PA (7821): sc-57952

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Bacillus anthracis, a Gram-positive bacterium, is capsulogenic and toxinogenic and is the causative agent of anthrax. *Bacillus anthracis* secretes two toxins, which are composed of three proteins: the protective antigen (PA), the lethal factor (LF) and the edema factor (EF). PA and LF comprise a lethal toxin, which provokes a subite death in animals, whereas the edema toxin, comprised of PA and EF, induces edema. The edema and the lethal factors are internalized into the target cells via the protective antigen. PA is the target-cell binding protein and is common to the two effector molecules, LF and EF, which exert their toxic effects once they are translocated to the cytosol by PA. PA is the major component of vaccines against anthrax since it confers protective immunity. The large-scale production of recombinant protein-based anthrax vaccines requires overexpression of the PA protein. LF plays an important role in the pathogenesis of anthrax. In addition, EF and LF exert adenylate cyclase and metalloprotease activity, respectively.

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SOURCE

PA (7821) is a mouse monoclonal antibody raised against toxin binding protein (Protective Antigen, PA) of *Bacillus anthracis* origin.

PRODUCT

Each vial contains 100 µg IgG$_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PA (7821) is recommended for detection of toxin binding protein (Protective Antigen, PA) of *Bacillus anthracis origin* by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of PA: 96 kDa.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.