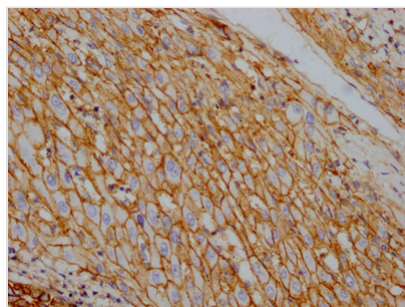




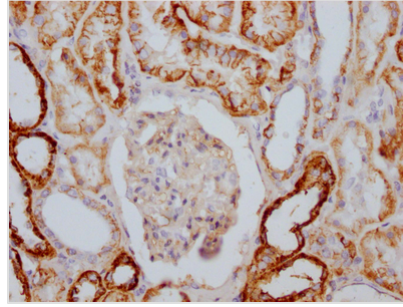
ATP1A1 Recombinant Monoclonal Antibody

Product Code	CSB-RA796310A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P05023
Immunogen	A synthesized peptide derived from human Sodium Potassium ATPase
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium ions, providing the energy for active transport of various nutrients.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience; Cancer; Tags & Cell Markers; Metabolism; Signal transduction
Target Names	ATP1A1
Clone No.	4C3

Image



IHC image of CSB-RA796310A0HU diluted at 1:100 and staining in paraffin-embedded human liver cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA796310A0HU diluted at 1:100 and staining in paraffin-embedded human kidney tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The ATP1A1 recombinant monoclonal antibody is prepared using protein and DNA recombinant technologies. To obtain this antibody, a synthesized peptide derived from human ATP1A1 is used to immunize mice. After a certain period of time, the spleen cells of mice are extracted under aseptic conditions, and the cDNA synthesized by RNA reverse transcription is used as a template for PCR amplification of the ATP1A1 antibody gene. The obtained gene is inserted into a vector and transfected into host cells for culture. The ATP1A1 recombinant monoclonal antibody is purified from the supernatant of the cell culture by affinity chromatography and is rigorously verified for human ATP1A1 protein detection in ELISA and IHC experiments.

The ATP1A1 protein is a transmembrane protein that plays a crucial role in maintaining the electrochemical gradient across the cell membrane. It uses ATP hydrolysis to transport sodium ions out of the cell and potassium ions into the cell against their concentration gradients, thereby creating a net negative charge inside the cell. In addition to its role in ion transport, ATP1A1 also plays a role in regulating cell growth, differentiation, and apoptosis. Dysfunction of the ATP1A1 protein has been implicated in a variety of diseases, including hypertension, cardiac arrhythmias, and neurological disorders.

Usage

For Research Use Only. Not for use in diagnostic or therapeutic procedures.