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Recombinant Human BMP-4

Cat# HST-B4

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.

Stability & 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.

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.