

ATP8A2 (H-45): sc-292155

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 5 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 6 classes determined by sequence similarity. ATP8A2 (ATPase class I type 8A member) is a 1,148 amino acid protein that is strongly expressed in brain, testis and heart. ATP8A2 is a multi-pass transmembrane protein that uses ATP to maintain ion gradients across the cell membrane and may possess some aminophospholipid translocase activity. There are two named isoforms of ATP8A2 which are a result of alternative splicing events.

REFERENCES

1. Sun, X.L., et al. 1999. Changes in levels of normal ML-1 gene transcripts associated with the conversion of human nontumorigenic to tumorigenic phenotypes. *Gene Expr.* 8: 129-139.
2. Halleck, M.S., et al. 1999. Differential expression of putative transbilayer amphipath transporters. *Physiol. Genomics* 1: 139-150.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605870. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Flamant, S., et al. 2003. Characterization of a putative type IV aminophospholipid transporter P-type ATPase. *Mamm. Genome* 14: 21-30.
5. Dhar, M.S., et al. 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.
6. Kubala, M. 2006. ATP-binding to P-type ATPases as revealed by biochemical, spectroscopic, and crystallographic experiments. *Proteins* 64: 1-12.
7. Møller, A.B., et al. 2008. Phylogenetic analysis of P5 P-type ATPases, a eukaryotic lineage of secretory pathway pumps. *Mol. Phylogenet. Evol.* 46: 619-634.

CHROMOSOMAL LOCATION

Genetic locus: ATP8A2 (human) mapping to 13q12.13; Atp8a2 (mouse) mapping to 14 D1.

SOURCE

ATP8A2 (H-45) is a rabbit polyclonal antibody raised against amino acids 714-758 mapping within an internal region of ATP8A2 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.

STORAGE

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

APPLICATIONS

ATP8A2 (H-45) is recommended for detection of ATP8A2 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).

ATP8A2 (H-45) is also recommended for detection of ATP8A2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ATP8A2 siRNA (h): sc-105108, ATP8A2 siRNA (m): sc-141364, ATP8A2 shRNA Plasmid (h): sc-105108-SH, ATP8A2 shRNA Plasmid (m): sc-141364-SH, ATP8A2 shRNA (h) Lentiviral Particles: sc-105108-V and ATP8A2 shRNA (m) Lentiviral Particles: sc-141364-V.

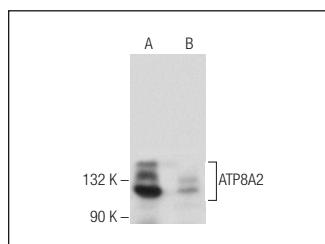
Molecular Weight of ATP8A2: 129 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or T98G cell lysate: sc-2294.

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



ATP8A2 (H-45): sc-292155. Western blot analysis of ATP8A2 expression in K-562 (A) and T98G (B) whole cell lysates.

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.