

**Anti-Cytochrome P450 11A1 Antibody**  
Rabbit polyclonal antibody to Cytochrome P450 11A1  
Catalog # AP59531

## Specification

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### Anti-Cytochrome P450 11A1 Antibody - Product Information

Application	WB, IF
Primary Accession	<a href="#">P05108</a>
Other Accession	<a href="#">O90Z82</a>
Reactivity	Human, Mouse, Rat, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60102

### Anti-Cytochrome P450 11A1 Antibody - Additional Information

Gene ID 1583

#### Other Names

CYP11A; Cholesterol side-chain cleavage enzyme mitochondrial; CYPXIA1; Cholesterol desmolase; Cytochrome P450 11A1; Cytochrome P450(scc)

#### Target/Specificity

Recognizes endogenous levels of Cytochrome P450 11A1 protein.

#### Dilution

WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500)

IF~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500)

#### Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

#### Storage

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

### Anti-Cytochrome P450 11A1 Antibody - Protein Information

**Name** CYP11A1 {ECO:0000303|PubMed:21636783, ECO:0000312|HGNC:HGNC:2590}

#### Function

A cytochrome P450 monooxygenase that catalyzes the side-chain hydroxylation and cleavage of cholesterol to pregnenolone, the precursor of most steroid hormones (PubMed:<a href="http://www.uniprot.org/citations/21636783" target="\_blank">21636783</a>). Catalyzes three sequential oxidation reactions of cholesterol, namely the hydroxylation at C22 followed with the hydroxylation at C20 to yield 20R,22R- hydroxycholesterol that is further cleaved between C20 and C22 to yield the C21-steroid pregnenolone and 4-methylpentanal (PubMed:<a href="http://www.uniprot.org/citations/21636783" target="\_blank">21636783</a>).

Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate and reducing the second into a water molecule. Two electrons are provided by NADPH via a two-protein mitochondrial transfer system comprising flavoprotein FDXR (adrenodoxin/ferredoxin reductase) and nonheme iron-sulfur protein FDX1 or FDX2 (adrenodoxin/ferredoxin) (PubMed:<a href="http://www.uniprot.org/citations/21636783" target="\_blank">21636783</a>).

#### Cellular Location

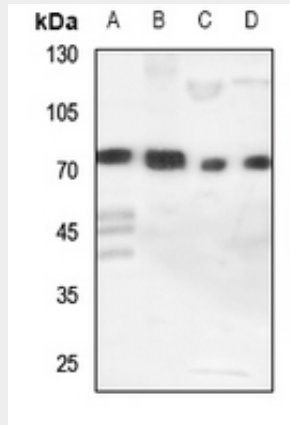
Mitochondrion inner membrane {ECO:0000250|UniProtKB:P14137}; Peripheral membrane protein. Note=Localizes to the matrix side of the mitochondrion inner membrane. {ECO:0000250|UniProtKB:P14137}

### Anti-Cytochrome P450 11A1 Antibody - Protocols

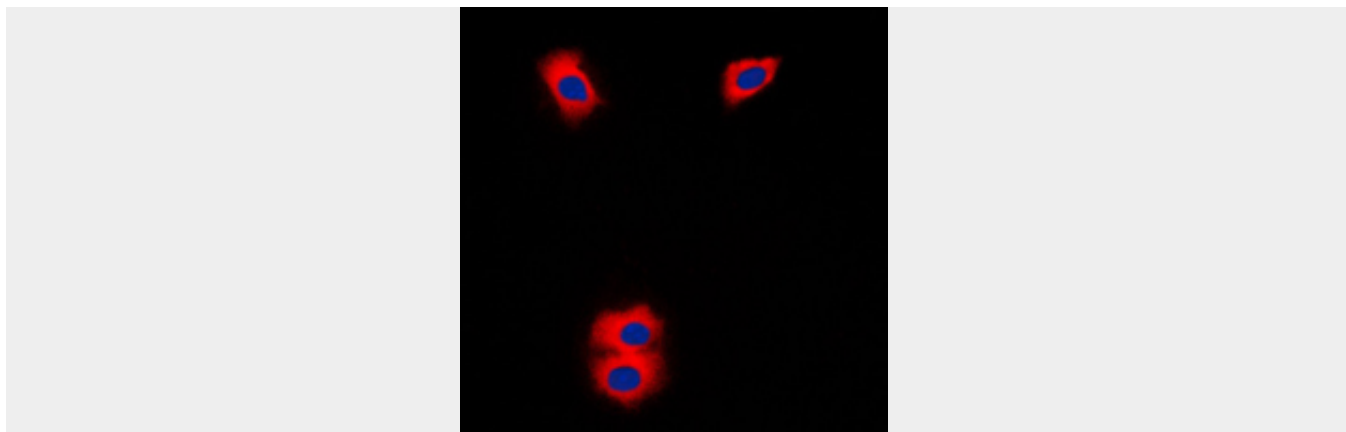
Provided below are standard protocols that you may find useful for product applications.

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

### Anti-Cytochrome P450 11A1 Antibody - Images



Western blot analysis of Cytochrome P450 11A1 expression in HEK293T (A), HeLa (B), H460 (C), mouse lung (D) whole cell lysates.



Immunofluorescent analysis of Cytochrome P450 11A1 staining in Jurkat cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

#### **Anti-Cytochrome P450 11A1 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Cytochrome P450 11A1. The exact sequence is proprietary.