



## pMSCV-Hyg-GFP-miR Cntl

Absent Sites	0	AarI, AbsI, Accl, AflI, AflI', Apal, AvrII, BamHI, BarI, BarI', BbsI, BclI, BpI, BpI', BsaAI, BsaBI, BsiWI, BstBI, BstZ17I, CspCI, CspCI', FseI, FspAI, HpaI, MauBI, MfeI, MluI, MreI, NruI, PacI, PfiMI, PmeI, PmlI, PstI, PspOMI, PspXI, PstI, PstI', Sall, SanDI, SbfI, SfiI, SgrDI, SnaBI, SrfI, SvaI, XcmI, XhoI
AfIII	1	4810
AjuI	1	3422
AjuI'	1	3390
AsiSI	1	3073
BglIII	1	1411
BplI	1	2456
BsmI	1	2614
BstEII	1	1089
BstXI	1	2699
Clal	1	3741
HincII	1	3545
HindIII	1	2694
NotI	1	2158
NsiI	1	3740
PciI	1	4810
PshAI	1	2736
RsrII	1	3117
SacII	1	3489
SexAI	1	1217
SgrAI	1	7246
StuI	1	2477

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5' TGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCATTTTTCGCAAGGCATGGAAAATACATAACTGAGAATAGAGAAGTTTCAAGTCAAGG  
 100  
 3' ACTTTCTGGGTGGACATCCAAACCGTTCGATCGAATTCATTGCGGTAACCGTTCCTGACCTTTTATGTATTGACTCTTATCTCTTCAAGTCTAGTTCC  
 5' pCMV LTR

5' TTAGGAACAGAGACAGCAGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCG  
 200  
 3' AATCCTTGTCTCTCTGTGCTTATACCCGGTTTGTCTTATAGACACCATTTCGTCAAGGACGGGGCCGAGTCCCGGTTCTTGTCTACCAGGGGTCTACGC  
 5' pCMV LTR

5' GTCCCGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTC  
 300  
 3' CAGGGCCGGGAGTCGTCAAAGATCTCTTGGTAGTCTACAAAGTCCACGGGGTTCCTGGACTTTACTGGGACACGGAATAAACTTGATTGGTTAGTCAAG  
 5' pCMV LTR

5' GCTTCTCGTCTCTGTTCGCGCCTTCTGCTCCCCGAGCTCAATAAAAAGAGCCACAAACCCCTCACTCGGCGCGCAGTCTCCGATAGACTGCGTCCCC  
 400  
 3' CGAAGAGCGAAGACAAGCGCGGAAGACGAGGGGCTCGAGTTATTTTCTCGGGTGTGGGGAGTGAGCCGCGCGGTGAGGAGGCTATCTGACGCAGCGGG  
 5' pCMV LTR

5' GGGTACCCGTATTCCCAATAAAGCCTCTTGCTGTTTGCATCCGAATCGTGGACTCGCTGATCCTTGGGAGGGTCTCCTCAGATTGATTGACTGCCACCT  
 500  
 3' CCCATGGGCATAAGGGTTATTTTCGGAGAACGACAAACGTAGGCTTAGCACCTGAGCGACTAGGAACCCCTCCAGAGGAGTCTAACTAACTGACGGGTGGA  
 5' pCMV LTR

5' CGGGGTCTTTTCAATTTGGAGGTTCCACCGAGATTGGAGACCCCTGCCAGGGACCACCGACCCCCCGCGGGAGGTAAGCTGGCCAGCGGTCTGTTTCG  
 600  
 3' GCCCCAGAAAGTAAACCTCCAAGGTGGCTCTAAACCTCTGGGGACGGGTCCCTGTTGGCTGGGGGGCGGCCCTCCATTCGACCGGTGCGCAGCAAAGC  
 5' pCMV LTR

Pack Signal

5' TGTCTGTCTCTGTCTTGTGCGTGTGTGCGCCGCATCTAATGTTTGGCCTGCGTCTGTACTAGTTAGCTAACTAGCTCTGTATCTGGCGGACCCGTGG  
 700  
 3' ACAGACAGAGACAGAAACACGCACAAACACGGCCGTAGATTACAAACCGCGACGCAGACATGATCAATCGATTGATCGAGACATAGACCGCTGGGCACC  
 Pack Signal

5' TGGAATGACGAGTTCTGAACACCCGGCCGCAACCTGGGAGACGTCCCAGGGACTTTGGGGCCGTTTGTGGCCCGACCTGAGGAAGGGAGTCGATG  
 800  
 3' ACCTTGACTGCTCAAGACTTGTGGGCCGGCGTTGGGACCTCTGCAGGGTCCCTGAAACCCCGGCAAAAACACCGGGCTGGACTCCTTCCTCAGCTAC  
 Pack Signal

5' TGGAATCCGACCCCGTCAGGATATGTGGTTCTGGTAGGAGACGAGAACC'TAAACAGTTCCCGCCTCCGTCTGAATTTTGTCTTTCGGTTTGAACCGAA  
 900  
 3' ACCTTAGGCTGGGGCAGTCTTATACACCAAGACCATCCTCTGCTCTTGGATTTTGTCAAGGGCGGAGGCAGACTTAAAAACGAAAGCCAAACCTTGGCTT  
 Pack Signal

