

Anti-AIM2 (N-terminal region) Antibody

Catalog # AN1623

Product Information

Application	WB
Primary Accession	O14862
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	38954

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.
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Dilution	WB~~1:1000
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

Background

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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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.