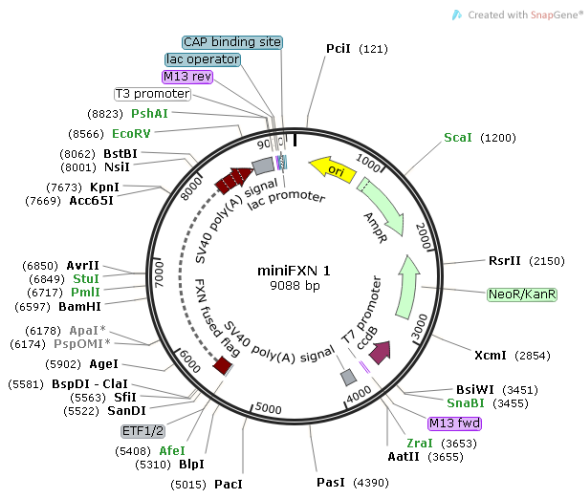


Supplemental Figure 1. Map and sequence of the miniFXN 1 construct.



Sequence:

```

cttccgcttctcgtcactgactcgctgcgctcggctcgttcggctcggcgagcggtatcagctcactcaaggcggtataacggttatccacagaatc
aggggataacgcaggaaagaacatgtgagcaaaaaggccagcaaaaggccaggaaaccgtaaaaaggccgcttgctggcgttttccataggctccg
ccccctgacgagcatcaaaaaatcgacgctcaagtcagagggtggcgaaaccgacaggactataaagataaccaggcgtttcccctggaagctcc
ctcgtgcgctcctcgtttccgaccctgcccttaccggatacctgtccgcctttcctcctcggaagcgtggcgcttttcatagctcacgctgtaggtat
ctcagttcgggtgtaggtcgttcgctcaagctgggctgtgtgcacgaacccccgttcagcccgaccgctgcgccttatccgtaactatcgtcttagtc
caaccggtaagacacgacttatcgccactggcagcagccactgtaacaggattagcagagcaggtatgtaggcggtgctacagagttctgaag
tggtggcctaactacggctacactagaagaacagtatttggtatctgcgctctgctgaagccagttacctcggaaaaagagttgtagctcttgatcc
ggcaaaaccaccgctgtagcgggtggtttttgttgcaagcagcagattacgcgcagaaaaaaggatctcaagaagatcctttgatcttttct
acggggtcgtacgctcagtggaacgaaaactcacgttaagggattttggtcatgagacaataaccctgataaatgcttcaataattgaaaaaggaa
gagtatgagattcaacattcgtgtcgccttattcctttttgctggcattttgcttctctgttttctcaccagaaacgctggtgaaagtaaaagat
gctgaagatcagttgggtgcacgagtggttacatcgaactggatctaacagcggtgaagatccttgagagttttcgccccgaagaacgttttcaatg
atgagcacttttaagttctgctatgtggcgggtattatcccgtattgacgcgggcaagagcaactcggctcggcgcatacactattctcagaatgact
tggtgagtagtaccagtcacagaaaagcatcttacggatggcatgacagtaagagaattatgtagtgctgcataaccatgagtgataaacactgag
gccaacttactctgacaacgatcggaggaccgaaggagtaaccgctttttgcacaacatgggggatcatgtaactcgccttgatcgttgggaaccg
gagctgaatgaagccatacacaacgacgagcgtgacaccacgatcctgtagcaatggcaacaacgttgcgcaaactattaactggcgaactactta
ctctagcttcccggcaacaattaatagactggatggaggcggataaaagttgcaggaccacttctgcgctcggccttccggctgggtggtttattgctga
taaatctggagccggtgagcgtgggtctcgggtatcattgcagcactggggccagatggtgaagcctcccgtatcgtagttatctacacgacgggga
gtcaggcaactatggatgaacgaaaatagacagatcgctgagataggtgcctcactgattaagcattggtactgtcagaccaagtttactatata
ctttagattgattaaaactcatttttaattaaaaggatctaggtaagatccttttgataatctatgagcggatacatatttgaatgatttagaaa
aataaacaataggggttcgcgcacatttcccgaaggatgacccctgatcgggtgtaaataccgcacagatgcgtaaggagaaaataccgcac
aggaaattgtaagcgttaataattcagaagaactcgtcaagaaggcagatagaaggcagatgcgctgcgaatcgggagcggcgataaccgtaaagcag
aggaagcggtcagccattcggcgaagcctttagcaatatacagggtagcaacgctatgtcctgtagcggctccgcaacaccagccggccac
agtcgatgaatccagaaaagcggccatttccacatgatattcggaagcaggatcgcctatgggtcaccgacgagatcctcggctcgggcatgctc
gccttagcctggcgaacagttcggctggcgcgagccctgatgctcctcgtccagatcatcctgatcgacaagaccggttccatccgagtagctgct
cgctcgatgcgatgtttcgttggtggtcgaatgggcaggttagccggatcaagcgtatgcagccgctgattgcatcagcatgatggatactttctg
gcaggagcaaggtgagatgacaggagatcctgccccgacttgcaccaatagcagccagtccttcccgttcagtgacaacgtcgagcacagctg
cgcaaggaaccccgtcgtggccagccacgatagccgctgcctcgttgcagttcattcagggcaccggacaggtcgttgcacaaaagaac
cgggcccctcgcgtgacagccggaacacggcggcatcagagcagccgattgtctgttgtgccagtcgatagccgaatagccttccaccaagcg

