Influenza A virus (H1N1)pdm09

VR-3441™

Description

Influenza A virus strain A/Connecticut/11/2023(H1N1)pdm09 is propagated in MDCK-SIAT1 cells. This culture was isolated from the nasopharyngeal swab of a pediatric human with flu-like symptoms.

Strain designation: A/Connecticut/11/2023(H1N1)pdm09

Storage Conditions

Product format: Frozen

Storage conditions: -70°C or colder

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 2

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Host: MDCK-SIAT1 cells (Sigma 05071502-1VL)
Effects: refractile cell rounding; cell detachment
Complete medium: DMEM (ATCC 30-2002) + 2% FBS (ATCC 30-2020)
Temperature: 37°C
Recommendations for infection: Plate cells 1-2 days days prior to infection and infect when cultures are 95 - 98% confluent. Remove medium and inoculate with a small volume of virus (e.g. 1 mL per 25 cm^2) diluted to provide an optimal MOI (e.g. 0.001). Adsorb 1 hour at 37°C in a humidified 5% CO_2 atmosphere. End adsorption by adding virus growth medium.
Incubation: 2-3 days at 37°C in a humidified 5% CO_2 atmosphere, until CPE is progressed through 90% of the monolayer.

Notes

This strain is a low-passage isolate that emerged in late 2023. It is a swine-origin influenza virus that caused the 2009 pandemic. It contains two mutations, NA-I223V and NA-S247N. Viruses that contain those mutations display a 13- to 16-fold reduced inhibition for oseltamivir and normal inhibition for other neuraminidase inhibitors. (MC Patel, et al. reference)

Sequence information is available for influenza A virus, A/Connecticut/11/2023 (H1N1)pdm09 [GISAID: EPI_ISL_19216849 (P2) and EPI_ISL_18586500(P0)].
Key Abbreviations: °C, Degrees Celsius; CO_2, Carbon dioxide; DMEM, Dulbecco's Modified Eagle's Medium; FBS, Fetal bovine serum; MOI, Multiplicity of infection

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: Influenza A virus (H1N1)pdm09 (ATCC VR-3441)

References

References and other information relating to this material are available at www.atcc.org.

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