

Supplementary Data 4. Sequence of the plasmid containing iTol2Amp-Cryst:RFP used as a template for recombineering.

LOCUS To12_Amp_Cryst_RFP 7724 bp ds-DNA circular SYN
30-AGO-2016
DEFINITION synthetic circular DNA

REFERENCE 1 (bases 1 to 7724)
AUTHORS .
TITLE Direct Submission
JOURNAL Exported martes, 30 de ago de 2016 from SnapGene Viewer 3.0.3
<http://www.snapgene.com>

FEATURES Location/Qualifiers
source 1..7724
/organism="synthetic DNA construct"
/mol_type="other DNA"
misc_feature 683..706
/label=pTarBAC_HA1_iTol2_fw
/note="pTarBAC_HA1_iTol2_fw"
misc_feature complement(702..901)
/label=Inverted L200
/note="Inverted L200"
misc_feature complement(917..935)
/label=amp_HA1_control_rev
/note="amp_HA1_control_rev"
misc_feature 1042..1902
/label=AmpR
/note="AmpR"
misc_feature 1868..1887
/label=amp_HA2_control_fw
/note="amp_HA2_control_fw"
misc_feature 1925..2074
/label=Inverted R150
/note="Inverted R150"
primer_bind 2129..2148
/label=T3
/note="T3"
promoter 2149..4387
/label=gamma Crys promoter
/note="gamma Crys promoter"
CDS 4397..5107
/label=mCherry
/note="mCherry"
polyA_signal 5149..5340
/label=SV40 late polyA
/note="SV40 late polyA"
misc_feature 5304..5324
/label=cryst_HA2_control_fw
/note="cryst_HA2_control_fw"
misc_feature complement(5338..5361)
/label=pTarBAC_HA2_iTol2CrystRFP_rev
/note="pTarBAC_HA2_iTol2CrystRFP_rev"
primer_bind complement(5388..5407)
/label=T3(1)
/note="T3(1)"
misc_feature 5388..5407
/label=ATTAACCCTCACTAAAGGGA
/note="ATTAACCCTCACTAAAGGGA"
misc_feature 5410..5416
/label=AttB1
/note="AttB1"
misc_recomb 5417..5566
/label=Attr1
/note="Attr1"
misc_recomb 5417..5566
/label=AttP1
/note="AttP1"

Supplementary Data 3

misc_recomb 5417..5430
 /label=AttL1
 /note="AttL1"
 misc_feature 5417..5430
 /label=AttB1(1)
 /note="AttB1(1)"
 misc_feature 5417..5423
 /label=Gateway recomb1
 /note="Gateway recomb1"
 misc_feature 5971..6981
 /label=SpectR
 /note="SpectR"

