



## pSEB361 Full-Length Sequence

TGAAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAAGTAACGCCATTTTTCGAAGGCATGGAAAAATACATAACTGAGAATAGAG  
AAGTTAGATCAAGGTTAGGAAACAGAGAGACAGCAGAAATATGGGCCAAAACAGGATATCTGTGGTAAGCAGTTTCTCCCGGCTCAG  
GGCAAGAACAGATGGTCCCAGATGCGGTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTTCCAGGGTGCCCCAAGGA  
CCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTTCGCTTCTCGCTTCTGTTCGCGCGCTTCTGCTCCCGAGCTCAA  
TAAAAGAGCCCAACCCCTCACTCGGCGGCCAGTCTCCGATAGACTGCGTTCGCGGGTACCCGTATTTCCAATAAAGCCTC  
TTGCTGTTTGCATCCGAATCGTGGACTCGTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCTCGGGGGTCTTTC  
ATTTGGAGGTTCCACCGAGATTTGGAGACCCCTGCCAGGGACCACCGACCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTT  
TCGTGCTGTCTGTCTTTGTGCGTGTTTGTGCCGGCATCTAATGTTTTCGCGCTGCGTCTGTACTAGTTAGCTAACTAGCTCTG  
TATCTGGCGGACCCGTGGTGGAACTGACGAGTTCTGAACACCCCGCCGCAACCCCTGGGAGACGTCCAGGGACTTTGGGGCCGT  
TTTTGTGGCCGACCTGAGGAAGGGAGTTCGATGTGGAATCCGACCCCGTCAGGATATGTGGTTTCTGGTAGGAGACGAGAACCCTAA  
AACAGTTCCCGCCTCCGTCTGAATTTTTGCTTTTCGGTTTGGAAACCGAAGCCGCGCTTGTCTGCTGCAGCGCTGCAGCATCGT  
TCTGTGTTGTCTCTGTCTGACTGTGTTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTACCCTCCCTTAAGTTTTCACCTTA  
GGTCACTGGAAAGATGTCGAGCGGATCGCTCACAACCAGTTCGGTAGATGTCAAGAAGAGACGTTGGGTTACCTTCTGCTCTGCAG  
AATGGCCAACCTTTAACGTCGGATGGCCGCGAGACGGCACCTTTAACCGAGACCTCATCACCCAGGTTAAGATCAAGGTTCTTTTC  
ACCTGGCCCGCATGGACACCCAGACCAGGTCCCTTACATCGTGACTGGGAAGCCTTGGCTTTTGACCCCTCCCTGGGTCAAG  
CCCTTTGTACACCCTAAGCCTCCGCTCCTCTTCTCCATCCGCCCCGTCTCTCCCTTGAACCTCCTCGTTCGACCCCGCCTC  
GATCCTCCCTTTATCCAGCCCTCACTCCTTCTTAGGCGCCGGAATTCACCATGGCCAAGCCTTTGTCTCAAGAAGAATCCACCC  
TCATTGAAAGAGCAACGGCTACAATCAACAGCATCCCCATCTCTGAAGACTACAGCGTCGCCAGCGCAGCTCTCTCTAGCGACGG  
CCGCATCTTCACTGGTGTCAATGTATATCATTTTTACTGGGGGACCTTGTGCAGAACTCGTGGTGTGGGCACTGCTGCTGCTGCG  
GCAGCTGGCAACCTGACTTGTATCGTTCGCGATCGGAAATGAGAACAGGGGCATCTTGAAGCCCTGCGGACGGTGCCGACAGGTGC  
TTCTCGATCTGCATCCTGGGATCAAAGCCATAGTGAAGGACAGTGTGACAGCCGACGGCAGTTGGGATTCGTGAATTTGCTGCC  
CTCTGGTTATGTGTGGGAGGGCTaagtttaaacTAGGGATAACAGGGTAATAAGGTCGGGCAGGAAGAGGGCCTATTTCCCATGA  
TTCTTTCATATTTGCATATACGATACAAGGCTGTTAGAGAGATAATTAAGAAATTAATTTGACTGTAAACACAAAAGATATTAGTACA  
AAATACGTGACGTAGAAAAGTAATAATTTCTTGGGTAGTTTGCAGTTTTAAAATTAATTTAAAATGGACTATCATATGCTTACCCTAC  
GTAACTTGAAAAGTATTTGCATTTCTTGGCTTTATATAATCTTGTGAAAAGGGATCCCTTCGAGGAATCGATGTCATACAGAACT  
TATAAGATTTCCAAATCCAAAGACATTTACGTTTATGGTGAATTTCCAGAACACATAGCGACATGCAAAATATTGCAGGGCGCCA  
CTCCCTGTCCCTCACAGCCATCTTCTGCCAGGGCGCACGCGCTGGGTGTTCCCGCTAGTGACACTGGGCCCGCGATTCTCT  
TGGAGCGGGTTGATGACGTGACGTTTCGCGTACGAAAGTTCGGGCAGGAAGAGGGCCTATTTCCCATGATTCTTTCATATTTGCAT  
ATACGATACAAGGCTGTTAGAGAGATAAATAGAATTAATTTGACTGTAAAACACAAAAGATATTAGTACAAAATACGTGACGTAGAA  
AGTAATAATTTCTTGGGTAGTTTGCAGTTTTAAAATTAATTTAAAATGGACTATCATATGCTTACCCTAACTTGAAAGTATTT  
