

Barx2 (8A7/1): sc-53177

BACKGROUND

Barx2 is a member of the homeobox gene family which are regulators of place-dependent morphogenesis and play important roles in controlling the expression patterns of cell adhesion molecules. The homeodomain encoded by Barx2 is 87% identical to that of Barx1, and both genes are related to genes at the Bar locus of *Drosophila melanogaster*. Barx2 may differentially control the expression of L1 and other target genes during embryonic development. The Barx1 and 2 genes are Bar class homeobox genes expressed in craniofacial structures during development. In a series of ovarian cancer cell lines, Barx2 expression showed a significant direct correlation with cadherin-6 expression. Barx2 interacts with serum response factor (SRF) and promotes the DNA binding activity of SRF. It is expressed in several smooth muscle-containing tissues, as well as skeletal muscle, brain, tongue and esophagus. Barx2 is also highly expressed in adult salivary gland and is expressed at lower levels in other tissues, including mammary gland, kidney and placenta. The human BARX2 gene maps to chromosome 11q24.3 and encodes a 254 amino acid protein.

REFERENCES

- Jones, F.S., et al. 1997. Barx2, a new homeobox gene of the Bar class, is expressed in neural and craniofacial structures during development. *Proc. Natl. Acad. Sci. USA* 94: 2632-2637.
- Hjalt, T.A. and Murray, J.C. 1999. The human BARX2 gene: genomic structure, chromosomal localization, and single nucleotide polymorphisms. *Genomics* 62: 456-459.

CHROMOSOMAL LOCATION

Genetic locus: BARX2 (human) mapping to 11q24.3; Barx2 (mouse) mapping to 9 A4.

SOURCE

Barx2 (8A7/1) is a mouse monoclonal antibody raised against MBP-tagged Barx2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-53177 X, 200 µg/0.1 ml.

Barx2 (8A7/1) is available conjugated to agarose (sc-53177 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53177 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53177 PE), fluorescein (sc-53177 FITC), Alexa Fluor® 488 (sc-53177 AF488), Alexa Fluor® 546 (sc-53177 AF546), Alexa Fluor® 594 (sc-53177 AF594) or Alexa Fluor® 647 (sc-53177 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53177 AF680) or Alexa Fluor® 790 (sc-53177 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Barx2 (8A7/1) is recommended for detection of Barx2 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

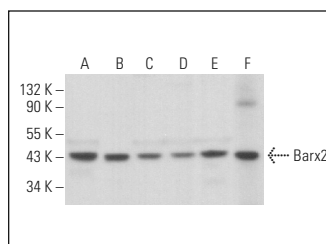
Suitable for use as control antibody for Barx2 siRNA (h): sc-43629, Barx2 siRNA (m): sc-62012, Barx2 shRNA Plasmid (h): sc-43629-SH, Barx2 shRNA Plasmid (m): sc-62012-SH, Barx2 shRNA (h) Lentiviral Particles: sc-43629-V and Barx2 shRNA (m) Lentiviral Particles: sc-62012-V.

Barx2 (8A7/1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

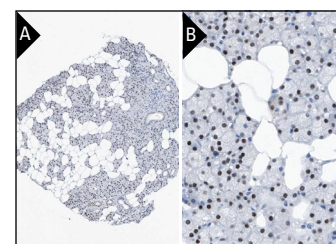
Molecular Weight of Barx2: 32 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, NIH/3T3 whole cell lysate: sc-2210 or SK-MEL-24 whole cell lysate: sc-364259.

DATA



Barx2 (8A7/1): sc-53177. Western blot analysis of Barx2 expression in MIA PaCa-2 (A), NIH/3T3 (B), SK-MEL-24 (C), A-431 (D) and A-375 (E) whole cell lysates and rat salivary gland tissue extract (F). Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Barx2 (8A7/1): sc-53177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear staining of glandular cells in low (A) and high (B) resolution. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Ma, J., et al. 2020. Barx2 expression is downregulated by CpG island hypermethylation and is associated with suppressed cell proliferation and invasion of gastric cancer cells. *Oncol. Rep.* 43: 1805-1818.
- Lu, Z., et al. 2022. BarH-like homeobox 2 represses the transcription of keratin 16 and affects Ras signaling pathway to suppress nasopharyngeal carcinoma progression. *Bioengineered* 13: 3122-3136.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA