SANTA CRUZ BIOTECHNOLOGY, INC.

FOXP2 (5C11A8): sc-517261

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 3p14.1. 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 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.

CHROMOSOMAL LOCATION

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

SOURCE

FOXP2 (5C11A8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 47-287 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 (5C11A8) is available conjugated to agarose (sc-517261 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-517261 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517261 PE), fluorescein (sc-517261 FITC), Alexa Fluor® 488 (sc-517261 AF488), Alexa Fluor® 546 (sc-517261 AF546), Alexa Fluor® 594 (sc-517261 AF594) or Alexa Fluor® 647 (sc-517261 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-517261 AF680) or Alexa Fluor® 790 (sc-517261 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

FOXP2 (5C11A8) is recommended for detection of FOXP2 of 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)] 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.

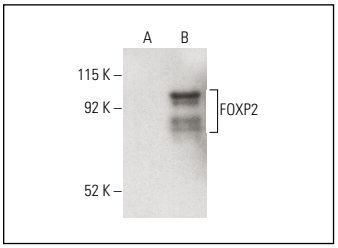
Molecular Weight of FOXP2: 70-75 kDa.

Positive Controls: FOXP2 (h): 293T Lysate: sc-372825.

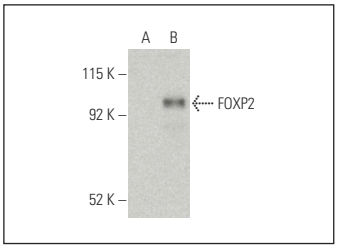
RECOMMENDED SUPPORT REAGENTS

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).

DATA



FOXP2 (5C11A8) HRP: sc-517261 HRP. Direct western blot analysis of FOXP2 expression in non-transfected: sc-117752 (**A**) and human FOXP2 transfected: sc-372825 (**B**) 293T whole cell lysates.



FOXP2 (5C11A8): sc-517261. Western blot analysis of FOXP2 expression in non-transfected: sc-117752 (**A**) and human FOXP2 transfected: sc-372825 (**B**) 293T whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Burkett, Z.D., et al. 2018. FOXP2 isoforms delineate spatiotemporal transcriptional networks for vocal learning in the zebra finch. Elife 7: e30649.
2. Tu, Z., et al. 2019. Microenvironmental regulation of long noncoding RNA LINC01133 promotes cancer-stem-cell-like phenotypic traits in triple-negative breast cancers. Stem Cells 37: 1281-1292.
3. Miura, Y., et al. 2020. Generation of human striatal organoids and cortico-striatal assembloids from human pluripotent stem cells. Nat. Biotechnol. 38: 1421-1430.
4. Grimaldi, A., et al. 2022. Identification of bipotent progenitors that give rise to myogenic and connective tissues in mouse. Elife 11: e70235.

RESEARCH USE

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