

**Shiga Toxin Type 1, Recombinant from *Escherichia coli***

**Catalog No. NR-857**

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

**Product Description:** Recombinant Shiga toxin type 1 was expressed in *Escherichia coli* and purified by affinity chromatography.

**Lot:** <sup>1</sup> 58338341

**Manufacturing Date:** 20SEP2008

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear and colorless	Clear and colorless
<b>SDS-PAGE (SYPRO Orange densitometer scan)</b>	2 dominant bands ~ 31 kDa; ~ 8 kDa > 90% pure	2 dominant bands ~ 31 kDa, ~ 8 kDa > 90% pure (see Figure 1)
<b>Mass Spectrometry</b>	Measured mass within 5% of expected mass based on amino acid sequence: ~ 32,200 daltons, A subunit ~ 7,700 daltons, B subunit	Measured mass within 0.6% of expected mass based on amino acid sequence: 32,211 daltons, A subunit <sup>2</sup> 7,739 daltons, B subunit
<b>Concentration by Bicinchoninic Acid Protein Assay</b>	Report results	0.07 mg/mL
<b>Functional Activity by Western Blot Analysis</b> Rabbit polyclonal antibody <sup>3</sup> to Shiga toxin 1	Reactive	Reactive (see Figure 2)
<b>Cytotoxicity</b> 50% cytotoxic dose in Vero cells	Report results	~ 1 X 10 <sup>-14</sup> M
<b>Sterility</b>	0.22 µm filter sterilized	0.22 µm filter sterilized

<sup>1</sup>NR-857 was not tested for endotoxin activity due to the inherent toxicity of the protein itself. The toxicity of Shiga toxin is so much greater than that of any contaminating endotoxin that any contribution by endotoxin to the overall toxicity is minor.

<sup>2</sup>As expected, due to post-translational modification.

<sup>3</sup>O'Brien, A. D., G. D. LaVeck, D. E. Griffin, and M. R. Thompson. "Characterization of *Shigella dysenteriae* 1 (Shiga) Toxin Purified by Anti-Shiga Toxin Affinity Chromatography." *Infect. Immun.* 30 (1980): 170-179. PubMed: 7002787.

Figure 1

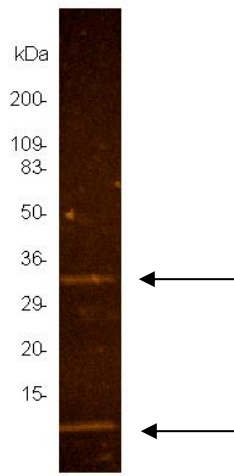
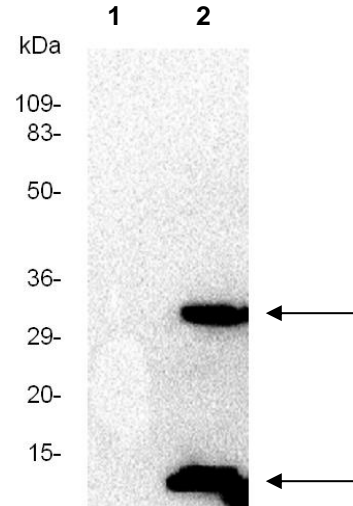


Figure 2



Lane 1: Carbonic anhydrase  
Lane 2: NR-857

**Date:** 13 NOV 2009

**Signature:** Signature on file

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

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