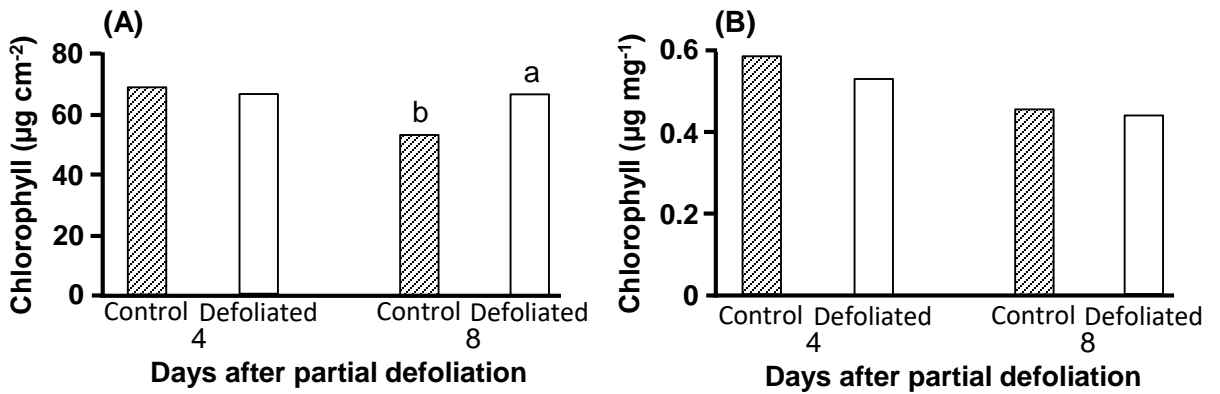
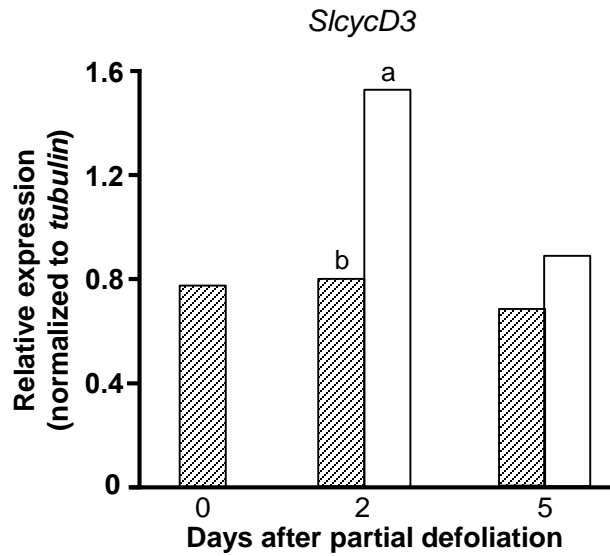


## Supplementary Figure S1



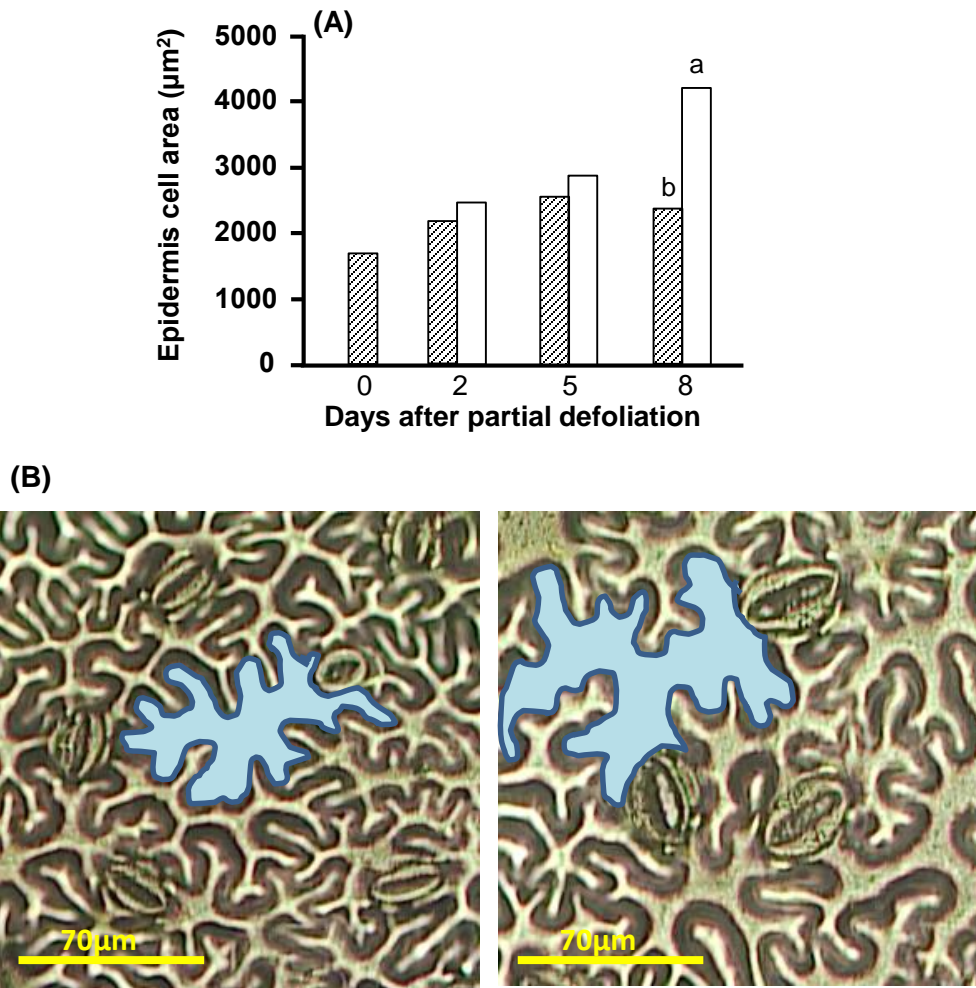
**Supplementary Figure 1. Effect of partial defoliation on chlorophyll content in the remaining tomato leaf after defoliation of the other leaves.** Values are presented as chlorophyll concentration per leaf area unit (A) and per leaf fresh weight (B). Defoliations were performed on mature plants grown in a temperature-controlled greenhouse (25 °C/18 °C day/night).

