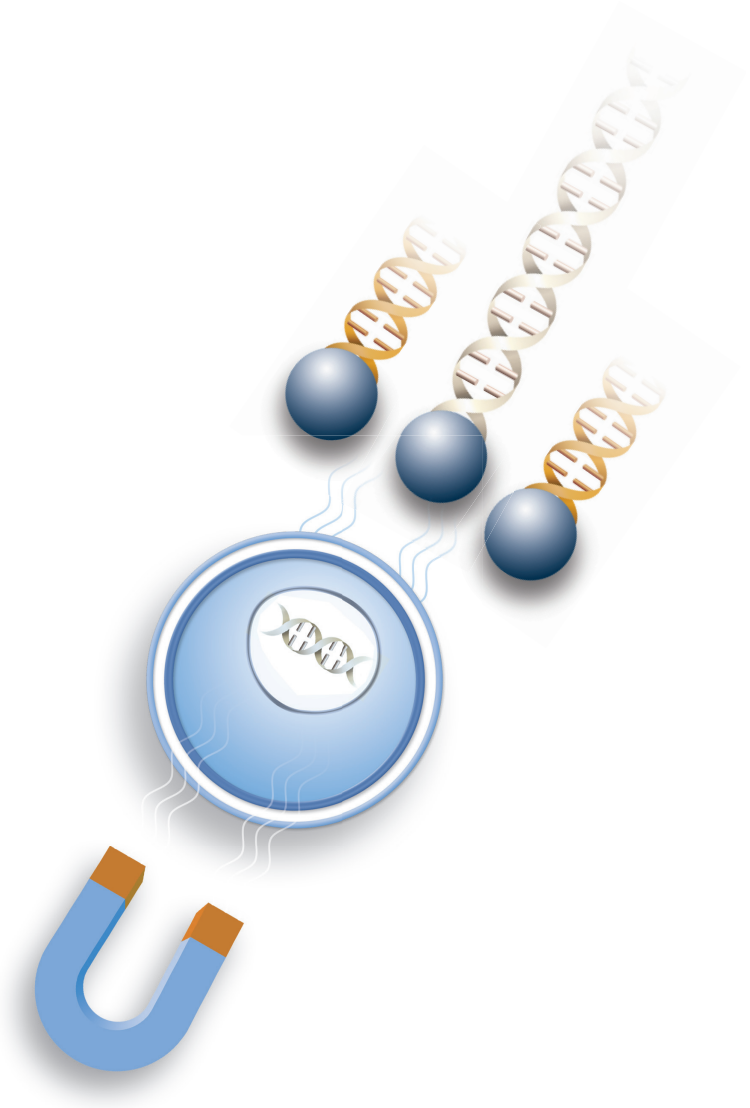
OZBIOSCIENCES
The art of delivery systems

NeuroMag™ Transfection Reagent



Neuroscience Applications

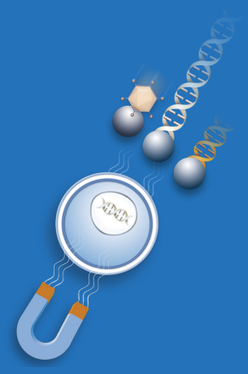
Hippocampal, Cortical, Motor Neurons, Dopaminergic, Glioblastoma
Neuroblastoma, DRG, Neural Stem cells, Oligodendrocytes...
Successfully transfected

Powerful Transfection Reagent for Neurons

MAIN FEATURES

Based on the Magnetofection™ technology, NeuroMag is a unique transfection reagent that has been specifically developed to transfect primary neurons and neural cells.
How does it work? Magnetofection exploits magnetic force to drive nucleic acids associated with magnetic nanoparticles into targeted cells within minutes allowing 100% of cells to uptake nucleic acids.

- **Ideal for primary neurons**
- **High transfection efficiency**
- **High transfected cell viability**
- **Efficient from DIV 1 to DIV 21**
- **Long lasting transgene expression (up to 7 days)**
- **Ready-to-use reagent, straightforward protocol**
- **For all types of nucleic acids (DNA, siRNA, miRNA...)**



Results

Primary neurons are sensitive and difficult to transfect with most methods. Thanks to NeuroMag unique formulation, primary cells have been successfully transfected with reproducibility and no toxicity.

