

# FOXP3 (150D/E4): sc-130666

## 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 3p14.1 and the gene encoding human FOXP2 maps to chromosome 7q31. 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 scurfin, 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 (150D/E4) is a mouse monoclonal antibody raised against full-length recombinant FOXP3 of human origin, with epitope mapping to amino acids 1-235.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXP3 (150D/E4) is available conjugated to either phycoerythrin (sc-130666 PE), fluorescein (sc-130666 FITC), Alexa Fluor<sup>®</sup> 488 (sc-130666 AF488) or Alexa Fluor<sup>®</sup> 647 (sc-130666 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

In addition, FOXP3 (150D/E4) is available conjugated to either PerCP (sc-130666 PerCP) or PerCP-Cy5.5 (sc-130666 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

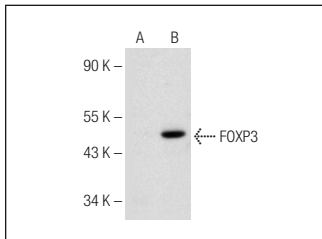
FOXP3 (150D/E4) is recommended for detection of FOXP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 shRNA Plasmid (h): sc-43569-SH, FOXP3 shRNA Plasmid (m): sc-45646-SH, FOXP3 shRNA (h) Lentiviral Particles: sc-43569-V and FOXP3 shRNA (m) Lentiviral Particles: sc-45646-V.

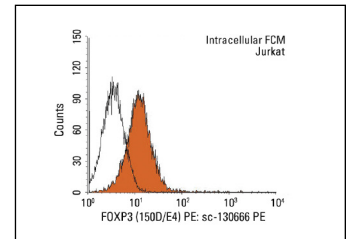
Molecular Weight of FOXP3: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, mouse brain extract: sc-2253 or FOXP3 (h): 293T Lysate: sc-128646.

## DATA



FOXP3 (150D/E4): sc-130666. Western blot analysis of FOXP3 expression in non-transfected: sc-117752 (A) and human FOXP3 transfected: sc-128646 (B) 293T whole cell lysates.




FOXP3 (150D/E4) PE: sc-130666 PE. Intracellular FCM analysis of fixed and permeabilized Jurkat cells. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-2866.

## SELECT PRODUCT CITATIONS

- Lei, W. and Jian, L. 2012. Changes of CD4<sup>+</sup> CD25<sup>+</sup> regulatory T cells, FoxP3 in adjuvant arthritis rats with damage of pulmonary function and effects of tripterygium glycosides tablet. *Int. J. Rheumatol.* 2012: 348450.
- Liang, H., et al. 2014. Interleukin-17 facilitates the immune suppressor capacity of high-grade glioma-derived CD4<sup>+</sup> CD25<sup>+</sup> Foxp3<sup>+</sup> T cells via releasing transforming growth factor β. *Scand. J. Immunol.* 80: 144-150.
- Ahmad, S.F., et al. 2016. Dysregulation of Th1, Th2, Th17, and T regulatory cell-related transcription factor signaling in children with autism. *Mol. Neurobiol.* E-published.

## RESEARCH USE

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



See **FOXP3 (2A11G9): sc-53876** for FOXP3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.