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Lentivirus Transduction Enhancer I

Cat. #: M0089 Size: 1 ml

Introduction

Lentivirus Transduction Enhancer I is a novel chemical reagent that increases lentiviral transduction efficiency into *in vitro* systems. Normally, incubation of lentivirus particles in cells in the presence of polybrene is generally efficient in transducing many cell types. However, lentiviruses are typically attenuated by cellular antiviral defense mechanism, which limits their transducing efficiency. Lentivirus Transduction Enhancer I suppresses the cellular anti-viral state by mimicking the activity of viral virulence gene products, and thus significantly increases lentivirus transducing efficiency by as high as 10-fold.

Lentivirus Transduction Enhancer I is most effective when added to cell culture media at the time of transduction. Recommended working concentration ranges from 1:100 to 1:50. However, the working concentration is highly cell line-dependent. Lower or higher dilution ratio may be required to optimize the effect.

Package Information

Component	M0089
Lentivirus Transduction Enhancer I	1 ml

Storage

Store at -20°C for 12 months.

Protocol

1. Day 1. Plate your cells of interest into a 6-well plate 24 hours before infection with a density of 2×10^5 cells per well.

2. Day 2. Infect each well with lentivirus at the final titer of 10 MOI (or an optimal MOI in the range of 2-100). Add in Lentivirus Transduction Enhancer I at 1:100 or your optimized dilution ratio. Incubate at 37°C with 5% CO_2.

3. Day 3. Replace the viral supernatant with the appropriate complete growth medium and incubate at 37°C with 5% CO_2.

4. Day 4 and on. If the lentiviral vector contains a drug resistance gene, begin drug selection by replacing media with drug containing media every 3-4 days until resistant colonies can be identified. If the lentiviral vector contains a fluorescent tag, you can evaluate transduction efficiency by checking signals under the fluorescence microscope.

Note: MOI = (Product Titer × Infection Sample Volume) / Total Cell Number