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CYP2C19 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP6710a

Specification

CYP2C19 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P33261

CYP2C19 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 1557

Other Names
Cytochrome P450 2C19, 11413-, (R)-limonene 6-monooxygenase, (S)-limonene 6-monooxygenase, (S)-limonene 7-monooxygenase, CYPIIC17, CYPIIC19, Cytochrome P450-11A, Cytochrome P450-254C, Mephenytoin 4-hydroxylase, CYP2C19

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6710a was selected from the N-term region of human CYP2C19. 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.

CYP2C19 Antibody (N-term) Blocking Peptide - Protein Information

Name CYP2C19

Function
A cytochrome P450 monooxygenase involved in the metabolism of polyunsaturated fatty acids (PUFA) (PubMed:18577768, PubMed:19965576, PubMed:20972997). 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) (PubMed:18577768, PubMed:19965576, PubMed:20972997). Catalyzes

the hydroxylation of carbon-hydrogen bonds. Hydroxylates PUFA specifically at the omega-1 position (PubMed:18577768). Catalyzes the epoxidation of double bonds of PUFA (PubMed:19965576, PubMed:20972997). Also metabolizes plant monoterpenes such as limonene. Oxygenates (R)- and (S)-limonene to produce carveol and perillyl alcohol (PubMed:11950794). Responsible for the metabolism of a number of therapeutic agents such as the anticonvulsant drug S-mephenytoin, omeprazole, proguanil, certain barbiturates, diazepam, propranolol, citalopram and imipramine. Hydroxylates fenbendazole at the 4' position (PubMed:23959307).

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

CYP2C19 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

CYP2C19 Antibody (N-term) Blocking Peptide - Images

CYP2C19 Antibody (N-term) Blocking Peptide - Background

CYP2C19 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 is known to metabolize many xenobiotics, including the anticonvulsive drug mephenytoin, omeprazole, diazepam and some barbiturates. Polymorphism within its gene is associated with variable ability to metabolize mephenytoin, known as the poor metabolizer and extensive metabolizer phenotypes.

CYP2C19 Antibody (N-term) Blocking Peptide - References

Shuldiner,A.R., JAMA 302 (8), 849-857 (2009)Nelson,D.R., Pharmacogenetics 14 (1), 1-18 (2004)