

# ZBP1 (E-13): sc-50685



The Power to Question

## 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/>

## SOURCE

ZBP1 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ZBP1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-50685 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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 (E-13) is recommended for detection of ZBP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (h): sc-61822.

Molecular Weight of ZBP1: 68 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) 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.

## RESEARCH USE

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