Recombinant ARL8B protein (His tag)

Catalog Number	543748
Synonyms	ADP-ribosylation factor-like protein 10C; Novel small G protein indispensable for equal chromosome segregation 1
Species	Human
Expression System	E. coli
Accession	Q9NVJ2
Molecular Weight	Predictes a molecular mass of 23.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	1-186
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 1-186 aa (Q9NVJ2) 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 ADP-ribosylation factor-like protein 8B (ARL8B) fragment (amino acids 1-186) is a high-purity, soluble protein ideal for studying lysosomal dynamics, intracellular trafficking, and immune cell functions. This stable fragment encompasses the complete small GTPase domain, enabling structural and biochemical investigations into its role in nutrient sensing, cytotoxicity, and microbial defense. ADP-ribosylation factor-like protein 8B (ARL8B) is a small GTPase that cycles between GTP-bound active and GDP-bound inactive states, primarily localizing to lysosomal and endosomal membranes. It serves as a master regulator of lysosomal positioning and transport by recruiting effector proteins like PLEKHM2 and kinesin-1 to drive anterograde motility. ARL8B is critical for lysosomal exocytosis, cytolytic granule release in natural killer cells, and axonal transport of presynaptic vesicles in neurons. It also facilitates endosome-to-lysosome trafficking and phagolysosome formation, playing key roles in antigen presentation (e.g., MHC II and CD1d pathways) and microbial killing. During infections, ARL8B mediates plasma membrane repair via lysosomal exocytosis in Mycobacterium tuberculosis-infected macrophages and supports unconventional egress of coronaviruses like SARS-CoV-2. Additionally, it may contribute to mitotic chromosome segregation. The protein's GTP-bound form associates with lysosomal membranes, while the GDP-bound form localizes to microtubular structures, including the spindle mid-zone during mitosis.