

Staphylococcal Enterotoxin B Toxoid, Recombinant from *Escherichia coli*

Catalog No. NR-10049

This reagent is the tangible property of the U.S. Government.

Product Description: NR-10049 is a recombinant toxoid of Staphylococcal Enterotoxin B (SEB) with genetic mutations (L56R, Y100A, Y105A; based on the recombinant sequence) which render the protein non-toxic. NR-10049 contains a hexa-histidine tag near the N-terminus. The recombinant protein was expressed in *Escherichia coli* and purified by nickel affinity chromatography.

Lot: 61992688

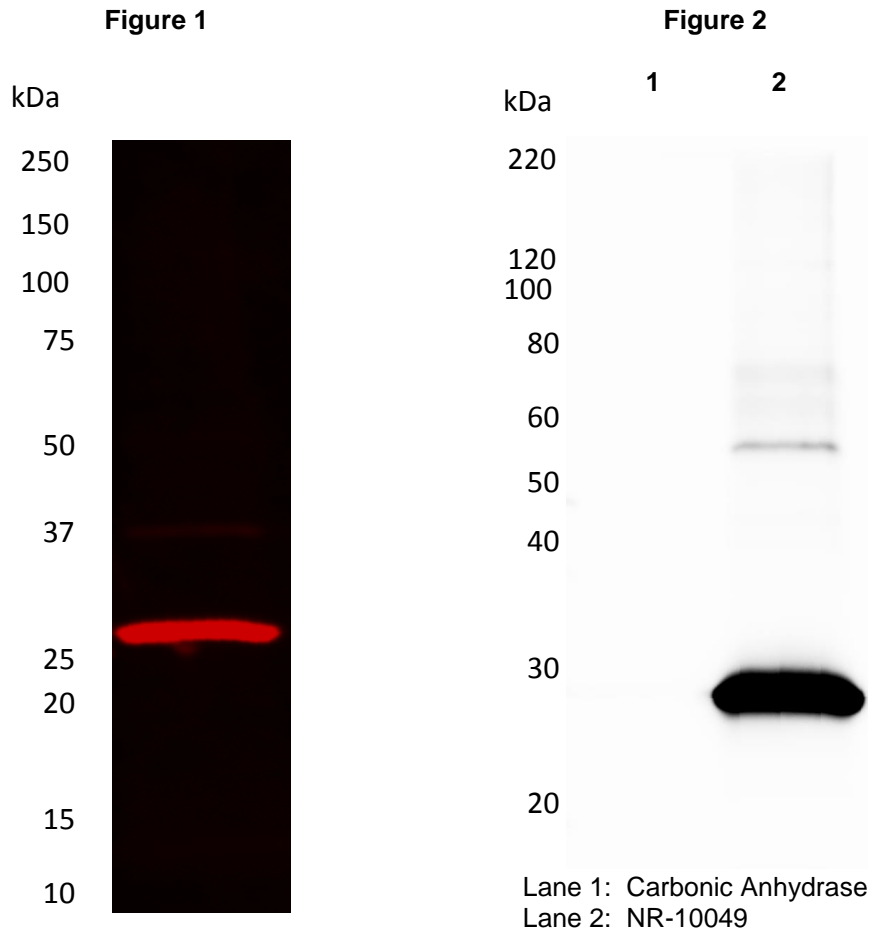
Manufacturing Date: 05DEC2013

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE (SYPRO Ruby Densitometer Scan)	Protein band of interest represents > 95% of total staining intensity above background	Protein band of interest represents > 95% of total staining intensity above background
SELDI-TOF Mass Spectrometry	Measured mass within 5% of expected mass: 29945 daltons	Measured mass (29124 daltons) within 3% of expected mass
SELDI-TOF Mass Spectrometry of Lys-C Proteolysis Products	> 50% of total residues accounted for in peptides of expected mass	55% of total residues accounted for in peptides of expected mass
Concentration by Bicinchoninic Acid Protein Assay	Report results	1.0 mg per mL
Functional Activity Western blot ¹ (Figure 2) Staphylococcal enterotoxin B toxoid Carbonic anhydrase	Reactive Not reactive	Reactive Not reactive
T Lymphocyte Activation Human interferon-γ ELISPOT assay ^{2,3} NR-10049 (35.7 mM) Staphylococcal enterotoxin B (0.357 mM) Negative control (cells with no antigen)	Report results Positive T-cell response Negative T-cell response	< 15 spots per sample > 200 spots per sample < 5 spots per sample
Sterility	0.22 μm filter sterilized	0.22 μm filter sterilized
Absorbance Ratio (OD₂₈₀/OD₂₆₀)	Report results	1.8
Endotoxin Content	Report results	9.8 EU per mg

¹Using anti-Staphylococcal Enterotoxin B antibody produced in rabbit (SIGMA® S9008)

²Using Human Interferon-γ ELISPOT Kit (Pierce™ ELHIFNG)

³This assay analyzes interferon-γ 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. Activation of large numbers of naïve T lymphocytes is characteristic of bacterial superantigens such as SEB, and the abrogation of this response confirms the inactivation of NR-10049.



Date: 01 DEC 2014

Signature: *Michael R. Gypke*

Title: Technical Manager, BEI Authentication or designee

ATCC[®], on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the contractor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC[®]'s knowledge.

ATCC[®] is a trademark of the American Type Culture Collection.
You are authorized to use this product for research use only. It is not intended for human use.

