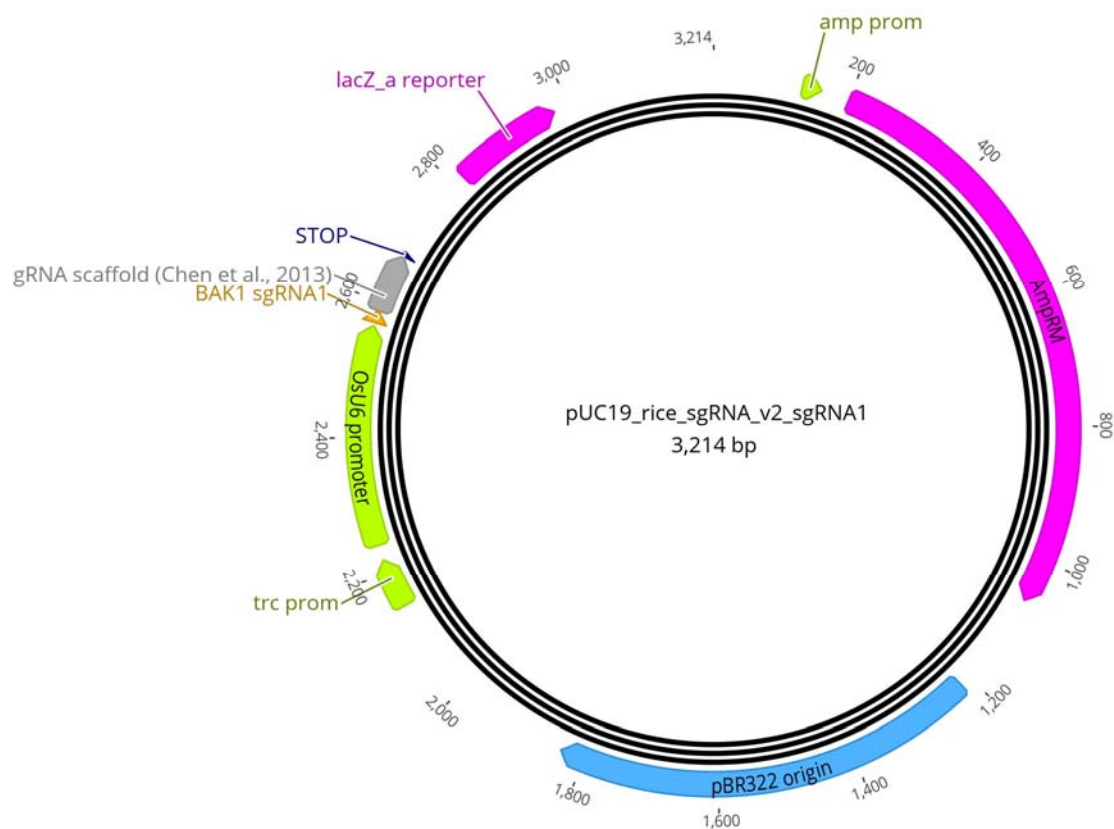


Table S1

Primers used for genotyping of transgenic lines.

Primer	5'-3' Sequence
UbiPro4	TTTAGCCCTGCCTTCATACG
WheatCas9R1	GGATTAAGGTCGCCTTCGATGAGG
M13F	GTAAAACGACGGCCAGT
M13R	CAGGAAACAGCTATGAC
Bar1	GTCTGCACCATCGTCAACC
Bar2	GAAGTCCAGCTGCCAGAAAC
FH41	GAGATTTCTGCTGAGATCCTACAT
FH42	GGATTATTACCAAACTGTGACAAT
FH43	CTGAAAGAGAAGAAGGTGGAGAT
FH44	GCTATCTGTCGGTCATCATGTAC
FH46	TCAAACGGTGTAGCGGTTCTT
FH56	GTATGATCAGATTTTCCGTCCG
FH57	TGAACAGCTTCGTTACTGGCAG
FH59	TGTCCAAAAGCAATCCGACC
FH147	GATGCGGAAGGTCAGGATCT
FH168	AGCAAGTTGAATGTGGGAGC
FH187	GTGGTCTCCGGCAACAAAGCACCAGTGGTCT
FH188	TAGGTCTCAATGTGGGAGCTGCACCAGCCGGAATC
FH189	GTGGTCTCCACATTCAACTTGCTGTTTCAGAGCTATGCTGGGAACA
FH190	TAGGTCTCAGTTCGACAACTGCACCAGCCGGAATC
FH191	GTGGTCTCCGAACCAGAAGGTCCGTTTCAGAGCTATGCTGGGAACA
FH192	TAGGTCTCACCACACCTTCTGCACCAGCCGGAATC
FH193	GTGGTCTCCGTGGATGGGGTGGAGTTTCAGAGCTATGCTGGGAACA
FH194	TAGGTCTCAATGGACCATCTGCACCAGCCGGAATC
FH195	GTGGTCTCCCCATTTACCGCCATGTTTCAGAGCTATGCTGGGAACA
FH196	TAGGTCTCAAACCTCTTCTGCACCAGCCGGAATC
FH197	GTGGTCTCCAGTTTCTGGACTACAGTTTCAGAGCTATGCTGGGAACA
FH198	GTGCGGTCTCAAACAAAAAAGCACCAGCTCGGTGCCACT
FH199	TAGGTCTCACGAAGAGTTCTGCACCAGCCGGAATC
FH200	GTGGTCTCCTTCGACGGTGTGAGTTTCAGAGCTATGCTGGGAACA
FH201	TAGGTCTCATACCCAGCCTGCACCAGCCGGAATC
FH202	GTGGTCTCCGGTAGAACCAAAGTGTTCAGAGCTATGCTGGGAACA
FH203	TAGGTCTCATTATCCTGTCTGCACCAGCCGGAATC
FH204	GTGGTCTCCATAAGCTTTCATTAGTTTCAGAGCTATGCTGGGAACA
FH205	TAGGTCTCACATCCAGACCTGCACCAGCCGGAATC
FH206	GTGGTCTCCGATGTCGTACCAGAGTTTCAGAGCTATGCTGGGAACA
FH207	TAGGTCTCAGCTTCGACCTGCACCAGCCGGAATC
FH208	GTGGTCTCCAAGCTGCGCTCCCGGTTTCAGAGCTATGCTGGGAACA
FH209	TGAAGCCTTTCAGGACATGTAT
FH210	CACTATAGGGCGAATTGGAGA
FH221	TAGAAAAGCCCGCGACTTTC
FH224	ATTAGCTGAGGCGGTTTCAATCT
FH227	TGTAAAACGACGGCCAGTTTTGGCGCTCTCATTATGTAT
FH228	CCTCTCTATGGGCAGTCGGTGATAGGAATCGCAACTTAAGAGTT
FH230	CCTCTCTATGGGCAGTCGGTGATCATGCCACAGCATATCCT
FH431	TCCCCATCCAAAACCTCG
FH445	TGTTCACCAATCATTGCCAGC
FH447	ATTTACCAGATAAGCATTGGCAA



AAGAACGAACTAAGCCGGACAAAAAAGGAGCACATATACAAACCGGTTTTATTTCATGAATGGTCACGATGGATGATGG
 GGCTCAGACTTGAGCTACGAGGCCGAGGCGAGAGAAGCCTAGTGTGCTCTCTGCTTGTTTGGGCCGTAACGGAGGATA
 CGGCCGACGAGCGTGTACTACCGCGCGGGATGCCGCTGGGCGCTGCGGGGGCCGTTGGATGGGGATCGGTGGGTCCGCG
 GAGCGTTGAGGGGAGACAGGTTTAGTACCACCTCGCCTACCGAACAATGAAGAACCCACCTTATAACCCCGCGCGCTGC
 CGCTTG**TGTTGTCAAGTTC**CGAG**TTCCA**AGTTTAAGAGCTATGCTGGAAACAGCATAGCAAGTTTAAATAAGGCTAGT
 CCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCTTTTTTTT

OsU6 promoter

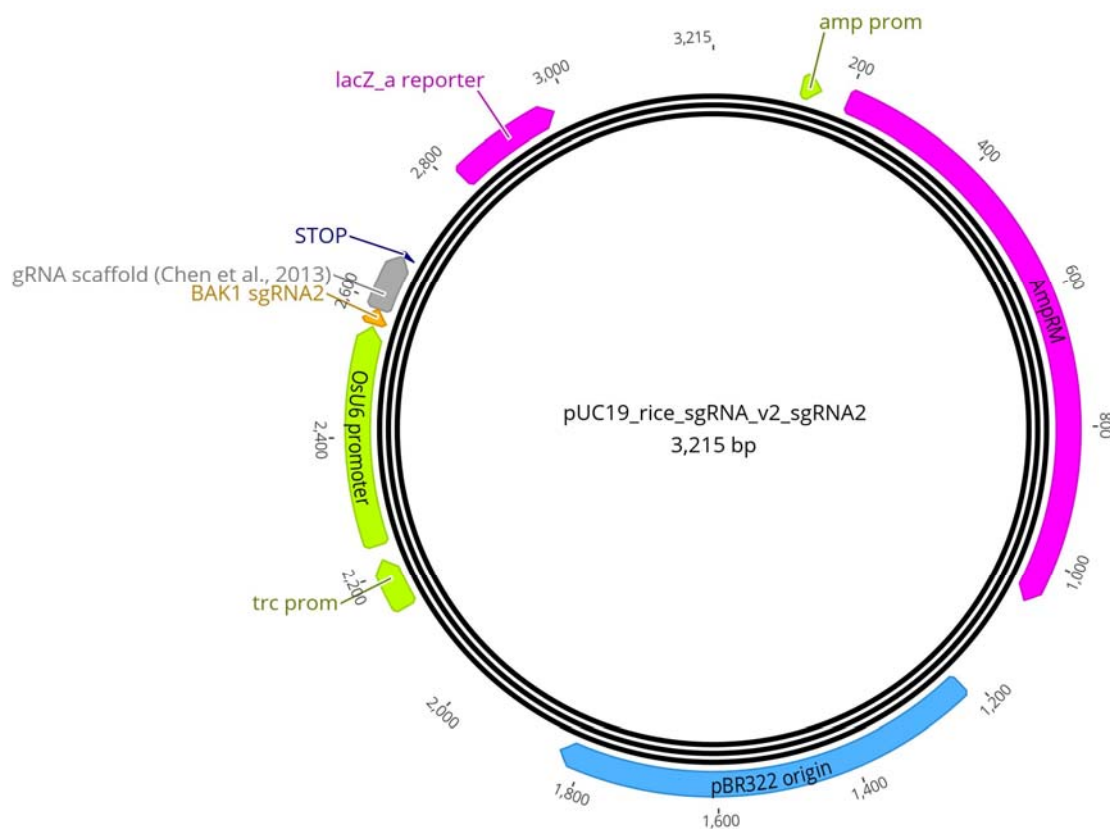
gRNA scaffold (Chen et al., 2013)

PolyT STOP

Target sequence

Figure S1

pUC19_rice_sgRNA_v2_sgRNA1 construct map and insert sequence.



