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Copper Transporting ATPase 1 Antibody
Copper Transporting ATPase 1 Antibody, Clone S60-4
Catalog # ASM10232

Specification

Copper Transporting ATPase 1 Antibody - Product Information

Application	**WB**
Primary Accession	Q04656
Other Accession	NP_000043.3
Host	**Mouse**
Isotype	**IgG2b**
Reactivity	**Human, Mouse, Rat**
Clonality	**Monoclonal**

Description
Mouse Anti-Human Copper Transporting ATPase 1 Monoclonal IgG2b

Target/Specificity
Detects ~180kDa in rat brain membrane preparations.

Other Names
ATP7A Antibody, ATP 7A Antibody, ATPase Cu transporting Antibody, DSMAX Antibody, FLJ17790 Antibody, MC1 Antibody, MC 1 Antibody, MK Antibody, MNK Antibody, OHS Antibody, Copper pump 1 Antibody, Menke Antibody, OTTHUMP00000062077 Antibody, SMAX3 Antibody, ATPase copper transporting alpha polypeptide Antibody, ATPase Cu++ transporting alpha polypeptide (Menkes syndrome) Antibody, Copper transporting ATPase 1 Antibody, Cu++ transporting P type ATPase Antibody, Menkes disease associated protein Antibody, Menkes syndrome Antibody

Immunogen
Synthetic peptide amino acids 42-61 (cytoplasmic C-terminus) of human Copper- transporting ATPase1

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml of SMC-398 was sufficient for detection of Copper-transporting ATPase1 in 20 µg of rat brain lysate by colorimetric immunoblot analysis using Goat IgG:HRP as the secondary antibody.

Cellular Localization
Endoplasmic Reticulum | Cytoplasm | Golgi Apparatus | Trans-Golgi Network Membrane | Cell Membrane

Copper Transporting ATPase 1 Antibody - Protocols

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

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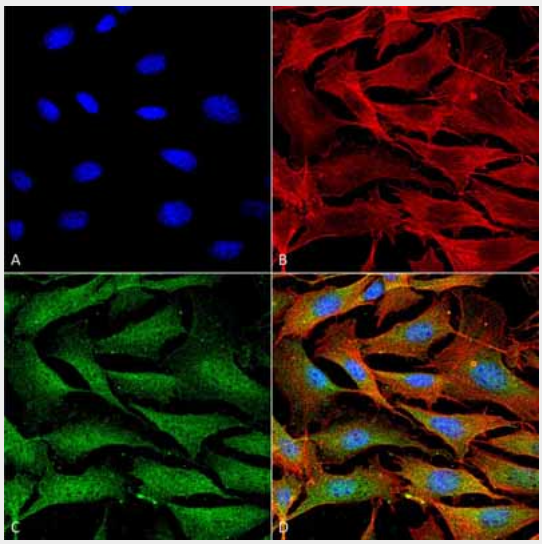
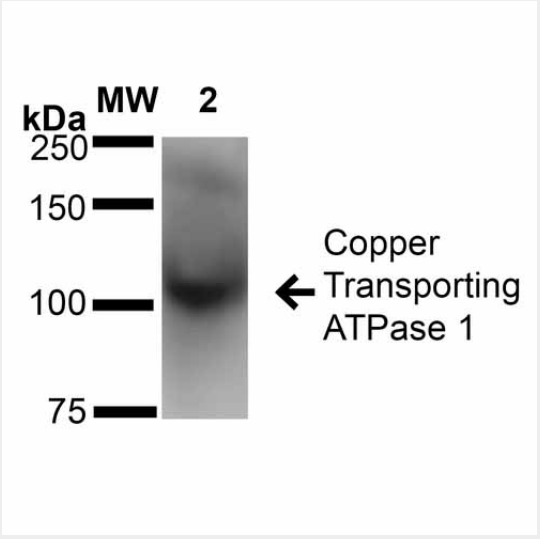
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Copper Transporting ATPase 1 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody, Clone S60-4 (ASM10232). Tissue: NIH 3T3 (Mouse Fibroblast cell line). Species: Mouse. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody (ASM10232) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:200 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60 min at RT, 5 min at RT. Localization: Endoplasmic Reticulum, Cytoplasm, Golgi Apparatus, Trans-Golgi Network Membrane, Cell Membrane. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) Copper Transporting ATPase 1 Antibody (D) Composite.



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Western Blot analysis of Rat Brain Membrane showing detection of ~180 kDa Copper Transporting ATPase 1 protein using Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody, Clone S60-4 (ASM10232). Lane 1: Molecular Weight Ladder (MW). Lane 2: Rat Brain Membrane cell lysate. Load: 20 µg. Block: 2% BSA and 2% Skim Milk in 1X TBST. Primary Antibody: Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody (ASM10232) at 1:1000 for 16 hours at 4°C. Secondary Antibody: Goat Anti-Mouse IgG: HRP at 1:100 for 60 min at RT. Color Development: ECL solution for 6 min in RT. Predicted/Observed Size: ~180 kDa. Other Band(s): 250kDa.

Copper Transporting ATPase 1 Antibody - Background

The copper efflux transporters ATP7A and ATP7B sequester intracellular copper into the vesicular secretory pathway for export from the cell. ATP7A (also known as Copper-transporting ATPase 1) functions as a transmembrane copper-trans locating P-type ATPase and plays a vital role in systemic copper absorption in the gut and copper reabsorption in the kidney. Polarized epithelial cells such as Madin-Darby canine kidney cells are a physiologically relevant model for systemic copper absorption and reabsorption in vivo. Although ATP7A is not detectable in most normal tissues, it is expressed in a considerable fraction of many common tumor types. Increased expression of ATP7A renders cells resistant to cisplatin and carboplatin. Mutations in the ATP7A gene result in Menkes disease, which is fatal in early childhood. Mutations in the ATP7B gene lead to the autosomal recessive disorder, Wilson disease, characterized by neurological symptoms and hepatic damage.

Copper Transporting ATPase 1 Antibody - References

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2. Samimi G., et al. (2004) Mol Pharmacol. 66: 25-32.
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5. van Dongen, E.M., et al. (2004) Biochem. Biophys. Res. Commun. 323: 789-795.
6. Samimi, G., et al. (2004) Mol Pharmacol 66: 25-32.
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