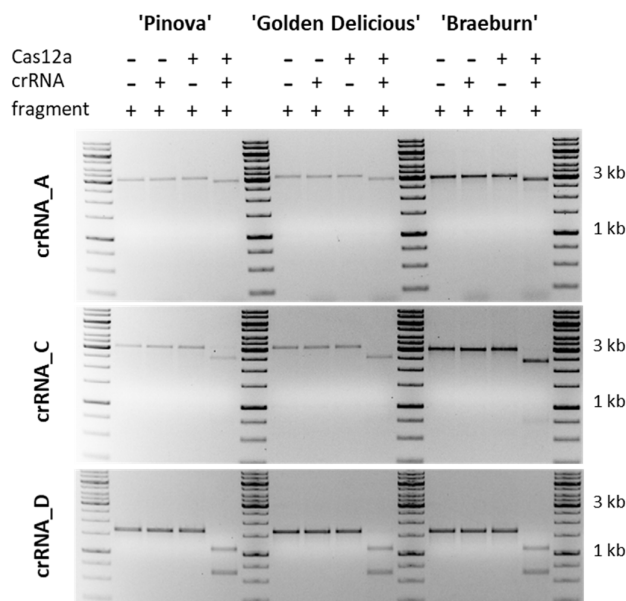**Supplementary Material**

Figure S1. Analysis of cleavage efficiency of crRNAs on different apple genotypes. PCR fragments amplified from different apple cultivars ('Pinova', 'Golden Delicious', 'Braeburn') were used as substrate for *in vitro* cleavage reactions in combination with different crRNAs pre-assembled with *Lb*Cas12a (Figure 1). The use of crRNA_A, C and D resulted in full digestion of the DNA substrate of each genotype.
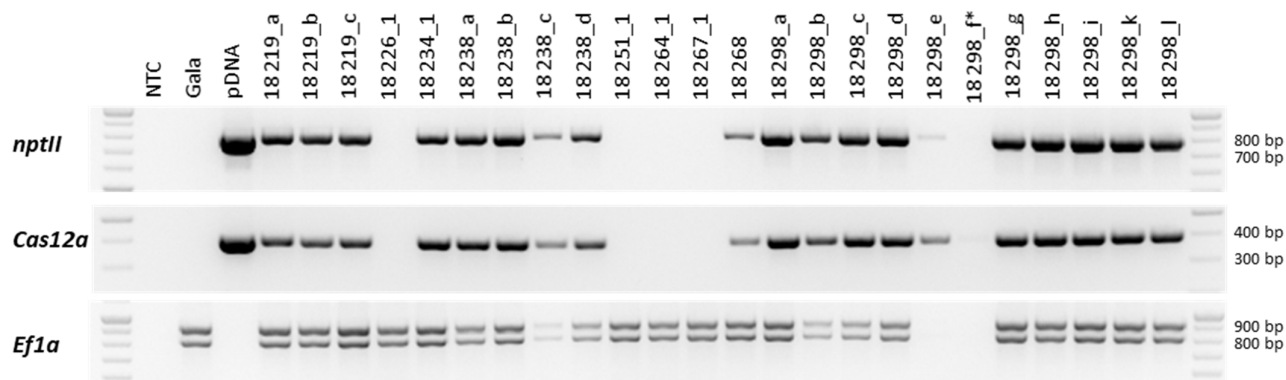

Figure S2. Detection of transgenic *nptII* and *LbCas12a* sequences in albino shoots. PCR using *nptII* and *LbCas12a* specific primer pair were performed to analyze several albino shoots. The plasmid p9oN-U10LbCpf1-Ex27 (pDNA), the genomic DNA of 'Gala' as well as no template control (NTC) were performed as PCR controls. Using a universal primer pair amplifying *EF1α* sequences, each DNA sample was tested for their usability as PCR template.

Table S1: DNA and RNA oligonucleotides. The sequence of the oligonucleotides used as crRNA or DNA primer for PCR amplification, respectively, is given. The 23 bp target-specific sequence of the respective crRNA is underlined. Fluorescent 5'-labels of the PCR primers are indicated.

oligo name	5'-label	5'-sequence-3'
guide RNA:		
crRNA_A		UAA UUU CUA CUA AGU GUA GAU CGA GCC UCU CCU CGU CCA ACC AA
crRNA_C		UAA UUU CUA CUA AGU GUA GAU GCA UUG CAA AUA UCA UAG AAU GU
crRNA_D		UAA UUU CUA CUA AGU GUA GAU UAG CCA UGU CAA AGG CCC UUA AC

PCR primer:

EX1-FW		AGG AAT GGT GTT TGC CCC TT
EX6-REV		AAC ATA AGC CTG CCC ACC AA
EX6-FW		TGT TGA AGC CCA AGA TGG CT
EX8-REV		GTG GCG AAC ACA TAC GCA TC
A-FW		TGG CAT AGG TTG TTT GCG TTG
A-FW	6-FAM	TGG CAT AGG TTG TTT GCG TTG
A-REV		TAA AGT TAG AGC GGC CGA AAA C
D-FW		TTT TGG TGA TTC GCA GGC CA
D-REV		GGT GCA CAT GAA GCC ATA ACA T
D-REV	Atto532	GGT GCA CAT GAA GCC ATA ACA T
EF1a-FW		ATT GTG GTC ATT GGY CAY GT
EF1a-REV		CCA ATC TTG TAV ACA TCC TG
nptIIopt_F		AGC ATG GAT TGA GCA GGA
nptIIopt_R		ATG ATG TTG GGG AGG CAG
Cas12a-FW		CCA GTA TCG CTT TTC GCT GC
Cas12a-REV		CTC CTC GTC GGA TGT GTA GC