

**Anthrax Protective Antigen (PA), Recombinant from *Bacillus anthracis***

**Catalog No. NR-140**

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**Product Description:** Recombinant anthrax protective antigen (PA) was produced in a non-sporulating avirulent strain of *Bacillus anthracis* lacking both of the wild type plasmids, pX01 and pX02. Recombinant PA was purified using conventional chromatographic techniques. The resulting purified protein lacks all other anthrax virulence factors.

**Lot: 1715AA**

**Manufacturing Date: 10OCT2002**

TEST	SPECIFICATIONS	RESULTS
Visual Appearance (after reconstitution)	Clear and colorless	Clear and colorless
SDS-PAGE (Coomassie Blue densitometer scan)	~80–90 kDa band is > 90% of total density	~80–90 kDa band is 96% of total density
Electrospray Mass Spectrometry (MW)	Report results (expected MW is 82,674 Da)	Interference by 17,688 Da species
MALDI-TOF Mass Spectrometry of Trypsin Digest	> 50% of total residues accounted for in peptides of expected mass	75% of total residues accounted for in peptides of expected mass
Functional Activity ELISA <sup>1</sup>  Cytotoxicity assay [determination of effective concentration (EC <sub>50</sub> ) by titration of PA in J774A.1 macrophage cell line]	Report results  PA with 1 µg/mL LF: EC <sub>50</sub> ≤ 500 pM 1 µg/mL PA alone: EC <sub>50</sub> ≥ 10,000 pM 1 µg/mL LF alone: EC <sub>50</sub> ≥ 10,000 pM	Within 5.3% of reference PA  EC <sub>50</sub> = 122 pM EC <sub>50</sub> ≥ 10,000 pM EC <sub>50</sub> ≥ 10,000 pM
Microbial Content	No detectable colony-forming units in 0.2 mL final product	No detectable colony-forming units in 0.2 mL final product
Endotoxin Content (Limulus Amoebocyte Lysate assay) <sup>2</sup>	< 0.5 EU endotoxin per µg protein	0.012 EU endotoxin per µg protein
Contaminating Protease Detection 3 hour incubation of 1 mg/mL solution at 37°C	Major band is > 85% initial density	Major band is 98% initial density
Absorbance Ratio (OD <sub>280</sub> /OD <sub>260</sub> )	≥ 1.7	1.73
Absorbance Ratio (OD <sub>280</sub> /OD <sub>310</sub> )	≥ 10	14.6

<sup>1</sup>Quinn, C. P., et al. "Specific, Sensitive and Quantitative Enzyme-Linked Immunosorbent Assay for Human Immunoglobulin G Antibodies to Anthrax Protective Antigen." *Emerg. Infect. Dis.* 8 (2002): 1103–1110. PubMed: 12396924.

<sup>2</sup>Performed by LAL Testing Service, Cambrex BioScience

**Date:** 24 MAY 2012

**Signature:** 

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

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