

Blimp-1 (H-150): sc-25380

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.
3. Knodel, M., et al. 1999. Reversal of Blimp-1-mediated apoptosis by Al, a member of the Bcl-2 family. *Eur. J. Immunol.* 29: 2988-2998.
4. Shaffer, A.L., et al. 2000. BCL-6 represses genes that function in lymphocyte differentiation, inflammation, and cell cycle control. *Immunity* 13: 199-212.
5. Angelin-Duclos, C., et al. 2000. Commitment of B lymphocytes to a plasma cell fate is associated with blimp-1 expression *in vivo*. *J. Immunol.* 165: 5462-5471.
6. Yu, J., et al. 2000. Transcriptional repression by blimp-1 (PRDI-BF1) involves recruitment of histone deacetylase. *Mol. Cell. Biol.* 20: 2592-2603.

CHROMOSOMAL LOCATION

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

SOURCE

Blimp-1 (H-150) is a rabbit polyclonal antibody raised against amino acids 640-789 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25380 X, 200 μ g/0.1 ml.

RESEARCH USE

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

APPLICATIONS

Blimp-1 (H-150) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Blimp-1 (H-150) is also recommended for detection of Blimp-1 in additional species, including equine, canine 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 (H-150) 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 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Blimp-1 (6D3): sc-47732** or **Blimp-1 (C-7): sc-398699**, our highly recommended monoclonal alternatives to Blimp-1 (H-150). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Blimp-1 (6D3): sc-47732**.