

Blimp-1 (N-20): sc-13203

BACKGROUND

The development and differentiation of plasma cells, which are terminally differentiated B-cells, are induced by Blimp-1 (B lymphocyte-induced maturation protein, also designated PRDI-BF1). Blimp-1 is a transcriptional repressor that localizes to the nucleus and is considered a master regulator of terminal B-cell development. Alone, Blimp-1 is sufficient to trigger terminal B-cell differentiation. Blimp-1 upregulates the expression of syndecan-1 and J chain, represses IFN- β gene transcription and associates with HDAC to recruit it to DNA, thereby repressing c-myc. Blimp-1 is expressed during the late stages of B-cell differentiation in immunoglobulin-secreting plasma cells, as well as in long-lived, bone marrow plasma cells. The expression of Blimp-1 defines a checkpoint beyond which fully activated B cells proceed to the plasma cell stage, whereas immature and partially activated cells are eliminated.

REFERENCES

1. Turner, C.A., Jr., et al. 1994. Blimp-1, a novel zinc finger-containing protein that can drive the maturation of B lymphocytes into immunoglobulin-secreting cells. *Cell* 77: 297-306.
2. Messika, E.J., et al. 1998. Differential effect of B lymphocyte-induced maturation protein (Blimp-1) expression on cell fate during B cell development. *J. Exp. Med.* 188: 515-525.

CHROMOSOMAL LOCATION

Genetic locus: PRDM1 (human) mapping to 6q21; Prdm1 (mouse) mapping to 10 B2.

SOURCE

Blimp-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Blimp-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13203 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin (sc-13203 PE), PerCP (sc-13203 PerCP) or PerCP-Cy5.5 (sc-13203 PCPC5) conjugates for flow cytometry, 100 tests.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13203 X, 200 μ g/0.1 ml.

Available as Alexa Fluor[®] 488 (sc-13203 AF488) conjugates for flow cytometry or immunofluorescence; 100 μ g/2 ml.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

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.

APPLICATIONS

Blimp-1 (N-20) is recommended for detection of Blimp-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), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Blimp-1 (N-20) is also recommended for detection of Blimp-1 in additional species, including equine, bovine and porcine.

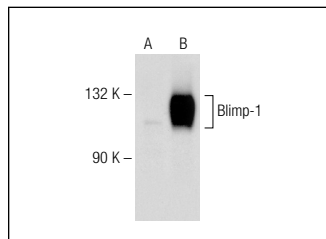
Suitable for use as control antibody for Blimp-1 siRNA (h): sc-37714, Blimp-1 siRNA (m): sc-37715, Blimp-1 shRNA Plasmid (h): sc-37714-SH, Blimp-1 shRNA Plasmid (m): sc-37715-SH, Blimp-1 shRNA (h) Lentiviral Particles: sc-37714-V and Blimp-1 shRNA (m) Lentiviral Particles: sc-37715-V.

Blimp-1 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

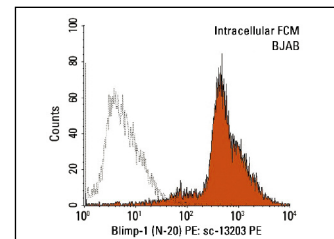
Molecular Weight of Blimp-1: 90 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Ramos nuclear extract: sc-2153 or Blimp-1 (h2): 293 Lysate: sc-176917.

DATA



Blimp-1 (N-20): sc-13203. Western blot analysis of Blimp-1 expression in non-transfected: sc-110760 (A) and human Blimp-1 transfected: sc-176917 (B) 293 whole cell lysates.



Blimp-1 (N-20) PE: sc-13203 PE. Intracellular FCM analysis of fixed and permeabilized BJAB cells. Black line histogram represents the isotype control, normal goat IgG: sc-3992.

SELECT PRODUCT CITATIONS

1. Acosta-Rodriguez, E.V., et al. 2004. Galectin-3 mediates IL-4-induced survival and differentiation of B cells: functional cross-talk and implications during *Trypanosoma cruzi* infection. *J. Immunol.* 172: 493-502.
2. Anastasiadou, E., et al. 2009. Epstein-Barr virus infection leads to partial phenotypic reversion of terminally differentiated malignant B cells. *Cancer Lett.* 284: 165-174.
3. Iwata, S., et al. 2012. Amplification of Toll-like receptor-mediated signaling through spleen tyrosine kinase in human B-cell activation. *J. Allergy Clin. Immunol.* 129: 1594-1601.e2.



Try **Blimp-1 (6D3): sc-47732** or **Blimp-1 (C-7): sc-398699**, our highly recommended monoclonal alternatives to Blimp-1 (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Blimp-1 (6D3): sc-47732**.