

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

Catalog No: #CoV2

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Package Size: #CoV2-1 200ul #CoV2-2 500ul #CoV2-3 1ml #CoV2-4 5ml

Description

Product Name	SARS-CoV-2 Pseudovirus Infection Enhancer (CoV-2-PIE)
Storage	Once thawed, CoV-2-PIE should be stored at 4°C, and is stable for 3 months. Do not re-freeze and do not leave CoV-2-PIE at room temperature. CoV-2-PIE viral infection enhancer works with most cell lines to enhance viral infection. On average, CoV-2-PIE enhances productive viral infection by 3- to 20-fold. CoV-2 PIE is formulated as 10 X concentrated.

Application Details

- 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

Result:

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

Product Description

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 1×10^5 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 $\geq 80\%$. 2) Before infection, wash cells with 2 ml medium, and leave 250 μ l medium in each well. 3) Pre-treat cells by adding 25 μ l 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 μ l of virus is used, add 10 μ l 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.

Background

CoV-2-PIE is a viral infection enhancer designed specifically to facilitate coronavirus and pseudovirus infection of target cells. CoV-2-PIE is formulated based on our current technology of Infectin-2™, which is designed to penetrate the cortical actin barrier, thereby greatly enhancing productive viral infection. CoV-2-PIE can be used to facilitate the infection of a variety of host cells by coronaviruses and pseudoviruses. CoV-2-PIE can enhance viral infection rates by 5 to 20 fold. SAB developed CoV-2-PIE 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). CoV-2-PIE is 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 combines our proprietary technology of Infectin™ with additional technologies that promote viral absorption onto target cells.

Note: This product is for in vitro research use only