

Recombinant Human BMP1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50068

Size: 10ug, 100ug

Protein Name: Bone morphogenetic protein 1 (BMP-1) (EC 3.4.24.19) (Mammalian tolloid protein) (mTld) (Procollagen C-proteinase) (PCP)

Synonym: BMP1, PCOLC

UniProt ID: P13497

UniProt Link: www.uniprot.org/uniprotkb/P13497/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 986 AA

Molecular Weight: 111 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPGVARLPLLLGLLLLPRPGRPLDLADYTYDLAEEDDSEPLNYKDPCKAAAFGLGDIALDEEDLRAFQV
QQAVDLRRHTARKSSIKAAPGNTSTPSCQSTNGQPQRGACGRWRGRSRSRRAATSRPERVWPD
GVIPFVIGGNFTGSQRAVFRQAMRHWEKHTCVTFLERTDEDSYIVFTYRPGCCSYVGRRGGGPQA
ISIGKNCDKFGIVVHELGHVVGFWHEHTRPDRDRHVSIVRENIQPGQEYNFLKMEPQEVESLGETYD
FDSIMHYARNTFSRGIFLDTIVPKYEVNGVKPPIGQRTLSKGDIAQARKLYKCPACGETLQDSTGNF
SSPEYPNGYSAHMHCVWRISVTPGEKIILNFTSLDLYRSRLCWYDYVEVRDGFWRKAPLRGRFCGS
KLPEPIVSTDSRLWVEFRSSSNWVGKGFFAVYEAICGGDVKKDYGHIQSPNYPDDYRPSKVCIWRIQ
VSEGFHVGLTFQSFEIERHDS CAYDYLEVRDGHSESTLIGRYCGYEKPDDIKSTSSRLWLK FVSDG
SINKAGFAVNFFKEVDECSRPNRGGCEQRCLNTLGSYKCSDDPGYELAPDKRRCEAACGGGFLTKLN
GSITSPGWPKEYPPNKNCIWQLVAPTQYRISLQDFDFFETEGNDVCKYDFVEVRSGLTADSKLHGKFC
GSEKPEVITSQYNNMRVEFKSDNTVSKKGFKAHFFSDKDECSKDNNGCQQDCVNTFGSYECQCRS
GFVLHDNKHDCKEAGCDHKVTSTSGTITSPNWPDKYPSKKECTWAISSTPGHRVKLTFMEMDIESQ
PECAYDHLEVFDDRDAKAPVLGRFCGSKKPEPVLATGSRMFLRFYSDNSVQRKGFQASHATECGG
QVRADVKTLDLYSHAQFGDNNYPGGVDCEWVIVAEEGYGVELVFQTFEVEEETDCGYDYMEFLFDG
YDSTAPRLGRYCGSGPPEEVYSAGDSVLVKFHSDDTITKKG FHLRYTSTK FQDTLHSRK

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 1 (BMP-1) (EC 3.4.24.19) (Mammalian tolloid protein) (mTld) (Procollagen C-proteinase) (PCP) 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: Metalloprotease that plays key roles in regulating the formation of the extracellular matrix (ECM) via processing of various precursor proteins into mature functional enzymes or structural proteins (PubMed:33206546). Thereby participates in several developmental and physiological processes such as cartilage and bone formation, muscle growth and homeostasis, wound healing and tissue repair (PubMed:32636307, PubMed:33169406). Roles in ECM formation include cleavage of the C-terminal propeptides from procollagens such as procollagen I, II and III or the proteolytic activation of the enzyme lysyl oxidase LOX, necessary to formation of covalent cross-links in collagen and elastic fibers (PubMed:31152061, PubMed:33206546). Additional substrates include matricellular thrombospondin-1/THBS1 whose cleavage leads to cell adhesion disruption and TGF-beta activation (PubMed:32636307).; [Isoform BMP1-3]: Plays an important role in bone repair by acting as a coactivator of BMP7.

Subcellular Localization: Golgi apparatus, trans-Golgi network . Secreted, extracellular space, extracellular matrix . Secreted . Note=Co-localizes with POSTN in the Golgi.; [Isoform BMP1-3]: 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.