

NCKX1 (E-6): sc-393400

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 bovine protein. The two sets of presumed transmembrane domains and their short connecting loops show 94% identity with that of the bovine, while the extracellular loop at the amino terminus is only 59% identical.

REFERENCES

- Cooper, C.B., et al. 1999. cDNA cloning and functional expression of the dolphin retinal rod Na⁺/Ca²⁺-K⁺ exchanger NCKX1: comparison with the functionally silent bovine NCKX1. *Biochemistry* 38: 6276-6283.
- Poon, S., et al. 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., et al. 2005. Modulation of Ca²⁺ signaling by Na⁺/Ca²⁺ exchangers in mast cells. *J. Immunol.* 174: 119-130.

CHROMOSOMAL LOCATION

Genetic locus: SLC24A1 (human) mapping to 15q22.31; Slc24a1 (mouse) mapping to 9 C.

SOURCE

NCKX1 (E-6) is a mouse monoclonal antibody raised against amino acids 94-380 mapping near the N-terminus of NCKX1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCKX1 (E-6) is available conjugated to agarose (sc-393400 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393400 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393400 PE), fluorescein (sc-393400 FITC), Alexa Fluor® 488 (sc-393400 AF488), Alexa Fluor® 546 (sc-393400 AF546), Alexa Fluor® 594 (sc-393400 AF594) or Alexa Fluor® 647 (sc-393400 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393400 AF680) or Alexa Fluor® 790 (sc-393400 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

NCKX1 (E-6) is recommended for detection of NCKX1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-61159, NCKX1 shRNA Plasmid (h): sc-61158-SH, NCKX1 shRNA Plasmid (m): sc-61159-SH, NCKX1 shRNA (h) Lentiviral Particles: sc-61158-V and NCKX1 shRNA (m) Lentiviral Particles: sc-61159-V.

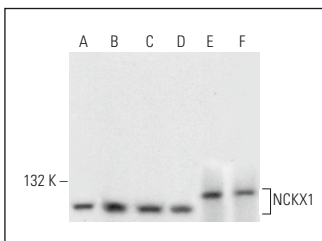
Molecular Weight of NCKX1: 130 kDa.

Positive Controls: Y79 cell lysate: sc-2240, mouse eye extract: sc-364241 or rat eye extract: sc-364805.

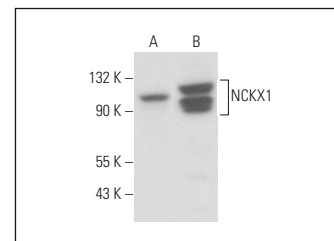
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NCKX1 (E-6): sc-393400. Western blot analysis of NCKX1 expression in human platelet extract (A), Y79 (B), ARPE-19 (C) and MEG-01 (D) whole cell lysates and mouse eye (E) and rat eye (F) tissue extracts.



NCKX1 (E-6): sc-393400. Western blot analysis of NCKX1 expression in Jurkat (A) and NIH/3T3 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Wölwer, C.B., et al. 2016. Calcium signaling is required for erythroid enucleation. *PLoS ONE* 11: e0146201.
- Qin, L., et al. 2019. Ginsenoside Rb1 improved diabetic cardiomyopathy through regulating calcium signaling by alleviating protein O-GlcNAcylation. *J. Agric. Food Chem.* 67: 14074-14085.

STORAGE

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