Appendix for:

Precision design of stable genetic circuits carried in highly-insulated *E. coli* genomic landing pads

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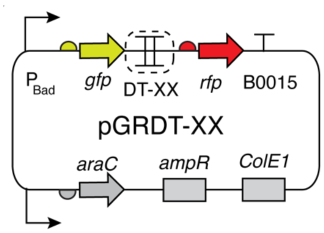
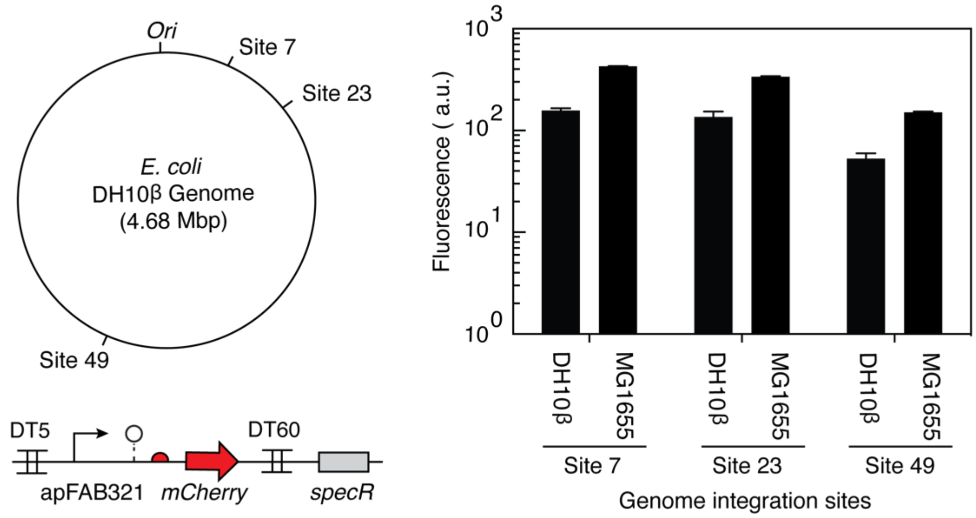
a



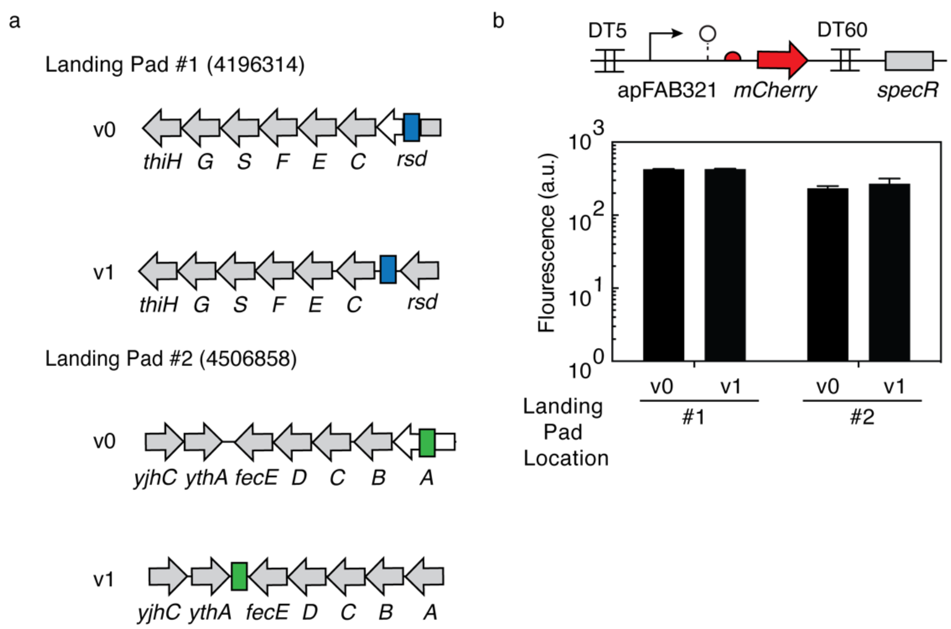
b

	Forward Terminator Strength						Reverse Terminator Strength					
Name	Day 1		Day 2		Day 3		Day 1		Day 2		Day 3	
	GFP	RFP	GFP	RFP	GFP	RFP	GFP	RFP	GFP	RFP	GFP	RFP
DT3	4100	0.4	3200	0.8	3100	0.8	3200	8.4	2900	10	3600	14
DT5	3100	0.9	4600	0.4	3500	0.5	3600	34	4700	51	3300	27
DT19	3400	2.0	2700	1.8	2200	1.5	2900	1300	3200	1500	4100	1400
DT34	4400	3.6	3300	2.4	3200	3.2	2600	950	3200	900	3800	1400
DT36	3400	2.5	3800	2.2	4500	3.8	3000	390	2900	470	3300	510
DT42	3200	0.4	3900	1.4	3900	1.0	6700	130	700	160	800	200
DT54	3100	0.6	3700	1.0	7700	2.7	3200	55	3500	60	4200	52
DT56	2700	5.4	3400	6.5	3300	7.1	540	20	560	26	660	41
DT60	3400	16	3200	14	4200	21	2900	48	3600	53	3800	79
DT65	2400	2.6	1500	1.4	3000	5.4	2200	1200	3000	1400	3100	1900
DT82	2200	6.3	1800	3.9	3000	11	2900	500	3300	570	3500	720
DT83	1800	1.7	4200	5.9	9100	2.9	2100	210	2700	310	3000	400
DT86	4800	11	2500	4.4	4000	12	3000	3100	4000	4700	4100	5200
DT100	5400	0.7	4500	0.5	9500	1.7	2700	120	3200	100	4100	180
DT101	4100	0.4	4600	0.7	3200	0.5	2900	10	5000	13	5200	20
DT103	3500	2.2	3000	1.6	3500	3.0	2400	260	3400	410	3200	500
DT104	3200	3.1	4400	4.9	3000	2.1	2400	11	3700	17	3300	19

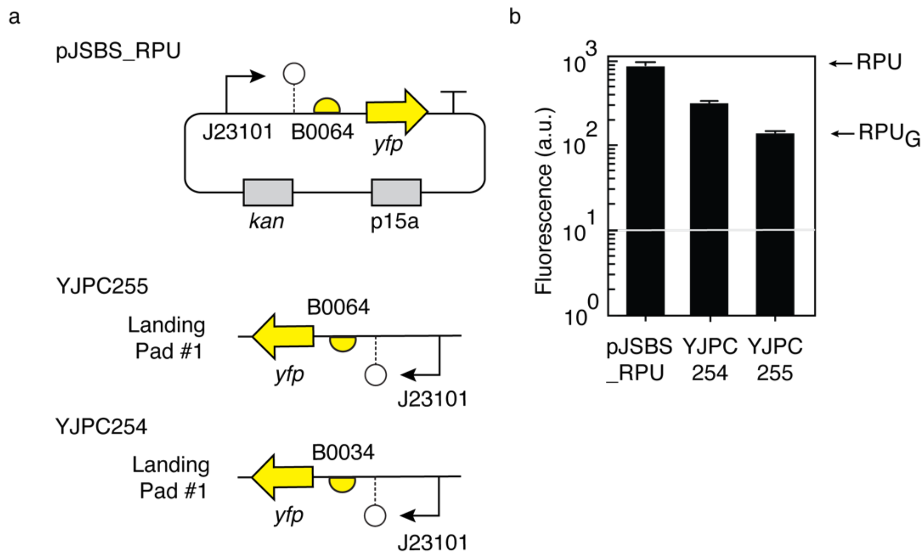
Appendix Figure 1: **Terminator characterization assay. (a)** The plasmid to measure terminator strength is shown, where XX refers to the terminator name. The terminator to be measured is inserted between *gfp* and *rfp* genes in an operon and the measured fluorescences are used to calculate terminator strength T_S (Methods). **(b)** The raw fluorescence measurements for each terminator are shown.



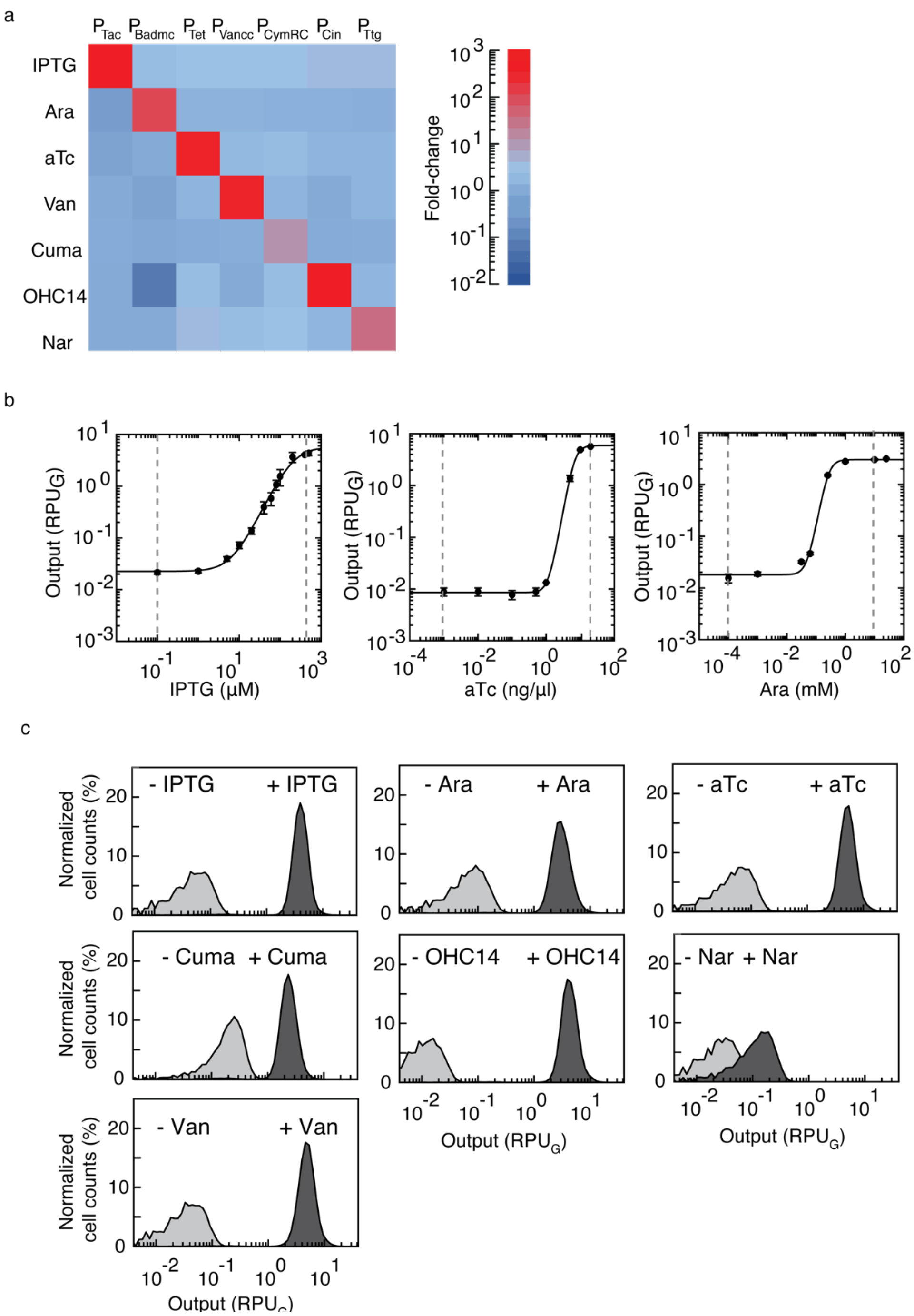
<u>Appendix Figure 2:</u> **Comparison of expression at different integration sites between *E. coli* strains.** Three sites are shown, selected from the Tn5 library (Appendix Table 2) (corresponding to nt positions #4294255, #4614289, #1983293 in the genome sequence NCBI CP000948.1). The construct integrated at these sites is shown. The means of three experiments performed on different days are shown and the error bars are the standard deviations of these measurements.



<u>Appendix Figure 3:</u> **Comparison of expression levels between landing pads. (a)** The locations of the landing pads in the genome are shown. **(b)** Experiments were performed where a constitutive expression cassette was evaluated at these positions (but not containing the context of the double terminators and integration sites) (Methods). The means are shown for three experiments performed on different days and the error bars are the standard deviations of these measurements.

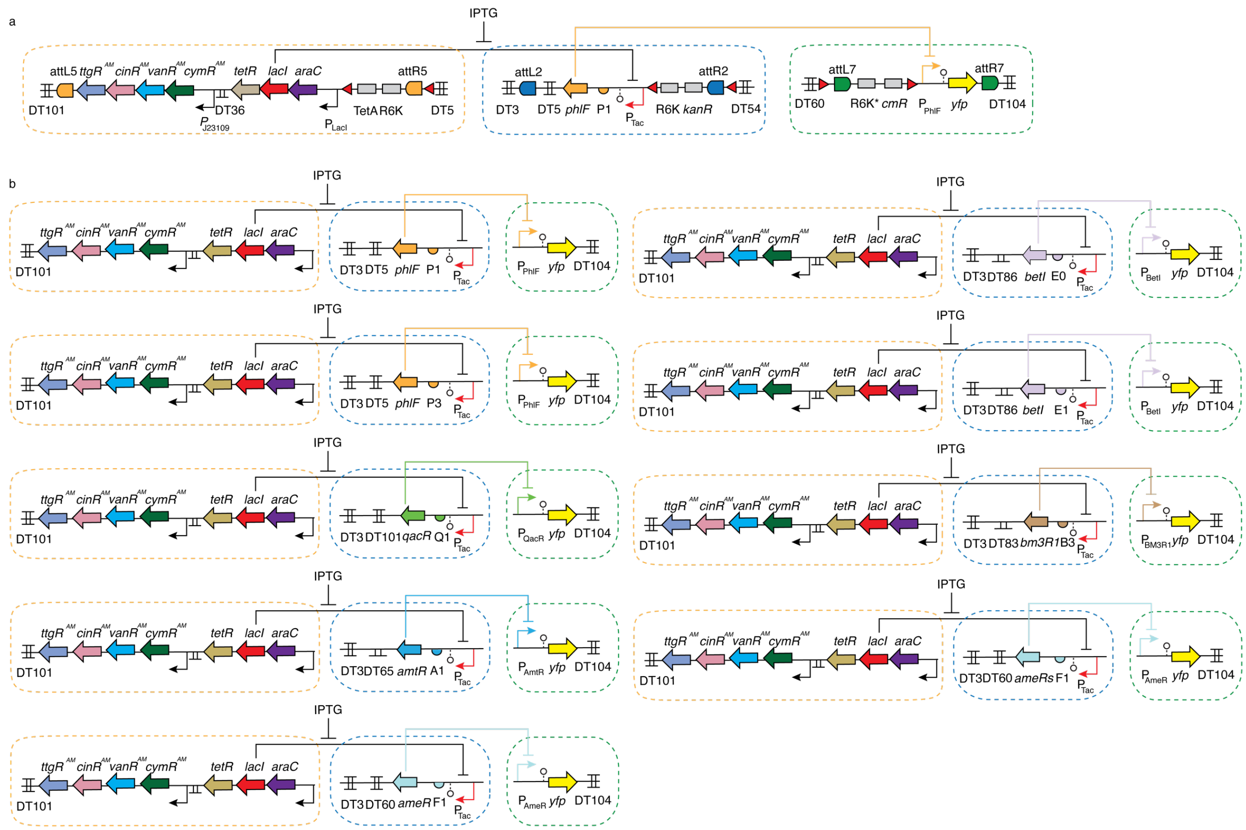


<u>Appendix Figure 4:</u> **Comparison between plasmid RPU and genome RPU_G fluorescence levels.** (a) The constructs used for evaluating the reference promoter are shown, with the plasmid names on the left[1]. **(b)** Fluorescence measurements of cells carrying the constructs are shown (Methods). The horizontal line shows the background fluorescence of cells. By comparing expression levels between the YJPC255 and pJSBS_RPU plasmids, the conversion factor between RPU and RPU_G was calculated (1 RPU = 6.3 RPU_G). Part sequences are provided in Supplementary Table 5. The means are shown for three experiments performed on different days and the error bars are the standard deviations of these measurements.

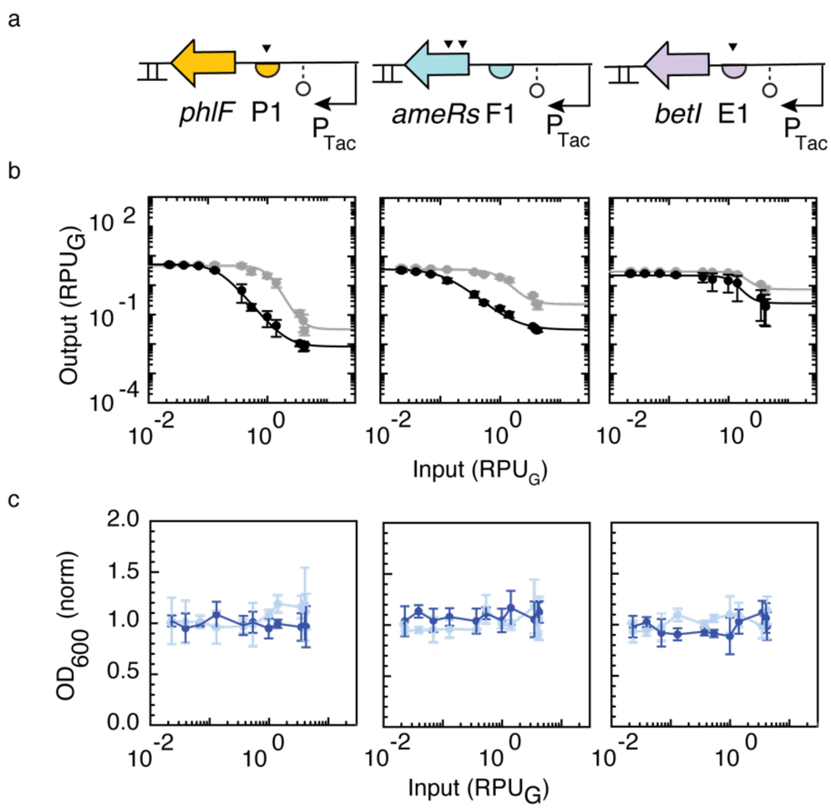


<u>Appendix Figure 5:</u> **Characterization of the sensor array at Landing Pad #1**. The genetic construct showing the sensors is shown in Figure 2c. **(a)** Sensor orthogonality. For these experiments, the output promoter of each sensor is transcriptionally fused to *yfp* and inserted into Landing pad #1 (Appendix Figure S18). The cross reactivity of the sensors is shown when the following inducer concentrations were used: 12.5 mM Ara, 1 mM IPTG, 20 ng/µl aTc, 500 µM Cuma, 200 µM Van, 10 µM OHC14, and 1 mM Nar.

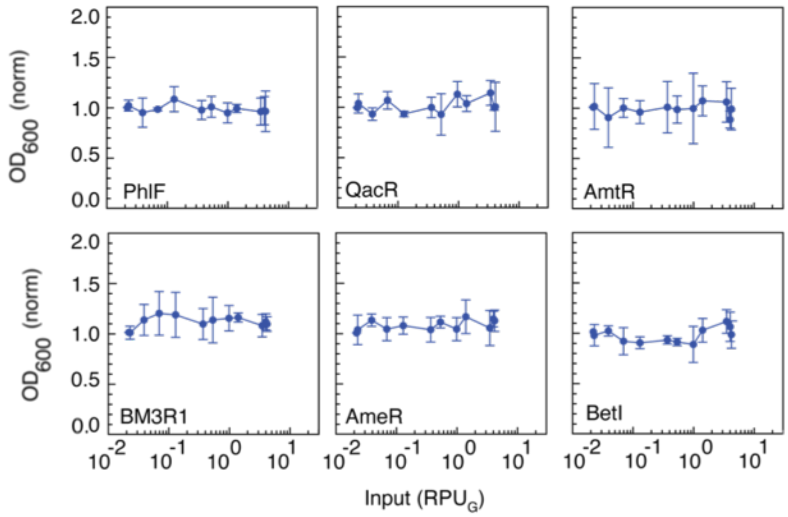
The fold-change is calculated from the median fluorescence in the presence of inducer divided by that measured in its absence. Growth and measurement conditions are provided in the Methods. The data represents the mean from three replicates measured on different days. **(b)** Full response functions for the three sensors used in the circuit designs. The P_{Tac} response function shown was used to convert the x-axis of the NOT gate response functions from concentration to RPU_G (Appendix Figure S12). The means are shown for three experiments performed on different days are and the error bars are the standard deviation of these measurements. Two gray dotted lines indicate inducer concentrations used for Cello prediction and circuit design. **(c)** The fluorescence distribution measured from flow cytometry and was converted into RPU_G (Methods). For each output promoter, both the OFF (without inducer, light gray) and ON (with inducer, darker gray) states are shown in the same plot. The experiments were repeated three times on different days with similar results. The mean of three replicates are shown in Figure 2C.



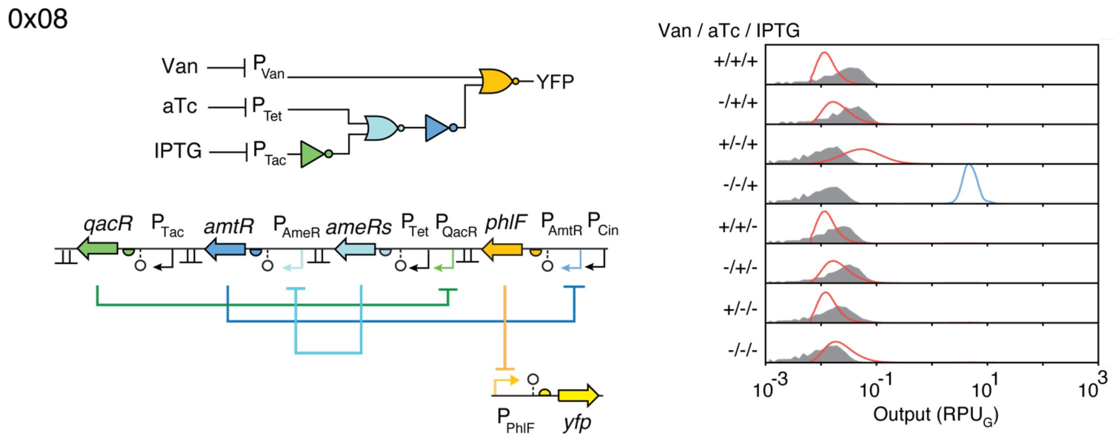
<u>Appendix Figure 6:</u> **Genetic schematics for the genome-encoded NOT gates. (a)** Schematic representation of the P1-PhlF-NOT gate on the genome. This construct is shown with the additional parts in the landing pad (*e.g.,* antibiotic resistance genes). Genetic parts and the integration sequences are provided in Appendix Tables 4, 5 and 6. **(b)** Design of 9 NOT gates implemented on the genome (genomic parts not shown for clarity). The constructs inserted into each landing pad are: landing pad #1 (blue), landing pad #2 (green) and landing pad #3(orange).



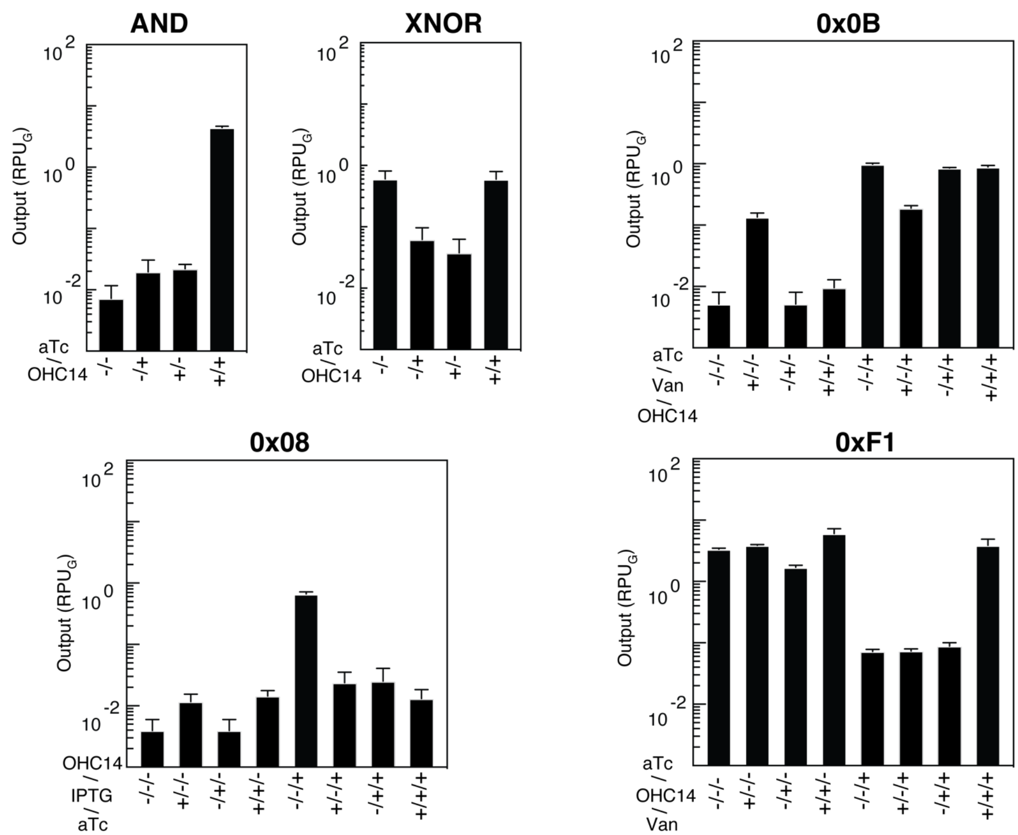
<u>Appendix Figure 7:</u> **Optimization of the NOT gates.** (**a**) Schematics of each gate; the changes made during optimization are indicated by the triangles. For the PhlF gate, the RBS was changed from P3 (CTTTACGAGGGCGATCCT) to P1 (CTATGGACTATGTTTGAAAGGGAGAAATACTAG). Two mutations were made in *ameR* (R25H and R43S) to create *ameRs*. For the BetI gate, the RBS was changed from E0 (CCCCCCGAGGAGTAGCAC) to E1 (CCTTCCGAGGAGGAGCACA). **(b)** The response functions before (gray) and after (black) optimization. **(c)** The impact on the growth of cells is shown before (light blue) and after (dark blue) optimization. The means are shown for three experiments performed on different days and the error bars are the standard deviations of these measurements.



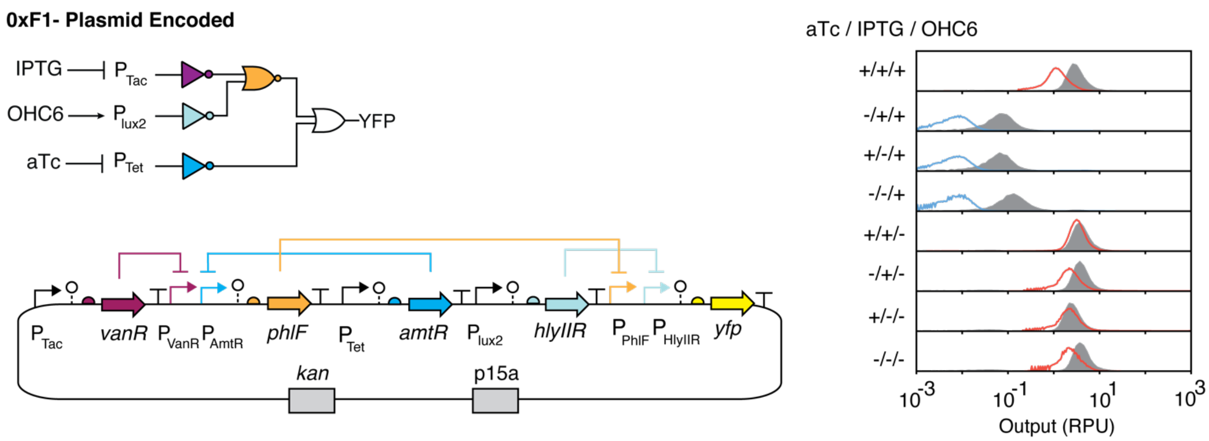
<u>Appendix Figure 8:</u> **Growth impact of repressor expression from Landing Pad #1.** Changes in OD_{600} upon the expression of repressors are shown (Methods). These data were used to create the blue lines shown in Figure 2D. The means are shown for three experiments performed on different days and the error bars are the standard deviations of these measurements. Note that the data used to plot the growth impact of PhiF, BetI, AmeRs gates were also used in Appendix Figure S7.



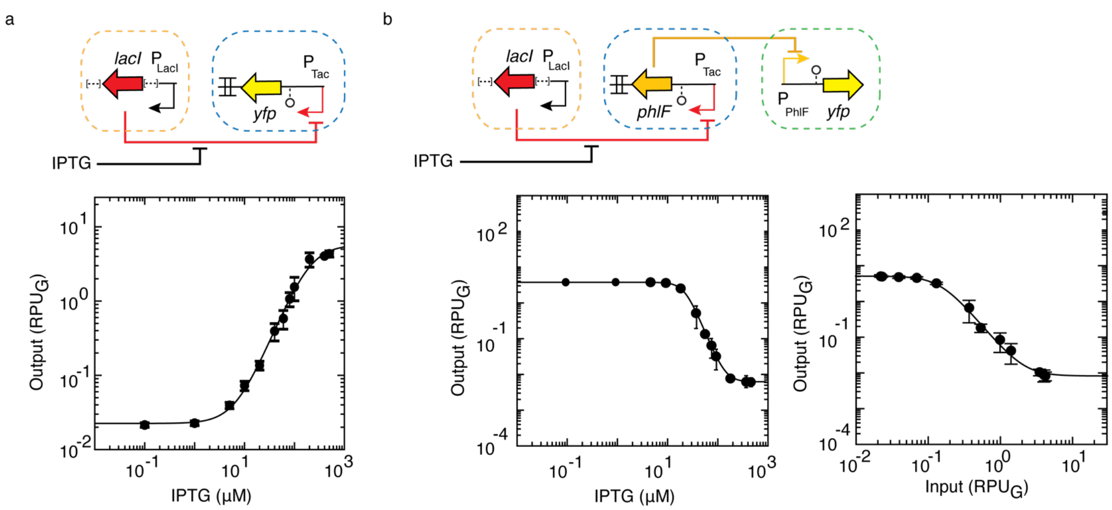
<u>Appendix Figure 9:</u> **Example of a circuit designed using "tandem" NOR gates.** The gates are based on two promoters in series driving the expression of the repressor (Figure 3F). The wiring diagram, repressor assignment, and genetic construct designed by Cello is shown. The predicted outputs are shown as blue (on) or red (off) distributions and the experimental data as gray distributions (Methods). The concentrations of inducers used are: 200 mM Van, 20 ng/µl aTc, and 1mM IPTG. The experiments were repeated three times on different days with similar results.



