# E. coli K99 (402): sc-66039



The Power to Question

## **BACKGROUND**

Escherichia coli is a member of the family Enterobacteriaceae, and it is one of the main species of bacteria living in the lower intestines of mammals. E. coli is a Gram-negative, rod-shaped, aerobic microbe that is commonly used as a model organism for bacteria in general. The K99 pilus antigen plays a large role in E. coli attachment and colonization in the small intestine. E. coli is the cause of a wide variety of infections in mammals including urinary tract infections, meningitis, peritonitis, mastitis, septicemia and Gramnegative pneumonia. Because of the important role of E. Coli in modern biological engineering, researchers commonly take advantage of this bacteria. E. coli can be easily altered to synthesize DNA or proteins, which can then be produced in large quantities using industrial fermentation processes. The E. coli strain 0157 is one of hundreds of strains of the bacterium E. coli that causes illness in humans. 0157 produces Shiga-like toxins that cause gastrointestinal illnesses. The E. coli K1 strain causes neonatal meningitis by penetrating into the central nervous system.

## **REFERENCES**

- South, M.A. 1971. Enteropathogenic Escherichia coli disease: new developments and perspectives. J. Pediatr. 79: 1-11.
- Tanaka, T., Weisblum, B., Schnös, M. and Inman, R. 1975. Construction and characterization of a chimeric plasmid composed of DNA-P from *Escherichia* coli and *Drosophila melanogaster*. Biochemistry 14: 2064-2072.
- 3. Joseph, T.A., Pyati, S.P. and Jacobs, N. 1998. Neonatal early-onset *Escherichia coli* disease. The effect of intrapartum Ampicillin. Arch. Pediatr. Adolesc. Med. 152: 35-40.
- 4. Sukumaran, S.K., Quon, M.J. and Prasadarao, N.V. 2002. *Escherichia coli* K1 internalization via caveolae requires caveolin-1 and protein kinase  $C\alpha$  interaction in human brain microvascular endothelial cells. J. Biol. Chem. 277: 50716-50724.
- Schultz, C.L., Edrington, T.S., Schroeder, S.B., Hallford, D.M., Genovese, K.J., Callaway, T.R., Anderson, R.C. and Nisbet, D.J. 2005. Effect of the thyroid on faecal shedding of *E. coli* 0157:H7 and *Escherichia coli* in naturally infected yearling beef cattle. J. Appl. Microbiol. 99: 1176-1180.
- Teng, C.H., Cai, M., Shin, S., Xie, Y., Kim, K.J., Khan, N.A., Di Cello, F. and Kim, K.S. 2005. *Escherichia coli* K1 RS218 interacts with human brain microvascular endothelial cells via type 1 fimbria bacteria in the fimbriated state. Infect. Immun. 73: 2923-2931.
- Duffy, G., Walsh, C., Blair, I.S. and McDowell, D.A. 2006. Survival of antibiotic 0157 and *E. coli* 026 in food matrices. Int. J. Food Microbiol. 109: 179-186.
- 8. Schultz, C.L., Edrington, T.S., Callaway, T.R., Schroeder, S.B., Hallford, D.M., Genovese, K.J., Anderson, R.C. and Nisbet, D.J. 2006. The influence of melatonin on growth of *E. coli* 0157:H7 in pure culture and exogenous melatonin on faecal shedding of *E. coli* 0157:H7 in experimentally infected wethers. Lett. Appl. Microbiol. 43: 105-110.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **SOURCE**

*E. coli* K99 (402) is a mouse monoclonal antibody raised against purified *E. coli* K99 pili.

## **PRODUCT**

Each vial contains 200  $\mu g \; lg G_1$  in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

E. coli K99 (402) is recommended for detection of K99 positive E. coli of *Escherichia coli* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com