

ATP6E (D-20): sc-21218

BACKGROUND

ATP6E, also known as V-ATPase E, is a vacuolar-type H⁺-ATPase (V-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. A peripheral V₁ domain, which is responsible for ATP hydrolysis, and an integral V₀ domain, which is responsible for proton translocation, compose V-ATPase. Nine subunits (A-H) make up the V₁ domain and five subunits (a, d, c, c' and c'') make up the V₀ domain. Like F-ATPase, V-ATPase most likely operates through a rotary mechanism. ATP6E controls acidification of the vacuolar system and provides the main proton-motive force.

REFERENCES

1. Baud, V., Mears, A.J., Lamour, V., Scamps, C., Duncan, A.M., McDermid, H.E. and Lipinski, M. 1994. The E subunit of vacuolar H⁺-ATPase localizes close to the centromere on human chromosome 22. *Hum. Mol. Genet.* 3: 335-339.
2. Oka, T., Yamamoto, R. and Futai, M. 1997. Three VHA genes encode proteolipids of *C. elegans* vacuolar-type ATPase. Gene structures and preferential expression in an H-shaped excretory cell and rectal cells. *J. Biol. Chem.* 272: 24387-24392.
3. Ludwig, J., Kerscher, S., Brandt, U., Pfeiffer, K., Getlawi, F., Apps, D.K. and Schagger, 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.
4. Nishi, T. and Forgacs, M. 2002. The vacuolar H⁺-ATPases—nature's most versatile proton pumps. *Nat. Rev. Mol. Cell Biol.* 3: 94-103.
5. LocusLink Report (LocusID: 8992). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: ATP6V1E1 (human) mapping to 22q11.21; Atp6v1e1 (mouse) mapping to 6 F1.

SOURCE

ATP6E (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATP6E 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.

Blocking peptide available for competition studies, sc-21218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

ATP6E (D-20) is recommended for detection of ATP6E 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

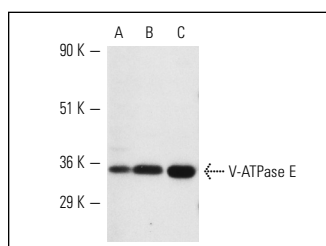
ATP6E (D-20) is also recommended for detection of ATP6E in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ATP6E siRNA (h): sc-36793, ATP6E siRNA (m): sc-36794, ATP6E shRNA Plasmid (h): sc-36793-SH, ATP6E shRNA Plasmid (m): sc-36794-SH, ATP6E shRNA (h) Lentiviral Particles: sc-36793-V and ATP6E shRNA (m) Lentiviral Particles: sc-36794-V.

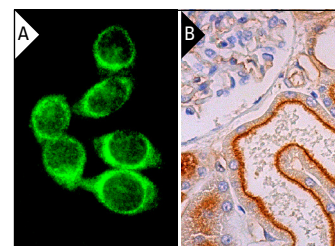
Molecular Weight of ATP6E: 33 kDa.

Positive Controls: mouse brain extract: sc-2253, HeLa whole cell lysate: sc-2200 or F9 cell lysate: sc-2245.

DATA



V-ATPase E (D-20): sc-21218. Western blot analysis of V-ATPase E expression in HeLa (A) and F9 (B) whole cell lysates and mouse brain tissue extract (C).



V-ATPase E (D-20): sc-21218. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules (B).

PROTOCOLS

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



Try **ATP6E (G-3): sc-514143** or **ATP6E (C-1): sc-48375**, our highly recommended monoclonal alternatives to ATP6E (D-20).