

V-ATPase G1/2 (N-20): sc-21225

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 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. In yeast, the V-ATPase G subunit is a soluble subunit that shares homology with the F-ATPase G subunit and may be part of a connection stalk between V₁ and V₀. The G2 isoform of the G subunit associates with the pore-forming A1c-subunit of L-type calcium channel and aids in proper membrane targeting of the calcium channel. The genes encoding the G1 and G2 V-ATPase subunits map to chromosomes 9q33.1 and 6p21.3, respectively.

CHROMOSOMAL LOCATION

Genetic locus: ATP6V1G1 (human) mapping to 9q32; ATP6V1G2 (human) mapping to 6p21.33; Atp6v1g1 (mouse) mapping to 4 C1; Atp6v1g2 (mouse) mapping to 17 B1.

SOURCE

V-ATPase G1/2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of V-ATPase G1 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-21225 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

V-ATPase G1/2 (N-20) is recommended for detection of V-ATPase subunit G isoforms 1 and 2 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 G1/2 (N-20) is also recommended for detection of V-ATPase subunit G isoforms 1 and 2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for V-ATPase G1 siRNA (h): sc-36797, V-ATPase G1 siRNA (m): sc-36798, V-ATPase G1 shRNA Plasmid (h): sc-36797-SH, V-ATPase G1 shRNA Plasmid (m): sc-36798-SH, V-ATPase G1 shRNA (h) Lentiviral Particles: sc-36797-V and V-ATPase G1 shRNA (m) Lentiviral Particles: sc-36798-V.

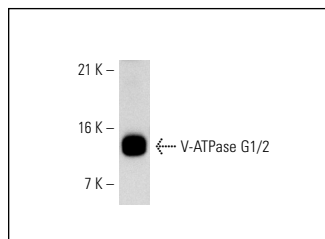
Molecular Weight of V-ATPase G1/2: 13 kDa.

Positive Controls: rat kidney extract: sc-2394.

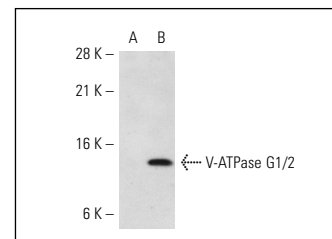
RECOMMENDED SECONDARY REAGENTS

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 G1/2 (N-20): sc-21225. Western blot analysis of V-ATPase G1/2 expression in rat kidney tissue extract.



V-ATPase G1/2 (N-20): sc-21225. Western blot analysis of V-ATPase G1/2 expression in non-transfected: sc-110760 (A) and mouse V-ATPase G1/2 transfected: sc-111266 (B) 293 whole cell lysates.

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
Satisfaction
Guaranteed

Try **V-ATPase G1 (D-5): sc-25333**, our highly recommended monoclonal alternative to V-ATPase G1/2 (N-20).