SuperKine™ Lipo3.0 Efficient Transfection Reagent

Cat #: BMU111-EN Size: 0.5 mL/1.5 mL/1.5 mL×5

	Lipo3.0 Efficient Transfection Reagent		
REF	**Cat #:** BMU111-EN	LOT	**Lot #:** Refer to product label
	Storage: Stored at 4℃ for 12 months, avoid freezing		

Assay Principle

SuperKine™ Lipo3.0 Efficient Transfection Reagent is a highly efficient new cationic liposome transfection reagent suitable for plasmid DNA and siRNA transfection in various animal cells, with high transfection efficiency for most animal cells. The transfection reagent/nucleic acid complex formed can be directly added to the complete culture medium, and the presence of serum and antibiotics does not affect its transfection effect, so the culture medium do not need to be changed before and after transfection.

Materials Required but Not Supplied

- Cell culture plate, precision pipettes, disposable pipette tips, 1.5mL sterile EP tube
- Opti-MEM or other serum-free, antibiotic-free cell medium
- Endotoxin free DNA, siRNA
- CO_2 incubator

Assay Procedure

A. Transfection of DNA

1. Cells were grown in suitable well plates or dishes one day before transfection to a density of 70-80% at the time of transfection.
2. Replace with fresh culture medium before transfection.
3. Preparation of Transfection reagent/DNA complex:

(1) DNA-Opti-MEM: Add 25 μL Opti-MEM or other serum-free, antibiotic-free cell medium to a 1.5 mL sterile EP tube, then add 0.5 μg DNA to the tube (As an example, 0.5mg DNA was transfected in each well of 24-well plate, refer to Table 1), gently mix with a pipette.

(2) Transfection reagent-Opti-MEM: Add 25 μL Opti-MEM or other serum-free, antibiotic-free cell medium to another 1.5 mL sterile EP tube, then add 1.5 μL Transfection reagent to the tube (1-5 μL/μg DNA, 3 μL/μg DNA is recommended), gently mix with a pipette.

(3) Add the Transfection reagent-Opti-MEM to DNA-Opti-MEM, gently mix with a pipette, after standing at room temperature for 10-15 min, it can be used for transfection.

Table 1. Addition of reagents for different well plates

Reagent	96-well plate	48-well plate	24-well plate	12-well plate	6-well plate	6 cm dish	10 cm dish

Complete growth medium		0.1 mL	0.25 mL	0.5 mL	1 mL	2 mL	5 mL	15 mL
Cell quantity		1-4×10^4	0.25-1×10^4	0.5-2×10^5	1-4×10^5	0.25-1×10^6	0.5-2×10^6	1.5-6×10^6
DNA-Opti-MEM	Opti-MEM	5 μL	12.5 μL	25 μL	50 μL	125 μL	250 μL	750 μL
	DNA	0.1 μg	0.25 μg	0.5 μg	1 μg	2.5 μg	5 μg	15 μg
Transfection reagent-Opti-MEM	Opti-MEM	5 μL	12.5 μL	25 μL	50 μL	125 μL	250 μL	750 μL
	Lipo3.0 Efficient Transfection reagent	0.3 μL	0.75 μL	1.5 μL	3 μL	7.5 μL	15 μL	45 μL
Transfection reagent/DNA complex		10 μL	25 μL	50 μL	100 μL	250 μL	500 μL	1,500 μL

4. Transfection: Drop the Transfection reagent/DNA complex into the culture medium and gently shake the culture plate or dish to evenly disperse the Transfection reagent/DNA.

5. Continue to culture for 24-72 h and test with appropriate methods.

B. Transfection of siRNA

1. Cells were grown in suitable well plates or dishes one day before transfection to a density of 70-80% at the time of transfection.

