Adenylate Cyclase (Bordetella pertussis), functional

01-501 50 µg

Storage: Shipped with ice-pack or dry-ice and store at -20℃ or -80℃ (for longer period).

Applications:

1) Functional studies on the cAMP- signaling pathway (10~100 ng/ml)
2) Antigen for western blotting and ELISA
3) SDS-PAGE marker as native adenylate cyclase

Form: 550 µg/ml in 50 mM Tris-HCl(pH8.0), 6M urea, 150 mM NaCl

Purity: More than 90% purity by SDS-PAGE (CBB staining)

Activity tested: Addition of the 10~100 ng/ml adenylate cyclase toxin to medium increased significant levels of cellular cAMP levels in CHO and human monocyte cells (2) as examined by Biotrak cAMP EIA System of GE Healthcare Bioscience. Adenylate cyclase is a toxin produced by a gram-negative coccobacillus, *Bordetella pertusis*. This toxin penetrates into the animal cells and produces cAMP from ATP in the cytoplasm. It belongs to the RTX family of toxins produced by many gram-negative bacteria. The molecular weight is 177 kDa

This product is a recombinant toxin of B*ordetella pertussis* Tohama strain expressed in *E. coli* from the structural gene *cyaA* and its activator gene *cyaC* (Ref 2) and purified by the method of Friedman (Ref. 1)

Data Link UniProtKB/Swiss-Prot P0DKX7

References:

1. Friedman RL (1987) Bordetella pertussis adenylate cyclase: isolation and purification by calmodulin-sepharose 4B chromatography. Infect Immun 55: 129-134 (1987) PMID: 2878883
2. Westrop GD et al (1996) Bordetella pertussis adenylate cyclase toxin: proCyaA and CyaC proteins synthesised separately in Escherichia coli produce active toxin in vitro. Gene.180:91-9. PMID: 8973351
3. Homzi K et al (1999) Toxicity tests on native and recombinant Bordetella pertussis adenylate cyclase toxin preparations. Dev Biol Stand. ;101:147-54.

＊No overt mouse toxicity was observed by intravenous injection of 50µg of adenylate cyclase toxin (Friedman R. L. *Infect Immun* 55:129-134 (1987)) No toxicity for human is known.

*** For research use only, not to be used for human application.**

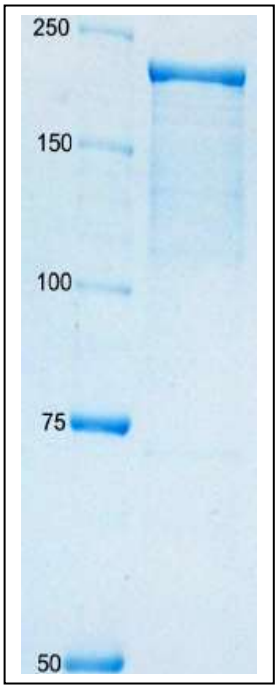

Fig.1 SDS polyacrylamide gel electrophoresis of adenylate cyclase toxin. 8% gel.. Left lane,is size maker proteins shown in kDa.

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