

ATP9A (N-18): sc-85285

BACKGROUND

The family of P-type adenosine triphosphates (ATPases), which are phosphorylated in their intermediate state, are involved in the active transport of charged substrates across biological membranes. Members of this family are ubiquitous integral membrane proteins and can be divided into five major groups consisting of several subfamilies each. The P-type ATPase Type IV family members are characterized as phospholipid pumps and are then divided into six classes determined by sequence similarity. ATP9A (ATPase class II type 9A) is a 1,047 multi-pass transmembrane protein that uses ATP to maintain ion gradients across the cell membrane and may possess some aminophospholipid translocase activity. ATP9A is strongly expressed in all tissues, with lower expression found in spleen. There are two named isoforms of ATP9A characterized as long and short forms which are a result of alternative splicing events.

REFERENCES

- Ishikawa, K., Nagase, T., Suyama, M., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 169-176.
- Halleck, M.S., Lawler, J.F., J.R., Blackshaw, S., Gao, L., Nagarajan, P., Hacker, C., Pyle, S., Newman, J.T., Nakanishi, Y., Ando, H., Weinstock, D., Williamson, P. and Schlegel, R.A. 1999. Differential expression of putative transbilayer amphipath transporters. *Physiol. Genomics* 1: 139-150.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609126. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Flamant, S., Pescher, P., Lemerrier, B., Clement-Ziza, M., Kepès, F., Fellous, M., Milon, G., Marchal, G. and Besmond, C. 2003. Characterization of a putative type IV aminophospholipid transporter P-type ATPase. *Mamm. Genome* 14: 21-30.
- Dhar, M.S., Yuan, J.S., Elliott, S.B. and Sommardahl, C. 2006. A type IV P-type ATPase affects Insulin-mediated glucose uptake in adipose tissue and skeletal muscle in mice. *J. Nutr. Biochem.* 17: 811-820.
- Kubala, M. 2006. ATP-binding to P-type ATPases as revealed by biochemical, spectroscopic, and crystallographic experiments. *Proteins* 64: 1-12.
- Moller, A.B., Asp, T., Holm, P.B. and Palmgren, M.G. 2008. Phylogenetic analysis of P5 P-type ATPases, a eukaryotic lineage of secretory pathway pumps. *Mol. Phylogenet. Evol.* 46: 619-634.
- Niggli, V. and Sigel, E. 2008. Anticipating antiport in P-type ATPases. *Trends Biochem. Sci.* 33: 156-160.

CHROMOSOMAL LOCATION

Genetic locus: ATP9A (human) mapping to 20q13.2; Atp9a (mouse) mapping to 2 H3.

RESEARCH USE

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

SOURCE

ATP9A (N-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of ATP9A of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85285 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATP9A (N-18) is recommended for detection of ATP9A of mouse 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); non cross-reactive with ATP9B.

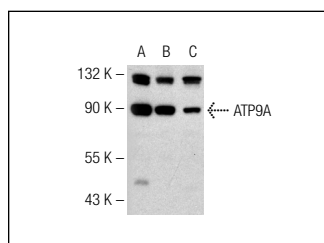
ATP9A (N-18) is also recommended for detection of ATP9A in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for ATP9A siRNA (h): sc-72589, ATP9A siRNA (m): sc-141368, ATP9A shRNA Plasmid (h): sc-72589-SH, ATP9A shRNA Plasmid (m): sc-141368-SH, ATP9A shRNA (h) Lentiviral Particles: sc-72589-V and ATP9A shRNA (m) Lentiviral Particles: sc-141368-V.

Molecular Weight of ATP9A: 100 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, HeLa whole cell lysate: sc-2200 or F9 cell lysate: sc-2245.

DATA



ATP9A (N-18): sc-85285. Western blot analysis of ATP9A expression in HeLa (A), PC-3 (B) and F9 (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.

PROTOCOLS

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