

CYP27B1 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12284B**Specification**

CYP27B1 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	O15528
Other Accession	NP_000776.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	400-429

CYP27B1 Antibody (C-term) - Additional Information**Gene ID** 1594**Other Names**

25-hydroxyvitamin D-1 alpha hydroxylase, mitochondrial, 25-OHD-1 alpha-hydroxylase, 25-hydroxyvitamin D(3) 1-alpha-hydroxylase, VD3 1A hydroxylase, Calcidol 1-monooxygenase, Cytochrome P450 subfamily XXVIB polypeptide 1, Cytochrome P450C1 alpha, Cytochrome P450VD1-alpha, Cytochrome p450 27B1, CYP27B1, CYP1ALPHA, CYP27B

Target/Specificity

This CYP27B1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 400-429 amino acids of human CYP27B1.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CYP27B1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CYP27B1 Antibody (C-term) - Protein Information**Name** CYP27B1

Synonyms CYP1ALPHA, CYP27B

Function A cytochrome P450 monooxygenase involved in vitamin D metabolism and in calcium and phosphorus homeostasis. Catalyzes the rate-limiting step in the activation of vitamin D in the kidney, namely the hydroxylation of 25-hydroxyvitamin D3/calcidiol at the C1alpha- position to form the hormonally active form of vitamin D3, 1alpha,25- dihydroxyvitamin D3/calcitriol that acts via the vitamin D receptor (VDR) (PubMed:[10518789](#), PubMed:[9486994](#), PubMed:[22862690](#), PubMed:[10566658](#), PubMed:[12050193](#)). Has 1alpha-hydroxylase activity on vitamin D intermediates of the CYP24A1-mediated inactivation pathway (PubMed:[10518789](#), PubMed:[22862690](#)). Converts 24R,25-dihydroxyvitamin D3/secalciferol to 1-alpha,24,25-trihydroxyvitamin D3, an active ligand of VDR. Also active on 25-hydroxyvitamin D2 (PubMed:[10518789](#)). 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:[22862690](#)).

Cellular Location

Mitochondrion membrane.

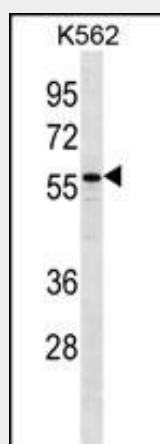
Tissue Location

Kidney.

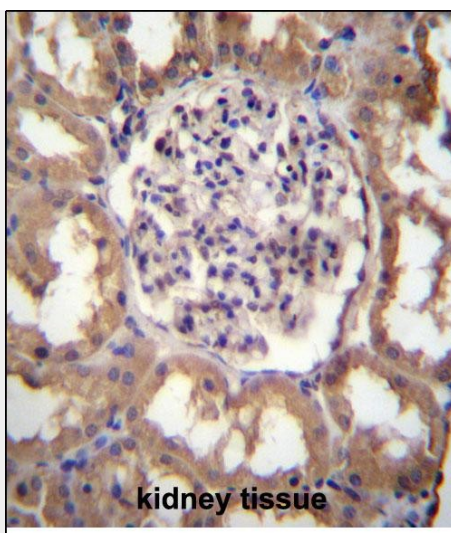
CYP27B1 Antibody (C-term) - Protocols

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](#)

CYP27B1 Antibody (C-term) - Images

CYP27B1 Antibody (C-term) (Cat. #AP12284b) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the CYP27B1 antibody detected the CYP27B1 protein (arrow).



CYP27B1 Antibody (C-term) (Cat. #AP12284b) immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of CYP27B1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

CYP27B1 Antibody (C-term) - 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. The protein encoded by this gene localizes to the inner mitochondrial membrane where it hydroxylates 25-hydroxyvitamin D3 at the 1 α position. This reaction synthesizes 1 α ,25-dihydroxyvitamin D3, the active form of vitamin D3, which binds to the vitamin D receptor and regulates calcium metabolism. Thus this enzyme regulates the level of biologically active vitamin D and plays an important role in calcium homeostasis. Mutations in this gene can result in vitamin D-dependent rickets type I.

CYP27B1 Antibody (C-term) - References

Giroux, S., et al. Bone 47(5):975-981(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Holt, S.K., et al. Prostate 70(13):1448-1460(2010)
Alzahrani, A.S., et al. J. Clin. Endocrinol. Metab. 95(9):4176-4183(2010)
Sundqvist, E., et al. Eur. J. Hum. Genet. (2010) In press :