# SARS-CoV-2 Pseudovirus Infection Enhancer (CoV-2-PIE)

Cat. #: CoV2-1ml, CoV2-200 works perfectly for Luc Pseudovirus to get robust signal.

This viral infection enhancer specifically designed to facilitate coronavirus and pseudovirus infection of target cells. It is designed to penetrate the cortical actin barrier, thereby 5 to 20 folds enhancing productive viral infection of a variety of host cells by coronaviruses and pseudoviruses. **CoV-2-PIE** is based on the scientific theory that the actin cytoskeleton is a natural barrier for viral entry and post-entry intracellular migration (Yoder et al., ***Cell***, 2008, 134:782). It's formulated to mainly enhance viral infection of adherent target cells, which are frequently also limited by poor absorption of virion particles to target cells. CoV-2-PIE is intended for Research Use. Link to web page

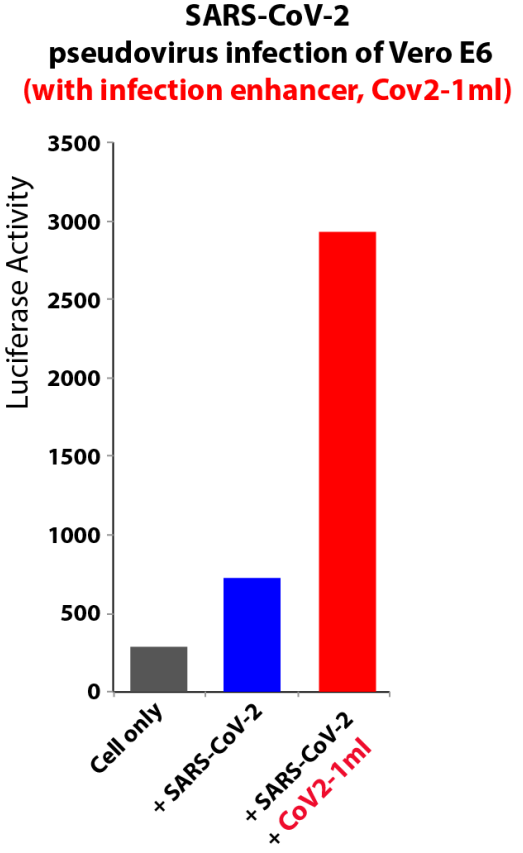
**Applications**

Enhancing coronavirus and pseudovirus transduction of target cells
Enhancing infection of other enveloped viruses
Facilitating recovery of infectious viruses from cell or tissue cultures
Facilitating anti-viral drug and neutralizing antibody screening efficiency

**Important notes**

1) **CoV-2 PIE** is formulated as 10 X concentrated, **works perfectly for Luc pseudovirus**. Once thawed, **CoV-2-PIE** should be stored at 4°C, stable for 6 months. *Do not re-freeze or leave it at room temperature.*

2) This viral infection enhancer works with most cell lines to enhance viral infection. On average, **CoV-2-PIE** enhances productive viral infection by **5- to 20-folds**. (depends on *the types of viruses and cells.)*




**Example of results from our customers:**

SARS-CoV-2-S(Luc) pseudovirus infection of Vero E6 cells (with pseudovirus infection enhancer ).

Vero E6 cells were transduced with SARS-CoV-2-S(Luc) lenti-pseudovirus (with a luciferase reporter) in the presence or absence of infection enhancer. Reporter expression was quantified at 3 days post transduction (luciferase assay).

**Protocol**

**Example - CoV-2-PIE enhances SARS-CoV-2 lenti-pseudovirus transduction of Vero E6 cells:**

1) Count Vero E6 cells to be infected and seed ~1 x $10^5$ cells per well into 12-well plates (0.5 ml per well). Culture cells until cells stably adhere to the plates (4–12 hours).

   **Note: Cell viability should be ≥ 80%.**

2) Before infection, wash cells with 2 ml medium, and leave 250 µl medium in each well.
3) Pre-treat cells by adding 25 µl of **CoV-2-PIE** (**10 X**) so that the **CoV-2-PIE** concentration is **1 X**. Mix and incubate for 30–60 minutes.
4) Add virus to the cells and mix. **Note volume of virus used.**
5) Add **CoV-2-PIE** (**10 X**) in an amount equal to 1/10 of the virus volume used, *e.g.,* if 100 µl of virus is used, add 10 µl of **CoV-2-PIE**. Incubate at 37°C for 4-6 hours.
6) Add 2 ml fresh media to wash cells.
7) After washing, add 2 ml fresh complete medium.
8) Culture infected cells for 2-3 days to signal detection.

| Catalog No. | Product Size |
|---|---|
| CoV2-200 | 200 µl of 10 X CoV-2-PIE solution |
| CoV2-1ml | 1 ml of 10 X CoV-2-PIE solution |

We also provide

**Ready to use** SARS-CoV and SARS-CoV-2 S protein pseudotyped lentiviruses. Link

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