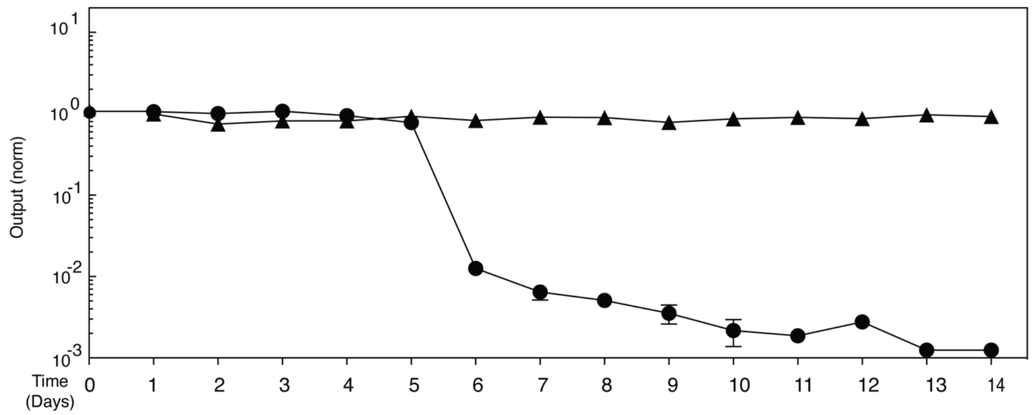
<u>Appendix Figure 10:</u> Replicate measurements are shown for the genetic circuits. This figure corresponds to the cytometry distributions in Figure 4. The concentrations of inducers used are: 1mM IPTG, 20 ng/µl aTc, 200 mM Van, and 10 µM of OHC14. These experiments were performed three times on different days and the means and standard deviations of the measurements are shown.



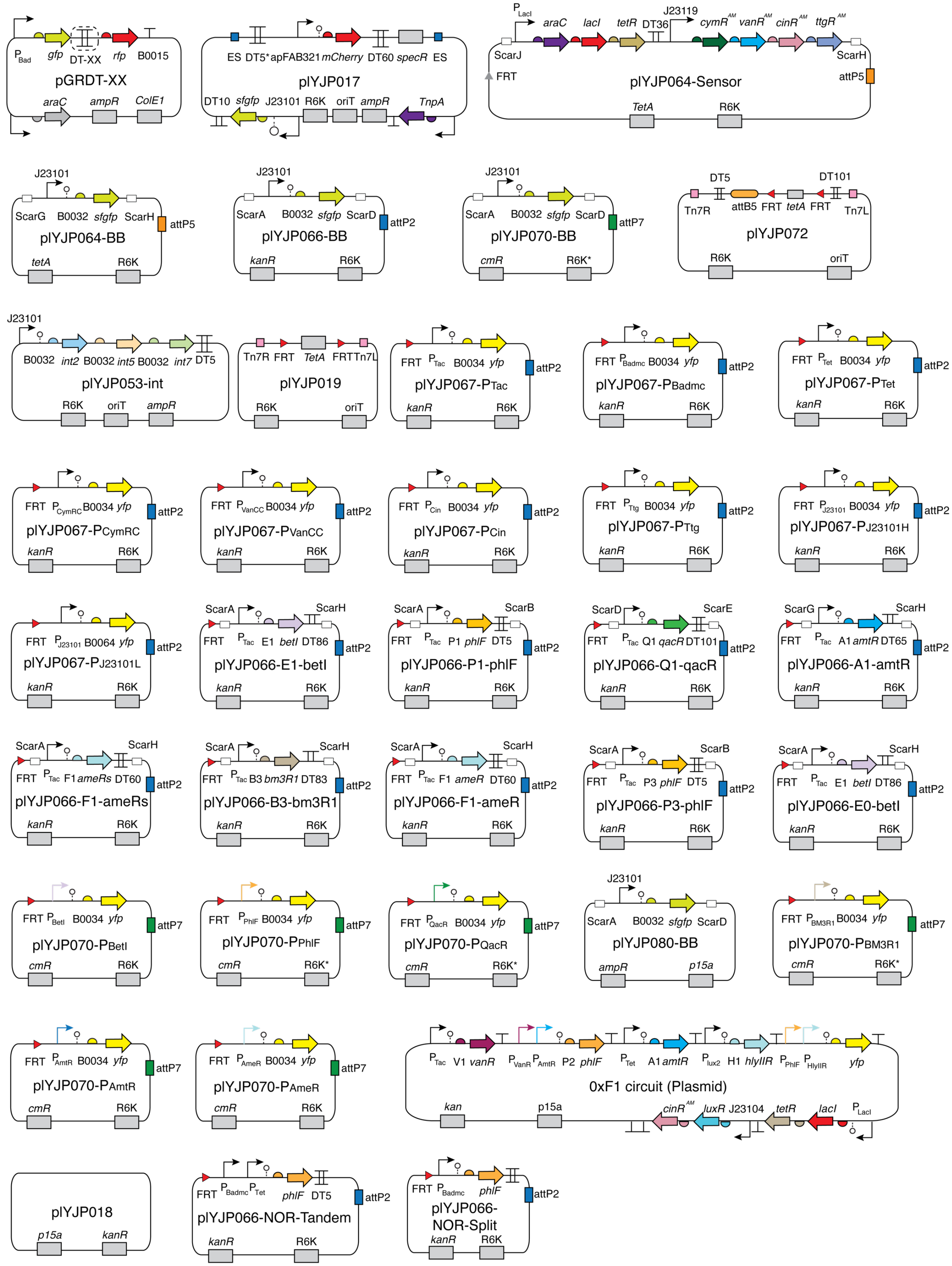
<u>Appendix Figure 11:</u> **Cello-designed plasmid circuit for the 0xF1 logic operation**. This logic operation corresponds to the genome-encoded circuit shown in Figure 4 and used for the evolutionary stability experiments in Figure 5. The following inducer concentrations are used: 2 ng/µl aTc, 0.2 mM IPTG and 10^{-4} ng/µl OHC6. The distributions predicted by Cello are shown in blue (ON states) or red (OFF states) and the grey distributions are the experimental measurements. The experiments were repeated three times on different days with similar results.



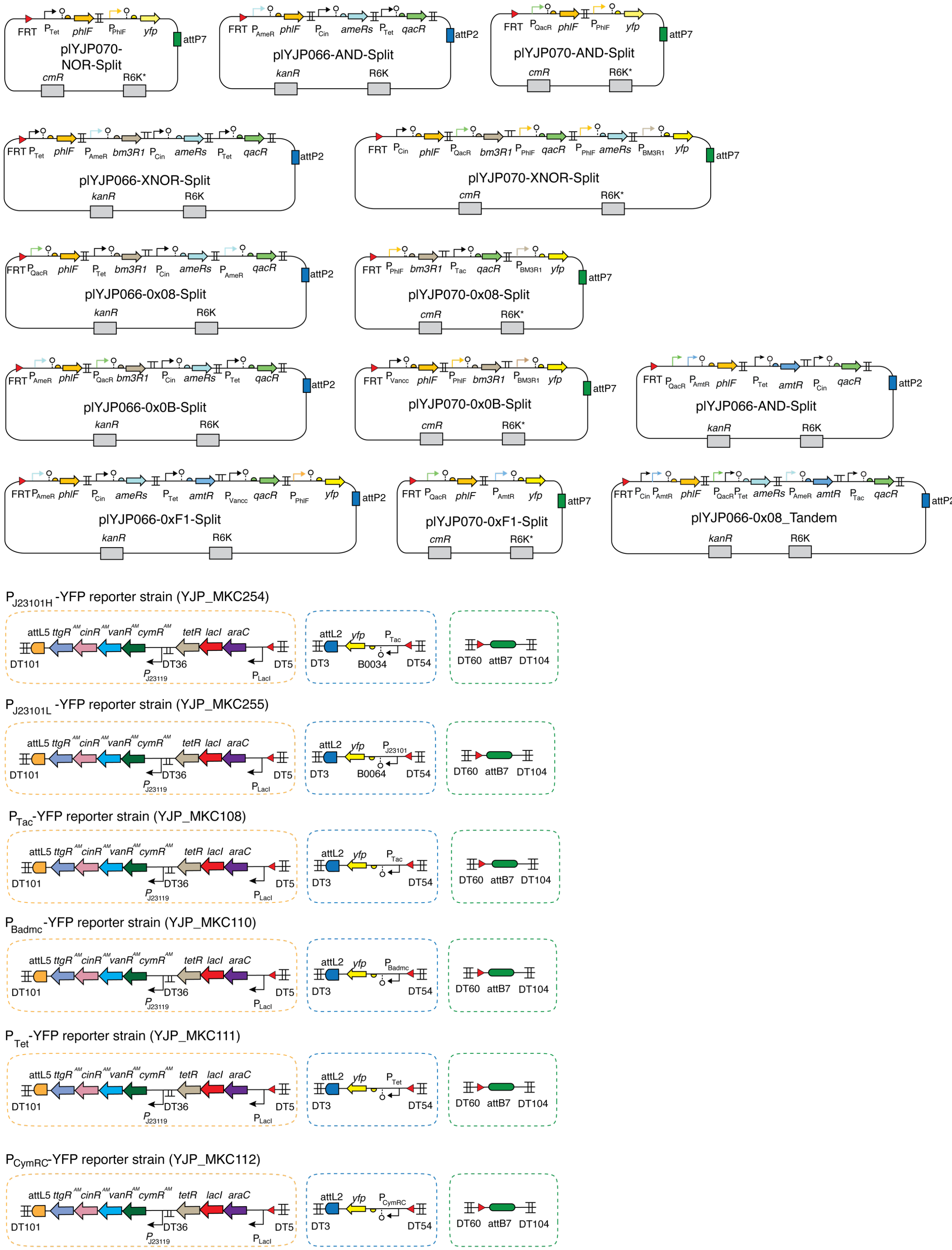
<u>Appendix Figure 12:</u> **Conversion of x-axis of response functions from [IPTG] to RPU_G.** The constructs at each landing pad are shown: blue (LP #1), green (LP #2) and orange (LP #3). In all subfigures, the concentrations of IPTG used were 0.1, 1, 5, 10, 20, 40, 60, 80, 100, 200, 400, 500 μM. **(a)** The construct and response function from the IPTG sensor were first used to obtain the activity of P_{Tac}. (The […] indicates the remainder of the sensor array, removed from the schematic for clarity). **(b)** The response function of the PhlF gate was first obtained as a function of IPTG (top). Then, the P_{Tac} activity at each IPTG concentration (part a) is used to convert the x-axis (bottom), which is used to fit to the response function to parameterize the gate. The data represent the means of three experiments performed on different days and the error bars are the standard deviations.



<u>Appendix Figure 13:</u> Performance of genome- and plasmid- encoded circuits when passaged for two weeks. The constructs tested are: plasmid (0xF1, YJP_DHC54, circle) and genome (YJP_MKC267, triangle). YJP_MKC267 was streaked on LB agar (2%) plates with Kan (50 µg/ml) and Cm (35 µg/ml) antibiotics and grown overnight. YJP_DHC54 was streaked on LB agar (2%) plates containing Kan (50 µg/ml) and grown overnight. Three individual colonies were inoculated in the M9 media without antibiotics. The circuits were tested under the presence of + 200 µM vanillic acid (genome) or + 2 ng/µl aTc (plasmid) (the other inducers are not present) in M9 media without antibiotics. Each day, cells were diluted 10,000-fold into 500 µl of fresh M9 media containing the same inducer noted above and were grown for 8 hours at 37 ^{o}C. After the incubation at 37 ^{o}C and 900 rpm in a Multitron Pro incubator shaker (In Vitro Technologies, VIC, Australia), 30 µl of cells were added to 200 µl 1x PBS with 2 mg/ml Kan for flow cytometry analysis and 100 µl of cells were mixed with 80% autoclaved glycerol (VWR chemical BDH1172-1LP) and stored at -80 ^{o}C. Another aliquot was diluted 100-fold into fresh media with the same inducer and incubated overnight. The cycle continued for 14 days by repeating this protocol. The means of three replicates are shown and the error bars are the standard deviations of these measurements. The error bars are often smaller than the data points. The output of the 0xF1 circuit was measured and normalized by the output at t = 0 days. Wild type E. coli MG1655 autofluorescence was measured as the output value of 0.005 a.u. (dotted line).



PBad gfp DT-XX rfp B0015
pGRDT-XX
araC ampR ColE1
ES DT5* apFAB321 mCherry DT60 specR ES
pIYJP017
DT10 sfgfp J23101 R6K oriT ampR TnpA
PLacI araC lacI tetR J23119 DT36 cymR AM vanR AM cinR AM ttgR AM
ScarJ ScarH
FRT attP5
pIYJP064-Sensor
TetA R6K
J23101
ScarG B0032 sfgfp ScarH
attP5
pIYJP064-BB
tetA R6K
J23101
ScarA B0032 sfgfp ScarD
attP2
pIYJP066-BB
kanR R6K
J23101
ScarA B0032 sfgfp ScarD
attP7
pIYJP070-BB
cmR R6K*
DT5 DT101
Tn7R attB5 FRT tetA FRT Tn7L
pIYJP072
R6K oriT
J23101
B0032 int2 B0032 int5 B0032 int7 DT5
pIYJP053-int
R6K oriT ampR
Tn7R FRT TetA FRT Tn7L
pIYJP019
R6K oriT
FRT PTac B0034 yfp
attP2
pIYJP067-PTac
kanR R6K
FRT PBadmc B0034 yfp
attP2
pIYJP067-PBadmc
kanR R6K
FRT PTet B0034 yfp
attP2
pIYJP067-PTet
kanR R6K
FRT PCymRC B0034 yfp
attP2
pIYJP067-PCymRC
kanR R6K
FRT PVanCC B0034 yfp
attP2
pIYJP067-PVanCC
kanR R6K
FRT PCin B0034 yfp
attP2
pIYJP067-PCin
kanR R6K
FRT PTtg B0034 yfp
attP2
pIYJP067-PTtg
kanR R6K
FRT PJ23101 B0034 yfp
attP2
pIYJP067-PJ23101H
kanR R6K
FRT PJ23101 B0064 yfp
attP2
pIYJP067-PJ23101L
kanR R6K
ScarA ScarH
FRT PTac E1 betI DT86
attP2
pIYJP066-E1-betI
kanR R6K
ScarA ScarB
FRT PTac P1 phlF DT5
attP2
pIYJP066-P1-phlF
kanR R6K
ScarD ScarE
FRT PTac Q1 qacR DT101
attP2
pIYJP066-Q1-qacR
kanR R6K
ScarG ScarH
FRT PTac A1 amtR DT65
attP2
pIYJP066-A1-amtR
kanR R6K
ScarA ScarH
FRT PTac F1 ameRs DT60
attP2
pIYJP066-F1-ameRs
kanR R6K
ScarA ScarH
FRT PTac B3 bm3R1 DT83
attP2
pIYJP066-B3-bm3R1
kanR R6K
ScarA ScarH
FRT PTac F1 ameR DT60
attP2
pIYJP066-F1-ameR
kanR R6K
ScarA ScarB
FRT PTac P3 phlF DT5
attP2
pIYJP066-P3-phlF
kanR R6K
ScarA ScarH
FRT PTac E1 betI DT86
attP2
pIYJP066-E0-betI
kanR R6K
FRT PBetI B0034 yfp
attP7
pIYJP070-PBetI
cmR R6K
FRT PPhlF B0034 yfp
attP7
pIYJP070-PPhlF
cmR R6K*
FRT PQacR B0034 yfp
attP7
pIYJP070-PQacR
cmR R6K*
J23101
ScarA B0032 sfgfp ScarD
pIYJP080-BB
ampR p15a
FRT PBM3R1 B0034 yfp
attP7
pIYJP070-PBM3R1
cmR R6K*
FRT PAmtR B0034 yfp
attP7
pIYJP070-PAmtR
cmR R6K
FRT PAmeR B0034 yfp
attP7
pIYJP070-PAmeR
cmR R6K
PTac V1 vanR PVanR PAmtR P2 phlF PTet A1 amtR Plux2 H1 hlyIIR PPhlF PHlyIIR yfp
0xF1 circuit (Plasmid)
kan p15a cinR AM luxR J23104 tetR lacI PLacI
pIYJP018
p15a kanR
FRT PBadmc PTet phlF DT5
attP2
pIYJP066-NOR-Tandem
kanR R6K
FRT PBadmc phlF
attP2
pIYJP066-NOR-Split
kanR R6K


pIYJP070-NOR-Split
pIYJP066-AND-Split
pIYJP070-AND-Split
pIYJP066-XNOR-Split
pIYJP070-XNOR-Split
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pIYJP070-0x08-Split
pIYJP066-0x0B-Split
pIYJP070-0x0B-Split
pIYJP066-AND-Split
pIYJP066-0xF1-Split
pIYJP070-0xF1-Split
pIYJP066-0x08_Tandem
FRT
attP7
attP2
cmR
kanR
R6K
R6K*
phlF
yfp
bm3R1
ameRs
qacR
amtR
P_J23101H -YFP reporter strain (YJP_MKC254)
P_J23101L -YFP reporter strain (YJP_MKC255)
P_Tac-YFP reporter strain (YJP_MKC108)
P_Badmc-YFP reporter strain (YJP_MKC110)
P_Tet-YFP reporter strain (YJP_MKC111)
P_CymRC-YFP reporter strain (YJP_MKC112)
attL5
ttgR
cinR
vanR
cymR
tetR
lacI
araC
DT101
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attL2
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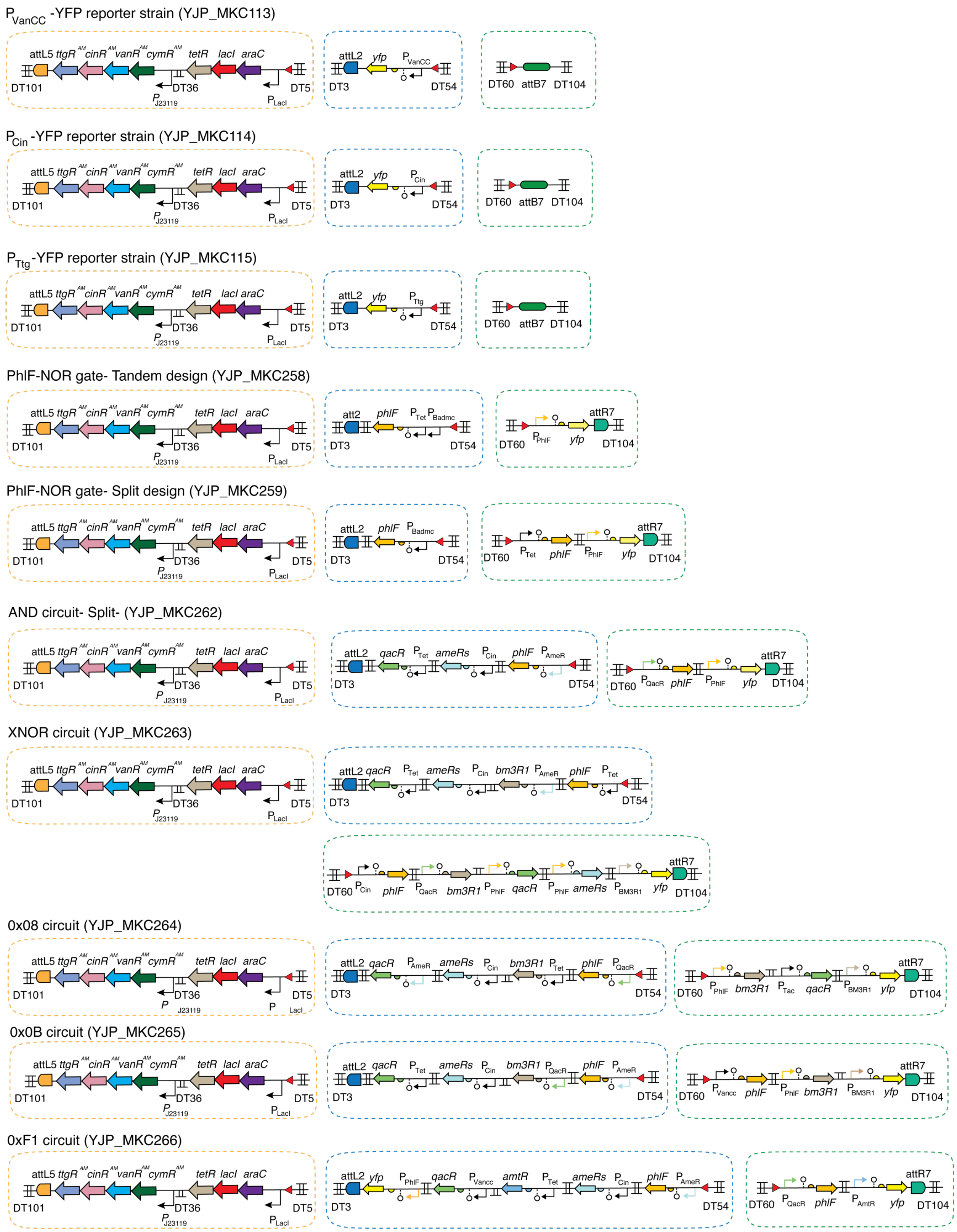
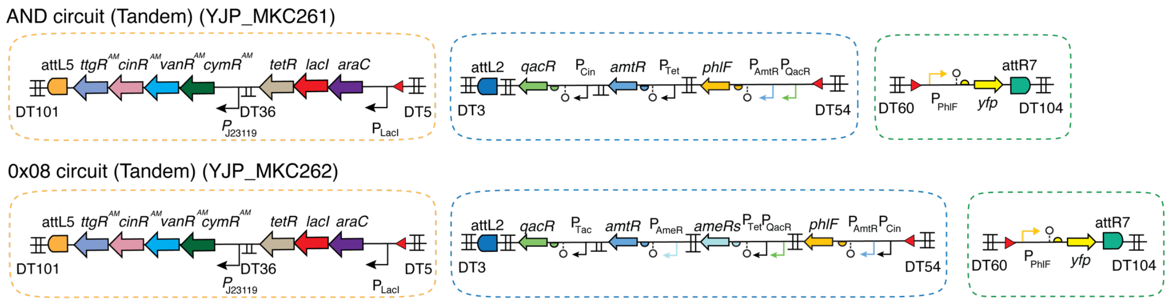
DT60
attB7
DT104



PVanCC -YFP reporter strain (YJP_MKC113)
attL5 ttgR AM cinR AM vanR AM cymR AM tetR lacI araC
DT101 DT36 PJ23119 DT5 PLacI
attL2 yfp PVanCC DT3 DT54
DT60 attB7 DT104
PCin -YFP reporter strain (YJP_MKC114)
attL2 yfp PCin DT3 DT54
PTtg -YFP reporter strain (YJP_MKC115)
attL2 yfp PTtg DT3 DT54
PhlF-NOR gate- Tandem design (YJP_MKC258)
att2 phlF PTet PBadmc DT3 DT54
DT60 PPhlF yfp attR7 DT104
PhlF-NOR gate- Split design (YJP_MKC259)
attL2 phlF PBadmc DT3 DT54
DT60 PTet phlF PPhlF yfp attR7 DT104
AND circuit- Split- (YJP_MKC262)
attL2 qacR PTet ameRs PCin phlF PAmeR DT3 DT54
DT60 PQacR phlF PPhlF yfp attR7 DT104
XNOR circuit (YJP_MKC263)
attL2 qacR PTet ameRs PCin bm3R1 PAmeR phlF PTet DT3 DT54
DT60 PCin phlF PQacR bm3R1 PPhlF qacR PPhlF ameRs PBM3R1 yfp attR7 DT104
0x08 circuit (YJP_MKC264)
attL2 qacR PAmeR ameRs PCin bm3R1 PTet phlF PQacR DT3 DT54
DT60 PPhlF bm3R1 PTac qacR PBM3R1 yfp attR7 DT104
0x0B circuit (YJP_MKC265)
attL2 qacR PTet ameRs PCin bm3R1 PQacR phlF PAmeR DT3 DT54
DT60 PVancc phlF PPhlF bm3R1 PBM3R1 yfp attR7 DT104
0xF1 circuit (YJP_MKC266)
attL2 yfp PPhlF qacR PVancc amtR PTet ameRs PCin phlF PAmeR DT3 DT54
DT60 PQacR phlF PAmtR yfp attR7 DT104



<u>Appendix Figure 14:</u> **Plasmid and genome constructs used in this study.** All genetic parts are provided in Appendix Table 5. Plasmid sequences are provided in Appendix Table 6.

<u>Appendix Note 1:</u> **Detailed protocol for inserting payloads into genome landing pads**

PREPARATION OF LANDING PAD CONSTRUCTS

Construct plasmids containing the payloads to be inserted in landing pads 1, 2, 3.

1. Clone payloads to one of plYJP066-KanR, plYJP070-CmR or plYJP064-TetR plasmids to target landing pad 1,2, and 3, respectively.
2. Transform the cloned product into *E. coli* EC100D pir+ competent cells and sequence verify the construct
3. Miniprep plasmids (~250 ng/µl).

PREPARATION OF ELECTROCOMPETANT CELLS CONTAINING LANDING PADS

1. Streak cells harboring empty landing pads (*E. coli* MG1655 YJPC173) on a 2% LB-agar plate without antibiotics and incubate overnight at 37 ^{o}C.
2. Pick a single colony and inoculate into 2 ml LB no salt media (water + 10 g/L tryptone + 5 g/L yeast extract, autoclaved) without antibiotics and incubate overnight at 37 ^{o}C, shaking at 250 rpm.
3. Dilute cells 50-fold 1 ml into 50 ml LB no salt medium in a 250-ml Erlenmeyer flask.
4. Grow 1-2 hours until reaching OD_{600} = 0.55-0.65.
5. Pre-chill 50-ml Falcon tubes, electroporation cuvettes and 10% glycerol solution while cells are growing.
6. Transfer cells to pre-chilled 50-ml Falcon tubes.
7. Centrifuge cells at 4000g and 4°C for 10 minutes.
8. Remove the supernatant.
9. Resuspend cell pellet in 4 ml of ice-chilled 10% glycerol.
10. Centrifuge cells at 4000g and 4°C for 10 minutes.
11. Remove the supernatant.
12. Repeat Steps 9-11 twice more for a total of three glycerol washes.
13. Resuspend cell pellet in 175 µl of ice-chilled 10% glycerol, yielding electrocompetent cells.
14. If making frozen aliquots, which we have found decreases transformation efficiency, aliquot 100 µl cells into pre-chilled 200-µl PCR strip tubes. Each 100 µl aliquot will yield a single transformation.

TRANSFORMATION WITH PAYLOAD DNA

15. Aliquot 100 µl cells into pre-chilled electroporation cuvettes.
16. Add 1500 ng of the integrase plasmid (plYJP053) and 500-1000 ng of the DNA containing the plasmid with payload.
    1. In order to ensure that the electroporation does not arc, it is important to ensure minimal salts. Salts in prepped plasmids can be removed using plasmid dialysis
    2. For plasmid dialysis:
        a. Fill appropriate number of wells in a 24-well plate with autoclaved Milli-Q purified water (one per transformation).
        b. Place DNA dialysis disc (Millipore Sigma, USA, VSWP01300) floating on top of water.
        c. Spot plasmids to be transformed on disc and leave for 30 minutes.
        d. Carefully retrieve plasmids from discs using pipette without submerging disc.
    3. For higher throughput dialysis method, we have also used Pierce micro-dialysis plates (ThermoFisher Scientific, 88260).
17. Electroporate the mixture (Using the Eppendorf Electroporator 2510, we found that 2500 mA and a time constant after the transformation >4.0 worked best).
18. Immediately after electroporation, add 500 µl of SOC recovery media to the cells.

19. Incubate the cells at 30 °C for 1-2 hours and then spread on a 2% LB agar plate with appropriate antibiotic (Insertion in landing pad #1, #2 and #3 was selected with 50 µg/ml Kan, 35 µg/ml Cm or 5 ng/ml Tet, respectively).
20. Incubate overnight at 37 °C.
21. Pick colony and inoculate in 200 µl LB with appropriate antibiotic for 3 hours. Typically, we pick three colonies for a higher likelihood of identifying a successful integration.

PCR SCREENING FOR SUCCESSFUL INTEGRATION

22. Primers that can amplify the junction between integrated constructs and the adjacent genomic DNA were used to validate the integration of the payload. The following primers are used at concentrations of 10 µM.
    a. LP #1: oYJP2164 (AATAAACAAATAGGCATGGTCTAAGAAACCATT)
       oYJP3436 (CCTGATCAGGTTCCGCGGATCCCGAATAAACGGTC)
    b. LP #2: oYJP2164 (AATAAACAAATAGGCATGGTCTAAGAAACCATT)
       oYJP3526 (TGCCAAAGGCGATAGGTGAAATAATGTCGGCGACAGCGG)
    c. LP #3: oYJP2166 (CACAAAACGGTTTACAAGCATAAAATCTCTG)
       oYJP2826(AGAGATGACAGAAAAATTTTCATTCTGTGACAGAGAAAAAGTAGCCGAAGATG)

23. Prepare an aliquot of cells for the PCR reaction. Take 30 µl of the cultures from Step 21 and incubate them at 98 °C for 10 minutes.
24. Perform the PCR reaction. Our preference is NEB Hi-Fi Phusion Master Mix (NEB M0531) with the following volumes: 12.5 µl Phusion Master Mix 2X, 8.5 µl water, 1.25 µl, 1.25 µl Primer #1, 1.25 µl Primer #2, 1 µl template (the cell mixture from Step 23) and 0.5 µl DMSO. The thermocycler parameters are: 90s initial denaturation (98 °C), 20s denaturation (98 °C), 30 s anneal (60°C), 1 min/kb extension (72 °C), repeat denaturation/anneal/extension steps 29 times, 1 kb/min final extension (72 °C).
25. Confirm the amplicon size using gel electrophoresis by adding 5 µl of PCR product into 1% agarose gel. NEB 1kb ladder was run together to confirm the size.

REMOVAL OF ANTIBIOTIC RESISTANCE MARKERS

26. Inoculate the 170 µl culture from Step 21 to 4 ml SOB without antibiotics for 3 hours at 37 °C.
27. Once cells reach OD_{600}=0.4, Centrifuge cells at 4700g and 4 °C for 10 minutes.
28. Remove the supernatant.
29. Add 1 ml of ice-chilled 10% glycerol to the cell pellet.
30. Transfer the resuspended cells into a 1.5 ml Eppendorf tube and centrifuge at 21000g and 4 °C for 30 seconds.
31. Remove the supernatant.
32. Repeat steps 30 to 31.
33. Add 20 ng of the FLP encoding plasmid (pE-FLP)
34. Electroporate the mixture using the Eppendorf Electroporator 2510 at 2500 mA with time constant after the transformation >4.0.
35. Immediately after electroporation, add 1 ml of SOC recovery media to the cells.
36. Incubate the cells at 30 °C for 1 hour and then spread on a 2% LB agar plate with 100 µg/ml.
37. Incubate the cells overnight at 30 °C
38. Pick colony and streak the colony on 2% LB agar plate with no antibiotics.
39. Pick 5-6 colonies from the streak after 14 hours of incubation and resuspend each to 30 µl LB without antibiotics.

