

HoxB4 (A-15): sc-28607

BACKGROUND

The homeobox genes encode a family of transcription factors that regulate development and postnatal tissue homeostasis. Encoded by the HOXB4 gene, the nuclear phosphoprotein HoxB4 plays a key role in regulating the balance between hematopoietic stem cell renewal and differentiation. Hematopoietic expression of HoxB4 is regulated by the binding of USF-1 and USF-2, the binding of which may be favored by cytokines promoting stem cell self-renewal versus differentiation. HoxB4 is dependent on AP-1 expression to induce changes in cellular proliferation and differentiation, which increases the levels of cyclin D1, thereby linking HoxB4 with key elements of the cell cycle machinery. HoxB4 also participates in the down-regulation of c-Myc expression. It is expressed in developing hair follicles as well as in K-562 and HL-60 cells.

REFERENCES

1. Rabin, M., et al. 1985. Two homeobox loci mapped in evolutionarily related mouse and human chromosomes. *Nature* 314: 175-178.
2. Pan, Q., et al. 1999. c-Myc intron element-binding proteins are required for 1,24-dihydroxy-vitamin D₃ regulation of c-Myc during HL-60 cell differentiation and the involvement of HoxB4. *J. Biol. Chem.* 274: 8437-8444.

CHROMOSOMAL LOCATION

Genetic locus: HOXB4 (human) mapping to 17q21.32; Hoxb4 (mouse) mapping to 11 D.

SOURCE

HoxB4 (H-50) is a rabbit polyclonal antibody raised against amino acids 91-140 mapping within an internal region of HoxB4 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.

APPLICATIONS

HoxB4 (H-50) is recommended for detection of HoxB4 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).

HoxB4 (H-50) is also recommended for detection of HoxB4 in additional species, including bovine.

Suitable for use as control antibody for HoxB4 siRNA (h): sc-38692, HoxB4 siRNA (m): sc-38693, HoxB4 shRNA Plasmid (h): sc-38692-SH, HoxB4 shRNA Plasmid (m): sc-38693-SH, HoxB4 shRNA (h) Lentiviral Particles: sc-38692-V and HoxB4 shRNA (m) Lentiviral Particles: sc-38693-V.

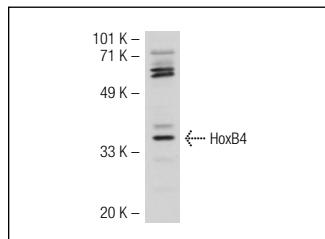
Molecular Weight of HoxB4: 34 kDa.

Positive Controls: HoxB4 (h): 293T Lysate: sc-116031, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

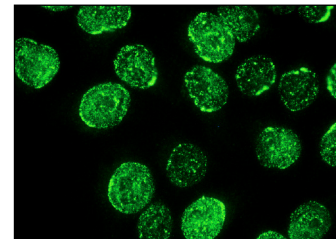
STORAGE

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

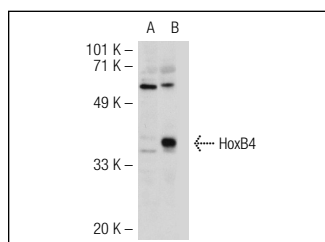
DATA



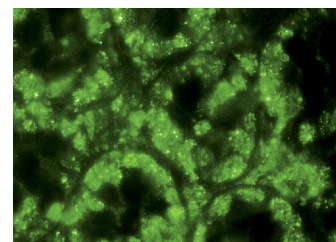
HoxB4 (H-50): sc-28607. Western blot analysis of HoxB4 expression in Jurkat whole cell lysate.



HoxB4 (H-50): sc-28607. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.



HoxB4 (H-50): sc-28607. Western blot analysis of HoxB4 expression in non-transfected: sc-117752 (A) and human HoxB4 transfected: sc-116031 (B) 293T whole cell lysates.



HoxB4 (H-50): sc-28607. Immunofluorescence staining of normal mouse intestine frozen section showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Doi, T., et al. 2010. HoxB2, HoxB4 and Alx4 genes are downregulated in the cadmium-induced omphalocele in the chick model. *Pediatr. Surg. Int.* 26: 1017-1023.

RESEARCH USE

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

PROTOCOLS

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

MONOS
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Guaranteed

Try **HoxB4 (D-1): sc-365927** or **HoxB4 (C-10): sc-271083**, our highly recommended monoclonal alternatives to HoxB4 (H-50).