



EZ-RV Transduction kit

Product Number: TR3041

Shipping and Storage

This product is transported at room temperature and stored for a long time at 4°C, with a validity period of 12 months.

This product is safe to use and no biological or chemical toxicity has been found. If accidentally contaminated, rinse with clean water.

Description

EZ-RV Transmission Kit is an enhancer developed and synthesized by our company for retroviral infection, which is synthesized using nanotechnology. The EZ-RV Transmission kit enriches the virus on the cell surface through physical interactions to enhance infection efficiency. Due to the application of nanotechnology, the EZ-RV Transmission kit significantly improves the efficiency of retroviral infection while maintaining minimal cytotoxicity and not interfering with cellular physiological functions.

Note

1. After using the EZ-RV Transmission kit for enhancement, the degree of cell fusion during infection has an impact on the infection effect. It is recommended to conduct infection experiments when the degree of cell fusion is around 30-50%.
2. Before using the EZ-RV Transmission kit enhancer, the optimal MOI (Multiplicity of Infection) of infected cells should be determined, which refers to the average number of viruses infected per cell. Generally, the higher the MOI, the more viruses integrate into chromosomes and the higher the surface expression of the target protein. Different cells have their optimal MOI values. We need to conduct a MOI gradient experiment first to determine the optimal MOI value for infected cells. The application of enhancers on the basis of the optimal MOI value has a better effect.
3. The relationship between EZ-RV Transmission kit and infection efficiency. Under other fixed conditions, the larger the dosage of enhancer, the higher the infection efficiency. Generally, the dosage of enhancer can be used 1-3 times the recommended dosage. However, excessive use of enhancers may lead to cytotoxicity.

Protocol

1. Cell laying one day in advance

It is advisable to plant cells in advance, with a cell fusion degree of around 30-50% during infection (adjust suspension cells as needed, do not use high cell density).

2. Infect

2.1. Dilute the EZ-RV Transmission kit with serum-free diluent (see table below for dosage), mix thoroughly, and prepare an enhancer diluent.

2.2. Dilute the virus concentrate with serum-free diluent (see table below for dosage), mix thoroughly, and prepare the virus diluent.

Note: Due to different virus concentrations, the specific amount of virus concentrate may be based on conventional dosage. It is recommended to conduct gradient experiments in combination with enhancers.

2.3. Mix the diluent of the enhancer and virus thoroughly, and let it stand at 4 °C for 15 minutes.

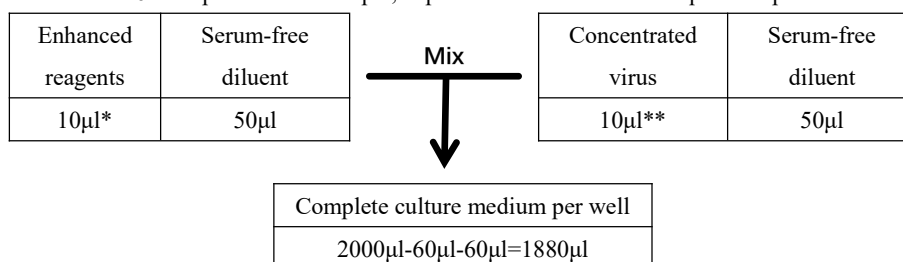
2.4. The above mixture is added to cells containing complete culture medium, and the cell state is observed after 8 hours of cultivation at 37 °C. If there is no significant change, do not change the culture medium. After continuing cultivation for 24 hours, replace the culture medium regularly. Observe the results based on the infection situation.

Table 1 Recommended dosages for different cell culture containers

Cell culture container	Surface area (cm ²)	Ratio of surface area to 24 well	Quantity of EZ-RV Transduction kit per Hole	Dosage of diluent per well	Total amount of culture medium per well
96-well	0.3	0.2	0.5-1.5μl	10μl	100μl

48-well	0.7	0.4	1-3 μ l	15 μ l	200 μ l
24-well	1.9	1	2.5-7.5 μ l	25 μ l	500 μ l
12-well	3.8	2	5-15 μ l	25 μ l	1ml
6-well/35-mm	10	5	10-30 μ l	50 μ l	2ml
60 mm/T25 flask	21	10	25-75 μ l	125 μ l	5ml
100 mm	58	30	75-225 μ l	250 μ l	15ml

2.5. Taking one well in a 6-well plate as an example, explain the amount of each liquid component used:



*Can be increased or decreased separately based on factors such as toxicity and efficiency

**The amount used here is for illustration only, and the specific amount can be determined based on the regular amount at your discretion

Common problems and solutions

Problem	Reason	Solution
The effect is not significant after using enhancers	Low virus concentration,	Increase virus usage or carry out multiple rounds of infection
	insufficient dosage	
	Excessive cell density	Reduce cell density
Cytotoxicity	The enhancement is not significant	Increase the dosage of enhancer by 1-3 times
	Excessive dosage of enhancer	Reduce the dosage of enhancers appropriately
Sedimentation occurs in the mixed solution	Excessive virus volume	Reduce virus usage appropriately
	Analysis of virus preservation solution	It can still be used, but pay attention to observing cell toxicity. The same serum-free dilution can also be added immediately to help precipitate and dissolve

Other related reagents

EnvirusTM-LV: Chronic virus infection enhancing reagent.

EnvirusTM AAV: Adenovirus infection enhancing reagent.

EnvirusTM-AV: Adenovirus infection enhancing reagent.

EnvirusTM in vivo: A reagent for enhancing viral infection in animals.