SANTA CRUZ BIOTECHNOLOGY, INC.

FOXL1 (40-M): sc-130373

BACKGROUND

FOXL1 is a 337 amino acid protein encoded by the mouse gene Foxl1. FOXL1 belongs to the forkhead family and contains one forkhead DNA-binding domain. The HNF3/forkhead family includes a large number of transcription factors that share a structurally related DNA binding domain. forkhead factors are known to play important roles both during development and in adults. FOXL1 is a winged helix transcriptional regulator expressed in the mesenchymal layer of developing and mature gastrointestinal tract. FOXL1-deficient mice exhibit various defects not only in the epithelial layer of the gastrointestinal tract but also in gut-associated lymphoid tissues. In the small intestine of FOXL1-deficient mice, the formation of Peyer's patches is affected, particularly in the caudal region. FOXL1 is a mesenchymal modifier of the adenomatous polyposis coli (APC) gene products and plays a key role in gastrointestinal tumorigenesis.

REFERENCES

1. Kaestner, K.H., et al. 1993. Six members of the mouse forkhead gene family are developmentally regulated. Proc. Natl. Acad. Sci. USA 90: 7628-7631.
2. Kaestner, K.H., et al. 1996. Clustered arrangement of winged helix genes fkh-6 and MFH-1: possible implications for mesoderm development. Development 122: 1751-1758.
3. Perreault, N., et al. 2001. FOXL1 controls the Wnt/β-catenin pathway by modulating the expression of proteoglycans in the gut. J. Biol. Chem. 276: 43328-43333.
4. Mazet, F., et al. 2003. Phylogenetic relationships of the Fox (forkhead) gene family in the Bilateria. Gene 316: 79-89.
5. Fukuda, K., et al. 2003. Mesenchymal expression of FOXL1, a winged helix transcriptional factor, regulates generation and maintenance of gut-associated lymphoid organs. Dev. Biol. 255: 278-289.
6. Katz, J.P., et al. 2004. FOXL1 null mice have abnormal intestinal epithelia, postnatal growth retardation, and defective intestinal glucose uptake. Am. J. Physiol. Gastrointest. Liver Physiol. 287: G856-G864.
7. Perreault, N., et al. 2005. FOXL1 is a mesenchymal modifier of Min in carcinogenesis of stomach and colon. Genes Dev. 19: 311-315.
8. Takano-Maruyama, M., et al. 2006. FOXL1-deficient mice exhibit aberrant epithelial cell positioning resulting from dysregulated EphB/EphrinB expression in the small intestine. Am. J. Physiol. Gastrointest. Liver Physiol. 291: G163-G170.

CHROMOSOMAL LOCATION

Genetic locus: FOXL1 (human) mapping to 16q24.1.

SOURCE

FOXL1 (40-M) is a mouse monoclonal antibody raised against recombinant FOXL1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FOXL1 (40-M) is recommended for detection of FOXL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for FOXL1 siRNA (h): sc-106746, FOXL1 shRNA Plasmid (h): sc-106746-SH and FOXL1 shRNA (h) Lentiviral Particles: sc-106746-V.

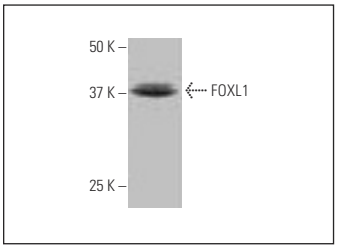
Molecular Weight of FOXL1: 36 kDa.

Positive Controls: DAOY whole cell lysate: sc-364381.

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).

DATA



FOXL1 (40-M): sc-130373. Western blot analysis of FOXL1 expression in DAOY whole cell lysate.

SELECT PRODUCT CITATIONS

1. Naeem, A., et al. 2022. Regulation of chemosensitivity in human medulloblastoma cells by p53 and the PI3 kinase signaling pathway. Mol. Cancer Res. 20: 114-126.
2. Yang, L., et al. 2024. NAD^+ dependent UPR^{mt} activation underlies intestinal aging caused by mitochondrial DNA mutations. Nat. Commun. 15: 546.

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.

PROTOCOLS

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