

# H1 Hemagglutinin (HA) Protein with C-Terminal Histidine Tag from Influenza Virus, A/Ghom/198/2010 (H1N1)pdm09, Recombinant from Baculovirus

## Catalog No. NR-41638

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/Ghom/198/2010 (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:** 61223218

**Manufacturing Date:** 15NOV2012

TEST	SPECIFICATIONS	RESULTS
<b>SDS-PAGE (Coomassie Blue Densitometry)</b>	HA bands (HA0, HA1, HA2) account for > 90% of total density	HA bands (HA0, HA1, HA2) account for 99% of total density (Figure 1)
<b>Concentration by Bicinchoninic Acid Protein Assay</b>	Report results	1.02 mg per mL
<b>Final Product</b> Quantity per vial	0.1 mg ( $\pm$ 10%) per vial	0.1 mg ( $\pm$ 10%) per vial
<b>Hemagglutination Titer with 0.5% Chicken Red Blood Cells</b>	Report results	1024 <sup>1</sup>
<b>Western Blot</b> Anti-histidine monoclonal antibody <sup>2</sup>	Report results	Reactive with HA0 and HA2 (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 $\mu$ m filtered	0.22 $\mu$ m 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:** 14 MAY 2013

**Signature:**

*Dorothy C. Young*

**Title:**

Technical Manager, BEI Authentication or designee

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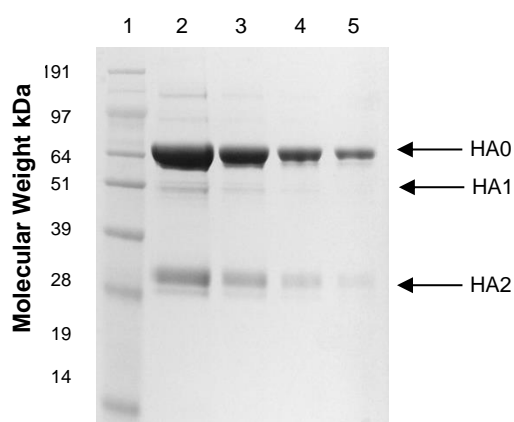
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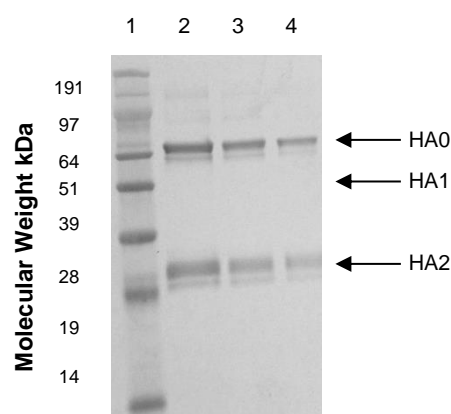
# Certificate of Analysis for NR-41638

**Figure 1 – SDS-PAGE**



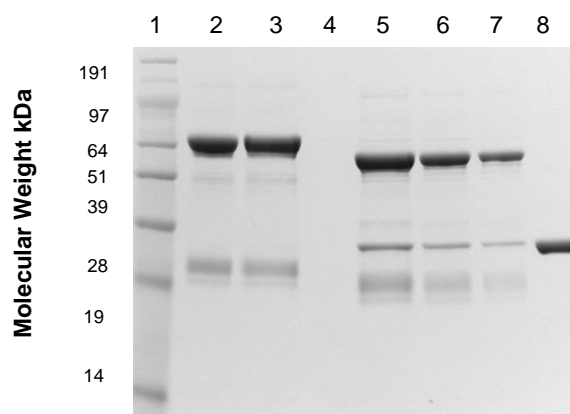
Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
Lane 2: 10.0 µg NR-41638  
Lane 3: 5.0 µg NR-41638  
Lane 4: 2.5 µg NR-41638  
Lane 5: 1.25 µg NR-41638

**Figure 2 – Western Blot with Monoclonal Anti-Histidine Tag**



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
Lane 2: 1.0 µg NR-41638  
Lane 3: 0.5 µg NR-41638  
Lane 4: 0.25 µg NR-41638

**Figure 3 – Glycan Analysis**



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)  
Lane 2: 5 µg NR-41638  
Lane 3: 5 µg NR-41638 with digest mixture without PNGaseF  
Lane 4: Blank  
Lane 5: 5 µg NR-41638, PNGaseF Digest  
Lane 6: 2.5 µg NR-41638, PNGaseF Digest  
Lane 7: 1.25 µg NR-41638, PNGaseF Digest  
Lane 8: PNGaseF