

# Pathogenic E. coli Detection Kits

| Products Name                | Cat. No. | Volume   |
|------------------------------|----------|----------|
| E. coli Detection Kit        | E-1000   | 96 tests |
| EAEC/EPEC/EIEC Detection Kit | E-2000   | 96 tests |
| ETEC/EHEC Detection Kit      | E-3000   | 96 tests |

## Components

1. Multi HS Prime Taq Premix (with UDG) 96 test x 1 plate
2. Primer Mixture 0.5 mL x 1 tube
3. Control DNA (for ladder) 60 uL x 1 tube

## Description

Pathogenic E. coli Detection Kits consists of HS Prime Taq Premix (with UDG), primer mixture and control DNA as ladder. Especially, the UDG (Uracil-DNA Glycosylase) is included in HS Prime Taq Premix and catalyses the release of free uracil from uracil-containing DNA. So the cross-contamination of PCR products is protected.

## Target Toxins

| Products                     | Pathotype        | Toxin       | Size    |
|------------------------------|------------------|-------------|---------|
| E.coli Detection Kit (multi) | Internal control | -           | 1000 bp |
|                              | EIEC             | <i>ipaH</i> | 718 bp  |
|                              | EHEC             | <i>vt1</i>  | 599 bp  |
|                              | EHEC             | <i>vt2</i>  | 481 bp  |
|                              | EPEC             | <i>bfpA</i> | 400 bp  |
|                              | EAEC             | <i>aggR</i> | 341 bp  |
|                              | EPEC             | <i>eaeA</i> | 291 bp  |
|                              | ETEC             | <i>stx</i>  | 234 bp  |
|                              | ETEC             | <i>stx</i>  | 171 bp  |
| EAEC/EPEC/EIEC Detection Kit | Internal control | -           | 1000 bp |
|                              | EIEC             | <i>ipaH</i> | 718 bp  |
|                              | EAEC             | <i>bfpA</i> | 400 bp  |
|                              | EAEC             | <i>aggR</i> | 341 bp  |
|                              | EPEC             | <i>eaeA</i> | 291 bp  |
| ETEC/EHEC Detection Kit      | Internal control | -           | 1000 bp |
|                              | EHEC             | <i>vt1</i>  | 599 bp  |
|                              | EHEC             | <i>vt2</i>  | 481 bp  |
|                              | ETEC             | <i>stx</i>  | 234 bp  |
|                              | ETEC             | <i>stx</i>  | 171 bp  |
|                              | ETEC             | <i>stx</i>  | 171 bp  |

EAEC: Enterotoxigenic E. coli      EPEC: Enteropathogenic E. coli  
ETEC: Enterotoxigenic E. coli      EHEC: Enterohaemorrhagic E. coli  
EIEC: Enteroinvasive E. coli

## Mixing Condition

| Components                   | Volume |
|------------------------------|--------|
| 2x Multi HS Prime Taq Premix | 10 uL  |
| Primer Mixture               | 5 uL   |
| Template DNA                 | 5 uL   |
| Total                        | 20 uL  |

## PCR Condition

| Step                | Temperature | Time   | Cycle |
|---------------------|-------------|--------|-------|
| UDG Reaction        | 50 °C       | 3 min  | 1     |
| Pre-denaturation    | 95 °C       | 10 min | 1     |
| Denaturation        | 95 °C       | 30 sec | 35    |
| Annealing/Extension | 68 °C       | 45 sec |       |
| Final Extension     | 72 °C       | 5 min  | 1     |
| Store               | 12 °C       | ∞      | -     |

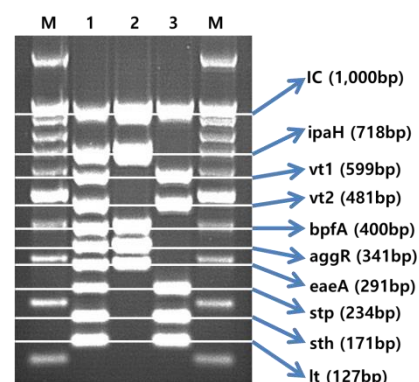
## Criterion of Interpretation of test results

| Reaction type                | Amplification | Interpretation  |
|------------------------------|---------------|-----------------|
| Internal control (only)      | +             | Negative        |
| Internal control + any toxin | +             | Positive        |
| Any toxin (only)             | +             | Positive        |
| Internal control, any toxin  | -             | Suspect result* |

\*Repeat the PCR with diluted 1/10 and 1/100 of extracted DNA from step 3.

## Electrophoresis

- PCR product loading volume: 7 ul / 5 mm lane width
- Control DNA loading volume: 7 ul / 5 mm lane width



Lane M: 100bp DNA Marker (Cat. No. M-1000)

Lane 1: E.coli Detection Kit (Cat. No. E-1000)

Lane 2: EAEC/EPEC/EIEC Detection Kit (Cat. No. E-2000)

Lane 3: ETEC/EHEC Detection Kit (Cat. No. E-3000)

Research Use Only

Store at -20°C