Recombinant EPS8 protein (His tag)

Catalog Number	540225
Species	Human
Expression System	E. coli
Accession	Q12929
Molecular Weight	Predictes a molecular mass of 20.42 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	40-205
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 40-205 aa (Q12929) 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 EPS8 (Epidermal growth factor receptor kinase substrate 8) Fragment (aa 40-205) is a high-purity protein designed to encompass the critical PTB domain (aa 64-194). This fragment serves as an essential tool for investigating actin cytoskeleton regulation, cellular protrusion dynamics, and signal transduction pathways in various research applications. Epidermal growth factor receptor kinase substrate 8 (EPS8) is a multifunctional signaling adapter that controls cellular protrusions by regulating actin cytoskeleton dynamics and architecture. The full-length protein functions as a key mediator in transducing signals from Ras to Rac through trimeric complex formation with SOS1 and ABI1, activating Rac-specific guanine nucleotide exchange factor activity. EPS8 directly regulates actin dynamics through both barbed-end actin filament capping and actin bundling activities, with its functional specificity determined by binding partners. It plays crucial roles in neuronal development by modulating axonal filopodia formation, stereocilia length regulation in hair cells, immune cell migration, and cancer cell invasion. EPS8 localizes to multiple subcellular compartments including the cytoplasm, cell cortex, ruffle membranes, growth cones, stereocilia tips, and synaptosomes, reflecting its diverse functional roles in cellular architecture and signaling pathways.