CGATTTCTTGGCTTTATATATCTTGTGAAAAGAGATCTGCCCGGCTTCGAGGTCTCATACAGAACTTATAAGATTTCCAAATCC  
AAAGACATTTACGTTTATGGTGAATTTCCAGAACACATAGCGACATGCAAAATATTGCAGGGCGCCACTCCCTGTCCCTCACAG  
CCATCTTCTGCCAGGGCGCACGCGCTGGGTGTTCCCGCTAGTGACACTGGGCCCGCGATTCTTGGAGCGGGTTGATGACG  
TCAGGTTCTGTCTAGAAAAGTTCGGGCAGGAAGAGGGCCTATTTCCCATGATTCTTTCATATTTGCATATACGATACAAGGCTGTT  
AGAGAGATAAATAGAATTAATTTGACTGTAAAACACAAAAGATATTAGTACAAAATACGTGACGTAGAAAAGTAAATTTCTTGGGT  
AGTTTGCAGTTTTAAAATTAATGTTTTAAAATGGACTATCATATGCTTACCCTAACTTGAAAGTATTTTCGATTTCTTGGCTTTATA  
TATCTTGTGAAAAGacgcgatTTTTAAATgtcgacGTCTCATACAGAACTTATAAGATTTCCAAATCCAAAGACATTTACGTTTTA  
TGGTGAATTTCCAGAACACATAGCGACATGCAAAATATTGCAGGGCGCCACTCCCTGTCCCTCACAGCCATCTTCTGCCAGGGC  
GCACGCGCGCTGGGTGTTCCCGCTAGTGACACTGGGCCCGCGATTCTTGGAGCGGGTTGATGACGTGACGTTTCGATTACCTT  
GTTATCCCTAGGGCCCgagggcgcgattacaaggatgacgacgataagataTGAattcttaattaaCGATAAAAATAAAGATTT  
TATTTAGTCTCCAGAAAAGGGGGGAATGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTGCAGGC  
ATGAAAATACATAACTGAGAATGAGAAGTTTCAGATCAAGTTTGAAGAAGAGACAGCAGAAATATGGGCCAAAACAGGATATC  
TGTGTAAGCAGTTTCTTCCCGCTCAGGGCCAAAGAACAGATGGTCCCAGATGCGGTCCCGCTCAGCAGTTTCTTAGAGAAAC  
CATCAGATGTTTCCAGGTTGCCCAAGGACCTGAAATGACCTGTGCTTATTTGAACTAACCAATCAGTTTCGCTTCTCGCTTCT  
GTTTCGCGCGCTTCTGCTCCCGAGCTCAATAAAAAGAGCCCAACCCCTCACTCGGCGCGCCAGTCTCCGATAGACTGCGTTCGC  
CCGGGTACCCGTGTATCCAATAAAACCCTCTTGCAGTTGCATCCGACTTGTGGTCTCGCTGTTCTTGGGAGGGTCTCCTCTGAGT  
GATTGACTACCCGTGACGCGGGGTCTTTCATGGGTAAACAGTTTCTTGAAGTTGGAGAACAACATTTCTGAGGGTAGGAGTCGAATA  
TTAAGTAATCCTGACTCAATTAGCCACTGTTTTGAATCCACATACTCCAATACTCTGAAATAGTTTATATGGACAGCGCAGAA  
GAGCTGGGGAGAATTAATTCGTAATCATGGTCATAGCTGTTTTCTGTGTGAAATTTGTTATCCGCTCACAATTTCCACACAACATAC  
GAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAAGTAACTCACATTAATTTGCGTTGCGCTCACTGCCCGCTTT  
CCAGTCCGGAAAACCTGTGCTGCCAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGGGTATTGGGCGCTCTTCC  
GCTTCTCGCTCACTGACTCGCTGCGCTCGGTTCGCTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTAT  
CCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAAGGCCAGCAAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCT  
GGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAACCCGACAGGACTA  
TAAAAGATACCAGGCGTTTCCCCCTGGAAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCCTGCCGCTTACCAGGATACCTGTCCGCT  
TTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCCGCTCCAAGCTGGG  
CTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTTCGAGTTCAACCCCGTTAAGACACGAC  
TTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGC  
CTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTC  
TTGATCCGGCAAACAACCCCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAA  
GAAGATCCTTTGATCTTTTACGGGGTCTGACGCTCAGTGAACGAAAATCAGTTAAGGGATTTTGGTTCATGAGATTATCAA  
AAAGGATCTTCACTAGATCCTTTTAAATTAAAAAATGAAGTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAG

TTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAG  
ATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGGCTCCAGATTTAT  
CAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTTATCCGCTCCATCCAGTCTATTAATTGTTG  
CCGGGAAGCTAGAGTAAGTAGTTTCGCCAGTTAATAGTTTTCGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACACGCTCG  
TCGTTTGGTATGGCTTCATTCAGCTCCGGTTCCTCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTTA  
GCTCCTTCGGTCTCCGATCGTTGTCAGAAGTAAGTTGGCCGCGAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCTCT  
TACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTTCTGAGAATAGTGTATGCGGCGACCG  
AGTTGCTCTTGCCTGGCTCAATACGGGATAAATACCGCGCCACATAGCAGAAGTTTAAAAAGTGTCTATCATTTGGAAAAAGTTCTT  
CGGGGCGAAAACTCTCAAGGATCTTACCCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATC  
TTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAAATGCCGCAAAAAAGGAATAAGGGGCGACCGAAAAATGT  
TGAATACTCATACTCTTCTTTTCAATATTTATGAAGCATTTATCAGGGTTATTGTCATGAGCGGATACATATTTGAATGTA  
TTTAGAAAAATAAACAAATAGGGGTTCGCGCACATTTCCCCGAAAAAGTGCCACCTGACGCTAAGAAAACCATTTATATCATGAC  
ATTAACCTATAAAAAATAGGCGTATCACGAGGCCCTTTTCGTCCTCGCGCGTTTCGGTGATGACGGTGAAAACTCTGACACATGCAG  
CTCCCGGAGACGGTACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGTCAGCGGGTGTGGCGGGT  
GTCGGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGTAAGTGTGAGAGTGCACCATATGCGGTGTGAAATACCGCACAGATGCGT  
AAGGAGAAAAATACCGCATCAGGCGCCATTCGCCATTCAGGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCTCTTCGCTA  
TTACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTCCAGTCACGACGTTGTAAAA  
CGACGGCGCAAGGAATGGTGCATGCAAGGAGATGGCGCCCAACAGTCCCCCGCCACGGGGCTGCCACCATAACCCACGCCGAAA  
CAAGCGTTCATGAGCCGAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGG  
CGCGGTGATGCGGCCACGATGCGTCCGGCTAGAGGCGATTAGTCCAATTTGTTAAAGACAGGATATCAGTGGTCCAGGCTCT  
AGTTTTGACTCAACAATATCACCAGCTGAAGCCTATAGAGTACGAGCCATAGATAAAAAATAAAGATTTTATTTAGTCTCCAGAAA  
AAGGGGGGAA

