proteintech®
Antibodies | ELISA kits | Proteins

Catalog Number: HZ-1229-GMP

Data Sheet

# GMP HumanKine® BMP-7 (Recombinant Human)

| Animal Component-Free | Human cell expressed | Tag-Free | Endotoxin Free |
|---|---|---|---|

## Product Description

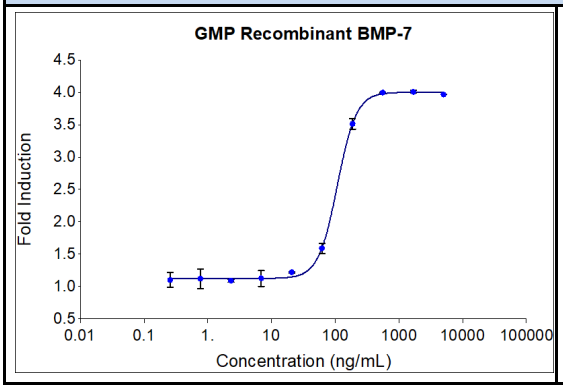
Animal-free Recombinant Human BMP-7 is expressed in human 293 cells as a disulfide linked homodimeric glycoprotein with an apparent molecular mass of 29 kDa. This cytokine is produced in a serum-free, chemically defined media. Recombinant Human BMP-7 is a homodimeric glycoprotein consisting of two 117 amino acid subunits, which correspond to amino acid residues 315 to 431 of the full-length BMP-7 precursor. The protein encoded by this gene is a member of the TGF-beta superfamily. Like other members of the Bone Morphogenetic Protein family of proteins, it plays a key role in the transformation of mesenchymal cells into bone and cartilage.

| | |
|---|---|
| Alternative Names | BMP 7, BMP7, BMP-7, bone morphogenetic protein 7, Eptotermin alfa, HZ1229, OP 1, OP1, Osteogenic protein 1 |
| Accession Number | P18075 |
| Source | Human Embryonic Kidney cells (HEK293). HEK293-derived BMP-7 protein |
| Adventitious Virus | Master Cell Bank tested Negative for Adventitious Viruses |

## Specifications

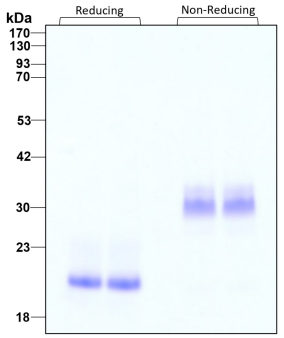
| Test | Method | Specification |
|---|---|---|
| Activity | Dose-dependent induction of alkaline phosphatase production in the ATDC-5 cell line (mouse chondrogenic cell line) | 50-275 ng/mL |
| Molecular Mass | SDS-PAGE | 20 kDa reduced, 32 to 36 kDa non-reduced, homodimer, glycosylated |
| Purity | SDS-PAGE | >95% |
| Endotoxin | LAL | <0.1 EU/μg |
| Mycoplasma | PCR | Not Detected |

## Activity Data




Recombinant human BMP-7(HZ-1229-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-7 for 72 hrs hours before lysis

## SDS-PAGE




Purity of recombinant human BMP-7 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.

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| Preparation | |
|---|---|
| Shipping Temperature | ambient temperature |
| Formulation | 10mM Acetic Acid |
| Reconstitution | Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in 10mM Acetic Acid containing 0.1% endotoxin-free recombinant human serum albumin (HSA). Gently swirl or tap vial to mix. |

| | Product Form | Temperature Conditions | Storage Time (From Date of Receipt) |
|---|---|---|---|
| Stability and Storage | 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

Invitro 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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