Recombinant VPP1 protein (His tag)

Catalog Number	540926
Synonyms	V-ATPase 116 kDa subunit a 1; Clathrin-coated vesicle/synaptic vesicle proton pump 116 kDa subunit; Vacuolar adenosine triphosphatase subunit Ac116; Vacuolar proton pump subunit 1; Vacuolar proton translocating ATPase 116 kDa subunit a isoform 1
Species	Human
Expression System	E. coli
Accession	Q93050
Molecular Weight	Predictes a molecular mass of 46.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 50 kDa band.

Product Information

Sequence Region	1-388
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 1-388 aa (Q93050) 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 Human V-type proton ATPase 116 kDa subunit a 1 (ATP6V0A1) Fragment (aa 1-388). This high-quality protein fragment represents a stable and soluble unit of the V-ATPase complex, essential for organelle acidification and neuronal development, making it ideal for structural studies, biochemical assays, and functional investigations. V-type proton ATPase 116 kDa subunit a 1 is a critical component of the V0 complex in vacuolar (H+)-ATPase (V-ATPase), a multisubunit enzyme that transports protons across cellular membranes to acidify organelles such as lysosomes, endosomes, the trans-Golgi network, and synaptic vesicles. This acidification is vital for processes like neuronal integrity, connectivity, and synaptic vesicle function, and in some cell types, the protein contributes to extracellular environment acidification when localized to the plasma membrane. The full-length protein is found in clathrin-coated vesicle membranes, synaptic vesicle membranes, and melanosomes, playing an indispensable role in cellular homeostasis and development. The provided fragment (amino acids 1-388) was selected for its stability and solubility, enabling focused research on V-ATPase mechanisms without the complexities of the full membrane-integral protein.