

NKAIN1 (E-13): sc-248079

BACKGROUND

The ubiquitously expressed sodium/potassium-ATPase (Na⁺/K⁺-ATPase) is an oligomeric plasma membrane complex that couples the hydrolysis of one molecule of ATP to the import 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. NKAIN1 (Na⁺/K⁺ transporting ATPase interacting 1), also known as FAM77C, is a 207 amino acid multi-pass membrane protein that belongs to the NKAIN family and interacts with the C-terminus of Na⁺/K⁺-ATPase β 1. NKAIN1 is expressed in brain and testis, and is encoded by a gene that maps to human chromosome 1p35.2.

REFERENCES

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- Zatyka, M., et al. 2008. Sodium-potassium ATPase 1 subunit is a molecular partner of Wolframin, an endoplasmic reticulum protein involved in ER stress. *Hum. Mol. Genet.* 17: 190-200.
- Liu, K., et al. 2009. Interference of human Na/K-ATPaseB1 subunit on proliferation and migration of gastric adenocarcinoma cell line SGC-7901. *Ai Zheng* 28: 225-231.
- Bab-Dinitz, E., et al. 2009. A C-terminal lobe of the β subunit of Na,K-ATPase and H,K-ATPase resembles cell adhesion molecules. *Biochemistry* 48: 8684-8691.
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CHROMOSOMAL LOCATION

Genetic locus: NKAIN1 (human) mapping to 1p35.2; Nkain1 (mouse) mapping to 4 D2.2.

SOURCE

NKAIN1 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NKAIN1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-248079 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NKAIN1 (E-13) is recommended for detection of NKAIN1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with NKAIN2, NKAIN3, or NKAIN4.

NKAIN1 (E-13) is also recommended for detection of NKAIN1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for NKAIN1 siRNA (h): sc-78952, NKAIN1 siRNA (m): sc-149984, NKAIN1 shRNA Plasmid (h): sc-78952-SH, NKAIN1 shRNA Plasmid (m): sc-149984-SH, NKAIN1 shRNA (h) Lentiviral Particles: sc-78952-V and NKAIN1 shRNA (m) Lentiviral Particles: sc-149984-V.

Molecular Weight of NKAIN1: 23 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.