

Recombinant Human Bone Morphogenetic Protein –7CHO (rh BMP-7CHO)

Synonyms: Osteogenic Protein 1, OP-1

Introduction: The bone morphogenetics 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 extraskeletal 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 BMP 5 and BMP 7 has led 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 BMP-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: *Chinese Hamster Ovary Cells.*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilised from a 0.2qm filtered solution containing 1% sucrose, 1.2% mannitol, 20 mM glycine and 0.05% tween 20, pH 4.

The aliquots of 1µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilised BMP-7 in sterile / endotoxin free water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Purity: Greater than 97% by SDS-PAGE and RP-HPLC

Stability: Lyophilized rh BMP-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh BMP-7 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 avoid freeze-thaw cycles.

Biological Activity: Measured in alkaline phosphatase activity assay using MC3T3-E1 cells. The ED₅₀ for this effect is < 70 ng/ml.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11343292
<i>medium</i>	10 µg	Cat.N°	11343293
<i>large</i>	50 µg	Cat.N°	11343295

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