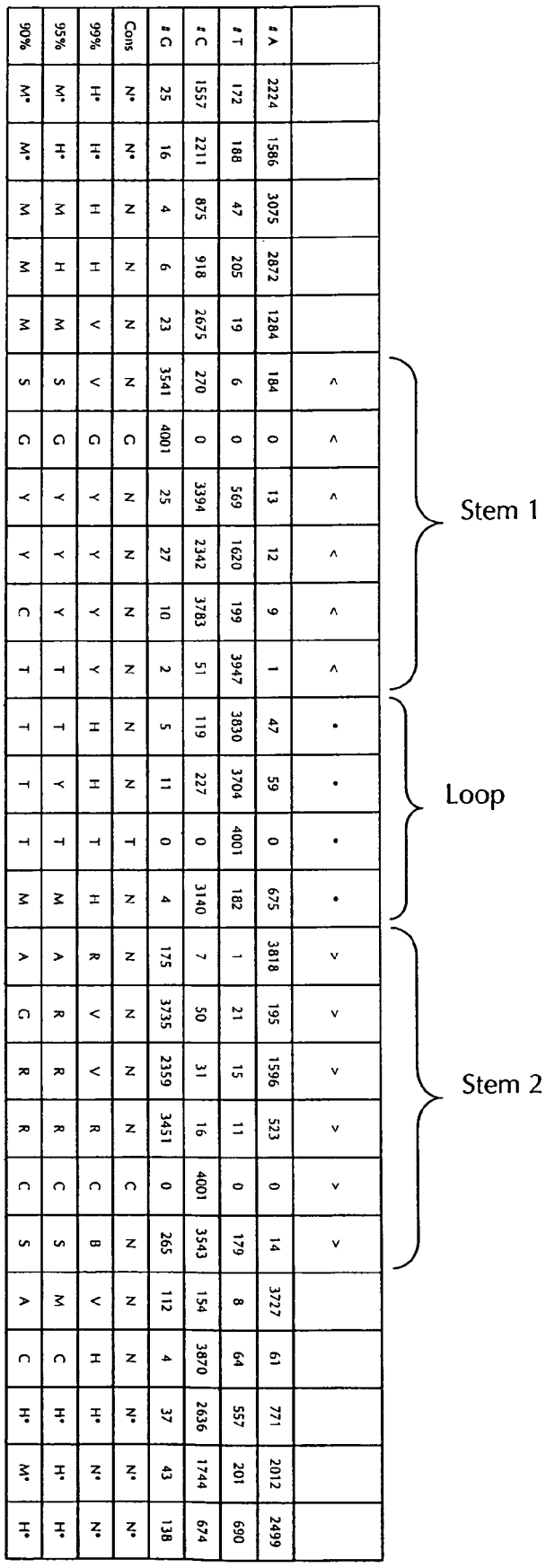


Figure 1

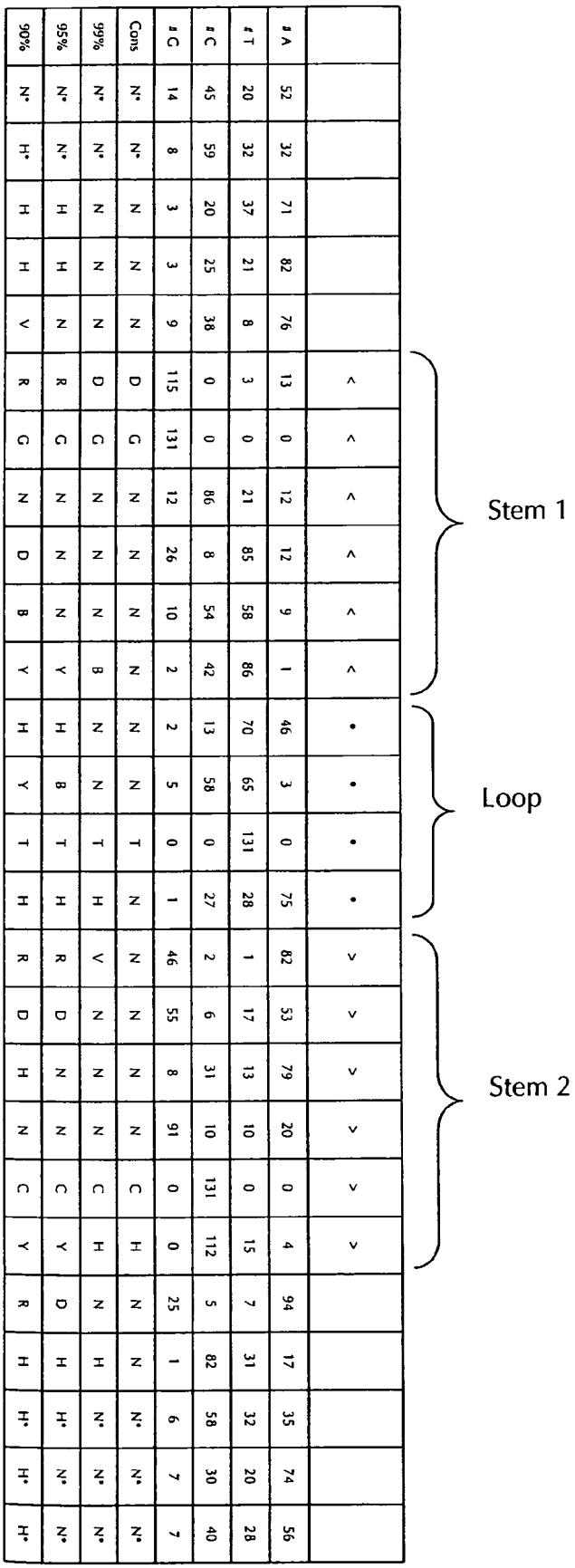


Figure 2

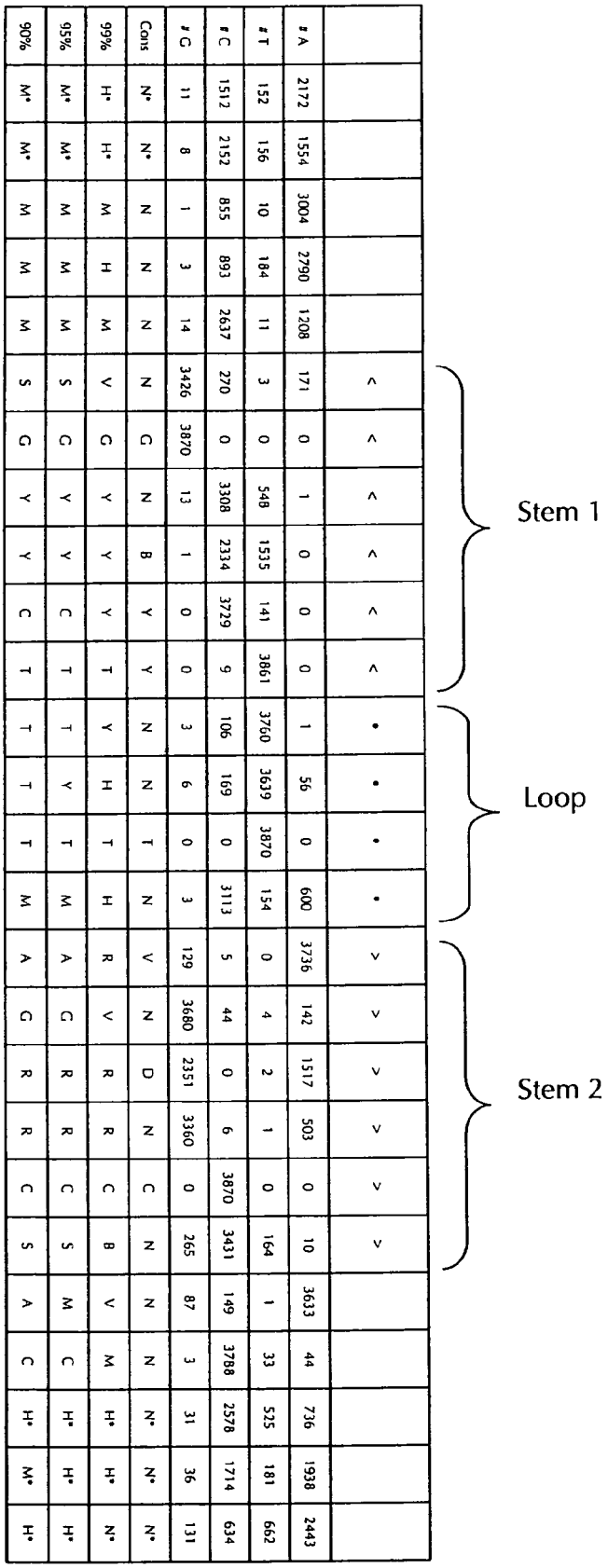


Figure 3

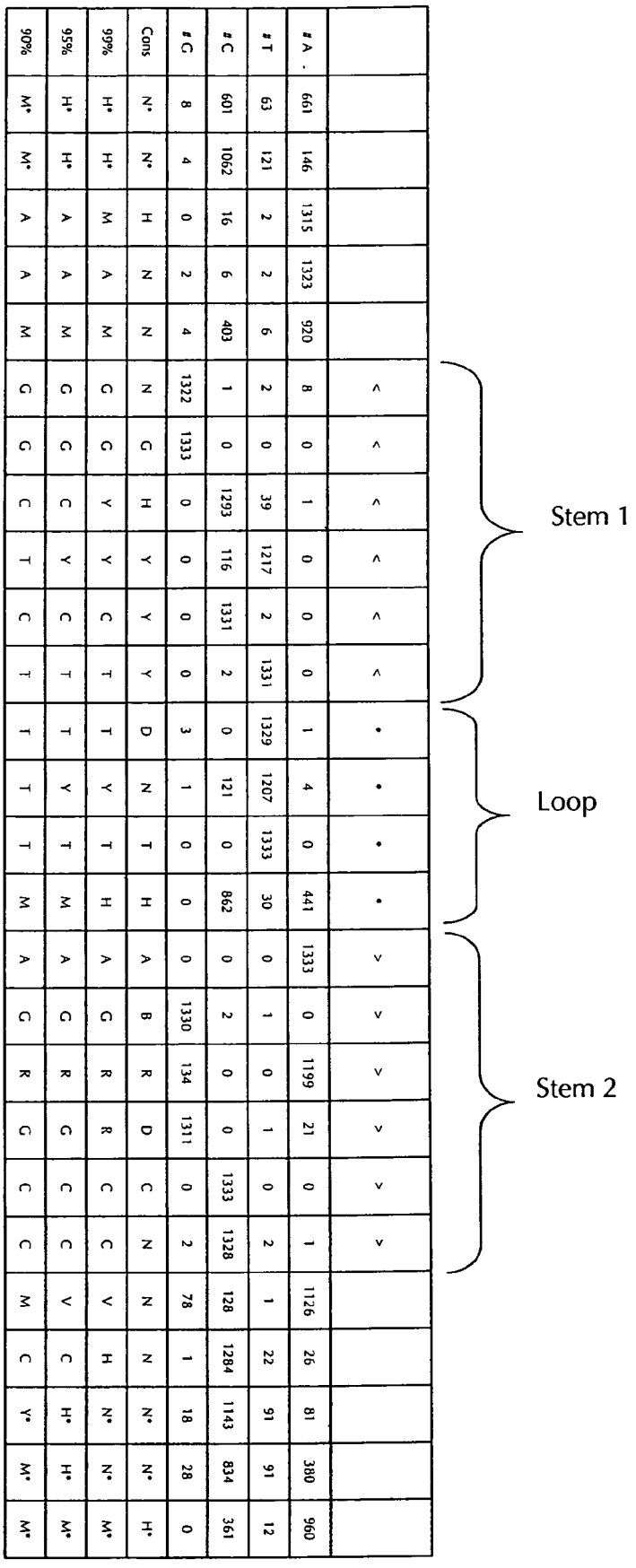


Figure 4

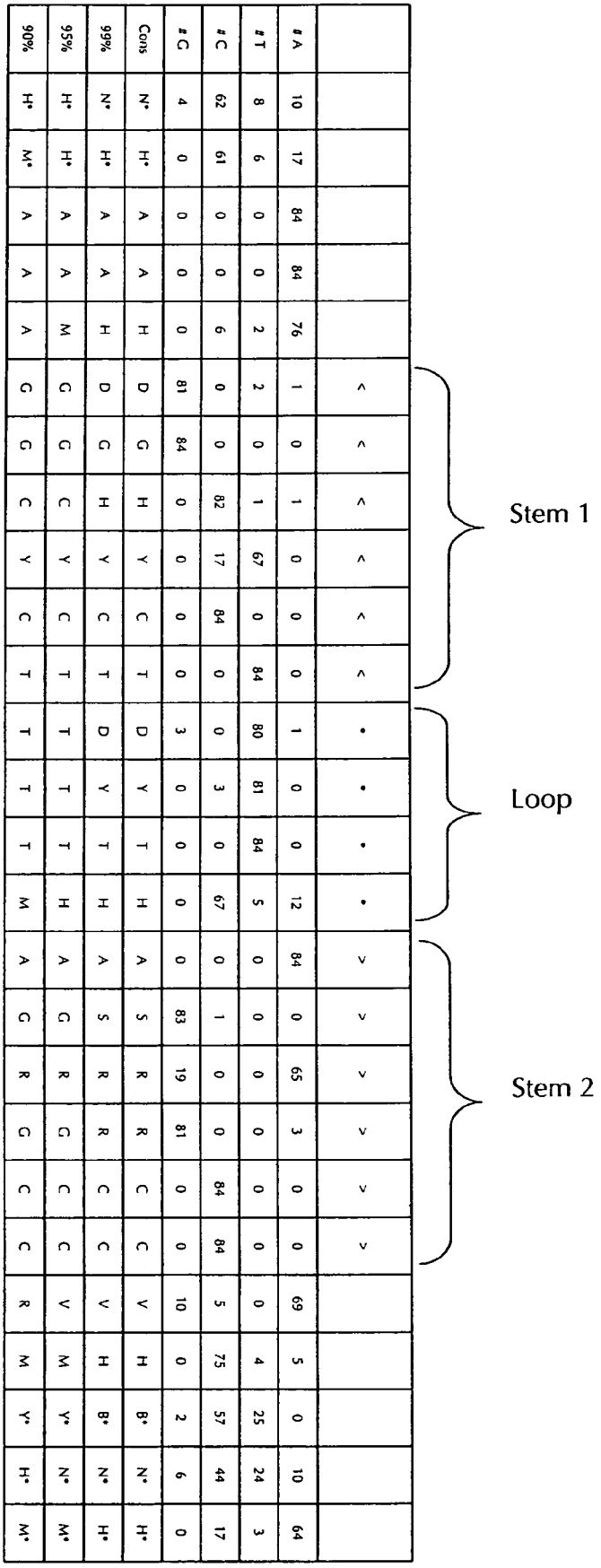


Figure 5

ppLuc(GC) – ag

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
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GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
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GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
auagauc-3′

Figure 6

ppLuc(GC) – ag – A64

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
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GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCCUCCUUGCACCG**agauua
auAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAA-3′

Figure 7

ppLuc(GC) – ag – histoneSL

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
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CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
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CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
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CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
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CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
auagaucuCAAAGGCUCUUUUCAGAGCCACCA-3′

Figure 8

ppLuc(GC) – ag – A64 – histoneSL

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
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CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
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CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