40. Inoculate the resuspended cells into 5 different media by adding 5 µl of resuspended cells. The five media compositions are: LB without antibiotics, with Amp 100 µg/ml, Kan 50 µg/ml, Cm 35 µg/ml, Tet 5 ng/ml. Incubate at 37 °C overnight.
41. Find colonies that only grew on LB without antibiotics.
42. Take 30 µl of the cultures from Step 41 and incubate them at 98 °C for 10 minutes.
43. PCR amplify using following oligos to confirm the removal of antibiotic markers from landing pads.
44. Primers that can amplify the junction between integrated constructs and the adjacent genomic DNA were used to validate the integration of the payload. The following primers are used at concentrations of 10 µM.
    a. LP #1: oYJP3436 (CCTGATCAGGTTCCGCGGATCCCGAATAAACGGTC)
       oYJP3437 (AGGCGCTGGAAGCGCGCTTTGTGCTGGAAGATAAG)
    b. LP #2: oYJP3525 (ACCAATTGGCGCGCGCTTCGCAATAAAATCTCCCTTCG)
       oYJP3526 (TGCCAAAGGCGATAGGTGAAATAATGTCGGCGACAGCGG)
    c. LP #3: oYJP2826 (AGAGATGACAGAAAAATTTTCATTCTGTGACAGAGAAAAAGTAGCCGAAGATG)
       oYJP2827(CCGCGTAACCTGGCAAAATCGGTTACGGTTGAGTAA)
45. Perform the PCR reaction. Our preference is NEB Hi-Fi Phusion Master Mix (NEB M0531) with the following volumes: 12.5 µl Phusion Master Mix 2X, 8.5 µl water, 1.25 µl, 1.25 µl Primer #1, 1.25 µl Primer #2, 1 µl template (the cell mixture from Step 42) and 0.5 µl DMSO. The thermocycler parameters are: 90s initial denaturation (98 °C), 20s denaturation (98 °C), 30 s anneal (66°C), 1 min/kb extension (72 °C), repeat denaturation/anneal/extension steps 29 times, 1 kb/min final extension (72 °C).
46. Confirm the amplicon size using gel electrophoresis by adding 5 µl of PCR product into 1% agarose gel. NEB 1kb ladder was run together to confirm the size.
47. Once the size is confirmed, add 25% autoclaved glycerol (v/v) to create glycerol stock.
48. Store glycerol stock at -80 °C.

Appendix Table 1: Double terminator sequences and strengths

Name	Sequence	T_S (forward)[a]	T_S (reverse)[a]
DT3	CCGGCTTATCGGTCAGTTTCACCTGATTTACGTAAAAACCCGCTTCGGCGGGTTTTTGCTTTTGGAGGGGCAGAAAGATGAATGACT GTCCACGACGCTATACCCAAAAGAAAAAAAAAAAAACCCCGCCCCTGACAGGGCGGGGTTTTTTTT	3000	120
DT5	TCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGAAAG GGGGGCCTTTTTTCGTTTTGGTCC	4700	50
DT19	TTCAGCCAAAAAACTTAAGACCGCCGGTCTTGTCCACTACCTTGCAGTAATGCGGTGGACAGGATCGGCGGTTTTCTTTTCTCTTCTC AACTCGGTACCAAAGACGAACAATAAGACGCTGAAAAGCGTCTTTTTTCGTTTTGGTCC	770	1.2
DT34	GCTGATGCCAGAAAGGGTCCTGAATTTCAGGGCCCTTTTTTTACATGGATTGCTCGGTACCAAATTCCAGAAAAGAGACGCTTTCGA GCGTCTTTTTTCGTTTTGGTCC	570	1.4
DT36	GATCTAACTAAAAAGGCCGCTCTGCGGCCTTTTTTCTTTTCACTGTAACAACGGAAACCGGCCATTGCGCCGGTTTTTTTTGGCCT	680	3.2
DT42	AGTTAACCAAAAAGGGGGGATTTTATCTCCCCTTTAATTTTTCCTCGCAGATAGCAAAAAAGCGCCTTTAGGGCGCTTTTTTACATTG GTGG	2500	2.2
DT54	GGAAACACAGAAAAAAGCCCGCACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCC GAAAGGGTGTTTTTTCGTTTTGGTCC	1800	30
DT56	TACCACCGTCAAAAAAAACGGCGCTTTTTAGCGCCGTTTTTATTTTTCAACCTTCCAGGCATCAAATAAAACGAAAGGCTCAGTCGA AAGACTGGGCCTTTCGTTTTATCTGTTGTTTGTCGGTGAACGCTCTC	240	11
DT60	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTT ATG	110	29
DT65	TGCTCGTACCAGGCCCCTGCAATTTCAACAGGGGCCTTTTTTTATCCAATTCCATCGGGTCCGAATTTTCGGACCTTTTCTCCGC	400	1.0
DT82	CTTATTCCATAACAAAGCCGGGTAATTCCCGGCTTTGTTGTATCTGAACAATAAATGGATGCCCTGCGTAAGCGGGGCATTTTTCTTC CT	170	2.8
DT83	AGCGTCAAAAGGCCGGATTTTCCGGCCTTTTTTATTAGGCAGCATGCTGCCAGGTGATCCCCCTGGCCACCTCTTTT	600	4.4
DT86	TAATCATTCTTAGCGTGACCGGGAAGTCGGTCACGCTACCTCTTCTGAAGAAACAGCAAACAATCCAAAACGCCGCGTTCAGCGGC GTTTTTTCTGCTTTTCT	210	0.4
DT100	GTGAAGTGAAAAATGGCGCACATTGTGCGCCATTTTTTTTGTCTGCCGTTTACCGCTTCTCTGAAAATCAACGGGCAGGTCACTGAC TTGCCCGTTTTTTTATCCCTTCTCCACACCG	4700	12
DT101	TCTTTAAAAAGAAACCTCCGCATTGCGGAGGTTTCGCCTTTTGATACTCTGTCTGAAGTAATTCTTGCCGCAGTGAAAAATGGCGCC CATCGGCGCCATTTTTTTATGCTTCCATTAGAAAGCAAAAAGCCTGCTAGAAAGCAGGCTTTTTTGAATTTGGCTCCTCTGAC	2800	160
DT103	AAAGTTCTGAAAAAGGGTCACTTCGGTGGCCCTTTTTTATCGCCACGGTTTGAGCAGTGCACTTGCTTAAAATCCCGCCAGCGGCGG GATTTTTTATTGTCCGGTTTAAGACA	790	4.0
DT104	GCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCC TTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA	580	101

a. The means of three replicates performed on different days are shown. The conditions and calculation of T_S are provided in the Methods and Appendix Figure 1.

Appendix Table 2: Transposon library results for *E. coli* DH10β

Number	Position[a]	Strand	Expression[b,c]	Relative OD_{600}[b,d]
1	3986119	-	160	1.5
2	239205	+	140	1.3
3	1703536	+	50	1.1
4	4403940	-	110	0.9
5	2354832	-	90	1.1
6	3821587	+	120	1.3
7 (LP#1)	4294255	-	160	1.1
8	3636005	-	130	1.1
9	216090	+	110	1.2
10	130791	+	80	1.0
11	1974358	-	60	1.2
12	953620	+	80	1.4
13	3942414	+	180	1.1
14	4577260	+	110	1.0
15	4185554	-	130	1.2
16	3635939	+	160	1.0
17	3293003	-	130	1.2
18	970929	-	80	1.2
19	2968336	-	110	1.0
20	3280886	-	60	1.2
21	3839522	-	120	1.1
22	3007855	+	90	1.4
23 (LP#3)	4000978	-	150	1.2
24	4160155	+	140	1.0
25	311535	+	80	1.3
26	4158775	+	130	1.1
27	2612824	-	80	1.1
28	3119521	-	110	1.2
29	268509	+	90	0.9
30	3286750	+	100	1.0
31	4575120	-	110	0.9
32	4648089	+	90	1.4
33	4525992	+	60	1.1
34	3149195	-	70	0.8
35	3851188	-	140	1.1
36	3792231	+	150	1.0
37	2691678	-	100	1.2
38	4078450	-	190	1.0
39	3008076	-	90	0.9
40	3357859	-	90	1.3
41	124347	-	90	0.8
42	4161116	+	100	0.9
43	6673	-	140	0.8
44	1434023	-	60	1.0
45	3268733	+	110	0.9
46	2763676	-	100	1.0
47	391229	+	120	1.5
48 (LP#2)	4614289	+	140	1.3
49	1983293	+	50	0.7
50	4519171	-	80	1.0

a. The number is based on the nucleotide numbering of the E. coli DH10β genome (NCBI CP000948.1)
b. The means of three experiments performed on different days are shown.
c. The expression is measured as mCherry fluorescence (Methods). The construct is shown in Figure 1b
d. The relative OD_{600} is calculated by dividing the OD_{600} by that of wild-type E. coli DH10β (Methods)

Appendix Table 3: ON/OFF levels for genome-encoded sensors

Inducer	Output Promoter	Strain	Y_{min} (RPU_G)	Y_{max} (RPU_G)
Ara	P_{Badmc}	YJP_MKC110	0.04	3.33
IPTG	P_{Tac}	YJP_MKC108	0.02	4.20
aTc	P_{Tet}	YJP_MKC111	0.02	5.41
Cuma	P_{CymRC}	YJP_MKC112	0.19	2.39
Van	P_{VanCC}	YJP_MKC113	0.02	3.79
OHC14	P_{Cin}	YJP_MKC114	0.01	4.38
Nar	P_{Ttg}	YJP_MKC115	0.01	0.22

Appendix Table 4: Sequence of landing pads used in this study

Landing Pad[a]	Position	DNA Sequence[c]
#1	4196314	GGAAACACAGAAAAAAGCCCGCACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTT CGTTTTGGTCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGGTCCCCAATAATTACGATTTAAATTGGCGAAAATGAGACGTTGATCGGCACGTA AGAGGTTCCAACTTTCACCATAATGAAATAAGATCACTACCGGGCGTATTTTTTGAGTTATCGAGATTTTCAGGAGCTAAGGAAGCTAAAATGGAGAAAAA AATCACTGGATATACCACCGTTGATATATCCCAATGGCATCGTAAAGAACATTTTGAGGCATTTCAGTCAGTTGCTCAATGTACCTATAACCAGACCGTTC AGCTGGATATTACGGCCTTTTTAAAGACCGTAAAGAAAAATAAGCACAAGTTTTATCCGGCCTTTATTCACATTCTTGCCCGCCTGATGAATGCTCATCCG GAATTTCGTATGGCAATGAAAGACGGTGAGCTGGTGATATGGGATAGTGTTCACCCTTGTTACACCGTTTTCCATGAGCAAACTGAAACGTTTTCATCGCT CTGGAGTGAATACCACGACGATTTCCGGCAGTTTCTACACATATATTCGCAAGATGTGGCGTGTTACGGTGAAAACCTGGCCTATTTCCCTAAAGGGTTTA TTGAGAATATGTTTTTCGTCTCAGCCAATCCCTGGGTGAGTTTCACCAGTTTTGATTTAAACGTGGCCAATATGGACAACTTCTTCGCCCCCGTTTTCACC ATGGGCAAATATTATACGCAAGGCGACAAGGTGCTGATGCCGCTGGCGATTCAGGTTCATCATGCCGTTTGTGATGGCTTCCATGTCGGCAGAATGCTTAA TGAATTACAACAGTACTGCGATGAGTGGCAGGGCGGGGCGTAAGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGACGGCGCAGAAGGGGAGTAGCT CTTCGCCGGACCGTCGACATACTGCTCAGCTCGTCCCGGCTTATCGGTCAGTTTCACCTGATTTACGTAAAAACCCGCTTCGGCGGGTTTTTGCTTTTGGA GGGGCAGAAAGATGAATGACTGTCCACGACGCTATACCCAAAAGAAAAAAAAAAAACCCCGCCCCTGACAGGGCGGGGTTTTTTTGCTTCAAATGCGGAT TTGACAGCTAGCTCAGTCCTAGGTATTGTGCTAGC
#2	4506858	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTAT TCTCTAGAAAGTATAGGAACTTCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGCTCGAGTCCCGTCAAGTCAGCGTAATGCT CTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAACTGCAATTTATTCATATCAGGATTATCAATACCATATT TTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCATAGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACA TCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTATCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATG CATTTCTTTCCAGACTTGTTCAACAGGCCAGCCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGA GACGAAATACGCGATCGCTGTTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAA TCAGGATATTCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTCGG AAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAACAACTCTGGCGCAT CGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAATCAGCATCCATGTTGGAATTTAAT CGCGGCCTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATGTAAGCAGACAGTTTTATTGTTCATGATGATATATT TTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGAGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCAGACGAGAAACG TTCCGTCCGTCTGGGTCAGTTGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTA CTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTT AATCGATAACCAGA
#3	3911814	TGTGGGCGGACAATAAAGTCTTAAACTGAACAAAATAGATCTAAACTATGACAATAAAGTCTTAAACTAGACAGAATAGTTGTAAACTGAAATCAGTCCAG TTATGCTGTGAAAAAGCATACTGGACTTTTGTTATGGCTAAAGCAAACTCTTCATTTTCTGAAGTGCAAATTGCCCGTCGTATTAAAGAGGGGCGTGGGGT TCGAGGTCGACGGTATCGATAAGCTAGCTTAATTAGCTGAGCTTGTCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTA CCAAATTCCAGAAAAGAGGCCTCCCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCAGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCAGCGGAAAAGGA CAATTGTCTCAGGTCGAGGTGGCCCGGCTCCATGCACCGCGACGCAACGCGGGGAGGCAGACAAGGTATAGGGCGGCGCCTACAATCCATGCCAACCCGTT CCATGTGCTCGCCGAGGCGGCATAAATCGCCGTGACGATCAGCGGTCCAGTGATCGAAGTTAGGCTGGTAAGAGCCGCGAGCGATCCTTGAAGCTGTCCCT GATGGTCGTCATCTACCTGCCTGGACAGCATGGCCTGCAACGCGGGCATCCCGATGCCGCCGGAAGCGAGAAGAATCATAATGGGGAAGGCCATCCAGCCT CGCGTCGCGAACGCCAGCAAGACGTAGCCCAGCGCGTCGGCCGCCATGCCGGCGATAATGGCCTGCTTCTCGCCGAAACGTTTGGTGGCGGACCAGTGAC GAAGGCTTGAGCGAGGGCGTGCAAGATTCCGAATACCGCAAGCGACAGGCCGATCATCGTCGCGCTCCAGCGAAAGCGGTCCTCGCCGAAAATGACCCAGA GCGCTGCCGGCACCTGTCCTACGAGTTGCATGATAAAGAAGACAGTCATAAGTGCGGCCACAATGGTCATGCCCCGCGCCCACCGGAAGGAGCTGACTGGG TTGAAGGCTCTCAAGGGCATCGGACGGCGCTCTCCCTTATGCGACTCCTGCATTAGGAAGCAGCCCAGTAGTAGGTTGAGGCCGTTGAGCACCGCCGCCGC AAGGAATGGTGCGTGCAGGGAGATGGCGCCCAACAGTCCCCCGGCCACGGGGCCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCCGAAGTGGC GAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTGATGCCGGCCACGATGCGTCCGGCGTAGAGAATC CACAGGACGGGTGTGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGACTGGGCGGCGGCCAAAGCGGTCGGACAGTGCTCC GAGAACGGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGCAGCACGCCATAGTGACTGGCGATGCTGTCGGAATGGACGATATCCCGCAAGAGGC CCGGCAGTACCGGCATAACCAAGCCTATGCCTACAGCATCCAGGGTGACGGTGCCGAGGATGACGATGAGCGCATTGTTAGATTTCATACACGGTGCCTGA CTGCGTTAGCAATTTAACTGTGATAAACTACCGCATTACAGTTTATCGATGATAAGCTGTCAAGAAGTTCCTATTCCGAAGTTCCTATTCTCTAGAAAGTA TAGGAACTTCGAGCGCCGGATCAGGGAGTGGACGGCCTGGGAGCGCTACACGCTGTGGCTGCGGTCGGTGCTCTTTAAAAAGAAACCTCCGCATTGCGGAG GTTTCGCCTTTTGATACTCTGTCTGAAGTAATTCTTGCCGCAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGCTTCCATTAGAAAGCAAAAAGCC TGCTAGAAAGCAGGCTTTTTTGAATTTGGCTCCTCTGACTGCATTTACGTTGACACCATCGAATGCCAAGCTAGCTTGGCGAGATCCTTGCAGCACATCCC CCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCAGGCCAACCAGATAAGTGAAATCTAGTTCCAAACTATTTTGTCATTTTTAATTTTC GTATTAGCTTACGACGCTACACCCAGTTCCCATCTATTTTGTCACTCTTCCCTAAATAATCCTTAAAAACTCCATTTCCACCCCTCCCAGTTCCCAACTAT TTTGTCCGCCCACA

a. All landing pad sequences contain the antibiotic resistance marker.

b. The nucleotide numbering is based on E. coli MG1655 K-12 (NCBI U00096.3)

c. The following colors are used for annotations. Blue: Promoters; Purple: Ribozymes; Green: Repressors, YFP and Sensor ORFs; Red: Terminators; Orange: FRT sites and att sites; yellow highlight: RBSs; Gray highlight: antibiotic resistance gene, and origin of rep; Green highlight: Transposase (Tn5, Tn7) recognition sites

Appendix Table 5: Sequence of genetic parts used in this study

Part Name	Part Class	Part Sequence
P_{Badmc}	Promoter	AACGATCGTTGGCTGTAGCATTTTTATCCATAAGATTAGCGGATCCTACCTGACGCTTTTTATCGCAACTCTCTATATTTTTCTCCATACCCG
P_{Tet}	Promoter	AACGATCGTTGGCTGTCCCTATCAGTGATAGAGATTGACATCCCTATCAGTGATAGATATAATGAGCAC
P_{Cin}	Promoter	TGGTAGCACAAAAGTCCCTTTGTGCGTCCAAACGGACGCACGGCGCTCTAAAGCGGGTCGCGATCTTTCAGATTCGCTCCTCGCGCTTTCAGTCTTTGT TTTGGCGCATGTCGTTATCGCAAAACCGCTGCACACTTTTGCGCGACATGCTCTGATCCCCCTCATCTGGGGGGGCCTATCTGAGGGAATTTCCGATCC GGCTCGCCTGAACCATTCTGCT
P_{CymRC}	Promoter	TTCCGATGTAGGAGTAACAAACAGACAATCTGGTCTGTTTGTATTATGGAAAATTTTTCTGTATAATAGATTC
P_{Ttg}	Promoter	TACGCTGCCACGTGTCACCCAGCAGTATTTACAAACAACCATGAATGTAAGTATATTCCTTAGCAA
P_{Tac}	Promoter	AACGATCGTTGGCTGTGTTGACAATTAATCATCGGCTCGTATAATGTGTGGAATTGTGAGCGCTCACAATT
P_{VanCC}	Promoter	GAGCCTACCTGCCTTATTGGATCCAATTGACAGCTAGCTCAGTCCTAGGTACCATTGGATCCAAT
P_{AmtR}	Promoter	CTTGTCCAACCAAATGATTCGTTACCCTTTGACAGTTTCTATCGATCTATAGATAATGCTAGC
P_{AmeR}	Promoter	TCGTCACTAGAGGGCGATAGTGACAAACTTGACAACTCATCACTTCCTACGTAGGCTGCTAGC
P_{PhlF}	Promoter	CGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGT
P_{QacR}	Promoter	GGTATGGAAGCTATACGTTACCAATTGACAGCTAGCTCAGTCCTACTTTAGTATATAGACCGTGCGATCGGTCTATA
P_{BetI}	Promoter	AGCGCGGGTGAGAGGGATTCGTTACCAATAGACAATTGATTGGACGTTCAATATAATGCTAGC
P_{BM3R1}	Promoter	AACGAATGGCTCATGTCTGATTCGTTACCAATTGACGGAATGAACGTTCATTCCGATAATGCTAGC
P_{HlyIIR}	Promoter	ACCAGGAATCTGAACGATTCGTTACCAATTGCCATATTTAAAATTCTTGTTTAAAATGCTAGC
P_{LacI}	Promoter	TGGTGCAAAACCTTTCGCGGTATGGCATGATAGCGCCCGGAAGAGAGTCAATTCAGG
P_{Lux2}	Promoter	ATAGCTTCTTACCGGACCTGTAGGATCGTACAGGTTTACGCAAGAAAATGGTTTGTTATTTTCGAATAAA
BBa_J23105	Promoter	GAAGACGCGGAGGGAGACCGGCGCGCCTTTACGGCTAGCTCAGTCCTAGGTACTATGCTAGCAAGGT
BBa_J23104	Promoter	GCTTCAAATGCGGATTTGACAGCTAGCTCAGTCCTAGGTATTGTGCTAGC
BBa_J23119	Promoter	GAATCGCACCAAGACAGGTTTGTCCATTGACAGCTAGCTCAGTCCTAGGTATAATGCTAGC
BBa_J23101	Promoter	GATAAGTCCCTAACTTTTACAGCTAGCTCAGTCCTAGGTATTATGCTAGC
Tn7L	att sites	AACCAGATAAGTGAAATCTAGTTCCAAACTATTTTGTCATTTTTAATTTTCGTATTAGCTTACGACGCTACACCCAGTTCCCATCTATTTTGTCACTCT TCCCTAAATAATCCTTAAAAACTCCATTTCCACCCCTCCCAGTTCCCAACTATTTTGTCCGCCCACA
Tn7R	att sites	TGTGGGCGGACAATAAAGTCTTAAACTGAACAAAATAGATCTAAACTATGACAATAAAGTCTTAAACTAGACAGAATAGTTGTAAACTGAAATCAGTCC AGTTATGCTGTGAAAAAGCATACTGGACTTTTGTTATGGCTAAAGCAAACTCTTCATTTTCTGAAGTGCAAATTGCCCGTCGTATTAAAGAGGGGCGTG G
attR2	att sites	GGACGGCGCAGAAGGGGAGTAGCTCTTCGCCCGAGAACTTCTGCAAGGCACTGCTCTTGGCT
attR5	att sites	GCACCGACCGCAGCCACAGCGTGTAGCGCTCCCAGGCCGTCCACTCCCTGATCCGGCGCTC
attR7	att sites	GTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTT
attL2	att sites	GCTCATGTATGTGTCTACGCGAGATTCTCGCCGGACCGTCGACATACTGCTCAGCTCGTC
attL5	att sites	GCACCGACCGCAGCCACAGCGTGTAGCGCTCCCAGGAGAGTTATCGACTTGCGTATTAGGG
attL7	att sites	AGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTTACGCAGGTTCAGCTT
attB2	att sites	GACGAGCTGAGCAGTATGTCGACGGTCCGGCGAAGAGCTACTCCCCTTCTGCGCCGTCC
attP2	att sites	GCTCATGTATGTGTCTACGCGAGATTCTCGCCCGAGAACTTCTGCAAGGCACTGCTCTTGGCT
attB5	att sites	GAGCGCCGGATCAGGGAGTGGACGGCCTGGGAGCGCTACACGCTGTGGCTGCGGTCGGTGC
attP5	att sites	CCCTAATACGCAAGTCGATAACTCTCCTGGGAGCGTTGACAACTTGCGCACCCTGATCTG
attB7	att sites	AGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGGGCAAAGTTGATGACCGGGTCGTCCGTT
attP7	att sites	GTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGCCTAACCTTAACTTTTACGCAGGTTCAGCTT
FRT	FRT	GAAGTTCCTATTCTCTAGAAAGTATAGGAACTTC
A1	RBS	AATGTTCCCTAATAATCAGCAAAGAGGTTACTAG
F2	RBS	ACGCTATGGACTATGTTTCAAACAGGAGCTAATAG
B3	RBS	CCAAACGAGGCCGGGAGG
E0	RBS	CCCCCCGAGGAGTAGCAC
E1	RBS	CCTTCCGAGGAGGAGCACA
P1	RBS	CTATGGACTATGTTTGAAAGGGAGAAATACTAG
P2	RBS	GGAGCTATGGACTATGTTTGAAAGGCTGAAATACTAG
P3	RBS	CTTTACGAGGGCGATCCT
H1	RBS	ACCCCCGAG
V1	RBS	AAGACCATTATAAGGTTTGAACT
BBa_B0032	RBS	TCACACAGGAAAGTACTAG
BBa_B0064	RBS	TACTAGAGAAAGAGGGGAAATACTAG
BBa_B0034	RBS	TACTAGAGAAAGAGGAGAAATACTAG
AraJ	Ribozyme	AGTGGTCGTGATCTGAAACTCGATCACCTGATGAGCTCAAGGCAGAGCGAAACCACCTCTACAAATAATTTTGTTTAA
SarJ	Ribozyme	AGACTGTCGCCGGATGTGTATCCGACCTGACGATGGCCCAAAAGGGCCGAAACAGTCCTCTACAAATAATTTTGTTTAA
RiboJ00	Ribozyme	AGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAA

RiboJ53	Ribozyme	AGCGGTCAACGCATGTGCTTTGCGTTCTGATGAGACAGTGATGTCGAAACCGCCTCTACAAATAATTTTGTTTAA
RiboJ54	Ribozyme	AGGGGTCAGTTGATGTGCTTTCAACTCTGATGAGTCAGTGATGACGAAACCCCCTCTACAAATAATTTTGTTTAA
RiboJ57	Ribozyme	AGAAGTCAATTAATGTGCTTTTAATTCTGATGAGTCGGTGACGACGAAACTTCCTCTACAAATAATTTTGTTTAA
RiboJ60	Ribozyme	AGTCGTCAAGTGCTGTGCTTGCACTTCTGATGAGGCAGTGATGCCGAAACGACCTCTACAAATAATTTTGTTTAA
BydvJ	Ribozyme	AGGGTGTCTCAAGGTGCGTACCTTGACTGATGAGTCCGAAAGGACGAAACACCCCTCTACAAATAATTTTGTTTAA
araC	Gene	ATGGCTGAAGCGCAAAATGATCCCCTGCTGCCGGGATACTCGTTTAATGCCCATCTGGTGGCGGGTTTAACGCCGATTGAGGCCAACGGTTATCTCGAT TTTTTTATCGACCGACCGCTGGGAATGAAAGGTTATATTCTCAATCTCACCATTCGCGGTCAGGGGGTGGTGAAAAATCAGGGACGAGAATTTGTTTGC CGACCGGGTGATATTTTGCTGTTCCCGCCAGGAGAGATTCATCACTACGGTCGTCATCCGGAGGCTCGCGAATGGTATCACCAGTGGGTTTACTTTCGT CCGCGCGCCTACTGGCATGAATGGCTTAACTGGCCGTCAATATTTGCCAATACGGGGTTCTTTCGCCCGGATGAAGCGCACCAGCCGCATTTCAGCGAC CTGTTTGGGCAAATCATTAACGCCGGGCAAGGGGAAGGGCGCTATTCGGAGCTGCTGGCGATAAATCTGCTTGAGCAATTGTTACTGCGGCGCATGGAA GCGATTAACGAGTCGCTCCATCCACCGATGGATAATCGGGTACGCGAGGCTTGTCAGTACATCAGCGATCACCTGGCAGACAGCAATTTTGATATCGCC AGCGTCGCACAGCATGTTTGCTTGTCGCCGTCGCGTCTGTCACATCTTTTCCGCCAGCAGTTAGGGATTAGCGTCTTAAGCTGGCGCGAGGACCAACGT ATCAGCCAGGCGAAGCTGCTTTTGAGCACCACCCGGATGCCTATCGCCACCGTCGGTCGCAATGTTGGTTTTGACGATCAACTCTATTTCTCGCGGGTA TTTAAAAAATGCACCGGGGCCAGCCCGAGCGAGTTCCGTGCCGGTTAAGGAAGAGAGTCAATTCAGGGTGGTGAATATGAAACCAGTAACGTTATACGA TGTCGCAGAGTATGCCGGTGTCTCTTATCAGACCGTTTCCCGCGTGGTGAACCAGGCCAGCCACGTTTCTGCGAAAACGCGGGAAAAAGTGGAAGCGGC GATGGCGGAGCTGAATTACATTCCCAACCGCGTGGCACAACAACTGGCGGGCAAACAGTCGTTGCTGATTGGCGTTGCCACCTCCAGTCTGGCCCTGCA CGCGCCGTCGCAAATTGTCGCGGCGATTAAATCTCGCGCCGATCAACTGGGTGCCAGCGTGGTGGTGTCGATGGTAGAACGAAGCGGCGTCGAAGCCTG TAAAGCGGCGGTGCACAATCTTCTCGCGCAACGCGTCAGTGGGCTGATCATTAACTATCCGCTGGATGACCAGGATGCCATTGCTGTGGAAGCTGCCTG CACTAATGTTCCGGCGTTATTTCTTGATGTCTCTGACCAGACACCCATCAACAGTATTATTTTCTCCCATGAGGACGGTACGCGACTGGGCGTGGAGCA TCTGGTCGCATTGGGTCACCAGCAAATCGCGCTGTTAGCG
lacI	Gene	ATGAAACCAGTAACGTTATACGATGTCGCAGAGTATGCCGGTGTCTCTTATCAGACCGTTTCCCGCGTGGTGAACCAGGCCAGCCACGTTTCTGCGAAA ACGCGGGAAAAAGTGGAAGCGGCGATGGCGGAGCTGAATTACATTCCCAACCGCGTGGCACAACAACTGGCGGGCAAACAGTCGTTGCTGATTGGCGTT GCCACCTCCAGTCTGGCCCTGCACGCGCCGTCGCAAATTGTCGCGGCGATTAAATCTCGCGCCGATCAACTGGGTGCCAGCGTGGTGGTGTCGATGGTA GAACGAAGCGGCGTCGAAGCCTGTAAAGCGGCGGTGCACAATCTTCTCGCGCAACGCGTCAGTGGGCTGATCATTAACTATCCGCTGGATGACCAGGAT GCCATTGCTGTGGAAGCTGCCTGCACTAATGTTCCGGCGTTATTTCTTGATGTCTCTGACCAGACACCCATCAACAGTATTATTTTCTCCCATGAGGAC GGTACGCGACTGGGCGTGGAGCATCTGGTCGCATTGGGTCACCAGCAAATCGCGCTGTTAGCGGGCCCATTAAGTTCTGTCTCGGCGCGTCTGCGTCTG GCTGGCTGGCATAAATATCTCACTCGCAATCAAATTCAGCCGATAGCGGAACGGGAAGGCGACTGGAGTGCCATGTCCGGTTTTCAACAAACCATGCAA ATGCTGAATGAGGGCATCGTTCCCACTGCGATGCTGGTTGCCAACGATCAGATGGCGCTGGGCGCAATGCGCGCCATTACCGAGTCCGGGCTGCGCGTT GGTGCGGATATCTCGGTAGTGGGATACGACGATACCGAAGATAGCTCATGTTATATCCCGCCGTTAACCACCATCAAACAGGATTTTCGCCTGCTGGGG CAAACCAGCGTGGACCGCTTGCTGCAACTCTCTCAGGGCCAGGCGGTGAAGGGCAATCAGCTGTTGCCAGTCTCACTGGTGAAAAGAAAAACCACCCTG GCGCCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCGGGCAGTGATAA
tetR	Gene	ATGTCCAGATTAGATAAAAGTAAAGTGATTAACAGCGCATTAGAGCTGCTTAATGAGGTCGGAATCGAAGGTTTAACAACCCGTAAACTCGCCCAGAAG CTAGGTGTAGAGCAGCCTACATTGTATTGGCATGTAAAAAATAAGCGGGCTTTGCTCGACGCCTTAGCCATTGAGATGTTAGATAGGCACCATACTCAC TTTTGCCCTTTAGAAGGGGAAAGCTGGCAAGATTTTTTACGTAATAACGCTAAAAGTTTTAGATGTGCTTTACTAAGTCATCGCGATGGAGCAAAAGTA CATTTAGGTACACGGCCTACAGAAAAACAGTATGAAACTCTCGAAAATCAATTAGCCTTTTTATGCCAACAAGGTTTTTCACTAGAGAATGCATTATAT GCACTCAGCGCTGTGGGGCATTTTACTTTAGGTTGCGTATTGGAAGATCAAGAGCATCAAGTCGCTAAAGAAGAAAGGGAAACACCTACTACTGATAGT ATGCCGCCATTATTACGACAAGCTATCGAATTATTTGATCACCAAGGTGCAGAGCCAGCCTTCTTATTCGGCCTTGAATTGATCATATGCGGATTAGAA AAACAACTTAAATGTGAAAGTGGGTCCTAA
cinR^AM^	Gene	ATGATTGAGAATACCTATAGCGAAAAGTTCGAGTCCGCGTTCGAACAGATCAAAGCGGCGGCCAACGTGGATGCCGCCATCCGTATTCTCCAGGCGGAA TATAACCTCGATTTCGTCACCTACCATCTCGCCCAGACAATCGCGAGCAAGATCGATTCGCCCCTTCGTGCGCACCACCTATCCGGATGCCTGGGTTTCC CGTTACCTCCTCAACTGCTATGTGAAGGTCGATCCGATCATCAAGCAGGGCTTCGAACGCCAGCTGCCCTTCGACTGGAGCGAGGTCGAACCGACGCCG GAGGCCTATGCCATGCTGGTCGACGCCCAGAAACACGGCATCGATGACAATGGCTACTCCATCCCCGTCGCCGACAAGGCGCAGCGCCGCGCCCTGCTG TCGCTGAATGCCCATATACCGGCCGACGAATGGACCGAGCTCGTGCGCCGCTGCCGCAATGAGTGGATCGAGATCGCCCATCTGATCCACCGCAAGGCC GTATATGAGCTGCATGGCGAAAACGATCCGGTGCCGGCATTGTCGCCGCGCGAGATCGAGTGTCTGCACTGGACCGCCCTCGGCAAGGATTACAAGGAT ATTTCGGTCATCCTGGGCATATCAGAGCATACCACACGCGATTACCTGAAAACCGCCCGCTTCAGGCTCGGCTGCACCACGATCTCGGCCGCCGCGTCG CGGGCTGTTCAATTGCGCATCATCAATCCCTATAGGATCCGCATGACGCGACGTAATTGGTAATAG
vanR^AM^	Gene	ATGGACATGCCTCGTATTAAACCGGGTCAGCGTGTTATGATGGCACTGCGTAAAATGATTGCAAGCGGTGAAATCAAAAGTGGTGAACGTATTGCAGAA ATTCCGACCGCAGCAGCACTGGGTGTTAGCCGTATGCCGGTTCGTATCGCACTGCGTTCACTGGAACAAGAAGGTCTGGTTGTTCGTCTGGGTGCACGT GGTTATGCAGCCCGTGGTGTTAGCAGCGATCAGATTCGTGATGCAATTGAAGTTCGTGGTGTTCTGGAAGGTTTTGCAGCACGTCGTCTGGCAGAACGT GGTATGACCGCAGAAACCCATGCACGTTTTGTTGTACTGATTGCAGAAGGTGAAGCACTGTTTGCAGCCGGTCGCCTGAATGGTGAAGATCTGGATCGT TATGCCGCATATAATCAGGCATTTCATGATACCCTGGTTAGCGCAGCAGGTAATGGTGCAGTTGAAAGCGCACTGGCACGTAATGGTTTTGAACCGTTT GCAGCAGCCGGTGCACTGGCCCTGGATCTGATGGACCTGTCTGCCGAATATGAACATCTGCTGGCAGCACATCGTCAGCATCAGGCAGTTCTGGATGCA GTTAGCTGTGGTGATGCCGAAGGTGCAGAACGTATTATGCGTGATCATGCACTGGCAGCAATTCGTAATGCAAAAGTTTTTGAAGCAGCAGCAAGCGCA GGCGCACCGCTGGGTGCAGCATGGTCAATTCGTGCAGATTGA
ttgR^AM^	Gene	ATGGTTCGTCGTACCAAAGAAGAGGCACAAGAAACCCGTGCACAGATTATTGAAGCAGCAGAACGTGCATTCTATAAACGTGGTGTTGCACGTACCACC CTGGCAGATATTGCAGAACTGGCAGGCGTTACCCGTGGTGCAATTTATTGGCATTTTAACAACAAAGCCGAACTGGTTCAGGCACTGCTGGATAGCCTG CATGAAACCCATGATCATCTGGCACGTGCAAGCGAAAGCGAAGATGAAGTTGATCCGCTGGGTTGTATGCGTAAACTGCTGCTGCAGGTTTTTAATGAA CTGGTTCTGGATGCACGTACCCGTCGTATTAATGAAATCCTGCATCACAAATGCGAGTTCACCGATGATATGTGTGAAATTCGTCAGCAGCATCAGAGC GCAGTTCTGGATTGTCATAAAGGTATTACCCTGACACTGGCAAATGTAGTTCGTCGTGGTCAGCTGCCTGGTGAACTGGATGCAGAACGTGCCGCAGTT GCAATGTTTGCCTATGTTGATGGTCTGATTCGTCGTTGGCTGCTGCTGCCGGATAGCGTTGATCTGCTGGGTGATGTTGAAAAATGGGTTGATACCGGT CTGGATATGCTGCGTCTGAGTCCGGCACTGCGTAAATAA
cymR^AM^	Gene	ATGAGCCCGAAACGTCGTACCCAGGCAGAACGTGCAATGGAAACCCAGGGTAAACTGATTGCAGCAGCACTGGGTGTTCTGCGTGAAAAAGGTTATGCA GGTTTTCGTATTGCAGATGTTCCGGGTGCAGCCGGTGTTAGCCGTGGTGCACAGAGCCATCATTTTCCGACCAAACTGGAACTGCTGCTGGCAACCTTT GAATGGCTGTATGAGCAGATTACCGAACGTAGCCGTGCACGTCTGGCAAAACTGAAACCGGAAGATGATGTTATTCAGCAGATGCTGGATGATGCAGCA GAATTTTTTCTGGATGATGATTTTAGCATCGGCCTGGATCTGATTGTTGCAGCAGATCGTGATCCGGCACTGCGTGAAGGTATTCAGCGTACCGTTGAA CGTAATCGTTTTGTTGTTGAAGATATGTGGCTGGGTGTGCTGGTGAGCCGTGGTCTGAGCCGTGATGATGCCGAAGATATTCTGTGGCTGATTTTTAAC AGCGTTCGTGGTCTGGTAGTTCGTAGCCTGTGGCAGAAAGATAAAGAACGTTTTGAACGTGTGCGTAATAGCACCCTGGAAATTGCACGTGAACGTTAT GCAAAATTCAAACGTTGA
luxR	Gene	ATGAAAAACATAAATGCCGACGACACATACAGAATAATTAATAAAATTAAAGCTTGTAGAAGCAATAATGATATTAATCAATGCTTATCTGATATGACT AAAATGGTACATTGTGAATATTATTTACTCGCAATCATTTATCCTCATTATATGGTTAAATCCGATATTTCAATCCTAGATAATTACCCTAAAAAATGG AGGCAATATTATGATGACGCTAATTTAATAAAATATGATCCTATAGTAGATTATTCTAACTCCAATCATTCACCAATTAATTGGAATATATTTGAAAAC AATGCTGTAAATAAAAAATCTCCAAATGTAATTAAAGAAGCGAAAACATCAGGTCTTATCACTGGGTTTAGTTTCCCTATTCATACGGCTAACAATGGC TTCGGAATGCTTAGTTTTGCACATTCAGAAAAAGACAACTATATAGATAGTTTATTTTTACATGCGTGTATGAACATACCATTAATTGTTCCTTCTCTA GTTGATAATTATCGAAAAATAAATATAGCAAATAATAAATCAAACAACGATTTAACCAAAAGAGAAAAAGAATGTTTAGCGTGGGCATGCGAAGGAAAA AGCTCTTGGGATATTTCAAAAATATTAGGTTGCAGTGAGCGTACTGTCACTTTCCATTTAACCAATGCGCAAATGAAACTCAATACAACAAACCGCTGC CAAAGTATTTCTAAAGCAATTTTAACAGGAGCAATTGATTGCCCATACTTTAAAAATTAA
tnpA	Gene	ATGGTAACGTTCATGATTACCAGTGCACTGCATCGTGCGGCGGATTGGGCGAAAAGCGTGTTTTCTAGTGCTGCGCTGGGTGATCCGCGTCGTACCGCG CGTCTGGTGAATGTTGCGGCGCAACTGGCCAAATATAGCGGCAAAAGCATTACCATTAGCAGCGAAGGCAGCAAAGCCATGCAGGAAGGCGCGTATCGT TTTATTCGTAATCCGAACGTGAGCGCGGAAGCGATTCGTAAAGCGGGTGCCATGCAGACCGTGAAACTGGCCCAGGAATTTCCGGAACTGCTGGCAATT GAAGATACCACCTCTCTGAGCTATCGTCATCAGGTGGCGGAAGAACTGGGCAAACTGGGTAGCATTCAGGATAAAAGCCGTGGTTGGTGGGTGCATAGC GTGCTGCTGCTGGAAGCGACCACCTTTCGTACCGTGGGCCTGCTGCATCAAGAATGGTGGATGCGTCCGGATGATCCGGCGGATGCGGATGAAAAAGAA AGCGGCAAATGGCTGGCCGCTGCTGCAACTTCGCGTCTGAGAATGGGCAGCATGATGAGCAACGTGATTGCGGTGTGCGATCGTGAAGCGGATATTCAT GCGTATCTGCAAGATAAACTGGCCCATAACGAACGTTTTGTGGTGCGTAGCAAACATCCGCGTAAAGATGTGGAAAGCGGCCTGTATCTGTATGATCAC CTGAAAAACCAGCCGGAACTGGGCGGCTATCAGATTAGCATTCCGCAGAAAGGCGTGGTGGATAAACGTGGCAAACGTAAAAACCGTCCGGCGCGTAAA GCGAGCCTGAGCCTGCGTAGCGGCCGTATTACCCTGAAACAGGGCAACATTACCCTGAACGCGGTGCTGGCCGAAGAAATTAATCCGCCGAAAGGCGAA ACCCCGCTGAAATGGCTGCTGCTGACCAGCGAGCCGGTGGAAAGTCTGGCCCAAGCGCTGCGTGTGATTGATATTTATACCCATCGTTGGCGCATTGAA GAATTTCACAAAGCGTGGAAAACGGGTGCGGGTGCGGAACGTCAGCGTATGGAAGAACCGGATAACCTGGAACGTATGGTGAGCATTCTGAGCTTTGTG GCGGTGCGTCTGCTGCAACTGCGTGAATCTTTTACTCCGCCGCAAGCACTGCGTGCGCAGGGCCTGCTGAAAGAAGCGGAACACGTTGAAAGCCAGAGC GCGGAAACCGTGCTGACCCCGGATGAATGCCAACTGCTGGGCTATCTGGATAAAGGCAAACGCAAACGCAAAGAAAAAGCGGGCAGCCTGCAATGGGCG TATATGGCGATTGCGCGTCTGGGCGGCTTTATGGATAGCAAACGTACCGGCATTGCGAGCTGGGGTGCGCTGTGGGAAGGTTGGGAAGCGCTGCAAAGC AAACTGGATGGCTTTCTGGCCGCGAAAGACCTGATGGCGCAGGGCATTAAAATCTAA

specR	Gene	ATGGCTTGTTATGACTGTTTTTTTGGGGTACAGTCTATGCCTCGGGCATCCAAGCAGCAAGCGCGTTACGCCGTGGGTCGATGTTTGATGTTATGGAGC AGCAACGATGTTACGCAGCAGGGCAGTCGCCCTAAAACAAAGTTAAACATCATGAGGGAAGCGGTGATCGCCGAAGTATCGACTCAACTATCAGAGGTA GTTGGCGTCATCGAGCGCCATCTCGAACCGACGTTGCTGGCCGTACATTTGTACGGCTCCGCAGTGGATGGCGGCCTGAAGCCACACAGTGATATTGAT TTGCTGGTTACGGTGACCGTAAGGCTTGATGAAACAACGCGGCGAGCTTTGATCAACGACCTTTTGGAAACTTCGGCTTCCCCTGGAGAGAGCGAGATT CTCCGCGCTGTAGAAGTCACCATTGTTGTGCACGACGACATCATTCCGTGGCGTTATCCAGCTAAGCGCGAACTGCAATTTGGAGAATGGCAGCGCAAT GACATTCTTGCAGGTATCTTCGAGCCAGCCACGATCGACATTGATCTGGCTATCTTGCTGACAAAAGCAAGAGAACATAGCGTTGCCTTGGTAGGTCCA GCGGCGGAGGAACTCTTTGATCCGGTTCCTGAACAGGATCTATTTGAGGCGCTAAATGAAACCTTAACGCTATGGAACTCGCCGCCCGACTGGGCTGGC GATGAGCGAAATGTAGTGCTTACGTTGTCCCGCATTTGGTACAGCGCAGTAACCGGCAAAATCGCGCCGAAGGATGTCGCTGCCGACTGGGCAATGGAG CGCCTGCCGGCCCAGTATCAGCCCGTCATACTTGAAGCTAGACAGGCTTATCTTGGACAAGAAGAAGATCGCTTGGCCTCGCGCGCAGATCAGTTGGAA GAATTTGTCCACTACGTGAAAGGCGAGATCACCAAGGTAGTCGGCAAATAA
kanR	Gene	ATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTC GGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACA GATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACT GCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCAT TCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGAT TTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGAT TTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATC CTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCAT TTGATGCTCGATGAGTTTTTCTAA
cmR	Gene	ATGGAGAAAAAAATCACTGGATATACCACCGTTGATATATCCCAATGGCATCGTAAAGAACATTTTGAGGCATTTCAGTCAGTTGCTCAATGTACCTAT AACCAGACCGTTCAGCTGGATATTACGGCCTTTTTAAAGACCGTAAAGAAAAATAAGCACAAGTTTTATCCGGCCTTTATTCACATTCTTGCCCGCCTG ATGAATGCTCATCCGGAATTTCGTATGGCAATGAAAGACGGTGAGCTGGTGATATGGGATAGTGTTCACCCTTGTTACACCGTTTTCCATGAGCAAACT GAAACGTTTTCATCGCTCTGGAGTGAATACCACGACGATTTCCGGCAGTTTCTACACATATATTCGCAAGATGTGGCGTGTTACGGTGAAAACCTGGCC TATTTCCCTAAAGGGTTTATTGAGAATATGTTTTTCGTCTCAGCCAATCCCTGGGTGAGTTTCACCAGTTTTGATTTAAACGTGGCCAATATGGACAAC TTCTTCGCCCCCGTTTTCACCATGGGCAAATATTATACGCAAGGCGACAAGGTGCTGATGCCGCTGGCGATTCAGGTTCATCATGCCGTTTGTGATGGC TTCCATGTCGGCAGAATGCTTAATGAATTACAACAGTACTGCGATGAGTGGCAGGGCGGGGCGTAA
tetA	Gene	ATGCCGGTACTGCCGGGCCTCTTGCGGGATATCGTCCATTCCGACAGCATCGCCAGTCACTATGGCGTGCTGCTAGCGCTATATGCGTTGATGCAATTT CTATGCGCACCCGTTCTCGGAGCACTGTCCGACCGCTTTGGCCGCCGCCCAGTCCTGCTCGCTTCGCTACTTGGAGCCACTATCGACTACGCGATCATG GCGACCACACCCGTCCTGTGGATTCTCTACGCCGGACGCATCGTGGCCGGCATCACCGGCGCCACAGGTGCGGTTGCTGGCGCCTATATCGCCGACATC ACCGATGGGGAAGATCGGGCTCGCCACTTCGGGCTCATGAGCGCTTGTTTCGGCGTGGGTATGGTGGCAGGCCCCGTGGCCGGGGGACTGTTGGGCGCC ATCTCCCTGCACGCACCATTCCTTGCGGCGGCGGTGCTCAACGGCCTCAACCTACTACTGGGCTGCTTCCTAATGCAGGAGTCGCATAAGGGAGAGCGC CGTCCGATGCCCTTGAGAGCCTTCAACCCAGTCAGCTCCTTCCGGTGGGCGCGGGGCATGACCATTGTGGCCGCACTTATGACTGTCTTCTTTATCATG CAACTCGTAGGACAGGTGCCGGCAGCGCTCTGGGTCATTTTCGGCGAGGACCGCTTTCGCTGGAGCGCGACGATGATCGGCCTGTCGCTTGCGGTATTC GGAATCTTGCACGCCCTCGCTCAAGCCTTCGTCACTGGTCCCGCCACCAAACGTTTCGGCGAGAAGCAGGCCATTATCGCCGGCATGGCGGCCGACGCG CTGGGCTACGTCTTGCTGGCGTTCGCGACGCGAGGCTGGATGGCCTTCCCCATTATGATTCTTCTCGCTTCCGGCGGCATCGGGATGCCCGCGTTGCAG GCCATGCTGTCCAGGCAGGTAGATGACGACCATCAGGGACAGCTTCAAGGATCGCTCGCGGCTCTTACCAGCCTAACTTCGATCACTGGACCGCTGATC GTCACGGCGATTTATGCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGATTGTAGGCGCCGCCCTATACCTTGTCTGCCTCCCCGCGTTGCGTCGC GGTGCATGGAGCCGGGCCACCTCGACCTGA
ampR	Gene	ATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGAC TTGGTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCG GCCAACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACTCGCCTTGATCGTTGGGAACCG GAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACGATGCCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACTGGCGAACTACTTACT CTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGAT AAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGT CAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAA
gfp	Gene	ATGCGTAAAGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGGTGATGTTAATGGGCACAAATTTTCTGTCAGTGGAGAGGGT GAAGGTGATGCAACATACGGAAAACTTACCCTTAAATTTATTTGCACTACTGGAAAACTACCTGTTCCATGGCCAACACTTGTCACTACTTTCGGTTAT GGTGTTCAATGCTTTGCGAGATACCCAGATCATATGAAACAGCATGACTTTTTCAAGAGTGCCATGCCCGAAGGTTATGTACAGGAAAGAACTATATTT TTCAAAGATGACGGGAACTACAAGACACGTGCTGAAGTCAAGTTTGAAGGTGATACCCTTGTTAATAGAATCGAGTTAAAAGGTATTGATTTTAAAGAA GATGGAAACATTCTTGGACACAAATTGGAATACAACTATAACTCACACAATGTATACATCATGGCAGACAAACAAAAGAATGGAATCAAAGTTAACTTC AAAATTAGACACAACATTGAAGATGGAAGCGTTCAACTAGCAGACCATTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCCTTTTACCAGACAAC CATTACCTGTCCACACAATCTGCCCTTTCGAAAGATCCCAACGAAAAGAGAGACCACATGGTCCTTCTTGAGTTTGTAACAGCTGCTGGGATTACACAT GGCATGGATGAACTATACAAATAA
yfp	Gene	ATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAG GGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGC TACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATC TTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAG GAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAAC TTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGAC AACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACT CTCGGCATGGACGAGCTGTACAAGTAA
rfp	Gene	ATGGCTTCCTCCGAAGACGTTATCAAAGAGTTCATGCGTTTCAAAGTTCGTATGGAAGGTTCCGTTAACGGTCACGAGTTCGAAATCGAAGGTGAAGGT GAAGGTCGTCCGTACGAAGGTACCCAGACCGCTAAACTGAAAGTTACCAAAGGTGGTCCGCTGCCGTTCGCTTGGGACATCCTGTCCCCGCAGTTCCAG TACGGTTCCAAAGCTTACGTTAAACACCCGGCTGACATCCCGGACTACCTGAAACTGTCCTTCCCGGAAGGTTTCAAATGGGAACGTGTTATGAACTTC GAAGACGGTGGTGTTGTTACCGTTACCCAGGACTCCTCCCTGCAAGACGGTGAGTTCATCTACAAAGTTAAACTGCGTGGTACCAACTTCCCGTCCGAC GGTCCGGTTATGCAGAAAAAAACCATGGGTTGGGAAGCTTCCACCGAACGTATGTACCCGGAAGACGGTGCTCTGAAAGGTGAAATCAAAATGCGTCTG AAACTGAAAGACGGTGGTCACTACGACGCTGAAGTTAAAACCACCTACATGGCTAAAAAACCGGTTCAGCTGCCGGGTGCTTACAAAACCGACATCAAA CTGGACATCACCTCCCACAACGAAGACTACACCATCGTTGAACAGTACGAACGTGCTGAAGGTCGTCACTCCACCGGTGCTTAA
mCherry	Gene	ATGGTTTCTAAGGGCGAAGAAGATAATATGGCCATTATCAAGGAGTTTATGCGCTTTAAAGTGCACATGGAGGGCTCAGTAAACGGTCACGAATTTGAA ATCGAAGGAGAAGGCGAGGGCCGTCCGTACGAGGGGACTCAGACGGCGAAGCTCAAAGTCACAAAAGGTGGCCCATTGCCATTCGCCTGGGATATTCTG TCGCCGCAGTTCATGTATGGCAGCAAAGCGTACGTAAAACACCCGGCAGATATTCCGGATTATCTGAAATTATCTTTCCCGGAAGGTTTCAAATGGGAA CGCGTTATGAATTTCGAGGACGGGGGCGTAGTGACGGTCACGCAGGATAGTAGCCTGCAGGACGGCGAATTCATTTACAAAGTCAAGCTGCGTGGCACA AATCTTCCGTCTGATGGCCCGGTGATGCAGAAGAAAACCATGGGTTGGGAGGCTTCCAGCGAACGCATGTATCCCGAAGATGGAGCATTGAAAGGCGAA ATCAAACAGCGCCTGAAATTAAAAGACGGCGGACATTACGACGCCGAGGTCAAGACCACTTACAAAGCGAAAAAACCAGTTCAGCTGCCAGGCGCCTAC AACGTTAATATCAAGCTGGATATTACCTCGCATAATGAAGATTATACTATCGTGGAACAATACGAGCGCGCCGAAGGCCGCCACTCCACTGGTGGTATG GATGAATTATATAAA
amtR	Gene	ATGGCAGGCGCAGTTGGTCGTCCGCGTCGTAGTGCACCGCGTCGTGCAGGTAAAAATCCGCGTGAAGAAATTCTGGATGCAAGCGCAGAACTGTTTACC CGTCAGGGTTTTGCAACCACCAGTACCCATCAGATTGCAGATGCAGTTGGTATTCGTCAGGCAAGCCTGTATTATCATTTTCCGAGCAAAACCGAAATC TTTCTGACCCTGCTGAAAAGCACCGTTGAACCGAGCACCGTTCTGGCAGAAGATCTGAGCACCCTGGATGCAGGTCCGGAAATGCGTCTGTGGGCAATT GTTGCAAGCGAAGTTCGTCTGCTGCTGAGCACCAAATGGAATGTTGGTCGTCTGTATCAGCTGCCGATTGTTGGTAGCGAAGAATTTGCAGAATATCAT AGCCAGCGTGAAGCACTGACCAATGTTTTTCGTGATCTGGCAACCGAAATTGTTGGTGATGATCCGCGTGCAGAACTGCCGTTTCATATTACCATGAGC GTTATTGAAATGCGTCGCAATGATGGTAAAATTCCGAGTCCGCTGAGCGCAGATAGCCTGCCGGAAACCGCAATTATGCTGGCAGATGCAAGCCTGGCA GTTCTGGGTGCACCGCTGCCTGCAGATCGTGTTGAAAAAACCCTGGAACTGATTAAACAGGCAGATGCAAAATAA
ameR	Gene	ATGAACAAAACCATTGATCAGGTGCGTAAAGGTGATCGTAAAAGCGATCTGCCGGTTCGTCGTCGTCCGCGTCGTAGTGCCGAAGAAACCCGTCGTGAT ATTCTGGCAAAAGCCGAAGAACTGTTTCGTGAACGTGGTTTTAATGCAGTTGCCATTGCAGATATTGCAAGCGCACTGAATATGAGTCCGGCAAATGTG TTTAAACATTTTAGCAGCAAAAACGCACTGGTTGATGCAATTGGTTTTGGTCAGATTGGTGTTTTTGAACGTCAGATTTGTCCGCTGGATAAAAGCCAT GCACCGCTGGATCGTCTGCGTCATCTGGCACGTAATCTGATGGAACAGCATCATCAGGATCATTTCAAACACATACGGGTTTTTATTCAGATCCTGATG ACCGCCAAACAGGATATGAAATGTGGCGATTATTACAAAAGCGTGATTGCAAAACTGCTGGCCGAAATTATTCGTGATGGTGTTGAAGCAGGTCTGTAT ATTGCAACCGATATTCCGGTTCTGGCAGAAACCGTTCTGCATGCACTGACCAGCGTTATTCATCCGGTTCTGATTGCACAAGAAGATATTGGTAATCTG GCAACCCGTTGTGATCAGCTGGTTGATCTGATTGATGCAGGTCTGCGTAATCCGCTGGCAAAATAA
ameRs	Gene	ATGAACAAAACCATTGATCAGGTGCGTAAAGGTGATCGTAAAAGCGATCTGCCGGTTCGTCGTCGTCCGCGTCATAGTGCCGAAGAAACCCGTCGTGAT ATTCTGGCAAAAGCCGAAGAACTGTTTAGTGAACGTGGTTTTAATGCAGTTGCCATTGCAGATATTGCAAGCGCACTGAATATGAGTCCGGCAAATGTG TTTAAACATTTTAGCAGCAAAAACGCACTGGTTGATGCAATTGGTTTTGGTCAGATTGGTGTTTTTGAACGTCAGATTTGTCCGCTGGATAAAAGCCAT GCACCGCTGGATCGTCTGCGTCATCTGGCACGTAATCTGATGGAACAGCATCATCAGGATCATTTCAAACACATACGGGTTTTTATTCAGATCCTGATG

		ACCGCCAAACAGGATATGAAATGTGGCGATTATTACAAAAGCGTGATTGCAAAACTGCTGGCCGAAATTATTCGTGATGGTGTTGAAGCAGGTCTGTAT ATTGCAACCGATATTCCGGTTCTGGCAGAAACCGTTCTGCATGCACTGACCAGCGTTATTCATCCGGTTCTGATTGCACAAGAAGATATTGGTAATCTG GCAACCCGTTGTGATCAGCTGGTTGATCTGATTGATGCAGGTCTGCGTAATCCGCTGGCAAAATAA
phlF	Gene	ATGGCACGTACCCCGAGCCGTAGCAGCATTGGTAGCCTGCGTAGTCCGCATACCCATAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGT GGTTATAGCGGTCTGAGCATTGAAAGCGTTGCACGTCGTGCCGGTGCAAGCAAACCGACCATTTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCC GAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATTTCCGGATCTGGGTAGCTTTAAAGCCGATCTGGATTTTCTGCTGCGTAATCTGTGGAAAGTT TGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGCAGAAGCACAGCTGGACCCTGCAACCCTGACCCAGCTGAAAGATCAGTTTATGGAA CGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGGTGAACTGCCGAAAGATACCAATCGTGAACTGCTGCTGGATATGATTTTT GGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGAAGAATTTACCTTCCTGCTGATTAATGGTGTTTGTCCGGGTACA CAGCGTTAA
qacR	Gene	ATGAACCTGAAAGATAAAATTCTGGGCGTTGCCAAAGAACTGTTTATCAAAAATGGCTATAACGCAACCACCACCGGTGAAATTGTTAAACTGAGCGAA AGCAGCAAAGGCAATCTGTATTATCACTTTAAAACCAAAGAGAACCTGTTTCTGGAAATCCTGAACATCGAAGAAAGCAAATGGCAAGAGCAGTGGAAA AAAGAACAAATCAAATGCAAAACCAACCGCGAGAAATTCTATCTGTATAATGAACTGAGCCTGACCACCGAATATTACTATCCGCTGCAGAATGCCATC ATCGAGTTTTATACCGAGTACTATAAAACCAACAGCATCAACGAGAAAATGAACAAACTGGAAAACAAATACATCGATGCCTACCACGTGATCTTTAAA GAAGGTAATCTGAACGGCGAATGGTGCATTAATGATGTTAATGCCGTGAGCAAAATTGCAGCAAATGCCGTTAATGGCATTGTTACCTTTACCCATGAG CAGAATATCAACGAACGCATTAAACTGATGAACAAATTCAGCCAGATCTTTCTGAATGGCCTGAGCAAATAA
betI	Gene	ATGCCGAAACTGGGTATGCAGAGCATTCGTCGTCGTCAGCTGATTGATGCAACCCTGGAAGCAATTAATGAAGTTGGTATGCATGATGCAACCATTGCA CAGATTGCACGTCGTGCCGGTGTTAGCACCGGTATTATTAGCCATTATTTCCGCGATAAAAACGGTCTGCTGGAAGCAACCATGCGTGATATTACCAGC CAGCTGCGTGATGCAGTTCTGAATCGTCTGCATGCACTGCCGCAGGGTAGCGCAGAACAGCGTCTGCAGGCAATTGTTGGTGGTAATTTTGATGAAACC CAGGTTAGCAGCGCAGCAATGAAAGCATGGCTGGCATTTTGGGCAAGCAGCATGCATCAGCCGATGCTGTATCGTCTGCAGCAGGTTAGCAGTCGTCGT CTGCTGAGCAATCTGGTTAGCGAATTTCGTCGTGAACTGCCTCGTGAACAGGCACAAGAGGCAGGTTATGGTCTGGCAGCACTGATTGATGGTCTGTGG CTGCGTGCAGCACTGAGCGGTAAACCGCTGGATAAAACCCGTGCAAATAGCCTGACCCGTCATTTTATCACCCAGCATCTGCCGACCGATTAA
hlyIIR	Gene	ATGAAATACATCCTGTTTGAGGTGTGCGAAATGGGTAAAAGCCGTGAACAGACCATGGAAAATATTCTGAAAGCAGCCAAAAAGAAATTCGGCGAACGT GGTTATGAAGGCACCAGCATTCAAGAAATTACCAAAGAAGCCAAAGTTAACGTTGCAATGGCCAGCTATTACTTTAATGGCAAAGAGAACCTGTACTAC GAGGTGTTCAAAAAATACGGTCTGGCAAATGAACTGCCGAACTTTCTGGAAAAAAACCAGTTTAATCCGATTAATGCCCTGCGTGAATATCTGACCGTT TTTACCACCCACATTAAAGAAAATCCGGAAATTGGCACCCTGGCCTATGAAGAAATTATCAAAGAAAGCGCACGCCTGGAAAAAATCAAACCGTATTTT ATCGGCAGCTTCGAACAGCTGAAAGAAATTCTGCAAGAGGGTGAAAAACAGGGTGTGTTTCACTTTTTTAGCATCAACCATACCATCCATTGGATTACC AGCATTGTTCTGTTTCCGAAATTCAAAAAATTCATCGATAGCCTGGGTCCGAATGAAACCAATGATACCAATCATGAATGGATGCCGGAAGATCTGGTT AGCCGTATTATTAGCGCACTGACCGATAAACCGAACATTTAA
int2	Gene	ATGCCGATTGCACCGGAATTTCTGAGCCTGGCATATCCGGGTCAAGAATTTCCGGCATATCTGTATGGTCGTGCAAGCCGTGATCCGAAACGTAAAGGT CGTAGCGTTCAGAGCCAGCTGGATGAAGGTCGTGCCACCTGTCTGGATGCAGGTTGGCCGATTGCCGGTGAATTTAAAGATGTTGATCGTAGCGCAAGC GCATATGCACGTCGTACCCGTGATGAATTTGAAGAAATGATTGCAGGTATTCAGGCAGGCGAATGTCGTATTCTGGTTGCATTTGAAGCAAGCCGTTAT TATCGTGATCTGGAAGCATATGTTCGTCTGCGTCGTGTTTGTCGTGAAGCCGGTGTTCTGCTGTGTTATAATGGTCAGGTTTATGATCTGAGCAAAAGC GCAGATCGTAAAGCAACCGCACAGGATGCAGTTAATGCCGAAGGTGAAGCAGATGATATTCGTGAACGTAATCTGCGTACCACCCGTCTGAATGCAAAA CGTGGTGGTGCACATGGTCCGGTTCCGGATGGTTATAAACGTCGTTATGATCCGGATAGCGGTGATCTGGTTGATCAGATTCCGCATCCTGATCGTGCA GGTCTGATTACCGAAATTTTTCGTCGTGCAGCAGCAGCCGAACCGCTGGCAGCAATTTGCCGTGATCTGAATGAACGTGGTGAAACCACCCATCGTGGT AAAGCATGGCAGCGTCATCATCTGCATGCAATTCTGCGTAATCCTGCATATATTGGTCATCGTCGTCATCTGGGTGTTGATACCGGTAAAGGTATGTGG GCACCGATTTGTGATGATGAAGATTTTGCAGAAACCTTTCAGGCCGTTCAAGAAATTCTGAGTCTGCCTGGTCGTCAGCTGAGTCCGGGTCCGGAAGCA CAGCATCTGCAGACCGGTATTGCACTGTGTGGTGAACATCCTGATGAACCGCCTCTGCGTAGCGTTACCGTTCGTGGTCGTACCAATTATAACTGTAGC ACCCGTTATGATGTTGCCATGCGTGAAGATCGTATGGATGCATTTGTTGAAGAAAGCGTGATTACCTGGCTGGCAAGTGATGAAGCAGTTGCAGCCTTT GAAGATAACACCGATGATGAACGTACCCGTAAAGCACGTATTCGTCTGAAAGTTCTGGAAGAACAGCTGGAAGCAGCACAGAAACAGGCACGTACCCTG CGTCCGGATGGCATGGGTATGCTGCTGAGCATTGATAGCCTGGCAGGTCTGGAAGCCGAACTGACACCGCAGATTGATAAAGCCCGTCAAGAAAGCCGT AGCCTGCATGTTCCGGCACTGCTGCGTGATCTGCTGGGTAAACCGCGTGCAGATGTGGATCGTGCATGGAATGAAGCACTGACCCTGCCGCAGCGTCGC ATGATTCTGCGCATGGTTGTTACCATTCGTCTGTTTAAAGCAGGTAGCCGTGGTGTTCGTGCAATTGAACCGGGTCGTATTACCCTGAGCTATGTTGGC GAACCGGGTTTTAAACCGGTTGGTGGTAATCGTGCAAAACAGTAA
int5	Gene	ATGCCTGGTATGACCACCGAAACCGGTCCGGATCCTGCAGGTCTGATTGACCTGTTTTGTCGTAAAAGCAAAGCAGTTAAAAGCCGTGCAAATGGTGCA GGTCAGCGTCGTAAACAAGAAATTAGCATTGCAGCACAAGAAACCCTGGGTCGTAAAGTTGCAGCACTGCTGGGTATGCAGGTTCGTCATGTTTGGAAA GAAGTTGGTAGCGCAAGCCGTTTTCGTAAAGGTAAAGCACGTGATGATCAGAGCAAAGCACTGAAAGCCCTGGAAAGCGGTGAAGTTGGTGCACTGTGG TGTTATCGTCTGGATCGTTGGGATCGTGGTGGTGCCGGTGCAATTCTGAAAATTATCGAACCGGAAGATGGTATGCCTCGTCGTCTGCTGTTTGGTTGG GATGAAGATACCGGTCGTCCGGTTCTGGATAGCACCAATAAACGTGATCGCGGTGAACTGATTCGTCGTGCAGAAGAAGCACGCGAAGAAGCAGAAAAA CTGAGCGAACGTGTTCGTGATACCAAAGCACATCAGCGTGAAAATGGTGAATGGGTTAATGCCCGTGCACCGTATGGTCTGCGTGTTGTTCTGGTTACC GTTAGTGATGAAGAGGGTGATGAATATGATGAACGTAAACTGGCAGCAGATGATGAAGATGCGGGTGGTCCTGATGGTCTGACCAAAGCAGAAGCAGCC CGTCTGGTTTTTACCCTGCCGGTTACCGATCGTCTGAGCTATGCAGGCACCGCACATGCAATGAATACCCGTGAAATTCCGAGCCCGACCGGTGGTCCG TGGATTGCAGTTACCGTGCGTGATATGATTCAGAATCCGGCATATGCGGGTTGGCAGACCACAGGTCGTCAGGATGGTAAACAGCGTCGTCTGACCTTT TATAACGGTGAAGGTAAACGTGTTAGCGTTATGCATGGTCCTCCGCTGGTGACCGATGAAGAACAAGAAGCCGCAAAAGCAGCCGTTAAAGGTGAAGAT GGTGTTGGTGTTCCGCTGGATGGTAGCGATCATGATACCCGTCGCAAACATCTGCTGAGCGGTCGTATGCGTTGTCCGGGTTGTGGTGGTAGCTGTAGC TATAGCGGTAATGGTTATCGTTGTTGGCGTAGCAGTGTGAAAGGTGGTTGTCCGGCACCGACCTATGTTGCACGTAAAAGCGTTGAAGAATATGTTGCA TTTCGTTGGGCAGCAAAATTAGCAGCAAGCGAACCGGATGATCCGTTTGTTATTGCAGTTGCAGATCGCTGGGCAGCACTGACCCATCCGCAGGCAAGC GAAGATGAAAAGTATGCAAAAGCCGCAGTTCGTGAAGCCGAAAAAAATCTGGGTCGCCTGCTGCGTGATCGTCAGAATGGTGTTTATGATGGTCCGGCA GAACAGTTTTTTGCCCCTGCATATCAAGAAGCACTGAGCACCCTGCAGGCAGCCAAAGATGCAGTTAGCGAAAGCAGCGCAAGCGCAGCAGTTGATGTT AGCTGGATTGTTGATAGCAGCGATTATGAAGAACTGTGGCTGCGTGCAACCCCGACCATGCGTAATGCAATTATTGATACCTGCATCGATGAAATTTGG GTTGCAAAAGGCCAGCGTGGTCGTCCGTTTGATGGTGATGAACGCGTTAAAATCAAATGGGCAGCCCGTACCTAA
int7	Gene	ATGAAAGTGGCCATTTATGTTCGTGTTAGCACCGATGAACAGGCCAAAGAAGGTTTTAGCATTCCGGCACAGCGTGAACGTCTGCGTGCATTTTGTGCA AGCCAGGGTTGGGAAATTGTGCAAGAATATATTGAAGAAGGTTGGAGCGCAAAAGATCTGGATCGTCCGCAGATGCAGCGTCTGCTGAAAGATATCAAA AAAGGCAACATTGATATTGTGCTGGTGTATCGTCTGGATCGCCTGACCCGTAGCGTTCTGGATCTGTATCTGCTGCTGCAGACCTTTGAAAAATACAAT GTGGCATTTCGTAGCGCCACCGAAGTTTATGATACCAGCACCGCAATGGGTCGTCTGTTTATTACCCTGGTTGCAGCACTGGCACAGTGGGAACGTGAA AATCTGGCAGAACGTGTTAAATTTGGTATCGAGCAGATGATCGATGAAGGTAAAAAACCGGGTGGTCATAGCCCGTATGGTTACAAATTTGATAAAGAC TTCAATTGCACCATTATTGAGGAAGAAGCAGACGTTGTTCGTATGATCTATCGCATGTATTGTGATGGTTATGGCTATCGTAGCATTGCAGATCGTCTG AATGAACTGATGGTTAAACCGCGTATTGCCAAAGAATGGAATCATAATAGCGTGCGTGATATCCTGACCAACGATATCTATATTGGCACCTATCGTTGG GGTGATAAAGTTGTTCCGAATAATCATCCGCCTATTATTAGCGAAACCCTGTTCAAAAAAGCCCAGAAAGAAAAAGAAAAACGTGGCGTTGATCGTAAA CGCGTTGGTAAATTTCTGTTTACCGGTCTGCTGCAGTGTGGTAATTGTGGTGGCCATAAAATGCAGGGCCATTTTGATAAACGTGAGCAGAAAACCTAT TACCGTTGTACCAAATGTCACCGCATTACCAACGAAAAAAACATTCTGGAACCGCTGCTGGATGAAATTCAGCTGCTGATTACCAGCAAAGAATACTTT ATGAGCAAATTCAGCGACCGCTATGATCAGCAAGAGGTTGTTGATGTTAGCGCACTGACAAAAGAACTGGAAAAAATCAAACGCCAGAAAGAGAAATGG TACGATCTGTATATGGATGATCGTAACCCGATTCCGAAAGAAGAACTGTTTGCCAAAATTAACGAACTGAACAAAAAAGAAGAAGAAATCTATAGCAAG CTGAGCGAAGTGGAAGAAGATAAAGAACCGGTTGAAGAGAAATATAACCGCCTGAGCAAAATGATCGATTTTAAACAGCAGTTTGAGCAGGCCAACGAC TTTACCAAAAAAGAGCTGCTGTTCAGCATCTTCGAAAAGATTGTGATTTATCGCGAGAAAGGCAAGCTGAAAAAAATCACCCTGGATTACACCCTGAAA TAA
R6K	Ori	TGATTCGCACGGGCCCATGGCTAATTCCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTCAGTGCGT TACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGCTA TTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGT TAGCCATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAG GTTGAACTGCTGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATCTT
*R6K**	Ori	CCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTCAGTGCGTTACATCCCTGGCTTGTTGTCCACAAC CGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGCTATTTAAGTTGCTGATTTATATTAATTT TATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGCCATGAGGGTTTAGTTCGTTAAA CATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGCTGATCTTCAGATCCTC TACGCCGGACGCATCGTGGCCGGATCTT
p15a	Ori	ACTAACTCCTCTAAATCAATTACCAGTGGCTGCTGCCAGTGGTGCTTTTGCATGTCTTTCCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCA GCGGTCGGACTGAACGGGGGGTTCGTGCATACAGTCCAGCTTGGAGCGAACTGCCTACCCGGAACTGAGTGTCAGGCGTGGAATGAGACAAACGCGGCC ATAACAGCGGAATGACACCGGTAAACCGAAAGGCAGGAACAGGAGAGCGCACGAGGGAGCCGCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCG GGTTTCGCCACCACTGATTTGAGCGTCAGATTTCGTGATGCTTGTCAGGGGGGCGGAGCCTACGGAAAAACGGCTTTGCCGCGGCCCTCTCACTTCCCT GTTAAGTATCTTCCTGGCATCTTCCAGGAAATCTCCGCCCCGTTCGTAAGCCATTTCCGCTCGCCGCAGTCGAACGACCGAGCGTAGCGAGTCTGTGAG CGAGGAAGCGGAATATATCCTGTATCACATATTCTGCTGACGCACCGGTGCTGCCTTTTTTCTCCTGCCACATGAAGCACTTCACTGACACCCTCATCA GTGCCAACATAGTAAGCCAGTATACACTCCGCTA

oriT	Conjugation element	CTTTTCCGCTGCATAACCCTGCTTCGGGGTCATTATAGCGATTTTTTCGGTATATCCATCCTTTTTCGCACGATATACAGGATTTTGCCAAAGGGTTCG TGTAGACTTTCCTTGGTGTATCCAACGGCGTCAGCCGGGCAGGATAGGTGAAGTAGGCCCACCCGCGAGCGGGTGTTCCTTCTTCACTGTCCCTTATTC GCACCTGGCGGTGCTCAACGGGAATCCTGCTCT

Appendix Table 6: Sequence of plasmids used in this study

Name	Function	DNA Sequence[a]
pIYJP080	Intermediate cloning backbone	TGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGGCGTATCACGAGGCAGAATTTCAGATAAAAAAAAT CCTTAGCTTTCGCTAAGGATGATTTCTGGAATTCGCGGCCGCTTCTAGAGGAAGACGCGGAGGGAGACCGGCGCGCCTTTACGGCTAGCT CAGTCCTAGGTACTATGCTAGCAAGGTAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAAT AATTTTGTTTAATTCACACAGGAAAGTACTAGATGAGCAAAGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGG TGATGTTAATGGGCACAAATTTTCTGTCCGTGGAGAGGGTGAAGGTGATGCTACAAACGGAAAACTCACCCTTAAATTTATTTGCACTAC TGGAAAACTACCTGTTCCGTGGCCAACACTTGTCACTACTCTGACCTATGGTGTTCAATGCTTTTCCCGTTATCCGGATCACATGAAACG GCATGACTTTTTCAAGAGTGCCATGCCCGAAGGTTATGTACAGGAACGCACTATATCTTTCAAAGATGACGGGACCTACAAGACGCGTGC TGAAGTCAAGTTTGAAGGTGATACCCTTGTTAATCGTATCGAGTTAAAGGGTATTGATTTTAAAGAAGATGGAAACATTCTTGGACACAA ACTCGAGTACAACTTTAACTCACACAATGTATACATCACGGCAGACAAACAAAAGAATGGAATCAAAGCTAACTTCAAAATTCGCCACAA CGTTGAAGATGGTTCCGTTCAACTAGCAGACCATTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCCTTTTACCAGACAACCATTA CCTGTCGACACAATCTGTCCTTTCGAAAGATCCCAACGAAAAGCGTGACCACATGGTCCTTCTTGAGTTTGTAACTGCTGCTGGGATTAC ACATGGCATGGATGAGCTCTACAAATAATACTAGAGCCAGGCATCAAATAAAACGAAAGGCTCAGTCGAAAGACTGGGCCTTTCGTTTTA TCTGTTGTTTGTCGGTGAACGCTCTCTACTAGAGTCACACTGGCTCACCTTCGGGTGGGCCTTTCTGCGTTTATAGGTCTCATACTATGT CTTCTACTAGTAGCGGCCGCTGCAGTCCGGCAAAAAAGGGCAAGGTGTCACCACCCTGCCCTTTCTTTAAAACCGAAAAGATTACTTCGC GTTATGCAGGCTTCCTCGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATTTAA TAAGATGATCTTCTTGAGATCGTTTTGGTCTGCGCGTAATCTCTTGCTCTGAAAACGAAAAAACCGCCTTGCAGGGCGGTTTTTCGAAGG TTCTCTGAGCTACCAACTCTTTGAACCGAGGTAACTGGCTTGGAGGAGCGCAGTCACCAAAACTTGTCCTTTCAGTTTAGCCTTAACCGG CGCATGACTTCAAGACTAACTCCTCTAAATCAATTACCAGTGGCTGCTGCCAGTGGTGCTTTTGCATGTCTTTCCGGGTTGGACTCAAGA CGATAGTTACCGGATAAGGCGCAGCGGTCGGACTGAACGGGGGGTTCGTGCATACAGTCCAGCTTGGAGCGAACTGCCTACCCGGAACTG AGTGTCAGGCGTGGAATGAGACAAACGCGGCCATAACAGCGGAATGACACCGGTAAACCGAAAGGCAGGAACAGGAGAGCGCACGAGGGA GCCGCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCACTGATTTGAGCGTCAGATTTCGTGATGCTTGTCAGG GGGGCGGAGCCTACGGAAAAACGGCTTTGCCGCGGCCCTCTCACTTCCCTGTTAAGTATCTTCCTGGCATCTTCCAGGAAATCTCCGCCC CGTTCGTAAGCCATTTCCGCTCGCCGCAGTCGAACGACCGAGCGTAGCGAGTCTGTGAGCGAGGAAGCGGAATATATCCTGTATCACATA TTCTGCTGACGCACCGGTGCTGCCTTTTTTCTCCTGCCACATGAAGCACTTCACTGACACCCTCATCAGTGCCAACATAGTAAGCCAGTA TACACTCCGCTACGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTTTAAATCAATCTAAAGTATATATGAG TAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCGTTCATCCATAGTTGCCTGACTC CCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGAACCACGCTCACCGGCTCCA GATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGT TGCCGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTCG TTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTC GGTCCTCCGATCGTTGTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACTGCATAATTCTCTTACTGTCATGCCA TCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCCCGGCG TCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAACTCTCAAGGATC TTACCGCTGTTGAGATCCAGTTCGATATAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTTACTTTCACCAGCGTTTCTGGGTGA GCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTCCTTTTTCAATATTAT TGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGGGTTCCGCGCACATTT CCCCGAAAAG
pYJP053	Integrases	GACGAAAGGGCCTCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAA ATGTGCGCGGAACCCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAAT AATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTC ACCCAGAAACGCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAGA TCCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATTGACG CCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCACAGAAAAGCATCTTACGGATG GCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCGGAGGACCGA AGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACTCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACG ACGAGCGTGACACCACGATGCCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCCGGCAAC AATTAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATCTG GAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGA GTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAACTGTCAGACCAAGTTTACT CATATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAAGGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCC CTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCT GCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCT TCAGCAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACC TCGCTCTGCTAATCCTGTTACCAGCCGGTTGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCT CAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACT TAAAACCTTAGAGGCTATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGT ACGTTAGCCATGAGAGCTTAGTACGTTAGCCATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACTTGAGAGCTTAGTAC GTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGCCCATGTTCTTTCCTGCGTTATCAGAGCTTATCGGCCAGCCTCGCA GAGCAGGATTCCCGTTGAGCACCGCCAGGTGCGAATAAGGGACAGTGAAGAAGGAACACCCGCTCGCGGGTGGGCCTACTTCACCTATCC TGCCCGGCTGACGCCGTTGGATACACCAAGGAAAGTCTACACGAACCCTTTGGCAAAATCCTGTATATCGTGCGAAAAAGGATGGATATA CCGAAAAAATCGCTATAATGACCCCGAAGCAGGGTTATGCAGCGGAAAGTATACCTTAACATGTTCTTTCCTGCGTTATCCCCTGATTCT GTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCG GAAGAGCGCCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGCACGACAGGTTTCCCGACTGGAAAGCG GGCAGTGAGCGCAACGCAATTAATGTGAGTTAGCTCACTCATTAGGCACCCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGT GGAATTGTGAGCGGATAACAATTTCACACAGGAAACAGCTATGACCATGATTACGAATTCGGCTTGCGGCCGCTTCTAGAGGGCGCGCCT TTACAGCTAGCTCAGTCCTAGGTATTATGCTAGCCAGTTAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACA GCCTCTACAAATAATTTTGTTTAATTCACACAGGAAAGTACTAGATGCCGATTGCACCGGAATTTCTGAGCCTGGCATATCCGGGTCAAGA ATTTCCGGCATATCTGTATGGTCGTGCAAGCCGTGATCCGAAACGTAAAGGTCGTAGCGTTCAGAGCCAGCTGGATGAAGGTCGTGCCAC CTGTCTGGATGCAGGTTGGCCGATTGCCGGTGAATTTAAAGATGTTGATCGTAGCGCAAGCGCATATGCACGTCGTACCCGTGATGAATT TGAAGAAATGATTGCAGGTATTCAGGCAGGCGAATGTCGTATTCTGGTTGCATTTGAAGCAAGCCGTTATTATCGTGATCTGGAAGCATA TGTTCGTCTGCGTCGTGTTTGTCGTGAAGCCGGTGTTCTGCTGTGTTATAATGGTCAGGTTTATGATCTGAGCAAAAGCGCAGATCGTAA AGCAACCGCACAGGATGCAGTTAATGCCGAAGGTGAAGCAGATGATATTCGTGAACGTAATCTGCGTACCACCCGTCTGAATGCAAAACG TGGTGGTGCACATGGTCCGGTTCCGGATGGTTATAAACGTCGTTATGATCCGGATAGCGGTGATCTGGTTGATCAGATTCCGCATCCTGA TCGTGCAGGTCTGATTACCGAAATTTTTCGTCGTGCAGCAGCAGCCGAACCGCTGGCAGCAATTTGCCGTGATCTGAATGAACGTGGTGA AACCACCCATCGTGGTAAAGCATGGCAGCGTCATCATCTGCATGCAATTCTGCGTAATCCTGCATATATTGGTCATCGTCGTCATCTGGG TGTTGATACCGGTAAAGGTATGTGGGCACCGATTTGTGATGATGAAGATTTTGCAGAAACCTTTCAGGCCGTTCAAGAAATTCTGAGTCT GCCTGGTCGTCAGCTGAGTCCGGGTCCGGAAGCACAGCATCTGCAGACCGGTATTGCACTGTGTGGTGAACATCCTGATGAACCGCCTCT GCGTAGCGTTACCGTTCGTGGTCGTACCAATTATAACTGTAGCACCCGTTATGATGTTGCCATGCGTGAAGATCGTATGGATGCATTTGT TGAAGAAAGCGTGATTACCTGGCTGGCAAGTGATGAAGCAGTTGCAGCCTTTGAAGATAACACCGATGATGAACGTACCCGTAAAGCACG TATTCGTCTGAAAGTTCTGGAAGAACAGCTGGAAGCAGCACAGAAACAGGCACGTACCCTGCGTCCGGATGGCATGGGTATGCTGCTGAG CATTGATAGCCTGGCAGGTCTGGAAGCCGAACTGACACCGCAGATTGATAAAGCCCGTCAAGAAAGCCGTAGCCTGCATGTTCCGGCACT GCTGCGTGATCTGCTGGGTAAACCGCGTGCAGATGTGGATCGTGCATGGAATGAAGCACTGACCCTGCCGCAGCGTCGCATGATTCTGCG CATGGTTGTTACCATTCGTCTGTTTAAAGCAGGTAGCCGTGGTGTTCGTGCAATTGAACCGGGTCGTATTACCCTGAGCTATGTTGGCGA ACCGGGTTTTAAACCGGTTGGTGGTAATCGTGCAAAACAGTAATCACACAGGAAAGTACTAGATGCCTGGTATGACCACCGAAACCGGTC CGGATCCTGCAGGTCTGATTGACCTGTTTTGTCGTAAAAGCAAAGCAGTTAAAAGCCGTGCAAATGGTGCAGGTCAGCGTCGTAAACAAG AAATTAGCATTGCAGCACAAGAAACCCTGGGTCGTAAAGTTGCAGCACTGCTGGGTATGCAGGTTCGTCATGTTTGGAAAGAAGTTGGTA GCGCAAGCCGTTTTCGTAAAGGTAAAGCACGTGATGATCAGAGCAAAGCACTGAAAGCCCTGGAAAGCGGTGAAGTTGGTGCACTGTGGT GTTATCGTCTGGATCGTTGGGATCGTGGTGGTGCCGGTGCAATTCTGAAAATTATCGAACCGGAAGATGGTATGCCTCGTCGTCTGCTGT TTGGTTGGGATGAAGATACCGGTCGTCCGGTTCTGGATAGCACCAATAAACGTGATCGCGGTGAACTGATTCGTCGTGCAGAAGAAGCAC GCGAAGAAGCAGAAAAACTGAGCGAACGTGTTCGTGATACCAAAGCACATCAGCGTGAAAATGGTGAATGGGTTAATGCCCGTGCACCGT ATGGTCTGCGTGTTGTTCTGGTTACCGTTAGTGATGAAGAGGGTGATGAATATGATGAACGTAAACTGGCAGCAGATGATGAAGATGCGG

		GTGGTCCTGATGGTCTGACCAAAGCAGAAGCAGCCCGTCTGGTTTTTACCCTGCCGGTTACCGATCGTCTGAGCTATGCAGGCACCGCAC ATGCAATGAATACCCGTGAAATTCCGAGCCCGACCGGTGGTCCGTGGATTGCAGTTACCGTGCGTGATATGATTCAGAATCCGGCATATG CGGGTTGGCAGACCACAGGTCGTCAGGATGGTAAACAGCGTCGTCTGACCTTTTATAACGGTGAAGGTAAACGTGTTAGCGTTATGCATG GTCCTCCGCTGGTGACCGATGAAGAACAAGAAGCCGCAAAAGCAGCCGTTAAAGGTGAAGATGGTGTTGGTGTTCCGCTGGATGGTAGCG ATCATGATACCCGTCGCAAACATCTGCTGAGCGGTCGTATGCGTTGTCCGGGTTGTGGTGGTAGCTGTAGCTATAGCGGTAATGGTTATC GTTGTTGGCGTAGCAGTGTGAAAGGTGGTTGTCCGGCACCGACCTATGTTGCACGTAAAAGCGTTGAAGAATATGTTGCATTTCGTTGGG CAGCAAAATTAGCAGCAAGCGAACCGGATGATCCGTTTGTTATTGCAGTTGCAGATCGCTGGGCAGCACTGACCCATCCGCAGGCAAGCG AAGATGAAAAGTATGCAAAAGCCGCAGTTCGTGAAGCCGAAAAAAATCTGGGTCGCCTGCTGCGTGATCGTCAGAATGGTGTTTATGATG GTCCGGCAGAACAGTTTTTTGCCCCTGCATATCAAGAAGCACTGAGCACCCTGCAGGCAGCCAAAGATGCAGTTAGCGAAAGCAGCGCAA GCGCAGCAGTTGATGTTAGCTGGATTGTTGATAGCAGCGATTATGAAGAACTGTGGCTGCGTGCAACCCCGACCATGCGTAATGCAATTA TTGATACCTGCATCGATGAAATTTGGGTTGCAAAAGGCCAGCGTGGTCGTCCGTTTGATGGTGATGAACGCGTTAAAATCAAATGGCAG CCCGTACCTAATCACACAGGAAAGTACTAGATGAAAGTGGCCATTTATGTTCGTGTTAGCACCGATGAACAGGCCAAAGAAGGTTTTAGC ATTCCGGCACAGCGTGAACGTCTGCGTGCATTTTGTGCAAGCCAGGGTTGGGAAATTGTGCAAGAATATATTGAAGAAGGTTGGAGCGCA AAAGATCTGGATCGTCCGCAGATGCAGCGTCTGCTGAAAGATATCAAAAAAGGCAACATTGATATTGTGCTGGTGTATCGTCTGGATCGC CTGACCCGTAGCGTTCTGGATCTGTATCTGCTGCTGCAGACCTTTGAAAAATACAATGTGGCATTTCGTAGCGCCACCGAAGTTTATGAT ACCAGCACCGCAATGGGTCGTCTGTTTATTACCCTGGTTGCAGCACTGGCACAGTGGGAACGTGAAAATCTGGCAGAACGTGTTAAATTT GGTATCGAGCAGATGATCGATGAAGGTAAAAAACCGGGTGGTCATAGCCCGTATGGTTACAAATTTGATAAAGACTTCAATTGCACCATT ATTGAGGAAGAAGCAGACGTTGTTCGTATGATCTATCGCATGTATTGTGATGGTTATGGCTATCGTAGCATTGCAGATCGTCTGAATGAA CTGATGGTTAAACCGCGTATTGCCAAAGAATGGAATCATAATAGCGTGCGTGATATCCTGACCAACGATATCTATATTGGCACCTATCGT TGGGGTGATAAAGTTGTTCCGAATAATCATCCGCCTATTATTAGCGAAACCCTGTTCAAAAAAGCCCAGAAAGAAAAAGAAAAACGTGGC GTTGATCGTAAACGCGTTGGTAAATTTCTGTTTACCGGTCTGCTGCAGTGTGGTAATTGTGGTGGCCATAAAATGCAGGGCCATTTTGAT AAACGTGAGCAGAAAACCTATTACCGTTGTACCAAATGTCACCGCATTACCAACGAAAAAAACATTCTGGAACCGCTGCTGGATGAAATT CAGCTGCTGATTACCAGCAAAGAATACTTTATGAGCAAATTCAGCGACCGCTATGATCAGCAAGAGGTTGTTGATGTTAGCGCACTGACA AAAGAACTGGAAAAAATCAAACGCCAGAAAGAGAAATGGTACGATCTGTATATGGATGATCGTAACCCGATTCCGAAAGAAGAACTGTTT GCCAAAATTAACGAACTGAACAAAAAAGAAGAAGAAATCTATAGCAAGCTGAGCGAAGTGGAAGAAGATAAAGAACCGGTTGAAGAGAAA TATAACCGCCTGAGCAAAATGATCGATTTTAAACAGCAGTTTGAGCAGGCCAACGACTTTACCAAAAAAGAGCTGCTGTTCAGCATCTTC GAAAAGATTGTGATTTATCGCGAGAAAGGCAAGCTGAAAAAAATCACCCTGGATTACACCCTGAAATAATCCGGCAATTAAAAAAGCGGC TAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCG TGGTTAGGCTAGCTACATTTAATGACAATGTGCAGGTTGTACATATTGGTCATTTATTCCGTAACTCGGGTCATAAGGAGTGGCGTATTT TTGTTTGGTTTAATCCAATGCAAGAACGGAAATGGACTCGATTTACTCATTTGCCTTTATTAAGTCGAGCTAAGGTGGTTAACAGTACAA CAAAGCAAATAAATAAGGCGGATCGTGTGATTGAGTTTGAAGCATCGGATCTTCAACGAGCCAAAATAATCGGGGGATCCTCTAGAGTCG ACCTGCAGGCATGCAAGCTTGGCACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCA GCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGG CGCCTGATGCGGTATTTTCTCCTTACGCATCTGTGCGGTATTTCACACCGCATATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCA TAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTG ACCGTCTCCGGGAGCTGCATGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGA
pGR-DT5	Terminator strength assay	TACTTTTCATACTCCCGCCATTCAGAGAAGAAACCAATTGTCCATATTGCATCAGACATTGCCGTCACTGCGTCTTTTACTGGCTCTTCT CGCTAACCAAACCGGTAACCCCGCTTATTAAAAGCATTCTGTAACAAAGCGGGACCAAAGCCATGACAAAAACGCGTAACAAAAGTGTCT ATAATCACGGCAGAAAAGTCCACATTGATTATTTGCACGGCGTCACACTTTGCTATGCCATAGCATTTTTATCCATAAGATTAGCGGATC CTACCTGACGCTTTTTATCGCAACTCTCTACTGTTTCTCCATACCCGTTTTTTTGGGCTAGCTACTAGAGAAAGAGGAGAAATACTAGAT GCGTAAAGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGATGGTGATGTTAATGGGCACAAATTTTCTGTCAGTGG AGAGGGTGAAGGTGATGCAACATACGGAAAACTTACCCTTAAATTTATTTGCACTACTGGAAAACTACCTGTTCCATGGCCAACACTTGT CACTACTTTCGGTTATGGTGTTCAATGCTTTGCGAGATACCCAGATCATATGAAACAGCATGACTTTTTCAAGAGTGCCATGCCCGAAGG TTATGTACAGGAAAGAACTATATTTTTCAAAGATGACGGGAACTACAAGACACGTGCTGAAGTCAAGTTTGAAGGTGATACCCTTGTTAA TAGAATCGAGTTAAAAGGTATTGATTTTAAAGAAGATGGAAACATTCTTGGACACAAATTGGAATACAACTATAACTCACACAATGTATA CATCATGGCAGACAAACAAAAGAATGGAATCAAAGTTAACTTCAAAATTAGACACAACATTGAAGATGGAAGCGTTCAACTAGCAGACCA TTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCCTTTTACCAGACAACCATTACCTGTCCACACAATCTGCCCTTTCGAAAGATCC CAACGAAAAGAGAGACCACATGGTCCTTCTTGAGTTTGTAACAGCTGCTGGGATTACACATGGCATGGATGAACTATACAAATAATAAGA ATTCTCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGAAAG GGGGGCCTTTTTTCGTTTTGGTCCACTAGTAGCGGCCGCTGCAGAAAGAGGAGAAATACTAGATGGCTTCCTCCGAAGACGTTATCAAAG AGTTCATGCGTTTCAAAGTTCGTATGGAAGGTTCCGTTAACGGTCACGAGTTCGAAATCGAAGGTGAAGGTGAAGGTCGTCCGTACGAAG GTACCCAGACCGCTAAACTGAAAGTTACCAAAGGTGGTCCGCTGCCGTTCGCTTGGGACATCCTGTCCCCGCAGTTCCAGTACGGTTCCA AAGCTTACGTTAAACACCCGGCTGACATCCCGGACTACCTGAAACTGTCCTTCCCGGAAGGTTTCAAATGGGAACGTGTTATGAACTTCG AAGACGGTGGTGTTGTTACCGTTACCCAGGACTCCTCCCTGCAAGACGGTGAGTTCATCTACAAAGTTAAACTGCGTGGTACCAACTTCC CGTCCGACGGTCCGGTTATGCAGAAAAAAACCATGGGTTGGGAAGCTTCCACCGAACGTATGTACCCGGAAGACGGTGCTCTGAAAGGTG AAATCAAAATGCGTCTGAAACTGAAAGACGGTGGTCACTACGACGCTGAAGTTAAAACCACCTACATGGCTAAAAAACCGGTTCAGCTGC CGGGTGCTTACAAAACCGACATCAAACTGGACATCACCTCCCACAACGAAGACTACACCATCGTTGAACAGTACGAACGTGCTGAAGGTC GTCACTCCACCGGTGCTTAATAACGCTGATAGTGCTAGTGTAGATCGCTACTAGAGCCAGGCATCAAATAAAACGAAAGGCTCAGTCGAA AGACTGGGCCTTTCGTTTTATCTGTTGTTTGTCGGTGAACGCTCTCTACTAGAGTCACACTGGCTCACCTTCGGGTGGGCCTTTCTGCGT TTATATACTAGAGTCAATTGAGGTAGAGGTACACACGCGAACTCCGATAGCCAATTCAGAGTAATAAACTGTGATAATCAATGCAGTGCT TCCTCGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAA TCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCAT AGGCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTT CCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCG CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCC GACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG ATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATC TGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTT GTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAA AACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTTTAAATCAATC TAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTCGTTCATCC ATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCA CGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATC CAGTCTATTAATTGTTGCCGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTG GTGTCACGCTCGTCGTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTTGTGCAAAAAA GCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACTGCATAATTCT CTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGT TGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGA AAACTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTTCAGCATCTTTTACTTTCACC AGCGTTTCTGGGTGAGCAAAAACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACTCATACTCTTC CTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGG GTTCCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGGCGTATCACG AGGCAGAATTTCAGATAAAAAAAATCCTTAGCTTTCGCTAAGGATGATTTCTGGAATTGAATTGAGGTAGAGGTACACACGCGAACTCCG ATAGCCAATTCAGAGTAATAAACTGTGATAATCAATGCATGTACTAGAGTTATGACAACTTGACGGCTACATCATTCACTTTTTCTTCAC AACCGGCACGGAACTCGCTCGGGCTGGCCCCGGTGCATTTTTTAAATACCCGCGAGAAATAGAGTTGATCGTCAAAACCAACATTGCGAC CGACGGTGGCGATAGGCATCCGGGTGGTGCTCAAAAGCAGCTTCGCCTGGCTGATACGTTGGTCCTCGCGCCAGCTTAAGACGCTAATCC CTAACTGCTGGCGGAAAAGATGTGACAGACGCGACGGCGACAAGCAAACATGCTGTGCGACGCTGGCGATATCAAAATTGCTGTCTGCCA GGTGATCGCTGATGTACTGACAAGCCTCGCGTACCCGATTATCCATCGGTGGATGGAGCGACTCGTTAATCGCTTCCATGCGCCGCAGTA ACAATTGCTCAAGCAGATTTATCGCCAGCAGCTCCGAATAGCGCCCTTCCCCTTGCCCGGCGTTAATGATTTGCCCAAACAGGTCGCTGA AATGCGGCTGGTGCGCTTCATCCGGGCGAAAGAACCCCGTATTGGCAAATATTGACGGCCAGTTAAGCCATTCATGCCAGTAGGCGCGCG GACGAAAGTAAACCCACTGGTGATACCATTCGCGAGCCTCCGGATGACGACCGTAGTGATGAATCTCTCCTGGCGGGAACAGCAAAATAT CACCCGGTCGGCAAACAAATTCTCGTCCCTGATTTTTCACCACCCCCTGACCGCGAATGGTGAGATTGAGAATATAACCTTTCATTCCCA GCGGTCGGTCGATAAAAAAATCGAGATAACCGTTGGCCTCAATCGGCGTTAAACCCGCCACCAGATGGGCATTAAACGAGTATCCCGGCA GCAGGGGATCATTTTGCGCTTCAGCCA

