Getting started with the Aiptasia-Symbiodinium Model System

Aiptasia Model

Abstract

A collection of protocols released as part of the IOS EDGE: Functional-genomics tools for Cnidarian-dinoflagellate symbiosis NSF grant (#1645164).

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Protocols for getting started w/ the Aiptasia-*Symbiodinium* Model System:

-General husbandry and culturing of Aiptasia and *Symbiodinium* in the laboratory
-DNA, RNA, and protein extraction
-Embedding animals for microscopy
-Genotyping

Citation: Aiptasia Model Getting started with the Aiptasia-Symbiodinium Model System. **protocols.io** dx.doi.org/10.17504/protocols.io.rj4d4qw
Published: 22 Jul 2018

Collection

PROTOCOLS

1. General Aiptasia husbandry - Weis Lab
CONTACT: Jason Presnell

2. General Aiptasia husbandry - Pringle lab
CONTACT: Christian Renicke

3. Cold-shock protocol to bleach Aiptasia
CONTACT: Christian Renicke

4. Menthol protocol to bleach Aiptasia
CONTACT: Aiptasia Model

5. Culturing Symbiodinium
CONTACT: Tingting Xiang

6. Isolation of axenic Symbiodinium cultures
CONTACT: Tingting Xiang

7. Colonization of aposymbiotic Aiptasia with Symbiodinium
CONTACT: Christian Renicke

8. Aiptasia spawning and embryo/larvae handling - Weis Lab
CONTACT: Jason Presnell

9. Aiptasia spawning and embryo/larvae handling - Pringle Lab
CONTACT: Christian Renicke

10. Embedding living larvae in low-melting agarose for imaging and recovery thereafter
CONTACT: Christian Renicke

11. Preparing small, live Aiptasia polyps for confocal microscopy
CONTACT: Jason Presnell

12. Symbiodinium / Aiptasia cell pop (crude lysis for PCR template)
CONTACT: Anthony Bellantuono

13. 2×CTAB Protocol for Isolation of predominantly Symbiodinium DNA from symbiotic anemones
CONTACT: Christian Renicke

14. 2×CTAB Protocol for (simultaneous) DNA Isolation from Aiptasia and Symbiodinium
CONTACT: Christian Renicke

15. 2×CTAB Protocol for predominantly host DNA isolation from symbiotic Aiptasia
CONTACT: Christian Renicke

16. DNA Extraction from Symbiodinium Cultures
CONTACT: Tingting Xiang

17. Using genomic SCAR markers for genotyping Aiptasia strains
CONTACT: Christian Renicke

18. Symbiodinium-enriched RNA extraction from Aiptasia holobiont
CONTACT: Anthony Bellantuono

19. Symbiodinium cp23S RFLP and sequence analysis
CONTACT: Christian Renicke

20. Protein extraction from Aiptasia
CONTACT: Jason Presnell