Table S1. Primers used for detecting the circular forms and structures missing the region of circular form

Primer	Sequence (5'→3')	Amplicon size (bp)
P1	TGGACAGAACGACACGGATAT	
		1710
P2	GCAACTGGAGAAGAGCAATGA	
P3	GCAACTACAACCATTACGAGTG	
		1964
P4	TGTCAGATATGGCTCAAGGATT	
P5	GGATTCAGGAGTGGACAGAAC	
		2033
P6	GCGTGACGTAACAGGCATT	
P7	GGTCTGGTCAGGCACAAGT	
		2046
P8	TGGGCGTATCTTTAGCGAGAA	
P9	TGCTTATTGATGGCAATGGTTG	
		1985
P10	GCGTGACGTAACAGGCATT	
P11	GCAACTACAACCATTACGAGTG	
		2185
P12	GGGCGTATCTTTAGCGAGAAA	

Primers P1-P6 were used for detecting the formation of circular form (P1and P2 for region between IS*431*A and IS*431*C; P3 and P4 for region between IS*431*A and IS*431*B; P5 and P6 for region between IS*431*B and IS*431*C); primers P7-P12 were used for detecting structure missing corresponding region of circular form (P7 and P8 for structure missing region spanning from Δ*rep* to IS*431*C; P9 and P10 for structure missing corresponding region of 12,481-bp circular form, P11 and P12 for structure missing corresponding region of 6,451-bp circular form).