Recombinant CYRIB protein (His tag)

Catalog Number	548362
Synonyms	L1
Species	Human
Expression System	E. coli
Accession	Q9NUQ9
Molecular Weight	Predictes a molecular mass of 38.27 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	2-324
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 2-324 aa (Q9NUQ9) 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 CYFIP-related Rac1 interactor B (CYRIB) Fragment (aa 2-324) - A high-quality protein reagent designed for studying RAC1 signaling regulation and cytoskeletal dynamics. This stable, soluble fragment enables robust structural and biochemical investigations into cellular migration, polarization, and pathogen defense mechanisms. CYFIP-related Rac1 interactor B (CYRIB) is a key regulatory protein that negatively controls RAC1 signaling and RAC1-driven cytoskeletal remodeling in human cells. It plays crucial roles in chemotaxis, cell migration, and epithelial polarization by precisely controlling the polarity, plasticity, duration, and extent of cellular protrusions. The protein limits Rac1-mediated activation of the Scar/WAVE complex, focuses protrusion signals, and regulates pseudopod complexity by inhibiting Scar/WAVE-induced actin polymerization. CYRIB also serves as an important defense protein, protecting against bacterial infections by attenuating processes such as macropinocytosis, phagocytosis, and cell migration, thereby restricting pathogen entry mechanisms utilized by Salmonella, Mycobacterium tuberculosis, and Listeria monocytogenes. Additionally, the protein is involved in regulating mitochondrial dynamics and oxidative stress. CYRIB localizes to both membrane and mitochondrial compartments, where it executes its diverse cellular functions through lipid-anchor mechanisms.