Recombinant VA0D2 protein (His tag)

Catalog Number	534892
Synonyms	V-ATPase subunit d 2; Vacuolar H+ ATPase subunit AC39-2; Vacuolar proton pump subunit d 2
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9VCQ3
Gene ID	42739
Molecular Weight	Predictes a molecular mass of 41.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 43 kDa band.

Product Information

Sequence Region	1-350
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 1-350 aa (Q9VCQ3) 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 product is a high-quality recombinant protein fragment of Drosophila melanogaster Probable V-type proton ATPase subunit d 2 (V-ATPase subunit d 2), encompassing residues 1-350. It represents a stable and soluble unit ideal for structural studies, biochemical assays, and investigating proton transport mechanisms in cellular energy systems. The full-length V-ATPase subunit d 2 is a key component of the V0 complex within the vacuolar (H+)-ATPase (V-ATPase) enzyme, a multisubunit complex critical for cellular pH regulation. V-ATPase consists of a peripheral V1 complex that hydrolyzes ATP and an integral membrane V0 complex that translocates protons, acidifying intracellular compartments such as lysosomes and endosomes. In certain cell types, it also localizes to the plasma membrane to extracellularly acidify the environment. This subunit is implicated in coupling proton transport with ATP hydrolysis, a fundamental process for maintaining electrochemical gradients and supporting diverse cellular functions, including organelle acidification, protein degradation, and nutrient uptake. The provided functional insights are based on similarities to orthologs in other species, as indicated by UniProtKB references.