



## pAIO plasmid sequence

TAGGGATAACAGGGTAATCGTAGAGGATCTGCTCATGTTTGACAGCTTATCATCGATGCATAAATGTCCCTGTCAAATGGACGAAGCAGGGATTCTGCAAACCCCTAT  
 GCTACTCCGTC AAGCCGTC AATTGCTGATTCTGTTACCAATTATGACAACCTTGACGGCTACATCATTCACTTTTTCTTCAACAACCGGCACGGAACCTGCTCGGGCT  
 GGCCCGGTGCATTTTTTAAATACCCGCGAGAAATAGAGTTGATCGTCAAACCAACATTGCGACCGACGGTGGCGATAGGCATCCGGTGGTGTCTAAAAAGCAGC  
 TTCGCTGGCTGATACGTTGGTCTCGCGCCAGCTTAAGACGCTAATCCCTAACTGCTGGCGGAAAAGATGTGACAGACGCGACGGCGACAAGCAACATGCTGTG  
 CGACGCTGGCGATATCAAATGCTGCTGCCAGGTGATCGTGTACTGACAAGCCTCGCGTACCCGATTATCCATCGGTGGATGGAGCGACTCGTTAATCGC  
 TTCCATGCGCCGAGTAACAATGCTCAAGCAGATTATCGCCAGCAGCTCCGAATAGCGCCCTTCCCTTGCCTGGCGGTAAATGATTGGCCAAACAGGTCGCTG  
 AAATGCGGCTGGTGCCTTTCATCCGGGCGAAAAGACCCGTAATTGGCAAATATTGACGGCCAGTTAAGCCATTATGCCAGTAGGCGCGGGACGAAAGTAAACCC  
 ACTGGTGATACCATTCGCGAGCCTCCGGATGACGACCGTAGTGATGAATCTCTCCTGGCGGGAACAGCAAAATATCACCCGGTGGGCAACAAATTCGTCCTG  
 ATTTTACCACCCCTGACCGCGAATGGTGAGATTGAGAATATAACCTTTCATTCACGCGGTTCGGTCGATAAAAAATCGAGATAACCGTTGGCTCAATCGGC  
 GTTAAACCCGCCACAGATGGGCATTAAACGAGTATCCGGCAGCAGGGGATCATTTTGCCTTCAGCCATACCTTTTACTACTCCGCCATTTCAGAGAAGAAACCA  
 ATGTCCATATTGCATCAGACATTGCCGTCACGCTCTTTTACTGGCTTCTCGTGAACCAACCGGTAACCCCGCTTATTAAGCATTCTGTAAACAAAGCGG  
 GACCAAGGCATGACAAAAACGCGTAACAAAAGTGTCTATAATCACGGCAGAAAAGTCCACATTGATTATTTGACGCGCTCACACTTGTATGCCATAGCATT  
 TTATCCATAAGATTAGCGGATCTACTGACGCTTTTATCGCAACTCTACTGTTTCCATACCCGTTTTTTGGGGCTAGCAGGAGGATATACATATGCATC  
 AAAAAACAGGTAATGAACCTGGGTCGAACTCTAACTGTGAAAGAATACAAATCCAGCTGATCGAACTGAACATCGAACAGTTCGAAGCAGGTATCGGTCT  
 GATCCTGGGTGATGCTTACATCCGTTCTCGTGATGAAGTAAAACCTACTGTATGCAGTTCGAGTGGAAAAACAAAGCATAACATGGACCAGGTATGCTGTGTAC  
 GATCAGTGGGTACTGTCGCCGCGCACAAAAACAACGTTAAACCACTGGGTAACCTGGTAATCACCTGGGCGCCAGACTTTCAAACCAAGCTTTCAACA  
 AACTGGCTAACCTGTTTCATCGTTAAACAACAAAAAACCTCCCGAACCACTGGTTGAAAACCTACCTGACCCCGATGCTCTGCGCATACTGGTTCATGGATGATGG  
 TGGTAAATGGGATTACAACAAAACTCTACCAACAATCGATCGTACTGAACCCAGTCTTTCACCTTCGAAGAAGTAGAATACCTGGTTAAGGGTCTGCGTAAC  
 AAATTCACCTGAACGTTACGTAAAAATCAACAAAAACAACCGATCATCTACATCGATTCTATGTCTTACCTGATCTTACAACTGATCAAAACCGTACCTGA  
