

SEA (E8): sc-66133

BACKGROUND

Staphylococcus enterotoxin A (SEA) 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* enterotoxin A are single chain polypeptides containing one disulfide bond formed by two half cystines in the middle of the chain. Enterotoxins cause T cell activation accompanied by induction of interleukin-2. Interferon is conditioned by interaction of *Staphylococcus* enterotoxins with class II MHC molecules and subsequent presentation of the complex formed to a variable region of the T cell receptor.

REFERENCES

1. Dack, G.M. 1963. *Staphylococcus* enterotoxin: a review. Jpn. J. Med. Sci. Biol. 16: 1-12.
2. Silverman, S.J. 1963. Serological assay of culture filtrates for *Staphylococcus* enterotoxin. J. Bacteriol. 85: 955-956.
3. Lin, T.M., Nash, J.F., Ensminger, P.W. and Benslay, D.N. 1967. Mechanism study of the action of Malethamer in *Staphylococcus* enterotoxin-induced diarrhea in monkeys. Arch. Int. Pharmacodyn. Ther. 169: 162-176.
4. Ezepchuk, Y.V., Morgan, S.D. and Major, P. 1981. A simple procedure for isolation and purification of A-type *Staphylococcus* enterotoxin. Acta Microbiol. Acad. Sci. Hung. 28: 25-30.
5. Mollick, J.A., Cook, R.G. and Rich, R.R. 1989. Class II MHC molecules are specific receptors for *Staphylococcus* enterotoxin A. Science 244: 817-820.
6. Baskar, P., Hildreth, J.E., Chrest, F.J., Nagel, J.E. and Adler, W.H. 1996. Anti-HLA class I antibody inhibits SEA-induced proliferation of human PBMC. Cell. Immunol. 172: 135-138.
7. Rosendahl, A., Hansson, J., Antonsson, P., Sekaly, R.P., Kalland, T. and Dohlsten, M. 1997. A mutation of F47 to A in *Staphylococcus* enterotoxin A activates the T cell receptor V β repertoire *in vivo*. Infect. Immun. 65: 5118-124.
8. Gerwien, J., Kaltoft, K., Nielsen, M., Nielsen, M.B., Svejgaard, A., Geisler, C., Röpke, C. and Odum, N. 1998. *Staphylococcus* enterotoxin A modulates interleukin-15-induced signaling and mitogenesis in human T cells. Tissue Antigens 51: 164-173.
9. D'Souza, S., McGrath, H. and Sekaly, R.P. 2003. Early activation events differentiate the reactivity of two T cell families to *Staphylococcus* enterotoxin A. Cell. Immunol. 223: 113-119.

SOURCE

SEA (E8) is a mouse monoclonal antibody raised against enterotoxin A of *Staphylococcus aureus* origin.

PRODUCT

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

APPLICATIONS

SEA (E8) is recommended for detection of SEA of *Staphylococcus aureus* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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 for detailed protocols and support products.