SANTA CRUZ BIOTECHNOLOGY, INC.

FOXP2 (A-10): sc-518143

SANTA CRUZ BIOTECHNOLOGY

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 scurfin, is essential for normal immune homeostasis. Specifically, FOXP3 represses a transcription through a DNA binding forkhead domain, thereby regulating T cell activation.

REFERENCES

1. 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.
2. 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.
3. 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.
4. Shu, W., et al. 2001. Characterization of a new subfamily of winged-helix/forkhead (Fox) genes that are expressed in the lung and act as transcriptional repressors. J. Biol. Chem. 276: 27488-27497.

CHROMOSOMAL LOCATION

Genetic locus: FOXP2 (human) mapping to 7q31.1.

SOURCE

FOXP2 (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 670-691 of FOXP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FOXP2 (A-10) is available conjugated to agarose (sc-518143 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518143 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518143 PE), fluorescein (sc-518143 FITC), Alexa Fluor® 488 (sc-518143 AF488), Alexa Fluor® 546 (sc-518143 AF546), Alexa Fluor® 594 (sc-518143 AF594) or Alexa Fluor® 647 (sc-518143 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518143 AF680) or Alexa Fluor® 790 (sc-518143 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FOXP2 (A-10) is recommended for detection of FOXP2 of 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).

Suitable for use as control antibody for FOXP2 siRNA (h): sc-43770, FOXP2 shRNA Plasmid (h): sc-43770-SH and FOXP2 shRNA (h) Lentiviral Particles: sc-43770-V.

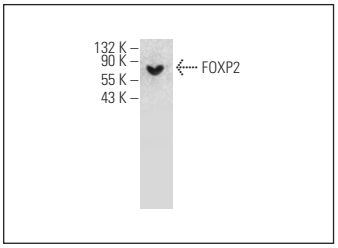
Molecular Weight of FOXP2: 70-75 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



FOXP2 (A-10): sc-518143. Western blot analysis of FOXP2 expression in HeLa nuclear extract. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.