Na⁺/K⁺-ATPase α3 (H-4): sc-365744

**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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

Na⁺/K⁺-ATPase α3 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 419-446 within an internal region of Na⁺/K⁺-ATPase α3 of human origin.

**PRODUCT**

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

Na⁺/K⁺-ATPase α3 (H-4) is available conjugated to agarose (sc-365744 AC), 50 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365744 HRP), 200 µg/ml, for WB, IHQD and ELISA; to either phycoerythrin (sc-365744 PE), fluorescein (sc-365744 FITC), Alexa Fluor® 488 (sc-365744 AF488), Alexa Fluor® 546 (sc-365744 AF546), Alexa Fluor® 594 (sc-365744 AF594) or Alexa Fluor® 647 (sc-365744 AF647), 200 µg/ml, for WB (RGB), IF, IHQD and FCM; and to either Alexa Fluor® 680 (sc-365744 AF680) or Alexa Fluor® 790 (sc-365744 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365744 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

Na⁺/K⁺-ATPase α3 (H-4) is recommended for detection of Na⁺/K⁺-ATPase α3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 α3 (H-4) is also recommended for detection of Na⁺/K⁺-ATPase α3 in additional species, including equine, canine and porcine.


Molecular Weight of Na⁺/K⁺-ATPase α3: 113 kDa.

Positive Controls: Daudi cell lysate: sc-2415, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

**DATA**

**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.

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