

Certificate of Analysis for NR-15258

H1 Hemagglutinin (HA) Protein from Influenza Virus, A/California/04/2009 (H1N1), **Recombinant from Baculovirus**

Catalog No. NR-15258

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

Product Description: H1 hemagglutinin (HA) protein from influenza virus A/California/04/2009 (H1N1) is a full-length glycosylated recombinant protein that was produced in Sf9 insect cells using a baculovirus expression vector system.¹ Recombinant H1 HA protein was purified under conditions that preserve its biological activity and tertiary structure.

Lot: 58726487 Manufacturing Date: JUL2009

| TEST | SPECIFICATIONS | RESULTS |
|---|--|---|
| SDS-PAGE (Coomassie Blue densitometer scan) | Report results | HA0, HA1 and HA2 account for > 90% of total density |
| Concentration by Bicinchoninic Acid Protein Assay | Report results | 300 μg/mL (JUL2009) |
| Functional Activity ² Hemagglutination titer using 0.5% chicken red blood cells Western blot analysis ³ ELISA | Report results Report results Report results | No hemagglutination activity Reactive Reactive within the H1 HA subtype |
| Sterility | 0.22 µm sterile filtered | 0.22 µm sterile filtered |
| Endotoxin Content | Report results | < 20 EU/mL |

¹U.S. Patent Numbers 5,762,939 and 6,103,526

Date: 24 JAN 2014

Signature: C. Young

Title: Technical Manager, BEI Authentication or designee

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the contractor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

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²Serum samples were incubated overnight with receptor-destroying enzyme and heated for 30 minutes at 56°C.

³Performed on bulk material prior to vialing