5' GCCGCGCTCTGTCTGCTGCAGCGCTGCAGCATCGTTCGTGTGTCTCTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATTAGGGCCAGACTGTTAC  
 1000  
 3' CGGCGCGCAGAACAGACGACGTCGCGACGTCGTAGCAAGACACAACAGAGACAGACTGACACAAAGACATAAACAGACTTTTAATCCCGGTCTGACAATG  
 Pack Signal



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5' GAAGAATCTCGTGCTTTCAGCTTCGATGTAGGAGGGCGTGGATATGTCCGCGGGTAAATAGCTGCGCCGATGGTTTCTACAAAGATCGTTATGTTTATC 2900  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' CTTCTTAGAGCACGAAAGTCGAAGCTACATCCTCCCGCACCTATACAGGACGCCATTTATCGACGCGGCTACCAAAGATGTTTCTAGCAATACAAATAG  
 hygromycin B phosphotransferase

5' GGCAC TTTGCATCGGCGCGCTCCCGATTCCGGAAGTGC TTGACAT TGGGGAATTCAGCGAGAGCCTGACCTATGCATCTCCCGCGTGACAGGGTGT 3000  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' CCGTGAAACGTAGCCGGCGGAGGGCTAAGGCCTTACGAACTGTAACCCCTTAAGTCGCTCTCGGACTGGATAACGTAGAGGGCGGCACGTGTCCACA  
 hygromycin B phosphotransferase

5' CACGTTGCAAGACCTGCCTGAAACCGAAGTGCCTGCTGTCTGACGCGGCTCGCGGAGGCCATGGATGCGATCGCTGCGGCCGATCTTAGCCAGACGAGC 3100  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' GTGCAACGTTCTGGACGGACTTTGGCTTGACGGGCGACAAGAGCTCGGCCAGCGCTCCGGTACCTACGCTAGCGACGCCGGCTAGAATCGGTCTGCTCG  
 hygromycin B phosphotransferase AsiSI

5' GGGTTCGGCCATTTCGGACCGCAAGGAATCGGTCAATACACTACATGGCGTGATTTTCATATGCGCGATTGCTGATCCCCATGTGTATCACTGGCAAACCTG 3200  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' CCCAAGCCGGTAAGCCTGGCGTTCCCTTAGCCAGTTATGTGATGTACCGCACTAAAGTATACGCGCTAACGACTAGGGGTACACATAGTGACCGTTTGGAC  
 hygromycin B phosphotransferase RsrII

5' TGATGGACGACACCGTCAGTGCCTCCGTCGCGCAGGCTCTCGATGAGCTGATGCTTTGGGCCGAGGACTGCCCGAAGTCCGGCACCTCGTGACGCGGA 3300  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' ACTACCTGCTGTGGCAGTCACGCAGGCAGCGCTCCGAGAGCTACTCGACTACGAAACCGGCTCCTGACGGGGCTTCAGGCCGTGGAGCACGTGCGCCT  
 hygromycin B phosphotransferase

5' TTTCGGCTCCAACAATGTCTGACGGACAATGGCCGATAACAGCGGTCAATTGACTGGAGCGAGGCGATGTTTCGGGGATTCCAATACGAGGTCGCCAAC 3400  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' AAAGCCGAGGTTGTTACAGGACTGCCTGTTACCGGCGTATTGTGCGCCAGTAACTGACCTCGCTCCGCTACAAGCCCCTAAGGGTTATGCTCCAGCGGTTG  
 hygromycin B phosphotransferase Ajul'

5' ATCTTCTTCTGGAGCCGTGGTTGGCTTGATGGAGCAGCAGACGCGCTACTTCGAGCGGAGGCATCCGGAGCTGCAGGATCGCCGCGGCTCCGGGCGT 3500  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' TAGAAGAAGACCTCCGGCACCAACCGAACATACCTCGTCTGCGCGATGAAGCTCGCCTCCGTAGGCCTCGAACGCTCCTAGCGGCGCCGAGGCCCGCA  
 hygromycin B phosphotransferase Ajul' SacII

5' ATATGCTCCGCATTGGTCTTGACCAACTCTATCAGAGCTTGGTTGACGGCAATTCGATGATGCAGCTTGGGCGCAGGGTTCGATGCGACGCAATCGTCCG 3600  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' TATACGAGGCGTAACCAGAACTGGTTGAGATAGTCTCGAACCAACTGCCGTTAAAGCTACTACGTCGAACCCGCGTCCCAGCTACGCTGCGTTAGCAGGC  
 hygromycin B phosphotransferase HincII

5' ATCCGAGCCGGGACTGTGCGGCGTACACAAATCGCCCGAGAAGCGCGCGCTCTGGACCGATGGCTGTGTAGAAGTACTCGCCGATAGTGGAACCGA 3700  
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
 3' TAGGCCTCGGCCCTGACAGCCCGCATGTGTTTAGCGGGCGTCTTCGCGCCGGCAGACCTGGCTACCGACACATCTTCATGAGCGGCTATCACCTTTGGCT  
 hygromycin B phosphotransferase pEHyg miR fwd seq primer







