

[Cat. No.] **K-2972**

Introduction

AccuPower® Staphylococcus aureus Real-Time PCR Kit is a product that can specifically detect *Staphylococcus aureus* (*S. aureus*) by real-time PCR.

S. aureus a gram-positive bacterium known as one of the causative agents of staphylococcosis. *S. aureus* is a zoonoses pathogenic to humans and livestock. *S. aureus* is transmitted through ingestion of contaminated food, and causes symptoms such as food poisoning, purulent infection, pneumonia, and enteritis.

This product contains all Real-time PCR components specific to *S. aureus*, including DNA polymerase, dNTPs, and reaction buffer. The users can easily prepare reaction mixture simply by adding template DNA, 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 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
2X Master Mix	625µl x 2
Oligo Mix	500 µl
DEPC-D.W.	1.8 ml
Positive Control (1x10 ⁸ copies/µl)	50 µl

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

Composition

Composition	25 µl reaction	
2X Master Mix	Taq DNA Polymerase	2 U
	dNTPs (dATP, dCTP, dGTP, dTTP)	Each 300 µM
	Reaction buffer with 2 mM MgCl ₂	1X
Oligo Mix	<i>S. aureus</i> Forward primer	0.6 µM
	<i>S. aureus</i> Reverse primer	0.6 µM
	<i>S. aureus</i> Probe (FAM)	0.6 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® Staphylococcus aureus Real-Time PCR Kit, 1.25 ml of 2X Master Mix solution, 100 tests	K-2972




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. Thaw all components of <i>AccuPower</i>® Staphylococcus aureus Real-Time PCR Kit on ice and mix thoroughly before use. Then, briefly spin down all components.</p>															
2	 Composition of reaction mixture	<p>2. Add all components into PCR tubes (not provided) or a plate (not provided) 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: center;">Components</th> <th style="text-align: center;">Amount</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2X Master Mix</td> <td style="text-align: center;">12.5 µl</td> </tr> <tr> <td style="text-align: center;">Oligo Mix</td> <td style="text-align: center;">5 µl</td> </tr> <tr> <td style="text-align: center;">Template DNA</td> <td style="text-align: center;">1-5 µl</td> </tr> <tr> <td style="text-align: center;">DEPC-D.W.</td> <td style="text-align: center;">Variable</td> </tr> <tr> <td style="text-align: center;">Total volume</td> <td style="text-align: center;">25 µl</td> </tr> </tbody> </table>	Components	Amount	2X Master Mix	12.5 µl	Oligo Mix	5 µl	Template DNA	1-5 µl	DEPC-D.W.	Variable	Total volume	25 µl			
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3	 Real-time PCR	<p>3. Place PCR tubes or 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: center;">Step</th> <th style="text-align: center;">Temperature</th> <th style="text-align: center;">Time</th> <th style="text-align: center;">Cycles</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Pre-denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">5 min</td> <td style="text-align: center;">1 cycle</td> </tr> <tr> <td style="text-align: center;">Denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">10 sec</td> <td rowspan="2" style="text-align: center;">45 cycles</td> </tr> <tr> <td style="text-align: center;">Annealing & Extension</td> <td style="text-align: center;">55°C</td> <td style="text-align: center;">20 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	10 sec	45 cycles	Annealing & Extension	55°C	20 sec
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