## Zero Cutters in pSEB361

#	Enzyme	Specificity
1	AgeI	A CCGG▲T
2	AleI	CACNN▲NNGTG
3	AsiSI	GCG▲AT CGC
4	BclI	T GATC▲A
5	BfuAI	ACCTGCNNNN NNNN▲
6	BlpI	GC TNA▲GC
7	BmgBI	CAC▲GTC
8	BsmI	GAATG▲CN
9	BspEI	T CCGG▲A
10	BspMI	ACCTGCNNNN NNNN▲
11	BstBI	TT CG▲AA
12	BstXI	CCAN▲NNNN NTGG
13	BstZ17I	GTA▲TAC
14	BtgZI	GCGATG (N) <sub>10</sub> NNNN▲
15	DraIII	CAC▲NNN GTG
16	FseI	GG▲CCGG CC
17	HindIII	A AGCT▲T
18	HpaI	GTT▲AAC
19	MfeI	C AATT▲G
20	NotI	GC GGCC▲GC
21	NsiI	A▲TGCA T
22	PflMI	CCAN▲NNN NTGG
23	PmlI	CAC▲GTG
24	PspXI	VC TCGA▲GB
25	RsrII	CG GWC▲CG
26	SacII	CC▲GC GG

27	SbfI	CC▲TGCA GG
28	SfiI	GGCCN▲NNN NGGCC
29	SnaBI	TAC▲GTA
30	SrfI	GCCC▲GGGC
31	StuI	AGG▲CCT
32	SwaI	ATT▲AAAT
33	XcmI	CCANNNN▲N NNNNTGG

## One-Cutters in pSEB361

#	Enzyme	Specificity	Sites & flanks	Cut positions (blunt - 5' ext. - 3' ext.)
1	AccI	GT MK▲AC	<a href="#">list</a>	*3065/3067
2	AvrII	C CTAG▲G	<a href="#">list</a>	3297/3301
3	BamHI	G GATC▲C	<a href="#">list</a>	2090/2094
4	BbsI	GAAGACNN NNNN▲	<a href="#">list</a>	1497/1501
5	BglII	A GATC▲T	<a href="#">list</a>	2574/2578
6	BsaBI	GATNN▲NNATC	<a href="#">list</a>	*#1710
7	BsgI	GTGCAG (N) <sub>14</sub> ▲NN	<a href="#">list</a>	1599/1597
8	BsiWI	C GTAC▲G	<a href="#">list</a>	*2315/2319
9	BspDI	AT CG▲AT	<a href="#">list</a>	*2097/2099
10	BsrGI	T GTAC▲A	<a href="#">list</a>	1281/1285
11	BstEII	G GTNAC▲C	<a href="#">list</a>	1086/1091
12	ClaI	AT CG▲AT	<a href="#">list</a>	*2097/2099
13	CspCI	▲NN (N) <sub>11</sub> CAA (N) <sub>5</sub> GTGG (N) <sub>10</sub> ▲NN	<a href="#">list</a>	1429/1427+1464/1462
14	HincII	GTY▲RAC	<a href="#">list</a>	*3066
15	MluI	A CGCG▲T	<a href="#">list</a>	*3058/3062
16	NcoI	C CATG▲G	<a href="#">list</a>	1410/1414
17	NruI	TCG▲CGA	<a href="#">list</a>	*#1643
18	PacI	TTA▲AT TAA	<a href="#">list</a>	3354/3352
19	PaeR7I	C TCGA▲G	<a href="#">list</a>	*2580/2584
20	PciI	A CATG▲T	<a href="#">list</a>	4426/4430
21	PmeI	GTTT▲AAAC	<a href="#">list</a>	1814
22	PshAI	GACNN▲NNGTC	<a href="#">list</a>	*3061
23	SalI	G TCGA▲C	<a href="#">list</a>	*3064/3068
24	ScaI	AGT▲ACT	<a href="#">list</a>	5799
25	SexAI	A CCWGG▲T	<a href="#">list</a>	#1214/1219
26	SgrAI	CR CCGG▲YG	<a href="#">list</a>	*6862/6866
27	SpeI	A CTAG▲T	<a href="#">list</a>	659/663
28	SphI	G▲CATG C	<a href="#">list</a>	6714/6710
29	XhoI	C TCGA▲G	<a href="#">list</a>	*2580/2584