



**Figure S1. Comparison of glutamate synthase gene expression levels**

(a) RT-qPCR analysis of gene expression levels of *NADH-GOGAT* (*GLT1*, magenta), *Fd-GOGAT1* (*GLU1*, green), and *Fd-GOGAT2* (*GLU2*, yellow) in different organs. R, root; YRL young rosette leaves; ORL old rosette leaves; MCL mature carline leaves; S stem; F flower; YS young silique; MS mature silique. Arabidopsis were seeded on rockwool and grown on MGRM medium (Naito et al. 1994). Means of three independent RNA samples and standard deviations are indicated. One-way ANOVA analysis was performed and followed by Bonferroni as post-hoc. Letters denote statistically significant differences between the treatment groups and no nitrogen control.

(b) Comparison of ammonium responsiveness of Arabidopsis GOGAT in roots. Two-week-old Arabidopsis plants (accession Col-0) grown on MGRM agar media were subjected to nitrogen starvation for 3 days prior to the treatment. Pre-cultured plants were treated for 6 hours on modified MGRM media without nitrogen (–) or with 10 mM ammonium as the sole nitrogen source (NH<sub>4</sub><sup>+</sup>) as described in Fig. 1.