

Arginase 1 (h): 293T Lysate: sc-159833

BACKGROUND

Arginase 1 (also designated liver-type arginase), which is expressed almost exclusively in the liver, catalyzes the conversion of arginine to ornithine and urea. Arginase 1 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. In addition, arginase II contains a putative amino-terminal mitochondrial localization sequence.

REFERENCES

1. 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.
2. Gotoh, T., et al. 1996. Molecular cloning of cDNA for nonhepatic mitochondrial arginase (arginase II) and comparison of its induction with nitric oxide synthase in a murine macrophage-like cell line. *FEBS Lett.* 395: 119-122.
3. Gotoh, T., et al. 1997. Chromosomal localization of the human arginase II gene and tissue distribution of its mRNA. *Biochem. Biophys. Res. Commun.* 233: 487-491.
4. Carraway, M.S., et al. 1998. Differential expression of arginase and iNOS in the lung in sepsis. *Exp. Lung Res.* 24: 253-268.
5. Mora, A., et al. 2000. Implications of the S-shaped domain in the quaternary structure of human arginase. *Biochim. Biophys. Acta* 1476: 181-190.
6. Ash, D.E. 2004. Structure and function of arginases. *J. Nutr.* 134: 2760S-2767S.

CHROMOSOMAL LOCATION

Genetic locus: ARG1 (human) mapping to 6q23.2.

PRODUCT

Arginase 1 (h): 293T Lysate represents a lysate of human Arginase 1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

Arginase 1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive arginase I antibodies. Recommended use: 10-20 µl per lane.

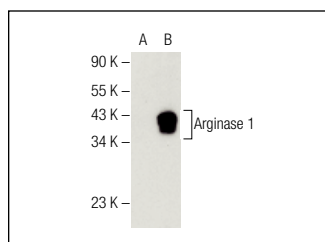
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Arginase 1 (C-2): sc-166920 is recommended as a positive control antibody for Western Blot analysis of enhanced human Arginase 1 expression in Arginase 1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

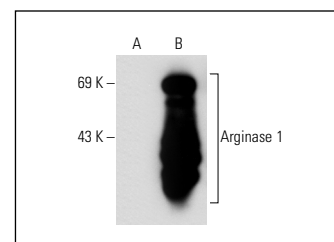
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Arginase 1 (C-2): sc-166920. Western blot analysis of Arginase 1 expression in non-transfected: sc-117752 (A) and human Arginase 1 transfected: sc-159833 (B) 293T whole cell lysates.



Arginase 1 (8C9): sc-47715. Western blot analysis of Arginase 1 expression in non-transfected: sc-117752 (A) and human Arginase 1 transfected: sc-159833 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.