

ZHX2 (Z-07): sc-101256



The Power to Question

BACKGROUND

Zinc-fingers and homeobox (ZHX) proteins are transcription factors that interact with the activation domain of the A subunit of nuclear factor-Y (NF-YA). ZHX1-3 are ubiquitously expressed proteins expressed in various tissues. They act as transcriptional repressors and localize to the nucleus. The ZHX proteins contain two Cys₂-His₂-type zinc-finger motifs and five homeodomains (HDs). These domains allow the ZHX proteins to form homodimers, but they can also form heterodimers with each other. However, this dimerization is not required for repressor activity. Hypermethylation-mediated silencing of ZHX2 is an epigenetic event involved in hepatocellular carcinoma (HCC).

REFERENCES

1. Yamada, K., et al. 1999. Human ZHX1: cloning, chromosomal location, and interaction with transcription factor NF-Y. *Biochem. Biophys. Res. Commun.* 261: 614-621.
2. Hirano, S., et al. 2002. Rat zinc-fingers and homeoboxes 1 (ZHX1), a nuclear factor-YA-interacting nuclear protein, forms a homodimer. *Gene* 290: 107-114.
3. Yamada, K., et al. 2002. Functional analysis and the molecular dissection of zinc-fingers and homeoboxes 1 (ZHX1). *Biochem. Biophys. Res. Commun.* 297: 368-374.
4. Shou, Z., et al. 2003. Genomic structure and analysis of transcriptional regulation of the mouse zinc-fingers and homeoboxes 1 (ZHX1) gene. *Gene* 302: 83-94.
5. Yamada, K., et al. 2003. Analysis of zinc-fingers and homeoboxes (ZHX)-1-interacting proteins: molecular cloning and characterization of a member of the ZHX family, ZHX3. *Biochem. J.* 373: 167-178.
6. Kawata, H., et al. 2003. Zinc-fingers and homeoboxes (ZHX) 2, a novel member of the ZHX family, functions as a transcriptional repressor. *Biochem. J.* 373: 747-757.
7. Kawata, H., et al. 2003. The mouse zinc-fingers and homeoboxes (ZHX) family; ZHX2 forms a heterodimer with ZHX3. *Gene* 323: 133-140.
8. Lv, Z., et al. 2006. Promoter hypermethylation of a novel gene, ZHX2, in hepatocellular carcinoma. *Am. J. Clin. Pathol.* 125: 740-746.

CHROMOSOMAL LOCATION

Genetic locus: ZHX2 (human) mapping to 8q24.13.

SOURCE

ZHX2 (Z-07) is a mouse monoclonal antibody raised against recombinant ZHX2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

ZHX2 (Z-07) is recommended for detection of ZHX2 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)], 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 ZHX2 siRNA (h): sc-63245, ZHX2 shRNA Plasmid (h): sc-63245-SH and ZHX2 shRNA (h) Lentiviral Particles: sc-63245-V.

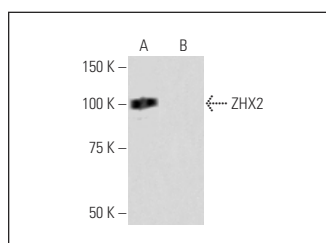
Molecular Weight of ZHX2: 100 kDa.

Positive Controls: human ZHX2 transfected 293T whole cell lysate.

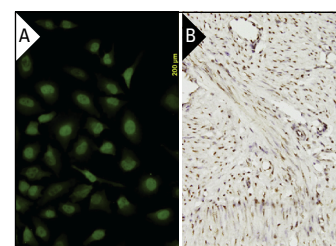
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ZHX2 (Z-07): sc-101256 Western blot analysis of ZHX2 expression in human ZHX2 transfected (A) and non-transfected (B) 293T whole cell lysates.



ZHX2 (Z-07): sc-101256. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human smooth muscle tissue (B) showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Nagel, S., et al. 2011. t(4;8)(q27;q24) in Hodgkin lymphoma cells targets phosphodiesterase PDE5A and homeobox gene ZHX2. *Genes Chromosomes Cancer* 50: 996-1009.

STORAGE

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