

siRNA Transfection Reagent

Basic Information

Cat.No	Specification	Form	Storage Conditions	Shelf Life
RC0022	1ml	Liquid	2~8°C	12months

Product Information

This product is a novel and stable siRNA-specific transfection reagent. It has a strong ability to condense RNA, enabling the efficient and rapid transfection of RNA into eukaryotic cells without degradation by nucleases. Compared to other transfection reagents, it offers several advantages: low toxicity, high stability, strong serum tolerance, simple and easy-to-follow transfection procedures, and excellent reproducibility.

Application Scope

This product is suitable for the transfection of siRNA in a wide range of primary and transformed cell lines. It provides high silencing efficiency and stable performance, achieving very satisfactory gene silencing effects in both serum-containing and serum-free cell culture media.

Instructions for Use

Plasmid DNA Transfection Procedure (Example with 24-well plate):

1. Cell Seeding: Seed $0.5\sim1.0\times10^5$ cells per well, and culture for 12~24 hours to achieve a cell density of 60~70% confluence at the time of transfection.
2. siRNA Dilution: Dilute 15pmol of siRNA in Opti-MEM culture medium to a final volume of 10 μ L.
3. Transfection Reagent Dilution: Dilute 1 μ L of the transfection reagent in 9 μ L of Opti-MEM culture medium to a final volume of 10 μ L.
4. Complex Preparation: Mix the diluted siRNA solution with the diluted transfection reagent solution, gently pipette to mix evenly, and let stand at room temperature for 10 minutes.
5. Transfection: Add the 20 μ L complex to the 24-well plate, gently pipette to mix evenly, and continue culturing for 18~48 hours before assessing transfection efficiency. There is no need to change the culture medium.

Optimization of siRNA Transfection

To achieve optimal transfection results, the transfection process can be optimized by adjusting the following parameters: cell density, siRNA concentration, and transfection reagent concentration. When conducting optimization experiments, ensure that the cell confluence is above 60%, and the ratio of transfection reagent (μ L) to siRNA (pmol) can be flexibly adjusted between 0.02:1 and 0.15:1 to find the most suitable transfection conditions for the target cell line.

Table.1 Reference Table for Transfection Reagent and siRNA Usage in Different Culture Plates

Culture Plate	Single Well Area (cm ²)	Seeded Cell Number (cells)	Final Volume of Opti-MEM Dilution (μL)	Transfection Reagent Usage (μL)	siRNA Usage (μg)
96-well	0.3cm ²	200μL	10μL	0.5μL	7.5 pmol
24-well	2.0cm ²	500μL	20μL	1.0μL	15 pmol
12-well	4.0cm ²	1mL	40μL	2.0μL	30 pmol
6-well	10.0cm ²	2mL	100μL	4.0μL	60 pmol

Precautions

1. Before using this product, please read this specification sheet carefully and strictly follow the recommended procedures to ensure optimal transfection results.
2. This product is intended for research use only and should not be used for clinical diagnosis or treatment or any other purposes.