

Blimp-1 (6D3): sc-47732



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 (6D3) is a rat monoclonal antibody raised against a GST-fusion protein corresponding to amino acids 255-395 of Blimp-1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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-47732 X, 200 μ g/0.1 ml.

Blimp-1 (6D3) is available conjugated to agarose (sc-47732 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47732 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47732 PE), fluorescein (sc-47732 FITC), Alexa Fluor[®] 488 (sc-47732 AF488), Alexa Fluor[®] 546 (sc-47732 AF546), Alexa Fluor[®] 594 (sc-47732 AF594) or Alexa Fluor[®] 647 (sc-47732 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-47732 AF680) or Alexa Fluor[®] 790 (sc-47732 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Blimp-1 (6D3) is recommended for detection of Blimp-1 of mouse, rat and, to a lesser extent, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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 (6D3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

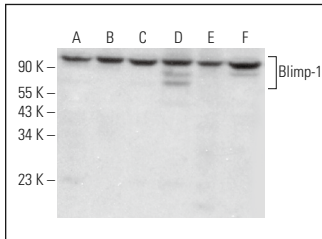
Molecular Weight of Blimp-1: 90 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213.

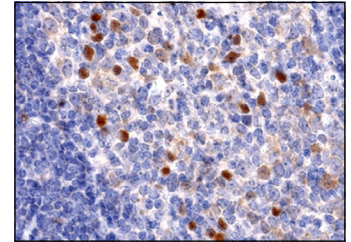
STORAGE

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

DATA



Blimp-1 (6D3): sc-47732. Western blot analysis of Blimp-1 expression in NAMALWA (A), BYDP (B), TF-1 (C), K-562 (D), HEL 92.1.7 (E) and WEHI-231 (F) whole cell lysates.



Blimp-1 (6D3): sc-47732. Immunoperoxidase staining of human tonsil showing Blimp-1 positive cells in the germinal center. Kindly provided by Dr. L Corcoran of The Walter and Eliza Hall Institute and Dr. T. Marafioti of Oxford University.

SELECT PRODUCT CITATIONS

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- Basu, S., et al. 2016. Constitutive CD40 signaling calibrates differentiation outcomes in responding B cells via multiple molecular pathways. *J. Immunol.* 197: 761-770.
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- Navis, M., et al. 2019. Mouse fetal intestinal organoids: new model to study epithelial maturation from suckling to weaning. *EMBO Rep.* 20: e46221.
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- Kinoshita, M., et al. 2021. Capture of mouse and human stem cells with features of formative pluripotency. *Cell Stem Cell* 28: 453-471.e8.

RESEARCH USE

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

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