SANTA CRUZ BIOTECHNOLOGY, INC.

FOXJ1 (3-19): sc-53139

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Forkhead-box J1 (FOXJ1) is a 421-amino acid transcription factor that suppresses T cell activity and thus spontaneous autoimmunity, through the repression of NFκB activity. FOXJ1 also inhibits the humoral immune response in B cells; FOXJ1 deficiency in B cells results in spontaneous and accentuated germinal center formation, implicated in the development of pathogenic autoantibodies and accentuated responses to immunizations. Abnormal expression of FOXJ1 may be associated with autoimmune diseases and/or other inflammatory diseases. FOXJ1 is also required for cilia formation and left-right axis determination because it increases calpastatin expression, a protein necessary for the ability of basal bodies to anchor to the apical cytoskeleton. FOXJ1 expression may function as an early marker of epithelial cell differentiation, recovery, and function.

CHROMOSOMAL LOCATION

Genetic locus: FOXJ1 (human) mapping to 17q25.1; Foxj1 (mouse) mapping to 11 E2.

SOURCE

FOXJ1 (3-19) is a mouse monoclonal antibody raised against recombinant FOXJ1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXJ1 (3-19) is available conjugated to agarose (sc-53139 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53139 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53139 PE), fluorescein (sc-53139 FITC), Alexa Fluor® 488 (sc-53139 AF488), Alexa Fluor® 546 (sc-53139 AF546), Alexa Fluor® 594 (sc-53139 AF594) or Alexa Fluor® 647 (sc-53139 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53139 AF680) or Alexa Fluor® 790 (sc-53139 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FOXJ1 (3-19) is recommended for detection of FOXJ1 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for FOXJ1 siRNA (h): sc-62335, FOXJ1 siRNA (m): sc-62336, FOXJ1 shRNA Plasmid (h): sc-62335-SH, FOXJ1 shRNA Plasmid (m): sc-62336-SH, FOXJ1 shRNA (h) Lentiviral Particles: sc-62335-V and FOXJ1 shRNA (m) Lentiviral Particles: sc-62336-V.

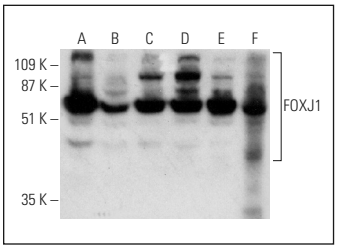
Molecular Weight of FOXJ1: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or WI-38 whole cell lysate: sc-364260.

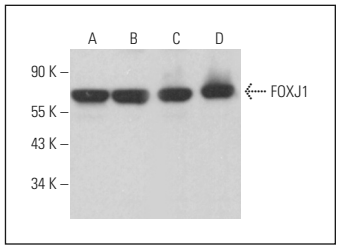
STORAGE

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

DATA



FOXJ1 (3-19): sc-53139 HRP. Direct western blot analysis of FOXJ1 expression in H69AR (**A**), Hep G2 (**B**), HeLa (**C**), MCF7 (**D**) and WI-38 (**E**) whole cell lysates and human esophagus tissue extract (**F**).



FOXJ1 (3-19): sc-53139. Western blot analysis of FOXJ1 expression in H69AR (**A**), HeLa (**B**), MCF7 (**C**) and WI-38 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Maouche, K., et al. 2009. α7 nicotinic acetylcholine receptor regulates airway epithelium differentiation by controlling basal cell proliferation. Am. J. Pathol. 175: 1868-1882.
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3. Zhu, P., et al. 2015. Forkhead box J1 expression is upregulated and correlated with prognosis in patients with clear cell renal cell carcinoma. Oncol. Lett. 10: 1487-1494.
4. García-Sanmartín, J., et al. 2016. Adrenomedullin regulates club cell recovery following lung epithelial injury. Histol. Histopathol. 31: 663-673.
5. Haider, S., et al. 2019. Estrogen signaling drives ciliogenesis in human endometrial organoids. Endocrinology 160: 2282-2297.
6. Angelidis, I., et al. 2019. An atlas of the aging lung mapped by single cell transcriptomics and deep tissue proteomics. Nat. Commun. 10: 963.
7. Zhang, Y., et al. 2020. Directed differentiation of notochord-like and nucleus pulposus-like cells using human pluripotent stem cells. Cell Rep. 30: 2791-2806.e5.
8. Yang, Y.Y., et al. 2020. Consecutive hypoxia decreases expression of NOTCH3, HEY1, CC10, and FOXJ1 via NKX2-1 downregulation and intermittent hypoxia-reoxygenation increases expression of BMP4, NOTCH1, MKI67, OCT4, and MUC5AC via HIF1A upregulation in human bronchial epithelial cells. Front. Cell Dev. Biol. 8: 572276.
9. Kim, H., et al. 2021. RNA demethylation by FTO stabilizes the FOXJ1 mRNA for proper motile ciliogenesis. Dev. Cell 56: 1118-1130.e6.
10. Calandria, J.M., et al. 2021. Elovanoids downregulate SARS-CoV-2 cell-entry, canonical mediators and enhance protective signaling in human alveolar cells. Sci. Rep. 11: 12324.

RESEARCH USE

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