

Recombinant Human BMP-4

Cat. #: SB4-010

Product Specifications

- Expression of Human Proteins in Human Cells
- Extremely Low Endotoxin Level
- High Purity
- Animal Free and Xeno Free
- Tag Free

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 BMPRI A) and type II (primarily Activin RIIA or BMPRI I) 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.

Source: Derived from human cells

Size: 10 μ g

Shipping: Ambient temperature

Structure: Glycosylated homodimer

Purity: >95% by SDS-PAGE

Endotoxin Level: <0.5 EU/ μ g

Molecular Weight: 34-40 kDa

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

Activity Assay

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.

Stability and Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles. In general: 12 months from date of receipt, -20 to -80° C as supplied. 1 month, 2 to 8° C under sterile conditions after reconstitution. 3 months, -20 to -80° C under sterile conditions after reconstitution.

