**Supplementary Table.** Species, strains, and genes used in the phylogenetic analyses. The sequences of accession numbers for *Paludistella* 18S *r*DNA include the ITS sequences.

|  |  |
| --- | --- |
| **Genus/clade**Species(Strain) | Accession number |
| 18S *r*RNA(Strain) | *atp*B(Strain) | *psa*B(Strain) |
| ***Paludistella****Paludistella chlorostellata* (SAG 12.72)*Paludistella asymmetrica*(SAG 19.88)*Paludistella meslinii* (SAG 75.81)*Paludistella trianguloculus* (NIES-4318)*Paludistella trianguloculus* (NIES-4317) | MK696129MK696130MK696131MK696132MK696133 | MK650458MK650459MK650460MK650461MK650462 | MK650453MK650454MK650455MK650456MK650457 |
| **CR clade (*Chloromonas* s.s.)** |  |  |  |
| *Chloromonas chlorococcoides*(SAG 15.82) | AJ410449 | AB624580 | AB624595 |
| *Chloromonas reticulata*(UTEX 1970) | U70791 | AB084312 | AB084346–7 |
| *Chloromonas rosae*(SAG 51.72 = UTEX 1337) | AB624565(SAG 51.72) | AB084315(UTEX 1337) | AB084350–1(UTEX 1337) |
| *Chloromonas typhlos*(SAG 26.86 = UTEX 1969) | AB624566(SAG 26.86) | AB084307(UTEX 1969) | AB084341(UTEX 1969) |
|  |  |  |  |
| ***Gloeomonas*** |  |  |  |
| *Gloeomonas rubrifilum*(SAG 3.85) | AJ410455 | AB504758 | AB504770 |
| *Gloeomonas tubulosa*(ACOI-1541) | AB971360 | LC437937(unpublished) | LC437941(unpublished) |
| *Gloeomonas* sp.(TkS1601B4 [= NIES-4283]) | LC437935(unpublished) | LC437936(unpublished) | LC437940(unpublished) |
|  |  |  |  |
| ***Ixipapillifera*** |  |  |  |
| *Ixipapillifera deasonii*(SAG 46.72) | AJ410446 | AB101503 | AB101514 |
| *Ixipapillifera pauromitos*(EbCl-16 = NIES-3707) | LC057290(EbCl-16) | LC360487(NIES-3707) | LC360491(NIES-3707) |
|  |  |  |  |
| **CA clade** |  |  |  |
| *Chloromonas asteroidea*(SAG 11-47) | U70783 | AB084808 | AB084342 |
| *Chloromonas radiata*(UTEX 966) | U57697 | AB084311 | AB084345 |
|  |  |  |  |
| **SA clade** |  |  |  |
| *Chloromonas chenangoensis*(UTEX SNO150) | AB906341 | AB906360 | AB906371 |
| *Chloromonas krienitzii*(NIES-3753) | LC012712 | LC012720 | LC012728 |
| *Chloromonas miwae*(NIES-2379) | AB906350 | AB906369 | AB906380 |
| *Chloromonas tughillensis*(UTEX SNO91)*Chloromonas nivalis*(UTEX SNO71) | AB906348LC360465 | AB906367LC360484 | AB906378LC360488 |
|  |  |  |  |
| **Other *Chloromonadinia* species** |  |  |  |
| *Chloromonas augustae*(SAG 5.73) | AJ410452 | AB504757 | AB504769 |
| *Chloromonas kasaiae*(EbCl-8 [= NBRC 109389 = NIES-2862]) | AB734109 | AB734110 | AB734111 |
| *Chloromonas pseudoplatyrhyncha*(HjCl-3 [= NIES-2563]) | AB548689 | AB548690 | AB548691 |
| *Chloromonas serbinowii*(SAG 11.84) | Unpublished | AB084317 | AB084354 |
| *Chloromonas vernalis*(ACOI-3241) | AB971361 | LC437939(unpublished) | LC437943(unpublished) |
|  |  |  |  |
| **Outgroup** |  |  |  |
| *Chlamydomonas reinhardtii*(CC-620, CC-503) | JX888471(CC-620) | FJ423446(CC-503) | FJ423446(CC-503) |
| *Chlorogonium euchlorum*(CCAP 12/3) | AB278604 | AB084328 | AB084369 |
| *Oogamochlamys gigantea*(SAG 44.91) | AJ410465 | KT625412  | KT625412 |