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CYP3A5 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7794c

Specification

CYP3A5 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P20815

CYP3A5 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 1577

Other Names
Cytochrome P450 3A5, CYPIIIA5, Cytochrome P450 HLp2, Cytochrome P450-PCN3, CYP3A5

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7794c was selected from the Center region of human CYP3A5. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CYP3A5 Antibody (Center) Blocking Peptide - 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:2732228, PubMed:10681376, PubMed:11093772, PubMed:12865317). 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:12865317, PubMed:2732228, PubMed:10681376, PubMed:<a href="http://www.uniprot.org/citations/11093772"

target="_blank">11093772). 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) Blocking Peptide - Protocols

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

- Blocking Peptides

CYP3A5 Antibody (Center) Blocking Peptide - Images

CYP3A5 Antibody (Center) Blocking Peptide - 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) Blocking Peptide - 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)