10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Anti-Asc (Tyr-144), Phosphospecific Antibody

Catalog # AN1644

Specification

Anti-Asc (Tyr-144), Phosphospecific Antibody - Product Information

Application	**WB**
Primary Accession	Q9EPB4
Reactivity	**Bovine**
Host	**Rabbit**
Clonality	**Rabbit Polyclonal**
Isotype	**IgG**
Calculated MW	**21459**

Anti-Asc (Tyr-144), Phosphospecific Antibody - Additional Information

Gene ID	**66824**

Other Names
Caspase, PYCARD, AIM, ASC, CARD5, TMS1

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. Asc can be phosphorylated at Tyr-144 in a Syk and JNK-dependent manner. This phosphorylation is critical for Asc speck formation and Caspase-1 activation.

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-Asc (Tyr-144), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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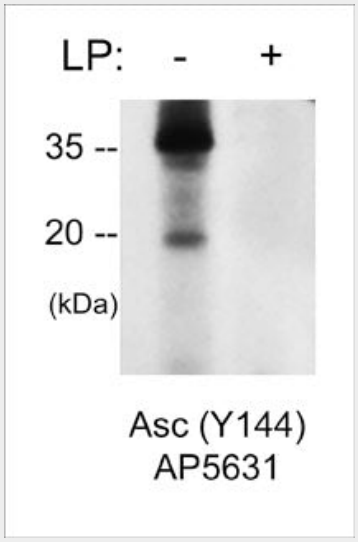
Anti-Asc (Tyr-144), Phosphospecific Antibody - Protocols

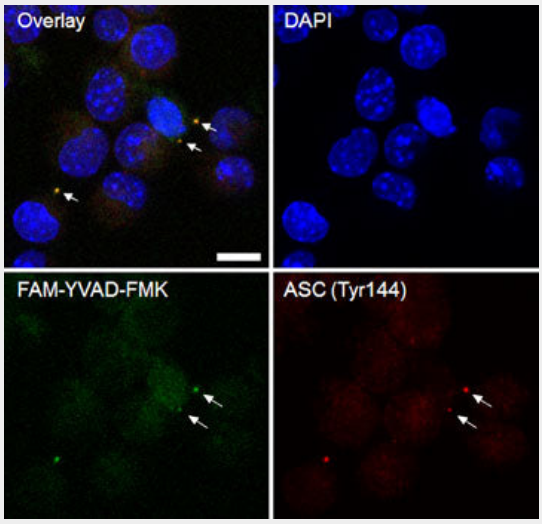
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Asc (Tyr-144), Phosphospecific Antibody - Images



Western blot analysis of mouse macrophage J774A.1 cells stimulated with pervanadate (1 mM for 30 min.), then untreated (-) or treated (+) with alkaline phosphatase. The blot was probed with rabbit polyclonal anti-Asc (Tyr-144) phospho-specific antibody (AP5631) at 1:500.



Immunocytochemical labeling of Asc (Tyr-144) in inflammasomes. Paraformaldehyde fixed J774 cells were primed with LPS and treated with nigericin. Cells were co-labeled with DAPI, a caspase-1 inhibitor (FAM-YVAD-FMK), and anti-Asc (Tyr-144) phosphospecific antibody detected

with AlexaFluor 568 secondary. (Image provided by Jordan Yaron, Center for Biosignatures Discovery Automation, Arizona State University)

Anti-Asc (Tyr-144), Phosphospecific 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. Asc can be phosphorylated at Tyr-144 in a Syk and JNK-dependent manner. This phosphorylation is critical for Asc speck formation and Caspase-1 activation.