10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Cytochrome P450 17A1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52768

## Product Information

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| **Application** | WB |
| **Primary Accession** | P05093 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2b |
| **Calculated MW** | 57371 |

## Additional Information

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| **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** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3. |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

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| **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

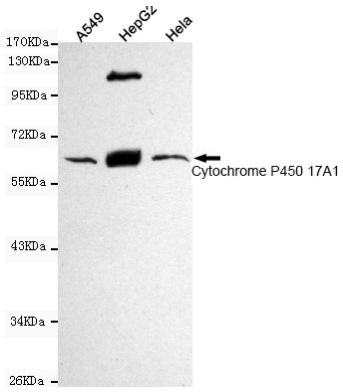
## Background

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.