ARG43826
anti-Arginase 1 antibody [2B12]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [2B12] recognizes Arginase 1
Tested Reactivity	Hu, Ms, Rat, Mk
Tested Application	FACS, WB
Host	Mouse
Clonality	Monoclonal
Clone	2B12
Isotype	IgG2b
Target Name	Arginase 1
Species	Human
Immunogen	Recombinant protein within aa. E25-D183 of Human Arginase 1.
Conjugation	Un-conjugated
Alternate Names	ARG1; Arginase 1; Arginase-1; Liver-Type Arginase; Arginase, Liver; Type I Arginase; EC 3.5.3.1

Properties

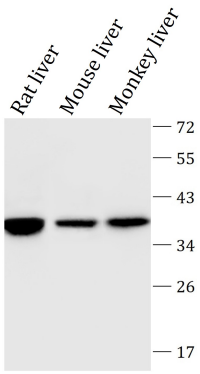
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na2HPO4, 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	ARG1
Gene Full Name	arginase 1
Background	Arginase catalyzes the hydrolysis of arginine to ornithine and urea. At least two isoforms of mammalian arginase exist (types I and II) which differ in their tissue distribution, subcellular localization, immunologic crossreactivity and physiologic function. The type I isoform encoded by this gene, is a cytosolic enzyme and expressed predominantly in the liver as a component of the urea cycle. Inherited deficiency of this enzyme results in argininemia, an autosomal recessive disorder characterized by hyperammonemia. Two transcript variants encoding different isoforms have been found for this gene.

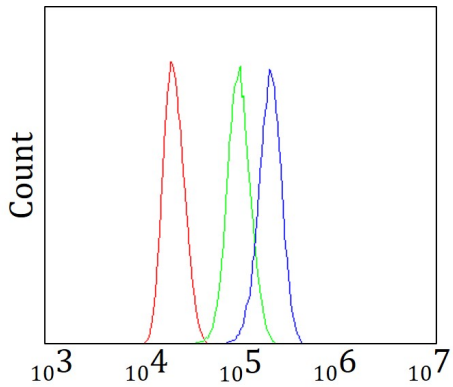
	[provided by RefSeq, Sep 2011]
Function	Key element of the urea cycle converting L-arginine to urea and L-ornithine, which is further metabolized into metabolites proline and polyamides that drive collagen synthesis and bioenergetic pathways critical for cell proliferation, respectively; the urea cycle takes place primarily in the liver and, to a lesser extent, in the kidneys. Functions in L-arginine homeostasis in nonhepatic tissues characterized by the competition between nitric oxide synthase (NOS) and arginase for the available intracellular substrate arginine. Arginine metabolism is a critical regulator of innate and adaptive immune responses. Involved in an antimicrobial effector pathway in polymorphonuclear granulocytes (PMN). Upon PMN cell death is liberated from the phagolysosome and depletes arginine in the microenvironment leading to suppressed T cell and natural killer (NK) cell proliferation and cytokine secretion (PubMed:15546957, PubMed:16709924, PubMed:19380772). In group 2 innate lymphoid cells (ILC2s) promotes acute type 2 inflammation in the lung and is involved in optimal ILC2 proliferation but not survival (By similarity). In humans, the immunological role in the monocytic/macrophage/dendritic cell (DC) lineage is unsure. [UniProt]
Calculated Mw	35 kDa
PTM	Phosphoprotein
Cellular Localization	Cytoplasm. Cytoplasmic granule. Note=Localized in azurophil granules of neutrophils (PubMed:15546957). [UniProt]

Images



ARG43826 anti-Arginase 1 antibody [2B12] WB image

Western blot: Rat Liver, Mouse Liver and Monkey Liver stained with ARG43826 anti-Arginase 1 antibody [2B12].



ARG43826 anti-Arginase 1 antibody [2B12] FACS image

Flow Cytometry: Jurkat cells were stained withARG43826 anti-Arginase 1 antibody [2B12] at 1:500 dilution in 1x PBS/1% BSA for 30 min at RT, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (Red) was used as a control.