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CYP17A1 Polyclonal Antibody

Catalog # AP69372

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P05093
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57371

Additional Information

Gene ID	1586
Other Names	CYP17A1; CYP17; S17AH; Steroid 17-alpha-hydroxylase/17; 20 lyase; CYPXVII; Cytochrome P450 17A1; Cytochrome P450-C17; Cytochrome P450c17; Steroid 17-alpha-monooxygenase
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

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

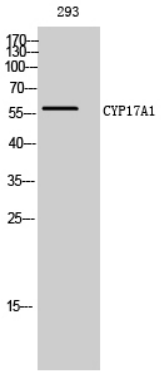
(PubMed:36640554). Also 16-alpha hydroxylates androgens, relevant for estriol synthesis (PubMed:25301938, PubMed:27339894). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase) (PubMed:22266943, PubMed:25301938, PubMed:27339894, PubMed:9452426).

Cellular Location Endoplasmic reticulum membrane. Microsome membrane

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.

Images



Western Blot analysis of 293 cells using CYP17A1 Polyclonal Antibody diluted at 1：2000

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