

FOXJ1 (3-19): sc-53139



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 NF κ B 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 μ g IgG κ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53139 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 μ g per 100-500 μ g 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.

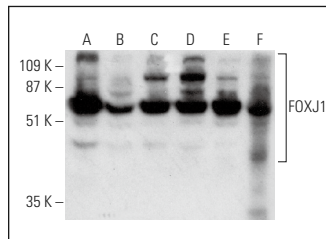
Molecular Weight of FOXJ1: 58 kDa.

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

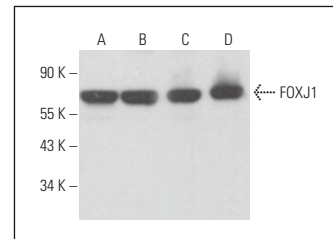
STORAGE

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-IgG κ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

- Maouche, K., et al. 2009. α 7 nicotinic acetylcholine receptor regulates airway epithelium differentiation by controlling basal cell proliferation. *Am. J. Pathol.* 175: 1868-1882.
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- García-Sanmartín, J., et al. 2016. Adrenomedullin regulates club cell recovery following lung epithelial injury. *Histol. Histopathol.* 31: 663-673.
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- 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.
- Kim, H., et al. 2021. RNA demethylation by FTO stabilizes the FOXJ1 mRNA for proper motile ciliogenesis. *Dev. Cell* 56: 1118-1130.e6.
- Calandria, J.M., et al. 2021. Elovans downregulate SARS-CoV-2 cell-entry, canonical mediators and enhance protective signaling in human alveolar cells. *Sci. Rep.* 11: 12324.
- Khalaj, K., et al. 2022. Treatment with amniotic fluid stem cell extracellular vesicles promotes fetal lung branching and cell differentiation at canalicular and saccular stages in experimental pulmonary hypoplasia secondary to congenital diaphragmatic hernia. *Stem Cells Transl. Med.* 11: 1089-1102.
- Kim, D.Y., et al. 2023. LRRC6 regulates biogenesis of motile cilia by aiding FOXJ1 translocation into the nucleus. *Cell Commun. Signal.* 21: 142.

RESEARCH USE

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