

HoxB9 (H-8): sc-398500

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 4 linkage groups, which are dispersed over 4 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 members, has been implicated in leukemia.

CHROMOSOMAL LOCATION

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

SOURCE

HoxB9 (H-8) is a mouse monoclonal antibody raised against amino acids 101-180 mapping within an internal region of HoxB9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-398500 X, 200 µg/0.1 ml.

HoxB9 (H-8) is available conjugated to agarose (sc-398500 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398500 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398500 PE), fluorescein (sc-398500 FITC), Alexa Fluor® 488 (sc-398500 AF488), Alexa Fluor® 546 (sc-398500 AF546), Alexa Fluor® 594 (sc-398500 AF594) or Alexa Fluor® 647 (sc-398500 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398500 AF680) or Alexa Fluor® 790 (sc-398500 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HoxB9 (H-8) is recommended for detection of HoxB9 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 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 (H-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

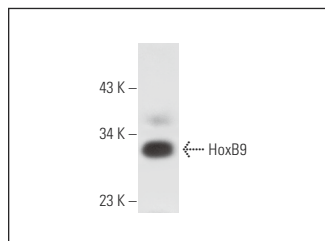
Molecular Weight (predicted) of HoxB9: 28 kDa.

Molecular Weight (observed) of HoxB9: 32 kDa.

STORAGE

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

DATA



HoxB9 (H-8): sc-398500. Western blot analysis of HoxB9 expression in K-562 nuclear extract.

SELECT PRODUCT CITATIONS

- Wan, J., et al. 2016. PCAF-mediated acetylation of transcriptional factor HoxB9 suppresses lung adenocarcinoma progression by targeting oncogenic protein JMJD6. *Nucleic Acids Res.* 44: 10662-10675.
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- Kim, M., et al. 2020. Mutually exclusive antiproliferative effect of cell line-specific HOX inhibition in epithelial ovarian cancer cell lines: SKOV-3 vs RMUG-S. *J. Cell. Mol. Med.* 24: 3246-3251.
- Francis, J.C., et al. 2020. HOX genes promote cell proliferation and are potential therapeutic targets in adrenocortical tumours. *Br. J. Cancer* 124: 805-816.
- Schmidt, V., et al. 2021. WT1 regulates HOXB9 gene expression in a bidirectional way. *Biochim. Biophys. Acta Gene Regul. Mech.* 1864: 194764.
- Sanchez-Ferras, O., et al. 2021. A coordinated progression of progenitor cell states initiates urinary tract development. *Nat. Commun.* 12: 2627.
- Farache, D., et al. 2022. Eukaryotic initiation factor 5A2 regulates expression of antiviral genes. *J. Mol. Biol.* 434: 167564.
- Wang, T., et al. 2022. The AMPK-HoxB9-KRAS axis regulates lung adenocarcinoma growth in response to cellular energy alterations. *Cell Rep.* 40: 111210.
- Zhang, J., et al. 2023. The E2F1-HOXB9/PBX2-CDK6 axis drives gastric tumorigenesis and serves as a therapeutic target in gastric cancer. *J. Pathol.* 260: 402-416.

RESEARCH USE

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

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