

**H3 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Wisconsin/67/2005 (H3N2), Recombinant from Baculovirus**

**Catalog No. NR-49237**

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**For research use only. Not for use in humans.**

**Contributor and Manufacturer:**

BEI Resources

**Product Description:**

A recombinant form of the H3 hemagglutinin (HA) protein from influenza A virus, A/Wisconsin/67/2005 (H3N2) containing a C-terminal histidine tag was produced in Sf9 insect cells using a baculovirus expression vector system and was purified by nickel affinity chromatography. The predicted protein sequence is shown in Figure 1. The HA protein includes a C-terminal peptide containing a thrombin cleavage site, trimerizing (foldon) domain and octa-histidine tag.<sup>1,2</sup> The full-length HA precursor protein is 566 residues (GenPept: [ABW80978](#)).

**Material Provided:**

Each vial contains 50 to 150 µg of purified recombinant HA protein in PBS (pH 7.4) with 50% glycerol. The protein content in µg and the concentration, expressed as micrograms per milliliter, are shown on the Certificate of Analysis.

**Packaging/Storage:**

NR-49237 was packaged aseptically, in screw-capped plastic cryovials. This product is provided on dry ice and should be stored at -20°C immediately upon arrival.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: H3 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Wisconsin/67/2005 (H3N2), Recombinant from Baculovirus, NR-49237.”

**Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. [Biosafety in Microbiological and Biomedical Laboratories](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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**References:**

1. Stevens, J., et al. “Structure of the Uncleaved Human H1 Hemagglutinin from the Extinct 1918 Influenza Virus.” [Science](#) 303 (2004): 1866-1870. PubMed: 14764887.
2. Stevens, J., et al. “Structure and Receptor Specificity of the Hemagglutinin from an H5N1 Influenza Virus.” [Science](#) 312 (2006): 404-410. PubMed: 16543414.

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Figure 1: Predicted Protein Sequence

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1      ADPQKLPGND  NSTATLCLGH  HAVPNGTIVK  TITNDQIEVT  NATELVQSSS
51     TGGICDSPHQ  ILDGENTLI   DALLGDPQCD  GFQNKKWDLF  VERSKAYSNC
101    YPYDVPDYAS  LRSLVASSGT  LEFNDEFNW   TGVTONGTSS  SCKRRSNNFS
151    FSRLNWLTHL  KFKYPALNVT  MPNNEKFDKL  YIWGVHHPVT  DNDQIFLYAQ
201    ASGRITVSTK  RSQOTVIPNI  GSRPRIRNIP  SRISIIYWTIV  KPGDILLINS
251    TGNLIAPRGY  FKIRSGKSSI  MRSDAPIGKC  NSECITPNGS  IPNDKPFQNV
301    NRITYGACPR  YVKQNTLKLA  TGMNRVPEKQ  TRGIFGAIAG  FIENGWEGMV
351    DGWYGFRHQN  SEGIGQAADL  KSTQAAINQI  NGKLNRLIGK  TNEKFHQIEK
401    EFSEVEGRIQ  DLEKYVEDTK  IDLWSYNAEL  LVALENQHTI  DLTDSEMKNL
451    FERTKKQLRE  NAEDMGNGCF  KIYHKCDNAC  IGSIRNGTYD  HDVYRDEALN
501    NRFQIKGVIG  RLVPRGSPGS  GYIPEAPRDG  QAYVRKDGEW  VLLSTFLGHH
551    HHHHHH
  
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Plasmid-derived amino acids – Residues 1 to 3, 509 to 511, 518, 548

HA protein – **Residues 4 to 508** [represents amino acid residues 17 to 521 of the native HA protein (GenPept: [ABW80978](#))]

Thrombin cleavage sequence – Residues 512 to 517

Trimerizing domain – Residues 519 to 547

Octa-histidine Tag – Residues 549 to 556