Recombinant Human BMP-8a protein(His Tag)

Catalog No. PKSH034134

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

Description

Synonyms	BMP-8;OP-2;Osteogenic Protein-2
Species	Human
Expression Host	E.coli
Sequence	Ala 264-His 402
Accession	Q7Z5Y6
Calculated Molecular Weight	16.6 kDa
Observed molecular weight	17 kDa
Tag	C-His
Bioactivity	Measure by its ability to induce alkaline phosphatase production by ATDC5 cells.The ED_{50} for this effect is 10-19.4 ng/mL.

Properties

Purity	> 98 % 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 citrate, 0.2 M NaCl, pH 3.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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

Induces cartilage and bone formation. May be the osteoinductive factor responsible for the phenomenon of epithelial osteogenesis. Plays a role in calcium regulation and bone homeostasis. Signaling protein involved in regulation of thermogenesis and energy balance. Proposed to increase the peripheral response of brown adipose tissue (BAT) to adrenergic stimulation while acting centrally in the hypothalamus to increase sympathetic output to BATBy Similarity1 Publication Growth factor of the TGF-beta superfamily that plays important role in various biological processes, including spermatogenesis, osteogenesis, steroidogenesis as well as regulation of energy balance. 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. In addition, activates the SMAD2/3 pathway.

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