Recombinant Human BMP-4 protein(His Tag)

Catalog Number: PKSH034130

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Species	Human
Source	E.coli-derived Human BMP-4 protein Lys 303-Arg 408, with an C-terminal His
Calculated MW	12.9 kDa
Observed MW	12 kDa
Accession	P12644
Bio-activity	Measure by its ability to induce alkaline phosphatase production by ATDC5 cells.The ED_{50} for this effect is <0.58 ng/mL.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 0.1 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20 mM sodium carbonate, pH 9.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Background

Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis. Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction. Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2. Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A. In turn, BMPR1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. Can also signal through non-canonical BMP pathways such as ERK/MAP kinase, PI3K/Akt, or SRC cascades. For example, induces SRC phosphorylation which, in turn, activates VEGFR2, leading to an angiogenic response.