Recombinant VA0D2 protein (His tag)

Catalog Number	545458
Synonyms	V-ATPase subunit d 2; Vacuolar proton pump subunit d 2
Species	Human
Expression System	E. coli
Accession	Q8N8Y2
Molecular Weight	Predictes a molecular mass of 42.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	1-350
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 1-350 aa (Q8N8Y2) 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 subunit d 2 (V-ATPase subunit d 2), corresponding to amino acids 1-350, is a high-quality protein fragment designed for structural and biochemical studies. This stable and soluble unit enables researchers to investigate the proton transport mechanisms and regulatory roles of this essential vacuolar ATPase component. V-type proton ATPase subunit d 2, encoded by the ATP6V0D2 gene, is a crucial subunit of the V0 complex within the vacuolar (H+)-ATPase (V-ATPase) enzyme. This multisubunit complex consists of a peripheral V1 component that hydrolyzes ATP and an integral membrane V0 component that translocates protons. V-ATPase functions to acidify and maintain pH in intracellular compartments, and in certain cell types, it localizes to the plasma membrane to acidify the extracellular environment. The subunit d 2 is implicated in coupling proton transport with ATP hydrolysis and serves as a key regulator of osteoclast fusion and bone formation, highlighting its significance in cellular physiology and bone metabolism. The provided fragment represents a computationally optimized region for experimental applications, preserving functional relevance while ensuring stability and solubility.