

ATP7A antibody - middle region

Rabbit Polyclonal Antibody Catalog # Al10563

Specification

ATP7A antibody - middle region - Product Information

Application WB
Primary Accession Q04656

Other Accession NM 000052, NP 000043

Reactivity Human, Mouse, Rat, Pig, Horse, Bovine,

Dog

Predicted Human, Mouse, Rat, Pig, Chicken, Bovine,

Guinea Pig, Dog

Host Rabbit
Clonality Polyclonal
Calculated MW 163kDa KDa

ATP7A antibody - middle region - Additional Information

Gene ID 538

Alias Symbol MK, MNK, DSMAX, SMAX3

Other Names

Copper-transporting ATPase 1, 3.6.3.54, Copper pump 1, Menkes disease-associated protein, ATP7A, MC1, MNK

Target/Specificity

This antibody is will react to isoforms 1-5.

Format

Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.

Reconstitution & Storage

Add 50 ul of distilled water. Final anti-ATP7A antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.

Precautions

ATP7A antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

ATP7A antibody - middle region - Protein Information

Name ATP7A {ECO:0000303|PubMed:28389643, ECO:0000312|HGNC:HGNC:869}

Function

ATP-driven copper (Cu(+)) ion pump that plays an important role in intracellular copper ion homeostasis (PubMed:10419525, PubMed:<a href="http://www.uniprot.org/citations/11092760"



target="_blank">11092760, PubMed:28389643). Within a catalytic cycle, acquires Cu(+) ion from donor protein on the cytoplasmic side of the membrane and delivers it to acceptor protein on the lumenal side. The transfer of Cu(+) ion across the membrane is coupled to ATP hydrolysis and is associated with a transient phosphorylation that shifts the pump conformation from inward-facing to outward-facing state (PubMed:10419525, PubMed:19453293, PubMed:19917612, PubMed:28389643, PubMed:31283225, PubMed:<a href="http://www.uniprot.org/citations/31283225" concentration, it is localized at the trans-Golgi network (TGN) where it transfers Cu(+) ions to cuproenzymes of the secretory pathway (PubMed:11092760, PubMed:28389643). Upon elevated cytosolic copper concentrations, it relocalizes to the plasma membrane where it is responsible for the export of excess Cu(+) ions (PubMed:10419525, PubMed:28389643). May play a dual role in neuron function and survival by regulating cooper efflux and neuronal transmission at the synapse as well as by supplying Cu(+) ions to enzymes such as PAM, TYR and SOD3 (By similarity) (PubMed:<a href="http://www.uniprot.org/citations/28389643" target="http://www.uniprot.org/citations/28389643" target="http://www.uniprot.org/citations/28389643" target="http://www.uniprot.org/citations/28389643"

target="_blank">28389643). In the melanosomes of pigmented cells, provides copper cofactor to TYR to form an active TYR holoenzyme for melanin biosynthesis (By similarity).

Cellular Location

Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein Melanosome membrane {ECO:0000250|UniProtKB:Q64430}; Multi-pass membrane protein. Early endosome membrane {ECO:0000250|UniProtKB:Q64430}; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P70705} Cell projection, dendrite {ECO:0000250|UniProtKB:P70705}. Postsynaptic density {ECO:0000250|UniProtKB:P70705}. Note=Cycles constitutively between the TGN and the plasma membrane (PubMed:9147644). Predominantly found in the TGN and relocalized to the plasma membrane in response to elevated copper levels. Targeting into melanosomes is regulated by BLOC-1 complex (By similarity). In response to glutamate, translocates to neuron processes with a minor fraction at extrasynaptic sites (By similarity). {ECO:0000250|UniProtKB:P70705, ECO:0000250|UniProtKB:Q64430, ECO:0000269|PubMed:9147644} [Isoform 5]: Endoplasmic reticulum

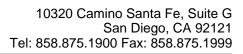
Tissue Location

Widely expressed including in heart, brain, lung, muscle, kidney, pancreas, and to a lesser extent placenta (PubMed:8490646, PubMed:8490659). Expressed in fibroblasts, aortic smooth muscle cells, aortic endothelial cells and umbilical vein endothelial cells (at protein level) (PubMed:16371425)

ATP7A antibody - middle region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation





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