

PU.1 (D-19): sc-5949

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 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-5949 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-5949 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PU.1 (D-19) 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).

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 (D-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

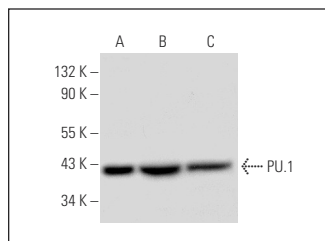
Molecular Weight of PU.1: 40 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, NIH/3T3 nuclear extract: sc-2138 or CTLL-2 cell lysate: sc-2242.

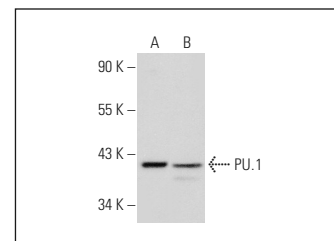
STORAGE

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

DATA



PU.1 (D-19): sc-5949. Western blot analysis of PU.1 expression in Jurkat (A) and NIH/3T3 (B) nuclear extracts and CTLL-2 whole cell lysate (C).



PU.1 (D-19): sc-5949. Western blot analysis of PU.1 expression in Hep G2 (A) and WiDR (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yue, W., et al. 2004. Mitosis-specific hyperphosphorylation of Epstein-Barr virus nuclear antigen 2 suppresses its function. *J. Virol.* 78: 3542-3552.
2. Wang, Q.H., et al. 2008. Suppressive effect of Elf-1 on Fc ϵ R1 α -chain expression in primary mast cells. *Immunogenetics* 60: 557-563.
3. Crotti, T.N., et al. 2008. PU.1 and NFATc1 mediate osteoclastic induction of the mouse β 3 integrin promoter. *J. Cell. Physiol.* 215: 636-644.
4. Fukai, T., et al. 2009. Involvement of PU.1 in the transcriptional regulation of TNF- α . *Biochem. Biophys. Res. Commun.* 388: 102-106.
5. Ito, T., et al. 2009. Roles of PU.1 in monocyte- and mast cell-specific gene regulation: PU.1 transactivates CIITA pIV in cooperation with IFN- γ . *Int. Immunol.* 21: 803-816.
6. Yang, Z., et al. 2009. Increased c-Jun expression and reduced GATA2 expression promote aberrant monocytic differentiation induced by activating PTPN11 mutants. *Mol. Cell. Biol.* 29: 4376-4393.
7. Shimokawa, N., et al. 2010. Suppressive effects of transcription factor GATA1 on cell type-specific gene expression in dendritic cells. *Immunogenetics* 62: 421-429.
8. Gu, X., et al. 2014. Runx1 regulation of PU.1 corepressor/coactivator exchange identifies specific molecular targets for leukemia differentiation therapy. *J. Biol. Chem.* 289: 14881-14895.

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 (D-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **PU.1 (C-3): sc-390405**.