

NCKX1 (H-300): sc-98904

BACKGROUND

NCKX1, also designated solute carrier family 24, member 1 (SLC24A1) or sodium/calcium/potassium exchanger 1, belongs to a family of potassium-dependent sodium/calcium exchangers. Members of this group of proteins contain two large hydrophilic loops and two sets of multiple transmembrane-spanning segments. One intron in the 5' untranslated region and 8 within the coding region of the NCKX1 gene have been identified; exon length varies from 54 to 2,037 bp. Human NCKX1 encodes a protein of 1,081 amino acids that shows 64% overall identity with the cow protein. The two sets of presumed transmembrane domains and their short connecting loops show 94% identity with that of the cow, while the extracellular loop at the amino terminus is only 59% identical.

REFERENCES

- Cooper, C.B., Winkfein, R.J., Szerencsei, R.T. and Schnetkamp, P.P. 1999. cDNA cloning and functional expression of the dolphin retinal rod Na/Ca⁺-K exchanger NCKX1: comparison with the functionally silent bovine NCKX1. *Biochemistry* 38: 6276-6283.
- Poon, S., Leach, S., Li, X.F., Tucker, J.E., Schnetkamp, P.P. and Lytton, J. 2000. Alternatively spliced isoforms of the rat eye sodium/calcium⁺ potassium exchanger NCKX1. *Am. J. Physiol., Cell Physiol.* 278: C651-C660.
- Kang, K. and Schnetkamp, P.P. 2003. Signal sequence cleavage and plasma membrane targeting of the retinal rod NCKX1 and cone NCKX2 Na⁺/Ca²⁺-K⁺ exchangers. *Biochemistry* 42: 9438-9445.
- Aneiros, E., Philipp, S., Lis, A., Freichel, M. and Cavalie, A. 2005. Modulation of Ca²⁺ signaling by Na⁺/Ca²⁺ exchangers in mast cells. *J. Immunol.* 174: 119-130.
- Kang, K.J., Shibukawa, Y., Szerencsei, R.T. and Schnetkamp, P.P. 2005. Substitution of a single residue, Asp 575, renders the NCKX2 K⁺-dependent Na⁺/Ca²⁺ exchanger independent of K⁺. *J. Biol. Chem.* 280: 6834-6839.

CHROMOSOMAL LOCATION

Genetic locus: SLC24A1 (human) mapping to 15q22.31.

SOURCE

NCKX1 (H-300) is a rabbit polyclonal antibody raised against amino acids 94-380 mapping near the N-terminus of NCKX1 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.

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.

APPLICATIONS

NCKX1 (H-300) is recommended for detection of NCKX1 of 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).

Suitable for use as control antibody for NCKX1 siRNA (h): sc-61158, NCKX1 shRNA Plasmid (h): sc-61158-SH and NCKX1 shRNA (h) Lentiviral Particles: sc-61158-V.

Molecular Weight of NCKX1: 130 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.