



ASC Polyclonal Antibody

Catalog No	YP-Ab-00302
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	PYCARD
Protein Name	Apoptosis-associated speck-like protein containing a CARD
Immunogen	The antiserum was produced against synthesized peptide derived from human ASC. AA range:10-59
Specificity	ASC Polyclonal Antibody detects endogenous levels of ASC protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/40000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	PYCARD; ASC; CARD5; TMS1; Apoptosis-associated speck-like protein containing a CARD; hASC; Caspase recruitment domain-containing protein 5; PYD and CARD domain-containing protein; Target of methylation-induced silencing 1
Observed Band	21kD
Cell Pathway	Cytoplasm . Inflammasome . Endoplasmic reticulum . Mitochondrion . Nucleus . Upstream of caspase activation, a redistribution from the cytoplasm to the aggregates occurs. These appear as hollow, perinuclear spherical, ball-like structures (PubMed:11103777, PubMed:12191486, PubMed:15030775). Upon NLRP3 inflammasome activation redistributes to the perinuclear space localizing to endoplasmic reticulum and mitochondria (PubMed:12191486, PubMed:15030775). Localized primarily to the nucleus in resting monocytes/macrophages and rapidly redistributed to the cytoplasm upon pathogen infection (PubMed:19234215). Localized to large cytoplasmic aggregate appearing as a speck containing AIM2, PYCARD, CASP8 and bacterial DNA after infection with Francisella tularensis (By similarity). .; Golgi apparatus
Tissue Specificity	Widely expressed at low levels. Detected in peripheral blood leukocytes, lung, small intestine, spleen, thymus, colon and at lower levels in placenta, liver and kidney. Very low expression in skeletal muscle, heart and brain. Expressed in lung



epithelial cells (at protein level) (PubMed:23229815). Detected in the leukemia cell lines HL-60 and U-937, but not in Jurkat T-cell lymphoma and Daudi Burkitt's lymphoma. Detected in the melanoma cell line WM35, but not in WM793. Not detected in HeLa cervical carcinoma cells and MOLT-4 lymphocytic leukemia cells.

Function

domain:Interacts with CIAS1/PYPAF1 and PYDC1 via the DAPIN domain.,function:Promotes caspase-mediated apoptosis. This proapoptotic activity is mediated predominantly through the activation of caspase 9. May be a component of the inflammasome, a protein complex which also includes NALP2, CARD8 and CASP1 and whose function would be the activation of proinflammatory caspases.,miscellaneous:In breast tumorigenesis, methylation-mediated silencing may affect genes and proteins that act as positive mediators of cell death.,PTM:Phosphorylated.,similarity:Contains 1 CARD domain.,similarity:Contains 1 DAPIN domain.,subcellular location:Upstream of caspase activation, a redistribution from the cytoplasm to the aggregates occurs. These appear as hollow, perinuclear spherical, ball-like structures.,subunit:Forms complexes with other DAPIN domain-containing proteins. Interacts with CIAS1/PYPAF1 and PY

Background

This gene encodes an adaptor protein that is composed of two protein-protein interaction domains: a N-terminal PYRIN-PAAD-DAPIN domain (PYD) and a C-terminal caspase-recruitment domain (CARD). The PYD and CARD domains are members of the six-helix bundle death domain-fold superfamily that mediates assembly of large signaling complexes in the inflammatory and apoptotic signaling pathways via the activation of caspase. In normal cells, this protein is localized to the cytoplasm; however, in cells undergoing apoptosis, it forms ball-like aggregates near the nuclear periphery. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

matters needing attention

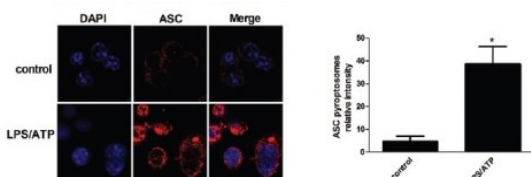
Avoid repeated freezing and thawing!

