E. coli (404): sc-66037



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.

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 from *Escherichia* coli and *Drosophila melanogaster*. Biochemistry 14: 2064-2072.
- 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 resistant and antibiotic sensitive strains of *E. coli* 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.
- 9. Satyaseela, M., Cai, M. and Kim, K.S. 2006. Effects of ompA deletion on expression of type 1 fimbriae in *Escherichia coli* K1 strain RS218 and on the association of *E. coli* with human brain microvascular endothelial cells. Infect. Immun. 74: 5609-5616.

RESEARCH USE

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

SOURCE

E. coli (404) is a mouse monoclonal antibody raised against pool of four *E. coli* serotypes which are associated with human urinary tract infections: 018:B21, 044:K74, 0112:B11 and 0125:B15.

PRODUCT

Each vial contains 100 μg lgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

E. coli (404) is recommended for detection of *E. coli* serotypes O2a/2b, O7, O11, O18, O44, O75, O112 and O125 of *Escherichia coli* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with *Enterobacter aerogenes, Klebsiella pneumoniae, Proteus mirabilis, Proteus vulgaris, Pseudomonas aeruginosa*, or *Serratia marcescens*.

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