

Product Data Sheet

□ Cat # RP-645

Recombinant Hemagglutinin Influenza A Virus H1N1 California/06/2009

Size: □ 2 ug

Influenza hemagglutinin (HA) or haemagglutinin is a glycoprotein found on the surface of influenza viruses. It is responsible for binding the virus to cells with sialic acid on the membranes, such as cells in the upper respiratory tract or erythrocytes. It is also responsible for the fusion of the viral envelope with the endosome membrane, after the pH has been reduced. The name "hemagglutinin" comes from the protein's ability to cause red blood cells (erythrocytes) to clump together ("agglutinate") in vitro.

HA has at least 18 different antigens. These subtypes are named H1 through H18. H16 was discovered in 2004 on influenza A viruses isolated from black-headed gulls from Sweden and Norway. H17 was discovered in 2012 in fruit bats. Most recently, H18 was discovered in a Peruvian bat in 2013. The first three hemagglutinins, H1, H2, and H3, are found in human influenza viruses.

Viral neuraminidase (NA) is another protein found on the surface of influenza. Influenza viruses are characterized by the type of HA and NA that they carry; hence H1N1, H5N2 etc.

A highly pathogenic avian flu virus of H5N1 type has been found to infect humans at a low rate. It has been reported that single amino acid changes in this avian virus strain's type H5 hemagglutinin have been found in human patients that "can significantly alter receptor specificity of avian H5N1 viruses, providing them with an ability to bind to receptors optimal for human influenza viruses". This finding seems to explain how an H5N1 virus that normally does not infect humans can mutate and become able to efficiently infect human cells. The hemagglutinin of the H5N1 virus has been associated with the high pathogenicity of this flu virus strain, apparently due to its ease of conversion to an active form by proteolysis.

HA has two functions. Firstly, it allows the recognition of target vertebrate cells, accomplished through the binding to these cells' sialic acid-containing receptors. Secondly, once bound it facilitates the entry of the viral genome into the target cells by causing the fusion of host endosomal membrane with the viral membrane.

Form and Source

250 kD
150 kD
100 kD
75 kD
50 kD
37 kD
25 kD
20 kD
15 kD



Recombinant protein is purified from HEK293 cell culture. It is expressed as fusion protein with 6Xhis at C-terminal. It is supplied in PBS 0.05% azide (or see lot sp. conc on the vial) or in lyophilized form. Reconstitute powder in water at 10 ug/ml or higher concentration. Store liquid at -20oC or below in smaller aliquots.

Immunological Activity:

Western-Blot 0.1µg -1µg per strip, ELISA 1µg/Well.

Usage:

This item is for LABORATORY RESEARCH USE ONLY

Related items

Catalog#	Prod Description
INFA11-M	Mouse Anti-Influenza A virus IgG, aff pure
INFB15-M	Mouse Anti-Influenza B IgG, aff pure
MA-20170	Mouse Monoclonal Anti-Human Influenza A virus Nucleoprotein
MA-20171	Mouse Monoclonal Anti-Human Influenza B virus Nucleoprotein
RP-1520	Influenza A Virus (H1N1) Beijing 262/95
RP-1521	Influenza A Virus (H1N1) New Caledonia 20/99 IV 116
RP-1522	Influenza A Virus (H3N2) Shangdong 9/93
RP-1523	Influenza A Virus (H3N2) Kiev 301/94 like /Johannesburg 33/94
RP-1524	Influenza A Virus (H3N2) Panama 2007/99
RP-1525	Influenza A Virus (H1N1) Taiwan 1/86
RP-1526	Influenza B Virus Qingdao 102/91 (purified virus, inactivated)
RP-1527	Influenza B Virus Tokio 53/99 (purified virus, inactivated)
RP-1528	Influenza B Virus Victoria 504/00 (purified 7/6/2011, inactivated)
RP-1591	Influenza B Virus Florida 04/06 (purified virus, inactivated)
RP-1592	Influenza B Virus Malaysia 2506/04 (purified virus, inactivated)
RP-1593	Recombinant Hemagglutinin Influenza B Virus Malaysia 2506/04 (HA full length, insect cells)
RP-638	Recombinant Hemagglutinin Influenza A Virus H1N1 New Caledonia 20/99 (HA protein full length, Sf9 cells)
RP-639	Recombinant Hemagglutinin Influenza A Virus H1N1 Texas 36/91
RP-640	Recombinant Hemagglutinin Influenza A Virus H7N7 Netherlands 219/03
RP-641	Recombinant Hemagglutinin Influenza A Virus H5N1 Vietnam 1203/04
RP-642	Recombinant Hemagglutinin Influenza A Virus H3N2 New York 55/04 (HA protein full length, Sf9 cells)
RP-643	Recombinant Hemagglutinin Influenza A Virus H3N2 Wyoming 3/03
RP-644	Recombinant Hemagglutinin Influenza A Virus H9N2 Hong Kong 1073/99
RP-645	Recombinant Hemagglutinin Influenza A Virus H1N1 California/04/2009
RP-646	Recombinant Hemagglutinin Influenza B Virus Ohio 01/05 (HA full length, insect cells)
RP-647	Recombinant Hemagglutinin Influenza A Virus H3N2 Wisconsin 67/05
RP-648	Recombinant Hemagglutinin Influenza B Virus Jilin 20/03 (HA full length, insect cells)
RP-645-Recombinant-HA-Protein	160412SV