## SANTA CRUZ BIOTECHNOLOGY, INC.

# HoxC6 (B-7): sc-376330



## BACKGROUND

The Hox proteins play a role in development and cellular differentiation by regulating downstream target genes. Specifically, the Hox proteins direct DNA-protein and protein-protein interactions that assist in determining the morphologic features associated with the anterior-posterior body axis. The mammalian Hox gene complex consists of 39 genes that are located on 4 link-age groups, which are dispersed over 4 chromosomes. Hox genes that occupy the same relative position along the 5' to 3' coordinate *(trans*-paralogous genes) are more similar in sequence and expression pattern than adjacent Hox genes on the same chromosome. HoxC6 sequence-specific transcription factor is part of a developmental regulatory system that provides cells with specific positional identities on the anterior-posterior axis. HoxC6 may be a novel potential therapeutic target for prostate cancer.

#### **REFERENCES**

- 1. Juan, A.H., et al. 2003. Enhancer timing of Hox gene expression: deletion of the endogenous HoxC8 early enhancer. Development 130: 4823-4834.
- Miller, G.J., et al. 2003. Aberrant HoxC expression accompanies the malignant phenotype in human prostate. Cancer Res. 63: 5879-5888.
- 3. Chen, K.N., et al. 2005. Expression of 11 Hox genes is deregulated in esophageal squamous cell carcinoma. Clin. Cancer Res. 11: 1044-1049.
- Ramachandran, S., et al. 2005. Loss of HoxC6 expression induces apoptosis in prostate cancer cells. Oncogene 24: 188-198.

#### **CHROMOSOMAL LOCATION**

Genetic locus: HOXC6 (human) mapping to 12q13.13; Hoxc6 (mouse) mapping to 15 F3.

#### SOURCE

HoxC6 (B-7) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of HoxC6 of human origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG<sub>2a</sub> 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-376330 X, 200  $\mu g$ /0.1 ml.

HoxC6 (B-7) is available conjugated to agarose (sc-376330 AC), 500  $\mu$ g/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376330 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376330 PE), fluorescein (sc-376330 AF546), Alexa Fluor<sup>®</sup> 488 (sc-376330 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376330 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376330 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376330 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376330 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376330 AF790), 200  $\mu$ g/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, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### APPLICATIONS

HoxC6 (B-7) is recommended for detection of HoxC6 isoform 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

HoxC6 (B-7) is also recommended for detection of HoxC6 isoform 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HoxC6 siRNA (h): sc-45673, HoxC6 siRNA (m): sc-45674, HoxC6 shRNA Plasmid (h): sc-45673-SH, HoxC6 shRNA Plasmid (m): sc-45674-SH, HoxC6 shRNA (h) Lentiviral Particles: sc-45673-V and HoxC6 shRNA (m) Lentiviral Particles: sc-45674-V.

HoxC6 (B-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HoxC6 isoforms: 27/18 kDa.

Positive Controls: SK-N-MC nuclear extract: sc-2154.

## DATA



HoxC6 (B-7): sc-376330. Western blot analysis of HoxC6 expression in SK-N-MC nuclear extract.

#### **SELECT PRODUCT CITATIONS**

- 1. Hamid, A.R., et al. 2015. The role of HoxC6 in prostate cancer development. Prostate 75: 1868-1876.
- Gao, Y., et al. 2019. MiR-127 attenuates adipogenesis by targeting MAPK4 and HoxC6 in porcine adipocytes. J. Cell. Physiol. 234: 21838-21850.
- Jung, J., et al. 2020. Increased HoxC6 mRNA expression is a novel biomarker of gastric cancer. PLoS ONE 15: e0236811.
- 4. Qi, L., et al. 2021. HomeoboxC6 promotes metastasis by orchestrating the DKK1/Wnt/ $\beta$ -catenin axis in right-sided colon cancer. Cell Death Dis. 12: 337.
- Huang, H., et al. 2022. HoxC6 impacts epithelial-mesenchymal transition and the immune microenvironment through gene transcription in gliomas. Cancer Cell Int. 22: 170.

## **RESEARCH USE**

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