



## Gene Pulser® Electroprotocols

**Cell Type** Bacterial, gram positive  
**Species Used** *Lactobacillus reuteri*, DSM 20016

**Molecules Electroporated** DNA: *L. reuteri* erythromycin resistance plasmid, pLUL631 (10.2kB, covalently closed circular form) and derivatives.

### Before the Pulse

**Cell growth medium** *Lactobacillus* Carrying Medium (LCM) + 40 mM glucose

**Growth phase at harvest** O.D. (600) = 0.5 to 1.0 (mid-log)

**Pre-pulse incubation** Ice, 1 to 3 min

**Wash solution** Distilled water

### The Pulse

**Electroporation Temperature** 0 °C  
**Electroporation Medium** 30% PEG 1500 /distilled water

**Instruments Used** Gene Pulser® apparatus

**Cell Density** Concentrated culture ~100X:  
10 (10) to 10 (11) cells / ml

**Cuvette Gap** 0.2 cm

**Volume of Cells** 100 µl

**Voltage** 2.0 to 2.5 kV

**DNA Concentration** 0.001 to 5 µg

**Field Strength** 10.0 to 12.5 kV/cm

**DNA Resuspension Buffer** TE buffer (10 mM Tris, 1 mM EDTA, pH 8.0) or water

**Capacitor** 25 µF

**Volume of DNA** < 10µl

**Resistor** (Pulse Controller) 200 Ω

**Time Constant** 0.5 msec

### After the Pulse

**Outgrowth Medium** LCM + 40 mM glucose

#### Relevant Publications and/or Comments

**Note:** exponential values designated in parentheses.  
 pLUL631: Axelsson, L.T., *et al.* 1988. *Plasmid*, **20**:171-174.

**Outgrowth Temperature** 37 °C

**Length of Incubation** 1.5 hrs

**Selection Method or Assay Used** erythromycin or chloramphenicol resistance, 10 µg / ml

Electroporation: Axelsson, L.T. & Ahrne, S.E.I. 1990. Transformation of *Lactobacillus reuterii* with electroporation: studies on the erythromycin resistance plasmid pLUL631. *In:* Axelsson, L. *Lactobacillus reuteri*, a member of the gut bacterial flora. Dissertation. Report 44. Dept. Microbiology, Swedish Univ., Uppsala, Sweden

Ahrne, S., & Axelsson, L. 1990. FEMS Microbiology. Rev. Abstract-A13, **87**: 12.

**Electroporation Efficiency** 10 (7) to 10 (8) transformants / µg DNA

**Per Cent Survival** Not known

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

**Telephone Number**

**Fax Number**

**Date Submitted** 12/26/90

**Survey Number** 070

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