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Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7)

Catalog # ABO16612

Specification

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Product Information

Application	**WB, IF, ICC, FC**
Primary Accession	Q16666
Host	**Mouse**
Isotype	**IgG2b**
Reactivity	**Human**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) . Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Additional Information

Gene ID 3428

Other Names
Gamma-interferon-inducible protein 16, Ifi-16, Interferon-inducible myeloid differentiation transcriptional activator, IFI16 {ECO:0000303|PubMed:1526658, ECO:0000312|HGNC:HGNC:5395}

Calculated MW
98 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human
 Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human IFI16 recombinant protein (Position: E183-K743).

Purification
Immunogen affinity purified.

Storage	**At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.**

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Protein Information

Name IFI16 {ECO:0000303|PubMed:1526658, ECO:0000312|HGNC:HGNC:5395}

Function
Binds double-stranded DNA. Binds preferentially to supercoiled DNA and cruciform DNA structures. Seems to be involved in transcriptional regulation. May function as a transcriptional repressor. Could have a role in the regulation of hematopoietic differentiation through activation of unknown target genes. Controls cellular proliferation by modulating the functions of cell cycle regulatory factors including p53/TP53 and the retinoblastoma protein. May be involved in TP53-mediated transcriptional activation by enhancing TP53 sequence-specific DNA binding and modulating TP53 phosphorylation status. Seems to be involved in energy-level-dependent activation of the ATM/AMPK/TP53 pathway coupled to regulation of autophagy. May be involved in regulation of TP53-mediated cell death also involving BRCA1. May be involved in the senescence of prostate epithelial cells. Involved in innate immune response by recognizing viral dsDNA in the cytosol and probably in the nucleus. After binding to viral DNA in the cytoplasm recruits TMEM173/STING and mediates the induction of IFN-beta. Has anti-inflammatory activity and inhibits the activation of the AIM2 inflammasome, probably via association with AIM2. Proposed to bind viral DNA in the nucleus, such as of Kaposi's sarcoma-associated herpesvirus, and to induce the formation of nuclear caspase-1-activating inflammasome formation via association with PYCARD. Inhibits replication of herpesviruses such as human cytomegalovirus (HCMV) probably by interfering with promoter recruitment of members of the Sp1 family of transcription factors. Necessary to activate the IRF3 signaling cascade during human herpes simplex virus 1 (HHV-1) infection and promotes the assembly of heterochromatin on herpesviral DNA and inhibition of viral immediate- early gene expression and replication. Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer.

Cellular Location
Nucleus. Cytoplasm. Note=Cellular distribution is dependent on the acetylation status of the multipartite nuclear localization signal (NLS); NLS acetylation promotes cytoplasmic localization Localizes in the nucleus during human herpes simplex virus 1 (HHV-1) infection.

Tissue Location
Expressed in peripheral blood leukocytes, fibroblasts and lymphoid cells. Present in myeloid precursors (CD34+) and throughout monocyte development, but its expression is down- regulated in erythroid and polymorphonuclear precursor cells. Present in prostate, ovary and breast (at protein level)

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Images

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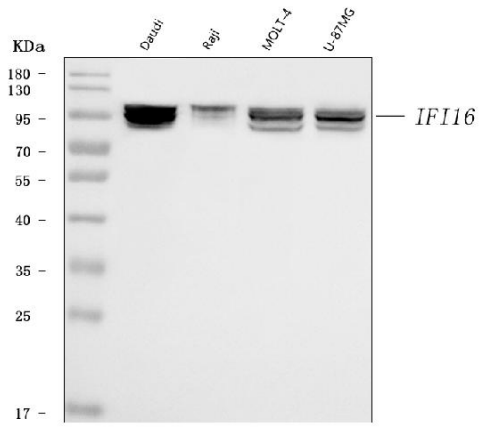

Figure 1. Western blot analysis of IFI16 using anti-IFI16 antibody (M00848).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Daudi whole cell lysates,
Lane 2: human Raji whole cell lysates,
Lane 3: human MOLT-4 whole cell lysates,
Lane 4: human U-87 MG 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 mouse anti-IFI16 antigen affinity purified monoclonal antibody (Catalog # M00848) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for IFI16 at approximately 98 kDa. The expected band size for IFI16 is at 88 kDa.

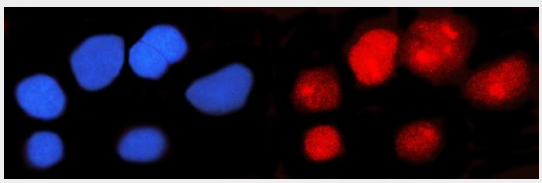

Figure 2. IF analysis of IFI16 using anti-IFI16 antibody (M00848).
IFI16 was detected in an immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-IFI16 Antibody (M00848) overnight at 4°C. DyLight®550 Conjugated Goat Anti-Mouse IgG (BA1133) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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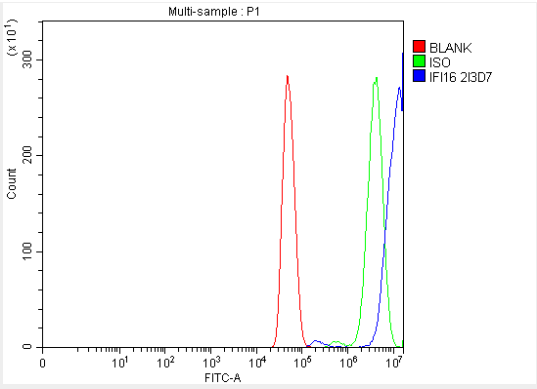

Figure 3. Flow Cytometry analysis of U251 cells using anti-IFI16 antibody (M00848).
Overlay histogram showing U251 cells stained with M00848 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-IFI16 Antibody (M00848, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-IFI16 Antibody Picoband™ (monoclonal, 2I3D7) - Background

Gamma-interferon-inducible protein Ifi-16 (Ifi-16) also known as interferon-inducible myeloid differentiation transcriptional activator is a protein that in humans is encoded by the IFI16 gene. This gene encodes a member of the HIN-200 (hematopoietic interferon-inducible nuclear antigens with 200 amino acid repeats) family of cytokines. The encoded protein contains domains involved in DNA binding, transcriptional regulation, and protein-protein interactions. The protein localizes to the nucleoplasm and nucleoli, and interacts with p53 and retinoblastoma-1. It modulates p53 function, and inhibits cell growth in the Ras/Raf signaling pathway. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.