

TH-POK (6): sc-136347

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 4 C₂H₂-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.

REFERENCES

1. He, X., et al. 2005. The zinc-finger transcription factor TH-POK regulates CD4 versus CD8 T cell lineage commitment. *Nature* 433: 826-833.
2. He, X., et al. 2006. CD4/CD8 lineage commitment: light at the end of the tunnel? *Curr. Opin. Immunol.* 18: 135-142.
3. Kappes, D.J., et al. 2006. Role of the transcription factor TH-POK in CD4: CD8 lineage commitment. *Immunol. Rev.* 209: 237-252.
4. Kimura, H., et al. 2006. Role of DNA methylation for expression of novel stem cell marker CDCP1 in hematopoietic cells. *Leukemia* 20: 1551-1556.
5. He, X., et al. 2008. CD4-CD8 lineage commitment is regulated by a silencer element at the TH-POK transcription-factor locus. *Immunity* 28: 346-358.
6. Bell, J.J., et al. 2008. Putting TH-POK in place. *Nat. Immunol.* 9: 1095-1097.
7. Wang, L., et al. 2008. Distinct functions for the transcription factors GATA-3 and TH-POK during intrathymic differentiation of CD4⁺ T cells. *Nat. Immunol.* 9: 1122-1130.
8. Egawa, T., et al. 2008. TH-POK acts late in specification of the helper T cell lineage and suppresses Runx-mediated commitment to the cytotoxic T cell lineage. *Nat. Immunol.* 9: 1131-1139.
9. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 607646. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: ZBTB7B (human) mapping to 1q21.3.

SOURCE

TH-POK (6) is a mouse monoclonal antibody raised against amino acids 213-337 of TH-POK 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-136347 X, 200 µg/0.1 ml.

APPLICATIONS

TH-POK (6) is recommended for detection of TH-POK 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TH-POK siRNA (h): sc-76649, TH-POK shRNA Plasmid (h): sc-76649-SH and TH-POK shRNA (h) Lentiviral Particles: sc-76649-V.

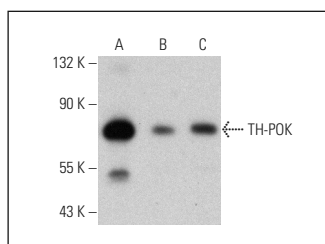
Molecular Weight of TH-POK: 58/80 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 cell lysate: sc-2227 or HeLa nuclear extract: sc-2120.

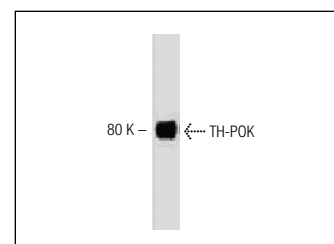
RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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



TH-POK (6): sc-136347. Western blot analysis of TH-POK expression in HeLa nuclear extract (A) and Hep G2 (B) and RT-4 (C) whole cell lysates.



TH-POK (6): sc-136347. Western blot analysis of TH-POK expression in A-431 whole cell lysate.

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. Not for resale.

PROTOCOLS

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