Transfectamine™ 7000 siRNA Transfection Reagent

Catalog number: 60025, 60026, 60027
Unit size: 1 mL, 5 mL, 50 uL

Component	Storage	Amount (Cat No. 60025)	Amount (Cat No. 60026)	Amount (Cat No. 60027)
Transfectamine™ 7000 siRNA Transfection Reagent	Freeze (< -15 °C), Minimize light exposure	1 mL	5 mL	50 uL

OVERVIEW

Transfectamine™ 7000 siRNA Transfection Reagent provides a reliable and effective solution for siRNA-mediated gene knockdown experiments, efficiently delivering small interfering RNA (siRNA) and microRNA (miRNA) into diverse cell types. This reagent allows researchers to achieve high transfection efficiency with lower RNAi concentrations, resulting in effective gene knockdown with minimal non-specific effects. The low cytotoxicity of Transfectamine™ 7000 facilitates easy optimization across various concentration ranges, ensuring minimal impact on cell viability. The application protocol for Transfectamine™ 7000 is streamlined and rapid, promoting consistent and reproducible outcomes in gene silencing experiments. This reagent is capable of achieving significant levels of gene knockdown in a broad spectrum of cell lines, which is crucial for obtaining robust and conclusive experimental data. For high-throughput siRNA transfection applications, Transfectamine™ 7000 offers a straightforward workflow: the reagent is mixed with siRNA, applied to cells, incubated, and then the extent of gene knockdown is assessed. The efficiency and speed of this process, combined with the high transfection efficiency, makes Transfectamine™ 7000 an optimal choice for high-throughput screening, and it can be readily adapted for automated or robotic systems.

AT A GLANCE

Protocol Summary

1. Prepare cells for transfection.
2. Prepare Transfectamine™ 7000-siRNA mixture.
3. Add Transfectamine™ 7000-siRNA mixture to cell culture
4. Culture overnight.
5. Analyze transfection efficiency with appropriate method.

Important Note

Thaw component at room temperature before starting the experiment.

PREPARATION OF WORKING SOLUTION

1. Mix 50 to 200 nM of siRNA with 200 µL of serum-free medium.
2. Add 7.5 µL of Transfectamine™ 7000 to Step 1.
3. Mix well and incubate at room temperature for 20 minutes.

   Note: Ratio of Transfectamine™ 7000 and siRNA need to be optimized for different cell lines.

Sample protocol detail for 6-well and 10 cm plate

Component	6 well plate (per well)	10 cm plate
Fresh culture medium	2 mL	6 mL
siRNA	50-200 nM	50-200 nM
Serum-free medium	200 µL	600 µL
Transfectamine™ 7000 siRNA Transfection Reagent	~7.5 µL	~22.5 µL

SAMPLE EXPERIMENTAL PROTOCOL

Preparation of Cell Culture

1. Culture cells to ~ 90% confluency at time of transfection.
2. Replace with fresh growth medium before transfection. For example, replace with 2 mL of medium per well for 6-well plates and 6 mL of medium for 10 cm plates.

Transtection Protocol

1. Add Transfectamine™ 7000-siRNA mixture to the culture plate and culture overnight.

   Note: Recombinant protein can start to be detected as early as 16 hours post-transfection. Maximal expression level may be observed 72~96 hours post-transfection.

EXAMPLE DATA ANALYSIS AND FIGURES

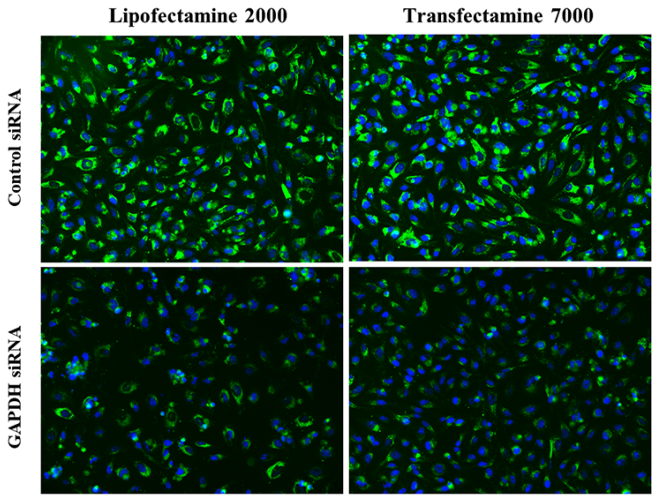

Figure 1. HeLa cells were subjected to immunohistochemistry after transfecting with Control siRNA or GAPDH siRNA using Lipofectamine 2000 and Transfectamine™ 7000. The experiment aimed to compare the efficacy of both transfection methods in knocking down GAPDH. After 48 hours of transfection, GAPDH was detected using an iFluor®

488 goat anti-mouse IgG (Cat No. 16528) through immunohistochemistry.

DISCLAIMER

AAT Bioquest provides high-quality reagents and materials for research use only. For proper handling of potentially hazardous chemicals, please consult the Safety Data Sheet (SDS) provided for the product. Chemical analysis and/or reverse engineering of any kit or its components is strictly prohibited without written permission from AAT Bioquest. Please call 408-733-1055 or email info@aatbio.com if you have any questions.