SANTA CRUZ BIOTECHNOLOGY, INC.

SHOX2 (N-15): sc-21898

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BIOTECHNOLOGY

The Power to Question

BACKGROUND

Homeodomain proteins (HP) are transcriptional regulators that coordinate the expression of genes involved in development, differentiation and cellular transformation. HPs are characterized by a conserved domain of 60 amino acid residues that recognize and bind a site in the regulatory region of the target gene. SHOX2, also designated SHOT, is a human paired-related home-obox gene with two known isoforms, SHOX2A and SHOX2B, which are products of alternative splicing. The SHOX2A and SHOX2B isoforms differ in N-terminal residues and an alternatively-spliced C-terminal exon. Both iso-forms contain a C-terminal OAR domain, a motif characteristic of craniofa-cially-expressed homeodomain proteins. Transcripts of Og12X, the mouse ortholog of SHOX2, have been isoloated in the aorta, female genitalia, dien-cephalon, mesencephalon, myelencephalon, nasal capsula, palate, eyelid and limbs of developing mouse embryo. Og12x localization and expression patterns suggest that SHOX2 may play a role in the pathology of Cornelia de Lange syndrome, a multisystem disorder that is characterized by somatic and cognitive retardation, characteristic facial features and limb abnormalities.

CHROMOSOMAL LOCATION

Genetic locus: SHOX2 (human) mapping to 3q25.32; Shox2 (mouse) mapping to 3 E1.

SOURCE

SHOX2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SHOX2 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-21898 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

SHOX2 (N-15) is recommended for detection of SHOX2A and SHOX2B of mouse, rat and 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 SHOX2 siRNA (h): sc-44100, SHOX2 siRNA (m): sc-38783, SHOX2 shRNA Plasmid (h): sc-44100-SH, SHOX2 shRNA Plasmid (m): sc-38783-SH, SHOX2 shRNA (h) Lentiviral Particles: sc-44100-V and SHOX2 shRNA (m) Lentiviral Particles: sc-38783-V.

Molecular Weight of SHOX2: 35 kDa.

Positive Controls: SHOX2 (h): 293T Lysate: sc-372647 or PC-12 cell lysate: sc-2250.

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) Immunoprecip-itation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA
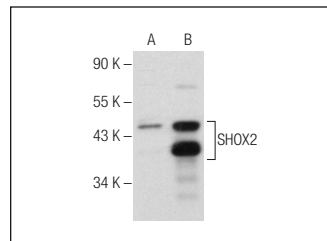
SHOX2 (N-15): sc-21898. Western blot analysis of SHOX2 expression in non-transfected: sc-117752 (**A**) and human SHOX2 transfected: sc-372647 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Nasrallah, M.P., et al. 2012. Differential effects of a polyalanine tract expansion in Arx on neural development and gene expression. Hum. Mol. Genet. 21: 1090-1098.

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.

MONOS
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Try **SHOX2 (JK-6E): sc-81955**, our highly recommended monoclonal alternative to SHOX2 (N-15).