***Wachter et al – Supplementary File 1***

**CGI-like DNA sequences**

Puro GFP

AGCTTGTCACCGAGCTGCAAGAACTCTTCCTCACGCGCGTCGGGCTCGACATCGGCAAGGTGTGGGTCGCGGACGACGGCGCCGCGGTGGCGGTCTGGACCACGCCGGAGAGCGTCGAAGCGGGGGCGGTGTTCGCCGAGATCGGCCCGCGCATGGCCGAGTTGAGCGGTTCCCGGCTGGCCGCGCAGCAACAGATGGAAGGCCTCCTGGCGCCGCACCGGCCCAAGGAGCCCGCGTGGTTCCTGGCCACCGTCGGCGTCTCGCCCGACCACCAGGGCAAGGGTCTGGGCAGCGCCGTCGTGCTCCCCGGAGTGGAGGCGGCCGAGCGCGCCGGGGTGCCCGCCTTCCTGGAGACCTCCGCGCCCCGCAACCTCCCCTTCTACGAGCGGCTCGGCTTCACCGTCACCGCCGACGTCGAGGTGCCCGAAGGACCGCGCACCTGGTGCATGACCCGCAAGCCCGGTGCCTGACGCCCGCCCCACGACCCGCAGCGCCCGACCGAAAGGAGCGCACGACCCCATGGCTCCGACCGAAGCCACCCGGATCCACCGGTCGCCACCATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCCTGACCTACGGCGTGCAGTGCTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCCATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTGAGCACCCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAA

Artificial CGI 1

AGCTTCTAGCACAGGAGTTGACTCGGCAGGTGCCGTAGTGCGGCTTGGCAGCGGGACGTCGCTGGTCGGGCCTGACTGGGCGCTACGCCGGTTGTGGTCACCTGAACCGCATCTGGGCCGTCGCTCGCTTCGCGGGCTCTGCAGCCGGACTCCACCAGCGGGACCTCACACGCTCGGGTGAGCCGTCCTAGGCCGCTTGCGCCAACCCACGGGGTAGGCCTGGCGAGACGCACGGGCAGTGCCGTTCCTGAGGTCCGCGGTGCTCCCTGCCCAGACGCCTAAGCACGCTCCACCCGTGCCTCGGGTTCCGGGGATTTAGGCCGCACTGTGCGCCATTCCGCGGCTCGCAGCCACCGAAGTGCCGCGTTCCCTCCTACCCTAGCCGCAGCAGCGTCCAGGGCCAAGAGGCTCGGCTACGGTCCGACTTTTGCACTGGGCAGTCGCAGCGTCGTCCTCTCGCGACGCGGGTGCAGAGGTCGGCGGGTCGTAACCGACTGCCAACCAGGCGCAGGCTGGTACCCACCGGGTGGGCATAACGTCCATCGCCTGGGAGGTGGGACGCGGACTCGTCGGACACGTCGCCTCTGCGTGTGTCGCGGGCCAGCAGCCAGCCGGCCTGGATCTAGACCCGGCGGCCATTGCAGCGAAGGGAGGTTCGCCACGGCGTAGCCCAGTCGCGCGTGTACCCAGCGCATCCGCCGGAGCCCATCCCCGCTCACGGTCGAAGCCCACCAGGGTGTCTCCACCGCGGCCTTTGCCCACCTCGCTGGTCCACAGCCGAGCGGTCCGCTCTGACGCAGCGTCCTGCCAGCCCTCGACGGCCGACCCCTGACTAGTTGGACCGCCTCCAGCGGCTGCGGGACACAGCTCCGGCGGTGGGGACGCACCGAATGGGACACCGGCACTCCTAGGGCGTACAGCTGCTCGCAACGCAACCGAAGGCAGCCTCCTACTGGCGGGCCGATCCGGCCTACATGGCCCTGGCCCATCATCCCGCGCAAGGTCGCACAATCGACGTGCACGACGGCAGCACGCCAGGTGACGTTCCCGGAGCA

