

A6	P	CAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGT	6/-6	<i>A. baylyi</i>	ACIAD1854	1854425-44	-16.79	6	
	R	CAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGT	(0)			(20)			
	D	CACCAAAGACTAGATGCATCGATGGGTCATCACAGCATAGCAGGCCCTTTGTATCTACAACCTTGATAACATGCTGTT							
O106	P	ATCAGCTAGTGAAGGCC (41×N) TAGCTGGAGTATTTACCCCTATCCGCTTTTA-TCCATTAATAGAAAACAACCTCACTATTCAAACCTCAACACTTC	16/-15	<i>A. baylyi</i>	ACIAD1581	1573321-46 ^e	-15.21	1	Frameshift, insertion of new start codon.
	R	ATCAGCTAGTGAAGGCC (41×N) TAGCTGGAGTATTTACCCCTATCCGCTTTTAAATCATGAAAAGAAAACAACCTCACTATTCAAACCTCAACACTTC	(1)			(26)			
	D	TCTCTTGATCATTATTC (41×N) ATCTCATATGAGCCAGAAAATCCGTTTAAATCATGAAAAGAAAACAACCTCACTATTCAAACCTCAACACTTC							
NC5	P	ACTACTCATCGAATCCTGCCCTACCTAAGCCTCACAGTGTGCCCCATCTAGCAACCAACATTATAGACTCAATTT	5/-5	<i>A. baylyi</i>	<i>nirD</i>	1901644-59	-14.27	1	Detection construct: <i>hisA</i> ::NC2.
	R	ACTACTCATCGAATCCTGCCCTACCTAAGCCTCACAGTGTGCCCCATCTAGCAACCAACATTATAGACTCAATTT	(0)			(16)			
	D	GCAATAATCATAAATAACAATACCGCCACGCTCACCTGTGCCCCATCTAGCAACCAACATTATAGACTCAATTT							
R1517	P	CAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAG	6/-6	<i>A. baylyi</i>	16S rRNA	(14) ^f	-13.81	1	
	R	CAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAG	(0)		(7 copies)				
	D	GTTGCATCGAATTAACACATGCTCCACCCTGTGTGCGGCCCTGCAATTCATTGAGTTTAGTCTTGCG							
B18	P	CCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	4/-4	<i>A. baylyi</i>	<i>vanK</i>	968658-70	-12.91	1	Mimicks double point mutation.
	R	CCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	(0)			(13)			
	D	TGGTCGCCGTTTACTGATTTTAAATTTGTTAGCTATTGCAAGGCATCAGCATGCTCGCCTGTGGTTTGGTGCAT							
K86	P	TCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	8/-8	<i>A. baylyi</i>	<i>lpxA</i>	1378402-19 ^e	-12.72	1	Same donor gene as NC7 (different position and different detection construct).
	R	TCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	(0)			(18)			
	D	TCACAAATCATGTGCAATATGAGTATGCACTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC							
K49	P	CAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTA	6/-6	<i>A. baylyi</i>	<i>hisC</i>	657687-707 ^e	-12.55	5	Right illegitimate crossover same as in A4 (class 2). Donor segment located in <i>hisC</i> of the <i>hisC</i> ::'ND5i' detection allele.
	R	CAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTA	(0)			(21)			
	D	GTTTAAAGTAAGTTCTGGATTTAGGTTGCTCACAGGTACATAAGGCCTACTACGAACTCTGGACTCCAGAAACGCA							
NC7	P	CAACTACTACTCATCGAATCCTGCCCTACCTAAAGCCTCAC-TAGTAGCCAAATCTAGCAACCAACATTATAGACTCAATTTGAC	10/-10	<i>A. baylyi</i>	<i>lpxA</i>	1378697-720 ^e	-12.04	1	Detection construct: <i>hisA</i> ::NC2. Same donor gene as K86 (detection construct: <i>hisC</i> ::'ND5i') but different position.
