Certificate of Analysis for NR-42002

N1 Neuraminidase (NA) Protein with N-Terminal Histidine Tag from Influenza Virus, A/Puerto Rico/8/1934 (H1N1), Recombinant from Baculovirus

Catalog No. NR-42002

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

Product Description:

A recombinant form of the N1 neuraminidase (NA) protein from influenza A virus A/Puerto Rico/8/1934 (H1N1) containing an N-terminal histidine tag was produced in *Spodoptera frugiperda* Sf9 cells using a baculovirus expression vector system and purified by nickel affinity chromatography, and vialed in 10 mM Tris-HCl (pH 7.5) with 250 mM NaCl, 125 mM Imidazole and 50% glycerol.

Lot: 70075700 **Manufacturing Date: 11JUL2025**

TEST	SPECIFICATIONS	RESULTS
Appearance	Clear and colorless	Clear and colorless
SDS-PAGE Analysis	Protein band of interest represents > 90% of total staining intensity	The dominant band of ~ 50 kDa accounts for 96.4% of total staining intensity (Figure 1)
Concentration by Bradford Assay[1]	Report results	0.03 mg/mL
Vial Contents		
Quantity per vial	Report results	6 µg
Volume per vial	Report results	200 µL
Identification by Western Blot		
Monoclonal anti-histidine tag[2]	Reactive	Reactive (Figure 2A)
Polyclonal anti-N1 NA[3]	Reactive	Reactive (Figure 2B)
Functional Activity		
Neuraminidase activity in a fluorescent enzymatic assay[4]	Report results	2.76 x 10^9 relative fluorescence units/hour/mg protein
Endotoxin Content (Limulus Amoebocyte Lysate Assay)	Report results	< 166.6 EU/mg
Filtration	0.2 µm filter-sterilized	0.2 µm filter-sterilized

[1]Using bovine serum albumin (BSA) as a standard

[2]Using a 1:2000 dilution of mouse monoclonal anti-histidine (R&D Systems MAB050) as primary antibody and a 1:1000 dilution of HRP-conjugated anti-mouse IgG (R&D Systems HAF007) as secondary antibody.

[3]Using a 1:1000 dilution of goat polyclonal anti-NA (BEI Resources NR-3136) as primary antibody and a 1:1000 dilution of HRP-conjugated anti-goat IgG (R&D Systems HAF109) as secondary antibody.

[4]Using serial dilutions of NR-42002 and 2'-(4-methylumbelliferyl)-α-D-N-acetylneuraminic acid (4-MUNANA), as described in Wetherall, N. T., et al. "Evaluation of Neuraminidase Enzyme Assays Using Different Substrates to Measure Susceptibility of Influenza Virus Clinical Isolates to Neuraminidase Inhibitors: Report of the Neuraminidase Inhibitor Susceptibility Network." J. Clin. Microbiol. 41 (2003): 742-750. PubMed: 12574276.

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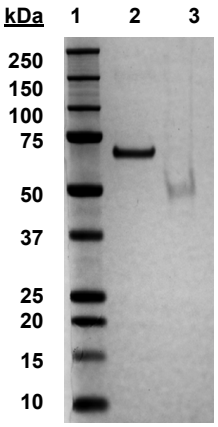
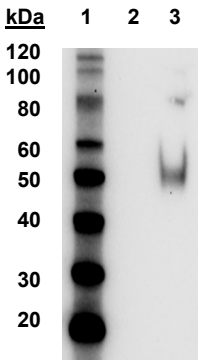
Figure 1: SDS-PAGE Analysis



Lane 1: Precision Plus Protein™ Standard
Lane 2: BSA (0.5 µg)
Lane 3: NR-42002 (0.5 µg)

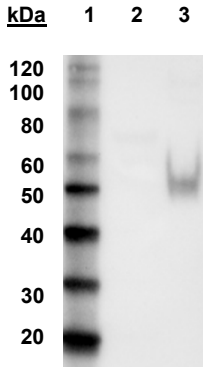
Figure 2: Western Blot Analysis

A: Monoclonal Anti-Histidine Tag



Lane 1: MagicMark™ XP Protein Standard
Lane 2: BSA (0.5 µg)
Lane 3: NR-42002 (0.5 µg)

B: Polyclonal Anti-NA



Lane 1: MagicMark™ XP Protein Standard
Lane 2: BSA (0.5 µg)
Lane 3: NR-42002 (0.5 µg)

/Sonia Bjorum Brower/
Sonia Bjorum Brower 13 NOV 2025
Technical Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected 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.

Support Provided by NIAID

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