

Anti-CYP17A1 Picoband Antibody
Catalog # ABO10095**Specification****Anti-CYP17A1 Picoband Antibody - Product Information**

Application	WB, IHC
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.

Anti-CYP17A1 Picoband Antibody - 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 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization

Membrane .

Protein Name

Steroid 17-alpha-hydroxylase/17,20 lyase

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃N.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human CYP17A1 (383-419aa EFAVDKGTVEIINLWALHHNEKEWHQPDPQFMPERFLN), 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.

Anti-CYP17A1 Picoband 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

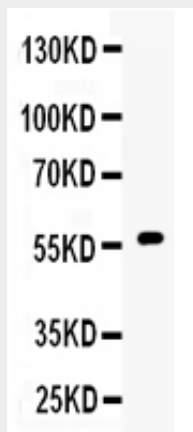
Endoplasmic reticulum membrane. Microsome membrane

Anti-CYP17A1 Picoband Antibody - Protocols

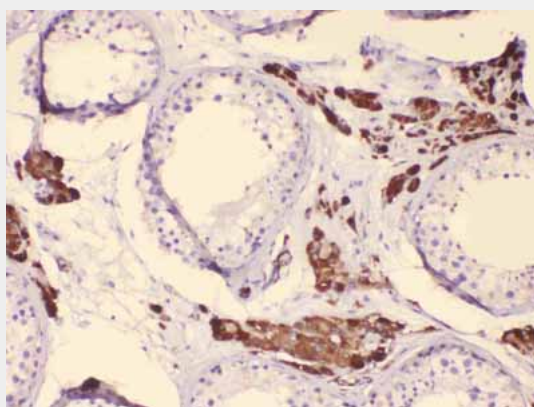
Provided below are standard protocols that you may find useful for product applications.

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

Anti-CYP17A1 Picoband Antibody - 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 μ g/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 μ g/mL. The immunohistochemical section was developed using SABC method .

Anti-CYP17A1 Picoband Antibody - Background

Cytochrome P450 17A1, also called steroid 17 α -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 17 α -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.