Recombinant RAC2 protein (His tag)

Catalog Number	546780
Synonyms	GX; Small G protein; p21-Rac2
Species	Human
Expression System	E. coli
Accession	P15153
Molecular Weight	Predictes a molecular mass of 22.77 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	1-189
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-189 aa (P15153) 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 RAC2 (Ras-related C3 botulinum toxin substrate 2) fragment (residues 1-189) is a high-quality protein designed for structural and biochemical studies. This fragment represents a stable, soluble unit of the small GTPase, ideal for investigating its regulatory roles in cellular processes such as NADPH oxidase activation and membrane dynamics. RAC2 is a plasma membrane-associated small GTPase that cycles between active GTP-bound and inactive GDP-bound states, regulating cellular responses including secretory processes, phagocytosis of apoptotic cells, and epithelial cell polarization. It acts as a regulatory subunit of the phagocyte NADPH oxidase complex, facilitating electron transfer from cytosolic NADPH to oxygen to generate superoxide anions. The protein is primarily localized in the cytoplasm and becomes membrane-associated upon activation, underscoring its dynamic role in signal transduction and oxidative burst mechanisms.