Influenza A (A/Wisconsin/24/2024) H3N2 Pseudoviral Particles

CATALOG NUMBER: PsLv-H3N2-Wi2024

Description

This replication-deficient lentiviral particles are pseudotyped with the hemagglutinin (HA) and neuraminidase (NA) proteins from the Influenza A (H3N2) strain A/Wisconsin/24/2024. The particles encode firefly luciferase (FLuc) as a reporter, enabling quantification of viral entry via luminescence in transduced cells.

This pseudovirus system isolates the entry process, making it ideal for evaluating inhibitors or neutralizing antibodies targeting H3N2-mediated infection.

Gene/Protein Sources

HA (A/Wisconsin/24/2024/H3N2) (GenBank accession#: PP690324)
NA (A/Wisconsin/24/2024/H3N2) (GenBank accession#: PP690326)

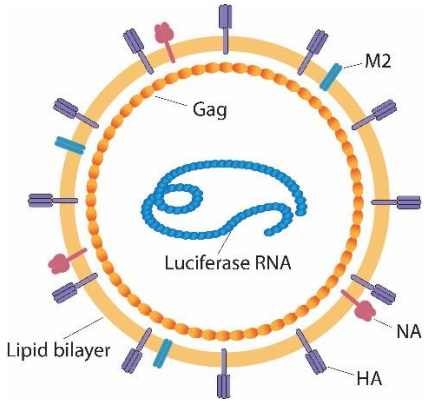

Figure 1. Illustration of the replication-deficient Lentivirus particle pseudotyped with H3N2 HA and NA proteins. The M2 used is from A/California/07/2009(H1N1).

Applications

Optimized for use with eEnzyme's Firefly Luciferase Assay Kit (Catalog # CA-L165), this pseudovirus is suitable for:

- Screening entry inhibitors targeting influenza A H3N2
- Quantifying neutralizing antibody titers against H3N2 strains
- High-throughput infection assays in 96- or 384-well formats

Key Features

- **High Particle Titer:** >1.0 x10^8 particles/mL
- **Robust Signal:** Strong luminescent output in HEK293-based assays
- **Ready-to-Use Format:** Compatible with standard luciferase workflows

Product Contents

- Volume: 1 mL or 5 mL (sufficient for one multi-well plate)
- Format: lentivirus-based pseudoviral particles

Storage & Stability

Store immediately at -80°C upon receipt
Thaw rapidly before use; avoid repeated freeze-thaw cycles
Shelf life: 6 months from shipping date when stored at -80°C

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ASSAY PROTOCOL

Cell Infection

1. Seed HEK293 cells at 5x 10^5 cells/mL in DMEM + 10% FBS + 20 mg/mL Polybrene
   - 96-well format: 50 µL cells + 50 µL pseudovirus per well
   - 384-well format: 12.5 µL cells + 12.5 µL pseudovirus per well
2. Incubate at 37 °C for 48 hours

Luciferase Readout

1. Without removing the supernatant, add luciferase assay working solution:
   - 96-well: 100 µL/well
   - 384-well: 25 µL/well
2. Measure luminescence using a microplate reader
   - Recommended: BioTek Synergy 2 (gain 255) for optimal signal detection

Representative Data

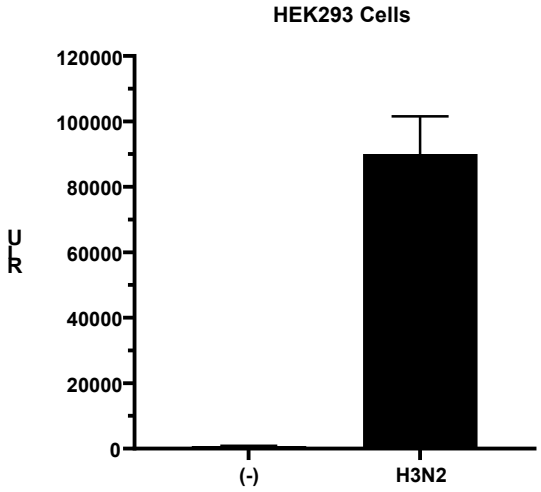

Figure 2. Assays: HEK293 cells infected with PsLv-H3N2-Wi2024 pseudovirus
Readout: Relative Luminescence Units (RLU)
H3N2: Lentivirus-based pseudovirus w/ influenza A H3N2 proteins (PsLv-H3N2-Wi2024)
(-): Negative control using lentivirus without H3N2 proteins

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