

pARG7.8 sequence (11552 bp)

pBR329 vector in lowercase, ARG7 in UPPERCASE

Linearised at the BamHI site i.e. pBR329;ARG7->;BamHI

cacaggacgggtgtggtcgccatgatcgcgtagtcgatagtggctccaagtagcgaagcgagcaggactgggcggcggccaaagcggtcggacagtgctccgagaacgggtgcgcatagaaattgcatcaacgcatatagcgctagcagcacgccatagtgactggcgatgctgtcggaatggacgatatcccgcaagaggcccggcagtaccggcataaccaagcctatgcctacagcatccagggtgacggtgccgaggatgacgatgagcgcattgttagatttcatacacggtgcctgactgcgttagcaatttaactgtgataaactaccgcattaaagcttatcgatgataagctgtcaaacatcaggagctaaggaagctaaaatggagaaaaaaatcactggatataccaccgttgatatatcccaatggcatcgtaaagaacattttgaggcatttcagtcagttgctcaatgtacctataaccagaccgttcagctggatattacggcctttttaaagaccgtaaagaaaaataagcacaagttttatccggcctttattcacattcttgcccgcctgatgaatgctcatccggaattccgtatggcaatgaaagacggtgagctggtgatatgggatagtgttcacccttgttacaccgttttccatgagcaaactgaaacgttttcatcgctctggagtgaataccacgacgatttccggcagtttctacacatatattcgcaagatgtggcgtgttacggtgaaaacctggcctatttccctaaagggtttattgagaatatgtttttcgtctcagccaatccctgggtgagtttcaccagttttgatttaaacgtggccaatatggacaacttcttcgcccccgttttcaccatgggcaaatattatacgcaaggcgacaaggtgctgatgccgctggcgattcaggttcatcatgccgtttgtgatggcttccatgtcggcagaatgcttaatgaattacaacagtactgcgatgagtggcagggcggggcgtaatttttttaaggcagttattggtgcccttaaacgcctggtgctacgcctgaataagtgataataagcggatgaatggcagaaattcgaaagcaaattcgacccggtcgtcggttcagggcagggtcgttaaatagccgcttatgtctattgctggtttaccggtttattgactaccggaagcagtgtgaccgtgtgcttctcaaatgcctagacgaaagggcctcgtgatacgcctatttttataggttaatgtcatgataataatggtttcttagacgtcaggtggcacttttcggggaaatgtgcgcggaacccctatttgtttatttttctaaatacattcaaatatgtatccgctcatgagacaataaccctgataaatgcttaaataatattgaaaaaggaagagtatgagtattcaacatttccgtgtcgcccttattcccttttttgcggcattttgccttcctgtttttgctcacccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtgggttacatcgaactggatctcaacagcggtaagatccttgagagttttcgccccgaagaacgttttccaatgatgagcacttttaaagttctgctatgtggcgcggtattatcccgtgttgacgccgggcaagagcaactcggtcgccgcatacactattctcagaatgacttggttgagtactcaccagtcacagaaaagcatcttacggatggcatgacagtaagagaattatgcagtgctgccataaccatgagtgataacactgcggccaacttacttctgacaacgatcggaggaccgaaggagctaaccgcttttttgcacaacatgggggatcatgtaactcgccttgatcgttgggaaccggagctgaatgaagccataccaaacgacgagcgtgacaccacgatgcctgcagcaatggcaacaacgttgcgcaaactattaactggcgaactacttactctagcttcccggcaacaattaatagactggatggaggcggataaagttgcaggaccacttctgcgctcggcccttccggctggctggtttattgctgataaatctggagccggtgagcgtgggtctcgcggtatcattgcagcactggggccagatggtaagccctcccgtatcgtagttatctacacgacggggagtcaggcaactatggatgaacgaaatagacagatcgctgagataggtgcctcactgattaagcattggtaactgtcagaccaagtttactcatatatactttagattgatttaaaacttcatttttaatttaaaaggatctaggtgaagatcctttttgataatctcatgaccaaaatcccttaacgtgagttttcgttccactgagcgtcagaccccgtagaaaagatcaaaggatcttcttgagatcctttttttctgcgcgtaatctgctgcttgcaaacaaaaaaaccaccgctaccagcggtggtttgtttgccggatcaagagctaccaactctttttccgaaggtaactggcttcagcagagcgcagataccaaatactgtccttctagtgtagccgtagttaggccaccacttcaagaactctgtagcaccgcctacatacctcgctctgctaatcctgttaccagtggctgctgccagtggcgataagtcgtgtcttaccgggttggactcaagacgatagttaccggataaggcgcagcggtcgggctgaacggggggttcgtgcacacagcccagcttggagcgaacgacctacaccgaactgagatacctacagcgtgagcattgagaaagcgccacgcttcccgaagggagaaaggcggacaggtatccggtaagcggcagggtcggaacaggagagcgcacgagggagcttccagggggaaacgcctggtatctttatagtcctgtcgggtttcgccacctctgacttgagcgtcgatttttgtgatgctcgtcaggggggcggagcctatggaaaaacgccagcaacgcggcccgagatgcgccgcgtgcggctgctggagatggcggacgcgatggatatgttctgccaagggttggtttgcgcattcacagttctccgcaagaattgattggctccaattcttggagtggtgaatccgttagcgaggtgccgccggcttccattcaggtggaggtggcccggctccatgcaccgcgacgcaacgcggggaggcagacaaggtatagggcggcgcctacaatccatgccaacccgttccatgtgctcgccgaggcggcataaatcgccgtgacgatcagcggtccagtgatcgaagttaggctggtaagagccgcgagcgatccttgaagctgtccctgatggtcgtcatctacctgcctggacagcatggcctgcaacgcgggcatcccgatgccgccggaagcgagaagaatcataatggggaaggccatccagcctcgcgtcgcgaacgccagcaagacgtagcccagcgcgtcggccgccatgccggcgataatggcctgcttctcgccgaaacgtttggtggcgggaccagtgacgaaggcttgagcgagggcgtgcaagattccgaataccgcaagcgacaggccgatcatcgtcgcgctccagcgaaagcggtcctcgccgaaaatgacccagagcgctgccggcacctgtcctacgagttgcatgataaagaagacagtcataagtgcggcgacgatagtcatgccccgcgcccaccggaaggagctgactgggttgaaggctctcaagggcatcgGTCGACGAGGAGGAGGTGCAAGGGGGATACCAGCGCGTGTTTCTCAGGGCCTGTGTGGGACACCGAAACGTGGTAAAAGAGACCCGCCCGCGAACTGTGTATGTGGAGTAGCGTGGCGTGTGCGGCCGGACCGACAAGGCAGCTTGTGGACTGCCCCACGTTGCAGAGTCAGCTGACAACGACACGTGCGCCTTCCTGTCATTGCCCGTGCGCACGCACGTCCTCCGCACTCCCAACAAATTGACAGCGACACGTGCGCCTTCCTATAAGCCTATGCCCGCACACGCTCCCGCGCCCTCAGGTGTCGGGCCAGACCACAGACCGGTTGGTCCACGAGTGCGAGGAGGATGAGGCGGGCGGCTGCGGCGGCGCCGGCGGGGCGCCGCGGCGAGGAGGACGGCCTGGGACTGGGCATCACAGGTGGGTGGCAGGCTGGCAGGGACTCACGCATGGGCCTTGTACGTGACTGCGGTTCTGCATGGCTAGTGGCTCACGCGCTGCGCACGTTCACGTACGGCTTGTGGGCATGCAGTGCCTTGACGTGAGGCTGCGCTGCCTTGCTGCTGCCGCCTTGCCCCGCTCCCTGCACACACTGCAGCCGGCTTCGGGCGCTACTTCACCGCGGGCTACGAGTGCGAGAACGCGCAGCAGCTCAACAGGCTGCTGGGGTACAAGGCGCTGTGAGAGCGCGCCGCAGGGGGAGTGTGTTCATATTGTGGTTGTTTGGGCCGTGGGCGCGGGCTGCATGTGCGTATTGCACGCGTACAGCATTGGTGACTGGTCAGGTGTAAGCGGCCGGCAGTGCGCCGCGAGGCGCTGCAGCGAGTTGTGGGGCATGCGTCATGCGCAGACGGCCCCTGGACGACAAGGCGTTGAGTTGGCGTTTGGAGGTGTGGGACGACGTGGGGTTTGTGCCGTCAAAGCACAGAACAGAAGGCGTGACCGTTTTACGAGCTCGTATGATGTAGCATGGATTGAATAATGACATGTGATTTTTGTTACAAGCGACGAATGCGTGGGGTTTTGGATGGCAGGGGTTTCAGTCGCCCGATTGCGCATGCACACGTGACCAAATTTATGCTCAACGACGTGACCATTGCTTTATACATACTTGTGTATCGGTTGGCACTTATAACAATTGGCTCGTCAAATTGACGCGAGGCTGCACTTCGATCCTGAAAGCCCCAGTTCAACAAGTCGGATAGCCAAATGGCCCCGCTCGCTCTCCAGCATCAAGGGGCCTCTAAGTGCCTCGCGGCAACCCAGCGCAAGTGTGCTCGCGTTGCGGTGAGCTGGACTCGTGCACTTGTCGACGCCGTCGGCACCGCAATCGAAAGACGCGTGCGTCGAGCAATTGTGGAAGCCGCTGACGAATTGTCCGCATGTGACATTGCAGGCTCGCGTCCCCGCTCGTCTCAGCGTCATGGCCCAGGTGCGGACGTTGGGACTGCACTTGCACGAATGTGATGGGGCCGCACCGAGTCTGCGCGGACGTCTCGCTGACGTTTCGCGTTGAATGCATCTCGCAATAGGCAGCTGCTGCGCCTGCTGACAACACTAAGAAGCTGTGGGGCGGTCGCTTCACGGGCAAGACGGACCCGCTCATGGAGAAGTTCAACGAGTCGCTGCCCTTTGACAAGCGCCTGTGGGCTGAGGACATCAAGGTGCGGCACAGGGAGGGGGGCGAGTGGTGGGGTGGGGCTGGGGGGGACGCGGGTTTGGTGGCCAGGGCAGGGAGGGAAGACGTGCGGGGCTAGGCAAGAGGCTGCGAGGGCCCAGGGTAACACCAGACCGTGCCGTGTCGCGTGCCCGGCTTGCTGCCCACCTTGCCCGGCCATCCCCACCGCCCTCCCCACCAGCAATGACACGTACACATTCACACACTCCCCCACACCCACATACCCACACACCCACGCATTCCCCAACAGGGCAGCCAGGCGTACGCCAAGGCTCTTGCCAAGGCCGGCATTCTGGCACATGACGAGGCCGTGACCATTGTGGAGGGGCTGGCCAAGGTGCGCACACCCGGCAGCAGGGCGGGTGGGTGGGTGGGTGGGGTGGGGGGGCAGAGAGAGGCGCGGGCTGAGAGGGGGCTGAGAGGGGGGTCAGCGAGGCGCAGGCTCAGGGGGAGGCGTCTGAGGGGGGCTGAGATGGTGGTGGGGGAGCTGCGGGTGCTGGGGCTGCTGCGGTGGCGGGCGGGCGGGCGGGCGGGCGACGTGTACGTGAGTAGCCGCTGACCGGGCGCTGGGCCTTTGCGCACGCCACAGCCCACATGACACCGCCGCAAGGCCCGCCGCGCCCCACCCACGTTCACACACTCCCCACACCCACGCGTGCGCGCGCCTCCTTCCCCTCAATACACGCGCCTCCTTCCCCTGGCCCCCGCCTGCTCCCCCCATCCGGCCGCCCCGCCTGCAGGTGGCTGAGGAGTGGAAGGCGGGTGCCTTTGTGATCAAGGCGGGTGACGAGGACATCCACACGGCCAACGAGCGGCGCCTCACGGAGCTGGTGGGGGCGGTGGGCGGCAAGCTGCACACCGGCCGCTCGCGCAACGACCAGGTGAGGGTGGGTGGGTGGGGGTGGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGGGTTTGAGATACCGGTACCAGGCCAAACTAAACCGAACCCAAGGGGGTGGCGTAGGGGCGTGGGAGGGGGGGAGTGCGGAAGCCGGGAGGCAGGAGTAAGGGCGGGAGGAGGGGGCCGGAGGAGAAGCAGGGACGAAGTCGATGACAGGCGCAGTCGGTGGCGGCGGTGGCGGGTGTGCCGTTGTGCAGTGGCTGTGGAGGCCATGTGCAGGGCGGCGGCGGGGCCGGGCCGGGGGTGGGAGACTTGTCCAGACCCCGTGGCCCTCTTCCAGCCCCGTCCGCCACTGCCGCCACCACCACCGCCGCCGCCGTAGCCACCACCCCTCACGTCGAGGCACTTCACAGATGCGAAGCAACCACACCGTTCTCCACATGAACAGCTACCCTCCCAAACCCAACTTTCCCTTCCCGCCTTACCTAACCATGACCCGCTACCCCCCCCCCCTTTATTTCTTAACTAACCATGAATGCCCCCCCCCGGCTGTACCTGGCTACGACTTCACTTCGTAAACTTAATGTGTGTAACCCCCCTTACACACACACACACACCCCTCCCCGCCCCTCCAAAGGTTGCCACCGACTACCGGCTGTGGCTGGTGGGTCAGGTGGAGGTGATGCGGTCCGAGGTGGGCGAGCTGATGCGCGTGGCGGCGGACCGCTCCGAGGCAGAGGTGGAGGTGCTCATGCCGGGTGAGGGGGCAGGGAGGGGGGGAGGGGGAGGGGGAGGTGCTCATGCCGGTGAGGGTAGGGAGGGGAGGGGCAGAGGAGGGAGGGGGAGGAGGGGGCGGCTGAGTGCGGGAGAGGCAGGGATGAGGGCGATAGAAAGTTGCGTATTGTCGGTAAACTCAAAGGACTAGACGAAGAGAACAAACCTAAACAAGGGAGCTGGAGCGAGGCCAAATCTGAACGTGACATCGCCCGCCTCCTCCCGCTGCCTGCTCCCCCACCTCCTCCCCCATCTCGCCCCCCCCCCCACACACACACAGGCTTCACGCACCTTCAGAATGCCATGACTGTGCGCTGGAGCCACTGGCTGATGAGCCACGCCGCGGCCTGGCAGCGCGACGACATGCGGCTGCGGGACCTGCTGCCGCGGGTGGCCACACTGCCGCTGGGCTCGGGTGGGTGAGGGAGGGGAGGGGAGGGGAGGGGGGGAGGGGGAGGGAGAGGAGGGGAGAAGGGGGGGGGAGACGAGGAGGGTGGAAGGGTGGGGGCGGGGCGGTGGAGGCTAGAGGGTGGGGCTGGGTGGGTGGACGGAGTGCACTGGTAGAGGAGGGATAGGGTACATTGAGACGGGAGGAGGGATGCAGGGGCGAAGGTGGGGAGGAGGGGAGGGGAGGAGGCGTGGAGCTGGAGTGGGCCGACGAGTGTGCGGACGGGGCAGGCGGCAACGGGGATTAAACGGCGGGGGGCCGGGGCGTGTGCACGACAGGGGCTTGCGCGTCTGCGATTGTGGGGGCACACAGGGACAGGAGCACGACGTGGGACACGCATAGATACGCCGCATTGACAACACACACACACACACACACACACACACACACACACACACACACACAAACACAAACACACACAAACACAAACACACACACGCCCCCCCCCCTACACACACGCCCCCTCCCCAGGCGCCCTGGCCGGCAACCCCTTTCTGGTGGACCGCCAGTTCATCGCCAAGGAGTTGGGTTTCGGCGGCGGCGTGTGCCCCAACTCCATGGACGCGGTGAGGGGAGGAGGAGGGGGAGGAGGGCGGGGGGGGGCAGGAGGGGGGAGGAGGAGGGGGGGAGGGGGTTAACTTTGAAGCGTAAGGAAACAGTCGGGAGGAGGGGGGGAAGGAGGGGGCCTGGAGGAGGGGGGGAGGAGGAGGGTGGCTGGAGGGGGCTGGGGGAGGAGGAGGGGGAGGATTGGGAGGGGGCTGGGGGAGGGTGCCCGCAGCTGGGGGAGGTGGGGAGGGAGGGGGTTGCTGCTGGTGTAAAGGGCCTGTAGGCACTGAGAGCACTGTGGGGAGCCGGGGTACTGCCTGGGGCCCCGCGCTGCAGAGGTGTCGCGCAGTGTGGCGGCGCATCCCCCGCATCCCCACACGCGGGCCGCTGCCGCTGCCCGCCACACCCTTGCCACTTTGTGTGCTTTCCTAGGATATACACACACACACACACACACACACACACACACACACACACAAACACAAACACACACGGGCGCGGGCTTTCGTTTCGTTTTTTAACACAAACACACACTCCCCCTGTGCTCCTCAACACACTCCATCTTTCTCACACAAACACACACGCACACACACATGCGCAGGTGTCTGACCGCGACTTTGTGATCGAGACGGTGTTTGCGGCCAGCCTGCTGTGCGTGCACCTGTCGCGCTGGGCGGAGGACCTCATCATCTACAGCTCCGGCCCCTTCGGCTACGTGCAGTGCAGCGACGCCTACGCCACCGGCTCCTCGCTCATGCCGCAGAAGAAGAACCCCGACGCCCTGGAGCTCATCAGGTGCGGGAGGGATGGGGTGGGGGTGGGGGGGTTACATTCATGGTTAGTTAAGAAGTGAAGGCGTAGGGGGTGGATGGGGTGGGTTACATTCATGAACATTTAAGAAGTGAAGGCGTAGCCAGGAACAGTAGTAGAGCAGACGCGTTGTAGTGTGTGGGTTTGGGTGGGAGGGATGGTTGGGTAAAGCGGTACAGGATGTACTGAGGACTGCAGACCGAAGGAGCGGGGGAGGGGGAGCAGGCAGGCGGGGCGAGGGGCGTGGGGGCGGGGGTTACTGGCACCGTGCCGGGTAAGCAACACGTGACACGGAGATGCACCACACAAAGAGGGACGTGGGGAGTGGCAGGCGGGGGCCAGGGCTGAGAGGCGCGTGTGGAGGGGTGCGGGGTTGGGCGGGGGGCTGTTTCATGATACCGCTGCCTCCACCTCCTCCACCGCCTCCTGCCACCTCCACCTCCCCCACTGCCCCTCCCCGCCTCCTCCTGCTGCAGGGGCAAGGGCGGTCGTGTGCAGGGCAACCTGATGGGCGTCATGGCGGTGCTCAAGGGCACGCCCACCACATACAACAAGGACTTCCAGGCGAGAGAGCGAGAGCGAGGGAGGGAGGGAGAGCGAGGGAGAGGGAGGGAGAGGGAGGGAGAGGGAGACAGAGGGACAGGGACAGGGACAGGGACAGGGACAGGGACAGGGACAGGGGCAGGGGCAGGGGCAGGGGCAGGGGCAGGGGCAGGGGAGGCCCCCCGGGGGCGGCGGGCCCGGGGCATGAGGTCAGACATAGGGGCGCTGCACTGAGGCCGCGAGGCGGGCGGGAGGCAGGGGGCGGGGGGCGGGGGGCGGGAGCGGACATGCGCCGCAAACACAGACGGGTTGAGAAAGCACAACGACTGGAACGCAGTGGGCTTACTGACAATTCATCATTGTGCGCATATGTGTGTATGTGTATGTGTGTGTTTGTTTGTGCAGGAGTGTTGGGAGCTGCTGTTTGACACGGTGGACACGGTGCACGACGTGGTGCGCATCGCCACCGGCGTGCTGTCCACCCTGCGGATCAAGCCCGACCGCATGAAGGCCGGTGAGCGTAGCCGAGCAGGGCTGGAGCAGCAGCCGGGCAGCAGTAGCAGCAGGGCAGGGGAGCAGCGGGAGCGGGAGCAGCAGGAGGGGTGGTTGGGAAGCGGTGGGGGTAGGGTGGGAGCGGAGGAAGGGAAGGAGGAGCAGGAGCAGGAGGAAGAGGAGGAGGAAGGGCGGTGGGGGGTGGGGGGTCGTGTCCTTGGCCGCATGGGCGGAGGCGGGGAGGCGGGGAGGAGGCGGGGAAGCAGAGCCTGCACCCACGCTCCGCGGGTCCCTACCGTCTTGCGCCTAACCCCGTGCGCCTAGCCTCTTGCGCCCACCCCCTTAGTGCATCCTGTACCCCTCTTTCCAAACATCCTTGCAACTCCCTGACCTCCTCGCCAAACCTCCCCCGCCCCCAGGCCTGTCCGCCGACATGCTCGCCACGGACTTGGCCGAGTACCTGGTGCGCAAGGGCGTGCCGTTCCGGGAGACACACCACCACAGGTGCGGCCGGGCGGGAGGGCGTGAGGGCGTGGGTGGGGCATGCCCGGGGTTGTGAGAGCTATCGAACGTTGTGCCGCGCCTGTTTCACAATGTCGGGCCACAGGGTATGCAGTTTCCTCTCCATATGTATAACAAACTGACCACCAATCATGCACGCTCACACGCTCTCCCACACACACGCGCACCACGCCACCACAGCGGCGCCGCCGTGAAGATGGCCGAGGACCGCGGCTGCACGCTGTTCGACCTCACCGTGGACGACCTCAAGACCATCCACCCGCTCTTCACCGACGACGTGGCGGCGGTGAGCGGCGGCGCGGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGTAGCCTGGGGGGGAGCGTGTGGGAGGAACGGCGGGGGAGGGGAGGCGGGGGGTGTCGTTTGCAGCCGAGCGCACGTGGTGCTTTGCCCCATTCCATGCCAGCAGGGTGACACACCTGACCATGCTGGTGTGCTGCTAGGTGGTTCACACCTACGTGTGAATTTGTGCTGGCGTGCGCACACCTTACTGTGGCCATGTGAACGGCATCCTCATGTCCTCGTGATTGCGCCCGGCACATTGCCCACAACCCCGCACCACCCAGCTCCTCAATCCAGTGCAAGGAAAGGAAATGCACGCCCGCCGCACCAACAACACGACGCATGTGTTTGCCACGTGCGCGCACACACGCGCAGGTGTGGGACTTCAACCGCAGCGCCGAGATGCGCGACACGGAGGGCGGCACCAGCAAGCGCTCGGTGCTGGAGCAGGTGCAGAAGATGCGCACCTACCTGGCGGCGGAGGGACAGCACTGAGCGGGTCGGGGGAGGGGGGGCGGGTGTGTATGTGTGTGTGTGTGCGTGTGTAAGTCTCGGTGGAGGGGTGGTCCTCTATATGGCGGCGGGGCCACAGGGGGACGGGTGTGACAGAGTTACGGCCGGAGCCAGCGGAGTCCCGGGATGGATTAAGGATCc

pARG7.83 sequence (11,944 bp)

pBR329 vector and phiX174 seq in lowercase, ARG7 in UPPERCASE