pYJP017	Transposon Insertion of *mCherry* probe	GCGAGGCTGGCCGTAGGCCGGCCGATCTGAAGATCAGCAGTTCAACCTGTTGATAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGC TCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTC TCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATA AGAAAAAAAAGAATATATAAGGCTTTTAAAGCCTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCT TAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGGCGCGCCCAGCTGTCTAGGGCGGCGGATTTGTCC TACTCAGCAGATAAAAAAAATCCTTAGCTTTCGCTAAGGATGATTTCTGGAATTCGCGGCCGCTTCTAGAGGGCGCGCCTTTACAGCTAG CTCAGTCCTAGGTATTATGCTAGCCAGTTAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAA ATAATTTTGTTTAATCACACAGGAAAGTACTAGATGAGCAAAGGAGAAGAACTTTTCACTGGAGTTGTCCCAATTCTTGTTGAATTAGAT GGTGATGTTAATGGGCACAAATTTTCTGTCCGTGGAGAGGGTGAAGGTGATGCTACAAACGGAAAACTCACCCTTAAATTTATTTGCACT ACTGGAAAACTACCTGTTCCGTGGCCAACACTTGTCACTACTCTGACCTATGGTGTTCAATGCTTTTCCCGTTATCCGGATCACATGAAA CGGCATGACTTTTTCAAGAGTGCCATGCCCGAAGGTTATGTACAGGAACGCACTATATCTTTCAAAGATGACGGGACCTACAAGACGCGT GCTGAAGTCAAGTTTGAAGGTGATACCCTTGTTAATCGTATCGAGTTAAAGGGTATTGATTTTAAAGAAGATGGAAACATTCTTGGACAC AAACTCGAGTACAACTTTAACTCACACAATGTATACATCACGGCAGACAAACAAAAGAATGGAATCAAAGCTAACTTCAAAATTCGCCAC AACGTTGAAGATGGTTCCGTTCAACTAGCAGACCATTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCCTTTTACCAGACAACCAT TACCTGTCGACACAATCTGTCCTTTCGAAAGATCCCAACGAAAAGCGTGACCACATGGTCCTTCTTGAGTTTGTAACTGCTGCTGGGATT ACACATGGCATGGATGAGCTCTACAAATAATTCAGCCAAAAAACTTAAGACCGCCGGTCTTGTCCACTACCTTGCAGTAATGCGGTGGAC AGGATCGGCGGTTTTCTTTTCTCTTCTCAATACAAATGAAGTACATAGAAATTACTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGAA AGGGGGGCCTTTTTTCGTTTTGGTCCTCATAGGCAATACGATCGCATGTCCGAGAGCGTTCACCGACAAACAACAGATAAAACGAAAGGC CCAGTCTTTCGACTGAGCCTTTCGTTTTATTTGATGCCTTTAATTAACTGTCTCTTATACACATCTTTGTGTCTCAGGCCGCCTAGGCCG CGGCCGCGCGAATTCGAGCTCGGTACCCGGGGATCCTCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCATCCTT GGCCCTCCATCCTTAGATAGCTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCTCATAGGCA ATACGATCGCATGTCCTTGACAATTAATCATCCGGCTCGTAACTTATGTGGACTCGGAGCGCTCAACGGGTGTGCTTCCCGTTCTGATGA GTCCGTGAGGACGAAAGCGCCTCTACAAATAATTTTGTTTAAAAATTTAATGATGAGTACAAAGAAGTACTAAGGAAGGAAAATACCCAA TGGTTTCTAAGGGCGAAGAAGATAATATGGCCATTATCAAGGAGTTTATGCGCTTTAAAGTGCACATGGAGGGCTCAGTAAACGGTCACG AATTTGAAATCGAAGGAGAAGGCGAGGGCCGTCCGTACGAGGGGACTCAGACGGCGAAGCTCAAAGTCACAAAAGGTGGCCCATTGCCAT TCGCCTGGGATATTCTGTCGCCGCAGTTCATGTATGGCAGCAAAGCGTACGTAAAACACCCGGCAGATATTCCGGATTATCTGAAATTAT CTTTCCCGGAAGGTTTCAAATGGGAACGCGTTATGAATTTCGAGGACGGGGGCGTAGTGACGGTCACGCAGGATAGTAGCCTGCAGGACG GCGAATTCATTTACAAAGTCAAGCTGCGTGGCACAAATCTTCCGTCTGATGGCCCGGTGATGCAGAAGAAAACCATGGGTTGGGAGGCTT CCAGCGAACGCATGTATCCCGAAGATGGAGCATTGAAAGGCGAAATCAAACAGCGCCTGAAATTAAAAGACGGCGGACATTACGACGCCG AGGTCAAGACCACTTACAAAGCGAAAAAACCAGTTCAGCTGCCAGGCGCCTACAACGTTAATATCAAGCTGGATATTACCTCGCATAATG AAGATTATACTATCGTGGAACAATACGAGCGCGCCGAAGGCCGCCACTCCACTGGTGGTATGGATGAATTATATAAATAGGAAAACCTGT ACTTCCAGGGCCCGGCGAGCGTGCCGCAGGGCATTGATTATAAAGATGATGATGATAAGTAATAAACATTTAATAAAAAAAGGGCGGTCG CAAGATCGCCCTTTTTTTACGTATGACACCTCGTCTCAACCAAAGCAATCAACCAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATG GTTCCTTATCATCTGGCGAATCGGAAAGCTTGCGGCCGCCAAAGCCCGCCGAAAGGCGGGCTTTTCTGTATTTAAATGAACCTTGACCGA ACGCAGCGGTGGTAACGGCGCAGTGGCGGTTTTCATGGCTTGTTATGACTGTTTTTTTGGGGTACAGTCTATGCCTCGGGCATCCAAGCA GCAAGCGCGTTACGCCGTGGGTCGATGTTTGATGTTATGGAGCAGCAACGATGTTACGCAGCAGGGCAGTCGCCCTAAAACAAAGTTAAA CATCATGAGGGAAGCGGTGATCGCCGAAGTATCGACTCAACTATCAGAGGTAGTTGGCGTCATCGAGCGCCATCTCGAACCGACGTTGCT GGCCGTACATTTGTACGGCTCCGCAGTGGATGGCGGCCTGAAGCCACACAGTGATATTGATTTGCTGGTTACGGTGACCGTAAGGCTTGA TGAAACAACGCGGCGAGCTTTGATCAACGACCTTTTGGAAACTTCGGCTTCCCCTGGAGAGAGCGAGATTCTCCGCGCTGTAGAAGTCAC CATTGTTGTGCACGACGACATCATTCCGTGGCGTTATCCAGCTAAGCGCGAACTGCAATTTGGAGAATGGCAGCGCAATGACATTCTTGC AGGTATCTTCGAGCCAGCCACGATCGACATTGATCTGGCTATCTTGCTGACAAAAGCAAGAGAACATAGCGTTGCCTTGGTAGGTCCAGC GGCGGAGGAACTCTTTGATCCGGTTCCTGAACAGGATCTATTTGAGGCGCTAAATGAAACCTTAACGCTATGGAACTCGCCGCCCGACTG GGCTGGCGATGAGCGAAATGTAGTGCTTACGTTGTCCCGCATTTGGTACAGCGCAGTAACCGGCAAAATCGCGCCGAAGGATGTCGCTGC CGACTGGGCAATGGAGCGCCTGCCGGCCCAGTATCAGCCCGTCATACTTGAAGCTAGACAGGCTTATCTTGGACAAGAAGAAGATCGCTT GGCCTCGCGCGCAGATCAGTTGGAAGAATTTGTCCACTACGTGAAAGGCGAGATCACCAAGGTAGTCGGCAAATAAGACAATTGTCTAAT TAATTGCGGACCCTAGAGGTCCCCTTTTTTATTTTAAAAATTTTTTCACAAAACGGTTTACAAGCATAAAATCTCTGAAGATGTGTATAA GAGACAGACTAGTCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCG GGCGTTTTTTATTGGTGAGAATCCAGGGGTCCCCTGGTTTAAACTACACAAGTAGCGTCCTGAACGGAACCTTTCCCGTTTTCCAGAATC TGATGTTCCATGTGACCTCCTAACATGGTAACGTTCATGATTACCAGTGCACTGCATCGTGCGGCGGATTGGGCGAAAAGCGTGTTTTCT AGTGCTGCGCTGGGTGATCCGCGTCGTACCGCGCGTCTGGTGAATGTTGCGGCGCAACTGGCCAAATATAGCGGCAAAAGCATTACCATT AGCAGCGAAGGCAGCAAAGCCATGCAGGAAGGCGCGTATCGTTTTATTCGTAATCCGAACGTGAGCGCGGAAGCGATTCGTAAAGCGGGT GCCATGCAGACCGTGAAACTGGCCCAGGAATTTCCGGAACTGCTGGCAATTGAAGATACCACCTCTCTGAGCTATCGTCATCAGGTGGCG GAAGAACTGGGCAAACTGGGTAGCATTCAGGATAAAAGCCGTGGTTGGTGGGTGCATAGCGTGCTGCTGCTGGAAGCGACCACCTTTCGT ACCGTGGGCCTGCTGCATCAAGAATGGTGGATGCGTCCGGATGATCCGGCGGATGCGGATGAAAAAGAAAGCGGCAAATGGCTGGCCGCT GCTGCAACTTCGCGTCTGAGAATGGGCAGCATGATGAGCAACGTGATTGCGGTGTGCGATCGTGAAGCGGATATTCATGCGTATCTGCAA GATAAACTGGCCCATAACGAACGTTTTGTGGTGCGTAGCAAACATCCGCGTAAAGATGTGGAAAGCGGCCTGTATCTGTATGATCACCTG AAAAACCAGCCGGAACTGGGCGGCTATCAGATTAGCATTCCGCAGAAAGGCGTGGTGGATAAACGTGGCAAACGTAAAAACCGTCCGGCG CGTAAAGCGAGCCTGAGCCTGCGTAGCGGCCGTATTACCCTGAAACAGGGCAACATTACCCTGAACGCGGTGCTGGCCGAAGAAATTAAT CCGCCGAAAGGCGAAACCCCGCTGAAATGGCTGCTGCTGACCAGCGAGCCGGTGGAAAGTCTGGCCCAAGCGCTGCGTGTGATTGATATT TATACCCATCGTTGGCGCATTGAAGAATTTCACAAAGCGTGGAAAACGGGTGCGGGTGCGGAACGTCAGCGTATGGAAGAACCGGATAAC CTGGAACGTATGGTGAGCATTCTGAGCTTTGTGGCGGTGCGTCTGCTGCAACTGCGTGAATCTTTTACTCCGCCGCAAGCACTGCGTGCG CAGGGCCTGCTGAAAGAAGCGGAACACGTTGAAAGCCAGAGCGCGGAAACCGTGCTGACCCCGGATGAATGCCAACTGCTGGGCTATCTG GATAAAGGCAAACGCAAACGCAAAGAAAAAGCGGGCAGCCTGCAATGGGCGTATATGGCGATTGCGCGTCTGGGCGGCTTTATGGATAGC AAACGTACCGGCATTGCGAGCTGGGGTGCGCTGTGGGAAGGTTGGGAAGCGCTGCAAAGCAAACTGGATGGCTTTCTGGCCGCGAAAGAC CTGATGGCGCAGGGCATTAAAATCTAATCGGCGATCGCTAGTAGCCCGCCTAATGAGCGGGCTTTTTTTTAATTCCCCTATTTGTTTATT TTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCAT TCAGCATTTCGTGTGGCGCTGATTCCGTTTTTTGCGGCGTTTTGCCTGCCGGTGTTTGCGCATCCGGAAACCCTGGTGAAAGTGAAAGA TGCGGAAGATCAACTGGGTGCGCGCGTGGGCTATATTGAACTGGATCTGAACAGCGGCAAAATTCTGGAATCTTTTCGTCCGGAAGAACG TTTTCCGATGATGAGCACCTTTAAAGTGCTGCTGTGCGGTGCGGTTCTGAGCCGTGTGGATGCGGGCCAGGAACAACTGGGCCGTCGTAT TCATTATAGCCAGAACGATCTGGTGGAATATAGCCCGGTGACCGAAAAACATCTGACCGATGGCATGACCGTGCGTGAACTGTGCAGCGC GGCGATTACCATGAGCGATAACACCGCGGCGAACCTGCTGCTGACGACCATTGGCGGTCCGAAAGAACTGACCGCGTTTCTGCATAACAT GGGCGATCATGTGACCCGTCTGGATCGTTGGGAACCGGAACTGAACGAAGCGATTCCGAACGATGAACGTGATACCACCATGCCGGCAGC AATGGCGACCACCCTGCGTAAACTGCTGACGGGTGAGCTGCTGACCCTGGCAAGCCGCCAGCAACTGATTGATTGGATGGAAGCGGATAA AGTGGCGGGTCCGCTGCTGCGTAGCGCGCTGCCGGCTGGCTGGTTTATTGCGGATAAAAGCGGTGCGGGCGAACGTGGCAGCCGTGGCAT TATTGCGGCGCTGGGCCCGGATGGTAAACCGAGCCGTATTGTGGTGATTTATACCACCGGCAGCCAGGCGACGATGGATGAACGTAACCG TCAGATTGCGGAAATTGGCGCGAGCCTGATTAAACATTGGTAAACCGATACAATTAAAGGCTCCTTTTGGAGCCTTTTTTTTTGGACACG CGTTTGTCCTTTTCCGCTGCATAACCCTGCTTCGGGGTCATTATAGCGATTTTTTCGGTATATCCATCCTTTTTCGCACGATATACAGGA TTTTGCCAAAGGGTTCGTGTAGACTTTCCTTGGTGTATCCAACGGCGTCAGCCGGGCAGGATAGGTGAAGTAGGCCCACCCGCGAGCGGG TGTTCCTTCTTCACTGTCCCTTATTCGCACCTGGCGGTGCTCAACGGGAATCCTGCTCT
pYJP018	Used as p15a-*kanR* control (in figure 5)	TAGCGGAGTGTATACTGGCTTACTATGTTGGCACTGATGAGGGTGTCAGTGAAGTGCTTCATGTGGCAGGAGAAAAAAGGCTGCACCGGT GCGTCAGCAGAATATGTGATACAGGATATATTCCGCTTCCTCGCTCACTGACTCGCTACGCTCGGTCGTTCGACTGCGGCGAGCGGAAAT GGCTTACGAACGGGGCGGAGATTTCCTGGAAGATGCCAGGAAGATACTTAACAGGGAAGTGAGAGGGCCGCGGCAAAGCCGTTTTTCCAT AGGCTCCGCCCCCCTGACAAGCATCACGAAATCTGACGCTCAAATCAGTGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTT CCCCTGGCGGCTCCCTCGTGCGCTCTCCTGTTCCTGCCTTTCGGTTTACCGGTGTCATTCCGCTGTTATGGCCGCGTTTGTCTCATTCCA CGCCTGACACTCAGTTCCGGGTAGGCAGTTCGCTCCAAGCTGGACTGTATGCACGAACCCCCCGTTCAGTCCGACCGCTGCGCCTTATCC GGTAACTATCGTCTTGAGTCCAACCCGGAAAGACATGCAAAAGCACCACTGGCAGCAGCCACTGGTAATTGATTTAGAGGAGTTAGTCTT GAAGTCATGCGCCGGTTAAGGCTAAACTGAAAGGACAAGTTTTGGTGACTGCGCTCCTCCAAGCCAGTTACCTCGGTTCAAAGAGTTGGT AGCTCAGAGAACCTTCGAAAAACCGCCCTGCAAGGCGGTTTTTTCGTTTTCAGAGCAAGAGATTACGCGCAGACCAAAACGATCTCAAGA AGATCATCTTATTAAGGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCAC CTAGATCCTTTTAAATTAAAAATGAAGTTTTAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAG TGAGGCACCTATCTCAGCGATCTGTCTATTTCGTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTT ACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGCTC GAGTCCCGTCAAGTCAGCGTAATGCTCTGCCAGTGTTACAACCAATTAACCAATTCTGATTAGAAAAACTCATCGAGCATCAAATGAAAC TGCAATTTATTCATATCAGGATTATCAATACCATATTTTTGAAAAAGCCGTTTCTGTAATGAAGGAGAAAACTCACCGAGGCAGTTCCAT AGGATGGCAAGATCCTGGTATCGGTCTGCGATTCCGACTCGTCCAACATCAATACAACCTATTAATTTCCCCTCGTCAAAAATAAGGTTA

		TCAAGTGAGAAATCACCATGAGTGACGACTGAATCCGGTGAGAATGGCAAAAGCTTATGCATTTCTTTCCAGACTTGTTCAACAGGCCAG CCATTACGCTCGTCATCAAAATCACTCGCATCAACCAAACCGTTATTCATTCGTGATTGCGCCTGAGCGAGACGAAATACGCGATCGCTG TTAAAAGGACAATTACAAACAGGAATCGAATGCAACCGGCGCAGGAACACTGCCAGCGCATCAACAATATTTTCACCTGAATCAGGATAT TCTTCTAATACCTGGAATGCTGTTTTCCCGGGGATCGCAGTGGTGAGTAACCATGCATCATCAGGAGTACGGATAAAATGCTTGATGGTC GGAAGAGGCATAAATTCCGTCAGCCAGTTTAGTCTGACCATCTCATCTGTAACATCATTGGCAACGCTACCTTTGCCATGTTTCAGAAAC AACTCTGGCGCATCGGGCTTCCCATACAATCGATAGATTGTCGCACCTGATTGCCCGACATTATCGCGAGCCCATTTATACCCATATAAA TCAGCATCCATGTTGGAATTTAATCGCGGCCTCGAGCAAGACGTTTCCCGTTGAATATGGCTCATAACACCCCTTGTATTACTGTTTATG TAAGCAGACAGTTTTATTGTTCATGATGATATATTTTTATCTTGTGCAATGTAACATCAGAGATTTTGAGACACAACGTGGCTTTGTTGA ATAAATCGAACTTTTGCTGAGTTGAAGGATCAGATCACGCATCTTCCCGACAACGCAGACCGTTCCGTGGCAAAGCAAAAGTTCAAAATC ACCAACTGGTCCACCTACAACAAAGCTCTCATCAACCGTGGCTCCCTCACTTTCTGGCTGGATGATGGGGCGATTCAGGCCTGGTATGAG TCAGCAACACCTTCTTCACGAGGCAGACCTCAGCGC

a. *Annotation colors. Blue: Promoters; Purple: Ribozymes; Green: Repressors, YFP and Sensor ORFs; Red: Terminators; Orange: FRT sites and att sites; yellow highlight: RBSs; Gray highlight: antibiotic resistance gene and origin of rep; Green highlight: Transposase (Tn5, Tn7) recognition sites*

