

# Human BTC / Betacellulin Protein

Catalog Number: 12192-HCCH



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

BTC

### Protein Construction:

A DNA sequence encoding the human BTC (P35070) (Met1-Tyr111) was expressed with six amino acids (LEVLFQ) at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Bio Activity:

Measured in a cell proliferation assay using Balb/3T3 mouse embryonic fibroblast cells. The ED<sub>50</sub> for this effect is typically 0.2-1 ng/mL.

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Asp 32

### Molecular Mass:

The recombinant human BTC comprises 87 amino acids and has a predicted molecular mass of 9.8 kDa. The apparent molecular mass of the protein is approximately 24 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

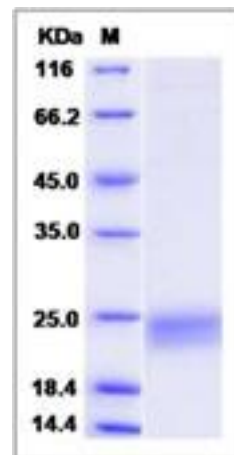
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Betacellulin(BTC) is a member of the epidermal growth factor (EGF) family. These soluble proteins are ligands for one or more of the four receptor tyrosine kinases encoded by the ErbB gene family (ErbB-1/epidermal growth factor receptor (EGFR), neu/ErbB-2/HER2, ErbB-3/HER3 and ErbB-4/HER4). Betacellulin is a 32-kilodalton glycoprotein that appears to be processed from a larger transmembrane precursor by proteolytic cleavage. This protein is a ligand for the EGF receptor. BTC is a polymer of about 62-111 amino acid residues. Secondary Structure: 6% helical (1 helices; 3 residues)36% beta sheet (5 strands; 18 residues). BTC was originally identified as a growth-promoting factor in mouse pancreatic β-cell carcinoma cell line and has since been identified in humans. It plays a role in the growth and development of the neonate and/or mammary gland function. Betacellulin is a potent mitogen for retinal pigment epithelial cells and vascular smooth muscle cells.

## References

1.Shing Y, *et al.* (1993) Betacellulin: a mitogen from pancreatic beta cell tumors. *Science* . 259(5101): 1604-7. 2.Riese DJ, *et al.* (1996) Betacellulin activates the epidermal growth factor receptor and erbB-4, and induces cellular response patterns distinct from those stimulated by epidermal growth factor or neuregulin-beta. *Oncogene*. 12(2): 345-53. 3.Bastian SE, *et al.* (2001) Measurement of betacellulin levels in bovine serum, colostrum and milk. *J Endocrinol* . 168: 203-12.

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>