

**HA1 Hemagglutinin (HA) Protein with N-Terminal Histidine Tag from Influenza Virus, A/Brisbane/59/2007 (H1N1), Recombinant from Baculovirus**

**Catalog No. NR-13411**

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

**Contributor and Manufacturer:**

BEI Resources

**Product Description:**

The HA1 form of the H1 hemagglutinin (HA) protein from influenza virus A/Brisbane/59/2007 (H1N1) containing an N-terminal histidine tag was produced in Sf9 insect cells using a baculovirus expression vector system and was purified by immobilized metal affinity chromatography under denaturing conditions.<sup>1</sup> The protein was re-folded into a soluble form but may aggregate upon storage. The full-length H1 HA precursor protein is 565 residues (GenPept: [ACA28844](#)). The predicted protein sequence is shown in Figure 1. NR 13411 has a theoretical molecular weight of 41 kilodaltons. Sequence information is available for Influenza A virus A/Brisbane/59/2007 (H1N1) at the [Bacterial and Viral Bioinformatics Resource Center](#) (BV-BRC).

**Material Provided:**

Each vial contains approximately 20 to 100 µg of purified recombinant HA1 protein in 50 mM sodium phosphate buffer (pH 7.4) containing 0.01% Tergitol NP-9 and 10% glycerol. The concentration, expressed as mg/mL, is shown on the Certificate of Analysis.

**Packaging/Storage:**

NR-13411 was packaged aseptically, in screw-capped plastic cryovials. This product is provided on refrigerated bricks and should be stored at 2°C to 8°C immediately upon arrival. Do not freeze.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: HA1 Hemagglutinin (HA) Protein with N-Terminal Histidine Tag from Influenza Virus, A/Brisbane/59/2007 (H1N1), Recombinant from Baculovirus, NR-13411."

**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.

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**References:**

1. Nwe, N., et al. "Expression of Hemagglutinin Protein from the Avian Influenza Virus H5N1 in a Baculovirus/Insect Cell System Significantly Enhanced by Suspension Culture." [BMC Microbiol.](#) 6 (2006): 16. PubMed: 16504108.

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**Figure 1: Predicted Protein Sequence**

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1  MSYYHHHHHH DYDIPTTENL YFQGITSLYK KAGSAAAPFT MDTICIGYHA
51  NNSTDVDTV LEKNVTVTHS VNLENSHNG KLCLLKGIAF LQLGNCVAG
101 WILGNPECEL LISKESWSYI VEKPNPENG TYPGHFADYE ELREQLSSVS
151 SFERFEIFPK ESSWPNHTVT GVSASC SHNG ESSFYRNLLW LTGKNGLYPN
201 LSKSYANNKE KEVLVLWGVH HPPNIGDQKA LYHTENAYVS VVSSHYSRKF
251 TPEIAKRPKV RDQEGRINYY WTLLEPGDTI IFEANGNLIA PRYAFALSRG
301 FGSGIINSNA PMDKCDAKCQ TPQGAINSSL PFQNVHPVTI GECPKYVRSA
351 KLRMVTGLRN IPSIQSR
    
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Plasmid-derived amino acids – Residues 1 to 4, 11 to 41

HA1 protein – Residues 42 to 367 [represents amino acid residues 18 to 343 of the native HA1 protein (GenPept: [ACA28844](#))]

Hexa-histidine Tag – Residues 5 to 10