«Hippocampal neurons were co-transfected with plasmid DNA with efficiency above 50%.»
Alavian KN.et al, Nat Cell Bio. 2011

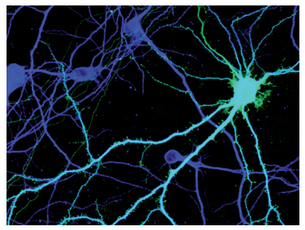


Figure 1: Primary rat hippocampal neurons 6 days after transfection with NeuroMag

«Achieved 30% transfection efficiency on cortical cells.»
Wang R et al, Neurobiol Dis. 2014

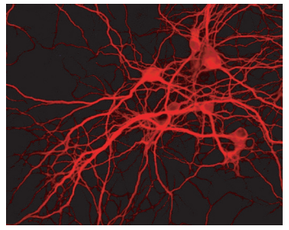


Figure 2: Primary cortical neurons 2 days after transfection with NeuroMag

«Efficient transfection rates of >45% on motor neurons while minimizing toxic effects.»
Fallini C. et al, Mol Neurodegener. 2010

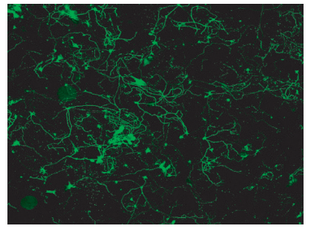


Figure 3: Motor neurons after transfection with NeuroMag

Comparative Data

NeuroMag was compared with other commercial transfection reagents. Figures 4 and 5 show the superior transfection efficiency obtained with NeuroMag on primary rat hippocampal neurons.

«High transfection efficiency at 21 DIV.»
UnderHill SM. et al, Neuron. 2014

«Efficient DNA & shRNA transfection and long-lasting expression in primary hippocampal.»
Buerli T. et al, Nat Protoc. 2007

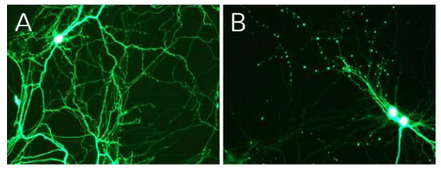


Figure 4: Primary rat hippocampal neurons 3 days after transfection. A) transfected with Neuromag B) transfected with Lipofectamine 2000

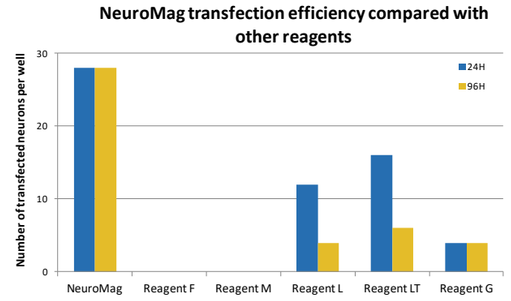


Figure 5: Transfection efficiency of several commercial reagents on primary rat hippocampal neurons.

Cells & References

More than 2000 publications show the efficiency of Magnetofection™ and a large variety of cells was successfully transfected with NeuroMag reagent.

Primary Neurons	Hippocampal, Cortical, Motor Neurons, Striatal, Cerebellar Granule, Dorsal Root Ganglion, Retinal Ganglion cells, Nodose Ganglion, Neuroblastoma...
Neural Cells	Neural Stem cells, Glial cells, Glioblastoma, Astrocytes, Oligodendrocyte, Mesencephalic cells...
Neuronal Cell Lines	A172, B65, C6, KS-1, N2A, PC12, SH-SY5Y, SKN-BE2, T98G, U251, U87, YH-13...

NeuroMag Publication Highlights

«Due to its high efficiency and its low toxicity, we used NeuroMag to transfect cortical neurons to study the role of SRGAP2A protein in the regulation of spine morphology.» Charrier C et al, Cell. 2012

«Transfection efficiency of primary cortical neurons was in the range of 20–30% for overexpression, and 10–15% for TDP-43 knockdown experiments.» Chou C.C. et al, Nature Neuroscience. 2018

«Transfection of small RNAs in primary Ganglion Cells using NeuroMag.» Welsbie D.S. et al, Neuron. 2017

Browse our citation database online!

Primary Cortical Neurons
- Mendonça, Nat Commun. 2022; 13:3497
- Petrova, Nat Commun. 2020; 11(1):5614
- Asselin, L., Nat Commun. 2020; 11(1):2441
- Wang W., Nat Med. 2016; 22(8):869-78
  + iPSC-derived neurons

Primary Hippocampal Neurons
- Helm, Nat Neurosci. 2021, 24(8):1151-1162
- Rangaraju V., Cell. 2019; 10;176(1-2):73-84

Motor Neurons derived from ES Cells
- Terenzio M., EMBO J. 2014; 33(14):1582

NeuroMag References

- KC30800 NeuroMag Starting kit (magnetic plate + 0.2mL of reagent)
- NM50200 NeuroMag 0.2mL - up to 65 assays
- NM50500 NeuroMag 0.5mL - up to 165 assays
- NM51000 NeuroMag 1mL - up to 330 assays

Related Products

- ViroMag, ViroMag R/L and AdenoMag reagents - To enhance transduction efficiency
- GeneBlaster Emerald - To enhance transfection efficiency in neurons
- Glial-Mag Transfection kit - The solution for Glial Cells
- BrainFectIN™ reagent - *In vivo* delivery into Central Nervous System (CNS)

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