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

CYP24A1 Antibody

Rabbit mAb
Catalog # AP92032

Product Information

Application	WB
Primary Accession	Q07973
Reactivity	Human
Clonality	Monoclonal
Other Names	CP24; CYP24; CYP24A1; HCAI; P450 CC24;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	58875

Additional Information

Dilution	WB 1:500~1:2000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CYP24A1
Description	Has a role in maintaining calcium homeostasis. Catalyzes the NADPH-dependent 24-hydroxylation of calcidiol (25-hydroxyvitamin D(3)) and calcitriol (1-alpha,25-dihydroxyvitamin D(3)).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

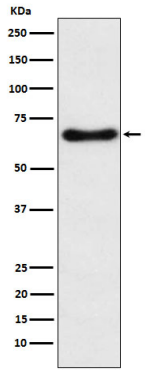
Protein Information

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}.

Images



Western blot analysis of CYP24A1 expression in Human fetal liver lysate.