Recombinant BMP8A protein (His tag)

Catalog Number	540608
Synonyms	BMP-8A
Species	Human
Expression System	E. coli
Accession	Q7Z5Y6
Molecular Weight	Predictes a molecular mass of 13.34 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	299-402
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 299-402 aa (Q7Z5Y6) 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 BMP-8A Fragment (residues 299-402) is a high-purity protein designed for structural and biochemical research. This 104-amino acid fragment represents a stable, soluble unit of Bone Morphogenetic Protein 8A, enabling studies of this important signaling molecule involved in bone formation, energy balance regulation, and multiple biological processes. Bone Morphogenetic Protein 8A (BMP-8A) is a secreted growth factor belonging to the TGF-beta superfamily that plays crucial roles in cartilage and bone formation, calcium regulation, and bone homeostasis. This multifunctional protein also regulates thermogenesis and energy balance by enhancing brown adipose tissue response to adrenergic stimulation and increasing sympathetic output. BMP-8A initiates canonical BMP signaling through association with type I (BMPR1A) and type II (BMPR2) receptors, leading to phosphorylation of SMAD1/5/8 transcription factors and activation of the SMAD2/3 pathway. The protein's diverse functions extend to spermatogenesis, osteogenesis, and steroidogenesis, making it a significant target for research in developmental biology, metabolism, and skeletal disorders.