

Active Recombinant *B. pertussis* Adenylate Cyclase Protein, His tagged

Cat. No. CYAA-01B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant <i>B. pertussis</i> Adenylate Cyclase Protein (Gln2-Arg399) with an N-terminal Met and 6-His tag was expressed in <i>E. coli</i> .
Species	<i>B. pertussis</i>
Source	<i>E. coli</i>
ProteinLength	2-399 aa
Description	<i>B. pertussis</i> Adenylate Cyclase is an enzymatic toxin that converts ATP to 3'-5'cyclic AMP and plays a role in the pathogenesis of whooping cough. The K_m for ATP of the enzyme is 0.6 mM. The enzyme activity is calmodulin (CaM) dependent with a K_d for CaM of 0.2 nM. The protein is synthesized as a large bifunctional precursor of 1706 amino acid residues, endowed with Adenylate Cyclase and haemolytic activity. The enzyme corresponds to amino acid 1 to 399 and is released from the precursor as a 43 kD fragment. The N-terminal portion (residues 1-235/237) harbors the catalytic site, whereas the C-terminal portion (residues 235/237-399) corresponds to the main CaM-binding domain of the enzyme
Tag	His
Molecular Mass	44 kDa
N-terminal Sequence	Met

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Analysis	
Bio-Activity	Measured by its ability to convert ATP to cAMP and pyrophosphate. The specific activity is > 250 nmol/min/μg
Endotoxin	< 0.01 EU/μg by LAL
Purity	> 90%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain at 5 μg per lane.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.
Storage Buffer	Supplied as a 0.2 μm filtered solution in Tris and NaCl.
Shipping	The product is shipped with polar packs.
Reference	1. Weiss, A.A. and E.L Hewlett (1986) Annu. Rev. Microbiol. 40:661. 2. Glaser, P. et al. (1989) EMBO J.8:967. 3. Shattuck, R.L. et al. (1985) Biochemistry 24:6358.

GENE INFORMATION

Gene Name	cyaA bifunctional adenylate cyclase toxin/hemolysin CyaA [Bordetella pertussis]
Official Symbol	cyaA
Synonyms	cyaA; bifunctional adenylate cyclase toxin/hemolysin CyaA; bifunctional adenylate cyclase toxin/hemolysin CyaA

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Gene ID	69600712
Protein Refseq	WP_010929995
UniProt ID	P15318

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