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Arginase 1 (Hepatocellular Carcinoma Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone ARG1/1125]
Catalog # AH11627

Product Information

Application	WB, IHC, IF, FC
Primary Accession	P05089
Other Accession	383, 440934
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG3, kappa
Clone Names	ARG1/1125
Calculated MW	34735

Additional Information

Gene ID	383
Other Names	Arginase-1, 3.5.3.1, Liver-type arginase, Type I arginase, ARG1
Application Note	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Arginase 1 (Hepatocellular Carcinoma Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	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.
Cellular Location	Cytoplasm. Cytoplasmic granule. Note=Localized in azurophil granules of neutrophils (PubMed:15546957)
Tissue Location	Within the immune system initially reported to be selectively expressed in granulocytes (polymorphonuclear leukocytes [PMNs]) (PubMed:15546957). Also detected in macrophages mycobacterial granulomas

(PubMed:23749634). Expressed in group2 innate lymphoid cells (ILC2s) during lung disease (PubMed:27043409)

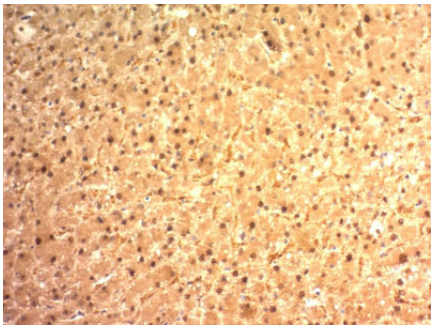
Background

Recognizes a protein of 35-38kDa, which is identified as Arginase 1 (ARG1). Arginase is a manganese metallo-enzyme that catalyzes the hydrolysis of arginine to generate ornithine and urea. Arginase I and II are isoenzymes which differ in subcellular localization, regulation, and possibly function. Arginase I is a cytosolic enzyme, which is expressed mainly in the liver as part of the urea cycle, whereas arginase II is a mitochondrial protein found in a variety of tissues. Antibody to ARG-1 labels hepatocytes in normal tissues and granulocytes in peripheral blood. ARG-1 is a sensitive and specific marker for identification of hepatocellular carcinoma.

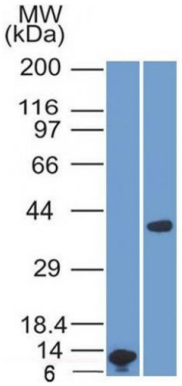
References

Diez, A., et al. 1994. Immunological identity of the two different molecular mass constitutive subunits of liver arginase. Biol. Chem. Hoppe Seyler 375: 537-541

Images



Formalin-fixed, paraffin-embedded human Hepatocellular Carcinoma stained with ARG1 Monoclonal Antibody (ARG1/1125).



Western Blot Analysis A) Recombinant ARG1 Protein Fragment (B) human Liver Lysate using ARG1 Monoclonal Antibody (ARG1/1125).