

Antibody Datasheet

Product Name:	Mouse anti <i>Escherichia coli</i> O157
Clone number:	E10
Isotype:	Mouse IgG
Product code:	MAB12167-100
Batch Number:	
Amount:	0.1mg
Concentration:	1 mg/ml
Buffer:	Phosphate Buffered Saline pH7.4
Preservative:	0.09% Sodium Azide (NaN ₃)
Purification:	The antibody was purified by affinity chromatography on protein A
Specificity:	This antibody is specific for <i>E.coli</i> O157 detection. The antibody does not cross react with <i>Campylobacter coli</i> , <i>Campylobacter jejuni</i> , <i>Citobacter freundii</i> , <i>Clostridium difficile</i> , <i>E. coli</i> O22:H8, <i>E. coli</i> O91:H1-, <i>E. coli</i> O103:H2, <i>E. coli</i> O111:H21, <i>E. coli</i> O145:H-, <i>E. coli</i> O171:H2, <i>E. coli</i> O174:H8, <i>Klebsiella pneumoniae</i> , <i>Helicobacter pylori</i> , <i>Listeria monocytogenes</i> , <i>Morganella morganii</i> , <i>Proteus mirabilis</i> , <i>Salmonella enteritidis</i> , <i>Salmonella paratyphi</i> , <i>Salmonella typhi</i> , <i>Salmonella typhimurium</i> , <i>Salmonella boydii</i> , <i>Shigella dysenteriae</i> , <i>Shigella flexneri</i> , <i>Shigella sonnei</i> , <i>Staphylococcus aureus</i> .
Applications:	ELISA
Antigen background:	<i>Escherichia coli</i> (<i>E.coli</i>) is a gram-negative, rod-shaped, facultative anaerobic bacterium. Most strains of <i>E.coli</i> are harmless, but some are pathogenic to humans. Some pathogenic strains of <i>E.coli</i> produce Shiga toxins, which are potent



bacteriophage encoded cytotoxins. Shiga toxin producing *E.coli* (STEC), including *E.coli* O157:H7, are a common cause of severe food poisoning in humans worldwide.

Cattle and ruminants are the natural reservoir for *E.coli* O157:H7, where it exists in the animals' intestine as part of the normal intestinal flora. Outside the natural host, *E.coli* O157:H7 can survive in diverse environments including water, soil and food. In particular, *E.coli* O157:H7 can survive in meat that has been contaminated with faecal matter, and undercooked beef has been identified as a major source *E.coli* O157 infection. The bacterium can thrive at temperatures ranging from 7 – 50°C and therefore thorough cooking of meats is essential to destroy it. Other foods have been linked to *E.coli* O157:H7 outbreaks including unpasteurised milk, cured meats, bean sprouts and leafy vegetables, which have all been associated with faecal contamination.

E.coli O157 can infect individuals from all age groups. *E.coli* O157:H7 is resistant to stomach acids and is highly infectious. In humans, the ingested bacterium invades and colonises the intestinal mucosa. Symptoms of *E.coli* O157 infection include stomach cramps, haemorrhagic diarrhoea and vomiting. Haemolytic uremic syndrome (HUS) may occur in severe cases of infection, which may result in life threatening renal failure.

Pathogenic strains of *E.coli* acquire virulence factors through various means including plasmids and bacteriophages. Several virulence factors have been associated with *E.coli* O157:H7 including shiga toxins, putative virulence plasmid O157 (pO157) and a pathogenicity island referred to as the locus of enterocyte effacement (LEE). Together these virulence factors are currently thought to be responsible for the pathogenic nature of *E.coli* O157:H7 ([Lim JY](#)).

References: Lim JY, Yoon J, Hovde CJ. 2010. A brief overview of Escherichia coli O157:H7 and its plasmid O157. *J Microbiol Biotechnol.* Jan;20(1):5-14

Storage: Store at +4°C for up to three months, or at -20°C for longer.
The Antibody is shipped at ambient temperature.
Avoid repeated freeze/thaw cycles.

