

## Barx2 (P-16): sc-68143

### 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 BARX genes 1 and 2 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. Barx2 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

1. 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.
2. Hjalt, T.A. and Murray, J.C. 1999. The human BARX2 gene: genomic structure, chromosomal localization, and single nucleotide polymorphisms. Genomics 62: 456-459.
3. Sander, G., et al. 2000. Expression of the homeobox gene, BARX2, in wool follicle development. J. Invest. Dermatol. 115: 753-756.
4. Krasner, A., et al. 2000. Cloning and chromosomal localization of the human BARX2 homeobox protein gene. Gene 250: 171-180.
5. Sellar, G.C., et al. 2001. Barx2 induces cadherin-6 expression and is a functional suppressor of ovarian cancer progression. Cancer Res. 61: 6977-6981.
6. Herring, B.P., et al. 2001. Identification of Barx2b, a serum response factor-associated homeodomain protein. J. Biol. Chem. 276: 14482-14489.
7. LocusLink Report (LocusID: 8538). <http://www.ncbi.nlm.nih.gov/LocusLink>

### CHROMOSOMAL LOCATION

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

### SOURCE

Barx2 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Barx2 of human origin.

### STORAGE

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

### 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-68143 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-68143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Barx2 (P-16) 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), 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).

Barx2 (P-16) is also recommended for detection of Barx2 in additional species, including equine, canine and avian.

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

Molecular Weight of Barx2: 32 kDa.

Positive Controls: A-10 cell lysate: sc-3806.

### 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.

### RESEARCH USE

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

### PROTOCOLS

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Try **Barx2 (8A7/1): sc-53177**, our highly recommended monoclonal alternative to Barx2 (P-16).