**Supplementary Table 2.** Frequency of key phosphorus and iron genes in the *Trichodesmium* microbiome compared tofree-livingbacterioplankton communities sampled from the Sargasso Sea region of the western North Atlantic.

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene Family** | **% Core Microbiomea** | **% Free Livingb** | **% Free Living Reference** |
| Phosphonate CP lyase (*PhnJ*) | 38 | 19 | Karl et al., 2008 |
| 26 | Martinez et al., 2010 |
| Siderophore/Vitamin transporters | 100 | ~18\* | Tang et al., 2012 |
| Heme/Hemophores/Iron(heme) binding protein transporters | 100 | ~2\* | Tang et al., 2012 |

aPercentage of core epibiont community genome bins (out of 8 total bins) containing the gene family

bPercentage of free living community calculated relative to the single copy gene *RecA*

\*Values estimated from data presented in Tang et al., 2012