

HoxB4 (N-18): sc-15001

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.

CHROMOSOMAL LOCATION

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

SOURCE

HoxB4 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-15001 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-15001 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HoxB4 (N-18) 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 (N-18) is also recommended for detection of HoxB4 in additional species, including canine, bovine and porcine.

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.

HoxB4 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

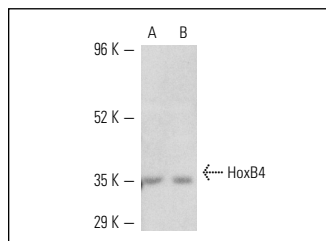
Molecular Weight of HoxB4: 34 kDa.

Positive Controls: HoxB4 (h): 293T Lysate: sc-116031, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

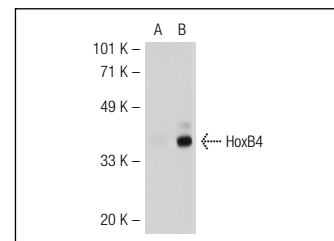
STORAGE

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

DATA



HoxB4 (N-18): sc-15001. Western blot analysis of HoxB4 expression in K-562 (A) and Jurkat (B) whole cell lysates.



HoxB4 (N-18): sc-15001. Western blot analysis of HoxB4 expression in non-transfected: sc-117752 (A) and human HoxB4 transfected: sc-116031 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tanaka, H., et al. 2006. HOX decoy peptide enhances the *ex vivo* expansion of human umbilical cord blood CD34⁺ hematopoietic stem cells/hematopoietic progenitor cells. *Stem Cells* 24: 2592-2602.
2. Volpe, M.V., et al. 2008. Unique spatial and cellular expression patterns of HoxA5, HoxB4, and HoxB6 proteins in normal developing murine lung are modified in pulmonary hypoplasia. *Birth Defects Res. Part A Clin. Mol. Teratol.* 82: 571-584.
3. Villaescusa, J.C., et al. 2009. Cytoplasmic Prep1 interacts with 4EHP inhibiting HoxB4 translation. *PLoS ONE* 4: e5213.
4. Ohno, Y., et al. 2010. Hoxb4 transduction down-regulates geminin protein, providing hematopoietic stem and progenitor cells with proliferation potential. *Proc. Natl. Acad. Sci. USA* 107: 21529-21534.

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.

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Try **HoxB4 (D-1): sc-365927** or **HoxB4 (C-10): sc-271083**, our highly recommended monoclonal alternatives to HoxB4 (N-18).