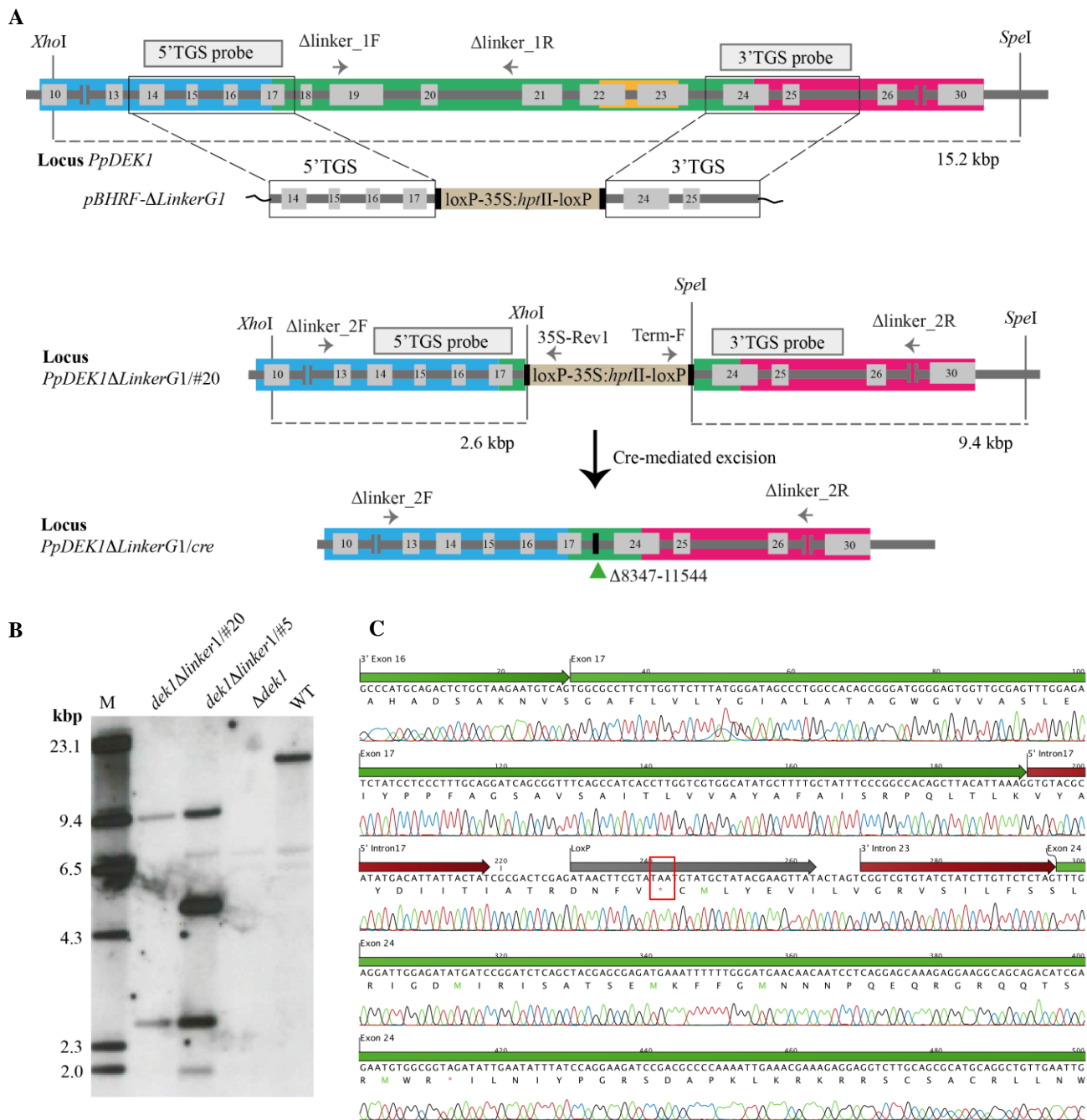


Supplemental Figure S1



Supplemental Figure S1. Vector construction, targeted *DEK1* Linker deletion and molecular characterization of the *Physcomitrella patens* *dek1ΔlinkerG1/cre* mutant line. A, Schematic representation of Linker deletion using the *pBHRF-ΔLinkerG1* vector and elimination of the resistance cassette by Cre-mediated excision. Blue, green, yellow and red highlights represent *DEK1* MEM, Linker, LG3 and calpain sequences, respectively (for the *DEK1* protein domains, see Figure 1A). Black boxes represent the *loxP* sequence. The numbers in the grey boxes correspond to the exons of the *P. patens* *DEK1* gene. The 5' and 3' targeting sequences (TGS) are boxed. The green triangle with numbers shows the position of the deleted *DEK1* nucleotides.

Annealing sites for primers used for PCR genotyping are shown with arrows (primer sequences can be found in Supplemental Table S3). The hybridization sites of the Southern blotting probes are shown above the schematics. Restriction enzymes used for Southern blotting and their restriction sites are indicated, and the corresponding expected band sizes are also given. B, Southern Blotting analysis. Southern blotting was performed to confirm removal of the Linker sequence in the *dek1ΔlinkerG1/#20* mutant. Restriction fragments were generated using *XhoI* and *SpeI* and the blot hybridized with a mixture of 5' and 3' TGS probes (A) displayed the expected hybridization signals. M = marker; WT = wild type, Positive control: WT; negative control: *Δdek1*. The *dek1ΔlinkerG1/#5* mutant line is a multi-copy line and was not used in the further study. C, *DEK1* cDNA sequencing. RT-PCR and DNA sequencing was used to analyze the *dek1ΔlinkerG1/cre* mutant *DEK1* cDNA showing deletion of exons 18-23 and mis-splicing leaving *DEK1* intron 17 and the *loxP* site in the processed transcript, creating a premature STOP codon (red box). The RT-PCR product was amplified using primers *Ex7-F* and *Ex30-R* and fully sequenced; for simplicity, only the sequencing result from exon 16 to exon 25 are provided.