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Cytochrome P450 17A1 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52768

Specification

Cytochrome P450 17A1 Antibody - Product Information

Application	**WB**
Primary Accession	P05093
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2b**
Calculated MW	**60 KDa**

Cytochrome P450 17A1 Antibody - 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

Cytochrome P450 17A1 Antibody - 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:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938). 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 (PubMed:9452426, PubMed:25301938) (Probable). 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:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938, PubMed:36640554). 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:27339894, PubMed:25301938). 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:9452426, PubMed:27339894, PubMed:22266943, PubMed:25301938).

Cellular Location
Endoplasmic reticulum membrane. Microsome membrane

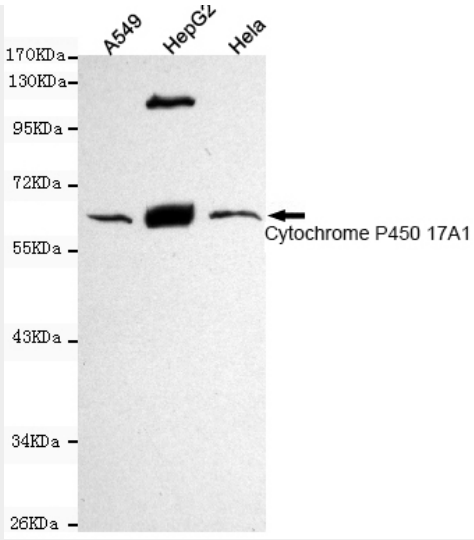
Cytochrome P450 17A1 Antibody - Protocols

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

Cytochrome P450 17A1 Antibody - Images

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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.

Cytochrome P450 17A1 Antibody - 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.

Cytochrome P450 17A1 Antibody - 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).