

## Mx2 (H-7): sc-271527



The Power to Question

## BACKGROUND

Members of the Dynamin family include GTPase, microtubule-associated proteins that are involved in cellular trafficking, including microtubule bundling and endocytosis. Mx1, also known as MxA, an interferon (IFN)-induced protein, acquires a high degree of resistance to Influenza A Virus and the rhabdo-virus vesicular stomatitis virus (VSV), which suggests that Mx1 plays an active role against influenza virus and the rhabdovirus VSV. Mx1 is a cytoplasmic protein that is 63% identical to the Mx2 protein, which lacks antiviral activity. Mx2 is also known as MxB and is localized at the cytoplasmic face of nuclear pores. Mx2 expression is not interferon-dependent and this protein is thought to regulate the efficiency and/or kinetics of nuclear import, a function which may have been usurped by its antiviral relatives.

## REFERENCES

1. Weitz, G., et al. 1989. Purification and characterization of a human Mx protein. *J. Interferon Res.* 9: 679-689.
2. Aebi, M., et al. 1989. cDNA structures and regulation of two interferon-induced human Mx proteins. *Mol. Cell. Biol.* 9: 5062-5072.
3. Pavlovic, J., et al. 1990. Resistance to influenza virus and vesicular stomatitis virus conferred by expression of human MxA protein. *J. Virol.* 64: 3370-3375.

## CHROMOSOMAL LOCATION

Genetic locus: MX2 (human) mapping to 21q22.3.

## SOURCE

Mx2 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 169-196 near the N-terminus of Mx2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mx2 (H-7) is available conjugated to agarose (sc-271527 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271527 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271527 PE), fluorescein (sc-271527 FITC), Alexa Fluor® 488 (sc-271527 AF488), Alexa Fluor® 546 (sc-271527 AF546), Alexa Fluor® 594 (sc-271527 AF594) or Alexa Fluor® 647 (sc-271527 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271527 AF680) or Alexa Fluor® 790 (sc-271527 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271527 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

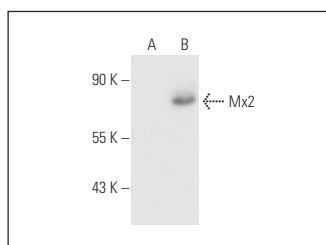
Mx2 (H-7) is recommended for detection of Mx2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mx2 siRNA (h): sc-61110, Mx2 shRNA Plasmid (h): sc-61110-SH and Mx2 shRNA (h) Lentiviral Particles: sc-61110-V.

Molecular Weight of Mx2: 73 kDa.

Positive Controls: Mx2 (h): 293T Lysate: sc-114275.

## DATA



Mx2 (H-7): sc-271527. Western blot analysis of Mx2 expression in non-transfected: sc-117752 (A) and human Mx2 transfected: sc-114275 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. OhAinle, M., et al. 2018. A virus-packageable CRISPR screen identifies host factors mediating interferon inhibition of HIV. *Elife* 7: e39823.
2. Wang, M.R., et al. 2020. Methadone inhibits viral restriction factors and facilitates HIV infection in macrophages. *Front. Immunol.* 11: 1253.
3. Steiner, F. and Pavlovic, J. 2020. Subcellular localization of MxB determines its antiviral potential against Influenza A virus. *J. Virol.* 94: e00125-20.
4. Xie, L., et al. 2020. MxB impedes the NUP358-mediated HIV-1 pre-integration complex nuclear import and viral replication cooperatively with CPSF6. *Retrovirology* 17: 16.
5. Oka, M., et al. 2023. Phase-separated nuclear bodies of nucleoporin fusions promote condensation of MLL1/CRM1 and rearrangement of 3D genome structure. *Cell Rep.* 42: 112884.
6. Itell, H.L., et al. 2023. Several cell-intrinsic effectors drive type I interferon-mediated restriction of HIV-1 in primary CD4+ T cells. *bioRxiv*. E-published.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.