

NKAIN3 (T-16): sc-98040

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. NKAIN3 (Na⁺/K⁺-transporting ATPase interacting 3), also known as FAM77D, is a 197 amino acid multi-pass membrane protein that belongs to the NKAIN family and interacts with Na⁺/K⁺-ATPase β1. The gene that encodes NKAIN3 consists of over 751,000 bases and maps to human chromosome 8q12.3. Chromosome 8, which consists of nearly 146 million base pairs and encodes over 800 genes, is associated with a variety of diseases and malignancies, including schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas.

REFERENCES

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2. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. *Hum. Genet.* 110: 64-67.
3. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
4. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. *Leuk. Lymphoma* 47: 1885-1893.
5. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. *Proc. Natl. Acad. Sci. USA* 103: 8822-8827.
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CHROMOSOMAL LOCATION

Genetic locus: NKAIN3 (human) mapping to 8q12.3; Nkain3 (mouse) mapping to 4 A3.

SOURCE

NKAIN3 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NKAIN3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-98040 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NKAIN3 (T-16) is recommended for detection of NKAIN3 of mouse, rat and human 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)], 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 NKAIN4.

NKAIN3 (T-16) is also recommended for detection of NKAIN3 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for NKAIN3 siRNA (h): sc-77678, NKAIN3 siRNA (m): sc-149986, NKAIN3 shRNA Plasmid (h): sc-77678-SH, NKAIN3 shRNA Plasmid (m): sc-149986-SH, NKAIN3 shRNA (h) Lentiviral Particles: sc-77678-V and NKAIN3 shRNA (m) Lentiviral Particles: sc-149986-V.

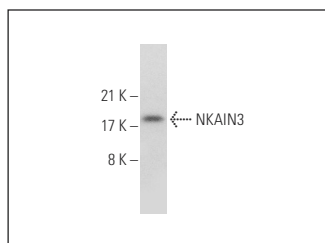
Molecular Weight of NKAIN3: 23 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



NKAIN3 (T-16): sc-98040. Western blot analysis of NKAIN3 expression in NIH/3T3 whole cell lysate.

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.