**Supplemental Figure 5**

GTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCGTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTCGTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTTACTTTCACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCGACGGATCGGGAGATCTCCCGATCCCCTATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTTGGAGGTCGCTGAGTAGTGCGCGAGCAAAATTTAAGCTACAACAAGGCAAGGCTTGACCGACAATTGCATGAAGAATCTGCTTAGGGTTAGGCGTTTTGCGCTGCTTCGCGATGTACGGGCCAGATATACGCGTTGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATGACCTTATGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGATAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTCCGCCCCATTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCTCTGGCTAACTAGAGAACCCACTGCTTACTGGCTTATCGAAATTAATACGACTCACTATAGGGAGACCCAAGCTGGCTAGCGTTTAAACTTAAGCTTACGCTGGCCGCAGGGATTATAATTATTTCCATTTTCAAATTAAGGCCTCTGAGCTCAGAGAGGGGAAGTTACTTGTCTGAGGCCACACAGCTTGTTGGAGCCCATCTCTTGACCCAAAGACTGTGGAGCCGAGTTGGCCACCTCTCTGGGAGCGGGTATTGGATGGTGGTTGATGGTTTTCCATTGCTTTCCTGGGAAAGGGGTGTCTCTGTCCCTAAGCAAAAAGGCAGGGAGGAAGAGATGCTTCCCCAGGGCAGCCGTCTGCTGTAGCTGCGCTTCCAACCTGGCTTCCACCTGCCTAACCCAGTGGTGAGCCTGGGAATGGACCCACGGGACAGGCAGCCCCCAGGGCCTTTTCTGACCCCACCCACTCGAGTCCTGGCTTCACTCCCTTCCTTCCTTCCCAGGTGAACCTCCAAAATCAGGGGATCGCAGCGGCTACAGCAGCCCCGGCTCCCCAGGCACTCCCGGCAGCCGCTCCCGCACCCCGTCCCTTCCAACCCCACCCACCCGGGAGCCCAAGAAGGTGGCAGTGGTCCGTACTCCACCCAAGTCGCCGTCTTCCGCCAAGAGCCGCCTGCAGACAGCCCCCGTGCCCATGCCAGACCTGAAGAATGTCAAGTCCAAGATCGGCTCCACTGAGAACCTGAAGCACCAGCCGGGAGGCGGGAAGGTGAGAGTGGCTGGCTGCGCGTGGAGGTGTGGGGGGCTGCGCCTGGAGGGGTAGGGCTGTGCCTGGAAGGGTAGGGCTGCGCCTGGAGGTGCGCGGTTGAGCGTGGAGTCGTGGGACTGTGCATGGAGGTGTGGGGCTCCCCGCACCTGAGCACCCCCGCATAACACCCCAGTCCCCTCTGGACCCTCTTCAAGGAAGTTCAGTTCTTTATTGGGCTCTCCACTACACTGTGAGTGCCCTCCTCAGGCGAGAGAACGTTCTGGCTCTTCTCTTGCCCCTTCAGCCCCTGTTAATCGGACAGAGATGGCAGGGCTGTGTCTCCACGGCCGGAGGCTCTCATAGTCAGGGCACCCACAGCGGTTCCCCACCTGCCTTCTGGGCAGAATACACTGCCACCCATAGGTCAGCATCTCCACTCGTGGGCCAAAAATCCACAGGTGATTCTGATGCCCGGCAGGCTTGAGAACAGCCGCAGGGAGTTCTCTGGGAATGTGCCGGTGGGTCTAGCCAGGTGTGAGTGGAGATGCCGGGGAACTTCCTATTACTCACTCGTCAGTGTGGCCGAACACATTTTTCACTTGACCTCAGGCTGGTGAACGCTCCCCTCTGGGGTTCAGGCCTCACGATGCCATCCTTTTGTGAAGTGAGGACCTGCAATCCCAGCTTCGTAAAGCCCGCTGGAAATCACTCACACTTCTGGGATGCCTTCAGAGCAGCCCTCTATCCCTTCAGCTCCCCTGGGATGTGACTCGACCTCCCGTCACTCCCCAGACTGCCTCTGCCAAGTCCGAAAGTGGAGGCATCCTTGCGAGCAAGTAGGCGGGTCCAGGGTGGCGCATGTCACTCATCGAAAGTGGAGGCGTCCTTGCGAGCAAGCAGGCGGGTCCAGGGTGGCGTGTCACTCATCCTTTTTTCTGGCTACCAAAGGTGCAGATAATTAATAAGAAGCTGGATCTTAGCAACGTCCAGTCCAAGTGTGGCTCAAAGGATAATATCAAACACGTCCCGGGAGGCGGCAGTGTGAGTACCTTCACACGTCCCATGCGCCGTGCTGTGGCTTGAATTATTAGGAAGTGGTGTGAGTGCGTACACTTGCGAGACACTGCATAGAATAAATCCTTCTTGGGCTCTCAGGATCTGGCTGCGACCTCTGGGTGAATGTAGCCCGGCTCCCCACATTCCCCCACACGGTCCACTGTTCCCAGAAGCCCCTTCCTCATATTCTAGGAGGGGGTGTCCCAGCATTTCTGGGTCCCCCAGCCTGCGCAGGCTGTGTGGACAGAATAGGGCAGATGACGGACCCTCTCTCCGGACCCTGCCTGGGAAGCTGAGAATACCCATCAAAGTCTCCTTCCACTCATGCCCAGCCCTGTCCCCAGGAGCCCCATAGCCCATTGGAAGTTGGGCTGAAGGTGGTGGCACCTGAGACTGGGCTGCCGCAGATACCCCACTCCTGCCTTTCCAGCAAGATTTTTCAGATGCTGTGCATACTCATCATATTGACCACTTTTTTCTTCATGCCTGATTGTGATCTGTCAATTTCATGTCAGGAAAGGGAGTGACATTTTTACACTTAAGCGTTTGCTGAGCAAATGTCTGGGTCTTGCACAATGACAATGGGTCCCTGTTTTTCCCAGAGGCTCTTTTGTTCTGCAGGGATTGAAGACACTCCAGTCCCACAGTCCCCAGCTCCCCTGGGGCAGGGTTGGCAGAATTTCGACAACACATTTTTCCACCCTGACTAGGATGTGCTCCTCATGGCAGCTGGGAACCACTGTCCAATAAGGGCCTGGGCTTACACAGCTGCTTCTCATTGAGTTACACCCTTAATAAAATAATCCCATTTTATCCTTTTTGTCTCTCTGTCTTCCTCTCTCTCTGCCTTTCCTCTTCTCTCTCCTCCTCTCTCATCTCCAGGTGCAAATAGTCTACAAACCAGTTGACCTGAGCAAGGTGACCTCCAAGTGTGGCTCATTAGGCAACATCCATCATAAACCAGGTAGCCCTGTGGAAGGTGAGGGTTGGGACGGGAAGGTGCAGGGGGTGGAGGAGTCCTGGTGAGGCTGGAACTGCTCCAGACTTCAGAAGGGGCTGGAAAGGATATTTTAGGTAGACCTACATCAAGGAAAGTGTTGAGTGTGAAACTTGCGGGAGCCCAGGAGGCGTGGTGGCTCCAGCTCGCTCCTGCCCAGGCTATGCTGCCCAAGACAAGGTGAGGCGGGAGTGAAGTGAAATAAGGCAGGCACAGAAAGAAAGCACATATTCTCGGCCGGGCGCTGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGGGTGGATCATGAGGTCAGGAGATTGAGACCATCCTGGCTAACACAGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTGTGGGGTCATGGTTTACAGGATGTTGATATAGAAAAGACTTCACTTAATGGGCCGGGCGCAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGCAGATCAGGAGGTCAGGAGATTGAGACCATCCTGGCTAACACAGTGAAACCCCATCTCTACTGAAAATACAAAAAATTAGCTGGGCGTGGTGGCAGGCACCTGTAGTCCCAGCCACTCGGTTGGCTGAGGCAGGAGAATGGCATGAACCCGGGAGGCGGAGCTTGCAGTGAGCAGAGACCATGCCACTGCACTCCAGCCTGGGCGACAGAGCAAGACTCTGTCTCAAGAAAAAAAAAAAAAAAACAGACTTTACTTACTGGAAGCCAACCAATGTATATTTAGAGTAATTTTTCCTGGGCTGAGCTGTCATTTACTTTTGCAGTATCTCAAGAAGAAGAGTTTACAGTGTAAATATTTGATGCACACTTTGATTATATAGATGAAGCAAACTATTTTCAAGAGCTTTGCAAGGACTTACTTGTATCCAAACACCATTCTAAAGGAGTCTTACCTACTTCTAAAGGCTGGTCTCTACTTGGAACCACTTGCTTGGCCCTGGTTCAAGTCCTGCTGCAAACCTGGAAGTCCTGTCATTGTCTTCTTCCCTCCAGAGCAGTGGCACCCAATCTAATTTTTGCTGTGCCCCAGCAGCCCCTGGCACTTTGCCCTGTAGACTGCAGACCTCATGTAATGTATGTTAAGTCCACAGAACCACAGAAGATGATGGCAAGATGCTCTTGTGTGTGTTGTGTTCTAGGAGGTGGCCAGGTGGAAGTAAAATCTGAGAAGCTTGACTTCAAGGACAGAGTCCAGTCGAAGATTGGGTCCCTGGACAATATCACCCACGTCCCTGGCGGAGGAAATAAAAAGGTAAAGGGGGTAGGGTGGGTTGGATGCTGCCCTTGGGTATATGGGCATTAATCAAGTTGAGTGGACAAAGGCTGGTCCAGTTCCCAGAGGAGGAAAACAGAGGCTTCTGTGTTGACTGGCTGGATGTGGGCCCTCAGCAGCATCCAGTGGGTCTCCACTGCCTGTCTCAATCACCTGGAGCTTTAGCACGTTTCACACCTGGGCCCCAACCTGGAGAGGCTGACCAATGGGTCTCAGGGGCAGCTCGGTTGCTGGAGTTTTTGTTTTTATTTATTTTTATGTATTTAAGGCAGGGTCTCTGTATTAGTCCATTCTCACACTGCTAATAAAGACATACCCAAGACTGGGTAATTTATAAAGGAAAGAGGTTTAATGGACTCACAGTTCCACATGGCTGGGGAGGCCTCAAAATCATGGCGGAAGGCAAAGGAGAAGCAAAGGCATTTCTTACATGGCGACAGGCAAGAGAGCGTGTGCAGGGGAACTCCCATTTATAAAACCATCAGACCTCATGAGATTTATTCACTATCATGAGAACAGCATGGGAAAGACCCGCCCCCATGATTCAGTTACCTCCCACTGGGTCCCTCCCATGACACATGGAATTATGGGAGCTACAATTCAAGATGAGATTTGGGTGGGGACACAGCCAAACCATATCAGTCTCCCTCTGTCATCCAGGCTGGAGTGCACTGGCATGATCTCGGCTCACTGCAGCCTCTACCTCCCTGGGTCAGGTGATCTTCCCACCTCAGCCTCCCAGGTAGCTGGAACTACAGGTACCTGCCACTATGCCTGGCTAAATATTTTGTATTTCCTGTGGAGACGAGGTTTTGCCACGTTGCCCAGGCTGGTCTTGAACTCCTGAGGTCAAGCAATATGCCCACCTCGGCCTCCCAAGGTGCTGGGATTACAGGTGTGAGCCACAGTGCTCGGCCTAAGTCACTGCAGTTTCTCGAGTCTAGAGGGCCCGTTTAAACCCGCTGATCAGCCTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGCCCCTCCCCCGTGCCTTCCTTGACCCTGGAAGGTGCCACTCCCACTGTCCTTTCCTAATAAAATGAGGAAATTGCATCGCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATTGGGAAGACAATAGCAGGCATGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGGAAAGAACCAGCTGGGGCTCTAGGGGGTATCCCCACGCGCCCTGTAGCGGCGCATTAAGCGCGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCTAGCGCCCGCTCCTTTCGCTTTCTTCCCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTCAAGCTCTAAATCGGGGGCTCCCTTTAGGGTTCCGATTTAGTGCTTTACGGCACCTCGACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTGGAACAACACTCAACCCTATCTCGGTCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTCGGCCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAACGCGAATTAATTCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCTGCCTCTGAGCTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTCCCGGGAGCTTGTATATCCATTTTCGGATCTGATCAAGAGACAGGATGAGGATCGTTTCGCATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGACTCTGGGGTTCGAAATGACCGACCAAGCGACGCCCAACCTGCCATCACGAGATTTCGATTCCACCGCCGCCTTCTATGAAAGGTTGGGCTTCGGAATCGTTTTCCGGGACGCCGGCTGGATGATCCTCCAGCGCGGGGATCTCATGCTGGAGTTCTTCGCCCACCCCAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAATTTCACAAATAAAGCATTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAAACTCATCAATGTATCTTATCATGTCTGTATACCGTCGACCTCTAGCTAGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCGCTCTTCCGCTTCCTCGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGC