SANTA CRUZ BIOTECHNOLOGY, INC.

V-ATPase D (Q-19): sc-31469

SANTA CRUZ BIOTECHNOLOGY

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. A peripheral V_1 domain, which is responsible for ATP hydrolysis, and an 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. V-ATPase C is an auxiliary subunit with ubiquitous expression.

REFERENCES

1. Nelson, H., et al. 1990. Molecular cloning of cDNA encoding the C subunit of H^+-ATPase from bovine chromaffin granules. J. Biol. Chem. 265: 20390- 20393.
2. van Hille, Vanek, M., et al. 1993. Cloning and tissue distribution of subunits C, D, and E of the human vacuolar H^+-ATPase. Biochem. Biophys. Res. Commun. 197: 15-21.

CHROMOSOMAL LOCATION

Genetic locus: ATP6V1D (human) mapping to 14q23.3; Atp6v1d (mouse) mapping to 12 C3.

SOURCE

V-ATPase D (Q-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of V-ATPase D 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-31469 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

V-ATPase D (Q-19) is recommended for detection of V-ATPase D 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).

V-ATPase D (Q-19) is also recommended for detection of V-ATPase D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for V-ATPase D siRNA (h): sc-36791, V-ATPase D siRNA (m): sc-36792, V-ATPase D shRNA Plasmid (h): sc-36791-SH, V-ATPase D shRNA Plasmid (m): sc-36792-SH, V-ATPase D shRNA (h) Lentiviral Particles: sc-36791-V and V-ATPase D shRNA (m) Lentiviral Particles: sc-36792-V.

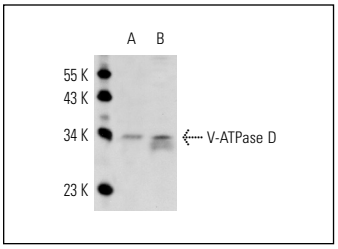
Molecular Weight of V-ATPase D: 38 kDa.

Positive Controls: rat brain extract: sc-2392 or SK-N-SH cell lysate: sc-2410.

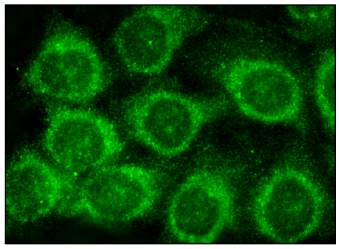
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



V-ATPase D (Q-19): sc-31469. Western blot analysis of V-ATPase D expression in SK-N-SH whole cell lysate (**A**) and rat brain tissue extract (**B**).



V-ATPase D (Q-19): sc-31469. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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 or our catalog for detailed protocols and support products.