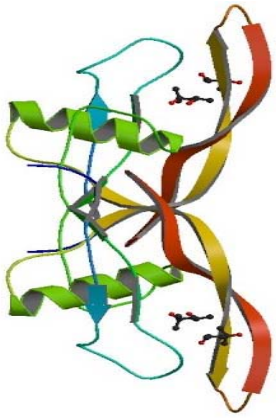
SPECIFICATION SHEET
Rev 082679A

Bone Morphogenetic Protein-4

Human, Recombinant (rHuBMP-4)

Expressed in *E. coli*
Cat. No. CRP0880
Lot. No. (See product label)



PDB rendering based on 1reu.

PRODUCT INFORMATION

Description: Human BMP-4 is one of at least 15 structurally and functionally related BMPs, which are members of the transforming growth factor β (TGF-β) superfamily. BMPs were originally identified as protein regulators of cartilage and bone formation. However, they havesince been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs have also been shown to regulate the growth, differentiation, chemotaxis and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells and neuronal cells. BMP-4 is synthesized as large precursor molecules which are cleaved by proteolytic enzymes. The active form can consist of a dimmer of two identical proteins or a heterodimer of two related bone morphogenetic proteins.

Amino-Acid Sequence:116aa.,monomeric,non-glycosylated

M. W. : 13,000 Da

Recombinant: Expressed in *E. coli*

Purity: >95% by SDS-PAGE and HPLC analyses.

Formulation: Lyophilized from a 0.2μm filtered concentrated (1mg/ml) solution in 20mM Na_2CO_3 buffer, pH 9.0.

Endotoxin: Less than 1EU/μg of rHuBMP-4 as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable at 2-8°C, but should be kept at –20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at –20°C to –70°C. Avoid repeated freeze/thaw cycles.

FOR RESEARCH USE ONLY

GENE INFORMATION

Gene Name: BMP4
Synonyms: ZYME; BMP2B; BMP2B1; DVR4; MCOPS6; BMP-2B; BMP-4; Bone morphogenetic protein 4 precursor; bone morphogenetic protein 2B; bone morphogenetic protein 4
mRNA Refseq: NM_001202
Protein Refseq: NP_001193
MIM: 112262
GeneID: 652
Uniprot ID: P12644
Chromosome Location: 14q22-q23
Function: cytokine activity. Growth factor activity. Heparin binding. Protein binding. Signal transducer activity.

REFERENCES

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3.Aoki H, Fujii M, Imamura T, et al. Synergistic effects of different bone morphogenetic protein type I receptors on alkaline phosphatase induction. J. Cell. Sci.2001; 114 (Pt 8): 1483–1489.

4.Ying Y, Liu XM, Marble A, et al. Requirement of Bmp8b for the generation of primordial germ cells in the mouse. Mol. Endocrinol. 2000;14 (7): 1053–1063.

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