Magnetic Transfection Kit, 100 nm
PRODUCT DATA SHEET

Magnetic Transfection Kit, 100 nm

Description

The 100 nm magnetic transfection reagent has high loading capacity and high surface positive charge, so it has high transfection efficiency, safety and environmental protection, good colloidal stability, and excellent magnetic resonance imaging ability. The product is brown clarified hydrocolloid, which has been filtered by 0.22 micron filter membrane for bacteria removal, simple operation, antibiotic-containing medium, easy to be phagocytic by cells under the action of magnetic plate (24 or 96 wells), and can be used for efficient transfection experiment of DNA or RNA.

Abvigen offers high quality 100 nm magnetic transfection reagent. The product has high repeatability between batches, which can meet the needs of various customers for personalized materials such as research and development, testing and production.

For custom sizes, formulations or bulk quantities please contact our customer service department.

Website: www.abvigen.com Phone: +1 929-202-3014 Email: info@abvigenus.com

Characteristics

Type: Magnetic Transfection Kit

Surface group: PEI

Dispersing solvent: Ultrapure water

Particle size: 100 nm

Concentration: 0.5 mg/mL

Size: 0.1 mL

Storage condition: Seal and store at room temperature or 2-8°C

Validity: 36 months

Application Example

Cells were inoculated before transfection

In order to obtain higher transfection efficiency, it is recommended to use cells less than 50 generations for transfection experiments. It is required to pass the cells again 12-24 h before

transfection, and **the cell density should generally be 50-70% at transfection**. Please note that the optimal experimental conditions vary depending on the cell line. The following recommendations can be used as a guide to achieve good transfection results with the shortest incubation time.

Adherent cells (24-well plate as an example)

1) Dilute 0.5 μg nucleic acid in 10 μL sterilized pure water or 25 μL serum-free medium and mix gently.

2) 0.5-1 μL 100 nm magnetic transfection kit was diluted into 10 μL sterilized pure water or 25 μL serum-free medium, mixed gently, added into the solution in step 1, mixed gently, and let stand at room temperature for 10-15 min.

3) The complete culture medium of 24-well plate cells was changed, the cells were cleaned with PBS once, and then 500 μL of the complete culture medium was added. The 100 nm magnetic transfection kit/ nucleic acid complex in (2) was added into the well, and the mixture was shaken flat, with 24-well magnetic label plate added at the bottom. Incubate in a CO_2 incubator at 37°C for 15 min.

4) Remove the bottom magnetic label plate, 24-well plate cells into 37°C, CO_2 incubator for further culture.

5) (optional) Wash the medium containing the transfection mixture after 12-48 h and replace it with a fresh medium.

6) The transfection efficiency of reporter genes could be analyzed 12-72 h after culture under standard conditions.

Recommended DNA amount, 100 nm magnetic transfection reagent volume and transfection volume.

The recommended numbers of adherent cells and suspended cells for transfection are shown in the table below:

Tissue culture dish	**Number of cells per pore**	**DNA quantity (μg)**	**ABMTK-100 (μL)**	**Transfection volume (mL)**
96-well culture plate	$(0.5\text{-}2)\times10^4$	0.1-0.5	0.1-0.5	0.2
24-well culture plate	$(0.5\text{-}1)\times10^5$	0.5-3	0.5-2	0.5
6-well culture plate	$(1\text{-}4)\times10^5$	2-6	2-6	2
60 mm petri	$(5\text{-}10)\times10^5$	6-8	6-8	5

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dish				
90-100 mm petri dish	(1-2)×10^6	8-12	8-12	10
T-75 culture bottle	(2-5)×10^6	15-25	15-25	15-25

* Total transfection volume = medium + magnetic transfection reagent complex

Common Problems and Solutions

1. Low transfection efficiency

High quality plasmid DNA was used and confirmed to contain no RNA (OD260/OD280 greater than 1.8 and less than 2).

Optimize cell density before transfection and ensure that cell morphology is optimal.

Optimize the transfection reagent /DNA ratio.

Reduce the volume of cell medium during transfection.

2. High cytotoxicity

The health status of cells before inoculation directly affects cytotoxicity.

Confirm that the plasmid has no endotoxin.

Reduce the amount of transfection reagents, or maintain the transfection reagent /DNA ratio to reduce the amount.

Reduce the culture time of complexes and cells, and replace fresh complete media in time.

Advantages

High transfection efficiency

Safety

Environmental protection and pollution-free

Good colloidal stability

Excellent magnetic resonance imaging ability

Applications

Experimental study on efficient transfection of DNA or RNA

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Storage

Seal and store at room temperature or 2-8°C for 3 years.

Note

Avoid freezing and thawing during use and storage. Close the bottle tightly after use.

Ordering Information

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