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GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
auAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAugcauCAAAGGCUCUUUUCAGAGCCACCA-3′

Figure 9

ppLuc(GC) – ag – A120

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
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GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
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GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
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CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
auagaucuAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAA-3′

Figure 10

ppLuc(GC) – ag – A64 – ag

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
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CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
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CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
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GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
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CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
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CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
au**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**
AAAAAAugcau**CCUGCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**3′

Figure 11

ppLuc(GC) – ag – A64 – aCPSL

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
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GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
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CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
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GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
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GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
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CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
au**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**
AAAAAugcau*CAAUUCCUACACGUGAGGCGCUGUGAUUCCCUAUCCCCCUUCAUUCCCU*
AUACAUUAGCACAGCGCCAUUGCAUGUAGGAAUU-3′

Figure 12

ppLuc(GC) – ag – A64 – PolioCL

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
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CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
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GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
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CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
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GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
au**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**
AAAAAugcau*CAAUUCUAAAACAGCUCUGGGGUUGUACCCACCCCAGAGGCCCACGUGG*
CGGCUAGUACUCCGGUAUUGCGGUACCCUUGUACGCCUGUUUUAGAAUU-3′

Figure 13

ppLuc(GC) – ag – A64 – G30

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCCUCCUUGCACCG**agauua
auAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAugcau*GGGGGGGGGGGGGGGGGGGGGGGGGGGGG*-3′

Figure 14

ppLuc(GC) – ag – A64 – U30

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
au**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**
AAAAAAugca*UUUUUUUUUUUUUUUUUUUUUUUUUUUUUU*-3′

Figure 15

ppLuc(GC) – ag – A64 – SL

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
au**AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA**
AAAAAAugcau*UAUGGCGGCCGUGUCCACCACGGAUAUCACCGUGGUGGACGCGGCC*-3′

