Function of Arabidopsis hexokinase-like1 as a negative regulator of plant growth

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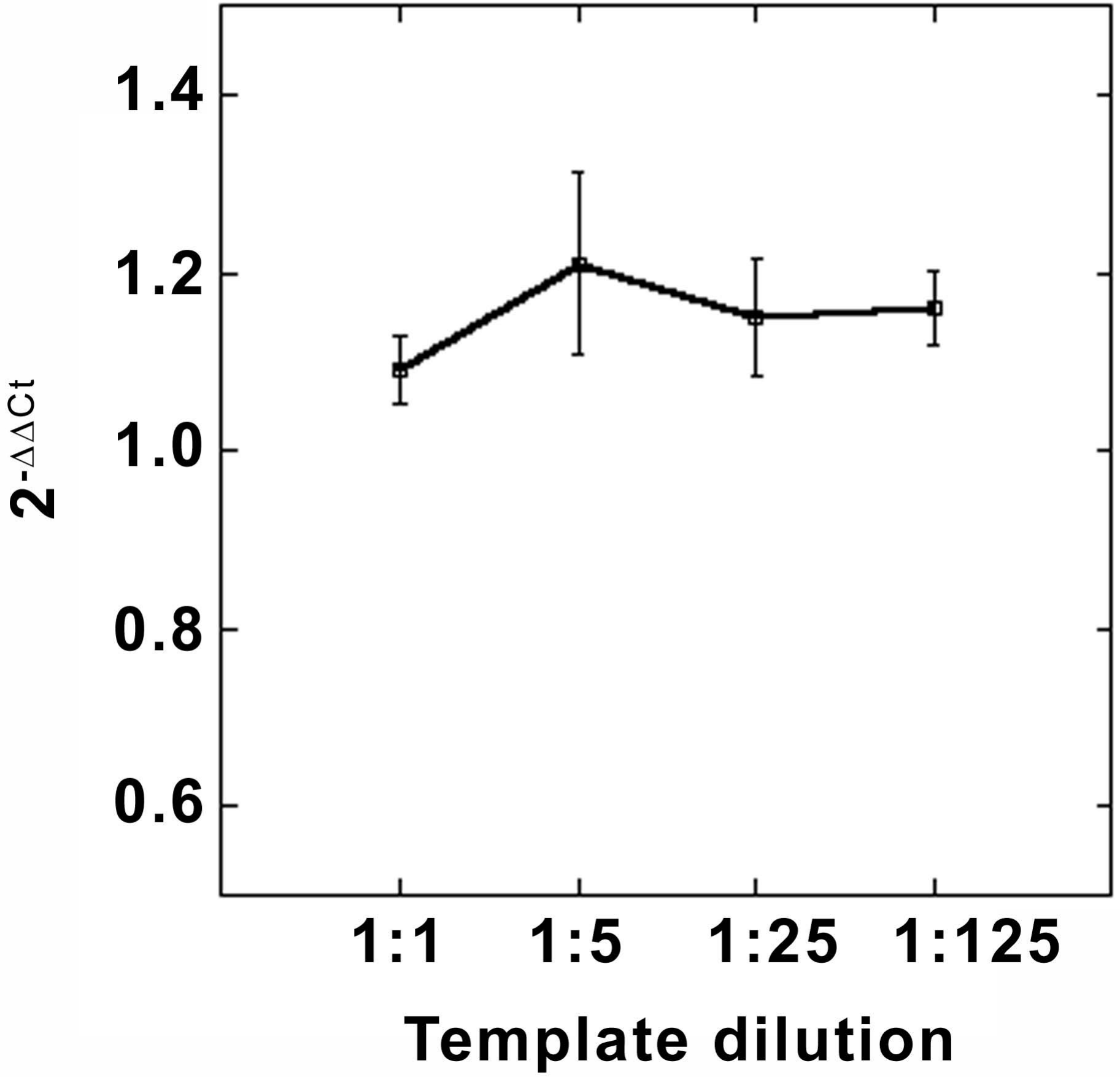
Supplementary Material

Figure S1. The number of T-DNA insertions in *hkl1-1* as determined by real time PCR. Plot of $2^{-\Delta\Delta Ct}$ for *hkl1-1* over a 1:5 dilution series of genomic DNA, using IQ SYBR green supermix (Bio-Rad) in an ABI step one plus real time PCR system. Insert-specific primers (L1INFP, 5'GACAACTTAATAACACATTGC3'; L1INRP, 5'GTCTCCTTG TTGCGAAGAGCCGT3') were designed to amplify 200 bp from *hkl1-1*. The PCR efficiencies for endogenous control amplicon (UBQ5) and for transgene amplicon (L1IN) were determined from standard curves starting with 200 ng of DNA template (E_{UBQ5} - 0.96; E_{TDNA} - 0.92). Col genomic DNA was used as a calibrator for the UBQ5 amplicon and as a negative control for the L1IN amplicon.

Figure S2. Growth under 16 h (long day) photoperiod conditions of transgenic Arabidopsis expressing HKL1 protein in different genetic backgrounds. HKL1-HA was expressed in L*er* background, HKL1-Flag in *gin2-1* background. OE = overexpression.

Figure S3. Growth response on agar plates with varying glc concentrations for the transgenic HKL1-Flag line 43.

Figure S4. Transcript abundance by semi-quantitative RT-PCR of HXK1 and HKL1 from L*er* seedlings grown on plates with 0.5% sucrose (-) or with 6% glucose (+). UBQ5 mRNA was measured as an internal control. PCR cycle numbers were either 28 (HXK1 and UBQ5) or 31 (HKL1).


