Recombinant RAC3 protein (His tag)

Catalog Number	537875
Synonyms	p21-Rac3
Species	Human
Expression System	E. coli
Accession	P60763
Molecular Weight	Predictes a molecular mass of 22.68 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	>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 1-189 aa (P60763) 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	Introducing the recombinant human Ras-related C3 botulinum toxin substrate 3 (Rac3) fragment (amino acids 1-189), a high-quality protein designed for structural and biochemical studies. This stable and soluble fragment retains key functional domains, enabling researchers to investigate Rac3's role in cytoskeletal dynamics and cell signaling pathways with precision and reliability. Rac3 is a plasma membrane-associated small GTPase that cycles between active GTP-bound and inactive GDP-bound states, regulating critical cellular processes such as cell spreading and the formation of actin-based protrusions like lamellipodia and membrane ruffles. It promotes cell adhesion and spreading on fibrinogen through interactions with CIB1 and α-IIb/β3 integrin. Rac3 localizes to the cytoplasm, endomembrane system, lamellipodia, perinuclear regions, and the cell membrane, and it associates with the cytoskeleton. When activated, it becomes membrane-associated and colocalizes with proteins such as NRBP at the cell periphery and CIB1 in perinuclear areas, underscoring its importance in cellular architecture and motility.