

**Staphylococcal Enterotoxin B Toxoid, Chemically Inactivated from *Staphylococcus aureus* subsp. *aureus***
**Catalog No. NR-4672**

This reagent is the property of the U.S. government.

**Product Description:** Staphylococcal enterotoxin B (SEB) toxoid was obtained from a preparation of *Staphylococcus aureus* subsp. *aureus*, strain FDA 243 (ATCC® 14458™) and chemically inactivated with formaldehyde.

**Lot: 57680184**
**Manufacturing Date: JUL2007**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear with no particulate matter	Clear with no particulate matter
<b>SDS-PAGE (SYPRO Orange densitometer scan)</b>	Dominant band ~ 28 kDa > 95% pure	Dominant band of ~ 28 kDa > 95% pure (see Figure 1) <sup>1</sup>
<b>SELDI-TOF Mass Spectrometry</b>	Measured mass within 5% of expected mass based on amino acid sequence (~ 28,366 daltons)	Measured mass of untreated protein ~ 1% greater than expected mass Measured mass of treated protein ~ 4% greater than expected mass
<b>SELDI-TOF Mass Spectrometry of Lys-C Proteolysis Products</b>	> 50% of total residues accounted for in peptides of expected mass	57% of total residues accounted for in peptides of expected mass
<b>Concentration by Bicinchoninic Acid Protein Assay</b>	Report results	0.8 to 1.1 mg/mL
<b>Functional Activity</b> Western blot <sup>2</sup> (see Figure 2) Staphylococcal enterotoxin B Staphylococcal enterotoxin B toxoid Carbonic anhydrase ELISA (see Figure 3) Staphylococcal enterotoxin B Staphylococcal enterotoxin B toxoid Negative control	Reactive Reactive Not reactive  Report results Report results Not reactive	Reactive Reactive <sup>1</sup> Not reactive  1:1,000,000 1:100,000 Not reactive
<b>Cytotoxicity</b> Human interferon- $\gamma$ ELISPOT assay <sup>3,4</sup> Staphylococcal enterotoxin B Staphylococcal enterotoxin B toxoid Negative control (cells with no antigen)	Positive T-cell response Negative T-cell response Negative T-cell response	> 300 spots per sample 20 spots per sample 22 spots per sample
<b>Sterility</b>	0.22 $\mu$ m filter sterilized	0.22 $\mu$ m filter sterilized
<b>Absorbance Ratio (OD<sub>280</sub>/OD<sub>260</sub>)</b>	Report results	1.1
<b>Endotoxin Content</b>	Report results	12.5 EU/mg

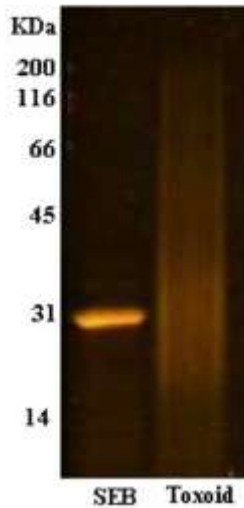
<sup>1</sup>The toxoid appears as a smear due to formaldehyde treatment of the protein.

<sup>2</sup>Using Anti-Staphylococcal Enterotoxin B antibody produced in rabbit (SIGMA® S9008).

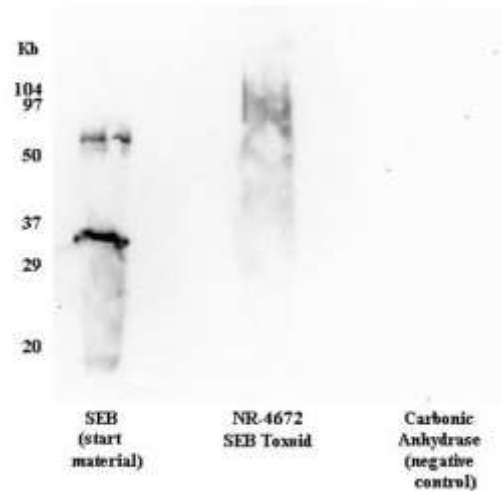
<sup>3</sup>Using Human Interferon- $\gamma$  ELISPOT Kit (Pierce ELHIFNG).

<sup>4</sup>This assay analyzes interferon- $\gamma$  production at a single cell level. A spot forms at the site where secreted cytokine is bound; one spot is equal to one molecule-secreting cell.

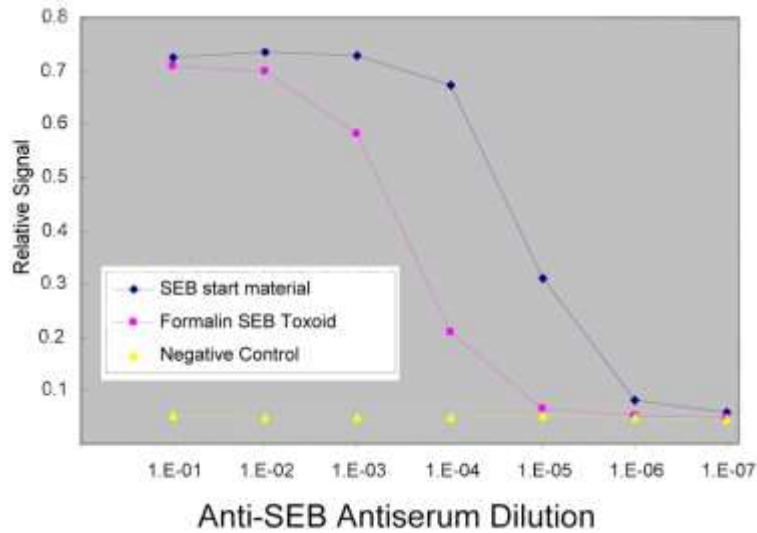
**Figure 1**



**Figure 2**



**Figure 3**



**Date:** 14 DEC 2007

**Signature:** Signature on File

**Title:** Technical Manager, BEI Authentication or designee

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