



NCKX6 (m): 293T Lysate: sc-121955

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

1. Lytton, J., Li, X.F., Dong, H. and Kraev, A. 2002. K⁺-dependent Na⁺/Ca²⁺ exchangers in the brain. *Ann. N.Y. Acad. Sci.* 976: 382-393.
2. 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.
3. 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.
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 (mouse) mapping to 5 F.

PRODUCT

NCKX6 (m): 293T Lysate represents a lysate of mouse NCKX6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

NCKX6 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive NCKX6 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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