AAGAACGAACTAAGCCGGACAAAAAAGGAGCACATATACAAACCGGTTTTATTTCATGAATGGTCACGATGGATGATGG
 GGCTCAGACTTGAGCTACGAGGCCGAGGCGAGAGAAGCCTAGTGTGCTCTCTGCTTGTTTGGGCCGTAAACGGAGGATA
 CGGCCGACGAGCGTGTACTACCGCGCGGGATGCCGCTGGGCGCTGCGGGGGCCGTTGGATGGGGATCGGTGGGTGCGCG
 GAGCGTTGAGGGGAGACAGGTTTAGTACCACCTCGCCTACCGAACAATGAAGAACCACCTTATAACCCGCGCGCTGC
 CGCTTG**TGTTGAACTTGGAGGGTGCTAATAT**GTTTAAGAGCTATGCTGGAAACAGCATAGCAAGTTTAAATAAGGCTAG
 TCCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCTTTTTTTTT

OsU6 promoter

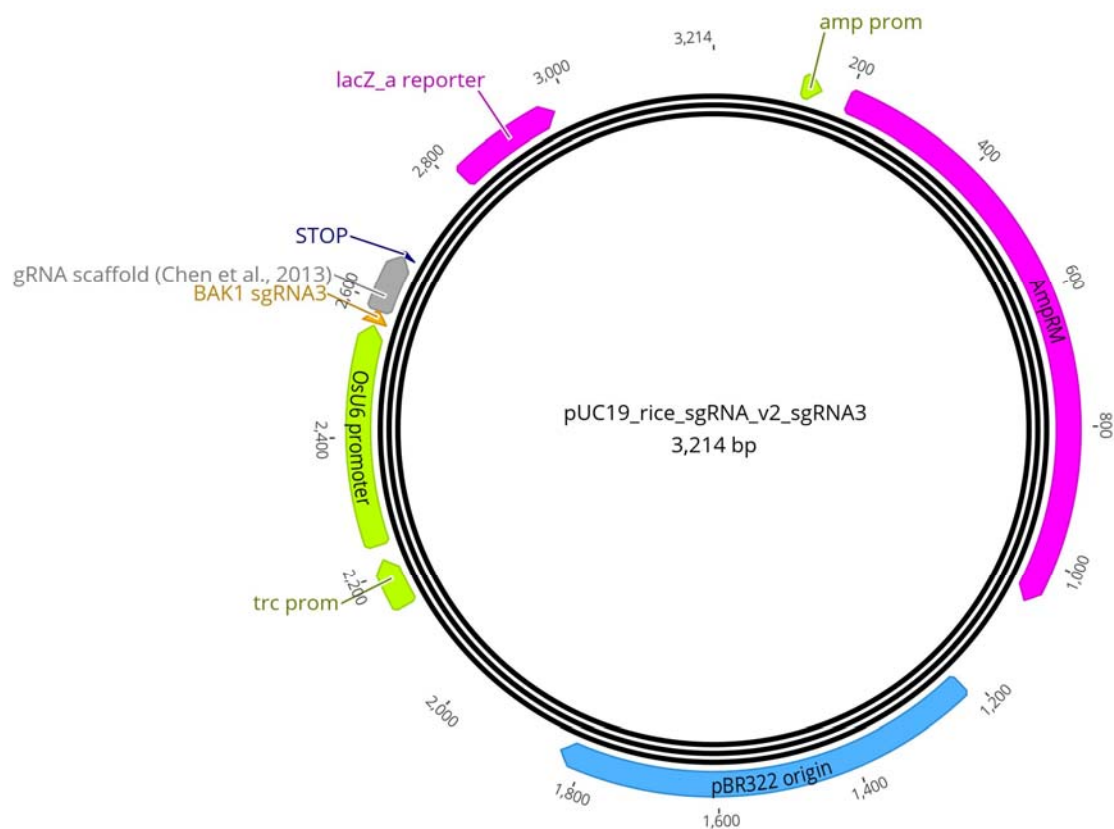
gRNA scaffold (Chen et al., 2013)

PolyT STOP

Target sequence

Figure S2

pUC19_rice_sgRNA_v2_sgRNA2 construct map and insert sequence.



AAGAACGAACTAAGCCGGACAAAAAAGGAGCACATATACAAACCGGTTTTATTTCATGAATGGTCACGATGGATGATGG
 GGCTCAGACTTGAGCTACGAGGCCGAGGCGAGAGAAGCCTAGTGTGCTCTCTGCTTGTTTGGGCCGTAACGGAGGATA
 CGGCCGACGAGCGTGTACTACCGCGCGGGATGCCGCTGGGCGCTGCGGGGGCCGTTGGATGGGGATCGGTGGGTCCGCG
 GAGCGTTGAGGGGAGACAGGTTTAGTACCACCTCGCCTACCGAACAATGAAGAACCACCTTATAACCCCGCGCGCTGC
 CGCTTG**TGTTGATCCAGTCGTTGTTTCGCG**GTTTAAGAGCTATGCTGGAAACAGCATAGCAAGTTTAAATAAGGCTAGT
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OsU6 promoter

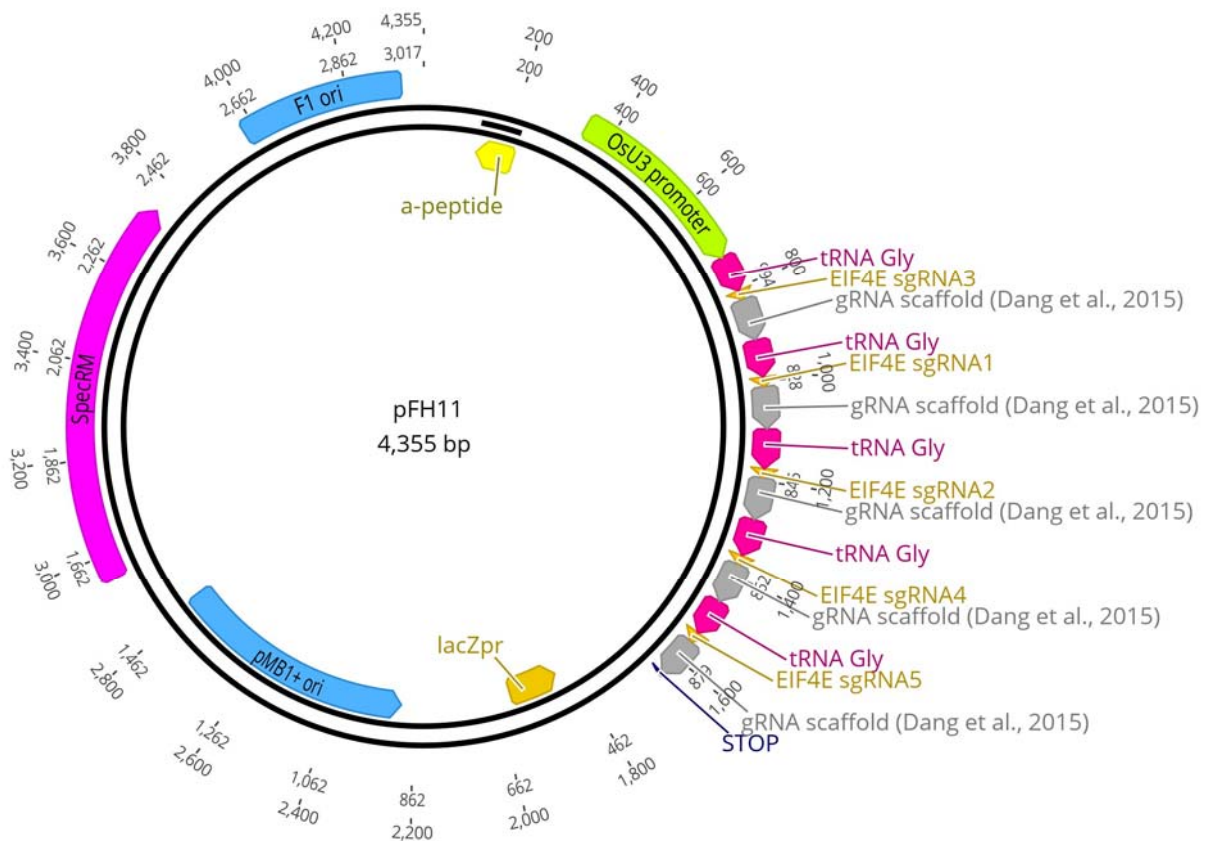
gRNA scaffold (Chen et al., 2013)

PolyT STOP

Target sequence

Figure S3

pUC19_rice_sgRNA_v2_sgRNA3 construct map and insert sequence.



AAGCTTAAGGAATCTTTAAACATACGAACAGATCACTTAAAGTTCTTCTGAAGCAACTTAAAGTTATCAGGCATGCATG
 GATCTTGGAGGAATCAGATGTGCAGTCAGGGACCATAGCACAAAGACAGGCGTCTTCTACTGGTGCTACCAGCAAATGCT
 GGAAGCCGGGAACACTGGGTACGTTGGAACACACGTGATGTGAAGAAGTAAGATAAACTGTAGGAGAAAAGCATTTCGT
 AGTGGGCCATGAAGCCTTTCAGGACATGTATTGCAGTATGGGCCGGCCATTACGCAATTGGACGACAACAAGACTAG
 TATTAGTACCACCTCGGCTATCCACATAGATCAAAGCTGATTTAAAGAGTTGTGCAGATGATCCGTGGCAACAAAGCA
 CCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCACTCCACATT
 CAACTTGCCTGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGT
 GGCACCGAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGAT
 TCCCGGCTGGTGCACTTGTGCAACCAGAAGGTCCGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGC
 TAGTCCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCT
 GCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCAAGAGTGTGGATGGGGTGGAGTTTCAGAGCTATGCTGGGA
 ACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCACAAAGCACCAG
 TGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCAATGGTCCATTTACC
 GCCATGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCA
 CCGAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCC
 GGCTGGTGCAAGAGGAGTTTCTGGACTACAGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGT
 CCGTTATCAACTTGAAAAAGTGGCACCGAGTCGGTGCATTTTTTTTTT

OsU3 promoter

tRNA Gly

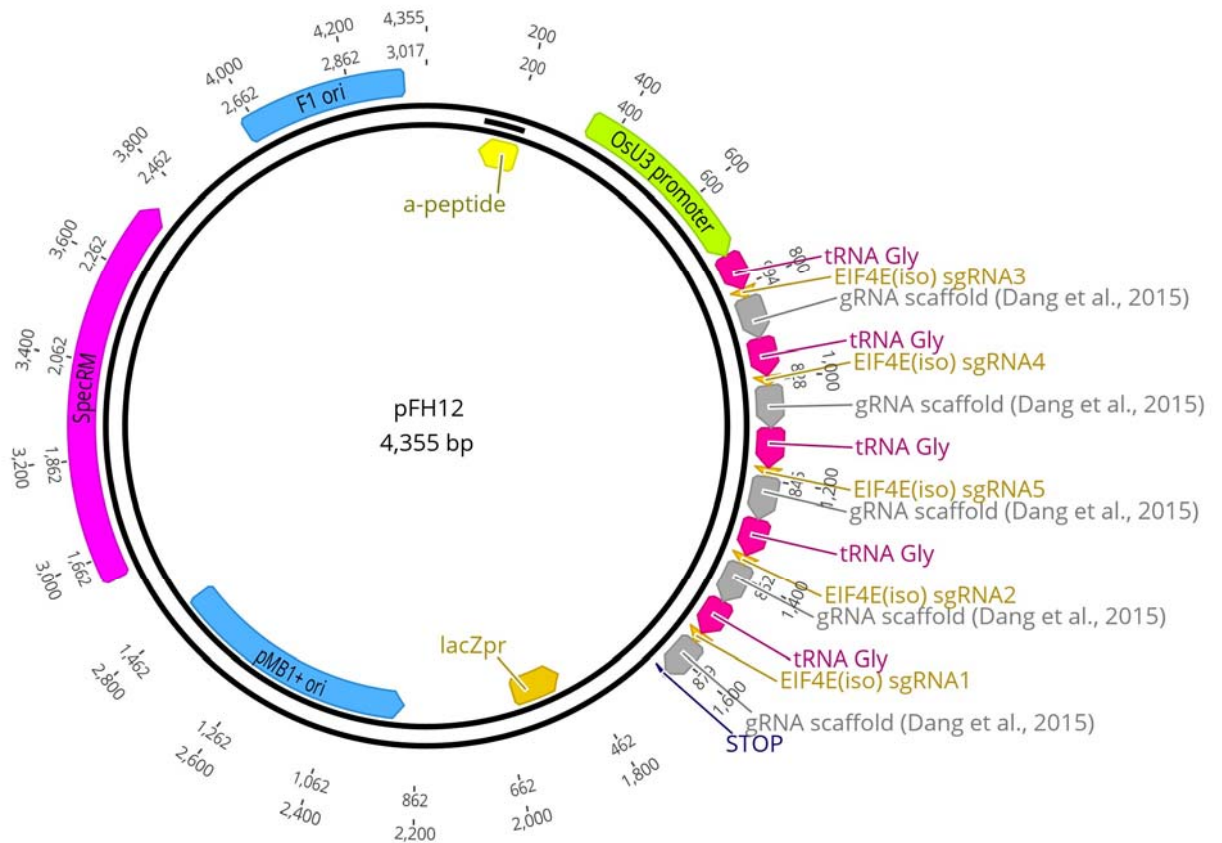
gRNA scaffold (Dang et al., 2015)

PolyT STOP

Target sequences

Figure S4

pFH11 construct map and insert sequence.



