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CYP27B1 Antibody (C-term)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8669b

Product Information

Application	WB, E
Primary Accession	O15528
Reactivity	Human, Rat, Mouse
Predicted	Human, Bovine, Canine, Rabbit
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,κ
Clone Names	1981CT820.303.81
Calculated MW	56504

Additional Information

Gene ID	1594
Other Names	25-hydroxyvitamin D-1 alpha hydroxylase, mitochondrial, 1.14.13.13, 25-OHD-1 alpha-hydroxylase, 25-hydroxyvitamin D(3) 1-alpha-hydroxylase, VD3 1A hydroxylase, Calcidiol 1-monooxygenase, Cytochrome P450 subfamily XXVIIB polypeptide 1, Cytochrome P450C1 alpha, Cytochrome P450VD1-alpha, Cytochrome p450 27B1, CYP27B1, CYP1ALPHA, CYP27B
Target/Specificity	This CYP27B1 antibody is generated from a mouse immunized with a KLH conjugated synthetic peptide between 477-508 amino acids from the C-terminal region of human CYP27B1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
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.

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:10566658, PubMed:12050193, PubMed:22862690, PubMed:9486994). 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.

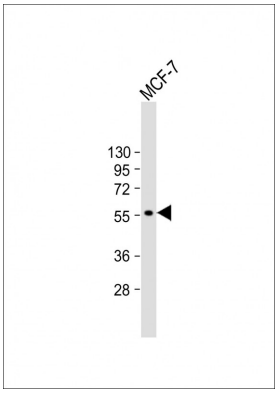
Background

Catalyzes the conversion of 25-hydroxyvitamin D3 (25(OH)D) to 1-alpha,25-dihydroxyvitamin D3 (1,25(OH)2D) plays an important role in normal bone growth, calcium metabolism, and tissue differentiation.

References

Fu G.K.,et al.DNA Cell Biol. 16:1499-1507(1997).
Monkawa T.,et al.Biochem. Biophys. Res. Commun. 239:527-533(1997).
Fu G.K.,et al.Mol. Endocrinol. 11:1961-1970(1997).
Huang D.C.,et al.Mol. Cancer Res. 1:56-67(2002).
Huang D.C.,et al.Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.

Images



Anti-CYP27B1 Antibody (C-term) at 1:1000 dilution + MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.