10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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℃

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-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:<a href="http://www.uniprot.org/citations/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).

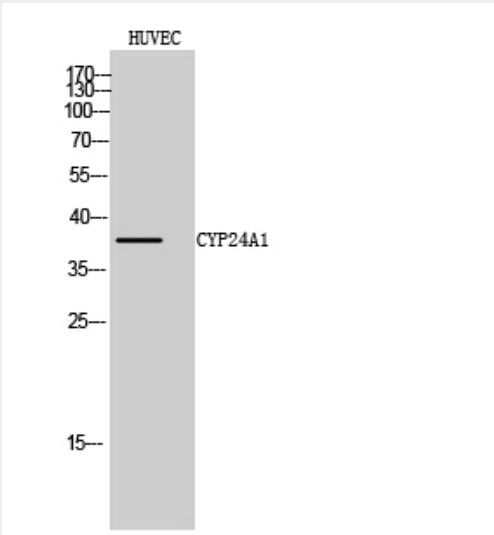
Cellular Location
Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

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 Cytomety
- 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 D(3)) and calcitriol (1-alpha,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.