Recombinant ACK protein (His tag)

Catalog Number	531342
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9VZI2
Gene ID	38489
Molecular Weight	Predictes a molecular mass of 38.77 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	116-442
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 116-442 aa (Q9VZI2) 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 Drosophila melanogaster Activated Cdc42 kinase Ack (EC 2.7.10.2, EC 2.7.11.1) fragment (residues 116-442) is a high-purity protein designed for studying kinase function. This 327-amino acid fragment fully encompasses the protein kinase domain, making it an ideal tool for investigating phosphorylation mechanisms, signal transduction pathways, and kinase-substrate interactions in cellular regulation. Full-length Activated Cdc42 kinase Ack is a non-receptor tyrosine-protein and serine/threonine-protein kinase implicated in diverse biological functions including cell survival, differentiation, growth, and proliferation. It phosphorylates key substrates such as SH3PX1 and ex, and functions in negative regulation of the Hippo/SWH signaling pathway by enhancing yki activity to promote cell proliferation and inhibit apoptosis. The kinase is essential for male and female fertility, coordinates cell shape changes during embryogenesis, and regulates temporal assembly of cytoophidium structures in germline nurse cells. Subcellular localization studies show cytoplasmic distribution with specific localization to clathrin-coated vesicles and cytoophidium filamentary structures, indicating roles in vesicular trafficking and metabolic compartmentalization.