

# Cytochrome P450 17A1 Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AP52768

## Product Information

Application	WB
Primary Accession	<a href="#">P05093</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	57371

## Additional Information

Gene ID	1586
Other Names	20 lyase;CP17A_HUMAN;CPT7;CYP17;CYP17A1;CYPXVII;Cytochrome P450 17A1;Cytochrome P450 family 17;Cytochrome P450 family 17 subfamily A polypeptide 1;Cytochrome p450 subfamily XVII (steroid 17 alpha hydroxylase) adrenal hyperplasia;Cytochrome p450 XVIIA1; Cytochrome P450-C17;Cytochrome P450c17;OTTHUMP00000020382;P450 C17;P450c17;S17AH;Steroid 17 alpha hydroxylase/17, 20 lyase;Steroid 17 alpha monooxygenase;Steroid 17-alpha-hydroxylase/17;Steroid 17-alpha-monooxygenase.
Dilution	WB~~1:1000
Format	Ascites
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	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:[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

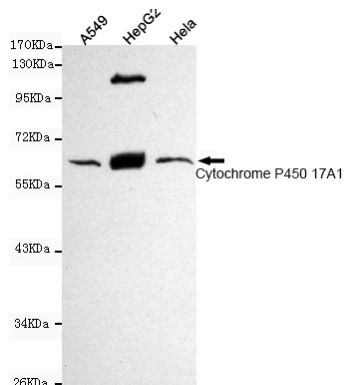
## Background

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

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).

## Images



Western blot detection of Cytochrome P450 17A1 in HeLa,HepG2 and A549 cell lysates using Cytochrome P450 17A1 mouse mAb (1:1000 diluted).Predicted band size:60KDa.Observed band size:60KDa.

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