Recombinant ITFG2 protein (His tag)

Catalog Number	545624
Synonyms	Integrin-alpha FG-GAP repeat-containing protein 2
Species	Human
Expression System	E. coli
Accession	Q969R8
Molecular Weight	Predictes a molecular mass of 50.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Sequence Region	1-447
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-447 aa (Q969R8) 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 ITFG2 (KICSTOR complex protein ITFG2) fragment (residues 1-447) is a high-quality protein designed for studying the amino acid-sensing branch of the TORC1 signaling pathway. This stable and soluble fragment is ideal for structural, biochemical, and functional analyses, supporting research in mTORC1 regulation and lysosomal signaling mechanisms. The full-length ITFG2 protein, encoded by the gene ITFG2, is a critical component of the KICSTOR complex, which functions in the amino acid-sensing branch of the TORC1 signaling pathway. It recruits the GATOR1 complex to lysosomal membranes in an amino acid-independent manner, facilitating interactions with GATOR2 and RAG GTPases. This recruitment is essential for negatively regulating mTORC1 signaling in the absence of amino acids; without the KICSTOR complex, mTORC1 remains constitutively active and localized to lysosomes. Additionally, the complex may play a role in glucose-mediated mTORC1 regulation. ITFG2 is localized to the lysosome membrane, and this localization is not dependent on amino acid availability, underscoring its foundational role in cellular nutrient sensing and signaling pathways.