Datasheet for ABIN2485181

anti-ATP7A antibody (AA 42-61) (Atto 390)

4 Images

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Overview

Quantity:	100 µg
Target:	ATP7A
Binding Specificity:	AA 42-61
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This ATP7A antibody is conjugated to Atto 390
Application:	Immunohistochemistry (IHC), Western Blotting (WB), Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	Synthetic peptide amino acids 42-61 (cytoplasmic C-terminus) of human Copper- transporting ATPase1
Clone:	S60-4
Isotype:	IgG2b
Specificity:	Detects ~180 kDa in rat brain membrane preparations.
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Protein G Purified

Target Details

Target:	ATP7A
Alternative Name:	ATP7A (ATP7A Products)
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.
Gene ID:	538
NCBI Accession:	NP_000043
UniProt:	Q04656
Pathways:	Transition Metal Ion Homeostasis, Ribonucleoside Biosynthetic Process

Application Details

Application Notes:	• WB (1:500) • ICC/IF (1:100) • optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN2485181 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.
Restrictions:	For Research Use only

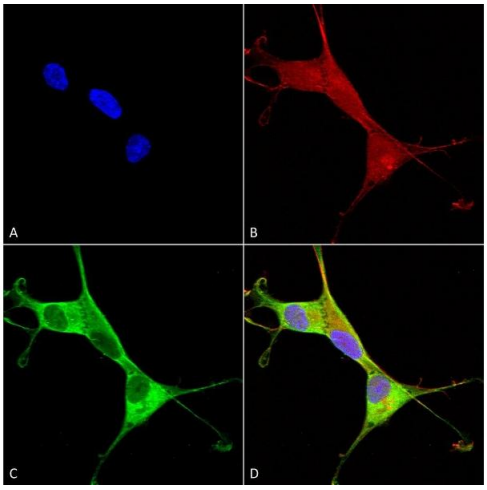
Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

Handling

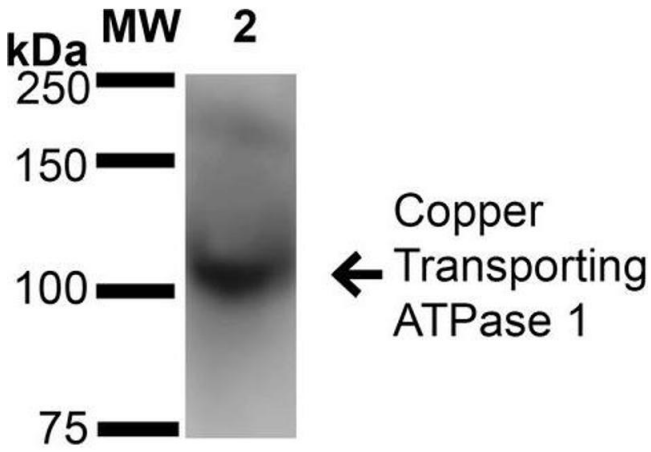
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



Immunocytochemistry

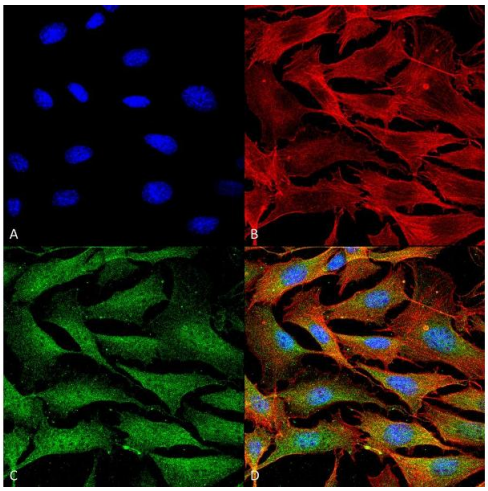
Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody, Clone S60-4 (ABIN2485181). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4 % PFA for 15 min. Primary Antibody: Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody (ABIN2485181) at 1:100 for overnight at 4 °C with slow rocking. Secondary Antibody: AlexaFluor 488 at 1:1000 for 1 hour at RT. Counterstain: Phalloidin-iFluor 647 (red) F-Actin stain, Hoechst (blue) nuclear stain at 1:800, 1.6 mM for 20 min at RT. (A) Hoechst (blue) nuclear stain. (B) Phalloidin-iFluor 647 (red) F-Actin stain. (C) Copper Transporting ATPase 1 Antibody (D) Composite.



Western Blotting

Image 2. 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 . 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 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.



Immunofluorescence (fixed cells)

Image 3. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Copper Transporting ATPase 1 Monoclonal Antibody, Clone S60-4 . 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 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.

Please check the product details page for more images. Overall 4 images are available for ABIN2485181.