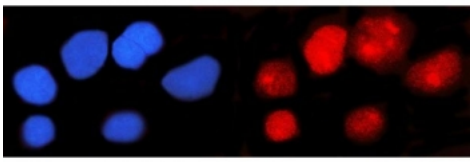
IFI16 Antibody 2I3D7 / PYHIN2 Antibody [clone 2I3D7] (RQ7639)

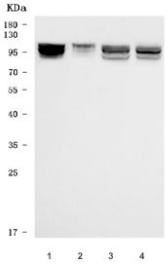
Catalog No.	Formulation	Size
RQ7639	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

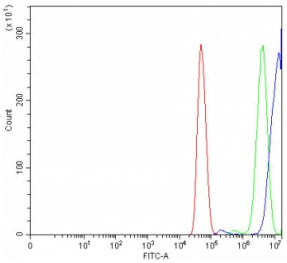
Species Reactivity	Human
Format	Antigen affinity purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b
Clone Name	2I3D7
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q16666
Localization	Nuclear, cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This IFI16 Antibody 2I3D7 / PYHIN2 Antibody is available for research use only.



IFI16 Antibody 2I3D7 by IF. Immunofluorescence staining of FFPE human U-251 cells using mouse monoclonal IFI16 antibody, clone 2I3D7. PYHIN2 immunoreactivity is detected predominantly in cell nuclei (red), with DAPI counterstaining (blue) identifying nuclear DNA. Heat-induced epitope retrieval was performed by steaming in citrate buffer (pH 6.0) for 20 minutes. The overlapping nuclear staining patterns are consistent with the expected predominantly nuclear localization of IFI16.



IFI16 Antibody 2I3D7 by WB. Western blot analysis of human Daudi (lane 1), Raji (lane 2), MOLT4 (lane 3), and U-87 MG (lane 4) cell lysates using mouse monoclonal IFI16 antibody, clone 2I3D7. The antibody detects a prominent band at approximately 85-95 kDa across all four samples, consistent with the expected molecular weight range of IFI16 isoforms. The Daudi sample produces the strongest signal, while additional faint bands are visible in some lanes. These results demonstrate recognition of PYHIN2 in multiple human cell lines.



IFI16 Antibody 2I3D7 by FACS. Flow cytometry analysis of human U-251 cells using mouse monoclonal IFI16 antibody, clone 2I3D7, at 1 ug per million cells. The PYHIN2 antibody-stained population (blue) exhibits a rightward fluorescence shift relative to the isotype control (green) and unstained cells (red). Cells were blocked with goat serum before antibody incubation. The fluorescence separation demonstrates detectable IFI16-associated staining under the tested conditions.

Description

IFI16 Antibody 2I3D7 recognizes interferon gamma-inducible protein 16 (IFI16), a member of the pyrin and HIN domain-containing (PYHIN) protein family involved in intracellular DNA sensing, innate immune signaling, and transcriptional regulation. Historically referred to as PYHIN2, IFI16 participates in cellular responses to foreign DNA, viral infection, and genomic stress. Its ability to interact with nucleic acids and regulatory proteins places it at the intersection of antiviral defense, inflammatory signaling, and cellular growth control.

IFI16 contains an N-terminal pyrin domain and two C-terminal HIN domains. The HIN domains interact with double-stranded DNA through contacts with the DNA backbone, enabling recognition of DNA without strict sequence specificity. The pyrin domain supports protein-protein interactions that connect DNA recognition to downstream signaling pathways. This domain architecture allows PYHIN2 to function as both a nucleic acid sensor and a regulatory component of multiprotein signaling complexes.

Although IFI16 is predominantly localized to the nucleus, its distribution and signaling activities can change in response to cellular stress or infection. During certain viral infections, IFI16 recognizes foreign DNA and contributes to innate immune activation. Interactions involving the STING pathway can promote type I interferon signaling, while additional pathways connect IFI16 to inflammasome activation and inflammatory cytokine processing. These functions are particularly relevant to research involving herpesviruses and host responses to intracellular pathogens.

Beyond pathogen recognition, IFI16 contributes to the regulation of cell proliferation, differentiation, and senescence. It has been associated with p53- and retinoblastoma-related signaling pathways that influence cell-cycle progression and growth arrest. Increased IFI16 expression has also been linked to cellular senescence, connecting DNA surveillance with changes in transcriptional activity and inflammatory mediator production. These regulatory functions demonstrate that PYHIN2 participates in biological processes extending beyond direct antiviral defense.

IFI16 expression is responsive to interferon signaling, including interferon gamma, and may increase during immune activation. Altered expression or activity has been investigated in autoimmune disorders, chronic inflammatory conditions, and cancer. IFI16 is also recognized as an autoantigen in certain autoimmune diseases, making it relevant to studies of immune tolerance and the relationship between nuclear proteins and inflammatory responses.

An IFI16 Antibody 2I3D7 from NSJ Bioreagents provides a monoclonal research reagent for investigating PYHIN2 and its roles in intracellular DNA recognition, innate immunity, transcriptional regulation, and cellular stress responses.

For an alternative IFI16 antibody with rabbit polyclonal recognition and additional immunohistochemistry validation, see our IFI16 Antibody.

Application Notes

Optimal dilution of the IFI16 Antibody 2I3D7 / PYHIN2 Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids E183-K743) was used as the immunogen for the IFI16 Antibody

2I3D7.

Storage

After reconstitution, the IFI16 Antibody 2I3D7 can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Gamma-interferon-inducible protein 16 antibody, Interferon gamma-inducible protein 16 antibody, PYHIN2 antibody, Interferon-inducible myeloid differentiation transcriptional activator antibody, IFI-16 antibody, HIN-200 family protein antibody

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