Fig. 1 Suppl. The description of 82 minisatellite markers designed to evaluate polymorphism in papaya, their location in the papaya genome (contigs and supercontigs - SC), and primer sequences and motifs.

Primer code	Localization	Primer 5' (forward)	Primer 3' (reverse)	Motif
CPMini-01	SC-51	caacggaagttgctgccta	caaggcgtgatcttgttga	tagggtt
CPMini-03	SC-153	tgtgtcattgtggcattgg	ggtgaggagtcggcttcat	$(agaaagag)_5$agaag $(agaaaaaa)_4$
CPMini-04	SC-30	gcagaaacagagccgaaat	agcagccttcatagctgaaa	aaacagaggtc
CPMini-05	SC-105	cagaaggtccatccaacacc	tccccacataggcaacaag	$(ttttaat)_3(aataaaat)_5$
CPMini-06	SC-2750	ctacttttttctgcggggaag	ctacttttttctgcggggaag	ctttcta
CPMini-07	SC-1847	gctcgcacgtcttcatcttt	catggaggaggatgcaatta	ttaagcc
CPMini-08	SC-232	gccatgaaatccaaaaagga	aagagaagagttcccgcaca	tcttgaa
CPMini-09	SC-957	ttgtgcgataccatttcca	gccattttggcaagtgaag	atcactt
CPMini-10	SC-225	ggcgggtttttgtgaaatta	gcccaaagccttgaatct	ttagggt
CPMini-11	SC-240	tgcatccaaagaaacatcca	ctcatccaacacttcgacatt	ataaaaaa
CPMini-12	SC-148	gcatgattggcatgtatgaa	ttccgccagaaaattagcc	attatta
CPMini-13	SC-127	ccaaagagtgcgtgattgg	ggccaagtgggagagattt	cctttcc
CPMini-14	SC-107	tttttaggaggcaaccctga	ccacaccatgcagctctgt	agcctgc
CPMini-15	SC-95	gatccgggaggcttatgaa	tgcacaaaagttgacccaaa	atgtcacttcatttaaaagttatcacttttcac
CPMini-16	SC-91	tgcaaaaattcagccctctc	ctgtttgttgccgcgtatt	gaaagaa
CPMini-17	SC-88	tggaattgggagaagctga	catggcaagtctccactctt	gatgaagaa
CPMini-18	SC-75	tttcaattcctgccatcca	gctctctttgcctgcctgt	tagtaaa
CPMini-19	SC-70	ttgcctagcctgaccaaga	ggggtgaaacaaacaatgg	atgagct
CPMini-20	SC-49	actgaaccggatggagatg	tgaaaatgagaaaggggaaa	ttgggctt
CPMini-21	SC-26	ccgacttccatctgcttca	gttccactcccttggtgct	tatgaaatgtcacgcatt
CPMini-22	SC-14	aaaggctatggcccaaaaa	gcaaaattgcatggaaatga	gatttg
CPMini-23	SC-108	tgccgttgtgtctctttcag	cctttccgggtgctacaata	atcatac
CPMini-24	Contig_40208	ggccatcaggttttccttt	ctggcctactttgcacacct	aggcccaagccc
CPMini-25	Contig_32224	cttcggattgttgtgggtta	tttggggctctgacgaatta	atgatta
CPMini-26	SC-240	tcaaaatcccctgggttgta	taaatcccccaagccctaaa	aaataaaata
CPMini-27	SC_1222	gatcagtggggatcgagaga	cgctgcgtcacttattgttg	tcttttt
CPMini-28	SC-211	tatgcccaaccctgtttctc	gaccgaaccacaatttctcc	ttttttc
CPMini-29	SC-141	tgcacacactcaatcacacg	gccttgttggcaagtgaag	tcacttt
CPMini-30	SC-116	cgggttacacgtcatccag	ggcggagatggctagtttt	aaataaa
CPMini-31	SC-113	ccggaggaagccctaaaa	gattctccgccttttcgtt	agggag
CPMini-32	SC-82	gcgtaagctcatccctcaa	ccccggtccacttgtaatc	agaaaga
CPMini-33	SC-80	cggttggatttttgtgatgc	tgccaaagaagatcatgcaa	tttttat
CPMini-34	SC-65	gattggtgccgggagatta	ggtttggcatggggttatt	taagcat
CPMini-35	SC-62	caagcaatcggaagaagca	cgcccgcactaaatgaact	aataatt
CPMini-36	SC-152	cagcattggtgcattaacct	agtggatgggtggttgtga	agaagg
CPMini-37	SC-34	catcgacgggagagacaga	tcaccatgcgtcatcataca	aagaaag
CPMini-38	SC-34	cagcccgttatgaacatcg	agcactccttttccccaaa	tgataaa

