

H1 Hemagglutinin (HA) Protein with N-Terminal Histidine Tag from Influenza Virus, A/Toulon/1173/2011 (H1N1)pdm09, Recombinant from Baculovirus

Catalog No. NR-34587

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/Toulon/1173/2011 (H1N1)pdm09 was produced by baculovirus infection of *Trichoplusia ni* insect larvae and purified by standard chromatographic methods.

Lot: 60730259

Manufacturing Date: 11JUN2012

TEST (Required)	SPECIFICATIONS	RESULTS
SDS-PAGE (Coomassie Blue Densitometry)	HA bands (HA0, HA1, HA2) account for > 90% of total density	HA bands (HA0, HA1, HA2) account for 99% of total density (Figure 1)
Concentration by Bicinchoninic Acid Protein Assay	Report results	1.08 mg per mL
Final Product Quantity per vial	0.1 mg (± 10%) per vial	0.1 mg (± 10%) per vial
Hemagglutination Titer with 0.5% Chicken Red Blood Cells	Report results	< 80 ¹
Western Blot Anti-histidine monoclonal antibody ²	Report results	Reactive with HA0 (Figure 2)
Demonstration of Protein Glycosylation	Size reduction of protein observed on SDS-PAGE when treated with de-glycosylating enzymes N-glycosidase F	Size reduction of protein observed on SDS-PAGE when treated with de-glycosylating enzyme N-glycosidase F (Figure 3)
Filtration	0.22 µm filtered	0.22 µm filtered
Bioburden	Report results	< 1 colony-forming unit per mL
Endotoxin Content	Report results	< 0.1 EU per mL

¹Highest dilution of protein that showed hemagglutination activity

²Novagen® 70796-4 (IgG₁)

Date: 14 MAY 2013

Signature: 

Title: Technical Manager, BEI Authentication or designee

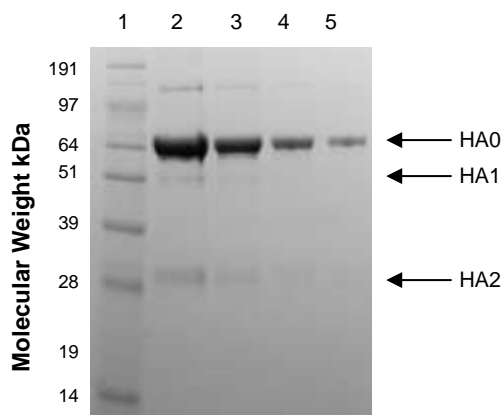
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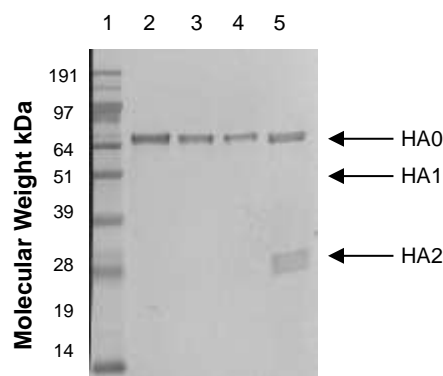


Figure 1 – SDS-PAGE



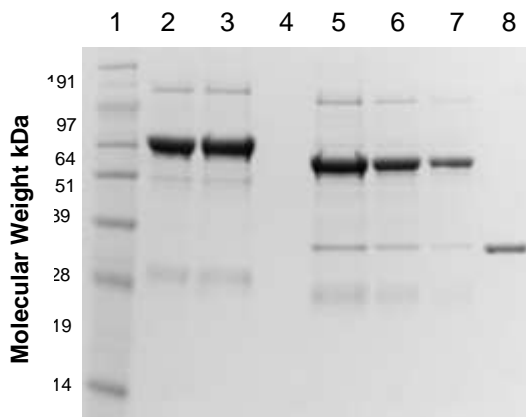
Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)
 Lane 2: 10.0 µg NR-34587
 Lane 3: 5.0 µg NR-34587
 Lane 4: 2.5 µg NR-34587
 Lane 5: 1.25 µg NR-34587

Figure 2 - Western Blot with Monoclonal Anti-Histidine Tag



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)
 Lane 2: 1.0 µg NR-34587
 Lane 3: 0.5 µg NR-34587
 Lane 4: 0.25 µg NR-34587
 Lane 5: 0.5 µg positive control

Figure 3 – Glycan Analysis



Lane 1: SeeBlue® Plus2 MW marker (Invitrogen™ LC5925)
 Lane 2: 5 µg NR-34587
 Lane 3: 5 µg NR-34587 Neg. PNGaseF
 Lane 4: Blank
 Lane 5: 5 µg NR-34587, PNGaseF Digest
 Lane 6: 2.5 µg NR-34587, PNGaseF Digest
 Lane 7: 1.25 µg NR-34587, PNGaseF Digest
 Lane 8: PNGaseF Enzyme