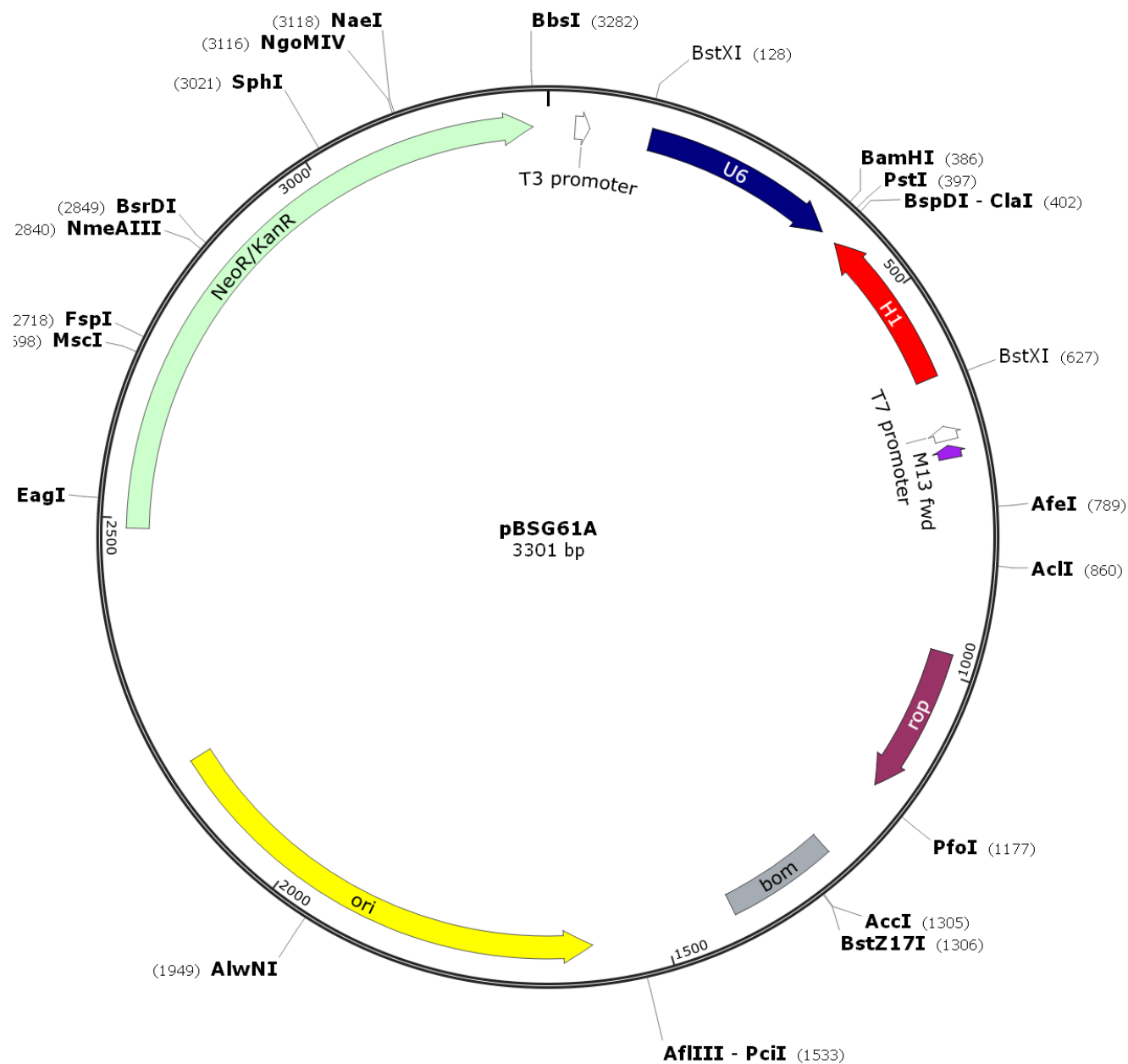


**Vector: pBSG61A** (pMOK1-based, BstXI-shotgun entry vector A; BstXI-A/B)

**Antibiotic Selection: Kan**

**Creator(s):** Xi Wang & Zongyue Zeng, Molecular Oncology Lab of The University of Chicago Medical Center

**Date of Construction:** October, 2018



## pBSG61A Full-length Sequence\*

(\* Based on partially sequenced data; not fully sequenced)

