Rabbit Monoclonal Antibody to Influenza
A H7N7 HA / Hemagglutinin

Catalog Number: 11082-R019

Preparation
This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant influenza A H7N7 HA / Hemagglutinin protein.

Applications
Hemagglutination Inhibition – This antibody has high hemagglutination inhibition activity against H7N7 (A/Netherlands/219/03) HA protein (Catalog#11082-V08H). The HI titer is 2048 when the antibody was used at 0.05 µg/mL

ELISA – This antibody can be used at 0.5 -1 µg/mL with the appropriate secondary reagents to detect H7N7 HA. The detection limit for H7N7 HA is 0.00245 ng/well

Specificity
H7N7 (A/Netherlands/219/03) HA
Has cross-reactivity in ELISA with
H7N7 (A/chicken/Netherlands/1/03) HA
No cross-reactivity in ELISA with
H1N1 (A/California/07/2009) HA
H2N2 (A/Canada/720/2005) HA
H3N2 (A/Brisbane/10/2007) HA
H4N6 (A/mallard/Ohio/657/2002) HA
H5N1 (A/Anhui/1/2005) HA
H6N1 (A/northern shoveler/California/HKWF115/2007) HA
H8N4 (A/pintail duck/Alberta/114/1979) HA
H9N2 (A/Hong Kong/1073/99) HA
H10N3 (A/duck/Hong Kong/786/1979) HA
H11N2 (A/duck/Yangzhou/906/2002) HA
H13N8 (A/black-headed gull/Netherlands/1/00) HA
H15N8 (A/duck/AUS/341/1983) HA
H16N3 (A/black-headed gull/Sweden/5/99) HA

Storage
This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free.

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

Background
Hemagglutinin (HA) is a single-pass type I integral membrane glycoprotein from the influenza virus, and comprises over 80% of the envelope proteins present in the virus particle. In natural infection, inactive HA is matured into HA1 and HA2 outside the cell by one or more trypsin-like, arginine-specific endoprotease secreted by the bronchial epithelial cells. Binding of HA to sialic acid-containing receptors on the surface of its target cell brings about the attachment of the virus particle to the cell and forms a nasosome. H7N7 is a subtype of Influenza virus A. It can infect humans, birds, pigs, seals, and horses in the wild and has infected mice in laboratory studies. H7N7 represents a pandemic threat because influenza H7N7 viruses do not commonly infect humans, there is little or no antibody protection against these viruses in the human population. If an avian or other animal influenza virus of H7N7 is able to infect people, cause illness, and spread efficiently from person to person, an influenza pandemic could begin. In 2003 in the Netherlands 89 people were confirmed to have the H7N7 influenza virus infection following an outbreak in poultry on several farms. One death was recorded. Antibodies were found in over half of 500 people tested according to the final official report by the Dutch government. Final analysis of Dutch avian influenza outbreaks reveals much higher levels of transmission to humans than previously thought.

Reference