	R	CAACTACTACTCATCGAATCCTGCCCTACCTAAAGCCTCACGTAAAT-GCCTGAATCTAGCAACCAACATTATAGACTCAATTTGAC	(0)			(24)			
	D	GTGTAAGTCCAGACTTATAAATTAATTTATGCTGCTGCTAAAT-GCCTGAATCTAGCAACCAACATTATAGACTCAATTTGAC							
B127	P	AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTA	5/-5	<i>B. subtilis</i>	<i>ybcI</i>	210793-812	-11.84	1	
	R	AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTA	(0)			(20)			
	D	TATCAAAACAATCGTTGAGGTTAGTCGATATCAGCTAGTGAAGGCCCTAAGGATATTATCTTAAAAATAACCGGAGAAA							
U96	P	AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	6/-6	<i>A. baylyi</i>	<i>recJ</i>	3425419-33	-11.38	1	
	R	AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCC	(0)			(15)			
	D	CAGCTCTGGTTGACATTTGATGCGCCAGATCAGCAATTCAGGCTTAAAGCCGATC							

A71	P CAGCCCAATTTGGACTTCATCCGTGACTTC CATCAGCTAGTGAAGGCC CTACCCAGTATCAGCACTCCTTCATTCCA R CAGCCCAATTTGGACTTCATCCGTGACTTC CATCTTCAAGTCAAGGCC CTACCCAGTATCAGCACTCCTTCATTCCA D CCGTAGCAAGCTCTGCCAAAATATCGGGTA CATCTTCAAGTCAAGGCC AGTTGAGCTGAATATTTGACGCGTAGAAA	9/-9 (0)	<i>A. baylyi</i>	<i>cysI</i>	2911491-508 (18)	-11.31	3		
K9	P AGCCCAATTTGGACTTCATCCGTGACTTC ATCAGCTAGTGAAGCCCTACCC AGTATCAGCACTCCTTCATTCCAGTACA R AGCCCAATTTGGACTTCATCCGTGACTTC ATCAGACCCGCTCATACCCTACCC AGTATCAGCACTCCTTCATTCCAGTACA P AATACTGAATTCGCCGGCGCAGAAACCAT ATCAGACCCGCTCATACCCTACCT CTACCAGCCGTGAGGCAAGCTGGTCAGGT	10/-10 (0)	<i>B. subtilis</i>	<i>mfd</i>	60904-27 ^e (24)	-10.68	1		
R13	P CCAATTTGGACTTCATCCGTGACTTC AGCTAGTGAAGGCC CTACCCAGTATCAGCACTCCTTCATTCC R CCAATTTGGACTTCATCCGTGACTTC AGCTATCGCAGGCC CTACCCAGTATCAGCACTCCTTCATTCC D GCTCAATGAGAACATTTCTCTTTTATTTTA AGCTATCGCAGGCC AAATTAATAAAAAATTCAGAATATGTACC	4/-4 (0)	<i>A. baylyi</i>	ACIAD3649	3567925-37 ^e (13)	-10.38	1		
A60	P CAATTTGGACTTCATCCGTGACTTC AGCTAGTGAAGGCC CTACCCAGTATCAGCACTCCTTCATTCC R CAATTTGGACTTCATCCGTGACTTC AGCTATTTAAGGCC CTACCCAGTATCAGCACTCCTTCATTCC D TTAGGCTATTTTATTTTAAATTTGCTTAGGCT ATTTAAGGCC TACAAAATAAATGAATCGATTTGCCAAAA	3/-3 (0)	<i>A. baylyi</i>	IR ^g (<i>aroQ</i> / ACIAD1740)	1747656-67 ^e (12)	-9.87	2	Mimicks double point mutation.	
K143	P CAATTTGGACTTCATCCGTGACTTC AGCTAGTGAAGGCC CTACCCAGTATCAGCACTCCTTCATTCCAG ^h R CAATTTGGACTTCATCCGTGACTTC AGCTACCTTAGGACC CTACCCAGTATCAGCACTCCTTCATTCCAG D CGGGTCGGAACCTACCCGACAAGGAATTT AGCTACCTTAGGACC GTTATAGTTACGGCCGCCGTTTACTGGGGC	8/-8 (0)	<i>B. subtilis</i> / <i>A. baylyi</i>	23S rRNA (10 and 7 copies)	(14) ⁱ	-4.46	1		
b) Class 2 SPDIR events									
O140	P GGTCTT CTCT-FAGCC TCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCATCAGC TAGTGA AGGCC (76×N) TAAT AGAAAACAACC TCACTATTCAA R GGTCTT CTCT-FAGCC CCAACAGGTTAGCC----- AGAAAACAACC TCACTATTCAA D GTAGGG CTCTA-FAGCC CCAACAGGTTAGCC----- AGAAAACAACC ACCTCAGTTAT	14/-143 (-129)	<i>A. baylyi</i>	IR (ACIAD1855/ ACIAD1856)	1855272-306 (35)	-17.87	-14.05	-31.92	7
A17	P AGCCCAATTTGGACTTCATCCGTGACTTC ATCAGCTAGTGAAGCCCTACCCCA GTATCAGCACTCCTTCATTCCAGTACAATAGTTATAGCTGG R AGCCCAATTTGGACTTCATCCGTGACTTC ATCAGCT--TGAAG-----CCGTGTATCAGCACT CCTTCATTCCAGTACAATAGTTATAGCTGG D GGCACTTTGTTCGCCGTGATATACCCGAT ATCAGCT--TGAAG-----CCGTGTATCAGCACT GGCTGGCAAACGTATTGTGAACCGCCAG	9/-18 (-9)	<i>A. baylyi</i>	ACIAD2174	2152597-623 ^e (27)	-13.48	-15.82	-29.30	1
