

## Product Data Sheet

## HA/Hemagglutinin Protein, H1N1 (Biotinylated, ACP41105, sf9, His)

Cat. No.:	HY-P74039
Synonyms:	HA; Hemagglutinin; HA/Hemagglutinin Protein, H1N1 (A/California/04/2009, sf9, His)
Species:	Virus
Source:	Sf9 insect cells
Accession:	ACP41105 (M1-Q529)
Gene ID:	/
Molecular Weight:	Approximately 59 kDa

PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION	
Background	The Hemagglutinin (HA) protein plays a crucial role in the attachment of virus particles to host cells by binding to sialic acid- containing receptors on the cell surface. This interaction not only induces virion internalization through clathrin-dependent endocytosis but also facilitates an alternative clathrin- and caveolin-independent pathway for about one-third of the virus particles. HA is a Class I viral fusion protein responsible for penetrating the cell cytoplasm by mediating the fusion of the virus particle's membrane with the endosomal membrane. The low pH environment in endosomes triggers an irreversible conformational change in HA2, leading to the release of the fusion hydrophobic peptide. The cooperative action of several trimers is necessary to form a competent fusion pore, highlighting the intricate role of HA in host range restriction and virulence determination.

## Caution: Product has not been fully validated for medical applications. For research use only.

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