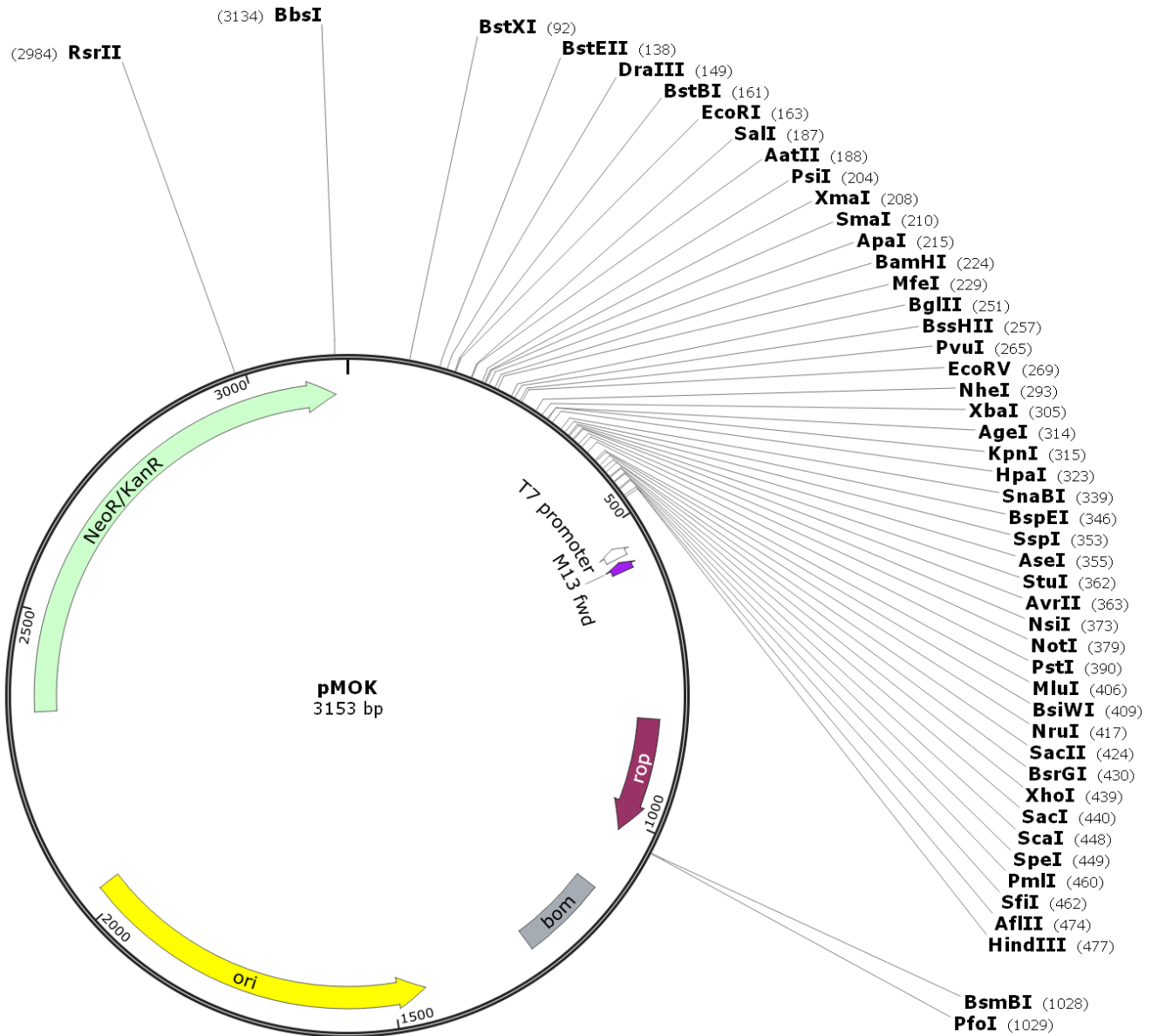


**Vector:** pMOK

**Antibiotic Selection:** Kan

**Creator(s):** Jinyong Luo, Molecular Oncology Lab of The University of Chicago Medical Center

**Date of Construction:** June, 2006 (updated by Zongyue Zeng @ Nov 12, 2017)



## pMOK Vector Full-Length Sequence

GGAAACAGCTATGACCATGATTACGCCAAGCTCGA**AATTACCCTCACTAAAGGGAACAAAAGCTGGTACGAGGACAGGCTGG**  
**AGCCATGGGCATGGCTACTCAAGCTGATTTGATGGAGTTGGACATGGCCATGGCTGGTACCACGTCGTGGAATGCCTT****GA**  
**ATT**CAGCACCTGCACATGGGACGTCGACCTGAGGTAATTATAACCCGGGCCCTATATATGGATCCAATTGCAATGATCATCA  
 TGACAGATCTGCGCGCATCGATATCAGCGCTTTAAATTTGCGCATGCTAGCTATAGTTCTAGAGGTACCGGTTGTTAACGT  
 TAGCCGGCTACGTATACTCCGGAATATTAATAGGCCTAGGATGCATATGGCGGCCGCTGCAGCTGGCGCCATCGAT**ACGGC**  
**T**ACGTCGCGACCGCGGACATGTACAGAGCTCGAGAAGTACTAGTGGCCACGTGGGCGGTGCACCTT**AAGCTT**TTAAATA**AG**  
**AGGAATAACATATGACCATGATTACGCCAAGCTCCAATT**GCCCTATAGTGAGTCGTATTACAATTCACCTGGCCGTCGTTTT  
 ACCCGGATCTGCATCGCAGGATGCTGCTGGCTACCCGTGGAACACCTACATCTGTATTAACGAAGCGCTGGCATTGACCCCT  
 GAGTGATTTTTCTCTGGTCCC GCCCATCCATACCGCCAGTTGTTTACCCTCACAACGTTCCAGTAACCGGGCATGTTTCATC  
 ATCAGTAACCCGATCGTGAGCATCCTCTCTCGTTTCATCGGTATCATTACCCCCATGAACAGAAATCCCCCTTACACGGAG  
 GCATCAGTGACCAACAGGAAAAACCGCCCTTAACATGGCCCGCTTTATCAGAAGCCAGACATTAACGCTTCTGGAGAAAC  
 TCAACGAGCTGGACGCGGATGAACAGGCAGACATCTGTGAATCGTTCACGACCAGCTGATGAGCTTTACCGCATGGCTGCCT  
 CGCGCTTTTCGGTGTACGGTGAAAACCTGTACACATCGCATCCCGGAGACGGTACAGCTTGTCTGTAAAGCGGATGCC  
 GGGAGCAGACAAGCCGCTCAGGGCGCGTCAGCGGGTGTGGCGGGTGTGGGGCGCAGCCATGACCCAGTCACGTAGCGATA  
 GCGGAGTGTATACTGGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGTGAAATACCGCAC  
 AGATGCGTAAGGAGAAAAATACCGCATCAGGCGCTCTCCGCTTCCCTCGTCACTGACTCGCTGCGCTCGGTGCTTCGGCTGC  
 GCGGAGCGGTATCAGCTCACTCAAAGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCAGGAAAGAATGTGAGC  
 AAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCAT  
 CACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATAACAGGCGTTTTCCCCCTGGAAGCTCCC  
 TCGTGCCTCTCCTGTTCCGACCCGCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCA  
 TAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCC  
 GACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTG  
 GTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG  
 GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACC  
 ACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCT  
 TTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGATTTTGGTCAATGAGATTATCAAAAAGGATCTTAC  
 CTAGATCCTTTTAAATTAATAAATGAAGTTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGC  
 TTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCCATAGTTGCCGACTCCCCGTCATTCAAATATGTA  
 TCCGCTCATGAGACAATAACCCGTGATAAATGCTTCAATAATAT**ATG**ATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCC  
 GCTTGGGGTGGAGAGGCTATCTCGGTATGACTGGGCAACAGACAAATCGGCTGCTCTGATGCCGCCGTTTCCGGCTGTCAG  
 CGCAGGGGGCGCCCGTTCTTTTTGTCAAGACCACGCTTCCGCTGCCGTTGAATGAACGCAAGCAGGAGCGAGCGCGGTATC  
 GTGGCTGGCCACGACGGGCGTTCCCTTGCAGCAGTGTGCTCGACGTTGTCTACTGAAGCGGGAAGGGACTGGCTGCTATTGGGC  
 GAAGTGCCGGGGCAGGATCTCCTGTCTATCTCACCTTGTCTCCGAGAAAGTATCCATCATGGCTGATGCAATGCCGGCGC  
 TGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGC  
 CGGTCTTGTTCGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACGTTTCGCCAGGCTCAAGGCGAGC  
 ATGCCCGACGGCGAGGATCTCGTTCGTGACCCATGGCGATGCCGCTTGGCCGAATATCATGGTGGAAAAATGGCCGCTTTTCTG  
 GATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCT  
 TGGCGCGAATGGGCTGACCGCTTCCCTCGTGTCTTACGGTATCGCCGCTCCCGATTTCGACGCGCATCGCTTCTATCGCCTT  
 CTTGACGAGTTCTT**CGAC**CTTTTCGCTTCAAGaatt

