Recombinant RAB7A protein (His tag)

Catalog Number	544672
Species	Human
Expression System	E. coli
Accession	P51149
Molecular Weight	Predictes a molecular mass of 25.01 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	2-207
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 2-207 aa (P51149) 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 Ras-related protein Rab-7a (EC 3.6.5.2) fragment (amino acids 2-207) from Homo sapiens. This high-purity, stable fragment is ideal for studying the structural and biochemical properties of Rab-7a, a key regulator of intracellular membrane trafficking and endo-lysosomal dynamics. Ras-related protein Rab-7a, encoded by the RAB7A gene, is a small GTPase that functions as a master regulator of intracellular membrane trafficking. It cycles between GDP-bound inactive and GTP-bound active states, recruiting effector proteins to govern processes such as early-to-late endosomal maturation, endosome-lysosome transport, and microtubule-dependent endosomal migration. Rab-7a also plays critical roles in growth factor signaling, nutrient uptake, neurotrophin transport, lipid metabolism, and specialized pathways including melanosome maturation, pathogen phagosome acidification, and autophagosome formation. It is localized to membranes of late endosomes, lysosomes, phagosomes, autophagosomes, melanosomes, and mitochondria, where it facilitates vesicle tethering, fusion, and cargo degradation. This protein is implicated in cellular processes ranging from osteoclast ruffled border formation to exosomal release and ACE2 surface expression, highlighting its broad significance in cell biology and disease research.