Recombinant RAB7B protein (His tag)

Catalog Number	543346
Species	Human
Expression System	E. coli
Accession	Q96AH8
Molecular Weight	Predictes a molecular mass of 24.17 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	1-199
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-199 aa (Q96AH8) 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-7b (RAB7B) fragment (amino acids 1-199) is a high-purity, soluble protein designed for structural and biochemical studies. This fragment captures a stable functional unit of Rab-7b, enabling research into its role in vesicular trafficking and immune signaling regulation. Ras-related protein Rab-7b, encoded by the RAB7B gene in humans, controls vesicular trafficking from endosomes to the trans-Golgi network. It acts as a key negative regulator of innate immune signaling by promoting lysosomal degradation of Toll-like receptors TLR9 and TLR4, thereby suppressing production of pro-inflammatory cytokines such as TNFα, IL6, and IFNβ in macrophages. Additionally, Rab-7b enhances megakaryocytic differentiation through NF-κB-dependent IL6 production and STAT3-GATA1 interactions. The protein localizes to late endosomes, lysosomes, the Golgi apparatus, trans-Golgi network, and phagosomal membranes, where it is recruited during bacterial infections. The provided recombinant fragment (1-199) represents a computationally optimized, soluble domain ideal for investigating Rab-7b's mechanistic roles in cellular trafficking and immune modulation.