



# TH-POK (h4): 293T Lysate: sc-178044

## BACKGROUND

TH-POK (T-helper-inducing POZ/Krueppel-like factor), also known as zinc-finger protein 67 (ZFP67), zinc finger and BTB domain-containing protein 7B or krueppel-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., 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.
2. He, X. and Kappes, D.J. 2006. CD4/CD8 lineage commitment: light at the end of the tunnel? *Curr. Opin. Immunol.* 18: 135-142.
3. 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.
4. 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.
5. 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 ThPOK transcription-factor locus. *Immunity* 28: 346-358.
6. Bell, J.J. and Bhandardola, A. 2008. Putting ThPOK in place. *Nat. Immunol.* 9: 1095-1097.
7. 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 ThPOK during intrathymic differentiation of CD4<sup>+</sup> T cells. *Nat. Immunol.* 9: 1122-1130.
8. Egawa, T. and Littman, D.R. 2008. ThPOK 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.

## PRODUCT

TH-POK (h4): 293T Lysate represents a lysate of human TH-POK transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

TH-POK (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive TH-POK antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## PROTOCOLS

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