

Recombinant Human Bone Morphogenetic Protein -4 (rh BMP-4)

Synonyms: BMP2B.

Introduction: The protein encoded by this gene is a member of the bone morphogenetic protein family which is part of the TGF-beta superfamily which includes large families of growth and differentiation factors. Bone morphogenetic proteins were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site and are widely distributed throughout the body and are involved in diverse physiological processes during both pre- and postnatal life. Like BMP-7, BMP-4 is involved in the development and maintenance of bone and cartilage. Reduced expression of BMP-4 is associated with a number of bone diseases, including the heritable disorder Fibrodysplasia Ossificans Progressiva.

Description: Recombinant human Bone Morphogenetic Protein-4 (BMP-4) is a monomeric, non-glycosylated, Polypeptide chain containing 116 amino acids and having a molecular mass of 13 kDa. The human BMP-4 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilised from a 0.2 µm filtered solution in 20mM NA₂CO₃ buffer, pH 9.0
The aliquotes of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized BMP-4 in sterile H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh BMP-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh BMP-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSS or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

Amino Acid Sequence: SPKHHSQRAR KKNKNCRRHS LYVDFSDVGW NDWIVAPPGY QAFYCHGDCP
FPLADHLNST NHAIVQTLVN SVNSSIPKAC CVPTELSAIS MLYLDEYDKV VLKNYQEMVW EGCGCR.

Application:

1. Molecular standard (Western, ELISA) in studying secreted BMP-4.
2. Preparing antibodies for BMP-4 monomer.
3. Molecule standard in detecting secreted BMP-4 in reduced SDS-PAGE.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11345002
<i>medium</i>	10 µg	Cat.N°	11345003

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