

H3 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Perth/16/2009 (H3N2), Recombinant from Baculovirus

Catalog No. NR-49734

This reagent is the tangible property of the U.S. Government.

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/Perth/16/2009 (H3N2) containing a C-terminal octa-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 eight histidine residues.^{1,2} The full-length HA precursor protein is 566 residues (GenPept: [ACS71642](#)). NR-49734 has a theoretical molecular weight of 62,320 daltons. [NR-49734 does not exhibit hemagglutination activity.](#)

Material Provided:

Each vial contains 100 µg to 200 µg of NR-49734 in 50 mM Tris-HCl (pH 8) with 100 mM NaCl and 15% glycerol. The concentration, expressed as mg/mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-49734 was packaged aseptically, in screw-capped plastic cryovials. This product is provided on dry ice and should be stored at -80°C immediately upon arrival. Freeze-thaw cycles should be avoided.

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/Perth/16/2009 (H3N2), Recombinant from Baculovirus, NR-49734.”

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.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

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.

ATCC® is a trademark of the American Type Culture Collection.



Figure 1: Predicted Protein Sequence

```

1  ADPMQKLPGN DNSTATLCLG HHAVPNGTIV KTITNDQIEV TNATELVQSS
51  STGEICDSPH QILDGKNCTL IDALLGDPQC DGFQNKKWDL FVERSKAYSN
101 CYPYDVDPYA SLRSLVASSG TLEFNNEFSN WTGVTQNGTS SACIRRSKNS
151 FFSRLNWLTH LNFKYPALNV TMPNNEQFDK LYIWGVHHPG TDKDQIFLYA
201 QASGRITVST KRSQQTVSPN IGSRPRVRNI PSRISIWYTI VKPGDILLIN
251 STGNLIAPRG YFKIRSGKSS IMRSDAPIGK CNSECITPNG SIPNDKPFQN
301 VNRITYGACP RYVKQNTLKL ATGMRNVPEK QTRGIFGAIA GFIENGWEGM
351 VDGWYGFRHQ NSEGRGQAAD LKSTQAAIDQ INGKLNRLIG KTNEKFHQIE
401 KEFSEVEGRI QDLEKYVEDT KIDLWSYNAE LLVALENQHT IDLTDSEMNK
451 LFEKTKKQLR ENAEDMGNGC FKIYHKCDNA CIGSIRNGTY DHDVYRDEAL
501 NNRFAQIKSGR LVPRGSPGSG YIPEAPRDGQ AYVRKDGEWV LLSTFLGHHH
551 HHHHH
  
```

Plasmid-derived amino acids – Residues 1 to 4, 508 to 510, 517, 547

HA protein – Residues 5 to 507 [represents amino acid residues 17 to 519 of the native HA protein (GenPept: [ACS71642](#))]

Thrombin cleavage sequence – Residues 511 to 516

Trimerizing domain – Residues 518 to 546

Octa-histidine Tag – Residues 548 to 555