

Supplementary Date

Supplementary Figures

-1228 ATTTTAAATCTTTTATTATGGATTAGATTTTTAAATTAGTTATTC
ERF

-1178 AATAGATTTTATATTAGACCTTAGAAATCTCTCTATTTTCAGATAA

-1128 GTTTTGAGCCTTTTAACATATAAGTTTTTAAATATTATGTAAATTTGGG

-1078 AATATTTTATTTCATCTAATGAATATTATTATCTTAAATAAAAAAAT

-1028 TGTTGACATGAAATAATTATTGCACTATATATTTTCCATTTTCCTGCG
O²-site

-978 AATTTGTAACAAAGGAAAAGGAAAAAAGATCCTACTAATGAGCTAATATT
GATA-motif

-928 TAGTACCATGTAGTGAAAAGATTTTAAATTATAATATAATAAACATAA
ERF

-878 TGGCATTAAATTATATGAAAATTGTAAATTATAATGTATGATTTTAAA
ERF

-828 AAAGAATTCAAATAACTTTCATATATGATTAAACAATTTTAAATTTAA

-778 AAAAATAAATTAATTACTGTAATCATTATTGGCATTGTCATCATCATCA
Box 4

-728 TTATTATTGCTATAAATAAATATTATAATAAAAACTATTATCCCTTAACA

-678 TCACTTAACATTTCTTTTTACAACCTCACTTCATTTAGAATGAGTTATTTT

-628 GAAAAGAAATAATTTTATAAAATTTTATTTTTTTAAATAAAATAAAA
ERF

-578 TATTCTTTTATTTCAACTAATAAAAAATAATTAAATTAAATTAAATAAA
AT1-motif

-528 TATCAGCCAATGTTTCAAATTGGAGTTAAATATATGAAAAATCGATTGGTTT
ARE

-478 TTCCCCACAAGAGTTGGTGAAAAGATTACTTTACCTATTATTTTATAG

-428 TAGACTCCAACAGCAAGAGCGCCAACGTGGCAAATATTTATTGACGTATCA
G-Box/ABRE TGACG-motif

-378 CTTCCAACGAATCTAAGCCTATCATCAGATCACAGATGGATAATAGCCTT
ATCT-motif

-328 AAAAACATTAAATACCGAATTATTTATTCTTAAAAAAAATTTTAAAATT
ERF

-278 ACAAAAAAAAAATTACATGCCGCTTATCTTTGTACAAGATCTTATCTTTG
GATA-motif

-228 TACAAGATCACACAATGGACGGCACAAAAAGCTACCGCAATGTTCACTGG

-178 AACGTAGCAATCAACGGTCAGTATGCTGCGCATTTGTAAACATTGTAGGC
CCAAT-box

-128 TGCATCGTAGAAGATTACAATCATTATTATTAATAGTTATGGCTGATATT
Box 4

-78 CTTGCTACTCCAGTGCATTCTTGTTGTAGTGAGAACTGAGAACAATTT

-28 TCGATTCTGAGTTGGTAACCGTCAGCCATGGAAGTGGGTTTGCAGGT
CGTCA-motif

Figure S1. Physical map of *MeSSIII-1* promoter. The “A” of translation initiation code “ATG” of *MeSSIII-1* was designated as “+1”. The TATA-box is highlighted in bold. Putative *cis*-acting elements are underlined, colored and labeled. The *cis*-acting elements sites on the positive strand and the negative strand are shown in red and blue, respectively.

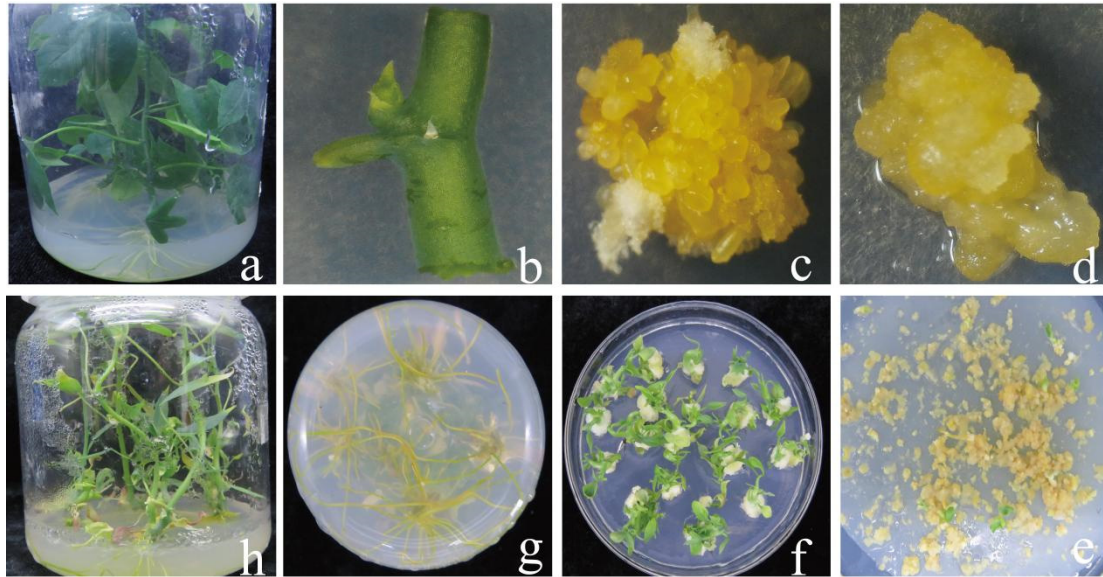


Figure S2. *Agrobacterium*-mediated genetic transformation of cassava SC8 FECs
a Aseptic culture seedling. b Axillary bud. c Somatic embryo. d Fragile embryonic calli. e Induction of resistant cotyledons. f Induction of regeneration shoots. g Rooting Screening. h Regeneration of resistant plants.