AAGCTTAAGGAATCTTTAAACATACGAACAGATCACTTAAAGTTCTTCTGAAGCAACTTAAAGTTATCAGGCATGCATG
 GATCTTGGAGGAATCAGATGTGCAGTCAGGGACCATAGCACAAAGACAGGCGTCTTCTACTGGTGCTACCAGCAAATGCT
 GGAAGCCGGGAACACTGGGTACGTTGGAACACAGTGTATGTGAAGAAGTAAGATAAACTGTAGGAGAAAAGCATTTCGT
 AGTGGGCCATGAAGCCTTTCAGGACATGTATTGCAGTATGGGCCGGCCATTACGCAATTGGACGACAACAAAGACTAG
 TATTAGTACCACCTCGGCTATCCACATAGATCAAAGCTGATTTAAAGAGTTGTGCAGATGATCCGTGGCAACAAAGCA
 CCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCAAACTCTTCGA
 CGGTGTGCAAGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGT
 GGCACCGAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGAT
 TCCCGGCTGGTGCAAGGCTGGGGTAGAACCAGTGTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGC
 TAGTCCGTTATCAACTTGAAAAAGTGGCACCAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCT
 GCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCAAGACAGGATAAGCTTTTATTAGTTTCAGAGCTATGCTGGGA
 ACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCACCAGTCGGTGCACAAAGCACCAG
 TGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCCGGCTGGTGCAAGGCTGCGATGTCGTA
 CCAGAGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCA
 CCGAGTCGGTGCACAAAGCACCAGTGGTCTAGTGGTAGAATAGTACCCTGCCACGGTACAGACCCGGGTTTCGATTCCC
 GGCTGGTGCAAGGTCGAAGCTGCGCTCCCGGTTTCAGAGCTATGCTGGGAACAGCATAGCAAGTTGAAATAAGGCTAGT
 CCGTTATCAACTTGAAAAAGTGGCACCAGTCGGTGCATTTTTTTTTT

OsU3 promoter

tRNA Gly

gRNA scaffold (Dang et al., 2015)

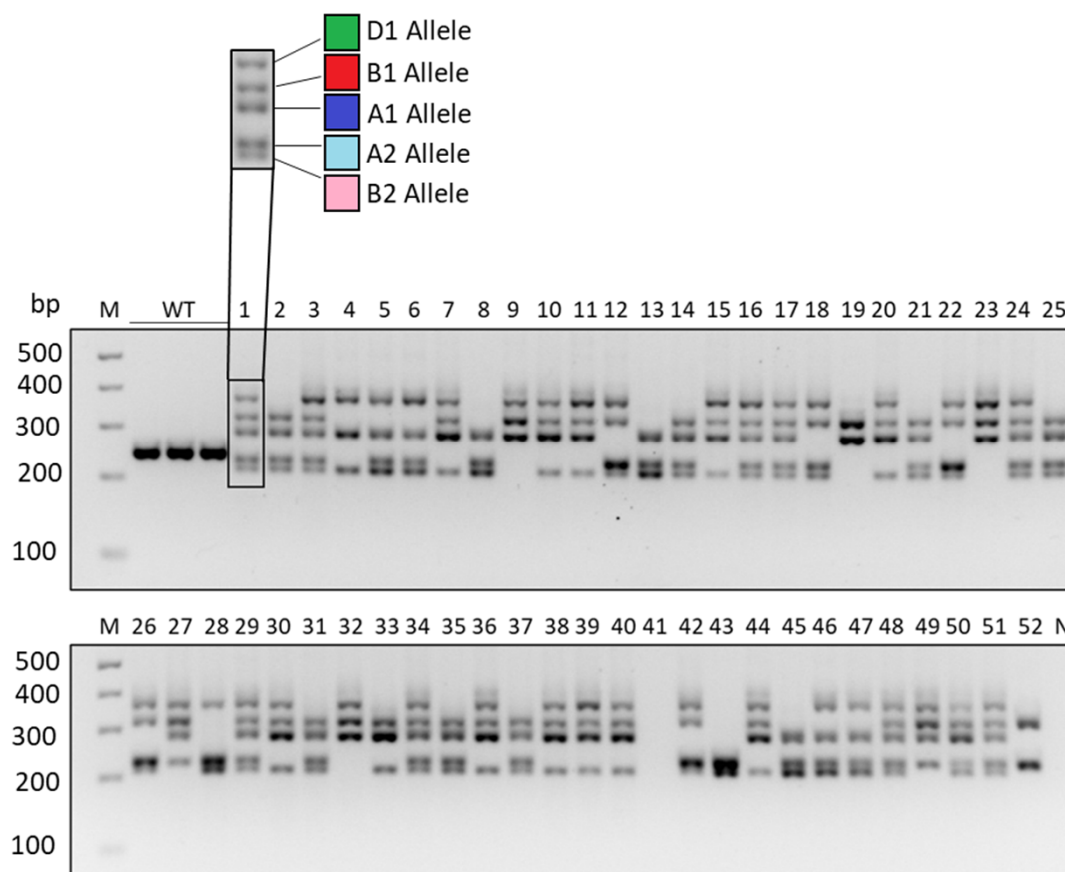
PolyT STOP

Target sequences

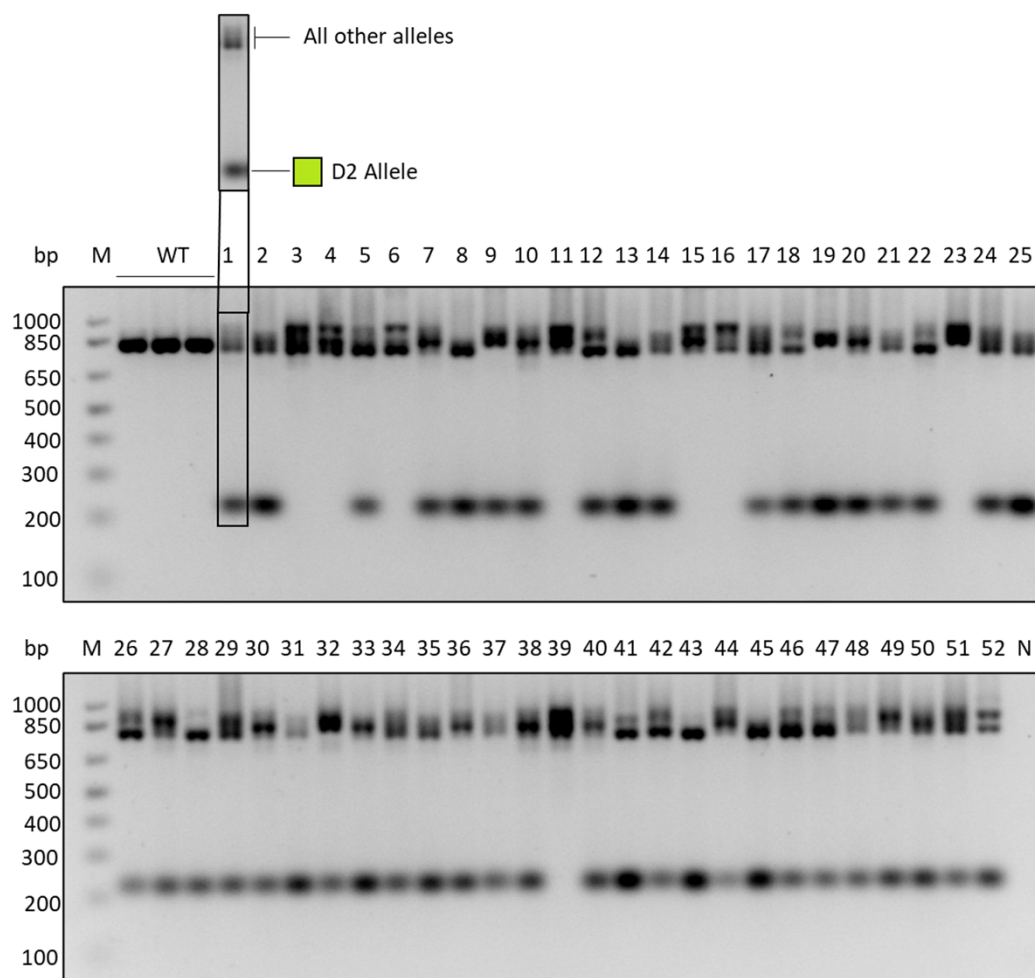
Figure S5

pFH12 construct map and insert sequence.

A



B

**Figure S6**

PCR-genotyping of T1 progeny of *tabak1-2* T0 plant 1 with FH227 + FH228 primers (A) and FH227 + FH230 primers (B).

T1 plant	A genome	B genome	D genome
1			
2			
3			
4			
5			
6			
7			
8			
9			
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37			
38			
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40			
41	nd	nd	nd
42			
43			
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51			
52			

Figure S7

TaBAK1-2 allele distribution among T1 progeny of *tabak1-2* T0 plant 1.

TaBAK1-2_A(WT)	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-1_A1	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_A(WT)	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLELGN-	119
TaBAK1-2_T0-1_A1	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLR+RQS*	120
TaBAK1-2_A(WT)	120	-LTNLVSLDLYLNKFTGGIPDTLGKLLKLRFLRLNNSLSGQIPQS-----LTNISTLQ	172
TaBAK1-2_T0-1_A1	121	VLGCRKAGG*TRELDKPGQFGSVPEQIHWRYSRHIGETLKVAIPPS*QQQSFWSNSTILQ	180
TaBAK1-2_A(WT)	173	VLDLSNNNLSGAVPSTGFSFLFTPISFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPPTPP	232
TaBAK1-2_T0-1_A1	181	VLDLSNNNLSGAVPSTGFSFLFTPISFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPPTPP	240
TaBAK1-2_A(WT)	233	AAQGDPKTGAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKR	292
TaBAK1-2_T0-1_A1	241	AAQGDPKTGAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKR	300
TaBAK1-2_A(WT)	293	FSLRELQVASDNFSNKNILGRGGFGKVKYGRITDGTLVAVKRLKEERTPGGELQFQTEVE	352
TaBAK1-2_T0-1_A1	301	FSLRELQVASDNFSNKNILGRGGFGKVKYGRITDGTLVAVKRLKEERTPGGELQFQTEVE	360
TaBAK1-2_A(WT)	353	MISMAVHRNLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALG	412
TaBAK1-2_T0-1_A1	361	MISMAVHRNLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALG	420
TaBAK1-2_A(WT)	413	SARGLSYLHDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGTI	472
TaBAK1-2_T0-1_A1	421	SARGLSYLHDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGTI	480
TaBAK1-2_A(WT)	473	GHIAPPEYLSTGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEK	532
TaBAK1-2_T0-1_A1	481	GHIAPPEYLSTGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEK	540
TaBAK1-2_A(WT)	533	KVEMLVDPDLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQ	592
TaBAK1-2_T0-1_A1	541	KVEMLVDPDLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQ	600
TaBAK1-2_A(WT)	593	KVEVVRQEAEELAPRNNDWIVDSTYNLRAVELSGPR-	627
TaBAK1-2_T0-1_A1	601	KVEVVRQEAEELAPRNNDWIVDSTYNLRAVELSGPR*	636

Figure S8

Protein alignment of the *tabak1-2* T0 plant 1 A1 allele to the WT.