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5' CCAACGATCAAGGCGAGTTACATGATCCCCATGTTGTGCAAAAAAGCGTTAGCTCCTTCGGTCCCGATCGTTGTCAGAAGTAAGTTGGCCGAGTG  
 6100  
 3' GGTTGCTAGTTCGGCTCAATGTACTAGGGGGTACAACACGTTTTTTTCGCAATCGAGGAAGCCAGGAGGCTAGCAACAGTCTTCATTCAACCGGCGTAC  
 Amp Res

5' TTATCACTCATGGTTATGGCAGCACTGCATAATCTCTTACTGTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCT  
 6200  
 3' AATAGTGAGTACCAATACCGTCGTGACGTATTAAGAGAATGACAGTACGGTAGGCATTCTACGAAAAGACACTGACCACCTCATGAGTTGGTTGAGTAAAG  
 Amp Res

5' GAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAA  
 6300  
 3' CTCCTTATCACATACGCCGCTGGCTCAACGAGAACGGGCCGAGTTATGCCCTATTATGGCGCGGTGATCGTCTTGAAATTTTCACGAGTAGTAACCTTT  
 Amp Res

5' ACGTCTTCGCGGGCGAAAACCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCCACTGATCTTCAGCATCTTTTACT  
 6400  
 3' TGCAAGAAGCCCGCTTTTGAGAGTTCTTAGAATGGCGACAACCTTAGGTCAGCTACATTGGGTGAGCACGTGGGTTGACTAGAAGTCGTAGAAAATGA  
 Amp Res

5' TTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTTCTCTTT  
 6500  
 3' AAGTGGTCGAAAAGACCCACTCGTTTTTGTCTTCCGTTTTTACGCGTTTTTTCCTTATTCCCGCTGTGCCTTTACAACCTTATGAGTATGAGAAGGAAA  
 Amp Res

5' TTCAATATTATGAAGCATTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATT  
 6600  
 3' AAGTTATAATAACTTCGTAATAGTCCCAATAACAGAGTACTCGCCTATGTATAAACTTACATAAATCTTTTTATTTGTTTATCCCAAGGCGCGTGTAA  
 Amp Res

5' TCCCGGAAAAGTGCCACCTGACGTCTAAGAAACCATTATATCATGACATTAACCTATAAAAATAGGCGTATCACGAGGCCCTTTCGTCTCGCGCTTTC  
 6700  
 3' AGGGGCTTTTTCAGGTTGACTGCAGATTCTTTGGTAATAATAGTACTGTAATTTGATATTTTATCCGCATAGTGTCCGGGAAAGCAGAGCGCGCAAG  
 Amp Res

5' GGTGATGACGGTGAAAACCTCTGACACATGCAGCTCCCGGAGACGGTACAGCTTGTCTGTAAGCGGATGCCGGGAGCAGACAAGCCCGTCAGGGCGCGT  
 6800  
 3' CCACACTGCCACTTTTGGAGACTGTGTACGTGAGGGCTCTGCCAGTGTGAACAGACATTTCGCCTACGGCCCTCGTCTGTTCCGGCAGTCCCGCGCA  
 Amp Res

5' CAGCGGGTGTGGCGGGTGTGGGGCTGGCTTAACTATGCGGCATCAGAGCAGATTGTACTGAGAGTGCACCATATGCGGTGTGAAATACCGCACAGATG  
 6900  
 3' GTCGCCCAACCGCCACAGCCCCGACCGAATTGATACGCCGTAGTCTCGTCTAACATGACTCTCACGTGGTATACGCCACACTTTATGGCGTGTCTAC  
 Amp Res

5' CGTAAGGAGAAAATACCGCATCAGGCGCCATTCCGCCATTAGGCTGCGCAACTGTTGGGAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTG  
 7000  
 3' GCATTCCTCTTTTATGGCGTAGTCCGGGTAAGCGGTAAGTCCGACGCGTTGACAACCCTTCCCGCTAGCCACGCCCGGAGAAGCGATAATGCGGTGCGAC  
 Amp Res

5' GCGAAAGGGGGATGTGCTGCAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAACGACGGCGCAAGGAATGGTGCATGCAA  
 7100  
 3' CGCTTCCCTTACACGACGTTCCGCTAATTCAACCCATTGCGGTCCCAAAGGGTCAGTGTGCAACATTTTGTGCTGCCGCGTTCTTACCACGTACGTT  
 Amp Res

5' GGAGATGGCGCCCAACAGTCCCCGGCCACGGGGCCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCGAAGTGGCGAGCCCGATCTTCCCA  
 7200  
 3' CCTCTACCGGGGTTGTCAGGGGGCCGGTGCCCCGGACGGTGGTATGGGTGCGGCTTTGTTCCGAGTACTCGGGCTTACCCTCGGGCTAGAAGGGGT  
 Amp Res

