

ARG42954 anti-CYP27B1 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CYP27B1
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CYP27B1
Species	Human
Immunogen	Synthetic peptide corresponding to aa. 475-508 of Human CYP27B1. (HFEVQPEPGAAPVRPKTRTVLVPERSINLQFLDR)
Conjugation	Un-conjugated
Alternate Names	P450c1; 25-OHD-1 alpha-hydroxylase; VDR; 25-hydroxyvitamin D; VD3 1A hydroxylase; CYP27B; Cytochrome P450 subfamily XXVIIIB polypeptide 1; Cytochrome P450C1 alpha; CP2B; EC 1.14.13.13; CYP1alpha; Cytochrome p450 27B1; VDDR; CYP1; VDD1; Calcidiol 1-monooxygenase; Cytochrome P450VD1-alpha; 25-hydroxyvitamin D-1 alpha hydroxylase, mitochondrial; VDDRI; PDDR; 3

Application Instructions

Application table	Application	Dilution
	IHC-P	1:200 - 1:1000
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 57 kDa	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na ₂ HPO ₄ , 0.9% NaCl, 0.05% Sodium azide and 5% BSA.
Preservative	0.05% Sodium azide
Stabilizer	5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated

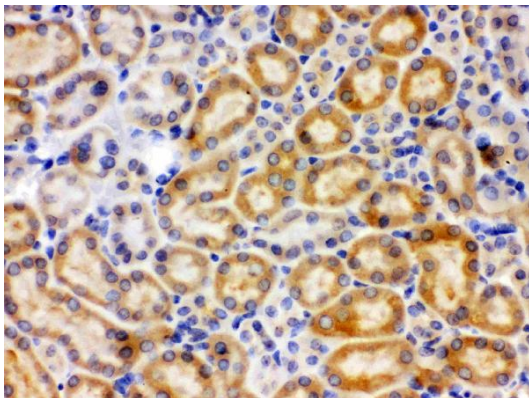
freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

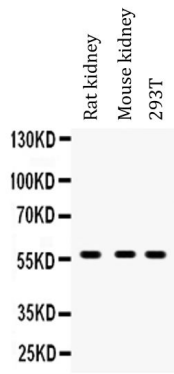
Gene Symbol	CYP27B1
Gene Full Name	cytochrome P450, family 27, subfamily B, polypeptide 1
Background	This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The protein encoded by this gene localizes to the inner mitochondrial membrane where it hydroxylates 25-hydroxyvitamin D3 at the 1alpha position. This reaction synthesizes 1alpha,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. [provided by RefSeq, Jul 2008]
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). [UniProt]
Calculated Mw	57 kDa
Cellular Localization	Mitochondrion membrane. [UniProt]

Images



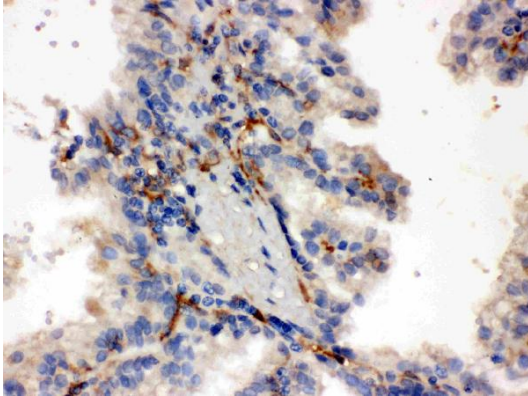
ARG42954 anti-CYP27B1 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat kidney tissue stained with ARG42954 anti-CYP27B1 antibody.



ARG42954 anti-CYP27B1 antibody WB image

Western blot: 50 μ g of Rat kidney, 50 μ g of Mouse kidney, 40 μ g of 293T whole cell lysates stained with ARG42954 anti-CYP27B1 antibody at 0.5 μ g/ml dilution.



ARG42954 anti-CYP27B1 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human kidney cancer tissue stained with ARG42954 anti-CYP27B1 antibody.