Recombinant SYNRG protein (His tag)

Catalog Number	539231
Synonyms	AP1 subunit gamma-binding protein 1; Gamma-synergin
Species	Human
Expression System	E. coli
Accession	Q9UMZ2
Molecular Weight	Predictes a molecular mass of 12.46 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	290-388
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 290-388 aa (Q9UMZ2) 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 Synergin gamma (SYNRG) Fragment (aa 290-388) is a high-purity protein designed to encompass the EH domain, providing researchers with a targeted tool to investigate endocytosis and membrane trafficking mechanisms at the trans-Golgi network. This fragment is ideal for domain-specific functional studies, protein-protein interaction assays, and elucidating the role of Synergin gamma in clathrin-coated vesicle formation and AP-1-mediated cargo transport. Synergin gamma, encoded by the SYNRG gene in humans, plays a critical role in endocytosis and membrane trafficking at the trans-Golgi network (TGN). It functions by linking the adapter protein complex AP-1 to other proteins, facilitating the assembly and function of clathrin-coated vesicles. As a component of the aftiphilin/p200/gamma-synergin complex, it is involved in AP1G1/AP-1-mediated trafficking pathways, including the transport of transferrin from early to recycling endosomes and the sorting of furin and cathepsin D between the TGN and endosomes. Subcellular localization studies confirm its presence in the cytoplasm, perinuclear region, and clathrin-coated vesicles, where it associates with membranes via AP-1 and depends on AFTPH/aftiphilin for vesicular localization. These functions underscore its importance in intracellular trafficking and organelle dynamics.