

Table S7. Taxa considered in the RelTime analyses

Species	Strain or isolate; ptDNA GenBank accession
<i>Carteria crucifera</i>	UTEX 432; KT624880.1
<i>Chlamydomonas applanata</i>	SAG 11-9; KT625417.1
<i>Hyalomonas chlamydogama</i>	SAG 11-48b; Pending
<i>Chlamydomonas leiostraca</i>	SAG 11-49; NC_032109.1
<i>Chlamydomonas reinhardtii</i>	CC-125; BK000554.2
<i>Chlorella sorokiniana</i> ¹	Isolate 1230; KJ742376.1
<i>Chlorella variabilis</i> ¹	NC64A; KJ718922.1
<i>Chlorogonium capillatum</i>	UTEX11; KT625090.1
<i>Chlorogonium euchlorum</i>	SAG 12-2a; NNNNN
<i>Chloromonas perforata</i>	SAG 11-43; KT625416.1
<i>Chloromonas radiata</i>	UTEX 966; KT625083.1
<i>Dunaliella salina</i>	CCAP 19/18; NC_016732.1
<i>Gonium pectorale</i>	K3-F3-4 (NIES-2863); NC_020438.1
<i>Haematococcus pluvialis</i>	UTEX 2505; NC_037007.1
<i>Hyalogonium fusiforme</i>	SAG 62-1c; Pending
<i>Microglena monadina</i>	SAG 31.72; KT624802.1
<i>Oltmannsiellopsis viridis</i>	NIES-360; NC_008099.1
<i>Oogamochlamys gigantea</i>	SAG 44.91; NC_028580.1
<i>Pectinodesmus pectinatus</i>	NA ² ; KU847995.1
<i>Pleodorina starrii</i>	NIES-1363; NC_021109.1
<i>Hyalomonas oviformis</i>	SAG 62-27; Pending
<i>Polytoma uvella</i>	UTEX 964; KX828177.1
<i>Schizomeris leibleinii</i>	UTEX LB 1228; HQ700713.1
<i>Stigeoclonium helveticum</i>	UTEX 441; DQ630521.1
<i>Tetrademus obliquus</i>	DOE0152 (UTEX B 3031); CM007919.1
<i>Volvox carteri f. nagariensis</i>	UTEX 2908; GU084820.1

1. *Chlorella sorokiniana* and *Chlorella variabilis* were used as outgroup.
2. NA; Strain information is not available in the corresponding GenBank record.
Nonphotosynthetic species are indicated in shaded boxes.