SANTA CRUZ BIOTECHNOLOGY, INC.

ISX (S-12): sc-86153

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. ISX (intestine-specific homeobox), also known as Pix-1 or RAXLX, is a 245 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Present at high levels in intestinal epithelial cells, ISX functions as a transcription factor that regulates intestinal gene expression and may also participate in vitamin A metabolism via the regulation of BCMO1 expression. The gene encoding ISX maps to human chromosome 22q12.3, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
2. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
3. Choi, M.Y., et al. 2006. A dynamic expression survey identifies transcription factors relevant in mouse digestive tract development. Development 133: 4119-4129.
4. Seino, Y., et al. 2008. ISX participates in the maintenance of vitamin A metabolism by regulation of β-carotene 15, 15'-monooxygenase (BCMO1) expression. J. Biol. Chem. 283: 4905-4911.
5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612019. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: ISX (human) mapping to 22q12.3.

SOURCE

ISX (S-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ISX of human origin.

PRODUCT

Each vial contains 100 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-86153 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-86153 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ISX (S-12) is recommended for detection of ISX 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 ISX siRNA (h): sc-75347, ISX shRNA Plasmid (h): sc-75347-SH and ISX shRNA (h) Lentiviral Particles: sc-75347-V.

ISX (S-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

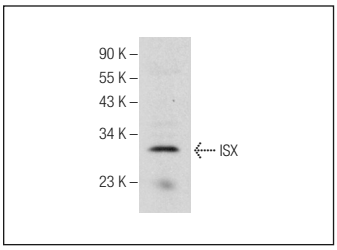
Molecular Weight of ISX: 27 kDa.

Positive Controls: human colon extract: sc-363757.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ISX (S-12): sc-86153. Western blot analysis of ISX expression in human colon tissue extract.

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.