

# FOXJ1 (B-8): sc-365216

## 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 $\kappa$ 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.

## REFERENCES

1. Look, D.C., et al. 2001. Effects of paramyxoviral infection on airway epithelial cell FOXJ1 expression, ciliogenesis, and mucociliary function. *Am. J. Pathol.* 159: 2055-2069.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602291. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Huang, T., et al. 2003. FOXJ1 is required for apical localization of Ezrin in airway epithelial cells. *J. Cell Sci.* 116: 4935-4945.
4. Gomperts, B.N., et al. 2004. FOXJ1 regulates basal body anchoring to the cytoskeleton of ciliated pulmonary epithelial cells. *J. Cell Sci.* 117: 1329-1337.
5. Zhang, M., et al. 2004. FOXJ1 regulates asymmetric gene expression during left-right axis patterning in mice. *Biochem. Biophys. Res. Commun.* 324: 1413-1420.
6. Lin, L., et al. 2005. Restraint of B cell activation by FOXJ1-mediated antagonism of NF $\kappa$ B and IL-6. *J. Immunol.* 175: 951-958.

## CHROMOSOMAL LOCATION

Genetic locus: FOXJ1 (human) mapping to 17q25.1.

## SOURCE

FOXJ1 (B-8) is a mouse monoclonal antibody raised against amino acids 221-421 mapping at the C-terminus of FOXJ1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

FOXJ1 (B-8) is recommended for detection of FOXJ1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

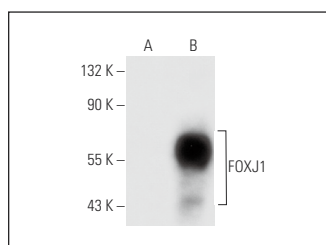
Molecular Weight of FOXJ1: 58 kDa.

Positive Controls: FOXJ1 (h): 293T Lysate: sc-115631 or H69AR whole cell lysate: sc-364382.

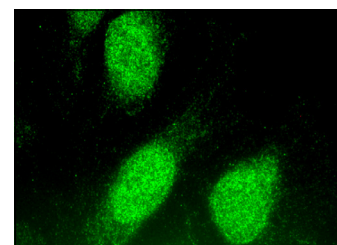
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



FOXJ1 (B-8): sc-365216. Western blot analysis of FOXJ1 expression in non-transfected: sc-117752 (A) and human FOXJ1 transfected: sc-115631 (B) 293T whole cell lysates.



FOXJ1 (B-8): sc-365216. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Rockfield, S., et al. 2019. Chronic iron exposure and c-Myc/H-Ras-mediated transformation in fallopian tube cells alter the expression of EVI1, amplified at 3q26.2 in ovarian cancer. *Oncogenesis* 8: 46.



See **FOXJ1 (3-19): sc-53139** for FOXJ1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.