

**Cytochrome P450 4A Antibody**  
Rabbit mAb  
Catalog # AP92005**Specification****Cytochrome P450 4A Antibody - Product Information**

Application	WB, IHC, IP
Primary Accession	<a href="#">Q02928</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
CYP4A; Cyp4a1; Cyp4a10; CYP4A11; Cyp4a14; Cyp4a3; CYP4A7; CYP4AII; CYP4A11;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	59348 Da

**Cytochrome P450 4A Antibody - Additional Information**

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Cytochrome P450 4A
Description	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).
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Cytochrome P450 4A 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) target="\_blank">10553002</a>, PubMed: [10660572](http://www.uniprot.org/citations/10660572) target="\_blank">10660572</a>, PubMed: [15611369](http://www.uniprot.org/citations/15611369) target="\_blank">15611369</a>, PubMed: [1739747](http://www.uniprot.org/citations/1739747) target="\_blank">1739747</a>, PubMed: [7679927](http://www.uniprot.org/citations/7679927) target="\_blank">7679927</a>, PubMed: [8914854](http://www.uniprot.org/citations/8914854) target="\_blank">8914854</a>). 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/10553002" target="\_blank">10553002</a>, PubMed:<a href="http://www.uniprot.org/citations/10660572" target="\_blank">10660572</a>, PubMed:<a href="http://www.uniprot.org/citations/15611369" target="\_blank">15611369</a>, PubMed:<a href="http://www.uniprot.org/citations/1739747" target="\_blank">1739747</a>, PubMed:<a href="http://www.uniprot.org/citations/7679927" target="\_blank">7679927</a>, PubMed:<a href="http://www.uniprot.org/citations/8914854" target="\_blank">8914854</a>). 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:<a href="http://www.uniprot.org/citations/10553002" target="\_blank">10553002</a>, PubMed:<a href="http://www.uniprot.org/citations/10660572" target="\_blank">10660572</a>). Acts as a major omega-hydroxylase for dodecanoic (lauric) acid in liver (PubMed:<a href="http://www.uniprot.org/citations/15611369" target="\_blank">15611369</a>, PubMed:<a href="http://www.uniprot.org/citations/1739747" target="\_blank">1739747</a>, PubMed:<a href="http://www.uniprot.org/citations/7679927" target="\_blank">7679927</a>, PubMed:<a href="http://www.uniprot.org/citations/8914854" target="\_blank">8914854</a>). 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:<a href="http://www.uniprot.org/citations/10620324" target="\_blank">10620324</a>, PubMed:<a href="http://www.uniprot.org/citations/10660572" target="\_blank">10660572</a>, PubMed:<a href="http://www.uniprot.org/citations/15611369" target="\_blank">15611369</a>). Can also catalyze the oxidation of the penultimate carbon (omega-1 oxidation) of fatty acids with lower efficiency (PubMed:<a href="http://www.uniprot.org/citations/7679927" target="\_blank">7679927</a>). 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:<a href="http://www.uniprot.org/citations/18182499" target="\_blank">18182499</a>). Omega-hydroxylates (9R,10S)-epoxy-octadecanoate stereoisomer (PubMed:<a href="http://www.uniprot.org/citations/15145985" target="\_blank">15145985</a>). Plays a minor role in omega-oxidation of long-chain 3-hydroxy fatty acids (PubMed:<a href="http://www.uniprot.org/citations/18065749" target="\_blank">18065749</a>). Has little activity toward prostaglandins A1 and E1 (PubMed:<a href="http://www.uniprot.org/citations/7679927" target="\_blank">7679927</a>).

#### 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).

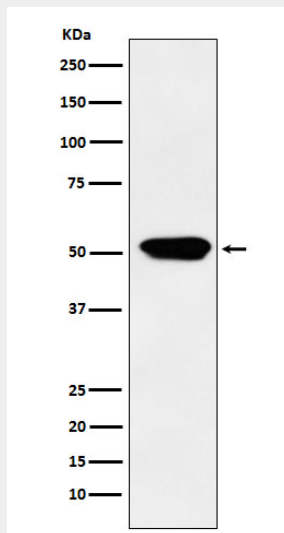
### Cytochrome P450 4A Antibody - Protocols

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 4A Antibody - Images



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