

**Anti-CYP24A1 Picoband Antibody**  
Catalog # ABO12234**Specification****Anti-CYP24A1 Picoband Antibody - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">Q07973</a>
Host	<b>Rabbit</b>
Reactivity	<b>Human, Mouse, Rat</b>
Clonality	<b>Polyclonal</b>
Format	<b>Lyophilized</b>

**Description**

Rabbit IgG polyclonal antibody for 1,25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial (CYP24A1) 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-CYP24A1 Picoband Antibody - Additional Information**

**Gene ID** 1591

**Other Names**

1, 25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial, 24-OHase, Vitamin D(3) 24-hydroxylase, 1.14.15.16, Cytochrome P450 24A1, Cytochrome P450-CC24, CYP24A1, CYP24

**Calculated MW**

58875 MW KDa

**Application Details**

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

**Subcellular Localization**

Mitochondrion.

**Protein Name**

1,25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial

**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>.

**Immunogen**

E.coli-derived human CYP24A1 recombinant protein (Position: E153-R514). Human CYP24A1 shares 86.2% amino acid (aa) sequence identity with both mouse and rat CYP24A1.

**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.**

**Anti-CYP24A1 Picoband Antibody - Protein Information**

**Name** CYP24A1 ([HGNC:2602](#))

**Synonyms** CYP24

**Function**

A cytochrome P450 monooxygenase with a key role in vitamin D catabolism and calcium homeostasis. Via C24- and C23-oxidation pathways, catalyzes the inactivation of both the vitamin D precursor calcidiol (25-hydroxyvitamin D(3)) and the active hormone calcitriol (1-alpha,25-dihydroxyvitamin D(3)) (PubMed:<a href="http://www.uniprot.org/citations/11012668" target="\_blank">11012668</a>, PubMed:<a href="http://www.uniprot.org/citations/15574355" target="\_blank">15574355</a>, PubMed:<a href="http://www.uniprot.org/citations/16617161" target="\_blank">16617161</a>, PubMed:<a href="http://www.uniprot.org/citations/24893882" target="\_blank">24893882</a>, PubMed:<a href="http://www.uniprot.org/citations/29461981" target="\_blank">29461981</a>, PubMed:<a href="http://www.uniprot.org/citations/8679605" target="\_blank">8679605</a>). With initial hydroxylation at C-24 (via C24-oxidation pathway), performs a sequential 6-step oxidation of calcitriol leading to the formation of the biliary metabolite calcitroic acid (PubMed:<a href="http://www.uniprot.org/citations/15574355" target="\_blank">15574355</a>, PubMed:<a href="http://www.uniprot.org/citations/24893882" target="\_blank">24893882</a>). With initial hydroxylation at C-23 (via C23-oxidation pathway), catalyzes sequential oxidation of calcidiol leading to the formation of 25(OH)D3-26,23-lactone as end product (PubMed:<a href="http://www.uniprot.org/citations/11012668" target="\_blank">11012668</a>, PubMed:<a href="http://www.uniprot.org/citations/8679605" target="\_blank">8679605</a>). Preferentially hydroxylates at C-25 other vitamin D active metabolites, such as CYP11A1-derived secosteroids 20S- hydroxycholecalciferol and 20S,23-dihydroxycholecalciferol (PubMed:<a href="http://www.uniprot.org/citations/25727742" target="\_blank">25727742</a>). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via FDXR/adrenodoxin reductase and FDX1/adrenodoxin (PubMed:<a href="http://www.uniprot.org/citations/8679605" target="\_blank">8679605</a>).

**Cellular Location**

Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

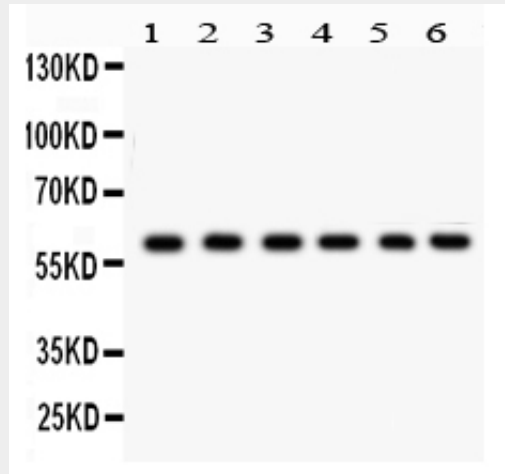
**Anti-CYP24A1 Picoband Antibody - Protocols**

