

AATK (L-37): sc-100436

BACKGROUND

AATK (apoptosis-associated tyrosine kinase), also known as LMR1 (Lemur tyrosine kinase 1), AATYK, AATYK1 or LMTK1, is a single-pass type I membrane protein that is involved in neuronal differentiation. Localized to the brain, AATK expression is induced during apoptosis and may be necessary for growth arrest of myeloid precursor cells. Additionally, AATK functions in death activation pathways in the brain where it helps to regulate neuronal apoptosis; a crucial event that minimizes brain damage and ensures proper development. AATK, which has *in vitro* kinase activity, contains a proline-rich domain at its C-terminus and a tyrosine kinase domain at its N-terminus. Three isoforms of AATK exist due to alternative splicing events.

REFERENCES

1. Seki, N., et al. 1999. Chromosomal assignment of a human apoptosis-associated tyrosine kinase gene on chromosome 17q25.3 by somatic hybrid analysis and fluorescence *in situ* hybridization. *J. Hum. Genet.* 44: 141-142.
2. Raghunath, M., et al. 2000. A novel kinase, AATYK induces and promotes neuronal differentiation in a human neuroblastoma (SH-SY5Y) cell line. *Brain Res. Mol. Brain Res.* 77: 151-162.
3. Baker, S.J., et al. 2001. Characterization of an alternatively spliced AATYK mRNA: expression pattern of AATYK in the brain and neuronal cells. *Oncogene* 20: 1015-1021.
4. Tomomura, M., et al. 2001. Characterization of the apoptosis-associated tyrosine kinase (AATYK) expressed in the CNS. *Oncogene* 20: 1022-1032.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605276. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Tomomura, M., et al. 2003. Differential expression and function of apoptosis-associated tyrosine kinase (AATYK) in the developing mouse brain. *Brain Res. Mol. Brain Res.* 112: 103-112.
7. Tomomura, M., et al. 2005. Apoptosis-associated tyrosine kinase (AATYK) has differential Ca²⁺-dependent phosphorylation states in response to survival and apoptotic conditions in cerebellar granule cells. *J. Biol. Chem.* 280: 35157-35163.

CHROMOSOMAL LOCATION

Genetic locus: AATK (human) mapping to 17q25.3; Aatk (mouse) mapping to 11 E2.

SOURCE

AATK (L-37) is a mouse monoclonal antibody raised against recombinant AATK of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AATK (L-37) is recommended for detection of AATK 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).

Suitable for use as control antibody for AATK siRNA (h): sc-93982, AATK siRNA (m): sc-140740, AATK shRNA Plasmid (h): sc-93982-SH, AATK shRNA Plasmid (m): sc-140740-SH, AATK shRNA (h) Lentiviral Particles: sc-93982-V and AATK shRNA (m) Lentiviral Particles: sc-140740-V.

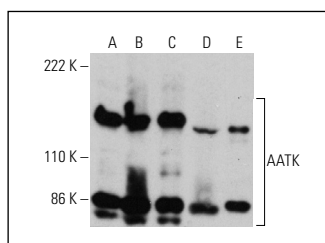
Molecular Weight of AATK isoforms: 145/45/93 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, CCRF-CEM cell lysate: sc-2225 or SK-N-SH cell lysate: sc-2410.

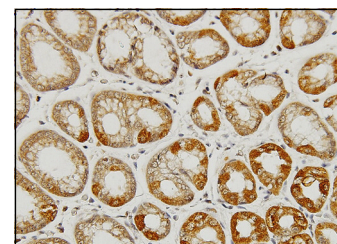
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AATK (L-37): sc-100436. Western blot analysis of AATK expression in HeLa nuclear extract (A) and CCRF-CEM (B), SK-N-SH (C), NIH/3T3 (D) and C6 (E) whole cell lysates.



AATK (L-37): sc-100436. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing membrane and cytoplasmic localization.

STORAGE

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

RESEARCH USE

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