SUPPLEMENTARY TABLE S1. Primers used during the amplification protocols.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Primer | Sequence (5'-3') | Direction | Region | Reference |
| PF1 | GCGCTACCTGGTTGATCCTGCC | Forward | SSU rDNA | Hoppenrath & Leander (2010) |
| R4 | GATCCTTCTGCAGGTTCACCTAC | Reverse | SSU rDNA | Hoppenrath & Leander (2010) |
| EK-82F | GAAACTGCGAATGGCTC | Forward | SSU rDNA | López-García et al. (2001) |
| DIN-464F | TAACAATACAGGGCATCCAT | Forward | SSU rDNA | Gómez et al. (2009) |
| EK-1520R | CYGCAGGTTCACCTAC | Reverse | SSU rDNA | López-García et al. (2001) |
| 28S-1F | ACCCGCTGAATTTAAGCAT | Forward | LSU rDNA | Moreira et al. (2007) |
| 28S-803R | ACTTCGGAGGGAACCAGCTA | Reverse | LSU rDNA | Marande et al. (2009) |
| 28S-1611R | CTTGGASACCTGMTGCGG | Reverse | LSU rDNA | Moreira et al. (2007) |
| EukA | AACCTGGTTGATCCTGCCAGT | Forward | SSU rDNA | Medlin et al. (1988) |
| EukB | TGATCCTTCTGCAGGTTCACCTAC | Reverse | SSU rDNA | Medlin et al. (1988) |
| Dino18SF1 | AAGGGTTGTGTTYATTAGNTACARAAC | Forward | SSU rDNA | Lin et al. (2006) |
| 18ScomR1 | CACCTACGGAAACCTTGTTACGAC | Reverse | SSU rDNA | Zhang et al. (2005) |
| D1R | ACCCGCTGAATTTAAGCATA | Forward | LSU rDNA | Scholin et al. (1994) |
| D2C | CCTTGGTCCGTGTTTCAAGA | Reverse | LSU rDNA | Scholin et al. (1994) |

Gómez, F., López-García, P. & Moreira, D. 2009. Molecular phylogeny of the ocelloid-bearing dinoflagellates *Erythropsidinium* and *Warnowia* (Warnowiaceae, Dinophyceae). *J. Euk. Microb.* 56:440-5.

Hoppenrath, M. & Leander, B. S. 2010. Dinoflagellates phylogeny as inferred from heat shock protein 90 and ribosomal gene sequences. *PLoS ONE* 5: e13220.

Lin, S., Zhang, H., Hou, Y., Miranda, L. & Bhattacharya, D. 2006. Development of a dinoflagellate-oriented PCR primer set leads to detection of picoplanktonic dinoflagellates from Long Island Sound. *Appl. Environ. Microbiol.* 72:5626-30.

López-García, P., Rodríguez Valera, F., Pedrós-Alió, C. & Moreira,D. (2001) Unexpected diversity of small eukaryotes in deep-sea Antarctic plankton. *Nature* 409:603-7.

Marande, W., López-García, P. & Moreira, D. 2009. Eukaryotic diversity and phylogeny using small- and large-subunit ribosomal RNA genes from environmental samples. *Environ. Microbiol.* 11(12):3179-88.

Medlin, L., Elwood, H. J., Stickel, S. & Sogin, M. L. 1988. The characterization of enzymatically amplified eukaryotic 16S-like rRNA-coding regions. *Gene* 71:491-9.

Moreira, D., von der Heyden, S., Bass, D., López-García, P., Chao, E. & Cavalier-Smith, T. 2007. Global eukaryote phylogeny: Combined small- and large-subunit ribosomal DNA trees support monophyly of Rhizaria, Retaria and Excavata. *Mol. Phyl. Evol.* 44:255-66.

Scholin, C.A., Herzog, M., Sogin, M. & Anderson, D.M. 1994. Identification of group- and strain-specific genetic markers for globally distributed *Alexandrium* (Dinophyceae). II. Sequence analysis of a fragment of the LSU rRNA gene. *J. Phycol.* 30:999-1011.

Zhang, H., Bhattacharya, D. & Lin, S. 2005. Phylogeny of dinoflagellates based on mitochondrial cytochrome b and nuclear small subunit rDNA sequence comparisons. *J. Phycol.* 41:411-20.