SANTA CRUZ BIOTECHNOLOGY, INC.

HoxA5 (C-11): sc-365784

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HoxA5 (previously identified as Hox-1.3) is a transcriptional regulator of multiple target genes, including p53 and the progesterone receptor. It is a potent transactivator of p53 and may affect the response of breast cancer cells to DNA damage. In primary breast carcinomas, loss of p53 expression is coupled with loss of HoxA5 expression, suggesting that the loss of HoxA5 expression is important in tumorigenesis. HoxA5 is dynamically expressed during gut development and organogenesis of the respiratory tract, and is continuously expressed from the neonatal period into adult stages in cerebellar Purkinje cells. Expression of HoxA5 is necessary for the region-specific differentiation of the endoderm and differentiation of the myeloid pathway. HoxA5 is also essential for correct specification of the cervical and upper thoracic region of the skeleton and for proper patterning of the embryo.

CHROMOSOMAL LOCATION

Genetic locus: HOXA5 (human) mapping to 7p15.2.

SOURCE

HoxA5 (C-11) is a mouse monoclonal antibody raised against amino acids 56-180 mapping within an internal region of HoxA5 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-365784 X, 200 µg/0.1 ml.

HoxA5 (C-11) is available conjugated to agarose (sc-365784 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365784 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365784 PE), fluorescein (sc-365784 FITC), Alexa Fluor® 488 (sc-365784 AF488), Alexa Fluor® 546 (sc-365784 AF546), Alexa Fluor® 594 (sc-365784 AF594) or Alexa Fluor® 647 (sc-365784 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365784 AF680) or Alexa Fluor® 790 (sc-365784 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HoxA5 (C-11) is recommended for detection of HoxA5 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HoxA5 siRNA (h): sc-38678, HoxA5 shRNA Plasmid (h): sc-38678-SH and HoxA5 shRNA (h) Lentiviral Particles: sc-38678-V.

HoxA5 (C-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HoxA5: 30 kDa.

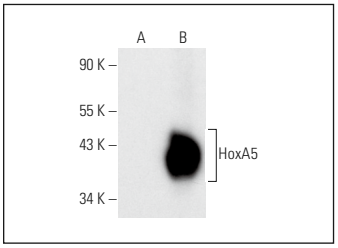
Molecular Weight (observed) of HoxA5: 43/55 kDa.

Positive Controls: HoxA5 (h2): 293T Lysate: sc-173687, WI-38 whole cell lysate: sc-364260 or SK-N-SH cell lysate: sc-2410.

STORAGE

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

DATA



HoxA5 (C-11): sc-365784. Western blot analysis of HoxA5 expression in non-transfected: sc-117752 (**A**) and human HoxA5 transfected: sc-173687 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Teo, W.W., et al. 2016. HoxA5 determines cell fate transition and impedes tumor initiation and progression in breast cancer through regulation of E-cadherin and CD24. Oncogene 35: 5539-5551.
2. Asada, S., et al. 2018. Mutant ASXL1 cooperates with BAP1 to promote myeloid leukaemogenesis. Nat. Commun. 9: 2733.
3. Godfrey, T.C., et al. 2018. The microRNA-23a cluster regulates the developmental HoxA cluster function during osteoblast differentiation. J. Biol. Chem. 293: 17646-17660.
4. Ma, H.M., et al. 2020. HoxA5 inhibits the proliferation and neoplasia of cervical cancer cells via downregulating the activity of the Wnt/β-catenin pathway and transactivating TP53. Cell Death Dis. 11: 420.
5. Ni, Y., et al. 2021. Interruption of neutrophil extracellular traps formation dictates host defense and tubular HoxA5 stability to augment efficacy of anti-Fn14 therapy against septic AKI. Theranostics 11: 9431-9451.
6. He, Z.C., et al. 2022. HoxA5 is amplified in glioblastoma stem cells and promotes tumor progression by transcriptionally activating PTPRZ1. Cancer Lett. 533: 215605.
7. Pai, P., et al. 2022. HOXA5-mediated stabilization of IκBα inhibits the NFκB pathway and suppresses malignant transformation of breast epithelial cells. Cancer Res. 82: 3802-3814.
8. Ye, J., et al. 2023. TRAF7-targeted HOXA5 acts as a tumor suppressor in prostate cancer progression and stemness via transcriptionally activating SPRY2 and regulating MEK/ERK signaling. Cell Death Discov. 9: 378.
9. Tang, H., et al. 2024. METTL14-mediated HOXA5 m^6A modification alleviates osteoporosis via promoting WNK1 transcription to suppress NLRP3-dependent macrophage pyroptosis. J. Orthop. Translat. 48: 190-203.

RESEARCH USE

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