Antibiotic sensitivity test for dinoflagellates and Chromera

Yoshihisa Hirakawa[1], Hirokazu Sakamoto[1], Takashi Shiratori[1], Elisabeth Hehenberger[2], Nick Irwin[2], Patrick Keeling[2]

[1]University of Tsukuba, [2]University of British Columbia

dx.doi.org/10.17504/protocols.io.vcke2uw

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

Yoshihisa Hirakawa
University of Tsukuba

PROTOCOL STATUS

Working

We use this protocol in our group and it is working

Algal culture

1 Seven dinoflagellate species (*Amphidinium carterae*, *Glenodinium foliaceum*, *Heterocapsa triquetra*, *Karlodinium veneficum*, *Prorocentrum minimum*, *Symbiodinium minutum*, and *Togula britannica*) and *Chromera velia* were grown in 75 mL plastic flasks with Daigo IMK (Nihon Pharmaceutical Co., Ltd.), f/2, or ESM medium. The culture condition was at 20˚C, under white illumination (60 µmol photons/m^{-2}/s^{-1}) on a 14:10 light:dark cycle.

Antibiotic treatment

2 Precultured cells were transferred to 24-well plates, and an antibiotic drug (puromycin or zeocin) was added with different concentrations (0, 50, 100, 300 µg/mL). The cell density was 2,000 to 40,000 cells/mL at the starting point. The culture plates were incubated under the same condition described above.

Cell monitoring

3 The number of living cells was counted under a microscope using hemacytometer during a week.