

V-ATPase α 1 (C-15): sc-69088

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. The V-ATPase is comprised of a peripheral V1 domain, which is responsible for ATP hydrolysis, and an integral V0 domain, which is responsible for proton translocation. 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, coupling ATP hydrolysis by the V1 domain to proton translocation by the V0 domain. V-ATPase α 1, also known as H068, VA68, VPP2, Vma1 or ATP6V1A1, functions as the A subunit of the V1 domain. It is a 617 amino acid, ubiquitously expressed protein.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ATP6V1A (human) mapping to 3q13.2; Atp6v1a (mouse) mapping to 16 B4.

SOURCE

V-ATPase α 1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of V-ATPase α 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69088 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

V-ATPase α 1 (C-15) is recommended for detection of V-ATPase α 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 α 1 (C-15) is also recommended for detection of V-ATPase α 1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for V-ATPase α 1 siRNA (h): sc-63199, V-ATPase α 1 siRNA (m): sc-63200, V-ATPase α 1 shRNA Plasmid (h): sc-63199-SH, V-ATPase α 1 shRNA Plasmid (m): sc-63200-SH, V-ATPase α 1 shRNA (h) Lentiviral Particles: sc-63199-V and V-ATPase α 1 shRNA (m) Lentiviral Particles: sc-63200-V.

Molecular Weight of V-ATPase α 1: 68 kDa.

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) 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.

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.


 MONOS
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Guaranteed

Try **V-ATPase α 1 (4F5): sc-293336**, our highly recommended monoclonal alternative to V-ATPase α 1 (C-15).