polymerase, primers, dNTPs, and reaction buffer required for PCR. This ready-to-use kit simplifies preparation of PCR mixture as the user only has to add template DNA and nuclease-free water. After the reaction, since tracking dye is included, the samples can be applied directly on agarose gel for analysis without adding extra solution.

### Features & Benefits

- **Convenience & Reproducibility:** All reactants necessary for PCR including primers are lyophilized in each PCR tube, providing reproducible results in a convenient way.
- **Multiplex PCR:** Generates three multiplex amplification products using only a single tube.
- **Sensitivity:** By applying the patented PyroHotStart (Enzyme-mediated HotStart) technology 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.
- **Stability:** Included stabilizer in the PCR reaction mixture provides increased stability compared to solution-type products.

### Composition

Composition	20 µl reaction
Top DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 200 µM
Reaction buffer with 2 mM MgCl <sub>2</sub>	1X
Stabilizer and tracking dye	O
Sin 1a primer	0.5 µM
Sin 1b primer	0.5 µM
Sin 2 primer	0.5 µM
Spa 2152 primer	0.5 µM
Spa 2870 primer	0.5 µM
pLG 1 primer	0.5 µM
pLG 2 primer	0.5 µM

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

### Specifications

Top DNA Polymerase	
5'→3' exonuclease activity	No
3'→5' exonuclease activity	No

3'-A overhang	Yes
	<i>S. iniae</i> : 300 bp
Fragment size	<i>S. parauberis</i> : 718 bp
	<i>L. garvieae</i> : 1,100 bp

### 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® Streptococcus 3-plex PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-2920




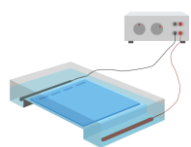
### Notice

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	 <b>Add template DNA</b>	<p>1. After preparing the template DNA and nuclease-free water, add the template DNA to the <i>AccuPower®</i> Streptococcus 3-plex PCR Kit.</p>																								
2	 <b>Preparation of reaction mixture</b>	<p>2. Add nuclease-free water into PCR tubes to make a total volume of 20 µl. (Do not include the volume of the dried premix in the PCR tubes.)</p> <p>3. Completely dissolve the vacuum-dried pellet by vortexing, and briefly spin down.</p>																								
3	 <b>Incubate reactions in a thermal cycler</b>	<p>4. Place PCR tubes on the thermal cycler.</p> <p>5. Perform the reaction under the following conditions.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> <th>Cycles</th> </tr> </thead> <tbody> <tr> <td>Pre-denaturation</td> <td>95°C</td> <td>10 min</td> <td>1 cycle</td> </tr> <tr> <td>Denaturation</td> <td>95°C</td> <td>30 sec</td> <td></td> </tr> <tr> <td>Annealing</td> <td>55°C</td> <td>30 sec</td> <td>30 cycles</td> </tr> <tr> <td>Extension</td> <td>72°C</td> <td>30 sec</td> <td></td> </tr> <tr> <td>Final extension</td> <td>72°C</td> <td>7 min</td> <td>1 cycle</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>	Step	Temperature	Time	Cycles	Pre-denaturation	95°C	10 min	1 cycle	Denaturation	95°C	30 sec		Annealing	55°C	30 sec	30 cycles	Extension	72°C	30 sec		Final extension	72°C	7 min	1 cycle
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4	 <b>Analyze with gel electrophoresis</b>	<p>6. After the reaction, maintain the reaction mixture at 4-8°C.</p> <p>7. Load samples on agarose gel without adding a loading-dye mixture, and perform gel electrophoresis for analysis.</p>																								