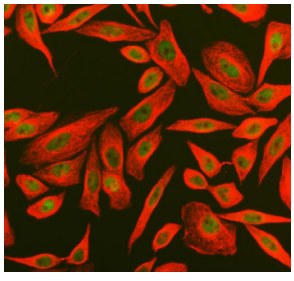
PYHIN1 Antibody / Pyrin and HIN domain-containing protein 1 (FY12755)

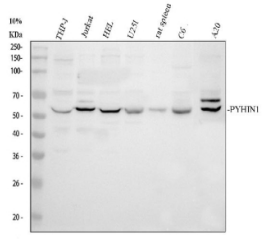
Catalog No.	Formulation	Size
FY12755	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q6K0P9
Localization	Nuclear
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunocytochemistry: 5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This PYHIN1 antibody is available for research use only.



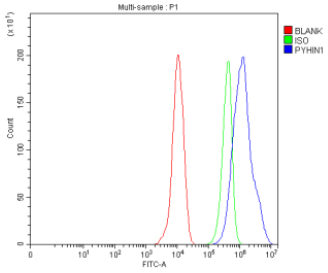
Immunofluorescent staining of PYHIN1 using anti-PYHIN1 antibody (green) and Alpha Tubulin mAb (red). PYHIN1 was detected in an immunocytochemical section of SiHa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum.



Western blot analysis of PYHIN1 using anti-PYHIN1 antibody. Lane 1: human THP-1 whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human U251 whole cell lysates, Lane 5: rat spleen tissue lysates, Lane 6: rat C6 whole cell lysates, Lane 7: mouse A20 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PYHIN1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A predominant band is detected at ~55 kDa as expected. In A20 and Jurkat lysates the signal appears as a doublet, consistent with modified or isoform variants of PYHIN1 commonly observed for this protein family.



Immunohistochemical staining of PYHIN1 using anti-PYHIN1 antibody. PYHIN1 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PYHIN1 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Flow Cytometry analysis of ThP-1 cells using anti-PYHIN1 antibody. Overlay histogram showing ThP-1 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PYHIN1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

PYHIN1 antibody detects Pyrin and HIN domain-containing protein 1, a nuclear and cytoplasmic signaling protein involved in immune regulation, cell cycle control, and apoptosis. Encoded by the PYHIN1 gene on chromosome 1q23.1, this protein belongs to the HIN-200 (hematopoietic interferon-inducible nuclear) family of interferon-inducible proteins, which are characterized by an N-terminal pyrin domain and a C-terminal HIN-200 DNA-binding domain. These domains mediate protein-protein and protein-DNA interactions that regulate immune transcription and DNA damage response pathways.

PYHIN1 functions primarily as a transcriptional regulator and sensor of foreign or damaged DNA. It can bind double-stranded DNA through its HIN domain and modulate transcription of interferon-stimulated genes. In the nucleus, PYHIN1 interacts with transcriptional co-regulators to influence gene expression linked to antiviral defense and tumor suppression. In the cytoplasm, it contributes to inflammasome regulation and apoptotic signaling. Expression of PYHIN1 is strongly induced by type I interferons and inflammatory cytokines, linking it to host defense and immune surveillance.

The PYHIN1 antibody is used in immunology, oncology, and molecular biology to investigate DNA sensing, innate immune activation, and cell cycle regulation. Western blot analysis identifies a 74 kilodalton band corresponding to PYHIN1, while immunofluorescence shows both nuclear and cytoplasmic staining depending on cell type and activation state. Because PYHIN1 acts at the interface of DNA sensing and transcriptional control, the antibody is a valuable tool for studying interferon signaling and genomic stability mechanisms.

Beyond innate immunity, PYHIN1 plays roles in tumor suppression and apoptosis. Its expression inhibits cell proliferation by interfering with E2F transcriptional activity and promoting p53-dependent growth arrest. Loss of PYHIN1 has been reported in several cancers, suggesting that it functions as a tumor suppressor gene. The PYHIN1 antibody enables researchers to explore these functions and track its expression across different physiological and disease contexts. NSJ Bioreagents provides this antibody validated for its applications, ensuring specific and reproducible detection across model systems.

Application Notes

Optimal dilution of the PYHIN1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PYHIN1 recombinant protein (Position: K86-H488) was used as the immunogen for the PYHIN1 antibody.

Storage

After reconstitution, the PYHIN1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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