Recombinant FABD protein (His tag)

Catalog Number	535863
Synonyms	MCT; Bad egg; [Acyl-carrier-protein] malonyltransferase
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q8T3L6
Gene ID	39910
Molecular Weight	Predictes a molecular mass of 40.01 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	35-379
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 35-379 aa (Q8T3L6) 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 fragment of Drosophila melanogaster Probable Malonyl-CoA-Acyl Carrier Protein Transacylase (MCT), encompassing residues 35-379. This 345-amino acid fragment has been computationally optimized for stability and solubility, making it an ideal tool for structural studies and enzymatic characterization of mitochondrial fatty acid biosynthesis pathways. The full-length protein, encoded by the beg gene, functions as a mitochondrial malonyl-CoA-acyl carrier protein transacylase (EC 2.3.1.39), catalyzing the transfer of malonyl groups from malonyl-CoA to the phosphopantetheine arm of acyl carrier proteins. This enzymatic activity suggests the existence of functional fatty acid biosynthesis machinery within mitochondria, paralleling cytoplasmic fatty acid synthesis systems. The protein is localized to the mitochondrion, where it likely plays a crucial role in mitochondrial lipid metabolism and energy homeostasis, as supported by conservation across species including mammalian homologs.