Recombinant ANGP1 protein (His tag)

Catalog Number	545019
Synonyms	ANG-1
Species	Human
Expression System	E. coli
Accession	Q15389
Molecular Weight	Predictes a molecular mass of 50.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 51 kDa band.

Product Information

Sequence Region	81-498
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 81-498 aa (Q15389) 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 Angiopoietin-1 (ANG-1) Fragment (aa 81-498) is a high-purity protein designed for studying angiogenesis, endothelial cell dynamics, and vascular stability. This 418-amino acid fragment fully encompasses the fibrinogen C-terminal domain (aa 277-497), making it an ideal tool for investigating domain-specific functions in cellular signaling and vascular biology research. Angiopoietin-1 (ANG-1), encoded by the ANGPT1 gene, is a secreted human protein that binds and activates the TEK/TIE2 receptor through dimerization and tyrosine phosphorylation. It plays a crucial role in angiogenesis regulation, endothelial cell survival, proliferation, migration, adhesion, and cytoskeletal reorganization. ANGPT1 maintains vascular quiescence in stable vessels by promoting tight endothelial contacts and activating PI3K/AKT1 signaling pathways, while in migrating endothelial cells it stimulates sprouting angiogenesis through focal adhesion formation and MAPK/ERK signaling cascades. Essential for normal embryonic heart development and angiogenesis, ANGPT1 mediates reciprocal endothelial-matrix interactions and vascular maturation postnatally, functioning distinctly from VEGF in later developmental stages.