

Na⁺/K⁺-ATPase α 3 (Y-13): sc-67697

BACKGROUND

The ubiquitously expressed sodium/potassium-ATPase (Na⁺/K⁺-ATPase) exists as a 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 to form the Na⁺/K⁺-ATPase oligomer. The α subunit contains the binding sites for ATP and the cations; 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 Na⁺/K⁺-ATPase for ATP. The β subunit, but not the γ subunit, is essential for normal activity of Na⁺/K⁺-ATPase.

CHROMOSOMAL LOCATION

Genetic locus: ATP1A3 (human) mapping to 19q13.2; Atp1a3 (mouse) mapping to 7 A3.

SOURCE

Na⁺/K⁺-ATPase α 3 (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Na⁺/K⁺-ATPase α 3 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-67697 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Na⁺/K⁺-ATPase α 3 (Y-13) is recommended for detection of Na⁺/K⁺-ATPase α 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 α 3 (Y-13) is also recommended for detection of Na⁺/K⁺-ATPase α 3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Na⁺/K⁺-ATPase α 3 siRNA (h): sc-36012, Na⁺/K⁺-ATPase α 3 siRNA (m): sc-36013, Na⁺/K⁺-ATPase α 3 shRNA Plasmid (h): sc-36012-SH, Na⁺/K⁺-ATPase α 3 shRNA Plasmid (m): sc-36013-SH, Na⁺/K⁺-ATPase α 3 shRNA (h) Lentiviral Particles: sc-36012-V and Na⁺/K⁺-ATPase α 3 shRNA (m) Lentiviral Particles: sc-36013-V.

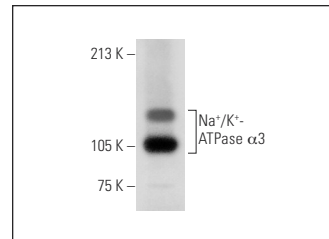
Molecular Weight of Na⁺/K⁺-ATPase α 3: 113 kDa.

Positive Controls: mouse brain extract: sc-2253, THP-1 cell lysate: sc-2238 or Hep G2 cell lysate: sc-2227.

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 α 3 (Y-13): sc-67697. Western blot analysis of Na⁺/K⁺-ATPase α 3 expression in mouse brain tissue extract.

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 **Na⁺/K⁺-ATPase α 3 (H-4): sc-365744** or **Na⁺/K⁺-ATPase α 3 (G-6): sc-376967**, our highly recommended monoclonal alternatives to Na⁺/K⁺-ATPase α 3 (Y-13).