

ATP10A/B/C (H-64): sc-99111

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: strain-background-dependent imprinting? *J. Hum. Genet.* 48: 492-493.
- 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/>
- 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.

CHROMOSOMAL LOCATION

Genetic locus: ATP10A (human) mapping to 15q12, ATP10B (human) mapping to, 5q34; Atp10a (mouse) mapping to 7 C, Atp10b (mouse) mapping to 11 A5.

SOURCE

ATP10A/B/C (H-64) is a rabbit polyclonal antibody raised against amino acids 1001-1064 mapping near the C-terminus of ATP10A 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.

RESEARCH USE

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

APPLICATIONS

ATP10A/B/C (H-64) is recommended for detection of ATP10A, ATP10B and ATP10C 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).

ATP10A/B/C (H-64) is also recommended for detection of ATP10A, ATP10B and ATP10C in additional species, including equine, canine, bovine and avian.

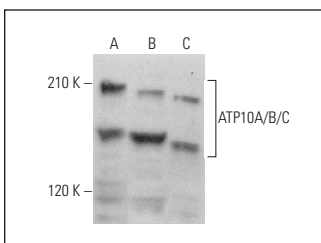
Molecular Weight of ATP10A/B/C: 168 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HEK293 whole cell lysate: sc-45136 or OVCAR-3 whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



ATP10A/B/C (H-64): sc-99111. Western blot analysis of ATP10A/B/C expression in HEK293 (A), OVCAR-3 (B) and SW480 (C) whole cell lysates.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **ATP10A (G-9): sc-514650**, our highly recommended monoclonal alternative to ATP10A/B/C (H-64).