

FOXP1 (A-2): sc-398811

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.
- Bennett, C.L., et al. 2001. The immune dysregulation, polyendocrinopathy, enteropathy, X-linked syndrome (IPEX) is caused by mutations of FOXP3. *Nat. Genet.* 27: 20-21.

CHROMOSOMAL LOCATION

Genetic locus: FOXP1 (human) mapping to 3p13; *Foxp1* (mouse) mapping to 6 D3.

SOURCE

FOXP1 (A-2) is a mouse monoclonal antibody raised against amino acids 551-620 mapping near the C-terminus of FOXP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398811 X, 200 µg/0.1 ml.

FOXP1 (A-2) is available conjugated to agarose (sc-398811 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398811 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398811 PE), fluorescein (sc-398811 FITC), Alexa Fluor® 488 (sc-398811 AF488), Alexa Fluor® 546 (sc-398811 AF546), Alexa Fluor® 594 (sc-398811 AF594) or Alexa Fluor® 647 (sc-398811 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398811 AF680) or Alexa Fluor® 790 (sc-398811 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

FOXP1 (A-2) is recommended for detection of FOXP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FOXP1 (A-2) is also recommended for detection of FOXP1 in additional species, including equine and canine.

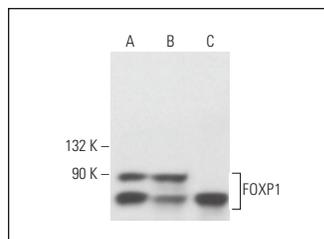
Suitable for use as control antibody for FOXP1 siRNA (h): sc-44583, FOXP1 siRNA (m): sc-44584, FOXP1 shRNA Plasmid (h): sc-44583-SH, FOXP1 shRNA Plasmid (m): sc-44584-SH, FOXP1 shRNA (h) Lentiviral Particles: sc-44583-V and FOXP1 shRNA (m) Lentiviral Particles: sc-44584-V.

FOXP1 (A-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

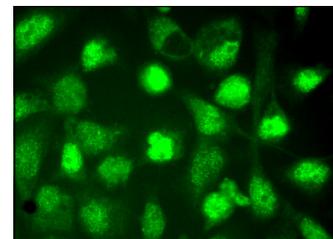
Molecular Weight of FOXP1: 85 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or NIH/3T3 whole cell lysate: sc-2210.

DATA



FOXP1 (A-2): sc-398811. Western blot analysis of FOXP1 expression in MCF7 (A), Jurkat (B) and NIH/3T3 (C) whole cell lysates.



FOXP1 (A-2): sc-398811. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Chen, L., et al. 2017. Transcriptomes of major renal collecting duct cell types in mouse identified by single-cell RNA-seq. *Proc. Natl. Acad. Sci. USA* 114: E9989-E9998.
- Olmsted, Z.T., et al. 2021. Transplantable human motor networks as a neuron-directed strategy for spinal cord injury. *iScience* 24: 102827.
- Maloy, A., et al. 2022. Stain-Free total-protein normalization enhances the reproducibility of Western blot data. *Anal. Biochem.* 654: 114840.
- Li, X., et al. 2023. Cortex-restricted deletion of *Foxp1* impairs barrel formation and induces aberrant tactile responses in a mouse model of autism. *Mol. Autism* 14: 34.

STORAGE

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

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