

# V-ATPase D1 (H-40): sc-366079

## BACKGROUND

Vacuolar-type H<sup>+</sup>-ATPase (V-ATPase) is a multisubunit enzyme responsible for the 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<sub>1</sub> domain, which is responsible for ATP hydrolysis, and an integral V<sub>0</sub> domain, which is responsible for proton translocation, comprise the V-ATPase complex. Nine subunits (A-H) make up the V<sub>1</sub> domain and five subunits (A, D, C, C' and C'') make up the V<sub>0</sub> domain. V-ATPase D1 (ATPase, H<sup>+</sup> transporting, lysosomal, V<sub>0</sub> subunit D1), also known as ATP6V0D1, P39, VATX, VMA6, ATP6D or VPATPD, is the D subunit of the V<sub>0</sub> domain. Expressed ubiquitously, V-ATPase D1 acts in concert with other V<sub>0</sub> subunits to catalytically acidify a variety of intracellular compartments, thereby synthesizing ATP to be used for vacuolar transport.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ATP6V0D1 (human) mapping to 16q22.1; Atp6v0d1 (mouse) mapping to 8 D3.

## SOURCE

V-ATPase D1 (H-40) is a rabbit polyclonal antibody raised against amino acids 66-105 mapping within an internal region of V-ATPase D1 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

V-ATPase D1 (H-40) is recommended for detection of V-ATPase D1 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 D1 (H-40) is also recommended for detection of V-ATPase D1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for V-ATPase D1 siRNA (h): sc-63207, V-ATPase D1 siRNA (m): sc-63208, V-ATPase D1 shRNA Plasmid (h): sc-63207-SH, V-ATPase D1 shRNA Plasmid (m): sc-63208-SH, V-ATPase D1 shRNA (h) Lentiviral Particles: sc-63207-V and V-ATPase D1 shRNA (m) Lentiviral Particles: sc-63208-V.

Molecular Weight of V-ATPase D1: 40 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **V-ATPase D1 (D-4): sc-393322** or **V-ATPase D1 (34-Z): sc-81887**, our highly recommended monoclonal alternatives to V-ATPase D1 (H-40).