

CYP24A1 Polyclonal Antibody
Catalog # AP69381

Specification

CYP24A1 Polyclonal Antibody - Product Information

Application	WB
Primary Accession	Q07973
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

CYP24A1 Polyclonal Antibody - Additional Information

Gene ID 1591

Other Names

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

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications.

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

CYP24A1 Polyclonal 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: [11012668](http://www.uniprot.org/citations/11012668) target="_blank">11012668, PubMed: [15574355](http://www.uniprot.org/citations/15574355) target="_blank">15574355, PubMed: [16617161](http://www.uniprot.org/citations/16617161) target="_blank">16617161, PubMed: [24893882](http://www.uniprot.org/citations/24893882) target="_blank">24893882, PubMed: [29461981](http://www.uniprot.org/citations/29461981) target="_blank">29461981, PubMed: [8679605](http://www.uniprot.org/citations/8679605) target="_blank">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](http://www.uniprot.org/citations/15574355) target="_blank">15574355).

target="_blank">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

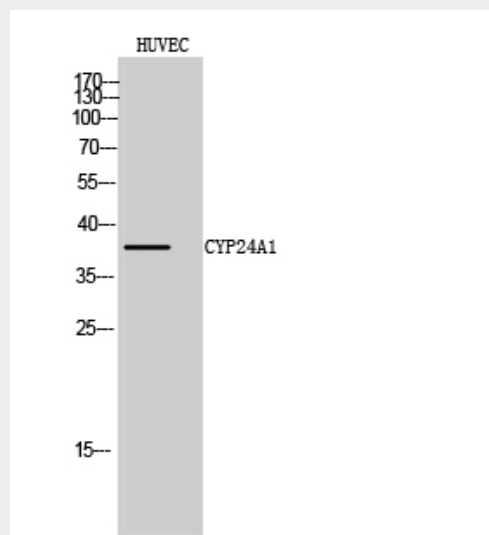
Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

CYP24A1 Polyclonal 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](#)

CYP24A1 Polyclonal Antibody - Images



CYP24A1 Polyclonal Antibody - Background

Has a role in maintaining calcium homeostasis. Catalyzes the adrenodoxin-dependent 24-hydroxylation of calcidiol (25- hydroxyvitamin D₃) and calcitriol (1- α ,25-dihydroxyvitamin

D(3)). The enzyme can perform up to 6 rounds of hydroxylation of calcitriol leading to calcitroic acid. It also shows 23- hydroxylating activity leading to 1-alpha,25-dihydroxyvitamin D(3)-26,23-lactone as end product.