 TCCCGCAGATGATGTACAACTGCCGAACACTATCTCCTCCGAACTTCTCCTGAAATAAGAATTCGTGTAGGAGGAATACCATTGGTACCCGGGATCTCTAGA  
 GTCGACCTGCAGGCATGCAAGCTTGGCTGTTTTGGCGGATGAGAGAAGATTTTCAGCCTGATACAGATTAATCAGAACGCGAAGCGGTCTGATAAAACAGAATT  
 TGCTTGGCGCAGTAGCGCGGTGGTCCACCTGACCCCATGCCGAACCTCAGAAGTGAACCGCCTAGCGCCGATGGTAGTGGGGTCTCCCATGCGAGAGTAGG  
 GAACTGCCAGGCATCAATAAAACGAAAGGCTCAGTCGAAAGACTGGGCTTTTCGTTTTATCTGTTGTTGTGCGGTGAACGCTCTCCTGAGTAGGACAAATCCGCC  
 GGGAGCGGATTTGAACGTTGCGAAGCAACGCCCGGAGGGTGGCGGGCAGGACGCCCGCCATAAACTGCCAGGCATCAAAATTAAGCAGAAGGCCATCTGACGGAT  
 GGCCTTTTTCGCTTTTACAAACTCTTTGTTTATTTTCTAAATACAGCGGCCGCGAAAGACTGAAATGCTATGTTTAGTGAGTTGTATCTATTTATTTTCAA  
 TAAATACAATGGTTATGTGTTTTGGGGCGATCGTGAGGCAAGAAAACCCGGCGTGGGCGGGTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAA  
 TTCATTAAGCATTCTGCCGACATGGAAGCCATCACAGACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTGCTTGGCTATAATATTTGCCCATG  
 GTGAAAACGGGGCGAAGAAGTTGTCATATTGGCCAGTTTAAATCAAACCTGGTGAACCTCACCCAGGGATTGGCTGAGACGAAAACATATTTCTCAATAAAC  
 CTTTAGGAAATAGCCAGGTTTTACCGTAACACGCCACATCTGCGAATATATGTGTAGAACTGCCGAAATCGTGTGGTATTACCTCCAGAGCGATGAAAA  
 CGTTTCAGTTTGTCTATGGAACCGGTGTAACAAGGGTGAACACTATCCCATATCACAGCTCACCGTCTTTCATTGCCATACGGAATCCGGATGAGCATTCATC  
 AGGCGGGCAAGATGTGAATAAAGCCGATAAACTTGTGCTTATTTTCTTACGGCTTTTAAAAGGCCGTAATACCAGCTGAACGGTCTGGTTATAGGTAC  
 ATTGAGCACTGACTGAAATGCTCAAATGTTCTTTACGATGCCATTGGGATAATACACGGTGGTATATCCAGTGAATTTTTTCTCCATAATCAATCCATTTA  
 CTATGTTATGTTCTGAGGGGATGAAAATTCCCCTAATTCGATGAAGATTCTGTGCAATTGTTATCAGCTATGCGCCGACCAGAACACCTTGGCGATCAGCCAAA  
 CGTCTCTCAGGCCACTGACTAGCGATAACTTTCCCAACAACGGAACAACCTCATTCATGGATCATTGGGTACTGTTGGTTAGTGGTTGTA AAAACACCTGA  
 CCGCTATCCCTGATCAGTTTCTTGAAGTAACTCATCACCCCAAGTCTGGCTATGCAGAAATCACCTGGCTCAACAGCTGCTCAGGGTCAACGAGAATTAACA  
 TTCGCTCAGGAAAGCTTGGCTTGGAGCTGTTGGTGGGTCATGGAATTACCTTCAACCTCAAGCCAGAATGCAGAATCACTGGCTTTTTTGGTTGTGCTTACCCA  
 TCTCTCCGATCACCTTGGTAAAGTTCTAAGCTTAGGTGAGAACATCCCTGCCTGAACATGAGAAAAACAGGGTACTCATACTCACTTCTAAGTACGGCTGC  
 ATACTAACCGCTTCATACATCTCGTAGATTCTCTGGCGATTGAAGGCTAAATCTTCAACGCTAACTTGAAGATTTTGTAAAGCAATCGGGCTTATAAGCAT  
 TTAATGCATTGATGCCATTAATAAAGCACCAACGCTGACTGCCCATCCCATCTGTCTGCGACAGATTCCTGGGATAAGCCAAGTTCAATTTTCTTTTTTTC  
