SANTA CRUZ BIOTECHNOLOGY, INC.

PU.1 (H-135): sc-22805

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, ER8I, 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 hematopoetic 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 (H-135) is a rabbit polyclonal antibody raised against amino acids 1-135 of PU.1 of human origin.

PRODUCT

Each vial contains 200 µg 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-22805 X, 200 µg/0.1 ml.

APPLICATIONS

PU.1 (H-135) 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 µg per 100-500 µg 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 (H-135) is also recommended for detection of PU.1 in additional species, including equine, canine, bovine and porcine.

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 (H-135) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

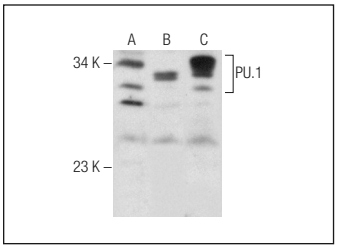
Molecular Weight of PU.1: 40 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, CTLL-2 cell lysate: sc-2242 or NIH/3T3 nuclear extract: sc-2138.

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 (H-135): sc-22805. Western blot analysis of PU.1 expression in NIH/3T3 (**A**) and MM-142 (**B**) nuclear extracts and NIH/3T3 whole cell lysate (**C**).

SELECT PRODUCT CITATIONS

1. Laouar, Y., et al. 2003. Stat3 is required for Flt3L-dependent dendritic cell differentiation. Immunity 19: 903-912.
2. Chen, G., et al. 2011. Molecular mechanisms for synchronized transcription of three complement C1q subunit genes in dendritic cells and macrophages. J. Biol. Chem. 286: 34941-34950.
3. Hie, M., et al. 2011. Zinc deficiency decreases osteoblasts and osteoclasts associated with the reduced expression of Runx2 and RANK. Bone 49: 1152-1159.
4. Hamdorf, M., et al. 2011. PKCδ-induced PU.1 phosphorylation promotes hematopoietic stem cell differentiation to dendritic cells. Stem Cells 29: 297-306.
5. Keating, G., et al. 2012. Regulation of the human prostacyclin receptor gene in megakaryocytes: major roles for C/EBPδ and PU.1. Biochim. Biophys. Acta 1819: 428-445.
6. Tsai, P.C., et al. 2012. Regulation of CD20 in rituximab-resistant cell lines and B-cell non-Hodgkin lymphoma. Clin. Cancer Res. 18: 1039-1050.
7. Gasper, W.C., et al. 2014. Fully automated high-throughput chromatin immunoprecipitation for ChIP-seq: identifying ChIP-quality p300 monoclonal antibodies. Sci. Rep. 4: 5152.

RESEARCH USE

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