

Nkx-6.3 (N-16): sc-98043

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., Nelson, S.B., Jorgensen, M.C., Henseleit, K.D., Fujitani, Y., Wright, C.V., Sander, M. and Serup, P. 2005. Endodermal expression of Nkx6 genes depends differentially on Pdx1. *Dev. Biol.* 288: 487-501.
2. Nelson, S.B., Janiesch, C. and Sander, M. 2005. Expression of Nkx6 genes in the hindbrain and gut of the developing mouse. *J. Histochem. Cytochem.* 53: 787-790.
3. Alanentalo, T., Chatonnet, F., Karlen, M., Sulniute, R., Ericson, J., Andersson, E. and Ahlgren, U. 2006. Cloning and analysis of Nkx-6.3 during CNS and gastrointestinal development. *Gene Expr. Patterns.* 6: 162-170.
4. Zhao, S., Jiang, H., Wang, W. and Mao, B. 2007. Cloning and developmental expression of the *Xenopus* Nkx6 genes. *Dev. Genes Evol.* 217: 477-483.
5. Hafler, B.P., Choi, M.Y., Shivdasani, R.A. and Rowitch, D.H. 2008. Expression and function of Nkx-6.3 in vertebrate hindbrain. *Brain Res.* 1222: 42-50.
6. Klinck, R., Serup, P., Madsen, O.D. and Jorgensen, M.C. 2008. Specificity of four monoclonal anti-NKx6-1 antibodies. *J. Histochem. Cytochem.* 56: 415-424.
7. Choi, M.Y., Romer, A.I., Wang, Y., Wu, M.P., Ito, S., Leiter, A.B. and Shivdasani, R.A. 2008. Requirement of the tissue-restricted homeodomain transcription factor Nkx-6.3 in differentiation of gastrin-producing G cells in the stomach antrum. *Mol. Cell. Biol.* 28: 3208-3218.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 610772. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

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

SOURCE

Nkx-6.3 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Nkx-6.3 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.

Blocking peptide available for competition studies, sc-98043 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

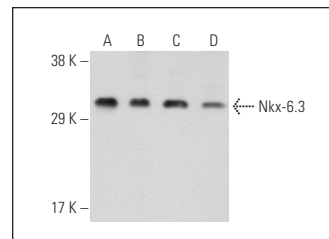
Nkx-6.3 (N-16) is recommended for detection of Nkx-6.3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 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: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

DATA



Nkx-6.3 (N-16): sc-98043. Western blot analysis of Nkx-6.3 expression in K-562 (A), Y79 (B) and HeLa (C) whole cell lysates and Hep G2 nuclear extract (D).

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 or our catalog for detailed protocols and support products.



Try **Nkx-6.3 (A-9): sc-390665**, our highly recommended monoclonal alternative to Nkx-6.3 (N-16).