SANTA CRUZ BIOTECHNOLOGY, INC.

FOXF1 (F-24): sc-133589

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The FOX family of transcription factors share a common DIUA 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., et al. 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., et al. 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., et al. 2004. FOXF1 haploinsufficiency reduces Notch-2 signaling during mouse lung development. Am. J. Physiol. 286: L521-L530.
4. Katoh, M., et al. 2004. Human FOX gene family (Review). Int. J. Oncol. 25: 1495-1500.
5. Ormestad, M., et al. 2004. Differences in the embryonic expression patterns of mouse FOXF1 and 2 match their distinct mutant phenotypes. Dev. Dyn. 229: 328-333.
6. Kim, I.M., et al. 2005. Functional characterization of evolutionarily conserved DNA regions in Forkhead Box f1 gene locus. J. Biol. Chem. 280: 37908-37916.
7. Lomenick, J., et al. 2006. Transcription factor FOXF1 regulates growth hormone variant gene expression. Am. J. Physiol. Endocrinol. Metab. 291: E947-E951.
8. Ormestad, M., et al. 2006. FOXF1 and FOXF2 control murine gut development by limiting mesenchymal Wnt signaling and promoting extracellular matrix production. Development 133: 833-843.

CHROMOSOMAL LOCATION

Genetic locus: FOXF1 (human) mapping to 16q24.1.

SOURCE

FOXF1 (F-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic FOXF1 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

FOXF1 (F-24) is recommended for detection of FOXF1 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

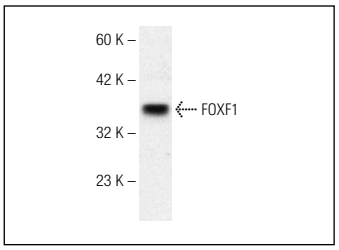
Molecular Weight of FOXF1: 40 kDa.

Positive Controls: Human placenta tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



FOXF1 (F-24): sc-133589. Western blot analysis of FOXF1 expression in human placenta tissue extract.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.