# Recombinant PSD protein (His tag)

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| **Catalog Number** | 531398 |
| **Synonyms** | Exchange factor for ADP-ribosylation factor guanine nucleotide factor 6; Exchange factor for Arf 6 |
| **Species** | Drosophila melanogaster |
| **Expression System** | E. coli |
| **Accession** | E1JIT7 |
| **Gene ID** | 42665 |
| **Molecular Weight** | Predictes a molecular mass of 26.49 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band. |

## Product Information

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| **Sequence Region** | 1332-1543 |
| **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 1332-1543 aa (E1JIT7) 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 Drosophila melanogaster Efa6 PH domain fragment (residues 1332-1543) - a specialized tool for studying the PH domain of this key Arf6 guanine nucleotide exchange factor. This 212-amino acid fragment provides researchers with a targeted reagent for investigating domain-specific functions in neuronal development and ethanol response pathways.<br>The full-length PH and SEC7 domain-containing protein (Efa6) functions as a guanine nucleotide exchange factor specifically for Arf6. It plays critical roles in regulating axon growth and branching by inhibiting microtubule polymerization at the cell cortex, and works in conjunction with shot to maintain axonal microtubule bundle integrity. Additionally, Efa6 is required for normal ethanol-induced tolerance and preference, where it likely counteracts ethanol-induced sedation through Arf6 activation. The protein localizes to multiple cellular compartments including axons, cytoplasm, cell membrane (as a peripheral membrane protein), and the cell cortex, reflecting its diverse functional roles in cellular processes. |