

For Research Use Only

# Arginase-1 Recombinant antibody

Catalog Number: 82975-1-RR



## Basic Information

<b>Catalog Number:</b> 82975-1-RR	<b>GenBank Accession Number:</b> BC005321	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 1000 µg/ml	<b>GeneID (NCBI):</b> 383	<b>CloneNo.:</b> 4M7
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P05089	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:500-1:2000 IF 1:500-1:2000
<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

**Tested Applications:**  
WB, IF/ICC, IHC, ELISA

**Species Specificity:**  
Human, mouse, rat

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

**Positive Controls:**

**WB :** mouse liver tissue, rat liver tissue

**IHC :** mouse liver tissue,

**IF :** mouse liver tissue,

## 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).

## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

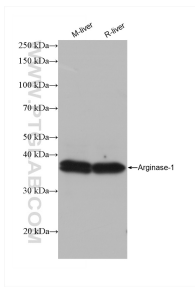
T: 4006900926

E: Proteintech-CN@ptglab.com

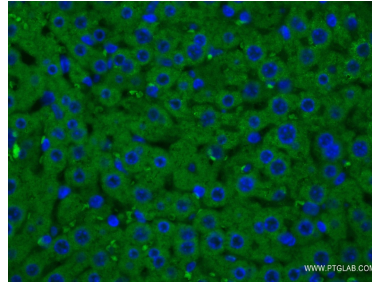
W: ptgcn.com

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

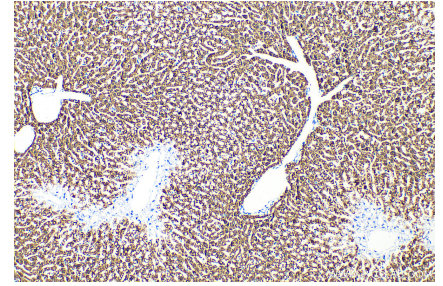
## Selected Validation Data



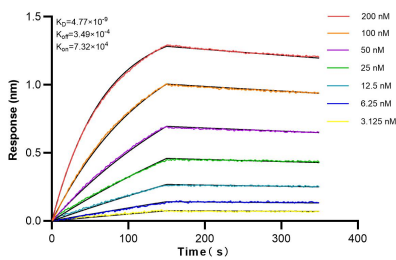
Various lysates were subjected to SDS PAGE followed by western blot with 82975-1-RR (Arginase-1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed mouse liver tissue using Arginase-1 antibody (82975-1-RR, Clone: 4M7) at dilution of 1:1000 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2).



Immunohistochemical analysis of paraffin-embedded mouse liver tissue slide using 82975-1-RR (Arginase-1 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Bi-layer interferometry (BLI) kinetic assays of 82975-1-RR against Human Arginase-1 were performed. The affinity constant is 4.77 nM.