SANTA CRUZ BIOTECHNOLOGY, INC.

TH-POK (A-4): sc-376250

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TH-POK (T-helper-inducing POZ/Krüppel-like factor), also known as zinc finger protein 67 (ZFP67), zinc finger and BTB domain-containing protein 7B or Krüppel-related zinc finger protein cKrox, is a 539 amino acid protein that contains one BTB (POZ) domain and four C_2H_2-type zinc fingers. Localized to the nucleus, TH-POK functions primarily as a key regulator of lineage commitment of immature T-cell precursors. Specifically, the presence of TH-POK directs positively selected thymocytes to the CD4 lineage, whereas its absence causes default development to the CD8 lineage. TH-POK also functions as a transcriptional repressor of various other genes, such as COL1A1, COL1A2 and Fibronectin.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB7B (human) mapping to 1q21.3; Zbtb7b (mouse) mapping to 3 F1.

SOURCE

TH-POK (A-4) is a mouse monoclonal antibody raised against amino acids 252-358 mapping within an internal region of TH-POK 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376250 X, 200 µg/0.1 ml.

TH-POK (A-4) is available conjugated to agarose (sc-376250 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376250 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376250 PE), fluorescein (sc-376250 FITC), Alexa Fluor® 488 (sc-376250 AF488), Alexa Fluor® 546 (sc-376250 AF546), Alexa Fluor® 594 (sc-376250 AF594) or Alexa Fluor® 647 (sc-376250 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376250 AF680) or Alexa Fluor® 790 (sc-376250 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TH-POK (A-4) is recommended for detection of TH-POK 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), immunohistochemistry (including paraffin-embedded sections) (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 TH-POK siRNA (h): sc-76649, TH-POK siRNA (m): sc-76650, TH-POK siRNA (r): sc-270526, TH-POK shRNA Plasmid (h): sc-76649-SH, TH-POK shRNA Plasmid (m): sc-76650-SH, TH-POK shRNA Plasmid (r): sc-270526-SH, TH-POK shRNA (h) Lentiviral Particles: sc-76649-V, TH-POK shRNA (m) Lentiviral Particles: sc-76650-V and TH-POK shRNA (r) Lentiviral Particles: sc-270526-V.

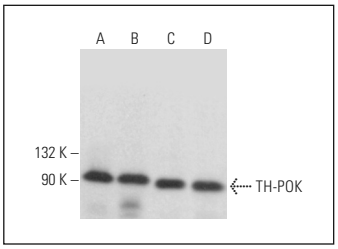
TH-POK (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TH-POK: 58/80 kDa.

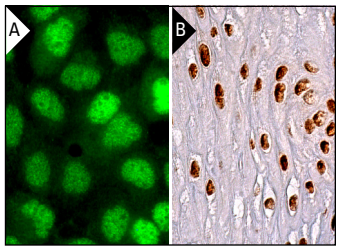
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TH-POK (A-4): sc-376250. Western blot analysis of TH-POK expression in HeLa nuclear extract (**A**) and T-47D (**B**), TK-1 (**C**) and RAW 264.7 (**D**) whole cell lysates.



TH-POK (A-4): sc-376250. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing nuclear staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Bian, Q., et al. 2013. β-globin *cis*-elements determine differential nuclear targeting through epigenetic modifications. J. Cell Biol. 203: 767-783.
2. Li, Y., et al. 2013. 60-kDa Tat-interactive protein (TIP60) positively regulates Th-inducing POK (ThPOK)-mediated repression of eomesodermin in human $CD4^+$ T cells. J. Biol. Chem. 288: 15537-15546.
3. Li, S., et al. 2017. Zbtb7b engages the long noncoding RNA Blnc1 to drive brown and beige fat development and thermogenesis. Proc. Natl. Acad. Sci. USA 114: E7111-E7120.
4. Yu, S., et al. 2020. BMP4 resets mouse epiblast stem cells to naive pluripotency through ZBTB7A/B-mediated chromatin remodelling. Nat. Cell Biol. 22: 651-662.
5. Cui, K., et al. 2022. A novel high-risk subpopulation identified by CTSL and ZBTB7B in gastric cancer. Br. J. Cancer 127: 1450-1460.

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.