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32-20560: Recombinant Human BMP-7(Discontinued)

Alternative Name : Bone Morphogenetic Protein-7, Osteogenic Protein-1 (OP-1)

Description

Source:CHO cells
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 an 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-1TM 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 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. Recombinant Human BMP-7 has a calculated molecular weight of 26.4 kDa; however, due to glycosylation, the BMP-7 homodimer migrates at an apparent molecular weight of approximately 25-35 kDa by SDS-PAGE analysis under non-reducing conditions.

Product Info

Amount : 2 µg / 10 µg
Purification : Purity:>= 98% by SDS-PAGE gel and HPLC analyses.
Content : This recombinant protein is supplied in lyophilized form.
Amino Acid : MANVAENSSS DQRQACKKHE LYVSFRDLGW QDWIIAPEGY AAYYCEGECA FPLNSYMNAT NHAIVQTLVH FINPETVPKP CCAPTQLNAI SVLYFDDSSN VILKKYRNMV VRACGCH

Application Note

Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells. The expectedÃ□Â ED_{50}Ã□Â for this effect is 0.02-0.04 Ã□Âµg/ml.Ã□Â