

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MxA/Mx1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human MxA/Mx1 His412-Leu630 Accession # P20591
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

MxA (orthoMyxovirus-resistant protein A; also IFN-induced protein p78/IFI-78K and Mx1) is a 75-78 kDa member of the Dynamin family, GTPase-binding superfamily of proteins. It is induced by type I and III interferons, and is known to reside in the cytoplasm and associate with the membranes of the ER. Typically, IFN-α is produced when influenza virus RNA (plus other viral dsDNA and RNA) is detected by internal Pattern recognition receptors (PRRs). IFN-α induces the synthesis of 300+ genes, one of which is MxA (Mx1 in mouse). In primates, MxA is cytoplasmic, and interacts with the influenza virus replication cycle at a point proximal to the transcription of genomic RNA into mRNA. By contrast, Mx1 in mouse acts in the nucleus to block primary viral gene transcription. Functionally, MxA is a GTPase, but it is only the binding of GTP to MxA that is associated with antiviral activity. Nucleotide binding to MxA is also associated with nonviral activity, being associated with the potentiation of TRPC Ca²⁺ channel activity. Human MxA is 662 amino acids (aa) in length. It contains one GTPase domain (aa 69-340) and a GED (GTPase Effector Domain) over aa 574-662. There are two utilized phosphorylation sites at Tyr129 and Tyr451. MxA forms homo-dimers, -tetramers and -oligomers, with multimerization suggested to be important for activity. Although IFNs are typically considered to induce Mx gene expression, HSV-1 itself also activates gene transcription. In this case, however, a truncated 54-57 kDa transcript is generated that contains an 84 aa substitution for aa 425-662. Over aa 412-630, human MxA shares 49% aa sequence identity with mouse Mx1.

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