

Bone Morphogenetic Protein -2

Human, Recombinant (rHuBMP2)

Expressed in *E. coli*

Cat. No. CRP0801

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Bone morphogenetic protein 2 (BMP-2) is a protein that belongs to the TGF- β superfamily of proteins. It, like other bone morphogenetic proteins, plays an important role in the development of bone and cartilage. It is involved in the Hedgehog pathway, TGF-beta signaling pathway, and the Cytokine-cytokine receptor interaction. It is involved also in cardiac cell differentiation and epithelial to mesenchymal transition.

Amino-Acid Sequence: 115 aa (The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Ala-Lys-His.), non-glycosylated

M. W. : 26,018 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE and SEC-HPLC.

Formulation: Lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM sodium citrate pH=3.5.

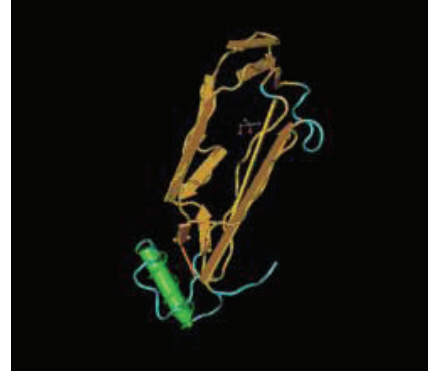
Specific Activity: BMP-2 is fully biologically active when compared to standard. The ED50 as determined by the cytolysis of MC3T3-E1 cells is less than 50 ng/ml, corresponding to a specific activity of 2.0×10^4 IU/mg.

Endotoxin: Less than 0.1ng/ μ g (1IEU/ μ g) of Bone Morphogenetic protein-2 .

Reconstitution: It is recommended to reconstitute the lyophilized rHuBMP2 in sterile 20mM Acetic acid not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized BMP2 although stable at room temperature for 3 weeks, should be stored desiccated below -18 $^{\circ}$ C. Upon reconstitution BMP2 should be stored at 4 $^{\circ}$ C between 2-7 days and for future use below -18 $^{\circ}$ C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Aliquot to avoid repeated freeze-thaw cycles.

FOR RESEARCH USE ONLY



[PDB](#) rendering based on 3bmp.

GENE INFORMATION

Gene Name: [BMP2](#)

Gene Alias: BMP2A

Gene Type: protein coding

mRNA Refseq: [NM_001200.2](#)

Protein Refseq: [NP_001191.1](#)

MIM: [112261](#)

GeneID: [650](#)

Chromosome Location: 20p12

Pathway: BMP signaling pathway; Basal cell carcinoma; Cytokine-cytokine receptor interaction; Hedgehog signaling pathway; TGF-beta signaling pathway

Function: cytokine activity, growth factor activity, specific transcriptional repressor activity

REFERENCES

- 1.Furuta Y, et al.Bone morphogenetic proteins (BMPs) as regulators of dorsal forebrain development. *Development*. 1997 Jun;124(11):2203-2212
- 2.Tsumaki N, et al.Bone morphogenetic protein signals are required for cartilage formation and differently regulate joint development during skeletogenesis. *J Bone Miner Res*. 2002 May;17(5):898-906
- 3.Wang EA, et al.Recombinant human bone morphogenetic protein induces bone formation. *Proc Natl Acad Sci U S A*. 1990 Mar;87(6):2220-2224

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