SANTA CRUZ BIOTECHNOLOGY, INC.

V-ATPase D2 (D-18): sc-69108

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 V1 domain, which is responsible for ATP hydrolysis, and a 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. V-ATPase D2 is a 350 amino acid protein that is expressed in kidney, lung and osteoclast. V-ATPase D2 has been implicated as a regulator of urine acidification, osteoclast fusion and bone formation. Furthermore, V-ATPase D2 has been identified as a dendritic cell marker.

CHROMOSOMAL LOCATION

Genetic locus: ATP6V0D2 (human) mapping to 8q21.3; Atp6v0d2 (mouse) mapping to 4 A3.

SOURCE

V-ATPase D2 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of V-ATPase D2 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-69108 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.

APPLICATIONS

V-ATPase D2 (D-18) is recommended for detection of V-ATPase D2 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 D2 (D-18) is also recommended for detection of V-ATPase D2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for V-ATPase D2 siRNA (h): sc-76885, V-ATPase D2 siRNA (m): sc-76886, V-ATPase D2 shRNA Plasmid (h): sc-76885-SH, V-ATPase D2 shRNA Plasmid (m): sc-76886-SH, V-ATPase D2 shRNA (h) Lentiviral Particles: sc-76885-V and V-ATPase D2 shRNA (m) Lentiviral Particles: sc-76886-V.

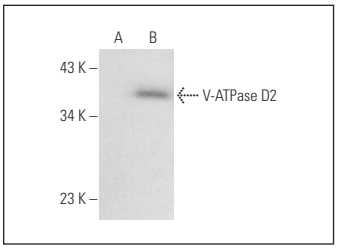
Molecular Weight of V-ATPase D2: 40 kDa.

Positive Controls: V-ATPase D2 (h): 293T Lysate: sc-116744, Y79 cell lysate: sc-2240 or Caki-1 cell lysate: sc-2224.

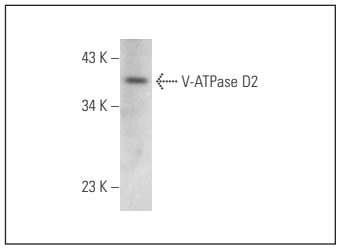
RECOMMENDED SECONDARY REAGENTS

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 D2 (D-18): sc-69108. Western blot analysis of V-ATPase D2 expression in non-transfected: sc-117752 (**A**) and human V-ATPase D2 transfected: sc-116744 (**B**) 293T whole cell lysates.



V-ATPase D2 (D-18): sc-69108. Western blot analysis of V-ATPase D2 expression in Y79 whole cell lysate.

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.

MONOS Satisfaction Guaranteed

Try **V-ATPase D2 (7A4): sc-517031**, our highly recommended monoclonal alternative to V-ATPase D2 (D-18).