

GMP HumanKine[®] BMP-4 (Recombinant Human)



Animal Component-Free	Human cell expressed	Tag-Free	Endotoxin Free
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Product Description

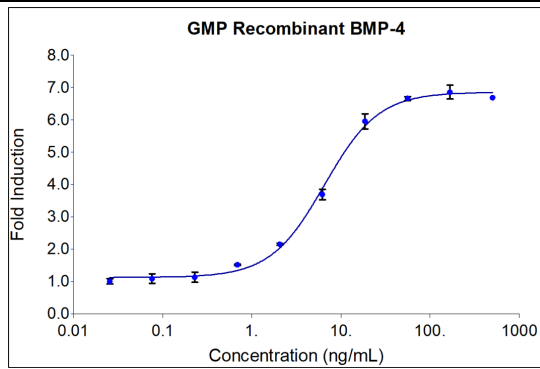
Animal-free Recombinant Human BMP-4 is expressed in human 293 cells as a disulfide linked homodimeric glycoprotein with an apparent molecular mass of 34 kDa. This cytokine is produced in a serum-free, chemically defined media.

Alternative Names	BMP 2B, BMP 4, BMP2B, BMP2B1, BMP4, BMP-4, Bone morphogenetic protein 2B, bone morphogenetic protein 4, DVR4, MCOP56, ZYME
Accession Number	P12644
Source	Human Embryonic Kidney cells (HEK293). HEK293-derived BMP-4 protein
Species Reactivity	human,mouse
Adventitious Virus	Master Cell Bank tested Negative for Adventitious Viruses

Specifications

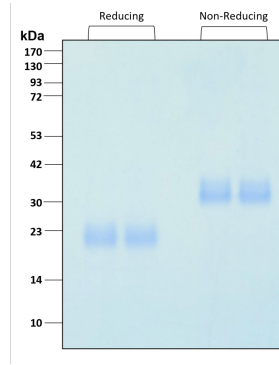
Test	Method	Specification
Activity	Dose-dependent induction of alkaline phosphatase production in the ATDC-5 cell line (mouse chondrogenic cell line)	1.5-9 ng/mL EC50
Molecular Mass	SDS-PAGE	20 to 24 kDa reduced, 32 to 38 kDa non-reduced, homodimer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<0.1 EU/μg
Mycoplasma	PCR	Not Detected

Activity Data



Recombinant human BMP-4 (HZ-1045-GMP) stimulates dose-dependent induction of alkaline phosphatase production in the ATDC-5 mouse chondrogenic cell line. Alkaline phosphatase production was assessed using pNPP as a chromogenic substrate. ATDC-5 cells were treated with increasing concentrations of recombinant human BMP-4 for 72 hrs hours before lysis

SDS-PAGE



Purity of recombinant human BMP-4 was determined by SDS- polyacrylamide gel electrophoresis. The protein was resolved in an SDS- polyacrylamide gel in reducing and non-reducing conditions and stained using Coomassie blue.

Preparation	
Shipping Temperature	ambient temperature
Formulation	2x PBS + 6% Ethanol, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile 4 mM HCL containing 0.1% endotoxin-free recombinant human serum albumin (HSA).

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.

www.ptglab.com

Document #: FR-QA118-101 Rev 0
Data Sheet Version #: 1

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