Usage suggestions

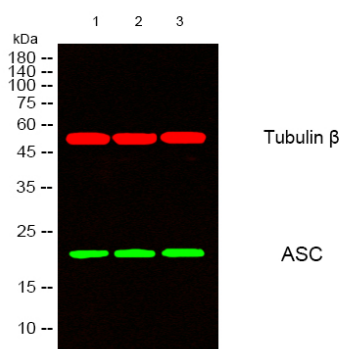
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



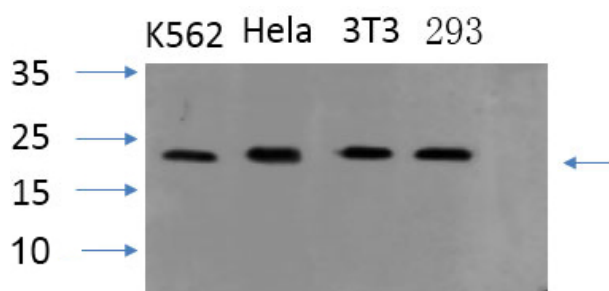
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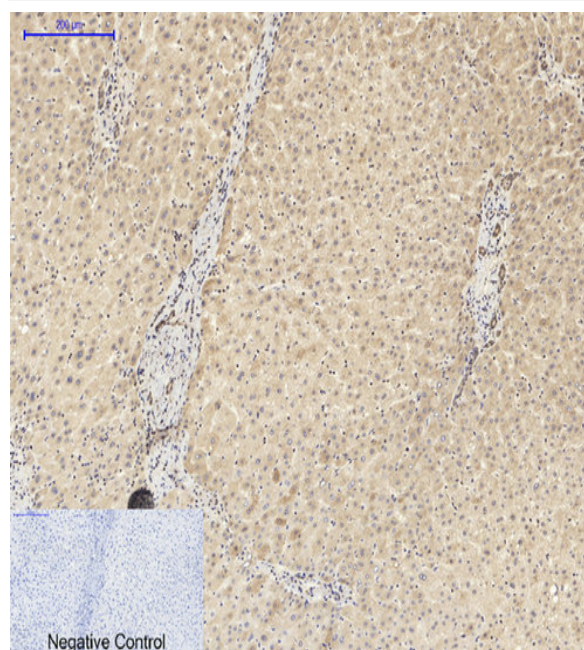
Wu, Dong-Dong, et al. "Inhibition of alveolar macrophage pyroptosis reduces lipopolysaccharide-induced acute lung injury in mice." Chinese medical journal 128.19 (2015): 2638.



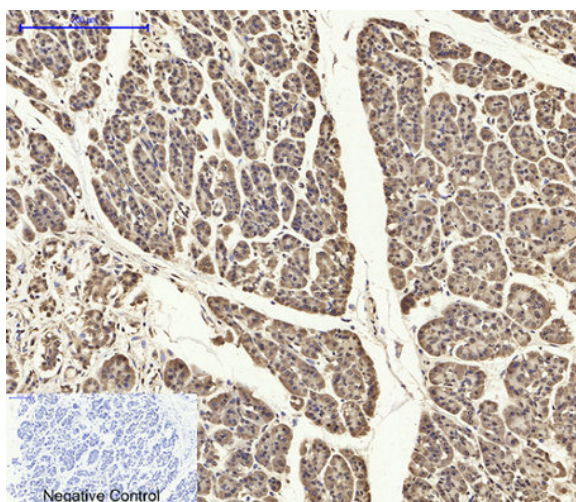
Western blot analysis of lysates from 1) K562, 2) HeLa, 3) 3T3 cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody (cat:RS23920) was diluted at 1:10000, 37° 1hour. (Red) Tubulin β Monoclonal Antibody (5G3) (cat:YM3030) antibody was diluted at 1:5000 as loading control, 4° over night, secondary antibody (cat:RS23710) was diluted at 1:10000, 37° 1hour.



Western Blot analysis of various cells using primary antibody diluted at 1:1000 (4°C overnight). Secondary antibody: Goat Anti-rabbit IgG IRDye 800 (diluted at 1:5000, 25°C, 1 hour). Cell lysate was extracted by Minute™ Plasma Membrane Protein Isolation and Cell Fractionation Kit (SM-005, Inventbiotech, MN, USA).



Immunohistochemical analysis of paraffin-embedded Human-liver tissue. 1, ASC Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.



Immunohistochemical analysis of paraffin-embedded Human-stomach-cancer tissue. 1, ASC Polyclonal Antibody was diluted at 1:200 (4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval (>98°C, 20min). 3, Secondary antibody was diluted at 1:200 (room temperature, 30min). Negative control was used by secondary antibody only.