

FOXQ1 (H-11): sc-166264

BACKGROUND

The FOX family of transcription factors share a common DNA binding domain termed a winged-helix or forkhead domain. Many FOX proteins play important roles in development, metabolism, cancer and aging. FOXQ1 is mutant in satin homozygous mice. Satin mice are characterized by having silky coats with high sheen as a result of structurally abnormal medulla cells and defects in the differentiation of the hair shaft. Satin mice also display suppressed natural killer cell function and alloimmune cytotoxic T cell function, which implicates FOXQ1 in lymphocyte development. FOXQ1 is predominantly expressed during embryogenesis and in a tissue-restricted expression pattern in adult tissues, including stomach, trachea, bladder and salivary gland. FOXQ1 is overexpressed in colorectal adenocarcinoma and lung carcinoma cell lines.

REFERENCES

- Hoggatt, A.M., et al. 2000. Hepatocyte nuclear factor-3 homologue 1 (HFH-1) represses transcription of smooth muscle-specific genes. *J. Biol. Chem.* 275: 31162-31170.
- Bieller, A., et al. 2001. Isolation and characterization of the human forkhead gene FOXQ1. *DNA Cell Biol.* 20: 555-561.
- Hong, H.K., et al. 2001. The winged helix/forkhead transcription factor FOXQ1 regulates differentiation of hair in satin mice. *Genesis* 29: 163-171.
- Katoh, M. and Katoh, M. 2004. Human FOX gene family (review). *Int. J. Oncol.* 25: 1495-1500.
- Jonsson, H. and Peng, S.L. 2005. Forkhead transcription factors in immunology. *Cell. Mol. Life Sci.* 62: 397-409.
- Potter, C.S., et al. 2006. Evidence that the satin hair mutant gene FOXQ1 is among multiple and functionally diverse regulatory targets for HoxC13 during hair follicle differentiation. *J. Biol. Chem.* 281: 29245-29255.

CHROMOSOMAL LOCATION

Genetic locus: FOXQ1 (human) mapping to 6p25.3.

SOURCE

FOXQ1 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 235-264 near the C-terminus of FOXQ1 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-166264 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-166264 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

FOXQ1 (H-11) is recommended for detection of FOXQ1 of 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 FOXQ1 siRNA (h): sc-60660, FOXQ1 shRNA Plasmid (h): sc-60660-SH and FOXQ1 shRNA (h) Lentiviral Particles: sc-60660-V.

FOXQ1 (H-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

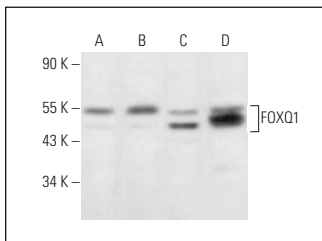
Molecular Weight of FOXQ1: 41 kDa.

Positive Controls: FOXQ1 (h): 293T Lysate: sc-116439, Jurkat whole cell lysate: sc-2204 or MCF7 whole cell lysate: sc-2206.

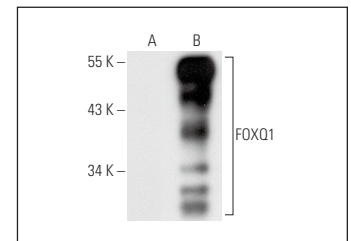
RECOMMENDED SUPPORT REAGENTS

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



FOXQ1 (H-11): sc-166264. Western blot analysis of FOXQ1 expression in A549 (A), MCF7 (B), Jurkat (C) and MDA-MB-231 (D) whole cell lysates.



FOXQ1 (H-11): sc-166264. Western blot analysis of FOXQ1 expression in non-transfected: sc-117752 (A) and human FOXQ1 transfected: sc-116439 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wu, X., et al. 2020. Targeting the interaction between RNA-binding protein HuR and FOXQ1 suppresses breast cancer invasion and metastasis. *Commun. Biol.* 3: 193.
- Lin, Y., et al. 2023. The FGFR1 signaling pathway upregulates the oncogenic transcription factor FOXQ1 to promote breast cancer cell growth. *Int. J. Biol. Sci.* 19: 744-759.

RESEARCH USE

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