B45	P GCCCAATTTGGACTTCATCC GTGACTTCCAT CAGCTAGTGAAGGCCCTACCCAGTATCAGC (90×N) AACAACCTCACTATTCAAAC TTCAACACTTCT GGTTCTGGC R GCCCAATTTGGACTTCATCC GTGACTTCCAT GTTCATCCAT----- TTCAACACTTCT GGTTCTGGC D TCATTTTTTGTATCTTT GTGACTTCCAT GTTCATCCAT----- TTCAACACTTCT TCACGCTCG	16/-127 (-111)	<i>B. subtilis</i>	<i>ipk</i>	541025-57 ^e (33)	-11.62	-15.59	-27.21	1
O59	P TCTTAGCCTC AGCAGG AAATCAGCCCAA--TTGGACTTCATCCGTGACTTCCA-TCAGC TAGTGA AGGCCCTACCC-CAGTATCAGCACTCCTTCAT--- CCAGTACAAT AGTTATAGCT R TCTTAGCCTC AGCAGG CAAGCCAGCATTATCTTTATAACGGAT-CTTGA--TCCAGTCATC-----GGCCAGCCACAGCA-CCAAACACCACCATAACAC CCAGTACAAT AGTTATAGCT D ACTTTTTCGC AGCAGG CAAGCCAGCATTATCTTTATAACGGAT-CTTGA--TCCAGTCATC-----GGCCAGCCACAGCA-CCAAACACCACCATAACAC CCAGTACAAT CCAGACATAA	77/-80 (-3)	<i>A. baylyi</i>	<i>mraY</i>	3271835-927 (93)	-14.28	-11.97	-26.25	1

K2	P ACTACTAGGCTTCTCTTAGCCTCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAGTT R ACTACTAGGCTTCTCTTAGCCTCAGCAGGCA-----TTACTCCATG--TACCA-CACCTG-----CAATATCAGCACTCCTTCATTCCAGTACAATAGTT D ACGATAAGCTGCTGCTGCCCTCAGCAGGCA-----TTACTCCATG--TACCA-CACCTG-----CAATATCAGCACTACAACAATTGAACTAATCTACGC	26/-62 (-36)	<i>A. baylyi</i>	ACIAD3425	3340507-54 (48)	-11.83	-14.33	-26.16	2	
R19	P ACTAGGCTTCTCTTAGCCTCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAGTTATAG R ACTAGGCTTCTCTTAGCCTCAGCAGGAAA-----GATTGCAT--TAAATT-----TACCAGCACTCCTTCATTCCAGTACAATAGTTATAG D GCATGCAGTCGTTGGTACGCAGCAGGAAA-----GATTGCAT--TAAATT-----TACCAGCAC--CTTCAGTGGATAGACTATACGCTGC	17/-62 (-45)	<i>A. baylyi</i>	ACIAD3309	3216622-59 ^e (38)	-13.79	-11.82	-25.61	1	
A78	P CAGCCCAATTTGGACTTCATCCGTGACTTCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAGTTATAGTGTG R CAGCCCAATTTGGACTTCATCCGTGACTTCATCAGCCAGTA-----CAGTATCAACACCTTCATTCCAGTACAATAGTTATAGTGTG D CTGGCAAAGCCCGTACATTTAACTGGCAATCATCAGCCAGTA-----CAGTATCAACACCTGTAATGATTGGCCAGAACGTGCTCGCC	14/-26 (-12)	<i>A. baylyi</i>	<i>ribD</i>	247248-71 ^e (24)	-11.59	-12.31	-23.90	2	
K22	P ACTAGGCTTCTCTTAGCCTCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAGT R ACTAGGCTTCTCTTAGCCTCAGCAGCCAAA-----TTACTCCATG--TACCA-CACCTG-----TATCAGCACTCCTTCATTCCAGTACAATAGT D AAGCTGTGGCGAATTTTGGCAGCAGCCAAA-----TTACTCCATG--TACCA-CACCTG-----TATCAGCACTCACATAATAGATGGCCTTTG	6/-63 (-57)	<i>A. baylyi</i>	<i>htpG</i>	317444-66 ^e (23)	-9.32	-14.19	-23.51	1	
T69	P ATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTAC--CCCAGTATCAGCACTCCTTCATTCCAGTACAATAGTTATAGTGGAGT R ATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCAAAATTCAG-ACAAGCAATGAGTACCAATCTCCTTCATTCCAGTACAATAGTTATAGTGGAGT D CGTAATAAAGCGACTTCACGTCGACGCTCAATCCAGCAAAATTCAG-ACAAGCAATGAGTACCAATCTCCTGACACCCCAAGACTGCCAGTATCGTA	27/-27 (0)	<i>A. baylyi</i>	ACIAD1059	1055406-47 ^e (42)	-12.00	-11.31	-23.31	1	
R159	P GGTCTTCTCTTAGCCTCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAG R GGTCTTCTCTTAGCCTCAGCAGGAAAATCAGGC-----TCAACAATCAA-TCCATCA-----AACACTTAATC--GTACCAGCACTCCTTCATTCCAGTACAATAG D GAAAACGTCAACGCTGTACGAGTAAAATCAGGC-----TCAACAATCAA-TCCATCA-----AACACTTAATC--GTACCAGCACTGGTATCAAACGGATGTTTTCAG	36/-57 (-21)	<i>A. baylyi</i>	ACIAD2154	2137307-60 (54)	-11.36	-11.59	-22.95	1	Same donor gene as R6 but different position.
