

Shiga Toxin Type 2, Recombinant from *Escherichia coli*

Catalog No. NR-4478

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

Product Description: Recombinant Shiga toxin type 2 [Stx2; composed of subunits A (Stx2A) and B (Stx2B)] was expressed in *Escherichia coli* and purified by antibody affinity chromatography.

Lot¹: 62905537

Manufacturing Date: 24SEP2014

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless, no particulate matter	Clear and colorless, no particulate matter
SDS-PAGE (SYPRO Orange Densitometer Scan)	Protein bands of interest represent > 95% of total staining intensity above background: Stx2A ~ 33kDa (Stx2A ₁ ~ 27.5 kDa and Stx2A ₂ ~ 4.5 kDa) and Stx2B ~ 7.8 kDa	Protein bands of interest represent > 95% of total staining intensity above background: Stx2A ~ 33 kDa (Stx2A ₁ ~ 27.5 kDa and Stx2A ₂ ~ 4.5 kDa) and Stx2B ~ 7.8 kDa (Figure 1)
Mass Spectrometry	Measured mass within 5% of expected mass: Stx2A: 33.2 kDa Stx2B: 7.8 kDa	Measured mass within 1% of expected mass: Stx2A: 33.4 kDa, 0.6% difference Stx2B: 7.9 kDa, 0.7% difference
SELDI-TOF Mass Spectrometry of Trypsin Digest	> 50% of total residues accounted for in peptides of expected mass	> 50% of total residues accounted for in peptides of expected mass: Stx2A: 52% of total residues Stx2B: 68% of total residues
Concentration by Bicinchoninic Acid Protein Assay	0.05 mg/mL ± 0.0025 mg/mL	0.05 mg/mL
Functional Activity by Western Blot Analysis² Shiga toxin type 2 (NR-4478) Carbonic anhydrase (negative control)	Reactive Not reactive	Reactive (Figure 2) Not reactive (Figure 2)
Cytotoxicity 50% cytotoxic dose in Vero cells	Report results	6.9 × 10 ⁻¹⁴ M (Figure 3)
Sterility	0.22 µm filter sterilized	0.22 µm filter sterilized
Endotoxin Content (Limulus Amoebocyte Lysate Assay)	Report results	< 12.5 EU/mL

¹Manufactured by Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA

²Using polyclonal antiserum specific for Stx2

Figure 1 – SDS-PAGE

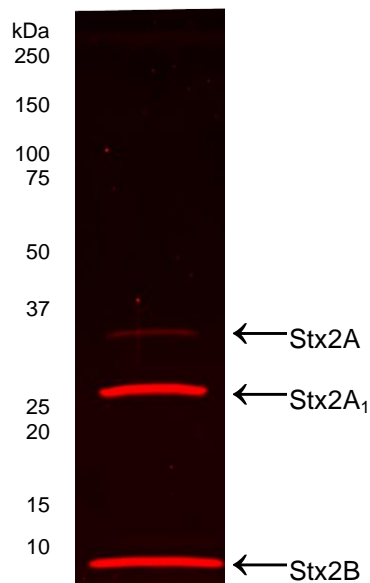
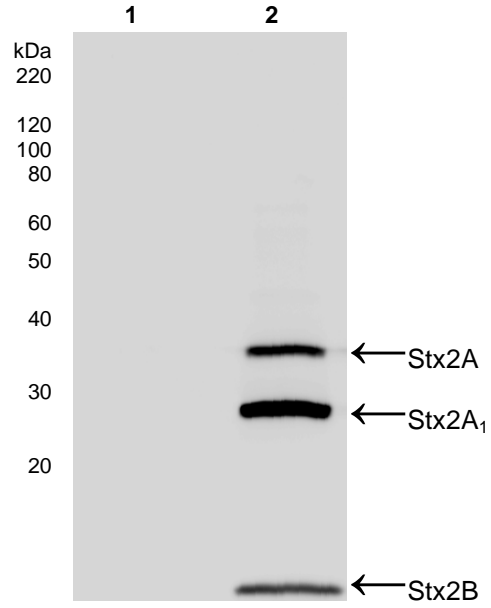
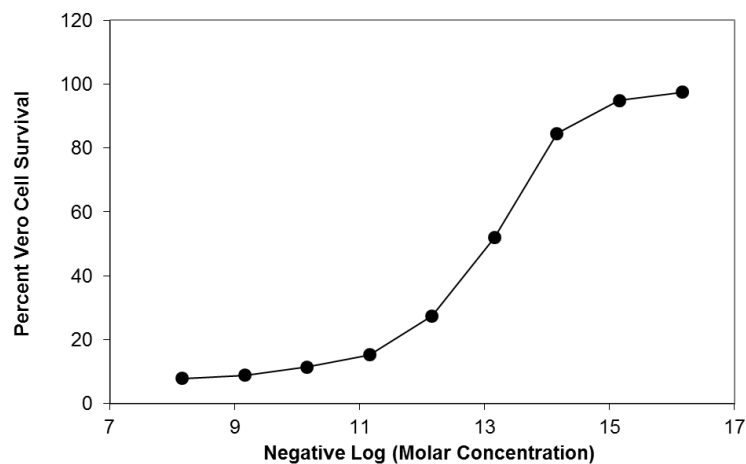


Figure 2 – Western Blot



Lane 1: Carbonic anhydrase (negative control)
Lane 2: NR-4478 (1 µg)

Figure 3 – Cytotoxicity Assay



Date: 10 APR 2015

Signature: 
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