# Non-structural protein 1/NS1 Protein, H1N1 (His)

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| **Cat. No.:** | HY-P74684 |
| **Synonyms:** | Influenza A H1N1 (A/Puerto Rico/8/34/Mount Sinai) Non-structural / NS1 Protein (His) |
| **Species:** | Virus |
| **Source:** | E. coli |
| **Accession:** | C8XP22 (D2-V230) |
| **Gene ID:** | / |
| **Molecular Weight:** | Approximately 29 kDa |

## PROPERTIES

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| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, 5% Glycerol, pH 8.0. 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 μg/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

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| **Background** | The Non-structural protein 1/NS1 serves as a multifaceted regulator during viral infection. It exerts control over post-transcriptional processing of cellular pre-mRNA by binding and inhibiting essential cellular proteins, specifically the 30 kDa cleavage and polyadenylation specificity factor/CPSF4 and the poly(A)-binding protein 2/PABPN1. This interference prevents the normal 3'-end processing of cellular pre-mRNAs, leading to the accumulation of unprocessed pre-mRNAs in the host nucleus, effectively shutting down cellular protein synthesis. NS1 also plays a crucial role in evading the cellular antiviral response by inhibiting TRIM25-mediated RIGI ubiquitination, disrupting the activation of type I interferon genes. Additionally, NS1 interferes with the integrated stress response (ISR) by blocking dsRNA binding by EIF2AK2/PKR, inhibiting stress granule formation, and facilitating viral replication. This multifunctional protein further interacts with various cellular components, including TRIM25, EIF2AK2/PKR, CPSF4, IVNS1ABP, and PABPN1, highlighting its intricate involvement in modulating host cell processes to favor viral replication. |

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

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