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

Catalog No. NR-49734

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Contributor and Manufacturer:

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Product Description:

A recombinant form of the H3 hemagglutinin (HA) protein from influenza A virus, A/Perth/16/2009 (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 Table 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: AHX37629). Note that NR-49734 does not exhibit hemagglutination activity.

Material Provided:

Each vial contains 50 µg to 150 µg of purified recombinant HA protein in 50 mM Tris-HCl (pH 8) with 100 mM NaCl and 50% glycerol. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

Purified recombinant HA protein was packaged aseptically, in screw-capped plastic cryovials. This product is provided on ice bricks and should be stored at -80°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/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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Stevens, J., et al. "Structure of the Uncleaved Human H3 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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Table 1 – Predicted Protein Sequence

1	ADPMQKLPGN DNSTATLCLG HHAVPNGTIV KTITNDQIEV TNATELVQSS
51	STGEICDSPH QILDGKNCTL IDALLGDPQC DGFQNKKWDL FVERSKAYSN
101	CYPYDVPDYA SLRSLVASSG TLEFNNESFN WTGVTQNGTS SACIRRSKNS
151	FFSRLNWLTH LNFKYPALNV TMPNNEQFDK LYIWGVHHPG TDKDQIFLYA
201	QASGRITVST KRSQQTVSPN IGSRPRVRNI PSRISIYWTI 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	NNRFQIKSGR LVPRGSPGSG YIPEAPRDGQ AYVRKDGEWV LLSTFLGHHH
551	HHHHH

Plasmid-derived amino acids – Residues 1 to 4, 508 to 510, 517, 547
HA protein **– Residues 4 to 507***
Thrombin cleavage sequence – Residues 511 to 516
Trimerizing domain – Residues 518 to 546
His Tag – Residues 548 to 555

*This represents amino acid residues 17-519 of the A/Perth/16/2009 (H3N2) HA protein (GenPept: AHX37629).

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