Recombinant FL2D protein (His tag)

Catalog Number	533020
Synonyms	2; dFL(2)D
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9Y091
Gene ID	36527
Molecular Weight	Predictes a molecular mass of 29.36 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 32 kDa band.

Product Information

Sequence Region	75-313
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 75-313 aa (Q9Y091) 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	This recombinant protein product features a 239-amino acid fragment (residues 75-313) of the Drosophila melanogaster Pre-mRNA-splicing regulator female-lethal(2)D (dFL(2)D), a key component of the WMM complex involved in mRNA N6-methyladenosine (m6A) methylation. This fragment has been computationally selected for optimal stability and solubility, making it ideal for structural studies and biochemical characterization of this essential splicing regulator. The full-length Pre-mRNA-splicing regulator female-lethal(2)D (dFL(2)D) protein, encoded by the fl(2)d gene, functions as an associated component of the WMM complex that mediates N6-methyladenosine (m6A) methylation of mRNAs. This modification plays a crucial role in mRNA splicing efficiency and is essential for sex determination and dosage compensation in Drosophila melanogaster. The protein regulates female-specific alternative splicing of Sxl pre-mRNA, which determines female physiognomy, and is also required for proper inclusion of regulated exons in Ubx transcripts. Additionally, m6A methylation mediated by this protein is necessary for neuronal functions. The protein is localized to the nucleus, consistent with its role in mRNA processing and splicing regulation.