Recombinant VPP4 protein (His tag)

Catalog Number	541294
Synonyms	V-ATPase 116 kDa isoform a 4; Vacuolar proton translocating ATPase 116 kDa subunit a isoform 4; Vacuolar proton translocating ATPase 116 kDa subunit a kidney isoform
Species	Human
Expression System	E. coli
Accession	Q9HBG4
Molecular Weight	Predictes a molecular mass of 27.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	170-390
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 170-390 aa (Q9HBG4) 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	Introducing the recombinant fragment of the V-type proton ATPase 116 kDa subunit a 4 (ATP6V0A4), a key component of the vacuolar proton-translocating ATPase complex. This product encompasses amino acids 170-390, selected for its stability and solubility, making it ideal for structural studies, biochemical assays, and functional investigations into proton transport mechanisms. The full-length V-type proton ATPase 116 kDa subunit a 4 is a critical subunit of the V0 complex in vacuolar (H+)-ATPase (V-ATPase), a multisubunit enzyme that hydrolyzes ATP to translocate protons. V-ATPase plays essential roles in acidifying intracellular compartments and, in certain cell types, the extracellular environment by targeting the plasma membrane. Specifically, this protein is involved in normal vectorial acid transport into urine in the kidney, as evidenced by studies linking it to renal acid-base homeostasis. It localizes to the apical membrane of alpha-intercalated cells and the basolateral membrane of beta-intercalated cells in the cortical collecting ducts of the distal nephron, highlighting its importance in pH regulation and ion transport processes in renal physiology.