Recombinant RTBP protein (His tag)

Catalog Number	533545
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9VL14
Gene ID	34371
Molecular Weight	Predictes a molecular mass of 11.37 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	37-118
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 37-118 aa (Q9VL14) 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 REPTOR-binding partner (37-118) fragment from Drosophila melanogaster, encompassing the essential bZIP domain. This high-purity protein fragment serves as an ideal research tool for investigating transcriptional regulation mechanisms within the TORC1 signaling pathway, particularly in studies of nutrient stress response and energy homeostasis. REPTOR-binding partner (REPTOR-BP) functions as a crucial transcriptional regulator in the TORC1 signaling pathway, playing a central role in maintaining energy homeostasis and promoting survival during nutrient deprivation. The protein forms a transcriptional activator complex with REPTOR that functions downstream of TORC1 to up-regulate expression of stress response genes. Under normal nutrient conditions, active TORC1 inhibits complex formation by phosphorylating REPTOR and promoting its cytoplasmic retention. However, during nutrient stress when TORC1 is inhibited, REPTOR translocates to the nucleus where it interacts with REPTOR-BP to activate expression of genes involved in glycogenesis and triglyceride biosynthesis. The complex also appears to negatively regulate certain aspects of TORC1-dependent larval growth. REPTOR-BP is localized to the nucleus and chromatin, where it enhances REPTOR's binding to regulatory sequences of target genes, making it essential for metabolic adaptation to nutrient stress conditions.