1.4
1.2
1.0
0.8
0.6
2-ΔΔCt
1:1
1:5
1:25
1:125
Template dilution

Ler BG

Ler

HKL1^{OE}-Ln43

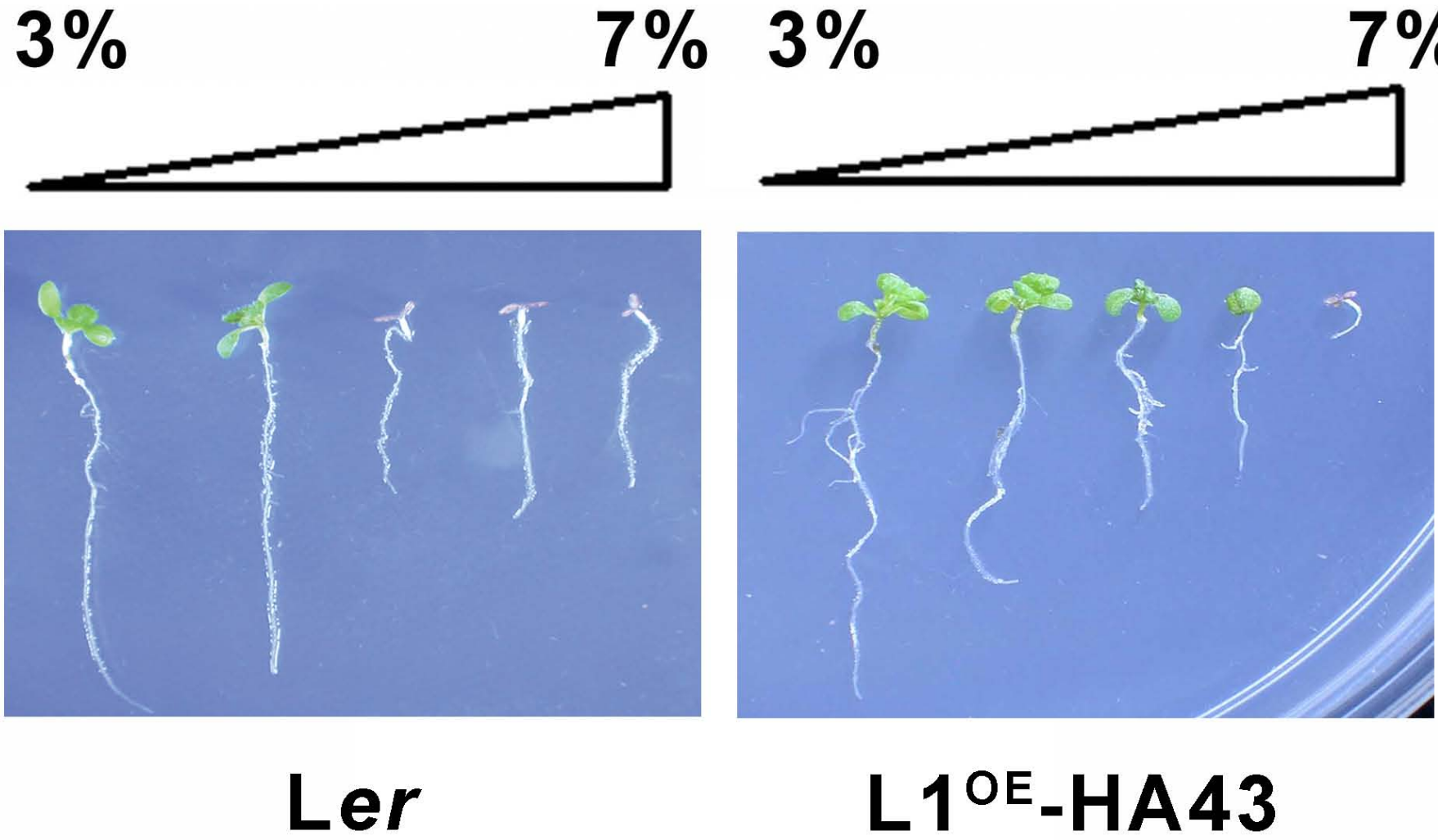
HKL1^{OE}-Ln52

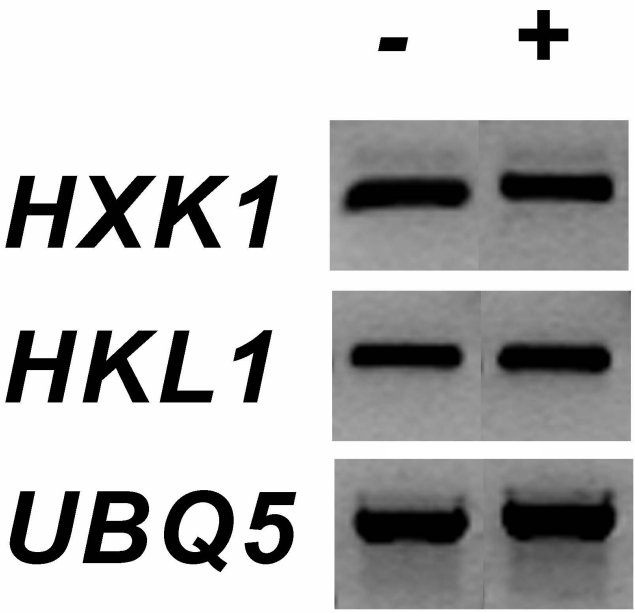
***gin2-1* BG**

gin2-1

HKL1^{OE}-Ln64

HKL1^{OE}-Ln79


3%
7%
3%
7%
Ler
L1OE-HA43


-
+
HXK1
HKL1
UBQ5