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

Catalog No. NR-44364

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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/Shanghai/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: EPI439487).

Material Provided:

Each vial contains 25 µg to 75 µg of purified recombinant NA protein in 50 mM Tris (pH 8.0), 500 mM NaCl, and 0.2% sodium azide. 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 refrigerated bricks and should be stored at 2°C to 8°C immediately upon arrival.

Functional Activity:

NR-44364 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/Shanghai/1/2013 (H7N9), Recombinant from Baculovirus, NR-44364."

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.

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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): e51112. 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.

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BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898