Recombinant PROF1 protein (His tag)

Catalog Number	534932
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q9XW16
Gene ID	173161
Molecular Weight	Predictes a molecular mass of 15.91 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	1-132
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 1-132 aa (Q9XW16) 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 Profilin-1 (pfn-1) fragment (residues 1-132) from Caenorhabditis elegans is a high-purity protein designed for cytoskeleton and actin-binding studies. This stable, soluble fragment preserves key functional domains, making it ideal for structural biology and biochemical assays. Profilin-1 is a cytoskeletal protein that binds actin and modulates polymerization—inhibiting it at high concentrations while promoting it at low levels. It also interacts with poly(L-proline) and phosphatidylinositol 4,5-bisphosphate (PIP2), where PIP2 binding suppresses inositol trisphosphate (IP3) and diacylglycerol (DG) production. Localized primarily in the cytoplasm and cytoskeleton, it additionally accumulates at cell-cell junctions during early embryogenesis, highlighting its role in cellular structure and signaling pathways.