

Active Recombinant H7N9 HA, His-tagged

Cat. No. HA-462H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the Influenza A virus (A/Shanghai/2/2013(H7N9)) hemagglutinin (Met1-Val524) was expressed with a C-terminal polyhistidine tag.
Species	H7N9
Source	Insect Cells
ProteinLength	Met1-Val524
Description	H7N9 is a subtype of Influenza virus A. On April 1, 2013, the World Health Organization (WHO) first reported 3 human infections with a new influenza A (H7N9) virus in China. Since then, additional cases have been reported. This new H7N9 virus is an avian (bird) influenza (flu) virus. Influenza (flu) is a respiratory infection in mammals and birds. The virus is divided into three main types (Influenza A, Influenza B, and Influenza C), which are distinguished by differences in two major internal proteins (hemagglutinin (HA) and neuraminidase (NA)). Influenza A is further divided into subtypes based on differences in the membrane proteins hemagglutinin (HA) and neuraminidase (NA), which are the most important targets for the immune system. The notation HhNn is used to refer to the subtype comprising the hth discovered Hemagglutinin (HA) protein and the nth discovered neuraminidase (NA) protein. The influenza viral Hemagglutinin (HA) protein is a homo trimer with a receptor binding pocket on the globular head of each monomer. The influenza virus Hemagglutinin (HA) protein is translated in cells as a single protein, HA0, or hemagglutinin precursor protein. For viral activation, hemagglutinin precursor protein (HA0) must be cleaved

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by a trypsin-like serine endoprotease at a specific site, normally coded for by a single basic amino acid (usually arginine) between the HA1 and HA2 domains of the protein. After cleavage, the two disulfide-bonded protein domains produce the mature form of the protein subunits as a prerequisite for the conformational change necessary for fusion and hence viral infectivity.

Form	Lyophilized from sterile PBS, pH7.4.
Bio-activity	1. Measured by its ability to agglutinate guinea pig red blood cells. HA titer is 0.04-0.16 µg/mL for 1% GRBC. It also agglutinates chick red blood cells. 2. Measured by its ability to bind with Neu5Aca2-3Galb1-4GlcNAcb-PAA-biotin (01-077) using the Octet
Molecular Mass	The recombinant hemagglutinin of Influenza A virus (A/Shanghai/2/2013(H7N9)) comprises 517 amino acids and has a predicted molecular mass of 57.6 kDa. The apparent molecular mass of the protein is approximately 58 kDa in SDS-PAGE under reducing conditions.
Endotoxin	< 1.0 eu per µg of the protein as determined by the LAL method.
Purity	>90 % as determined by SDS-PAGE
Stability	Samples are stable for up to twelve months from date of receipt at -70°C
Storage	Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	Hardcopy of COA with reconstitution instruction is sent along with the products.

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