

GMP HumanKine[®] Betacellulin (Recombinant Human)



Animal Component-Free

Human cell expressed

Tag-Free

Endotoxin Free

Product Description

Betacellulin (BTC) is a member of the epidermal growth factor (EGF) family of proteins, which play a critical role in cell growth, differentiation, and repair. It is initially synthesized as a membrane-bound precursor, later cleaved to release its active soluble form (PMID 27635238). BTC is known to bind to and activate the ErbB receptor family, particularly ErbB1 (also known as EGFR) and ErbB4, triggering a cascade of intracellular signaling pathways that regulate cell proliferation and survival (PMID 24440602). BTC is highly expressed in various tissues, including the pancreas, where it promotes the growth and regeneration of insulin-producing beta cells, suggesting a potential role in diabetes treatment (PMID 33553143). Due to its wide-ranging effects, betacellulin has been studied for therapeutic applications in regenerative medicine and cancer (PMID 31678994, 12704384).

Alternative Names

BTC

Accession Number

P35070

Source

Human Embryonic Kidney cells (HEK293). HEK293-derived Betacellulin protein

Adventitious Virus

Master Cell Bank tested Negative for Adventitious Viruses

Specifications

Test	Method	Specification
Activity		
Molecular Mass	SDS-PAGE	12 to 25 kDa reduced, 11 to 23 kDa non-reduced, monomer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<0.1 EU/μg
Mycoplasma	PCR	Not Detected

SDS-PAGE

Preparation	
Shipping Temperature	ambient temperature
Formulation	1 x PBS, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4. Gently swirl or tap vial to mix.

Stability and Storage	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
Avoid repeated freeze-thaw cycles.			

Proteintech GMP Quality Policy HumanKine® GMP Proteins

In vitro recombinant protein production can be prone to variability due to various reasons ranging from quality of raw materials to inconsistency in the process. Therefore, HumanKine®, a proteintech brand's GMP proteins are produced and tested under an ISO 13485 certified quality management system in a clean room facility. Proteintech manufactures the GMP HumanKine® products according to the applicable sections in the following documents: USP Chapter 1043 (Ancillary Materials for Cell, Gene, and Tissue-Engineered Products, USP Chapter 92 (Growth Factors and Cytokines Used in Cell Therapy Manufacturing), WHO TRS, No. 822, 1992 Annex 1 (Good Manufacturing Practices for Biological Products), Ph. Eur. General Chapter 5.2.12, and EudraLex – Volume 4 – Part IV (Guidelines on GMP specific to ATMPs). Proteintech strives to achieve the utmost quality GMP raw material ensuring all applicable guidelines are taken into consideration.

The QMS is built to provide our customers with consistent and pure product delivered by documented processes, qualified personnel, validated processes, qualified equipment, qualified vendors, and a stringent final product release process. Although the final product release process is important, Proteintech performs in-process QC steps after each major manufacturing stage. Production records and facilities may be available for an inspection by approved personnel.

Our GMP policy covers all the aspects of production; from raw materials, facility, equipment, and Instruments to training and personal hygiene of staff. It also guarantees that the process is explicit, validated and well documented for transparency and traceability.

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