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Anti-CYP17A1 Picoband Antibody

Catalog # ABO10095

Product Information

Application	WB, IHC-P
Primary Accession	P05093
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Steroid 17-alpha-hydroxylase/17,20 lyase(CYP17A1) detection. Tested with WB, IHC-P in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	1586
Other Names	Steroid 17-alpha-hydroxylase/17, 20 lyase, 1.14.14.19, 17-alpha-hydroxyprogesterone aldolase, 1.14.14.32, CYPXVII, Cytochrome P450 17A1, Cytochrome P450-C17, Cytochrome P450c17, Steroid 17-alpha-monooxygenase, CYP17A1, CYP17, S17AH
Calculated MW	57371
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Membrane .
Source	Eukaryota
Protein Name	Steroid 17-alpha-hydroxylase/17,20 lyase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CYP17A1 (383-419aa EFAVDKGTEVIINLWALHHNEKEWHQPDQFMPERFLN), different from the related mouse and rat sequences by ten amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

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

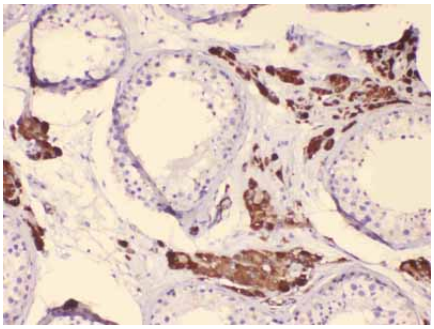
Background

Cytochrome P450 17A1, also called steroid 17 □±-monooxygenase, is an enzyme of the hydroxylase type that in humans is encoded by the CYP17A1 gene on chromosome 10. This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum. It has both 17alpha-hydroxylase and 17,20-lyase activities and is a key enzyme in the steroidogenic pathway that produces progestins, mineralocorticoids, glucocorticoids, androgens, and estrogens. Mutations in this gene are associated with isolated steroid-17 alpha-hydroxylase deficiency, 17-alpha-hydroxylase/17,20-lyase deficiency, pseudohermaphroditism, and adrenal hyperplasia.

Images

Western blot analysis of CYP17A1 expression in 22RV1 whole cell lysates (lane 1). CYP17A1 at 57KD was detected using rabbit anti- CYP17A1 Antigen Affinity purified polyclonal antibody (Catalog # ABO10095) at 0.5 □¼g/mL. The blot was developed using chemiluminescence (ECL) method .





CYP17A1 was detected in paraffin-embedded sections of human testis tissues using rabbit anti- CYP17A1 Antigen Affinity purified polyclonal antibody (Catalog # ABO10095) at 1 □¼g/mL. The immunohistochemical section was developed using SABC method .

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