R1522	P AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGA---AG---GCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAGTTATAGCTGG R AGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCAAGTGGACAGATTGCCAAAC---AGTATCTGCACCTCCTTCATTCCAGTACAATAGTTATAGCTGG D TAGCATTTTGTGCTCCTTGGCTCATTTGGCATCAGCAAGTGGACAGATTGCCAAAC---AGTATCTGCACCTTGTGCTTTTGGGTACCAGGTTTATGTTT	28/-25 (3)	<i>A. baylyi</i>	ACIAD2761	2700433-71 ^e (39)	-10.41	-11.91	-22.32	1	
E11	P AGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAG (70×N) AAACAACCTCAGTATTCAACCTTCAACACTTCTGTTCTG R AGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAG (70×N) AAACAACCTCAGTATTCAACCTTCAACACTTCTGTTCTG D AAACCTTTTATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAG (70×N) AAACAACCTCAGTATTCAACCTTCAACACTTCTGTTCTG	0/-150 (-150)	<i>A. baylyi</i>	<i>pepN</i>	2000415-35 (21)	-5.84	-16.17	-22.01	1	Mimicks MH-free deletion.
S80	P TTGAGATAGAAAGATGAACACTACACTCCCACTAGTAGGCTTCTCTTAGCCTCAG (40×N) ATCAGCTAGTGAAGGCC (15×N) ACTCCTTCATTCCAGTACAATAGTTATAGCTGGAGTA R TTGAGATAGAAAGATGAACACTACACTCCCACTAG-----TTACTCCATG--TACCA-CACCTG-----CCAGTACAATACTTCATTCCAGTACAATAGTTATAGCTGGAGTA D TCTAAATTAATGCTGAAACTATAAAGCACCATTAG-----TTACTCCATG--TACCA-CACCTG-----CCAGTACAATACTTCATTCCAGTACAATAGTTATAGCTGGAGTA	0/-105 (-105)	<i>A. baylyi</i>	<i>ggt</i>	913145-77 ^e (33)	-8.70	-13.08	-21.78	1	Mimicks MH-free deletion. Left MH contains a stop codon (italics) not acquired with the observed (highlighted) crossover joint.
R1520	P TCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCCATCAGCTAGTGAAGGCCCTACCCAGTATCAGCACTCCTTCATTCCAGTACAATAG R TCAGCAGGAAAATCAGCCCAATTTGGACTTCATCCGTGACTTCATCCAGTAAAGTCCAGCC-CAAAAT-AATACCCTGCCAGTATCAGCACTCCTTCATTCCAGTACAATAG D GCGCCAGATCTGCAATCCGACCAATACCATCCGAGCCAGTAAAGTCCAGCC-CAAAAT-AATACCCTGCCAGTATCAGCACTCCTTCATTCCAGTACAATAG	31/-28 (3)	<i>A. baylyi</i>	<i>cycA</i>	118908-50 ^e (43)	-7.08	-14.65	-21.49	1	

R7	P	AGCCCAATTGGACTTCATCCGTGACTTCCATCA AGCTAGTGA AGGCCCTACCC CAGTATCAGCAC TCTTCATTCCAGTACAATAGTTATAGCTG	20/-23	<i>A. baylyi</i>	ACIAD0133	137897-928 ^e	-2.89	-13.67	-16.56	1	
	R	AGCCCAATTGGACTTCATCCGTGACTTCCATCA CCCACTTCT ---CATGTT GCAGCATCAGCAC TCTTCATTCCAGTACAATAGTTATAGCTG	(-3)			(32)					
	D	ACGTTTGGATCAGGAACACCAGCAAAAGATCA CCCACTTCT ---CATGTT GCAGCATCAGCAC CCAATGTCTGATTACTGGGCATATTGCT									
K6	P	CAGCCCAATTGGACTTCATCCG TGACTTCCAT CAG CTAGTGA AGGCCCTACCCAGTATCAGCACTCCT (65×N) ACAACCTCACTATTCAAACCTCAACAC TTCTG TTTCTGGCTCTA	0/-129	<i>A. baylyi</i>	ACIAD3429	3346647-61 ^e	-12.64	-3.61	-16.25	1	Mimicks MH-free deletion.
