

Influenza A NP (F8): sc-52026

BACKGROUND

Influenza A viruses are negative sense, single-stranded, segmented RNA viruses which are hosted by birds, but may infect several species of mammals. All known subtypes are endemic in birds. The subtypes of Influenza A are classified based on the combination of the virus coat glycoproteins hemagglutinin (HA) and neuraminidase (NA) subtypes. There are 16 different HA antigens (H1-H16) and 9 different NA antigens (N1-N9) for Influenza A. The extent of infection into host organisms is determined by HA, which interacts with cell surface proteins containing oligosaccharides with terminal sialyl residues.

REFERENCES

1. Green, N., Alexander, H., Olson, A., Alexander, S., Shinnick, T.M., Sutcliffe, J.G. and Lerner, R.A. 1982. Immunogenic structure of the influenza virus hemagglutinin. *Cell* 28: 477-487.
2. Gething, M.J., McCommon, K. and Sambrook, J. 1986. Expression of wild-type and mutant forms of influenza hemagglutinin: the role of folding in intracellular transport. *Cell* 46: 939-950.
3. Webster, R.G. and Rott, R. 1987. Influenza virus A pathogenicity: the pivotal role of hemagglutinin. *Cell* 50: 665-666.
4. Wilson, I.A. and Cox, N.J. 1990. Structural basis of immune recognition of influenza virus hemagglutinin. *Annu. Rev. Immunol.* 8: 737-771.
5. Skehel, J.J. and Wiley, D.C. 2000. Receptor binding and membrane fusion in virus entry: the influenza hemagglutinin. *Annu. Rev. Biochem.* 69: 531-569.
6. Huang, Q., Sivaramakrishna, R.P., Ludwig, K., Korte, T., Bottcher, C. and Herrmann, A. 2003. Early steps of the conformational change of influenza virus hemagglutinin to a fusion active state: stability and energetics of the hemagglutinin. *Biochim. Biophys. Acta* 1614: 3-13.
7. Takeda, M., Leser, G.P., Russell, C.J. and Lamb, R.A. 2003. Influenza virus hemagglutinin concentrates in lipid raft microdomains for efficient viral fusion. *Proc. Natl. Acad. Sci. USA* 100: 14610-14617.
8. Borrego-Diaz, E., Peebles, M.E., Markosyan, R.M., Melikyan, G.B. and Cohen, F.S. 2003. Completion of trimeric hairpin formation of influenza virus hemagglutinin promotes fusion pore opening and enlargement. *Virology* 316: 234-244.
9. Lau, W.L., Ege, D.S., Lear, J.D., Hammer, D.A. and DeGrado, W.F. 2004. Oligomerization of fusogenic peptides promotes membrane fusion by enhancing membrane destabilization. *Biophys. J.* 86: 272-284.

SOURCE

Influenza A NP (F8) is a mouse monoclonal antibody raised against purified Influenza virus A strain H1N1.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Influenza A NP (F8) is recommended for detection of nucleoprotein (NP) of Influenza A virus origin by 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).

Molecular Weight of Influenza A NP: 56 kDa.

SELECT PRODUCT CITATIONS

1. Xie, X., Zhao, C., He, Q., Qiu, T., Yuan, S., Ding, L., Liu, L., Jiang, L., Wang, J., Zhang, L., Zhang, C., Wang, X., Zhou, D., Zhang, X. and Xu, J. 2019. Influenza vaccine with consensus internal antigens as immunogens provides cross-group protection against Influenza A viruses. *Front. Microbiol.* 10: 1630.
2. Ruan, T., Sun, J., Liu, W., Prinz, R.A., Peng, D., Liu, X. and Xu, X. 2020. H1N1 influenza virus cross-activates Gli1 to disrupt the intercellular junctions of alveolar epithelial cells. *Cell Rep.* 31: 107801.
3. Ruan, T., Sun, Y., Zhang, J., Sun, J., Liu, W., Prinz, R.A., Peng, D., Liu, X. and Xu, X. 2022. H5N1 infection impairs the alveolar epithelial barrier through intercellular junction proteins via Itch-mediated proteasomal degradation. *Commun. Biol.* 5: 186.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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