

HoxA10 (F-4): sc-271954

BACKGROUND

The Hox homeobox genes encode proteins that are transcriptional regulators with an established role in embryonic development. The HoxA10 gene is related to the Abdominal B (AbdB) homeobox subfamily of genes and is expressed in both the developing genitourinary tract and in the adult uterus. HoxA10 expression increases during the midsecretory phase of the menstrual cycle, which corresponds with increased levels of circulating progesterone, as evidenced by Northern blot analysis. Furthermore, HoxA10 expression increases in a concentration-dependent manner with progesterone stimulation in cultured endometrial cells and is blocked by the progesterone receptor antagonist RU486. In addition, HoxA10 is differentially expressed in the myometrium throughout the menstrual cycle, both *in vivo* and *in vitro*, with decreased expression coinciding with increased progesterone levels. In contrast with a control group, female patients with documented endometriosis do not exhibit a mid-luteal increase in uterine Hox gene expression, which may contribute to the pathology of the disease.

REFERENCES

1. Acampora, D., et al. 1989. The human Hox gene family. *Nucleic Acids Res.* 17: 10385-10402.
2. Satokata, I., et al. 1995. Sexually dimorphic sterility phenotypes in HoxA10-deficient mice. *Nature* 374: 460-463.
3. Taylor, H.S., et al. 1998. HoxA10 is expressed in response to sex steroids at the time of implantation in the human endometrium. *J. Clin. Invest.* 101: 1379-1384.
4. Ma, L., et al. 1998. Abdominal B (AbdB) HoxA genes: regulation in adult uterus by estrogen and progesterone and repression in mullerian duct by the synthetic estrogen diethylstilbestrol (DES). *Dev. Biol.* 197: 141-154.

CHROMOSOMAL LOCATION

Genetic locus: HOXA10 (human) mapping to 7p15.2; Hoxa10 (mouse) mapping to 6 B3.

SOURCE

HoxA10 (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 213-257 within an internal region of HoxA10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-271954 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-271954 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

HoxA10 (F-4) is recommended for detection of HoxA10 of mouse, rat and 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 HoxA10 siRNA (h): sc-38684, HoxA10 siRNA (m): sc-38685, HoxA10 shRNA Plasmid (h): sc-38684-SH, HoxA10 shRNA Plasmid (m): sc-38685-SH, HoxA10 shRNA (h) Lentiviral Particles: sc-38684-V and HoxA10 shRNA (m) Lentiviral Particles: sc-38685-V.

HoxA10 (F-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

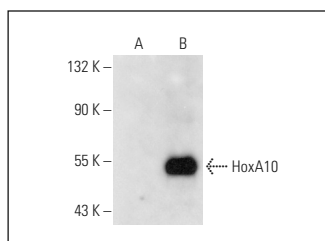
Molecular Weight of HoxA10 isoforms 1/2: 42/11 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HoxA10 (m): 293T Lysate: sc-120881 or Jurkat whole cell lysate: sc-2204.

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.

DATA



HoxA10 (F-4): sc-271954. Western blot analysis of HoxA10 expression in non-transfected: sc-117752 (A) and mouse HoxA10 transfected: sc-120881 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kim, M., et al. 2020. Mutually exclusive antiproliferative effect of cell line-specific HOX inhibition in epithelial ovarian cancer cell lines: SKOV-3 vs RMUG-S. *J. Cell. Mol. Med.* E-published.

RESEARCH USE

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