

Recombinant Human Betacellulin/BTC Protein

Catalog No.: RP01700 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	685	P35070

Tags

C-hFc

Synonyms

BTC;Betacellulin

Product Information

Source	Purification
HEK293 cells	> 92% by SDS-PAGE.

Calculated MW	Observed MW
34.94 kDa	45-60 kDa

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

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.

Basic Information

Description

Recombinant Human Betacellulin/BTC Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Asp32-Tyr111) of human Betacellulin/BTC (Accession #NP_001720.1) fused with and a hFc tag at the C-terminus.

Bio-Activity

Measured in a cell proliferation assay using BALB/3T3 mouse fibroblasts. The ED₅₀ for this effect is 1.02-4.06 ng/mL, corresponding to a specific activity of 2.46×10⁵~9.80×10⁵ units/mg.

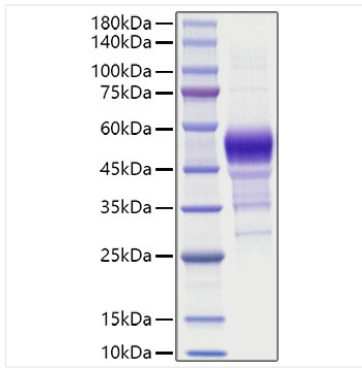
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

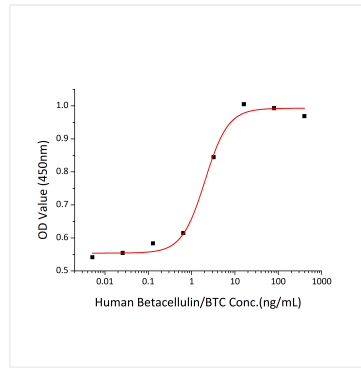
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Betacellulin/BTC Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 46-56 kDa.



Recombinant Human Betacellulin/BTC stimulates cell proliferation assay using BALB/3T3 mouse fibroblasts. The ED₅₀ for this effect is 1.02-4.06 ng/mL, corresponding to a specific activity of $2.46 \times 10^5 \sim 9.80 \times 10^5$ units/mg.