

Recombinant Human BMP8A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50077

Size: 10ug, 100ug

Protein Name: Bone morphogenetic protein 8A (BMP-8A)

Synonym: BMP8A

UniProt ID: Q7Z5Y6

UniProt Link: www.uniprot.org/uniprotkb/Q7Z5Y6/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 402 AA

Molecular Weight: 45 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAARPGPLWLLGLTLCALGGGGPGLRPPPGCPQRRLGARERRDVQREILAVLGLPGRPRPRAPPA
ASRLPASAPLFMLDLYHAMAGDDDEDGAPAEQRLGRADLVMSFVNMVERDRALGHQEPHWKEFR
FDLTQIPAGEAVTAAEFRIYKVPSIHLNRTLHVSMFQVVQEESNRESDFFLDLQTLRAGDEGWLVL
DVTAASDCWLLKRHKDLGLRLYVETEDGHSVDPGLAGLLGQRAPRSQQPFVVTFFRASPSPIRTPR
AVRPLRRRQPKKSNELPQANRLPGIFDDVRGSHGRQVCRRHELYVSFQDLGWLDWVIAPQGYSAY
YCEGECSEPLDSCMNATNHAILQSLVHLMKPNVPAKACCAPTKLSATSVLYYDSSNNVILRKHRNMV
VKACGCH

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Bone morphogenetic protein 8A (BMP-8A) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: 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 (By similarity). 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 BAT.; 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 (PubMed:22579288, PubMed:31940275). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPRI1 and type II receptor BMPRII (PubMed:31940275). Once all three components are bound together in a complex at the cell surface, BMPRII phosphorylates and activates BMPRI1. In turn, BMPRI1 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 (PubMed:31940275).

Subcellular Localization: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.