



Gene Pulser® Electroprotocols

* We recommend adapting this protocol to use the Gene Pulser electroporation buffer (catalog #165-2676, 165-2677), which increases cell viability and transfection efficiency in mammalian cell lines.

Cell Type	Mammalian, adherent, suspension	Molecules Electroporated	DNA: linearized constructs
Species Used	Human, K562, chronic myeloid leukemia; Hamster, CHO, ovary; Hybrid, rat / mouse, MEL cells.		

Before the Pulse

Cell growth medium	RPMI 1640, 10% Fetal Bovine Serum (GIBCO/BRL, Sigma)	Growth phase at harvest	3 x 10 ⁽⁵⁾ to 5 x 10 ⁽⁵⁾ cells / ml (suspension)
Wash solution	Phosphate Buffred Saline	Pre-pulse incubation	10 min. at room temp in Hepes buffered saline with dextrose

The Pulse

Electroporation Temperature	Room temperature	Instruments Used	Gene Pulser® apparatus & Capacitance Extender
Electroporation Medium*	HEPES buffered saline with dextrose	Cuvette Gap	0.4 cm
Cell Density	2 x 10 ⁽⁷⁾ cells / ml	Voltage	0.2 kV
Volume of Cells	0.4 ml	Field Strength	0.5 kV/cm
DNA Concentration	Not given	Capacitor	960 μF
DNA Resuspension Buffer	RPMI 1640 +10% Fetal Bovine Serum	Resistor	(Pulse Controller) Ω none
Volume of DNA	Not given	Time Constant	25.0 msec

After the Pulse

Outgrowth Medium	RPMI 1640+10% Fetal Bovine Serum	Relevant Publications and/or Comments
Outgrowth Temperature	37 °C	Note: exponential values designated in parentheses.
Length of Incubation	Not given	PBS: 1x = 8g NaCl, 0.2g KCl, 0.2g KH ₂ PO ₄ , 1.15g Na ₂ HPO ₄
Selection Method or Assay Used	G418	HBS: 10mM HEPES,pH 7.2,150 mM NaCl, 5 mM CaCl ₂
Electroporation Efficiency	Not given	
Per Cent Survival	Not given	

Name of Submitter	Telephone Number
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