



Figure 2-figure supplement 1. Induction of carbon concentrating mechanism (CCM).

Chlamydomonas reinhardtii CC1690 were grown at 46 $\mu\text{mol photons}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$, 24°C and bubbled with 5% CO₂ (HC) for two days at constant turbidity in a bioreactor. CO₂ in the outlet air of the bioreactor was measured continuously during a 48 h run (A). From time point zero onwards the culture was aerated with ambient air (0.039% CO₂). The inserted graph shows the same CO₂ data at lower CO₂ concentrations. Cultures were harvested before (HC) and 25 and 34 h (LC) after low-CO₂ exposure for Western blot analysis (B). Protein amounts equivalent to 1 μg chlorophyll were loaded per lane and separated by 12% SDS-PAGE before transferred to a nitrocellulose membrane for detection via chemiluminescence by an antiserum recognizing mtCA (AgriSera Cat# AS11 1737, RRID:AB_10752086). Loading control: CF₁β, β-subunit of the CF₁-component of CF₁F₀-ATP synthase (AgriSera Cat# AS10 1590, RRID:AB_10754669). Transmission electron microscopy (TEM) of cells exposed for 30 h to low CO₂ and 15 min to high CO₂ (LC*; C). Cells were then quenched in the light for metabolite analysis by LC-MS/MS. Measure bar = 2 μm .