

PU.1 (Spi-1) (T-21): sc-352

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 β -selection checkpoint.

CHROMOSOMAL LOCATION

Genetic locus: SPI1 (human) mapping to 11p11.2; Sfpi1 (mouse) mapping to 2 E1.

SOURCE

PU.1 (Spi-1) (T-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of PU.1 of mouse origin.

PRODUCT

Each vial contains 200 μ 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-352 X, 100 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-352 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PU.1 (Spi-1) (T-21) is recommended for detection of PU.1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

PU.1 (Spi-1) (T-21) is also recommended for detection of PU.1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PU.1 siRNA (h): sc-36330, PU.1 siRNA (m): sc-36331, PU.1 shRNA Plasmid (h): sc-36330-SH, PU.1 shRNA Plasmid (m): sc-36331-SH, PU.1 shRNA (h) Lentiviral Particles: sc-36330-V and PU.1 shRNA (m) Lentiviral Particles: sc-36331-V.

PU.1 (Spi-1) (T-21) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

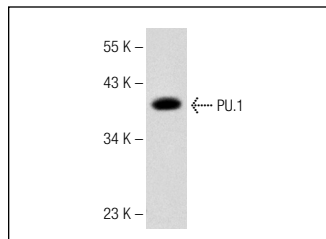
Molecular Weight of PU.1: 40 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

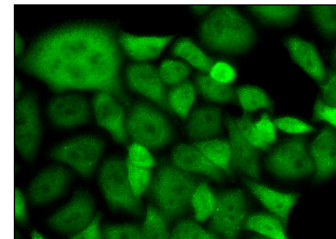
STORAGE

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

DATA



PU.1 (Spi-1) (T-21): sc-352. Western blot analysis of PU.1 expression in K-562 nuclear extract.



PU.1 (Spi-1) (T-21): sc-352. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear and cytoplasmic localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School.

SELECT PRODUCT CITATIONS

- Inaba, T., et al. 1996. Transcription factor PU.1 mediates induction of c-Fms in vascular smooth muscle cells: a mechanism for phenotypic change to phagocytic cells. *Mol. Cell. Biol.* 16: 2264-2273.
- Takemoto, C.M., et al. 2010. PU.1 positively regulates GATA-1 expression in mast cells. *J. Immunol.* 184: 4349-4361.
- Ng, K.P., et al. 2011. p53 independent epigenetic-differentiation treatment in xenotransplant models of acute myeloid leukemia. *Leukemia* 25: 1739-1750.
- Grigorakaki, C., et al. 2011. Tumor necrosis factor α -mediated inhibition of erythropoiesis involves GATA-1/GATA-2 balance impairment and PU.1 over-expression. *Biochem. Pharmacol.* 82: 156-166.
- Hamdorf, M., et al. 2011. PKC δ -induced PU.1 phosphorylation promotes hematopoietic stem cell differentiation to dendritic cells. *Stem Cells* 29: 297-306.
- Courtial, N., et al. 2012. Tal1 regulates osteoclast differentiation through suppression of the master regulator of cell fusion DC-STAMP. *FASEB J.* 26: 523-532.
- Gomez-Nicola, D., et al. 2013. Regulation of microglial proliferation during chronic neurodegeneration. *J. Neurosci.* 33: 2481-2493.

RESEARCH USE

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



Try **PU.1 (C-3): sc-390405** or **PU.1 (A-7): sc-365208**, our highly recommended monoclonal alternatives to PU.1 (Spi-1) (T-21). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PU.1 (C-3): sc-390405**.