ATP10A (E-20): sc-249980



The Power to Question

BACKGROUND

ATPase class V type 10A (ATP10A), also known as aminophospholipid translocase VA (ATPVA) or probable phospholipid-transporting ATPase VA, is a 1,499 amino acid protein belonging to the cation transport ATPase (P-type) family. Localized to the cell membrane, ATP10A is widely expressed in various tissues, with highest levels in kidney, lung, brain, prostate, testis, ovary and small intestine. ATP10A transports phosphatidylserine and phosphatidylethanolamine from one side of a membrane lipid bilayer to another. The gene encoding ATP10A is an imprinted gene that is maternally expressed. Defects in this gene lead to Angelman syndrome (AS), also known as happy puppet syndrome. AS is characterized by mental retardation, movement or balance disorder, characteristic abnormal behaviors and severe limitations in speech and language.

REFERENCES

- Kayashima, T., Yamasaki, K., Joh, K., Yamada, T., Ohta, T., Yoshiura, K., Matsumoto, N., Nakane, Y., Mukai, T., Niikawa, N. and Kishino, T. 2003. Atp10a, the mouse ortholog of the human imprinted ATP10A gene, escapes genomic imprinting. Genomics 81: 644-647.
- Kayashima, T., Ohta, T., Niikawa, N. and Kishino, T. 2003. On the conflicting reports of imprinting status of mouse ATP10a in the adult brain: strainbackground-dependent imprinting? J. Hum. Genet. 48: 492-493.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 605855. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 4. Kim, K.P., Thurston, A., Mummery, C., Ward-van Oostwaard, D., Priddle, H., Allegrucci, C., Denning, C. and Young, L. 2007. Gene-specific vulnerability to imprinting variability in human embryonic stem cell lines. Genome Res. 17: 1731-1742.
- Kato, C., Tochigi, M., Ohashi, J., Koishi, S., Kawakubo, Y., Yamamoto, K., Matsumoto, H., Hashimoto, O., Kim, S.Y., Watanabe, K., Kano, Y., Nanba, E., Kato, N. and Sasaki, T. 2008. Association study of the 15q11-q13 maternal expression domain in Japanese autistic patients. Am. J. Med. Genet. B Neuropsychiatr. Genet. 147B: 1008-1012.
- Giardina, E., Peconi, C., Cascella, R., Sinibaldi, C., Nardone, A.M. and Novelli, G. 2008. A multiplex molecular assay for the detection of uniparental disomy for human chromosome 15. Electrophoresis 29: 4775-4779.
- 7. Hogart, A., Patzel, K.A. and LaSalle, J.M. 2008. Gender influences monoallelic expression of ATP10A in human brain. Hum. Genet. 124: 235-242.
- Sigurdsson, M.I., Jamshidi, N., Jonsson, J.J. and Palsson, B.O. 2009. Genome-scale network analysis of imprinted human metabolic genes. Epigenetics 4: 43-46.

CHROMOSOMAL LOCATION

Genetic locus: Atp10a (mouse) mapping to 7 C.

RESEARCH USE

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

SOURCE

ATP10A (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of ATP10A of mouse 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-249980 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATP10A (E-20) is recommended for detection of ATP10A of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with ATP10B or ATP10D.

Suitable for use as control antibody for ATP10A siRNA (m): sc-141332, ATP10A shRNA Plasmid (m): sc-141332-SH and ATP10A shRNA (m) Lentiviral Particles: sc-141332-V.

Molecular Weight of ATP10A: 168 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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

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