

Recombinant Bovine Betacellulin

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-406
----------------------------	---------------------------------

➤ **Background:**

BetaCellulin is a Type I membrane protein in precursor form but an extracellular protein in mature form. It is Expressed in a wide range of tissues, including the mammary gland. BetaCellulin is a Potent mitogen for retinal pigment epithelial cells and vascular smooth muscle cells. The effects of betacellulin are probably mediated by the EGF receptor and other related receptors.

➤ **Description :**

Recombinant Bovine Betacellulin produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 80 amino acids and having a molecular mass of 9003 Dalton.

Recombinant Bovine BTC is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

The protein was lyophilized after extensive dialysis against 50mM acetic acid.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized Bovine BTC in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

lyophilized Bovine BTC although stable at room temperature for 3 weeks, should be stored desiccated below -18⁰C. Upon reconstitution Bovine BTC should be stored at 4⁰C between 2-7 days and for future use below -18⁰C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **Amino acid sequence:**

The sequence of the first five N-terminal amino acids was determined and was found to be Asp-Gly-Asn-Ser-Thr.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Biological Activity:**

This rbBTC is fully biologically active when compared to standards. The ED50, calculated by the dose-dependant proliferation of murine BALB\C 3T3 cells (measured by 3H-thymidine uptake) is < 10.0 ng/ml.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of Bovine Betacellulin.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.59 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of BTC as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.