

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

Anti-CYP24A1 Picoband Antibody - Product Information

Application	WB, IHC
Primary Accession	Q07973
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

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
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat

Subcellular Localization

Mitochondrion.

Protein Name

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

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

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 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-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- α ,25-dihydroxyvitamin D(3)) (PubMed: [24893882](http://www.uniprot.org/citations/24893882), PubMed: [15574355](http://www.uniprot.org/citations/15574355), PubMed: [8679605](http://www.uniprot.org/citations/8679605), PubMed: [11012668](http://www.uniprot.org/citations/11012668), PubMed: [16617161](http://www.uniprot.org/citations/16617161), PubMed: [29461981](http://www.uniprot.org/citations/29461981)). 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: [24893882](http://www.uniprot.org/citations/24893882), PubMed: [15574355](http://www.uniprot.org/citations/15574355), PubMed: [11012668](http://www.uniprot.org/citations/11012668), PubMed: [8679605](http://www.uniprot.org/citations/8679605)). 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: [11012668](http://www.uniprot.org/citations/11012668), PubMed: [8679605](http://www.uniprot.org/citations/8679605)). Preferentially hydroxylates at C-25 other vitamin D active metabolites, such as CYP11A1-derived secosteroids 20S- hydroxycholecalciferol and 20S,23-dihydroxycholecalciferol (PubMed: [25727742](http://www.uniprot.org/citations/25727742)). 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: [8679605](http://www.uniprot.org/citations/8679605)).

Cellular Location

Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

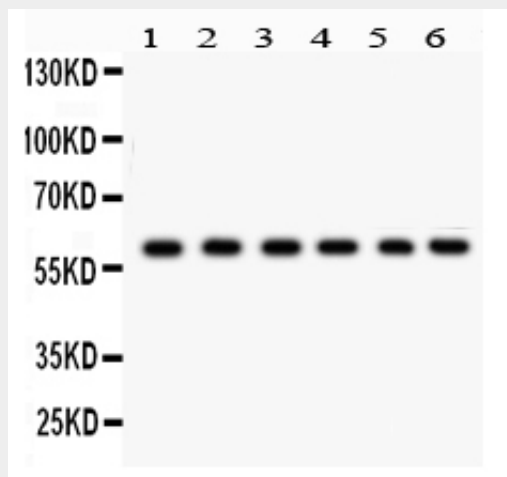
Anti-CYP24A1 Picoband Antibody - Protocols

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

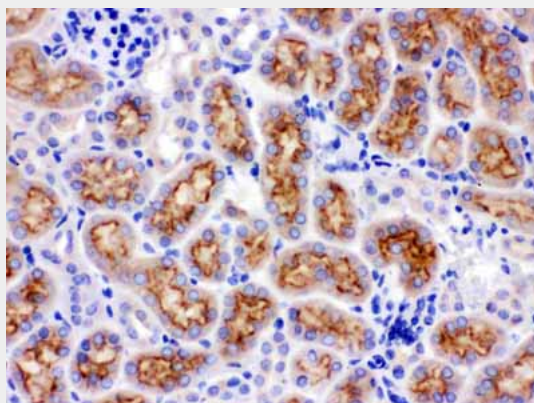
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

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

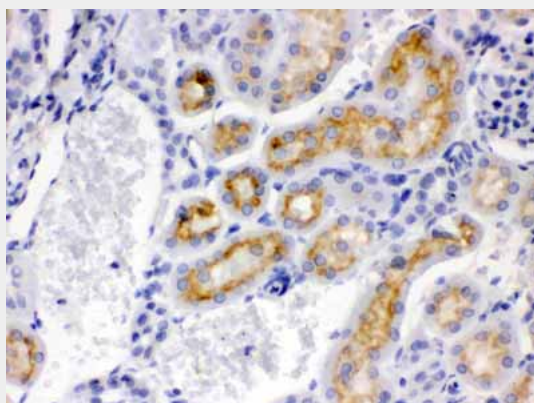
Anti-CYP24A1 Picoband Antibody - Images



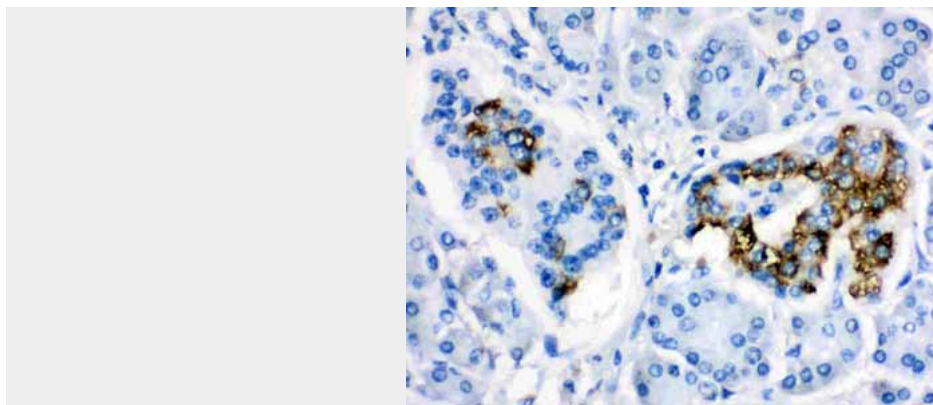
Anti- CYP24A1 Picoband antibody, ABO12234, Western blotting
All lanes: Anti CYP24A1 (ABO12234) at 0.5ug/ml
Lane 1: Rat Thymus Tissue Lysate at 50ug
Lane 2: Rat Lung Tissue Lysate at 50ug
Lane 3: HELA Whole Cell Lysate at 40ug
Lane 4: 22RV1 Whole Cell Lysate at 40ug
Lane 5: A431 Whole Cell Lysate at 40ug
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 D₃, the physiologically active form of vitamin D₃, by hydroxylation of the side chain. In regulating the level of vitamin D₃, 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.