

HoxD9 (h): 293T Lysate: sc-115615

BACKGROUND

The Hox proteins play a role in patterns of embryonic development and cellular differentiation by regulating downstream target genes. *In vivo*, the HoxD9 protein interacts with the autoregulatory and cross-regulatory enhancers of the murine HoxB1 and human HoxD9 genes. Specifically, the HoxD9 protein interacts with the human control region (HCR) of the HoxD9 gene, thus inducing transcription of the HoxD9 promoter. HoxD9 may be a multifunctional transcriptional regulator, as it contains different activation domains. Activation of HoxD9 depends on the structure of the target regulatory element, and results in differential cofactor interaction. The HoxD9 protein is expressed in the early stages of mouse joint development, primarily in the articular cartilage. HoxD9 transcripts are also detected in the synovial tissue of arthritic mice, but not in that of normal mice, suggesting that HoxD9 may have a role in the pathology of arthritis. Furthermore, the HoxD9 protein is highly expressed in the synoviocytes of patients with rheumatoid arthritis (RA), but not in osteoarthritis patients. The human HoxD9 protein is also differentially expressed in the human cervical cancer cell line HeLa, but is not expressed in the normal cervix and may thus play a role in tumorigenesis.

REFERENCES

1. Zappavigna, V., Sartori, D. and Mavilio, F. 1994. Specificity of Hox protein function depends on DNA-protein and protein-protein interactions, both mediated by the homeo domain. *Genes Dev.* 8: 732-744.
2. Vigano, M.A., Di Rocco, G., Zappavigna, V. and Mavilio, F. 1998. Definition of the transcriptional activation domains of three human Hox proteins depends on the DNA-binding context. *Mol. Cell. Biol.* 18: 6201-6212.
3. Khoa, N.D., Hasunuma, T., Kobata, T., Kato, T. and Nishioka, K. 1999. Expression of murine HoxD9 during embryonic joint patterning and in human T lymphotropic virus type I tax transgenic mice with arthropathy resembling rheumatoid arthritis. *Arthritis Rheum.* 42: 686-696.
4. Khoa, N.D., Nakazawa, M., Hasunuma, T., Nakajima, T., Nakamura, H., Kobata, T. and Nishioka, K. 2001. Potential role of HoxD9 in synoviocyte proliferation. *Arthritis Rheum.* 44: 1013-1021.
5. Li, H., Huang, C.J. and Choo, K.B. 2002. Expression of homeobox genes in cervical cancer. *Gynecol. Oncol.* 84: 216-221.

CHROMOSOMAL LOCATION

Genetic locus: HOXD9 (human) mapping to 2q31.1.

PRODUCT

HoxD9 (h): 293T Lysate represents a lysate of human HoxD9 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

HoxD9 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HoxD9 antibodies. Recommended use: 10-20 µl per lane.

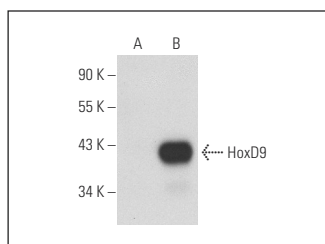
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HoxD9 (H-2): sc-137134 is recommended as a positive control antibody for Western Blot analysis of enhanced human HoxD9 expression in HoxD9 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

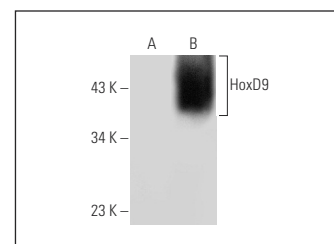
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



HoxD9 (H-2): sc-137134. Western blot analysis of HoxD9 expression in non-transfected: sc-117752 (A) and human HoxD9 transfected: sc-115615 (B) 293T whole cell lysates.



HoxD9 (B-9): sc-365717. Western blot analysis of HoxD9 expression in non-transfected: sc-117752 (A) and human HoxD9 transfected: sc-115615 (B) 293T whole cell lysates.

RESEARCH USE

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