Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 (E-4): sc-376406

**BACKGROUND**

The ubiquitously expressed sodium/potassium-ATPase (Na\textsuperscript{+}/K\textsuperscript{+}-ATPase) exists as an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the importation of three Na\textsuperscript{+} ions and two K\textsuperscript{+} ions against their respective electrochemical gradients. As a member of the P-type family of ion motives, Na\textsuperscript{+}/K\textsuperscript{+}-ATPase plays a critical role in maintaining cellular ion motives, Na\textsuperscript{+}/K\textsuperscript{+}-ATPase. The ubiquitously expressed sodium/potassium-ATPase (Na\textsuperscript{+}/K\textsuperscript{+}-ATPase) is a molecule of ATP to the importation of three Na\textsuperscript{+} ions and two K\textsuperscript{+} ions against their respective electrochemical gradients. As a member of the P-type family of ion motives, Na\textsuperscript{+}/K\textsuperscript{+}-ATPase plays a critical role in maintaining cellular ion motives, Na\textsuperscript{+}/K\textsuperscript{+}-ATPase.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: ATP1B1 (human) mapping to 1q24.2.

**SOURCE**

Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 (E-4) is a mouse monoclonal antibody raised against amino acids 41-155 of Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG\textsubscript{\alpha}, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 (E-4) is available conjugated to agarose (sc-376406 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376406 HRP), 200 µg/ml, for WB, (HCP) and ELISA; to either phycoerythrin (sc-376406 PE), fluorescein (sc-376406 FITC), Alexa Fluor\textsuperscript{®} 488 (sc-376406 AF488), Alexa Fluor\textsuperscript{®} 546 (sc-376406 AF546), Alexa Fluor\textsuperscript{®} 594 (sc-376406 AF594) or Alexa Fluor\textsuperscript{®} 647 (sc-376406 AF647), 200 µg/ml, for WB (RGB), IF, IHC\textsuperscript{\alpha} and FCM; and to either Alexa Fluor\textsuperscript{®} 680 (sc-376406 AF680) or Alexa Fluor\textsuperscript{®} 790 (sc-376406 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**RESEARCH USE**

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

**APPLICATIONS**

Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 (E-4) is recommended for detection of Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 of 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), 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\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 siRNA (h): sc-36008, Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 shRNA Plasmid (h): sc-36008-Sh and Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 shRNA (h) Lentiviral Particles: sc-36008-V.

Molecular Weight of Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1: 40-60 kDa.

Positive Controls: human kidney extract: sc-363764, Caki-1 cell lysate: sc-2224 or human brain extract: sc-364375.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG\textsuperscript{\alpha} BP-HRP: sc-516102 or m-IgG\textsuperscript{\alpha} BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker\textsuperscript{TM} Molecular Weight Standards: sc-2035, UltraCruz\textsuperscript{®} Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2048. 3) Immunofluorescence: use m-IgG\textsuperscript{\alpha} BP-FITC: sc-516140 or m-IgG\textsuperscript{\alpha} BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz\textsuperscript{®} Hard-set Mounting Medium: sc-24941 or UltraCruz\textsuperscript{®} Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG\textsuperscript{\alpha} BP-HRP: sc-516102 with DAB, 50X: sc-24982 and ImmunohistoMount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 (E-4) is recommended for detection of Na\textsuperscript{+}/K\textsuperscript{+}-ATPase \(\beta\)1 of 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), 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).

**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.