10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Catalog # ABO14971

Specification

Anti-liver Arginase/ARG1 Antibody Picoband™ (monoclonal, 2B12) - Product Information

Application	**WB, FC**
Primary Accession	P05089
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse, Monkey**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-liver Arginase/ARG1 Antibody Picoband™ (monoclonal, 2B12) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.

Anti-liver Arginase/ARG1 Antibody Picoband™ (monoclonal, 2B12) - Additional Information

Gene ID 383

Other Names
Arginase-1, 3.5.3.1, Liver-type arginase, Type I arginase, ARG1

Calculated MW
35 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Monkey, Mouse, Rat
Flow Cytometry, 1-3 µ/1x10^6 cells, Human

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.

Immunogen
E.coli-derived human liver Arginase/ARG1 recombinant protein (Position: E25-D183).

Purification
Immunogen affinity purified.

Storage	**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.**

Anti-liver Arginase/ARG1 Antibody Picoband™ (monoclonal, 2B12) - Protein Information

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Name ARG1

Function
Key element of the urea cycle converting L-arginine to urea and L-ornithine, which is further metabolized into metabolites proline and polyamides that drive collagen synthesis and bioenergetic pathways critical for cell proliferation, respectively; the urea cycle takes place primarily in the liver and, to a lesser extent, in the kidneys.

Cellular Location
Cytoplasm. Cytoplasmic granule. Note=Localized in azurophil granules of neutrophils (PubMed:15546957)

Tissue Location
Within the immune system initially reported to be selectively expressed in granulocytes (polymorphonuclear leukocytes [PMNs]) (PubMed:15546957). Also detected in macrophages mycobacterial granulomas (PubMed:23749634). Expressed in group2 innate lymphoid cells (ILC2s) during lung disease (PubMed:27043409)

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

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

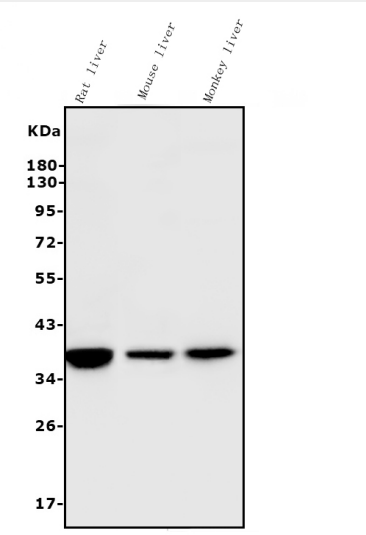

Figure 1. Western blot analysis of liver Arginase/ARG1 using anti-liver Arginase/ARG1 antibody (M01106-4).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving

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 µg/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.

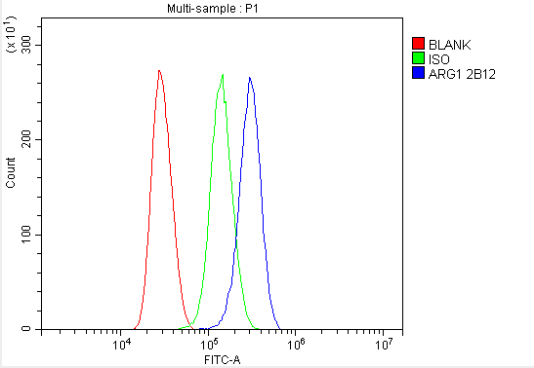

Figure 2. Flow Cytometry analysis of Jurkat cells using anti-liver Arginase/ARG1 antibody (M01106-4).
Overlay histogram showing Jurkat cells stained with M01106-4 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-liver Arginase/ARG1 Antibody (M01106-4, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

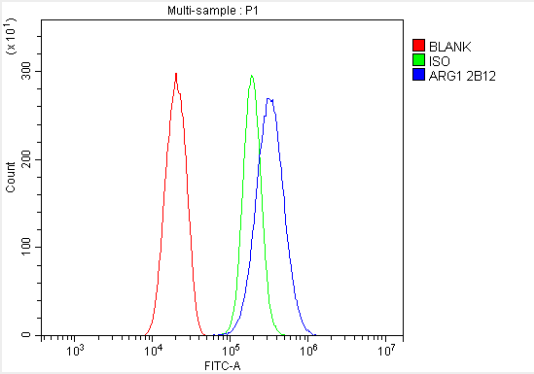

Figure 3. Flow Cytometry analysis of SiHa cells using anti-liver Arginase/ARG1 antibody (M01106-4).
Overlay histogram showing SiHa cells stained with M01106-4 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-liver Arginase/ARG1 Antibody (M01106-4, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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

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.