



HoxA9 (m): 293T Lysate: sc-120885

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 Pbx 1. In addition, the HoxA9 protein, along with the Meis1 and Pbx 1 proteins, have been implicated in leukemic transformation in both mice and humans. Furthermore, 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-HoxA9 acquire a myeloproliferative disease (MPD) which ultimately degrades to AML.

REFERENCES

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2. Izon, D.J., et al. 1998. Loss of function of the homeobox gene HOXA9 perturbs early T cell development and induces apoptosis in primitive thymocytes. *Blood* 92: 383-393.
3. Kroon, E., et al. 1998. HoxA9 transforms primary bone marrow cells through specific collaboration with Meis1a but not Pbx 1b. *EMBO J.* 17: 3714-3725.
4. Taylor, H.S., et al. 1998. HoxA10 is expressed in response to sex steroids at the time of implantation in the human endometrium. *J. Clin. Invest.* 101: 1379-1384.
5. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 142956. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Kroon, E., et al. 2001. NUP98-HOXA9 expression in hemopoietic stem cells induces chronic and acute myeloid leukemias in mice. *EMBO J.* 20: 350-361.
7. Fujino, T., et al. 2002. Single-translocation and double-chimeric transcripts: detection of NUP98-HOXA9 in myeloid leukemias with HOXA11 or HOXA13 breaks of the chromosomal translocation t(7;11)(p15;p15). *Blood* 99: 1428-1433.

CHROMOSOMAL LOCATION

Genetic locus: Hoxa9 (mouse) mapping to 6 B3.

PRODUCT

HoxA9 (m): 293T Lysate represents a lysate of mouse HoxA9 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

HoxA9 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive HoxA9 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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