Figure 16

ppLuc(GC) – ag – A64 – N32

gggagaaagcuugaggAUGGAGGACGCCAAGAACAUCAAGAAGGGCCCGGCGCCCUUCUA
CCCGCUGGAGGACGGGACCGCCGGCGAGCAGCUCCACAAGGCCAUGAAGCGGUACGCCCU
GGUGCCGGGCACGAUCGCCUUCACCGACGCCCACAUCGAGGUCGACAUCACCUACGCGGA
GUACUUCGAGAUGAGCGUGCGCCUGGCCGAGGCCAUGAAGCGGUACGGCCUGAACACCAA
CCACCGGAUCGUGGUGUGCUCGGAGAACAGCCUGCAGUUCUUCAUGCCGGUGCUGGGCGC
CCUCUUCAUCGGCGUGGCCGUCGCCCCGGCGAACGACAUCUACAACGAGCGGGAGCUGCU
GAACAGCAUGGGGAUCAGCCAGCCGACCGUGGUGUUCGUGAGCAAGAAGGGCCUGCAGAA
GAUCCUGAACGUGCAGAAGAAGCUGCCCAUCAUCCAGAAGAUCAUCAUCAUGGACAGCAA
GACCGACUACCAGGGCUUCCAGUCGAUGUACACGUUCGUGACCAGCCACCUCCCGCCGGG
CUUCAACGAGUACGACUUCGUCCCGGAGAGCUUCGACCGGGACAAGACCAUCGCCCUGAU
CAUGAACAGCAGCGGCAGCACCGGCCUGCCGAAGGGGGUGGCCCUGCCGCACCGGACCGC
CUGCGUGCGCUUCUCGCACGCCCGGGACCCCAUCUUCGGCAACCAGAUCAUCCCGGACAC
CGCCAUCCUGAGCGUGGUGCCGUUCCACCACGGCUUCGGCAUGUUCACGACCCUGGGCUA
CCUCAUCUGCGGCUUCCGGGUGGUCCUGAUGUACCGGUUCGAGGAGGAGCUGUUCCUGCG
GAGCCUGCAGGACUACAAGAUCCAGAGCGCGCUGCUCGUGCCGACCCUGUUCAGCUUCUU
CGCCAAGAGCACCCUGAUCGACAAGUACGACCUGUCGAACCUGCACGAGAUCGCCAGCGG
GGGCGCCCCGCUGAGCAAGGAGGUGGGCGAGGCCGUGGCCAAGCGGUUCCACCUCCCGGG
CAUCCGCCAGGGCUACGGCCUGACCGAGACCACGAGCGCGAUCCUGAUCACCCCCGAGGG
GGACGACAAGCCGGGCGCCGUGGGCAAGGUGGUCCCGUUCUUCGAGGCCAAGGUGGUGGA
CCUGGACACCGGCAAGACCCUGGGCGUGAACCAGCGGGGCGAGCUGUGCGUGCGGGGGCC
GAUGAUCAUGAGCGGCUACGUGAACAACCCGGAGGCCACCAACGCCCUCAUCGACAAGGA
CGGCUGGCUGCACAGCGGCGACAUCGCCUACUGGGACGAGGACGAGCACUUCUUCAUCGU
CGACCGGCUGAAGUCGCUGAUCAAGUACAAGGGCUACCAGGUGGCGCCGGCCGAGCUGGA
GAGCAUCCUGCUCCAGCACCCCAACAUCUUCGACGCCGGCGUGGCCGGGCUGCCGGACGA
CGACGCCGGCGAGCUGCCGGCCGCGGUGGUGGUGCUGGAGCACGGCAAGACCAUGACGGA
GAAGGAGAUCGUCGACUACGUGGCCAGCCAGGUGACCACCGCCAAGAAGCUGCGGGGCGG
CGUGGUGUUCGUGGACGAGGUCCCGAAGGGCCUGACCGGGAAGCUCGACGCCCGGAAGAU
CCGCGAGAUCCUGAUCAAGGCCAAGAAGGGCGGCAAGAUCGCCGUGUAAgacuaguuaua
agacugacua**GCCCGAUGGGCCUCCCAACGGGCCCUCCUCCCCUCCUUGCACCG**agauua
auAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAugcau*CCCCCUCUAGACAAUUGGAAUUCCAUA*-3′

Figure 17

H1N1(PR8) – ag – A64 – C30

GGGAGAAAGCUUACCAUGAAGGCCAACCUGCUCGUGCUGCUGUGCGCCCUCGCGGCCGCC
GACGCCGACACCAUCUGCAUCGGCUACCACGCCAACAACAGCACCGACACGGUCGACACC
GUGCUGGAGAAGAACGUGACCGUCACCCACUCCGUGAACCUGCUCGAGGACAGCCACAAC
GGGAAGCUGUGCCGGCUGAAGGGCAUCGCGCCCCUCCAGCUGGGGAAGUGCAACAUCGCC
GGCUGGCUGCUCGGGAACCCGGAGUGCGACCCCCUGCUGCCCGUGCGCUCCUGGAGCUAC
AUCGUCGAGACGCCCAACUCCGAGAACGGCAUCUGCUACCCGGGCGACUUCAUCGACUAC
GAGGAGCUCCGGGAGCAGCUGAGCUCCGUGAGCUCCUUCGAGCGCUUCGAGAUCUUCCCC
AAGGAGAGCUCCUGGCCCAACCACAACACCAACGGGGUGACCGCCGCCUGCAGCCACGAG
GGCAAGUCCAGCUUCUACCGGAACCUGCUCUGGCUGACCGAGAAGGAGGGGUCCUACCCC
AAGCUGAAGAACAGCUACGUCAACAAGAAGGGCAAGGAGGUGCUCGUGCUGUGGGGGAUC
CACCACCCGCCCAACUCCAAGGAGCAGCAGAACCUGUACCAGAACGAGAACGCGUACGUC
AGCGUGGUGACGUCCAACUACAACCGCCGGUUCACCCCCGAGAUCGCCGAGCGCCCCAAG
GUCCGGGACCAGGCCGGCCGCAUGAACUACUACUGGACCCUCCUGAAGCCGGGCGACACC
AUCAUCUUCGAGGCCAACGGGAACCUGAUCGCCCCGAUGUACGCGUUCGCCCUCAGCCGG
GGCUUCGGGAGCGGCAUCAUCACGUCCAACGCCAGCAUGCACGAGUGCAACACCAAGUGC
CAGACCCCCCUGGGCGCCAUCAACUCCAGCCUGCCCUACCAGAACAUCCACCCGGUGACC
AUCGGGGAGUGCCCCAAGUACGUGCGCUCCGCCAAGCUCCGGAUGGUCACGGGCCUGCGC
AACAACCCCAGCAUCCAGUCCCGGGGGCUGUUCGGCGCGAUCGCCGGGUUCAUCGAGGGC
GGCUGGACCGGGAUGAUCGACGGCUGGUACGGGUACCACCACCAGAACGAGCAGGGCAGC
GGGUACGCCGCCGACCAGAAGUCCACCCAGAACGCCAUCAACGGCAUCACCAACAAGGUG
AACACGGUGAUCGAGAAGAUGAACAUCCAGUUCACCGCGGUCGGCAAGGAGUUCAACAAG
CUCGAGAAGCGCAUGGAGAACCUGAACAAGAAGGUGGACGACGGGUUCCUGGACAUCUGG
ACCUACAACGCCGAGCUCCUGGUGCUGCUCGAGAACGAGCGGACCCUGGACUUCCACGAC
AGCAACGUCAAGAACCUGUACGAGAAGGUGAAGUCCCAGCUCAAGAACAACGCCAAGGAG
AUCGGCAACGGGUGCUUCGAGUUCUACCACAAGUGCGACAACGAGUGCAUGGAGAGCGUC
CGCAACGGCACGUACGACUACCCCAAGUACUCCGAGGAGAGCAAGCUGAACCGGGAGAAG
GUGGACGGGGUGAAGCUGGAGUCCAUGGGCAUCUACCAGAUCCUCGCCAUCUACAGCACC
GUCGCCUCCAGCCUGGUGCUGCUGGUGUCCCUCGGCGCGAUCAGCUUCUGGAUGUGCAGC
AACGGGUCCCUGCAGUGCCGCAUCUGCAUCUGAccacuaguuauaagacugacua**GCCCG**
AUGGGCCUCCCAACGGGCCCUCCUCCCCCUCCUUGCACCGagauuaauAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUAUUCCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCUCUAGACAAUUGGAAUU-3′

