

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: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

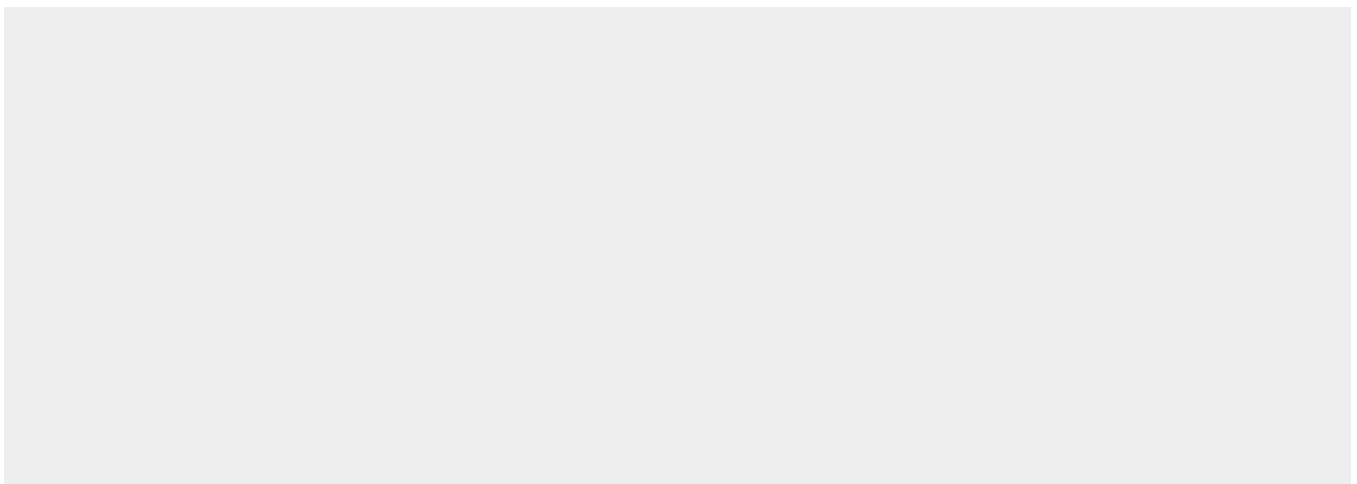
Endoplasmic reticulum membrane. Microsome membrane

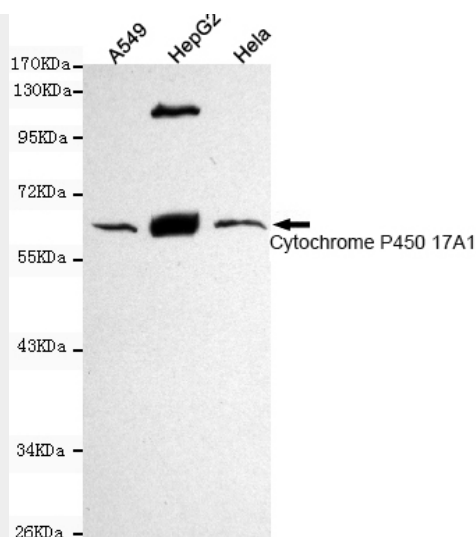
Cytochrome P450 17A1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Cytochrome P450 17A1 Antibody - 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.

Cytochrome P450 17A1 Antibody - Background

Conversion of pregnenolone and progesterone to their 17- α -hydroxylated products and subsequently to dehydroepiandrosterone (DHEA) and androstenedione. Catalyzes both the 17- α -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).