



Salmonella typhimurium 0-4 (8C11C): sc-52224

BACKGROUND

Salmonella typhimurium, a Gram-negative, facultatively anaerobic, flagellated member of the *Enterobacteria* family, is a potent food-borne pathogen. It is the leading cause of a form of human gastroenteritis commonly referred to as Salmonellosis. Salmonellosis causes diarrhea, fever and abdominal cramps 12 to 72 hours after infection and may last for up to seven days. *Salmonella typhimurium* is readily transmitted through the feces of people or animals. Lipopolysaccharide (LPS) is the result of the joining of a lipid and a polysaccharide (carbohydrate) by a covalent bond. LPS is a major component of the cell membrane of all Gram-negative bacteria, and it contributes greatly to the structural integrity of the bacteria, protecting the membrane from certain types of chemical attacks. LPS is an endotoxin, and induces a strong response from normal animal immune systems, causing many of the characteristic symptoms of the infection.

REFERENCES

- Cash, M.T., Miles, E.W. and Phillips, R.S. 2004. The reaction of indole with the aminoacrylate intermediate of *Salmonella typhimurium* tryptophan synthase: observation of a primary kinetic isotope effect with 3-[[2]H]indole. *Arch. Biochem. Biophys.* 432: 233-243.
- Komitopoulou, E., Bainton, N.J. and Adams, M.R. 2004. Premature *Salmonella typhimurium* Gram-negative organisms is redox potential regulated via RpoS induction. *J. Appl. Microbiol.* 97: 964-972.
- Lyons, S., Wang, L., Casanova, J.E., Sitaraman, S.V., Merlin, D. and Gewirtz, A.T. 2004. *Salmonella typhimurium* transcytoses flagellin via an SPI2-mediated vesicular transport pathway. *J. Cell Sci.* 117 (Pt. 24): 5771-5780.
- Carnevalini, M., Faccenna, F., Faccenna, F., Gabrielli, R., Irace, L., Dell'isola, S., d'Ettore, G., Vullo, V. and Mastroianni, C.M. 2005. Abdominal aortic mycotic aneurysm, psoas abscess, and aorto-bisiliac graft infection due to *Salmonella typhimurium*. *J. Infect. Chemother.* 11: 297-299.
- Oscar, T.P. 2005. Development and validation of primary, secondary, and tertiary models for growth of *Salmonella typhimurium* on sterile chicken. *J. Food Prot.* 68: 2606-2613.
- Cutler, S.A., Rasmussen, M.A., Hensley, M.J., Wilhelms, K.W., Griffith, R.W. and Scanes, C.G. 2006. Effects of *Lactobacilli* and lactose on *Salmonella typhimurium* colon and microbial fermentation in the crop of the young turkey. *Br. Poultry Sci.* 46: 708-716.
- Na, H.S., Kim, H.J., Lee, H.C., Hong, Y., Rhee, J.H. and Choy, H.E. 2006. Immune response induced by *Salmonella typhimurium* defective in ppGpp synthesis. *Vaccine* 24: 2027-2034.
- Prescott, J.F. 2006. *Salmonella typhimurium* veterinary clinic outbreak. *Emerg. Infect. Dis.* 11: 1989.
- Saroj, S.D., Shashidhar, R., Pandey, M., Dhokane, V., Hajare, S., Sharma, A. and Bandekar, J.R. 2006. Effectiveness of radiation processing in elimination of *Salmonella typhimurium* and *Listeria monocytogenes* from sprouts. *J. Food Prot.* 69: 1858-1864.

RESEARCH USE

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

SOURCE

Salmonella typhimurium 0-4 (8C11C) is a mouse monoclonal antibody raised against heat inactivated bacterial cells of *S. typhimurium*.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Salmonella typhimurium 0-4 (8C11C) is recommended for detection of B-group 0-4 antigen of *Salmonella typhimurium* origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Suo, Z., Yang, X., Avci, R., Deliorman, M., Rugheimer, P., Pascual, D.W. and Idzerda, Y. 2009. Antibody selection for immobilizing living bacteria. *Anal. Chem.* 81: 7571-7578.

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 or our catalog for detailed protocols and support products.