

HoxA5 (C-11): sc-365784

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.

REFERENCES

1. Aubin, J., et al. 1998. Transcriptional interferences at the HoxA4/HoxA5 locus: importance of correct HoxA5 expression for the proper specification of the axial skeleton. *Dev. Dyn.* 212: 141-156.
2. Sanlioglu, S., et al. 1998. Regulation of Purkinje cell-specific promoter by homeodomain proteins: repression by engrailed-2 vs. synergistic activation by HoxA5 and HoxB7. *J. Neurobiol.* 36: 559-571.
3. Crooks, G.M., et al. 1999. Constitutive HoxA5 expression inhibits erythropoiesis and increases myelopoiesis from human hematopoietic progenitors. *Blood* 94: 519-528.

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 IgG₁ 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.

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

STORAGE

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

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.

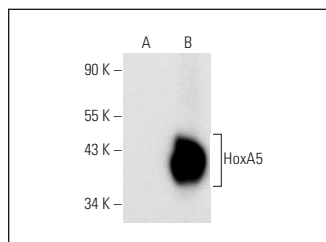
HoxA5 (C-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.

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. Li, Q., et al. 2016. Downregulation of microRNA-196a enhances the sensitivity of non-small cell lung cancer cells to cisplatin treatment. *Int. J. Mol. Med.* 37: 1067-1074.
2. 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.
3. Asada, S., et al. 2018. Mutant ASXL1 cooperates with BAP1 to promote myeloid leukaemogenesis. *Nat. Commun.* 9: 2733.
4. 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.
5. 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.

RESEARCH USE

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