

Nkx-6.3 (A-9): sc-390665

BACKGROUND

Members of the Nkx family of homeodomain proteins are key regulators of growth and development in several tissues, including brain, heart and pancreas. The Nkx-6 family is involved in the patterning of the pancreas and central nervous system and consists of three proteins: Nkx-6.1, Nkx-6.2 and Nkx-6.3. Nkx-6.1 is responsible for cellular differentiation in the ventral neural tube and spinal meninges in response to Shh. Nkx-6.2 is also expressed during neural tube development by neural progenitor cells. During development, Nkx-6.2 regulates interneuron fates by repressing the expression of Dbx1, a class I homeodomain transcription repressor. Nkx-6.3 is a 265 amino acid homeobox protein that shows selective expression in the duodenal and glandular endoderm, in contrast to Nkx-6.1 and Nkx-6.2 that are broadly expressed in the ventral positions of the developing CNS. Nkx-6.3 is required in differentiation of gastrin-producing G-cells in the stomach and antrum. There are two isoforms of Nkx-6.3 that are produced as a result of alternative splicing events.

REFERENCES

1. Pedersen, J.K., et al. 2005. Endodermal expression of Nkx6 genes depends differentially on Pdx1. *Dev. Biol.* 288: 487-501.
2. Nelson, S.B., et al. 2005. Expression of Nkx6 genes in the hindbrain and gut of the developing mouse. *J. Histochem. Cytochem.* 53: 787-790.
3. Alanentalo, T., et al. 2006. Cloning and analysis of Nkx6.3 during CNS and gastrointestinal development. *Gene Expr. Patterns* 6: 162-170.
4. Zhao, S., et al. 2007. Cloning and developmental expression of the *Xenopus* Nkx6 genes. *Dev. Genes Evol.* 217: 477-483.

CHROMOSOMAL LOCATION

Genetic locus: NKX6-3 (human) mapping to 8p11.21.

SOURCE

Nkx-6.3 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-24 of Nkx-6.3 of human origin.

PRODUCT

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

Nkx-6.3 (A-9) is available conjugated to agarose (sc-390665 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390665 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390665 PE), fluorescein (sc-390665 FITC), Alexa Fluor® 488 (sc-390665 AF488), Alexa Fluor® 546 (sc-390665 AF546), Alexa Fluor® 594 (sc-390665 AF594) or Alexa Fluor® 647 (sc-390665 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390665 AF680) or Alexa Fluor® 790 (sc-390665 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390665 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Nkx-6.3 (A-9) is recommended for detection of Nkx-6.3 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 Nkx-6.3 siRNA (h): sc-77590, Nkx-6.3 shRNA Plasmid (h): sc-77590-SH and Nkx-6.3 shRNA (h) Lentiviral Particles: sc-77590-V.

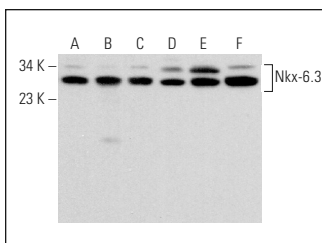
Molecular Weight of Nkx-6.3: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

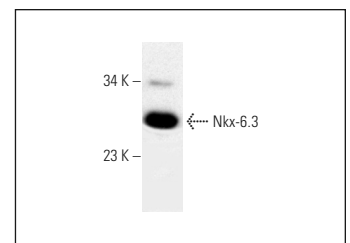
RECOMMENDED SUPPORT REAGENTS

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



Nkx-6.3 (A-9): sc-390665. Western blot analysis of Nkx-6.3 expression in Jurkat (A), K-562 (B), Hep G2 (C), NIH/3T3 (D), RAW 264.7 (E) and Daudi (F) whole cell lysates.



Nkx-6.3 (A-9): sc-390665. Western blot analysis of Nkx-6.3 expression in HeLa whole cell lysate.

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.