VERSION 2

JUN 25, 2019

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.4p8gvrw

Collection Citation: Lev Tsy-pin, Aaron Turkewitz 2019. *Seminavis robusta* protocol collection. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.4p8gvrw>

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Protocol status: Other
 We attempted to genetically transform *S. robusta*, but did not succeed. This collection provides protocols that we used to arrive at the transformations, and everything included should work. Under "Guidelines", you can find the plasmids that we attempted to use for the transformations.

Created: Jun 25, 2019

Last Modified: Jun 25, 2019

Seminavis robusta protocol collection V.2

Lev Tsy-pin¹, Aaron Turkewitz²

¹California Institute of Technology; ²University of Chicago

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

Lev Tsy-pin

ABSTRACT

This is a collection of media, reagents, and protocols for the cultivation and manipulation of the diatom *Seminavis robusta*. Our hope is that these documents will help future researchers develop genetic tools for studying this organism.

GUIDELINES

In our (unsuccessful) attempts to transform *S. robusta* to confer resistance to puromycin or glyphosate, we used the attached plasmid sequences: pBS_ActAgroCP4GlyphR (an *Agrobacterium tumefaciens* derived glyphosate resistance cassette flanked by *S. robusta* sequences upstream and downstream of its Actin 1 homolog), pBS_ActEF_AgroCP4GlyphR (an *Agrobacterium tumefaciens* derived glyphosate resistance cassette flanked by *S. robusta* Actin 1 5' region upstream and Elongation Factor 1 3' downstream), and pBS_Act_PurR (a puromycin acetyltransferase flanked by *S. robusta* sequences upstream and downstream of Actin 1). All the plasmids used a pBluescript II SK (+) backbone and the resistance gene cassettes were codon optimized for the *S. robusta* genome.

☐ pBS_Act_AgroCP4GlyphR.gb ☐ pBS_Act_PurR.gb
☐ pBS_ActEF_AgroCP4GlyphR.gb

COLLECTION integer ID:
25056

Keywords: Diatoms, protist,
transgenics, cultivation,
marine, transformation,
Seminavis robusta

FILES

Protocol

NAME

Media and reagents for *Seminavis robusta* cultivation and experiments

VERSION 1

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Protocol

NAME

Cultivation of *Seminavis robusta*

VERSION 1

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Protocol

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Cell deposition and drug sensitivity assay

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