Recombinant BMP5 protein (His tag)

Catalog Number	546841
Synonyms	BMP-5
Species	Human
Expression System	E. coli
Accession	P22003
Molecular Weight	Predictes a molecular mass of 13.46 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	351-454
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 351-454 aa (P22003) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Bone Morphogenetic Protein 5 (BMP-5) Fragment (residues 351-454) is a high-purity, soluble protein fragment engineered for structural and biochemical research. This 104-amino acid fragment offers a stable and functional unit ideal for investigating BMP signaling mechanisms and developmental processes. Bone Morphogenetic Protein 5 (BMP-5) is a crucial growth factor within the TGF-β superfamily, playing essential roles in developmental processes including cartilage and bone formation, neurogenesis, and chondrogenic differentiation. It initiates canonical BMP signaling by binding to BMPR1A and BMPR2 receptors, leading to phosphorylation of SMAD1/5/8 transcription factors that regulate target gene expression. BMP-5 also activates non-canonical pathways such as MAPK p38 signaling and modulates hepcidin expression through interaction with ERFE. As a secreted protein, BMP-5 functions in extracellular signaling cascades fundamental to tissue development and homeostasis.