

[Cat. No.] **K-6815**

Introduction

AccuPower® Proteus mirabilis Real-Time PCR Kit is a product that can specifically detect *Proteus mirabilis* (*P. mirabilis*) by real-time PCR.

P. mirabilis is a gram-negative bacterium that primarily causes cystitis and is also known to cause kidney stones and sepsis. *P. mirabilis* is the most common pathogen of the genus *Proteus*, and infection through a catheter placed in the urethra is the most commonly reported.

This product contains all Real-time PCR components specific to *P. mirabilis*, 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 | 625 µl x 2 ea |
| 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 | 2.5 U |
| | dNTPs (dATP, dCTP, dGTP, dTTP) | Each 300 µM |
| | Reaction buffer with 2 mM MgCl ₂ | 1X |
| Oligo Mix | <i>P. mirabilis</i> Forward primer | 0.48 µM |
| | <i>P. mirabilis</i> Reverse primer | 0.48 µM |
| | <i>P. mirabilis</i> Probe (FAM) | 0.48 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



English

Visit our **product page** for additional information and protocols

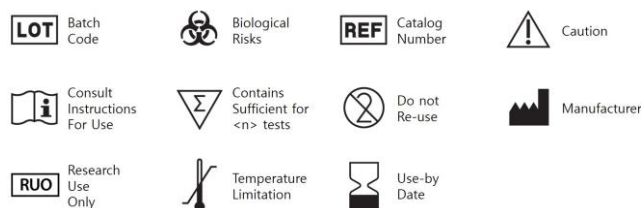
Ordering Information

| Description | Cat. No. |
|--|----------|
| AccuPower® Proteus mirabilis Real-Time PCR Kit, 1.25 ml of 2X Master Mix solution, 100 tests | K-6815 |




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

| Steps | | Procedure Details | | | | | | | | | | | | | | | |
|-----------------------|---|---|------------|-------------|---------------|---------|------------------|------|--------------|---------|--------------|----------|--------------|-----------|-----------------------|------|--------|
| 1 |  Preparation of reaction mixture | <p>1. Thaw all components of <i>AccuPower</i>® Proteus mirabilis 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: left;">Components</th> <th style="text-align: left;">Amount</th> </tr> </thead> <tbody> <tr> <td>2X Master Mix</td> <td>12.5 µl</td> </tr> <tr> <td>Oligo Mix</td> <td>5 µl</td> </tr> <tr> <td>Template DNA</td> <td>1-5 µl</td> </tr> <tr> <td>DEPC-D.W.</td> <td>Variable</td> </tr> <tr> <td>Total volume</td> <td>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 | | | |
| 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 | | | | | | | | | | | | | | | | |
| 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: 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>10 sec</td> <td rowspan="2">45 cycles</td> </tr> <tr> <td>Annealing & Extension</td> <td>55°C</td> <td>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 |
| Step | Temperature | Time | Cycles | | | | | | | | | | | | | | |
| Pre-denaturation | 95°C | 5 min | 1 cycle | | | | | | | | | | | | | | |
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| Annealing & Extension | 55°C | 20 sec | | | | | | | | | | | | | | | |