Recombinant VATH protein (His tag)

Catalog Number	541489
Synonyms	V-ATPase subunit H; Nef-binding protein 1; NBP1; Protein VMA13 homolog; V-ATPase 50/57 kDa subunits; Vacuolar proton pump subunit H; Vacuolar proton pump subunit SFD
Species	Human
Expression System	E. coli
Accession	Q9UI12
Molecular Weight	Predictes a molecular mass of 57.55 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 59 kDa band.

Product Information

Sequence Region	1-483
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 1-483 aa (Q9UI12) 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 recombinant protein product features a stable and soluble fragment (residues 1-483) of the human V-type proton ATPase subunit H (V-ATPase subunit H), also known as Nef-binding protein 1 (NBP1). This fragment is ideal for structural studies and biochemical assays, offering researchers a reliable tool to investigate the essential roles of V-ATPase in cellular acidification and vesicular trafficking. The full-length V-type proton ATPase subunit H is a critical component of the V1 complex of vacuolar(H+)-ATPase (V-ATPase), a multisubunit enzyme that hydrolyzes ATP to drive proton translocation across membranes. V-ATPase is responsible for acidifying intracellular compartments, such as endosomes and lysosomes, and in some cell types, it localizes to the plasma membrane to acidify the extracellular environment. Subunit H is indispensable for V-ATPase enzymatic activity, though it is not required for the assembly of the complex. Additionally, it plays a key role in clathrin-mediated endocytosis, facilitating the formation of endosomes and contributing to vesicular transport processes. The protein is localized to cytoplasmic vesicles, including clathrin-coated vesicle membranes, where it functions as a peripheral membrane protein, underscoring its importance in intracellular trafficking and pH regulation.