

## Product Data Sheet

## HA1/Hemagglutinin Protein, H3N2 (AFM71912, HEK293, His)

Cat. No.:	HY-P74969
Synonyms:	Influenza A H3N2 (A/England/42/1972) Hemagglutinin / HA1 Protein (HEK293, His)
Species:	Virus
Source:	HEK293
Accession:	AFM71912 (M1-I363)
Gene ID:	/
Molecular Weight:	Approximately 39.4 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 HA1 protein is instrumental in the attachment of virus particles to host cells by binding to sialic acid- containing receptors on the cell surface. This attachment triggers virion internalization through either clathrin-dependent endocytosis or a clathrin- and caveolin-independent pathway. HA1 plays a crucial role in determining host range restriction and virulence, functioning as a Class I viral fusion protein that facilitates the penetration of the virus into the cell cytoplasm by mediating the fusion of the endocytosed virus particle's membrane with the endosomal membrane. The low pH environment in endosomes induces an irreversible conformational change in HA2, leading to the release of the fusion hydrophobic peptide. The formation of a competent fusion pore requires the cooperative action of several trimers, underscoring the intricate mechanisms by which HA1 contributes to viral entry and infection.

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

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