

Datasheet for ABIN1589575
BMP2 Protein (Homodimer)



[Go to Product page](#)

5 Publications

Overview

Quantity:	5 µg
Target:	BMP2
Protein Characteristics:	Homodimer
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Sequence:	MQAKHKQRKR LKSSCKRHPL YVDFSDVGWN DWIVAPPGYH AFYCHGECPF PLADHLNSTN HAIVQTLVNS VNSKIPKACC VPTELSAISM LYLDENEKVV LKNYQDMVVE GCGCR
Characteristics:	Length (AA): 115 Chromosomal location: 20p12 Measured by the ability of BMP-2 to induce alkaline phosphatase production by C2C12 myogenic cells. The ED50 for this effect is typically 0.3-0.8 µg/mL.
Purity:	> 95 % by SDS-PAGE. Visualized by silver stain
Endotoxin Level:	< 0.1 ng per mg of BMP-2

Target Details

Target:	BMP2
Alternative Name:	BMP-2 (BMP2 Products)

Target Details

Background: Human Bone Morphogenetic Protein-2 (BMP-2) is a disulfide-bonded homodimeric protein with an apparent molecular weight of 26 kDa. BMP-2 regulates similarly to its nearest homologue BMP-4 diverse fundamental processes during embryonic development: BMP-2 and other BMP proteins have great potential for medical therapeutic applications, in particular because they allow or at least accelerate the ossification of extensive bone lesions. The amino acid sequence of recombinant human BMP-2 starts with MQAKHKQ (position 283) containing the Met from the E. coli expression vector. BMP-2 is a heparin binding protein.

Synonyms: bone morphogenetic protein 2, BDA2, BMP2A, bone morphogenetic protein 4, ZYME, BMP2B, OFC11, BMP2B1, MCOPS6

Molecular Weight: 26.0 kDa

NCBI Accession: [NM_001200](#), [NP_001191](#)

UniProt: [P12643](#)

Pathways: [Regulation of Hormone Metabolic Process](#), [Regulation of Hormone Biosynthetic Process](#), [Regulation of Muscle Cell Differentiation](#), [Growth Factor Binding](#), [Positive Regulation of fat Cell Differentiation](#)

Application Details

Comment: Cytokines & Growth Factors

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: The lyophilized BMP-2 is best soluble in 50 mM acetic acid at a concentration of 0.1 mg/mL but should be also soluble in most aqueous buffers when the pH is below 6.0.

Buffer: 50 mM acetic acid

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -20 °C/-80 °C

Storage Comment: Lyophilized samples are stable for greater than six months at -20 °C to -70 °C. Reconstituted BMP-2 should be stored in working aliquots at -20 °C.

Expiry Date: 6 months

Product cited in:

Yao, Li, Xiong, Zeng, Xu, Wang: "Hollow hydroxyapatite microspheres/chitosan composite as a sustained delivery vehicle for rhBMP-2 in the treatment of bone defects." in: **Journal of materials science. Materials in medicine**, Vol. 26, Issue 1, pp. 5336, (2015) ([PubMed](#)).

Schliephake, Rublack, Förster, Schwenzer, Reichert, Scharnweber: "Functionalization of titanium implants using a modular system for binding and release of VEGF enhances bone-implant contact in a rodent model." in: **Journal of clinical periodontology**, Vol. 42, Issue 3, pp. 302-10, (2015) ([PubMed](#)).

Haversath, Hülsen, Böge, Tassemeier, Landgraeber, Herten, Warwas, Krauspe, Jäger: "Osteogenic differentiation and proliferation of bone marrow-derived mesenchymal stromal cells on PDLLA?+?BMP-2-coated titanium alloy surfaces." in: **Journal of biomedical materials research. Part A**, (2015) ([PubMed](#)).

Suliman, Xing, Wu, Xue, Pedersen, Sun, Døskeland, Nickel, Waag, Lygre, Finne-Wistrand, Steinmüller-Nethl, Krueger, Mustafa: "Release and bioactivity of bone morphogenetic protein-2 are affected by scaffold binding techniques in vitro and in vivo." in: **Journal of controlled release : official journal of the Controlled Release Society**, Vol. 197, pp. 148-57, (2014) ([PubMed](#)).

Wölfle, Fiedler, Dürselen, Reichert, Scharnweber, Förster, Schwenzer, Reichel, Ignatius, Brenner: "Improved anchorage of Ti6Al4V orthopaedic bone implants through oligonucleotide mediated immobilization of BMP-2 in osteoporotic rats." in: **PLoS ONE**, Vol. 9, Issue 1, pp. e86151, (2014) ([PubMed](#)).