Recombinant Cholera Toxin B subunit

#R00593

Size: 100 μg/500 μg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 6 months from date of receipt, -20 to -70 °C as supplied.
- 3 months, -20 to -70 °C under sterile conditions after opening.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Cholera toxin (also known as choleragen and sometimes abbreviated to CTX, Ctx or CT) is protein complex secreted by the bacterium Vibrio cholerae. CTX is responsible for the massive, watery diarrhea characteristic of cholera infection. The cholera toxin is an oligomeric complex made up of six protein subunits: a single copy of the A subunit (part A, enzymatic), and five copies of the B subunit (part B, receptor binding), denoted as AB5. Subunit B binds while subunit A activates the G protein which activates adenylate cyclase. The five B subunits - each weighing 11 kDa, form a five-membered ring. The A subunit which is 28 kDa, has two important segments. The A1 portion of the chain (CTA1) is a globular enzyme payload that ADP-ribosylates G proteins, while the A2 chain (CTA2) forms an extended alpha helix which sits snugly in the central pore of the B subunit ring. This structure is similar in shape, mechanism, and sequence to the heat-labile enterotoxin secreted by some strains of the Escherichia coli bacterium.

AA Sequence

TPQNITDLCAEYHNTQIYTLNDKIFSYTESLAGKREMA
IITFKNGAIFQVEVPGSQHIDSQKKAIERMKDTLRIAYL
TEAKVEKLCVWNNKTPHAIAAISMAN

Product Specification

Accession	P01556
GeneID	2613962
Source	Escherichia coli.
Molecular Weight	Approximately 11.6 kDa, a single non-glycosylated polypeptide chain containing 103 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Data Not Available.
Physical Appearance	Sterile colorless liquid.
Formulation	Supplied as a 0.2 μm filtered solution in 5 mM PB, pH 7.0, 75 mM NaCl, with 50 % glycerol.
Endotoxin	Less than 0.1 EU/μg of rCTB as determined by LAL method.