

Influenza A H5N1 Antibody Pair Kit | H5N1 antibody pair kit

Influenza A H5N1 (Avian Flu) Hemagglutinin/HA ELISA Pair Set

CATALOG #
AAA257808

REACTIVITY
H5N1

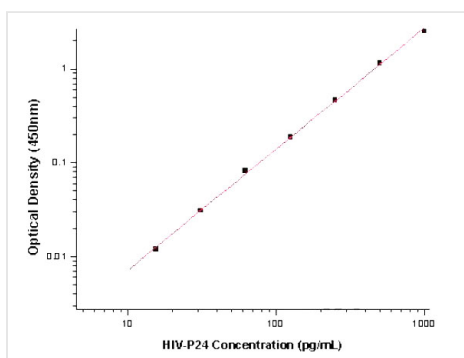
PRODUCT SYNONYMS

Influenza A H5N1; Influenza A H5N1 (Avian Flu) Hemagglutinin/HA ELISA Pair Set; Harvey rat sarcoma viral oncogene homolog; H5N1 antibody pair kit

PRODUCT SPECIFICATIONS

Reactivity	H5N1
Specificity	Quantitative determination of H5N1 Hemagglutinin/HA
Assay Type	Quantitative Sandwich
Sensitivity	125 pg/ml
Materials Provided	- Capture Antibody 1mg/mL of mouse anti-H5N1 hemagglutinin monoclonal antibody. Dilute to a working concentration of 2ug/mL in PBS before coating. - Detection Antibody 0.2mg/mL biotinylated rabbit anti-H5N1 hemagglutinin polyclonal antibody. Dilute to a working concentration of 0.8ug/mL in detection antibody dilution buffer before use. - Standard Each vial contains 300ng of recombinant H5N1 hemagglutinin. Reconstitute with 1 mL detection antibody dilution buffer. A seven-point standard curve using 2-fold serial dilutions in sample dilution buffer, and a high standard of 8000pg/mL is recommended.
Preparation and Storage	Capture Antibody: Aliquot and store at -20 degree C to -80 degree C for up to 6 months from date of receipt. Avoid repeated freeze-thaw cycles. Detection Antibody: Store at 4 degree C and protect it from prolonged exposure to light for up to 6 months from date of receipt. DO NOT FREEZE! Standard: Store lyophilized standard at -20 degree C to -80 degree C for up to 6 months from date of receipt. Aliquot and store the reconstituted Standard at -80 degree C for up to 1 month. Avoid repeated freeze-thaw cycles.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for H5N1 antibody pair kit

Background: Influenza (flu) is a viral respiratory infection in mammals and birds. This virus is divided into three main types (A, B and C). Influenza A is found in a wide variety of mammalian and avian species and is associated with the major human pandemics. Influenza B is largely confined to humans and became unexpectedly prevalent in humans during 2000-2002. Influenza C infects humans, dogs and pigs and generally causes only mild upper respiratory tract infection. However, influenza A and B viruses cause a wide spectrum of severe disease including lower respiratory, tract infection, pneumonia and encephalitis. Influenza A is further divided into subtypes based on antigenic differences in the membrane proteins hemagglutinin (HA) and neuraminidase (NA). 16 HAs (H1-H16) and 9 NA (N1-N9) had been identified. While different combinations of the two antigens appear more frequently in some groups of birds than others, only few subtypes have established themselves in humans (HA:H1, H2, and H3; NA: N1 and N2). Sustained, widespread highly pathogenic avian influenza (HPAI) H5N1 epidemics represent a significant public health hazard because they not only cause mortality in poultry but also increase the risk of a human influenza pandemic. In 1997, the first case of human infected H5N1 was reported in Hongkong, China. Avian influenza have broken the species barrier and made heavy threaten to human health. In the process of epidemic, more than 100 countries had found more than 400 human avian influenza infected cases, within 262 patients dead. Since two human-to-human transmission cases were reported in China, controlling the interspecies transmission of avian influenza is of critical importance. At least 4 major antigenic groups of H5N1 viruses currently in circulation have caused infection in humans. The recent emergence and development of the unique antigenic FJ-like virus (clade 2.3.4) in Asia, the continuous circulation and expansion of Qinghai-like virus (clade 2.2) in Europe, the Middle East, and Africa, and the persistent prevalence of clade 2.1 viruses in Indonesia, and classic Clade 1 in Vietnam and Hong Kong. Hemagglutinin (HA), which binds to sialic acid (SA)-containing receptors on host cells, is the protein that produces neutralizing antibodies. Hemagglutinin plays a major role in the determination of host range restriction and virulence because human influenza HA preferentially binds to SA- α -2,6 while avian influenza HA preferentially binds to SA- α -2,3. The cleavage of HA into two disulfide-linked subunits, HA1 and HA2, is a prerequisite for initiating infection. Usually HA is restricted to be cleaved at respiratory tracts by limited proteases. Highly pathogenic avian influenza contains a stretch of basic residues adjacent to the HA cleavage site, enabling its HA to be cleaved by a wide range of proteases with ubiquitous tissue distributions. This process permits productive virus replication in organs outside of the respiratory and gastrointestinal tracts, including the brain, resulting in widespread disease and high mortality rates.

Principle of the Assay: The H5N1 (avian flu) hemagglutinin ELISA Pair Set is for the quantitative determination of H5N1 (avian flu) hemagglutinin. The ELISA Pair Set is a solid phase sandwich ELISA (Enzyme-Linked Immunosorbent Assay). It utilizes a monoclonal antibody specific for H5N1 (avian flu) hemagglutinin coated on a 96-well plate. Standards and samples are added to the wells, and any H5N1 (avian flu) hemagglutinin present binds to the immobilized antibody. The wells are washed and a horseradish peroxidase conjugated mouse anti-H5N1 (avian flu) hemagglutinin monoclonal antibody is then added, producing an antibodyantigen- antibody ""sandwich"". The wells are again washed and TMB substrate solution is loaded, which produces color in proportion to the amount of H5N1 (avian flu) hemagglutinin present in the sample. To end the enzyme reaction, the stop solution is added and absorbances of the microwell are read at 450 nm.

Intended Uses: The H5N1 (avian flu) hemagglutinin ELISA Pair Set is for the quantitative determination of hemagglutinin. This ELISA Pair Set contains the basic components required for the development of sandwich ELISAs.

References

White JM, Hoffman LR, Arevalo JH, et al. Attachment and entry of influenza virus into host cells. Pivotal roles of hemagglutinin. In Chiu W, Burnett RM, Garcea RL. Structural Biology of Viruses.1997

Suzuki Y. Sialobiology of influenza: molecular mechanism of host range variation of influenza viruses. Biol. Pharm. Bull. 2005.

Senne DA, Panigrahy B, Kawaoka Y, et al. Survey of the hemagglutinin (HA) cleavage site sequence of H5 and H7 avian influenza viruses: amino acid sequence at the HA cleavage site as a marker of pathogenicity potential. Avian Dis. 1996

Donald J. Benton, Influenza hemagglutinin membrane anchor, PNAS, 2018

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/antibody-pair-kits/influenza-a-h5n1/257808>