



ATP11B (P-18): sc-102334

BACKGROUND

ATP11B (ATPase, class VI, type 11B), also known as ATP1R or ATP1F, is a 1,177 amino acid multi-pass membrane protein that belongs to the cation transport family of P-type ATPases. Like most P-type ATPases, ATP11B is phosphorylated in its intermediate state and it uses ATP to drive the active transport of ions across cellular membranes. ATP11B, which contains ten transmembrane domains, is expressed at high levels in ovary, kidney, testis and corpus callosum and is encoded by a gene that maps to human chromosome 3. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. Nagase, T., Ishikawa, K., Suyama, M., Kikuno, R., Hirose, M., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1999. Prediction of the coding sequences of unidentified human genes. XIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 63-70.
2. Halleck, M.S., Lawler, J.F., JR., 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.
3. Mansharamani, M., Hewetson, A. and Chilton, B.S. 2001. Cloning and characterization of an atypical Type IV P-type ATPase that binds to the RING motif of RUSH transcription factors. J. Biol. Chem. 276: 3641-3649.
4. Halleck, M.S., Schlegel, R.A. and Williamson, P.L. 2002. Reanalysis of ATP11B, a type IV P-type ATPase. J. Biol. Chem. 277: 9736-9740.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605869. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Drögemüller, C., Kuiper, H., Spötter, A., Williams, J.L. and Distl, O. 2004. Mapping of the ATP11B gene and refined localization of the SOX2 and FXR1 genes to BTA1q33. Anim. Genet. 35: 499-501.
7. Andrew Nesbit, M., Bowl, M.R., Harding, B., Schlessinger, D., Whyte, M.P. and Thakker, R.V. 2004. X-linked hypoparathyroidism region on Xq27 is evolutionarily conserved with regions on 3q26 and 13q34 and contains a novel P-type ATPase. Genomics 84: 1060-1070.
8. Hewetson, A., Wright-Pastusek, A.E., Helmer, R.A., Wesley, K.A. and Chilton, B.S. 2008. Conservation of inter-protein binding sites in RUSH and RFBP, an ATP11B isoform. Mol. Cell. Endocrinol. 292: 79-86.

CHROMOSOMAL LOCATION

Genetic locus: ATP11B (human) mapping to 3q26.33.

STORAGE

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

SOURCE

ATP11B (P-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of ATP11B 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-102334 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATP11B (P-18) is recommended for detection of ATP11B of human 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).

Suitable for use as control antibody for ATP11B siRNA (h): sc-78522, ATP11B shRNA Plasmid (h): sc-78522-SH and ATP11B shRNA (h) Lentiviral Particles: sc-78522-V.

Molecular Weight of ATP11B: 134 kDa.

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) 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.

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.