# Recombinant COPB protein (His tag)

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| **Catalog Number** | 534319 |
| **Synonyms** | Beta-coat protein; Beta-COP |
| **Species** | Drosophila melanogaster |
| **Expression System** | E. coli |
| **Accession** | P45437 |
| **Gene ID** | 32820 |
| **Molecular Weight** | Predictes a molecular mass of 57.68 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 59 kDa band. |

## Product Information

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| **Sequence Region** | 1-493 |
| **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 1-493 aa (P45437) 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 Coatomer subunit beta (Beta-COP) fragment from Drosophila melanogaster, encompassing residues 1-493. This high-quality protein is designed for structural and biochemical studies, offering a stable and soluble unit ideal for investigating COPI vesicle formation and intracellular transport mechanisms.<br>Coatomer subunit beta (Beta-COP) is a key component of the coatomer complex, a cytosolic protein assembly essential for intracellular trafficking. It binds to dilysine motifs and associates reversibly with Golgi-derived, non-clathrin-coated vesicles, facilitating biosynthetic protein transport from the endoplasmic reticulum (ER) through the Golgi apparatus to the trans Golgi network. The coatomer complex is critical for vesicle budding from Golgi membranes and mediates retrograde transport of dilysine-tagged proteins from the Golgi back to the ER. Additionally, Beta-COP plays a role in regulating lipid storage within lipid droplets. Subcellularly, it localizes to the cytoplasm, Golgi apparatus membrane (as a peripheral membrane protein on the cytoplasmic side), and COPI-coated vesicle membranes, where it polymerizes to support vesicle formation and trafficking processes. |