SANTA CRUZ BIOTECHNOLOGY, INC.

NCKX6 (N-12): sc-161921

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NCKX6 ($Na^+/K^+/Ca^{2+}$-exchange protein 6), also designated SLC24A6 (solute carrier family 24 member 6), belongs to a family of potassium-dependent sodium/calcium exchangers, all of which contain 2 large hydrophilic loops and 2 sets of multiple transmembrane-spanning segments. Potassium-dependent sodium/calcium exchangers maintain cellular calcium homeostasis via the countertransport of four sodium ions for one calcium ion and a potassium ion. Belonging to the SLC24A subfamily and consisting of 584 amino acids, NCKX6 is unlike other potassium-dependent sodium/calcium exchangers in that it functions independently of potassium and transports calcium in exchange for either lithium or sodium. NCKX6 is a multi-pass membrane protein that is strongly inhibited by zinc, exists as two alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 12q24.13.

REFERENCES

1. Lytton, J., et al. 2002. K^+-dependent Na^+/Ca^{2+} exchangers in the brain. Ann. N.Y. Acad. Sci. 976: 382-393.
2. Cai, X. and Lytton, J. 2004. Molecular cloning of a sixth member of the K^+-dependent Na^+/Ca^{2+} exchanger gene family, NCKX6. J. Biol. Chem. 279: 5867-5876.
3. Palty, R., et al. 2004. Lithium-calcium exchange is mediated by a distinct potassium-independent sodium-calcium exchanger. J. Biol. Chem. 279: 25234-25240.
4. Schnetkamp, P.P. 2004. The SLC24 Na^+/Ca^{2+}-K^+ exchanger family: vision and beyond. Pflugers Arch. 447: 683-688.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609841. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Altimimi, H.F. and Schnetkamp, P.P. 2007. Examining Ca^{2+} extrusion of Na^+/Ca^{2+}-K^+ exchangers. Ann. N.Y. Acad. Sci. 1099: 29-33.
7. Lytton, J. 2007. Na^+/Ca^{2+} exchangers: three mammalian gene families control Ca^{2+} transport. Biochem. J. 406: 365-382.

CHROMOSOMAL LOCATION

Genetic locus: SLC24A6 (human) mapping to 12q24.13; Slc24a6 (mouse) mapping to 5 F.

SOURCE

NCKX6 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of NCKX6 of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-161921 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCKX6 (N-12) is recommended for detection of NCKX6 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 other NCKX family members.

NCKX6 (N-12) is also recommended for detection of NCKX6 in additional species, including equine and porcine.

Suitable for use as control antibody for NCKX6 siRNA (h): sc-95984, NCKX6 siRNA (m): sc-149857, NCKX6 shRNA Plasmid (h): sc-95984-SH, NCKX6 shRNA Plasmid (m): sc-149857-SH, NCKX6 shRNA (h) Lentiviral Particles: sc-95984-V and NCKX6 shRNA (m) Lentiviral Particles: sc-149857-V.

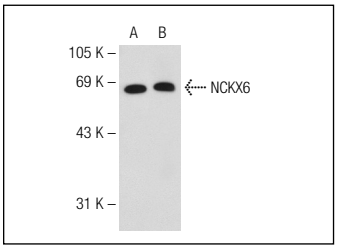
Molecular Weight of NCKX6: 64 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat heart extract: sc-2393.

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



NCKX6 (N-12): sc-161921. Western blot analysis of NCKX6 expression in mouse heart (**A**) and rat heart (**B**) tissue extracts.

RESEARCH USE

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