Recombinant Human Mature BMP-7 Protein

Catalog No.: RP02513S

Sequence Information

Species
Human

Gene ID
655

Swiss Prot
P18075

Tags
No-Tag

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

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
15.68 kDa

Observed MW
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
Centrifμge 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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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 No Tag.

Activity
Measured by its ability to 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 7.2×10^{3}~2.87×10^{4} units/mg.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

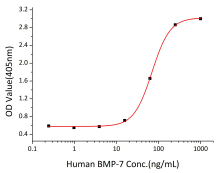
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

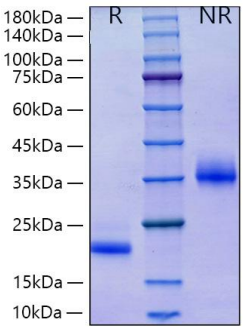
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Validation Data



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 7.2×10^3~2.87×10^4 units/mg.



Recombinant Human Mature BMP-7 Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.