

Mouse BTC / Betacellulin Protein (His & Fc Tag)

Catalog Number: 50340-M03H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

Btc, Bcn

Protein Construction:

A DNA sequence encoding the mouse BTC (NP_031594.1) extracellular domain (Met 1-Gln 118) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: Mouse

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 2-10 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 mouse BTC/Fc is a disulfide-linked homodimer. The reduced monomer consists of 335 amino acids and has a predicted molecular mass of 38 kDa. As a result of glycosylation, the apparent molecular mass of rm BTC/Fc monomer migrates with an apparent molecular mass of 50-55 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

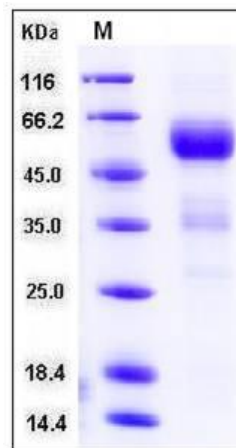
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Betacellulin, also known as BTC is a single-pass type I membrane protein. Betacellulin is synthesized in several tissues and tumor cells. It is predominantly expressed in pancreas and small intestine. The expression of Betacellulin is particularly high in the pancreas where it is thought to play a role in the differentiation of pancreatic beta cells. Betacellulin belongs to the epidermal growth factor (EGF) family of peptide ligands that are characterised by a six-cysteine consensus motif that forms three intra-molecular disulfide bonds crucial for binding the ErbB receptor family. Betacellulin was initially described, purified and cloned from a mouse insulinoma cell line. It is proteolytically processed from a larger membrane-anchored precursor and is a potent mitogen for a wide variety of cell types. Betacellulin binds and activates ErbB-1 and ErbB-4 homodimers. Betacellulin stimulated gastrointestinal growth, the increased responsiveness of the terminal ileum and colon suggesting therapeutic potential in disease conditions in which ileal or colonic re-growth is desirable. Betacellulin further stimulated a diuresis suggesting an additional role in fluid homeostasis.

References

1. Dunbar, A.J. et al., 2000, Int J Biochem Cell Biol. 32 (8): 805-15.
2. Howarth, G.S. et al., 2003, Growth Factors. 21 (2): 79-86.
3. Moon, W.S. et al., 2006, Hum Pathol. 37 (10): 1324-32.
4. Mummery, R.S. et al., 2007, Glycobiology. 17 (10): 1094-103.
5. Dunbar, A.J. et al., 2001, J Mol Endocrinol. 27 (2): 239-47.

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