Supplementary Information

Supplemental Table 1. Expression of CsLOX genes in cucumber tissues.

Gene ID	cucumber accession number	Expression Data										predicted group
		MF	FF	O	2d	10d	C	TF	R	S	T	
CsLOX1	Csa006735	+	+	+	+	+	+	+	+	+	+	Type-1
CsLOX2	Csa006736	+	+	+	+	+	+	+	+	+	+	Type-1
CsLOX3	Csa022479	-	-	-	-	-	-	-	-	-	-	Type-1
CsLOX4	Csa022478	+	+	+	+	+	+	+	+	+	+	Type-1
CsLOX5	Csa013924	-	-	-	-	-	-	-	-	-	-	Type-1
CsLOX6	Csa006734	-	-	-	-	-	-	-	+	+	+	Type-1
CsLOX7	Csa010334	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX8	Csa006732	+	+	+	+	+	+	+	+	+	+	Type-1
CsLOX9	Csa007837	+	+	+	+	+	+	+	+	-	-	Type-1
CsLOX10	Csa006731	+	+	+	+	+	+	+	-	+	+	Type-1
CsLOX11	Csa019335	-	-	-	-	-	-	-	-	-	-	orphan
CsLOX12	Csa010340	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX13	Csa010337	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX14	Csa010338	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX15	Csa010339	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX16	Csa010336	+	+	+	+	+	+	+	+	+	+	Type-2
CsLOX17	Csa010335	+	+	+	+	+	+	+	+	+	+	Type-2
CsLOX18	Csa010343	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX19	Csa010344	+	+	+	+	+	+	+	+	+	+	Type-2
CsLOX20	Csa010342	+	+	+	+	+	+	+	-	+	+	Type-2
CsLOX21	Csa010341	-	-	-	-	-	-	-	-	-	-	Type-2
CsLOX22	Csa009893	+	+	+	+	+	+	+	-	+	+	Type-2
CsLOX23	Csa000832	+	+	+	+	+	+	+	+	+	+	Type-2

MF: male flower; FF: female flower; O: ovary; 2d: 2 days old fruit; 10: 10 days old fruit; C: cotyledon; TF: true leaf; R: root; S: stem; T: tendril

Supplemental Table 2. Expression of cucumber fruit LOX genes in response to ABA, Cold, wound, MeJA, ACC, NaCl and KCl treatments.

Gene ID	cucumber accession number	Expression of CsLOX in response to							predicted group
		ABA	Cold	wound	MeJA	ACC	NaCl	KCl	
CsLOX1	Csa006735	+	+	+	+	+	+	+	Type-1
CsLOX2	Csa006736	+	+	+	+	+	+	+	Type-1
CsLOX4	Csa022478	+	-	+	+	+	-	+	Type-1
CsLOX8	Csa006732	+	+	+	+	+	+	+	Type-1
CsLOX9	Csa007837	-	+	-	-	+	-	-	Type-1
CsLOX10	Csa006731	-	-	-	-	-	+	-	Type-1
CsLOX16	Csa010336	-	-	+	+	+	-	-	Type-2
CsLOX17	Csa010335	+	+	+	+	+	+	+	Type-2
CsLOX19	Csa010344	+	+	+	+	+	+	+	Type-2
CsLOX20	Csa010342	+	+	+	+	+	+	+	Type-2
CsLOX22	Csa009893	+	+	+	+	+	+	+	Type-2
CsLOX23	Csa000832	+	+	+	+	+	+	+	Type-2

Supplemental Table 3. Primers used in semi-quantitative RT-PCR and Quantitative Real-time PCR analysis of cucumber *LOX* genes.

Gene ID	Forward primers (5′ to 3′)	Reverse primers (5′ to 3′)
CsLOX1	AGGACTTCCTGTTCCATTGGA	TGGAGGAAATTCCTTAAGACGA
CsLOX2	TCCAATTCATAAGCTACTTGTTCCT	ACCTTTCTCTCTCTTGATGAGATCA
CsLOX3	TCCCGAAGTTGTCAAAGATAATAAA	TGTTGCATTCATCCTCATCAA
CsLOX4	TCCCATTGGTTGAATACACAT	GCTTGTTCAAGGAAATTCCA
CsLOX5	TTATCAGCCACTGGCTGAATAC	GAAGACCCAATTCTTGTAAGCA
CsLOX6	GCACTTGAAAGAATCAGATTTTCTT	CCAGACTTATTATCTTGGATGACTTG
CsLOX7	CATTTTCAATCAAAAGGAATGG	CAATTAACACTTCTAGGGTTTCCA
CsLOX8	TCCTGCTGACAAATACAAAACC	CTTTTTGGATCTTTTTTGGAAGG
CsLOX9	TCGTCTCCTAGAGTTCCCTCC	AATCATTCACGGCGACATAA
CsLOX10	TGGGAGAAGAAGCATACTTAGAGG	GGAAGATAGCTCTGGTTGAGAAAG
CsLOX11	TGGCATTGCACTCCCATC	TAAAGCCATGTGCACGAGG
CsLOX12	TTAAGTTCCGCTTTCAGCCTC	TCTTGATCAATCATTTCGGTGT
CsLOX13	GGTTTATCGACACCATTACTATTGA	CAAATGCATTACGCTTCTTTTTA
CsLOX14	TTATCCACTGGCTTAGAGCTCA	AATCGCCACTGATCTCTGTACA
CsLOX15	TCTTCCAACAAGTCTTATTTGTCG	GAAAATTAAGATACCATTTTGAGTAAG
CsLOX16	TATAGCGCAAAAGAAATTGTTCG	TGGGCTTTAGCAAGCCTC
CsLOX17	CAGACCTGCTGAAAAGAAAGATG	GTAGTGTGGCCATTTCATACCA
CsLOX18	TAGCAATGAGATGGATCCAAGAT	AGATGATATTGTGTTGGAATTCCA
CsLOX19	CTCATTGGCTGAGAACTCATTG	TGAATTAAGTCAGCAGGTAAAGCT
CsLOX20	TTGCTTCCAATAAGATGGGAC	TCCCGTTACAGGATCAACCT
CsLOX21	GTTTATTTTGGATTACCACGACCT	TCTCCAAAGCCAGAGGCTAG
CsLOX22	TCTCTAATAAGCCTTATCTTCCAGGT	TGCAGTCATATCAGTCTCGGA
CsLOX23	TAAATCATTGGTTAAGGACTCACG	CCATACCCCTTCGAATAAGATC
CsUBQ	GGTGCCAAGAAGCGTAAGAA	CACCAGCTTTGTTGTAAACGT
CsACT	TCCACGAGACTACCTACAACTC	GCTCATACGGTCAGCGAT