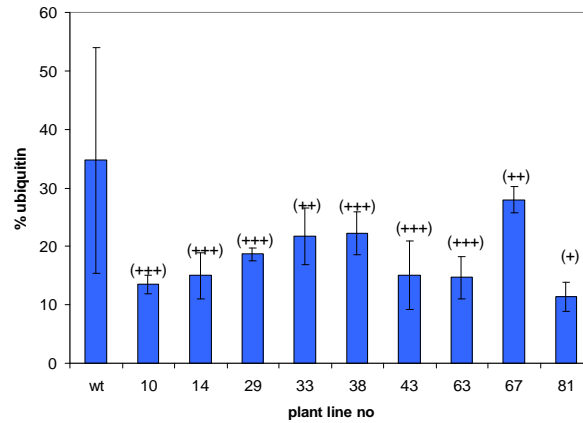


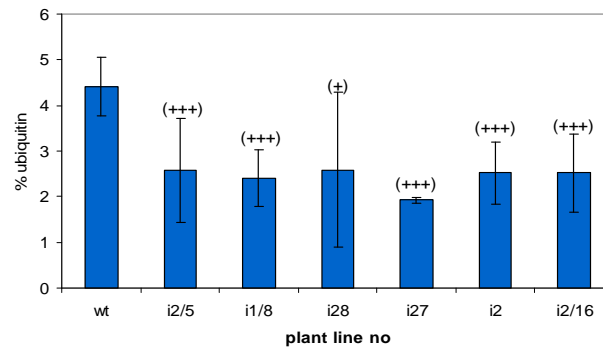
Supplement 1

A



Quantification of the StSUT4 expression level in flowers of *S. tuberosum* Désirée (ssp. tuberosum) transformed with the StSUT4 RNAi-construct. Ubiquitin was used as internal standard for relative quantification via real time-PCR. The SD is given.

B



Real time PCR quantification of *StSUT4* expression in source leaves of *S. tuberosum* supsp. andigena transformed with the StSUT4-RNAi construct. Reduced *StSUT4* mRNA levels correlated with early flowering and tuber production under LD conditions in the greenhouse. Samples were collected during the light period at 3 pm. The SD is given.

Transgenic line no	1 st experiment	2 nd experiment	3 rd experiment
<i>S. tuberosum</i> andigena WT	-	-	-
i2/5	+	+	+
i28	nd	+	+
i2	nd	+	+
i2/16	+	+	+
i27	nd	+	nd
i1/8	+	+	-

Tuber yield of *StSUT4*-RNAi andigena plants of three independent experiments. Tubers were harvested after 3 month of growth under non-inductive LD conditions in the greenhouse. + : tuber production, -: no tuber production, nd: not determined.