abcam

ab233548

Anti-Liver Arginase antibody [EPR22033-369]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22033-369
Purification technique	Affinity purification Protein A
Concentration	0.673 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Species	Rat
Dilution info	1/5000
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/60
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information 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. Functions in L-arginine homeostasis in nonhepatic tissues characterized by the competition between nitric oxide synthase (NOS) and arginase for the available intracellular substrate arginine. Arginine metabolism is a critical regulator of innate and adaptive immune responses. Involved in an antimicrobial effector pathway in polymorphonuclear granulocytes (PMN). Upon PMN cell death is liberated from the phagolysosome and depletes arginine in the microenvironment leading to suppressed T cell and natural killer (NK) cell proliferation and cytokine secretion (By similarity). In group 2 innate lymphoid cells (ILC2s) promotes acute type 2 inflammation in the lung and is involved in optimal ILC2 proliferation but not survival (PubMed:27043409). Plays a role in the immune response of alternatively activated or M2 macrophages in processes such as wound healing and tissue regeneration, immune defense against multicellular pathogens and parasites, and immune suppression and allergic inflammation; the regulatory outcome seems to be organ specific (PubMed:19360123, PubMed:20483789, PubMed:23552798, PubMed:23637937, PubMed:7537672). In tumor-infiltrating dendritic cells (DCs) and myeloid-derived suppressor cells (MDSCs) plays a role in suppression of T cell-mediated antitumor immunity (PubMed:19414774, PubMed:23248265).

Storage

Shipped at conditions Conditional Ambient

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

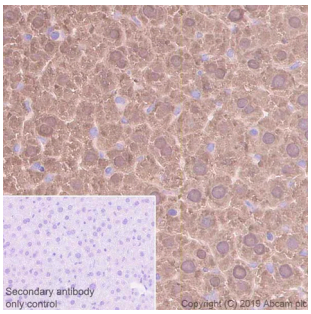
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images

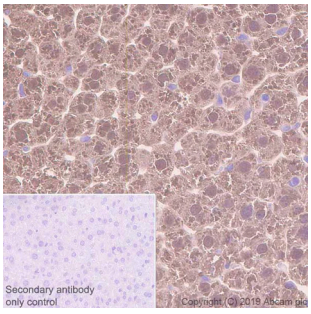


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Liver Arginase antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Liver Arginase with ab233548 at 1/2000 dilution (0.333 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear and cytoplasmic staining in mouse liver (PMID/ 22298472, 23637937, 21975054). The section was incubated with ab233548 for 15 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control/ Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

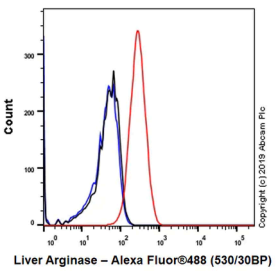


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Liver Arginase antibody

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Liver Arginase with ab233548 at 1/2000 dilution (0.333 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Nuclear and cytoplasmic staining in rat liver (PMID/ 22298472, 23637937, 21975054) is observed. The section was incubated with ab233548 for 15 mins at RT. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101)

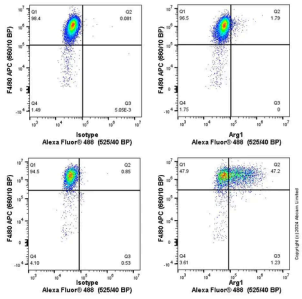
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase Flow Cytometry (Intracellular) staining using rabbit Anti-Liver Arginase antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Hepa1-6 (mouse epithelial hepatoma) cells labeling Liver Arginase with ab233548 at 1/60 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



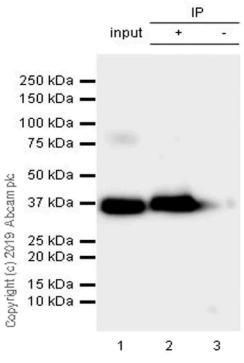
Flow Cytometry (Intracellular) - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase Flow Cytometry (Intracellular) staining of Mouse Bone Marrow Cell-derived Macrophages (M2 polarisation) using rabbit Anti-Liver Arginase antibody

Flow cytometry staining of C57BL/6 Mouse Bone Marrow Cell-derived Macrophages (M1 polarisation) (top) or C57BL/6 Mouse Bone Marrow Cell-derived Macrophages (M2 polarisation) (bottom) with ab233548 (right) or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (left). Cells were fixed and permeabilised with BD Cytofix/Cytoperm™ for 20 min. Cells were incubated for 30min on ice in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab233548 or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (1x 10^6in 100 µl at 5.0 µg/ml (1/472)) for 30min at 22°C. The cells were simultaneously stained with F4/80.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on live cells.



Immunoprecipitation - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase was immunoprecipitated from 0.35 mg Mouse liver tissue lysate with ab233548 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab233548 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: Mouse liver tissue lysate 10ug

Lane 2: ab233548 IP in Mouse liver tissue lysate

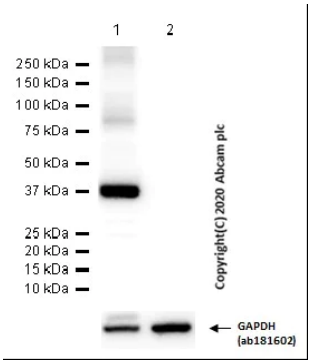
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab233548 in Mouse liver tissue lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST

Exposure time: 3 seconds

All lanes:
Immunoprecipitation - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Predicted band size: 35 kDa



Western blot - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

Liver Arginase Western blot staining using rabbit Anti-Liver Arginase antibody

Blocking/Diluting buffer and concentration: 5% NFDM/TBST.
The expression profile observed in RAW 264.7 is consistent with the literature (PMID: 28032600, PMID: 27166374, PMID: 9814991, PMID: 11080091).

All lanes:
Western blot - Anti-Liver Arginase antibody [EPR22033-369] (ab233548) at 1/1000 dilution

Lane 1:
Mouse liver tissue lysate at 20 µg

Lane 2:
RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate at 20 µg

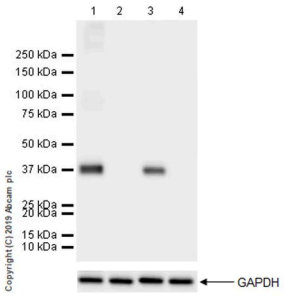
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 35 kDa

Observed band size: 37 kDa

Exposure time: 1s



Western blot - Anti-Liver Arginase antibody [EPR22033-369] (ab233548)

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 27761413). Negative control: kidney (PMID: 21975054)
Blocking/Diluting buffer and concentration: 5% NFDM/TBST

Exposure Time: 1 second

All lanes:
Western blot - Anti-Liver Arginase antibody [EPR22033-369] (ab233548) at 1/5000 dilution

Lane 1:
Mouse liver lysate at 20 µg

Lane 2:
Mouse kidney lysate at 20 µg

Lane 3:
Rat liver lysate at 20 µg

Lane 4:
Rat kidney lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 35 kDa

Observed band size: 37 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.