

H1 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/New Caledonia/20/1999 (H1N1), Recombinant from Baculovirus

Catalog No. NR-48873

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Contributor and Manufacturer:

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Product Description:

A recombinant form of the H1 hemagglutinin (HA) protein from influenza A virus, A/New Caledonia/20/1999 (H1N1) 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 565 residues (GenPept: AAP34324).

Material Provided:

Each vial contains 50 µg to 150 µg of purified recombinant HA protein in D-PBS (pH 7.4) with 50% glycerol. The concentration, expressed as µg 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 blue 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: H1 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/New Caledonia/20/1999 (H1N1), Recombinant from Baculovirus, NR-48873.”

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 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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Table 1 – Predicted Protein Sequence

1	ADPDTICIGY	HANNSTDTVD	TVLEKNVTVT	HSVNLEDSDH	NGKLCLLKGI
51	APLQLGNCSV	AGWILGNPEC	ELLISKESWS	YIVETPNPEN	GTCYPGYFAD
101	YEELREQLSS	VSSFERFEIF	PKESSWPNHT	VTGVSASCSH	NGKSSFYRNL
151	LWLTGKNGLY	PNLSKSYVNN	KEKEVLVLWG	VHHPPNIGNQ	RALYHTENAY
201	VSVVSSHYSR	RFTPEIAKRP	KVRDQEGRIN	YYWTLLEPGD	TIIFEANGNL
251	IAPWYAFALS	RFGSGGIITS	NAPMDECDAK	CQTPQGAINS	SLPFQNVHPV
301	TIGECPKYVR	SAKLRMVTGL	RNIPSIQSRG	LFGAIAGFIE	GGWTGMVDGW
351	YGYHHQNEQG	SGYAADQKST	QNAINGITNK	VNSVIEKMNT	QFTAVGKEFN
401	KLERRMENLN	KKVDDGFLDI	WTYNAELLVL	LENERTLDFH	DSNVKNLYEK
451	VKSQKNNNAK	EIGNGCFEFY	HKCNNECMES	VKNGTYDYPK	YSEESKLNRE
501	KIDGVIGRLV	PRGSPGSGYI	PEAPRDGOAY	VRKDGEWVLL	STFLGHHHHH
551	HHH				

Plasmid-derived amino acids – Residues 1 to 3, 506 to 508, 515, 545

HA protein – **Residues 4 to 505** (represents amino acid residues 18-519 of the A/New Caledonia/20/1999 (H1N1) HA protein)

Thrombin cleavage sequence – Residues 509 to 514

Trimerizing domain – Residues 516 to 544

His Tag – Residues 546 to 553