

geneARROW™

the new gene transfection reagent

geneARROW is a new powerful polymeric transfection reagent with a very high efficiency and low toxicity of transfection of plasmid DNA and siRNA



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NEW TOOLS IN BIOSCIENCES

geneARROW™ – the new polymeric transfection reagent

geneARROW™ is a new, powerful polymeric reagent to transfect cells in culture with a very high transfection efficiency and low toxicity.

geneARROW™ is useful for transfection of adherent- and suspension cells with plasmid DNA, siRNA or antisense oligonucleotides.

Storage Conditions

The **geneARROW™** reagent should be stored at room temperature (20-25°C).

- Do not freeze the transfection reagent
- Do not add anything to the stock solution
- Shipping conditions: room temperature

Protocol for plasmid DNA transfection in 6-well plate format

1. Plate in each well 2×10^5 adherent cells the day before transfection in 2 ml culture medium per well.
2. Dilute 3 µg plasmid DNA in 100 µL with culture medium **without** serum and supplement (such as OptiMEM).
3. Before each use, vortex the **geneARROW™** vial. Dilute 3 µl **geneARROW™** reagent in 100 µL with culture medium **without** serum and supplement (such as OptiMEM).
4. Transfer the diluted plasmid DNA solution to 100 µL of **geneARROW™** diluted solution and mix immediately 4 - 5 times by vigorous pipetting. The final volume is 200 µl.
5. Incubate the plasmid DNA / **geneARROW™** mixture for 20 minutes at room temperature.

6. Add to each well 200 µL of the plasmid DNA / **geneARROW™** complex drop by drop directly on the cells, which are covered with complete medium.

Note: For some cells, serum-free condition for the first 3 hours of incubation might lead to better gene silencing. However, in most assays, siRNA delivery has been realized in culture medium with serum.

7. Cultivate the cells under standard conditions until evaluation of the gene silencing. Depending on the plasmid DNA amount, the gene target and the cell type assays can be monitored 24 to 96 hours post-transfection.

We recommend to incubate between 48 hours and 72 hours for protein expression analyses.

Note: Optionally a medium change can be performed 8-24 h after the transfection if your cells are sensitive to serum/supplement concentration.

Example dilution procedure of plasmid DNA and **geneARROW™** :

As starting condition we recommend a mixing ratio of 1:1 (µg eGFP plasmid DNA : µl **geneARROW™**).

Tissue Culture Dishes	Cell Number	plasmid DNA Quantity	geneARROW™ Quantity
96-well	0.5 - 2 x 10 ⁴	0.1 - 0.5 µg	0.1 - 0.5 µl
24-well	0.5 - 1 x 10 ⁵	0.5 – 2 µg	0.5 – 2 µl
12-well	1 - 2 x 10 ⁵	2 – 4 µg	2 – 4 µl
6-well	1 - 4 x 10 ⁵	2 – 6 µg	2 – 6 µl
60 mm dish	5 - 10 x 10 ⁵	6 – 8 µg	6 – 8 µl
90-100 mm dish	1 - 2 x 10 ⁶	8 – 12 µg	8 – 12 µl
T-75 flask	2 - 5 x 10 ⁶	15 – 25 µg	15 – 25 µl

Protocol for siRNA transfection in 6-well plate format

1. Plate in each well 2×10^5 adherent cells the day before transfection in 2 ml culture medium per well.
2. Dilute 2 μg siRNA in 100 μL with culture medium **without** serum and supplement (such as OptiMEM).
3. Before each use, vortex the **geneARROW™** vial. Dilute 4 μl **geneARROW™** reagent in 100 μL with culture medium **without** serum and supplement (such as OptiMEM).
4. Transfer the diluted siRNA solution to 100 μL of **geneARROW™** diluted solution and mix immediately 4 - 5 times by vigorous pipetting. The final volume is 200 μl .
5. Incubate the siRNA / **geneARROW™** mixture 20 minutes at room temperature.
6. Add to each well 200 μL of the siRNA / **geneARROW™** complex drop by drop directly on the cells, which are covered with complete medium.

Note: For some cells, serum-free condition for the first 3 hours of incubation might lead to better gene silencing. However, in most assays, siRNA delivery has been realized in culture medium with serum.

7. Cultivate the cells under standard conditions until evaluation of the gene silencing. Depending on the siRNA amount, the gene target and the cell type assays can be monitored 24 to 96 hours post-transfection.

We recommend to incubate 48 hours to 72 hours for RNA and protein knockdown analyses, respectively.

Note: Optionally a medium change can be performed 8-24 h after the transfection if your cells are sensitive to serum/supplement concentration.

Example dilution procedure of siRNA and **geneARROW™** :

As starting condition we recommend a mixing ratio of 1:2 (μg siRNA : μl **geneARROW™**).

Tissue Culture Dishes	Cell Number	siRNA Quantity	geneARROW™ Quantity
96-well	$0.5 - 2 \times 10^4$	0.1 - 0.5 μg	0.2 - 1.0 μl
24-well	$0.5 - 1 \times 10^5$	0.5 – 2 μg	1.0 – 2 μl
12-well	$1 - 2 \times 10^5$	2 – 4 μg	2 – 4 μl
6-well	$1 - 4 \times 10^5$	2 – 6 μg	4 – 12 μl
60 mm dish	$5 - 10 \times 10^5$	6 – 8 μg	12 – 16 μl
90-100 mm dish	$1 - 2 \times 10^6$	8 – 12 μg	16 – 24 μl
T-75 flask	$2 - 5 \times 10^6$	15 – 25 μg	30 – 40 μl

Purchaser Notification

The **geneARROW™** reagent is developed, designed, intended and sold for research use only. It is not to be used for human diagnostic or any drug intended.

geneARROW™ are registered trademark.

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