SANTA CRUZ BIOTECHNOLOGY, INC.

Bacteroides LPS (1265/30): sc-80692



The Power to Question

BACKGROUND

The Bacteroides, which consists of anaerobic, Gram-negative rods, is the most abundant genus found in the human ileum and large intesetine. Lipopolysaccharide (LPS), which is a major constituent of the outer leaflet of bacterial outer membranes, plays an important role in the pathophysiology of sepsis. While LPS contains large, variable polysaccharide and oligosaccharide regions, the relatively conserved lipid region (lipid A) is the endotoxic and biologically active moiety responsible for septic shock. Exposure of host cells to LPS or lipid A results in the rapid activation of a number of responses, including the production of proinflammatory cytokines by monocytes, macrophages and neutrophils. Studies have shown that LPS signals via Toll-like receptors (TLRs), which play a central role in the initiation of innate immune responses, such as cytokine release.

REFERENCES

- 1. Zhang, G. and Weintraub, A. 1997. Identification of *Bacteroides fragilis* by co-agglutination, using a specific monoclonal antibody. Anaerobe 3: 295-300.
- Meisel-Mikołajczyk, F., Rokosz, A., Kot, K., Zawidzka, E., Malchar, C., Nowaczyk, M. and Górski, A. 2003. Influence of clindamycin, metronidazole and polymyxin B on the expression of cell adhesion molecules stimulated by endotoxin and enterotoxin of *Bacteroides fragilis*. Acta Microbiol. Pol. 52: 361-372.
- 3. Erridge, C., Pridmore, A., Eley, A., Stewart, J. and Poxton, I.R. 2004. Lipopolysaccharides of *Bacteroides fragilis, Chlamydia trachomatis* and *Pseudomonas aeruginosa* signal via toll-like receptor 2. J. Med. Microbiol. 53: 735-740.
- 4. Mancuso, G., Midiri, A., Biondo, C., Beninati, C., Gambuzza, M., Macrì, D., Bellantoni, A., Weintraub, A., Espevik, T. and Teti, G. 2005. *Bacteroides fragilis*-derived lipopolysaccharide produces cell activation and lethal toxicity via toll-like receptor 4. Infect. Immun. 73: 5620-5627.
- Peterfi, Z., Kovács, K., Antal, A. and Kocsis, B. 2006. Anti-lipopolysaccharide antibodies in acute appendicitis detected by ELISA. APMIS. 114: 265-269.
- Ogawa, T. 2006. Chemical structure and immunobiological activity of Bacteroides species LPS based on study of *Porphyromonas gingivalis* LPS. Nippon Saikingaku Zasshi 61: 391-404.
- Alhawi, M., Stewart, J., Erridge, C., Patrick, S. and Poxton, I.R. 2009. Bacteroides fragilis signals through Toll-like receptor (TLR) 2 and not through TLR4. J. Med. Microbiol. 58: 1015-1022.
- Berezow, A.B., Ernst, R.K., Coats, S.R., Braham, P.H., Karimi-Naser, L.M. and Darveau, R.P. 2009. The structurally similar, penta-acylated lipopolysaccharides of *Porphyromonas gingivalis* and *Bacteroides* elicit strikingly different innate immune responses. Microb. Pathog. 47: 68-77.
- Patrick, S., Houston, S., Thacker, Z. and Blakely, G.W. 2009. Mutational analysis of genes implicated in LPS and capsular polysaccharide biosynthesis in the opportunistic pathogen *Bacteroides fragilis*. Microbiology 155: 1039-1049.

SOURCE

Bacteroides LPS (1265/30) is a mouse monoclonal antibody raised against LPS of *Bacteroides fragilis* origin.

PRODUCT

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

APPLICATIONS

Bacteroides LPS (1265/30) is recommended for detection of *Bacteroides fragilis* LPS of *Bacteroides fragilis* 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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