Supporting Information 1

**Supporting Information 1** $CO_2$ assimilation curves in *Arabidopsis thaliana* with genetically reduced Rubisco content. The photosynthetic assimilatory response to $CO_2$ in *A. thaliana* expressing Rubisco small subunit constructs (antirbcS) as compared to Wild type (a) and as measured under various $O_2$ partial pressures (b). The lines represent the modeled response of photosynthesis according to Rubisco limitation only. Panel b is an example of the data used to solve for Rubisco kinetics at given temperature and is representative of data obtained at all the temperatures measured.