

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 InformationGene 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-1 β 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- β 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

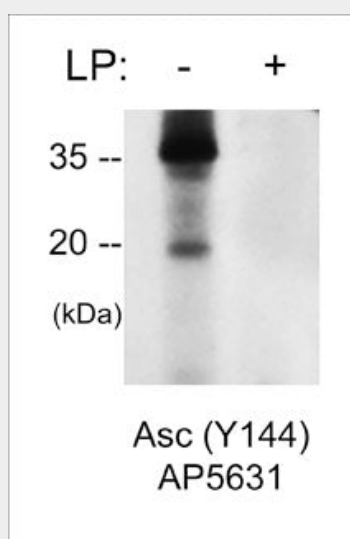
Blue Ice

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

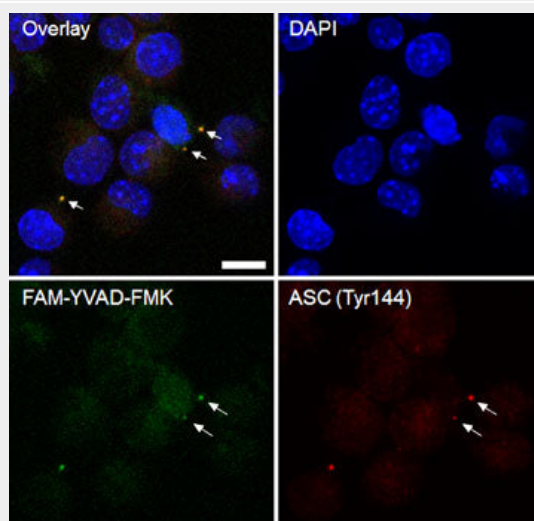
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [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-1 β 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- β 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.