Bone Morphogenetic Protein 7 Human Chinese Hamster Ovary Cells (CHO)

Product Data Sheet

Type: Recombinant
Source: Chinese Hamster Ovary Cells (CHO)
Species: Human
Other names: BMP-7

Cat. No.:

RBG10088002	(2 µg)
RBG10088010	(10 µg)
RBG10088100	(100 µg)

Description

TGF-beta family members are key modulators of cell proliferation, differentiation, matrix synthesis and apoptosis. As implied by their name, BMPs initiate, promote and regulate the development, growth and remodeling of bone and cartilage. In addition to this role, BMPs are also involved in prenatal development and postnatal growth, remodeling and maintenance of a variety of other tissues and organs. BMP-7, also known as osteogenic protein-1 or OP-1, is a potent bone inducing agent, which in the presence of appropriate osteoconductive carrier (e.g. collagen sponge or synthetic hydroxyapatite) can be used in the treatment of bone defects. A bone-graft substitute, called OP-1 ^{TM} implant, made of recombinant human BMP-7 associated with bovine bone-derived collagen, has recently been approved by the FDA as a device for treating critical-size bone fractures. The potential use of BMP-7 in dental reconstructive surgeries is currently under investigation. Recombinant human BMP-7 is a 28.8 kDa homodimeric glycoprotein consisting of two 117 amino acid subunits, which correspond to amino acid residues 315 to 431 of the full-length BMP-7 precursor.

Amino Acid Sequence

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MANVAENSSS DQRQACKKHE LYVSFRDLGW QDWIIAPEGY AAYYCEGECA FPLNSYMNAT NHAIVQTLVH FINPETVPKP
CCAPTQLNAI SVLYFDDSSN VILKKYRNMV VRACGCH
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Source

Chinese Hamster Ovary Cells (CHO)

Purity

98%

Biological Activity

Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells. The expected ED_{50} for this effect is 0.02-0.04 µg/ml.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

-20°C

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