

**Anti-AIM2 (N-terminal region) Antibody**  
Catalog # AN1623**Specification****Anti-AIM2 (N-terminal region) Antibody - Product Information**

|                   |                          |
|-------------------|--------------------------|
| Primary Accession | <a href="#">O14862</a>   |
| Reactivity        | <b>Bovine</b>            |
| Host              | <b>Rabbit</b>            |
| Clonality         | <b>Rabbit Polyclonal</b> |
| Isotype           | <b>IgG</b>               |
| Calculated MW     | <b>38954</b>             |

**Anti-AIM2 (N-terminal region) Antibody - Additional Information**

|                    |             |
|--------------------|-------------|
| Gene ID            | <b>9447</b> |
| <b>Other Names</b> |             |
| PYHIN4, AIM2       |             |

**Target/Specificity**

Host- and pathogen-associated cytoplasmic double-stranded DNA triggers the activation of a NALP3-independent inflammasome, which activates caspase-1, leading to maturation of pro-interleukin-1beta and inflammation. Several studies have isolated AIM2 (absent in melanoma 2) as a candidate cytoplasmic-DNA-sensing protein that contains an N-terminal pyrin domain and C-terminal oligonucleotide binding domain. A screen for transcripts induced by interferon-beta identified AIM2 gene expression. AIM2 protein bound double-stranded DNA, recruited the inflammasome adaptor ASC, and localized to ASC containing speckles. AIM2 and ASC form a pyroptosome, which induces pyroptotic cell death mediated by caspase-1. RNA-mediated suppression of AIM2 expression impairs DNA-induced maturation of interleukin-1beta in THP-1 human monocytic cells, as well as abrogates caspase-1 activation in response to cytoplasmic double-stranded DNA and the double-stranded DNA vaccinia virus. Thus, AIM2 is a DNA-sensing protein for the activation of the caspase-1 inflammasome.

**Format**

Antigen Affinity Purified

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Anti-AIM2 (N-terminal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

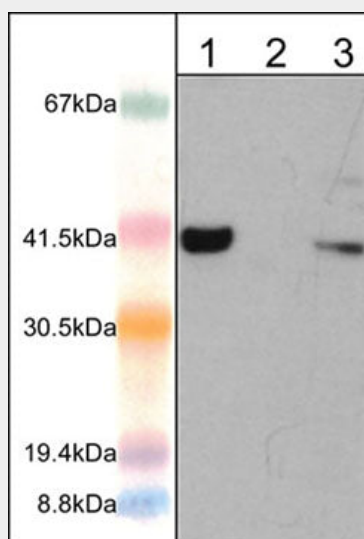
Blue Ice

**Anti-AIM2 (N-terminal region) Antibody - Protocols**

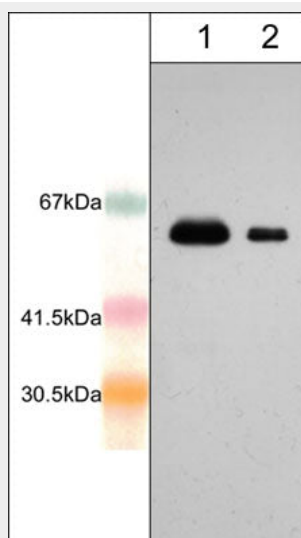
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Anti-AIM2 (N-terminal region) Antibody - Images**



Western blot analysis of human Jurkat cells (lane 1), mouse macrophages untreated (lane 2) and treated (lane 3) with IFN $\gamma$  (10 ng/ml) and LPS (1  $\mu$ g/ml) for 12 hr (20  $\mu$ g/lane). The blot was probed with rabbit polyclonal anti-AIM2 (N-terminal region) antibody at 1:1000.



Western blot analysis of human recombinant AIM2 full length sequence with N-terminal GST tag (62 kDa). The blot was probed with rabbit polyclonal anti-AIM2 (N-terminal region) antibody at 1:250 (lane 1) and 1:1000 (lane 2).

**Anti-AIM2 (N-terminal region) Antibody - Background**

Host- and pathogen-associated cytoplasmic double-stranded DNA triggers the activation of a NALP3-independent inflammasome, which activates caspase-1, leading to maturation of pro-interleukin-1beta and inflammation. Several studies have isolated AIM2 (absent in melanoma 2) as a candidate cytoplasmic-DNA-sensing protein that contains an N-terminal pyrin domain and C-terminal oligonucleotide binding domain. A screen for transcripts induced by interferon-beta identified AIM2 gene expression. AIM2 protein bound double-stranded DNA, recruited the inflammasome adaptor ASC, and localized to ASC containing speckles. AIM2 and ASC form a pyroptosome, which induces pyroptotic cell death mediated by caspase-1. RNA-mediated suppression of AIM2 expression impairs DNA-induced maturation of interleukin-1beta in THP-1 human monocytic cells, as well as abrogates caspase-1 activation in response to cytoplasmic double-stranded DNA and the double-stranded DNA vaccinia virus. Thus, AIM2 is a DNA-sensing protein for the activation of the caspase-1 inflammasome.