

Arginase 1 polyclonal antibody

Catalog: BS67738

Host: Rabbit

Reactivity: Human, Mouse, Rat

BackGround:

L-arginine plays a critical role in regulating the immune system. In inflammation, cancer, and certain other pathological conditions, myeloid cell differentiation is inhibited leading to a heterogeneous population of immature myeloid cells, known as myeloid-derived suppressor cells (MDSCs). MDSCs are recruited to sites of cancer-associated inflammation and express high levels of arginase-1. Arginase-1 catalyzes the final step of the urea cycle converting L-arginine to L-ornithine and urea. Thus, MDSCs increase the catabolism of L-arginine resulting in L-arginine depletion in the inflammatory microenvironment of cancer. The reduced availability of L-arginine suppresses T cell proliferation and function and thus contributes to tumor progression. Arginase-1 is of great interest to researchers looking for a therapeutic target to inhibit the function of MDSCs in the context of cancer immunotherapy. In addition, research studies have demonstrated that arginase-1 distinguishes primary hepatocellular carcinoma (HCC) from metastatic tumors in the liver, indicating its value as a potential biomarker in the diagnosis of HCC.

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 40 kDa

Swiss-Prot:

P05089

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IHC (1/50 - 1/100), IF/ICC (1/50 - 1/100)

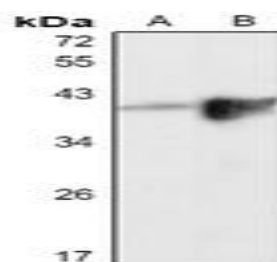
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

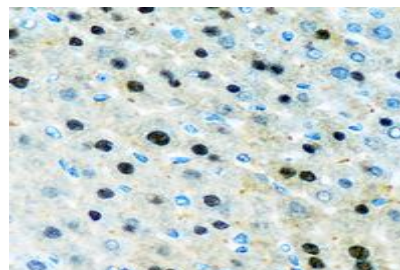
Specificity:

Recognizes endogenous levels of Arginase 1 protein.

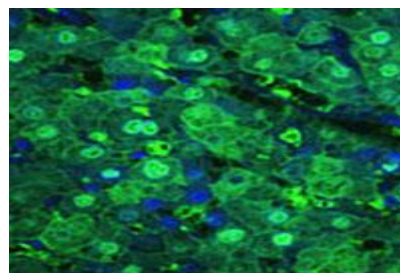
DATA:



Western blot analysis of Arginase 1 expression in HepG2 (A), rat liver (B) whole cell lysates.



Immunohistochemical analysis of Arginase 1 staining in mouse liver formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Arginase 1 staining in human liver. For-

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PRODUCT DATA SHEET

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malin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Note:

For research use only, not for use in diagnostic procedure.

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