Product Data Sheet

Product Name:	BMP 7 Human, CHO
Cat. No.:	GP20110
Batch No.:	1

Product Data

Purity	>98%	Source	Chinese Hamster Ovarian Cells.
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Osteogenic Protein 1; BMP-7.		
Solubility	It is recommended to reconstitute the lyophilized Bone Morphogenetic Protein-7 in 0.5mg/1ml sterile/ endotoxin free water.		
Formulation	BMP-7 was lyophilized from a concentrated (1mg/ml) sterile solution containing 1% sucrose, 1.2% mannitol, 20mM glycine and 0.05% polysorbate 20 pH-4.		

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 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 BMP5 and BMP7 has lead to speculation of possible bone inductive activity.

Biological Activity

Measured in alkaline phosphatase activity assay using MC3T3-E1 cells. The ED50 for this effect is < 70ng/ml, corresponding to a Specific Activity of 14,286IU/mg.

Stability

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

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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.

Background

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 propetide contains 139 amino acid residues. The glycosylation of BMP-7 increases the molecular mass and the glycosylated proteins migrate as 25 ~ 40kDa in SDS-PAGE under non-reducing conditions.BMP-7 is purified by proprietary chromatographic techniques.

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