ORIGIN

```

1 ctttctcgcg ttatcccctg attctgtgga taaccgtatt accgcctttg agtgagctga
61 taccgctcgc cgacgccgaa cgaccgagcg cagcgagtca gtgagcgagg aagcgggaaga
121 gcgcccgaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca
181 cgacaggttt cccgactgga aagcgggcag tgagcgcaac gcaattaata cgcgctaccgc
241 tagccaggaa gagttttaga aaacgcaaaa aggccatccg tcaggatggc cttctgctta
301 gtttgatgcc tggcagttta tggcgggctt cctgcccgcc accctccggg ccggtgcttc
361 acaacgttca aatccgctcc cggcggattt gtcctactca ggagagcgtt caccgacaaa
421 caacagataa aacgaaaggc ccagcttctc gactgagcct ttcgttttat ttgatgcctg
481 gcagttccct actctcgcgt taacgctagc atggatgttt tcccagtcac gacggtgtaa
541 aacgacggcc agtcttaagc tcgggcccc aataatgatt ttattttgac tgatagtgc
601 ctgttcggtg caacaattg atgagcaatg cttttttata atgccaactt tgtacaaaaa
661 agcaggctcc gaattcgccc ttcccgtctc gagccgggcc caagtgatct ccaaaaaata
721 agtacttttt gactgtaaat aaaattgtaa ggagtaaaaa gtactttttt ttctaaaaaa
781 atgtaattaa gtaaaagtaa aagtattgat ttttaattgt actcaagtaa agtaaaaaatc
841 ccaaaaaata atacttaagt acagtaatca agtaaaatta ctcaagtact ttacacctct
901 ggttcttgac cccctaccac ttttcgggga aatgtgcgcg gaacccttat ttgtttat
961 ttctaataac attcaaatat gtatccgctc atgagacaat aaccctgata aatgcttcaa
1021 taatattgaa aaaggaagag tatgagtatt caacatttcc gtgtcgcctt taticctttt
1081 tttgcggcat tttgccttcc tgtttttgct caccagaaa cgctggtgaa agtaaaagat
1141 gctgaagatc agttgggtgc acgagtgggt tacatcgaac tggatctcaa cagcggtaag
1201 atccttgaga gttttcgccc cgaagaacgt tttccaatga tgagcacttt taaagtctctg
1261 ctatgtggcg cggattatc ccgtattgac gccgggcaag agcaactcgg tcgccgcata
1321 cactattctc agaatgactt ggttgagtac tcaccagtca cagaaaagca tcttacggat
1381 ggcagacac taagagaatt atgcagtgtc gccataacca tgagtgataa cactcgggcc
1441 aacttacttc tgacaacgat cggaggaccg aaggagctaa ccgctttttt gcacaacatg
1501 ggggatcatg taactcgcct tgatcgttgg gaaccggagc tgaatgaagc cataccaac
1561 gacgagcgtg acaccacgat gcctgtagca atggcaacaa cgttgcgcaa actattaact
1621 ggcaactac ttactctagc ttcccggcaa caattaatag actggatgga ggcggataaa
1681 gttgcaggac cacttctgcg ctcgccctt ccggctggct ggtttattgc tgataaatct
1741 ggagccggtg agcgtgggtc tcgcggtatc attgagcac tggggccaga ttgtaagccc
1801 tcccgtatcg tagttatcta cagcagggg agtcaggcaa ctatggatga acgaaataga
1861 cagatcgctg agataggtgc ctactgatt aagcattggt aaggtagcgg catatggttc
1921 ttgacagagg tgtaaaaagt actcaaaaat tttactcaag tgaaagtaca agtacttagg
1981 gaaaatttta ctcaattaaa agtaaaagta tctggctaga atcttacttg agtaaaagta
2041 aaaaagtact ccattaaaat tgtacttgag tattagatcg tggcggccgc tctagaacta
2101 gactcgatg ccaagcttgg ggcgcgcaat taaccctcac taaaggaaga aaaagctggt
2161 accgggcccc ccctcgagtc cataagaaag atataaataa gctggagaga atgcagaatt
2221 gtcaactagc agtgctggaa ttggggaggg atgccatccc ctactttttt tatttctgtg
2281 aatagcatc ccctcagtg ggatgcaagt tttttgaatc ccggaactgt cttttgctcc
2341 tcttcacttc tgcatgcaaa tacaatgcag aggtaaaata taatatagtt aaatatatag
2401 gggattaaag gagagaaaaa attgctggga gagaagaaga aaagtagag agtgttaaa
2461 cagataaaga aggtggaggc atcagagagg gttatagaga aaaggagaga agaaaaaatg
2521 aaggatttaa acagcagcag attaaggaat agtgagaaaa tgctttatat gaaataatct
2581 tgggtaatat agaatatgat ggggatgtgc tatgttatga cacaatacac agaaaagggtg
2641 ctttatttgc agtagctgaa ttggtagcca agaaaagtca taagcacaat ttttattttg
2701 gggccctat aggtcacata tgtaaatatg gttatgggag ggatgcacca ctcagagcat
2761 ccctccactt tttttactcc aattcaagca ctgggaatga gatagtcttc attagcacct
2821 aaacatttga caatgacca tgtgaattgt agcgaccata tttgcgtcct tttgtgacca
2881 aatggcatat gtgaacattc ctagtgtatg taataaaatt ttgcaacaaa atatttaaaa
2941 actccagagc agatgcttaa cttagtcatg taatattcgc cagcaaatga gtataacctt
3001 atttttaaca tcacttgtga tttttttagt aacattccca cttttagtat ttccagattg
3061 aattatcat accccccc atctttaaat agggaaactt gtaccagtgg gtctgggatt
3121 atttgtccat atattgcaat atatccaagc tgaccaactg tctcaaagt acccttggctc
3181 tggccaataa aacacaacaa ttctagcaga aagtaaagct ggccatagat ttgtgagatt
3241 ttaaaagatc agatcctgat cgtgagacca cgatcttctc agaacgatcg tacgatcgta

