

HoxD11 (R-26): sc-81969

BACKGROUND

The Hox proteins are a family of transcription factors that play a role in development and cellular differentiation by regulating downstream target genes. Specifically, the Hox proteins direct DNA-protein and protein-protein interactions that assist in determining the morphologic features associated with the anterior-posterior body axis. Hox proteins are involved in controlling axial patterning, leukemias and hereditary malformations. HoxD11 (homeobox D11), also known as HOX4 or HOX4F, is a 338 amino acid protein that contains one homeobox DNA-binding domain and is a member of the Abd B homeobox family. Localized to the nucleus, HoxD11 functions as a sequence-specific transcription factor that, in conjunction with a variety of other proteins, provides cells with positional identities on their anterior-posterior axis. Defects in the gene encoding HoxD11 are associated with severe limb and genital abnormalities, suggesting that HoxD11 plays an important role in forelimb morphogenesis.

REFERENCES

1. Acampora, D., et al. 1989. The human HOX gene family. *Nucleic Acids Res.* 17: 10385-10402.
2. Johnson, R.L. and Tabin, C.J. 1997. Molecular models for vertebrate limb development. *Cell* 90: 979-990.
3. Taketani, T., et al. 2002. The HOXD11 gene is fused to the NUP98 gene in acute myeloid leukemia with t(2;11)(q31;p15). *Cancer Res.* 62: 33-37.
4. Kmita, M., et al. 2002. Serial deletions and duplications suggest a mechanism for the collinearity of HOXD genes in limbs. *Nature* 420: 145-150.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 142986. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Zákány, J., et al. 2004. A dual role for HOX genes in limb anterior-posterior asymmetry. *Science* 304: 1669-1672.
7. Spitz, F., et al. 2005. Inversion-induced disruption of the HoxD cluster leads to the partition of regulatory landscapes. *Nat. Genet.* 37: 889-893.

CHROMOSOMAL LOCATION

Genetic locus: HOXD11 (human) mapping to 2q31.1; Hoxd11 (mouse) mapping to 2 C3.

SOURCE

HoxD11 (R-26) is a mouse monoclonal antibody raised against recombinant HoxD11 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

HoxD11 (R-26) is recommended for detection of HoxD11 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 HoxD11 siRNA (h): sc-75291, HoxD11 siRNA (m): sc-75292, HoxD11 shRNA Plasmid (h): sc-75291-SH, HoxD11 shRNA Plasmid (m): sc-75292-SH, HoxD11 shRNA (h) Lentiviral Particles: sc-75291-V and HoxD11 shRNA (m) Lentiviral Particles: sc-75292-V.

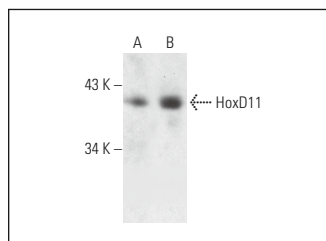
Molecular Weight of HoxD11: 36 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Jurkat nuclear extract: sc-2132 or LNCaP cell lysate: sc-2231.

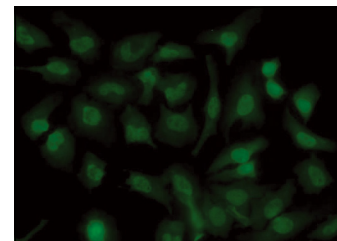
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HoxD11 (R-26): sc-81969. Western blot analysis of HoxD11 expression in LNCaP whole cell lysate (A) and Jurkat nuclear extract (B).



HoxD11 (R-26): sc-81969. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Olatoke, T., et al. 2023. Single-cell multiomic analysis identifies a HOX-PBX gene network regulating the survival of lymphangioleiomyomatosis cells. *Sci. Adv.* 9: eadf8549.
2. Gu, S., et al. 2023. Nephrotoxicity assessment of Esculentoside A using human-induced pluripotent stem cell-derived organoids. *Phyther. Res.* E-published.

RESEARCH USE

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