SANTA CRUZ BIOTECHNOLOGY, INC.

Nkx-2.3 (S-16): sc-83438

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nkx homeodomain proteins are members of a large family of vertebrate transcription factors that have a strong homology to the NK genes in *Drosophila*. Nkx proteins are involved in several aspects of cell type specification and maintenance of differentiated tissue functions. Nkx-2.3 contains a homeobox, a conserved NK2 domain, a C-terminal GIRAW motif and an N-terminal homology domain that is conserved among all NK2 genes. Expression of Nkx-2.3 is activated later in differentiated myocardial cells, and the protein is primarily detected in gut mesoderm, distinct regions of the brachial arches, the tongue epithelium and some domains in the developing jaws. Nkx-2.3 is necessary to function as a transcriptional activator during the earliest stages of heart formation. Overexpression of Nkx-2.3 leads to an enlarged heart due to a thickening of the myocardium caused by an increase in the overall number of myocardial cells.

REFERENCES

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4. Cleaver, O.B., Patterson, K.D. and Krieg, P.A. 1997. Overexpression of the tinman-related genes xNkx-2.5 and xNkx-2.3 in *Xenopus* embryos results in myocardial hyperplasia. Development 122: 3549-3556.
5. Fu, Y., Yan, W., Mohun, T.J. and Evans, S.M. 1999. Vertebrate tinman homologues xNkx2-3 and xNkx2-5 are required for heart formation in a functionally redundant manner. Development 125: 4439-4449.
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CHROMOSOMAL LOCATION

Genetic locus: NKX2-3 (human) mapping to 10q24.2; Nkx2-3 (mouse) mapping to 19 C3.

RESEARCH USE

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

SOURCE

Nkx-2.3 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Nkx-2.3 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-83438 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-83438 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Nkx-2.3 (S-16) is recommended for detection of Nkx-2.3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other Nkx-2 family members.

Nkx-2.3 (S-16) is also recommended for detection of Nkx-2.3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Nkx-2.3 siRNA (h): sc-38725, Nkx-2.3 siRNA (m): sc-38726, Nkx-2.3 shRNA Plasmid (h): sc-38725-SH, Nkx-2.3 shRNA Plasmid (m): sc-38726-SH, Nkx-2.3 shRNA (h) Lentiviral Particles: sc-38725-V and Nkx-2.3 shRNA (m) Lentiviral Particles: sc-38726-V.

Nkx-2.3 (S-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Nkx-2.3: 38 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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