BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Aromatase/CYP19A1 Antibody Picoband®

Catalog Number: A00071

About CYP19A1

CYP19A1, also called Aromatase, is an enzyme responsible for a key step in the biosynthesis of estrogens. It is a member of the cytochrome P450 superfamily, which are monooxygenases that catalyze many reactions involved in steroidogenesis. In particular, aromatase is responsible for the aromatization of androgens into estrogens. The CYP19 gene spans at least 70 kb of genomic DNA and contains 10 exons. By in situ hybridization, the ARO gene is mapped to 15q21.1. The aromatase enzyme can be found in many tissues including gonads, brain, adipose tissue, placenta, blood vessels, skin, bone, and endometrium, as well as in tissue of endometriosis, uterine fibroids, breast cancer, and endometrial cancer. It is an important factor in sexual development. Some bodybuilders taking steroids also take antiaromatase supplements to prevent excess testosterone conversion into estrogens, which can cause gynecomastia.

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Overview

Product Name	Anti-Aromatase/CYP19A1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Aromatase/CYP19A1 Antibody Picoband® catalog # A00071. Tested in ELISA, Flow Cytometry, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IHC, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 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	P11511

Technical Details

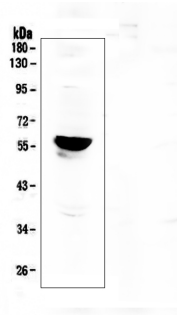
Immunogen	E. coli-derived human CYP19A1 recombinant protein (Position: Y241-H503).

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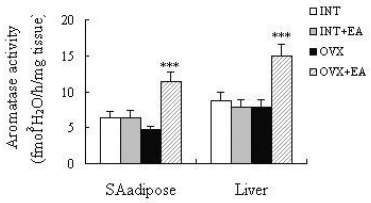
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunohistochemistry (Frozen Section), 0.5-1ug/ml Immunocytochemistry, 0.5-1ug/ml Flow Cytometry (Fixed), 1-3ug/1x10^6 cells ELISA, 0.1-0.5ug/ml Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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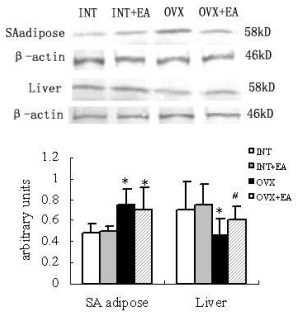
Anti-Aromatase/CYP19A1 Antibody Picoband® (A00071) Images



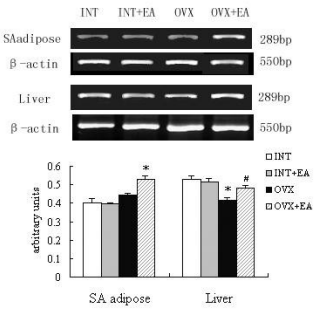
Western blot analysis of Aromatase using anti-Aromatase antibody (A00071). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human placenta tissue lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Aromatase antigen affinity purified polyclonal antibody (Catalog # A00071) 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 1:10000 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 Aromatase at approximately 58KD. The expected band size for Aromatase is at 58KD.



The aromatase activities in SA adipose and liver tissues of the INT (n = 12), INT+EA (n = 12), OVX (n = 12) and OVX+EA (n = 10) rats. ***p < 0.01 vs INT, INT+EA and OVX. Index in PubMed under a CC BY license. PMID: 15113414



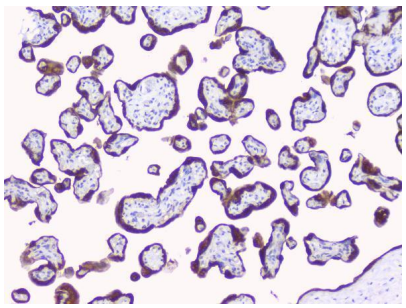
Effects of the electroacupuncture on the aromatase expressions by Western blot analysis. The upper picture shows the Western blot analysis of the aromatase P450. The SA adipose and liver tissue samples (50 mg/lane) were electrophoresed and blotted onto the membrane, and aromatase was then detected using the polyclonal antibody as described in materials and methods. Densitometric analysis of the protein concentration using aromatase/beta-actin expressed as the mean with SEM bar (n INT = 12, n INT+EA = 12, n OVX = 12 and n OVX+EA = 10) in each column indicated in the lower panel. * p < 0.05 vs INT, INT+EA and OVX, # p < 0.05 vs OVX Index in PubMed under a CC BY license. PMID: 15113414