Artificial CGI 2

CTCACTATAGGGGCTGTTCCTGCCACGAGGCGTAGCACACAGGGAGACGGTCACGGGCGCGGTCCAGACGCGCGGCCCGGTGCCCCCTGTCCGAACAGGCCAGTTGTGCAAGCCGACTGAACTCGCCCCATGACGTGTGTGGCTGACCACGCGCACCAGAGTAGGCCCCAACGCGACGATCCCACGCCGCGCACCTCGGCTTCGGCGTGGGCGTTCCCGCACCTACCAAGGTGGCATCTGGAGCACGTATAGTAGCGCAGGCCTCCGCTCTGGCCAGCCTGCGCATAGCCAGGCTAGAGGGAGAGAACTCACGCCACGGTCGATCCTGGTCCCGTGCACCCCCGTAGCCTTCCTGCGCCACAGTGACAAGTTCACCCGCTGGGCGTTCTGAGTGGACGGAGCATGTGGCTGGGCCCGGACGGGCCCGAAGGGGGGCCTTGCATAGGCTGATTGCCTGTGGCTGTAGTCTCGTTCCCTTGCTCTCCGCTCCACCCTGATCCAGATAACGCCCATCCGGTCCCGCACAACTCGGCCTACTCTGATACGTGTCCAGAGGCCGTCCCGAAGGCAGTGGGAAGTAGTATGGAGGCGTGTGACGATGCCGCACAGGGAATGCCTCCTCTCGGGAAGAGTTGCTACCGAGAACCAGTGCGCCCGTCCCGCACGGCTCCTTGTGCCGGGAACCCTCCAGGGAGCGCTGAACGCTTGCCGAAGAAGCTGCGCGGTCTGGGCTAAGAAAGCTCACCTGCCCTCTCGCTCGTTCATGAGCCCAGACAGCCCATGCCGGACTCCGGGCCTGCTGCGCAGGACGGCTGTGCTTCACATTGGTTACCCAGCCTGAGCGAGTGGCAGCCACAAGATGCTACTGGAGGACGGAGTTGTTCACCCTAAGGGGGATCGCCGAGCCTTGGGTCCGTCCCGGACCCCTGGTAGCCTCAACTCCTCAGCACCTACTAGGCCACGGCCCGTACTTAACGGTCTGATCCGGCCCCGCTATGCTTACCCCTGCGTCCG

Low CpG High G+C

GCTAAGCTTGGCCCCTGGGGGAAGCCCCACATGCCTGGGACCCCAAGCTGGACTTCCGTCATGCAAGAGTACCAGGTACAGGGGACCCCTTAGTGTCTCCCTGGCAAGTGCCCCCAGGGGACCAGGGTGGGCATCCCCCCACCTAAGTGGCCACCCCTCCCTCCACCACTGTCCCCTGAAGGACATGTTGAGCCTGCCTCACCGGGGTGTGGTGGCCACTGGGTCTCCAGGGCTTGCCAAGGGGTCAGAATACTTCCGGGGTGTCTACCCATCCCCACCCTAGGGGATGCTAAGCGGGGGTCCAGCCCTGCCCATTCCCCCAGGGGTAGGAGGGGGTCCCTGGTGCCCCTCCCCAGAAAGGAGGCCAGGGGAGTGGGGGGAGCCTAAACTAAACCCACTCAGCCCCTGGGCCCAGTTGGGAACAGATATGGCTAGGCGGGGAGGCAGGGGGCTGATGAGGGGCCTGGTAAGGTCTCCCTCCCAAGTGGGGGGGTGGATGGGCCCAGAATCCTATGAGGACACATATCTTTGACTGGGCAGCTTCAGAGGGGTAGGGCCCTTGAGGGCTGGGTAGAGTCCCAAGGCCCCAGGGGGGATGTGACCCCCCTATGTCCTCAGCCCCCCCAGACCACAGAGAGTTCAGGAAGGAGGGTAGCCCCGCCTCTCCAGGGCAGGTGACCCAGGGCCCCCTGGTAACTGGGGGGGGAGCACCCTCATTGAACCCCCCGAGCCCATGTCAGGTGGCAGCCACTCCCAGCCAGAAGCCCTGAGGGCCCATCCCAGGTGGCCCCTAAGGGGGAGGGGGGATTCCCAGGAATATTCTCCCAGCTTCAGGGCCTCAGTGAGAATCATGAGGGGCCCTGGCTCCCGCCATACCCCACCAGCATATGGCCTCTCCCCGGGTTCAGGGAGAAACCCAGTGGGGCAGCAAATTAAGCATCTCCCACTGACCAGAGCATTGGAGGTAGGGGCTTCTGTAGGATGCCGGCCAAAGCTGCCAGCTGAACCCCTGAATTCTC

