

Mouse liver Arginase/ARG1 Monoclonal Antibody | anti-ARG1 antibody

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

CATALOG # AAA125914	HOST Mouse	REACTIVITY Human, Mouse, Rat, Monkey	APPLICATIONS Flow Cytometry, Functional Assay, Western Blot
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PRODUCT SYNONYMS

liver Arginase/ARG1; Monoclonal Antibody; Anti-liver Arginase/ARG1 Antibody (monoclonal; 2B12); Arginase-1; Liver-type arginase; Type I arginase; ARG1; arginase; liver; anti-ARG1 antibody

PRODUCT SPECIFICATIONS

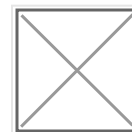
Host	Mouse
Reactivity	Human, Mouse, Rat, Monkey
Clonality	Monoclonal
Isotype	Mouse IgG2b
Clone Number	2B12
Specificity	Mouse IgG monoclonal antibody for liver Arginase/ARG1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-ARG1 antibody	FCM/FACS (Flow Cytometry), WB (Western Blot)
Immunogen	E Coli-derived human liver Arginase/ARG1 recombinant protein (Position: E25-D183).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of SiHa cells using anti- liver Arginase/ARG1 antibody (AAA125914).Overlay histogram showing SiHa cells stained with AAA125914 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-liver Arginase/ARG1 Antibody (AAA125914, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



FCM/FACS (Flow Cytometry)

Figure 2. Flow Cytometry analysis of Jurkat cells using anti- liver Arginase/ARG1 antibody (AAA125914).Overlay histogram showing Jurkat cells stained with AAA125914 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-liver Arginase/ARG1 Antibody (AAA125914, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of liver Arginase/ARG1 using anti-liver Arginase/ARG1 antibody (AAA125914). 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 # AAA125914) at 0.5 µg/mL overnight at 4 degree 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 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.

ADDITIONAL INFORMATION

Related Product Information for anti-ARG1 antibody	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.
References	<ol style="list-style-type: none">Cardoso, M. L., Martins, E., Vasconcelos, R., Vilarinho, L., Rocha, J. Identification of a novel R21X mutation in the liver-type arginase gene (ARG1) in four Portuguese patients with argininemia. Hum. Mutat. 14: 355-356, 1999.Grody, W. W., Dodson, A., Klein, D., Kern, R. M., Bassand, P., Cederbaum, S. D. Molecular genetic study of human arginase deficiency. (Abstract) Am. J. Hum. Genet. 45 (suppl.): A191 only, 1989.Haraguchi, Y., Takiguchi, M., Amaya, Y., Kawamoto, S., Matsuda, I., Mori, M. Molecular cloning and nucleotide sequence of cDNA for human liver arginase. Proc. Nat. Acad. Sci. 84: 412-415, 1987.

NCBI AND UNIPROT INFORMATION

NCBI GI #	10947139
NCBI GeneID	383
NCBI Accession #	NP_000036.2
NCBI GenBank Nucleotide #	NM_000045.3
UniProt Accession #	P05089 ; Q5JWT5 ; Q5JWT6 ; Q8TE72 ; Q9BS50 ; A6NEA0
Molecular Weight	34,735 Da
NCBI Official Full Name	arginase-1 isoform 2
NCBI Official Synonym Full Names	arginase, liver
NCBI Official Symbol	ARG1
NCBI Protein Information	arginase-1; type I arginase; liver-type arginase
UniProt Protein Name	Arginase-1
UniProt Gene Name	ARG1
UniProt Entry Name	ARGI1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/liver-arginase-arg1-antibody-clone-2b12-flow-cytometry-western-blot-elisa/125914>