

Catalog number C15053-K01/ C15053-K02

Package & Component

Reagents	Form	C15053-K01	C15053-K02
<i>EndoSafe mRNA Transfection Reagent</i>	Liquid	0.5 mL*1	0.5 mL*2

Product Description

EndoSafe mRNA Transfection Reagent is specifically designed to introduce mRNA into mammalian cells with minimal cellular toxicity. By delivering mRNA directly to the cytoplasm, it bypasses transcriptional regulation, enabling immediate expression. This method also avoids the risk of genetic integration, thereby minimizing the potential for mutations associated with plasmid DNA.

Storage & Stability

This product is stable after storage at:

- Stored at -20°C.
- All reagents are stable for one year under proper storage conditions.

Application

Cell transfection.

Important notes

EndoSafe mRNA Transfection Reagent is recommended for use with Gibco™ Opti-MEM™ I Reduced-Serum Medium or Gibco™ OptiPRO™ SFM for alternative optimizing transfection efficiency.

Materials Required but not Provided

Devices & Consumables

1. 10 mL graduated pipettes
2. 10 µL to 1000 µL adjustable single-channel micropipettes with disposable tips
3. Disposable microcentrifuge tubes
4. Timer
5. Incubator capable of maintaining temperature at 37±1°C
6. Disposable gloves
7. Discard container for bio-medical waste

Reagents

1. Cultured cells
2. Appropriate cell culture medium
3. Purified RNA
4. Serum-free medium
5. Reporter assay as required

Intended Use

The EndoSafe mRNA Transfection Reagent is typically intended for introducing exogenous mRNA molecules into cells for various purposes, such as gene expression studies, protein production, or gene therapy research. The kit's reagents efficiently transport mRNA into target cells with minimal toxicity, ensuring high transfection efficiency. Researchers often use mRNA transfection Reagent in molecular biology and biotechnology experiments to manipulate gene expression levels in cells temporarily without altering the genome permanently.

(1) Cell preparation: Cells should be seeded 16 to 20 hours prior to transfection with around 70% confluence. The medium should be refreshed 30 minutes before transfection. Typically, culture medium containing serum does not affect transfection.

(2) mRNA preparation: mRNA for transfection should be with high purity (A260/A280=1.9-2.0) to ensure efficient transfection mixture preparation.

(3) Mixture preparation: The guideline for the amount and ratio of mRNA and EndoSafe mRNA Transfection Reagent can be found in Table 1. In brief, dilute the mRNA and transfection reagent in serum-free culture medium for 5 minutes, then mix them gently for an additional 5-10 minutes.

(4) Transfection: Add mixtures into cell culture dish/plate. The mixture could be removed after 18-24 hours and refilled with culture medium.

Table1. Recommended formula of transfection mixture

Procedures

Culture Dish/Plate	Medium Volume	mRNA / Serum-free medium	EndoSafe mRNA Transfection Reagent / Serum-free medium
96-well	100 µL	0.25 µg / 10 µL	0.25 µL / 10 µL
24-well	500 µL	0.5 µg / 25 µL	0.5 µL / 25 µL
12-wel	700 µL	0.75 µg / 35 µL	0.75 µL / 35 µL
6-well	1 mL	1 µg / 50 µL	1 µL / 50 µL
6 cm	3 mL	2.5 µg / 150 µL	2.5 µL / 150 µL
10 cm	6 mL	5 µg / 300 µL	5 µL / 300 µL

*** Transfection Optimization**

Determine the best EndoSafe mRNA Transfection Reagent: mRNA ratio for each cell type. Vary the concentration of EndoSafe mRNA Transfection Reagent from 1-3 µL per 1 µg mRNA to find the optimal ratio.

For Research Use Only.