TaBAK1-2_A(WT)	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-1_A2	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_A(WT)	61	PCTWFHVTCNTDNSVIRVDLGNALSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
TaBAK1-2_T0-1_A2	61	PCTWFHVTCNTDNSVIRVDLGNALSGALVSQLGQLKNLQYLELYSN I ELGNL	116
TaBAK1-2_A(WT)	121	TNLVSLDLYLKFTGGIPDTLGKLLKLRFLRLNNSLSGQIPQSLTNISTLQVLDLSNNN	180
TaBAK1-2_T0-1_A2	117	TNLVSLDLYLKFTGGIPDTLGKLLKLRFLRLNNSLSGQIPQSLT +VLDLSNNN	172
TaBAK1-2_A(WT)	181	LSGAVPSTGSFSLFTPIISFGNNPNLCGPGTTKPCPGAPPFSPPPPFNPTPPAAQGDPKT	240
TaBAK1-2_T0-1_A2	173	LSGAVPSTGSFSLFTPIISFGNNPNLCGPGTTKPCPGAPPFSPPPPFNPTPPAAQGDPKT	232
TaBAK1-2_A(WT)	241	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	300
TaBAK1-2_T0-1_A2	233	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	292
TaBAK1-2_A(WT)	301	ASDNFSNKNILGRGGFGKVYKGRITDGTLLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	360
TaBAK1-2_T0-1_A2	293	ASDNFSNKNILGRGGFGKVYKGRITDGTLLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	352
TaBAK1-2_A(WT)	361	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	420
TaBAK1-2_T0-1_A2	353	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	412
TaBAK1-2_A(WT)	421	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHVTTAVRGTIGHIAPEYL	480
TaBAK1-2_T0-1_A2	413	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHVTTAVRGTIGHIAPEYL	472
TaBAK1-2_A(WT)	481	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	540
TaBAK1-2_T0-1_A2	473	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	532
TaBAK1-2_A(WT)	541	DLQSVYVEHEVEALIQVALLCTQGSPMDRPKMSEVVRMLEGDGLAERWEEWQKVEVVRQE	600
TaBAK1-2_T0-1_A2	533	DLQSVYVEHEVEALIQVALLCTQGSPMDRPKMSEVVRMLEGDGLAERWEEWQKVEVVRQE	592
TaBAK1-2_A(WT)	601	AELAPRNNDWIVDSTYNLRAVELSGPR	627
TaBAK1-2_T0-1_A2	593	AELAPRNNDWIVDSTYNLRAVELSGPR	619

Figure S9

Protein alignment of the *tabak1-2* T0 plant 1 A2 allele to the WT.

TaBAK1-2_B(WT)	1	MAASPEMLRRRWAAVAVLSVVLAVSRVAANTEGDALYSRLQSLKDANNVLSWDPTLVN	60
TaBAK1-2_T0-1_B1	1	MAASPEMLRRRWAAVAVLSVVLAVSRVAANTEGDALYSRLQSLKDANNVLSWDPTLVN	60
TaBAK1-2_B(WT)	61	PCTWFHVTCNTDNSVIRVDLGNALSGALVSQGLQKLNQYLELYSNNISGTIPLELG--	118
TaBAK1-2_T0-1_B1	61	PCTWFHVTCNTDNSVIRVDLGNALSGALVSQGLQKLNQYLELYSNNISGTIPL L	120
TaBAK1-2_B(WT)	119	-----NLTNLVSLDLYLNKFTGGIPDTLGQLLKLRLRLNN	154
TaBAK1-2_T0-1_B1	121	HTHTTRSPPNPPVGTSSASRYAALGNLTNLVSLDLYLNKFTGGIPDTLGQLLKLRLRLNN	180
TaBAK1-2_B(WT)	155	NSLSGQIPQSLTNISTLQVLDLSNNNLSGAVPSTGSFSLFTPISFGNNPNLCGPGTSKPC	214
TaBAK1-2_T0-1_B1	181	NSLSGQIPQSLTNISTLQVLDLSNNNLSGAVPSTGSFSLFTPISFGNNPNLCGPGTSKPC	240
TaBAK1-2_B(WT)	215	PGAPPFSPPPFPNPPTPPTTPGDPKGTGAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHF	274
TaBAK1-2_T0-1_B1	241	PGAPPFSPPPFPNPPTPPTTPGDPKGTGAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHF	300
TaBAK1-2_B(WT)	275	FDVPAEEDPEVHLGQLKRFSLRELQVASDNFSNKNILGRGGFGKVYKGRLLDGTTLVAVKR	334
TaBAK1-2_T0-1_B1	301	FDVPAEEDPEVHLGQLKRFSLRELQVASDNFSNKNILGRGGFGKVYKGRLLDGTTLVAVKR	360
TaBAK1-2_B(WT)	335	LKEERTPGGELQFQTEVEMISMAVHRNLLRLRGFCMTPTERLLVYPYMANGSVASRLRER	394
TaBAK1-2_T0-1_B1	361	LKEERTPGGELQFQTEVEMISMAVHRNLLRLRGFCMTPTERLLVYPYMANGSVASRLRER	420
TaBAK1-2_B(WT)	395	GPNEPALEWEKRTRIALGSARGLSYLHDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLA	454
TaBAK1-2_T0-1_B1	421	GPNEPALEWEKRTRIALGSARGLSYLHDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLA	480
TaBAK1-2_B(WT)	455	KLMDYKDTHTVTTAVRGITIGHIAPEYLSGKSSEKTDVFGYGIMLLELITGQRAFDLARLA	514
TaBAK1-2_T0-1_B1	481	KLMDYKDTHTVTTAVRGITIGHIAPEYLSGKSSEKTDVFGYGIMLLELITGQRAFDLARLA	540
TaBAK1-2_B(WT)	515	NDDDVMLLDWVKGLLKEKKVEMLVDPDLQSVYVEHEVEALIQVALLCTQGSPMDRPMSE	574
TaBAK1-2_T0-1_B1	541	NDDDVMLLDWVKGLLKEKKVEMLVDPDLQSVYVEHEVEALIQVALLCTQGSPMDRPMSE	600
TaBAK1-2_B(WT)	575	VVRMLEGDGLAERWEEWQKVEVVRQEAELAPRNNDWIVDSTYNLRAVELSGPR	627
TaBAK1-2_T0-1_B1	601	VVRMLEGDGLAERWEEWQKVEVVRQEAELAPRNNDWIVDSTYNLRAVELSGPR	653

Figure S10

Protein alignment of the *tabak1-2* T0 plant 1 B1 allele to the WT.

TaBAK1-2_B(WT)	1	MAASPEMLRRRWAAVAVLSVVLAVSRVAANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-1_B2	1	MAASPEMLRRRWAAVAVLSVVLAVSRVAANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_B(WT)	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
TaBAK1-2_T0-1_B2	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTN-----	113
TaBAK1-2_B(WT)	121	TNLVSLDLYLNKFTGGIPDTLGQLLKLRLFLRLNNSLSGQIPQSLTNISTLQVLDLSNNN	180
TaBAK1-2_T0-1_B2	114	--LVSLDLYLNKFTGGIPDTLGQLLKLRLFLRLNNSLSGQIPQSLT--NTLQVLDLSNNN	169
TaBAK1-2_B(WT)	181	LSGAVPSTGSFSLFTPISFGNNPNLCGPGTSKPCPGAPPFSPPPFPNPPTPTTPGDPKT	240
TaBAK1-2_T0-1_B2	170	LSGAVPSTGSFSLFTPISFGNNPNLCGPGTSKPCPGAPPFSPPPFPNPPTPTTPGDPKT	229
TaBAK1-2_B(WT)	241	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	300
TaBAK1-2_T0-1_B2	230	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	289
TaBAK1-2_B(WT)	301	ASDNFSNKNILGRGGFGKVYKGRLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	360
TaBAK1-2_T0-1_B2	290	ASDNFSNKNILGRGGFGKVYKGRLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	349
TaBAK1-2_B(WT)	361	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGNPALEWEKRTTRIALGSARGLSYL	420
TaBAK1-2_T0-1_B2	350	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGNPALEWEKRTTRIALGSARGLSYL	409
TaBAK1-2_B(WT)	421	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGTTIGHIAPEYL	480
TaBAK1-2_T0-1_B2	410	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGTTIGHIAPEYL	469
TaBAK1-2_B(WT)	481	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	540
TaBAK1-2_T0-1_B2	470	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	529
TaBAK1-2_B(WT)	541	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	600
TaBAK1-2_T0-1_B2	530	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	589
TaBAK1-2_B(WT)	601	AELAPRNNDWIVDSTYNLRAVELSGPR	627
TaBAK1-2_T0-1_B2	590	AELAPRNNDWIVDSTYNLRAVELSGPR	616

Figure S11

Protein alignment of the *tabak1-2* T0 plant 1 B2 allele to the WT.

TaBAK1-2_D(WT)	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-1_D1	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_D(WT)	61	PCTWFHVTCTDNSVIRVDLGNALVSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
TaBAK1-2_T0-1_D1	61	PCTWFHVTCTDNSVIRVDLGNALVSGALVSQLGQLKNLQYLELYSNNISGTIPL+ G L	120
TaBAK1-2_D(WT)	121	TNLVSLDLYLNKFTGGIPDTLGQLLKLRLRLNNSLSG-----	159
TaBAK1-2_T0-1_D1	121	*ENRVL*LCGDKRR*GSLQRLAGNVPRLAQDH*G*RLPR*RT*QTWSVWICT*TNLAVF	180
TaBAK1-2_D(WT)	160	-----QIPQSLTNISTLQVLDLSNNNLSGAVPSTGSFSLFTPI	197
TaBAK1-2_T0-1_D1	181	QTHWGN*SCDSSVLT*TTT*VFLVKFHN*PILAPSKFWIYQTTISLERFHLARFHSPL*	240
TaBAK1-2_D(WT)	198	SFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPPTPPAAQGDPKTGAIAGGVAAGAALIFAV	257
TaBAK1-2_T0-1_D1	241	VLVIIQIFVARVLRNHVGLHLLFLHLHHSILQHHPRHKVTLKPEQLLEVLRLVH*YLLF	300
TaBAK1-2_D(WT)	258	PAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLQVADNFSNKNILGRGGFG	317
TaBAK1-2_T0-1_D1	301	LQLDLHCGGDVNLK*ISLMSLLRRIQKCTLAS*RGSH*GSFKLLAITS*AIRTF*EEVALE	360
TaBAK1-2_D(WT)	318	KVYKGRLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHRNLLRLRGFCMTPTERLL	377
TaBAK1-2_T0-1_D1	361	RCTRGD*RMVHW*QLKD*KKNVLLVANSNSKQKSK*LVWQCIGTCFDSVDSA*HLQNGY*	420
TaBAK1-2_D(WT)	378	VYPYMANGSVASRLRERGPNEPALEWEKRTIALGSARGLSYLHDHCDPKIIHRDVKAAN	437
TaBAK1-2_T0-1_D1	421	SIHTWLTVALHHVCESEGQMSRLNLNGKKEGLHWDLPEDCLTCMITVIPRSFIVMSKPQT	480
TaBAK1-2_D(WT)	438	ILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGITIGHIAPEYLS*TKGSSEKTDVFGYGIM	497
TaBAK1-2_T0-1_D1	481	FSWMKTLRRLWVTL*DWPSLWTT*RTL*PQPSVERSGILLPSTYPPE*SPRRRMFSVTASC	540
TaBAK1-2_D(WT)	498	LLELITGQRAFDLARLANDDVMLLDWVKGLLKEKKVEMLVDPDLQSVYVEHEVEALIQV	557
TaBAK1-2_T0-1_D1	541	FWSLSLGRGHSTSHVLQTTTMS*CLTG*KGC*KRRRWRCWWTRTCRACTWSTRWRR*SRW	600
TaBAK1-2_D(WT)	558	ALLCTQGS*PMDR*PKMSEVVRMLEGDGLAERWEEWQKVEVVRQEAELAPRNNDWIVDSTYN	617
TaBAK1-2_T0-1_D1	601	RCCARRGRRWTGPRCRRW*GCWRATGWSAGRSGRRRWWSGRRRSWPRETTTGSSTPPTT	660
TaBAK1-2_D(WT)	618	LRAVELSGPR	627
TaBAK1-2_T0-1_D1	661	SGRWSSPARG	670

Figure S12

Protein alignment of the *tabak1-2* T0 plant 1 D1 allele to the WT.

