# invitrogen

## Lipofectamine™ 3000 Reagent Protocol

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		Catalog Numbers	Size:
R	Package	L3000001	0.1 mL
		L3000008	$0.75  \mathrm{mL}$
		L3000015	1.5 mL
	Contents	L3000075	$5 \times 1.5 \text{ mL}$
		L3000150	15 mL

Storage
Conditions

Store at 4°C (do not freeze).



Required Materials

- Plasmid DNA (0.5–5 μg/μL stock)
- Opti-MEM<sup>™</sup> Reduced Serum Medium
- Microcentrifuge tubes



Timing

Preparation: 10 minutes Incubation: 10–15 minutes Final Incubation: 1–3 days



Selection Guide Lipofectamine™ Reagents Go online to view related products.



 Lipofectamine<sup>™</sup> 3000 Reagent is a proprietary formulation for transfecting nucleic acids into a wide range of eukaryotic cells and especially designed for hard to transfect cells



## Product Description

 Make DNA-Lipofectamine<sup>™</sup> 3000 complexes in serum-free medium such as Opti-MEM<sup>™</sup> Reduced Serum Medium and add directly to cells in culture medium, in the presence or absence of serum/antibiotic.



#### Important Guidelines

- It is not necessary to remove complexes or change/add medium after transfection.
- The amount of Lipofectamine<sup>™</sup> 3000 Reagent for successful transfection varies. Start any new transfection by testing the recommended two concentrations of Lipofectamine<sup>™</sup> 3000 Reagent to determine an optimum amount.



#### Online Resources

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## **Protocol Outline**

- A. Plate cells so they will be 70–90% confluent at the time of transfection.
- B. Prepare plasmid DNA-lipid complexes (recommend 2 doses of lipid).
- C. Add DNA-lipid complexes to cells.

## **Transfection Amounts**

Component	96-well	24-well	6-well
DNA per well	100 ng	500 ng	2500 ng
P3000™ Reagent per well	0.2 μL	1 μL	5 µL
Lipofectamine™ 3000 Reagent per well	0.15 and 0.3 μL	0.75 and 1.5 μL	3.75 and 7.5 µL

## Transfection of siRNA

To transfect cells with siRNA, follow the protocol as described for DNA but **do not** add  $P3000^{\text{\tiny{M}}}$  Reagent when diluting the siRNA (step 3).

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# Lipofectamine™ 3000 Reagent Protocol

Transfect cells according to the following table. Use the indicated volume of DNA and P3000™ Reagent with each of the two volumes of Lipofectamine™ 3000 (when performing optimization). Each reaction mix volume is for one well and accounts for pipetting variations. Scale volumes proportionally for additional wells.

Timeline S		Steps	Procedure Details (Two Reaction Optimization)				
	Seed cells to be 70-90%	Component	96-well	24-well	6-well		
1	1	confluent at transfection	Adherent cells	1-4 × 10 <sup>4</sup>	0.5-2 × 10 <sup>5</sup>	0.25-1 × 10 <sup>6</sup>	
	iluted Lipofectamine** 3000	Dilute Lipofectamine™ 3000 Reagent in Opti-MEM™ Medium (2 tubes) - Mix well	Opti-MEM™ Medium	5 μL × 2	25 μL × 2	125 μL × 2	
2	Vortex 2–3 sec		Lipofectamine™ 3000 Reagent	0.15 and 0.3 µL	0.75 and 1.5 μL	3.75 and 7.5 µl	
3	Prepare master mix of DNA by diluting DNA in Opti- MEM™ Medium, then add P3000™ Reagent – Mix well	Opti-MEM™ Medium	10 μL	50 μL	250 µL		
		DNA (0.5–5 μg/μL)	0.2 μg	1 µg	5 μg		
		P3000™ Reagent (2 µL/µg DNA)	0.4 μL	2 μL	10 μL		
4	Add Diluted DNA to each tube of Diluted Lipofectamine™ 3000 Reagent (1:1 ratio)	Diluted DNA (with P3000™ Reagent)	5 μL	25 μL	125 µL		
		Diluted Lipofectamine™ 3000 Reagent	5 μL	25 μL	125 µL		
5	10-15	Incubate	Incubate for 10–15 minutes at room temperature.				
6 10		Add DNA-lipid complex to cells	Component (per well)	96-well	24-well	6-well	
	1.4		DNA-lipid complex	10 μL	50 μL	250 µL	
			DNA amount	100 ng	500 ng	2500 ng	
	1 1 1		P3000™ Reagent	0.2 μL	1 μL	5 μL	
		Lipofectamine™ 3000 Reagent used	0.15 and 0.3 μL	0.75 and 1.5 μL	3.75 and 7.5 µl		

transfected cells