## Supplementary Figure S2



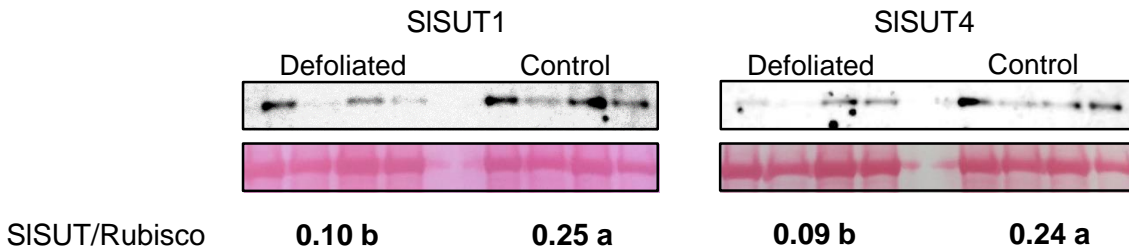
**Supplementary Figure 2. Partial defoliation upregulated expression of *Cyclin D3* gene in the remaining leaf.** Relative expression of *SlcycD3* in leaves of partially defoliated (empty bars) and control (hatched bars) M82 tomato plants. Samples were collected before defoliation (0), 2 and 5 days after partial defoliation. Data represent means ( $\pm$ SE) of six biological replications. Different letters indicate significant differences between control and partially defoliated plants at each time point using Student's t-test ( $P < 0.05$ ).

### Supplementary Figure S3



**Supplementary Figure 3. Effect of partial defoliation on the expansion rate of the remaining leaf.** (A) Size of epidermis cells of leaf number 4 from the top after partial defoliation of tomato plants. Defoliations were performed on mature plants grown in a temperature-controlled greenhouse (25 °C/18 °C day/night). Empty bars represent partially defoliated plants and hatched bars represent control plants. Data represent means ( $\pm$ SE) of six biological replications. Different letters indicate significant differences between control and partially defoliated plants at each time point using Student's t-test ( $P < 0.05$ ). (B) Pictures of control (left) and remaining leaf (right) after imprinting on a glass cover slip. Leaf samples were taken 8 days after partial defoliation.

## Supplementary Figure S4



**Supplementary Figure 4. Partial defoliation inhibits expression of sucrose transporter proteins in the remaining leaf.**

Western blot analysis of protein extracted from leaf number 4 from the top taken from four different plants 8 days after partial defoliation as compared with control tomato plants. Defoliations were performed on mature plants grown in a temperature-controlled greenhouse (25 °C/18 °C day/night). Lower panels represent expression of Rubisco large subunit following staining the gel with Ponceau. Numbers indicate the ratio between the intensities of the target bands as assayed by the ImageJ software. Different letters indicate significant differences between control and partially defoliated plants using Student's t-test ( $P < 0.05$ ).