BOSTER
antibody and ELISA experts

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Anti-Cytochrome P450 17A1/Cyp17a1 Antibody Picoband™

Catalog Number: A00615-3

About Cyp17a1

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

Overview

Product Name	Anti-Cytochrome P450 17A1/Cyp17a1 Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Cytochrome P450 17A1/Cyp17a1 Antibody Picoband™ catalog # A00615-3. Tested in ELISA, IF, IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P27786

Technical Details

Immunogen	E. coli-derived mouse Cyp17a1 recombinant protein (Position: Q80-R363).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunofluorescence, 2ug/ml Direct ELISA, 0.1-0.5ug/ml

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Anti-Cytochrome P450 17A1/Cyp17a1 Antibody Picoband™ (A00615-3) Images

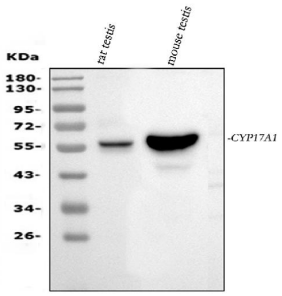

Figure 1. Western blot analysis of Cyp17a1 using anti-Cyp17a1 antibody (A00615-3).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat testis tissue lysates,
Lane 2: mouse testis tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Cyp17a1 antigen affinity purified polyclonal antibody (Catalog # A00615-3) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Cyp17a1 at approximately 57 kDa. The expected band size for Cyp17a1 is at 57 kDa.

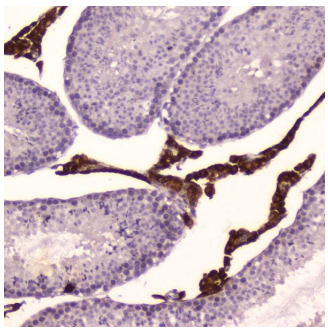

Figure 2. IHC analysis of Cyp17a1 using anti-Cyp17a1 antibody (A00615-3).
Cyp17a1 was detected in paraffin-embedded section of mouse testis tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Cyp17a1 Antibody (A00615-3) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

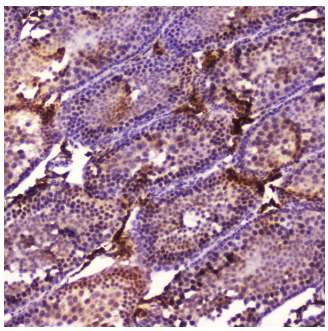

Figure 3. IHC analysis of Cyp17a1 using anti-Cyp17a1 antibody (A00615-3).
Cyp17a1 was detected in paraffin-embedded section of rat testis tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-Cyp17a1 Antibody (A00615-3) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IF analysis of Cyp17a1 using anti-Cyp17a1

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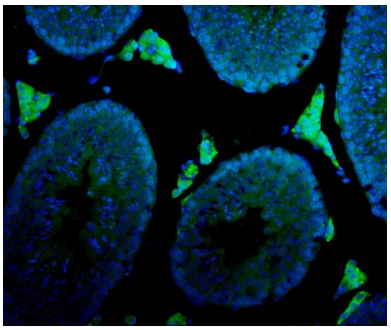

antibody (A00615-3).
Cyp17a1 was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL rabbit anti-Cyp17a1 Antibody (A00615-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

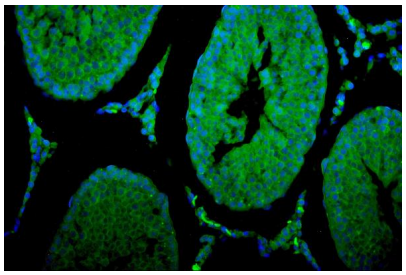

Figure 5. IF analysis of Cyp17a1 using anti-Cyp17a1 antibody (A00615-3).
Cyp17a1 was detected in paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/mL rabbit anti-Cyp17a1 Antibody (A00615-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

2 Publications Citing This Product

1. PubMed ID: 10.1016/j.fct.2017.01.011, Effects of six priority controlled phthalate esters with long-term low-dose integrated exposure on male reproductive toxicity in rats

2. PubMed ID: 24212501, Liu C, Luan X, He Y, Xia X, Sun L, Miao W, Jin Y, Liu L. Biomed Microdevices. 2014 Apr;16(2):209-16. Doi: 10.1007/S10544-013-9824-2. Endogenous Release Of Female Hormones From Co-Microencapsulated Rat Granulosa And Theca Cells.

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