SANTA CRUZ BIOTECHNOLOGY, INC.

HoxB13 (F-9): sc-28333

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. HoxB13 is a sequence-specific transcription factor which is part of a developmental regulatory system that provides cells with specific positional identities on the anterior-posterior axis. HoxB13 is highly expressed in the prostate gland from the embryonic stages to adulthood and is required for normal differentiation and secretory function of that organ. HoxB13 is primarily expressed in the nucleus, but is cytoplasmic throughout fetal skin development and some hyperproliferative skin conditions.

CHROMOSOMAL LOCATION

Genetic locus: HOXB13 (human) mapping to 17q21.32.

SOURCE

HoxB13 (F-9) is a mouse monoclonal antibody raised against amino acids 1-284 of HoxB13 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-28333 X, 200 µg/0.1 ml.

HoxB13 (F-9) is available conjugated to agarose (sc-28333 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28333 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28333 PE), fluorescein (sc-28333 FITC), Alexa Fluor® 488 (sc-28333 AF488), Alexa Fluor® 546 (sc-28333 AF546), Alexa Fluor® 594 (sc-28333 AF594) or Alexa Fluor® 647 (sc-28333 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28333 AF680) or Alexa Fluor® 790 (sc-28333 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

HoxB13 (F-9) is recommended for detection of HoxB13 of 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 HoxB13 siRNA (h): sc-43851, HoxB13 shRNA Plasmid (h): sc-43851-SH and HoxB13 shRNA (h) Lentiviral Particles: sc-43851-V.

HoxB13 (F-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

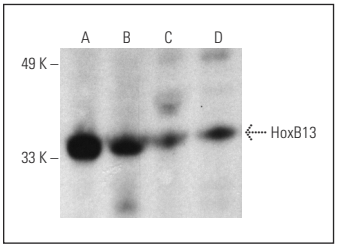
Molecular Weight of HoxB13: 34 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, PC-3 cell lysate: sc-2220 or human bladder extract: sc-363751.

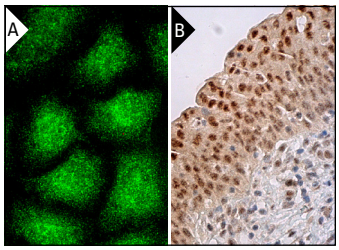
STORAGE

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

DATA



HoxB13 (F-9): sc-28333. Western blot analysis of HoxB13 expression in LNCaP (**A**) and PC-3 (**B**) whole cell lysates and human bladder (**C**) and human prostate (**D**) tissue extracts.



HoxB13 (F-9): sc-28333. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Muthusamy, V., et al. 2006. Epigenetic silencing of novel tumor suppressors in malignant melanoma. Cancer Res. 66: 11187-11193.
2. Barton, V.N., et al. 2010. Unique molecular characteristics of pediatric myxopapillary ependymoma. Brain Pathol. 20: 560-570.
3. Ang, M.K., et al. 2011. Molecular classification of breast phyllodes tumors: validation of the histologic grading scheme and insights into malignant progression. Breast Cancer Res. Treat. 129: 319-329.
4. Liu, Z., et al. 2012. ATRA inhibits the proliferation of DU145 prostate cancer cells through reducing the methylation level of HoxB13 gene. PLoS ONE 7: e40943.
5. Varinot, J., et al. 2013. HoxB13 is a sensitive and specific marker of prostate cells, useful in distinguishing between carcinomas of prostatic and urothelial origin. Virchows Arch. 463: 803-809.
6. Dryden, N.H., et al. 2014. Unbiased analysis of potential targets of breast cancer susceptibility loci by Capture Hi-C. Genome Res. 24: 1854-1868.
7. Alshenawy, H.A. and Saied, E. 2015. Do HoxB13 and P63 have a role in differentiating poorly differentiated prostatic carcinoma from urothelial high-grade carcinoma? APMIS 123: 772-778.
8. Varinot, J., et al. 2016. HoxB13 protein expression in metastatic lesions is a promising marker for prostate origin. Virchows Arch. 468: 619-622.
9. Kristiansen, I., et al. 2017. Sensitivity of HoxB13 as a diagnostic immunohistochemical marker of prostatic origin in prostate cancer metastases: comparison to PSA, prostein, androgen receptor, ERG, NKX3.1, PSAP, and PSMA. Int. J. Mol. Sci. 18: 1151.

RESEARCH USE

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