PRODUCT INFORMATION

# EndoSafe mRNA Transfection Reagent

*v. 241201*

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|---|---|
| **Catalog number** | C15053-K01/ C15053-K02 |

**Package & Component**

| Reagents | Form | C15053-K01 | C15053-K02 |
|---|---|---|---|
| *EndoSafe mRNA Transfection Reagent* | 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.

## Procedures

(1) Cell preparation: Cells should be seeded before 16 to 20 hours prior to transfection with around 70% confluence. The medium should be refreshed 30 minutes before transfection. Usually, culture medium with 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 10 minutes.

(4) Transfection: Add mixtures into cell culture dish/plate. The mixture could be removed after 6-24 hours and refilled with culture medium.

**Table1.** Recommended formula of transfection mixture

| Culture Dish/Plate | Medium Volume | mRNA / Serum-free medium | EndoSafe mRNA Transfection Reagent / Serum-free medium |
|---|---|---|---|
| 96-well | 100 µL | 250 ng / 10 µL | 0.75 µL / 10 µL |
| 24-well | 500 µL | 500 ng / 25 µL | 1.5 µL / 25 µL |
| 12-wel | 700 µL | 750 ng / 35 µL | 2.25 µL / 35 µL |
| 6-well | 1 mL | 1 µg / 50 µL | 3 µL / 50 µL |
| 6 cm | 3 mL | 2.5 µg / 150 µL | 7.5 µL / 150 µL |
| 10 cm | 6 mL | 5 µg / 300 µL | 15 µL / 300 µL |

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