RP02513S

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Recombinant Human Mature BMP-7 Protein

Catalog No.: RP02513S Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
HEK293 cells	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
≥ 95 % as determined by SDS-PAGE.

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.

Contact

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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.

Bio-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.

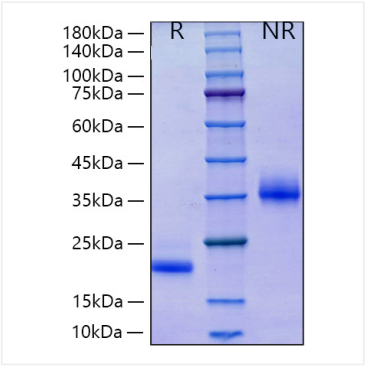
Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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

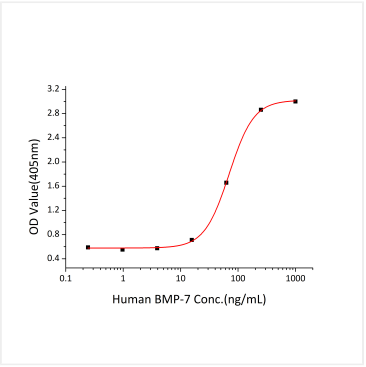
Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

* For your safety and health, please wear a lab coat and disposable gloves when handling.

Validation Data



Recombinant Human Mature BMP-7 Protein was determined by 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 7.2×10^{3}~2.87×10^{4} units/mg.