ALPHA DIAGNOSTIC INTERNATIONAL

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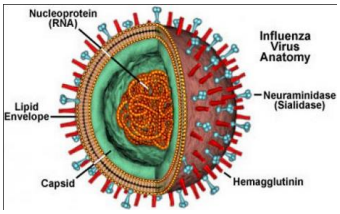
Product Specification Sheet

Recombinant (E-coli, his tag) Purified Influenza A virus Neuraminidase (H1N1-NA) protein (>95%)

☐ **Cat** # H1N1NA15-R-10 Recombinant H1N1 neuraminidase protein(>95%) **SIZE**: 10 ug

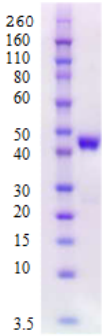
Influenza A (H1N1) virus is a subtype of influenza A virus and was the most common cause of human influenza (flu) in 2009. Some strains of H1N1 are endemic in humans and cause a small fraction of all influenza-like illness and a small fraction o-f all seasonal influenza. H1N1 strains caused a few percent of all human flu infections in 2004–2005. Other strains of H1N1 are endemic in pigs (swine influenza) and in birds (avian influenza). In June 2009, the World Health Organization declared the new strain of swine-origin H1N1 as a pandemic. This strain is often called swine flu by the public media. Swine influenza (also called swine flu, or pig flu) is an infection by any one of several types of swine influenza virus. Swine influenza virus (SIV) is any strain of the influenza family of viruses that is endemic in pigs. As of 2009, the known SIV strains include influenza C and the subtypes of influenza A known as H1N1, H1N2, H3N1, H3N2, and H2N3.



The Influenza A Virus is a globular particle about 100nm in diameter, sheathed in a lipid bilayer derived from the plasma membrane of its host. Studded in the lipid bilayer are two integral membrane proteins some 500 molecules of hemagglutinin ("H") and some 100 molecules of neuraminidase ("N"). Within the lipid bilayer are 3000 molecules of matrix protein and 8 pieces of RNA. Each of the 8 RNA molecules is associated with many copies of a nucleoprotein, several molecules of the three subunits of its RNA polymerase some "non-structural" protein molecules of uncertain function

Viral neuraminidase is a type of neuraminidase found on the surface of influenza viruses that enables the virus to be released from the host cell. Neuraminidases are enzymes that cleave sialic acid groups from glycoproteins and are required for influenza virus replication. When influenza virus replicates, it attaches to the interior cell surface using hemagglutinin, a molecule found on the surface of the virus that binds to sialic acid groups. Sialic acids are found on various glycoproteins at the host cell surface, and the virus exploits these groups to bind the host cell. In order for the virus to be released from the cell, neuraminidase must enzymatically cleave the sialic acid groups from host glycoproteins A single hemagglutinin-neuraminidase protein can combine neuraminidase and hemagglutinin functions, such as in mumps virus and human parainfluenza virus.

Since the cleavage of the sialic groups is an integral part of influenza replication, blocking the function of neuraminidase with neuraminidase inhibitors is an effective way to treat influenza.



Source of Antigen

H1N1 Neuraminidase, was expressed in E. Coli as a his-tag fusion protein (full length >95%, ~44 KDa). Purified protein is supplied in 50 mM Tris-HCl [pH 8.0], 0.25 M NaCl, 5 mM β-ME, 0.5 mM EDTA, 8 M Urea and 0.25M Imidazole. (or see lot sp. Conc. on the vial).

It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting: load 100-200 ng/well.

ELISA (50-100 ng antigen/well).

Specificity & Cross-reactivity : Cross reactivity with other proteins has not been established. Recombinant protein is available for control studies.

References: Huang IC (2008) J. Virol. 82 (10): 4834–43; Boon (2011). The Journal of Obstetrics and Gynecology 61 (4): 386–393. Dhama, (2012) Pakistan Journal of Biological Science 15 (21): 1001–1009.

*This product is for In vitro research use only.

Related material available from ADI

H1N1-01-A	Anti-Hemagglutinin Influenza A Virus H1N1 H1 (H1N1) (A/New Caledonia/20/99) IgG
H1N1-01-C	Recombinant Purified Hemagglutinin Influenza A Virus H1N1 H1 (H1N1) (A/New Caledonia/20/99) protein control for Western
H1N1-01-R-10	Recombinant Purified Hemagglutinin Influenza A Virus H1N1 H1 (H1N1) (A/New Caledonia/20/99) protein
H1N1-02-A	Anti-Hemagglutinin Influenza A Virus H1N1 H1 (Pan H1N1 reacts with multiple strains of H1N1) IgG
H1N12-R-10	Recombinant Purified Hemagglutinin HA1 (A/California/06-2009, H1N1) protein
H1N1NA11-C	Purified Influenza A Neuraminidase (H1N1-NA) protein control for western blot
H1N1NA11-S	Rabbit Anti Influenza A Neuraminidase (H1N1-NA) antiserum
H1N1NA15-R-10	Recombinant (E.coli, his tag) purified Influenza A Neuraminidase (H1N1-NA) protein (>95%)
RP-1520	Influenza A Virus (H1N1) Beijing 262/95
RP-1521	Influenza A Virus (H1N1) New Caledonia 20/99 IV 116
RP-1525	Influenza A Virus (H1N1) Taiwan 1/86

H1N1NA15-R-10-protein 160303SV

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