Figure 18

H1N1(PR8) – ag – A64 – C30 – histoneSL

GGGAGAAAGCUUACCAUGAAGGCCAACCUGCUCGUGCUGCUGUGCGCCCUCGCGGCCGCC
GACGCCGACACCAUCUGCAUCGGCUACCACGCCAACAACAGCACCGACACGGUCGACACC
GUGCUGGAGAAGAACGUGACCGUCACCCACUCCGUGAACCUGCUCGAGGACAGCCACAAC
GGGAAGCUGUGCCGGCUGAAGGGCAUCGCGCCCCUCCAGCUGGGGAAGUGCAACAUCGCC
GGCUGGCUGCUCGGGAACCCGGAGUGCGACCCCCUGCUGCCCGUGCGCUCCUGGAGCUAC
AUCGUCGAGACGCCCAACUCCGAGAACGGCAUCUGCUACCCGGGCGACUUCAUCGACUAC
GAGGAGCUCCGGGAGCAGCUGAGCUCCGUGAGCUCCUUCGAGCGCUUCGAGAUCUUCCCC
AAGGAGAGCUCCUGGCCCAACCACAACACCAACGGGGUGACCGCCGCCUGCAGCCACGAG
GGCAAGUCCAGCUUCUACCGGAACCUGCUCUGGCUGACCGAGAAGGAGGGGUCCUACCCC
AAGCUGAAGAACAGCUACGUCAACAAGAAGGGCAAGGAGGUGCUCGUGCUGUGGGGGAUC
CACCACCCGCCCAACUCCAAGGAGCAGCAGAACCUGUACCAGAACGAGAACGCGUACGUC
AGCGUGGUGACGUCCAACUACAACCGCCGGUUCACCCCCGAGAUCGCCGAGCGCCCCAAG
GUCCGGGACCAGGCCGGCCGCAUGAACUACUACUGGACCCUCCUGAAGCCGGGCGACACC
AUCAUCUUCGAGGCCAACGGGAACCUGAUCGCCCCGAUGUACGCGUUCGCCCUCAGCCGG
GGCUUCGGGAGCGGCAUCAUCACGUCCAACGCCAGCAUGCACGAGUGCAACACCAAGUGC
CAGACCCCCCUGGGCGCCAUCAACUCCAGCCUGCCCUACCAGAACAUCCACCCGGUGACC
AUCGGGGAGUGCCCCAAGUACGUGCGCUCCGCCAAGCUCCGGAUGGUCACGGGCCUGCGC
AACAACCCCAGCAUCCAGUCCCGGGGGCUGUUCGGCGCGAUCGCCGGGUUCAUCGAGGGC
GGCUGGACCGGGAUGAUCGACGGCUGGUACGGGUACCACCACCAGAACGAGCAGGGCAGC
GGGUACGCCGCCGACCAGAAGUCCACCCAGAACGCCAUCAACGGCAUCACCAACAAGGUG
AACACGGUGAUCGAGAAGAUGAACAUCCAGUUCACCGCGGUCGGCAAGGAGUUCAACAAG
CUCGAGAAGCGCAUGGAGAACCUGAACAAGAAGGUGGACGACGGGUUCCUGGACAUCUGG
ACCUACAACGCCGAGCUCCUGGUGCUGCUCGAGAACGAGCGGACCCUGGACUUCCACGAC
AGCAACGUCAAGAACCUGUACGAGAAGGUGAAGUCCCAGCUCAAGAACAACGCCAAGGAG
AUCGGCAACGGGUGCUUCGAGUUCUACCACAAGUGCGACAACGAGUGCAUGGAGAGCGUC
CGCAACGGCACGUACGACUACCCCAAGUACUCCGAGGAGAGCAAGCUGAACCGGGAGAAG
GUGGACGGGGUGAAGCUGGAGUCCAUGGGCAUCUACCAGAUCCUCGCCAUCUACAGCACC
GUCGCCUCCAGCCUGGUGCUGCUGGUGUCCCUCGGCGCGAUCAGCUUCUGGAUGUGCAGC
AACGGGUCCCUGCAGUGCCGCAUCUGCAUCUGAccacuaguuauaagacugacua**GCCCG**
AUGGGCCUCCCAACGGGCCCUCCUCCCCCUCCUUGCACCGagauuaauAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUGCAUCCCC
CCCCCCCCCCCCCCCCCCCCCCCCCCCCAAAGGCUCUUUUCAGAGCCACCAgaauu

