

# PU.1 (A-7): sc-365208

## BACKGROUND

The Ets transcription factor family (Ets-1, Ets-2, Erg-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: SPI1 (human) mapping to 11p11.2.

## SOURCE

PU.1 (A-7) is a mouse monoclonal antibody raised against amino acids 1-135 of PU.1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain 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-365208 X, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

PU.1 (A-7) is recommended for detection of PU.1 of human origin by Western Blotting (starting dilution 1:100, 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), 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 PU.1 siRNA (h): sc-36330, PU.1 shRNA Plasmid (h): sc-36330-SH and PU.1 shRNA (h) Lentiviral Particles: sc-36330-V.

PU.1 (A-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PU.1: 40 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, U-698-M whole cell lysate: sc-364799 or THP-1 cell lysate: sc-2238.

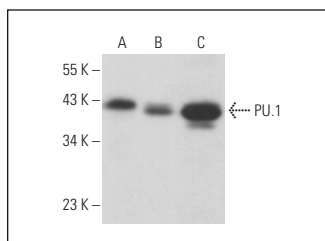
## STORAGE

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

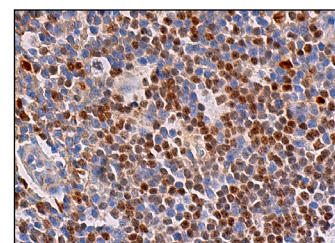
## RESEARCH USE

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

## DATA



PU.1 (A-7): sc-365208. Western blot analysis of PU.1 expression in K-562 nuclear extract (A) and U-698-M (B) and THP-1 (C) whole cell lysates.




PU.1 (A-7): sc-365208. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear staining of subset of cells in non-germinal center.

## SELECT PRODUCT CITATIONS

- Li, H., et al. 2016. Characterization of KIR intermediate promoters reveals four promoter types associated with distinct expression patterns of KIR subtypes. *Genes Immun.* 17: 66-74.
- Song, G., et al. 2016. A novel PAD4/SOX4/PU.1 signaling pathway is involved in the committed differentiation of acute promyelocytic leukemia cells into granulocytic cells. *Oncotarget* 7: 3144-3157.
- Lina, T.T., et al. 2016. *Ehrlichia chaffeensis* TRP120 activates canonical notch signaling to downregulate TLR2/4 expression and promote intracellular survival. *MBio* 7: e00672-16.
- Haimovici, A., et al. 2017. PU.1 supports TRAIL-induced cell death by inhibiting NF $\kappa$ B-mediated cell survival and inducing DR5 expression. *Cell Death Differ.* 24: 866-877.
- Tao, L., et al. 2020. Long noncoding RNA SNHG16 promotes the tumorigenicity of cervical cancer cells by recruiting transcriptional factor SPI1 to upregulate PARP9. *Cell Biol. Int.* 44: 773-784.
- Zuo, F., et al. 2021. Long noncoding RNA NR2F1-AS1 plays a carcinogenic role in gastric cancer by recruiting transcriptional factor SPI1 to upregulate ST8SIA1 expression. *Bioengineered*. E-published.

## PROTOCOLS

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



See **PU.1 (C-3): sc-390405** for PU.1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.