SANTA CRUZ BIOTECHNOLOGY, INC.

Barx1 (C-13): sc-49377

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The BAR homeobox (Barx) family of proteins comprise Barx1 and Barx2. These proteins are regulators of place-dependent morphogenesis and play important roles in controlling the expression patterns of cell adhesion molecules. Barx1, a 226 amino acid nuclear protein, is expressed primarily in testis, heart and craniofacial tissue. Barx1 is a homeodomain transcription factor important in odontogenesis, craniofacial development and stomach organogenesis. Barx1 controls mesenchymal cell expression of two secreted Wnt antagonists, sFRP1 and sFRP2, proteins that are important in the development of the gastric endoderm which occurs before the epithelial differentiation. During early stages of molar development, Barx1 directs the undetermined ectomesenchymal cells in the proximal region of the jaws to follow the pathway of multicuspid tooth development. Fibroblast growth factor-8 (FGF-8) stimulates Barx1 expression, while bone morphogenetic protein-4 (BMP-4) inhibits Barx1 expression.

REFERENCES

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2. Mitsiadis, T.A., et al. 1998. Expression of the transcription factors Otlx2, Barx1 and Sox-9 during mouse odontogenesis. Eur. J. Oral Sci. 106: 112-116.
3. Gould, D.B. and Walter, M.A. 2000. Cloning, characterization, localization, and mutational screening of the human BARX1 gene. Genomics 68: 336-342.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603260. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Gould, D.B. and Walter, M.A. 2004. Mutational analysis of BARHL1 and Barx1 in three new patients with Joubert syndrome. Am. J. Med. Genet. 131: 205-208.
6. Sander, G.R. and Powell, B.C. 2004. Expression of the homeobox gene BARX2 in the gut. J. Histochem. Cytochem. 52: 541-544.
7. Kim, B.M., et al. 2005. The stomach mesenchymal transcription factor Barx1 specifies gastric epithelial identity through inhibition of transient Wnt signaling. Dev. Cell 8: 611-622.

CHROMOSOMAL LOCATION

Genetic locus: BARX1 (human) mapping to 9q22.32; Barx1 (mouse) mapping to 13 A5.

SOURCE

Barx1 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Barx1 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-49377 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Barx1 (C-13) is recommended for detection of Barx1 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).

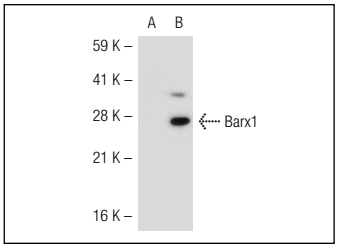
Suitable for use as control antibody for Barx1 siRNA (h): sc-60247, Barx1 siRNA (m): sc-60248, Barx1 shRNA Plasmid (h): sc-60247-SH, Barx1 shRNA Plasmid (m): sc-60248-SH, Barx1 shRNA (h) Lentiviral Particles: sc-60247-V and Barx1 shRNA (m) Lentiviral Particles: sc-60248-V.

Barx1 (C-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Barx1: 24 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Barx1 (h): 293T Lysate: sc-116949 or MIA PaCa-2 cell lysate: sc-2285.

DATA



Barx1 (C-13): sc-49377. Western blot analysis of Barx1 expression in non-transfected: sc-117752 (**A**) and human Barx1 transfected: sc-116949 (**B**) 293T whole cell lysates.

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.