

# Blimp-1 (3H2E8): sc-66015

## 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- $\beta$  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 (3H2E8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 199-409 of Blimp-1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blimp-1 (3H2E8) is available conjugated to agarose (sc-66015 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-66015 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-66015 PE), fluorescein (sc-66015 FITC), Alexa Fluor<sup>®</sup> 488 (sc-66015 AF488), Alexa Fluor<sup>®</sup> 546 (sc-66015 AF546), Alexa Fluor<sup>®</sup> 594 (sc-66015 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-66015 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-66015 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-66015 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Blimp-1 (3H2E8) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (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.

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.

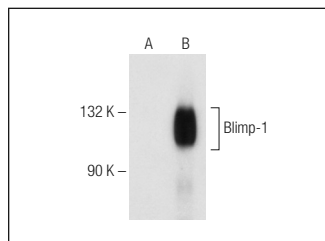
## RESEARCH USE

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

## 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 (3H2E8): sc-66015. 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.

## SELECT PRODUCT CITATIONS

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- Shin, H.M., et al. 2017. Transient expression of ZBTB32 in anti-viral CD8<sup>+</sup> T cells limits the magnitude of the effector response and the generation of memory. *PLoS Pathog.* 13: e1006544.
- Wang, L., et al. 2019. Control of germinal center localization and lineage stability of follicular regulatory T cells by the Blimp-1 transcription factor. *Cell Rep.* 29: 1848-1861.e6.
- Romero-García, R., et al. 2020. Differential epigenetic regulation between the alternative promoters, PRDM1 $\alpha$  and PRDM1 $\beta$ , of the tumour suppressor gene PRDM1 in human multiple myeloma cells. *Sci. Rep.* 10: 15899.
- Villanueva-Hernández, S., et al. 2022. Co-expression of the B-cell key transcription factors Blimp-1 and IRF4 identifies plasma cells in the pig. *Front. Immunol.* 13: 854257.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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