

Resource Summary Report

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Electroporation of *Caecitellus* sp. with FITC-dextran

DOI:10.17504/protocols.io.35kgq4w

Type: Protocol

Proper Citation

Nick Irwin, Elisabeth Hehenberger, Patrick Keeling 2019. Electroporation of *Caecitellus* sp. with FITC-dextran. protocols.io dx.doi.org/10.17504/protocols.io.35kgq4w

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.35kgq4w>

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Group: Protist Research to Optimize Tools in Genetics (PROT-G)

Summary: *Caecitellus* sp. is a small phagotroph belonging to the biocosoecid order of the stramenopiles. *Caecitellus* is found across global oceans but its role in marine ecosystems, as with many heterotrophic flagellates, is unclear. We isolated a strain of *Caecitellus* (small subunit rRNA gene was 99.53% identical to *Caecitellus parvulus* and *Caecitellus paraparvulus*) from a contaminated culture of *Oxyrrhis marina* and assessed its amenability to transformation. Fluorescein isothiocyanate conjugated to dextran was successfully introduced into *Caecitellus* sp. using a high voltage exponential decay pulse (1000 V, 10 μ F, ? ?) from a BioRad GenePulser Xcell (cuvette width 0.2 cm). Cell viability was confirmed by observing motility and fluorescence 24 h after electroporation (Figure 1). Lower voltage pulses did not result in FITC uptake. Estimates of transformation efficiency were difficult to obtain due to the small size of the cells. Unfortunately, the isolated strain of *Caecitellus* perished in an incubator malfunction. However, these results may be transferable to *Caecitellus parvulus*, a model for heterotrophic flagellates.

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Version: 1

Publication Date: 2019

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Record Creation Time: 20210329T220517+0000

Record Last Update: 20210329T220836+0000

Data and Source Information

Source: