

# Mx2 (H-58): sc-98977

## 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 rhabdovirus 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

- Weitz, G., Bekisz, J., Zoon, K. and Arnheiter, H. 1989. Purification and characterization of a human Mx protein. *J. Interferon Res.* 9: 679-689.
- Aebi, M., Fah, J., Hurt, N., Samuel, C.E., Thomis, D., Bazzigher, L., Pavlovic, J., Haller, O. and Staeheli, P. 1989. cDNA structures and regulation of two interferon-induced human Mx proteins. *Mol. Cell. Biol.* 9: 5062-5072.
- Pavlovic, J., Zurcher, T., Haller, O. and Staeheli, P. 1990. Resistance to influenza virus and vesicular stomatitis virus conferred by expression of human MxA protein. *J. Virol.* 64: 3370-3375.
- Melen, K., Keskinen, P., Ronni, T., Sareneva, T., Lounatmaa, K. and Julkunen, I. 1996. Human targeting signal and is localized in the heterochromatin region beneath the nuclear envelope. *J. Biol. Chem.* 271: 23478-23486.
- Melen, K. and Julkunen, I. 1998. Nuclear cotransport mechanism of cytoplasmic human MxB protein. *J. Biol. Chem.* 272: 32353-32359.
- Melen, K., Fagerlund, R., Nyqvist, M., Keskinen, P. and Julkunen, I. 2004. Expression of hepatitis C virus core protein inhibits interferon-induced nuclear import of STATs. *J. Med. Virol.* 73: 536-547.
- King, M.C., Raposo, G. and Lemmon, M.A. 2004. Inhibition of nuclear import and cell-cycle progression by mutated forms of the Dynamin-like GTPase MxB. *Proc. Natl. Acad. Sci. USA* 101: 8957-8962.
- Ozaki, T., Takahashi, K., Kanasaki, H., Iida, K. and Miyazaki, K. 2005. Expression of the type I interferon receptor and the interferon-induced Mx protein in human endometrium during the menstrual cycle. *Fertil. Steril.* 83: 163-170.

## CHROMOSOMAL LOCATION

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

## SOURCE

Mx2 (H-58) is a rabbit polyclonal antibody raised against amino acids 602-650 mapping near the C-terminus of Mx2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Mx2 (H-58) is recommended for detection of Mx2 of human origin by Western Blotting (starting dilution 1:200, 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.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Mx1/2/3 (C-1): sc-166412** or **Mx2 (H-7): sc-271527**, our highly recommended monoclonal alternatives to Mx2 (H-58). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Mx1/2/3 (C-1): sc-166412**.