

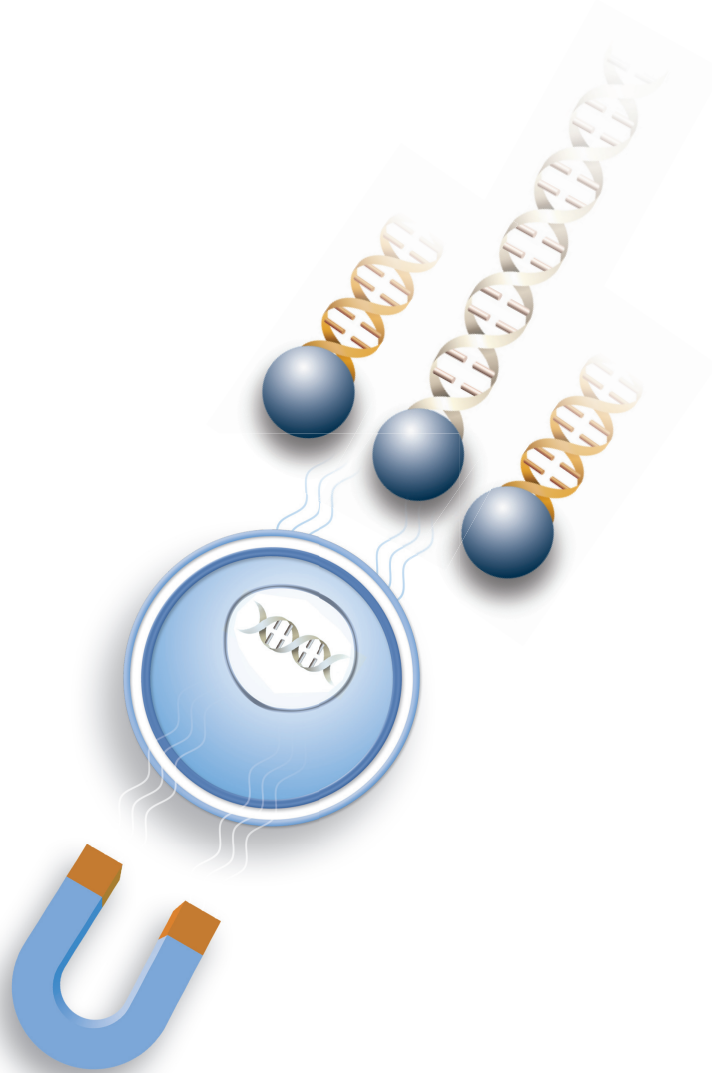


OZBIOSCIENCES
The art of delivery systems

NeuroMag™ Transfection Reagent

We Bring The World Of Biotechnology To You

**BOCA
SCIENTIFIC**



Neuroscience Applications

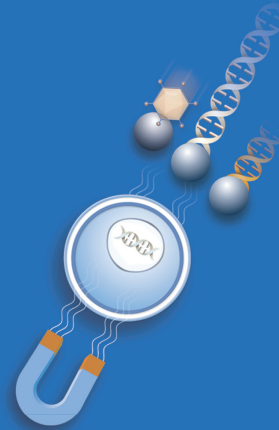
Hippocampal, cortical, motor neurons, dopaminergic, glioblastoma neuroblastoma, DRG, neural stem cells, oligodendrocytes... have been successfully transfected.

NeuroMag to transfect primary

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

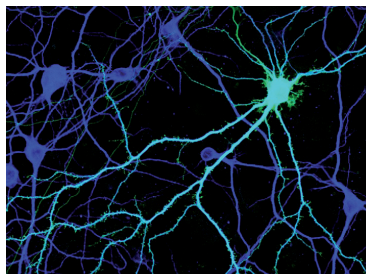


Figure 1: Primary rat hippocampal neurons 6 days after transfection with NeuroMag

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

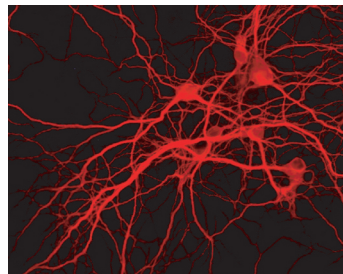


Figure 2: Primary cortical neurons 2 days after transfection with NeuroMag

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

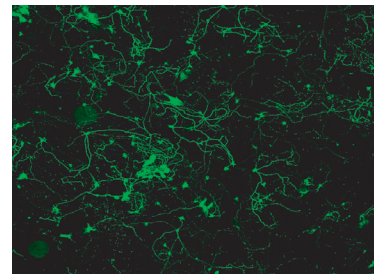


Figure 3: Motor neurons after transfection with NeuroMag

neurons and neural cells

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

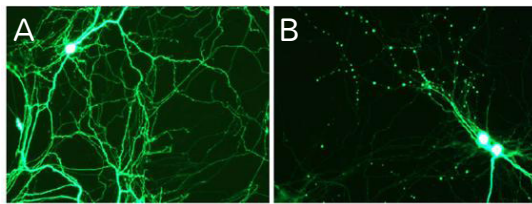


Figure 4: Primary rat hippocampal neurons 3 days after transfection. A) transfected with NeuroMag B) transfected with Lipofectamine 2000

NeuroMag transfection efficiency compared with other reagents

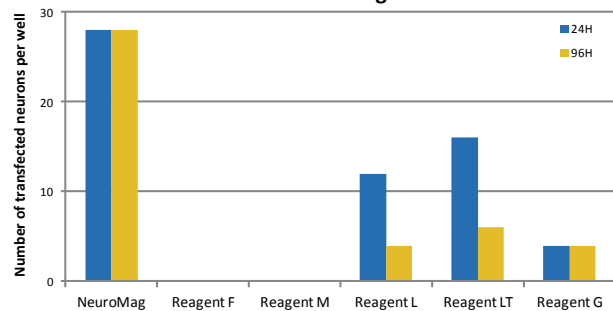


Figure 5: Transfection efficiency of several commercial reagents on primary rat hippocampal neurons.

Cells & References

A large variety of cells was successfully transfected with NeuroMag reagent and more than 750 publications show the efficiency of Magnetofection™.

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

Primary Dopaminergic neurons:

- Underhill SM., *Neuron*. 2014; 83(2):404

Primary cortical Neurons

- Courchet J., *Cell*. 2013; 153(7):1510
- Mairet-Coello G., *Neuron*. 2013; 78(1):94

Primary hippocampal neurons

- Charrier C., *Cell*. 2012; 149(4):923
- Alavian KN., *Nat Cell Biol*. 2011; 13(10):1224
- Buerli T., *Nat Protoc*. 2007; 2(12):3090

Motor neurons derived from ES cells

- Terenzio M., *EMBO J*. 2014; 33(14):1582