

NCKX5 (A-6): sc-515715



The Power to Question

BACKGROUND

Plasma membrane sodium/calcium exchangers are crucial for the maintenance of intracellular calcium homeostasis and the modulation of electrical conduction. Potassium-dependent sodium/calcium exchangers, such as NCKX5 (Na⁺/K⁺/Ca²⁺-exchange protein 5), presumably transport an intracellular calcium and a potassium ion in exchange for four extracellular sodium ions. NCKX5, also known as JSX, SHEP4 or SLC24A5, is a 500 amino acid multi-pass membrane protein belonging to the sodium/potassium/calcium exchanger family and the SLC24A subfamily. NCKX5 is expressed in skin, retinal epithelium and brain. Considered a cation exchanger, NCKX5 may be involved in skin pigmentation by participating in ion transport in melanosomes.

REFERENCES

1. Lamason, R.L., et al. 2005. SLC24A5, a putative cation exchanger, affects pigmentation in zebrafish and humans. *Science* 310: 1782-1786.
2. Chi, A., et al. 2006. Proteomic and bioinformatic characterization of the biogenesis and function of melanosomes. *J. Proteome Res.* 5: 3135-3144.
3. Lytton, J. 2007. Na⁺/Ca²⁺ exchangers: three mammalian gene families control Ca²⁺ transport. *Biochem. J.* 406: 365-382.
4. Soejima, M. and Koda, Y. 2007. Population differences of two coding SNPs in pigmentation-related genes SLC24A5 and SLC45A2. *Int. J. Legal Med.* 121: 36-39.
5. Giardina, E., et al. 2008. Haplotypes in SLC24A5 gene as ancestry informative markers in different populations. *Curr. Genomics* 9: 110-114.
6. Ginger, R.S., et al. 2008. SLC24A5 encodes a *trans*-Golgi network protein with potassium-dependent sodium-calcium exchange activity that regulates human epidermal melanogenesis. *J. Biol. Chem.* 283: 5486-5495.

CHROMOSOMAL LOCATION

Genetic locus: SLC24A5 (human) mapping to 15q21.1.

SOURCE

NCKX5 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 91-108 within a cytoplasmic domain of NCKX5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NCKX5 (A-6) is available conjugated to agarose (sc-515715 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515715 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515715 PE), fluorescein (sc-515715 FITC), Alexa Fluor® 488 (sc-515715 AF488), Alexa Fluor® 546 (sc-515715 AF546), Alexa Fluor® 594 (sc-515715 AF594) or Alexa Fluor® 647 (sc-515715 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515715 AF680) or Alexa Fluor® 790 (sc-515715 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NCKX5 (A-6) is recommended for detection of NCKX5 of 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 NCKX5 siRNA (h): sc-90252, NCKX5 shRNA Plasmid (h): sc-90252-SH and NCKX5 shRNA (h) Lentiviral Particles: sc-90252-V.

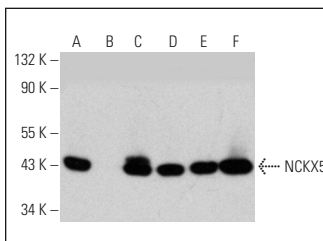
Molecular Weight of NCKX5: 43 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, A-375 cell lysate: sc-3811 or Y79 cell lysate: sc-2240.

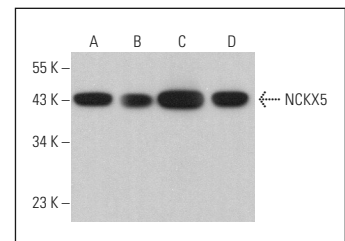
RECOMMENDED SUPPORT REAGENTS

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



NCKX5 (A-6): sc-515715. Western blot analysis of NCKX5 expression in C32 (A), NIH/3T3 (B), A-375 (C), HeLa (D), Jurkat (E) and Y79 (F) whole cell lysates. Note lack of reactivity to mouse NCKX5 in lane B.



NCKX5 (A-6): sc-515715. Western blot analysis of NCKX5 expression in HeLa (A), A549 (B), HEL 92.1.7 (C) and A2058 (D) whole cell lysates.

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.

PROTOCOLS

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