SANTA CRUZ BIOTECHNOLOGY, INC.

HoxB6 (B-12): sc-166950

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HOX genes play a fundamental role in the development of the vertebrate central nervous system, heart, axial skeleton, limbs, gut, urogenital tract and external genitalia. There are multiple transcripts of the HoxB3 gene, and the anterior boundaries of its expression vary at different stages of development. HoxB3 plays a role in the proliferation and differentiation of both early myeloid and lymphoid developmental pathways. HoxB3 also has overlapping function in mediating the migration of pharyngeal organ primordia and is expressed in very restricted domains in the future hindbrain. HoxB6 controls the generation, proliferation and survival of erythroid progenitor cells. The HoxB6 protein is expressed in the suprabasal layer of the early developing epidermis and throughout the upper layers of late fetal and adult human skin. HoxB6 is cytoplasmically expressed throughout fetal epidermal development, but displays nuclear expression in normal adult skin. HoxB6 protein also has nuclear expression in hyperproliferative skin conditions, but appears to be localized in the cytoplasm in basal and squamous cell carcinomas. HoxB6 genes are also expressed in normal adult lung.

REFERENCES

1. Godsave, S., et al. 1994. Expression patterns of HoxB genes in the *Xenopus* embryo suggest roles in anteroposterior specification of the hindbrain and in dorsoventral patterning of the mesoderm. Dev. Biol. 166: 465-476.
2. Sauvageau, G., et al. 1997. Overexpression of HoxB3 in hematopoietic cells causes defective lymphoid development and progressive myeloproliferation. Immunity 6: 13-22.
3. Manley, N.R., et al. 1998. Hox group 3 paralogs regulate the development and migration of the thymus, thyroid, and parathyroid glands. Dev. Biol. 195: 1-15.

CHROMOSOMAL LOCATION

Genetic locus: HOXB6 (human) mapping to 17q21.32; Hoxb6 (mouse) mapping to 11 D.

SOURCE

HoxB6 (B-12) is a mouse monoclonal antibody raised against amino acids 21-120 mapping near the N-terminus of HoxB6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-166950 X, 200 µg/0.1 ml.

HoxB6 (B-12) is available conjugated to agarose (sc-166950 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166950 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166950 PE), fluorescein (sc-166950 FITC), Alexa Fluor® 488 (sc-166950 AF488), Alexa Fluor® 546 (sc-166950 AF546), Alexa Fluor® 594 (sc-166950 AF594) or Alexa Fluor® 647 (sc-166950 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166950 AF680) or Alexa Fluor® 790 (sc-166950 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HoxB6 (B-12) is recommended for detection of HoxB6 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

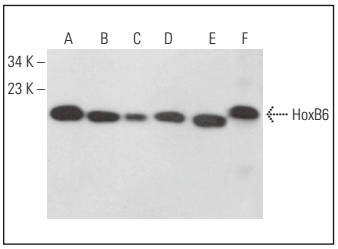
Suitable for use as control antibody for HoxB6 siRNA (h): sc-38694, HoxB6 siRNA (m): sc-38695, HoxB6 shRNA Plasmid (h): sc-38694-SH, HoxB6 shRNA Plasmid (m): sc-38695-SH, HoxB6 shRNA (h) Lentiviral Particles: sc-38694-V and HoxB6 shRNA (m) Lentiviral Particles: sc-38695-V.

HoxB6 (B-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

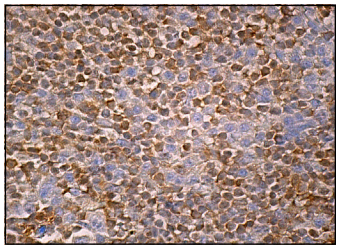
Molecular Weight of HoxB6 isoform 1/2: 25/15 kDa.

Positive Controls: JAR cell lysate: sc-2276, WEHI-231 whole cell lysate: sc-2213 or COLO 205 whole cell lysate: sc-364177.

DATA



HoxB6 (B-12): sc-166950. Western blot analysis of HoxB6 expression in JAR (**A**), WEHI-231 (**B**), COLO 205 (**C**), Caco-2 (**D**) and NIH/3T3 (**E**) whole cell lysates and human placenta tissue extract (**F**).



HoxB6 (B-12): sc-166950. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and nuclear staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Yan, Y., et al. 2020. MiR-126 regulates properties of SOX9$^+$ liver progenitor cells during liver repair by targeting Hoxb6. Stem Cell Reports 15: 706-720.

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 for detailed protocols and support products.