2. Replace with fresh culture medium before transfection.

3. Preparation of siRNA: Prepare siRNA into a 20 μM storage solution using RNase-free H_2O.

4. Preparation of Transfection reagent/siRNA complex:

(1) siRNA-Opti-MEM: Add 25 μL Opti-MEM or other serum-free, antibiotic-free cell medium to a 1.5 mL sterile RNase-free EP tube, then add 1 μL 20 μM siRNA storage solutionto the tube (As an example, 20 pmol siRNA was transfected in each well of 24-well plate, refer to Table 2), gently mix with a pipette.

(2) Transfection reagent-Opti-MEM: Add 25 μL Opti-MEM or other serum-free, antibiotic-free cell medium to another 1.5 mL sterile RNase-free EP tube, then add 1.2 μL Transfection reagent to the tube (0.4-1 μL/10 pmol siRNA, 0.6 μL/10 pmol siRNA is recommended), gently mix with a pipette.

(3) Add the Transfection reagent-Opti-MEM to siRNA-Opti-MEM, gently mix with a pipette, after standing at room temperature for 10-15 min, it can be used for transfection.

Table 2. Addition of reagents for different well plates

Reagent		**96-well plate**	**48-well plate**	**24-well plate**	**12-well plate**	**6-well plate**	**6 cm dish**	**10 cm dish**
Complete growth medium		0.1 mL	0.25 mL	0.5 mL	1 mL	2 mL	5 mL	15 mL
Cell quantity		1-4×10^4	0.25-1×10^4	0.5-2×10^5	1-4×10^5	0.25-1×10^6	0.5-2×10^6	1.5-6×10^6
siRNA-Opti-MEM	Opti-MEM	5 μL	12.5 μL	25 μL	50 μL	125 μL	250 μL	750 μL
	siRNA	4 pmol	10 pmol	20 pmol	40 pmol	100 pmol	200 pmol	600 pmol
Transfection reagent-Opti-MEM	Opti-MEM	5 μL	12.5 μL	25 μL	50 μL	125 μL	250 μL	750 μL
	Lipo3.0 Efficient Transfection reagent	0.24 μL	0.6 μL	1.2 μL	2 μL	6 μL	12 μL	36 μL
Transfection reagent/siRNA complex		10 μL	25 μL	50 μL	100 μL	250 μL	500 μL	1,500 μL

5. Transfection: Drop the Transfection reagent/siRNA complex into the culture medium and gently shake the culture plate or dish to evenly disperse the Transfection reagent/siRNA.

6. Continue to culture for 24-72 h and test with appropriate methods.

Typical Data

Table 3. Table of transfection efficiency data for different cells

Cells	Abbkine	Brand A	Brand B	Brand C
HEK293	>95%	95%	90-95%	90-95%
HEK293T	97-98%	>98%	97-98%	95%
Hela	88-90%	>90%	85-90%	85-90%
COS-7	85-88%	88-90%	90%	85%
MCF-7	60-65%	50-60%	60-65%	60-70%
HepG2	35-40%	45%	40-45%	35%
U2OS	35-40%	40-45%	45%	35%
HUVEC	35-40%	45%	40-45%	35%

