

[Cat. No.] **K-6845**

### Introduction

*AccuPower*<sup>®</sup> *Neisseria meningitidis* Real-Time PCR Kit is a product that can specifically detect *Neisseria meningitidis* (*N. meningitidis*) by real-time PCR.

*N. meningitidis* is a gram-negative bacterium known to primarily cause meningitis and sepsis or urethritis. Infection by *N. meningitidis* is prevalent in the spring and winter of temperate climates and is frequently reported in the 'meningitis belt' spanning 26 countries in sub-Saharan Africa. The fatality rate of meningitis induced by *N. meningitidis* is about 10%, and even after recovery, complications such as seizures and gangrene in the extremities are accompanied, so caution is required.

This product contains all Real-time PCR components specific to *N. meningitidis*, 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 <sup>8</sup> 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 | <i>Taq</i> DNA Polymerase                   | 2.5 U       |
|               | dNTPs (dATP, dCTP, dGTP, dTTP)              | Each 300 µM |
|               | Reaction buffer with 2 mM MgCl <sub>2</sub> | 1X          |
| Oligo Mix     | <i>N. meningitidis</i> Forward primer       | 0.4 µM      |
|               | <i>N. meningitidis</i> Reverse primer       | 0.4 µM      |
|               | <i>N. meningitidis</i> Probe (FAM)          | 0.4 µM      |
|               | ROX dye                                     | 1X          |

### Specifications

| <i>Taq</i> 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

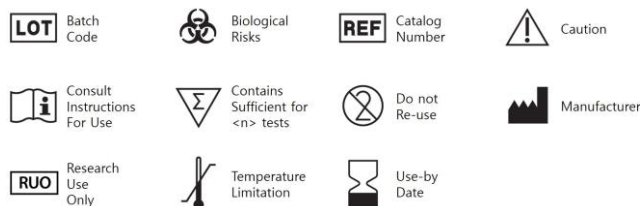
### Ordering Information

| Description   | Cat. No. |
|---|----------|
| <i>AccuPower</i> <sup>®</sup> <i>Neisseria meningitidis</i> Real-Time PCR Kit, 1.25 ml of 2X Master Mix solution, 100 tests | K-6845   |




### 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                     | <br><b>Preparation of reaction mixture</b> | 1. Thaw all components of <i>AccuPower</i> <sup>®</sup> <i>Neisseria meningitidis</i> Real-Time PCR Kit on ice and mix thoroughly before use. Then, briefly spin down all components.  |            |             |               |         |                  |      |              |         |              |          |              |           |                       |      |        |
| 2                     | <br><b>Composition of reaction mixture</b> | 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). <table border="1" style="width: 100%; margin-top: 10px;"> <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                     | <br><b>Real-time PCR</b>                 | 3. Place PCR tubes or plate on the Real-Time Quantitative thermal cycler.<br>4. Perform the reaction under the following conditions. <table border="1" style="width: 100%; margin-top: 10px;"> <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 &amp; Extension</td> <td>55°C</td> <td>20 sec</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> 5. After the reaction is completed, analyze the results. | 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    |             |               |         |                  |      |              |         |              |          |              |           |                       |      |        |
| Denaturation          | 95°C  | 10 sec   | 45 cycles  |             |               |         |                  |      |              |         |              |          |              |           |                       |      |        |
| Annealing & Extension | 55°C  | 20 sec   |            |             |               |         |                  |      |              |         |              |          |              |           |                       |      |        |