Staphylococcal Enterotoxin B Toxoid, Chemically Inactivated from Staphylococcus aureus subsp. aureus

Catalog No. NR-44235
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Contributor and Manufacturer:
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Product Description:
Staphylococcal enterotoxin B (SEB) was extracted from a preparation of Staphylococcus aureus (S. aureus) subsp. aureus, strain FDA 243 (ATCC® 14458™), purified by ion exchange chromatography, and chemically inactivated with formaldehyde. The toxin has a theoretical molecular weight of approximately 28368 daltons. The predicted amino acid sequence is shown below in Table 1.

SEB is one of several exotoxins produced by S. aureus subsp. aureus. S. aureus subsp. aureus is a ubiquitous, nonmotile, Gram-positive coccus found on the skin and mucous membranes of humans and animals. The staphylococcal exotoxins are characterized as enterotoxins, because they exert their effect on the intestinal tract when ingested. SEB has a broad spectrum of biological activity, and depending on the portal of entry (e.g., gastrointestinal, respiratory, or mucosal), the toxin will elicit a different clinical syndrome. SEB is the enterotoxin that most commonly causes classic food poisoning. The amino acid sequence of SEB from S. aureus subsp. aureus, strain FDA 243 (ATCC® 14458™) has been determined (GenPept: AAW19659). The crystal structure of SEB has been solved to 1.48 Å (PDB 3SEB).

Material Provided:
Each vial of NR-44235 contains approximately 50 µg of SEB toxoid in phosphate buffered saline (pH ~ 7.4). The concentration is shown on the Certificate of Analysis.

Packaging/Storage:
NR-44235 was packaged aseptically in plastic cryovials. The product is provided frozen on dry ice and should be stored at -70°C or colder immediately upon arrival. Repeated freeze-thaw cycles should be avoided.

Functional Activity:
NR-44235 reacts with rabbit polyclonal antibody to SEB using western blot analysis.

Citation:
Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Staphylococcal Enterotoxin B Toxoid, Chemically Inactivated from Staphylococcus aureus subsp. aureus, NR-44235.”

Biosafety Level: 1

Disclaimers:
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References:
2. Direct Submission.


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<thead>
<tr>
<th>Table 1 – Predicted Protein Sequence for SEB Toxoid</th>
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<tr>
<td>1     ESQPDPKPDE LHSSKFTGL MENMKLDDYD NHVSAINVKS IDQFLYFDLI</td>
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