```

gccggagaacctgctgcaatccatcttgttcaatcatgcaaacgatcctcatcctgtctcttgatcagagcttgatcccctgcccacagatccttgg
cggcaagaaagccatccagtttactttgcagggcttcccaacctaccagagggcgcccagctggcaattccggttcgcttgctccataaaaccgc
ccagtctagctatgcccagtaagcccactgcaagctacctgctttctttgctgctgtttcccttgccagatagcccagtagctgacattcatccg
gggtcagcaccgtttctgaggactggctttctacgtgaaaaggatctaggtgaagatccttttgataatctcatgacctgacatttatccccagaaca
tcaggtaaatggcgttttgatgtcattttcggggtgctgagatcagccacttctccccgataacggagaccggcacactggccatatcggtggtcatc
atgcccagctttcatccccgatagcaccaccgggtaagttcacgggagactttatctgacagcagctgactggccagggggatcacatccg
tcccccggcgtgcaataatcactctgtacatccacaaacagacgataacggctctctctttataggtgtaaacttaactgccgtacgtatagg
ctgccaactgtgggaaggggatcggtgcccgtctctgctattacgccagctggcgaaagggggatgtgctgcaaggcgattaagttgggtaac
gccagggtttccagtcacgacgttgaacgacggccagtgattgaatacactcactatagggcgaattgaatttagcggccgacgctgt
aactagaggatcataatcagccataccacattgtagaggtttactgtcttaaaaaactccccacactccccctgaacctgaaacataaaatgaat
gcaattgtgtgtaactgtttattgagccttataatggttacaataaagcaatagatcacaaaattcacaataaagcatttttctactgattct
agtgtggtttgtccaaactcatcaatgtatcttatcatgtctggatctgactctagtgaattcgcccttctcttccagattcacaagtggctttgga
agaacttagtaccttcccatcttctgcccagtaaggtgtacacaactgacattttcttttttaagacagatcttctgatgagccgggctggaa
tgctgtggctattcacaggcacaatcatagctcactgacgcttagctcccaggctcaagtatctcccgcctcagcctctgagtagctgagatcac
aggatgactaccacactcggctcacatttgacatcctctaaagcatataaaatgtgaagaaaactttcacaattgcatccctttgtaatatgaa
cagaataaaactcttttaaaatctatcaacaataggcaaggcacgggtggctcacgctgtcgtctcagcactttgtgaggccaggcgggcagatc
gtttgagcctagaagtcaagaccacctgggcaacatagcgaacccctttctacaaaaatacaaaaactagctgggtgtggtggtgcacacctg
tagtcccagctacttggaggctgaaatgggaagactgcttagcccgggaggggagaagtgcagtaagccaggaccacaccactgactccagcct
gggcaacagagttagactctgtctcaacaaacaaataaatgaggcgggtggatcacagagtcagtagatcgagaccatcctggtaaacagggtga
aacctgctctactaaaaaaaaaaaaaaaaatacaaaaaaattagccagcagtggtggcggcgctgtagtcccagttactcgggaggctgaggcagg
agaatggcgtgaaaccgggaggcagagcttgactgagcagatcgaccactgcctccagcctgggagcagagcgagactccgtctcaatca
atcaatcaataaaaaatctattaacaatatttattgtgacttaacaggaacatgcctgtccaaaaaaactttacagggcttaactcattttatct
taccacaatcctatgaagtaggaactttataaaacgcatttataaaacaggcacagagaggttaattaactgcctctggtcacacagctaggaa
gtgggcagagtacagattacacaaggcatcctgtcctggccccacatacccaactgtgtaaacccataaccggcgccaagcagcctcaattgtg
catgaccacttcccagcaagacagcagctccaagtctctctgtttagaattttagaagcggcgggccaccaggctgactctccctgggtcagg
ggtcctggtgactccgtgctttgcacaaagcaggctctcattttgttaaatgcagaaatgtgtaagctgggaagtcttctgaggctaacctc
tagctgtccccacagaagagtgcctgcccagtgccaccaggggtgcggcagcaccagcgtggaggggcggagcggggcagaccggg
agcagcatgtgactctcgggcccgcgagtagccggcctctggcgtcaccagcccagcccaggcccagaccctcaccgggtcccggcggcgg
cagagttggcccactctgcccggcctggcctgcccagcagatcgatcgactgcagccccgcgagtaagatccgcccgggaacag
ccgcccggccgacgcccggggccgacgcccagcctgcccagggagggcggcggcagcggggtgctccgggtacgcccgctggactagctc
accccgtccttctcagggcggccggcgggaagcggcctgcaactccttctggttctccgggtgatttactgcttcttccgaaggaaa
aggggacattttgctgctgctgactgcccgggtcaaggcagggcgaaggcagggcagggctggtggaggggaccggttccgaggggtgtgctgct
gtctcatgcttgcacttctctgcgataactgtttcagtaataatagatggatctgctagtataacatacacataatgtgtgtctgtgtatc
tgtatagcgtgtgtgtgtgtgtgtgtttgcccgcagggcgccgacacctaataatttcaaggctggattttttgaaacgaaatgcttctgga
acgaggtgaaactttcagagctcagaatagctagagcagcagggccctggcttttgaaactgaccgacctttattccagattctgcccactccg
cagagctgtgtgacctgggggattcccctaactctctgagacgtggcttgtttctgtagggaagataaaggtagcggcattttgaggacctgg
tgtgaggatgaaatgggaataacatagataaagtctcagaactcaaatagttccccttctctttgggggtacaaagaaatactgaccagtt
acgccagcgttgaaggaggaaacccaaagaatggctgtggggatgaggaagattctcaaggggaggacatggtattatgagggtcttgaag
atgcaaggaagtgttagagggtttcacgaggagggaaccgtctgggcaaggccaggaaggcgggaaggggatccctcagagtggtggtacg
ccgcatgtattaggggatgaaagaggcaggccactcaagccatattgtgtgctctccggagttgtactttaggcttgaactccccacagctg
tattggcccacattgtgttgaagaaactttgggattggttgcagtgcttaaaagttaggacttagaaaatggatttctggcaggacgctggtgctc
atgccataatctcagcactttgggaggcctaggaagggtgacactgaggtccggagttcaagactaacctggccaacatggtgaaaccagtatc
tactaaaaatacaaaaaaaaaaaaaaaaaaagaagaagaagaagaagaaataaagaaaagttagccggcgctggtgtcgcgcgctgtaatccca
gctactccagaggctgcccagggagaatcgttgagcccgggaggcagaggttgattaagccaagatcgccaatgactccggcctggcgaca