 ATAAATGCTTTAAGCGCAGTGCCTCCTCAAGCTGCTCTGTGTTAATGTTCTTTTTTGTGCTCATACTGTTAAATCTATCACCGCAAGGGATAAATATCTAAC  
 ACCGTGCGTGTGACTATTTTACCTTGGCGGTGATAATGGTTGCATGTACTAAGGAGTTGTATGGAACAACGAGATGTGTATAAGAGACAGCTGGCCTGCCCT  
 CCCTTTTGGTGTCCAACCGCTCGACGGGGCAGCGCAAGCGGTGCTCCGGCGGGCCTCAATGCTTGGTATACTACTAGACTTTGCTTCGCAAGTCTGTG  
 ACCGCTACGGCGCTGCGCGCCCTACGGCTTGTCTCCGGCTTCGCCCTGCGGGTCTGCGCTCCCTTGCAGCCGTTGGATATGTGGACGATGGCCGG  
 AGCGGCCACCGCTGGCTCGCTTCTCGTCCGGCGTGGACAACCTGCTGGACAAGTGTGAGCAGGCTGCGCTGCCACGAGCTTACCACAGGGATTGCCAC  
 CGGCTACCAGCTTCGACCACATACCCACCGCTCCAACCTGCGCGGCTGCGGCTTGCCTCATCAATTTTTTAAATTTCTTGGGAAAAGCCTCCGGCTGC  
 GGCTGCGGCTTCTGCTTCCGGTTGGACACCAAGTGAAGGGGGTCAAGGCTCGCGCAGCAGCCGCGAGCGGCTTGGCCTTACGCGCTGGAACGACCCAAAG  
 CCTATGCGAGTGGGGCAGTCAAGGCGAAGCCCGCCCGCTGCCCCGAGCTCACGGCGCGAGTGGGGGGTTCAAAGGGGGCAGCCACCTTGGCAAGG  
 CCGAAGGCCGCGAGTCGATCAACAAGCCCGGAGGGGGCACTTTTTTCGCGGAGGGGGAGCCCGCCGAAAGCGTGGGGGAACCCCGAGGGGTGCCCTTCTTGG  
 GCACAAAAGAACTAGATATAGGGCGAAATGCGAAAGACTTAAAATCAACAACCTTAAAAAGGGGGTACGCAACAGCTCATTGCGGCACCCCGCAATAGCTCA  
 TTGCGTAGGTTAAGAAAATCTGTAATTGACTGCCACTTTTACGCAACGATAAATTGTTGTCGCGCTGCCGAAAAGTGCAGCTGATGCGCATGGTCCGCAACC



GTGCGGCACCCTACCGCATGGAGATAAGCATGGCCACGCAGTCCAGAGAAATCGGCATTCAAGCCAAGAACAAGCCCGGTCACTGGGTGCAAACGGAACGCAAAGC  
GCATGAGGCGTGGCCGGGCTTATTGCGAGAAACCCACGGCGCAATGTGTGCATCACCTCGTGGCGCAGATGGGCCACCAGAACCCGTTGGTGGTCAGCCAG  
AAGACTTTCCAAGTTCATCGGACGTTCTTTGCGGACGGTCCAATACGCAGTCAAGGACTTGGTGGCCGAGCGCTGGATCTCCGTCGTGAAGCTCAACGGCCCCG  
GCACCGTGTGCGCCTACGTGGTCAATGACCGCGTGGCGTGGGCCAGCCCCGCGACCAGTTGCGCCTGTGCGTGTTCAGTCCCGCGTGGTGGTTGATCAGCAGCA  
CCAGGACGAATCGCTGTTGGGGCATGGCGACCTGCGCCGCATCCCGACCTGTATCCGGCGAGCAGCAACTACCGACCGCCCCGCGAGGAGCCGCCAGCCAG  
CCCGGCATTCCGGGCATGGAACAGACCTGCCAGCCTTGACGAAACGGAGGAATGGGAACGGCGGGGAGCAGCGCCTGCCGATGCCGATGAGCCGTTTTC  
TGGACGATGGCGAGCGTGGAGCCCGACACGGGTACGCTGCCGCGCGGTAGCAGTTGGGTTGCGCAGCAACCCGTAAGTGGCTGTTCCAGACTATCGGCT  
GTAGCCGCTCGCAGTGTCTTATACACATCTCCGCTGTGCTTTCAGTGGATTTTCGGATAACAGAAAGCCGGGAAATACCGACCTCGCTTGTAAACGGAGTA  
