

# Spi-C (K-24): sc-134029

## BACKGROUND

The Ets transcription factor family is comprised of DNA-binding proteins that influence lymphoid development and activity and bind the consensus DNA site GGA(A/T) through a unique winged helix-turn-helix motif known as the Ets domain. Spi-B and Spi-C (also known as SPIC) are closely related Ets family members which share a conserved divergent sequence within the Ets domain that enables their binding to non-canonical AGAA sites. Spi-C is a 248 amino acid protein that localizes to the nucleus and, like other Ets family members, binds DNA as a monomer and plays a role in transcriptional regulation. Additionally, Spi-C is thought to control the development of red pulp macrophages, thereby contributing to iron homeostasis and red blood cell recycling. Human Spi-C shares 65% amino acid identity with its mouse counterpart, suggesting a conserved role between species.

## REFERENCES

- Carlsson, R., Hjalmarsson, A., Liberg, D., Persson, C. and Leanderson, T. 2002. Genomic structure of mouse Spi-C and genomic structure and expression pattern of human Spi-C. *Gene* 299: 271-278.
- Kageyama, S., Liu, H., Nagata, M. and Aoki, F. 2006. The role of ETS transcription factors in transcription and development of mouse preimplantation embryos. *Biochem. Biophys. Res. Commun.* 344: 675-679.
- Carlsson, R., Thorell, K., Liberg, D. and Leanderson, T. 2006. Spi-C and Stat6 can cooperate to stimulate IgE germline transcription. *Biochem. Biophys. Res. Commun.* 344: 1155-1160.
- Guillouf, C., Gallais, I. and Moreau-Gachelin, F. 2006. Spi-1/PU.1 oncoprotein affects splicing decisions in a promoter binding-dependent manner. *J. Biol. Chem.* 281: 19145-19155.
- Schweitzer, B.L., Huang, K.J., Kamath, M.B., Emelyanov, A.V., Birshtein, B.K. and DeKoter, R.P. 2006. Spi-C has opposing effects to PU.1 on gene expression in progenitor B cells. *J. Immunol.* 177: 2195-2207.
- Zhu, X., Schweitzer, B.L., Romer, E.J., Sulentic, C.E. and DeKoter, R.P. 2008. Transgenic expression of Spi-C impairs B-cell development and function by affecting genes associated with Bcr signaling. *Eur. J. Immunol.* 38: 2587-2599.
- Uchiya, K. and Nikai, T. 2008. *Salmonella* virulence factor Spi-C is involved in expression of flagellin protein and mediates activation of the signal transduction pathways in macrophages. *Microbiology* 154: 3491-3502.
- Kohyama, M., Ise, W., Edelson, B.T., Wilker, P.R., Hildner, K., Mejia, C., Frazier, W.A., Murphy, T.L. and Murphy, K.M. 2009. Role for Spi-C in the development of red pulp macrophages and splenic iron homeostasis. *Nature* 457: 318-321.

## CHROMOSOMAL LOCATION

Genetic locus: Spic (mouse) mapping to 10 C1.

## SOURCE

Spi-C (K-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic Spi-C peptide of mouse origin.

## 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

Spi-C (K-24) is recommended for detection of Spi-C of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Spi-C siRNA (m): sc-76562, Spi-C shRNA Plasmid (m): sc-76562-SH and Spi-C shRNA (m) Lentiviral Particles: sc-76562-V.

Molecular Weight (predicted) of Spi-C: 28 kDa.

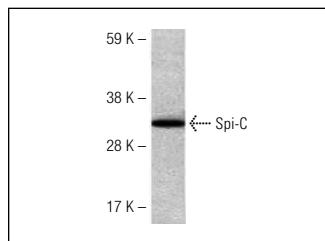
Molecular Weight (observed) of Spi-C: 36 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795.

## 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).

## DATA



Spi-C (K-24): sc-134029. Western blot analysis of Spi-C expression in SP2/0 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.

## PROTOCOLS

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