

Arginase 1 Rabbit pAb

Catalog # AP96615

Product Information

Application	WB
Primary Accession	Q61176
Other Accession	Q61176
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34808
Physical State	Liquid
Immunogen	Recombinant mouse Arginase 1 protein
Epitope Specificity	1-291/323
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the arginase family.
SUBUNIT	Homotrimer.
DISEASE	Defects in ARG1 are the cause of argininemia (ARGIN) ; also known as hyperargininemia. Argininemia is a rare autosomal recessive disorder of the urea cycle. Arginine is elevated in the blood and cerebrospinal fluid, and periodic hyperammonemia occurs. Clinical manifestations include developmental delay, seizures, mental retardation, hypotonia, ataxia, progressive spastic quadriplegia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Arginase I which is expressed almost exclusively in the liver, catalyzes the conversion of arginine to ornithine and urea . The human arginase I gene, which maps to chromosome 6q23, encodes a 322 amino acid protein. Arginase I exists as a homotrimeric protein and contains a binuclear manganese cluster. Arginase II catalyzes the same reaction as arginase I, but differs in its tissue specificity and subcellular location. Specifically, arginase II localizes to the mitochondria. Arginase II is expressed in non-hepatic tissues, with the highest levels of expression in the kidneys, but, unlike arginase I, is not expressed in liver. The human arginase II gene, which maps to chromosome 14q24.1-q24.3, encodes a 354 amino acid protein. In addition, arginase II contains a putative amino-terminal mitochondrial localization sequence.

Additional Information

Gene ID	11846
Other Names	AI; Arg-1; PGIF; ARG11_BOVIN; ARG1; Liver-type arginase; Type I arginase; 3.5.3.1; ARG11_HUMAN; ARG11_MOUSE; ARG11_PIG; ARG11_RABIT; ARG11_RAT;

arginase 1; arginase, liver; arginase-1

Dilution

WB=1:500-2000

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name

Arg1

Function

Catalyzes the final step of the urea cycle by hydrolyzing L- arginine into urea, a nitrogenous waste product, and L-ornithine, a precursor to proline and polyamines; the urea cycle occurs primarily in the liver and, to a lesser extent, in the kidneys.

Cellular Location

Cytoplasm, cytosol {ECO:0000250|UniProtKB:P05089}. Cytoplasmic granule {ECO:0000250|UniProtKB:P05089}. Note=Localized in azurophil granules of neutrophils. {ECO:0000250|UniProtKB:P05089}

Tissue Location

Expressed in macrophages (PubMed:12193690, PubMed:19360123, PubMed:7537672). Expressed in precursor and mature group 2 innate lymphoid cells (ILC2s) (PubMed:27043409). Expressed in lung tumor-associated myeloid cells (PubMed:15313928). Expressed in lung tumor-infiltrating dendritic cells (PubMed:19414774)

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