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# CYP17A1 Antibody (Center)

**Purified Rabbit Polyclonal Antibody (Pab)**

**Catalog # AP7879C**

## Specification

### CYP17A1 Antibody (Center) - Product Information

| | |
|---|---|
| Application | **WB, IF,E** |
| Primary Accession | P05093 |
| Other Accession | Q2XVA1 |
| Reactivity | **Human** |
| Predicted | **Monkey** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **57371** |
| Antigen Region | **358-388** |

### CYP17A1 Antibody (Center) - Additional Information

**Gene ID** 1586

**Other Names**
Steroid 17-alpha-hydroxylase/17, 20 lyase, 17-alpha-hydroxyprogesterone aldolase, CYPXVII, Cytochrome P450 17A1, Cytochrome P450-C17, Cytochrome P450c17, Steroid 17-alpha-monooxygenase, CYP17A1, CYP17, S17AH

**Target/Specificity**
This CYP17A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 358-388 amino acids from the Central region of human CYP17A1.

**Dilution**
WB~~1:1000
IF~~1:10~50
E~~Use at an assay dependent concentration.

**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**
CYP17A1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

### CYP17A1 Antibody (Center) - Protein Information

**Name** CYP17A1 {ECO:0000303|PubMed:19793597, ECO:0000312|HGNC:HGNC:2593}

**Function** A cytochrome P450 monooxygenase involved in corticoid and androgen biosynthesis (PubMed:22266943, PubMed:25301938, PubMed:27339894, PubMed:9452426). Catalyzes 17-alpha hydroxylation of C21 steroids, which is common for both pathways. A second oxidative step, required only for androgen synthesis, involves an acyl-carbon cleavage. The 17-alpha hydroxy intermediates, as part of adrenal glucocorticoids biosynthesis pathway, are precursors of cortisol (Probable) (PubMed:25301938, PubMed:9452426). Hydroxylates steroid hormones, pregnenolone and progesterone to form 17-alpha hydroxy metabolites, followed by the cleavage of the C17-C20 bond to form C19 steroids, dehydroepiandrosterone (DHEA) and androstenedione (PubMed:22266943, PubMed:25301938, PubMed:27339894, PubMed:36640554, PubMed:9452426). Has 16-alpha hydroxylase activity. Catalyzes 16-alpha hydroxylation of 17-alpha hydroxy pregnenolone, followed by the cleavage of the C17-C20 bond to form 16-alpha-hydroxy DHEA (PubMed:36640554). Also 16-alpha hydroxylates androgens, relevant for estriol synthesis (PubMed:25301938, PubMed:27339894). 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:22266943, PubMed:25301938, PubMed:27339894, PubMed:9452426).

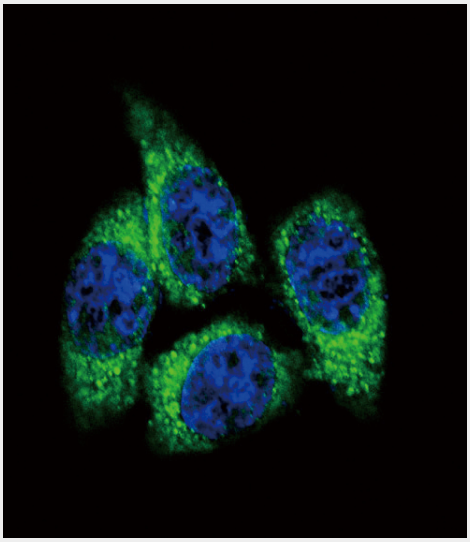
**Cellular Location**
Endoplasmic reticulum membrane. Microsome membrane

## CYP17A1 Antibody (Center) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## CYP17A1 Antibody (Center) - Images



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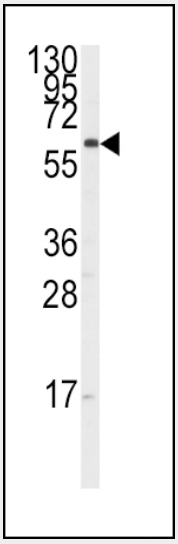
Confocal immunofluorescent analysis of CYP17A1 Antibody (Center) (Cat. #AP7879c) with Hela cell followed by Alexa Fluor?488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).




Western blot analysis of anti-CYP17A1 Antibody (Center)(Cat.#AP7879c) in K562 cell line lysates (35ug/lane). CYP17A1(arrow) was detected using the purified Pab.

## CYP17A1 Antibody (Center) - Background

CYP17A1 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. It has both 17alpha-hydroxylase and 17,20-lyase activities and is a key enzyme in the steroidogenic pathway that produces progestins, mineralocorticoids, glucocorticoids, androgens, and estrogens. Mutations in CYP17A1 gene are associated with isolated steroid-17 alpha-hydroxylase deficiency, 17-alpha-hydroxylase/17,20-lyase deficiency, pseudohermaphroditism, and adrenal hyperplasia.

## CYP17A1 Antibody (Center) - References

Yuan,X., Cancer Epidemiol. Biomarkers Prev. 17 (12), 3621-3627 (2008)
Nelson,D.R., Pharmacogenetics 14 (1), 1-18 (2004)
Imai,T., Hum. Genet. 89 (1), 95-96 (1992)