

Human / Mouse / Rat / Rhesus / Canine BMP-2 Protein (Fc Tag)

Catalog Number: 10426-H01H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

BMP2, BMP2A

Protein Construction:

A DNA sequence encoding the mature form of human BMP2 (NP_001191.1) (Gln 283-Arg 396) was fused with the Fc region of human IgG1 at the C-terminus. The mature form sequences of human, mouse, rat, rhesus and canine BMP2 are identical.

Source: Human

Expression Host: Human Cells

QC Testing

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

Bio-Activity:

1. Measured by its ability to bind recombinant human Nog-Fc (Cat:10267-H02H) in a functional ELISA.
2. Measured by its ability to bind recombinant human ALK3-Fch (Cat:10446-H03H) in a functional ELISA.
3. Measured by its ability to bind recombinant mouse ALK3-Fch (Cat:50078-M03H) in a functional ELISA.
4. Measured by its ability to bind recombinant human BMPRII-Fc (Cat:10551-H03H) in a functional ELISA.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Glu 20

Molecular Mass:

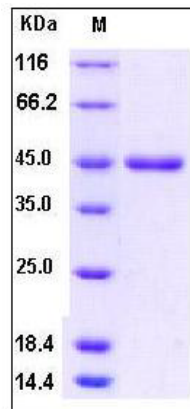
The recombinant human BMP2 consists of 351 amino acids and has a predicted molecular mass of 39.5 kDa.

Formulation:

Lyophilized from sterile 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.5.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

SDS-PAGE:



Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Bone morphogenetic protein 2 (BMP2) is a member of the BMP subgroup belonging to the transforming growth factor (TGF)-beta superfamily. The mature BMP2 acts as disulfide-linked homodimers and heterodimers with BMP-7 after proteolytic removal of propeptide. BMP2 is capable of inducing the formation of cartilage and bone but are now regarded as multifunctional cytokines. It binds heterodimeric receptor complexes composed of a type I receptor and a type II receptor, and transduces the related signals via the down-stream molecules, such as the PI3 kinase, Smads, STATs, etc. BMP2 has been demonstrated to potently induce osteoblast differentiation in a variety of cell types, and induce apoptosis in human myeloma cell lines as a novel function. In addition, recent studies have revealed that osteoblast-derived BMP2 enhances the migration of prostate cancer cells. rhBMP2 can be utilized in various therapeutic interventions such as bony defects, delayed union, non-union fractures and osteoporosis.

References

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3. Kawamura, C. et al., 2000, Blood. 96: 2005-2011.
4. Lai, T.H. et al., 2008, Prostate. 68: 1341-1353.
5. Ghosh-Choudhury, N. et al., 2002, J. Biol. Chem. 277: 33361-33368.
6. Hallahan, A.R. et al., 2003, Nat. Med. 9: 1033-1038.

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