GGAAACAGCTATGACCATGATTACGCCAAGCTCGAAATTAACCCTCACTAAAGGGAACAAAAGCTGGTACGAGGA  
 CAGGCTGGAGCCATGGCTGGTGACCACGTCGTGGAATGCCTTCGCCAAGTTGGTGGAAAGGTCGGGCGAGGAAGAG  
 GGCCTATTTCCCATGATTCCTTCATATTTGCATATACGATACAAGGCTGTTAGAGAGATAATTAGAATTAATTTG  
 ACTGTAAACACAAAGATATTAGTACAAAATACGTGACGTAGAAAGTAATAATTTCTTGGGTAGTTTGCAGTTTTA  
 AAATTATGTTTTAAAATGGACTATCATATGCTTACCGTAACTTGAAAGTATTTTCGATTTCTTGGCTTTATATATC  
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 CACGTTTATGGTGATTTCCAGAACACATAGCGACATGCAAATATTGCAGGGCGCCACTCCCCTGTCCCTCACAG  
 CCATCTTCCCTGCCAGGGCGCACGCGCGCTGGGTGTTCCCGCTAGTGACACTGGGCCCCGCGATTCCCTTGGAGCGG  
 GTTGATGACGTCAGCGTTCCGACGCCCTGTGGATGCCTAATCGGACGAAAAAATGACCATGATTACGCCAAGCTC  
 CAATTCGCCCTATAGTGAGTCGTATTACAATTCCTGACCGCTCGTTTTACCCGGATCTGCATCGCAGGATGCTGC  
 TGGCTACCTGTGGAACACCTACATCTGTATTAACGAAGCGCTGGCATTGACCCTGAGTGATTTTTCTCTGGTCC  
 CGCCGCATCCATACCGCCAGTTGTTTACCCTCACAACGTTCCAGTAACCGGGCATGTTTCATCATCAGTAACCCGT  
 ATCGTGAGCATCCTCTCTCGTTTTCATCGGTATCATTACCCCCATGAACAGAAATCCCCCTTACACGGAGGCATCA  
 GTGACCAAAACAGGAAAAACC GCCCTTAACATGGCCCCGTTTATCAGAAGCCAGACATTAACGCTTCTGGAGAAA  
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 AGCTGCCTCGCGCGTTTTCGGTGATGACGGTGAAAACCTCTGACACATGCAGCTCCCGGAGACGGTCACAGCTTGT  
 CTGTAAGCGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGTCAGCGGGTGTGGCGGGTGTGGGGCGCAGCC  
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 AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGA  
 GGTGGCGAAACCCGACAGGACTATAAAGATAACAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTT  
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 CTGGTAAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCT  
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 GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAG  
 GATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTT  
 TGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTTAAATTAATAAATGAAGTTTTAAATCAATCTAAA  
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 GCTTCAATAATATATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGG  
 CTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGT  
 TCTTTTTGTCAAGACCGACCTGTCCGGTGCCTGAATGAACGCAAGACGAGGCAGCGCGGCTATCGTGGCTGGC  
 CACGACGGGCGTTCCCTTGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTTGGCGA  
 AGTGCCGGGGCAGGATCTCCTGTATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCG  
 GCGGCTGCATACGTTGATCCGGCTACCTGCCATTTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTAC  
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 CGCCAGGCTCAAGGCGAGCATGCCCGACGGCGAGGATCTCGTCTGACCCATGGCGATGCCGCTTGGCGAATAT  
 CATGGTGGAAATGGCCGCTTTTCTGGATTATCGACTGTGGCCGGCTGGGTGTGGCTGACCGCTATCAGGACAT  
 AGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCAATGGGCTGACCGCTTCCCTCGTGCTTTACGGTAT  
 CGCCGCTCCCGATTGCGAGCGCATCGCTTCTATCGCTTCTTGACGAGTTCTTCTGACCTTTCTGCTTCAAGaa  
 tt

### Zero-Cutters

#	Enzyme	Specificity
1	<a href="#">Acc65I</a>	G GTAC▲C
2	<a href="#">AflII</a>	C TTAA▲G

3	<a href="#">AgeI</a>	A CCGG▲T
4	<a href="#">AleI</a>	CACNN▲NNGTG
5	<a href="#">ApoI</a>	R AATT▲Y

