

# TH-POK (Y-25): sc-134085

## 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

- He, X., He, X., Dave, V.P., Zhang, Y., Hua, X., Nicolas, E., Xu, W., Roe, B.A. and Kappes, D.J. 2005. The zinc finger transcription factor TH-POK regulates CD4 versus CD8 T-cell lineage commitment. *Nature* 433: 826-833.
- He, X. and Kappes, D.J. 2006. CD4/CD8 lineage commitment: light at the end of the tunnel? *Curr. Opin. Immunol.* 18: 135-142.
- Kappes, D.J., He, X. and He, X. 2006. Role of the transcription factor TH-POK in CD4:CD8 lineage commitment. *Immunol. Rev.* 209: 237-252.
- Kimura, H., Morii, E., Ikeda, J.I., Ezoe, S., Xu, J.X., Nakamichi, N., Tomita, Y., Shibayama, H., Kanakura, Y. and Aozasa, K. 2006. Role of DNA methylation for expression of novel stem cell marker CDCP1 in hematopoietic cells. *Leukemia* 20: 1551-1556.
- He, X., Park, K., Wang, H., He, X., Zhang, Y., Hua, X., Li, Y. and Kappes, D.J. 2008. CD4-CD8 lineage commitment is regulated by a silencer element at the TH-POK transcription-factor locus. *Immunity* 28: 346-358.
- Bell, J.J. and Bhandoola, A. 2008. Putting TH-POK in place. *Nat. Immunol.* 9: 1095-1097.
- Wang, L., Wildt, K.F., Zhu, J., Zhang, X., Feigenbaum, L., Tessarollo, L., Paul, W.E., Fowlkes, B.J. and Bosselut, R. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

TH-POK (Y-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic TH-POK peptide of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

TH-POK (Y-25) 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)], 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 shRNA Plasmid (h): sc-76649-SH and TH-POK shRNA (h) Lentiviral Particles: sc-76649-V.

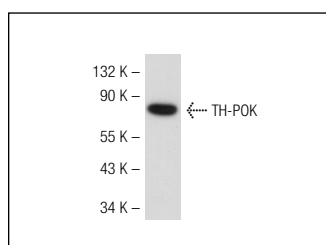
Molecular Weight of TH-POK: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

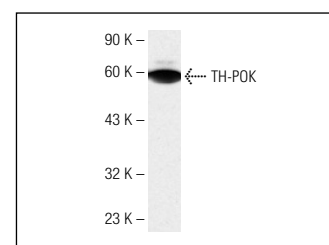
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



TH-POK (Y-25): sc-134085. Western blot analysis of TH-POK expression in HeLa whole cell lysate.



TH-POK (Y-25): sc-134085. Western blot analysis of TH-POK expression in Hep G2 whole cell lysate.

## RESEARCH USE

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