Human BTC / Betacellulin Protein

Catalog Number: 12192-HCCH

### General Information

**Gene Name Synonym:**
BTC

**Protein Construction:**
A DNA sequence encoding the human BTC (P35070) (Met1-Tyr111) was expressed with six amino acids (LEVLFO) at the C-terminus.

**Source:** Human

**Expression Host:** Human 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 ED₅₀ 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:

![SDS-PAGE Image]

### 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