6	<a href="#">AscI</a>	GG CGCG▲CC
7	<a href="#">AsiSI</a>	GCG▲AT CGC
8	<a href="#">AvaI</a>	C YCGR▲G
9	<a href="#">AvrII</a>	C CTAG▲G
10	<a href="#">BaeI</a>	▲(N) <sub>5</sub> (N) <sub>10</sub> ACNNNNGTAYC (N) <sub>7</sub> ▲(N) <sub>5</sub>
11	<a href="#">BbvCI</a>	CC TCA▲GC
12	<a href="#">BclI</a>	T GATC▲A
13	<a href="#">BglI</a>	GCCN▲NNN NGGC
14	<a href="#">BglII</a>	A GATC▲T
15	<a href="#">BlpI</a>	GC TNA▲GC
16	<a href="#">BmtI</a>	G▲CTAG C
17	<a href="#">Bpu10I</a>	CC TNA▲GC
18	<a href="#">BsaI</a>	GGTCTCN NNNN▲
19	<a href="#">BsaXI</a>	▲NNN (N) <sub>9</sub> AC (N) <sub>5</sub> CTCC (N) <sub>7</sub> ▲NNN
20	<a href="#">BseRI</a>	GAGGAG (N) <sub>8</sub> ▲NN
21	<a href="#">BsgI</a>	GTGCAG (N) <sub>14</sub> ▲NN
22	<a href="#">BsiWI</a>	C GTAC▲G
23	<a href="#">BsoBI</a>	C YCGR▲G
24	<a href="#">BspEI</a>	T CCGG▲A
25	<a href="#">BsrGI</a>	T GTAC▲A
26	<a href="#">BstBI</a>	TT CG▲AA
27	<a href="#">Bsu36I</a>	CC TNA▲GG
28	<a href="#">BtsI</a>	GCAGTG▲NN
29	<a href="#">CspCI</a>	▲NN (N) <sub>11</sub> CAA (N) <sub>5</sub> GTGG (N) <sub>10</sub> ▲NN
30	<a href="#">Eco53kI</a>	GAG▲CTC
31	<a href="#">EcoNI</a>	CCTNN N▲NNAGG
32	<a href="#">EcoRI</a>	G AATT▲C
33	<a href="#">EcoRV</a>	GAT▲ATC
34	<a href="#">FseI</a>	GG▲CCGG CC
35	<a href="#">HincII</a>	GTY▲RAC
36	<a href="#">HindIII</a>	A AGCT▲T
37	<a href="#">HpaI</a>	GTT▲AAC
38	<a href="#">KpnI</a>	G▲GTAC C
39	<a href="#">MfeI</a>	C AATT▲G
40	<a href="#">MluI</a>	A CGCG▲T
41	<a href="#">NheI</a>	G CTAG▲C

42	<a href="#">NotI</a>	GC GGCC▲GC
43	<a href="#">NruI</a>	TCG▲CGA
44	<a href="#">NsiI</a>	A▲TGCA T
45	<a href="#">PacI</a>	TTA▲AT TAA
46	<a href="#">PaeR7I</a>	C TCGA▲G
47	<a href="#">PmeI</a>	GTTT▲AAAC
48	<a href="#">PmlI</a>	CAC▲GTG
49	<a href="#">PpuMI</a>	RG GWC▲CY
50	<a href="#">PshAI</a>	GACNN▲NNGTC
51	<a href="#">PspXI</a>	VC TCGA▲GB
52	<a href="#">PvuI</a>	CG▲AT CG
53	<a href="#">RsrII</a>	CG GWC▲CG
54	<a href="#">SacI</a>	G▲AGCT C
55	<a href="#">SacII</a>	CC▲GC GG
56	<a href="#">SalI</a>	G TCGA▲C
57	<a href="#">ScaI</a>	AGT▲ACT
58	<a href="#">SexAI</a>	A CCWGG▲T
59	<a href="#">SfiI</a>	GGCCN▲NNN NGGCC
60	<a href="#">SgrAI</a>	CR CCGG▲YG
61	<a href="#">SmaI</a>	CCC▲GGG
62	<a href="#">SnaBI</a>	TAC▲GTA
63	<a href="#">SpeI</a>	A CTAG▲T
64	<a href="#">SrfI</a>	GCCC▲GGGC
65	<a href="#">StuI</a>	AGG▲CCT
66	<a href="#">SwaI</a>	ATTT▲AAAT
67	<a href="#">TspMI</a>	C CCGG▲G
68	<a href="#">XbaI</a>	T CTAG▲A
69	<a href="#">XcmI</a>	CCANNNN▲N NNNNTGG
70	<a href="#">XhoI</a>	C TCGA▲G
71	<a href="#">XmaI</a>	C CCGG▲G

## One-Cutters

#	Enzyme	Specificity	Sites & flanks	Cut positions (blunt - 5' ext. - 3' ext.)
1	<a href="#">AatII</a>	G▲ACGT C	<a href="#">list</a>	*610/606
2	<a href="#">AccI</a>	GT MK▲AC	<a href="#">list</a>	1305/1307
3	<a href="#">AclI</a>	AA CG▲TT	<a href="#">list</a>	*860/862

