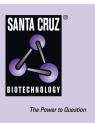
SANTA CRUZ BIOTECHNOLOGY, INC.

SEA (1.B.496): sc-73016



BACKGROUND

Staphylococcus enterotoxin A (SEA) is a member of the Staphylococcal enterotoxin family. Staphylococcal enterotoxins represent a group of proteins, which are secreted by Staphylococcus aureus that cause food poisoning. The illness is characterised by high fever, hypotension, diarrhea, shock and sometimes death. Their molecular masses range between 27 and 30 kDa. All 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. 1964. *Staphylococcus* enterotoxin: a review. Jpn. J. Med. Sci. Biol. 16: 1-12.
- Silverman, S.J. 1964. Serological assay of culture filtrates for *Staphylococcus* enterotoxin. J. Bacteriol. 85: 955-956.
- 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. Parmacodyn. Ther. 169: 162-176.
- 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.
- 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.
- 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., Sékaly, 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: 5118-5124.
- 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.
- D'Souza, S., McGrath, H. and Sékaly, 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 (1.B.496) is a mouse monoclonal antibody raised against purified enterotoxin A from FRI-722H strain of *Staphylococcus aureus*.

PRODUCT

Each vial contains 100 $\mu g~lgG_{2a}$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SEA (1.B.496) is recommended for detection of enterotoxins B, C1, C2 and D of *Staphylococcus aureus* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of SEA: 32 kDa.

STORAGE

Store at 4° C, **D0 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.