

**AG-20B-0010**

15-Oct-2010

**anti-ZBP1, mAb (Zippy-1)**

[Z-DNA-binding Protein 1; Tumor Stroma and Activated Macrophage Protein DLM-1; DNA-dependent Activator of IFN-regulatory Factors; DAI]

AG-20B-0010-C100	100 µg
Clone	Zippy-1
Source/Host	Purified from concentrated hybridoma tissue culture supernatant.
Isotype	Mouse IgG2a
Immunogen	Recombinant mouse ZBP1 (aa 1-411).

**Handling / Storage**

Shipping	BLUE ICE
Short Term Storage	+4°C
Long Term Storage	-20°C

After opening, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles.

**Use / Stability**

Stable for at least 1 year after receipt when stored at -20°C.

MSDS available at [www.adipogen.com](http://www.adipogen.com) or upon request.

**Product Specifications**

Specificity	Recognizes human and mouse ZBP1.
Species Crossreactivity	Human / Mouse
Application	<b>Immunocytochemistry:</b> (1:500) (see reference 1) <b>Immunoprecipitation:</b> (1:200) <b>Western Blot:</b> (1:1'000)
Purity	≥95% (SDS-PAGE)
Formulation	Liquid. In PBS containing 10% glycerol and 0.02% sodium azide.
Concentration	1mg/ml
Isotype Negative Control	<a href="#">Mouse IgG2a Isotype Control</a>

**Product Description**

ZBP1 is an interferon inducible protein that binds to cytoplasmic DNA and plays a role in host defense against tumors and pathogens. ZBP1 is highly expressed in lymphatic tissues including lymph node, leukocytes, tonsil, bone marrow and spleen. ZBP1 is an innate immune sensor of Influenza A virus (IAV). ZBP1 regulates NLRP3 (nucleotide and oligomerization domain, leucine-rich repeat-containing protein family, pyrin domain containing 3) inflammasome activation as well as induction of different types of cell death (apoptosis, necroptosis and pyroptosis) during IAV infection.

**WARNING:** Intended for research use only. This product is not intended or approved for human, diagnostics, therapeutic or veterinary use. Use of this product for human or animal testing is extremely hazardous and may result in disease, severe injury, or death. **MATERIAL SAFETY DATA:** Review the complete Material Safety Data Sheet before use.

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**Product Specific References**

1. ZBP1/DAI is an innate sensor of influenza virus triggering the NLRP3 inflammasome and programmed cell death pathways: T. Kuriakose, et al.; *Sci. Immunol.* **1**, aag2045 (2016)
2. DAI senses Influenza A virus genomic RNA and activates RIPK3-dependent cell death: R.J. Thapa, et al.; *Cell Host & Microbe* **20**, 674 (2016)
3. RIPK1 counteracts ZBP1-mediated necroptosis to inhibit inflammation: J. Lin, et al.; *Nature* **540**, 124 (2016)
4. RIPK1 inhibits ZBP1-driven necroptosis during development: K. Newton, et al.; *Nature* **540**, 129 (2016)
5. IRF1 Is a Transcriptional Regulator of ZBP1 Promoting NLRP3 Inflammasome Activation and Cell Death during Influenza Virus Infection: T. Kuriakose, et al.; *J. Immunol.* **200**, 1489 (2018)
6. Species-independent contribution of ZBP1/DAI/DLM-1-triggered necroptosis in host defense against HSV1: H. Guo, et al.; *Cell Death Dis.* **9**, 816 (2018) [KO Validation]
7. Constitutive interferon signaling maintains critical threshold of MLKL expression to license necroptosis: J. Sarhan, et al.; *Cell Death Diff.* **26**, 332 (2019)
8. ZBP1/DAI Drives RIPK3-Mediated Cell Death Induced by IFNs in the Absence of RIPK1: J.P. Ingram, et al.; *J. Immunol.* **203**, 1348 (2019)
9. IRF3 and IRF7 contribute to diesel exhaust particles-induced pulmonary inflammation by mediating mTORC1 activation and restraining autophagy in mice: C. Wang, et al.; *Eur. J. Immunol.* (**Epub ahead of print**) (2020)
10. Influenza Virus Z-RNAs Induce ZBP1-Mediated Necroptosis: T. Zhang, et al.; *Cell* **180**, 1115 (2020)
11. Z-nucleic-acid sensing triggers ZBP1-dependent necroptosis and inflammation: H. Jiao, et al.; *Nature* **580**, 391 (2020)
12. Caspase-6 Is a Key Regulator of Innate Immunity, Inflammasome Activation, and Host Defense: M. Zheng, et al.; *Cell* (**Epub ahead of print**) (2020)

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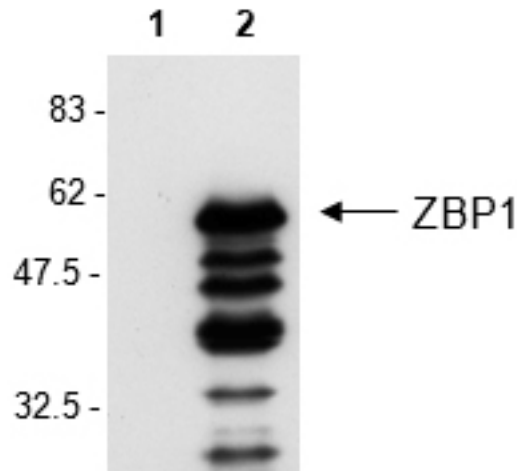
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**Figure 1:** Western Blot analysis of mouse ZBP1 in L929 cells by using anti-ZBP1, mAb (Zippy-1) (Prod. No. AG-20B-0010).

Cell extracts from L929 cell either unstimulated (lane 1) or stimulated for 24h with poly(dA.dT) poly(dT.dA) at 3µg/ml (lane 2) were resolved by SDS-PAGE under reducing conditions, transferred to nitrocellulose and incubated with the anti-ZBP1, mAb (Zippy-1) at a 1:1000 dilution for 1 hour. Proteins were visualized using a peroxidase-conjugated polyclonal antibody to mouse IgG and a chemiluminescence detection system. The multiple bands represent isoforms or degradation products of ZBP1 since they are down regulated upon ZBP1 siRNA treatment (data not shown).

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