TaBAK1-2_D(WT)	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-1_D2	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_D(WT)	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
TaBAK1-2_T0-1_D2	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLPSKFW	120
TaBAK1-2_D(WT)	121	TNLVSLDLYLNKFTGGIPDTLGQLLKLRLFLRLNNSLSGQIPQSLTNISTLQVLDLSNNN	180
TaBAK1-2_T0-1_D2	121	IYQTTISLERFHQLARFHSLPL*VLVIIQIFVARVLNRHVLGHLFLHLHHSILQHHPRH	180
TaBAK1-2_D(WT)	181	LSGAVPSTGSFSLFTPISFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPPTPPAAQGDPKT	240
TaBAK1-2_T0-1_D2	181	KVTLKPEQLLEVLRLVLH*-----	199
TaBAK1-2_D(WT)	241	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAEEDPEVHLGQLKRFSRELQV	300
TaBAK1-2_T0-1_D2	200	-----YLLFLQLDLHCGGDVNLKSISLSMLLRIQKCTLAS*RGSH*GSFKL	246
TaBAK1-2_D(WT)	301	ASDNFSNKNILGRGGFGKVYKGRLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	360
TaBAK1-2_T0-1_D2	247	LAITSAIRTF*EEVALERCTRGD*RMVHW*QLKD*KKNVLLVANSNSKQKSK*LVWQCIG	306
TaBAK1-2_D(WT)	361	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	420
TaBAK1-2_T0-1_D2	307	TCFDSVDSA*HLQNGY*SIHTWLTVALHHVCESEGQMSRLNGKELGLHWDLPEDCLTC	366
TaBAK1-2_D(WT)	421	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHTVTTAVRGITIGHIAPEYL	480
TaBAK1-2_T0-1_D2	367	MITVIPRSFIVMSKPQTFSWMKTLRRLWVTLDWPSLWTTRTLMT*PQPSVERSGILLPSTY	426
TaBAK1-2_D(WT)	481	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	540
TaBAK1-2_T0-1_D2	427	PPESPPrRRMFsvTASCFWslSLGRGHSTshVLQTTMTSCCLTG*KGC*KRRRWRCWWTR	486
TaBAK1-2_D(WT)	541	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	600
TaBAK1-2_T0-1_D2	487	TCRACTWSTRWRR*SRWRCCARRGRRTGPRCRRW*GCWRATGWRsAGRSgRRWRWSgRR	546
TaBAK1-2_D(WT)	601	AELAPRNNDWIVDSTYNLRAVELSGPR	627
TaBAK1-2_T0-1_D2	547	RSWPRETTTGSSTPPTTSGRWSSPARG	573

Figure S13

Protein alignment of the *tabak1-2* T0 plant 1 D2 allele to the WT.

TaBAK1-2_A(WT)	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
BAK1-2A_T0-2_A1	1	MAASPEMLRRCWAAAAVLSAVLTVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_A(WT)	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
BAK1-2A_T0-2_A1	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPL	117
TaBAK1-2_A(WT)	121	TNLVSLDLYLNKFTGGIPDTLGKLLKLRFLRLNNSLSGQIPQSLTNISTLQVLDLSNNN	180
BAK1-2A_T0-2_A1	118	-----TLQVLDLSNNN	128
TaBAK1-2_A(WT)	181	LSGAVPSTGSFSLFTPISFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPTPPAAQGDPKT	240
BAK1-2A_T0-2_A1	129	LSGAVPSTGSFSLFTPISFGNNPNLCGPGTTKPCPGAPPFSPPPFPNPTPPAAQGDPKT	188
TaBAK1-2_A(WT)	241	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	300
BAK1-2A_T0-2_A1	189	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSRLRELQV	248
TaBAK1-2_A(WT)	301	ASDNFSNKNILGRGGFGKVKGRLLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	360
BAK1-2A_T0-2_A1	249	ASDNFSNKNILGRGGFGKVKGRLLTDGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	308
TaBAK1-2_A(WT)	361	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	420
BAK1-2A_T0-2_A1	309	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	368
TaBAK1-2_A(WT)	421	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDHVTTAVRGTIGHIAPEYL	480
BAK1-2A_T0-2_A1	369	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDHVTTAVRGTIGHIAPEYL	428
TaBAK1-2_A(WT)	481	STGKSSEKTDVFGYGIMLLELITQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	540
BAK1-2A_T0-2_A1	429	STGKSSEKTDVFGYGIMLLELITQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	488
TaBAK1-2_A(WT)	541	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	600
BAK1-2A_T0-2_A1	489	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	548
TaBAK1-2_A(WT)	601	AELAPRNNDWIVDSTYNLRAVELSGPR	627
BAK1-2A_T0-2_A1	549	AELAPRNNDWIVDSTYNLRAVELSGPR	575

Figure S14

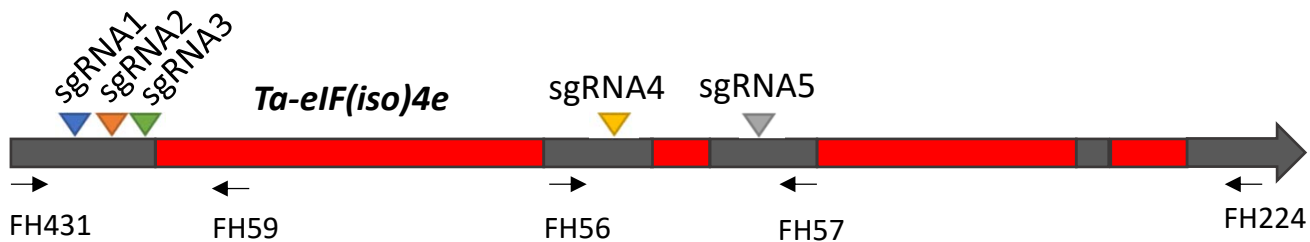
Protein alignment of the *tabak1-2* T0 plant 2 A1 allele to the WT.

TaBAK1-2_D(WT)	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_T0-2_D1	1	MAASPEMLRRRWAAAAVLSVVLAVSRVSANTEGDALYSRLRQSLKDANNVLQSWDPTLVN	60
TaBAK1-2_D(WT)	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLELGNL	120
TaBAK1-2_T0-2_D1	61	PCTWFHVTCNTDNSVIRVDLGNAQLSGALVSQLGQLKNLQYLELYSNNISGTIPLSG-T*	119
TaBAK1-2_D(WT)	121	TNLVSLDLYLNKFTGGIPDTLGQLLKLRLFLRLNNSLSGQIPQSLTNISTLQVLDLSNNN	180
TaBAK1-2_T0-2_D1	120	QTWSVWICT*TNLAVFQTHWGN*SCDSSVLT*TTVFLVKFHN*PILAPSKFWIYQTTI	179
TaBAK1-2_D(WT)	181	LSGAVPSTGSFSLFTPISFGNPNLCPGPTTKPCPGAPPFSPPPFPNPPTPPAAQGDPKT	240
TaBAK1-2_T0-2_D1	180	SLERFQHQLARFHSPL*VLVIIQIFVARVLRNHVLGHLFLHLHHSILQHHPRHKVTLKP	239
TaBAK1-2_D(WT)	241	GAIAGGVAAGAALIFAVPAIGFALWRRRKPEEHFFDVPAAEDPEVHLGQLKRFSLRELQV	300
TaBAK1-2_T0-2_D1	240	EQLLEVLLRVLH*YLLFLQLDLHCGGDVNLKSI*SLMSLLRRIQKCTLAS*RGSH*GSFKL	299
TaBAK1-2_D(WT)	301	ASDNFSNKNILGRGGFGKVYKGR*LTGTLVAVKRLKEERTPGGELQFQTEVEMISMAVHR	360
TaBAK1-2_T0-2_D1	300	LAITSAIRTF*EEVALERCTRGD*RMVHW*QLKD*KKNVLLVANSNSKQSK*LVWQCIG	359
TaBAK1-2_D(WT)	361	NLLRLRGFCMTPTERLLVYPYMANGSVASRLRERGPNEPALEWEKRTRIALGSARGLSYL	420
TaBAK1-2_T0-2_D1	360	TCFDSVDSA*HLQNGY*SIHTWLTVALHHVCESEGQMSRLLNGKKELGLHWDLPEDCLTC	419
TaBAK1-2_D(WT)	421	HDHCDPKIIHRDVKAANILLDEDFEAVVGDFGLAKLMDYKDTHVTTAVRGTTIGHIAPEYL	480
TaBAK1-2_T0-2_D1	420	MITVIPRSFIVMSKPQTF*SWMKTLRRLWVTL*DWPSLWTT*RTL*PQPSVERS*GILLPSTY	479
TaBAK1-2_D(WT)	481	STGKSSEKTDVFGYGIMLLELITGQRAFDLARLANDDDVMLLDWVKGLLKEKKVEMLVDP	540
TaBAK1-2_T0-2_D1	480	PPESP*PRRMFSVTASCFW*SLSLGRGHSTSHVLQTTTMS*CLTG*KGC*KRRRWRCW*WTR	539
TaBAK1-2_D(WT)	541	DLQSVYVEHEVEALIQVALLCTQGSPMDRPMSEVVRMLEGDGLAERWEEWQKVEVVRQE	600
TaBAK1-2_T0-2_D1	540	TCRACTWSTRWRR*SRWRCCARRGRRWTGPRCRRW*GCWRATG*WRSAGRSGR*RWWSGRR	599
TaBAK1-2_D(WT)	601	AELAPRNNDWIVDSTYNLRAVELSGPR	627
TaBAK1-2_T0-2_D1	600	RSWPRETTTGSSTPPTTSGRWSSPARG	626

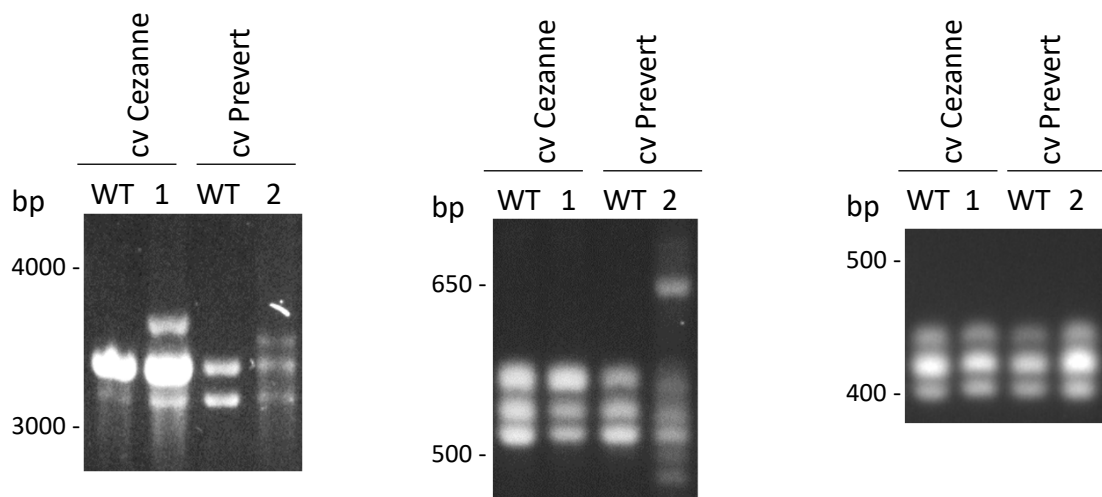
Figure S15

Protein alignment of the *tabak1-2* T0 plant 2 D1 allele to the WT.

