Recombinant Human BMP-7
Catalog # C935
Derived from Human Cells

DESCRIPTION
Recombinant Human Bone Morphogenetic Protein 7 is produced by our Mammalian expression system and the target gene encoding Ser293-His431 is expressed.

Accession #: P18075
Known as: Bone morphogenetic protein 7; BMP-7; Osteogenic protein 1; OP-1; Bmp7; Eptotermin alfa

FORMULATION
Lyophilized from a 0.2 μm filtered solution of 4mM HCl.

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

STORAGE
Lyophilized protein should be stored at < -20° C, though stable at room temperature for 3 weeks.
Reconstituted protein solution can be stored at 4-7° C for 2-7 days.
Aliquots of reconstituted samples are stable at < -20° C for 3 months.

RECONSTITUTION
Always centrifuge tubes before opening. Do not mix by vortex or pipetting.
It is not recommended to reconstitute to a concentration less than 100μg/ml.
Dissolve the lyophilized protein in distilled water.
Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

QUALITY CONTROL
Purity: Greater than 95% as determined by reducing SDS-PAGE.
Endotoxin: Less than 0.1 ng/μg (1 IEU/μg).

AMINO ACID SEQUENCE
STGSKQRSQNSKTPKNQELRMANVAAENSSDQRAKHELYVSRDLGWQDGIAPEGYAACGFPLNSYMNA
TNHAIVQLTFLHINFETVPKCCAPQLNAISVLYFDSSNVILKKYRNMMVRACGCH

BACKGROUND
Bone morphogenetic protein 7 (BMP-7) is a widely expressed TGF-β superfamily member with important functions during embryogenesis, in the adult, and in disease. The BMP-7 propeptide is cleaved intracellularly but remains in association with the growth factor domain. BMP-7 is subsequently secreted as a tetramer that consists of two propeptides and two disulfide-linked growth factor domains. Mature BMP-7 can also form disulfide-linked heterodimers with BMP-2 or BMP-4, complexes that show increased potency and range of activity compared to BMP-7 homodimers. BMP-7 exerts its biological effects through the type 2 receptors Activin RIIA, Activin RIIB, and BMPR-II and the type 1 receptors ActivinRIA, BMPRIA, and BMPRIAIB. BMP-7 plays a role in a variety of organ systems. It promotes new bone formation and nephron development, inhibits the branching of prostate epithelium, and antagonizes epithelial-mesenchymal transition (EMT). In pathological conditions, BMP-7 inhibits tumor growth and metastasis, ameliorates fibrotic damage in nephritis, and promotes neuroregeneration following brain ischemia.

SDS-PAGE