BOSTER
antibody and ELISA experts

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Anti-liver Arginase/ARG1 Antibody Picoband™

Catalog Number: A01106

About ARG1

ARG1 (arginase, live) is a cytosolic enzyme and expressed predominantly in the liver as a component of the urea cycle. The isoform encoded by ARG1, referred to as the liver, or A-I, isoform, contributes 98% of the arginase activity in liver but is also present in red cells. Using a rat liver ARG1 cDNA clone to probe a human liver cDNA library, Haraguchi et al. (1987) isolated and characterized a cDNA corresponding to the ARG1 gene. The ARG1 gene is mapped on 6q23.2 and the arginase gene contains 8 exons. By immunologic studies, 90% of the arginase in red blood cell and liver was precipitated by the antibody, whereas only 50% of the arginase in kidney, brain, and the gastrointestinal tract reacted with it. Inherited deficiency of this enzyme results in argininemia, an autosomal recessive disorder characterized by hyperammonemia. Two transcript variants encoding different isoforms have been found for this gene.

Overview

Product Name	Anti-liver Arginase/ARG1 Antibody Picoband™
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-liver Arginase/ARG1 Antibody Picoband™ catalog # A01106. Tested in ELISA, IHC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
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	P05089

Technical Details

Immunogen	E.coli-derived human liver Arginase/ARG1 recombinant protein (Position: E25-D183).
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, 0.25-0.5 ug/ml Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml Direct ELISA, 0.1-0.5 ug/ml

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Anti-liver Arginase/ARG1 Antibody Picoband™ (A01106) Images

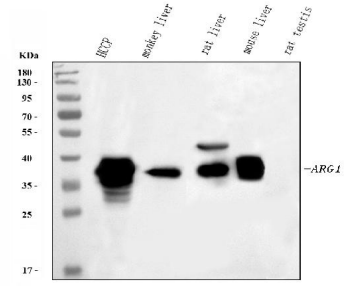

Figure 1. Western blot analysis of ARG1 using anti-ARG1 antibody (A01106).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HCCP tissue lysates,
Lane 2: monkey liver tissue lysates,
Lane 3: rat liver tissue lysates,
Lane 4: mouse liver tissue lysates,
Lane 5: rat 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-ARG1 antigen affinity purified polyclonal antibody (Catalog # A01106) 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 ARG1 at approximately 37 kDa. The expected band size for ARG1 is at 35 kDa.

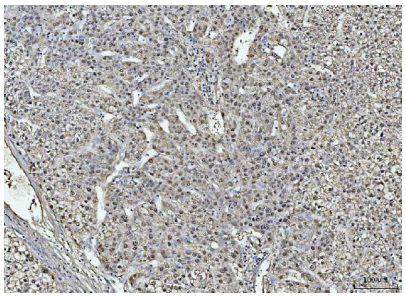

Figure 2. IHC analysis of ARG1 using anti-ARG1 antibody (A01106).
ARG1 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ARG1 Antibody (A01106) 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.

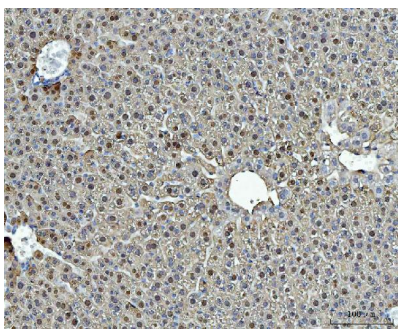

Figure 3. IHC analysis of ARG1 using anti-ARG1 antibody (A01106).
ARG1 was detected in a paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ARG1 Antibody (A01106) 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. IHC analysis of ARG1 using anti-ARG1 antibody

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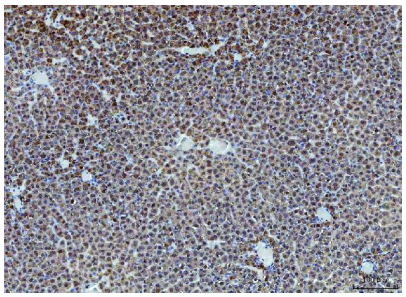

(A01106).
ARG1 was detected in a paraffin-embedded section of rat liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ARG1 Antibody (A01106) 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.

3 Publications Citing This Product

1. PubMed ID: 32908940, Liao H,Li Y,Zhang X,Zhao X,Zheng D,Shen D,Li R. Protective Effects of Thalidomide on High-Glucose-Induced Podocyte Injury through In Vitro Modulation of Macrophage M1/M2 Differentiation.J Immunol Res.2020 Aug 27;2020:8263598.doi:10.1155/2020/8263598.PMID

2. PubMed ID: 28615349, CFTR protects against vascular inflammation and atherogenesis in apolipoprotein E-deficient mice

3. PubMed ID: 30151392, Panax notoginseng Saponins Regulate Macrophage Polarization under Hyperglycemic Condition via NF-%u03BAB Signaling Pathway

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