CPMini-39	SC-32	gggagggagagagaacgag	gcgtcccttgaaccttgag	gggagag
CPMini-40	SC-23	tccttcactcccctattcct	gaaaagagagaccgggagaa	cctattt
CPMini-41	SC-22	cgcagtcagggtaaaaact	ggcccttgtgtttgtttga	aaaaata
CPMini-42	SC-14	ccttgtgattcatgatttaggg	tgcataaaggcctcatttttc	gtttagggtttagagttaatg
CPMini-43	SC-14	ccaaccagggtcaaatgaa	tgtggagagagatggtggtg	ctctcaa
CPMini-44	SC-8	gcacatttttatggggagga	gtctctgacacgaacccaaa	aaataaa
CPMini-45	SC-7	ggaacctttccaccgagat	taacggcgtgtcgtgttg	ctccctc
CPMini-46	SC-7	cacatgtaaaacccgtgagg	ctaattcttgacggcaaatga	tttttat
CPMini-47	SC-5	tatgggttcccgaaatcgt	ccactacgatgatccccaga	ctcactc
CPMini-48	SC-2	ttcttcaggtagccagcaa	gggcagcagcaataaagaa	tcttctc
CPMini-49	SC-1913	aagctgaccaggcatccta	ggagtcacgagtatccatgc	aaaattaa
CPMini-51	SC-1686	ccatcatccacctactgacc	atgaaagtggtgtgcgttc	cacacacacacactctgatcattctctcccgtcaccagcatcggcgaccattaaccacctctcgacctataccaggc
CPMini-52	Contig_27935	agaatgagtgggggcaat	ggcgaccatctgtcacct	gtgtgtgtgagtggcctggtataggtcgtgagatggctaacggtcgccgatggtggtgacgggagagaatgatcaga
CPMini-53	SC-198	ccaaaaacgttacttgtgaaa	aggaccaccgcctaattc	atatac
CPMini-54	SC-152	gccgaattcaggtccatta	ggcctccaatgatccttta	cccattacagg
CPMini-55	SC-152	aacatatgcacatgctgacc	ggtcgttgggggttagag	tcactcagccacacacacaccaacactacaacaactc
CPMini-56	SC-77	ccgtgcgcaccaatagta	ggccattgtggacacatc	ttttttcttt
CPMini-57	SC-122	cagcgcaccaacatcata	ctgcgggaaagaaggaag	tttttttttc
CPMini-58	SC-77	catattggagtgattatgaca	tgaacatccccacttgat	ttttttttctttttttct
CPMini-59	SC-74	cgaggactgacttttctttc	ggcctgtgtcattgagttg	tatcatatcatttcatctaaaagttatcacttt
CPMini-60	SC-15	ttggggatcccttctacc	catttggcatactggaacg	ctctataatgatttgtacgatgcttcttctatttactaagtatgctgctcgtactagttgaat
CPMini-61	SC-0	atttggtcgccacacttc	acgggcaagagaaaggaa	ttttttcttcttct
CPMini-62	SC-42	gaatcatggtcgggtagaga	agtggcctttccctctca	aaaaagaagaagaagaaagaaaaa
CPMini-63	SC-117	cccattgggtgtttggt	agccttttgtgctgttgc	gtgagcttggtgggcgaggcgagcccattgg
CPMini-64	SC-0	cttcgtgcgaaggtcagt	caagcggtgtactcaataaa	ctctataatgattcgtactatgcttcttttatttactaagtatgctgcttgtactagttgaat
CPMini-65	SC-5	cacccagtatgtgtgctgac	ccaggggtcaaagaccat	tctctgtc
CPMini-66	SC-5	aatgtggcgcatcatttg	agagttgccggaaaggag	ctttctttttttt
CPMini-67	SC-163	tctcaggcccagatattaca	caatcgcgctataattgctt	aactgttagtataataatatatatata
CPMini-68	SC-5	ctcgacgagaaggggttt	gcccctcgacgtcctat	gtggcctattacgggtcgagggataggcggtttattggtggtcgctgatactggtgacaggtgagaatggaatctgtgtgtgtgt
CPMini-69	SC-10	tcccaacttttgtttcctga	ggccaaaaaccctattcg	gagagagggagaga
CPMini-70	SC-22	ggcttcgcacagaggtta	agagcgccattattcaaca	ctctatgatgatttgtatgatggttcttctgtttactgagtatgctgctcgtattagttgaat
CPMini-71	SC-22	cagcttcgtgtgaaggtca	ttggtatatggcaccctca	atgattcttctatttactaagtatgttgctcgtactagttgaatctctataatgatttgtacg
CPMini-72	SC-24	atgcatgccttccctttt	tctttggtcccacatctctc	gagagagaagcta
CPMini-73	SC-16	tttgtaaatgaatgatgacg	agccatttttgtttgcatt	atgtatttatatatttaattatatatat
CPMini-74	SC-24	acggtactgtatggtaagtgt	agccacttgatcttcttttg	aatatacagatatatgtatatatataattaaatatattatatatatgtatatataatt
CPMini-75	SC-50	ccaaacagccccttttaca	tgggagcctatggagaca	ctctctctcctctctctctatatatatatattatttatttcttacccaaacaaccctctatagactcccatttt
CPMini-76	SC-23	caaaaataaaattatgggtgt	agagaaaacgaggggaga	tctctctttctt
CPMini-77	SC-23	ccacccttcttaaaaattca	gtttggtaaaatagatttgga	tatataatataatata
CPMini-78	SC-127	gatgagggggcgtgtgt	cccataaatacaccggcagt	tgtggccaagggaaggcggtgtgtgtgtggcagggtactgccgataag
CPMini-79	SC-168	atgcgacgtaccagcaac	cggcgaaggagagagaaa	tcttttctctctttttcttc
CPMini-80	SC-110	acacaagactcatcaacatgg	caccgacattagggttcg	taataatatatatatataaactgttagtg
CPMini-81	SC-13	aatcataaaactacggaacca	ttgcgtaaaagtttcttacat	aataataattatatatatataaatattagtataataatatatatataaactgtt
CPMini-82	SC-47	gggttgccattactcgtg	tttgcacatgcatcccta	agagaaagagagag

