

ATE1 (S-17): sc-50218

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

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2. 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.
3. 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/>
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 (human) mapping to 10q26.13; Ate1 (mouse) mapping to 7 F3.

SOURCE

ATE1 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATE1 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.

Blocking peptide available for competition studies, sc-50218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ATE1 (S-17) is recommended for detection of ATE1 isoforms 1 and 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

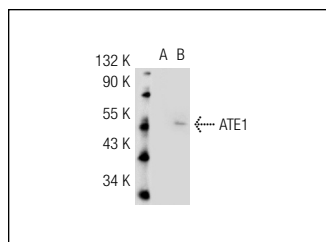
ATE1 (S-17) is also recommended for detection of ATE1 isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ATE1 siRNA (h): sc-60220, ATE1 siRNA (m): sc-60221, ATE1 shRNA Plasmid (h): sc-60220-SH, ATE1 shRNA Plasmid (m): sc-60221-SH, ATE1 shRNA (h) Lentiviral Particles: sc-60220-V and ATE1 shRNA (m) Lentiviral Particles: sc-60221-V.

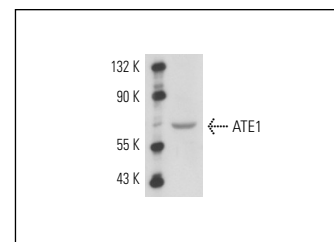
Molecular Weight of ATE1: 59 kDa.

Positive Controls: ATE1 (m): 293T Lysate: sc-126458, mouse embryo extract: sc-364239 or HeLa whole cell lysate: sc-2200.

DATA



ATE1 (S-17): sc-50218. Western blot analysis of ATE1 expression in non-transfected: sc-117752 (A) and mouse ATE1 transfected: sc-126458 (B) 293T whole cell lysates.



ATE1 (S-17): sc-50218. Western blot analysis of ATE1 expression in mouse embryo tissue extract.

RESEARCH USE

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

PROTOCOLS

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



Try **ATE1 (G-6): sc-398805** or **ATE1 (H-12): sc-271219**, our highly recommended monoclonal alternatives to ATE1 (S-17).