

Influenza A Virus, A/Connecticut/11/2023 (H1N1)pdm09 with NA-I223V and NA-S247N Mutations

Catalog No. NR-59881

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For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Virus Classification: *Orthomyxoviridae, Influenzavirus A*

Species: Influenza A Virus

Strain/Isolate: A/Connecticut/11/2023

Clade: 6B.1A.5a.2a

Original Source: Influenza A virus, A/Connecticut/11/2023 (H1N1)pdm09 was collected from a nasopharyngeal swab of a pediatric human with flu-like symptoms on October 14, 2023, in Connecticut, USA and isolated at the CDC in February 2024.^{1,2}

Comments: NR-59881 contains two mutations, NA-I223V and NA-S247N.³ Sequence information is available for influenza A virus, A/Connecticut/11/2023 (H1N1)pdm09 [GISAID: EPI_ISL_19216849 (P2) and EPI_ISL_18586500(P0)].²

Influenza A virus, A/Connecticut/11/2023 (H1N1)pdm09 is a low-passage isolate that emerged in late 2023 (passage history is provided on the Certificate of Analysis).¹ It is a swine-origin influenza virus that caused the 2009 pandemic. Viruses that contain the NA-I223V and NA-S247N mutations display 13- to 16-fold reduced inhibition for oseltamivir and normal inhibition for other neuraminidase inhibitors.³

Material Provided:

Each vial contains approximately 1 mL of spin-clarified cell lysate and supernatant from Madin-Darby canine kidney SIAT1 (MDCK-SIAT1; Sigma 05071502-1VL) cells infected with Influenza A virus, A/Connecticut/11/2023 (H1N1)pdm09.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-59881 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-

thaw cycles should be avoided.

Growth Conditions:

Host: MDCK-SIAT1 cells (Sigma-Aldrich 05071502-1VL)

Growth Medium: Dulbecco's Modified Eagle's Medium (ATCC® 30-2002) supplemented with 0.2% bovine serum albumin and 1 µg/mL L-1-tosylamido-2-phenylethyl chloromethyl ketone (TPCK)-treated trypsin, or equivalent.

Infection: Cells should be 80% to 100% confluent

Incubation: 2 to 3 days at 37°C and 5% CO₂

Cytopathic Effect: Cell rounding and sloughing

Note: Do not move infected flasks/plates within 24 hours after infection. MDCK-SIAT1 cells are sensitive to movement after infection.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Influenza A Virus, A/Connecticut/11/2023 (H1N1)pdm09 with NA-I223V and NA-S247N Mutations, NR-59881."

Biosafety Level: 2

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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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References:

1. Gubareva, L. V., Personal Communication.
2. GISAID
3. Patel, M. C., et al. "Multicountry Spread of Influenza A (H1N1)pdm09 Viruses with Reduced Oseltamivir Inhibition, May 2023 – February 2024." Emerg. Infect. Dis. 30 (2024): 1410-1415. PubMed: 38916572.

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