

Table S1. Sequences and coverage (based on SILVA release 111, 27 July 2012) of probes used in this study. Hybridization condition and target groups are given in Table 1. * Numbers of sequence with perfect match to the probe, in brackets numbers of sequences in target group.

| Probe name | Sequence (5'→3') | reference | SILVA 111 coverage* |
|-------------------|-----------------------------|----------------------------|----------------------------|
| Euk516 | ACC AGA CTT GCC CTC C | Amann et al 1990 | 59123 (71787) |
| Chlo02 | CTT CGA GCC CCC AAC TTT | Simon et al 2000 | 3169 (3519) |
| CryptB | ACG GCC CCA ACT GTC CCT | Metfies and Medlin 2007 | 268 (303) |
| Bolido02 | TAC CTA GGT ACG CAA ACC | Guillou et al 1999b | 17 (21) |
| Prym02 | GGA ATA CGA GTG CCC CTG AC | Simon et al 2000 | 397 (418) |
| Pavlova01 | CAC CTC TCT CTA CGG AAT | Eller et al 2007 | 89 (94) |
| Phaeo02 | TCG GCA GAC CGC TCG GCC CG | Zingone et al 1999 | 41 (44) |
| Ped675 | TCA CAG TAA ACG ACA GGC GT | Piwosz and Pernthaler 2010 | 29 (34) |
| NS1A | ATT ACC TCG ATC CGC AAA | Massana et al 2006 | 9 (11) |
| NS1B | AAC GCA AGT CTC CCC GCG | Massana et al 2006 | 5 (5) |
| NS1C | GTG TTC CCT AAC CCC GAC | Massana et al 2006 | 25 (29) |
| NS2 | CGG GTC CCG AGC ACG ACA | Massana et al 2006 | 9 (10) |
| MAST-6 | CCA AAG CAG TTG GGA GTT AAC | Piwosz and Pernthaler 2010 | 2 (6) |
| Alv01 | GCC TGC CGT GAA CAC TCT | Chambouvet et al 2008 | 409 (716) |