A



B



PCR primers: FH431/
FH224

FH431/
FH59

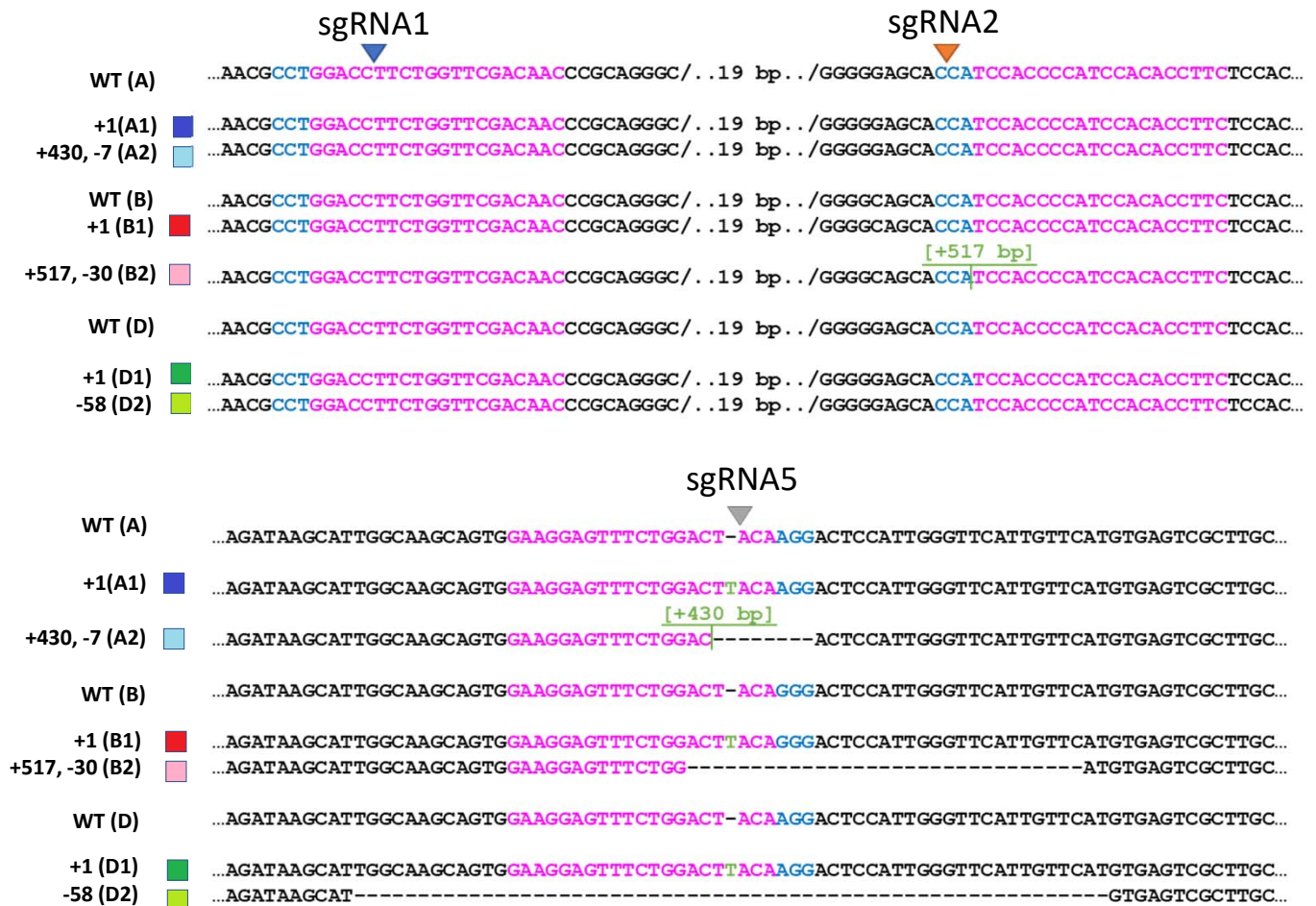
FH56/
FH57

Figure S17

PCR genotyping of the *ta-elf(iso)4e* T0 plants 1 and 2 (cvs Cezanne and Prevert, respectively). (A) A cartoon showing positions of sgRNA target sites and PCR primer binding sites within the *Ta-elf(iso)4e* gene. Exons are shown in grey, while introns – in red. (B) Results of PCR genotyping with three primer sets.

ta-eif4e

T0 Plant 1 (cv Cezanne)



T0 Plant 2 (cv Goncourt)

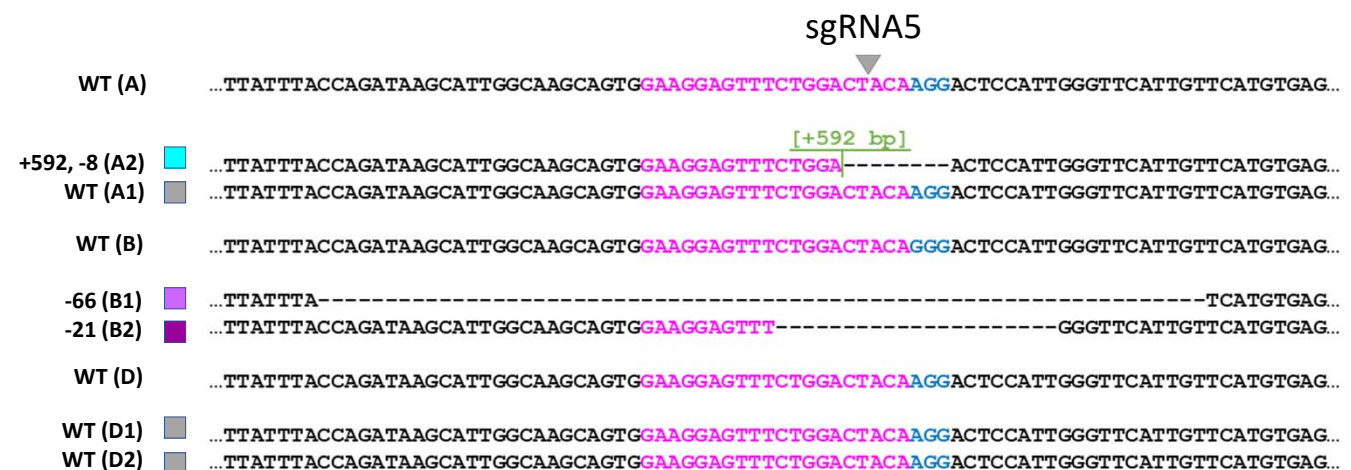


Figure S18

Alignments showing CRISPR/Cas-induced indels in *Ta-eif4e* homoeologues in two *ta-eif4e* T0 plants (cvs Cezanne and Goncourt).

A

Ta-eIF4e_A(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_A1	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_A(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-1_A1	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_A(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	
Ta-eIF4e_T0-1_A1	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
Ta-eIF4e_A(WT)	181	GKQWKEFLDYKDSIGFIVHEDAKRSDKGPKNRYTV*	216
		GKQWKEFLD + K + P+	
Ta-eIF4e_T0-1_A1	181	GKQWKEFLDLQGLHWVHCS*GCKEV*QRPQEPLHRL	216

B

Ta-eIF4e_A(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_A2	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_A(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-1_A2	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_A(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQ +	
Ta-eIF4e_T0-1_A2	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQTPL	180
Ta-eIF4e_A(WT)	181	GKQWKEFLDYKDSIGFIVHEDAKRSDKGPKNRYTV*	216
		G + ++ +	
Ta-eIF4e_T0-1_A2	181	GSLFMRMQRLTKAPRTATPFE*ALASSGRSFW---	213

Figure S19

Protein alignments of the *ta-eif4e* T0 plant 1 A1 (A) and A2 (B) alleles to the WT.

A

Ta-eIF4e_B(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_B1	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_B(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLVGADFHCFCNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLVGADFHCFCNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-1_B1	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLVGADFHCFCNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_B(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVSVRQKQERVAIWTKNAANEAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVSVRQKQERVAIWTKNAANEAQISI	
Ta-eIF4e_T0-1_B1	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVSVRQKQERVAIWTKNAANEAQISI	180
Ta-eIF4e_B(WT)	181	GKQWKEFLDYRDSIGFIVHEDAKRSDKGPKNRYTV* 216	
		GKQWKEFLD + K + P+	
Ta-eIF4e_T0-1_B1	181	GKQWKEFLDLQGLHWVHCS*GCKEV*QRPQEPLHRL 216	

B

Ta-eIF4e_B(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_B2	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_B(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLVGADFHCFCNKIEPKWEDPICANGGKWT	120
		AWGSTI S L + A F +E +	
Ta-eIF4e_T0-1_B2	61	AWGSTIQW*TGQSGPCRLASLASCPTAQYRTRKAAP*SAAYLEVTVVHDDEYFTVYN	120
Ta-eIF4e_B(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVSVRQKQERVAIWTKNAANEAQISI	180
		++ D + V + +++ +A	
Ta-eIF4e_T0-1_B2	121	ELTKVKYVTEGMRKPAFLSGEQKKAIVDLLFKTNRKVTDETKKIMKSIPSAERLEPSQDS	180
Ta-eIF4e_B(WT)	181	GKQWKEFLDYRDSIGFIVHEDAKRSDKGPKNRYTV*----- 216	
		K+ L R + + H S	
Ta-eIF4e_T0-1_B2	181	PKRNTGKLAIRTCITYRSHPCNTASSTDLTQTRI*HKHEQK*NYRALIMDRNADLEKVEP	240
Ta-eIF4e_B(WT)		-----	
Ta-eIF4e_T0-1_B2	241	HPHLLHRRGLLGHLHRRGLLGPLQQYP*P*QVECGSRLPLLQE*D*A*MGRPHLCQWR*	300
Ta-eIF4e_B(WT)		-----	
Ta-eIF4e_T0-1_B2	301	MDHQLWQREI*HILVAYFAGNDW*TIRLW*RNLWSSR*RASETGKSSYLD*ECCQ*SCSD	360
Ta-eIF4e_B(WT)		-----	
Ta-eIF4e_T0-1_B2	361	KHWQAVEGVSG*GCKEV*QRPQEPLHRL	388

Figure S20

Protein alignments of the *ta-eif4e* T0 plant 1 B1 (A) and B2 (B) alleles to the WT.

