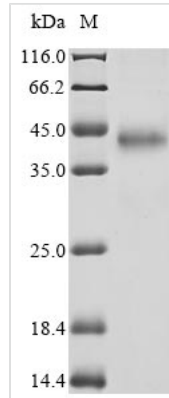




Recombinant Drosophila melanogaster GEO11329p1 (ITP)

Product Code	CSB-MP3350DLU
Abbreviation	Recombinant Drosophila melanogaster ITP protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q9W151
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Drosophila melanogaster (Fruit fly)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SNFFDLECKGIFNKTMMFFRLDRICEDCYQLFRETSIHRLCKKDCFDKWFGECL KVLIIPEEEISNLQHFLRVVNGSPISFNMGPQT
Research Area	Neuroscience
Source	Mammalian cell
Target Names	ITP
Expression Region	33-119aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal hFc1-tagged
Mol. Weight	38 kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant *Drosophila melanogaster* GEO11329p1 (ITP) is produced in a mammalian cell expression system, which appears to ensure proper folding and post-translational modifications. The protein is expressed as the full length of its mature form, spanning amino acids 33 to 119, and carries a C-terminal hFc1 tag for easier detection and purification. The product achieves a purity of greater than 90%, as verified by SDS-PAGE analysis, making it suitable for various research applications.

GEO11329p1, also known as ITP, is a protein found in *Drosophila melanogaster*—the common fruit fly. It likely plays a crucial role in signaling pathways that are important for cellular communication and regulation. Scientists often study this protein for its involvement in key physiological processes, which has made it a significant focus in research related to insect biology and genetics.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Ion Transport Peptide (ITP) Functional Studies in *Drosophila* Research

This recombinant ITP protein can be used to investigate the physiological roles of ion transport peptides in *Drosophila melanogaster* through in vitro binding assays and receptor interaction studies. The mammalian cell expression system may ensure proper protein folding and post-translational modifications that could be critical for biological function. The C-terminal hFc1 tag simplifies protein detection and purification for biochemical characterization experiments. Researchers can use this protein to study ITP signaling pathways and their effects on ion homeostasis in fruit fly model systems.

2. Antibody Development and Validation

The high purity recombinant ITP protein serves as what appears to be an excellent immunogen for generating specific antibodies against *Drosophila* ITP.



The C-terminal hFc1 tag allows for straightforward immobilization on protein A/G columns for antibody purification and validation assays. These antibodies can subsequently be used for immunohistochemistry, Western blotting, and other detection methods in Drosophila research. The mature protein region (33-119aa) represents the biologically relevant form, which suggests it would be ideal for producing antibodies that recognize native ITP in biological samples.

3. Protein-Protein Interaction Studies

The hFc1-tagged recombinant ITP can be used in pull-down assays to identify potential binding partners and interacting proteins in Drosophila protein extracts. The Fc tag enables efficient capture using protein A/G beads, which makes co-immunoprecipitation experiments more straightforward. This approach may help clarify the molecular mechanisms underlying ITP function and identify components of ITP signaling complexes. Mass spectrometry analysis of pulled-down complexes could reveal novel regulatory proteins involved in ion transport regulation.

4. ELISA-Based Quantitative Assays

The recombinant ITP protein can serve as a standard or capture reagent in enzyme-linked immunosorbent assays for measuring endogenous ITP levels in Drosophila tissue extracts or hemolymph samples. The C-terminal hFc1 tag provides a convenient handle for immobilization and detection in sandwich ELISA formats. This application would likely be valuable for studying ITP expression patterns during different developmental stages or under various physiological conditions. The high purity of the protein suggests it should provide reliable and reproducible quantitative measurements in comparative studies.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.