

**Anti-ATP7b Picoband Antibody**  
Catalog # ABO10101**Specification****Anti-ATP7b Picoband Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P35670</a>
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 Picoband 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, Rat, By Heat  
<br>Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**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 Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>N.

**Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of human ATP7b (616-652aa RDIKIIEEIGFHASLAQRNPNAHHLDDHKMEIKQWKK), different from the related mouse sequence by one amino acid, and from the related rat sequence by three amino acids.

#### **Purification**

Immunogen affinity purified.

#### **Cross Reactivity**

No cross reactivity with other proteins

#### **Storage**

**At -20°C for one year. After reconstitution, 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.**

### **Anti-ATP7b Picoband 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**

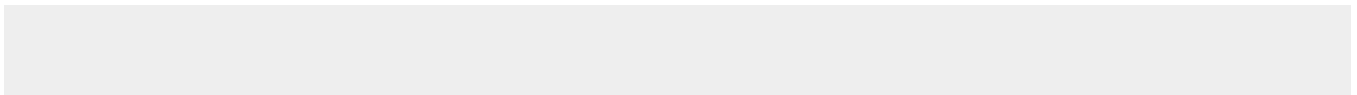
Most abundant in liver and kidney and also found in brain. Isoform 2 is expressed in brain but not in liver. The cleaved form WND/140 kDa is found in liver cell lines and other tissues

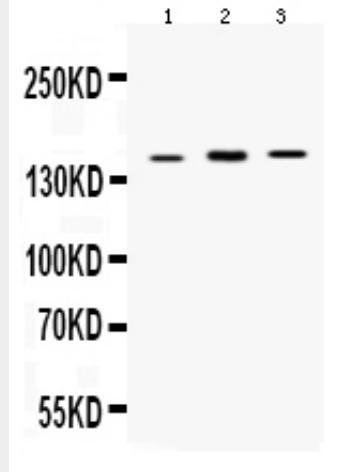
### **Anti-ATP7b Picoband Antibody - Protocols**

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

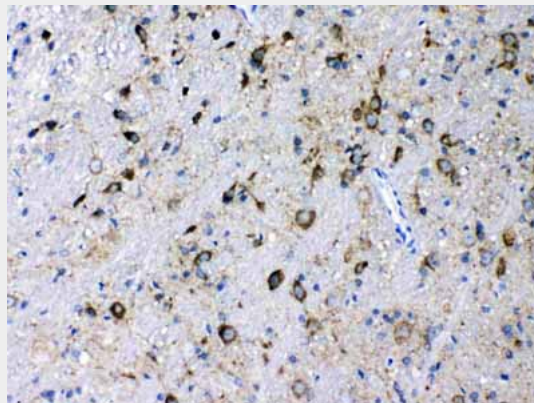
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-ATP7b Picoband Antibody - Images**

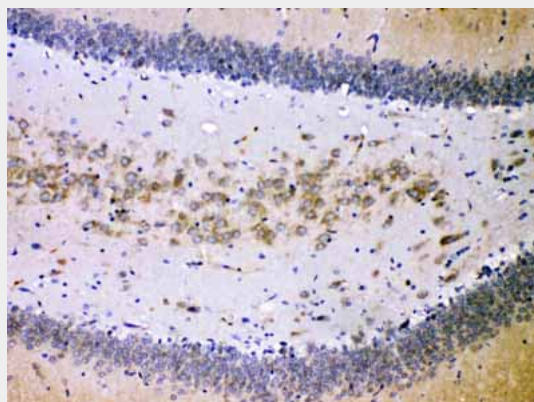




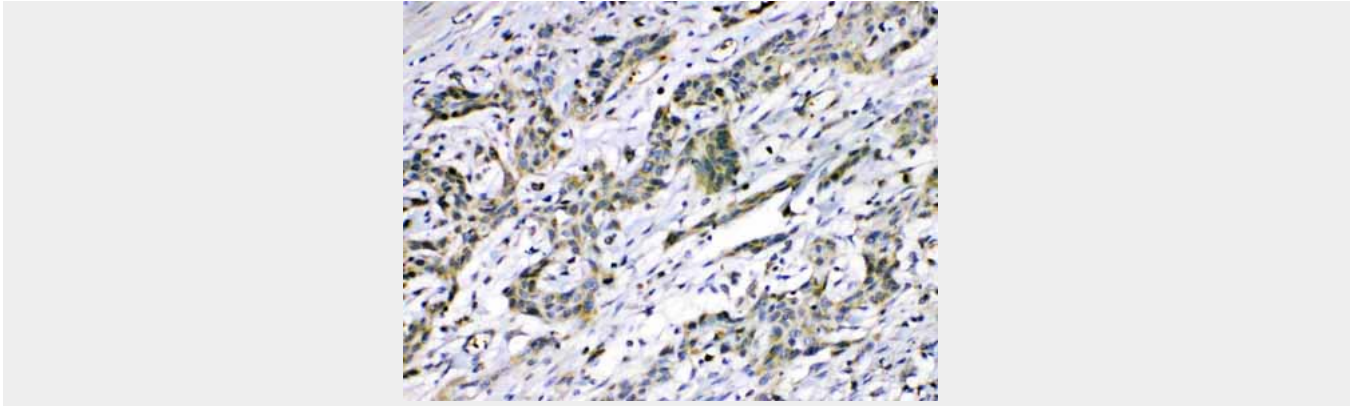
Western blot analysis of ATP7b expression in RH35 whole cell lysates (lane 1), HEPA whole cell lysates (lane 2) and HEPG2 whole cell lysates (lane 3). ATP7b at 157KD was detected using rabbit anti- ATP7b Antigen Affinity purified polyclonal antibody (Catalog #ABO10101) at 0.5  $\mu$ g/mL. The blot was developed using chemiluminescence (ECL) method .



ATP7b was detected in paraffin-embedded sections of rat brain tissues using rabbit anti- ATP7b Antigen Affinity purified polyclonal antibody (Catalog # ABO10101) at 1  $\mu$ g/mL. The immunohistochemical section was developed using SABC method .



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ATP7b was detected in paraffin-embedded sections of human glioma tissues using rabbit anti-ATP7b Antigen Affinity purified polyclonal antibody (Catalog # ABO10101) at 1  $\mu$ g/mL. The immunohistochemical section was developed using SABC method .

#### **Anti-ATP7b Picoband Antibody - Background**

ATPase, Cu<sup>++</sup> 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.