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antibody and ELISA experts

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Anti-liver Arginase/ARG1 Antibody Picoband® (monoclonal, 2B12)

Catalog Number: M01106-4

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 byARG1, 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 liverARG1cDNA clone to probe a human liver cDNA library,Haraguchi et al. (1987)isolated and characterized a cDNA corresponding to theARG1gene.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® (monoclonal, 2B12)
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-liver Arginase/ARG1 Antibody Picoband® (monoclonal, 2B12) catalog # M01106-4. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, 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	Flow Cytometry, WB
Clonality	Monoclonal 2B12
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg 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	Mouse
Uniprot ID	P05089

Technical Details

Immunogen	E.coli-derived human liver Arginase/ARG1 recombinant protein (Position: E25-D183).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b

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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	Western blot, 0.1-0.5ug/ml, Monkey, Mouse, Rat Flow Cytometry (Fixed), 1-3u/1x10^6 cells, Human

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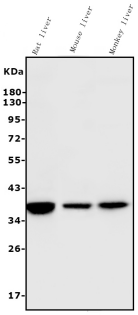
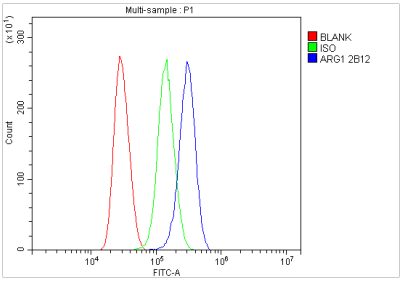
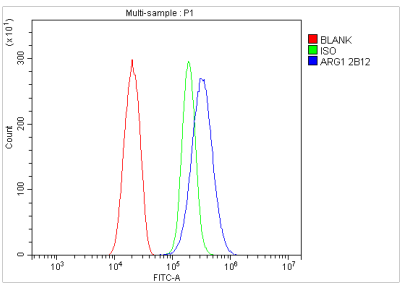
Anti-liver Arginase/ARG1 Antibody Picoband® (monoclonal, 2B12) (M01106-4) Images



Western blot analysis of liver Arginase/ARG1 using anti-liver Arginase/ARG1 antibody (M01106-4). 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: rat liver tissue lysates, Lane 2: mouse liver tissue lysates, Lane 3: monkey liver tissue lysates. 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 mouse anti-liver Arginase/ARG1 antigen affinity purified monoclonal antibody (Catalog # M01106-4) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for liver Arginase/ARG1 at approximately 35KD. The expected band size for liver Arginase/ARG1 is at 35KD.



Flow Cytometry analysis of Jurkat cells using anti- liver Arginase/ARG1 antibody (M01106-4). Overlay histogram showing Jurkat cells stained with M01106-4 (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 mouse anti-liver Arginase/ARG1 Antibody (M01106-4, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of SiHa cells using anti- liver Arginase/ARG1 antibody (M01106-4). Overlay histogram showing SiHa cells stained with M01106-4 (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 mouse anti-liver Arginase/ARG1 Antibody (M01106-4, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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3 Publications Citing This Product

1. PubMed ID: 33757565, Li T, Zhao J, Xie W, Yuan W, Guo J, Pang S, Gan WB, Gómez-Nicola D, Zhang S. Specific depletion of resident microglia in the early stage of stroke reduces cerebral ischemic damage. J Neuroinflammation. 2021 Mar 23;18(1):81. doi: 10.1186/s12974-021-02127-w. PMID: 33757565; PMCID: PMC7986495.

2. 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

3. PubMed ID: 33102606, Li Y,Zheng D,Shen D,Zhang X,Zhao X,Liao H.Protective Effects of Two Safflower Derived Compounds, Kaempferol and Hydroxysafflor Yellow A, on Hyperglycaemic Stress-Induced Podocyte Apoptosis via Modulating of Macrophage M1/M2 Polarization.J Immunol Res.2020

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