

Cytochrome P450 17A1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51140

Specification

Cytochrome P450 17A1 Antibody - Product Information

Application	WB, IP, ICC, IHC-P, E
Primary Accession	P05093
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55 KDa

Cytochrome P450 17A1 Antibody - 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

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

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](http://www.uniprot.org/citations/22266943), PubMed: [25301938](http://www.uniprot.org/citations/25301938), PubMed: [27339894](http://www.uniprot.org/citations/27339894), PubMed: [9452426](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/25301938), PubMed: [9452426](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/22266943), PubMed: [25301938](http://www.uniprot.org/citations/25301938), PubMed: [25301938](http://www.uniprot.org/citations/25301938)).

href="http://www.uniprot.org/citations/27339894" target="_blank">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

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).