

HoxD1 (H-6): sc-365853

BACKGROUND

The Hox (homeobox) genes play an important role in the development and design of anterior-posterior body axes in animals. Although Hox proteins can bind to DNA as monomers, dimerization with PBX homeoproteins can significantly increase the DNA binding activity of these transcription factors. The HoxD9 gene is involved in the development and patterning of the forelimb and axial skeleton. Transcriptional activation of HoxD9 has been shown to be enhanced by HMG1 (high mobility group protein 1) and antagonized by HoxD8, suggesting that Hox protein function depends on both DNA-protein and protein-protein interactions. The Hox genes are known to regulate a number of cell adhesion molecules (CAMs), with HoxD9 specifically increasing levels of L-CAM transcripts. In presomitic mesoderm, HoxD1 displays dynamic stripes of expression. In the three stages of diencephalon development, HoxD1 is strongly expressed in the first two stages and downregulated in the third stage.

REFERENCES

1. Zappavigna, V., et al. 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. Goomer, R.S., et al. 1994. Regulation *in vitro* of an L-CAM enhancer by homeobox genes HoxD9 and HNF-1. *Proc. Natl. Acad. Sci. USA* 91: 7985-7989.
3. Zappavigna, V., et al. 1996. HMG1 interacts with Hox proteins and enhances their DNA binding and transcriptional activation. *EMBO J.* 15: 4981-4991.

CHROMOSOMAL LOCATION

Genetic locus: HOXD1 (human) mapping to 2q31.1; Hoxd1 (mouse) mapping to 2 C3.

SOURCE

HoxD1 (H-6) is a mouse monoclonal antibody raised against amino acids 1-180 mapping at the N-terminus of HoxD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-365853 X, 200 µg/0.1 ml.

HoxD1 (H-6) is available conjugated to agarose (sc-365853 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365853 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365853 PE), fluorescein (sc-365853 FITC), Alexa Fluor® 488 (sc-365853 AF488), Alexa Fluor® 546 (sc-365853 AF546), Alexa Fluor® 594 (sc-365853 AF594) or Alexa Fluor® 647 (sc-365853 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365853 AF680) or Alexa Fluor® 790 (sc-365853 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

HoxD1 (H-6) is recommended for detection of HoxD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 HoxD1 siRNA (h): sc-38696, HoxD1 siRNA (m): sc-38697, HoxD1 shRNA Plasmid (h): sc-38696-SH, HoxD1 shRNA Plasmid (m): sc-38697-SH, HoxD1 shRNA (h) Lentiviral Particles: sc-38696-V and HoxD1 shRNA (m) Lentiviral Particles: sc-38697-V.

HoxD1 (H-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

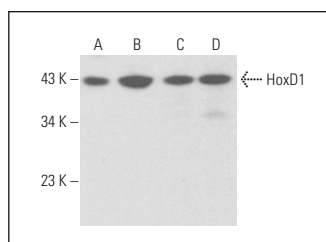
Molecular Weight of HoxD1: 41 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, F9 cell lysate: sc-2245 or A-10 cell lysate: sc-3806.

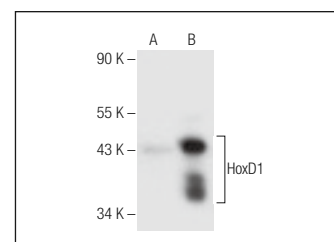
RECOMMENDED SUPPORT REAGENTS

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



HoxD1 (H-6): sc-365853. Western blot analysis of HoxD1 expression in 3T3-L1 (A), F9 (B), Sol8 (C) and A-10 (D) whole cell lysates.



HoxD1 (H-6): sc-365853. Western blot analysis of HoxD1 expression in non transfected (A) and HoxD1 transfected (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Almgren, P., et al. 2017. Genetic determinants of circulating GIP and GLP-1 concentrations. *JCI Insight* 2: 93306.

STORAGE

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