### Unique enzymes in pMOK:

BstE II	G`GNAC,C	95	Hpa I	GTT AAC	280
PflM I	CCAN,NNN`NTGG	106	SnaB I	TAC GTA	296
Dra III	CAC,NNN`GTG	106	BspM II	T`CCGG,A	303
Bsm I	GAATG,C 7	116	Ssp I	AAT ATT	310
Bsg I	GTGCAG 22/20	116	Ase I	AT`TA,AT	312
BsiC I	TT`CG,AA	118	Vsp I	AT`TA,AT	312
BstB I	TT`CG,AA	118	Stu I	AGG CCT	319
EcoR I	G`AATT,C	120	Avr II	C`CTAG,G	320
Sal I	G`TCGA,C	144	Nsi I	A,TGCA`T	330
Aat II	G,ACGT`C	145	Not I	GC`GGCC,GC	336
Bsu36 I	CC`TNA,GG	150	Pst I	C,TGCA`G	347
PspA I	C`CCGG,G	165	Mlu I	A`CGCG,T	363
Xma I	C`CCGG,G	165	BsiW I	C`GTAC,G	366
Sma I	CCC GGG	167	Spl I	C`GTAC,G	366
Bsp120 I	G`GGCC,C	168	Nru I	TCG CGA	374
Eco0109 I	RG`GNC,CY	169	Sac II	CC,GC`GG	381
Apa I	G,GGCC`C	172	BsrG I	T`GTAC,A	387
BamH I	G`GATC,C	181	PaeR7 I	C`TCGA,G	396
Mun I	C`AATT,G	186	Xho I	C`TCGA,G	396
Bcl I	T`GATC,A	195	Sac I	G,AGCT`C	397
Bgl II	A`GATC,T	208	Sca I	AGT ACT	405
BssH II	G`CGCG,C	214	Spe I	A`CTAG,T	406
Pvu I	CG,AT`CG	222	Eco72 I	CAC GTG	417
EcoR V	GAT ATC	226	Pml I	CAC GTG	417
Nhe I	G`CTAG,C	250	Sfi I	GGCCN,NNN`NGGCC	419
Xba I	T`CTAG,A	262	Bgl I	GCCN,NNN`NGGC	419
Acc65 I	G`GTAC,C	268	Afl II	C`TTAA,G	431
Asp718	G`GTAC,C	268	HinD III	A`AGCT,T	434
Age I	A`CCGG,T	271	BsmB I	CGTCTC 7/11	982
Kpn I	G,GTAC`C	272	Bsp1286 I	G,DGCH`C	2725
			Msl I	CAYNN NNRTG	2859
			Rsr II	CG`GWC,CG	2938

Bbs I GAAGAC 8/12 3088  
Bbv II GAAGAC 7/11 3089  
Number of enzymes = 64

BsrB I (3) 1272 2254 3035  
BsrD I (2) 198 2655  
BsrG I (1) 387  
BssH II (1) 214  
BssS I (2) 1512 3014  
Bst1107 I (2) 299 1112  
BstB I (1) 118  
BstE II (1) 95  
BstN I (4) 1367 1488 1501 2809  
BstU I (13) 216 218 365 374  
380 871 940 942  
1045 1386 1967 2488  
2789

The following enzymes do not cut in pMOK:

Asc I Blp I Bsa I BseR I BstX I  
EcoN I Esp I Fse I Pac I Pme I

BstY I (9) 181 208 533 1980  
1991 2077 2089 2593  
2839  
Bsu36 I (1) 150  
Cac8 I (24) 216 248 252 290  
343 350 438 556  
598 816 1270 1356  
1393 1953 2316 2502  
2721 2787 2793 2821  
2825 2866 2870 2924  
271 288 2741 2922

pMOK: sites sorted by name:

Aat II (1) 145  
Acc I (3) 145 298 1111  
Acc65 I (1) 268  
Aci I (44) 335 339 378 380  
630 633 644 800  
816 871 927 1012  
1051 1061 1103 1128  
1166 1179 1205 1222  
1265 1272 1293 1384  
1412 1539 1558 1679  
1789 1924 1933 2252  
2331 2394 2488 2552  
2653 2656 2896 2936  
2941 2991 3007 3033  
Afl II (1) 431  
Afl III (3) 363 384 1339  
Age I (1) 271  
Aha II (3) 142 352 2422  
Ahd I (2) 2232 3092  
Alu I (20) 9 31 64 254  
348 395 436 477  
864 921 932 981  
1000 1281 1507 1597  
1643 1900 2528 2986  
Alw I (11) 177 188 540 1901  
1987 1987 2084 2085  
2600 2667 2846  
AlwN I (2) 130 1755  
Apa I (1) 172  
ApaL I (3) 425 1155 1653  
Apo I (2) 120 238  
Ase I (1) 312  
Asp718 (1) 268  
Ava I (2) 165 396  
Ava II (2) 626 2938  
Avr II (1) 320  
BamH I (1) 181  
Ban I (5) 268 351 2180 2421  
2456  
Ban II (3) 172 397 2787  
Bbe I (2) 355 2425  
Bbs I (1) 3088  
Bbv I (10) 357 941 990 1087  
1758 1761 1967 2495  
2537 3058  
Bbv II (1) 3089  
Bcl I (1) 195  
Bcn I (9) 167 168 532 680  
986 1021 1720 2427  
2587  
Bfa I (6) 251 263 321 407  
1834 2087  
Bgl I (1) 419  
Bgl II (1) 208  
Bpm I (2) 102 868  
BsaA I (4) 296 417 1093 2726  
BsaB I (2) 224 538  
BsaH I (3) 142 352 2422  
BsaJ I (7) 87 165 320 378  
1499 2585 2854 378  
BsaW I (5) 271 303 1545 1692  
2453  
Bsg I (1) 116  
BsiC I (1) 118  
BsiE I (6) 222 339 378 1255  
1679 2331  
BsiHKA I (6) 397 429 1159 1657  
2535 2725  
BsiW I (1) 366  
Bsm I (1) 116  
BsmA I (2) 983 2255  
BsmB I (1) 982  
BsmF I (3) 153 612 2573  
BsoF I (33) 336 339 346 552  
633 930 933 979  
1076 1129 1245 1263  
1266 1384 1539 1682  
1747 1750 1956 2331  
2383 2394 2484 2489  
2526 2567 2654 2657  
2660 2896 2992 3033  
3047  
Bsp120 I (1) 168  
Bsp1286 I (1) 2725  
BspH I (3) 201 2059 2256  
BspM I (3) 138 2309 2690  
BspM II (1) 303  
Bsr I (10) 518 648 672 1087  
1118 1746 1759 1873  
2365 2566

Cfr10 I (4) 271 288 2741 2922  
Cla I (2) 222 358  
Csp6 I (7) 68 269 367 388  
404 1146 2727  
Dde I (6) 150 609 1149 1614  
2023 2189  
Dpn I (17) 183 197 210 221  
535 1907 1982 1993  
2001 2079 2091 2196  
2595 2673 2754 2763  
2841  
DpnII (17) 181 195 208 219  
533 1905 1980 1991  
1999 2077 2089 2194  
2593 2671 2752 2761  
2839  
Dra I (3) 237 2098 2117  
Dra III (1) 106  
Drd I (3) 1034 1447 2449  
Dsa I (3) 87 378 2854  
Eae I (7) 336 411 516 2328  
2502 2893 2920  
Eag I (2) 336 2328  
Ear I (3) 1223 2766 2976  
Eco47 III (2) 232 595  
Eco57 I (3) 1886 2567 2999  
Eco72 I (1) 417  
EcoO109 I (1) 169  
EcoR I (1) 120  
EcoR II (4) 1365 1486 1499 2807  
EcoR V (1) 226  
Ehe I (2) 353 2423  
Fnu4H I (33) 336 339 346 552  
633 930 933 979  
1076 1129 1245 1263  
1266 1384 1539 1682  
1747 1750 1956 2331  
2383 2394 2484 2489  
2526 2567 2654 2657  
2660 2896 2992 3033  
3047  
Fok I (9) 337 560 622 700  
886 1027 2198 2746  
2771  
Fsp I (2) 245 2524  
Gdi II (7) 335 337 515 2327  
2329 2892 2919  
Gsu I (2) 101 867  
Hae I (6) 319 413 1354 1365  
1817 2504  
Hae II (6) 234 355 597 1217  
1587 2425  
Hae III (15) 170 319 338 413  
422 518 814 1354  
1365 1383 1817 2330  
2504 2895 2922  
Hga I (4) 876 1035 1449 2027  
HgiA I (6) 397 429 1159 1657  
2535 2725  
HgiE II (2) 1157 1918  
Hha I (22) 216 218 233 246  
354 596 942 1045  
1075 1216 1249 1519  
1586 1686 1860 1969  
2416 2424 2488 2525  
2791 3051  
HinC II (2) 146 280  
Hind II (2) 146 280  
Hind III (1) 434  
Hinf I (8) 497 895 1239 1314  
1710 2227 2907 3041  
HinI I (3) 142 352 2422  
HinP I (22) 214 216 231 244  
352 594 940 1043  
1073 1214 1247 1517  
1584 1684 1858 1967  
2414 2422 2486 2523  
2789 3049  
Hpa I (1) 280  
Hpa II (20) 166 272 289 304



