

# LipoJet™ In Vitro Transfection Kit

----- A General Protocol for DNA  
Transfection to Mammalian Cells



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- 100 µl
- 500 µl
- 1000 µl

This product is for laboratory research ONLY and not for diagnostic use

## Introduction:

LipoJet™ In Vitro Transfection Kit was formulated by our innovative and proprietary lipid-conjugation technology. LipoJet™ Transfection Kit exhibits significant difference from other lipids transfection reagents in the market. LipoJet™ Transfection Kit is the most powerful gene delivery tool for a variety of applications including plasmid DNA, siRNA, and shRNA delivery.

## Important Guidelines for Transfection:

- LipoJet™ reagent was formulated as a versatile gene delivery tool. While this protocol gives procedures for transfecting DNA to mammalian cells, the protocol for siRNA transfection and siRNA/DNA co-transfection can be obtained from our website by visiting <http://signagen.com/lipojet>
- For maximum efficiency, we recommend using LipoJet™ Transfection Buffer to dilute DNA, siRNA and LipoJet™ Reagent.

## Procedures for Transfecting DNA to Mammalian Cells

### Step I. Preparation of Working Solution of LipoJet™ Transfection Buffer

LipoJet™ Transfection Buffer (5x ) is provided as 5 times concentrated stock solution. To make working solution, dilute one part of the stock solution with 4 parts of ddH<sub>2</sub>O. The working solution is stable at 4 °C~RT for 12 months.

### Step II. Cell Seeding

Cells should be plated 18 to 24 hours prior to transfection so that the monolayer cell density reaches to the optimal ~70% confluency at the time of transfection. Complete culture medium with serum and antibiotics is freshly added to each well 30~60 minutes before transfection.

**Note:** LipoJet™ is NOT interfered by serum and antibiotics, therefore serum and antibiotic containing medium can be used during the entire experiment.

**Table 1. A Guideline for DNA Transfection Per Cell Culture Vessel**

Culture Dish	Growth Medium (ml)	Transfection Buffer (µL)	Plasmid DNA (µg)	LipoJet™ Reagent (µL)
24-well	0.5	50	0.5	1.5
12-well	0.75	75	0.75	2.25
6-well	1.0	100	1.0	3
60 mm	3.0	300	3.0	9
10 cm/flask 75	8.0	800	8.0	24

### Step III. DNA Transfection Protocol

For DNA transfection experiment, we recommend using

0.5~1.0 µg DNA per well in a 6-well plate. As a starting point, we recommend using 1.0 µg DNA and 3.0 µl LipoJet™ reagent per well of a 6-well plate which usually give satisfactory efficiency without visible toxicity.

The following conditions are given per well of a 6 well plate. For other culture format, please refer to **Table 1**.

- For each well, add 1.0 ml of complete medium with serum and antibiotics freshly 30~60 minutes before transfection.
- Dilute 1.0 µg DNA into 100 µl of working solution LipoJet™ Transfection Buffer. Mix by pipetting up and down.
- Add 3 µl LipoJet™ reagent, pipette up and down to mix.
- Incubate for 10~20 min at RT to let transfection complex form.
- Note:** Never keep the complex longer than 30 minutes.
- Add the transfection complex to the cells drop wise.
- Gently rock the plate back and forth and return the plate to the incubator.
- Replace transfection medium by cell growth medium 5 hours after transfection when necessary and analyze as required.

**Storage:** LipoJet™ In Vitro Transfection Kit is stable for up to 12 months at 4 °C. This item shipped at ambient temperature