SANTA CRUZ BIOTECHNOLOGY, INC.

Blimp-1 (C-21): sc-13206

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

Blimp-1 (C-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Blimp-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.

Blocking peptide available for competition studies, sc-13206 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-13206 PE, 100 tests.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13206 X, 200 µg/0.1 ml.

APPLICATIONS

Blimp-1 (C-21) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Blimp-1 (C-21) 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.

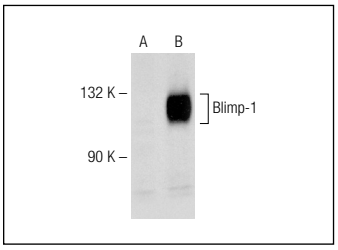
Blimp-1 (C-21) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Blimp-1: 90 kDa.

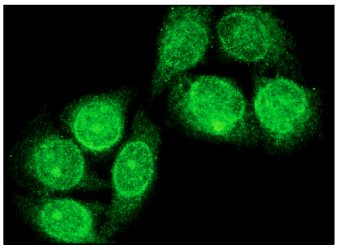
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Blimp-1 (C-21): sc-13206. 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 (C-21): sc-13206. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Tumang, J.R., et al. 2005. Spontaneously Ig-secreting B-1 cells violate the accepted paradigm for expression of differentiation-associated transcription factors. J. Immunol. 174: 3173-3177.
2. Wilson, J.J., et al. 2012. CD8 T cells recruited early in mouse polyomavirus infection undergo exhaustion. J. Immunol. 188: 4340-4348.

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.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **Blimp-1 (6D3): sc-47732** or **Blimp-1 (C-7): sc-398699**, our highly recommended monoclonal alternatives to Blimp-1 (C-21). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Blimp-1 (6D3): sc-47732**.