DNA Transfection Kit Powered by Transfectin™

DNA transfection is a laboratory method commonly used to study biological mechanisms in cells. The process involves the use of artificial methods to deliver DNA molecules into cells, enabling the cells to express a particular gene or genetic trait.

There are various DNA transfection techniques, including chemical, physical, and biological approaches. In a chemical transfection, DNA is mixed with a lipid-based solution that penetrates the cell membrane, while in a physical transfection, DNA is introduced into cells using electric shocks or microinjections. Viral vectors or bacterial cells are used to deliver DNA to cells in a biological transfection.

Virongy Transfectin utilizes a cationic polymer-mediated transfection process, in which DNA is condensed into positively charged particles to be delivered into cells. Transfectin can effectively deliver DNA into a variety of cells. Transfectin also has lower cytotoxicity than most liposome-based transfection reagents. It is ideal for routine DNA transfection applications and for viral particle assembly.

Highlights

- High efficiency (over 90% in HEK293T) and low toxicity
- An affordable solution for DNA transfection and large-scale lenti-and AAV viral vector assembly
- Less amounts of DNA needed

Table: Recommended amounts of DNA/Transfectin used for transfection

	Transfectin (µL)	DNA (µg)	Total volume in culture(mL)
48 well plate	2.25	1	0.5
24 well plate	4.5	2	1
12 well plate	6.75	3	1.5
6 well plate	9	4	2
35mm dish	9	4	2
60mm dish	27	12	6
10cm dish	45	20	10
T75 flask	67.5	30	15
250mL flask	157.5	70	35

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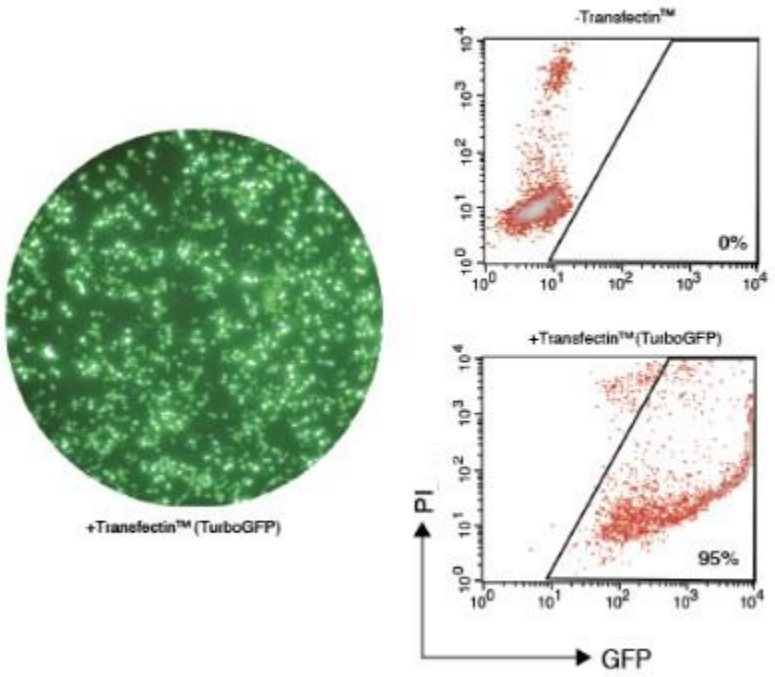
Protocol

1. Seed cells to confluence.
2. For each well/dish/flask mix DNA with serum free media and add Transfectin.
3. Incubate the mix at room temperature for 10-15 minutes.
4. Add the mix from step 2 to the cells dropwise.
5. Incubate for 5-6 hours at 37C.
6. Remove the supernatant and add media supplemented with 10% serum.
7. Particle production/FACS/Fluorescent microscopy can be performed 48-72 hours after transfection.

Example Data:

HEK293T cells were transfected with a GFP expression vector with Virongy Transfectin. GFP expression was visualized with fluorescent microscopy at 48 hours post transfection.



Please contact *info@virongy.com* for volumes and pricing.