Recombinant TBCD5 protein (His tag)

Catalog Number	540902
Species	Human
Expression System	E. coli
Accession	Q92609
Molecular Weight	Predictes a molecular mass of 47.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	50-437
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 50-437 aa (Q92609) 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 TBC1D5 (TBC1 domain family member 5) Fragment (aa 50-437) is a high-purity protein designed to encompass the complete Rab-GAP TBC domain. This fragment serves as an essential tool for investigating GTPase-activating protein (GAP) activity, endosomal trafficking, and autophagy regulation, offering researchers a targeted reagent for domain-specific functional studies. TBC1D5 is a human protein that functions as a GTPase-activating protein (GAP), primarily for RAB7A, and plays a critical role in intracellular vesicle trafficking. It facilitates retrograde transport from endosomes to the trans-Golgi network and regulates autophagy by acting as a molecular switch between endosomal and autophagosomal pathways. TBC1D5 displaces RAB7A and the retromer complex from endosomal membranes and is involved in ATG9A trafficking during autophagy induction. Subcellularly, it localizes to endosome membranes and, upon autophagy induction, relocates to LC3-positive autophagosomes, highlighting its dynamic role in cellular transport and degradation processes.