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# arginase I (271-322): sc-4496 WB

## 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, encodes a 322 amino acid protein with a molecular mass of approximately 37 kDa. 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 with a molecular mass of 39 kDa. In addition, arginase II contains a putative amino-terminal mitochondrial localization sequence.

## REFERENCES

1. Diez, A., Fuentes, J.M., Prada, F., Campo, M.L., and Soler, G. 1994. Immunological identity of the two different molecular mass constitutive subunits of liver arginase. *Biol. Chem. Hoppe Seyler.* 375: 537-541.
2. Gotoh, T., Sonoki, T., Nagasaki, A., Terada, K., Takiguchi, M., and Mori, M. 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., Araki, M., and Mori, M. 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., Piantadosi, C.A., Jenkinson, C.P., and Huang, Y.C. 1998. Differential expression of arginase and iNOS in the lung in sepsis. *Exp. Lung Res.* 24: 253-268.
5. Mora, A., del Ara Rangel, M., Fuentes, J.M., Soler, G., and Centeno, F. 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 (10 Suppl): 2760S-2767S.
7. Crombez, E.A., Cederbaum, S.D. 2004. Hyperargininemia due to liver arginase deficiency. *Mol. Genet. Metab.* 84: 243-251.
8. Ensunsa, J.L., Symons, J.D., Lanoue, L., Schrader, H.R., Keen, C.L. 2004. Reducing arginase activity via dietary manganese deficiency enhances endothelium-dependent vasorelaxation of rat aorta. *Exp. Biol. Med.* 229: 1143-1153.
9. Grodzicki M, Pawlak J, Chrzanowska A, Poremba Z, Krawczyk M. 2004. Arginase activity concentration marking in monitoring of hepatocytes function after orthotopic liver transplantation-preliminary report. *Ann. Transplant.* 9: 54-57.
10. Cheng, P.N., Leung, Y.C., Lo, W.H., Tsui, S.M., Lam, K.C. 2005. Remission of hepatocellular carcinoma with arginine depletion induced by systemic release of endogenous hepatic arginase due to transhepatic arterial embolisation, augmented by high-dose insulin: arginase as a potential drug candidate for hepatocellular carcinoma. *Cancer Lett.* 224: 67-80.

## SOURCE

arginase I (271-322) is expressed in *E. coli* as a 33 kDa tagged fusion protein corresponding to amino acids 271-322 of arginase I of human origin.

## PRODUCT

arginase I (271-322) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

## APPLICATIONS

arginase I (271-322) is suitable as a Western blotting control for sc-18355 and sc-20150.

## STORAGE

Store at -20° C; stable for one year from the date of shipment.

## RESEARCH USE

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