Glial-Mag™
Magnetofection Technology for Microglial cells

To find the ideal conditions, Glial-Mag must be tested at ratios of **2 µL/µg**, **3 µL/µg**, **3.5 µL/µg** and **4 µL/µg** (µL of Glial-Mag / µg of DNA). For the DNA quantity, we suggest **0.1 µg** per well in 48-well, **0.2 µg** per well in 24-well and **0.6 µg** per well in 6-well.

1. Prepare 4 wells: seed the cells to be at 70% confluent on the day of transfection



For primary cells, only if needed change only 50% of the culture medium 24 h before transfection.

2. Prepare 4 identical tubes of DNA



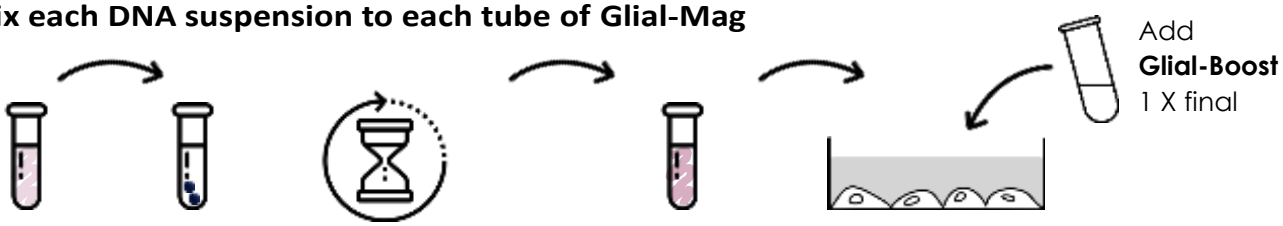
48-well plate	24-well plate	6-well plate
0.1 µg in 50 µL of serum-free medium or buffer **x4**	0.2 µg in 100 µL of serum-free medium or buffer **x4**	0.6 µg in 200 µL of serum-free medium or buffer **x4**

3. Prepare 4 tubes of Glial-Mag



48-well plate	24-well plate	6-well plate
0.2 µL/0.3 µL/0.35 µL/0.4 µL	0.4 µL/0.6 µL/0.7 µL/0.8 µL	1.2 µL/1.8 µL/2.1 µL/ 2.4 µL

4. Mix each DNA suspension to each tube of Glial-Mag



Incubate 20 min at RT

Distribute each preparation of complexes in each well.

5. Incubate the cells 20 min on the magnetic plate and follow transgene expression



Place the cells onto the magnetic plate

Remove the magnet, perform a medium change after **2 h** (option)

Incubate **24** to **72 h** at 37°C

Choose the best ratio DNA:Glial-Mag

Contact us regarding protocols for DNA transfection in suspension cells, optimization procedures or for gene silencing with siRNA at: **tech@ozbiosciences.com** or visit our website: **www.ozbiosciences.com**.

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Before you begin

Glial-Mag™ is a Magnetic nanoparticle formulation specifically designed to achieve high transfection efficiency of microglial cell lines and primary cells.

Protocol | General considerations

• Cell density is a critical parameter for microglia: prefer higher cell density.
• Allow reagents to reach room temperature (RT).
• Use medium w/o any supplement for preparation of complexes, avoid using RPMI.
• Option: perform medium change 2 h after transfection.

⚠ For doses of Glial-Mag less than 1µL, dilute the reagent with deionized water only.
⚠ For primary cells, avoid medium change within 24h before transfection. If needed replace 50% of culture medium.

1. Cells preparation:
One day before transfection prepare the cells according to table 1 (60-80% confluence).

Cell culture format	Surface area per well	Adherent cell nb. / well
48-well	1 cm^2	0.2-0.4 x 1.10^5
24-well	2 cm^2	0.5-0.8 x 1.10^5
6-well	10 cm^2	2-4 x 1.10^5

Table 1: Suggested cell number per well.

2. Preparation of DNA/Glial-Mag complexes:

a. Glial-Mag: mix the reagent and add **0.5** to **14 µL** in a microtube (refer to Table 2).

b. DNA: Dilute the indicated quantity of DNA in **50** to **200 µL** of culture medium w/o supplement (Table 2).

c. Add DNA solution to Glial-Mag, mix gently by carefully pipetting up and down & incubate at RT for **20 min**.
⚠ Do not vortex or centrifuge.

3. Transfection | Magnetofection:
a1. Add the Glial-Mag/DNA complexes onto cells drop by drop and gently rock the plate to ensure a uniform distribution.
a2. Add Glial-Boost (1X final) to the cells.

b. Place the cell culture plate on the magnetic plate for **30 min** (RT or 37°C).

c. Remove the magnetic plate, incubate **2 h** and optionally, perform a medium change.

d. Cultivate the cells at **37°C** in a CO_2 incubator under standard conditions until evaluation of transgene expression.

Cell culture format	DNA quantity	Glial-Mag volume (µL)	Glial-Boost volume (µL)	Dilution volume	Transfection volume
48-well	0.1 µg	0.2 to 0.4	2.5	50 µL	200 µL
24-well	0.2 µg	0.4 to 0.8	5	100 µL	500 µL
6-well	0.6 µg	1.2 to 2.4	20	250 µL	2 mL

Table 2: Recommended DNA amounts, Glial-Mag volumes and transfection conditions. For other formats, adjust conditions accordingly.

Protocol | Optimization | Co-transfection | siRNA transfection |

Contact us regarding protocols for gene silencing, co-transfection, optimization procedure, or any technical question:
✉ **- tech@ozbiosciences.com.**

Use, handling and storage

For Research Use Only. Not for use in humans. Not for use in diagnostic or therapeutic purposes.

Shipping conditions: Room Temperature
Storage conditions Glial-Mag & **Glial-Boost:** -20°C
Shelf life: 1 year from the date of purchase

Kit contents

GL00250 : 250 µL of Glial-Mag reagent + 3 mL Glial-Boost
GL00500 : 500 µL of Glial-Mag reagent + 6 mL Glial-Boost
KGL0250 : 250 µL of Glial-Mag reagent + 3 mL Glial-Boost + Super Magnetic Plate

Certificate of analysis on demand.

Related Products

Ref	Description
#NM51000	NeuroMag transfection reagent
#IV-BF30500	BrainFectIN (*in vivo* central nervous system).

Purchaser Notification | Conditions of Sale

This product is sold in accordance with our general conditions of sale that you can find on our website: https://ozbiosciences.com/content/3-terms-and-conditions.

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