10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-AIM2 (N-terminal region) Antibody
Catalog # AN1623

Specification

Anti-AIM2 (N-terminal region) Antibody - Product Information

Primary Accession	O14862
Reactivity	**Bovine**
Host	**Rabbit**
Clonality	**Rabbit Polyclonal**
Isotype	**IgG**
Calculated MW	**38954**

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

Gene ID	**9447**

Other Names
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

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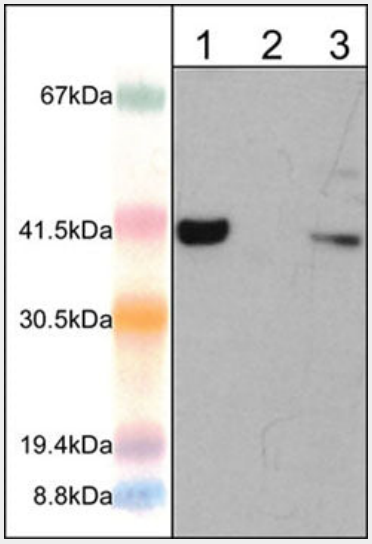
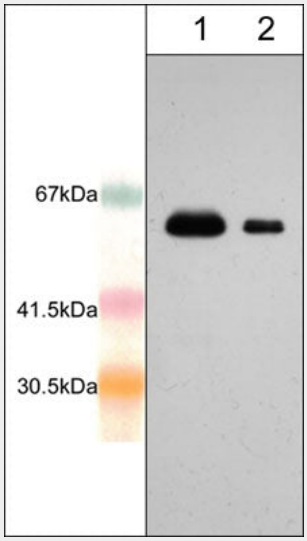
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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 IFNγ (10 ng/ml) and LPS (1 µg/ml) for 12 hr (20 µg/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.