

**CYP51A1 Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8874b**

## Specification

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### CYP51A1 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q16850</a>
Other Accession	<a href="#">Q64654</a> , <a href="#">Q46420</a> , <a href="#">Q8K0C4</a> , <a href="#">Q4R8S6</a>
Reactivity	Human
Predicted	Monkey, Mouse, Pig, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	57278
Antigen Region	474-503

### CYP51A1 Antibody (C-term) - Additional Information

**Gene ID** 1595

#### Other Names

Lanosterol 14-alpha demethylase, LDM, CYPLI, Cytochrome P450 51A1, Cytochrome P450-14DM, Cytochrome P45014DM, Cytochrome P450LI, Sterol 14-alpha demethylase, CYP51A1, CYP51

#### Target/Specificity

This CYP51A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 474-503 amino acids from the C-terminal region of human CYP51A1.

#### Dilution

WB~~1:1000  
IHC-P~~1:50~100

#### 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

CYP51A1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### CYP51A1 Antibody (C-term) - Protein Information

**Name** CYP51A1 ([HGNC:2649](#))

## Synonyms CYP51

**Function** Sterol 14 $\alpha$ -demethylase that plays a critical role in the cholesterol biosynthesis pathway, being cholesterol the major sterol component in mammalian membranes as well as a precursor for bile acid and steroid hormone synthesis (PubMed:[20149798](#), PubMed:[8619637](#), PubMed:[9559662](#)). Cytochrome P450 monooxygenase that catalyzes the three-step oxidative removal of the 14 $\alpha$ -methyl group (C-32) of sterols such as lanosterol (lanosta-8,24-dien-3 $\beta$ -ol) and 24,25- dihydrolanosterol (DHL) in the form of formate, and converts the sterols to 4,4-dimethyl-5 $\alpha$ -cholesta-8,14,24-trien-3 $\beta$ -ol and 4,4-dimethyl-8,14-cholestadien-3 $\beta$ -ol, respectively, which are intermediates of cholesterol biosynthesis (PubMed:[20149798](#), PubMed:[8619637](#), PubMed:[9559662](#)). Can also demethylate substrates not intrinsic to mammals, such as eburicol (24-methylene-24,25- dihydrolanosterol), but at a lower rate than DHL (PubMed:[9559662](#)).

## Cellular Location

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q64654}; Single-pass membrane protein. Microsome membrane {ECO:0000250|UniProtKB:Q64654}; Single-pass membrane protein

## Tissue Location

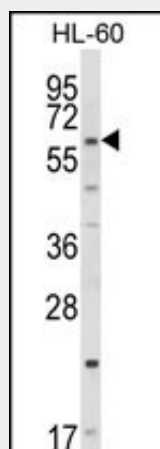
Ubiquitously expressed with highest levels in testis, ovary, adrenal, prostate, liver, kidney and lung

## CYP51A1 Antibody (C-term) - Protocols

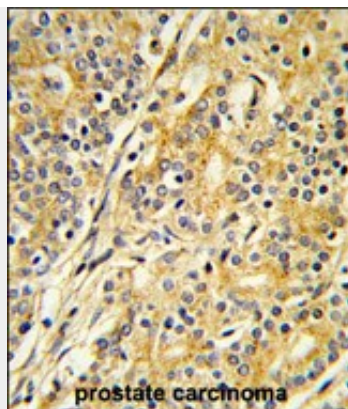
Provided below are standard protocols that you may find useful for product applications.

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

## CYP51A1 Antibody (C-term) - Images



Western blot analysis of CYP51A1 Antibody (C-term) (Cat. #AP8874b) in HL-60 cell line lysates (35 $\mu$ g/lane). CYP51A1 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human prostate carcinoma reacted with CYP51A1 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **CYP51A1 Antibody (C-term) - Background**

CYP51A1 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 endoplasmic reticulum protein participates in the synthesis of cholesterol by catalyzing the removal of the 14 $\alpha$ -methyl group from lanosterol.

#### **CYP51A1 Antibody (C-term) - References**

Wang, Y., et al., J. Biol. Chem. 283 (39), 26332-26339 (2008)