Recombinant RAB43 protein (His tag)

Catalog Number	545361
Synonyms	Ras-related protein Rab-41
Species	Human
Expression System	E. coli
Accession	Q86YS6
Molecular Weight	Predictes a molecular mass of 24.99 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-212
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-212 aa (Q86YS6) 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-43 (RAB43) fragment (residues 1-212) is a high-purity, stable protein designed for in-depth structural and functional studies. This fragment encompasses the complete functional domain of Rab-43, optimized for solubility and activity, making it ideal for investigating intracellular trafficking mechanisms, Golgi integrity, and phagosome maturation in research applications. Ras-related protein Rab-43, encoded by the RAB43 gene in Homo sapiens, is a small GTPase that serves as a critical regulator of intracellular membrane trafficking. It cycles between inactive GDP-bound and active GTP-bound states, facilitated by activators like USP6NL, to coordinate vesicle formation, movement, tethering, and fusion. Rab-43 is involved in retrograde transport from endocytic pathways to the Golgi apparatus, including the transport of Shiga toxin to the trans-Golgi network, and is essential for maintaining Golgi complex structural integrity. Additionally, it plays a role in phagosome maturation during immune responses against pathogens such as Staphylococcus aureus and Mycobacterium tuberculosis. Subcellularly, Rab-43 localizes to cytoplasmic vesicles, phagosomes (both membrane-associated via lipid anchors), and the Golgi apparatus, particularly the trans-Golgi network membrane, highlighting its importance in cellular logistics and host defense mechanisms.