Recombinant BMP3 protein (His tag)

Catalog Number	542122
Synonyms	BMP-3; Bone morphogenetic protein 3A; BMP-3A; Osteogenin
Species	Human
Expression System	E. coli
Accession	P12645
Molecular Weight	Predictes a molecular mass of 14.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	363-472
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 363-472 aa (P12645) 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	This product is a recombinant protein fragment of Bone Morphogenetic Protein 3 (BMP-3), also known as Osteogenin, spanning residues 363-472. This 110-amino acid fragment has been computationally designed for optimal stability and solubility, making it an ideal tool for structural studies and biochemical assays investigating BMP-3's regulatory functions in skeletal development. Bone Morphogenetic Protein 3 (BMP-3) is a secreted growth factor belonging to the TGF-beta superfamily, playing essential roles in developmental processes by inducing and patterning early skeletal formation while negatively regulating bone density. It functions as an antagonist to certain osteogenic BMPs, inhibiting osteoprogenitor differentiation and ossification. BMP-3 initiates signaling cascades by associating with the type II receptor ACVR2B, activating both SMAD2-dependent and SMAD-independent pathways including TAK1 and JNK. As a secreted protein, it operates extracellularly to modulate bone morphogenesis and maintain skeletal homeostasis.