

H5 Hemagglutinin (HA) Protein from Influenza Virus, A/Hong Kong/213/2003 (H5N1), Recombinant from baculovirus

Catalog No. NR-658

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Contributor and Manufacturer:

NIH - Influenza Pandemic Preparedness in Asia Program

Product Description:

Recombinant H5 hemagglutinin (HA) protein from influenza virus A/Hong Kong/213/2003 (H5N1)¹⁻³ was produced in Sf9 insect cells using a baculovirus expression vector system.^{4,5} Recombinant H5 HA protein was purified using conventional chromatographic techniques.

Material Provided:

Each vial contains approximately 0.25 mL of purified recombinant H5 HA protein in 10 mM sodium phosphate (pH 7.2), 150 mM sodium chloride, and 0.01% Tween-20. The concentration, expressed as µg/mL, is shown on the Certificate of Analysis.

Packaging/Storage:

Purified recombinant H5 HA protein was packaged aseptically in screw-capped plastic cryovials. This product is provided on wet ice and should be stored at 2 to 8°C immediately upon arrival.

Functional Activity:

NR-658 is weakly active in a hemagglutination assay with 0.5% chicken red blood cells. Prior to vialing, the bulk form of NR-658 possessed a sufficient hemagglutination titer to allow antigenic specificity testing using a serological hemagglutination inhibition (HI) assay. The HI results showed that the bulk H5 HA protein does not react with reference antisera to any of the other HA subtypes. Post-vialing ELISA experiments demonstrated that NR-658 has reactivity with reference antisera within the H5 HA subtype. Analysis by SDS-PAGE indicates that the purified recombinant H5 HA protein preparation may be unstable over time. **Applications:** ELISA, SDS-PAGE, Western blot, antiserum preparation (immunogen).

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: H5 Hemagglutinin (HA) Protein from Influenza Virus, A/Hong Kong/213/2003 (H5N1), Recombinant from baculovirus, NR-658."

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/bmb15/index.htm.

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NR-658 is claimed in U.S. Patent Numbers 5,762,939 and 6,103,526, and the continuations, continuations-in-part, reissues and foreign counterparts thereof. Commercial use also requires a license from Protein Sciences Corporation, Meriden, Connecticut. For information call 203-686-0800.

References:

- Guan, Y., et al. "H5N1 Influenza: A Protean Pandemic Threat." Proc. Natl. Acad. Sci. U.S.A. 101 (2004): 8156-8161. PubMed: 15148370. GenBank: AY575870.

2. Hoffmann, E., et al. "Role of Specific Hemagglutinin Amino Acids in the Immunogenicity and Protection of H5N1 Influenza Virus Vaccines." Proc. Natl. Acad. Sci. U.S.A. 102 (2005): 12915–12920. PubMed: 16118277.
3. World Health Organization Global Influenza Program Surveillance Network. "Evolution of H5N1 Avian Influenza Viruses in Asia." Emerg. Infect. Dis. 11 (2005): 1303–1305.
4. Smith, G. E., et al. Method for Producing Influenza Hemagglutinin Multivalent Vaccines Using Baculovirus. MG-PMC, LLC, assignee. U.S. Patent 5,762,939. 09 Jun. 1998.
5. Smith, G. E., et al. *Spodoptera frugiperda* Single Cell Suspension Cell Line in Serum-Free Media, Methods of Producing and Using. Protein Sciences Corporation, assignee. U.S. Patent 6,103,526. 15 Aug. 2000.

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