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

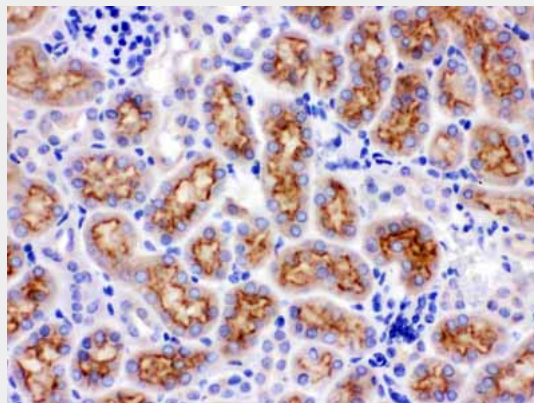
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

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

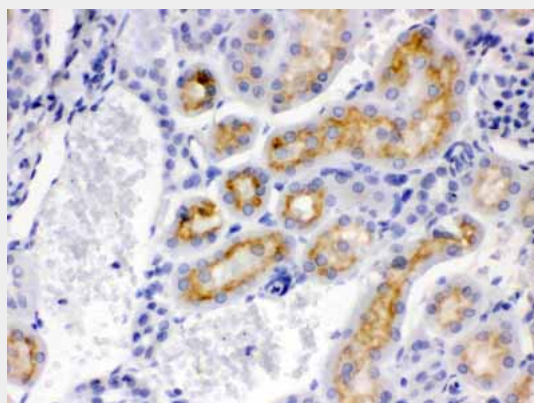
### Anti-CYP24A1 Picoband Antibody - Images



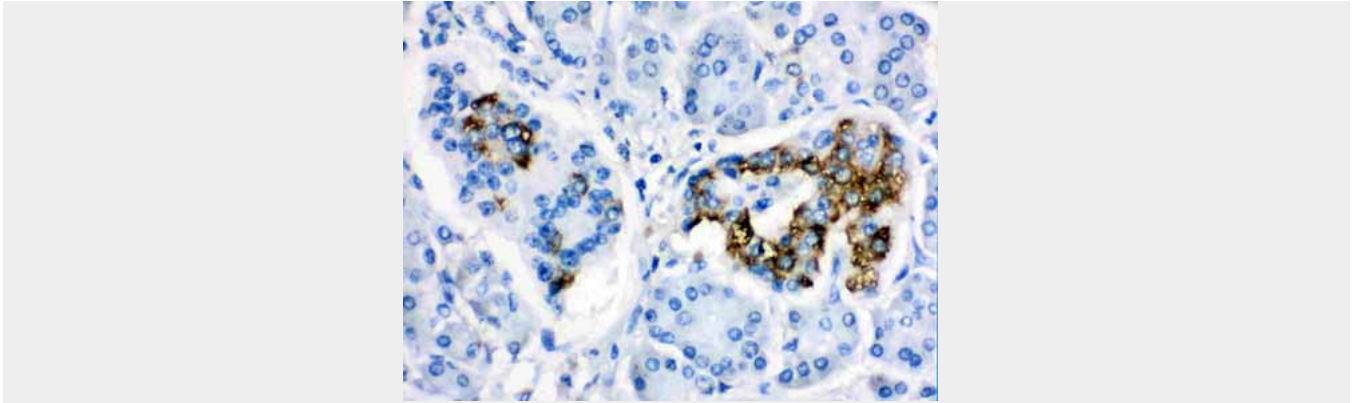
Anti- CYP24A1 Picoband antibody, ABO12234, Western blotting  
All lanes: Anti CYP24A1 (ABO12234) at 0.5ug/ml  
Lane 1: Rat Thymus Tissue Lysate at 50ug  
Lane 2: Rat Lung Tissue Lysate at 50ug  
Lane 3: HELA Whole Cell Lysate at 40ug  
Lane 4: 22RV1 Whole Cell Lysate at 40ug  
Lane 5: A431 Whole Cell Lysate at 40ug  
Lane 6: HEPA Whole Cell Lysate at 40ug  
Predicted bind size: 59KD  
Observed bind size: 59KD



Anti- CYP24A1 Picoband antibody, ABO12234, IHC(P) IHC(P): Rat Kidney Tissue



Anti- CYP24A1 Picoband antibody, ABO12234, IHC(P) IHC(P): Mouse Kidney Tissue



Anti- CYP24A1 Picoband antibody, ABO12234, IHC(P)IHC(P): Human Pancreatic Cancer Tissue

### **Anti-CYP24A1 Picoband Antibody - Background**

This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. And this mitochondrial protein initiates the degradation of 1,25-dihydroxyvitamin D<sub>3</sub>, the physiologically active form of vitamin D<sub>3</sub>, by hydroxylation of the side chain. In regulating the level of vitamin D<sub>3</sub>, this enzyme plays a role in calcium homeostasis and the vitamin D endocrine system. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.