Data Sheet (Cat.No.TMPY-03788)

TargetMol

ATP1B1 Protein, Human, Recombinant (His)

General Information

Synonyms:	ATPase, Na+/K+ transporting, β 1 polypeptide;ATPase, Na+/K+ transporting, beta 1 polypeptide;ATP1B
Protein Construction:	A DNA sequence encoding the human ATP1B1 (P05026-1) (Glu63-Ser303) was expressed with an N-terminal polyhistidine tag. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P05026-1
Molecular Weight:	30.4 kDa (predicted); 40-47 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

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:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

ATP1B1 belongs to the family of Na+/K+and H+/K+-ATPases beta chain proteins, and to the subfamily of Na+/K+ -ATPases. ATP1B1 is a subunit of Na+/K+-ATPase. Na+/K+-ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. Na+/K+-ATPase is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit

(beta). ATP1B1 regulates, through assembly of alpha/beta heterodimers, the number of sodium pumps transported to the plasma membrane. ATP1B1 is the non-catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with which catalyzes the hydrolysis of ATP coupled with the exchange of Na+and K+ions across the plasma membrane.

Reference

Lingrel JB. et al., 1990, Prog Nucleic Acid Res Mol Biol. 38: 37-89.
Oakey RJ. et al., 1993, Hum Mol Genet. 1 (8): 613-20.
Ushkaryov YuA. et al., 1990, FEBS Lett. 257 (2): 439-42.

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