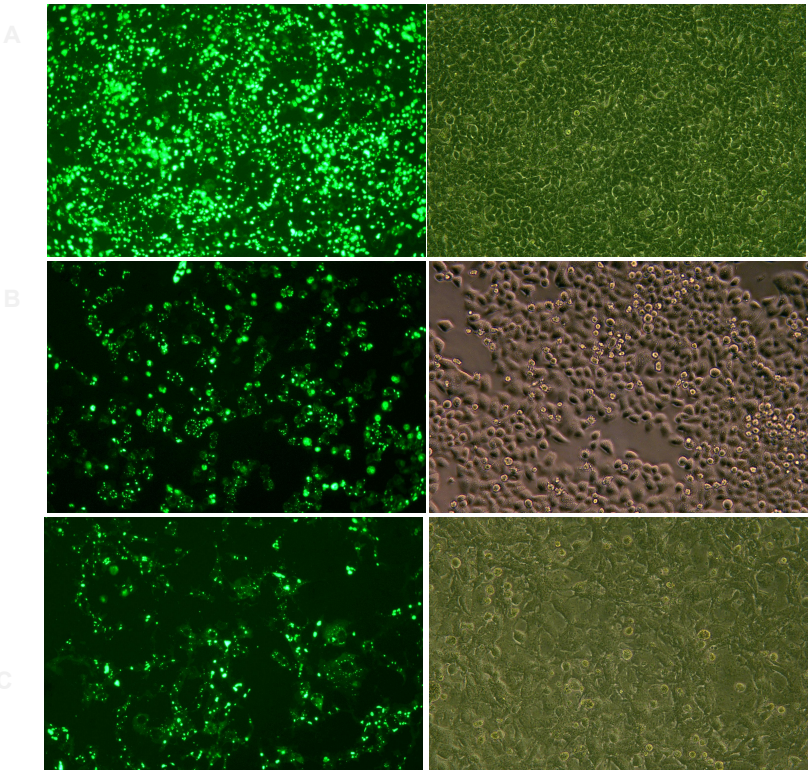

Figure 1. The transfection effect of HEK293T cells (A), Hela cells (B), and Cos-7 cells (C) using Lipo3.0 Transfection Reagent

Precaution

1. It is recommended to use high-purity, endotoxin-free DNA or siRNA to achieve higher transfection efficiency.
2. The transfection reagent/nucleic acid complex should be prepared using antibiotic-free and serum-free medium to avoid the presence of antibiotics or serums in the reaction system that would interfere with the formation of the transfection reagent and DNA (siRNA) complex.
3. Cells must be in good growth status before transfection.
4. The transfection agent cannot be vortex or centrifuged, and should be mixed slowly by shaking.
5. There is no need to remove the complex or replace the culture medium. If fresh culture medium needs to be replaced after

transfection, the medium can be replaced after adding Transfection reagent/DNA complex for 4-12 h, without reducing transfection activity.

6. Please cover the lid immediately after using the transfection reagent to avoid prolonged exposure to the air, which may affect the transfection efficiency.

7. Transfection siRNA, all materials need to be RNase-free.

Strawberry moment: In addition to Efficient Transfection Reagent, Abbkine also offers Maximum Sensitivity Cell Counting Kit-8 (BMU106-EN) and other cell state assay kits, such as Apoptosis Detection kit (KTA0002), One-step TUNEL Apoptosis Assay Kit (KTA2010/KTA2011), etc. Scan the QR code on the right and follow the Abbkine official account to learn more about Abbkine products.

FAQ

Question	Answer
How many days does the effect of this reagent last after transfection?	The expression of different cells and plasmids was different, and the expression of protein was generally within 24-72 h after transient transfection, which was generally believed to be less than 1 week.
Can the reagent be co-transfected with multiple plasmids of different molecular weight?	Yes, it is recommended to do a pre-experiment to test the transfection effect.
Does the reagent need to be shaken before use?	It is not recommended to shake Vigorously. Shake gently if necessary.
How does this reagent improve transfection efficiency?	It is recommended to use high purity, endotoxin-free DNA or RNA to achieve higher transfection efficiency. Cells must be in a good growth state before transfection.
How does this reagent avoid cytotoxicity?	This transfection agent is almost non-cytotoxic , but cytotoxicity to certain special cell types could not be excluded. In this case, the recommendations are as follows: (1) Before transfection, the growth time for cells was extended to 18-24 h; (2) Try to reduce the amount of transfection reagents or plasmids; (3) Appropriately increase the cell density during transfection, which can be adjusted to 70-90%.

Recommended Products

Catalog No.	Product Name
BMU106-EN	SuperKine™ Maximum Sensitivity Cell Counting Kit-8 (CCK-8)
KTA2010	One-step TUNEL Apoptosis Assay Kit (Green Fluorescence)
KTA0002	Annexin V-AbFluor™ 488/PI Apoptosis Detection kit

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.