SANTA CRUZ BIOTECHNOLOGY, INC.

HoxA5 (129C1a): sc-81289

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HoxA5 (previously identified as Hox-1.3) is a transcriptional regulator of multiple target genes, including p53 and the progesterone receptor. It is a potent transactivator of p53 and may affect the response of breast cancer cells to DNA damage. In primary breast carcinomas, loss of p53 expression is coupled with loss of HoxA5 expression, suggesting that the loss of HoxA5 expression is important in tumorigenesis. HoxA5 is dynamically expressed during gut development and organogenesis of the respiratory tract, and is continuously expressed from the neonatal period into adult stages in cerebellar Purkinje cells. Expression of HoxA5 is necessary for the region-specific differentiation of the endoderm and differentiation of the myeloid pathway. HoxA5 is also essential for correct specification of the cervical and upper thoracic region of the skeleton and for proper patterning of the embryo.

REFERENCES

1. Aubin, J., et al. 1998. Transcriptional interferences at the HoxA4/HoxA5 locus: importance of correct HoxA5 expresion for the proper specification of the axial skeleton. Dev. Dyn. 212: 141-156.
2. Sanlioglu, S., et al. 1998. Regulation of Purkinje cell-specific promoter by homeodomain proteins: repression by engrailed-2 vs. synergistic activation by HoxA5 and HoxA7. J. Neurobiol. 36: 559-571.
3. Aubin, J., et al. 1999. Loss of HoxA5 gene function in mice perturbs intestinal maturation. Am. J. Physiol. 277: 965-973.
4. Crooks, G.M., et al. 1999. Constitutive HoxA5 expression inhibits erythropoiesis and increases myelopoiesis from human hematopoietic progenitors. Blood 94: 519-528.
5. Larochelle, C., et al. 1999. Multiple *cis*-acting regulatory regions are required for restricted spatio-temporal HoxA5 gene expression. Dev. Dyn. 214: 127-140.
6. Nowling, T., et al. 1999. HoxA5 gene regulation: a gradient of binding activity to a brachial spinal cord element. Dev. Biol. 208: 134-146.
7. Raman, V., et al. 2000. Compromised HoxA5 function can limit p53 expression in human breast tumours. Nature 405: 974-978.

CHROMOSOMAL LOCATION

Genetic locus: HOXA5 (human) mapping to 7p15.2.

SOURCE

HoxA5 (129C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of HoxA5 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

PROTOCOLS

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

APPLICATIONS

HoxA5 (129C1a) is recommended for detection of HoxA5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

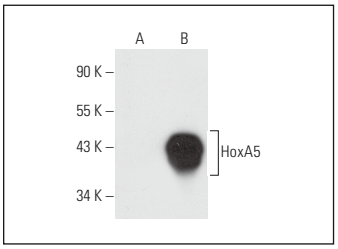
Suitable for use as control antibody for HoxA5 siRNA (h): sc-38678, HoxA5 shRNA Plasmid (h): sc-38678-SH and HoxA5 shRNA (h) Lentiviral Particles: sc-38678-V.

Molecular Weight (predicted) of HoxA5: 30 kDa.

Molecular Weight (observed) of HoxA5: 43/55 kDa.

Positive Controls: HoxA5 (h): 293T Lysate: sc-173626, WI-38 whole cell lysate: sc-364260 or SK-N-SH cell lysate: sc-2410.

DATA



HoxA5 (129C1a): sc-81289. Western blot analysis of HoxA5 expression in non-transfected: sc-117752 (**A**) and human HoxA5 transfected: sc-173626 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, Y., et al. 2010. Ratio of miR-196s to HoxC8 messenger RNA correlates with breast cancer cell migration and metastasis. Cancer Res. 70: 7894-7904.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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