cacaggacgggtgtggtcgccatgatcgcgtagtcgatagtggctccaagtagcgaagcgagcaggactgggcggcggccaaagcggtcggacagtgctccgagaacgggtgcgcatagaaattgcatcaacgcatatagcgctagcagcacgccatagtgactggcgatgctgtcggaatggacgatatcccgcaagaggcccggcagtaccggcataaccaagcctatgcctacagcatccagggtgacggtgccgaggatgacgatgagcgcattgttagatttcatacacggtgcctgactgcgttagcaatttaactgtgataaactaccgcattaaagcttatcgatgataagctgtcaaacatcaggagctaaggaagctaaaatggagaaaaaaatcactggatataccaccgttgatatatcccaatggcatcgtaaagaacattttgaggcatttcagtcagttgctcaatgtacctataaccagaccgttcagctggatattacggcctttttaaagaccgtaaagaaaaataagcacaagttttatccggcctttattcacattcttgcccgcctgatgaatgctcatccggaattccgtatggcaatgaaagacggtgagctggtgatatgggatagtgttcacccttgttacaccgttttccatgagcaaactgaaacgttttcatcgctctggagtgaataccacgacgatttccggcagtttctacacatatattcgcaagatgtggcgtgttacggtgaaaacctggcctatttccctaaagggtttattgagaatatgtttttcgtctcagccaatccctgggtgagtttcaccagttttgatttaaacgtggccaatatggacaacttcttcgcccccgttttcaccatgggcaaatattatacgcaaggcgacaaggtgctgatgccgctggcgattcaggttcatcatgccgtttgtgatggcttccatgtcggcagaatgcttaatgaattacaacagtactgcgatgagtggcagggcggggcgtaatttttttaaggcagttattggtgcccttaaacgcctggtgctacgcctgaataagtgataataagcggatgaatggcagaaattcgaaagcaaattcgacccggtcgtcggttcagggcagggtcgttaaatagccgcttatgtctattgctggtttaccggtttattgactaccggaagcagtgtgaccgtgtgcttctcaaatgcctagacgaaagggcctcgtgatacgcctatttttataggttaatgtcatgataataatggtttcttagacgtcaggtggcacttttcggggaaatgtgcgcggaacccctatttgtttatttttctaaatacattcaaatatgtatccgctcatgagacaataaccctgataaatgcttaaataatattgaaaaaggaagagtatgagtattcaacatttccgtgtcgcccttattcccttttttgcggcattttgccttcctgtttttgctcacccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtgggttacatcgaactggatctcaacagcggtaagatccttgagagttttcgccccgaagaacgttttccaatgatgagcacttttaaagttctgctatgtggcgcggtattatcccgtgttgacgccgggcaagagcaactcggtcgccgcatacactattctcagaatgacttggttgagtactcaccagtcacagaaaagcatcttacggatggcatgacagtaagagaattatgcagtgctgccataaccatgagtgataacactgcggccaacttacttctgacaacgatcggaggaccgaaggagctaaccgcttttttgcacaacatgggggatcatgtaactcgccttgatcgttgggaaccggagctgaatgaagccataccaaacgacgagcgtgacaccacgatgcctgcagcaatggcaacaacgttgcgcaaactattaactggcgaactacttactctagcttcccggcaacaattaatagactggatggaggcggataaagttgcaggaccacttctgcgctcggcccttccggctggctggtttattgctgataaatctggagccggtgagcgtgggtctcgcggtatcattgcagcactggggccagatggtaagccctcccgtatcgtagttatctacacgacggggagtcaggcaactatggatgaacgaaatagacagatcgctgagataggtgcctcactgattaagcattggtaactgtcagaccaagtttactcatatatactttagattgatttaaaacttcatttttaatttaaaaggatctaggtgaagatcctttttgataatctcatgaccaaaatcccttaacgtgagttttcgttccactgagcgtcagaccccgtagaaaagatcaaaggatcttcttgagatcctttttttctgcgcgtaatctgctgcttgcaaacaaaaaaaccaccgctaccagcggtggtttgtttgccggatcaagagctaccaactctttttccgaaggtaactggcttcagcagagcgcagataccaaatactgtccttctagtgtagccgtagttaggccaccacttcaagaactctgtagcaccgcctacatacctcgctctgctaatcctgttaccagtggctgctgccagtggcgataagtcgtgtcttaccgggttggactcaagacgatagttaccggataaggcgcagcggtcgggctgaacggggggttcgtgcacacagcccagcttggagcgaacgacctacaccgaactgagatacctacagcgtgagcattgagaaagcgccacgcttcccgaagggagaaaggcggacaggtatccggtaagcggcagggtcggaacaggagagcgcacgagggagcttccagggggaaacgcctggtatctttatagtcctgtcgggtttcgccacctctgacttgagcgtcgatttttgtgatgctcgtcaggggggcggagcctatggaaaaacgccagcaacgcggcccgagatgcgccgcgtgcggctgctggagatggcggacgcgatggatatgttctgccaagggttggtttgcgcattcacagttctccgcaagaattgattggctccaattcttggagtggtgaatccgttagcgaggtgccgccggcttccattcaggtggaggtggcccggctccatgcaccgcgacgcaacgcggggaggcagacaaggtatagggcggcgcctacaatccatgccaacccgttccatgtgctcgccgaggcggcataaatcgccgtgacgatcagcggtccagtgatcgaagttaggctggtaagagccgcgagcgatccttgaagctgtccctgatggtcgtcatctacctgcctggacagcatggcctgcaacgcgggcatcccgatgccgccggaagcgagaagaatcataatggggaaggccatccagcctcgcgtcgcgaacgccagcaagacgtagcccagcgcgtcggccgccatgccggcgataatggcctgcttctcgccgaaacgtttggtggcgggaccagtgacgaaggcttgagcgagggcgtgcaagattccgaataccgcaagcgacaggccgatcatcgtcgcgctccagcgaaagcggtcctcgccgaaaatgacccagagcgctgccggcacctgtcctacgagttgcatgataaagaagacagtcataagtgcggcgacgatagtcatgccccgcgcccaccggaaggagctgactgggttgaaggctctcaagggcatcgGTCGACGAGGAGGAGGTGCAAGGGGGATACCAGCGCGTGTTTCTCAGGGCCTGTGTGGGACACCGAAACGTGGTAAAAGAGACCCGCCCGCGAACTGTGTATGTGGAGTAGCGTGGCGTGTGCGGCCGGACCGACAAGGCAGCTTGTGGACTGCCCCACGTTGCAGAGTCAGCTGACAACGACACGTGCGCCTTCCTGTCATTGCCCGTGCGCACGCACGTCCTCCGCACTCCCAACAAATTGACAGCGACACGTGCGCCTTCCTATAAGCCTATGCCCGCACACGCTCCCGCGCCCTCAGGTGTCGGGCCAGACCACAGACCGGTTGGTCCACGAGTGCGAGGAGGATGAGGCGGGCGGCTGCGGCGGCGCCGGCGGGGCGCCGCGGCGAGGAGGACGGCCTGGGACTGGGCATCACAGGTGGGTGGCAGGCTGGCAGGGACTCACGCATGGGCCTTGTACGTGACTGCGGTTCTGCATGGCTAGTGGCTCACGCGCTGCGCACGTTCACGTACGGCTTGTGGGCATGCAGTGCCTTGACGTGAGGCTGCGCTGCCTTGCTGCTGCCGCCTTGCCCCGCTCCCTGCACACACTGCAGCCGGCTTCGGGCGCTACTTCACCGCGGGCTACGAGTGCGAGAACGCGCAGCAGCTCAACAGGCTGCTGGGGTACAAGGCGCTGTGAGAGCGCGCCGCAGGGGGAGTGTGTTCATATTGTGGTTGTTTGGGCCGTGGGCGCGGGCTGCATGTGCGTATTGCACGCGTACAGCATTGGTGACTGGTCAGGTGTAAGCGGCCGGCAGTGCGCCGCGAGGCGCTGCAGCGAGTTGTGGGGCATGCGTCATGCGCAGACGGCCCCTGGACGACAAGGCGTTGAGTTGGCGTTTGGAGGTGTGGGACGACGTGGGGTTTGTGCCGTCAAAGCACAGAACAGAAGGCGTGACCGTTTTACGAGCTCGTATGATGTAGCATGGATTGAATAATGACATGTGATTTTTGTTACAAGCGACGAATGCGTGGGGTTTTGGATGGCAGGGGTTTCAGTCGCCCGATTGCGCATGCACACGTGACCAAATTTATGCTCAACGACGTGACCATTGCTTTATACATACTTGTGTATCGGTTGGCACTTATAACAATTGGCTCGTCAAATTGACGCGAGGCTGCACTTCGATCCTGAAAGCCCCAGTTCAACAAGTCGGATAGCCAAATGGCCCCGCTCGCTCTCCAGCATCAAGGGGCCTCTAAGTGCCTCGCGGCAACCCAGCGCAAGTGTGCTCGCGTTGCGGTGAGCTGGACTCGTGCACTTGTCGACGCCGTCGGCACCGCAATCGAAAGACGCGTGCGTCGAGCAATTGTGGAAGCCGCTGACGAATTGTCCGCATGTGACATTGCAGGCTCGCGTCCCCGCTCGTCTCAGCGTCATGGCCCAGGTGCGGACGTTGGGACTGCACTTGCACGAATGTGATGGGGCCGCACCGAGTCTGCGCGGACGTCTCGCTGACGTTTCGCGTTGAATGCATCTCGCAATAGGCAGCTGCTGCGCCTGCTGACAACACTAAGAAGCTGTGGGGCGGTCGCTTCACGGGCAAGACGGACCCGCTCATGGAGAAGTTCAACGAGTCGCTGCCCTTTGACAAGCGCCTGTGGGCTGAGGACATCAAGGTGCGGCACAGGGAGGGGGGCGAGTGGTGGGGTGGGGCTGGGGGGGACGCGGGTTTGGTGGCCAGGGCAGGGAGGGAAGACGTGCGGGGCTAGGCAAGAGGCTGCGAGGGCCCAGGGTAACACCAGACCGTGCCGTGTCGCGTGCCCGGCTTGCTGCCCACCTTGCCCGGCCATCCCCACCGCCCTCCCCACCAGCAATGACACGTACACATTCACACACTCCCCCACACCCACATACCCACACACCCACGCATTCCCCAACAGGGCAGCCAGGCGTACGCCAAGGCTCTTGCCAAGGCCGGCATTCTGGCACATGACGAGGCCGTGACCATTGTGGAGGGGCTGGCCAAGGTGCGCACACCCGGCAGCAGGGCGGGTGGGTGGGTGGGTGGGGTGGGGGGGCAGAGAGAGGCGCGGGCTGAGAGGGGGCTGAGAGGGGGGTCAGCGAGGCGCAGGCTCAGGGGGAGGCGTCTGAGGGGGGCTGAGATGGTGGTGGGGGAGCTGCGGGTGCTGGGGCTGCTGCGGTGGCGGGCGGGCGGGCGGGCGGGCGACGTGTACGTGAGTAGCCGCTGACCGGGCGCTGGGCCTTTGCGCACGCCACAGCCCACATGACACCGCCGCAAGGCCCGCCGCGCCCCACCCACGTTCACACACTCCCCACACCCACGCGTGCGCGCGCCTCCTTCCCCTCAATACACGCGCCTCCTTCCCCTGGCCCCCGCCTGCTCCCCCCATCCGGCCGCCCCGCCTGCAGGTGGCTGAGGAGTGGAAGGCGGGTGCCTTTGTGATCAAGGCGGGTGACGAGGACATCCACACGGCCAACGAGCGGCGCCTCACGGAGCTGGTGGGGGCGGTGGGCGGCAAGCTGCACACCGGCCGCTCGCGCAACGACCAGGTGAGGGTGGGTGGGTGGGGGTGGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGTGGGGGTTTGAGATACCGGTACCAGGCCAAACTAAACCGAACCCAAGGGGGTGGCGTAGGGGCGTGGGAGGGGGGGAGTGCGGAAGCCGGGAGGCAGGAGTAAGGGCGGGAGGAGGGGGCCGGAGGAGAAGCAGGGACGAAGTCGATGACAGGCGCAGTCGGTGGCGGCGGTGGCGGGTGTGCCGTTGTGCAGTGGCTGTGGAGGCCATGTGCAGGGCGGCGGCGGGGCCGGGCCGGGGGTGGGAGACTTGTCCAGACCCCGTGGCCCTCTTCCAGCCCCGTCCGCCACTGCCGCCACCACCACCGCCGCCGCCGTAGCCACCACCCCTCACGTCGAGGCACTTCACAGATGCGAAGCAACCACACCGTTCTCCACATGAACAGCTACCCTCCCAAACCCAACTTTCCCTTCCCGCCTTACCTAACCATGACCCGCTACCCCCCCCCCCTTTATTTCTTAACTAACCATGAATGCCCCCCCCCGGCTGTACCTGGCTACGACTTCACTTCGTAAACTTAATGTGTGTAACCCCCCTTACACACACACACACACCCCTCCCCGCCCCTCCAAAGGTTGCCACCGACTACCGGCTGTGGCTGGTGGGTCAGGTGGAGGTGATGCGGTCCGAGGTGGGCGAGCTGATGCGCGTGGCGGCGGACCGCTCCGAGGCAGAGGTGGAGGTGCTCATGCCGGGTGAGGGGGCAGGGAGGGGGGGAGGGGGAGGGGGAGGTGCTCATGCCGGTGAGGGTAGGGAGGGGAGGGGCAGAGGAGGGAGGGGGAGGAGGGGGCGGCTGAGTGCGGGAGAGGCAGGGATGAGGGCGATAGAAAGTTGCGTATTGTCGGTAAACTCAAAGGACTAGACGAAGAGAACAAACCTAAACAAGGGAGCTGGAGCGAGGCCAAATCTGAACGTGACATCGCCCGCCTCCTCCCGCTGCCTGCTCCCCCACCTCCTCCCCCATCTCGCCCCCCCCCCCACACACACACAGGCTTCACGCACCTTCAGAATGCCATGACTGTGCGCTGGAGCCACTGGCTGATGAGCCACGCCGCGGCCTGGCAGCGCGACGACATGCGGCTGCGGGACCTGCTGCCGCGGGTGGCCACACTGCCGCTGGGCTCGGGTGGGTGAGGGAGGGGAGGGGAGGGGAGGGGGGGAGGGGGAGGGAGAGGAGGGGAGAAGGGGGGGGGAGACGAGGAGGGTGGAAGGGTGGGGGCGGGGCGGTGGAGGCTAGAGGGTGGGGCTGGGTGGGTGGACGGAGTGCACTGGTAGAGGAGGGATAGGGTACATTGAGACGGGAGGAGGGATGCAGGGGCGAAGGTGGGGAGGAGGGGAGGGGAGGAGGCGTGGAGCTGGAGTGGGCCGACGAGTGTGCGGACGGGGCAGGCGGCAACGGGGATTAAACGGCGGGGGGCCGGGGCGTGTGCACGACAGGGGCTTGCGCGTCTGCGATTGTGGGGGCACACAGGGACAGGAGCACGACGTGGGACACGCATAGATACGCCGCATTGACAACACACACACACACACACACACACACACACACACACACACACACACAAACACAAACACACACAAACACAAACACACACACGCCCCCCCCCCTACACACACGCCCCCTCCCCAGGCGCCCTGGCCGGCAACCCCTTTCTGGTGGACCGCCAGTTCATCGCCAAGGAGTTGGGTTTCGGCGGCGGCGTGTGCCCCAACTCCATGGACGCGGTGAGGGGAGGAGGAGGGGGAGGAGGGCGGGGGGGGGCAGGAGGGGGGAGGAGGAGGGGGGGAGGGGGTTaacttctgcgtcatggaagcgataaaactctgcaggttggatacgccaatcatttttatcgaagcgcgcataaatttgagcagatttgtcgtcacaggttgcgccgccaaaacgtcggctacagtaacttttcccagcctcaatctcatctctctttttgcgttctgcttcaatatctggttgaacggcgtcgcgtcgtaacccagcttggtaagttggattaagcactccgtggacagatttgtcattgtgagcattttcatcccgaagttgcggctcattctgattctgaacagcttcttgggaagtagcgacagcttggtttttagtgagttgttccattctttagctcctagacctttagcagcaaggtccatatctgactttttgttAACTTTGAAGCGTAAGGAAACAGTCGGGAGGAGGGGGGGAAGGAGGGGGCCTGGAGGAGGGGGGGAGGAGGAGGGTGGCTGGAGGGGGCTGGGGGAGGAGGAGGGGGAGGATTGGGAGGGGGCTGGGGGAGGGTGCCCGCAGCTGGGGGAGGTGGGGAGGGAGGGGGTTGCTGCTGGTGTAAAGGGCCTGTAGGCACTGAGAGCACTGTGGGGAGCCGGGGTACTGCCTGGGGCCCCGCGCTGCAGAGGTGTCGCGCAGTGTGGCGGCGCATCCCCCGCATCCCCACACGCGGGCCGCTGCCGCTGCCCGCCACACCCTTGCCACTTTGTGTGCTTTCCTAGGATATACACACACACACACACACACACACACACACACACACACACAAACACAAACACACACGGGCGCGGGCTTTCGTTTCGTTTTTTAACACAAACACACACTCCCCCTGTGCTCCTCAACACACTCCATCTTTCTCACACAAACACACACGCACACACACATGCGCAGGTGTCTGACCGCGACTTTGTGATCGAGACGGTGTTTGCGGCCAGCCTGCTGTGCGTGCACCTGTCGCGCTGGGCGGAGGACCTCATCATCTACAGCTCCGGCCCCTTCGGCTACGTGCAGTGCAGCGACGCCTACGCCACCGGCTCCTCGCTCATGCCGCAGAAGAAGAACCCCGACGCCCTGGAGCTCATCAGGTGCGGGAGGGATGGGGTGGGGGTGGGGGGGTTACATTCATGGTTAGTTAAGAAGTGAAGGCGTAGGGGGTGGATGGGGTGGGTTACATTCATGAACATTTAAGAAGTGAAGGCGTAGCCAGGAACAGTAGTAGAGCAGACGCGTTGTAGTGTGTGGGTTTGGGTGGGAGGGATGGTTGGGTAAAGCGGTACAGGATGTACTGAGGACTGCAGACCGAAGGAGCGGGGGAGGGGGAGCAGGCAGGCGGGGCGAGGGGCGTGGGGGCGGGGGTTACTGGCACCGTGCCGGGTAAGCAACACGTGACACGGAGATGCACCACACAAAGAGGGACGTGGGGAGTGGCAGGCGGGGGCCAGGGCTGAGAGGCGCGTGTGGAGGGGTGCGGGGTTGGGCGGGGGGCTGTTTCATGATACCGCTGCCTCCACCTCCTCCACCGCCTCCTGCCACCTCCACCTCCCCCACTGCCCCTCCCCGCCTCCTCCTGCTGCAGGGGCAAGGGCGGTCGTGTGCAGGGCAACCTGATGGGCGTCATGGCGGTGCTCAAGGGCACGCCCACCACATACAACAAGGACTTCCAGGCGAGAGAGCGAGAGCGAGGGAGGGAGGGAGAGCGAGGGAGAGGGAGGGAGAGGGAGGGAGAGGGAGACAGAGGGACAGGGACAGGGACAGGGACAGGGACAGGGACAGGGACAGGGGCAGGGGCAGGGGCAGGGGCAGGGGCAGGGGCAGGGGAGGCCCCCCGGGGGCGGCGGGCCCGGGGCATGAGGTCAGACATAGGGGCGCTGCACTGAGGCCGCGAGGCGGGCGGGAGGCAGGGGGCGGGGGGCGGGGGGCGGGAGCGGACATGCGCCGCAAACACAGACGGGTTGAGAAAGCACAACGACTGGAACGCAGTGGGCTTACTGACAATTCATCATTGTGCGCATATGTGTGTATGTGTATGTGTGTGTTTGTTTGTGCAGGAGTGTTGGGAGCTGCTGTTTGACACGGTGGACACGGTGCACGACGTGGTGCGCATCGCCACCGGCGTGCTGTCCACCCTGCGGATCAAGCCCGACCGCATGAAGGCCGGTGAGCGTAGCCGAGCAGGGCTGGAGCAGCAGCCGGGCAGCAGTAGCAGCAGGGCAGGGGAGCAGCGGGAGCGGGAGCAGCAGGAGGGGTGGTTGGGAAGCGGTGGGGGTAGGGTGGGAGCGGAGGAAGGGAAGGAGGAGCAGGAGCAGGAGGAAGAGGAGGAGGAAGGGCGGTGGGGGGTGGGGGGTCGTGTCCTTGGCCGCATGGGCGGAGGCGGGGAGGCGGGGAGGAGGCGGGGAAGCAGAGCCTGCACCCACGCTCCGCGGGTCCCTACCGTCTTGCGCCTAACCCCGTGCGCCTAGCCTCTTGCGCCCACCCCCTTAGTGCATCCTGTACCCCTCTTTCCAAACATCCTTGCAACTCCCTGACCTCCTCGCCAAACCTCCCCCGCCCCCAGGCCTGTCCGCCGACATGCTCGCCACGGACTTGGCCGAGTACCTGGTGCGCAAGGGCGTGCCGTTCCGGGAGACACACCACCACAGGTGCGGCCGGGCGGGAGGGCGTGAGGGCGTGGGTGGGGCATGCCCGGGGTTGTGAGAGCTATCGAACGTTGTGCCGCGCCTGTTTCACAATGTCGGGCCACAGGGTATGCAGTTTCCTCTCCATATGTATAACAAACTGACCACCAATCATGCACGCTCACACGCTCTCCCACACACACGCGCACCACGCCACCACAGCGGCGCCGCCGTGAAGATGGCCGAGGACCGCGGCTGCACGCTGTTCGACCTCACCGTGGACGACCTCAAGACCATCCACCCGCTCTTCACCGACGACGTGGCGGCGGTGAGCGGCGGCGCGGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGTAGCCTGGGGGGGAGCGTGTGGGAGGAACGGCGGGGGAGGGGAGGCGGGGGGTGTCGTTTGCAGCCGAGCGCACGTGGTGCTTTGCCCCATTCCATGCCAGCAGGGTGACACACCTGACCATGCTGGTGTGCTGCTAGGTGGTTCACACCTACGTGTGAATTTGTGCTGGCGTGCGCACACCTTACTGTGGCCATGTGAACGGCATCCTCATGTCCTCGTGATTGCGCCCGGCACATTGCCCACAACCCCGCACCACCCAGCTCCTCAATCCAGTGCAAGGAAAGGAAATGCACGCCCGCCGCACCAACAACACGACGCATGTGTTTGCCACGTGCGCGCACACACGCGCAGGTGTGGGACTTCAACCGCAGCGCCGAGATGCGCGACACGGAGGGCGGCACCAGCAAGCGCTCGGTGCTGGAGCAGGTGCAGAAGATGCGCACCTACCTGGCGGCGGAGGGACAGCACTGAGCGGGTCGGGGGAGGGGGGGCGGGTGTGTATGTGTGTGTGTGTGCGTGTGTAAGTCTCGGTGGAGGGGTGGTCCTCTATATGGCGGCGGGGCCACAGGGGGACGGGTGTGACAGAGTTACGGCCGGAGCCAGCGGAGTCCCGGGATGGATTAAGGATCc