SANTA CRUZ BIOTECHNOLOGY, INC.

ATP6E (FL-226): sc-20946

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 V_1 domain, which is responsible for ATP hydrolysis, and a integral V_0 domain, which is responsible for proton translocation, compose V-ATPase. Nine subunits (A-H) make up the V_1 domain and five subunits (a, d, c, c' and c") make up the V_0 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., et al. 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., et al. 1997. Three VHA genes encode proteo-lipids 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.

CHROMOSOMAL LOCATION

Genetic locus: ATP6V1E2 (human) mapping to 2p21, ATP6V1E1 (human) mapping to 22q11.21; Atp6v1e1 (mouse) mapping to 6 F1.

SOURCE

ATP6E (FL-226) is a rabbit polyclonal antibody raised against amino acids 1-226 representing full length 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.

APPLICATIONS

ATP6E (FL-226) 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 (FL-226) is also recommended for detection of ATP6E in additional species, including equine, canine, bovine, porcine and avian.

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.

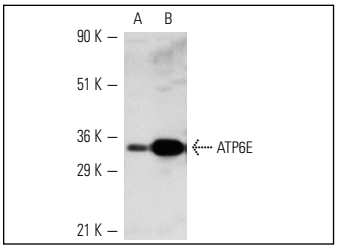
Molecular Weight of ATP6E: 33 kDa.

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

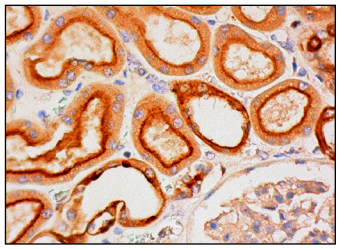
STORAGE

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

DATA



ATP6E (FL-226): sc-20946. Western blot analysis of ATP6E expression in HeLa whole cell lysate (**A**) and mouse brain tissue extract (**B**).



ATP6E (FL-226): sc-20946. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane and cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Kujala, M., et al. 2005. SLC26A6 and SLC26A7 anion exchangers have a distinct distribution in human kidney. Nephron Exp. Nephrol. 101: e50-e58.
2. Fiori, M., et al. 2006. Relative contribution of V-H^+ATPase and NA^+/H^+ exchanger to bicarbonate reabsorption in proximal convoluted tubules of old rats. Aging Cell 5: 367-372.
3. Kujala, M., et al. 2007. Expression of ion transport-associated proteins in human efferent and epididymal ducts. Reproduction 133: 775-784.
4. Diaz-Sylvester, P.L., et al. 2008. Effect of chronic inhibition of converting enzyme on proximal tubule acidification. Am. J. Physiol. Regul. Integr. Comp. Physiol. 294: R2014-R2020.
5. Hendrix, A., et al. 2013. Vacuolar H^+ ATPase expression and activity is required for Rab27B-dependent invasive growth and metastasis of breast cancer. Int. J. Cancer 133: 843-854.

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.