

HoxA1 (C-20): sc-17148

BACKGROUND

Hox genes play a fundamental role in the development of the vertebrate central nervous system, heart, axial skeleton, limbs, gut, urogenital tract and external genitalia. The homeobox gene HoxA1 is transcriptionally regulated by retinoic acid (RA) and encodes a transcription factor which has been shown to play important roles in cell differentiation and embryogenesis. HoxA1 is also expressed in cancers, such as mammary tumors, though it is not expressed in normal gland or in precancerous mammary tissues. At embryonic stages, HoxA2 is expressed in the mesenchyme and epithelial cells of the palate, however its expression is restricted to the tips of the growing palatal shelves. HoxA2 protein is predominantly expressed in the nuclei of cells in the ventral mantle region of the developing embryo. In the developing and adult mouse spinal cord, HoxA2 protein may contribute to dorsal-ventral patterning and/or to the specification of neuronal phenotype. HoxA7 functions as a potent transcriptional repressor and its action as such requires several domains, including both activator and repressor regions. HoxA7 is expressed in the fetal liver, lung, skeletal muscle, kidney, pancreas and placenta.

REFERENCES

1. Schnabel, C.A., et al. 1996. Repression by HoxA7 is mediated by the homeodomain and the modulatory action of its N-terminal-arm residues. *Mol. Cell. Biol.* 16: 2678-2688.
2. Srebrow, A., et al. 1998. Expression of HoxA1 and HoxB7 is regulated by extracellular matrix-dependent signals in mammary epithelial cells. *J. Cell Biol.* 69: 377-391.
3. Hao, Z., et al. 1999. Differential expression of HoxA2 protein along the dorsal-ventral axis of the developing and adult mouse spinal cord. *Dev. Dyn.* 216: 201-217.
4. Nazarali, A., et al. 2000. Temporal and spatial expression of HoxA2 during murine palatogenesis. *Cell Mol. Neurobiol.* 20: 269-290.
5. Shen, J., et al. 2000. Molecular cloning and analysis of a group of genes differentially expressed in cells which overexpress the HoxA1 homeobox gene. *Exp. Cell Res.* 259: 274-283.

CHROMOSOMAL LOCATION

Genetic locus: HOXA1 (human) mapping to 7p15.2; Hoxa1 (mouse) mapping to 6 B3.

SOURCE

HoxA1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HoxA1 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-17148 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

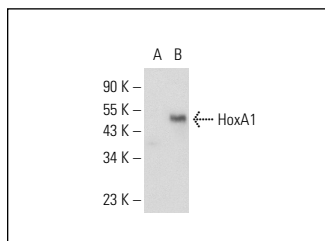
HoxA1 (C-20) is recommended for detection of HoxA1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 HoxA1 siRNA (h): sc-35583, HoxA1 siRNA (m): sc-35584, HoxA1 shRNA Plasmid (h): sc-35583-SH, HoxA1 shRNA Plasmid (m): sc-35584-SH, HoxA1 shRNA (h) Lentiviral Particles: sc-35583-V and HoxA1 shRNA (m) Lentiviral Particles: sc-35584-V.

Molecular Weight of HoxA1: 37 kDa.

Positive Controls: HoxA1 (h3): 293T Lysate: sc-172096 or 3611-RF whole cell lysate: sc-2215.

DATA



HoxA1 (C-20): sc-17148. Western blot analysis of HoxA1 expression in non-transfected: sc-117752 (A) and human HoxA1 transfected: sc-172096 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kömüves, L.G. and Largman, C. 2005. Analysis of HOX homeodomain proteins and gene transcripts in the epidermis. *Methods Mol. Biol.* 289: 157-170.

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.



Try **HoxA1 (1E10): sc-293257**, our highly recommended monoclonal alternative to HoxA1 (C-20).