

Recombinant Human BMP-7 Protein

Catalog No.: RP02513 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	655	P18075

Tags

C-His

Synonyms

BMP7;OP-1

Product Information

Source	Purification
<i>E. coli</i>	> 98% by SDS-PAGE.

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of 20 mM sodium citrate, 0.2 M NaCl, pH 3.5.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile 4 mM HCl. 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.

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 Escherichia coli expression system. The target protein is expressed with sequence of Human BMP-7 fused with polyhistidine tag at the C-terminus

Bio-Activity

Measured by its ability to inhibit alkaline phosphatase production by ATDC5 cells. The ED₅₀ for this effect is <0.65 μg/mL.

Storage

Store the lyophilized protein at -20°C to -80°C for long term.

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.

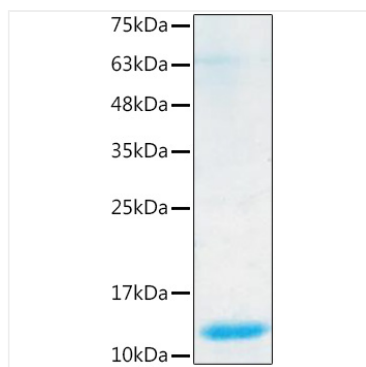
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Validation Data



Recombinant Human BMP-7 Protein was determined by SDS-PAGE with Coomassie Blue, showing bands at 12 kDa.