

Cholera Toxin B subunit、CTxB

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Catalog Number : MBX10205

Packaging Size : 1mg

Lot Number : Refer to vial

Synonym : 霍乱毒素 B 亚基、CHOLERA TOXIN B SUBUNIT、CTB、Cholera Toxin B subunit、CTxB、Cholera toxin B subunit

CAS : 131096-89-4

Molecular weight : 11kd

Purity ≥ 95.0%

Background

Cholera toxin (CTB, 霍乱毒素B亚基) belongs to the AB₅-subunit family of toxins. The native hexameric protein has a molecular mass of ~85 kDa and contains two subunits. It consists of a single A subunit (~27.2 kDa), responsible for the ADP-ribosylation activity, and five B subunits (~11.6 kDa each), which are arranged as a pentameric ring with an apparent 5-fold symmetry and are associated with the cell surface receptor binding and subsequent internalization (transmembrane transport) of the enzymatic component. The B subunit is non-toxic to cells and possesses no intrinsic adenylate cyclase activity. The cholera toxin B subunit (CTB) attaches to cells by binding to ganglioside GM1. CTB has been shown to be a good label for microglial cells (due to the enrichment of ganglioside GM1 on their cell surface), but not for oligodendrocytes or astrocytes. The B subunit has been reported to be an excellent tracer for the study of axonal transport using immunohistochemical methods. Recently it has been widely used as a marker of membrane lipid rafts, which are membrane microdomains enriched with cholesterol and sphingolipids. These lipid rafts have an important role in cell signaling and protein trafficking.

Application

Cholera toxin and its purified A subunit are frequently used for the study of signal transduction mechanisms. In addition, cholera toxin acts as an adjuvant through the stimulation of B lymphocytes. The cholera toxin B subunit alone is used for track tracing in neurological research, taking advantage of GM1 ganglioside binding and retrograde transport. Tissue culture cells treated with cholera toxin are not killed and tissues of animals do not become necrotic.

Technical Information

Appearance : powder

Format : Recombinant

Source : E.coli

Sodium azide : Not add

H₂O : soluble 1mg/mL

Storage condition

2-8°C, The product, as supplied, is stable 2 years when stored properly. Solutions are stable for at least 3 months when stored at 2-8°C. **DO NOT FREEZE.**

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