CPMini-83	SC-2	tttaatttcttctgcccaaca	tgacaactgtttttatttgga	tatatatatatatatatatatttttaattatatatatgtata
CPMini-84	SC-38	cttgggggaagagagacg	accatccgtcacctatcg	gtgtgtgtgagtggcctggtataggtcgtgagatggctaacggtcgccgatggtggtgacgggagagaatgatcaga

Fig. 2 Suppl. The origin and description of papaya accessions used in characterization of minisatellite markers.

Acessions	Origin	Germplasm	Fruit type	Reproductive system
CMF008	Malaysia	improved	Formosa	gynodioecious
CMF011	Costa Rica	unimproved	Formosa	gynodioecious
CMF017	Taiwan	unimproved	Formosa	gynodioecious
CMF024	Costa Rica	cultivar	Formosa	gynodioecious
CMF038	Brazil	improved	common	gynodioecious
CMF054	Hawaii	unimproved	Solo	gynodioecious
CMF068	Brazil	improved	Formosa	gynodioecious
CMF082	South Africa	improved	Solo	gynodioecious
CMF102	Brazil	unimproved	common	gynodioecious
CMF108	South Africa	improved	common	gynodioecious
CMF115	South Africa	improved	common	gynodioecious
CMF123	Thailand	cultivar	Formosa	gynodioecious
CMF125	Hawaii	improved	common	gynodioecious
CMF128	Brazil	cultivar	Solo	gynodioecious
CMF129	Brazil	unimproved	Formosa	gynodioecious
CMF134	Brazil	unimproved	common	dioecious
CMF135	Brazil	unimproved	common	gynodioecious
CMF138	Brazil	improved	Solo	gynodioecious
CMF142	Brazil	improved	Formosa	gynodioecious
CMF143	Brazil	improved	Solo	gynodioecious
CMF147	Brazil	improved	Solo	gynodioecious
CMF157	Brazil	unimproved	common	dioecious
CMF165	Brazil	unimproved	common	dioecious
CMF189	Brazil	unimproved	Formosa	dioecious

Fig. 3 suppl. The description of 82 minisatellite markers designed to evaluate polymorphism in papaya, their location in the papaya genome (contigs and supercontigs - SC), primer sequences, motifs, number of repeats, annealing temperature (AT), $MgCl_2$ concentration and expected allele size for PCR assays.

