DATASHEET

ATP1A1/ATP1A2/ATP1A3 Mouse Monoclonal Antibody (H-3)

CAT. NO. ARA1233

KEY FEATURES

Target	ATP1A1/ATP1A2/ATP1A3	Source / Host	Mouse
Reactivity	Human, Mouse, Rat	Clonality	Monoclonal
Applications	WB, IP, IF/ICC, IHC , ELISA	Storage	-20°C

BACKGROUND

The ubiquitously expressed sodium/potassium - ATPase (Na^+/K^+ - ATPase) exists as an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the importation of three Na^+ ions and two K^+ ions against their respective electrochemical gradients. As a member of the P - type family of ion motives, Na^+/K^+ - ATPase plays a critical role in maintaining cellular volume, resting membrane potential and Na^+ - coupled solute transport. Multiple isoforms of three subunits, α, β and γ, comprise the Na^+/K^+ - ATPase oligomer. The α subunit contains the binding sites for ATP and the cations; the glycosylated β subunit ensures correct folding and membrane insertion of the α subunits. The small γ subunit co - localizes with the α subunit in nephron segments, where it increases the affinity of Na^+/K^+ - ATPase for ATP. The β subunit, but not the γ subunit, is essential for normal activity of Na^+/K^+ - ATPase.

APPLICATION

To ensure optimal assay performance, AREX recommends conducting reagent titration tailored to each testing system for optimal detection results.

WB	1:2000-1:10000
IHC	1:50-1:500
IF/ICC	1:50-1:500
ELISA	1:30-1:3000
IP	1-2 μg/100-500 μg total protein

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

Isotype	Mouse IgG2b kappa light chain
Target Antigen	Na+/K+ ATPase alpha (recognizes alpha1, alpha2, and alpha3 isoforms)
Gene Name	ATP1A1, ATP1A2, ATP1A3
UniProt ID	P05023 (Human ATP1A1), P50993 (Human ATP1A2), P13637 (Human ATP1A3)
Entrez Gene ID	476 (Human ATP1A1), 477 (Human ATP1A2), 478 (Human ATP1A3)
Molecular Weight	100-113 kDa
Gene Aliases	Sodium/potassium-transporting ATPase subunit alpha
Immunogen	amino acids 551-850 of Na+/K+ ATPase alpha1 of human origin
Form/Buffer	PBS with < 0.1% sodium azide and 0.1% gelatin

*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact info@arexbio.com or your local distributor.

*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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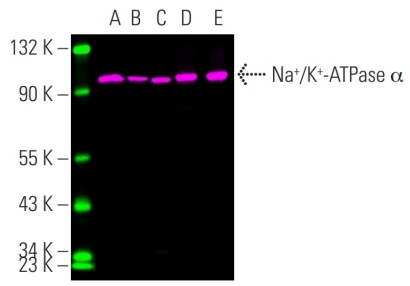
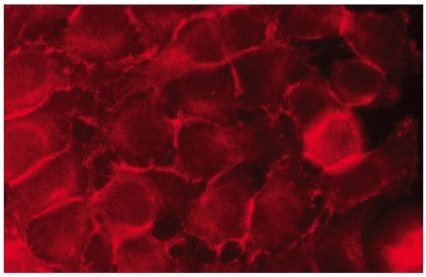
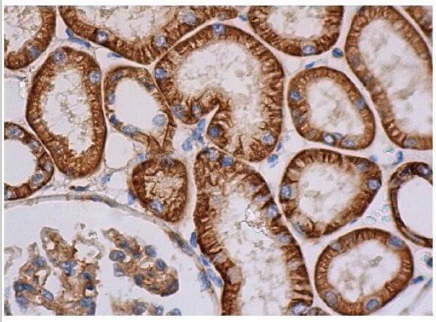
DATA



Direct fluorescent western blot analysis of Na^+/K^+ - ATPase α expression in PC - 12 (A), Hep G2 (B) and MDCK (C) whole cell lysates and human kidney (D) and human brain (E) tissue extracts.



Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.



Immunofluorescence staining of methanol - fixed HeLa cells showing membrane localization (above). Immunoperoxidase staining of formalin fixed, paraffin - embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli in membrane and cytoplasmic staining of cells in tubules (below).

STORAGE

Store at 4°C, DO NOT FREEZE. Stable for one year from the date of shipment.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.

More information: www.arexbio.com