

Recombinant Human ATP1A1, His-tagged

Cat. No. ATP1A1-10004H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ATP1A1 protein, fused to His-tag, was expressed in E.coli and purified by Ni-sepharose.
Species	Human
Source	E.coli
ProteinLength	346-680a.a.
Description	The protein encoded by this gene belongs to the family of P-type cation transport ATPases, and to the subfamily of Na ⁺ /K ⁺ -ATPases. 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. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The catalytic subunit of Na ⁺ /K ⁺ -ATPase is encoded by multiple genes. This gene encodes an alpha 1 subunit. Multiple transcript variants encoding different isoforms have been found for this gene.
Storage	The protein is stored in PBS buffer at -20°C. Avoid repeated freezing and thawing cycles.
Storage Buffer	1M PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH8.) added with 300mM Imidazole and 0.7% Sarcosyl, 15%glycerol.

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GENE INFORMATION

Gene Name	ATP1A1 ATPase, Na ⁺ /K ⁺ transporting, alpha 1 polypeptide [Homo sapiens]
Official Symbol	ATP1A1
Synonyms	ATP1A1; ATPase, Na ⁺ /K ⁺ transporting, alpha 1 polypeptide; sodium/potassium-transporting ATPase subunit alpha-1; sodium pump 1; Na ⁺ /K ⁺ ATPase 1; Na,K-ATPase alpha-1 subunit; sodium pump subunit alpha-1; Na ⁺ , K ⁺ ATPase alpha subunit; Na ⁽⁺⁾ /K ⁽⁺⁾ ATPase alpha-1 subunit; Na, K-ATPase, alpha-A catalytic polypeptide; sodium-potassium-ATPase, alpha 1 polypeptide; Na,K-ATPase catalytic subunit alpha-A protein; MGC3285; MGC51750;
Gene ID	476
mRNA Refseq	NM_000701
Protein Refseq	NP_000692
MIM	182310
UniProt ID	P05023
Chromosome Location	1p13
Pathway	Aldosterone-regulated sodium reabsorption, organism-specific biosystem; Aldosterone-regulated sodium reabsorption, conserved biosystem; Bile secretion, organism-specific biosystem; Bile secretion, conserved biosystem; Carbohydrate digestion and absorption, organism-specific biosystem; Carbohydrate digestion and absorption, conserved biosystem; Cardiac muscle contraction, organism-specific

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biosystem;

Function

4-nitrophenylphosphatase activity; ATP binding; ATPase activity, coupled to transmembrane movement of ions, phosphorylative mechanism; hydrolase activity; hydrolase activity, acting on acid anhydrides, catalyzing transmembrane movement of substances; meta

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