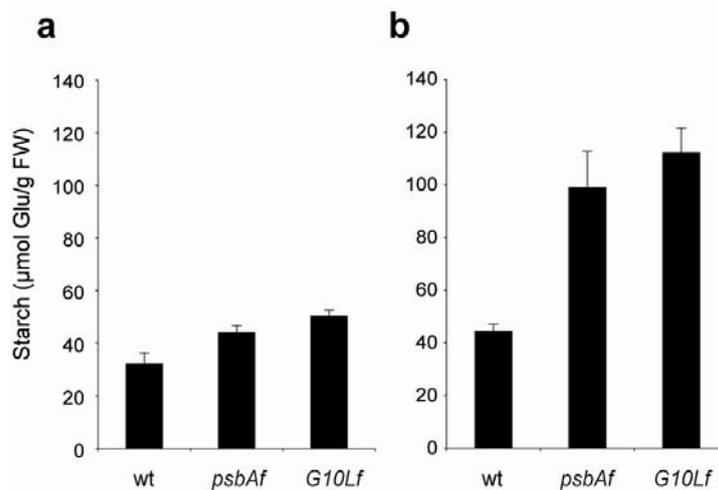
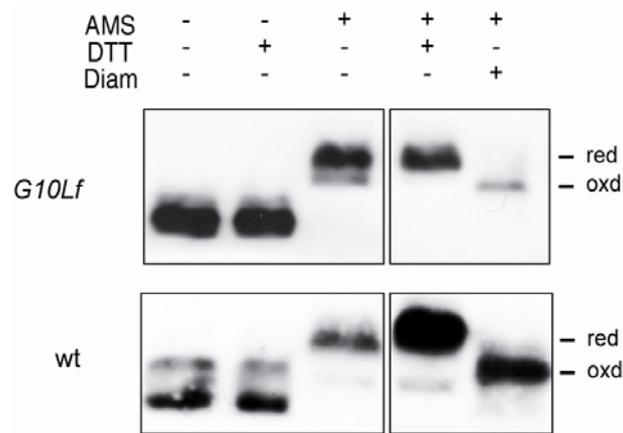


## Overexpression of plastidial thioredoxin f leads to enhanced starch accumulation in tobacco leaves

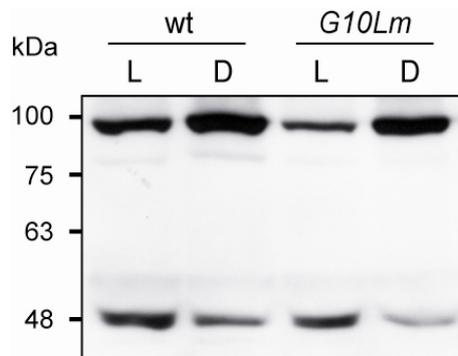
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**Figure S1** Starch content in tobacco leaves is influenced by growth conditions. (a) Starch levels from mature leaves (fourth from the top) of phytotron growing plants (16 h light/8 h dark;  $200 \mu\text{mol m}^{-2}\text{s}^{-1}$ ) harvested at the inflorescence emergence stage, 12 h after the beginning of light period. (b) Starch content of greenhouse growing plants (15 h light/9 h dark; sunlight) harvested at the same time and stage of (a). Results are the mean  $\pm\text{SE}$  (bars) of six individual plants.



**Figure S2** Redox state of endogenous and overexpressed Trx f in tobacco chloroplasts. AMS alkylation and western blot analysis after non-reducing SDS-PAGE of endogenous and overexpressed Trx f. Specific Trx f antibody was used. Protein leaf extracts incubated with DTT (DTT) or diamide (Diam) prior to the treatment with AMS were undertaken as reduced and oxidized controls respectively. Protein extracts not incubated with AMS were used as non-alkylated controls either with or without DTT. The mobility of the alkylated (reduced, red) and non-alkylated (oxidized, oxd) form is indicated.



**Figure S3** Redox activation of AGPase in Trx m-overexpressing leaves. Redox status of AGPase of mature leaves (fourth from the top) from wild-type (wt) and transformants sampled at the end of the light (L, 12 h) or dark (D, 9 h) periods at the ripening stage with first capsules darkened. Specific AGPB antibody was used.