	R	CAGCCCAATTGGACTTCATCCG TGACTTCCAT ----- TTCTG TTTCTGGCTCTA	(-129)			(15)					
	P	TTCATTCTTCAAAAATTCCTGTT TGACTTCCAT ----- TTCTG CAATGGTATCTC									
O100	P	AGGAAAATCAGCCCAATTGG GACTTCA TCCGTGACTTCCA--TCAGCT-- AGTGA AGGCCCTAC--CCAGTATCAGCACT CCTTCA TTCCAGTACAATAGTTATAGCTG	42/-48	<i>A. baylyi</i>	<i>fkfB</i>	62738-95	-8.63	-6.46	-15.09	1	
	R	AGGAAAATCAGCCCAATTGG GACTTCA --CCAT-AC-GCAAGTTTGGCTGGAATAAAA---CAGACGCGCTTTTCA--- CCTTCT TTCCAGTACAATAGTTATAGCTG	(-6)			(58)					
	P	CCAATCGCATCACCGCTAC GACTTCA --CCAT-AC-GCAAGTTTGGCTGGAATAAAA---CAGACGCGCTTTTCA--- CCTTCT TTCCAGTATGCAAGCCTTCGGT									
Total		60 different SPDIR events found.								128	
DIR1	P	TCAGCT AGTGA AGGCC (69×N) TTTATCCAT T ----- A ATAGAAAACAA (24×N) TCTGGTTCTGGCTCTAATGTC	92/0	<i>A. baylyi</i>	<i>hisC::'ND5i'</i>	657587-637 +	>0.00	>0.00	>0.00	1	DIR isolate (see SI). Formed by two IR events without MH and resulted in a duplication of a neighboring segment (interrupted direct repeat).
	R	TCAGCT AGTGA AGGCC (69×N) TTTATCCAT T AAGTCTCTACGGG (24×N) AATAGAAAGATGAAACACTAC (24×N) AGCCTCAGC A ATAGAAAACAA (24×N) TCTGGTTCTGGCTCTAATGTC	(92)			insert down-stream (94)					
	D	GTATTGGCTCAACAGG (69×N) AGAGCTTAG T AAGTCTCTACGGG (24×N) AATAGAAAGATGAAACACTAC (24×N) AGCCTCAGC A GGAAAATCAGC (24×N) TCCATCAGCT AGTGA AGGCC									

^a P: ancestral/parental DNA sequence; R: recombinant (microindel-containing) DNA sequence; D: donor DNA sequence of segment used for double IR; bold red: double stop codons; bold pink: simple or extended microhomologies as determined by ΔG^0_{min} ; highlighted yellow: illegitimate recombination sites; underlined: start codons. ^b Nucleotides inserted/nucleotides deleted. ^c Nucleotide positions, including all MH annealing segments as determined by ΔG^0_{min} , in annotated GenBank entries (*A. baylyi*: NC_005966; *B. subtilis*: NC_000964). ^d Simple or extended microhomology. ^e Reverse complement. ^f The seven positions are: 19331-44; 214116-29; 646953-66; 1661615-28 (all reverse complement); 2946435-48; 3075532-45; and 3563854-67. ^g Intergenic region. ^h The triple alignment was created with the *B. subtilis* donor DNA sequence. The *A. baylyi* donor sequence is identical in the shown section except for a G/A nucleotide difference 29 bp upstream of the MH (indicated in italics). ⁱ The ten positions in *B. subtilis* are: 13658-71; 34126-39; 94203-16; 100059-72; 164558-71; 170164-77; 175163-76; 639104-17; 950367-80 (all reverse complement); and 3174956-69; in *A. baylyi*, the seven positions are: 22446-59; 217231-44; 650158-71; 1664730-43 (all reverse complement); 2943230-43; 3072327-40; and 3560739-52.