

# FOXP3 (2A11G9): sc-53876



The Power to Question

## BACKGROUND

The FOX family of transcription factors is a large group of proteins that share a common DNA binding domain termed a winged-helix or forkhead domain. During early development, FOXP1 and FOXP2 are expressed abundantly in the lung, with lower levels of expression in neural, intestinal and cardiovascular tissues, where they act as transcription repressors. FOXP1 is widely expressed in adult tissues, while neoplastic cells often exhibit a dramatic change in expression level or localization of FOXP1. The gene encoding human FOXP1 maps to chromosome 3p13. The gene encoding human FOXP2 maps to chromosome 7q31.1. The gene encoding FOXP3, a third member of this family, maps to chromosome Xp11.23. Mutations in this gene cause IPEX, a fatal, X-linked inherited disorder characterized by immune dysregulation. The FOXP3 protein, also known as scurf, is essential for normal immune homeostasis. Specifically, FOXP3 represses transcription through a DNA binding forkhead domain, thereby regulating T cell activation.

## REFERENCES

- Lai, C.S., et al. 2000. The SPCH1 region on human 7q31: genomic characterization of the critical interval and localization of translocations associated with speech and language disorder. *Am. J. Hum. Genet.* 67: 357-368.
- Banham, A.H., et al. 2001. The FOXP1 winged helix transcription factor is a novel candidate tumor suppressor gene on chromosome 3p. *Cancer Res.* 61: 8820-8829.

## CHROMOSOMAL LOCATION

Genetic locus: FOXP3 (human) mapping to Xp11.23; Foxp3 (mouse) mapping to X A1.1.

## SOURCE

FOXP3 (2A11G9) is a mouse monoclonal antibody raised against purified truncated recombinant FOXP3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXP3 (2A11G9) is available conjugated to agarose (sc-53876 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53876 HRP), 200 µg/ml, for IHC(P) and ELISA; to either phycoerythrin (sc-53876 PE), fluorescein (sc-53876 FITC), Alexa Fluor® 488 (sc-53876 AF488), Alexa Fluor® 546 (sc-53876 AF546), Alexa Fluor® 594 (sc-53876 AF594) or Alexa Fluor® 647 (sc-53876 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53876 AF680) or Alexa Fluor® 790 (sc-53876 AF790), 200 µg/ml, for IF and FCM.

In addition, FOXP3 (2A11G9) is available conjugated to either PerCP (sc-53876 PerCP) or PerCP-Cy5.5 (sc-53876 PCPC5), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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## STORAGE

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

## APPLICATIONS

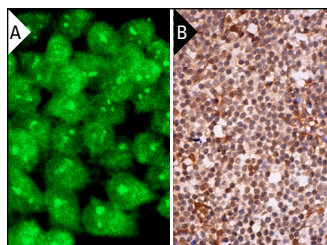
FOXP3 (2A11G9) is recommended for detection of FOXP3 of mouse, rat and human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FOXP3 siRNA (h): sc-43569, FOXP3 siRNA (m): sc-45646, FOXP3 siRNA (r): sc-270590, FOXP3 shRNA Plasmid (h): sc-43569-SH, FOXP3 shRNA Plasmid (m): sc-45646-SH, FOXP3 shRNA Plasmid (r): sc-270590-SH, FOXP3 shRNA (h) Lentiviral Particles: sc-43569-V, FOXP3 shRNA (m) Lentiviral Particles: sc-45646-V and FOXP3 shRNA (r) Lentiviral Particles: sc-270590-V.

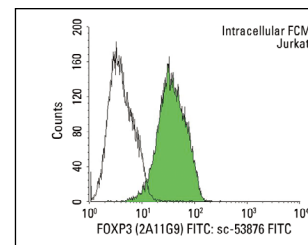
Molecular Weight of FOXP3: 48 kDa.

Positive Controls: mouse brain extract: sc-2253, human brain extract: sc-364375 or Jurkat whole cell lysate: sc-2204.

## DATA



FOXP3 (2A11G9): sc-53876. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear and cytoplasmic staining of cells in non-germinal centers (B).



FOXP3 (2A11G9) FITC: sc-53876 FITC. Intracellular FCM analysis of fixed and permeabilized Jurkat cells. Black line histogram represents the isotype control, normal mouse IgG<sub>2a</sub>-FITC: sc-2856.

## SELECT PRODUCT CITATIONS

- He, S.H., et al. 2011. Interferon-λ mediates oral tolerance and inhibits antigen-specific, T-helper 2 cell-mediated inflammation in mouse intestine. *Gastroenterology* 141: 249-258.
- Sun, Y.F., et al. 2021. Dissecting spatial heterogeneity and the immune-evasion mechanism of CTCs by single-cell RNA-seq in hepatocellular carcinoma. *Nat. Commun.* 12: 4091.
- Russo, G.I., et al. 2022. PD-1, PD-L1 and cAMP immunohistochemical expressions are associated with worse oncological outcome in patients with bladder cancer. *J. Cancer Res. Clin. Oncol.* 149: 3681-3690.
- Shao, S., et al. 2023. Primary head and neck cancer cell cultures are susceptible to proliferation of Epstein-Barr virus infected lymphocytes. *BMC Cancer* 23: 47.

## RESEARCH USE

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