Hybrid method for difficult-to-transfect cells

Technology #cu12145

Lead Inventor: Jian Yang PhD

Hybrid technology that can transfect genetic material into sensitive cells with high efficiency and low toxicity

Transfection is a common laboratory method for introducing foreign genetic material (DNA, cDNA, or siRNA) into primary cells or cell lines. This technology is a highly efficient method for transfecting cells, irrespective of the amount of genetic material or the type of expression system being used. Indeed, this method has been successfully demonstrated in cells that are generally known to be difficult to transfect, such as primary neurons, allowing for high rates of transfection. Moreover, this technology has very low levels of toxicity, making it an ideal method for transfecting cells.

Efficient transfection of genetic material into cells leads to quicker results and reduces research costs

Increased efficiency and decreased toxicity of transfections reduces the time and cost spent on failed experiments. The improved efficiency of this transfection method has been demonstrated in primary mammalian hippocampal neurons. Additionally, larger amounts of genetic material have been successfully transfected into these cells with high efficiency. During and after transfection with this method, cells maintain high viability and normal rates of proliferation, demonstrating the very low toxicity afforded by this method.

Applications:
- Effectively transfects variety of cell types, including difficult-to-transfect cells
- Effectively transfects large amounts of genetic material, including DNA, cDNA, or siRNA, into cells.

Advantages:
- Improves efficiency of transfections, compared to current transfection methods
- Very low toxicity, compared to current transfection methods
- Successfully transfects a variety of cell types, including primary cells
- Successfully transfects a variety of genetic material, including large amounts of genetic material, into cells

Patent information: Patent Pending

Licensing Status: Available for licensing and sponsored research support

Inventors

Jian Yang Ph.D.