SANTA CRUZ BIOTECHNOLOGY, INC.

Influenza A H5N1 HA (P-20): sc-54958

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Influenza A H5N1 HA protein binds to sialic acid-containing receptors on the cell surface, bringing about the attachment of the virus particle to the cell. Influenza A H5N1 HA plays a major role in the determination of host range restriction and virulence. It is a class I viral fusion protein and is responsible for penetration of the virus into the cell cytoplasm by mediating the fusion of the membrane of the endocytosed virus particle with the endosomal membrane. Low pH levels in endosomes induce an irreversible conformational change in hemagglutinin (HA), releasing the fusion hydrophobic peptide. Several hemagglutinin trimers are required to form a competent fusion pore. Hemagglutinin protein targets the apical plasma membrane in epithelial polarized cells through a signal present in the transmembrane domain. It is also associated with glycosphingolipid- and cholesterol-enriched detergent-resistant lipid rafts

REFERENCES

1. Yang, Z.Y., Wei, C.J., Kong, W.P., Wu, L., Xu, L., Smith, D.F. and Nabel, G.J. 2007. Immunization by avian H5 influenza hemagglutinin mutants with altered receptor binding specificity. Science 317: 825-828.
2. Horimoto, T., Murakami, S., Muramoto, Y., Yamada, S., Fujii, K., Kiso, M., Iwatsuki-Horimoto, K., Kino, Y. and Kawaoka, Y. 2007. Enhanced growth of seed viruses for H5N1 influenza vaccines. Virology 366: 23-27.
3. Sharpe, M., Lynch, D., Topham, S., Major, D., Wood, J. and Loudon, P. 2007. Protection of mice from H5N1 influenza challenge by prophylactic DNA vaccination using particle mediated epidermal delivery. Vaccine 25: 6392-6398.
4. Shi, H., Liu, X.F., Zhang, X., Chen, S., Sun, L. and Lu, J. 2007. Generation of an attenuated H5N1 avian influenza virus vaccine with all eight genes from avian viruses. Vaccine 25: 7379-7384.
5. Spackman, E., Swayne, D.E., Suarez, D.L., Senne, D.A., Pedersen, J.C., Killian, M.L., Pasick, J., Handel, K., Pillai, S.P., Lee, C.W., Stallknecht, D., Slemons, R., Ip, H.S. and Deliberto, T. 2007. Characterization of low-pathogenicity H5N1 avian influenza viruses from North America. J. Virol. 81: 11612-11619.
6. Tsuda, Y., Sakoda, Y., Sakabe, S., Mochizuki, T., Namba, Y. and Kida, H. 2007. Development of an immunochromatographic kit for rapid diagnosis of H5 avian influenza virus infection. Microbiol. Immunol. 51: 903-907.
7. Mukhtar, M.M., Rasool, S.T., Song, D., Zhu, C., Hao, Q., Zhu, Y. and Wu, J. 2007. Origin of highly pathogenic H5N1 avian influenza virus in China and genetic characterization of donor and recipient viruses. J. Gen. Virol. 88: 3094-3099.
8. Huan, L.F., Yao, L.H., Chen, A.J., Cheng, C.S., Jia, R.Q., Tian, Q., Bo, H., Guo, J.Q., Wang, M., Shu, Y.L. and Zhang, Z.Q. 2007. Construction and immunogenicity study of DNA vaccine expressing human H5N1 influenza virus hemagglutinin. Bing Du Xue Bao 23: 366-370.

STORAGE

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

SOURCE

Influenza A H5N1 HA (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of hemagglutinin of Influenza A H5N1 of duck origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Influenza A H5N1 HA (P-20) is recommended for detection of hemagglutinin of Influenza A H5N1 of duck, chicken and turkey origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 H5N1 HA: 64 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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