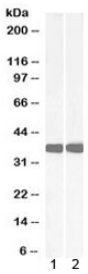
Arginase Antibody for IF / Arginase-1 Immunofluorescence Antibody (R34816)

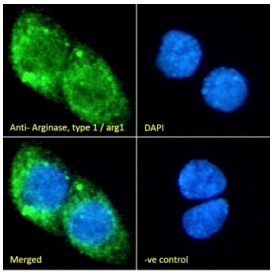
Catalog No.	Formulation	Size
R34816-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	11846
Applications	Western Blot : 0.03-0.1ug/ml IF/ICC : 10ug/ml ELISA (peptide) LOD : 1:128000
Limitations	This Arginase antibody is available for research use only.



Western blot testing of 1) mouse liver and 2) rat liver lysate with Arginase antibody at 0.05ug/ml. Predicted molecular weight ~35 kDa.



Arginase Antibody for IF immunofluorescence analysis in human HepG2 cells. IF/ICC staining of fixed and permeabilized human HepG2 cells using Arginase Antibody for IF shows strong cytoplasmic fluorescence signal (green) consistent with the known cytosolic localization of Arginase-1 (ARG1), a urea cycle enzyme highly expressed in hepatocyte-derived cells. Nuclei are counterstained with DAPI (blue). The merged image demonstrates cytoplasmic arginase staining surrounding the nuclei, while the negative control shows minimal background fluorescence.

Description

Arginase-1 (ARG1), encoded by the ARG1 gene and also known as liver arginase or arginine ureahydrolase, is a cytosolic enzyme that catalyzes the final step of the urea cycle by converting L-arginine into urea and ornithine. This metabolic reaction is essential for ammonia detoxification and nitrogen metabolism, particularly in hepatocytes where the urea cycle is most active. Arginase Antibody for IF enables visualization of ARG1 protein using immunofluorescence microscopy, allowing researchers to examine the cellular localization and distribution of this urea cycle enzyme within cultured cells and tissue sections.

Immunofluorescence detection of arginase-1 provides a powerful approach for studying the spatial organization of metabolic enzymes at the cellular level. Because ARG1 is primarily localized within the cytoplasm, immunofluorescence staining typically reveals a diffuse cytoplasmic fluorescence pattern within hepatocytes and hepatocyte-derived cells. Arginase Antibody for IF allows this cytoplasmic localization to be visualized with fluorescent secondary antibodies, enabling high-resolution imaging of ARG1 expression using fluorescence microscopy.

Immunofluorescence analysis is particularly useful for studying protein localization in the context of cellular architecture. Using Arginase Antibody for IF, researchers can evaluate ARG1 distribution relative to other intracellular markers through multiplex fluorescence imaging. Co-staining with nuclear dyes or other cellular markers allows visualization of hepatocyte morphology while simultaneously highlighting arginase-1 expression within the cytoplasmic compartment.

ARG1 expression is strongly enriched in hepatocytes of the liver, reflecting the central role of these cells in nitrogen metabolism and ammonia detoxification. Immunofluorescence staining can therefore be used to visualize hepatocyte populations and examine the intracellular distribution of arginase-1 within liver-derived cells. Fluorescent detection also allows detailed imaging of metabolic enzyme organization in hepatocytes while preserving cellular morphology.

In addition to normal liver biology, arginase-1 expression has been investigated in hepatocyte-derived tumors such as hepatocellular carcinoma. Immunofluorescence-based detection of ARG1 enables visualization of enzyme expression in tumor cells while maintaining cellular context within tissue sections or cultured tumor models. Fluorescence microscopy approaches can also be used to study protein localization patterns during hepatocyte differentiation or metabolic regulation.

Arginase Antibody for IF is a goat polyclonal antibody developed for immunofluorescence applications targeting the ARG1 protein. By enabling fluorescent visualization of arginase-1 in cells and tissues, this antibody supports studies investigating hepatocyte metabolism, urea cycle enzyme localization, and cellular pathways involved in arginine catabolism.

Application Notes

Optimal dilution of the Arginase Antibody for IF should be determined by the researcher.

Immunogen

Amino acids NHKPETDYLKPPK were used as the immunogen for this Arginase antibody.

Storage

Aliquot and store the Arginase antibody at -20oC.

Alternate Names

Arginase-1 antibody, ARG1 antibody, Liver arginase antibody, Arginine ureahydrolase antibody