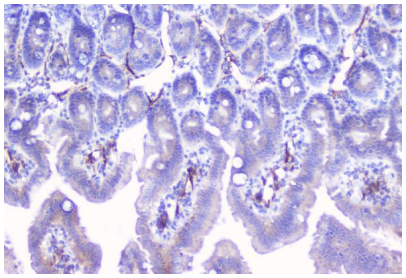
Effects of the electroacupuncture on the aromatase mRNA expressions by RT-PCR analysis. The upper picture shows the gel electrophoresis of the RT-PCR products for the aromatase. Total RNA fractions were isolated from the SA adipose and liver tissues of the INT, INT+EA, OVX and OVX+EA rats, and the cDNAs were prepared using standard techniques, as described in materials and methods. The RT-PCR products for aromatase were fractionated by electrophoresis through 2% agarose gels. Densitometric analysis of the mRNA concentration using aromatase/beta-

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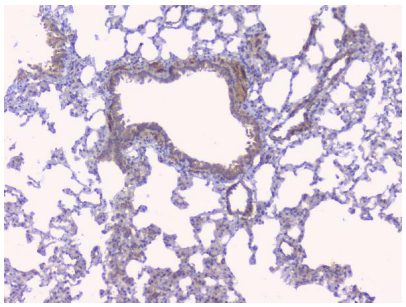
actin expressed as the mean with SEM bar (n INT = 12, n INT + EA = 12, n OVX = 12 and n OVX + EA = 10) in each column indicated in the lower panel. * $p < 0.05$ vs INT and INT+EA, # $p < 0.05$ vs OVX. Index in PubMed under a CC BY license. PMID: 15113414



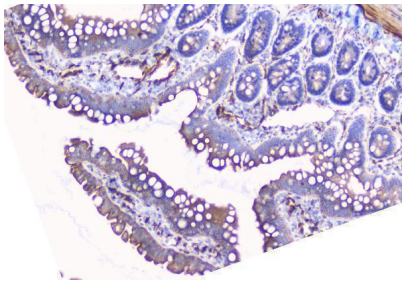
IHC analysis of Aromatase using anti-Aromatase antibody (A00071). Aromatase was detected in paraffin-embedded section of human placenta tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Aromatase Antibody (A00071) 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.



IHC analysis of Aromatase using anti-Aromatase antibody (A00071). Aromatase was detected in paraffin-embedded section of mouse small intestine tissues. 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 1ug/ml rabbit anti-Aromatase Antibody (A00071) 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.



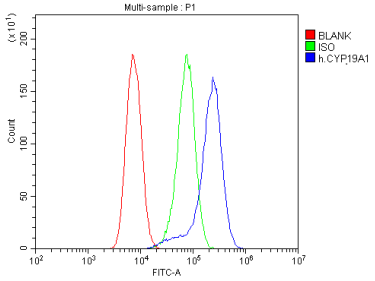
IHC analysis of Aromatase using anti-Aromatase antibody (A00071). Aromatase was detected in paraffin-embedded section of rat lung tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Aromatase Antibody (A00071) 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.



IHC analysis of Aromatase using anti-Aromatase antibody (A00071). Aromatase was detected in paraffin-embedded section of rat small intestine tissues. 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 1ug/ml rabbit anti-Aromatase Antibody (A00071) 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

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Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of U20S cells using anti-Aromatase antibody (A00071). Overlay histogram showing U20S cells stained with A00071 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Aromatase Antibody (A00071,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

5 Publications Citing This Product

1. PubMed ID: 32695776, Feng F,Wang J,Bao R,Li L,Tong X,Han S,Zhang H,Wen W,Xiao L,Zhang C.LncPrep + 96kb 2.2 kb Inhibits Estradiol Secretion From Granulosa Cells by Inducing EDF1 Translocation.Front Cell Dev Biol.2020 Jun 30;8:481.doi:10.3389/fcell.2020.00481.PMID:32695776;PMCI

2. PubMed ID: -, Xuan Luo,Hui Liu,Hongzhou Guo et al.RAF1 as Downstream Molecule Mediates the FSH Signaling Pathway to Stimulate E2 Synthesis and Secretion in Mouse Ovarian Granulosa Cells, 22 September 2020, PREPRINT (Version 1) available at Research Square [https://doi.

3. PubMed ID: 23484106, Zhang D, Yang B, Zou W, Lu X, Xiong M, Wu L, Wang J, Gao J, Xu S, Zou T. Biomed Res Int. 2013;2013:301540. Doi: 10.1155/2013/301540. Epub 2012 Dec 26. Estradiol Synthesis And Release In Cultured Female Rat Bone Marrow Stem Cells.

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