

In utero electroporation

Required material

- Square wave pulse electroporator CUY21SC
- Electrode CUY650P3 or CUY650P5
(depends on the stage of an embryo)
- Micro-injection system

Electroporation procedure



1. Hold the anesthetized rat on the operation table.



2. Cut and open rat's abdomen
3. Take out the uterus



4. Inject DNA into the brain of rat embryo by glass capillary.



5. Place embryo's brain between anode and cathode.
6. Measure the resistance.
7. Set the voltage to output the requested current, based on the measured resistance
8. Apply the voltage to embryo's brain

Note: Spray the saline to the uterus every electroporation as the resistance (ohms) changes when the uterus gets dry.

Note: Makes sure that the current is in the range from 30mA to 60mA.



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9. Stitch up the abdomen

10. Warm up the rat by hands and thereafter by heater

The surgery should be done within 30 min.