

# Influenza A H1N1 Pseudoviral Particles, Lentivirus-based

**Cat. No.** IAV-02PsV    **Lot. No.** (See product label)

## SPECIFICATION

### Product Overview

Our Influenza A H1N1 Pseudoviral Particles are replication-deficient Lentivirus pseudotyped with the H1 and N1 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/California/07/2009/H1N1) (GenBank accession#: NC\_026433.1)

NA (A/California/07/2009/H1N1) (GenBank accession#: NC\_026434.1)

M2 (A/California/07/2009/H1N1) (GenBank accession#: NC\_026431.1)

### Species

IAV

### Description

Influenza A H1N1, virus that is best known for causing widespread outbreaks, including epidemics and pandemics, of acute upper or lower respiratory tract infection. The influenza A H1N1 virus is a member of the family Orthomyxoviridae (a group of RNA viruses). Type A is one of the three major types of influenza viruses (the other two being types B and C). Type A is divided into subtypes, which are differentiated mainly on the basis of two surface antigens (foreign proteins)—hemagglutinin (H) and neuraminidase (N). Therefore, H1N1 represents a subtype of influenza A. This subtype is further differentiated into strains based on minor variations in RNA sequence.

### Usage

Note: requires a luciferase assay reagent.

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|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   | <p>Cell Infection:</p> <ol style="list-style-type: none"> <li>1. In each well of 96-well plate, add 50 µL of influenza A H1N1 Pseudoviral Particles (12.5 µL for 384-well plate); add 50 µL of HEK293 cells (<math>5 \times 10^5</math> cells/mL) in DMEM (with 10% FBS and 20 µg/mL Polybrene) (12.5 µL for 384-well plates).</li> <li>2. Incubate for 48 hrs at 37 centigrade.</li> </ol> <p>Measurement of Luciferase Activity in Infected cells</p> <ol style="list-style-type: none"> <li>1. Do not remove supernatant. Add 100 µL luciferase assay WORKING SOLUTION (25 µL for 384-well plates).</li> <li>2. Read in a luminescence plate reader and record the data.</li> </ol> |
| <b>Applications</b>                               | <p>Our Pseudovirus Particles (PP) generate robust chemiluminescent signals in cell assays when coupled with our firefly luciferase assay kit, useful for:</p> <ol style="list-style-type: none"> <li>1) screening potential inhibitor to block influenza A entry;</li> <li>2) titting neutralizing antibody against influenza A H1N1.</li> </ol>                                                                                                                                                                                                                                                                                                                                       |
| <b>Shelf Life</b>                                 | Six months from the date of shipping when stored at -70 centigrade.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Features</b>                                   | <p>Robust: Excellent signal to noise (basal) ratio</p> <p>Easy to use: Amenable to HTS format (96-well, 384-well and 1536-well format)</p> <p>Specific: only measures the pseudovirus entry into host cells</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>                                    | At -70 centigrade.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Shipping</b>                                   | Shipped on dry ice.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Pseudoviral Particle (PP) Infection Assays</b> | Pseudoviral particles on HEK293 cells in 384-well format.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Illustration of the replication-deficient</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Lentivirus particle  
pseudotyped with  
H1N1 proteins**

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