

# Cytochrome P450 17A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51140

## Product Information

Application	WB, IP, ICC, IHC-P
Primary Accession	<a href="#">P05093</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57371

## 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	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Cytochrome P450 17A1. The exact sequence is proprietary.
Dilution	WB~~1:1000 IP~~N/A ICC~~N/A IHC-P~~N/A
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

## Protein Information

Name	CYP17A1 {ECO:0000303 PubMed:19793597, ECO:0000312 HGNC:HGNC:2593}
Function	<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.</p>

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

## Background

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Conversion of pregnenolone and progesterone to their 17- alpha-hydroxylated products and subsequently to dehydroepiandrosterone (DHEA) and androstenedione. Catalyzes both the 17-alpha-hydroxylation and the 17,20-lyase reaction. Involved in sexual development during fetal life and at puberty.

## References

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Chung B.-C.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:407-411(1987).  
Picado-Leonard J.,et al.DNA 6:439-448(1987).  
Bradshaw K.D.,et al.Mol. Endocrinol. 1:348-354(1987).  
Brentano S.T.,et al.Mol. Endocrinol. 4:1972-1979(1990).  
Kagimoto M.,et al.Mol. Endocrinol. 2:564-570(1988).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.