LipoCore™ Transfection Reagent

Ordering info

TBR0338, 1 mL

Description

LipoCore™ Transfection Reagent is a high performance transfection reagent based on liposomal formulation. It possess cationic lipids with positively charged head group that electrostatically interacts with negatively charged nucleic acids (e.g. plasmid DNA, mRNA, siRNA, or miRNA), forming stable lipoplexes. Once formed, these complexes facilitate cellular uptake primarily via endocytosis, allowing the cargo to enter the cell. The lipid components also promote fusion with the endosomal membrane, which aids in the release of nucleic acids into the cytoplasm and enhances transfection efficiency.

Features

- High transfection efficiency in a broad range of cell types, including hard-to-transfect, primary and stem cells.
- Serum resistant.
- Easy protocol and reproducible results.
- Very low cytotoxicity.
- Free of animal derived components.

Applications

- Stable and transient transfection gene delivery.
- Transfection of plasmid DNA, siRNA, mRNA or miRNA.
- Transfected cells are suitable for all downstream cellular applications.

Kit Components

Components	TBR0338
LipoCore™ Transfection Reagent	1 mL
Dilution Buffer	50 mL

Order Info Kit Components: *LipoCore™ Transfection Reagent (TBR0338-1) | Dilution Buffer (TBR0338-2).*

Storage

Store at 4 °C. It is stable for 1 year.

Also available:

Trypan Blue Cell Viability Indicator (TBB0402)

Erythrosin Cell Viability Indicator (TBB0413)

Resazurin Viability Assay Kit (TBK0506, TBK0507)

Tiaris™ Cell Transfection Kit (TBK0550, TBK0551)

PROTOCOL

A. CELL CULTURE PREPARATION

1. For transfection, seed the cells attending to the following table.

Recommended Number of Cells to seed in different growth areas

TISSUE CULTURE FORMAT	GROWTH AREA (mm^2)	ADHERENT CELLS*	SUSPENSION CELLS	FINAL VOLUME OF MEDIA (mL)
96-well plate	50	1.5 - 5.0·x 10^4	0.5 - 2.5·x 10^4	0.1
24-well plate	200	6·x 10^4 - 2·x 10^5	2.0·x 10^4-1.0·x 10^5	0.5
6-well plate	962	2.5 – 8.0·x 10^5	1.0 - 5.0·x 10^5	2

* *to seed 24 hours before transfection to reach 60-80% confluence.*

2. Detach and/or resuspend the cells, attending at

Volume to Cell Resuspension

TISSUE CULTURE FORMAT	VOLUME (µL)
96-well plate	80
24-well plate	420
6-well plate	1250

B. TRANSFECTION OF PLASMID DNA | mRNA

1. According to the following table, prepare DNA | mRNA SOLUTION and TRANSFECTION SOLUTION:

TISSUE CULTURE FORMAT	DNA | mRNA SOLUTION		TRANSFECTION SOLUTION	
	DNA | mRNA (µg)	Dilution Buffer (µL)	LipoCore™ Reagent (µL)[b]	Dilution Buffer (µL)
96-well plate	0.075	8[a]	0.35	7.65
24-well plate	0.3	35[a]	2	33
6-well plate	1	120[a]	6	114

[a] *Indicated as total volume of solution*

[b] *Vortex before use it!*

2. With both solutions ready, prepare the Transfection Mix.
3. **Transfection Mix**: Combine Transfection Solution and DNA/ mRNA Solution, adding Transfection Solution into DNA/ mRNA Solution. Mix by pipetting up and down. Do not vortex.
4. Incubate 20 minutes at room temperature.
5. Add freshly detached cells to the Transfection Mix and mix by pipetting.
6. Transfer cells mixed with Transfection Mix to plates.

C. TRANSFECTION OF PLASMID siRNA

1. According to the following table, prepare miRNA | siRNA SOLUTION and TRANSFECTION SOLUTION:

TISSUE CULTURE FORMAT	miRNA | siRNA SOLUTION		TRANSFECTION SOLUTION	
	miRNA | siRNA (pmol)	Dilution Buffer (µL)	LipoCore™ Reagent (µL)[b]	Dilution Buffer (µL)
96-well plate	1	8[a]	0.45	7.55
24-well plate	10	35[a]	2	33
6-well plate	30	120[a]	4.5	115.5

[a] *Indicated as total volume of solution*

[b] *Vortex before use it!*

2. With both solutions ready, prepare the Transfection Mix.
3. **Transfection Mix**: Combine Transfection Solution and miRNA/ siRNA Solution, adding Transfection Solution into miRNA/ siRNA Solution. Mix by pipetting up and down. Do not vortex.
4. Incubate 20 minutes at room temperature.
5. Add freshly detached cells to the Transfection Mix and mix by pipetting.
6. Transfer cells mixed with Transfection Mix to the corresponding format plates.