



Spi-C (L-14): sc-79602

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

1. 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.
2. 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.
3. 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.
4. 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.
5. Schweitzer, B.L., Huang, K.J., Kamath, M.B., Emelyanov, A.V., Birshstein, 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.
6. 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.
7. Uchiya, K. and Nikai, T. 2008. *Salmonella* virulence factor SpiC is involved in expression of flagellin protein and mediates activation of the signal transduction pathways in macrophages. *Microbiology* 154: 3491-3502.
8. 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.
9. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612568. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

STORAGE

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

CHROMOSOMAL LOCATION

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

SOURCE

Spi-C (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Spi-C of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79602 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-79602 X, 200 µg/0.1 ml.

APPLICATIONS

Spi-C (L-14) is recommended for detection of Spi-C of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Spi-C siRNA (m): sc-76562, Spi-C shRNA Plasmid (m): sc-76562-SH and Spi-C shRNA (m) Lentiviral Particles: sc-76562-V.

Spi-C (L-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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