Recombinant FCSD2 protein (His tag)

Catalog Number	541895
Synonyms	Carom; Protein nervous wreck 1; NWK1; SH3 multiple domains protein 3
Species	Human
Expression System	E. coli
Accession	O94868
Molecular Weight	Predictes a molecular mass of 50.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	1-423
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-423 aa (O94868) 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 F-BAR and double SH3 domains protein 2 (Carom) fragment, encompassing amino acids 1-423. This high-purity protein includes the complete F-BAR domain and is an essential tool for studying clathrin-mediated endocytosis, membrane binding, and actin cytoskeleton regulation in cellular processes. F-BAR and double SH3 domains protein 2 (FCHSD2) functions as a crucial adapter protein in clathrin-coated pit-mediated endocytosis, facilitating the internalization of key cell surface receptors including integrin ITGB1, transferrin receptor, and EGFR. The protein localizes to cytoplasmic membranes, particularly clathrin-coated pits at the cell membrane, where it promotes the progression of endocytic intermediates to mature pits. Notably, FCHSD2 binds to phosphoinositide-enriched membranes and activates actin polymerization through interactions with WAS/WASL proteins, leading to Arp2/3 complex activation—a process strictly dependent on membrane association. This membrane-actin coordination makes FCHSD2 fundamental to understanding receptor trafficking, signal modulation, and cytoskeletal dynamics in both normal and cancerous cells.