

ATP6E (C-1): sc-48375

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., 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.
3. Ludwig, J., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

ATP6E (C-1) is a mouse monoclonal antibody raised against amino acids 1-226 representing full length ATP6E of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ATP6E (C-1) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

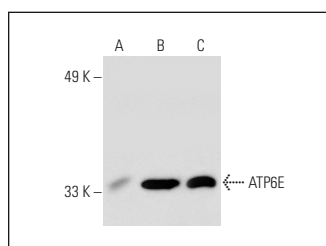
Molecular Weight of ATP6E: 33 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, HeLa whole cell lysate: sc-2200 or ATP6E (m): 293T Lysate: sc-118629.

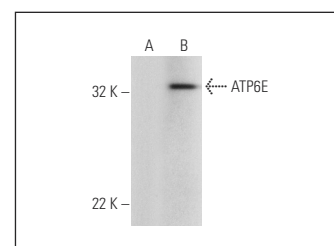
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ATP6E (C-1): sc-48375. Western blot analysis of ATP6E expression in non-transfected 293T: sc-117752 (A), mouse ATP6E transfected 293T: sc-118629 (B) and MOLT-4 (C) whole cell lysates.



ATP6E (C-1): sc-48375. Western blot analysis of ATP6E expression in non-transfected: sc-117752 (A) and mouse ATP6E transfected: sc-110138 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Nordenfelt, P., et al. 2012. V-ATPase-mediated phagosomal acidification is impaired by *Streptococcus pyogenes* through Mga-regulated surface proteins. *Microbes Infect.* 14: 1319-1329.
2. Lee, J.J., et al. 2019. Lysosome-associated membrane protein-2 deficiency increases the risk of reactive oxygen species-induced ferroptosis in retinal pigment epithelial cells. *Biochem. Biophys. Res. Commun.* E-published.

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.

PROTOCOLS

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