

Anti-ATP1A2 Antibody [JE34-00]

HA721422



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC
Molecular Wt:	Predicted band size: 112 kDa
Clone number:	JE34-00

Description: Sodium/potassium-transporting ATPase subunit alpha-2 is a protein which in humans is encoded by the ATP1A2 gene. 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 2 subunit.

Immunogen: Synthetic peptide within Human ATP1A2 aa 50-99 / 1,020.

Positive control: Mouse heart tissue lysate, rat heart tissue lysate, human heart tissue, human striated muscle tissue, mouse heart tissue, rat skeletal muscle tissue, HeLa.

Subcellular location: Cell membrane.

Database links: SwissProt: P50993 Human | Q6PIE5 Mouse | P06686 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
FC	1:500-1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Western blot analysis of ATP1A2 on different lysates with Rabbit anti-ATP1A2 antibody (HA721422) at 1/1,000 dilution.

Lane 1: Mouse heart tissue lysate

Lane 2: Rat heart tissue lysate

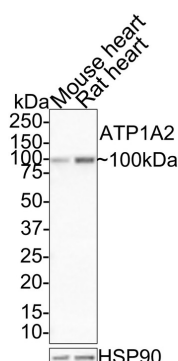
Lysates/proteins at 30 µg/Lane.

Predicted band size: 112 kDa

Observed band size: 100 kDa

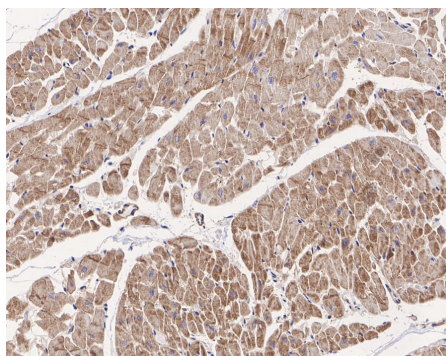
Exposure time: 24 seconds;

4-20% SDS-PAGE gel.



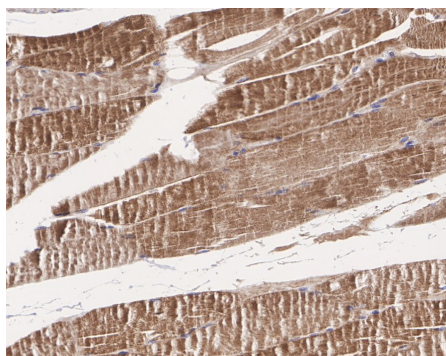
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721422) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:100,000 dilution was used for 1 hour at room temperature.

Fig2: Immunohistochemical analysis of paraffin-embedded human heart tissue with Rabbit anti-ATP1A2 antibody (HA721422) at 1/1,000 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721422) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Fig3: Immunohistochemical analysis of paraffin-embedded human striated muscle tissue with Rabbit anti-ATP1A2 antibody (HA721422) at 1/1,000 dilution.



The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721422) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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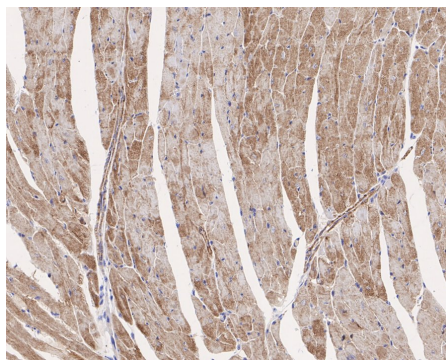


Fig4: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-ATP1A2 antibody (HA721422) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721422) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

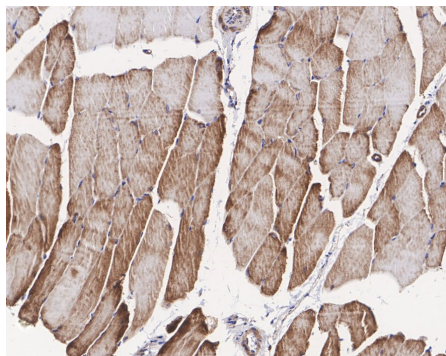


Fig5: Immunohistochemical analysis of paraffin-embedded rat skeletal muscle tissue with Rabbit anti-ATP1A2 antibody (HA721422) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA721422) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

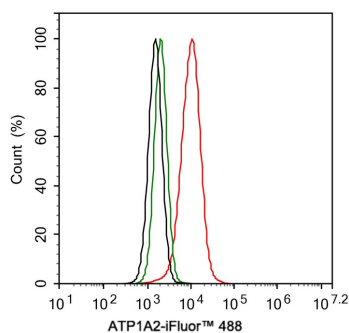


Fig6: Flow cytometric analysis of HeLa cells labeling ATP1A2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721422, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Vetro A et al. ATP1A2- and ATP1A3-associated early profound epileptic encephalopathy and polymicrogyria. Brain. 2021 Jun
2. Moya-Mendez ME et al. Early onset severe ATP1A2 epileptic encephalopathy: Clinical characteristics and underlying mutations. Epilepsy Behav. 2021 Mar

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