gagcaagactccgtctcaaaaaataataataataaaaaataaaaaataaaatggatttcccagcatctctggaaaaataggcaagtgtggccat
gatggccttagatctcctctaggaaagcagacatttacttggcttctgtgactatctgagctgccacgtattgggcttccaccctgcctgtgtgga
cagcatgggtgtcagcagagttgtgttttgttttggagacagagttccctctgtgtgccaggctggagtgagtggtcagctcagctcact
gcaacctctgcctcctgggttcaagtattcctgcctcagcctcccagtagctgggattatcggctaattttgtatttttagtagagacagatttctcc
atgttggctcaggctggtctcgaactcccaacctcaggtgatccgccacctgccctccaaagtctggaattacaggcgtgagccaccgctgtggc
catcagcagagttttaatttaggagaatgacaagggtgtacagtttttagatggtacctggtggctgtaagggtattgactgacaaacacacc
caacttggcgtgcccaggagggtggacactgggttctggatagatggttagcaacctctgtcaccagctgggctctttttctatactgaattaa
tcacatttgttaacctgtctgttccatagttcccttgacatcttgggtatttggaggtgggtggcagtggaactggggccaccatcctgttta
attatttaagccctgactgtcctggattgaaggcgaaattcgcccttgcaactgtagaagtagcaatatataaattatgcattaatgggtata
attcactgaaaaatagtaacgtacttctaacttggcttccagagttcgaaccaacgtggcctcaaccagatttggaaatgcaaaaagcagagtgct
atgtgatgaatttggagaaatctggaacttgggcccaccaggctctctagatgagaccacatgaagactagcagaggaaacgctggactcttta
gcagagtttttgaagacctgacagacaagccatacacgtttgaggactatgatgtctcttgggagtggtgtctaactgtcaaacgggtggagatc
taggaacctatgtgatcaacaagcagacgcaacaagcaaatctggctatcttccatccagtgagcctaagcgttatgactggactgggaaaaac
tgggtgtactcccacgacggcgtgtccctccatgagctgctggccgagagctcactaaagccttaaaaacaaactggactgtcttcttggcctatt
ccggaaaagatgctcggatactgggtgatggattacaaggatgacgacgataagtgatatctagaggatcataatcagccataccacattttagaggt
ttacttgccttaaaaaacctcccacacctcccctgaacctgaaacataaaatgaatgcaattgttgtttaaactgtttattgcagcttataatggta
caaataaagcaatagcatcacaatttcacaaataaagcatttttctactgcattctagtgtgtgttccaaactcatcaatgtatcttatcatgtctg
gatctgcgactctagtccttttagtggggttaattctgagcttggcgtaatcatggtcatagctgttctctgtgtgaaattgttatccgctcacaattcca
cacaacatacagagccggaagcataaagtgtaaagcctggggtgcctaataagtgagtaactcacattaattgcgttgcgctcactgccgcttcca
gtcgggaaacctgtcgtgccagctgcattaatgaatcggccaacgcgggggagaggcggttgcgtattggcgct