

ZBP1 Antibody

ZBP1: Z-DNA binding protein 1, DLM-1, DAI

CATALOG NO.: 4401

BACKGROUND:

Z-DNA binding protein 1 (ZBP1) belongs to a family of proteins that contain the Z α domain which binds specifically to left-handed Z-DNA and Z-RNA (1). ZBP1 was initially identified as a novel gene that was up-regulated in activated macrophages in mice bearing ascites tumors, suggesting that it may play a role in processes such as host response in neoplasia (2). More recent reports indicate that the cytosolic ZBP1 can act like the toll-like receptor TLR9 by detecting cytosolic double-stranded (ds) DNA and trigger induction of type I interferon and other innate immune responses. It is thought that the binding of ZBP1 to dsDNA enhances its association with innate immune response proteins such as the IRF3 transcription factor and the serine/threonine kinase TBK1 (also known as NAK) (3). Multiple isoforms of ZBP1 are known to exist.

SOURCE:

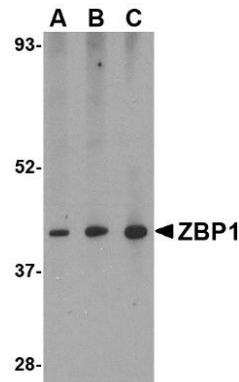
Rabbit polyclonal ZBP1 antibody was raised against an 18 amino acid peptide from near the carboxy terminus of human ZBP1 (Genbank accession No. EAW75510).

APPLICATION:

ZBP1 antibody can be used for the detection of ZBP1 by Western blot at 0.5 – 1 μ g/ml. (Optimal dilution should be determined by user). Mouse small intestine tissue lysate can be used as positive control. ZBP1 antibody is human, mouse and rat reactive. **This product is for research use only.**

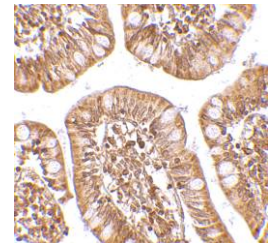
STORAGE:

ZBP1 antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of ZBP1 in mouse small intestine tissue lysate with ZBP1 antibody at (A) 0.5, (B) 1 and (C) 2 μ g/ml.

Immunohistochemistry of ZBP1 in human small intestine tissue with ZBP1 antibody at 2.5 μ g/ml.



RELATED PRODUCTS:

Blocking peptide, Catalog No. **4401P**.

Mouse Small Intestine Tissue Lysate, Catalog No. **1408**.

TLR9 Antibody (CT), Catalog No. **3737**.

IRF3 Antibody (CT), Catalog No. **3615**.

NAK Antibody, Catalog No. **2351**.

REFERENCES:

- Schwartz T, Behlke J, Lowenhaupt K, et al. Structure of the DLM-1-Z-DNA complex reveals a conserved family of Z-DNA-binding proteins. *Nat. Struct. Biol.* 2001; 8:761-5.
- Fu Y, Comella N, Tognazzi K, et al. Cloning of DLM-1, a novel gene that is up-regulated in active macrophages, using RNA differential display. *Gene* 1999; 204:157-63.
- Takaoda A, Wang Z, Choi MK, et al. DAI (DLM-1/ZBP1) is a cytosolic DNA sensor and an activator of innate immune response. *Nature* 2007; 448:501-5. (08-01D)