

SUPPORTING INFECTIOUS DISEASE RESEARCH

Product Information Sheet for NR-44082

N9 Neuraminidase (NA) Protein from Influenza Virus, A/Anhui/1/2013 (H7N9), Recombinant from Baculovirus

Catalog No. NR-44082

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

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

A recombinant form of the N9 neuraminidase (NA) protein from influenza A virus, A/Anhui/1/2013 (H7N9)1 was produced in Sf9 insect cells using a baculovirus expression vector system. The predicted ectodomain coding region of the NA gene was fused to a synthetic gene segment encoding an N-terminal six histidine tag followed by a vasodilator-stimulated tetramerization domain from phosphoprotein (VASP) and a thrombin cleavage site. 2,3 The protein was purified by nickel affinity chromatography and then treated with thrombin to remove the tetramerization domain and the histidine tag. The thrombin-treated protein was further purified prior to final formulation. The full-length NA precursor protein is 465 residues (GISAID EpiFlu: EPI439509).

Material Provided:

Each vial contains 25 μg to 75 μg of purified recombinant NA protein in PBS (pH 7.4). The protein content in μg and the concentration, expressed as μg per mL, are shown on the Certificate of Analysis.

Packaging/Storage:

Purified recombinant NA protein was packaged aseptically in screw-capped plastic cryovials. This product is provided on blue ice and should be stored at -20°C immediately upon arrival.

Functional Activity:

NR-44082 was demonstrated to be functionally active based on its ability to cleave the fluorogenic substrate 2'-(4-methylumbelliferyl)-α-d-N-acetylneuraminic acid (4-MUNANA).⁴

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH:

N9 Neuraminidase (NA) Protein from Influenza Virus, A/Anhui/1/2013 (H7N9), Recombinant from Baculovirus, NR-44082."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

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References:

- Gao, R. et al. "Human Infection with a Novel Avian-Origin Influenza A (H7N9) Virus." <u>N. Engl. J. Med.</u> 368 (2013): 1888-1897. PubMed: 23577628.
- Kühnel, K., et al. "The VASP Tetramerization Domain is a Right-Handed Coiled Coil Based on a 15-Residue

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- Repeat." <u>Proc. Natl. Acad. Sci. USA</u> 101 (2004): 17027-17032. PubMed: 15569942.
- Margine, I., P. Palese, and F. Krammer. "Expression of Functional Recombinant Hemagglutinin and Neuraminidase Proteins from the Novel H7N9 Influenza Virus Using the Baculovirus Expression System." J. Vis. Exp. 6 (2013): e51112. PubMed: 24300384.
- 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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