

DIARRHOEAGENIC E. COLI PCR KIT

(EHEC, EIEC, EPEC, ETEC, EAEC)

STATENS
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- Improve your *E. coli* diagnostics
- Target 5 diarrhoeagenic *E. coli* groups in a single reaction
- Detect pathogenic *E. coli* bacteria causing diarrhoea in humans

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Description

The Diarrhoeagenic *E. coli* PCR Kit (EHEC, EIEC, EPEC, ETEC, EAEC) is a robust conventional PCR system for *in vitro* diagnostics of *E. coli* causing diarrhoea in humans [1,2]. The kit detects the 5 most important diarrhoeagenic *E. coli* (DEC) groups, which are:

- The enterohaemorrhagic *E. coli* (EHEC)
- The enteroinvasive *E. coli* (EIEC)
- The enteropathogenic *E. coli* (EPEC) and the attaching and effacing *E. coli* (A/EEC)
- The enterotoxigenic *E. coli* (ETEC)
- The enteroaggregative *E. coli* (EAEC)

The Primer Mix included in the kit targets all 5 DEC groups in a single reaction.



Materials provided

Primer Mix
PCR positive DNA Control 1 and 2
PCR ReadyMix (including loading buffer)
TE-buffer (10 mM Tris-HCL, 1 mM EDTA, pH 8)
10 % Chelex-100 in TE-buffer (magnetic stir bar added)

The kit contains reagents to perform 100 PCR reactions.

Principle

The DEC is detected by using template prepared from *E. coli* colonies grown on an agar plate. The PCR set-up is simple and reactions can be run on thermal cyclers from various manufacturers. Agarose gel electrophoresis is performed to visualise the amplicons.

The Primers included in the Primer Mix target 10 virulence genes and 16S rDNA (positive internal control). The targeted virulence genes, amplicon sizes and the identified DEC groups are listed below.

Gene	DEC	Amplicon size (bp)
16S rDNA	-	1062
<i>ipaH</i>	EIEC	647
<i>aatA</i>	EAEC	550
<i>eltA</i>	ETEC	479
<i>vtx2</i>	EHEC	420
<i>eae</i>	EPEC, A/EEC	377
<i>aggR</i>	EAEC	323
<i>vtx1</i>	EHEC	260
<i>aaiC</i>	EAEC	214
<i>estA</i> -porcine	ETEC	160
<i>estA</i> -human	ETEC	151

Storage and Shelf Life

Reagent	Temperature
Primer Mix	-20°C
DNA controls	-20°C
PCR ReadyMix	-20°C
TE-buffer	Room temp.
10% Chelex-100	Room temp.

The Primer Mix and the controls in use can be stored at 2-8 °C for up to 2 weeks. The expiry date of the kit is printed on the label.

Product Assortment

Diarrhoeagenic *E. coli* PCR Kit (EHEC, EIEC, EPEC, ETEC, EAEC), Article No. 97004.

References

1. Persson, S., Olsen, K. E. P., Scheutz, F., Krogfelt, K. A. and Gerner-Smidt, P. 2007. A method for fast and simple detection of major diarrhoeagenic *Escherichia coli* in the routine diagnostic laboratory. Clin Microbiol Infect. 13:516-524.
2. Nataro, J. P. and J. B. Kaper. 1998. Diarrhoeagenic *Escherichia coli*. Clin. Microbiol Rev. 11:142-201.

Information and Ordering

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