

N9 Neuraminidase (NA) Protein with N-Terminal Histidine Tag from Influenza Virus, A/Anhui/1/2013 (H7N9), Recombinant from Baculovirus

Catalog No. NR-44366

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

For research use only. Not for human use.

Contributor:

Peter Palese, Ph.D., Florian Krammer, Ph.D., and Rong Hai, Ph.D., Departments of Medicine and Microbiology, Icahn School of Medicine at Mount Sinai, One Gustave L. Levey Place, New York, New York, USA

Manufacturer:

BEI Resources

Product Description:

A recombinant form of the N9 neuraminidase (NA) protein from influenza A virus, A/Anhui/1/2013 (H7N9)¹ containing an N-terminal histidine tag was produced in Sf9 insect cells using a baculovirus expression vector system and purified by nickel affinity chromatography. 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 tetramerization domain from vasodilator-stimulated phosphoprotein (VASP) and a thrombin cleavage site.^{2,3} 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-44366 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 with N-Terminal Histidine Tag from Influenza Virus, A/Anhui/1/2013 (H7N9),

Recombinant from Baculovirus, NR-44366."

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.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC[®] nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC[®] nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC[®] and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC[®], their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Gao, R. et al. "Human Infection with a Novel Avian-Origin Influenza A (H7N9) Virus." N. Engl. J. Med. 368 (2013): 1888-1897. PubMed: 23577628.
2. Kühnel, K., et al. "The VASP Tetramerization Domain is a Right-Handed Coiled Coil Based on a 15-Residue Repeat." Proc. Natl. Acad. Sci. USA 101 (2004): 17027-17032. PubMed: 15569942.

3. 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): e511112. PubMed: 24300384.
4. 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.

ATCC® is a trademark of the American Type Culture Collection.

