ATP6E1 (h): 293 Lysate: sc-110889



The Power to Question

BACKGROUND

Vacuolar-type H+-ATPase (V-ATPase) is a multisubunit enzyme responsible for acidification of eukaryotic intracellular organelles. V-ATPases pump protons against an electrochemical gradient, while F-ATPases reverse the process, thereby synthesizing ATP. ATP6E1, also known as V-type proton ATPase subunit E 2, is a 226 amino acid phosphoprotein that belongs to the V-ATPase E subunit family. ATP6E1 is a subunit of the peripheral V1 complex of vacuolar ATPase and is essential for assembly or catalytic function. ATP6E1 is specifically transcribed in testis and spermatozoa, whereas ATP6E2 is expressed ubiquitously. The ATP6E1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, *E. gossypii, A. thaliana* and rice, and maps to human chromosome 2p21.

REFERENCES

- Ludwig, J., Kerscher, S., Brandt, U., Pfeiffer, K., Getlawi, F., Apps, D.K. and Schägger, H. 1998. Identification and characterization of a novel 9.2-kDa membrane sector-associated protein of vacuolar proton-ATPase from chromaffin granules. J. Biol. Chem. 273: 10939-10947.
- Imai-Senga, Y., Sun-Wada, G.H., Wada, Y. and Futai, M. 2002. A human gene, ATP6E1, encoding a testis-specific isoform of H+-ATPase subunit E. Gene 289: 7-12.
- 3. Nishi, T. and Forgac, M. 2002. The vacuolar H+-ATPases—nature's most versatile proton pumps. Nat. Rev. Mol. Cell Biol. 3: 94-103.
- 4. Morel, N. 2003. Neurotransmitter release: the dark side of the vacuolar-H+ATPase. Biol. Cell 95: 453-457.
- Kawasaki-Nishi, S., Nishi, T. and Forgac, M. 2003. Proton translocation driven by ATP hydrolysis in V-ATPases. FEBS Lett. 545: 76-85.
- Smith, A.N., Lovering, R.C., Futai, M., Takeda, J., Brown, D. and Karet, F.E. 2003. Revised nomenclature for mammalian vacuolar-type H+-ATPase subunit genes. Mol. Cell 12: 801-803.
- 7. Da Silva, N., Pisitkun, T., Belleannée, C., Miller, L.R., Nelson, R., Knepper, M.A., Brown, D. and Breton, S. 2010. Proteomic analysis of V-ATPase-rich cells harvested from the kidney and epididymis by fluorescence-activated cell sorting. Am. J. Physiol., Cell Physiol. 298: C1326-C1342.

CHROMOSOMAL LOCATION

Genetic locus: ATP6V1E2 (human) mapping to 2p21.

PRODUCT

ATP6E1 (h): 293 Lysate represents a lysate of human ATP6E1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

ATP6E1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive ATP6E1 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures

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