Recombinant RAB14 protein (His tag)

Catalog Number	537878
Species	Human
Expression System	E. coli
Accession	P61106
Molecular Weight	Predictes a molecular mass of 25.42 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	2-215
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 2-215 aa (P61106) 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 Ras-related protein Rab-14 (EC 3.6.5.2) fragment (amino acids 2-215) is a high-purity, stable protein designed for structural and biochemical studies. This fragment encompasses the complete functional domain of Rab-14, a key regulator of intracellular membrane trafficking, and is optimized for solubility and experimental utility in investigating GTPase-mediated vesicle transport mechanisms. Ras-related protein Rab-14 is a small GTPase that acts as a critical regulator of intracellular membrane trafficking, cycling between inactive GDP-bound and active GTP-bound states to coordinate vesicle formation, movement, tethering, and fusion. It is involved in membrane transport between the Golgi complex and endosomes, particularly during early embryonic development, where it regulates Golgi-to-endosome transport of FGFR-containing vesicles—essential for basement membrane formation and lineage specification. Rab-14 also modulates endocytic transport of ADAM10 and N-cadherin/CDH2, influencing cell-cell adhesion, and facilitates endosomal tethering and fusion through interactions with proteins like RUFY1 and RAB4B. Additionally, it contributes to neurite formation via RAB11FIP1 interaction. Located primarily in recycling endosomes, early endosome membranes, the Golgi apparatus, and cytoplasmic vesicles, Rab-14 is recruited to specific compartments such as phagosomes and recycling endosomes by partners like DENND6A, underscoring its role in diverse cellular processes from development to membrane dynamics.