

HoxA11 (B-11): sc-393440

BACKGROUND

HOX genes play a fundamental role in the development of the vertebrate central nervous system, heart, axial skeleton, limbs, gut, urogenital tract and external genitalia. These genes are important for morphogenesis in multicellular organisms, as they encode a highly conserved family of transcription factors and specify the embryonic body pattern by providing cells with specific positional identities on the anterior-posterior axis. The homeobox gene HoxA11, also designated homeobox 11 (HOX11), belongs to the AbdB homeobox family. HoxA11 is necessary for fertility in females as it is a regulator of the cyclic development of the adult endometrium and embryonic uterine development. The expression of HoxA11 increases drastically during the mid-luteal stage of the menstrual cycle, which is necessary for implantation of the blastocyst.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 142958. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Wong, K.H., et al. 2003. HoxA11 regulates stromal cell death and proliferation during neonatal uterine development. *Mol. Endocrinol.* 18: 184-193.
3. Wang, L.F., et al. 2004. Expression of HoxA11 gene in human endometrium. *Am. J. Obstet. Gynecol.* 191: 767-772.
4. Lynch, V.J., et al. 2004. Adaptive evolution of HoxA11 and HoxA13 at the origin of the uterus in mammals. *Proc. Biol. Sci.* 271: 2201-2207.

CHROMOSOMAL LOCATION

Genetic locus: HOXA11 (human) mapping to 7p15.2; Hoxa11 (mouse) mapping to 6 B3.

SOURCE

HoxA11 (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 60-81 near the N-terminus of HoxA11 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-393440 X, 200 µg/0.1 ml.

HoxA11 (B-11) is available conjugated to agarose (sc-393440 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393440 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393440 PE), fluorescein (sc-393440 FITC), Alexa Fluor® 488 (sc-393440 AF488), Alexa Fluor® 546 (sc-393440 AF546), Alexa Fluor® 594 (sc-393440 AF594) or Alexa Fluor® 647 (sc-393440 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393440 AF680) or Alexa Fluor® 790 (sc-393440 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393440 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HoxA11 (B-11) is recommended for detection of HoxA11 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 HoxA11 siRNA (h): sc-60802, HoxA11 siRNA (m): sc-60803, HoxA11 shRNA Plasmid (h): sc-60802-SH, HoxA11 shRNA Plasmid (m): sc-60803-SH, HoxA11 shRNA (h) Lentiviral Particles: sc-60802-V and HoxA11 shRNA (m) Lentiviral Particles: sc-60803-V.

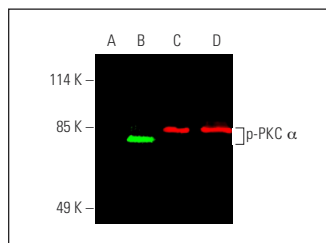
HoxA11 (B-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of HoxA11: 34 kDa.

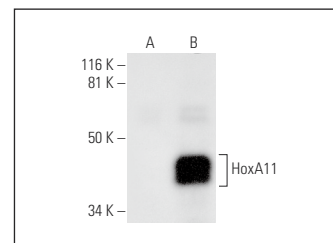
Molecular Weight (observed) of HoxA11: 29/37-42 kDa.

Positive Controls: HoxA11 (h): 293T Lysate: sc-115833.

DATA



Direct near-infrared western blot analysis of PKC α phosphorylation in untreated (A,C) and PMA (sc-3576) treated (B,D) Jurkat whole cell lysates. Antibodies tested include p-PKC α (A-11) Alexa Fluor® 680: sc-377565 AF680 (A,B) and PKC α (H-7) Alexa Fluor® 790: sc-8393 AF790 (C,D). Blocked with UltraCruz® Blocking Reagent: sc-516214.



HoxA11 (B-11): sc-393440. Western blot analysis of HoxA11 expression in non-transfected: sc-117752 (A) and human HoxA11 transfected: sc-115833 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.
2. Shanmugam, D.A.S., et al. 2022. Maternal exposure to di(2-ethylhexyl) phthalate (DEHP) causes multigenerational adverse effects on the uterus of F₁ and F₂ offspring rats. *Reprod. Toxicol.* 115: 17-28.

STORAGE

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

RESEARCH USE

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

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