

Certificate of Analysis for NR-44074

H1 Hemagglutinin (HA) Protein from Influenza Virus, A/California/07/2009 (H1N1)pdm09, Recombinant from Baculovirus

Catalog No. NR-44074

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

Product Description: The H1 hemagglutinin (HA) protein from influenza virus A/California/07/2009 (H1N1)pdm09 is a full-length glycosylated recombinant protein that was produced in *expres*SF+[®] insect cells using a baculovirus expression vector system.¹ The recombinant H1 HA protein was purified using conventional chromatographic techniques.

Lot: 61941877 Manufacturing Date: 26MAR2013

TEST	SPECIFICATIONS	RESULTS
SDS-PAGE (Coomassie Blue Densitometer Scan)	Report results	HA0 band accounts for > 90% of total density
Protein Concentration by Bicinchoninic Acid Protein Assay	Report results	617 μg per mL (MAR2013)
Functional Activity Hemagglutination titer using 0.5% chicken red blood cells	Report results	1:320
Hemagglutination inhibition (HI) assay ² using polyclonal antiserum to 16 HA subtypes	Report results	Specific for H1 HA subtype ³
HI titers ² using polyclonal antiserum to H9 HA subtype A/California/04/2009 (H1N1)pdm09 goat antiserum A/California/04/2009 (H1N1)pdm09 ferret antiserum	Report results Report results	1:160 1:320
HI titers ² using monoclonal antibody to H9 HA subtype A/California/04-2/2009 (H1N1)pdm09 antibody A/California/04-9/2009 (H1N1)pdm09 antibody	Report results Report results	1:12800 1:6400
Sterility	0.22 µm filter-sterilized	0.22 µm filter-sterilized
Endotoxin	Report results	< 1.25 EU per mL

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

³Low level reactivity (HI titer 1:40) was observed with antisera to other HA subtypes

Date: 01 MAY 2014

Signature: Dorothy C. Young

Title: Technical Manager, BEI Authentication or designee

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