# Recombinant PROF protein (His tag)

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| **Catalog Number** | 532050 |
| **Synonyms** | Protein chickadee |
| **Species** | Drosophila melanogaster |
| **Expression System** | E. coli |
| **Accession** | P25843 |
| **Gene ID** | 33834 |
| **Molecular Weight** | Predictes a molecular mass of 15.38 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band. |

## Product Information

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| **Sequence Region** | 1-126 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >86%, 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 1-126 aa (P25843) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Profilin (Protein chickadee) fragment (residues 1-126) from Drosophila melanogaster, a key regulator of actin cytoskeleton dynamics. This stable, soluble fragment is ideal for structural studies and biochemical assays investigating actin polymerization mechanisms.<br>Profilin (encoded by the chic gene) is a cytoskeletal protein that binds actin and modulates cytoskeleton structure through concentration-dependent regulation of actin polymerization—inhibiting polymerization at high concentrations while enhancing it at low concentrations. It also binds phosphatidylinositol 4,5-bisphosphate (PIP2), potentially inhibiting inositol trisphosphate (IP3) and diacylglycerol (DG) formation. During Drosophila oogenesis, profilin is essential for intercellular cytoplasm transport. In neurons, it is critical for adult survival, climbing behavior, and activity. The protein localizes to the cytoplasm and cytoskeleton, underscoring its central role in cellular structure and motility. |