**Na⁺/K⁺-ATPase β1 (464.8): sc-58626**

**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 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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ATP1B1 (human) mapping to 1q24.2; Atp1b1 (mouse) mapping to 1 H2.2.

**SOURCE**

Na⁺/K⁺-ATPase β1 (464.8) is a mouse monoclonal antibody raised against purified rabbit renal outer medulla, epitope maps to an external domain of the β1 subunit.

**PRODUCT**

Each vial contains 200 µg IgG₂a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Na⁺/K⁺-ATPase β1 (464.8) is recommended for detection of Na⁺/K⁺-ATPase β1 of mouse, rat, human, rabbit, canine, bovine and porcine 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).


Molecular Weight of Na⁺/K⁺-ATPase β1: 40-60 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), 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).


**DATA**

- Western blot analysis of Na⁺/K⁺-ATPase β1 expression in Caki-1 and MOLT-4 whole cell lysates and rat brain tissue extract.

**SELECT PRODUCT CITATIONS**


**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 website at www.scbt.com for detailed protocols and support products.