10320 Camino Santa Fe, Suite G
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Anti-ATP7b Antibody
Catalog # ABO11572

Specification

Anti-ATP7b Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	P35670
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Copper-transporting ATPase 2(ATP7B) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-ATP7b Antibody - Additional Information

Gene ID 540

Other Names
Copper-transporting ATPase 2, 3.6.3.54, Copper pump 2, Wilson disease-associated protein, WND/140 kDa, ATP7B, PWD, WC1, WND

Calculated MW
157263 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization
Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Predominantly found in the trans-Golgi network (TGN). Not redistributed to the plasma membrane in response to elevated copper levels.

Tissue Specificity
Most abundant in liver and kidney and also found in brain. Isoform 2 is expressed in brain but not in liver. The cleaved form WND/140 kDa is found in liver cell lines and other tissues.

Protein Name
Copper-transporting ATPase 2

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human ATP7b(1451-1465aa DKWSLLLNGRDEEQYI), different from the related mouse and rat sequences by three amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IB subfamily.

Anti-ATP7b Antibody - Protein Information

Name ATP7B

Synonyms PWD, WC1, WND

Function
Copper ion transmembrane transporter involved in the export of copper out of the cells. It is involved in copper homeostasis in the liver, where it ensures the efflux of copper from hepatocytes into the bile in response to copper overload.

Cellular Location
Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Late endosome Note=Predominantly found in the trans-Golgi network (TGN). Localized in the trans-Golgi network under low copper conditions, redistributes to cytoplasmic vesicles when cells are exposed to elevated copper levels, and then recycles back to the trans-Golgi network when copper is removed (PubMed:10942420). [Isoform 2]: Cytoplasm

Tissue Location
Most abundant in liver and kidney and also found in brain. Isoform 2 is expressed in brain but not in liver. The cleaved form WND/140 kDa is found in liver cell lines and other tissues

Anti-ATP7b Antibody - Protocols

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

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

Anti-ATP7b Antibody - Images

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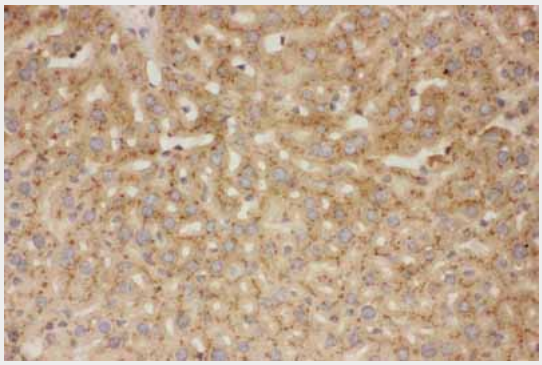
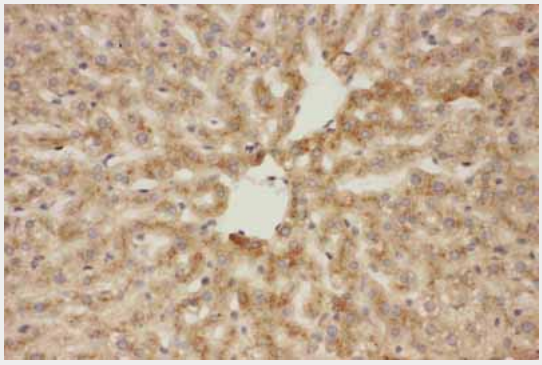
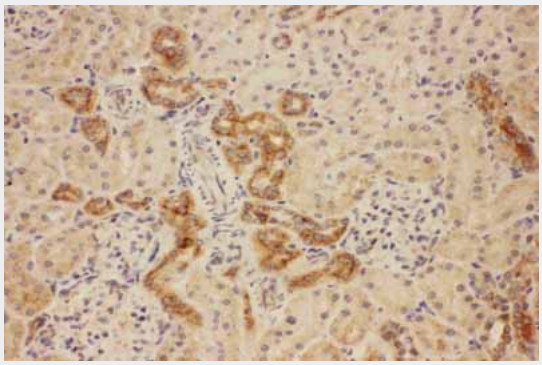


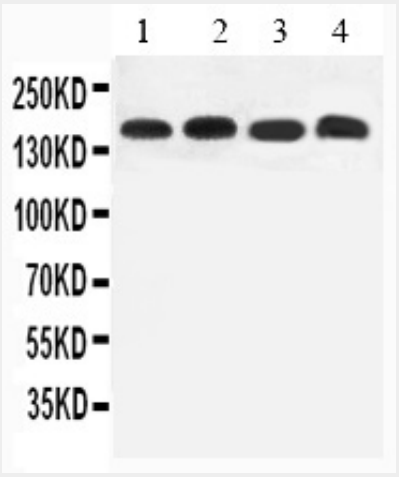
Anti-ATP7b antibody, ABO11572, IHC(P)IHC(P): Mouse Liver Tissue



Anti-ATP7b antibody, ABO11572, IHC(P)IHC(P): Rat Liver Tissue



Anti-ATP7b antibody, ABO11572, IHC(P)IHC(P): Rat Kidney Tissue



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Anti-ATP7b antibody, ABO11572, All Western blottingAll lanes: Anti-ATP7B(ABO11572) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 40ugLane 2: Rat Brain Tissue Lysate at 40ugLane 3: SMMC Whole Cell Lysate at 40ugLane 4: NEURO Whole Cell Lysate at 40ugPredicted bind size: 157KDObserved bind size: 157KD

Anti-ATP7b Antibody - Background

ATPase, Cu++ transporting, beta polypeptide(Wilson disease) protein, also called ATP7B, is an ATPase that transports copper. This gene is a member of the P-type cation transport ATPase family and encodes a protein with several membrane-spanning domains, an ATPase consensus sequence, a hinge domain, a phosphorylation site, and at least two putative copper-binding sites. ATP7B is mapped to 13q14.3. This protein functions as a monomer, exporting copper out of the cells. When copper levels are in excess, ATP7B redistributes to a vesicular compartment near the biliary canalicular membranes for elimination of excess copper into bile, and it is transported along liver cell microtubules via interaction with the p62 dynactin subunit.