Figure 19

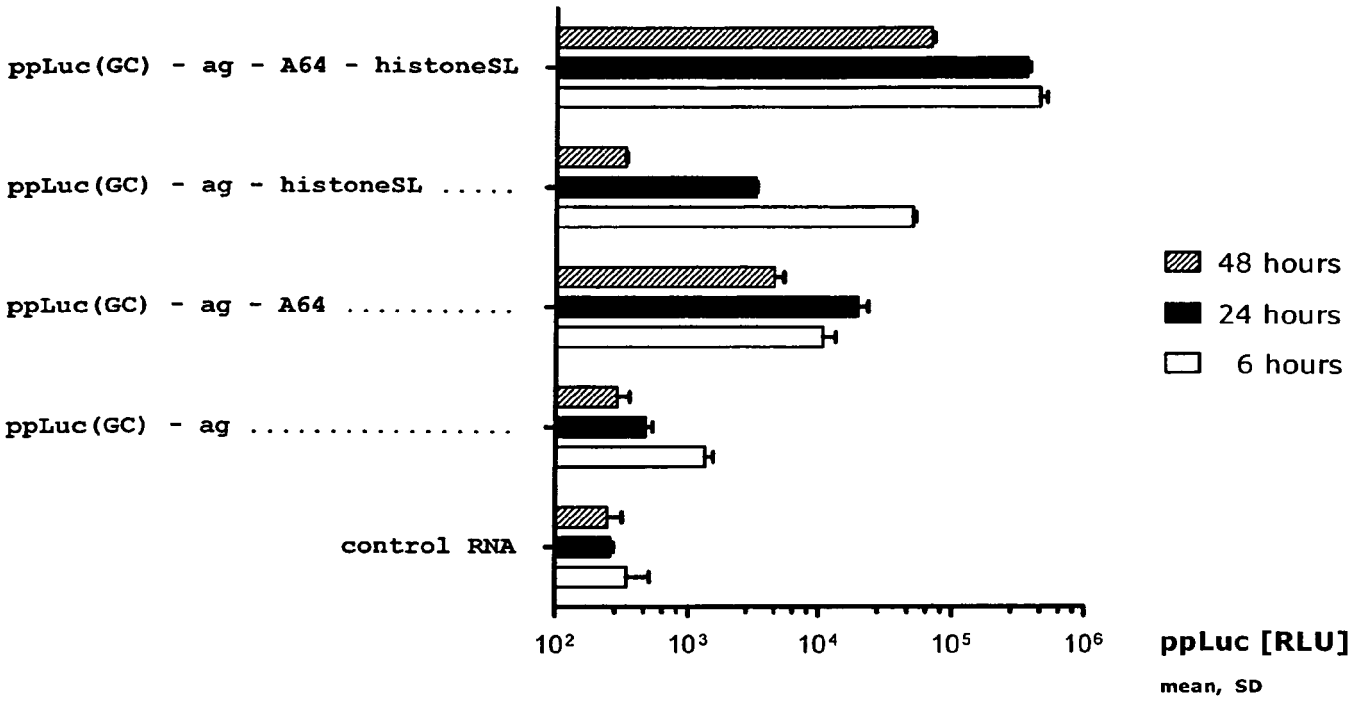

ppLuc(GC) - ag - A64 - histoneSL
ppLuc(GC) - ag - histoneSL .....
ppLuc(GC) - ag - A64 .....
ppLuc(GC) - ag .....
control RNA
48 hours
24 hours
6 hours
10²
10³
10⁴
10⁵
10⁶
ppLuc [RLU]
mean, SD

