

Na⁺/K⁺-ATPase α2 (A-16): sc-31391

BACKGROUND

The ubiquitously expressed sodium/potassium-ATPase (Na⁺/K⁺-ATPase) exists as an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the importation of three Na⁺ ions and two K⁺ ions against their respective electrochemical gradients. As a member of the P-type family of ion motives, Na⁺/K⁺-ATPase plays a critical role in maintaining cellular volume, resting membrane potential and Na⁺-coupled solute transport. Multiple isoforms of three subunits, α, β and γ, comprise the Na⁺/K⁺-ATPase oligomer. The α subunit contains the binding sites for ATP and the cations, while the glycosylated β subunit ensures correct folding and membrane insertion of the α subunits. The small γ subunit co-localizes with the α subunit in nephron segments, where it increases the affinity of the Na⁺/K⁺-ATPase for ATP. While the γ subunit is not essential for normal activity of Na⁺/K⁺-ATPase, the β subunit is.

CHROMOSOMAL LOCATION

Genetic locus: ATP1A2 (human) mapping to 1q23.2; Atp1a2 (mouse) mapping to 1 H3.

SOURCE

Na⁺/K⁺-ATPase α2 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of Na⁺/K⁺-ATPase α2 of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31391 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Na⁺/K⁺-ATPase α2 (A-16) is recommended for detection of Na⁺/K⁺-ATPase α2 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).

Na⁺/K⁺-ATPase α2 (A-16) is also recommended for detection of Na⁺/K⁺-ATPase α2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Na⁺/K⁺-ATPase α2 siRNA (h): sc-42660, Na⁺/K⁺-ATPase α2 siRNA (m): sc-42661, Na⁺/K⁺-ATPase α2 shRNA Plasmid (h): sc-42660-SH, Na⁺/K⁺-ATPase α2 shRNA Plasmid (m): sc-42661-SH, Na⁺/K⁺-ATPase α2 shRNA (h) Lentiviral Particles: sc-42660-V and Na⁺/K⁺-ATPase α2 shRNA (m) Lentiviral Particles: sc-42661-V.

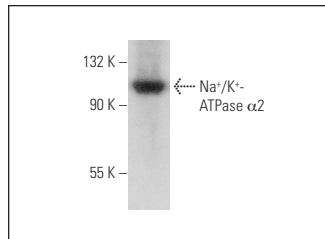
Molecular Weight of Na⁺/K⁺-ATPase α2: 113 kDa.

Positive Controls: rat brain extract: sc-2392, MDCK cell lysate: sc-2252 or HeLa whole cell lysate: sc-2200.

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



Na⁺/K⁺-ATPase α2 (A-16): sc-31391. Western blot analysis of Na⁺/K⁺-ATPase α2 expression in rat brain tissue extract.

SELECT PRODUCT CITATIONS

- Ding, C., et al. 2011. Na⁺/K⁺-ATPase in the lacrimal glands of rabbits and its changes during induced autoimmune dacryoadenitis. *Mol. Vis.* 17: 2368-2379.

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.



Try **Na⁺/K⁺-ATPase α (H-3): sc-48345** or **Na⁺/K⁺-ATPase α (M7-PB-E9): sc-58628**, our highly recommended monoclonal alternatives to Na⁺/K⁺-ATPase α2 (A-16).