



Polybrene

Catalog Number: D025

Content and Storage

Component	Volume	Shipping Condition	Storage Condition
Polybrene (0.8 mg/mL)	1 mL	Room temperature	-20°C for one year

Product Description and Application

As a cationic polymer, polybrene increases the efficiency of infection in some cells by neutralizing the charge repulsion between virions and the cell surface.

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

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 polybrene at 1:100 or your optimized dilution ratio. Incubate at 37°C with 5% CO₂.
3. Day 3. Replace the viral supernatant with the appropriate complete growth medium and incubate at 37°C with 5% CO₂.
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: $MOI = (\text{Product Titer} \times \text{Infection Sample Volume}) / \text{Total Cell Number}$