Data Sheet (Cat.No.TMPH-01894)

TargetMol

ATP4B Protein, Human, Recombinant

General Information

Synonyms:	Potassium-transporting ATPase subunit beta;Gastric H(+)/K(+) ATPase subunit beta;ATP4B; Proton pump beta chain
Protein Construction:	58-291 aa
Species:	Human
Expression Host:	E. coli
Accession:	P51164
Molecular Weight:	26.6 kDa (predicted)
AA Sequence:	CLYVLMQTVDPYTPDYQDQLRSPGVTLRPDVYGEKGLEIVYNVSDNRTWADLTQTLHAFLAGYSPAAQEDSI NCTSEQYFFQESFRAPNHTKFSCKFTADMLQNCSGLADPNFGFEEGKPCFIIKMNRIVKFLPSNGSAPRVDCA FLDQPRELGQPLQVKYYPPNGTFSLHYFPYYGKKAQPHYSNPLVAAKLLNIPRNAEVAIVCKVMAEHVTFNN PHDPYEGKVEFKLKIEK

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The beta subunit of the gastric H(+)/K(+) ATPase pump which transports H(+) ions in exchange for K(+) ions across the apical membrane of parietal cells. Plays a structural and regulatory role in the assembly and membrane targeting of a functionally active pump. Within a transport cycle, the transfer of a H(+) ion across the membrane is

coupled to ATP hydrolysis and is associated with a transient phosphorylation of the alpha subunit that shifts the pump conformation from inward-facing (E1) to outward-facing state (E2). Interacts with the phosphorylation domain of the alpha subunit and functions as a ratchet, stabilizing the lumenal-open E2 conformation and preventing the reverse reaction of the transport cycle.

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