**BACKGROUND**

The Dynamin family of microtubule-associated proteins functions as GTPases that are involved in microtubule bundling and endocytosis. In mice, Mx2 (myxovirus resistance protein 2) and Mx1 (myxovirus resistance protein 1) are members of the Dynamin family that are involved in the immune response to viral infections. Localized to the cytoplasm, Mx2 contains one GED domain and is expressed in response to viral infection or treatment by IFN-α/IFN-β. Once expression is induced, Mx2 accumulates in the cytoplasm and inhibits the replication of vesicular stomatitis virus (VSV), thereby conferring resistance to VSV infection. Unlike Mx2, Mx1 is localized to the nucleus where, upon induction by IFN-α/IFN-β, it provides selective resistance to infection by the highly lethal H5N1 influenza virus. In humans, MxA and MxB function in a similar manner to Mx1 and Mx2, conferring resistance to specific target viruses. Mx3 is a rat-specific member of the myxovirus resistance protein family.

**CHROMOSOMAL LOCATION**

Genetic locus: MX1/MX2 (human) mapping to 21q22.3; Mx1/Mx2 (mouse) mapping to 16 C4.

**SOURCE**

Mx1/2/3 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 47-73 near the N-terminus of Mx1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mx1/2/3 (C-1) is available conjugated to agarose (sc-166412 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166412 HRP), 200 µg/ml, for WB, (HCP) and ELISA; to either phycoerythrin (sc-166412 PE), fluorescein (sc-166412 FITC), Alexa Fluor® 488 (sc-166412 AF488), Alexa Fluor® 546 (sc-166412 AF546), Alexa Fluor® 594 (sc-166412 AF594) or Alexa Fluor® 647 (sc-166412 AF647), 200 µg/ml, for WB (RGB), IF, (HCP) and FCM; and to either Alexa Fluor® 680 (sc-166412 AF680) or Alexa Fluor® 790 (sc-166412 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166412 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

Mx1/2/3 (C-1) is recommended for detection of Mx1 and Mx2 of human and mouse origin, and Mx1, Mx2, and Mx3 of rat 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).

Mx1/2/3 (C-1) is also recommended for detection of Mx1 and Mx2 in additional species, including equine and bovine.

**Molecular Weight of Mx1/Mx2/Mx3:** 72/73/75 kDa.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.

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