

Recombinant Human Mature BMP-7 Protein

Catalog No.: RP02513S **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	655	P18075

Tags
No-Tag

Synonyms

BMP7; OP1; Bone morphogenetic protein 7; BMP-7; Osteogenic protein 1; OP-1; Eptotermin alfa

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
15.68 kDa	15-20 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of 50mM acetic acid pH3.6.

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.

Contact

☎ | 400-999-6126

✉ | cn.market@abclonal.com.cn

🌐 | www.abclonal.com.cn

Background

BMP-7 (Bone morphogenetic protein 7) is a bone morphogenetic protein which belongs to the TGF-β superfamily. OP-1 is expressed in the brain, kidneys, and bladder. BMP-7 may be involved in bone homeostasis and plays a key role in the transformation of mesenchymal cells into bone and cartilage. The phosphorylation of SMAD1 and SMAD5 can be induced by BMP-7, which in turn induce transcription of numerous osteogenic genes. BMP-7 treatment can also induce all of the genetic markers of osteoblast differentiation in many cell types. Human recombinant BMP-7 protein can be used to aid in the fusion of vertebral bodies to prevent neurologic trauma. It also functions in the treatment of tibial non-union, frequently in cases where a bone graft has failed. It is found that BMP7 has the potential for treatment of chronic kidney disease.

Basic Information

Description

Recombinant Human BMP-7 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ser293-His431) of Human BMP-7 (Accession #NP_001710.1) fused with His tag at the N-terminus

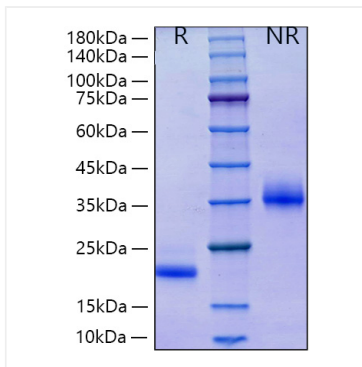
Bio-Activity

Measured by its ability to induce alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED₅₀ for this effect is 34.9-139.58 ng/mL, corresponding to a specific activity of 7.2×10³~2.87×10⁴ units/mg.

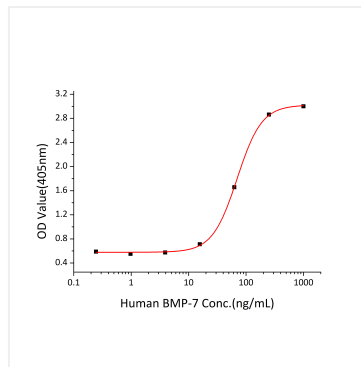
Storage

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 Mature BMP-7 Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions.



Recombinant Human Mature BMP-7 Protein induce alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED_{50} for this effect is 34.9-139.58 ng/mL, corresponding to a specific activity of $7.2 \times 10^3 \sim 2.87 \times 10^4$ units/mg.