```

Supplementary Data 3

3301 cgaatctacc atcaactaaa aagaccaatt taccagggaaa acaaagggga gctgcctgct
3361 tggccctgca aacatagaga gattgcaact gggccgacaa agattttttg acctggccga
3421 tcaatttccc gacagatgct ggccgaaaaa tcgtaagatg tacgatcggt cgaataccac
3481 taaccgcacg ataatttcga aggattggct gggcttcctt aaaatcggct gttcggcaag
3541 aagaatcgct gcgtctatgg ggaccttaag tgtacttgct ttccaagggt aaaaattggt
3601 acctttttat acgacactgc atggatcacc tgaagcagg ttgggagcta caacatggaa
3661 ctagccactg ttcctttata tggtatcac tacccaattt taaataatta aactggaggt
3721 tattgatggg gtgaccacaa aattgatata gataaagaca tactgtatat attgcggtat
3781 atgacaaaata cagtaacacc acattactat tttaaattat atataaaaata atattaatat
3841 atctggggac ataaaatgtg gcttcttaaa cattgggggtg aactgatga gattatattg
3901 taaatgtttg atgctagcta accattgttt ggttcatttg tgtgattcaa aagtggcaaa
3961 gaatgacacc tagatgatgc caaatgaagg atttactagt aaccacaatt ctttaactg
4021 ttacaaagtg tttggaccag caactgaatt gcactgtaaa ttaccacatc agggctctcc
4081 gggtaacgcg tgctaagcaa tggatggaa aatttgtgac attgagtttt tgaataact
4141 gggatgctg ggaactctt tgggtaagc tatggaacaa aagtaccagc atgaactaag
4201 aatgactgt cacagcacia catcaaacac aatgcaagac aaaggttctc tgcttttgcc
4261 ttacttgaca gaaaaagtaa gctctagggt catcgcatgc agacagcagc aatacatgac
4321 atatataaag gctggctctt ttctcccttc cattgaaactg aaacttccac tcagtcagac
4381 ttgccccggg tccaccatgg tgagcaaggg cgaggaggat aacatggcca tcataagga
4441 gttcatgctg ttcaaggctg acatggaggg ctccgtgaac ggccacgagt tcgagctcga
4501 gggcgaggcc gagggcgcc cctacgaggg caccagacc gccaaagtga aggtgaccaa
4561 ggggtgcccc ctgcccctcg cctgggacat cctgtcccct cagttcatgt acggctccaa
4621 ggcctacgtg aagcaccctg ccgacatccc cgactacttg aagctgtcct tccccgaggg
4681 cttcaagtgg gagcgcgtga tgaacttcca ggacggcggc gtggtgaccg tgaccagga
4741 ctctccctg caggacggcg agttcatcta caaggtgaag ctgctgggca ccaacttccc
4801 ctccgacggc cccgtaatgc agaagaagac catgggctgg gaggcctcct cggagcggat
4861 gtaccccgag gacggcgccc tgaagggcga gatcaagcag aggctgaagc tgaaggcgg
4921 cggccactac gacgctgagg tcaagaccac ctacaaggcc aagaagcccg tgcagctgcc
4981 cggcgcctac aacgtcaaca tcaagttgga catcacctcc cacaacgagg actacaccat
5041 cgtggaacag tacgaacgcg ccgagggccg ccactccacc ggcggcatgg acgagctgta
5101 caagtaactg gacccctag aactatagtg agtctgatta cgtagatcca gatagataa
5161 gatacattga tgagtttggg caaacacaaa tgtaaatgca tggaaaaaaa tgcttttatt
5221 gtgaaatttg tgatgctatt gctttatttg taaccattat aagctgcaat aaacaagtta
5281 acaacaacia ttgcattcat tttatgtttc aggttcaggg ggaggtgtgg gaggttttt
5341 aatcgatacc gtgcacctcg agggggggcc cggtagccag cttttgttcc ctttagtgag
5401 ggtaattgca aagtttgtac aaaaaagttg aacgagaaac gtaaaatgat ataaatatca
5461 atataataa ttagattttg cataaaaaac agactacata atactgtaaa acacaacata
