

Recombinant Mouse ANGP1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51126

Size: 10ug, 100ug

Protein Name: Angiopoietin-1 (ANG-1)

Synonym: Angpt1, Agpt

UniProt ID: O08538

UniProt Link: www.uniprot.org/uniprotkb/O08538/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 498 AA

Molecular Weight: 58 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTVFLSFAFFAAILTHIGCSNQRRNPENGGRRYNRIQHGGCAYTFILPEHDGNCRESATEQYNTNAL
QRDAPHVEPDFSSQKLQHLEHVMENYTQWLQKLENYIVENMKSEMAQIQQNAVQNHTATMLEIGTS
LLSQTAEQTRKLTDTVETQVLNQTSRLEIQLLLENSLSTYKLEKQLLQQTNEILKIHEKNSLLEHKILEMEG
KHKEELDTLKEEKENLQGLVSRQTFIIQELEKQLSRATNNNSILQKQLELMDTVHNLISLCTKEGVLL
KGGKREEEEKPFRDCADVYQAGFNKSGIYTIYFNNMPEPKKVFNCMDVNGGGWTVIQHREDGSLDF
QRGWKEYKMGFGNPSGEYWLGNFIFAITSQRQYMLRIELMDWEGNRAYSQYDRFHIGNEKQNYR
LYLKGHTGTAGKQSSLILHGADFSTKADNDNDCMCKCALMLTGGWWFDACGPSNLNGMFYTAGQ
NHGKLNGIKWHYFKGPSYSLRSTTMMIRPLDF

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 Angiopoietin-1 (ANG-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: Binds and activates TEK/TIE2 receptor by inducing its dimerization and tyrosine phosphorylation. Plays an important role in the regulation of angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Required for normal angiogenesis and heart development during embryogenesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell-cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANGPT1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. Mediates blood vessel maturation/stability. Implicated in endothelial developmental processes later and distinct from that of VEGF. Appears to play a crucial role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme (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.