

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

**Synonyms:** ZYME, BMP2B, BMP2B1.

**Introduction:** The protein encoded by this gene is a member of the bone morphogenetic protein family which is part of the TGF-beta superfamily. The superfamily 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. This particular family member plays an important role in the onset of endochondral bone formation in humans, and a reduction in expression has been associated with a variety of bone diseases, including the heritable disorder Fibrodysplasia Ossificans Progressiva. Alternative splicing in the 5' untranslated region of this gene has been described and three variants are described, all encoding an identical protein.

**Description:** Recombinant human BMP-4 produced in CHO cells is a glycosylated homodimerchain containing 2x116 amino acids and having a total molecular mass of 26.2kDa.  
The BMP-4 is purified by proprietary chromatographic techniques.

**Source:** CHO

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

**Formulation:** The BMP-4 was lyophilized from a sterile solution containing 0.1% Trifluoroacetic Acid (TFA)

**Solubility:** It is recommended to reconstitute the lyophilized BMP-4 in sterile 10mM HCl not less than 0.1mg/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 SDS-PAGE.

**Amino Acid Sequence:**

SPKHHSQRARKKNKNCRRHSLYVDFSDVGWNDWIVAPPGYQAFYCHGDCPPFLADHLNST  
NHAIVQTLVNSVNSSIPKACCVPTELSAISMLYLDEYDKVVLKKNYQEMVVEGCGC.

**Specific Activity:** The ED50 as calculated by alkaline phosphatase activity induced in ATDC-5 cells is 8.452 ng/ml corresponding to a specific activity of  $1.2 \times 10^5$  U/mg.

This material is offered for **research use 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°	11345042
<i>medium</i>	10 µg	Cat.N°	11345043

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