



# 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.

<b>Cell Type</b>	Mammalian, suspension	<b>Molecules</b>	DNA: plasmid
<b>Species Used</b>	Human,U937, histiocytic lymphoma	<b>Electroporated</b>	

## Before the Pulse

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

## The Pulse

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

## After the Pulse

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

<b>Name of Submitter</b>	<b>Telephone Number</b>
<b>Institution Address</b>	<b>Fax Number</b>
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