High CpG Low G+C 1

CGTAAGCTTCTATAGCACACGGGCCAACGACAACGCTGGGCGATTTAACGTTTAATGTCGTATGAGTCTCGATAGCGAGGTTGGCACTCCGACCAAAAACCGAACATTGAATCTAACGGAATACTGTCACGTTAATAACGTATAACGAAATATACGTATTTTAACTATGAACGCATATAACGATTATCGCAGAACAAATTTTACGAATCAATAAAAAACGTGATACGTAACTCGTTCGTTCAGAAGATTATGCGGACGAAAGAATGTACGAACTCGTTGTATTTCTTGCGCGATATACGTAGTACGTGTTTCGTATGTAGTACCGGAAAGTATCGAATCATTTCGATCGTACCTCACCGTTTCGACAACTACGATACGCTAACAGTTGTTCGGCTATACAGCTTACGTCGCACAGTAGACGATTCCGACATGACGCAACTTATCGAAACAATTTCGATTTTAACGACGTACAAAATCGATTCGAATCACACTCGATATCGTACTATACAAATGTGAAATTCGGTCTCACTTTCTTGATCCGTTTAGCGAATCTCTTTAACGCTTCGAGATTTAGTAGTTTTCGATGTAAATTTGACGAAGTTTGTCGCGCATGAAAGAGTAAACGTCAATCTTCTCGATCTTATAACTATCGACCGAGCCGCGCCTTAGCTTCGCATATATGACAAATGACAAAACAAACGTGATTGTCGCAGAATACGTTCTTTGACGTCATTTTAGACGAAATCGACTCGACTTCAATACGTTATACGATACGAATGTTGATCTGTTCGTGTACGCTTCGATCATTACTCGATCGGGTAGTTGTGCGTTTTCGCATTGCGCACGACGAATTATCTGTAAACGTTTCCGGGGGATGCGACCTCTCAGATCGTTATAAATGCTATTAACGTTATTATTCTTCCTTGGATAAGTCAAGTTCGAACGTGCTAAGAAGTGTGTTACTATATTACGAATGAACGAGAGAGCATTAATACGACGATTCCCTAAATGAATTC

High CpG Low G+C 2

CGAATTGGCGGAAGGCCGTCAAGGCCACGTGTCTTGTCCAGAGCTCAAGCTTAATACGATCAACTACATTCGATCTCAGTTATATGAAACAGATAGTATACACATTTTCTACAGGCCTAAACTTACGGACGATCAGATTTGTACTCATTGTTGTGTAATCGGTACGCTCTTCGCTCTACTTGTAACTATCGTTCTCTATTGTCGGACTAAACTATGTTCTCAACGATCAAAGTACGTTAGACTTGACGTAGTAGAATCGTAATTTAAGACACGGCAGATGCGACGACAATAATGTCTAGAGACGAACGCTACTTCACGTATCAAGTACAACGATCACTAAATCGTTAGATCATTACGTGATATCGATTGTTCGTTCTGCGATGTACGATTTGAAAGATTCGATTGTGACAACGATCTAACAGATCGGAGAGTTCGTAAGTTTGTCGAAATTTTCTTCGAGTGAACTATAAATCGCTACACTGACGTAAAGATGAGATCAATCGAGTCAATGAATTTAACGATTACGTTCAACGCTACCAACGTCACATTCAACGATACTAATCGGATCGGTATCGCTATCGCATACTTCGTTCATTCACGTAATATCGATTATATTGACGCAATTCGCGATCAGTCGAAGTCGCATATACGTTAATCGTAACATCGTTTTAAACGTCGATTTCTGTTCGTTTAGTACGAAGACACAATTCGAGATCGCGGAATCGTAAGTAAAACGGATTCATCGTGTTTCGCTACTCTTGTCGCTGTCAGACGGCTTCGAAATCGCTAAGTAGATCGACTTCACGCATAGAGAATACGCGACTACGTTCTTTCTCGTGTTTTACGCTGAACGGTCGTCAACTATTCGTCACGACATAACGCTAGACGGATTATCGTAAATTCACGAGGTCGCTTCACTACGTTGTCATCATCGACGATAACTCGTTTAGAAATGTTGACGGAGTGATCGAAAAGAACTATAACGATCAGTTAAGTATCGTATAATCGAAACGCACGTCTGAATCAATATCTGTAGAGTCTAGATCGACTCGACGGTAAGAATTCGGTACCTGGAGCACAAGACTGGCCTCATGGGCCTTCCGCTCACTGC

