# BTXpress Electroporation Solution & Kits

# QUICK REFERENCE CARD

Instructions for Product Nos. 450800, 450801, 450802, 450803, 450804, 450806, 450807, 450810, 450811

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## Electroporation Procedure

*New users should refer to the complete protocol before using this quick reference card.*

### A Prepare the Cells

1. Divide the cells 18 - 24 hours prior to electroporation as needed and culture overnight.

### B Prepare for Electroporation

1. Warm all solutions to room temperature before use.
2. Harvest cells for electroporation, and count cells to determine cells/ml.
   Cells/ml =_____
3. Determine the total volume needed for all the electroporations. Multiply the number of electroporations needed by 0.1 ml (for 0.2 cm cuvettes) OR by 0.25 ml (for 0.4 cm cuvettes), and add 10% more for pipetting errors. Total volume needed = _____ml
4. Determine the volume of cells required for each electroporation according to the formula

$$\text{Volume Needed (ml)} = \frac{\text{\#cells needed/ml*}}{\text{\#counted cells/ml**}} \times \text{Total Volume of BTXpress Solution from step 3}$$

** This is the number of cells/ml needed per electroporation. Refer to Table 1 of the complete protocol.*
***This is the number of cells/ml counted in step 2.*

Enter the calculated volume needed =_____ ml

5. Pipette the volume of cells determined in step 4 into a new tube and centrifuge at 1000 x g for 5 minutes. Aspirate the supernatant.
6. Prepare a culture vessel with pre-warmed complete medium.
7. Resuspend the centrifuged cells from step 5 in _____ ml BTXpress Solution according to the volume determined in step 3.

### C Perform Electroporation

1. Add ___ µl DNA (use 20 µg/ml of cells) to the cells. Mix gently.
2. Aliquot 100 µl (0.25 cm cuvette) or 250 µl (0.4 cm cuvette) DNA/cell mix to each cuvette.
3. Electroporate at room temperature. Using a square wave system set the voltage and pulse length given for your cells as described in Table 1. If using an exponential decay set the capacitance to 950 µF and resistance to "None". Use the voltage given for your cells from Table 2 (refer to to Table 1 & 2 for complete protocols). Voltage = _____
4. Immediately mix the cells gently and transfer to the culture dish prepared in step B-6.
5. Incubate in complete medium for 12 – 72 hours or as required.
6. Harvest cells and perform assay as required.

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BTX® HARVARD APPARATUS
The Electroporation Experts

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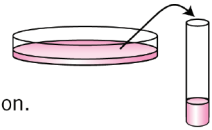
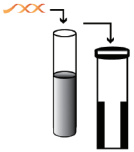
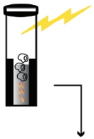
1. Harvest and count cells. Centrifuge and resuspend in **BTXpress** Electroporation Solution.



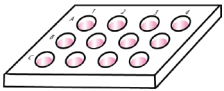
2. Add DNA to cells to create a Master Mix. Aliquot DNA/cell mix to cuvettes.



3. Electroporate.



4. **Immediately** transfer electroporated cells to warm culture medium.



5. Incubate 12-72 hours.


6. Harvest cells and perform assay.

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