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ViralPlus Transduction Enhancer

Store at -20°C

Cat. No.	Description	Quantity
G698	ViralPlus Transduction Enhancer	1.0 ml (100 infections)

Product Description and Application

ViralPlus is a novel chemical cocktail that increases the lentiviral and adenoviral transduction efficiency into *in vitro* systems. Traditionally, incubation of lentivirus pseudotyped with VSV-G and cells in the presence of polybrene (**abm** Cat. No. G062) is generally efficient in transducing many cell types. However, lentiviruses are typically attenuated by cellular antiviral defense mechanisms, which limits their transducing efficiency. ViralPlus 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. Our chemical cocktail is effective on enhancing adenovirus transduction in a similar manner and achieves transduction in cell which lack the coxsackie adenovirus receptor.

ViralPlus 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.

Shipping and Storage

Upon arrival, the ViralPlus Cocktail should be stored at -20°C and is stable for 1 year from the date of shipping if stored and handled properly. Avoid repeated freeze-thaw cycles to retain maximum performance.

ViralPlus 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 10MOI (or an optimal MOI in the range of 2-100) or adenovirus at optimal MOI between 2-100 for desired hard-to-transduce cell lines, in the presence of polybrene (**abm** Cat. No. G062) at 8 µg/mL. Add in ViralPlus 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 or adenoviral vector contains a fluorescent tag, you can evaluate transduction efficiency by checking signals under the fluorescence microscope.

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