Influenza A H3N2 Pseudoviral Particles

CATALOG NUMBER: PsLv-H3N2-Wi2024

Size: 1 mL, 5 mL

Description

Our Influenza A H3N2 Pseudoviral Particles are replication-deficient Lentivirus pseudotyped with the H3 and N2 proteins of the influenza A variants. They also contain the ORF for firefly luciferase (FLuc) as a reporter. Upon the Pseudoviral Particles (PP) infecting of the cells, the reporters will be expressed in the transduced cells. By measuring the FLuc activity in the cells, the infectivity of the PP can be determined.

Gene/Protein Sources

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

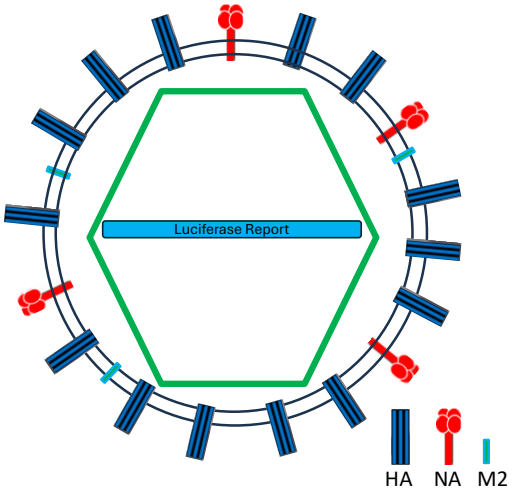

Figure 1. Illustration of the replication-deficient Lentivirus particle pseudotyped with H3N2 HA and NA proteins. The M2 used is from A/California/07/2009(H1N1).

Applications

Our Pseudovirus Particles (PP) generate robust chemiluminescent signals in cell assays when coupled with our firefly luciferase assay kit (Catalog # CA-L165), useful for: 1) screening potential inhibitor to block influenza A entry; 2) tittering neutralizing antibody against influenza A H3N2.

Features

- **Robust:** Excellent signal to noise (basal) ratio
- **Easy to use:** Amenable to HTS format (96-well, 384-well and 1536-well format)
- **Specific:** only measures the pseudovirus entry into host cells

Contents

1 mL; 5 ml (for one multi-well plate) pseudoviral particles (PP). PP per mL > 1.0E+08

Storage

Upon receiving it, store at -70 ^{o}C right away. Thaw* before immediate use.
Note: read the instruction for thawing in the following protocol carefully. Do not aliquot and refreeze.

Shelf Life:

Six months from the date of shipping when stored at -70 ^{o}C

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ASSAY PROTOCOL

Note: requires a luciferase assay reagent (Catalog # CA-L165).

Cell Infection:

1. In each well of 96-well plate, add 50 µl of influenza A H3N2 Pseudoviral Particles (12.5 µl for 384-well plate); add 50 µl of HEK293 cells (5 x 10^5 cells/mL) in DMEM (with 10% FBS and 20 µg/mL **Polybrene**) (12.5 µl for 384-well plates).
2. Incubate for 48 hrs at 37 °C.

Measurement of Luciferase Activity in Infected cells

1. Do not remove supernatant. Add 100 µl eEnzyme's luciferase assay WORKING SOLUTION (25 µl for 384-well plates). Refer to the protocol of "Firefly Luciferase Assay Kit" (eEnzyme Cat.# CA-L165).
2. Read in a luminescence plate reader and record the data.

Data Analysis

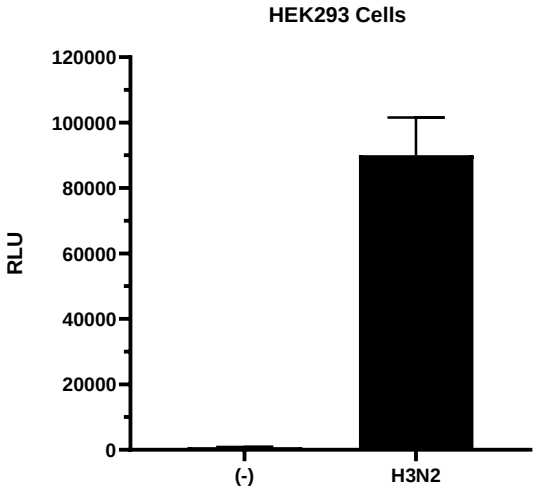

Figure 2. Pseudoviral Particle (PP) Infection Assays
(Pseudoviral particles on HEK293 cells in 384-well format; Luminescence plate reader: BioTek Synergy 2, gain 255)
H3N2: Lentivirus-based pseudovirus w/ influenza A H3N2 proteins (PsLV-H3N2-Wi2024)
(-): Negative control (Lentivirus-based pseudoviral particles, w/o H3N2 protein)

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