

Abrin Toxoid (Formalin Fixed Abrin) from *Abrus precatorius* Seeds

Catalog No. NR-32831

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

Product Description: NR-32831 is a preparation of Abrin which has been chemically inactivated by treatment with formalin. The sequence for the Abrin toxin precursor protein has been reported (GenBank: X55667.1). Mature Abrin toxin has a molecular weight of approximately 60,000 daltons, however, formalin fixation can induce cross linking which may interfere with how the toxoid behaves in SDS-PAGE and the band may appear larger than expected.

Lot¹: 60453463

Manufacturing Date: 18JAN2012

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE (SYPRO Orange Densitometer Scan)	Protein band(s) of interest represents > 95% of total staining intensity above background	Abrin bands ² represent > 98% of total staining intensity (Figure 1)
SELDI-TOF Mass Spectrometry	Measured mass within 5% of expected mass: 59244 daltons	Measured mass (62042 daltons) within 4.5% of expected mass
SELDI-TOF Mass Spectrometry of Trypsin Proteolysis Products	> 50% of total residues accounted for in peptides of expected mass	74% 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 toxoid ^{2,3} Carbonic anhydrase	Reactive Not reactive	Reactive (Figure 2) Not reactive (Figure 2)
Cytotoxicity Vero cell cytotoxicity	Report results	Cytotoxicity reduced by >4 logs compared to active toxin ⁴
Sterility	0.22 µm filter sterilized	0.22 µm filter sterilized
Absorbance Ratio (OD ₂₈₀ /OD ₂₆₀)	Report results	0.95 ⁵
Endotoxin Content	Report results	< 250 EU per mg

¹NR-32831 was prepared and tested by Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA.

²The higher mass species is a result of formalin crosslinking.

³The primary antibody for the western blot was Anti-Ricin polyclonal rabbit antisera (BEI Resources NR-862). Ricin antibodies are known to react with abrin.

⁴NR-32831 is not toxic to Vero cells at concentrations below 10 µg/mL (0.167 µM).

⁵The absorbance spectrum is altered by formalin fixation.

Date: 08 OCT 2014

Signature:



Title:

Technical Manager, BEI Authentication or designee

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Figure 1: SDS-PAGE

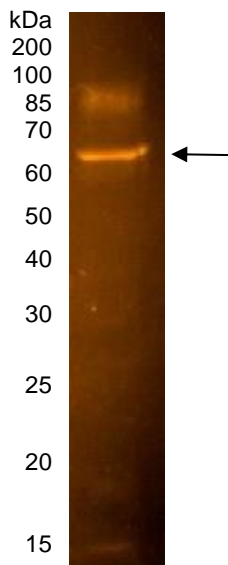
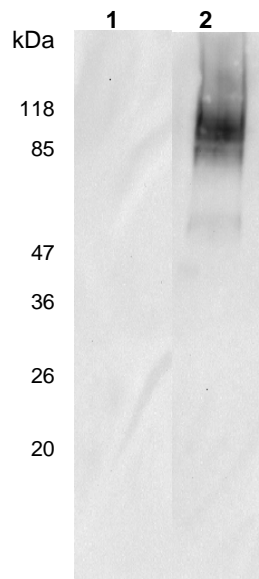


Figure 2: Western Blot



Lane 1: Carbonic anhydrase negative control
Lane 2: NR-32831 (primary antibody NR-862)