

H1 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Puerto Rico/8/1934 (H1N1), Recombinant from Baculovirus

Catalog No. NR-19240

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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/Puerto Rico/8/1934 (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, as described for the 1918 pandemic virus.¹ The full-length HA precursor protein is 562 residues (GenPept: AEX92873).

Material Provided:

Each vial contains approximately 50 to 100 µg of purified recombinant HA protein in PBS (pH 7.4) with 50% glycerol. The protein content in µg and the concentration, expressed as µg/mL, are 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/Puerto Rico/8/1934 (H1N1), Recombinant from Baculovirus, NR-19240."

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 and 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 | <u>ADPGYLLEDT</u> ICIGYHANNSTDTVDTVLEKNVTVTHSVNL LEDSHNGKLC |
| 51 | RLKGIAPLQL GKCNIAGWLL GNPECDPLLP VRSWSYIVET PNSENGICYP |
| 101 | GDFIDYEELR EQLSSVSSFERFEIFPKESS WPNHNTNGVT AACSHGKSS |
| 151 | FYRNLLWLTE KEGSYPKLN SYVNKKGKEV LVLWGIHPP NSKEQQNLYQ |
| 201 | NENAYVSVVT SNYNRRFTPE IAERPQVRDQ AGRMNYWTL LKPGDTIIFE |
| 251 | ANGNLIAPMY AFALSRGFGS GIITSNASMHECNTKCQTPL GAINSSLPYQ |
| 301 | NIHPVTIGEC PKYVRSKLR MVTGLRNIPS IQSRGLFGAI AGFIEGGWTG |
| 351 | MIDGWYGYHH ONEQSGYAA DQKSTONAIN GITNKVNTVI EKMNIQFTAV |
| 401 | GKEFNKLEKR MENLNKKVDD GFLDIWTYNA ELLVLENER TLDHFDSNVK |
| 451 | NLYEKVKSQKNNAKEI GNG CFEFYHKCDN ECMESVRNGT YDYPKYSEES |
| 501 | <u>KLNREKVDGV</u> <u>RCRSSGRLVP</u> <u>RGSPGSGYIP</u> <u>EAPRDGQAYV</u> <u>RKDGEWVLLS</u> |
| 551 | <u>TFLG</u> HHHHHH HH |

Plasmid-derived amino acids – Residues 1 to 8, 511 to 517, 524, 554

HA protein – **Residues 9 to 510***

Thrombin cleavage sequence – Residues 518 to 523

Trimerizing domain – Residues 525 to 553

His Tag – Residues 555 to 562

*This represents amino acid residues 18-519 of the Influenza A/Puerto Rico/8/1934 (H1N1) HA protein.