Recombinant RRAGC protein (His tag)

Catalog Number	545984
Synonyms	Rag C; RagC; GTPase-interacting protein 2; TIB929
Species	Human
Expression System	E. coli
Accession	Q9HB90
Molecular Weight	Predictes a molecular mass of 28.48 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	133-367
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 133-367 aa (Q9HB90) 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 RagC (RRAGC) Fragment (aa 133-367) is a high-purity, soluble protein designed for structural and biochemical studies. This 235-amino acid fragment represents a stable, functionally relevant region of RagC, a key GTP-binding protein involved in the mTORC1 signaling pathway and cellular response to amino acid availability. Ideal for investigating mTOR regulation, lysosomal recruitment mechanisms, and protein interaction studies. Ras-related GTP-binding protein C (RagC), encoded by the RRAGC gene, is a crucial regulatory component in the cellular response to amino acid levels through the mTORC1 signaling cascade. RagC functions as a heterodimeric complex with RagA or RagB, cycling between active (GDP-bound) and inactive (GTP-bound) states. In its active GDP-bound form, RagC facilitates mTORC1 recruitment to lysosomal membranes for activation by RHEB GTPase, a fundamental step in amino acid-mediated MTOR signaling. Additionally, GDP-bound RagC plays a specialized role in non-canonical mTORC1 complexes by recruiting MiT/TFE transcription factors TFEB and TFE3. The protein localizes predominantly to the cytoplasm but also shuttles to the nucleus and associates with lysosome membranes via the Ragulator complex, reflecting its dynamic regulatory functions in nutrient sensing and cellular homeostasis.