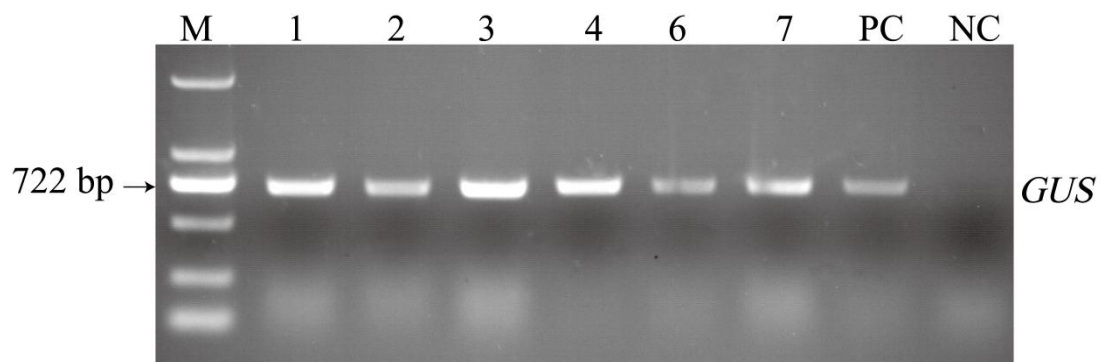


Figure S3. PCR identification of the proMeSSIII-1 transgenic plants by *GUS*.
M: 2000 DNA marker. 1-7: transgenic plants. PC: positive control. NC: negative control.

Supplementary Tables

Table S1 Primers used in this study

Table S1 Primers used in this study		
Primer name	Primer sequencess (5'→3')	Purpose
qMeSSIII-1-F	TGGGTTTGCAGGTACACAGA	For qPCR
qMeSSIII-1-R	GGAAAGACCCAGAGAGACGA	For qPCR
qTUB-F	ATGCGGTTCTTGATGTTGTTC	For qPCR
qTUB-R	TCGGTGAAGGGAATACAGAGA	For qPCR
MeSSIII-1-F	TGAGTTGGTAACCGTCAGCC	For <i>MeSSIII-1</i> gene amplification
MeSSIII-1-R	ACAAATATGGTGTGCGGGGT	For <i>MeSSIII-1</i> gene amplification
1300-MeSSIII-1-F	tgatacatatgcccgctgacATGGAAGTGGGTTTGCAGGTAC	For construction
1300-MeSSIII-1-R	tgggtaggatccggtaccTGAGAACCATGACCTGTGGG	For construction
1300-F	CGGGGGACTCTAGATACATCA	For vector detection
1300-R	CTTGTGGCCGTTTACGTCG	For vector detection
proMeSSIII-1-F	CTCTTCTATTCTGCCTGA	For promoter amplification
proMeSSIII-1-R	TGAGGGAAAGACCCAGAG	For promoter amplification
SP0-F	GGATCCTCTAGAGTCGACATTTTTTAAATCTTTTAT TATGGA	For construction
SP1-F	GGATCCTCTAGAGTCGACTTTCCTGCGAATTTGTA ACAAAGG	For construction
SP2-F	GGATCCTCTAGAGTCGACGGCATTGTCATCATCAT CATTAT	For construction
SP3-F	GGATCCTCTAGAGTCGACATCGATGGTTTTTCCCC ACA	For construction
SP4-F	GGATCCTCTAGAGTCGACACATGCCGCTTATCTTT GTACA	For construction
SP-R	CTTACTAGTCAGATCTACCATGGCTGACGGTTAC CAACT	For construction
GUS-F	CCTCGCATTACCCTTACGCT	For identification
GUS-R	TTTCTTGTTACCGCCAACGC	For identification

Table S2 Main *cis*-acting elements in *MeSSIII-1* promoter

<i>Cis</i>-elements	Number	Function	Core Sequence
CAAT-box	22	common <i>cis</i> -acting element in promoter and enhancer regions	CAAT
TATA-box	48	core promoter element around -30 of transcription start	TATA
ABRE	1	<i>cis</i> -acting element involved in the abscisic acid responsiveness	ACGTG
ARE	1	<i>cis</i> -acting regulatory element essential for the anaerobic induction	AAACCA
AT1-motif	1	part of a light responsive module	AATTATTTTTT ATT
GATA-motif	2	part of a light responsive element	AAGATAAGAT T
ATCT-motif	1	part of a conserved DNA module involved in light responsiveness	GAATCTAAGC C
Box 4	2	part of a conserved DNA module involved in light responsiveness	ATTAAT
G-Box	1	<i>cis</i> -acting regulatory element involved in light responsiveness	CACGTT
ERE	6	ethylene-responsive element	ATTTTAAA
CGTCA-motif	2	<i>cis</i> -acting regulatory element involved in the MeJA-responsiveness	CGTCA
TGACG-motif	2	<i>cis</i> -acting regulatory element involved in the MeJA-responsiveness	TGACG
O ² -site	1	<i>cis</i> -acting regulatory element involved in zein metabolism regulation	GTTGACATGA