

NCKX6 (F-12): sc-161920

BACKGROUND

NCKX6 (Na⁺/K⁺/Ca²⁺-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 two large hydrophilic loops and two 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

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2. Cai, X. and Lytton, J. 2004. Molecular cloning of a sixth member of the K⁺-dependent Na⁺/Ca²⁺ exchanger gene family, NCKX6. *J. Biol. Chem.* 279: 5867-5876.
3. Palty, R., Ohana, E., Hershinkel, M., Volokita, M., Elgazar, V., Beharier, O., Silverman, W.F., Argaman, M. and Sekler, I. 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⁺/Ca²⁺-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 Ca²⁺ extrusion of Na⁺/Ca²⁺-K⁺ exchangers. *Ann. N.Y. Acad. Sci.* 1099: 29-33.
7. Lytton, J. 2007. Na⁺/Ca²⁺ exchangers: three mammalian gene families control Ca²⁺ transport. *Biochem. J.* 406: 365-382.

CHROMOSOMAL LOCATION

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

SOURCE

NCKX6 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-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.

RESEARCH USE

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

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-161920 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NCKX6 (F-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), 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 (F-12) is also recommended for detection of NCKX6 in additional species, including equine, canine, bovine 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.

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.

PROTOCOLS

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