

Na⁺/K⁺-ATPase β3 (15-2): sc-130362

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; 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ATP1B3 (human) mapping to 3q23.

SOURCE

Na⁺/K⁺-ATPase β3 (15-2) is a mouse monoclonal antibody raised against recombinant Na⁺/K⁺-ATPase β3 of human origin.

PRODUCT

Each vial contains 100 μg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Na⁺/K⁺-ATPase β3 (15-2) is recommended for detection of Na⁺/K⁺-ATPase β3 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

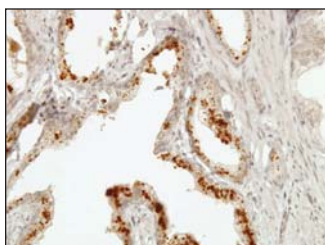
Suitable for use as control antibody for Na⁺/K⁺-ATPase β3 siRNA (h): sc-62002, Na⁺/K⁺-ATPase β3 shRNA Plasmid (h): sc-62002-SH and Na⁺/K⁺-ATPase β3 shRNA (h) Lentiviral Particles: sc-62002-V.

Molecular Weight of Na⁺/K⁺-ATPase β3: 40-60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



Na⁺/K⁺-ATPase β3 (15-2): sc-130362. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human prostate tissue showing cytoplasmic localization.

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.