Recombinant RHOB protein (His tag)

Catalog Number	537899
Synonyms	Rho cDNA clone 6; h6
Species	Human
Expression System	E. coli
Accession	P62745
Molecular Weight	Predictes a molecular mass of 23.44 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-193
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 1-193 aa (P62745) 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 RhoB (Rho cDNA clone 6) Fragment (1-193) - A high-quality recombinant protein representing a stable and soluble domain of the Rho-related GTP-binding protein RhoB, ideal for structural studies and functional analysis of this key regulator of apoptosis, cell adhesion, and intracellular trafficking. RhoB is a Rho-related GTP-binding protein that plays a critical role in mediating apoptosis in neoplastically transformed cells following DNA damage. While not essential for normal development, it significantly influences cell adhesion and growth factor signaling in transformed cells, acting as a negative regulator of tumorigenesis. The protein is involved in intracellular trafficking of multiple proteins, including targeting PKN1 to endosomes and facilitating EGF receptor transport from late endosomes to lysosomes. RhoB also stabilizes and regulates nuclear trafficking of AKT1/AKT, promoting endothelial cell survival during vascular development. Additionally, it serves as a microtubule-dependent signal required for myosin contractile ring formation during cytokinesis and is essential for genotoxic stress-induced cell death in breast cancer cells. The protein localizes to late endosome membranes and plasma membrane through lipid anchors, with additional presence at the nuclear margin, within the nucleus, and at the cleavage furrow during cell division, where it translocates to the equatorial region in an ECT2-dependent manner prior to furrow formation.