

# HoxB9 (K-12): sc-46129

## BACKGROUND

The Hox proteins 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. The mammalian Hox gene complex consists of 39 genes that are located on four linkage groups, which are dispersed over four chromosomes. Hox genes that occupy the same relative position along the 5' to 3' coordinate (trans-paralogous genes) are more similar in sequence and expression pattern than adjacent Hox genes on the same chromosome. In mice, the HoxB cluster contains HoxB1 to HoxB9 and HoxB13, which are transcribed in the same direction. HoxB9 associates with the transcriptional cofactors BTG1 and BTG2, which enhance HoxB9 transcription. Alterations in HoxB9 expression, as with other Hox family member, has been implicated in leukemia.

## REFERENCES

- Ohnishi, K., et al. 1998. Modulation of HoxB6 and HoxB9 genes expression in human leukemia cell lines during myelomonocytic differentiation. *Leuk. Lymphoma* 31: 599-608.
- Chen, F., et al. 1999. Paralogous mouse Hox genes, HoxA9, HoxB9, and HoxD9, function together to control development of the mammary gland in response to pregnancy. *Proc. Natl. Acad. Sci. USA* 96: 541-546.
- Calvo, R., et al. 2000. Altered Hox and WNT7A expression in human lung cancer. *Proc. Natl. Acad. Sci. USA* 97: 12776-12781.
- Medina-Martinez, O., et al. 2000. A large targeted deletion of HoxB1-HoxB9 produces a series of single-segment anterior homeotic transformations. *Dev. Biol.* 222: 71-83.
- Prevot, D., et al. 2000. The leukemia-associated protein BTG1 and the p53-regulated protein BTG2 interact with the homeoprotein HoxB9 and enhance its transcriptional activation. *J. Biol. Chem.* 275: 147-153.
- Chen, K.N., et al. 2005. Expression of 11 Hox genes is deregulated in esophageal squamous cell carcinoma. *Clin. Cancer Res.* 11: 1044-1049.

## CHROMOSOMAL LOCATION

Genetic locus: HOXB9 (human) mapping to 17q21.32; Hoxb9 (mouse) mapping to 11 D.

## SOURCE

HoxB9 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HoxB9 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.

Blocking peptide available for competition studies, sc-46129 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-46129 X, 200 µg/0.1 ml.

## APPLICATIONS

HoxB9 (K-12) is recommended for detection of HoxB9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

HoxB9 (K-12) is also recommended for detection of HoxB9 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HoxB9 siRNA (h): sc-45669, HoxB9 siRNA (m): sc-45670, HoxB9 shRNA Plasmid (h): sc-45669-SH, HoxB9 shRNA Plasmid (m): sc-45670-SH, HoxB9 shRNA (h) Lentiviral Particles: sc-45669-V and HoxB9 shRNA (m) Lentiviral Particles: sc-45670-V.

HoxB9 (K-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HoxB9: 28 kDa.

Molecular Weight (observed) of HoxB9: 32 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **HoxB9 (H-8): sc-398500** or **HoxB9 (45.9): sc-130377**, our highly recommended monoclonal alternatives to HoxB9 (K-12).