Figure 20

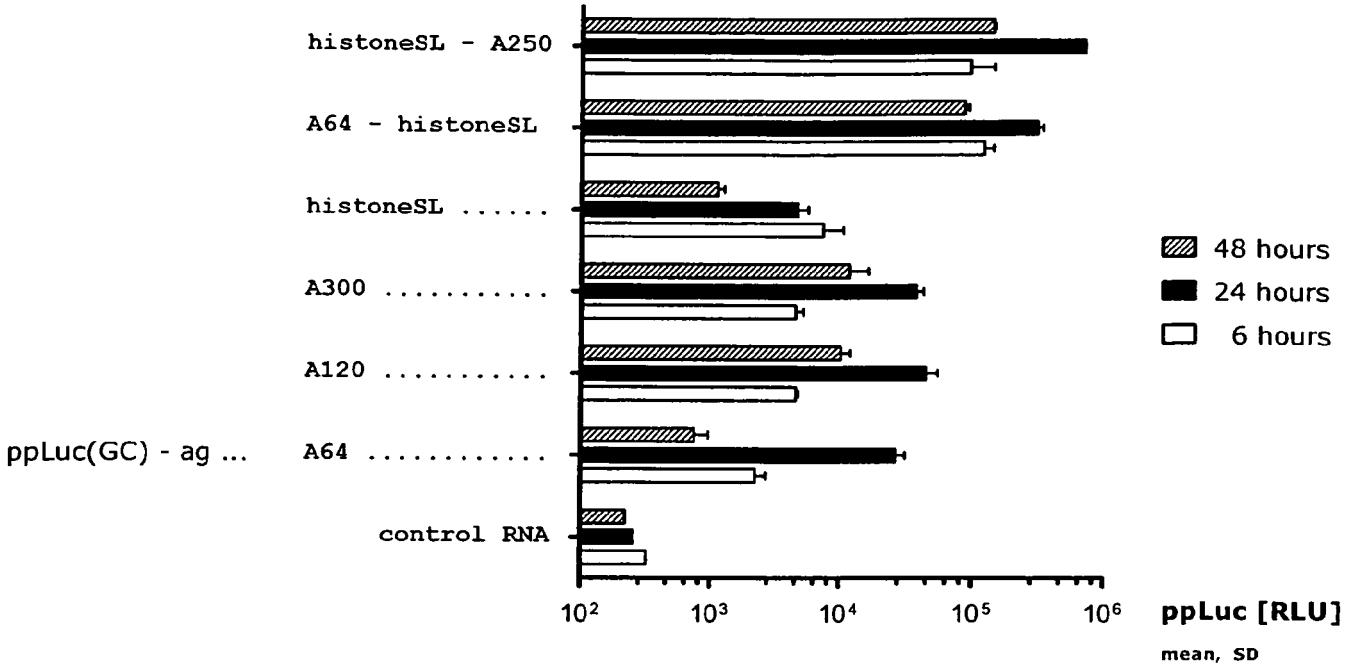

histoneSL - A250
A64 - histoneSL
histoneSL .....
A300 .....
A120 .....
ppLuc(GC) - ag ...
A64 .....
control RNA
48 hours
24 hours
6 hours
10²
10³
10⁴
10⁵
10⁶
ppLuc [RLU]
mean, SD

Figure 21

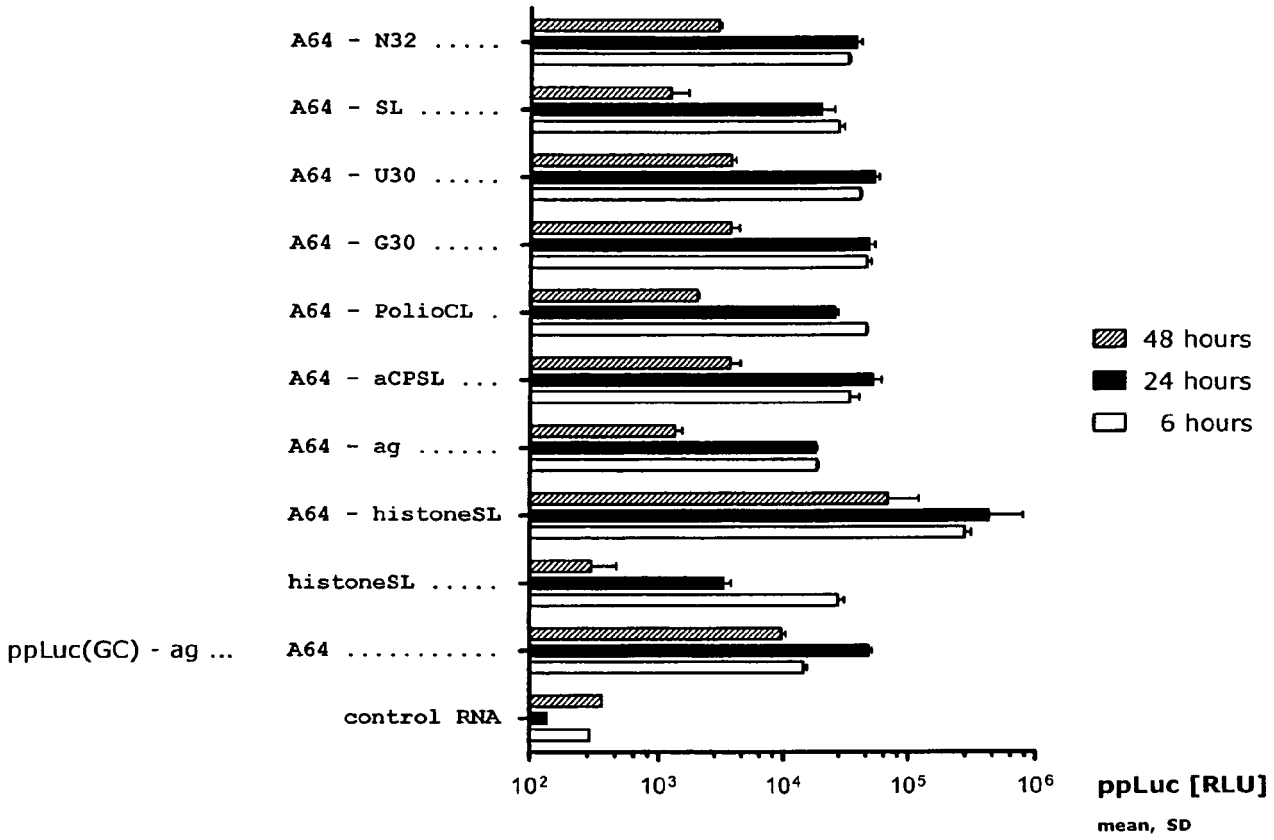

A64 - N32 .....
A64 - SL .....
A64 - U30 .....
A64 - G30 .....
A64 - PolioCL .
A64 - aCPSL ...
A64 - ag .....
A64 - histoneSL
histoneSL .....
ppLuc(GC) - ag ...
A64 .....
control RNA
48 hours
24 hours
6 hours
10²
10³
10⁴
10⁵
10⁶
ppLuc [RLU]
mean, SD

