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Anti-CYP24A1 Picoband Antibody

Catalog # ABO12234

Product Information

Application	WB, IHC-P
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.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Mitochondrion.
Source	Eukaryota
Protein Name	1,25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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.

Protein Information

Name CYP24A1 (HGNC:2602)

Synonyms CYP24

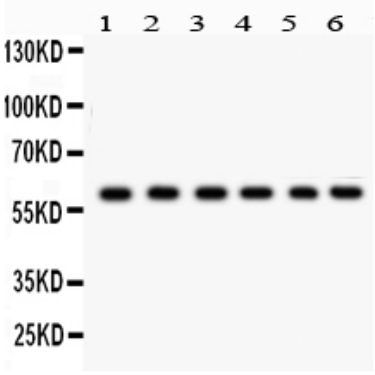
Function A cytochrome P450 monooxygenase with a key role in vitamin D catabolism and calcium homeostasis. Via C24- and C23-oxidation pathways, catalyzes the inactivation of both the vitamin D precursor calcidiol (25-hydroxyvitamin D(3)) and the active hormone calcitriol (1-alpha,25-dihydroxyvitamin D(3)) (PubMed:11012668, PubMed:15574355, PubMed:16617161, PubMed:24893882, PubMed:29461981, PubMed:8679605). 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:15574355, PubMed:24893882). 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, PubMed:8679605). Preferentially hydroxylates at C-25 other vitamin D active metabolites, such as CYP11A1-derived secosteroids 20S- hydroxycholecalciferol and 20S,23-dihydroxycholecalciferol (PubMed: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).

Cellular Location Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

Background

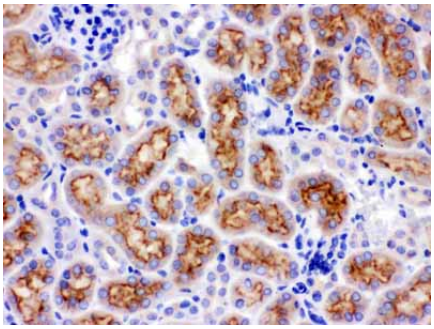
This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. And this mitochondrial protein initiates the degradation of 1,25-dihydroxyvitamin 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.

Images

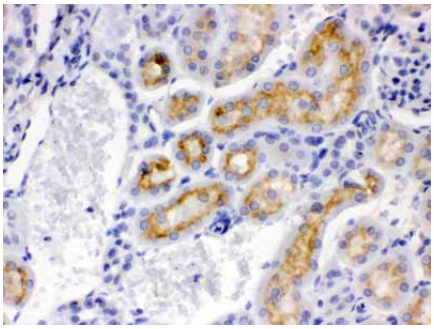


Anti- CYP24A1 Picoband antibody, ABO12234, Western blottingAll lanes: Anti CYP24A1 (ABO12234) at 0.5ug/mlLane 1: Rat Thymus Tissue Lysate at 50ugLane 2: Rat Lung Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: 22RV1 Whole Cell Lysate at 40ugLane 5: A431 Whole Cell Lysate at 40ugLane 6: HEPA Whole Cell Lysate at 40ugPredicted bind size: 59KDObserved bind size: 59KD

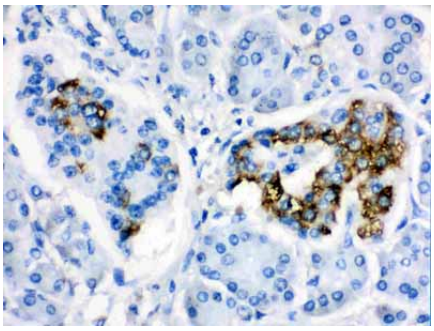
Anti- CYP24A1 Picoband antibody, ABO12234,



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.