

## Non-structural protein 2/NS2 Protein, H1N1 (His)

Cat. No.:	HY-P76448
Synonyms:	Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai) Non-structural Protein 2 / NS2
Species:	Virus
Source:	E. coli
Accession:	P03508 (M1-I121)
Gene ID:	956532
Molecular Weight:	Approximately 13 kDa.

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 20 mM HEPES, 1 mM EDTA, pH 7.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
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	<p>Non-structural protein 2/NS2 Protein assumes a crucial role in the influenza virus life cycle by mediating the nuclear export of encapsidated genomic RNAs, acting as a vital adapter between viral ribonucleoprotein complexes (RNPs) and the host cell's nuclear export machinery. Despite lacking intrinsic RNA-binding activity, NS2 includes a C-terminal M1-binding domain that allows indirect recognition of RNPs bound to the viral protein M1. This indirect recognition mechanism ensures that genomic RNPs are not prematurely exported from the host nucleus before sufficient quantities of viral mRNA and progeny genomic RNA have been synthesized, as protein M1 is limited in the early stages of infection. Moreover, NS2 facilitates the entry of RNPs into the host cytoplasm only when associated with the M1 protein, which guides them to the plasma membrane. Additionally, NS2 may down-regulate viral RNA synthesis when overproduced and interacts with M1, while also potentially interacting with host nucleoporin RAB/HRB and exportin XPO1/CRM1, further emphasizing its intricate role in orchestrating influenza virus replication.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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