

Influenza A NP (AA5H): sc-57883

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. Influenza A subtypes 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 nine 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. Influenza A nucleoprotein (NP) associates with its RNA genome and is present in eight separate segments of ribonucleoprotein (RNP), each of which has to be present for successful replication.

REFERENCES

- 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.
- Gething, M.J., McCammon, K. and Sambrook, J. 1986. Expression of wildtype and mutant forms of influenza hemagglutinin: the role of folding in intracellular transport. *Cell* 46: 939-950.
- Webster, R.G. and Rott, R. 1987. Influenza Virus A pathogenicity: the pivotal role of hemagglutinin. *Cell* 50: 665-666.
- Wilson, I.A. and Cox, N.J. 1990. Structural basis of immune recognition of influenza virus hemagglutinin. *Annu. Rev. Immunol.* 8: 737-771.
- 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.
- 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.
- 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.
- Borrego-Diaz, E., Peeples, 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.
- 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 (AA5H) is a mouse monoclonal antibody raised against Influenza A/Puerto Rico/8/34 (H1N1) and A/Bangkok/1/79 (H3N2) viruses.

PRODUCT

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

APPLICATIONS

Influenza A NP (AA5H) is recommended for detection of nucleoprotein (NP) of Influenza A Virus origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Influenza A NP: 56 kDa.

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.