4	<a href="#">AfeI</a>	AGC▲GCT	<a href="#">list</a>	<a href="#">*789</a>
5	<a href="#">AflIII</a>	A CRYG▲T	<a href="#">list</a>	<a href="#">1533/1537</a>
6	<a href="#">AlwNI</a>	CAG▲NNN CTG	<a href="#">list</a>	<a href="#">1949/1946</a>
7	<a href="#">ApaI</a>	G▲GGCC C	<a href="#">list</a>	<a href="#">*581/577</a>
8	<a href="#">AseI</a>	AT TA▲AT	<a href="#">list</a>	<a href="#">218/220</a>
9	<a href="#">AvaII</a>	G GWC▲C	<a href="#">list</a>	<a href="#">820/823</a>
10	<a href="#">BamHI</a>	G GATC▲C	<a href="#">list</a>	<a href="#">386/390</a>
11	<a href="#">BbsI</a>	GAAGACNN NNNN▲	<a href="#">list</a>	<a href="#">3282/3286</a>
12	<a href="#">BcgI</a>	▲NN (N) <sub>10</sub> CGA(N) <sub>6</sub> TGC(N) <sub>10</sub> ▲NN	<a href="#">list</a>	<a href="#">*1112/1110+1146/1144</a>
13	<a href="#">BmgBI</a>	CAC▲GTC	<a href="#">list</a>	<a href="#">*102</a>
14	<a href="#">BsaBI</a>	GATNN▲NNATC	<a href="#">list</a>	<a href="#">*#732</a>
15	<a href="#">BsmBI</a>	CGTCTCN NNNN▲	<a href="#">list</a>	<a href="#">*1176/1180</a>
16	<a href="#">BsmI</a>	GAATG▲CN	<a href="#">list</a>	<a href="#">115/113</a>
17	<a href="#">BspDI</a>	AT CG▲AT	<a href="#">list</a>	<a href="#">*402/404</a>
18	<a href="#">BsrDI</a>	GCAATG▲NN	<a href="#">list</a>	<a href="#">2849/2847</a>
19	<a href="#">BssHII</a>	G CGCG▲C	<a href="#">list</a>	<a href="#">*547/551</a>
20	<a href="#">BstEII</a>	G GTNAC▲C	<a href="#">list</a>	<a href="#">94/99</a>
21	<a href="#">BstZ17I</a>	GTA▲TAC	<a href="#">list</a>	<a href="#">1306</a>
22	<a href="#">ClaI</a>	AT CG▲AT	<a href="#">list</a>	<a href="#">*402/404</a>
23	<a href="#">DraIII</a>	CAC▲NNN GTG	<a href="#">list</a>	<a href="#">*105/102</a>
24	<a href="#">EagI</a>	C GGCC▲G	<a href="#">list</a>	<a href="#">*2522/2526</a>
25	<a href="#">EcoO109I</a>	RG GNC▲CY	<a href="#">list</a>	<a href="#">150/153</a>
26	<a href="#">Esp3I</a>	CGTCTCN NNNN▲	<a href="#">list</a>	<a href="#">*1176/1180</a>
27	<a href="#">FspI</a>	TGC▲GCA	<a href="#">list</a>	<a href="#">*2718</a>
28	<a href="#">MscI</a>	TGG▲CCA	<a href="#">list</a>	<a href="#">2698</a>
29	<a href="#">NaeI</a>	GCC▲GGC	<a href="#">list</a>	<a href="#">*3118</a>
30	<a href="#">NgoMIV</a>	G CCGG▲C	<a href="#">list</a>	<a href="#">*3116/3120</a>
31	<a href="#">NmeAIII</a>	GCCGAG(N) <sub>19</sub> ▲NN	<a href="#">list</a>	<a href="#">2841/2839</a>
32	<a href="#">PciI</a>	A CATG▲T	<a href="#">list</a>	<a href="#">1533/1537</a>
33	<a href="#">PflMI</a>	CCAN▲NNN NTGG	<a href="#">list</a>	<a href="#">105/102</a>
34	<a href="#">PsiI</a>	TTA▲TAA	<a href="#">list</a>	<a href="#">423</a>
35	<a href="#">PspOMI</a>	G GGCC▲C	<a href="#">list</a>	<a href="#">*577/581</a>
36	<a href="#">PstI</a>	C▲TGCA G	<a href="#">list</a>	<a href="#">397/393</a>
37	<a href="#">SbfI</a>	CC▲TGCA GG	<a href="#">list</a>	<a href="#">397/393</a>
38	<a href="#">SphI</a>	G▲CATG C	<a href="#">list</a>	<a href="#">3021/3017</a>
39	<a href="#">SspI</a>	AAT▲ATT	<a href="#">list</a>	<a href="#">492</a>
40	<a href="#">ZraI</a>	GAC▲GTC	<a href="#">list</a>	<a href="#">*608</a>