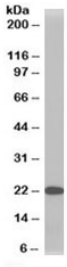
TMS1 / PYCARD Antibody (R35605)

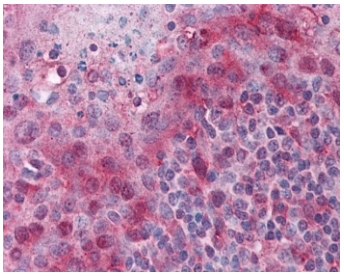
Catalog No.	Formulation	Size
R35605-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

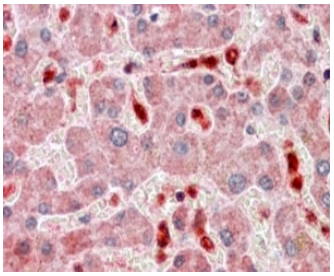
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	29108
Localization	Nuclear, cytoplasmic
Applications	Western blot: 1-3ug/ml ELISA (peptide) LOD: 1:32000
Limitations	This TMS1 / PYCARD antibody is available for research use only.



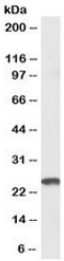
TMS1 / PYCARD Antibody WB. Western blot analysis of HeLa cell lysate using TMS1 / PYCARD Antibody at 1 ug/ml. A distinct immunoreactive band is detected at approximately 22 kDa, consistent with the predicted molecular weight of PYCARD (TMS1/ASC), supporting specific detection of the endogenous inflammasome adaptor protein in human HeLa cells.



TMS1 / PYCARD Antibody Human Tonsil IHC. Immunohistochemical staining of FFPE human tonsil using TMS1 Antibody / PYCARD at 2.5 ug/ml. PYCARD expression is detected predominantly within the cytoplasm of lymphoid cells, consistent with its role as an inflammasome adaptor protein involved in innate immune signaling, inflammatory cytokine maturation, and pyroptotic cell death. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer prior to AP-based immunostaining.



TMS1 Antibody / PYCARD Human Liver IHC. Immunohistochemical staining of FFPE human liver using TMS1 Antibody / PYCARD at 2.5 ug/ml. PYCARD expression is observed predominantly within the cytoplasm of hepatocytes, consistent with its function as an inflammasome adaptor protein involved in innate immune signaling, inflammatory responses, and regulation of programmed cell death. Heat-induced epitope retrieval was performed by steaming sections in pH 6 citrate buffer prior to AP-based immunostaining.



TMS1 Antibody / PYCARD WB. Western blot analysis of U937 cell lysate using TMS1 Antibody / PYCARD at 2 ug/ml. A distinct immunoreactive band is detected at approximately 22 kDa, consistent with the predicted molecular weight of PYCARD (TMS1/ASC), supporting specific detection of the endogenous inflammasome adaptor protein in human U937 cells.

Description

TMS1 / PYCARD Antibody recognizes target of methylation-induced silencing 1 (TMS1), also known as PYCARD or apoptosis-associated speck-like protein containing a CARD (ASC), a bipartite adaptor protein that serves as a central organizer of inflammasome signaling. TMS1/PYCARD contains both a pyrin domain and a caspase recruitment domain, allowing it to bridge activated pattern recognition receptors with inflammatory caspases during innate immune responses. Through this adaptor function, TMS1/PYCARD promotes assembly of multiprotein inflammasome complexes that initiate inflammatory cytokine maturation and pyroptotic cell death. TMS1 Antibody / PYCARD is widely used to investigate inflammasome activation, innate immunity, and inflammatory disease mechanisms.

PYCARD functions downstream of several innate immune receptors, including NLRP3, AIM2, and additional inflammasome-forming sensors. Following detection of microbial pathogens, cellular stress, or tissue damage, TMS1/PYCARD rapidly oligomerizes into characteristic ASC specks that recruit and activate caspase 1. Activated caspase 1 processes pro-interleukin 1 beta and pro-interleukin 18 into their biologically active forms while triggering pyroptosis, an inflammatory form of programmed cell death that eliminates infected or damaged cells. These activities position TMS1/PYCARD as a pivotal regulator of host defense and inflammatory signaling.

Beyond antimicrobial immunity, TMS1/PYCARD contributes to sterile inflammation, tissue repair, neuroinflammation, cardiovascular disease, metabolic disorders, autoimmune disease, and cancer. The protein was originally identified as a gene frequently silenced by promoter methylation in certain cancers, leading to the historical designation TMS1. Today, it is recognized primarily for its essential role in inflammasome biology, while continuing to be investigated as a biomarker and potential therapeutic target in inflammatory and neoplastic diseases. Ongoing research continues to define how TMS1/PYCARD regulates immune homeostasis across diverse physiological and pathological settings.

NSJ Bioreagents' TMS1 Antibody / PYCARD provides researchers with a dependable reagent for immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and additional immunodetection applications. Suitable for studies of inflammasome assembly, ASC speck formation, innate immune signaling, and pyroptosis, TMS1 / PYCARD Antibody enables reliable detection of endogenous PYCARD expression in both normal and diseased tissues while supporting advanced research in immunology, inflammation, infectious disease, and oncology.

Learn more about PYCARD biology, inflammasome signaling, and additional validated products on our PYCARD Antibody page.

Application Notes

Optimal dilution of the TMS1 / PYCARD antibody should be determined by the researcher.

Immunogen

Amino acids RESQSYLVEDLERS were used as the immunogen for this TMS1 / PYCARD antibody.

Storage

Aliquot and store the TMS1 / PYCARD antibody at -20oC.

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