Primer Code	Nunber of repeats	AT	$MgCl_2$ [mM]	Alelle [bp]	Primer Code	Number of repeats	AT	$MgCl_2$ [mM])	Alelle [bp])
CPMini-01	11.40	62.00	1.50	395	CPMini-43	6.00	61.00	1.50	655
CPMini-03	11.50	50.00	1.50	653	CPMini-44	6.30	58.00	1.50	384
CPMini-04	8.70	49.00	1.50	353	CPMini-45	6.60	58.00	1.50	388
CPMini-05	7.50	-	-	459	CPMini-46	6.60	58.00	1.50	343
CPMini-06	7.10	-	-	631	CPMini-47	6.10	58.00	1.50	383
CPMini-07	8.10	63.00	1.50	947	CPMini-48	6.40	58.00	1.50	350
CPMini-08	16.10	58.00	1.50	284	CPMini-49	42.70	63.00	2.00	323
CPMini-09	10.00	62.00	1.50	296	CPMini-51	7.00	63.00	1.50	599
CPMini-10	9.40	60.00	1.50	979	CPMini-52	6.20	60.00	2.00	471
CPMini-11	6.50	-	-	390	CPMini-53	6.50	60.00	2.00	174
CPMini-12	7.60	58.00	1.50	914	CPMini-54	32.40	-	-	495
CPMini-13	6.10	62.00	1.50	808	CPMini-55	6.50	63.00	2.00	289
CPMini-14	6.00	60.00	1.50	695	CPMini-56	14.00	62.00	2.00	250
CPMini-15	5.90	60.00	1.50	475	CPMini-57	10.20	60.00	2.00	180
CPMini-16	6.30	62.00	1.50	488	CPMini-58	11.00	55.00	2.00	295
CPMini-17	9.80	-	-	297	CPMini-59	9.70	62.00	2.00	371
CPMini-18	8.30	-	-	631	CPMini-60	10.60	63.00	2.00	818
CPMini-19	6.30	58.00	1.50	466	CPMini-61	11.40	60.00	2.00	204
CPMini-20	7.00	-	-	479	CPMini-62	6.70	62.00	2.00	246
CPMini-21	6.20	61.00	1.50	423	CPMini-63	8.70	55.00	2.00	353
CPMini-22	6.70	60.00	1.50	404	CPMini-64	9.70	62.00	2.00	745
CPMini-23	6.70	-	-	552	CPMini-65	10.60	63.00	2.00	164
CPMini-24	6.70	58.00	1.50	195	CPMini-66	10.20	60.00	2.00	241
CPMini-25	6.60	58.00	1.50	245	CPMini-67	12.00	-	-	523
CPMini-26	9.40	62.00	1.50	449	CPMini-68	8.70	-	-	837
CPMini-27	5.90	64.00	1.50	389	CPMini-69	6.40	45.00	2.00	242
CPMini-28	6.00	58.00	1.50	291	CPMini-70	10.70	64.00	2.00	830
CPMini-29	8.10	64.00	1.50	658	CPMini-71	8.80	62.00	2.00	678
CPMini-30	7.30	56.00	1.50	467	CPMini-72	6.50	50.00	2.00	206
CPMini-31	6.70	58.00	1.50	299	CPMini-73	9.00	-	-	559
CPMini-32	8.00	60.00	1.50	583	CPMini-74	6.70	-	-	676
CPMini-33	6.60	-	-	824	CPMini-75	6.30	62.00	2.00	468
CPMini-34	8.00	-	-	870	CPMini-76	12.60	55.00	2.00	200
CPMini-35	6.00	58.00	1.50	441	CPMini-77	6.30	58.00	2.00	394
CPMini-36	6.80	58.00	1.50	410	CPMini-78	6.60	60.00	2.00	400
CPMini-37	7.60	60.00	1.50	344	CPMini-79	7.00	60.00	2.00	225
CPMini-38	6.10	60.00	1.50	499	CPMini-80	12.60	60.00	2.00	579

CPMini-39	8.30	58.00	1.50	300	CPMini-81	10.50	-	-	838
CPMini-40	6.40	58.00	1.50	396	CPMini-82	6.40	50.00	2.00	210
CPMini-41	7.40	58.00	1.50	395	CPMini-83	6.60	50.00	2.00	591
CPMini-42	6.30	55.00	1.50	717	CPMini-84	6.20	-	-	484