

# TH-POK (C-8): sc-398509

## 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<sub>2</sub>H<sub>2</sub>-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<sup>+</sup> 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

TH-POK (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-102 within an internal region of TH-POK of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-398509 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-398509 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

TH-POK (C-8) 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) 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 (C-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

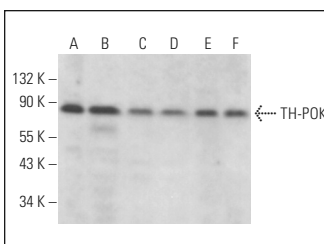
Molecular Weight of TH-POK: 58/80 kDa.

Positive Controls: T-47D cell lysate: sc-2293, TH-POK (m2): 293T Lysate: sc-124029 or HeLa nuclear extract: sc-2120.

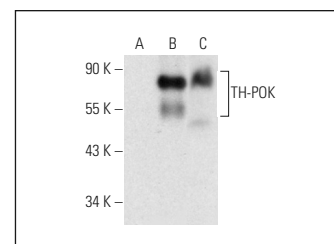
## RECOMMENDED SUPPORT REAGENTS

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, 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



TH-POK (C-8): sc-398509. Western blot analysis of TH-POK expression in HeLa nuclear extract (A) and T-47D (B), U-698-M (C), GA-10 (D), TK-1 (E) and RAW 264.7 (F) whole cell lysates.



TH-POK (C-8): sc-398509. Western blot analysis of TH-POK expression in non-transfected: sc-117752 (A) and mouse TH-POK transfected: sc-124029 (B) 293T whole cell lysates and HeLa nuclear extract (C).

## 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.