

**Ricin Toxin A Subunit with N-Terminal Histidine Tag, Recombinant from *Escherichia coli***

**Catalog No. NR-853**

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

**Product Description:** NR-853 is a recombinant form of the A subunit of ricin toxin. The amino acid sequence includes an N-terminal histidine-tag (MRGSHHHHHTDPM) and amino acid residues 36 to 302 of the ricin toxin precursor. A QIAGEN pQE-32 vector was used to express the recombinant protein in *Escherichia coli*. The protein was purified by nickel affinity chromatography.

**Lot: 61274530**

**Manufacturing Date: 30JAN2013**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Report results	Clear and colorless; some opalescence or white precipitate may form after thawing
<b>Sequencing of Ricin A Gene in Plasmid Construct</b>	Report results	99% identical to GenBank X03179 (nucleotides 396 to 1196) <sup>1</sup>
<b>SDS-PAGE (SYPRO Orange Densitometer Scan)</b>	Protein band of interest represents > 95% of total staining intensity above background	Ricin A chain accounts for >95% of total staining intensity above background (Figure 1)
<b>Mass Spectrometry</b>	Measured value within 5% theoretical value (31636.2 daltons)	Measured value within 0.02% (31642.8 daltons)
<b>SELDI-TOF Mass Spectrometry of Trypsin Digest</b>	> 50% of total residues accounted for in peptides of expected mass	Identified peptides from trypsin digest cover 70% of total residues
<b>Concentration by Bicinchoninic Acid Protein Assay</b>	Report results	1.0 mg/mL
<b>Functional Activity</b> Western Blot Mouse monoclonal antibody to ricin A subunit (BEI Resources NR-843)	Reactive	Reactive (Figure 2)
<b>Cytotoxicity in Vero Cells</b>	Report results	Non-cytotoxic
<b>Sterility</b>	0.22 µm filter sterilized	0.22 µm filter sterilized
<b>Endotoxin Content</b>	Report results	< 250 EU/mg
<b>Absorbance Ratio (OD<sub>280</sub>/OD<sub>260</sub>)</b>	Report results	1.56

<sup>1</sup>The nucleotide differences result in two amino acid changes compared to GenBank X03179: Q to E at position 237 and S to N at position 255 of NR-853 (see Table 1 on Product Information Sheet).

Date: 25 APR 2013

Signature: *Dorothy C. Young*

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.



Figure 1

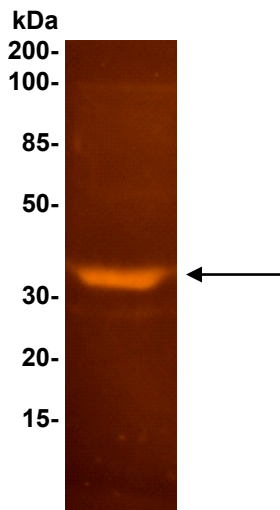
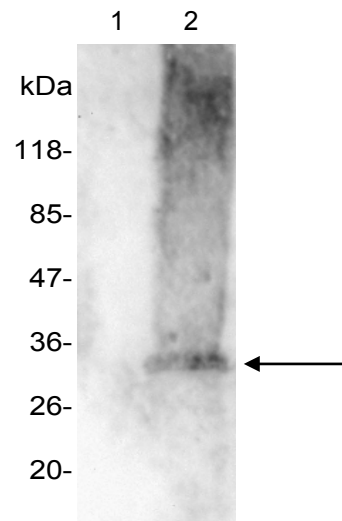


Figure 2



Lane 1: Carbonic Anhydrase Negative Control  
Lane 2: NR-853