Recombinant GRAP1 protein (His tag)

Catalog Number	547397
Synonyms	GRASP-1; 30kDa C-terminus form
Species	Human
Expression System	E. coli
Accession	Q4V328
Molecular Weight	Predictes a molecular mass of 52.25 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 64 kDa band.

Product Information

Sequence Region	195-626
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 195-626 aa (Q4V328) 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 GRIP1-associated protein 1 (GRASP-1) Fragment (residues 195-626) is a high-purity, stable protein fragment designed for structural and biochemical studies. This 432-amino acid fragment, representing a soluble and stable unit of GRASP-1, is ideal for investigating neuronal endosomal recycling, synaptic plasticity, and scaffold-mediated signaling pathways. GRASP-1, encoded by the GRIPAP1 gene in Homo sapiens, regulates endosomal recycling to the neuronal plasma membrane by connecting early and late recycling endosomal domains and promoting segregation of recycling endosomes from early endosomal membranes. It localizes to early and recycling endosome membranes, axons, dendrites, and synapses, and is essential for activity-induced AMPA receptor recycling to dendrite membranes, long-term potentiation, and synaptic plasticity. The C-terminal chain of GRASP-1 functions as a scaffold protein that facilitates MAP3K1/MEKK1-mediated activation of JNK1 kinase by phosphorylation, potentially by bringing MAP3K1/MEKK1 and JNK1 into close proximity. This protein plays a critical role in maintaining dendritic spine morphology and neuronal function.