GACGAAAGTGATTGCGCCTACCGGATATTATCGTGAGGATGCGTCATCGCCATTGCTCCCAAATACAAAACCAATTTACGACAGTGCCTCGTCCATTTTTTCGA  
TGAACCTCCGGCAGATCTCGTCAAACTCGCCATGTAATTTTATCCCGCTCAATCAGCATAAATGCAGGCTTCACGCTTACAGCGGGTCATAGTTGGCAAA  
GTACCAGGCATTTTTTCGCGTCAACCACATGCTGTACTGCACCTGGGCCATGTAAGTGTACTTTATGGCTCGAAAACACCGAGCCGGAATTTCAAAATCCCGG  
GAGGTAACGGGCATTTCAGTTCAAGCCGTTGCCGTCAGTGCATAAACCATCGGGAGAGCAGGCGGTACGCATACCTTCGTCGCGATAGATGATCGGGGATTAG  
TAACATTCACGCGGAAGTGAACCAACAGGGTTCTGGCGTGTCTCGTACTGTTTTCCCGAGCCAGTGTCTTAGCGTTAACTTCGGAGCCACACCGGTGCA  
AACCTCAGCAAGCAGGGTGTGGAAGTAGGACATTTTCATGTAGGCCACTTCTTCCGAGCGGGTTTTGCTATCACGTTGTGAACCTTCGAAGCGGTGATGACG  
CCGAGCCGTAATTTGTGCCACGCATCATCCCCCTGTCGACAGCTTCACATCGATCCCGGTACGCTGCAGGATAATGTCGGTGTGATGTCACCTTCTGCTC  
TGCGGCTTCTGTTTTCAGGAATCCAAGAGCTTTTACTGCTTCCGCTGTGTGAGTTCGACGATGCACGAATGTCGCGGGCAAAATATCTGGGAACAGAGCGGCAAT  
AAGTCGTATCCCATGTTTTATCCAGGGGATCAGCAGAGTGTAAATCTCCTGCATGGTTTCATCGTTAACCGGAGTGTGTCGCTCCGGTGCAGCTTCTGAG  
TGTATGAGTATTTTCGACAATGCGCTCGGCTTCATCCTGTGATAGATACCAGCAAAATCCGAAGCCAGACGGGCACACTGAATCATGGCTTTATGACGTAACAT  
CCGTTTGGGATGCGACTGCCACGGCCCGTGATTTCTGCTTCCGCGAGTTTTGAATGGTTCGCGGGCAGTTCATCCATCCATTCGGTAACGCAGATCGGATGA  
TTACGGTCCCTGCGGTAATCCGGCATGTACAGGATTCATTGCTCCTCAAAGTCCATGCCATCAAACCTGCTGGTTTTTCATTGATGATGCGGGACCAGCCATCAA  
CGCCCACCACCGAAGCATGCCATTCTGCTTATCAGGAAAGCGTAATTTCTTTCGTCACCGGATTAAGCCGTAAGTGGTTCAGGACAGTTCAGCCAGCTTCCAGCC  
CTGCGCATCGCTGGCATCACCTTTAAATGCCGCTGCGCAAGAGTGGTGTGATGAGTTCCTGTGGTTCGACAGAAATCCATGCCGACAGTTCAGCCAGCTTCCAGCC  
AGCGTTGCGAGTGCAGTACTCATTGTTTTATACCTCTGAATCAATATCAACCTGGTGGTGGCAATGGTTTCAACCATGTACCGGATGTGTTCTGCCATGCGCTC  
CTGAAACTCAACATCGTATCAAACGCACGGGTAATGGATTTTTGCTGGCCCCGTGGCGTTGCAAAATGATCGATGCATAGCGATTCAAACAGGTGCTGGGGCAGG  
CCTTTTTCCATGTCGCTGCCAGTTCTGCTCTTCTTTCACGGGCGAGCTGCTGGTAGTGACGCGCCAGCTCTGAGCCTCAAGACGATCCTGAATGTAATAAG  
CGTTCATGGCTGAACCTCGAAATAGCTGTGAAAATATCGCCCGCAAAATGCCGGGCTGATTAGTAATCCGGAATCGCACTTACGGCCAATGCTTCGTTTCGTATC  
ACACACCCCAAAGCCTTCTGCTTTGAATGCTGCCCTTCTCAGGGCTTAATTTTTAAGAGCGTACCTTCATGGTGGTCAAGTGGTCTGCTGATGCTGCTCAGTAT  
CACCGCCAGTGGTATTTATGTCAACACCGCCAGAGATAATTTATCACCGCAGATGGTTATCTGTATGTTTTTATATGAATTTTTTTTCAGGGGGCATTGTT  
TGGTAGGTGAGA