**Na⁺/K⁺-ATPase α (H-3): sc-48345**

**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.

**SOURCE**

Na⁺/K⁺-ATPase α (H-3) is a mouse monoclonal antibody raised against amino acids 551-850 of Na⁺/K⁺-ATPase α1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG₂κ, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Na⁺/K⁺-ATPase α (H-3) is available conjugated to agarose (sc-48345 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, or to HRP (sc-48345 HRP), 200 µg/ml, for WB, HRP, and ELISA; to either phycoerythrin (sc-48345 PE), fluorescein (sc-48345 FITC), Alexa Fluor® 488 (sc-48345 AF488), Alexa Fluor® 546 (sc-48345 AF546), Alexa Fluor® 594 (sc-48345 AF594) or Alexa Fluor® 647 (sc-48345 AF647), 200 µg/ml, for WB (RGB), IF, ELISA, and FCM; and to either Alexa Fluor® 680 (sc-48345 AF680) or Alexa Fluor® 790 (sc-48345 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF, and FCM.

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**APPLICATIONS**

Na⁺/K⁺-ATPase α (H-3) is recommended for detection of Na⁺/K⁺-ATPase α1, and 2 and 3 in mouse, rat and human origin by Western Blotting (starting dilution 1:2000, dilution range 1:2000-1:10000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immuno-fluorescence (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 1:300-1:3000).

Na⁺/K⁺-ATPase α (H-3) is also recommended for detection of Na⁺/K⁺-ATPase α1, 2 and 3 in additional species, including canine.


Molecular Weight of Na⁺/K⁺-ATPase α isoforms: 100-113 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human kidney extract: sc-363764 or MDCK cell lysate: sc-2252.

**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.