# SEB (B344): sc-73349



The Power to Question

## **BACKGROUND**

Staphylococcus enterotoxin B (SEB) is a member of the Staphylococcal enterotoxin family. Staphylococcal enterotoxins are proteins secreted by Staphylococcus aureus that cause food poisoning. The illness is characterized by high fever, hypotension, diarrhea, shock and sometimes death. Staphylococcus enterotoxins are single chain polypeptides containing one disulfide bond formed by two half cystines in the middle of the chain. SEB commonly is referred to as a "bacterial superantigen" because it is an extremely potent activator of T cells, stimulating the production and secretion of various cytokines which mediate many of the toxic effects of SEB. SEB also inhibits naturally occurring regulatory T cell (nTreg) activity.

## **REFERENCES**

- Schultz, H., et al. 1996. The superantigen Staphylococcus enterotoxin B induces a strong and accelerated secondary T cell response rather than anergy. Immunology 87: 49-54.
- Mukhin, D.N. and Chatterjee, S. 1997. A receptor-based immunoassay to detect *Staphylococcus* enterotoxin B in biological fluids. Anal. Biochem. 245: 213-217.
- Seprényi, G., et al. 1997. In Staphylococcus enterotoxin B (SEB)-stimulated human PBMC, the LAK activity of non-T cells might have a major role in the mechanism of glomerular endothelial cells' injury. Immunobiology 197: 44-54.
- Huang, C.C., et al. 2000. Effect of Staphylococcus enterotoxin B on the concurrent CD8+ T cell response to influenza virus infection. Cell. Immunol. 204: 1-10.
- Wang, X., et al. 2004. Fos expression in the rat brain after intraperitoneal injection of *Staphylococcus* enterotoxin B and the effect of vagotomy. Neurochem. Res. 29: 1667-1674.
- Watson, J.L., et al. 2005. Immune cell enterotoxin B is attenuated by the green tea polyphenol (-)-epigallocatechin gallate. Cell. Immunol. 237: 7-16.
- 7. Cardona, I.D., et al. 2006. *Staphylococcal* enterotoxin TNF receptor-related protein ligand on monocytes. J. Allergy Clin. Immunol. 117: 688-695.
- 8. Dong, Y., et al. 2006. Immunosensing of *Staphylococcus* enterotoxin B (SEB) in milk with PDMS microfluidic systems using reinforced supported bilayer membranes (r-SBMs). Lab Chip 6: 675-681.
- Liu, T., et al. 2006. A possible association of *Staphylococcus* enterotoxin B-induced asthma and sinusitis. J. Huazhong Univ. Sci. Technolog. Med. Sci. 26: 63-67.

## **SOURCE**

SEB (B344) is a mouse monoclonal antibody raised against *Staphylococcus aureus* enterotoxin B.

## **STORAGE**

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

#### **PRODUCT**

Each vial contains 200  $\mu g \ lg G_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SEB (B344) is available conjugated to either phycoerythrin (sc-73349 PE) or fluorescein (sc-73349 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

## **APPLICATIONS**

SEB (B344) is recommended for detection of SEB of *Staphylococus aureus* origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Molecular Weight of SEB: 31 kDa.

#### **RESEARCH USE**

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

## **PROTOCOLS**

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com