



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, suspension	Molecules	DNA: plasmid
Species Used	Human,U937, histiocytic lymphoma	Electroporated	

Before the Pulse

Cell growth medium	RPMI 1640, 10 % Fetal Calf Serum (GIBCO/BRL, Sigma)	Growth phase at harvest	5 to 10 x10 (5) / ml
Wash solution	Phosphate Buffered Saline	Pre-pulse incubation	Phosphate Buffered Saline (-)

The Pulse

Electroporation Temperature	Room temperature	Instruments Used	Gene Pulser® apparatus & Capacitance Extender
Electroporation Medium*	Phosphate Buffered Saline	Cuvette Gap	0.4 cm
Cell Density	1 x 10 (8) / ml	Voltage	0.2 kV
Volume of Cells	2 x 10 (7) / 200 µl	Field Strength	0.5 kV/cm
DNA Concentration	50 µg / 200 µl	Capacitor	960 µF
DNA Resuspension Buffer	Not given	Resistor	(Pulse Controller) Ω none
Volume of DNA	50 µg	Time Constant	50 to 70 msec

After the Pulse

Outgrowth Medium	RPMI 1640, 10% Fetal Calf Serum	Relevant Publications and/or Comments	Note: exponential values designated in parentheses.
Outgrowth Temperature	37° C		
Length of Incubation	1 day		
Selection Method or Assay Used	G418: 700 µg / ml 3 days; then 400 µg / ml 3 days.		
Electroporation Efficiency	Not assayed		
Per Cent Survival	Not assayed		

Name of Submitter
Institution Address

Telephone Number
Fax Number
Date Submitted 5/13/92
Survey Number 116
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