5521 tgagctcact atgaatcaac tacttagatg gtattagtga cctgtagaat tgatctagag
5581 gatcataata agggcgaatt cgaccagct ttcttgtaaa aagttggcat tataaaaaat
5641 aattgctcat caatttggtg caacgaacag gtcactatca gtcaaaataa atcattatt
5701 tgccatccag ctgatatccc ctatagttag tctgattaca tggatcatagc tgtttcttgg
5761 cagctctggc ccgtgtctca aaatctctga tgttacattg cacaagataa aaatatatca
5821 tctagccctc tctagaccag ccaggacaga aatgcctcga cttcgtgctg gcccaaggtt
5881 gccgggtgac gcacaccgtg gaaacggatg aaggcacgaa cccagtggac ataagcctgt
5941 tcggttcgta agctgtaatg caagtagcgt atgcgctcac gcaactggct cagaacctg
6001 accgaacgca gcgggtgtaa cggcgcagtg gcggttttca tggcttggtt tgactgtttt
6061 tttgggttac agtctatgcc tcgggcatcc aagcagcaag cgcgttacgc cgtgggtcga
6121 tgttgatgct tatggagcag caacgatggt acgcagcagg gcagctgcgc taaaacaaag
6181 ttaaactatca tgaggaagc ggtgatcgcc gaagtatcga ctcaactatc agaggtaggt
6241 ggcgtcatcg agcgcctct cgaaccgacg ttgctggccg tacatttgta cggctccgca
6301 gtggatggcg gcctgaagcc acacagtgat attgatttgc tggttacggg gaccgtaagg
6361 cttgatgaaa caacgcggcg agctttgatc aacgacctt tggaaacttc ggcttcccct
6421 ggagagagcg agattctccg cgctgtagaa gtcaccattg ttgtgcacga cgacatcatt
6481 ccgtggcggt atccagctaa gcgcgaactg caatttggag aatggcagcg caatgacatt
6541 cttgcaggta tcttcgagcc agccacgatc gacattgatc tggctatctt gctgacaaaa
6601 gcaagagaac atagcgttg cttggtaggt ccagcggcgg aggaactctt tgatccgggt
6661 cctgaacagg atctatttga ggcgctaaat gaaaccttaa cgctatggaa ctgcgccccc
6721 gactgggctg gcgatgagcg aatgtatgtg cttacgttgt cccgcatthg gtacagcgca
6781 gtaaccggca aaatcgcgcc gaaggatgct gctgcccact gggcaatgga gcgcctgccc
6841 gccagatca agcccgtcat acttgaagct agacaggctt atcttggaca agaagaagat
6901 cgcttggcct cgcgcgcaga tccagttgaa gaatttgtcc gaatttgtcc actacgtgaa
6961 accaaggtag tcggcaata accctcgagc caccatgac caaaatccct taactgtagt
7021 tacgcgtcgt tccactgagc gtcagacccc gtagaaaaga tcaaaggatc ttcttgagat
7081 ctttttttcc tgccgctaag ctgctgcttg caaacaacaaa aaccaccgct accagcgggt
7141 gtttgtttgc cggatcaaga gctaccaact ctttttccga aggtaactgg cttcagcaga
7201 gcgcagata caaatactgt ccttctatgt tagccgtagt tagccacca cttcaagaac
7261 tctgtagcac cgcctacata cctcgtctct ctaactcctgt taccagtygc ctgtgcccag
7321 ggcgataagt cgtgtcttac cgggttgagc tcaagacgat agttaccgga taaggcgcag

Supplementary Data 3

```
7381 cggtcgggct gaacgggggg ttcgtgcaca cagcccagct tggagcgaac gacctacacc
7441 gaactgagat acctacagcg tgagcattga gaaagcgcca cgcttcccga agggagaaag
7501 gcggacaggt atccggtaag cggcagggtc ggaacaggag agcgcacgag ggagcttcca
7561 gggggaaacg cctggtatct ttatagtcct gtcgggtttc gccacctctg acttgagcgt
7621 cgatTTTTgt gatgctcgtc aggggggCGG agcctatgga aaaacgccag caacgcggcc
7681 tttttacggt tcctggcctt ttgctggcct tttgctcaca tgtt
```

//