SANTA CRUZ BIOTECHNOLOGY, INC.

HoxB6 (m): 293T Lysate: sc-125468

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 myelopro-lif-eration. 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.
4. Kappen, C. 2000. Disruption of the homeobox gene HoxB6 in mice results in increased numbers of early erythrocyte progenitors. Am. J. Hematol. 65: 111-118.
5. Komuves, L.G., et al. 2000. Changes in HoxB6 homeodomain protein structure and localization during human epidermal development and differentiation. Dev. Dyn. 218: 636-647.
6. Golpon, H.A., et al. 2001. HOX genes in human lung: altered expression in primary pulmonary hypertension and emphysema. Am. J. Pathol. 158: 955-966.
7. Goodman, F.R., et al. 2001. Human HOX gene mutations. Clin. Genet. 59: 1-11.
8. Kwan, C.T., et al. 2001. Regulatory analysis of the mouse HoxB3 gene: multiple elements work in concert to direct temporal and spatial patterns of expression. Dev. Biol. 232: 176-190.

CHROMOSOMAL LOCATION

Genetic locus: Hoxb6 (mouse) mapping to 11 D.

RESEARCH USE

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

PRODUCT

HoxB6 (m): 293T Lysate represents a lysate of mouse HoxB6 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HoxB6 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive HoxB6 antibodies. Recommended use: 10-20 µl per lane.

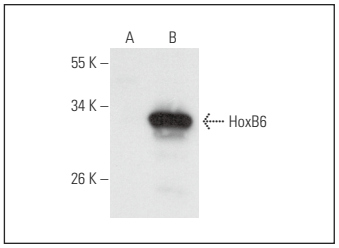
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HoxB6 (B-12): sc-166950 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse HoxB6 expression in HoxB6 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

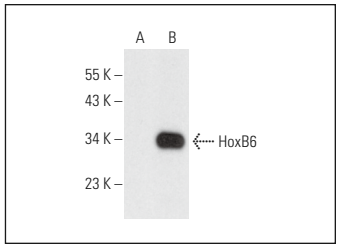
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



HoxB6 (B-12): sc-166950. Western blot analysis of HoxB6 expression in non-transfected: sc-117752 (**A**) and mouse HoxB6 transfected: sc-125468 (**B**) 293T whole cell lysates.



HoxB6 (D-12): sc-393926. Western blot analysis of HoxB6 expression in non-transfected: sc-117752 (**A**) and mouse HoxB6 transfected: sc-125468 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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