

**CYP4A11 (4A22) Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7884b****Specification**

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**CYP4A11 (4A22) Antibody (C-term) - Product Information**

Application	IF, WB,E
Primary Accession	<a href="#">Q02928</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	59348
Antigen Region	407-435

**CYP4A11 (4A22) Antibody (C-term) - 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

**Target/Specificity**

This CYP4A11 (4A22) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 407-435 amino acids from the C-terminal region of human CYP4A11 (4A22).

**Dilution**

IF~~1:10~50

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CYP4A11 (4A22) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**CYP4A11 (4A22) Antibody (C-term) - 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:[7679927](#), PubMed:[1739747](#), PubMed:[8914854](#), PubMed:[10553002](#), PubMed:[10660572](#), PubMed:[15611369](#)). 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:[7679927](#), PubMed:[1739747](#), PubMed:[8914854](#), PubMed:[10553002](#), PubMed:[10660572](#), PubMed:[15611369](#)). 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:[7679927](#), PubMed:[1739747](#), PubMed:[8914854](#), PubMed:[15611369](#)). 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**

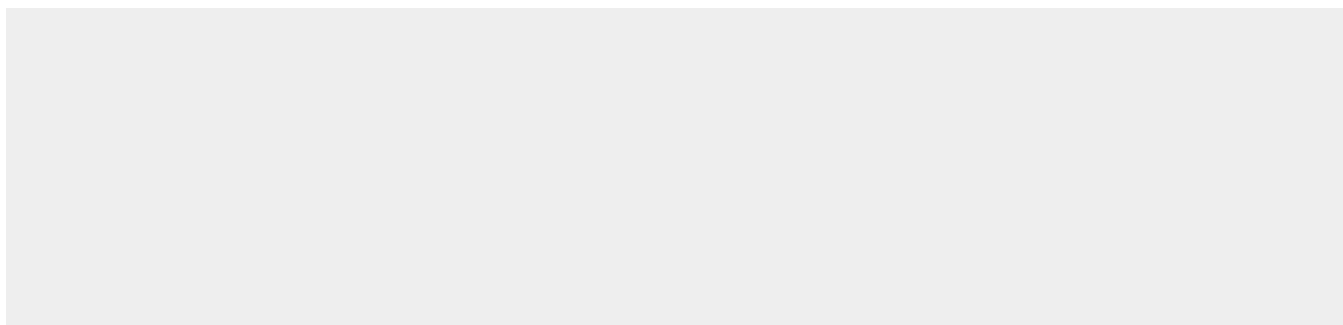
Expressed in liver (PubMed:[7679927](#)). Expressed in S2 and S3 segments of proximal tubules in cortex and outer medulla of kidney (PubMed:[7679927](#), PubMed:[10660572](#)).

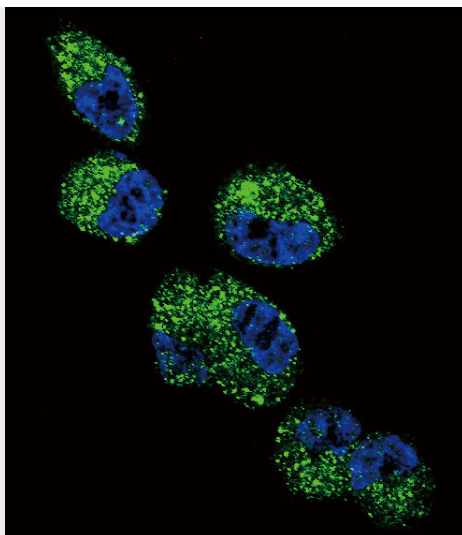
### **CYP4A11 (4A22) Antibody (C-term) - Protocols**

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

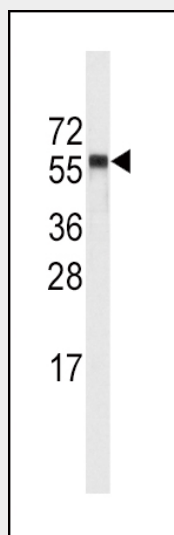
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **CYP4A11 (4A22) Antibody (C-term) - Images**





Confocal immunofluorescent analysis of CYP4A11 (4A22) Antibody (C-term)(Cat#AP7884b) with NCI-H460 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



Western blot analysis of anti-CYP4A11 (4A22) Antibody (C-term) (Cat.#AP7884b) in NCI-H460 cell line lysates (35ug/lane). CYP4A11 (arrow) was detected using the purified Pab.

#### **CYP4A11 (4A22) Antibody (C-term) - Background**

CYP4A11 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 hydroxylates medium-chain fatty acids such as laurate and myristate.

#### **CYP4A11 (4A22) Antibody (C-term) - References**

Sugimoto, K., Hypertension 52 (6), 1142-1148 (2008)  
Ward, N.C., Hypertension 51 (5), 1393-1398 (2008)  
Nelson, D.R., Pharmacogenetics 14 (1), 1-18 (2004)