

Shiga Toxin Type 2 Toxoid, Recombinant from *Escherichia coli*

Catalog No. NR-4676

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

Product Description: NR-4676 is a recombinant toxoid of Shiga toxin type 2 (Stx2) with genetic mutations (Y77S, E167Q and R170L; based on the recombinant sequence) in the catalytic A subunit which render the protein non-toxic. The recombinant protein was expressed in *Escherichia coli* and purified by nickel affinity chromatography.

Lot: 57680188

Manufacturing Date: 01MAY2008

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless, no particulate matter	Clear and colorless, no particulate matter
SDS-PAGE (SYPRO Orange densitometer scan)	Dominant bands of expected size: Stx2A: 33.1 kDa Stx2B: 8.6 kDa	Dominant bands (Figure 1): Stx2A: ~ 33 kDa Stx2B: ~ 8 kDa
Mass Spectrometry	Measured mass within 5% of expected mass based on amino acid sequence: Stx2A: 33080 Da Stx2B: 8640 Da	Measured mass within 0.1% of expected mass based on amino acid sequence for Stx2A and Stx2B: Stx2A: 33179 Da Stx2B: 8662 Da
SELDI-TOF Mass Spectrometry of Trypsin Digest	> 50% of total residues accounted for in peptides of expected mass	Stx2A: 75% of total residues accounted for in peptides of expected mass Stx2B: Resistant to trypsin digestion
Concentration by Bicinchoninic Acid Protein Assay	Report results	0.05 mg/mL
Functional Activity by Western Blot Analysis¹ Rabbit polyclonal antibody to Stx2 Carbonic anhydrase	Reactive Non-reactive	Reactive (Figure 2) Non-reactive
Cytotoxicity in Vero Cells NR-4676 Stx2	Report results Report results	Non-cytotoxic at 1×10^{-7} M CD ₅₀ ~ 1×10^{-14} M
Sterility	0.22 µm filter sterilized	0.22 µm filter sterilized
Endotoxin Content (Limulus Amoebocyte Lysate assay)	Report results	≤ 25 EU/mg

Figure 1

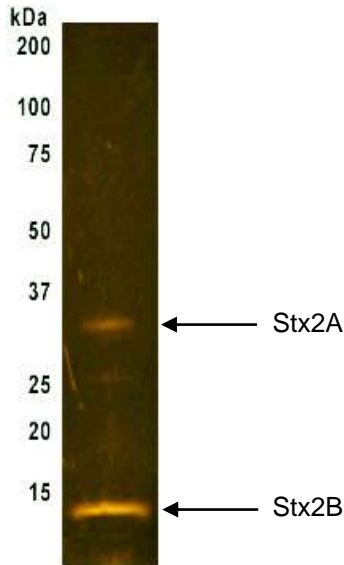
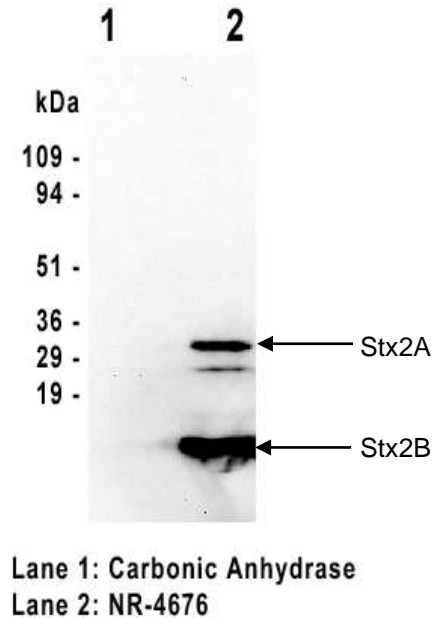


Figure 2



Date: 08 SEP 2008

Signature: Signature on File

Title: Technical Manager, BEI Authentication or designee

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