

For Research Use Only

# Arginase-1 Polyclonal antibody

Catalog Number: 16001-1-AP

471 Publications



## Basic Information

<b>Catalog Number:</b> 16001-1-AP	<b>GenBank Accession Number:</b> BC005321	<b>Purification Method:</b> Antigen affinity purification
<b>Size:</b> 150ul , Concentration: 1000 ug/ml by Nanodrop;	<b>GeneID (NCBI):</b> 383	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate IHC 1:50-1:500 IF-P 1:50-1:500 IF/ICC 1:200-1:800
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P05089	
<b>Isotype:</b> IgG	<b>Full Name:</b> arginase, liver	
<b>Immunogen Catalog Number:</b> AG8595	<b>Calculated MW:</b> 236aa, 25 kDa; 322aa, 35 kDa	
	<b>Observed MW:</b> 35-36 kDa	

## Applications

<b>Tested Applications:</b> WB, IHC, IF/ICC, IF-P, IP, ELISA	<b>Positive Controls:</b> WB : mouse liver tissue, rat liver tissue IP : mouse liver tissue, IHC : human liver cancer tissue, mouse liver tissue IF-P : mouse liver tissue, human liver cancer tissue IF/ICC : HepG2 cells,
<b>Cited Applications:</b> WB, IHC, IF	
<b>Species Specificity:</b> human, mouse, rat	
<b>Cited Species:</b> human, mouse, rat, pig, bovine	
<b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b>	

## Background Information

Arginase-1 (Liver arginase) belongs to the arginase family. ARG1 is a novel immunohistochemical marker of hepatocellular differentiation in fine needle aspiration cytology and a marker of hepatocytes and hepatocellular neoplasms. ARG1 is closely associated with alternative macrophage activation and ARG1 has been shown to protect motor neurons from trophic factor deprivation and allow sensory neurons to overcome neurite outgrowth inhibition by myelin proteins (PMID: 20071539, PMID: 12098359). It can exist as a homotrimer and it has 3 isoforms produced by alternative splicing (PMID: 16141327). Defects in ARG1 are the cause of argininemia (ARGIN). Deletion or TNF-mediated restriction of ARG1 unleashes the production of NO by NOS2, which is critical for pathogen control (PMID: 27117406). ARG1 mainly expresses in neurons in a normal brain. The expression of ARG1 increases in microglia/macrophages and astrocytes early after CNS injuries. ARG1 has been regarded as a marker for beneficial microglia/macrophages and possesses anti-inflammatory and tissue repair properties under various pathological conditions (PMID: 26538310, PMID: 31619589).

## Notable Publications

Author	Pubmed ID	Journal	Application
Shiao Tong	36248799	Front Immunol	WB
Meili Wu	30266587	Brain Res Bull	WB
Yifei Zhou	36242920	Biochem Biophys Res Commun	

## Storage

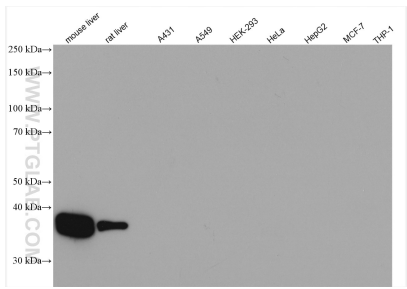
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol, pH7.3  
Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

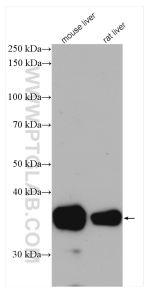
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

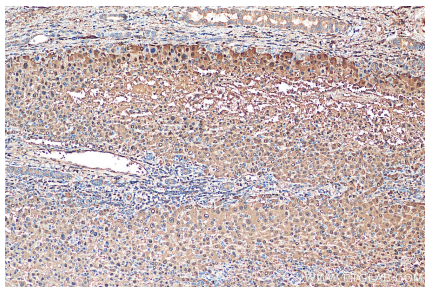
Selected Validation Data



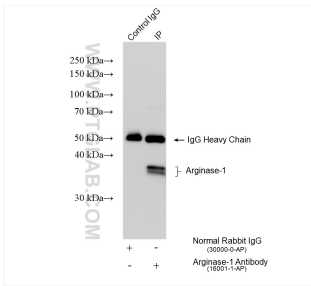
Various lysates were subjected to SDS PAGE followed by western blot with 16001-1-AP (ARG1 antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours; mouse liver tissue and rat liver tissue are positive, other cells express no or low ARG1 under normal condition.



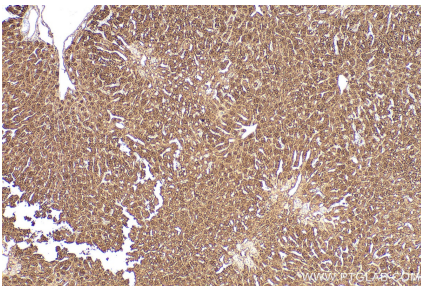
Various lysates were subjected to SDS PAGE followed by western blot with 16001-1-AP (ARG1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



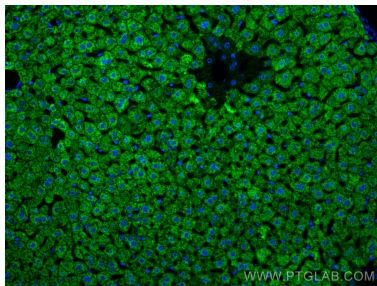
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 16001-1-AP (Arginase-1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



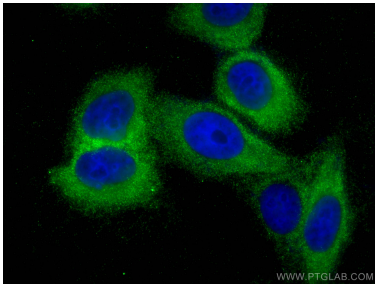
IP result of anti-Arginase-1 (IP:16001-1-AP, 4ug; Detection:16001-1-AP 1:40000) with mouse liver tissue lysate 1960 ug.



Immunohistochemical analysis of paraffin-embedded mouse liver tissue slide using 16001-1-AP (Arginase-1 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse liver tissue using Arginase-1 antibody (16001-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (-20°C Ethanol) fixed HepG2 cells using Arginase-1 antibody (16001-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).