b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-43946

Abrin Toxin (B Subunit) from *Abrus precatorius* Seeds

Catalog No. NR-43946

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

Product Description: The B subunit of abrin toxin from *Abrus precatorius* (*A. precatorius*) seeds was separated from the holotoxin by galactose affinity chromatography under reducing conditions. The protoxin is post-translationally cleaved into the A and B chains. This preparation may contain several isotypes of the B subunit.

Lot[1]: 61683449 **Manufacturing Date: 30APR2014**

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE (SYPRO Orange Densitometer Scan)	Protein band of interest represents > 95% of total staining intensity above background	Protein band of interest represents > 95% of total staining intensity (Figure 1)
SELDI-TOF Mass Spectrometry	Measured mass within 5% of expected mass: 31164 daltons	Measured mass (33215 daltons) within 6.4% of expected mass[2]
SELDI-TOF Mass Spectrometry of Lys-C Proteolysis Products	> 50% of total residues accounted for in peptides of expected mass	54% of total residues accounted for in peptides of expected mass
Concentration by Bicinchoninic Acid Protein Assay	Report results	0.1 mg per mL
Functional Activity by Western Blot Abrin toxin subunit B[3] Carbonic anhydrase	 Reactive Not reactive	 Reactive (Figure 2) Not reactive (Figure 2)
Cytotoxicity Vero cell cytotoxicity	Report results	Cytotoxicity reduced by >3 logs compared to active toxin
Sterility	0.22 µm filter sterilized	0.22 µm filter sterilized
Absorbance Ratio (OD_{280}/OD_{260})	Report results	1.8
Endotoxin Content	Report results	< 2500 EU per mg

[1]NR-43946 was prepared and tested by Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA.
[2]The measured mass specification does not take protein glycosylation into account. The abrin B subunit is known to be glycosylated. [Tahirov, T. H., et al. "Crystal Structure of Abrin-a at 2.14 Å." J. Mol. Biol. 250 (1995): 354-67. PubMed: 7608980.]. It is expected that the measured mass is larger than the predicted mass.
[3]The western blot was done using the Anti-Ricin B chain monoclonal antibody TFTB1 (BEI Resources NR-842) primary antibody, which is known to also react with abrin toxin.

Date: 25 SEP 2014 **Signature:**

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.

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Figure 1: SDS-PAGE

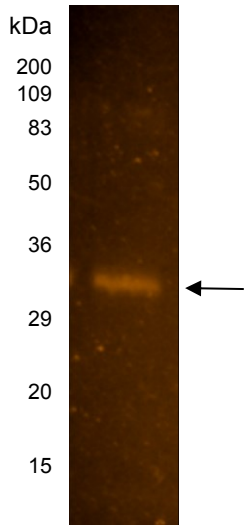
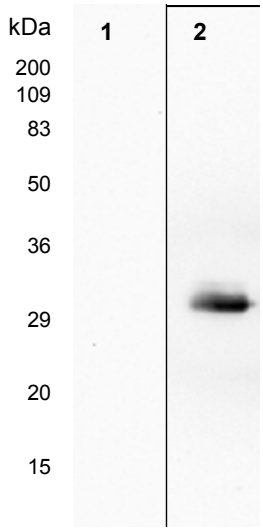


Figure 2: Western Blot



Lane 1: Carbonic anhydrase negative control
Lane 2: NR-43946

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NR-43946_61683449_25SEP2014