Figure 22

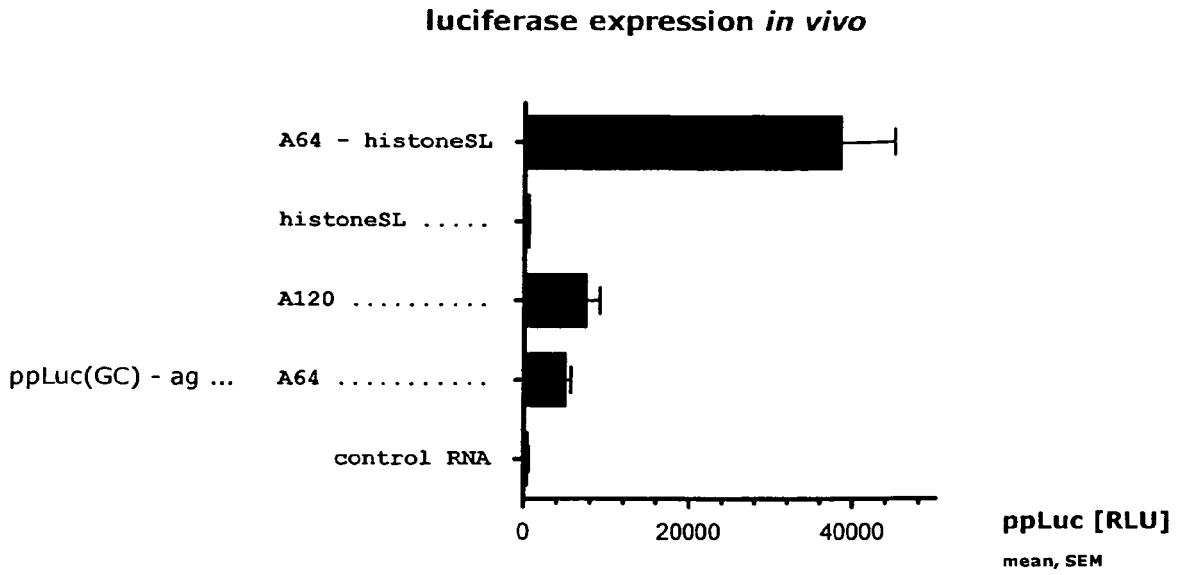

luciferase expression in vivo
A64 - histoneSL
histoneSL .....
A120 .....
ppLuc(GC) - ag ...
A64 .....
control RNA
0
20000
40000
ppLuc [RLU]
mean, SEM

Figure 23

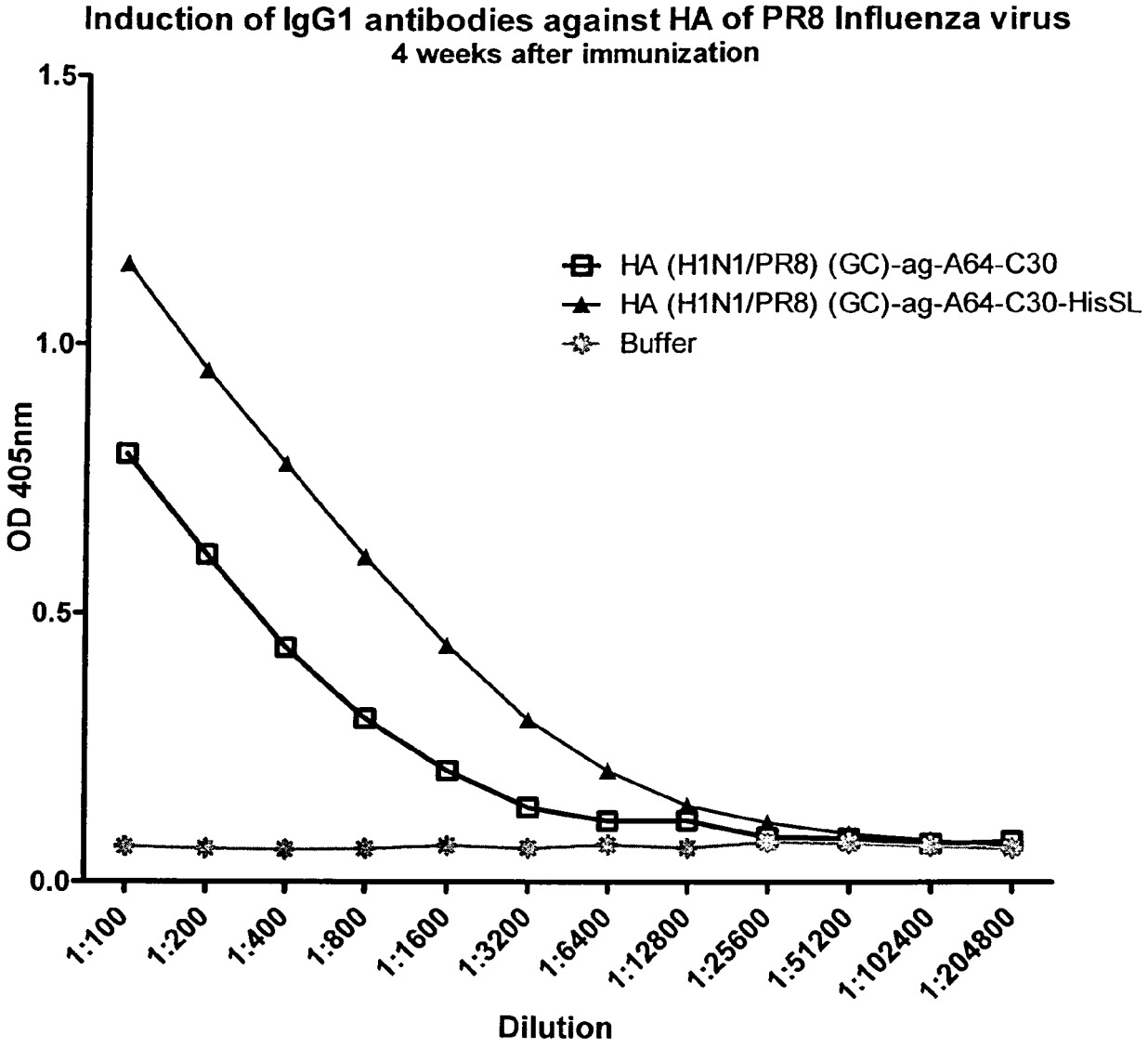

Induction of IgG1 antibodies against HA of PR8 Influenza virus
4 weeks after immunization
1.5
1.0
0.5
0.0
OD 405nm
HA (H1N1/PR8) (GC)-ag-A64-C30
HA (H1N1/PR8) (GC)-ag-A64-C30-HisSL
Buffer
1:100
1:200
1:400
1:800
1:1600
1:3200
1:6400
1:12800
1:25600
1:51200
1:102400
1:204800
Dilution

Figure 24