BTX Applications

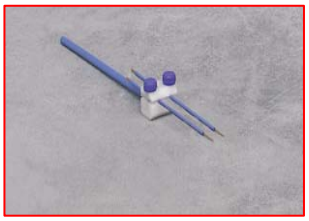
Tech-Trends

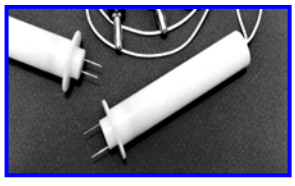
Volume 2, Series 3

In-Vivo Electroporation

In Vivo Electroporation

Electroporation is an excellent, low toxic technique applicable for transfection of mammalian cells and tissues. It is a perfect alternative to transfection with adenoviral vectors, especially when transfecting tumors resistant to viral infections. Electroporation alleviates severe liver damage in experimental animals, when large number of tumor cells need to be transduced. BTX electroporators are designed for in-vitro, in-vivo, in-ovo and ex-vivo transfection of DNA, RNA, siRNA and therapeutic proteins. BTX optimized protocols result in enhancement of transgene expression 50 to 100 fold. Specialized BTX Tweezertrodes, Genetrodes and Gene Paddles, and designated BTX Electroporators are perfect tools for cancer research and tumor transfection.





ECM® 830 In Vivo Electroporation Protocol

Tissue preparation:
Inject tissue with DNA 0.5 -1 µg/µl in 0.9% NaCl or PBS. Encompass the injection site with Caliper electrodes, Genetrodes, Tweezertrodes or 2-needle array.

Electroporation Settings:

Voltage:	50-180
Pulse length:	20-50 msec
Number of pulses:	4-8
Field Strength:	200-250 V/cm

Reference;

1. Suzuki et al: Direct gene transfer into rat liver cells by in vivo electroporation. FEBS letters, 425:436-440, 1988
2. Mir etal: High efficiency gene transfer into skeletal muscle mediated. PNAS 96: 4262-4267, 1999
3. Pierre Lefesvre et al. A comparison of efficacy and toxicity between electroporation and adenoviral gene transfer. *BMC Molecular Biology* 2002, 3:12

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Molecular Delivery Systems

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