



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	Molecules Electroporated	DNA: growth hormone reporter construct with a mammalian promoter.
Species Used	Human, JEG-3, choriocarcinoma cells		

Before the Pulse

Cell growth medium	MEM + 10% Fetal Bovine Serum + 1% glutamine + 1% penicillin / streptomycin (GIBCO/BRL, Sigma)	Growth phase at harvest	70% confluency
Wash solution	MEM + 10% Fetal Bovine Serum	Pre-pulse incubation	Not given

The Pulse

Electroporation Temperature	0 °C (ice)	Instruments Used	Gene Pulser® apparatus & Capacitance Extender
Electroporation Medium*	MEM + 10% FBS		
Cell Density	2.5 x 10 ⁸ (8) cells / ml	Cuvette Gap	0.4cm
Volume of Cells	0.4 ml	Voltage	0.140 kV
DNA Concentration	4 µg / µl	Field Strength	0.35 kV/cm
DNA Resuspension Buffer	TE Buffer (10 mM Tris, 1 mM EDTA, pH 8.0)	Capacitor	960 µF
Volume of DNA	12 µl	Resistor	(Pulse Controller) Ω none
		Time Constant	50 msec

After the Pulse

Outgrowth Medium	Not given	Relevant Publications and/or Comments	
Outgrowth Temperature	ice °C	Note:	exponential values designated in parentheses.
Length of Incubation	10 min		
Selection Method or Assay Used	Growth hormone RIA or ELISA		
Electroporation Efficiency	Not given		
Per Cent Survival	50 %		

Name of Submitter	Telephone Number
Institution Address	Fax Number
	Date Submitted 9/12/90
	Survey Number 101
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