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CYP3A5 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7794c

Specification

CYP3A5 Antibody (Center) - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	P20815
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**57109**
Antigen Region	**186-218**

CYP3A5 Antibody (Center) - 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 186-218 amino acids from the Central region of human CYP3A5.

Dilution
WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

CYP3A5 Antibody (Center) - 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).

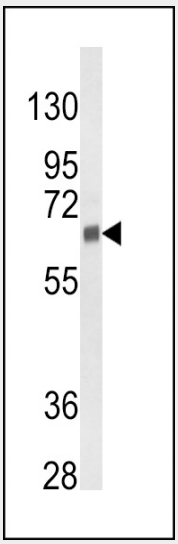
Cellular Location
Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

CYP3A5 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CYP3A5 Antibody (Center) - Images



Western blot analysis of CYP3A5 Antibody (Center) (Cat. #AP7794c) in 293 cell line lysates (35ug/lane). CYP3A5 (arrow) was detected using the purified Pab.

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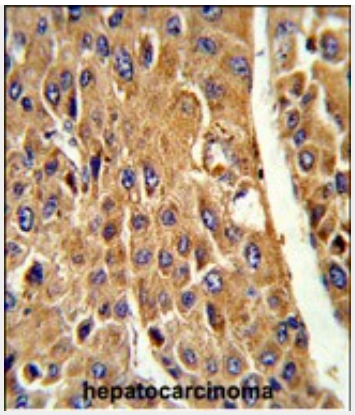
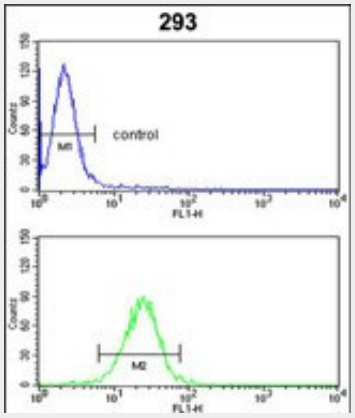


Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with CYP3A5 Antibody (Center) (Cat. #AP7794c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



CYP3A5 Antibody (Center) (Cat. #AP7794c) flow cytometric analysis of 293 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CYP3A5 Antibody (Center) - 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.

CYP3A5 Antibody (Center) - 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)