

Human BMP-2 (glycosylated, HEK)

Human Bone Morphogenetic Protein-2, glycosylated (HEK), recombinant

Synonyms: BMP-2, BMP2A.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
2 µg	1195.955.002		
10 µg	1195.955.010		
100 µg	1195.955.100		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant human BMP-2 glycosylated from HEK is a 28.0 kDa homodimeric protein consisting of two 113 amino acid polypeptide chains. BMPs (Bone Morphogenetic Proteins) belong to the TGF-beta superfamily of structurally related signaling proteins. BMP-2 is a potent osteoinductive cytokine, capable of inducing bone and cartilage formation in association with osteoconductive carriers such as collagen and synthetic hydroxyapatite. In addition to its osteogenic activity, BMP-2 plays an important role in cardiac morphogenesis and is expressed in a variety of tissues including lung, spleen, brain, liver, prostate ovary and small intestine. The functional form of BMP-2 is a 26 kDa protein composed of two identical 114 amino acid polypeptide chains linked by a single disulfide bond. Each BMP-2 monomer is expressed as the C-terminal part of a precursor polypeptide, which also contains a 23 amino acid signal sequence for secretion, and a 259 amino acid propeptide. After dimerization of this precursor, the covalent bonds between the propeptide (which is also a disulfide-linked homodimer) and the mature BMP-2 ligand are cleaved by a furin-type protease.

- **Biological Activity** see below
- **Source** HEK
- **Purity** ≥ 95 % (SDS-PAGE)
- **Endotoxin level** ≤ 0.1ng/µg (≤ 1EU/µg)
- **Stabilizer** None
- **Buffer** PBS (2x), Ethanol (6%)*
- **Physical state** Sterile filtered, lyophilized

Biological Activity

The ED₅₀ of 5-7ng/ml was determined by its ability to induce alkaline phosphatase production by mouse chondrogenic cell line, ATDC-5.

Reconstitution

We recommend a quick spin followed by reconstitution in 4mM HCl containing about 0.1% HSA (highly pure and endotoxin free). Do not vortex. This solution can be stored at 2-8°C for up to 1 week or in working aliquots at -20°C to -80°C. Working aliquots should be at the highest possible concentration.

Stability

The lyophilized protein is stable at room temperature for up 1 month and at least until the lot specific expiry date if kept below -18°C. Reconstituted glycosylated BMP-2 is stable for at least 6 months when stored in working aliquots at -20°C to -80°C with HSA. **Please avoid repeated freeze-thaw cycles.**

Amino Acid Sequence

QAKHKQRKRL KSSCKRHPLY VDFSVDGWND WIVAPPGYHA FYCHGECFPF LADHLNSTNH AIVQTLVNSV
 NSKIPKACCV PTELSAISML YLDENEKVVL KNYQDMVVEG CGCR

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

ORDERING
 Tel.: +49 40 43208448-0
 order@active-bioscience.de
 www.active-bioscience.de

TECHNICAL SUPPORT
 Tel.: +49 40 43208448-11
 support@active-bioscience.de

Active Bioscience GmbH
 Oberaltenallee 8
 D-22081 Hamburg
 HRB 98170 Amtsgericht Hamburg