

Bone Morphogenetic Protein-7, Human Recombinant, CHO

CATALOG NUMBER: CBM-276-010P, 10 µg

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| Synonyms | Osteogenic Protein 1, BMP-7 |
| Introduction | The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extra-skeletal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development. In addition, the fact that this BMP is closely related to BMP5 and BMP7 has lead to speculation of possible bone inductive activity. |
| Description | N-TERMINAL---Human BMP-2 (Met 1 – Arg 282) Human BMP-7 (Ser 293 – Arg 431)---C-TERMINAL. The DNA sequence encoding the human BMP-2 signal peptide and propeptide (1~282 amino acid) fused to the human rhBMP-7 mature chain (293~431 amino acid) was expressed in a Chinese hamster ovary cell line. The mature recombinant BMP-7 generated by the proteolytic removal of the signal peptide and propeptide contains 139 amino acid residues. The glycosylation of BMP-7 increases the molecular mass and the glycosylated proteins migrate as 25 ~ 40 kDa in SDS-PAGE under non-reducing conditions. BMP-7 is purified by proprietary chromatographic techniques. |
| Source | <i>Chinese Hamster</i> ovarian cells |
| Biological Activity | Measured in alkaline phosphatase activity assay using MC3T3-E1 cells. The ED ₅₀ for this effect is < 100 ng/mL. |
| Size | 10 µg (lyophilized from a concentrated sterile solution containing 1% sucrose, 1.2% mannitol, 20 mM glycine, and 0.005% tween 20, pH4.0). |
| Storage | It is recommended to reconstitute the lyophilized Bone Morphogenetic Protein-7 in sterile/ endotoxin free water. Lyophilized BMP-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BMP 7 Human should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles. |
| Purity | > 97% pure by SDS-PAGE and RP-HPLC. |