10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CYP3A5 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7794b

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P20815
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15796
Calculated MW	57109
Antigen Region	476-502

Additional Information

Gene ID	1577
Other Names	Cytochrome P450 3A5, CYPIIIA5, Cytochrome P450 HLp2, Cytochrome P450-PCN3, CYP3A5
Target/Specificity	This CYP3A5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 476-502 amino acids from the C-terminal region of human CYP3A5.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	CYP3A5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CYP3A5 {ECO:0000303|PubMed:8569713, ECO:0000312|HGNC:HGNC:2638}
Function	A cytochrome P450 monooxygenase involved in the metabolism of steroid hormones and vitamins (PubMed:10681376, PubMed:11093772, PubMed:12865317, PubMed:2732228). 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 cytochrome P450 reductase (NADPH--hemoprotein reductase). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed:10681376, PubMed:11093772, PubMed:12865317, PubMed:2732228). Exhibits high catalytic activity for the formation of catechol estrogens from 17beta-estradiol (E2) and estrone (E1), namely 2-hydroxy E1 and E2 (PubMed:12865317). Catalyzes 6beta-hydroxylation of the steroid hormones testosterone, progesterone, and androstenedione (PubMed:2732228). Catalyzes the oxidative conversion of all-trans- retinol to all-trans-retinal, a rate-limiting step for the biosynthesis of all-trans-retinoic acid (atRA) (PubMed:10681376). Further metabolizes all trans-retinoic acid (atRA) to 4-hydroxyretinoate and may play a role in hepatic atRA clearance (PubMed:11093772). Also involved in the oxidative metabolism of xenobiotics, including calcium channel blocking drug nifedipine and immunosuppressive drug cyclosporine (PubMed:2732228).

Cellular Location

Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

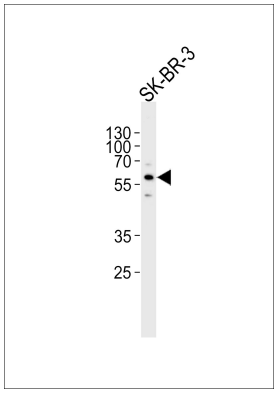
Background

CYP3A5 is 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. This protein localizes to the endoplasmic reticulum and its expression is induced by glucocorticoids and some pharmacological agents. The enzyme metabolizes drugs such as nifedipine and cyclosporine as well as the steroid hormones testosterone, progesterone and androstenedione.

References

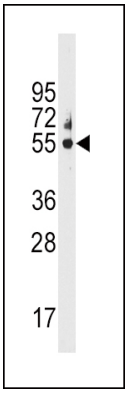
Zencir,S., Z. Naturforsch., C, J. Biosci. 63 (9-10), 780-784 (2008)
Nelson,D.R., Pharmacogenetics 14 (1), 1-18 (2004)
Murray,G.I., FEBS Lett. 364 (1), 79-82 (1995)

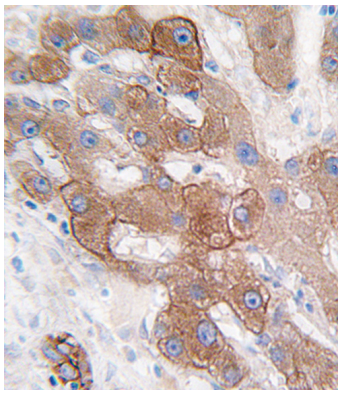
Images



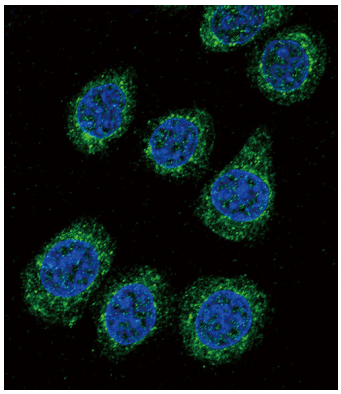
Western blot analysis of lysate from SK-BR-3 cell line, using CYP3A5 Antibody (C-term) (Cat. #AP7794b). AP7794b was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

Western blot analysis of anti-CYP3A5 Antibody (C-term) (Cat.#AP7794b) in 293 cell line lysates (35ug/lane). CYP3A5 (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with CYP3A5 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of CYP3A5 Antibody (C-term)(Cat#AP7794b) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).