

Supplementary Table 1. List of oligonucleotide primers and probes used in this study

Target	Name	Nucleotide sequences (5'→3')*
SSIIb (Maize endogenous)	SSIIb3-5'	CCAATCCTTTGACATCTGCTCC
	SSIIb3-3'	GATCAGCTTTGGGTCCGGA
	SSIIb-Taq	FAM-AGCAAAGTCAGAGCGCTGCAATGCA-TAMRA
P35S	P35S 1-5'	ATTGATGTGATATCTCCACTGACGT
	P35S 1-3'	CCTCTCCAAATGAAATGAACTTCCT
	P35S-Taq	FAM-CCCCTATCCTTCGCAAGACCCTTCCT-TAMRA
GA21	GA21-3-5'	GAAGCCTCGGCAACGTCA
	GA21-3-3'	ATCCGGTTGGAAAGCGACTT
	GA21-Taq	FAM-AAGGATCCGGTGCATGGCCG-TAMRA
MIR162	MIR162-f1	GCGCGGTGTCATCTATGTTACTAG
	MIR162-r1	TGCCTTATCTGTTGCCTTCAGA
	MIR162-p1	FAM-TCTAGACAATTCAGTACATTA AAAACGTCCGCCA-TAMRA
MIR604	MIR604 primer F	GCGCACGCAATTCAACAG
	MIR604 primer R	GGTCATAACGTGACTCCCTTAATTCT
	MIR604 probe	FAM-AGGCGGGAAACGACAATCTGATCATG-TAMRA
Le1 (Soybean endogenous)	Le1n 02-5'	GCCCTCTACTCCACCCCA
	Le1n 02-3'	GCCCATCTGCAAGCCTTTTT
	Le1-Taq	FAM-AGCTTCGCCGCTTCCTTCAACTCAC-TAMRA
RRS	RRS 01-5'	CCTTTAGGATTCAGCATCAGTGG
	RRS 01-3'	GACTTGTCGCCGGAATG
	RRS-Taq	FAM-CGCAACCGCCCGCAAATCC-TAMRA
LLS	KVM175	GCAAAAAAGCGGTTAGCTCCT
	SMO001	ATTCAGGCTGCGCAACTGTT
	TM031	FAM-CGGTCCTCCGATCGCCCTCC-TAMRA
RRS2	MON89788-F	TCCCGCTCTAGCGTTCAAT
	MON89788-R	TCGAGCAGGACCTGCAGAA
	MON89788-P	FAM-CTGAAGGCGGGAAACGACAATCTG-TAMRA

*FAM, 6-carboxyfluorescein; TAMRA, 6-carboxytetramethylrhodamine

Supplementary Table 2. List of PCR conditions used in this study

PCR instruments	Target	PCR condition	
7900HT or 7500 Fast (Standard ramp speed)	MIR604	Pre-denaturation	50°C, 2 min
			95°C, 10 min
		Denaturation	95°C, 15 sec
		Annealing/Extension	60°C, 1 min
		Cycle	45 cycles
	Others	Pre-denaturation	50°C, 2 min
			95°C, 10 min
		Denaturation	95°C, 30 sec
		Annealing/Extension	59°C, 1 min
			Cycle
7500 Fast (Fast ramp speed)	MIR604	Pre-denaturation	95°C, 20 sec
		Denaturation	95°C, 6 sec
		Annealing/Extension	60°C, 30 sec
		Cycle	45 cycles
	Others	Pre-denaturation	95°C, 20 sec
		Denaturation	95°C, 6 sec
		Annealing/Extension	59°C, 30 sec
		Cycle	45 cycles

Supplementary Table 3. C_f values for the real-time PCR instruments described in the official detection methods for the authorized GM maize and soybean in Japan¹⁷⁾

Target	PCR instruments					
	7900HT	7500	LightCycler 480	LightCycler 96	QuantStudio 5	QuantStudio 12K Flex
P35S	0.38	0.46	0.41	0.41	0.43	0.40
GA21	1.99	2.13	2.19	2.17	1.55	1.61
MIR162	0.70	0.64	0.56	0.59	0.71	0.66
MIR604	0.44	0.44	0.44	0.43	0.44	0.44
RRS	1.04	1.02	0.96	0.90	0.97	1.00
LLS	0.98	0.98	1.07	1.11	1.08	1.10
RRS2	1.32	1.33	1.30	1.29	1.51	1.51