

ATE1 (m): 293T Lysate: sc-126458

BACKGROUND

Arginyl-tRNA-protein transferase (ATE1), also designated arginyltransferase 1, belongs to the R-transferase family of proteins. In order for a protein to be degraded via the ubiquitin pathway, arginylation of the protein is required. ATE1 plays an important role in this process, as it is important for the post-translational conjugation of arginine to the N-terminal aspartate-, glutamate- and possibly cystine-containing substrates. ATE1 is a 518 amino acid protein. Alternative splicing results in two distinct isoforms. ATE1, which is found as a monomer, can localize to the cytoplasm and/or the nucleus.

REFERENCES

1. Kwon, Y.T., Kashina, A.S. and Varshavsky, A. 1999. Alternative splicing results in differential expression, activity, and localization of the two forms of arginyl-tRNA-protein transferase, a component of the N-end rule pathway. *Mol. Cell. Biol.* 19: 182-193.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607103. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Kwon, Y.T., Kashina, A.S., Davydov, I.V., Hu, R.G., An, J.Y., Seo, J.W., Du, F. and Varshavsky, A. 2002. An essential role of N-terminal arginylation in cardiovascular development. *Science* 297: 96-99.
4. Hu, R.G., Sheng, J., Qi, X., Xu, Z., Takahashi, T.T. and Varshavsky, A. 2005. The N-end rule pathway as a nitric oxide sensor controlling the levels of multiple regulators. *Nature* 437: 981-986.
5. Rai, R. and Kashina, A. 2005. Identification of mammalian arginyltransferases that modify a specific subset of protein substrates. *Proc. Natl. Acad. Sci. USA* 102: 10123-10128.
6. Lee, M.J., Tasaki, T., Moroi, K., An, J.Y., Kimura, S., Davydov, I.V. and Kwon, Y.T. 2005. RGS4 and RGS5 are *in vivo* substrates of the N-end rule pathway. *Proc. Natl. Acad. Sci. USA* 102: 15030-15035.

CHROMOSOMAL LOCATION

Genetic locus: Ate1 (mouse) mapping to 7 F3.

PRODUCT

ATE1 (m): 293T Lysate represents a lysate of mouse ATE1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ATE1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ATE1 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.

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.

RESEARCH USE

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

PROTOCOLS

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