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Anti-Cytochrome P450 4A Rabbit Monoclonal Antibody

Catalog # ABO15469

Product Information

Application	WB, IHC, IP
Primary Accession	Q02928
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Cytochrome P450 4A Rabbit Monoclonal Antibody . Tested in WB, IHC, IP applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

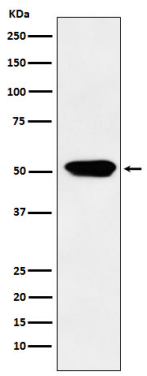
Gene ID	1579
Other Names	Cytochrome P450 4A11, 1.14.14.1, 20-hydroxyeicosatetraenoic acid synthase, 20-HETE synthase, CYP4AII, CYPIVA11, Cytochrome P-450HK-omega, Cytochrome P450HL-omega, Fatty acid omega-hydroxylase, Lauric acid omega-hydroxylase, Long-chain fatty acid omega-monooxygenase, 1.14.14.80, CYP4A11 {ECO:0000303|PubMed:8274222, ECO:0000312|HGNC:HGNC:2642}
Calculated MW	59348
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 20C45
Immunogen	A synthesized peptide derived from human Cytochrome P450 4A
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	CYP4A11 {ECO:0000303|PubMed:8274222, ECO:0000312|HGNC:HGNC:2642}

Function	A cytochrome P450 monooxygenase involved in the metabolism of fatty acids and their oxygenated derivatives (oxylipins) (PubMed:10553002, PubMed:10660572, PubMed:15611369, PubMed:1739747, PubMed:7679927, PubMed:8914854). 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:10553002, PubMed:10660572, PubMed:15611369, PubMed:1739747, PubMed:7679927, PubMed:8914854). Catalyzes predominantly the oxidation of the terminal carbon (omega-oxidation) of saturated and unsaturated fatty acids, the catalytic efficiency decreasing in the following order: dodecanoic > tetradecanoic > (9Z)-octadecenoic > (9Z,12Z)- octadecadienoic > hexadecanoic acid (PubMed:10553002, PubMed:10660572). Acts as a major omega-hydroxylase for dodecanoic (lauric) acid in liver (PubMed:15611369, PubMed:1739747, PubMed:7679927, PubMed:8914854). Participates in omega-hydroxylation of (5Z,8Z,11Z,14Z)-eicosatetraenoic acid (arachidonate) to 20-hydroxyeicosatetraenoic acid (20-HETE), a signaling molecule acting both as vasoconstrictive and natriuretic with overall effect on arterial blood pressure (PubMed:10620324, PubMed:10660572, PubMed:15611369). Can also catalyze the oxidation of the penultimate carbon (omega-1 oxidation) of fatty acids with lower efficiency (PubMed:7679927). May contribute to the degradation of saturated very long-chain fatty acids (VLCFAs) such as docosanoic acid, by catalyzing successive omega-oxidations to the corresponding dicarboxylic acid, thereby initiating chain shortening (PubMed:18182499). Omega-hydroxylates (9R,10S)-epoxy-octadecanoate stereoisomer (PubMed:15145985). Plays a minor role in omega-oxidation of long-chain 3-hydroxy fatty acids (PubMed:18065749). Has little activity toward prostaglandins A1 and E1 (PubMed:7679927).
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein
Tissue Location	Expressed in liver (PubMed:7679927). Expressed in S2 and S3 segments of proximal tubules in cortex and outer medulla of kidney (PubMed:10660572, PubMed:7679927).

Images



Western blot analysis of Cytochrome P450 4A expression in Human fetal kidney lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.