

Efficient Neuronal Cell Transfection

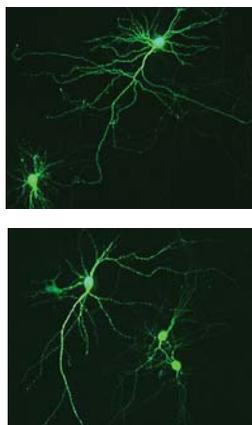
NeuroPORTER™ Transfection Reagent

Transfection of neuronal cells is notoriously difficult, with the percentage of transfected cells commonly <1% for primary neurons and <20% for neuronal cell lines. To improve gene delivery in neuronal cells, we developed the NeuroPORTER™ Transfection Reagent, an innovative cationic lipid specifically designed to achieve the highest transfection efficiencies in a variety of primary neurons, neuronal cell lines, and glial cells.

Superior Neuronal Transfection Efficiencies

Obtaining a high percentage of transfected neurons is a difficult challenge frequently faced by neuroscience researchers. With NeuroPORTER Transfection Reagent, efficient transfection of neuronal cells is now possible. Figure 1 shows dissociated rat primary cortical neurons transfected with a GFP expression vector. The transfection efficiency achieved was 5-10%. Also, note how these cells exhibit none of the cytotoxicity or withdrawal of neuronal dendrites commonly associated with the use of calcium phosphate and other transfection methods. Figure 2 shows a comparison of expression levels obtained using NeuroPORTER Transfection Reagent and other popular transfection reagents in a variety of neuronal cell lines. The NeuroPORTER

Figure 1: Transfection of Rat Primary Cortical Neurons



Rat primary cortical neuron cells were grown on cover slip in 24 well plates. 0.5 µg of gWiz/GFP vector (GTS Cat. No. P040400) were transfected into these cells with 2.5 µl of NeuroPORTER reagent. Images were taken 48 hours post transfection.

reagent is clearly the most effective at facilitating high level gene expression. Transfection efficiencies achieved with these cells ranged from 35% to 40%. In addition, customers have obtained transfection efficiencies as high as 80% in certain glial cell lines.

Optimized Neuron Transfection Reagent

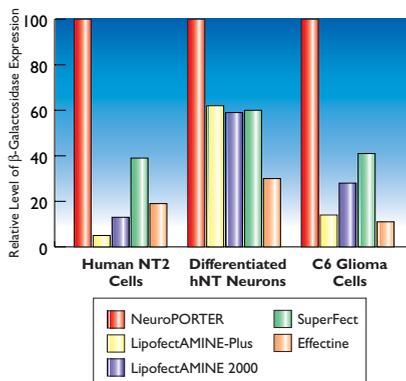
The NeuroPORTER Transfection Reagent is a unique lipid formulation identified by screening hundreds of candidate lipids using a proprietary high-throughput transfection assay. The

NeuroPORTER reagent was chosen because it provides the highest transfection efficiencies in the widest range of neuronal cells. Also, the NeuroPORTER reagent minimizes cytotoxicity, enabling easier post-transfection analysis.

Fast & Easy Protocol

NeuroPORTER Transfection Reagent allows you to avoid excessive time and difficulties associated with viral transfection vectors. Simply combine your plasmid DNA with the NeuroPORTER reagent, incubate at room temperature for 5-10 minutes, and add to your cells. The NeuroPORTER reagent has minimal interaction with serum, so there is no need to switch media after starting your transfection. Also, because it exhibits extremely low cytotoxicity, in most cases there is no need to remove NeuroPORTER from the transfected cells. Finally, the NeuroPORTER reagent is supplied with optimized protocols for primary neurons, neuronal cell lines, and glial or post-miotic cell lines, so you can

Figure 2: β -Galactosidase Expression Comparison in NT2, hNT, and C6 cells



achieve the highest transfection efficiencies with each neuronal cell type.

Get the Best Neuronal Transfection

Because of its unprecedented efficiency, low toxicity, broad applicability, and ease-of-use, NeuroPORTER reagent is your best choice for transfecting neurons. Stop stressing over time-consuming viral vectors and low transfection efficiencies: call GTS and order the NeuroPORTER Transfection Reagent today.

Product	Quantity	Catalog no.
NeuroPORTER™ Transfection Reagent	75-300 reactions (1.5 ml)	T400150
	375-1500 reactions (5 x 1.5 ml)	T400750