

ATP7A antibody - middle region
Rabbit Polyclonal Antibody
Catalog # AI10563**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 luminal 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:31283225, PubMed:28389643). Under physiological conditions, at low cytosolic copper concentration, it is localized at the trans-Golgi network (TGN) where it transfers Cu(+) ions to cuproenzymes of the secretory pathway (PubMed:28389643, PubMed:11092760). Upon elevated cytosolic copper concentrations, it relocates 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 copper efflux and neuronal transmission at the synapse as well as by supplying Cu(+) ions to enzymes such as PAM, TYR and SOD3 (PubMed:28389643) (By similarity). 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 relocated 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](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

