SANTA CRUZ BIOTECHNOLOGY, INC.

HoxA9 (N-20): sc-17155

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Hox homeobox genes encode proteins that play a role in embryonic development. The HoxA9 gene encodes a class I homeodomain protein, which is expressed in normal adult and fetal thymic tissue, and may play a role in regulating early differentiation of thymocytes. The HoxA9 homeodomain protein cooperatively binds consensus DNA sequences with Meis1 and Pbx1. In addition, the HoxA9 protein, along with the MEIS1 and Pbx 1 proteins, have been implicated in leukemic transformation in both mice and humans. Further-more, overexpression of both HoxA9 and Meis1 in primary bone marrow cells in syngenic mice induced growth factor-dependent acute myeloid leukemia (AML). Chromosomal translocation of t(7;11)(p15;p15) has been demonstrated in patients with human AML and chronic myelogenous leukemia (CML), resulting in the fusion gene NUP98-HoxA9. Mice transplanted with bone marrow cells expressing NUP98-NoxA9 acquire a myeloproliferative disease (MPD) which ultimately degrades to AML.

CHROMOSOMAL LOCATION

Genetic locus: HOXA9 (human) mapping to 7p15.2; Hoxa9 (mouse) mapping to 6 B3.

SOURCE

HoxA9 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HoxA9 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-17155 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-17155 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HoxA9 (N-20) is recommended for detection of HoxA9 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).

HoxA9 (N-20) is also recommended for detection of HoxA9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HoxA9 siRNA (h): sc-38682, HoxA9 siRNA (m): sc-38683, HoxA9 shRNA Plasmid (h): sc-38682-SH, HoxA9 shRNA Plasmid (m): sc-38683-SH, HoxA9 shRNA (h) Lentiviral Particles: sc-38682-V and HoxA9 shRNA (m) Lentiviral Particles: sc-38683-V.

HoxA9 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

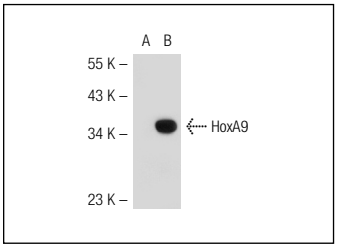
Molecular Weight of HoxA9: 36 kDa.

Positive Controls: HoxA9 (m): 293T Lysate: sc-120885 or SW480 cell lysate: sc-2219.

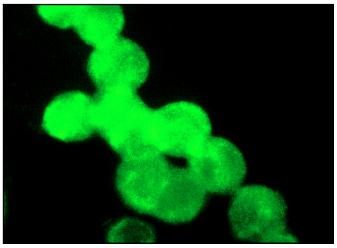
STORAGE

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

DATA



HoxA9 (N-20): sc-17155. Western blot analysis of HoxA9 expression in non-transfected: sc-117752 (**A**) and mouse HoxA9 transfected: sc-120885 (**B**) 293T whole cell lysates.



HoxA9 (N-20): sc-17155. Immunofluorescence staining of methanol-fixed SW480 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Dasen, J.S., et al. 2003. Motor neuron columnar fate imposed by sequential phases of Hox-c activity. Nature 425: 926-933.
2. Kirito, K., et al. 2004. Thrombopoietin induces HOXA9 nuclear transport in immature hematopoietic cells: potential mechanism by which the hormone favorably affects hematopoietic stem cells. Mol. Cell. Biol. 24: 6751-6762.
3. Chen, K.N., et al. 2005. Expression of 11 HOX genes is deregulated in esophageal squamous cell carcinoma. Clin. Cancer Res. 11: 1044-1049.
4. Dintilhac, A., et al. 2005. PBX1 intracellular localization is independent of Meis1 in epithelial cells of the developing female genital tract. Int. J. Dev. Biol. 49: 851-858.
5. Sohl, M., et al. 2009. Characterization of the murine ephrin-B2 promoter. Gene 437: 54-59.
6. Gilbert, P.M., et al. 2010. HOXA9 regulates BRCA1 expression to modulate human breast tumor phenotype. J. Clin. Invest. 120: 1535-1550.
7. Funasaka, T., et al. 2011. RNA export factor RAE1 contributes to NUP98-HOXA9-mediated leukemogenesis. Cell Cycle 10: 1456-1467.
8. Martin, N., et al. 2013. Interplay between Homeobox proteins and Polycomb repressive complexes in p16INK4a regulation. EMBO J. 32: 982-995.

RESEARCH USE

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