

# FOXF1 (C-20): sc-47589

## 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. Development of the vertebrate gut is controlled by paracrine crosstalk between the endodermal epithelium and the associated splanchnic mesoderm. FOXF1, previously designated HFH-8 or Freac-1, is expressed in the splanchnic mesoderm and required for proper development of gut-derived organs, including the liver, gallbladder, lung and intestinal tract. Inactivation of FOXF1 results in a range of defects, including megacolon, colorectal muscle hypoplasia and agangliosis. FOXF1 controls epithelial proliferation and survival and links hedgehog proteins to BMP and Wnt signaling pathways.

## REFERENCES

1. Mahlapuu, M., Enerbäck, S. and Carlsson, P. 2001. Haploinsufficiency of the forkhead gene FOXF1, a target for sonic hedgehog signaling, causes lung and foregut malformations. *Development* 128: 2397-2406.
2. Kalinichenko, V.V., Zhou, Y., Shin, B., Stolz, D.B., Watkins, S.C., Whitsett, J.A. and Costa, R.H. 2002. Wild-type levels of the mouse Forkhead Box f1 gene are essential for lung repair. *Am. J. Physiol.* 282: L1253-L1265.
3. Kalinichenko, V.V., Gusarova, G.A., Kim, I.M., Shin, B., Yoder, H.M., Clark, J., Sapozhnikov, A.M., Whitsett, J.A. and Costa, R.H. 2004. FOXF1 haploinsufficiency reduces Notch-2 signaling during mouse lung development. *Am. J. Physiol.* 286: L521-L530.
4. Katoh, M. and Katoh, M. 2004. Human FOX gene family (review). *Int. J. Oncol.* 25: 1495-1500.
5. Ormestad, M., Astorga, J. and Carlsson, P. 2004. Differences in the embryonic expression patterns of mouse FOXF1 and -2 match their distinct mutant phenotypes. *Dev. Dyn.* 229: 328-333.

## CHROMOSOMAL LOCATION

Genetic locus: FOXF1 (human) mapping to 16q24.1; Foxf1a (mouse) mapping to 8 E1.

## SOURCE

FOXF1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FOXF1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47589 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-47589 X, 200 µg/0.1 ml.

## RESEARCH USE

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

## APPLICATIONS

FOXF1 (C-20) is recommended for detection of FOXF1 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

FOXF1 (C-20) is also recommended for detection of FOXF1 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for FOXF1 siRNA (h): sc-60655, FOXF1 siRNA (m): sc-60656, FOXF1 shRNA Plasmid (h): sc-60655-SH, FOXF1 shRNA Plasmid (m): sc-60656-SH, FOXF1 shRNA (h) Lentiviral Particles: sc-60655-V and FOXF1 shRNA (m) Lentiviral Particles: sc-60656-V.

FOXF1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

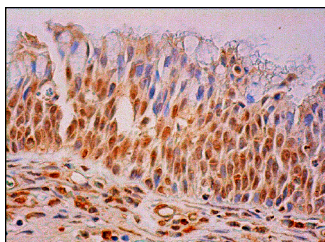
Molecular Weight of FOXF1: 40 kDa.

Positive Controls: human placenta extract: sc-363772.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



FOXF1 (C-20): sc-47589. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear staining of respiratory epithelial cells.

## STORAGE

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