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CYP4F11 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP9058a

Specification

CYP4F11 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q9HBI6

CYP4F11 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 57834

Other Names
Phylloquinone omega-hydroxylase CYP4F11, 3-hydroxy fatty acids omega-hydroxylase CYP4F11, 11413-, Cytochrome P450 4F11, CYPIVF11, CYP4F11 (HGNC:13265)

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP9058a was selected from the N-term region of human CYP4F11. 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.

CYP4F11 Antibody (N-term) Blocking Peptide - Protein Information

Name CYP4F11 {ECO:0000303|PubMed:10964514, ECO:0000312|HGNC:HGNC:13265}

Function
A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids and their oxygenated derivatives (oxylipins) (PubMed:15364545, PubMed:18065749, PubMed:24138531, PubMed:37373382). 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 (CPR; NADPH-ferrihemoprotein reductase) (PubMed:<a

href="http://www.uniprot.org/citations/15364545" target="_blank">15364545, PubMed:18065749, PubMed:24138531, PubMed:37373382). Catalyzes with high efficiency the oxidation of the terminal carbon (omega-oxidation) of 3-hydroxy fatty acids, such as 3- hydroxyhexadecanoic and 3-hydroxyoctadecanoic acids, likely participating in the biosynthesis of long-chain 3-hydroxydicarboxylic acids (PubMed:18065749, PubMed:19932081). Omega-hydroxylates and inactivates phylloquinone (vitamin K1), and menaquinone-4 (MK-4, a form of vitamin K2), both acting as cofactors in blood coagulation (PubMed:24138531). Metabolizes with low efficiciency fatty acids, including (5Z,8Z,11Z,14Z)-eicosatetraenoic acid (arachidonate) and its oxygenated metabolite 8-hydroxyeicosatetraenoic acid (8-HETE) (PubMed:15364545, PubMed:19932081). Catalyzes N- and O-demethylation of drugs such as erythromycin, benzphetamine, ethylmorphine, chlorpromazine, imipramine and verapamil (PubMed:15364545). Catalyzes the oxidation of dialkylresorcinol 2 (PubMed:36565673).

Cellular Location
Endoplasmic reticulum membrane; Single-pass membrane protein. Microsome membrane; Single-pass membrane protein

Tissue Location
Expressed mainly in human liver, followed by kidney, heart, and skeletal muscle.

CYP4F11 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

CYP4F11 Antibody (N-term) Blocking Peptide - Images

CYP4F11 Antibody (N-term) Blocking Peptide - Background

CYP4F11 encodes 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 is part of a cluster of cytochrome P450 genes on chromosome 19. Another member of this family, CYP4F2, is approximately 16 kb away.

CYP4F11 Antibody (N-term) Blocking Peptide - References

Wang,Y., et.al., Drug Metab. Dispos. 38 (1), 100-107 (2010)Dhar,M., et.al., J. Lipid Res. 49 (3), 612-624 (2008)