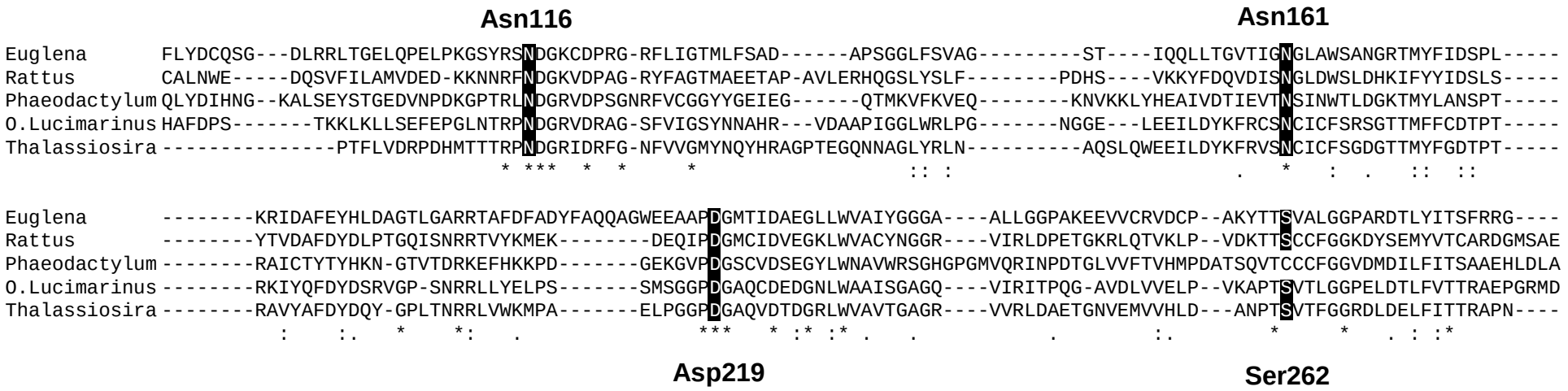
Euglena. The cells were illuminated at an intensity of 55 μmol m^{-2} s^{-1}. Samples were taken out at the indicated times and used for the determination of AsA, the assay of ALase, and Northern hybridization. Values are expressed as the mean ± SEM for three experiments. *A*, AsA level. *B*, ALase activity. *C*, Northern blot analysis. Ten micrograms of total RNA extracted from each sample was electrophoressed through a formaldehyde-containing agarose gel, capillary blotted onto a nylon membrane, and hybridized with ^{32}P-labeled cDNA of *Euglena* ALase. Ethidium bromide staining of the rRNA is shown for the equality of loading. Values that were significantly different between control and illuminated cells are indicated $^{a}P<0.05$, $^{b}P < 0.01$.

Supplemental Data

The following materials are available in the online version of this article.

Supplemental FIGURE 1. Sequence alignment of ALase homologues from various photosynthesizing algae. Position numbers for indicated amino acid residues are from *Euglena* ALase. Sources of sequences: *Euglena* (AB306917), Rat (X69021), *Phaeodactylum tricornutum* (fgenesh1_pg.C_chr_22000164) from the *Phaeodactylum* genomic sequence (http://genome.jgi-psf.org/Phatr2/Phatr2.home.html), *Ostreococcus lucimarinus* (e_gwEuk.13.288.1) from the *Ostreococcus* genomic sequence (http://genome.jgi-psf.org/Ost9901_3/Ost9901_3.home.html), *Thalassiosira pseudonana* (fgenesh1_pg.C_chr_7000613) from the *Thalassiosira* genomic sequence (http://genome.jgi-psf.org/Thaps3/Thaps3.home.html).



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