

# HoxC9 (HOXCA6E6): sc-81100

## BACKGROUND

The Hox proteins are a family of transcription factors that 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. Hox proteins are involved in controlling axial patterning, leukemias and hereditary malformations. HoxC9 (homeobox protein HoxC9), also known as HOX3 or HOX3B, is a member of the Abd-B homeobox (Hox) family. It is a 260 amino acid long nuclear protein that contains one homeobox DNA-binding domain. HoxC9 plays a role in the regulation of development, providing cells with positional identities on the anterior-posterior body axis. In addition, HoxC9 is expressed in esophageal cancer cells and may be involved in cancer development.

## REFERENCES

1. Redline, R.W., et al. 1994. Expression of Abd-B-type homeobox genes in human tumors. *Lab. Invest.* 71: 663-670.
2. Miano, J.M., et al. 1996. Restricted expression of homeobox genes distinguishes fetal from adult human smooth muscle cells. *Proc. Natl. Acad. Sci. USA* 93: 900-905.
3. Ponsuksili, S., et al. 2001. Expression of homeobox-containing genes in cDNA libraries derived from cattle oocytes and preimplantation stage embryo. *Mol. Reprod. Dev.* 60: 297-301.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 142970. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. López, R., et al. 2006. A subgroup of HOX Abd-B gene is differentially expressed in cervical cancer. *Int. J. Gynecol. Cancer* 16: 1289-1296.
6. Huntriss, J., et al. 2006. cDNA cloning and expression of the human NOBOX gene in oocytes and ovarian follicles. *Mol. Hum. Reprod.* 12: 283-289.
7. Gu, Z.D., et al. 2007. Expression of 39 HOX genes in esophageal cancer cell lines. *Zhonghua Wei Chang Wai Ke Za Zhi* 10: 365-367.
8. Okamoto, O.K., et al. 2007. Expression of HoxC9 and E2F2 are up-regulated in CD133<sup>+</sup> cells isolated from human astrocytomas and associate with transformation of human astrocytes. *Biochim. Biophys. Acta* 1769: 437-442.

## CHROMOSOMAL LOCATION

Genetic locus: HOXC9 (human) mapping to 12q13.13.

## SOURCE

HoxC9 (HOXCA6E6) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of HoxC9 of human origin.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

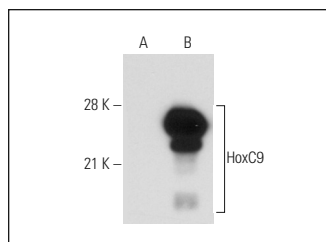
HoxC9 (HOXCA6E6) is recommended for detection of HoxC9 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HoxC9 siRNA (h): sc-75289, HoxC9 shRNA Plasmid (h): sc-75289-SH and HoxC9 shRNA (h) Lentiviral Particles: sc-75289-V.

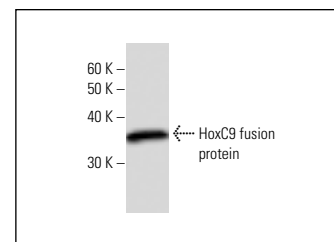
Molecular Weight of HoxC9: 29 kDa.

Positive Controls: HT-1080 whole cell lysate: sc-364183 or HoxC9 (h): 293T Lysate: sc-116567.

## DATA



HoxC9 (HOXCA6E6): sc-81100. Western blot analysis of HoxC9 expression in non-transfected: sc-117752 (A) and human HoxC9 transfected: sc-116567 (B) 293T whole cell lysates.



HoxC9 (HOXCA6E6): sc-81100. Western Blot analysis of human recombinant HoxC9 fusion protein.

## SELECT PRODUCT CITATIONS

1. Xuan, F., et al. 2015. Homeobox C9 suppresses Beclin1-mediated autophagy in glioblastoma by directly inhibiting the transcription of death-associated protein kinase 1. *Neuro Oncol.* 18: 819-829.
2. Gomez, G.A., et al. 2019. WNT/β-catenin modulates the axial identity of ES derived human neural crest. *Development* 146: dev175604.
3. Bi, R., et al. 2020. High hsa\_circ\_0020123 expression indicates poor progression to non-small cell lung cancer by regulating the miR-495/HOXC9 axis. *Aging* 12: 17343-17352.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.