

# ProteanFect™ TuffCell Transfection Kit

## Quick Start Guide

### What's in the Package

- 1x User Manual
- Reagent A, B, and C
- EGFP mRNA
- EGFP pDNA (with general kit)

### Storage Requirement

- Entire Kit can be stored at  $-80^{\circ}\text{C}$
- Reagent A and C can be stored at  $4^{\circ}\text{C}$

## Quick Protocol: per well of a 96-well plate

### 1. Transfection Complex Preparation

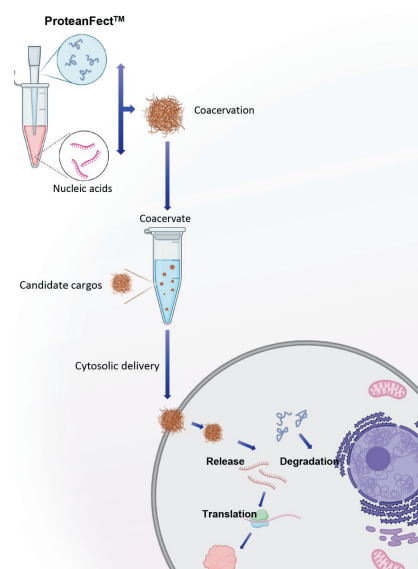
- a. Mix Reagent A ( $40\ \mu\text{L}$ ) with mRNA ( $0.5\ \mu\text{g}$ ).
- b. Add Reagent B ( $1.4\ \mu\text{L}$ ) and mix with pipette (20–30x or vortex for 10 seconds).

### 2. Cell Preparation

- a. Suspension cells – Harvest cells by centrifugation at 300g for 5 min. Discard supernatant and wash once with Opti-MEM. Resuspend cells with Opti-MEM at  $5 \times 10^6$ – $1 \times 10^7$  cells/mL.
- b. Adherent cells – Maintain 50–80% cell confluence. Remove medium, wash cells once with Opti-MEM, add  $20\ \mu\text{L}$  of Opti-MEM.  
**Optional:** Harvest cells by trypsinization, then resuspend them in Opti-MEM at a concentration of  $5 \times 10^6$  –  $1 \times 10^7$  cells/mL for subsequent transfection.

### 3. Transfection

- a. Mix complex with cells: For suspension cells, mix  $40\ \mu\text{L}$  of transfection complex with  $20\ \mu\text{L}$  of cell suspension and gently pipet up and down 2–3 times. For adherent cells, apply directly to the cells.
- b. Incubate the cells with the transfection complex for 45–60 minutes in a cell culture incubator.
- c. Terminate the reaction by adding  $\geq 200\ \mu\text{L}$  of culture medium (10x cell suspension), then transfer the cells from the tube to the culture plate. For adherent cells, replenish with  $\geq 200\ \mu\text{L}$  of complete culture medium.
- d. Incubate transfected cells in culture medium and assess transfection efficiency after 5 to 48 hours, or at an appropriate time.



### Additional Notes

- Avoid including FBS in the transfection medium.
- The cell pellet may adhere to the tube walls. Gently remove the supernatant to minimize cell loss.

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