

CYP24 / CYP24A1 Antibody (aa400-450)
Rabbit Polyclonal Antibody
Catalog # ALS17204**Specification**

CYP24 / CYP24A1 Antibody (aa400-450) - Product Information

Application	IHC-P, WB
Primary Accession	Q07973
Other Accession	1591
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58875

CYP24 / CYP24A1 Antibody (aa400-450) - Additional Information**Gene ID** 1591**Other Names**

CYP24A1, 24-OHase, CP24, CYP24, Cytochrome P450-CC24, Exo-mitochondrial protein, HCAI, p450-CC24, Vitamin D 24-hydroxylase, Cytochrome P450 24A1, Vitamin D(3) 24-hydroxylase

Target/Specificity

Human CYP24 / CYP24A1

Reconstitution & Storage

PBS, pH 7.2, 0.05% sodium azide. Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

Precautions

CYP24 / CYP24A1 Antibody (aa400-450) is for research use only and not for use in diagnostic or therapeutic procedures.

CYP24 / CYP24A1 Antibody (aa400-450) - 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, PubMed:15574355, PubMed:16617161, PubMed:24893882, PubMed:29461981)

target="_blank">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}.

Volume

50 µl

CYP24 / CYP24A1 Antibody (aa400-450) - Protocols

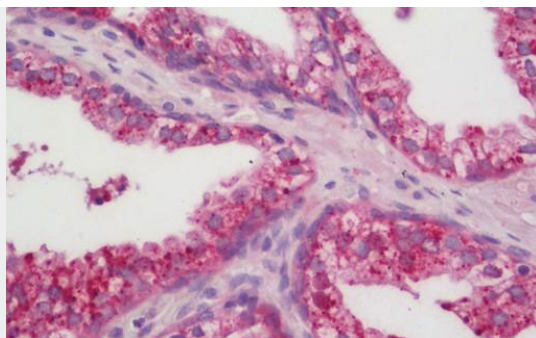
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

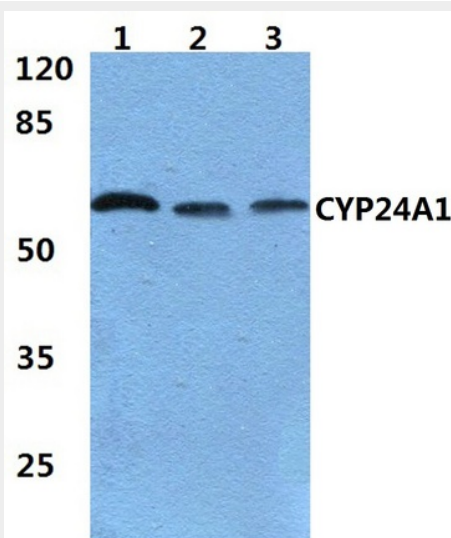
CYP24 / CYP24A1 Antibody (aa400-450) - Images



Human Tonsil: Formalin-Fixed, Paraffin-Embedded (FFPE)



Human Prostate: Formalin-Fixed, Paraffin-Embedded (FFPE)



Western blot (WB) analysis of Anti-CYP24A1 pAb at 1:500 dilution.

CYP24 / CYP24A1 Antibody (aa400-450) - Background

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)). 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.

CYP24 / CYP24A1 Antibody (aa400-450) - References

- Chen K.-S., et al. Proc. Natl. Acad. Sci. U.S.A. 90:4543-4547(1993).
- Ren S., et al. J. Biol. Chem. 280:20604-20611(2005).
- Deloukas P., et al. Nature 414:865-871(2001).
- Chen K.-S., et al. Biochim. Biophys. Acta 1263:1-9(1995).
- Labuda M., et al. J. Bone Miner. Res. 8:1397-1406(1993).