

Rabbit ATPase Polyclonal Antibody | anti-ATP1A1 antibody

ATPase Antibody

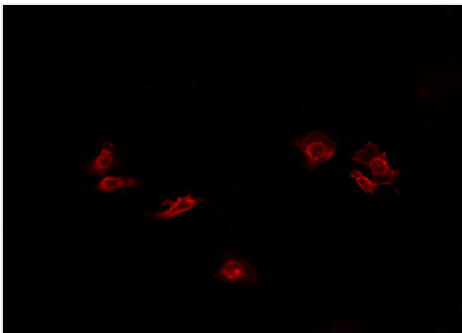
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322173	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

ATPase; Polyclonal Antibody; ATPase Antibody; A1A1; AT1A1; AT1A1_HUMAN; ATP1A1; Atpa-1; ATPase Na⁺/K⁺ transporting alpha 1 polypeptide; ATPase Na⁺/K⁺ transporting subunit alpha 1; BC010319; EC 3.6.3.9; MGC3285; MGC38419; MGC51750; Na K ATPase alpha A catalytic polypeptide; Na K ATPase catalytic subunit alpha A protein; Na⁽⁺⁾/K⁽⁺⁾ ATPase 1; Na⁽⁺⁾/K⁽⁺⁾ ATPase alpha-1 subunit; Na⁺; K⁺ ATPase alpha subunit; Na⁺/K⁺ ATPase alpha 1 subunit; Na⁺/K⁺ ATPase 1; Na; K ATPase alpha 1 subunit; Nkaa1b; Sodium potassium ATPase alpha 1 polypeptide; Sodium pump 1; Sodium pump subunit alpha-1; sodium-potassium ATPase catalytic subunit alpha-1; Sodium/potassium-transporting ATPase subunit alpha-1; anti-ATP1A1 antibody

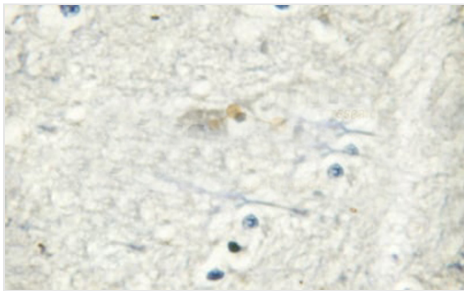
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	ATPase antibody detects endogenous levels of total ATPase
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1023
Applicable Applications for anti-ATP1A1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human ATPase
Subcellular Location	Cell Membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog
Similarity	Pig (100%), Bovine (100%), Horse (83%), Sheep (100%), Rabbit (100%), Dog (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



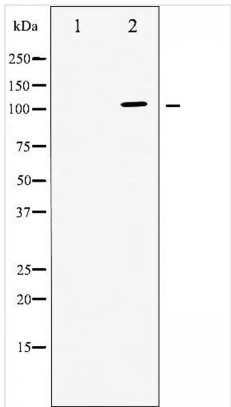
IF (Immunofluorescence)

AAA322173 staining 293 cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



IHC (Immunohistochemistry)

AAA322173 at 1/50 dilution staining ATPase in human brain by Immunohistochemistry using paraffin-embedded tissue



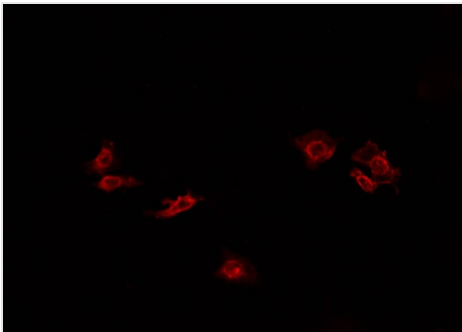
WB (Western Blot)

Western blot analysis of ATPase expression in PMA treated 293 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)

AAA322173 staining Hela cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.



IF (Immunofluorescence)

AAA322173 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-ATP1A1 antibody	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. Function: 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. Subunit Structure: The sodium/potassium-transporting ATPase is composed of a catalytic alpha subunit, an auxiliary non-catalytic beta subunit and an additional regulatory subunit. Interacts with regulatory subunit FXYD1 (By similarity). Interacts with regulatory subunit FXYD3 (PubMed:21454534). Interacts with SIK1 (By similarity). Binds the HLA class II histocompatibility antigen DR1 (PubMed:1380674). Interacts with SLC35G1 and STIM1 (PubMed:22084111). Post-translational Modifications: Phosphorylation on Tyr-10 modulates pumping activity. Phosphorylation of Ser-943 by PKA modulates the response of ATP1A1 to PKC. Dephosphorylation by protein phosphatase 2A (PP2A) following increases in intracellular sodium, leading to increase catalytic activity (By similarity). Similarity: Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIC subfamily.
References	Wang C, Deng Y, Yue Y, Chen W, Zhang Y, Shi G, Wu Z; Journal: Med Sci Monit.

NCBI AND UNIPROT INFORMATION

NCBI GI #	21361181
NCBI GeneID	476
NCBI Accession #	NP_000692.2
NCBI GenBank Nucleotide #	NM_000701.7
UniProt Accession #	P05023; Q16689; Q6LDM4; Q9UCN1; Q9UJ20; Q9UJ21; B2RBR6; B7Z2T5; B7Z3U6; F5H3A1
Molecular Weight	Observed: 112 kDa Predicted: 113 kDa
NCBI Official Full Name	sodium/potassium-transporting ATPase subunit alpha-1 isoform a
NCBI Official Synonym Full Names	ATPase Na ⁺ /K ⁺ transporting subunit alpha 1
NCBI Official Symbol	ATP1A1
NCBI Official Synonym Symbols	CMT2DD
NCBI Protein Information	sodium/potassium-transporting ATPase subunit alpha-1
UniProt Protein Name	Sodium/potassium-transporting ATPase subunit alpha-1
UniProt Gene Name	ATP1A1
UniProt Synonym Gene Names	Na ⁺ (+)/K ⁺ (+) ATPase alpha-1 subunit

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.