

Recombinant Rat BMP6 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52445

Size: 10ug, 100ug

Protein Name: Bone morphogenetic protein 6 (BMP-6) (VG-1-related protein) (VGR-1)

Synonym: Bmp6, Bmp-6, Vgr

UniProt ID: Q04906

UniProt Link: www.uniprot.org/uniprotkb/Q04906/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 506 AA

Molecular Weight: 56 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPGLGRRRAQWLCWWWGLLCSCGPPPLRPPLPVAAAAAGGQLLGAGGSPVRAEQPPPQSSSSGF
LYRRLKTHEKREMQKEILSVLGLPHRPRPLHGLQQPQSPVLPQQQSSQQTAREEPPPGRLKSAPLF
MLDLYNSLSKDDEEDGVSEGEGLPESHGRASSSQLKQPSGAHSLNRKSLAPGPGGSASPLTS
AQDSAFLNDADMVMSFVNLVEYDKEFSRQRHHKEFKFNLSQIPEGEAVTAAEFRVYKDCVVGSKF
NQTFLLISYQVLQEHQHRSDFLLDTRVWVASEEGWLEFDITATSNLWVTPQHNMGLQLSVVTRD
GLHINPRAAGLVGRDGPYDKQPFMVAFFKVSEVHVTRTRSASSRRRQQSRNRSTQSQDVSRGSSA
SDYNSSELKTACKKHELYVSFQDLGWQDWIAPKGYAANYCDGECFPLNAHMNATNHAIVQTLVH
LMNPEYVPKPCCAPTKLNAISVLYFDDNSNVILKKYRNMVVRACGCH

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 6 (BMP-6) (VG-1-related protein) (VGR-1) 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: Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes including cartilage and bone formation (By similarity). Also plays an important role in the regulation of HAMP/hepcidin expression and iron metabolism by acting as a ligand for hemojuvelin/HJV (By similarity). Also acts to promote expression of HAMP, potentially via the interaction with its receptor BMPR1A/ALK3 (By similarity). Initiates the canonical BMP signaling cascade by associating with type I receptor ACVR1 and type II receptor ACVR2B. In turn, ACVR1 propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target. Can also signal through non-canonical pathway such as TAZ-Hippo signaling cascade to modulate VEGF signaling by regulating VEGFR2 expression (By similarity).

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.