

**H1 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Czech Republic/32/2011 (H1N1)pdm09, Recombinant from Baculovirus**

**Catalog No. NR-42486**

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

**Product Description:** A recombinant form of the H1 hemagglutinin (HA) protein from influenza virus A/Czech Republic/32/2011 (H1N1)pdm09 containing a C-terminal histidine tag was produced by baculovirus infection of *Trichoplusia ni* insect larvae and purified by standard chromatographic methods.

**Lot: 61376133**

**Manufacturing Date: 25JAN2013**

| TEST   | SPECIFICATIONS   | RESULTS   |
|--|--|---|
| <b>SDS-PAGE (Coomassie Blue Densitometry)</b>                          | HA bands account for > 90% of total density  | HA bands account for 94% of total density (Figure 1)                                |
| <b>Concentration by Bicinchoninic Acid Protein Assay</b>               | Report results   | 0.47 mg per mL  |
| <b>Final Product</b><br>Quantity per vial                              | 0.1 mg (± 10%) per vial  | 0.1 mg (± 10%) per vial   |
| <b>Hemagglutination Titer with 0.5% Chicken Red Blood Cells</b>        | Report results   | 2048 <sup>1</sup>   |
| <b>Western Blot</b><br>Anti-histidine monoclonal antibody <sup>2</sup> | Report results   | Reactive (Figure 2)   |
| <b>Demonstration of Protein Glycosylation</b>                          | Size reduction of protein observed on SDS-PAGE when treated with de-glycosylating enzyme N-glycosidase (PNGaseF) | Size reduction of protein observed on SDS-PAGE when treated with PNGaseF (Figure 3) |
| <b>Filtration</b>  | 0.22 µm filtered   | 0.22 µm filtered  |
| <b>Bioburden</b>   | Report results   | < 1 colony-forming unit per mL  |
| <b>Endotoxin Content</b>   | Report results   | < 0.05 EU per mL  |

<sup>1</sup>Highest dilution of protein that showed hemagglutination activity

<sup>2</sup>Novagen® 70796-4 (IgG<sub>1</sub>)

**Date:** 25 APR 2013

**Signature:** 

**Title:** Technical Manager, BEI Authentication or designee

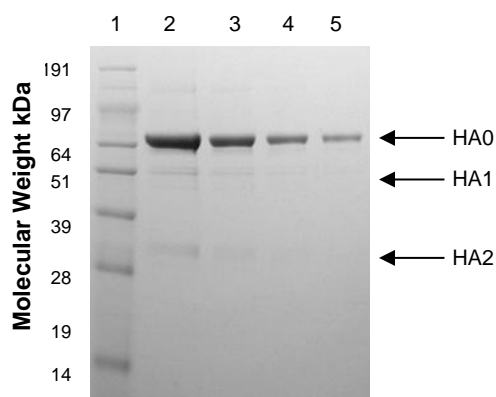
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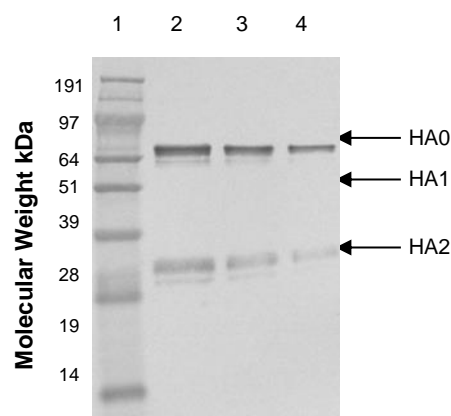


Figure 1 – SDS-PAGE



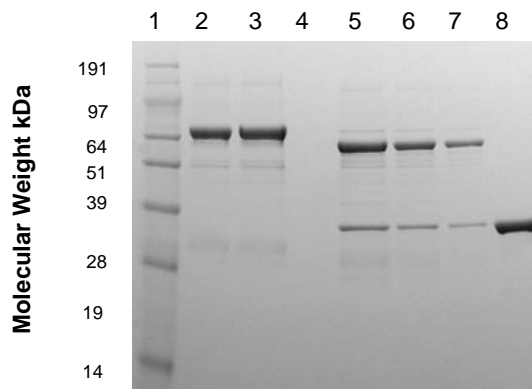
Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
 Lane 2: 5.0 µg NR-42486  
 Lane 3: 2.5 µg NR-42486  
 Lane 4: 1.25 µg NR-42486  
 Lane 5: 0.63 µg NR-42486

Figure 2 – Western Blot with Monoclonal Anti-Histidine Tag



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
 Lane 2: 1.0 µg NR-42486  
 Lane 3: 0.5 µg NR-42486  
 Lane 4: 0.25 µg NR-42486

Figure 3 – Glycan Analysis



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
 Lane 2: 2.5 µg NR-42486  
 Lane 3: 2.5 µg NR-42486 with digest mixture without PNGaseF  
 Lane 4: Blank  
 Lane 5: 2.5 µg NR-42486, PNGaseF Digest  
 Lane 6: 1.25 µg NR-42486, PNGaseF Digest  
 Lane 7: 0.63 µg NR-42486, PNGaseF Digest  
 Lane 8: 1.5 µg PNGaseF Enzyme