

Recombinant Human BMP-4

Cat. # and size:	PBMP4-10	10 µg
	PBMP4-100	100 µg
	PBMP4-1000	1000 µg

Product Specifications

- Expression of Human Proteins in Human Cells
- Extreme low Endotoxin
- High Purity
- Animal Free and Xeno Free
- Tag Free

Source: Human cells derived

Structure: Glycosylated homodimer

Purity: >95% by SDS-PAGE

Endotoxin Level: <0.5EU/ug

Molecular Weight: 34-40kDa

Formulation: Lyophilized from a 0.2µm filtered solution in PBS without carrier protein

Activity Assay

The activity was measured by its ability to induce alkaline phosphatase production in the ATDC-5 cell line (Mouse chondrogenic cell line).

Reconstitution

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile 4 mM HCl containing at least 0.1% human or bovine serum albumin to a desired concentration.

Stability & Storage

Store in a manual defrost freezer. In general, the lyophilized protein is stable for 12 months if stored at -80°C. Reconstituted protein is stable for 4 weeks at 2 to 8°C under sterile conditions. Store the reconstituted protein in aliquots at -20°C to -80°C for up to 3 months under sterile conditions. Avoid repeated freeze-thaw cycles.

Protein Description

Bone morphogenetic protein 4 (BMP-4) is a member of transforming growth factor β family that includes more than 20 structurally related bone growth factors. BMP-4 is widely expressed from early embryogenesis through adulthood. It plays an important role in cartilage and bone formation, mesoderm induction, tooth development, limb formation and fracture repair. Mature human BMP-4 is a 116 amino acids glycoprotein and normally found as a homodimer. Dimerization is facilitated by a disulfide bridge formed between the monomer, which contains three intrachain disulfide bridges arranged in a cystine knot motif. BMP-4 signals through tetrameric complexes composed of type I (primarily Activin RIA or BMPRIA) and type II (primarily Activin RIIA or BMPRII) receptors. The bioavailability of BMP-4 is regulated by its interaction with multiple proteins and glycosaminoglycans.

References

- Zhang Y, et al. (2008) Blood 111,1933.
- Shore EM, et al. (1998) Calcif. Tissue Int. 63,221-229.
- Nakamura K, et al. (1999) Exp. Cell Research 250,351-363.