A

Ta-eIF4e_D(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_D1	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_D(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-1_D1	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_D(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	
Ta-eIF4e_T0-1_D1	121	ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
Ta-eIF4e_D(WT)	181	GKQWKEFLDYKDSIGFIVHEDAKRSDKGPKNRYTV* 216	
		GKQWKEFLD + K + P+	
Ta-eIF4e_T0-1_D1	181	GKQWKEFLDLQGLHWVHCS*GCKEV*QRPQEPLHRL 216	

B

Ta-eIF4e_D(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-1_D2	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_D(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-1_D2	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_D(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQIS+	
Ta-eIF4e_T0-1_D2	121	ISCGRGKSDTFWLHTLLAMIGEQFDFGDEICGAVVSVRQKQERVAIWTKNAANEAQAQISM	180
Ta-eIF4e_D(WT)	181	GKQWKEFLDYKDSIGFIVHEDAKRSDKGPKNRYTV* 216	
		Q + + F	
Ta-eIF4e_T0-1_D2	181	RMQRGLTKAPRTATPF----- 196	

Figure S21

Protein alignments of the *ta-eif4e* T0 plant 1 D1 (A) and D2 (B) alleles to the WT.

Ta-eIF4e_A(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_T0-2_A2	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRITAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_A(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADDFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_T0-2_A2	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADDFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_A(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAAQISI	180
Ta-eIF4e_T0-2_A2	121	ISCGRGKSDTFWLHTLLAMIGEQDFGDEICGAVVSVRQKQERVAIWTKNAANEAAQISI	180
Ta-eIF4e_A(WT)	181	GKQWKEFLDYKDSIGFIVHEDAKRSDKGPKNRYTV*-----	216
Ta-eIF4e_T0-2_A2	181	GKQWKEFL+ + + S + ++ *	240
Ta-eIF4e_A(WT)		-----	
Ta-eIF4e_T0-2_A2	241	LNPKP*TLKP*QP*TLNPKP*TLNLKP*TLNPNPNPKP*TLNPKP*TLNPNPKP*TLNPK	300
Ta-eIF4e_A(WT)		-----	
Ta-eIF4e_T0-2_A2	301	P*TQP*TLNPKP*TLNPKP*TLTLNPKPQTLNPNPMAAQ*HSCRYLRASHDRH*SGYLAD	360
Ta-eIF4e_A(WT)		-----	
Ta-eIF4e_T0-2_A2	361	KSKRT*RCLGRSSGGGT*SGS*TGSTPLGSLFMRMRGLTKAPRTATPF	410

Figure S22

Protein alignment of the *ta-eif4e* T0 plant 2 A2 allele to the WT.

A

Ta-eIF4e_B(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-2_B1	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_B(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-2_B1	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_B(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQ	
Ta-eIF4e_T0-2_B1	121	ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQS*G	180
Ta-eIF4e_B(WT)	181	GKQWKEFLDYRDSIGFIVHEDAKRSDKGPKNRYTV*	216
		K+ +	
Ta-eIF4e_T0-2_B1	181	CKEV*QRPQEPLHRL-----	195

B

Ta-eIF4e_B(WT)	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
		MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	
Ta-eIF4e_T0-2_B2	1	MAEDTETRPASAGAEEREERGEIADDGDGSSAAAAGRISAHPLENAWTFWFDNPQGKSRQV	60
Ta-eIF4e_B(WT)	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
		AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	
Ta-eIF4e_T0-2_B2	61	AWGSTIHPIHTFSTVEDFWGLYNNIHNPSKLNVGADFHCFKNKIEPKWEDPICANGGKWT	120
Ta-eIF4e_B(WT)	121	ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQISI	180
		ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQISI	
Ta-eIF4e_T0-2_B2	121	ISCGRGKSDTFWLHTLLAMIGEQDFDGEICGAVSVRQKQERVAIWTKNAANEAAQISI	180
Ta-eIF4e_B(WT)	181	GKQWKEFLDYRDSIGFIVHEDAKRSDKGPKNRYTV*	216
		GKQWKEF FIVHEDAKRSDKGPKNRYTV	
Ta-eIF4e_T0-2_B2	181	GKQWKEFG-----FIVHEDAKRSDKGPKNRYTV-	208

Figure S23

Protein alignments of the *ta-eif4e* T0 plant 2 B1 (A) and B2 (B) alleles to the WT.

ta-eif(iso)4e

T0 Plant 1 (cv Cezanne)

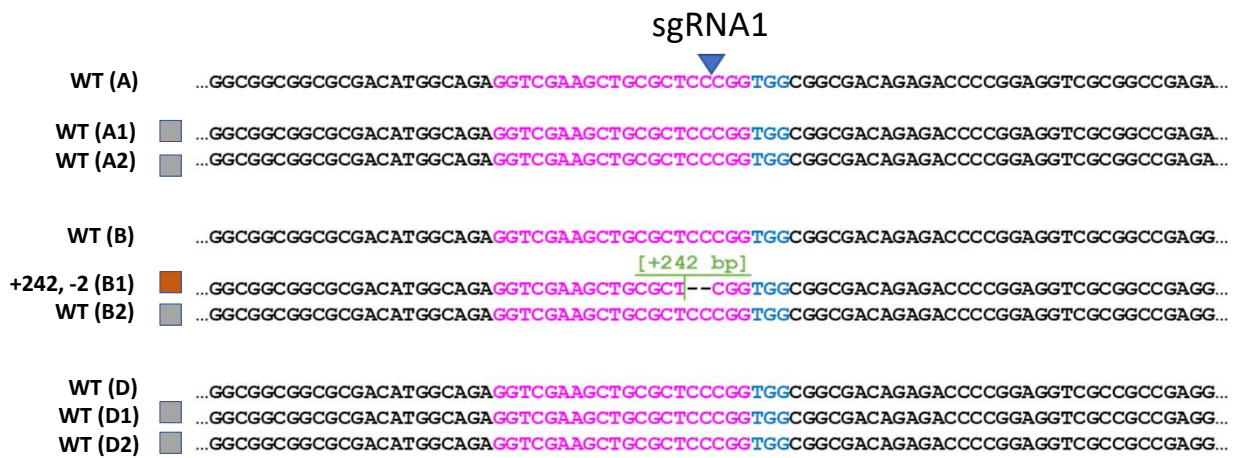


Figure S24

Alignment showing CRISPR/Cas-induced indels in *Ta-eIF(iso)4e* homoeologues in the *ta-eif(iso)4e* T0 plant 1 (cv Cezanne).

ta-elf(iso)4e

T0 Plant 2 (cv Prevert)

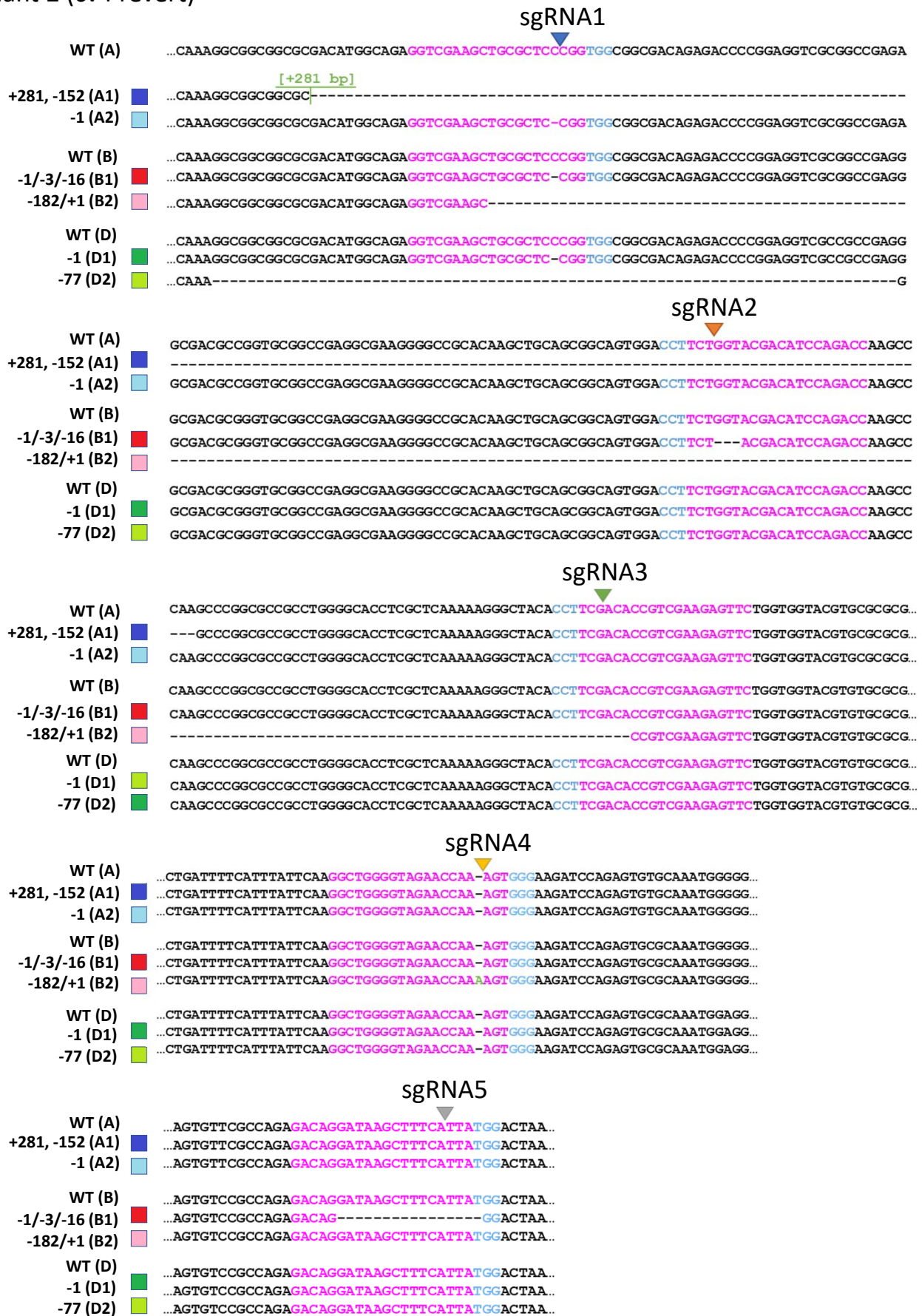


Figure S25

Alignment showing CRISPR/Cas-induced indels in *Ta-elf(iso)4e* homoeologues in the *ta-elf(iso)4e* T0 plant 2 (cv Prevert).

