



# 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	<b>Molecules</b>	DNA: pZ189
<b>Species Used</b>	Human, K562, chronic myeloid leukemia	<b>Electroporated</b>	

## Before the Pulse

<b>Cell growth medium</b>	RPMI 1640 (GIBCO/BRL, Sigma)	<b>Growth phase at harvest</b>	10 (6) cells / ml
<b>Wash solution</b>	Phosphate Buffered Saline	<b>Pre-pulse incubation</b>	Not given

## The Pulse

<b>Electroporation Temperature</b>	20 to 25 °C (but pre-cooled on ice)	<b>Instruments Used</b>	Not given
<b>Electroporation Medium*</b>	Phosphate Buffered Saline	<b>Cuvette Gap</b>	0.4 cm
<b>Cell Density</b>	1 x 10 (7) cells / ml	<b>Voltage</b>	0.6 kV
<b>Volume of Cells</b>	0.4 ml	<b>Field Strength</b>	1.50 V/cm
<b>DNA Concentration</b>	400 µg / ml	<b>Capacitor</b>	25 µF
<b>DNA Resuspension Buffer</b>	TE	<b>Resistor</b>	(Pulse Controller) Ω none
<b>Volume of DNA</b>	40 µg	<b>Time Constant</b>	1.5 to 1.9 msec

## After the Pulse

<b>Outgrowth Medium</b>	RPMI 1640	<b>Relevant Publications and/or Comments</b> <b>Note:</b> exponential values designated in parentheses. <b>PBS:</b> 1x = 8g NaCl, 0.2g KCl, 0.2g KH <sub>2</sub> PO <sub>4</sub> , 1.15g Na <sub>2</sub> HPO <sub>4</sub>
<b>Outgrowth Temperature</b>	37 °C, 5% CO <sub>2</sub>	
<b>Length of Incubation</b>	1 day	
<b>Selection Method or Assay Used</b>	Not given	
<b>Electroporation Efficiency</b>	Not given	
<b>Per Cent Survival</b>	50%	

**Name of Submitter**  
**Institution Address**

**Telephone Number**  
**Fax Number**  
**Date Submitted** 4/22/91  
**Survey Number** 104  
© Bio-Rad Laboratories, 1993