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antibody and ELISA experts

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Anti-HSD17B1 Antibody

Catalog Number: PA1613-1

About HSD17B1

Estradiol 17-beta-dehydrogenase 1 is an enzyme that in humans is encoded by the HSD17B1 gene. This gene encodes a member of the 17beta-hydroxysteroid dehydrogenase family of short-chain dehydrogenases/reductases. It has a dual function in estrogen activation and androgen inactivation and plays a major role in establishing the estrogen E2 concentration gradient between serum and peripheral tissues. The encoded protein catalyzes the last step in estrogen activation, using NADPH to convert estrogens E1 and E2 and androgens like 4-androstenedione, to testosterone. It has an N-terminal short-chain dehydrogenase domain with a cofactor binding site, and a narrow, hydrophobic C-terminal domain with a steroid substrate binding site. This gene is expressed primarily in the placenta and ovarian granulosa cells, and to a lesser extent, in the endometrium, adipose tissue, and prostate. Polymorphisms in this gene have been linked to breast and prostate cancer. A pseudogene of this gene has been identified. Alternative splicing results in multiple transcript variants.

Overview

Product Name	Anti-HSD17B1 Antibody
Reactive Species	Human, Rat
Description	Boster Bio Anti-HSD17B1 Antibody catalog # PA1613-1. Tested in IHC, ICC, WB applications. This antibody reacts with Human, Rat.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
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	P14061

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human HSD17B1, different from the related rat and mouse sequences by one amino acid.
Predicted Reactive Species	Hamster
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) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

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Form	Lyophilized
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, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Rat, By Heat Immunocytochemistry , 0.5-1ug/ml, Human

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Anti-HSD17B1 Antibody (PA1613-1) Images

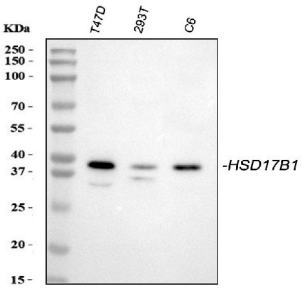

Figure 1. Western blot analysis of HSD17B1 using anti-HSD17B1 antibody (PA1613-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human T47D whole cell lysates,
Lane 2: human 293T whole cell lysates,
Lane 3: rat C6 whole cell 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-HSD17B1 antigen affinity purified polyclonal antibody (Catalog # PA1613-1) 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 HSD17B1 at approximately 37-38 kDa. The expected band size for HSD17B1 is at 35 kDa.

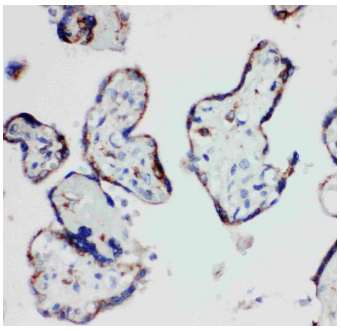

Figure 2. IHC analysis of HSD17B1 using anti-HSD17B1 antibody (PA1613-1).
HSD17B1 was detected in a paraffin-embedded section of Human Placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-HSD17B1 Antibody (PA1613-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

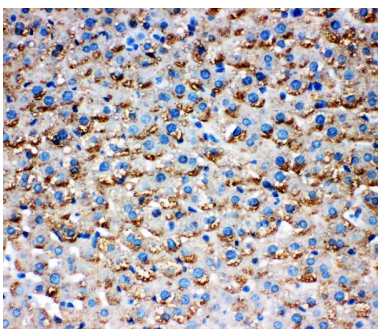

Figure 3. IHC analysis of HSD17B1 using anti-HSD17B1 antibody (PA1613-1).
HSD17B1 was detected in a paraffin-embedded section of Rat Liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-HSD17B1 Antibody (PA1613-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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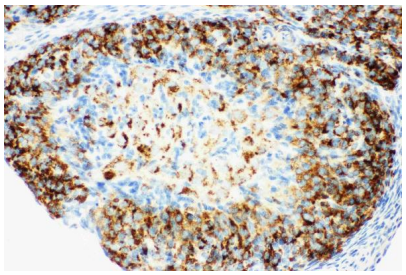

Figure 4. IHC analysis of HSD17B1 using anti-HSD17B1 antibody (PA1613-1).
HSD17B1 was detected in a paraffin-embedded section of Rat Ovary tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-HSD17B1 Antibody (PA1613-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

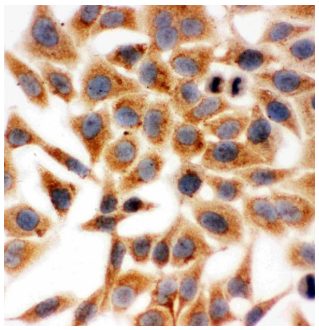

Figure 5. ICC analysis of HSD17B1 using anti-HSD17B1 antibody (PA1613-1).
HSD17B1 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1 ug/ml rabbit anti-HSD17B1 Antibody (PA1613-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

1 Publications Citing This Product

1. PubMed ID: 26478095, Estrogen Secreted by Mesenchymal Stem Cells Necessarily Determines Their Feasibility of Therapeutical Application

Visit bosterbio.com/anti-hsd17b1-antibody-pa1613-1-boster.html to see all 1 publications.