High CpG Low G+C 3

ACGTAACAAACGCTGATCTTACGTATGAGACGTCGATTGATGATTCGAAAGTACTCCGTGTTCGCGGATTTATAATTGAACTACTAAATTGAGCTTGACCGAGACATTTTTCTTTACTCTTTAAAGTATCGTGAACGCTGCGATGTACTTGGATTCATCGTGATTTATACAACGTTGAACTGTTGAATATTACGACGTCTGACAGATTGACGACAGAAGTGAATAATCAGTACGAATCCGACGCTCGGTGTAATCAGAAACGTCTCTGATCACATCGCACTATCGAATAACGTAATTTACGATTGGGGTCGCACTAGGAACGTTAATCGCTAACTACATATCGGGGAGTGCCCATGCACCTTCATAACATCTCATTGAAATCGCATGTACAATATCATACTATTCGATGTATATCGTATTATACGTCCTTCGCTCTCCGGCGATATCCTTGTGCTACGCGTTTACACGCGTCTATGGTTGAGGAATGTCGAACACTACCTCCTAATTGAGAATACCTACCTCTAGTCAACCTTCATAGAAATCTCTTATTCTCATTCTAGTCTTCGAACGTTAGTACGCTTCTTCAGTCTTCGCGATGTTTTTACGCTATTCGACGAAACGCTCGTTACGTCTAACTAACCGGACGCGCAACAATTGTAAGTACGTGTTTCAGAAACGAATCATTTAACGTTTCGTCTAATTTTACCACAGAGTGGAATTACTTCAAACTTGAGATCGAAATAAAATCTTCGAGTGTCTGATCTCGCGGAACCATATATAGACGTTTGGGTTCGCTATTCGTACTTTTTTCGATCTTCGGAGGTTTCGTAAAACGGGGCGTGAAACTTCTATACAATCGCCCTCACAATCGCATCGTATTGATTTAACGAGACACGAACATAGAAGAGTTCGACGAGTTAGAAAAAAATCTCAACGATCTCTATTGAATGTACGTTCATAATTATCGATTTCTAGTTATTAATCATTTTAGTGTTCGGAAAC

High CpG Medium G+C

TCGTATCCTATGCAGATCgCTCTGCAACATGAAATTTaCGTTCACGTTGGTACttGTGGtATACCGTTATGCGCTGAAAAGTCGTAAACtCTGCGGTTAACCACGGGCCTAGACGGTAAGGCCCAGCCGGATTACATTAACTTGAGATGCCATTTCACTGCATTGCGTGGTTACGCATGCCTTCACTTCGGGAGCaTGGAAACGGGCCAAtCTcGTGTTGtAGAAGACTCGGCaTTTAACTGTCtCAAAATCGTGGCTACGATCATACGGTAAAGGCTTGAGAAGTATGGcGCCTCTCACTTTCTTAACgTTCTATGcGTGGAGCACtACgCAGGCTTGCCTaCTTTGcGGGGGAAGAGGCTCGCTTACgAATCgAAAAcGGTAAcGTCGCGGACCCGTAGtGCGAGCTAtCgTAGTTCCCGACgCATACgTCGAGCCTTGcGACCTACTCTCGCAGGTATAACGATGttCGCTTTACTcGAACTTCTCgAATCGTCCGGGAAGACCGAACCCGTGCTAATcGAAACgCTAACCCgAAATAGTGCgCATTtCGGTCCATGGAAtCGGGTTCATTACgAGTtCAACgACTAGCgTGACGAAACgTTATTaTCgAcGCAGGTAGTGCGAATGCTGCGGAGGAACGGGGGGCGAACCACGAAATGAACGGTATGCCGCGAGATGCGTAACTACACGTGCGCTCTTGTcGTAATTTAGGGTACgCTGtCCGGCCTTGCAACGCATCCTCGACACtACTGcGTTAAACCtAAGCTaCACAACCGGCTGCGTGTACCACGACAAAGAAAtAAGTAGCATtCGCAACATCATCTCCGGGCGCTGGGTGCGCAGCATTCGCCAGACATaCACGTGTTCGGAGAGatTCCAGATTACGCCGGCTAACAGAAATTCTGaCACAtCGATATTCtaCTCGTCCGTAGCGACTACCTCAAGCGGTTTCACTAAGCTGtGtCACATGTCGTGCGGCGTGGCttCATGaaCGGCCATGCAC