

# Cytochrome P450 17A1 Antibody

Rabbit mAb

Catalog # AP91937

## Product Information

<b>Application</b>	WB, IF, FC, ICC, IP
<b>Primary Accession</b>	<a href="#">P05093</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	CPT7; CYP17; P450C17; S17AH; CYP17A1;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	57371

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 ICC/IF 1:50~1:200 IP 1:50 FC 1:50
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Cytochrome P450 17A1
<b>Description</b>	Conversion of pregnenolone and progesterone to their 17-alpha-hydroxylated products and subsequently to dehydroepiandrosterone (DHEA) and androstenedione.
<b>Storage Condition and Buffer</b>	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.

## Protein Information

<b>Name</b>	CYP17A1 {ECO:0000303   PubMed:19793597, ECO:0000312   HGNC:HGNC:2593}
<b>Function</b>	<p>A cytochrome P450 monooxygenase involved in corticoid and androgen biosynthesis (PubMed:<a href="#">22266943</a>, PubMed:<a href="#">25301938</a>, PubMed:<a href="#">27339894</a>, PubMed:<a href="#">9452426</a>). 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:<a href="#">25301938</a>, PubMed:<a href="#">9452426</a>). 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:<a href="#">22266943</a>, PubMed:<a href="#">25301938</a>, PubMed:<a href="#">27339894</a>, PubMed:<a href="#">36640554</a>, PubMed:<a href="#">9452426</a>). 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:<a href="#">36640554</a>). Also 16-alpha hydroxylates androgens, relevant for</p>

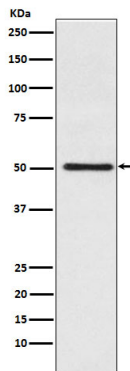
estriol synthesis (PubMed:[25301938](#), PubMed:[27339894](#)). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase) (PubMed:[22266943](#), PubMed:[25301938](#), PubMed:[27339894](#), PubMed:[9452426](#)).

## Cellular Location

Endoplasmic reticulum membrane. Microsome membrane

## Images

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Western blot analysis of Cytochrome P450 17A1 expression in Jurkat cell lysate.

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