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STEMCELL launches novel Cell-Engineering CellPoreÃ¢â??Â¢ Transfection System

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STEMCELL Technologies has launched the CellPore™ Transfection System, a new technology with the potential to advance cell engineering research and the development of novel cell therapies to cure diseases.

The CellPore™ Transfection System represents a substantial leap forward for cell engineering researchers, offering a novel method—known as mechanoporation—for cargo delivery into mammalian cells. Unlike traditional electroporation techniques, the CellPore™ Transfection System squeezes cells to create temporary pores in the cell membrane through which the cargo is introduced.

The CellPore™ platform, designed for Research Use Only applications, includes the benchtop CellPore™ Transfection System and the CellPore™ Transfection Kit 300 that features a specialized reagent kit and single-use delivery cartridges.

This state-of-the-art system leverages a mechanism of rapid, controlled cell deformation within microfluidic channels to create transient pores in the plasma membrane. This facilitates the efficient and gentle delivery of target molecules, such as small molecules, nucleic acids, proteins, and gene editing complexes, into human cells. This method ensures minimal cell perturbation and maintains high cell quality, crucial for advancing biological research and the development of novel cell and gene-based therapies.