Mlu I	A`CGCG,T	1	Mme I	TCCRAC 25/23	2	Rsr II	CG`GWC,CG	1	Sac I	G,AGCT`C	1
Mnl I	CCTC 10/10	18	Msc I	TGG CCA	2	Sac II	CC,GC`GG	1	Sal I	G`TCGA,C	1
Mse I	T`TA,A	14	Msl I	CAYNN NNRTG	1	Sap I	GCTCTTC 8/11	3	Sau3A I	`GATC,	17
Msp I	C`CG,G	20	MspA1 I	CMG CKG	7	Sau96 I	G`GNC,C	6	Sca I	AGT ACT	1
Mun I	C`AATT,G	1	Nae I	GCC GGC	2	ScrF I	CC`N,GG	13	Sec I	C`CNNG,G	7
Nar I	GG`CG,CC	2	Nci I	CC`S,GG	9	SfaN I	GCATC 9/13	17	Sfc I	C`TRYA,G	5
Nco I	C`CATG,G	2	Nde I	CA`TA,TG	2	Sfi I	GGCCN,NNN`NGGCC	1	Sma I	CCC GGG	1
NgoM I	G`CCGG,C	2	Nhe I	G`CTAG,C	1	SnaB I	TAC GTA	1	Spe I	A`CTAG,T	1
Nla III	,CATG`	19	Nla IV	GGN NCC	11	Sph I	G,CATG`C	2	Spl I	C`GTAC,G	1
Not I	GC`GGCC,GC	1	Nru I	TCG CGA	1	Srf I	GCCC GGGC	-	Ssp I	AAT ATT	1
Nsi I	A,TGCA`T	1	Nsp7524 I	R`CATG,Y	6	Stu I	AGG CCT	1	Sty I	C`CWWG,G	3
NspB II	CMG CKG	7	NspH I	R,CATG`Y	6	Taq I	T`CG,A	12	Tfi I	G`AWT,C	4
Pac I	TTA,AT`TAA	-	Paer7 I	C`TCGA,G	1	Tsp45 I	`GTSAC,	6	Tth111 I	GACN`N,NGTC	3
Pal I	GG CC	15	Pf1M I	CCAN,NNN`NTGG	1	Tth111 II	CAARCA 16/14	5	Vsp I	AT`TA,AT	1
Ple I	GAGTC 9/10	2	Pme I	CTTT AAAC	-	Xba I	T`CTAG,A	1	Xca I	GTA TAC	2
Pml I	CAC GTG	1	PpuM I	RG`GWC,CY	-	Xcm I	CCANNNN,N`NNNNTGG-	-	Xho I	C`TCGA,G	1
Psp1406 I	AA`CG,TT	2	PspA I	C`CCGG,G	1	Xho II	R`GATC,Y	9	Xma I	C`CCGG,G	1
Pst I	C,TGCA`G	1	Pvu I	CG,AT`CG	1	Xma III	C`GGCC,G	2	Xmn I	GAANN NNTTC	2
Pvu II	CAG CTG	3	Rsa I	GT AC	7						

