SANTA CRUZ BIOTECHNOLOGY, INC.

Influenza A m2 (14C2): sc-32238

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Influenza viruses are divided into three types, designated A, B, and C. Influenza types A and B are responsible for epidemics of respiratory illness that occur almost every winter and are often associated with increased rates for hospitalization and death. Influenza type A viruses are divided into subtypes based on differences in two viral proteins called hemagglutinin (HA) and neuraminidase (NA). The Influenza virus matrix 1, otherwise known as m1, is a critical protein required for assembly and budding. HA and NA interact with Influenza virus m1; HA associates with m1 via its cytoplasimic tail and transmembrane domain. The m2 and NB proteins are critical in the replication cycle of Influenza viruses. The m2 channel protein is an essential component of the viral envelope because of its ability to form a highly selective, pH-regulated, proton-conducting channel. The m2 channel allows protons to enter the virus' interior, and acidification weakens the interaction of the m1 protein with the ribonuclear core.

REFERENCES

1. Pinto, L.H., et al. 1997. A functionally defined model for the M_2 proton channel of Influenza A virus suggests a mechanism for its ion selectivity. Proc. Natl. Acad. Sci. USA 94: 11301-11306.
2. Kukol, A., et al. 1999. Experimentally based orientational refinement of membrane protein models: a structure for the Influenza A m2 H^+ channel. J. Mol. Biol. 286: 951-962.

SOURCE

Influenza A m2 (14C2) is a mouse monoclonal antibody raised against M_2 protein purified from WSN/33-infected CV1 cell lysates.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Influenza A m2 (14C2) is available conjugated to agarose (sc-32238 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32238 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32238 PE), fluorescein (sc-32238 FITC), Alexa Fluor® 488 (sc-32238 AF488), Alexa Fluor® 546 (sc-32238 AF546), Alexa Fluor® 594 (sc-32238 AF594) or Alexa Fluor® 647 (sc-32238 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32238 AF680) or Alexa Fluor® 790 (sc-32238 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

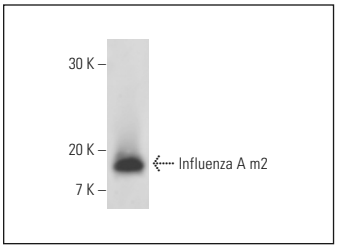
Influenza A m2 (14C2) is recommended for detection of Influenza A m2 of Influenza A protein m2 origin by Western Blotting (starting dilution 1:100, dilution range), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Influenza A m2: 15 kDa.

STORAGE

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

DATA



Influenza A m2 (14C2): sc-32238. Western blot analysis of Influenza A virus m2 protein.

SELECT PRODUCT CITATIONS

1. LeBouder, F., et al. 2010. Plasminogen promotes Influenza A virus replication through an annexin 2-dependent pathway in the absence of neuraminidase. J. Gen. Virol. 91: 2753-2761.
2. Matic, S., et al. 2011. Efficient production of chimeric human papillomavirus 16 L1 protein bearing the M2e Influenza epitope in *Nicotiana benthamiana* plants. BMC Biotechnol. 11: 106.
3. Leung, H.S., et al. 2012. Entry of Influenza A virus with a α2,6-linked sialic acid binding preference requires host fibronectin. J. Virol. 86: 10704-10713.
4. van Wielink, R., et al. 2012. Mutations in the M-gene segment can substantially increase replication efficiency of NS1 deletion Influenza A virus in MDCK cells. J. Virol. 86: 12341-12350.
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8. Kumar, A., et al. 2017. Influenza virus exploits tunneling nanotubes for cell-to-cell spread. Sci. Rep. 7: 40360.
9. Fan, Y., et al. 2017. Cell cycle-independent role of cyclin D3 in host restriction of Influenza virus infection. J. Biol. Chem. 292: 5070-5088.
10. Jang, Y., et al. 2018. Salinomycin inhibits Influenza virus infection by disrupting endosomal acidification and viral matrix protein 2 function. J. Virol. 92: e01441-18.
11. Li, C., et al. 2018. Anti-influenza effect and action mechanisms of the chemical constituent gallocatechin-7-gallate from *Pithecellobium clypearia* Benth. Acta Pharmacol. Sin. 9: 1913-1922.

RESEARCH USE

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