

# ZBP1 (M-300): sc-67258

## BACKGROUND

Left-handed Z-DNA is a higher energy form of the double helix. Proteins containing Z $\alpha$  domains share a remarkable ability to bind specifically to Z-DNA and/or Z-RNA. ZBP1 (Z-DNA binding protein 1), also designated DLM-1, is a 429 amino acid protein that harbors two copies of the Z $\alpha$  domain containing the Z $\alpha$  motif at its N-terminus. ZBP1 is involved in host responses against cellular stresses, including tumorigenesis and viral infection. It is highly expressed in lymphatic tissues including leukocytes, lymph node, tonsil, bone marrow, spleen and, to a lesser extent, in thymus, lung and liver. There are five known isoforms of human ZBP1. The ZBP1 protein shares 47% and 46% sequence identity with the mouse and rat homologs, respectively. The mouse, rat and human ZBP1 proteins all contain four conserved regions, two of which are homologous to the Z-DNA binding domains Z $\alpha$  and Z $\beta$  of the RNA editing enzyme ADAR1.

## REFERENCES

1. Rich, A., Nordheim, A. and Wang, A.H. 1984. The chemistry and biology of left-handed Z-DNA. *Annu. Rev. Biochem.* 53: 791-846.
2. Schwartz, T., Rould, M.A., Lowenhaupt, K., Herbert, A. and Rich, A. 1999. Crystal structure of the Z $\alpha$  domain of the human editing enzyme ADAR1 bound to left-handed Z-DNA. *Science* 284: 1841-1845.
3. Fu, Y., Comella, N., Tognazzi, K., Brown, L.F., Dvorak, H.F. and Kocher, O. 2000. Cloning of DLM-1, a novel gene using RNA differential display. *Gene* 240: 157-163.
4. Rothenburg, S., Schwartz, T., Koch-Nolte, F. and Haag, F. 2002. Complex regulation of the human gene for the Z-DNA binding protein DLM-1. *Nucleic Acids Res.* 30: 993-1000.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606750. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: Zbp1 (mouse) mapping to 2 H3.

## SOURCE

ZBP1 (M-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of ZBP1 of mouse origin.

## PRODUCT

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

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

ZBP1 (M-300) is recommended for detection of ZBP1 of mouse and, to a lesser extent, rat 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)], 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).

Suitable for use as control antibody for ZBP1 siRNA (m): sc-61823, ZBP1 shRNA Plasmid (m): sc-61823-SH and ZBP1 shRNA (m) Lentiviral Particles: sc-61823-V.

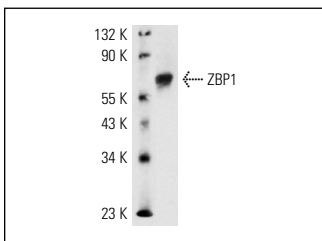
Molecular Weight of ZBP1: 68 kDa.

Positive Controls: ZBP1 (m): 293T Lysate: sc-127799 or mouse liver extract: sc-2256.

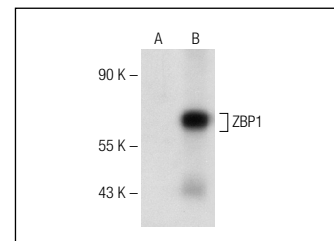
## RECOMMENDED SECONDARY REAGENTS

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.

## DATA



ZBP1 (M-300): sc-67258. Western blot analysis of ZBP1 expression in mouse liver tissue extract.



ZBP1 (M-300): sc-67258. Western blot analysis of ZBP1 expression in non-transfected: sc-117752 (A) and mouse ZBP1 transfected: sc-127799 (B) 293T whole cell lysates.

## RESEARCH USE

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


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Try **ZBP1 (H-9): sc-271483**, our highly recommended monoclonal alternative to ZBP1 (M-300).