

Native Escherichia coli O111:H8 Cells, Heat-Inactivated

Cat. No. ESC-226 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Heat-killed Escherichia coli O111:H8 cells in dextran solution. Antigen is intended for use as a positive control in immunoassay development for E. coli detection.

Background

E. coli was first described in 1885 by Theodor Escherich, an Austrian paediatrician, who called it Bacterium coli commune to reflect its universal occurrence in the faeces of healthy individuals (Escherich 1885). In 1939 the relationship between E. coli and infantile diarrhoea was confirmed (Bray 1945). Serotyping based on the somatic lipopolysaccharide or 'O' antigen and the flagella or 'H' antigen, helped distinguish the serogroups most likely to be associated with the disease (Kauffmann 1947), which included a set of O serogroups, notably O26, O55 and O111 (Ewing et al. 1963). Shiga toxin-producing Escherichia coli (STEC) are an important cause of haemorrhagic colitis and the diarrhoea-associated form of the haemolytic uraemic syndrome. Of the numerous serotypes of E. coli that have been shown to produce Shiga toxin (Stx), E. coli O157:H7 and E. coli O157:NM (non-motile) are most frequently implicated in human disease (De Boer & Heuvelink, 2000). Human infections with Enterohaemorrhagic Escherichia coli strains (EHEC) as agents of Haemorrhagic Colitis (HC) and Haemolytic Uraemic Syndrome (HUS) are frequently associated with the consumption of EHEC contaminated foodstuffs of different origins. EHEC O26, O103, O111, O118, O121, O145 and O157 strains are responsible for the majority of HC and HUS cases worldwide. Escherichia coli strains of serogroup O111 were the first strains implicated as the main cause of outbreaks of severe gastroenteritis in infant nurseries in the United Kingdom in the 1940s and is now recognized as one of the classic serogroups of enteropathogenic E. coli (EPEC). E. coli O111 strains have been implicated in numerous epidemics of serious enteric

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disease, including 28% of 50 outbreaks of infantile diarrhea in the United States from 1934 to 1987 (reviewed in Smith et al., 2014).

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type

Native

ClassID 1

Infectious Disease

GENE INFORMATION**Synonyms**

Escherichia coli O111:H8

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