

arginase I (H-52): sc-20150

BACKGROUND

Arginase I (also designated liver-type arginase), 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 6q23.2, 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.

CHROMOSOMAL LOCATION

Genetic locus: ARG1 (human) mapping to 6q23.2; Arg1 (mouse) mapping to 10 A4.

SOURCE

arginase I (H-52) is a rabbit polyclonal antibody raised against amino acids 271-322 of arginase I of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

arginase I (H-52) is available conjugated to agarose (sc-20150 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

arginase I (H-52) is recommended for detection of arginase I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

arginase I (H-52) is also recommended for detection of arginase I in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for arginase I siRNA (h): sc-29728, arginase I siRNA (m): sc-29727, arginase I shRNA Plasmid (h): sc-29728-SH, arginase I shRNA Plasmid (m): sc-29727-SH, arginase I shRNA (h) Lentiviral Particles: sc-29728-V and arginase I shRNA (m) Lentiviral Particles: sc-29727-V.

Molecular Weight of arginase I isoforms: 35/38 kDa.

Positive Controls: arginase I (m): 293T Lysate: sc-118520 or mouse liver extract: sc-2256.

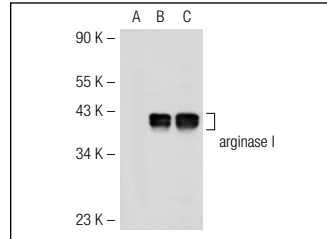
RESEARCH USE

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

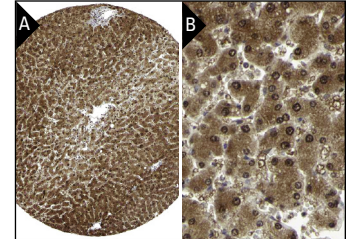
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



arginase I (H-52): sc-20150. Western blot analysis of arginase I expression in non-transfected: sc-117752 (A) and mouse arginase I transfected: sc-118520 (B) 293T whole cell lysates and mouse liver tissue extract (C).



arginase I (H-52): sc-20150. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing nuclear and cytoplasmic staining of hepatocytes at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Kim, N.N., et al. 2006. Streptozotocin-induced diabetes in the rat is associated with changes in vaginal hemodynamics, morphology and biochemical markers. *BMC Physiol.* 6: 4.
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- Cassis, P., et al. 2014. An unanticipated role for survivin in organ transplant damage. *Am. J. Transplant.* 14: 1046-1460.
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- Zhang, X.L., et al. 2014. Vitamin D prevents podocyte injury via regulation of macrophage M1/M2 phenotype in diabetic nephropathy rats. *Endocrinology* 155: 4939-4950.
- Jimenez-Garcia, L., et al. 2015. Critical role of p38 MAPK in IL-4-induced alternative activation of peritoneal macrophages. *Eur. J. Immunol.* 45: 273-286.
- Guanmei, W., et al. 2015. A novel role of matrix metalloproteinase-8 in macrophage differentiation and polarization. *J. Biol. Chem.* 290: 19158-19172.



Try **arginase I (C-2): sc-166920** or **arginase I (E-2): sc-271430**, our highly recommended monoclonal alternatives to arginase I (H-52). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **arginase I (C-2): sc-166920**.