

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
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 C1 α - position to form the hormonally active form of vitamin D3, 1 α ,25- dihydroxyvitamin D3/calcitriol that acts via the vitamin D receptor (VDR) (PubMed: 10518789 , PubMed: 10566658 , PubMed: 12050193 , PubMed: 22862690 , PubMed: 9486994). Has 1 α -hydroxylase activity on vitamin D intermediates of the CYP24A1-mediated inactivation pathway (PubMed: 10518789 , PubMed: 22862690). Converts 24R,25-dihydroxyvitamin D3/secalciferol to 1- α ,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.

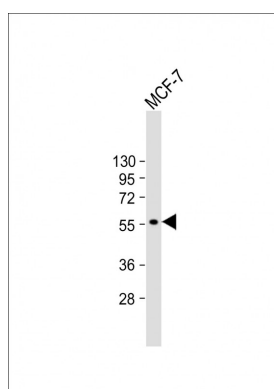
Background

Catalyzes the conversion of 25-hydroxyvitamin D3 (25(OH)D) to 1- α ,25-dihydroxyvitamin D3 (1,25(OH) $_2$ D) 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 μ g 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'.