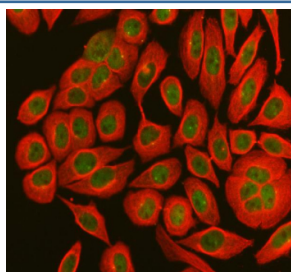


MX1 Antibody / MxA / Myxovirus resistance protein 1 (FY13028)

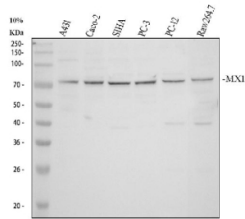
Catalog No.	Formulation	Size
FY13028	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

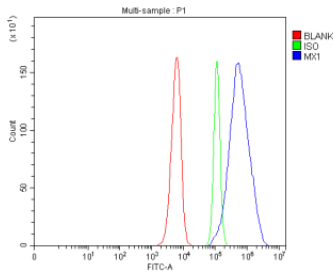
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	P20591
Localization	Cytoplasm, nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This MX1 antibody is available for research use only.



Immunofluorescent staining of using anti-MX1 antibody (green) and anti-Tubulin Alpha antibody (red). MX1 was detected in immunocytochemical section of SiHa cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-MX1 antibody and mouse anti-Tubulin Alpha antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of MX1 using anti-MX1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human whole cell lysates, Lane 2: human Caco-2 whole cell lysates, Lane 3: human SiHa whole cell lysates, Lane 4: human PC-3 whole cell lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse RAW264.7 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-MX1 antibody at 0.5 ug/ml overnight at 4°C, 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 an ECL Plus Western Blotting Substrate. A specific band was detected for MX1 at approximately 76 kDa. The expected molecular weight of MX1 is ~76 kDa.



Flow Cytometry analysis of SiHa cells using anti-MX1 antibody. Overlay histogram showing SiHa cells stained with MX1 antibody (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-MX1 antibody (1 ug/million cells) for 30 min at 20°C. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20°C. 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

MX1 antibody detects Myxovirus resistance protein 1, a dynamin-like GTPase that mediates antiviral defense against a wide range of RNA and DNA viruses. The UniProt recommended name is Interferon-induced GTP-binding protein Mx1 (MX1). Also known as MxA in humans, this protein is one of the best-characterized interferon-stimulated genes (ISGs) and represents a central effector of type I and type III interferon antiviral activity.

Functionally, MX1 antibody identifies a 662-amino-acid cytoplasmic GTPase that self-assembles into oligomeric rings and tubular structures upon activation. MX1 binds and traps viral nucleocapsids and replication complexes, blocking viral genome transcription and replication. Its antiviral spectrum includes orthomyxoviruses (such as influenza A), paramyxoviruses, bunyaviruses, and other RNA viruses, as well as certain DNA viruses. MX1 activity is GTP-dependent and requires oligomerization for full antiviral efficacy.

The MX1 gene is located on chromosome 21q22.3 and is transcriptionally induced by type I interferons (IFN-alpha and IFN-beta) and type III interferons (IFN-lambda). MX1 localizes to the cytoplasm and associates with intracellular membranes where viral replication occurs. Upon interferon stimulation, MX1 accumulates rapidly and remains active for several hours, providing a robust first-line defense during viral infection. Its antiviral mechanism includes sequestering viral nucleoproteins, blocking uncoating, and preventing the assembly of viral polymerase complexes.

In immunology, MX1 serves as a molecular signature of interferon pathway activation and is frequently used as a biomarker for assessing antiviral or autoimmune responses. Elevated MX1 expression is characteristic of viral infections, systemic lupus erythematosus, and interferonopathies. In contrast, genetic polymorphisms affecting MX1 activity can reduce viral resistance and modulate disease susceptibility. MX1 also contributes to innate immunity in epithelial barriers, liver, and lung tissues, providing localized protection against viral entry and replication.

MX1 antibody is widely used in virology, immunology, and interferon signaling research. It is suitable for western blotting, immunofluorescence, and immunohistochemistry to detect MX1 expression following viral infection or interferon treatment. This antibody enables monitoring of innate immune activation and evaluation of interferon pathway modulators. In pathology, MX1 staining is used to confirm interferon signature activation in autoimmune and inflammatory diseases.

Structurally, MX1 belongs to the dynamin superfamily of large GTPases, with conserved GTP-binding, stalk, and oligomerization domains. The protein hydrolyzes GTP to induce conformational changes required for viral entrapment. NSJ Bioreagents provides MX1 antibody reagents validated for use in antiviral signaling, innate immunity, and interferon response research.

Application Notes

Optimal dilution of the MX1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human MX1 recombinant protein (Position: E315G-662) was used as the immunogen for the MX1 antibody.

Storage

After reconstitution, the MX1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.