

[Cat. No.] **K-2907**

Introduction

AccuPower® Streptococcus suis PCR Kit is a ready-to-use premix for PCR that can be used to detect *Streptococcus suis* (*S. suis*) which causes pneumonia and sepsis in pigs, rabbits and cattle.

S. suis is a bacterial pathogen that can cause many symptoms such as porcine meningitis, sepsis, pneumonia, arthritis, endocarditis, vaginitis, and abortion. When worsened, it can lead to death. *S. suis* can be found worldwide, such as in the Republic of Korea, North America, and Europe. A pig can also transmit *S. suis* to humans by direct contact, especially through skin wounds. When affected, they can experience meningitis, sepsis, pharyngitis, and diarrhea. As there are a wide variety of symptoms, it is the best to check for the presence of the bacteria to determine the exact cause of the illness. This product contains vacuum-dried components specific to *S. suis* 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.
- **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 250 µM
Reaction buffer with 1.5 mM MgCl ₂	1X
Stabilizer and tracking dye	O
<i>S. suis</i> Forward primer	0.5 µM
<i>S. suis</i> Reverse 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
Fragment size	688 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

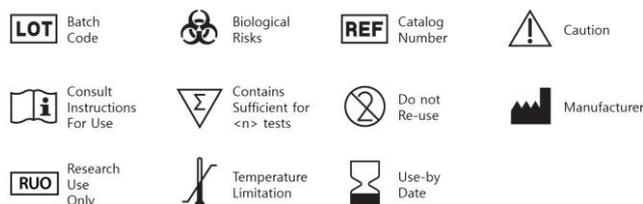
Ordering Information

Description	Cat. No.
AccuPower® Streptococcus suis PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-2907

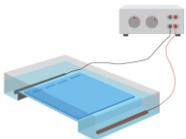
Notice

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Explanation of Symbols



Experimental Procedures

Steps		Procedure Details																								
1	 <p>Add template DNA</p>	<p>1. After preparing the template DNA and nuclease-free water, add the template DNA to the <i>AccuPower®</i> Streptococcus suis PCR Kit.</p>																								
2	 <p>Preparation of reaction mixture</p>	<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	 <p>Incubate reactions in a thermal cycler</p>	<p>4. Place PCR tubes on the thermal cycler.</p> <p>5. Perform the reaction under the following conditions.</p> <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time</th> <th>Cycles</th> </tr> </thead> <tbody> <tr> <td>Pre-denaturation</td> <td>94°C</td> <td>5 min</td> <td>1 cycle</td> </tr> <tr> <td>Denaturation</td> <td>94°C</td> <td>60 sec</td> <td></td> </tr> <tr> <td>Annealing</td> <td>55°C</td> <td>60 sec</td> <td>40 cycles</td> </tr> <tr> <td>Extension</td> <td>72°C</td> <td>60 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>* Note: Users can adjust the protocol according to their instrument and template sequences to get optimal results.</p>	Step	Temperature	Time	Cycles	Pre-denaturation	94°C	5 min	1 cycle	Denaturation	94°C	60 sec		Annealing	55°C	60 sec	40 cycles	Extension	72°C	60 sec		Final extension	72°C	7 min	1 cycle
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4	 <p>Analyze with gel electrophoresis</p>	<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>																								