Ta-eIF(iso)4e_B(WT)	1	MAEVEAAL-----P-----	9
		MAEVEAAL P	
Ta-eIF(iso)4e_T0-1_B1	1	MAEVEAALSPVPVTSSSLLSRRADETLPQHSAGS*VRGTSLS*TCADHGGAVLFFLFH*	60
Ta-eIF(iso)4e_B(WT)	10	-----VAATETPEVAAEGDAGAAEAKGPHKLQRQWT	40
		VAATETPEVAAEGDAGAAEAKGPHKLQRQWT	
Ta-eIF(iso)4e_T0-1_B1	61	IWEHIV*ISEQF*KFHDLF*NQDFF*KNSVAATETPEVAAEGDAGAAEAKGPHKLQRQWT	120
Ta-eIF(iso)4e_B(WT)	41	FWYDIQTKPKPGAAGWTSKKGYTFDTVEEFWCLYDQIFRPSKLVGSADFHLFKAGVEPK	100
		FWYDIQTKPKPGAAGWTSKKGYTFDTVEEFWCLYDQIFRPSKLVGSADFHLFKAGVEPK	
Ta-eIF(iso)4e_T0-1_B1	121	FWYDIQTKPKPGAAGWTSKKGYTFDTVEEFWCLYDQIFRPSKLVGSADFHLFKAGVEPK	180
Ta-eIF(iso)4e_B(WT)	101	WEDPECANGGKWTVISSRKANLDTMWLETMCALIGEQQFDESQEICGVVASVRQRQDKLSL	160
		WEDPECANGGKWTVISSRKANLDTMWLETMCALIGEQQFDESQEICGVVASVRQRQDKLSL	
Ta-eIF(iso)4e_T0-1_B1	181	WEDPECANGGKWTVISSRKANLDTMWLETMCALIGEQQFDESQEICGVVASVRQRQDKLSL	240
Ta-eIF(iso)4e_B(WT)	161	WTKTASNEAVQVDIGKKWKEVIDYNDKMVYSFHDDSRSQKPSRGGRYTV*	210
		WTKTASNEAVQVDIGKKWKEVIDYNDKMVYSFHDDSRSQKPSRGGRYTV*	
Ta-eIF(iso)4e_T0-1_B1	241	WTKTASNEAVQVDIGKKWKEVIDYNDKMVYSFHDDSRSQKPSRGGRYTV*	290

Figure S26

Protein alignment of the *ta-eif(iso)4e* T0 plant 1 B1 allele to the WT.

A

Ta-eIF(iso)4e_A(WT)	1	-----MAEVEAALPVAATETPEVAAESDAGAAEAKGPHKLQRQWTFWYDIQTKPKPG	52
		+ + S A Q	
Ta-eIF(iso)4e_T0-2_A1	1	MALMMSFLRKSI CRFSSSGKRR* TDRGTPSRMLATSPAIRDSTNVQNAVSTTSAESFAFF	60
Ta-eIF(iso)4e_A(WT)	53	AAWGTSLKKGYTFDTVEEFWCFFGSLYDQIFRPSKLVGSADFLFKAGVEPKWEDPECAN	112
		++W ++ ++ + + F +	
Ta-eIF(iso)4e_T0-2_A1	61	SSWASARRRLGHLAQKGLHLRHRRRVLVV* SDFPSE*AGRKC*FSFIQGWGRTKVGRSR	120
Ta-eIF(iso)4e_A(WT)	113	GGKWTVISSRKANLDTMWLET CMALIGE QFDESQEICGVVASVRQRQDKLSLWTKTASNE	172
		KW + + G + + G + R + +	
Ta-eIF(iso)4e_T0-2_A1	121	VCKWGMDCDI*QEGQS*YHVA*NVYGSDWRAVR*EPGNLWCCR*CSPETG*AFIMD*DC	180
Ta-eIF(iso)4e_A(WT)	173	AVQVDIGKKWKEVIDYNDKMVYSFHDDSR SQKPSRGGRYTV*--- 214	
		G W+E+ R + S +	
Ta-eIF(iso)4e_T0-2_A1	181	Q**SCSGGHWQEMEGGY*LQ**DGLQLPR*LEKSETKQRWTIHRV	225

B

Ta-eIF(iso)4e_A(WT)	1	MAEVEAALPVAATETPEVAAESDAGAAEAKGPHKLQRQWTFWYDIQTKPKPGA	60
		MAEVEAAL + +G + P P K	
Ta-eIF(iso)4e_T0-2_A2	1	MAEVEAALRWRQRPRRSRPRATPVRPRRRGR TSCSGSGPSGTTSRPSPSPAPPAPRSK	60
Ta-eIF(iso)4e_A(WT)	61	KGYTFDTVEEFWCFFGSLYDQIFRPSKLVGSADFLFKAGVEPKWEDPECANGGKWTVIS	120
		+ + + ++ L+ F + G + G	
Ta-eIF(iso)4e_T0-2_A2	61	RATPSTPSKSSGACMIRFSVRVSW*EVLI---FIYSRLG*NQSGKIQSVQMGANGL*YL	116
Ta-eIF(iso)4e_A(WT)	121	SRKANLDTMWLET CMALIGE QFDESQEICGVVASVRQRQDKLSLWTKTASNEAVQVDIGK	180
		+ + L L+ + +++ + + + + + + +	
Ta-eIF(iso)4e_T0-2_A2	117	AGRPILIPCGLKRVWL*LESSMRARKFVVL SLVFARDRISFHYGLRLPVMKLFRTTLAR	176
Ta-eIF(iso)4e_A(WT)	181	KWKEVIDYNDKMVYSFHDDSR SQKPSRGGRYTV* 214	
		+ ++ + + + +	
Ta-eIF(iso)4e_T0-2_A2	177	NGRRLLTMTIRWSTASTMTREVRNQA EVDDTPC- 209	

Figure S27

Protein alignments of the *ta-eif(iso)4e* T0 plant 2 A1 (A) and A2 (B) alleles to the WT.

A

Ta-eIF(iso)4e_B(WT)	1	MAEVEAALPVAATETPEVAAEGDAGAAEAKGPHKLQRQWTFWYDIQTKPKPGAAGTSLK	60
		MAEVEAAL +G + S +	
Ta-eIF(iso)4e_T0-2_B1	1	MAEVEAALRWRRQRPRRSRPRATRVPRRRGRGTSCSGSGPSTTSRPSPPAPPAPRPSKR	60
Ta-eIF(iso)4e_B(WT)	61	KGYTFDFTVEEFWCLYDQIFRPSK-LVGSADFHLFKAGVEPKWEDPECANGGKWTVISSRK	119
		+ + C+ R S V + K + + G ++ R	
Ta-eIF(iso)4e_T0-2_B1	61	ATPSTPSKSSGACMIRFSVRVSW*EVLIFIYSRLG*NQSGKIQSAQMGANGL*-YLAGRP	119
Ta-eIF(iso)4e_B(WT)	120	ANLDTMWLETTCMALIGEQQFDESQEICGVVASVRQRQDKLSLWTKTASNEAVQVDIGKKWK	179
		+ + L + + ++ S R R ++ S G+ W+	
Ta-eIF(iso)4e_T0-2_B1	120	ILIPCGLKRVWL*LESSLMKARKFVVLLLVSARDRD*--DCQ*RSCT-----GRHWQ	169
Ta-eIF(iso)4e_B(WT)	180	EVIDYN-DKMVYSFHDDRSQKPSRGGRYTV*--	210
		E+ + + +K R+T+	
Ta-eIF(iso)4e_T0-2_B1	170	EMEGGD*LQ**DGLQLPR*LKKSETKQRWTIHGV	203

B

Ta-eIF(iso)4e_B(WT)	1	MAEVEAALPVAATETPEVAAEGDAGAAEAKGPHKLQRQWTFWYDIQTKPKPGAAGTSLK	60
		MAEVEA V + +E A K + W + + A G	
Ta-eIF(iso)4e_T0-2_B2	1	MAEVEARRRVLVLV*SDFPSE*----AGRKC*FSFIQGWGRKSGKIQSAQMGANGL*YL	56
Ta-eIF(iso)4e_B(WT)	61	KGYTFDFTVEEFWCLYDQIFRPSKLVGSADFHLFKAGVEPKWEDPECANGGKWTVISSRKA	120
		G RP L G++ W E + ++ +R	
Ta-eIF(iso)4e_T0-2_B2	57	AG-----RP-----ILIPCGLKRVWL*LESS-----LMKAR--	82
Ta-eIF(iso)4e_B(WT)	121	NLDTMWLETTCMALIGEQQFDESQEICGVVASVRQRQDKLSLWTKTASNEAVQVDIGKKWKE	180
		+ L + I + R + L+ T + +	
Ta-eIF(iso)4e_T0-2_B2	83	KFVVLLLVLSARDRISFHYG-----LRLPVMKLF*TLARNGRR*-----LTT	124
Ta-eIF(iso)4e_B(WT)	181	VIDYNDKMVYSFHDDRSQKPSRGGRYTV*	210
		+I ++ + + R+Q R	
Ta-eIF(iso)4e_T0-2_B2	125	MIRWS--TASTMTQEVNRQAQVDDTRC---	149

Figure S28

Protein alignments of the *ta-eif(iso)4e* T0 plant 2 B1 (A) and B2 (B) alleles to the WT.

A

```

Ta-eIF(iso)4e_D(WT)      1 MAEVEAALPVAATETPEVAAEGDAGAAEAKGPHKLQRQWTFWYDIQTKPKPGAAWGTSLK  60
                           MAEVEAAL                               +G                               + P P                               K
Ta-eIF(iso)4e_T0-2_D1    1 MAEVEAALRWRRQRPRRSPPRATRVRPRRRGRTSCSGSGPSGTTSRPSPSPAPPGAPRSK  60

Ta-eIF(iso)4e_D(WT)      61 KGYTFDFTVEEFWCLYDQIFRPSKLVGSADFHLFKAG--VEPKWEDPECANGGKWTVISSR 118
                           +       +       +       F   + G       K + +       G   ++ R
Ta-eIF(iso)4e_T0-2_D1    61 RATPSTPSKSSGACMIRFSVRVSW*EVLIFIYSRLG*NQSGKIQSAQMEANGL*-YLAGR 119

Ta-eIF(iso)4e_D(WT)      119 KTNLDTMWLETMCALIGEQFDESQEICGVVASVRQRQDKLSLWTKTASNEAVQVDIGKKW 178
                           +       + L       + + ++ S R R       +       + + + +
Ta-eIF(iso)4e_T0-2_D1    120 PILIPCGLKRVWL*LESSSMKARKFVVLVLLVSARDRIS-FHYGLRLPVMKLFRTWLARNG 178

Ta-eIF(iso)4e_D(WT)      179 KEVIDYNDKMYVSFHDSDRSQKPSRGGRYTV* 210
                           + ++       +       +       + +
Ta-eIF(iso)4e_T0-2_D1    179 RRLLTMMIRWSTASTMTQEVNRQAEDDTPS- 209

```

B

```

Ta-eIF(iso)4e_D(WT)      1 MAEVEAALPVAATETPEVAAEGDAGAAEAKGPHKLQRQWTFWYDIQTKPKPGAAWGTSLK  60
                           V   +                               F Y       + G       ++
Ta-eIF(iso)4e_T0-2_D2    1 ----MIRFSVRVSW*-----EVLIFIYSRLG*NQSGKIQSAQME  35

Ta-eIF(iso)4e_D(WT)      61 KGYTFDFTVEEFWCLYDQIFRPSKLVGSADFHLFKAGVEPKWEDPECANGGKWTVISSRKT 120
                           L G       L   G++ W   E +       S +
Ta-eIF(iso)4e_T0-2_D2    36 ANGL*-----YLAGRP--ILIPCGLKRVWL*LESS-----SMKAR  68

Ta-eIF(iso)4e_D(WT)      121 NLDTMWLETMCALIGEQFDESQEICGVVASVRQRQDKLSLWTKTASNEAVQVDIGKKWKE 180
                           + L +       I   +       +R   KL  WT  +   +   + +W
Ta-eIF(iso)4e_T0-2_D2    69 KRVVLLVLSARDRISFHYG-----LRLPVMKLFRTWLARNGRRLTMM-IRWST 116

Ta-eIF(iso)4e_D(WT)      181 VIDYNDKMYVSFHDSDRSQKPSRGGRYTV* 210
                           ++       D
Ta-eIF(iso)4e_T0-2_D2    117 ASTMTQEVNRQAEDDTPS----- 135

```

Figure S29

Protein alignments of the *ta-eif(iso)4e* T0 plant 2 D1 (A) and D2 (B) alleles to the WT.