

**Cytochrome P450 4A11/22 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP51150**

**Specification**

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**Cytochrome P450 4A11/22 Antibody - Product Information**

Application	<b>WB, IP, E</b>
Primary Accession	<a href="#">O02928</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Calculated MW	<b>59 KDa</b>

**Cytochrome P450 4A11/22 Antibody - Additional Information**

**Gene ID** 1579

**Other Names**

Cytochrome P450 4A11, 20-hydroxyeicosatetraenoic acid synthase, 20-HETE synthase, CYP4A11, CYP4A11, Cytochrome P-450HK-omega, Cytochrome P450HL-omega, Fatty acid omega-hydroxylase, Lauric acid omega-hydroxylase, CYP4A11, CYP4A2

**Format**

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

**Storage**

Store at -20 °C. Stable for 12 months from date of receipt

**Cytochrome P450 4A11/22 Antibody - 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](http://www.uniprot.org/citations/10553002), PubMed: [10660572](http://www.uniprot.org/citations/10660572), PubMed: [15611369](http://www.uniprot.org/citations/15611369), PubMed: [1739747](http://www.uniprot.org/citations/1739747), PubMed: [7679927](http://www.uniprot.org/citations/7679927), PubMed: [8914854](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10553002), PubMed: [10660572](http://www.uniprot.org/citations/10660572), PubMed: [15611369](http://www.uniprot.org/citations/15611369), PubMed: [1739747](http://www.uniprot.org/citations/1739747), PubMed: [7679927](http://www.uniprot.org/citations/7679927), PubMed: [8914854](http://www.uniprot.org/citations/8914854)).

[8914854](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10553002), PubMed:[10660572](http://www.uniprot.org/citations/10660572)). Acts as a major omega-hydroxylase for dodecanoic (lauric) acid in liver (PubMed:[15611369](http://www.uniprot.org/citations/15611369), PubMed:[1739747](http://www.uniprot.org/citations/1739747), PubMed:[7679927](http://www.uniprot.org/citations/7679927), PubMed:[8914854](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10620324), PubMed:[10660572](http://www.uniprot.org/citations/10660572), PubMed:[15611369](http://www.uniprot.org/citations/15611369)). Can also catalyze the oxidation of the penultimate carbon (omega-1 oxidation) of fatty acids with lower efficiency (PubMed:[7679927](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18182499)). Omega-hydroxylates (9R,10S)-epoxy-octadecanoate stereoisomer (PubMed:[15145985](http://www.uniprot.org/citations/15145985)). Plays a minor role in omega-oxidation of long-chain 3-hydroxy fatty acids (PubMed:[18065749](http://www.uniprot.org/citations/18065749)). Has little activity toward prostaglandins A1 and E1 (PubMed:[7679927](http://www.uniprot.org/citations/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).

### Cytochrome P450 4A11/22 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Cytochrome P450 4A11/22 Antibody - Images

### Cytochrome P450 4A11/22 Antibody - Background

Catalyzes the omega- and (omega-1)-hydroxylation of various fatty acids such as laurate,

myristate and palmitate. Has little activity toward prostaglandins A1 and E1. Oxidizes arachidonic acid to 20-hydroxyeicosatetraenoic acid (20-HETE).

#### **Cytochrome P450 4A11/22 Antibody - References**

Palmer C.N.A., et al. *Biochim. Biophys. Acta* 1172:161-166(1993).

Kawashima H., et al. *J. Biochem.* 116:74-80(1994).

Imaoka S., et al. *DNA Cell Biol.* 12:893-899(1993).

Bellamine A., et al. *Arch. Biochem. Biophys.* 409:221-227(2003).

Gregory S.G., et al. *Nature* 441:315-321(2006).