

# Spi-B (N-16): sc-5944

## BACKGROUND

The Ets transcription factor family (Ets-1, Ets-2, Erg-1–3, Elk-1, Elf-1, Elf-5, NERF, PU.1, PEA3, ERM, FEV, ER81, Fli-1, TEL, Spi-B, ESE-1, ESE-3A, Net, ABT1 and ERF) are DNA-binding proteins that influence lymphoid development and activity. The Ets family monomeric proteins bind the consensus DNA site GGA(A/T) through a unique winged helix-turn-helix motif known as the Ets domain. PU.1 (Spi-1/Spi-A), Spi-B and Spi-C are closely related Ets family members which share a conserved divergent sequence within the Ets domain that enables their binding to the non-canonical AGAA sites. PU.1 transactivates a large number of B cell genes, such as those encoding CD72, CD20 and Btk, and Spi-B enhances expression of many of these same target genes. PU.1 is expressed in a wide variety of hematopoietic cells, including B cells, early T-cells, megakaryocytes, granulocytes, mast cells, immature erythrocytes and myeloid cells. Alternatively, Spi-B expression is limited to B cells and immature T cells, where expression accumulates through T-lineage commitment and then is dramatically absent following the  $\beta$ -selection checkpoint.

## CHROMOSOMAL LOCATION

Genetic locus: SPIB (human) mapping to 19q13.33; Spib (mouse) mapping to 7 B4.

## SOURCE

Spi-B (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Spi-B of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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-5944 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-5944 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Spi-B (N-16) is recommended for detection of Spi-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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). Spi-B (N-16) is also recommended for detection of Spi-B in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Spi-B siRNA (h): sc-37869, Spi-B siRNA (m): sc-37870, Spi-B shRNA Plasmid (h): sc-37869-SH, Spi-B shRNA Plasmid (m): sc-37870-SH, Spi-B shRNA (h) Lentiviral Particles: sc-37869-V and Spi-B shRNA (m) Lentiviral Particles: sc-37870-V.

Spi-B (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

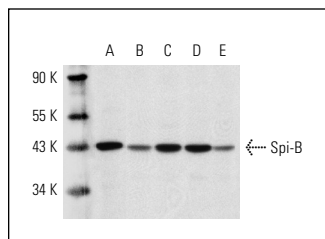
Molecular Weight of Spi-B: 46 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, NAMALWA cell lysate: sc-2234 or CTLL-2 cell lysate: sc-2242.

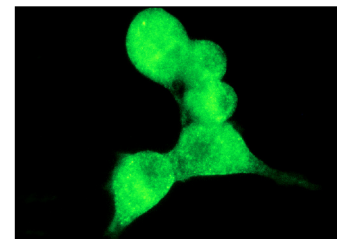
## STORAGE

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

## DATA



Spi-B (N-16): sc-5944. Western blot analysis of Spi-B expression in WEHI-231 (A), NAMALWA (B), CTLL-2 (C), NIH/3T3 (D) and MCP-5 (E) whole cell lysates.



Spi-B (N-16): sc-5944. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic and nuclear localization.

## SELECT PRODUCT CITATIONS

- Beerheide, W., et al. 2002. Downregulation of  $\beta$ 2-microglobulin in human cord blood somatic stem cells after transplantation into livers of SCID-mice: an escape mechanism of stem cells?. *Biochem. Biophys. Res. Commun.* 294: 1052-1063.
- Hu, K., et al. 2005. Characterization of the human zinc finger protein 267 promoter: essential role of nuclear factor Y. *Biochim. Biophys. Acta* 1729: 14-23.
- Larsson, L., et al. 2009. The Sp1 transcription factor binds to the G-allele of the -1087 IL-10 gene polymorphism and enhances transcriptional activation. *Genes Immun.* 10: 280-284.
- Larsson, L., et al. 2010. Sp1 binds to the G allele of the -1087 polymorphism in the IL-10 promoter and promotes IL-10 mRNA transcription and protein production. *Genes Immun.* 11: 181-187.

## 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.

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Try **Spi-B (4G5B3): sc-517204**, our highly recommended monoclonal alternative to Spi-B (N-16).