Appendix Table 7: Sequence of genome integrated constructs used In this study

Strain name	Sequence[a]
YJP_DHC404	CCCGCTGTGGGCGGACAAAATAGTTGGGAACTGGGAGGGGTGGAAATGGAGTTTTTAAGGATTATTTAGGGAAGAGTGACAAAATAGATGGGAACTGGGTGTAGC GTCGTAAGCTAATACGAAAATTAAAAATGACAAAATAGTTTGGAACTAGATTTCACTTATCTGGTTGGCCTGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAG CTGGCGAAAGGGGGATGTGCTGCAAGGATCTCGCCAAGCTAGCTTGGCATTCGATGGTGTCAACGTAAATGCAGAAGTTCCTATACTTTCTAGAGAATAGGAACT TCGGAATAGGAACTTCTTGACAGCTTATCATCGATAAACTGTAATGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGGCACCGTGTATGAAATCTAACA ATGCGCTCATCGTCATCCTCGGCACCGTCACCCTGGATGCTGTAGGCATAGGCTTGGTTATGCCGGTACTGCCGGGCCTCTTGCGGGATATCGTCCATTCCGACA GCATCGCCAGTCACTATGGCGTGCTGCTAGCGCTATATGCGTTGATGCAATTTCTATGCGCACCCGTTCTCGGAGCACTGTCCGACCGCTTTGGCCGCCGCCCAG TCCTGCTCGCTTCGCTACTTGGAGCCACTATCGACTACGCGATCATGGCGACCACACCCGTCCTGTGGATTCTCTACGCCGGACGCATCGTGGCCGGCATCACCG GCGCCACAGGTGCGGTTGCTGGCGCCTATATCGCCGACATCACCGATGGGGAAGATCGGGCTCGCCACTTCGGGCTCATGAGCGCTTGTTTCGGCGTGGGTATGG TGGCAGGCCCCGTGGCCGGGGGACTGTTGGGCGCCATCTCCTTGCACGCACCATTCCTTGCGGCGGCGGTGCTCAACGGCCTCAACCTACTACTGGGCTGCTTCC TAATGCAGGAGTCGCATAAGGGAGAGCGCCGTCCGATGCCCTTGAGAGCCTTCAACCCAGTCAGCTCCTTCCGGTGGGCGCGGGGCATGACCATTGTCGCCGCAC TTATGACTGTCTTCTTTATCATGCAACTCGTAGGACAGGTGCCGGCAGCGCTCTGGGTCATTTTCGGCGAGGACCGCTTTCGCTGGAGCGCGACGATGATCGGCC TGTCGCTTGCGGTATTCGGAATCTTGCACGCCCTCGCTCAAGCCTTCGTCACTGGTCCCGCCACCAAACGTTTCGGCGAGAAGCAGGCCATTATCGCCGGCATGG CGGCCGACGCGCTGGGCTACGTCTTGCTGGCGTTCGCGACGCGAGGCTGGATGGCCTTCCCCATTATGATTCTTCTCGCTTCCGGCGGCATCGGGATGCCCGCGT TGCAGGCCATGCTGTCCAGGCAGGTAGATGACGACCATCAGGGACAGCTTCAAGGATCGCTCGCGGCTCTTACCAGCCTAACTTCGATCACTGGACCGCTGATCG TCACGGCGATTTATGCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGATTGTAGGCGCCGCCCTATACCTTGTCTGCCTCCCCGCGTTGCGTCGCGGTGCAT GGAGCCGGGCCACCTCGACCTGAGACAATTGTCCTTTTCCGCTGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGTACTTCCAAGCTCAGCTAAT TAAGCTAGCTTATCGATACCGTCGACCTCGAACCCCACGCCCCTCTTTAATACGACGGGCAATTTGCACTTCAGAAAATGAAGAGTTTGCTTTAGCCATAACAAA AGTCCAGTATGCTTTTTCACAGCATAACTGGACTGATTTCAGTTTACAACTATTCTGTCTAGTTTAAGACTTTATTGTCATAGTTTAGATCTATTTTGTTCAGTT TAAGACTTTATTGTCCGCCCACACCCGC
YJP_MKC174 (without antibiotic marker *tetA*)	CCCGCTGTGGGCGGACAAAATAGTTGGGAACTGGGAGGGGTGGAAATGGAGTTTTTAAGGATTATTTAGGGAAGAGTGACAAAATAGATGGGAACTGGGTGTAGC GTCGTAAGCTAATACGAAAATTAAAAATGACAAAATAGTTTGGAACTAGATTTCACTTATCTGGTTGGCCTGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAG CTGGCGAAAGGGGGATGTGCTGCAAGGATCTCGCCAAGCTAGCTTGGCATTCGATGGTGTCAACGTAAATGCAGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTT TCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGA AACCTCCGCAATGCGGAGGTTTCTTTTTAAAGAGCACCGACCGCAGCCACAGCGTGTAGCGCTCCCAGGAGAGTTATCGACTTGCGTATTAGGGAGCGTCATTAT TTACGCAGTGCCGGACTCAGACGCAGCATATCCAGACCGGTATCAACCCATTTTTCAACATCACCCAGCAGATCAACGCTATCCGGCAGCAGCAGCCAACGACGA ATCAGACCATCAACATAGGCAAACATTGCAACTGCGGCACGTTCTGCATCCAGTTCACCAGGCAGCTGACCACGACGAACTACATTTGCCAGTGTCAGGGTAATA CCTTTATGACAATCCAGAACTGCGCTCTGATGCTGCTGACGAATTTCACACATATCATCGGTGAACTCGCATTTGTGATGCAGGATTTCATTAATACGACGGGTA CGTGCATCCAGAACCAGTTCATTAAAAACCTGCAGCAGCAGTTTACGCATACAACCCAGCGGATCAACTTCATCTTCGCTTTCGCTTGCACGTGCCAGATGATCA TGGGTTTCATGCAGGCTATCCAGCAGTGCCTGAACCAGTTCGGCTTTGTTGTTAAAATGCCAATAAATTGCACCACGGGTAACGCCTGCCAGTTCTGCAATATCT GCCAGGGTGGTACGTGCAACACCACGTTTATAGAATGCACGTTCTGCTGCTTCAATAATCTGTGCACGGGTTTCTTGTGCCTCTTCTTTGGTACGACGAACCATG TTTTACCTACTTATCTAATTCGTAACTATTACCAATTACGTCGCGTCATGCGGATCCTATAGGGATTGATGATGCGCAATTGAACAGCCCGCGACGCGGCGGCCG AGATCGTGGTGCAGCCGAGCCTGAAGCGGGCGGTTTTCAGGTAATCGCGTGTGGTATGCTCTGATATGCCCAGGATGACCGAAATATCCTTGTAATCCTTGCCGA GGGCGGTCCAGTGCAGACACTCGATCTCGCGCGGCGACAATGCCGGCACCGGATCGTTTTCGCCATGCAGCTCATATACGGCCTTGCGGTGGATCAGATGGGCGA TCTCGATCCACTCATTGCGGCAGCGGCGCACGAGCTCGGTCCATTCGTCGGCCGGTATATGGGCATTCAGCGACAGCAGGGCGCGGCGCTGCGCCTTGTCGGCGA CGGGGATGGAGTAGCCATTGTCATCGATGCCGTGTTTCTGGGCGTCGACCAGCATGGCATAGGCCTCCGGCGTCGGTTCGACCTCGCTCCAGTCGAAGGGCAGCT GGCGTTCGAAGCCCTGCTTGATGATCGGATCGACCTTCACATAGCAGTTGAGGAGGTAACGGGAAACCCAGGCATCCGGATAGGTGGTGCGCACGAAGGGCGAAT CGATCTTGCTCGCGATTGTCTGGGCGAGATGGTAGGTGACGAAATCGAGGTTATATTCCGCCTGGAGAATACGGATGGCGGCATCCACGTTGGCCGCCGCTTTGA TCTGTTCGAACGCGGACTCGAACTTTTCGCTATAGGTATTCTCAATCATTCGCCGTTCTCCGTTGACGGGCGTCTCGGTCAATCTGCACGAATTGACCATGCTGC ACCCAGCGGTGCGCCTGCGCTTGCTGCTGCTTCAAAAACTTTTGCATTACGAATTGCTGCCAGTGCATGATCACGCATAATACGTTCTGCACCTTCGGCATCACC ACAGCTAACTGCATCCAGAACTGCCTGATGCTGACGATGTGCTGCCAGCAGATGTTCATATTCGGCAGACAGGTCCATCAGATCCAGGGCCAGTGCACCGGCTGC TGCAAACGGTTCAAAACCATTACGTGCCAGTGCGCTTTCAACTGCACCATTACCTGCTGCGCTAACCAGGGTATCATGAAATGCCTGATTATATGCGGCATAACG ATCCAGATCTTCACCATTCAGGCGACCGGCTGCAAACAGTGCTTCACCTTCTGCAATCAGTACAACAAAACGTGCATGGGTTTCTGCGGTCATACCACGTTCTGC CAGACGACGTGCTGCAAAACCTTCCAGAACACCACGAACTTCAATTGCATCACGAATCTGATCGCTGCTAACACCACGGGCTGCATAACCACGTGCACCCAGACG AACAACCAGACCTTCTTGTTCCAGTGAACGCAGTGCGATACGAACCGGCATACGGCTAACACCCAGTGCTGCTGCGGTCGGAATTTCTGCAATACGTTCACCACT TTTGATTTCACCGCTTGCAATCATTTTACGCAGTGCCATCATAACACGCTGACCCGGTTTAATACGAGGCATGTCCATGTCTATCCTCCTTATTTACGTTCGTTA GTTTTCAACGTTTGAATTTTGCATAACGTTCACGTGCAATTTCCAGGGTGCTATTACGCACACGTTCAAAACGTTCTTTATCTTTCTGCCACAGGCTACGAACTA CCAGACCACGAACGCTGTTAAAAATCAGCCACAGAATATCTTCGGCATCATCACGGCTCAGACCACGGCTCACCAGCACACCCAGCCACATATCTTCAACAACAA AACGATTACGTTCAACGGTACGCTGAATACCTTCACGCAGTGCCGGATCACGATCTGCTGCAACAATCAGATCCAGGCCGATGCTAAAATCATCATCCAGAAAAA ATTCTGCTGCATCATCCAGCATCTGCTGAATAACATCATCTTCCGGTTTCAGTTTTGCCAGACGTGCACGGCTCTTCGGTAATCTGCTCATACAGCCATTCAA AGGTTGCCAGCAGCAGTTCCAGTTTGGTCGGAAAATGATGGCTCTGTGCACCACGGCTAACACCGGCTGCACCCGGAACATCTGCAATACGAAAACCTGCATAAC CTTTTTCACGCAGAACACCCAGTGCTGCTGCAATCAGTTTACCCTGGGTTTCCATTGCACGTTCTGCCTGGGTACGACGTTTCGGGCTCATAAGAATCTCCGTTT GGTATTTACTATGAATATTCCATTGCTAGCATTATACCTAGGACTGAGCTAGCTGTCAATGGACAAACCTGTCTTGGTGCGATTCAGGCCAAAAAAAACCGGCGC AATGGCCGGTTTCCGTTGTTACAGTGAAAAGAAAAAAGGCCGCAGAGCGGCCTTTTTAGTTAGATCTTATTAGGACCCACTTTCACATTTAAGTTGTTTTTCTAA TCCGCATATGATCAATTCAAGGCCGAATAAGAAGGCTGGCTCTGCACCTTGGTGATCAAATAATTCGATAGCTTGTCGTAATAATGGCGGCATACTATCAGTAGT AGGTGTTTCCCTTTCTTCTTTAGCGACTTGATGCTCTTGATCTTCCAATACGCAACCTAAAGTAAAATGCCCCACAGCGCTGAGTGCATATAATGCATTCTCTAG TGAAAAACCTTGTTGGCATAAAAAGGCTAATTGATTTTCGAGAGTTTCATACTGTTTTTCTGTAGGCCGTGTACCTAAATGTACTTTTGCTCCATCGCGATGACT TAGTAAAGCACATCTAAAACTTTTAGCGTTATTACGTAAAAAATCTTGCCAGCTTTCCCCTTCTAAAGGGCAAAAGTGAGTATGGTGCCTATCTAACATCTCAAT GGCTAAGGCGTCGAGCAAAGCCCGCTTATTTTTTACATGCCAATACAATGTAGGCTGCTCTACACCTAGCTTCTGGGCGAGTTTACGGGTTGTTAAACCTTCGAT TCCGACCTCATTAAGCAGCTCTAATGCGCTGTTAATCACTTTACTTTTATCTAATCTGGACATCTAGTATTTCTCCTCTTTCTCTTCACTGCCCGCTTTCCAGTC GGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCGCCAGGGTGGTTTTTCTTTTCACCAGTGAGACTG GCAACAGCTGATTGCCCTTCACCGCCTGGCCCTGAGAGAGTTGCAGCAAGCGGTCCACGCTGGTTTGCCCCAGCAGGCGAAAATCCTGTTTGATGGTGGTTAACG GCGGGATATAACATGAGCTATCTTCGGTATCGTCGTATCCCACTACCGAGATATCCGCACCAACGCGCAGCCCGGACTCGGTAATGGCGCGCATTGCGCCCAGCG CCATCTGATCGTTGGCAACCAGCATCGCAGTGGGAACGATGCCCTCATTCAGCATTTGCATGGTTTGTTGAAAACCGGACATGGCACTCCAGTCGCCTTCCCGTT CCGCTATCGGCTGAATTTGATTGCGAGTGAGATATTTATGCCAGCCAGCCAGACGCAGACGCGCCGAGACAGAACTTAATGGGCCCGCTAACAGCGCGATTTGCT GGTGACCCAATGCGACCAGATGCTCCACGCCCAGTCGCGTACCGTCCTCATGGGAGAAAATAATACTGTTGATGGGTGTCTGGTCAGAGACATCAAGAAATAACG CCGGAACATTAGTGCAGGCAGCTTCCACAGCAATGGCATCCTGGTCATCCAGCGGATAGTTAATGATCAGCCCACTGACGCGTTGCGCGAGAAGATTGTGCACCG CCGCTTTACAGGCTTCGACGCCGCTTCGTTCTACCATCGACACCACCACGCTGGCACCCAGTTGATCGGCGCGAGATTTAATCGCCGCGACAATTTGCGACGGCG CGTGCAGGGCCAGACTGGAGGTGGCAACGCCAATCAGCAACGACTGTTTGCCCGCCAGTTGTTGTGCCACGCGGTTGGGAATGTAATTCAGCTCCGCCATCGCCG CTTCCACTTTTTCCCGCGTTTTCGCAGAAACGTGGCTGGCCTGGTTCACCACGCGGGAAACGGTCTGATAAGAGACACCGGCATACTCTGCGACATCGTATAACG TTACTGGTTTCATATTCACCACCCTGAATTGACTCTCTTCCTTAACCGGCACGGAACTCGCTCGGGCTGGCCCCGGTGCATTTTTTAAATACCCGCGAGAAATAG AGTTGATCGTCAAAACCAACATTGCGACCGACGGTGGCGATAGGCATCCGGGTGGTGCTCAAAAGCAGCTTCGCCTGGCTGATACGTTGGTCCTCGCGCCAGCTT AAGACGCTAATCCCTAACTGCTGGCGGAAAAGATGTGACAGACGCGACGGCGACAAGCAAACATGCTGTGCGACGCTGGCGATATCAAAATTGCTGTCTGCCAGG TGATCGCTGATGTACTGACAAGCCTCGCGTACCCGATTATCCATCGGTGGATGGAGCGACTCGTTAATCGCTTCCATGCGCCGCAGTAACAATTGCTCAAGCAGA TTTATCGCCAGCAGCTCCGAATAGCGCCCTTCCCCTTGCCCGGCGTTAATGATTTGCCCAAACAGGTCGCTGAAATGCGGCTGGTGCGCTTCATCCGGGCGAAAG AACCCCGTATTGGCAAATATTGACGGCCAGTTAAGCCATTCATGCCAGTAGGCGCGCGGACGAAAGTAAACCCACTGGTGATACCATTCGCGAGCCTCCGGATGA CGACCGTAGTGATGAATCTCTCCTGGCGGGAACAGCAAAATATCACCCGGTCGGCAAACAAATTCTCGTCCCTGATTTTTCACCACCCCCTGACCGCGAATGGTG AGATTGAGAATATAACCTTTCATTCCCAGCGGTCGGTCGATAAAAAAATCGAGATAACCGTTGGCCTCAATCGGCGTTAAACCCGCCACCAGATGGGCATTAAAC GAGTATCCCGGCAGCAGGGGATCATTTTGCGCTTCAGCCATGTACGTCTCCTCGAATTGCCTGAATTGACTCTCTTCCGGGCGCTATCATGCCATACCGCGAAAG GTTTTGCACCATTCGATGGCGCGCCGCTACCATTTTCTAAACTGGCCTCCCAGGCCTTAATTGGACCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATT CGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCTGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTG CAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGACAAGCTCAGCTAATTAAGCTAGCTTATCGATACCGTCGACCTCGAACCCCACGCCCCT CTTTAATACGACGGGCAATTTGCACTTCAGAAAATGAAGAGTTTGCTTTAGCCATAACAAAAGTCCAGTATGCTTTTTCACAGCATAACTGGACTGATTTCAGTT TACAACTATTCTGTCTAGTTTAAGACTTTATTGTCATAGTTTAGATCTATTTTGTTCAGTTTAAGACTTTATTGTCCGCCCACACCCGC
YJP_MKC174 (with antibiotic marker *tetA)*	CCCGCTGTGGGCGGACAAAATAGTTGGGAACTGGGAGGGGTGGAAATGGAGTTTTTAAGGATTATTTAGGGAAGAGTGACAAAATAGATGGGAACTGGGTGTAGC GTCGTAAGCTAATACGAAAATTAAAAATGACAAAATAGTTTGGAACTAGATTTCACTTATCTGGTTGGCCTGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAG CTGGCGAAAGGGGGATGTGCTGCAAGGATCTCGCCAAGCTAGCTTGGCATTCGATGGTGTCAACGTAAATGCAGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTT TCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGA AACCTCCGCAATGCGGAGGTTTCTTTTTAAAGAGCACCGACCGCAGCCACAGCGTGTAGCGCTCCCAGGAGAGTTATCGACTTGCGTATTAGGGAGCGTCATTAT TTACGCAGTGCCGGACTCAGACGCAGCATATCCAGACCGGTATCAACCCATTTTTCAACATCACCCAGCAGATCAACGCTATCCGGCAGCAGCAGCCAACGACGA ATCAGACCATCAACATAGGCAAACATTGCAACTGCGGCACGTTCTGCATCCAGTTCACCAGGCAGCTGACCACGACGAACTACATTTGCCAGTGTCAGGGTAATA CCTTTATGACAATCCAGAACTGCGCTCTGATGCTGCTGACGAATTTCACACATATCATCGGTGAACTCGCATTTGTGATGCAGGATTTCATTAATACGACGGGTA

	CGTGCATCCAGAACCAGTTCATTAAAAACCTGCAGCAGCAGTTTACGCATACAACCCAGCGGATCAACTTCATCTTCGCTTTCGCTTGCACGTGCCAGATGATCA TGGGTTTCATGCAGGCTATCCAGCAGTGCCTGAACCAGTTCGGCTTTGTTGTTAAAATGCCAATAAATTGCACCACGGGTAACGCCTGCCAGTTCTGCAATATCT GCCAGGGTGGTACGTGCAACACCACGTTTATAGAATGCACGTTCTGCTGCTTCAATAATCTGTGCACGGGTTTCTTGTGCCTCTTCTTTGGTACGACGAACCATG TTTTACCTACTTATCTAATTCGTAACTATTACCAATTACGTCGCGTCATGCGGATCCTATAGGGATTGATGATGCGCAATTGAACAGCCCGCGACGCGGCGGCCG AGATCGTGGTGCAGCCGAGCCTGAAGCGGGCGGTTTTCAGGTAATCGCGTGGTATGCTCTGATATGCCCAGGATGACCGAAATATCCTTGTAATCCTTGCCGA GGGCGGTCCAGTGCAGACACTCGATCTCGCGCGGCGACAATGCCGGCACCGGATCGTTTTCGCCATGCAGCTCATATACGGCCTTGCGGTGGATCAGATGGGCGA TCTCGATCCACTCATTGCGGCAGCGGCGCACGAGCTCGGTCCATTCGTCGGCCGGTATATGGGCATTCAGCGACAGCAGGGCGCGGCGCTGCGCCTTGTCGGCGA CGGGGATGGAGTAGCCATTGTCATCGATGCCGTGTTTCTGGGCGTCGACCAGCATGGCATAGGCCTCCGGCGTGGTCGGTTCGACCTCGCTCCAGTCGAAGGGCAGCT GGCGTTCGAAGCCCTGCTTGATGATCGGATCGACCTTCACATAGCAGTTGAGGAGGTAACGGGAAACCCAGGCATCCGGATAGGTGGTGCGCACGAAGGGCGAAT CGATCTTGCTCGCGATTGTCTGGGCGAGATGGTAGGTGACGAAATCGAGGTTATATTCCGCCTGGAGAATACGGATGGCGGCATCCACGTTGGCCGCCGCTTTGA TCTGTTCGAACGCGGACTCGAACTTTTCGCTATAGGTATTCTCAATCATTCGCCGTTCTCCGTTGACGGGCGTCTCGGTCAATCTGCACGAATTGACCATGCTGC ACCCAGCGGTGCGCCTGCGCTTGCTGCTGCTTCAAAACTTTTGCATTACGAATTGCTGCCAGTGCATGATCACGCATAATACGTTCTGCACCTTCGGCATCACC ACAGCTAACTGCATCCAGAACTGCCTGATGCTGACGATGTGCTGCCAGCAGATGTTCATATTCGGCAGACAGGTCCATCAGATCCAGGGCCAGTGCACCGGCTGC TGCAAACGGTTCAAAACCATTACGTGCCAGTGCGCTTCAACTGCACCATTACCTGCTGCGCTAACCAGGGTATCATGAAATGCCTGATTATATGCGGCATAACG ATCCAGATCTTCACCATTCAGGCGACCGGCTGCAAACAGTGCTTCACCTTCTGCAATCAGTACAACAAAACGTGCATGGGTTTCTGCGGTCATACCACGTTCTGC CAGACGACGTGCTGCAAAACCTTCCAGAACACCACGAACTTCAATTGCATCACGAATCTGATCGCTGCTAACCACCGGGCTGCATAACCACGTGCACCCAGACG AACAACCAGACCTTCTTGTTCCAGTGAACGCAGTGCGATACGAACCGGCATACGGCTAACACCAGTGCTGCTGCGGTCGGAATTTCTGCAATACGTTCACCACT TTTGATTTCACCGCTTGCAATCATTTTACGCAGTGCCATCATAACACGCTGACCCGGTTTAATACGAGGCATGTCCATGTCTATCCTCCTTATTTACGTTCGTTA GTTTTCAACGTTTGAATTTTGCATAACGTTCACGTGCAATTTCCAGGGTGCTATTACGCACACGTTCAAAACGTTCTTTATCTTTCTGCCACAGGCTACGAACTA CCAGACCACGAACGCTGTTAAAAATCAGCCACAGAATATCTTCGGCATCATCACGGCTCAGACCACGGCTCACCAGCACACCCAGCCACATATCTTCAACAACAA AACGATTACGTTCAACGGTACGCTGAATACCTTCACGCAGTGCCGGATCACGATCTGCTGCAACAATCAGATCCAGGCCGATGCTAAAATCATCATCCAGAAAAA ATTCTGCTGCATCATCCAGCATCTGCTGAATAACATCATCTTCCGGTTTCAGTTTTGCCAGACGTGCACGGCTACGTTCGGTAATCTGCTCATACAGCCATTCAA AGGTTGCCAGCAGCAGTTCCAGTTTGGTCGGAAAATGATGGCTCTGTGCACCACGGCTAACACCGGCTGCACCCGGAACATCTGCAATACGAAAACCTGCATAAC CTTTTTCACGCAGAACACCCAGTGCTGCTGCAATCAGTTTACCCTGGGTTTCCATTGCACGTTCTGCCTGGGTACGACGTTCGGGCTCATAAGAATCTCCGTTT GGTATTTACTATGAATATTCCATTGCTAGCATTATACCTAGGACTGAGCTAGCTGTCAATGGACAAACCTGTCTTGGTGCGATTCAGGCCAAAAAAAACCGGCGC AATGGCCGGTTTCCGTTGTTACAGTGAAAAGAAAAAAGGCCGCAGAGCGGCCTTTTTAGTTAGATCTTATTAGGACCCACTTTCACATTTAAGTTGTTTTTCTAA TCCGCATATGATCAATTCAAGGCCGAATAAGAAGGCTGGCTCTGCACCTTGGTGATCAAATAATTCGATAGCTTGTCGTAATAATGGCGGCATACTATCAGTAGT AGGTGTTTCCCTTTCTTCTTTAGCGACTTGATGCTCTTGATCTTCCAATACGCAACCTAAAGTAAAATGCCCCACAGCGCTGAGTGCATATAATGCATTCTCTAG TGAAAAACCTTGTTGGCATAAAAAGGCTAATTGATTTTCGAGAGTTTCATACTGTTTTTCTGTAGGCCGTGTACCTAAATGTACTTTTGCTCCATCGCGATGACT TAGTAAAGCACATCTAAAACTTTTAGCGTTATTACGTAAAAAATCTTGCCAGCTTTCCCCTTCTAAAGGGCAAAAGTGAGTATGGTGCCTATCTAACATCTCAAT GGCTAAGGCGTCGAGCAAAGCCCGCTTATTTTTTACATGCCAATACAATGTAGGCTGCTCTACACCTAGCTTCTGGGCGAGTTTACGGGTTGTTAAACCTTCGAT TCCGACCTCATTAAGCAGCTCTAATGCGCTGTTAATCACTTTACTTTTATCTAATCTGGACATCTAGTATTTCTCCTCTTTCTCTTCACTGCCCGCTTTCCAGTC GGGAAACCTGTCGTGCCAGCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCGCCAGGGTGGTTTTTCTTTTCACCAGTGAGACTG GCAACAGCTGATTGCCCTTCACCGCCTGGCCCTGAGAGAGTTGCAGCAAGCGGTCCACGCTGGTTTGCCCCAGCAGGCGAAAATCCTGTTTGATGGTGGTTAACG GCGGGATATAACATGAGCTATCTTCGGTATCGTCGTATCCCACTACCGAGATATCCGCACCAACGCGCAGCCCGGACTCGGTAATGGCGCGCATTGCGCCCAGCG CCATCTGATCGTTGGCAACCAGCATCGCAGTGGGAACGATGCCCTCATTCAGCATTTGCATGGTTTGTTGAAAACCGGACATGGCACTCCAGTCGCCTTCCCGTT CCGCTATCGGCTGAATTTGATTGCGAGTGAGATATTTATGCCAGCCAGCCAGACGCAGACGCGCCGAGACAGAACTTAATGGGCCCGCTAACAGCGCGATTTGCT GGTGACCCAATGCGACCAGATGCTCCACGCCCAGTCGCGTACCGTCCTCATGGGAGAAAATAATACTGTTGATGGGTGTCTGGTCAGAGACATCAAGAAATAACG CCGGAACATTAGTGCAGGCAGCTTCCACAGCAATGGCATCCTGGTCATCCAGCGGATAGTTAATGATCAGCCCACTGACGCGTTGCGCGAGAAGATTGTGCACCG CCGCTTTACAGGCTTCGACGCCGCTTCGTTCTACCATCGACACCACCACGCTGGCACCCAGTTGATCGGCGCGAGATTTAATCGCCGCGACAATTTGCGACGGCG CGTGCAGGGCCAGACTGGAGGTGGCAACGCCAATCAGCAACGACTGTTTGCCCGCCAGTTGTTGTGCCACGCGGTTGGGAATGTAATTCAGCTCCGCCATCGCCG CTTCCACTTTTTCCCGCGTTTTCGCAGAAACGTGGCTGGCCTGGTTCACCACGCGGGAAACGGTCTGATAAGAGACACCGGCATACTCTGCGACATCGTATAACG TTACTGGTTTCATATTCACCACCCTGAATTGACTCTCTTCCTTAACCGGCACGGAACTCGCTCGGGCTGGCCCCGGTGCATTTTTTAAATACCCGCGAGAAATAG AGTTGATCGTCAAAACCAACATTGCGACCGACGGTGGCGATAGGCATCCGGGTGGTGCTCAAAAGCAGCTTCGCCTGGCTGATACGTTGGTCCTCGCGCCAGCTT AAGACGCTAATCCCTAACTGCTGGCGGAAAAGATGTGACAGACGCGACGGCGACAAGCAAACATGCTGTGCGACGCTGGCGATATCAAAATTGCTGTCTGCCAGG TGATCGCTGATGTACTGACAAGCCTCGCGTACCCGATTATCCATCGGTGGATGGAGCGACTCGTTAATCGCTTCCATGCGCCGCAGTAACAATTGCTCAAGCAGA TTTATCGCCAGCAGCTCCGAATAGCGCCCTTCCCCTTGCCCGGCGTTAATGATTTGCCCAAACAGGTCGCTGAAATGCGGCTGGTGCGCTTCATCCGGCGAAAG AACCCCGTATTGGCAAATATTGACGGCCAGTTAAGCCATTCATGCCAGTAGGCGCGCGGACGAAAGTAAACCCACTGGTGATACCATTCGCGAGCCTCCGGATGA CGACCGTAGTGATGAATCTCTCCTGGCGGGAACAGCAAAATATCACCCGGTCGGCAAACAAATTCTCGTCCCTGATTTTTCACCACCCCCTGACCGCGAATGGTG AGATTGAGAATATAACCTTTCATTCCCAGCGGTCGGTCGATAAAAAAATCGAGATAACCGTTGGCCTCAATCGGCGTTAAACCCGCCACCAGATGGGCATTAAAC GAGTATCCCGGCAGCAGGGGATCATTTTGCGCTTCAGCCATGTACGTCTCCTCGAATTGCCTGAATTGACTCTCTTCCGGGCGCTATCATGCCATACCGCGAAAG GTTTTGCACCATTCGATGGCGCGCCGCTACCATTTTCTAAACTGGCCTCCCAGGCCTTAATTGGACCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATT CGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTCAGAGATTTTATGCTTGTAAACCGTTTTGTGAAAAAATTTTTAAAATAA AAAAGGGGACCTCTAGGGTCCGCAATTAATTAGACAATTGTCTCAGGTCGAGGTGGCCCGGCTCCATGCACCGCGACGCAACGCGGGGAGGCAGACAAGGTATAG GGCGGCGCCTACAATCCATGCCAACCCGTTCCATGTGCTCGCCGAGGCGGCATAAATCGCCGTGACGATCAGCGGTCCAGTGATCGAAGTTAGGCTGGTAAGAGC CGCGAGCGATCCTTGAAGCTGTCCCTGATGGTCGTCATCTACCTGCCTGGACAGCATGGCCTGCAACGCGGGCATCCCGATGCCGCCGGAAGCGAGAAGAATCAT AATGGGGAAGGCCATCCAGCCTCGCGTCGCGAACGCCAGCAAGACGTAGCCCAGCGCGTCGGCCGCCATGCCGGCGATAATGGCCTGCTTCTCGCCGAAACGTTT GGTGGCGGGACCAGTGACGAAGGCTTGAGCGAGGGCGTGCAAGATTCCGAATACCGCAAGCGACAGGCCGATCATCGTCGCGCTCCAGCGAAAGCGGTCCTCGCC GAAAATGACCCAGAGCGCTGCCGGCACCTGTCCTACGAGTTGCATGATAAAGAAGACAGTCATAAGTGCGGCCACAATGGTCATGCCCCGCGCCCACCGGAAGGA GCTGACTGGGTTGAAGGCTCTCAAGGGCATCGGACGGCGCTCTCCCTTATGCGACTCCTGCATTAGGAAGCAGCCCAGTAGTAGGTTGAGGCCGTTGAGCACCGC CGCCGCAAGGAATGGTGCGTGCAGGGAGATGGCGCCCAACAGTCCCCCGGCCACGGGGCCTGCCACCATACCCACGCCGAAACAAGCGCTCATGAGCCCGAAGTG GCGAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTGATGCCGGCCACGATGCGTCCGGCGTAGAGAATCCA CAGGACGGGTGTGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGACTGGGCGGCGGCCAAAGCGGTCGGACAGTGCTCCGAGAAC GGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGCAGCACGCCATAGTGACTGGCGATGCTGTCGGAATGGACGATATCCCGCAAGAGGCCCGGCAGTAC CGGCATAACCAAGCCTATGCCTACAGCATCCAGGGTGACGGTGCCGAGGATGACGATGAGCGCATTGTTAGATTTCATACACGGTGCCTGACTGCGTTAGCAATT TAACTGTGATAAACTACCGCATTACAGTTTATCGATGATAAGCTGTCAATCCGATTCGCCAGATGATAAGGAACCATAAAAAAATGGCGCCGATGGGCGCCATTT TTCACTGGTTGATTGCTTTGGTTGAGACGAGGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTGGATTTGTTCAGAACGCTCG GTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGAT AGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCT CATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGT TTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTC TCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTT TGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTT GGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCGCACCGACCGCAGCCACAGCGTGTAGCGCTCCCAGGCCG TCCACTCCCTGATCCGGCGCTCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCTGGACCAAAACGAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGA ATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGACAAGCTCAGCTAATTAAGCTAGCTTATCGATACCGTCGACCTC GAACCCCACGCCCCTCTTTAATACGACGGGCAATTTGCACTTCAGAAAATGAAGAGTTTGCTTTAGCCATAACAAAAGTCCAGTATGCTTTTTCACAGCATAACT GGACTGATTTCAGTTTACAACTATTCTGTCTAGTTTAAGACTTTATTGTCATAGTTTAGATCTATTTTGTTCAGTTTAAGACTTTATTGTCCGCCCACACCCGC
YJP_MKC108_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCTCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTAATTGTGAGCGCTCACA ATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCAC TAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAAT AATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAA AAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAA TGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGA TGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCC CGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTG

	TAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGG CTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGA CGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTC ATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACT CCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGTTC ACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCAT GTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATA AGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGG AACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGG ATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCA GGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCT AGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGG TGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
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	CTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGT TCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTC ATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATA TAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACA GGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGT GGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGT CAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTT CTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCA GGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC113_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCTCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTATTGGATCCAATGGTAC CTAGGACTGAGCTAGCTGTCAATTGGATCCAATAAGGCAGGTAGGCTCCTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGT CGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGT TTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAA GAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGG GCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGAT GGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAA AACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTG TCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCC TGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGG GAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACA GAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTT GATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGTTCACGTAC TAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCA CGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTT TTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACT TAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACC GTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCG GGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAA TAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGG CTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC114_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCTCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTAGCGTTTTCAAGTTCGT GGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCAGATGAGGGGGATCAGAGCATGTCGCGCAAAAGTGTGCAGCGGTTTTG CGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTCCGTTTGGACGCACAAAGGGA CTTTTGTGCTACCACTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTAT ACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAA ATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGC TCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGG AAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCT CTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGAT TCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCT CAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTT TTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTC GGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAAT CCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTG GATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATG TTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTA ATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAAC AAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGT GCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCC TTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGC CTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTT TCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAAC TCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC115_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCTCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTTTGCTAAGGAATATACT TACATTCATGGTTGTTTGTAAATACTGCTGGGTGACACGTGGCAGCGTACTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTG TCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTdTTATAGGTTAATGTCATGATAATAATG GTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGG AAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTC GGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAG ATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGG AAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAAT TGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGG CCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAG GGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTA CAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTG TTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGTTCACGT ACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTT

	CACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGC TTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACA CTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAA CCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTG CGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAG AATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCG GGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC254_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCTCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTTCAGGCTAGCATAATAC CTAGGACTGAGCTAGCTGTAAAAGTTAGGGACTTATCAAGCTTCCACCGTACGTCGAGTATGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGC ACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTG GAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTG ACGCGGGCGGCGTCAAG
YJP_MKC255_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCG GACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATG TTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAGGATG TTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTG AAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCCGTAG CCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCGCCG GACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTTCCCC TCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTTCAGGCTAGCATAATAC CTAGGACTGAGCTAGCTGTAAAAGTTAGGGACTTATCAAGCTTCCACCGTACGTCGAGTATGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGC ACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTG GAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTG ACGCGGGCGGCGTCAAG
YJP_MKC140_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGTAGGACCAAAACGAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTT TAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAGCTGTTCGGTCAGCAGGCGA TACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCA CGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGC CAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCA ATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTTC AGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATAGGATCGCCCTCGTAA AGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTAATTGTGAGCGCTCACAATTCCACACAT TATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACG GAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTT AGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTA TGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAAT CAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCA GACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAG CATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTT TTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTG AACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAAT TAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAAC GGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAG ATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACG ATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAG CTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAA TAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTG TGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCAT GGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAA AAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAG AGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAA ACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAG CGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC141_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAAGCGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTACCTTGGTCTTCCAGTACA ATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAA CTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAA TAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCT GATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACAT GGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCT GATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTG TTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTT GATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCAT GGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATC CTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATG CTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCG TTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAGTACGTACTAAGC TCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTAC TAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAA AAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTG AGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCT TTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGC

	CCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTC CTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCC GCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC142_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGCGGCGGAGAAAAGGTCCGAAAATTCGGACCCGATGGAATTGGATAAAAAAAGGCCCCTGTTGAAATTGCAGGGGCCTGGTACGAGCATTATTTTGCATCTG CCTGTTTAATCAGTTCCAGGGTTTTTTCAACACGATCTGCAGGCAGCGGTGCACCCAGAACTGCCAGGCTTGCATCTGCCAGCATAATTGCGGTTTCCGGCAGGC TATCTGCGCTCAGCGGACTCGGAATTTTACCATCATTGCGACGCATTTCAATAACGCTCATGGTAATATGAAACGGCAGTTCTGCACGCGGATCATCACCAACAA TTTCGGTTGCCAGATCACGAAAAACATTGGTCAGTGCTTCACGCTGGCTATGATATTCTGCAAATTCTTCGCTACCAACAATCGGCAGCTGATACAGACGACCAA CATTCCATTTGGTGCTCAGCAGCAGACGAACTTCGCTTGCAACAATTGCCCACAGACGCATTTCCGGACCTGCATCCAGGGTGCTCAGATCTTCTGCCAGAACGG TGCTCGGTTCAACGGTGCTTTTCAGCAGGGTCAGAAAGATTTCGGTTTTGCTCGGAAAATGATAATACAGGCTTGCCTGACGAATACCAACTGCATCTGCAATCT GATGGGTACTGGTGGTTGCAAAACCCTGACGGGTAAACAGTTCTGCGCTTGCATCCAGAATTTCTTCACGCGGATTTTTACCTGCACGACGCGGTGCACTACGAC GCGGACGACCAACTGCGCCTGCCATCTAGTAACCTCTTTGCTGATTATTAGGGAACATTTTAAACAAAATTATTTGTAGAGGGGTGTTTCGTCCTTTCGGACTCA TCAGTCAAGGTACGCACCTTGAGACACCCTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTGGCA TGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGA ACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTAT CCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAAT TCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAG TTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCAT TTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTT GATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATG AATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGAT TCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATAC CAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTG CAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTC GGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGA TAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTC TCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAG TTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCT CTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTT TTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTG GTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTG CGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGT CGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC146_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGCGCATAAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGC CAGCGGATTACGCAGACCTGCATCAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCT GGTCAGTGCATGCAGAACGGTTTCTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAAT CACGCTTTTGTAATAATCGCCACATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCAT CAGATTACGTGCCAGATGACGCAGACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATC AACCAGTGCGTTTTTGCTGCTAAAATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACG AAACAGTTCTTCGGCTTTTGCCAGAATATCACGACGGGTTTCTTCGGCACTACGACGCGGACGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCAC CTGATCAATGGTTTTGTTCATCTATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCA GAGTTGAAAGCACATCAACTGACCCCTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGG TCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACT TCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCG CTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTC AACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTG TTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTT ATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGAT GCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAAT AACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCA GTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAG GATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAG TTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGT TGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAG TACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCA TGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTT TATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTC AAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTG CTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTC GAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGC CGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGA AAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC149_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGCGAAAAGAGGTGGCCAGGGGGATCACCTGGCAGCATGCTGCCTAATAAAAAAGGCCGGAAAATCCGGCCTTTTGACGCTTTAGCTCTGACGGCTCAGTGCT GCCCACAGGCTTTCTTCAACACCGGTCAGCAGTTCATCGGTCAGGCTCAGATAATCGTTCTCGATCATTTCATACACTTCCATAAAGCTGCCAAACAGAATTGCA ATCAGTGCATTTTCCGGCAGATTACGAATCACACCCTGTTTCTGACCTTCACGAAAAAGGTGCACACAAATTCAACCAGTTTCTGATATGCCAGACGGCTTTCT TCGGTCAGAAAGGTGCCCTGGCTATGGGTTTTGATAAAACCCAGTGCACGCGGATGATTTTTGGTAAAGGTCACCATACCTTCAAAAATGTGATGAAAGCCATCA CGATAACCATCACGTTCATTTGCCAGACCGCTTTCAATACACTGCAGAAATTCATTAACATGCTGCTGAAACAGTTCGTTCACCAGGCTTTCTTTGTTTTTGAAA TAGCGATAAATGGTGCCTGCACCAACTTTTGCATTTTCTGCAATCATCGGCATGGTGGTTGCATCAAAACCACGTTCTGCAAACAGCAGCAGGCTTGCGCTAAAA ATTGCTTTCTGTTTGGTCGGGGTGCTTTCCATCCTCCCGGCCTCGTTTGGTTAAACAAAATTATTTGTAGAGGACTGTTTCGGCCCTTTTGGGCCATCGTCAGGT CGGATACACATCCGGCGACAGTCTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGGTCT TCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCG GAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTC ATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAAC ATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTT CTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATC CGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCG CTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAAC GGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTC GTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGAT CTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTT CATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGC CGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAGTAC GTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGG CTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTAT AAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAA GCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTC ACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAA AAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGT

	CCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAA AAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC154_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGCGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGC CAGCGGATTACGCAGACCTGCATCAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCT GGTCAGTGCATGCAGAACGGTTTCTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAAT CACGCTTTTGTAATAATCGCCACATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCAT CAGATTACGTGCCAGATGACGCAGACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATC AACCAGTGCGTTTTTGCTGCTAAAATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACT AAACAGTTCTTCGGCTTTTGCCAGAATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCAC CTGATCAATGGTTTTGTTCATCTATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCA GAGTTGAAAGCACATCAACTGACCCCTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGG TCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACT TCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCG CTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCC AACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTG TTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTT ATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGAT GCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAAT AACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCA GTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAG GATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAG TTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGT TGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAG TACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCA TGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTT TATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTC AAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTG CTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTC GAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGC CGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGA AAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
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YJP_MKC156_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTT TAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGA TACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTCAACCAGTTTTTTCGGCATCTCA CGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGC CAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCA ATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTC AGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTT TCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTAATTGTGAGCGCT CACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTCTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCC GCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGA TAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATT GAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCG ATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTA CAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGA TCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTG TTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTA ATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTT TTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTC CTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTG GACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAA GAAGATCCGGCCACGATGCGTCCGGCGTAGGATCTGAAGATCAGCAGTTCAACCTGTTGATAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCAT GTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCT CTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTT AAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGAC ATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCC TGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCT GTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCG

	GACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGT GTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGTTTGACGCGGGCGGCGTCAAG
YJP_MKC158_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGCGAGAAAAGCAGAAAAAACGCCGCTGAACGCGGCGTTTTGGATTGTTTGCTGTTTCTTCAGAAGAGGTAGCGTGACCGACTTCCCGGTCACGCTAAGAATG ATTATTAATCGGTCGGCAGATGCTGGGTGATAAAATGACGGGTCAGGCTATTTGCACGGGTTTTATCCAGCGGTTTACCGCTCAGTGCTGCACGCAGCCACAGAC CATCAATCAGTGCTGCCAGACCATAACCTGCCTCTTGTGCCTGTTCACGAGGCAGTTCACGACGAAATTCGCTAACCAGATTGCTCAGCAGACGACGACTGCTAA CCTGCTGCAGACGATACAGCATCGGCTGATGCATGCTGCTTGCCCAAAATGCCAGCCATGCTTTCATTGCTGCGCTGCTAACCTGGGTTTCATCAAAATTACCAC CAACAATTGCCTGCAGACGCTGTTCTGCGCTACCCTGCGGCAGTGCATGCAGACGATTCAGAACTGCATCACGCAGCTGGCTGGTAATATCACGCATGGTTGCTT CCAGCAGACCGTTTTTATCGCGGAAATAATGGCTAATAATACCGGTGCTAACACCGGCACGACGTGCAATCTGTGCAATGGTTGCATCATGCATACCAACTTCAT TAATTGCTTCCAGGGTTGCATCAATCAGCTGACGACGACGAATGCTCTGCATACCCAGTTTCGGCATTGTGCTCCTCCTCGGAAGGTTAAACAAAATTATTTGTA GAGGAAGTTTCGTCGTCACCGACTCATCAGAATTAAAAGCACATTAATTGACTTCTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATT GTCAACACAGCCAACGATCGTTCTCCTGGTCTTCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAA GTTCCTATACTTTCTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTAT TTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAA CGTCTTGCTCTAGGCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGAT TGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAAT TTATGCCTCTTCCGACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGAAAACAGCATTCCAGGTATTAGAAGAAT ATCCTGATTCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTC GTCTCGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGC ATAAACTTTTGCCATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTG GACGAGTCGGAATCGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTA TTGATAATCCTGATATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAAC TCCATCTGGATTTGTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATC TGAAGATCAGCAGTTCAACCTGTTGATAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAA ACCCTCATGGCTAACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCA ACTTAAATAGCCTCTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGT AACGCACTGAGAAGCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTT ACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTT TTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTC TCGGGCGAAGAGCTACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTT CTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCCGTTAACAGCGCAGAACTCAAGCAGGATGT TTGACGCGGGCGGCGTCAAG
YJP_MKC141_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTAC CATGTCGGTAATGACTCCAACTTATTGATAGTGTTTTATGTTCAGATAATGCCCGATGACTTTGTCATGCAGCTCCACCGATTTTGAGAACGACAGCGACTTCCG TCCCAGCCGTGCCAGGTGCTGCCTCAGATTCAGGTTATGCCGCTCAATTCGCTGCGTATATCGCTTGCTGATTACGTGCAGCTTTCCCTTCAGGCGGGATTCATA CAGCGGCCAGCCATCCGTCATCCATATCACCACGTCAAAGGGTGACAGCAGGCTCATAAGACGCCCCAGCGTCGCCATAGTGCGTTCACCGAATACGTGCGCAAC AAACGTCTTCCGGAGACTGTCATACGCGTAAAACAGCCAGCGCTGGCGCGATTTAGCCCCGACATAGCCCCACTGTTCGTCCATTTCCGCGCAGACGATGACGTC ACTGCCCGGCTGTATGCGCGAGGTTACCGACTGCGGCCTGAGTTTTTTAAGTGACGTAAAATCGTGTTGAGGCCAACGCCCATAATGCGGGCTGTTGCCCGGCAT CCAACGCCATTCATGGCCATATCAATGATTTTCTGGTGCGTACCGGGTTGAGAAGCGGTGTAAGTGAACTGCAGTTGCCATGTTTTACGGCAGTGAGAGCAGAGA TAGCGCTGATGTCCGGCGGTGCTTTTGCCGTTACGCACCACCCCGTCAGTAGCTGAACAGGAGGGACAGCTGATAGAAACAGAAGCCACTGGAGCACCTCAAAAA CACCATCATACACTAAATCAGTAAGTTGGCAGCATCACCTCCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCT CAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGC TATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGC CATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGC TGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATCTTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAAT CCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGAGTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGG GGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGA AATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGG CAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAG CAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTG AAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTA AATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAAATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTAT TCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTG GAAGACCATACTGGTATGGAAGCTATACGTTACCAATTGACAGCTAGCTCAGTCCTACTTTAGTATATAGACCGTGCGATCGGTCTATAAGCTGTCACCGGATGT GCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATTACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGA GCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAA GCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGA CCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGA GGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAA CAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCA CTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGA TCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATG GGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGC TTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC142_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTCC CATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTCAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAAC CTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGCTATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACAT GAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGCCATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTA AACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGCTGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATC TTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAATCCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGA GTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCT GAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAAC TGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAAT ATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCC ATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTT TCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATT GGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTA TTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTAAATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAA ATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTATTCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATC CGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTGGAAGACCATACTCTTGTCCAACCAAATGATTCGTTACCCTTT GACAGTTTCTATCGATCTATAGATAATGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTT TAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCC ACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCC TCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGG AGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACT

	TCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACT TCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACT ACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACG AGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTG CGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTG ATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC149_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTAC CATGTCGGTAATGACTCCAACTTATTGATAGTGTTTTATGTTCAGATAATGCCCGATGACTTTGTCATGCAGCTCCACCGATTTTGAGAACGACAGCGACTTCCG TCCCAGCCGTGCCAGGTGCTGCCTCAGATTCAGGTTATGCCGCTCAATTCGCTGCGTATATCGCTTGCTGATTACGTGCAGCTTTCCCTTCAGGCGGGATTCATA CAGCGGCCAGCCATCCGTCATCCATATCACCACGTCAAAGGGTGACAGCAGGCTCATAAGACGCCCCAGCGTCGCCATAGTGCGTTCACCGAATACGTGCGCAAC AAACGTCTTCCGGAGACTGTCATACGCGTAAAACAGCCAGCGCTGGCGCGATTTAGCCCCGACATAGCCCCACTGTTCGTCCATTTCCGCGCAGACGATGACGTC ACTGCCCGGCTGTATGCGCGAGGTTACCGACTGCGGCCTGAGTTTTTTAAGTGACGTAAAATCGTGTTGAGGCCAACGCCCATAATGCGGGCTGTTGCCCGGCAT CCAACGCCATTCATGGCCATATCAATGATTTTCTGGTGCGTACCGGGTTGAGAAGCGGTGTAAGTGAACTGCAGTTGCCATGTTTTACGGCAGTGAGAGCAGAGA TAGCGCTGATGTCCGGCGGTGCTTTTGCCGTTACGCACCACACCGTCAGTAGCTGAACAGGAGGGACAGCTGATAGAAACAGAAGCCACTGGAGCACCTCAAAAA CACCATCATACACTAAATCAGTAAGTTGGCAGCATCACCTCCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCT CAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGC TATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGC CATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGC TGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATCTTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAAT CCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGAGTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGG GGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGA AATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGG CAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAG CAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTG AAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTA AATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAAATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTAT TCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTG GAAGACCATACTAACGAATGGCTCATGTCTGATTCGTTACCAATTGACGGAATGAACGTTCATTCCGATAATGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTC TGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCG GGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGA AGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGC TGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG AGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACG TCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGA ACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCC TGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGA TGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCT TTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC154_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTCC CATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTCAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAAC CTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGCTATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACAT GAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGCCATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTA AACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGCTGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATC TTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAATCCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGA GTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCT GAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAAC TGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAAT ATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCC ATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTT TCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATT GGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTA TTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTAAATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAA ATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTATTCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATC CGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTGGAAGACCATACTTCGTCACTAGAGGGCGATAGTGACAAACTT GACAACTCATCACTTCCTACGTAGGCTGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTT TAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCC ACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCC TCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGG AGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACT TCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACT TCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACT ACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACG AGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTG CGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTG ATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC155_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTCC CATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCTCAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAAC CTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGCTATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACAT GAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGCCATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTA AACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGCTGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATC TTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAATCCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGA GTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCT GAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAAC TGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAAT ATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCC ATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTT TCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATT GGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTGAAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTA TTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTAAATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAA ATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTATTCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATC CGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTGGAAGACCATACTAGCGCGGGTGAGAGGGATTCGTTACCAATA GACAATTGATTGGACGTTCAATATAATGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTT TAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCC

	ACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCC TCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGG AGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACT TCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACT TCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACT ACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACG AGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTG CGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTG ATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC156_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTAC CATGTCGGTAATGACTCCAACTTATTGATAGTGTTTTATGTTCAGATAATGCCCGATGACTTTGTCATGCAGCTCCACCGATTTTGAGAACGACAGCGACTTCCG TCCCAGCCGTGCCAGGTGCTGCCTCAGATTCAGGTTATGCCGCTCAATTCGCTGCGTATATCGCTTGCTGATTACGTGCAGCTTTCCCTTCAGGCGGGATTCATA CAGCGGCCAGCCATCCGTCATCCATATCACCACGTCAAAGGGTGACAGCAGGCTCATAAGACGCCCCAGCGTCGCCATAGTGCGTTCACCGAATACGTGCGCAAC AAACGTCTTCCGGAGACTGTCATACGCGTAAAACAGCCAGCGCTGGCGCGATTTAGCCCCGACATAGCCCCACTGTTCGTCCATTTCCGCGCAGACGATGACGTC ACTGCCCGGCTGTATGCGCGAGGTTACCGACTGCGGCCTGAGTTTTTTAAGTGACGTAAAATCGTGTTGAGGCCAACGCCCATAATGCGGGCTGTTGCCCGGCAT CCAACGCCATTCATGGCCATATCAATGATTTTCTGGTGCGTACCGGGTTGAGAAGCGGTGTAAGTGAACTGCAGTTGCCATGTTTTACGGCAGTGAGAGCAGAGA TAGCGCTGATGTCCGGCGGTGCTTTTGCCGTTACGCACCACACCGTCAGTAGCTGAACAGGAGGGACAGCTGATAGAAACAGAAGCCACTGGAGCACCTCAAAAA CACCATCATACACTAAATCAGTAAGTTGGCAGCATCACCTCCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCT CAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGC TATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGC CATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGC TGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATCTTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAAT CCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGAGTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGG GGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGA AATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGG CAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAG CAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTG AAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTA AATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAAATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTAT TCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTG GAAGACCATACTCGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGCTGTCACCGGATGTGCTTTCCGGTC TGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCG GGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGA AGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGC TGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCG AGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACG TCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGA ACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCC TGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGA TGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCT TTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC258_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGTAGGACCAAAACGAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTT TAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGA TACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCA CGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGC CAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCA ATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTTC AGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTT TCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTCGTGCTCATTATAT CTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGACAGCCAACGATCGTTCGGGTATGGAGAAAAATATAGAGAGTTGCGATAAAAAGCGTCAGGTAGG ATCCGCTAATCTTATGGATAAAAATGCTACAGCCAACGATCGTTCTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCG AATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTT GGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTCTGTGTTTCC
YJP_MKC258_LP#2 (Same as YJP_MKC260_LP#2, YJP_MKC261_LP#2)	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGTACTGGAAGACCATACTCGACGT ACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGAC GAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGG TCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAG GCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGT CCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGA ACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACA AGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCCAATCGGCGACG GCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCG CCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTG CAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGG CATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC259_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAGTAGGACCAAAACGAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTT TAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGA TACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCA CGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGC CAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCA ATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTTC AGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTT TCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTCGGGTATGGAGAA AAATATAGAGAGTTGCGATAAAAAGCGTCAGGTAGGATCCGCTAATCTTATGGATAAAAATGCTACAGCCAACGATCGTTCTCCCAGTACAATCTGCTCTGATGC CCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTT TCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTCTGTGTTTCC
YJP_MKC259_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGCGCAACCACTCTCGCTCCC TATCAGTGATAGAGATTGACATCCCTATCAGTGATAGATATAATGAGCACAGCGGTCAACGCATGTGCTTTGCGTTCTGATGAGACAGTGATGTCGAAACCGCCT CTACAAATAATTTTGTTTAACTATGGACTATGTTTGAAAGGGAGAAATACTAGATGGCACGTACCCCGAGCCGTAGCAGCATTGGTAGCCTGCGTAGTCCGCATA CCCATAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGTGGTTATAGCGGTCTGAGCATTGAAAGCGTTGCACGTCGTGCCGGTGCAAGCAAACCGA CCATTTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCCGAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATTTCCGGATCTGGGTAGCTTTAAAGCCG ATCTGGATTTTCTGCTGCGTAATCTGTGGAAAGTTTGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGCAGAAGCACAGCTGGACCCTGCAACCC TGACCCAGCTGAAAGATCAGTTTATGGAACGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGGTGAACTGCCGAAAGATACCAATCGTG

	AACTGCTGCTGGATATGATTTTTGGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGAAGAATTTACCTTCCTGCTGATTAATG GTGTTTGTCCGGGTACACAGCGTTAATCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTC CCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCTACTCGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGCT GTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAG CAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGC CACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGC CCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAA GACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGA GTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCA GCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAA CGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAATGGTGTTATAAACCTGTGTGA GAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTT GAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC260_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCACCTGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCAGATGAGGGGGATCAG AGCATGTCGCGCAAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGA GCGCCGTGCGTCCGTTTGGACGCACAAAGGGACTTTTGTGCTACCACATTGCGGAGAAAAGGTCCGAAAATTCGGACCCGATGGAATTGGATAAAAAAAGGCCCC TGTTGAAATTGCAGGGGCCTGGTACGAGCATTATTTTGCATCTGCCTGTTTAATCAGTTCCAGGGTTTTTTCAACACGATCTGCAGGCAGCGGTGCACCCAGAAC TGCCAGGCTTGCATCTGCCAGCATAATTGCGGTTTCCGGCAGGCTATCTGCGCTCAGCGGACTCGGAATTTTACCATCATTGCGACGCATTTCAATAACGCTCAT GGTAATATGAAACGGCAGTTCTGCACGCGGATCATCACCAACAATTTCGGTTGCCAGATCACGAAAAACATTGGTCAGTGCTTCACGCTGGCTATGATATTCTGC AAATTCTTCGCTACCAACAATCGGCAGCTGATACAGACGACCAACATTCCATTTGGTGCTCAGCAGCAGACGAACTTCGCTTGCAACAATTGCCCACAGACGCAT TTCCGGACCTGCATCCAGGGTGCTCAGATCTTCTGCCAGAACGGTGCTCGGTTCAACGGTGCTTTTCAGCAGGGTCAGAAAGATTTCGGTTTTGCTCGGAAAATG ATAATACAGGCTTGCCTGACGAATACCAACTGCATCTGCAATCTGATGGGTACTGGTGGTTGCAAAACCCTGACGGGTAAACAGTTCTGCGCTTGCATCCAGAAT TTCTTCACGCGGATTTTTACCTGCACGACGCGGTGCACTACGACGCGGACGACCAACTGCGCCTGCCATCTAGTAACCTCTTTGCTGATTATTAGGGAACATTTT AAACAAAATTATTTGTAGAGGGGTGTTTCGTCCTTTCGGACTCATCAGTCAAGGTACGCACCTTGAGACACCCTGTGCTCATTATATCTATCACTGATAGGGATG TCAATCTCTATCACTGATAGGGAGCGAGAGTGGTTGCGAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTG CAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATA TCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTG CTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATA ACACAACGAAATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTA CGCACCTGTTCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACG CTTTCAATGCTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTA CGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAAC GCAAAGCACATGCGTTGACCGCTGCTAGCATTATCTATAGATCGATAGAAACTGTCAAAGGGTAACGAATCATTTGGTTGGACAAGTATAGACCGATCGCACGGT CTATATACTAAAGTAGGACTGAGCTAGCTGTCAATTGGTAACGTATAGCTTCCATACCCTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGT GTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTT GGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCC
YJP_MKC261_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAAGCGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTAATTGTGAGCGCTCACAATTCCACACATTATACGAGCCGATGATTAATTGTCAACACAGCCAACGATCGTTACCTGCGGAGAAAAGGTCC GAAAATTCGGACCCGATGGAATTGGATAAAAAAAGGCCCCTGTTGAAATTGCAGGGGCCTGGTACGAGCATTATTTTGCATCTGCCTGTTTAATCAGTTCCAGGG TTTTTTCAACACGATCTGCAGGCAGCGGTGCACCCAGAACTGCCAGGCTTGCATCTGCCAGCATAATTGCGGTTTCCGGCAGGCTATCTGCGCTCAGCGGACTCG GAATTTTACCATCATTGCGACGCATTTCAATAACGCTCATGGTAATATGAAACGGCAGTTCTGCACGCGGATCATCACCAACAATTTCGGTTGCCAGATCACGAA AAACATTGGTCAGTGCTTCACGCTGGCTATGATATTCTGCAAATTCTTCGCTACCAACAATCGGCAGCTGATACAGACGACCAACATTCCATTTGGTGCTCAGCA GCAGACGAACTTCGCTTGCAACAATTGCCCACAGACGCATTTCCGGACCTGCATCCAGGGTGCTCAGATCTTCTGCCAGAACGGTGCTCGGTTCAACGGTGCTTT TCAGCAGGGTCAGAAAGATTTCGGTTTTGCTCGGAAAATGATAATACAGGCTTGCCTGACGAATACCAACTGCATCTGCAATCTGATGGGTACTGGTGGTTGCAA AACCCTGACGGGTAAACAGTTCTGCGCTTGCATCCAGAATTTCTTCACGCGGATTTTTACCTGCACGACGCGGTGCACTACGACGCGGACGACCAACTGCGCCTG CCATCTAGTAACCTCTTTGCTGATTATTAGGGAACATTTTAAACAAAATTATTTGTAGAGGGGTGTTTCGTCCTTTCGGACTCATCAGTCAAGGTACGCACCTTG AGACACCCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTATCGCCCTCTAGTGACGACATTCATAAAAAAATGGCGCCGATGGGCGCCAT TTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCATCAATCAGATCAA CCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTTCTGCCAGAACCG GAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCACATTTCATATCCT GTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCAGACGATCCAGCG GTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAAAATGTTTAAACA CATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACTAAACAGTTCTTCGGCTTTGCCAGAATATCACGAC GGGTTTCTTCGGCATCTATGACGCGGACGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCTATTAGCTCCTGT TTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCAGAGTTGAAAGCACATCAACTGACCCCTGTGCTCAT TATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGACAGCCAACGATCGTTATAGACCGATCGCACGGTCTATATACTAAAGTAGGACTGAGCT AGCTGTCAATTGGTAACGTATAGCTTCCATACCAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGAC GTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTG TTCAACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAAT GGCATTTTCAACCAGTTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACA ACGAAATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCAC CTGTTCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTC AATGCTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCT CGGGGTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAA GCACATGCGTTGACCGCTGCTAGCATTATCTATAGATCGATAGAAACTGTCAAAGGGTAACGAATCATTTGGTTGGACAAGAGCGTTTTCAAGTTCGTGGAAAGCAAGAGC AGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCAGATGAGGGGGATCAGAGCATGTCGCGCAAAAGTGTGCAGCGGTTTTGCGATAAC GACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTCCGTTTGGACGCACAAAGGGACTTTTGT GCTACCACTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATA GGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCT TTTTCTGTGTTTCC
YJP_MKC262_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCACCTGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA

	TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGAGCGAGAGTGGTTGCGCATTCATAAAAAAATGGCGCC GATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCAT CAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTT CTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCAC ATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCA GACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAA AATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCA GAATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCT ATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCAGAGTTGAAAGCACATCAACTGAC CCCTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCCAGATGAGGGGGATCAGAGCATGTCGCG CAAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGT CCGTTTGGACGCACAAAGGGACTTTTGTGCTACCAAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAG ACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCC TGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTA ATGGCATTTTCAACCAGTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACA CAACGAAATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGC ACCTGTTCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTT TCAATGCTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGG CTCGGGGTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCA AAGCACATGCGTTGACCGCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTATCGCCCTCTAGTGACGACTCCCAGTACAATCTGCTCTGA TGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACC CTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTCTGTGTTTCC
YJP_MKC262_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGCGCAACCACTCTCGCTCCC TATCAGTGATAGAGATTGACATCCCTATCAGTGATAGATATAATGAGCACAGCGGTCAACGCATGTGCTTTGCGTTCTGATGAGACAGTGATGTCGAAACCGCCT CTACAAATAATTTTGTTTAACTATGGACTATGTTTGAAAGGGAGAAATACTAGATGGCACGTACCCCGAGCCGTAGCAGCATTGGTAGCCTGCGTAGTCCGCATA CCCATAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGTGGTTATAGCGGTCTGAGCATTGAAAGCGTTGCACGTCGTGCCGGTGCAAGCAAACCGA CCATTTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCCGAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATTTCCGGATCTGGGTAGCTTTAAAGCCG ATCTGGATTTTCTGCTGCGTAATCTGTGGAAAGTTTGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGCAGAAGCACAGCTGGACCCTGCAACCC TGACCCAGCTGAAAGATCAGTTTATGGAACGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGGTGAACTGCCGAAAGATACCAATCGTG AACTGCTGCTGGATATGATTTTTGGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGAAGAATTTACCTTCCTGCTGATTAATG GTGTTTGTCCGGGTACACAGCGTTAATCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTC CCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCTACTCGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGCT GTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAG CAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGC CACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGC CCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAA GACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGA GTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCA GCTCGCCGACCACTACCAGCAGAACACCCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAA CGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAATGGTGTTATAAACCTGTGTGA GAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTT GAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC263_LP#1	AAAAAAAACCCCGCCCCTGTCAGGGGCGGGGTTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAAGCTCAGAGGAGCCAAATTCAAAAAGCCTGCTTTCTAGCAGGCTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTG CGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTGA ATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTGCTCACGGCATTAACATCAT TAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGAT TGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTCA GGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCAC AGCACTTGACGACTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGAGCGAGAGTGGTTGCGACCTCATAAAAAAATGGCGCCG ATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCATC AATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTTC TGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCACA TTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCAG ACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAAA ATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCAG AATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCTA TTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCAGAGTTGAAAGCACATCAACTGACC CCTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCCAGATGAGGGGGATCAGAGCATGTCGCGC AAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTC CGTTTGGACGCACAAAGGGACTTTTGTGCTACCACATTAAAAGAGGTGGCCAGGGGGATCACCTGGCAGCATGCTGCCTAATAAAAAAGGCCGGAAAATCCGGCC TTTTGACGCTTTAGCTCTGACGGCTCAGTGCTGCCCACAGGCTTTCTTCAACACCGGTCAGCAGTTCATCGGTCAGGCTCAGATAATCGTTCTCGATCATTTCAT ACACTTCCATAAAGCTGCCAAACAGAATTGCAATCAGTGCATTTTCCGGCAGATTACGAATCACACCCTGTTTCTGACCTTCACGAAAAAGGTGCACACAAATT CAACCAGTTTCTGATATGCCAGACGGCTTTCTTCGGTCAGAAAGGTGCCCTGGCTATGGGTTTTGATAAAACCCAGTGCACGCGGATGATTTTTGGTAAAGGTCA CCATACCTTCAAAAATGTGATGAAAGCCATCACGATAACCATCACGTTCATTTGCCAGACCGCTTTCAATACACTGCAGAAATTCATTAACATGCTGCTGAAACA GTTCGTTCACCAGGCTTTCTTTGTTTTTGAAATAGCGATAAATGGTGCCTGCACCAACTTTTGCATTTTCTGCAATCATCGGCATGGTGGTTGCATCAAAACCAC GTTCTGCAAACAGCAGCAGGCTTGCGCTAAAAATTGCTTTCTGTTTGGTCGGGGTGCTTTCCATCCTCCCGGCCTCGTTTGGTTAAACAAAATTATTTGTAGAGG ACTGTTTCGGCCCTTTTGGGCCATCGTCAGGTCGGATACACATCCGGCGACAGTCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTATCG CCCTCTAGTGACGAAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGT TAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCG GTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTT TTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAA ATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCA TACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAA CCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAG TATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTG TGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGAGCGAGAGTGGTTGCGCTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGG CCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTT TCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTCTGTGTTTCC
YJP_MKC263_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGGGTATGGAAGCTATACGTT ACCAATTGACAGCTAGCTCAGTCCTACTTTAGTATATAGACCGTGCGATCGGTCTATAAGACTGTCGCCGGATGTGTATCCGACCTGACGATGGCCCAAAAGGGC CGAAACAGTCCTCTACAAATAATTTTGTTTAACCAAACGAGGCCGGGAGGATGGAAAGCACCCCGACCAAACAGAAAGCAATTTTTAGCGCAAGCCTGCTGCTGT TTGCAGAACGTGGTTTTGATGCAACCACCATGCCGATGATTGCAGAAAATGCAAAAGTTGGTGCAGGCACCATTTATCGCTATTTCAAAAACAAAGAAAGCCTGG TGAACGAACTGTTTCAGCAGCATGTTAATGAATTTCTGCAGTGTATTGAAAGCGGTCTGGCAAATGAACGTGATGGTTATCGTGATGGCTTTCATCACATTTTTG

	AAGGTATGGTGACCTTTACCAAAAATCATCCGCGTGCACTGGGTTTTATCAAAACCCATAGCCAGGGCACCTTTCTGACCGAAGAAAGCCGTCTGGCATATCAGA AACTGGTTGAATTTGTGTGCACCTTTTTTCGTGAAGGTCAGAAACAGGGTGTGATTCGTAATCTGCCGGAAAATGCACTGATTGCAATTCTGTTTGGCAGCTTTA TGGAAGTGTATGAAATGATCGAGAACGATTATCTGAGCCTGACCGATGAACTGCTGACCGGTGTTGAAGAAAGCCTGTGGGCAGCACTGAGCCGTCAGAGCTAAA GCGTCAAAAGGCCGGATTTTCCGGCCTTTTTTATTAGGCAGCATGCTGCCAGGTGATCCCCCTGGCCACCTCTTTTTACTCGACGTACGGTGGAATCTGATTCGT TACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGTCGTCAAGTGCTGTGCTTGCACTTCTGATGAGGCAGTGATGCCGAAACGACCTCTACAAATA ATTTTGTTTAAGCCATGCCATTGGCTTTTGATAGAGGACAACTACTAGATGAACCTGAAAGATAAAATTCTGGGCGTTGCCAAAGAACTGTTTATCAAAAATGGC TATAACGCAACCACCACCGGTGAAATTGTTAAACTGAGCGAAAGCAGCAAAGGCAATCTGTATTATCACTTTAAAACCAAAGAGAACCTGTTTCTGGAAATCCTG AACATCGAAGAAAGCAAATGGCAAGAGCAGTGGAAAAAAGAACAAATCAAATGCAAAACCAACCGCGAGAAATTCTATCTGTATAATGAACTGAGCCTGACCACC GAATATTACTATCCGCTGCAGAATGCCATCATCGAGTTTTATACCGAGTACTATAAAACCAACAGCATCAACGAGAAAATGAACAAACTGGAAAACAAATACATC GATGCCTACCACGTGATCTTTAAAGAAGGTAATCTGAACGGCGAATGGTGCATTAATGATGTTAATGCCGTGAGCAAAATTGCAGCAAATGCCGTTAATGGCATT GTTACCTTTACCCATGAGCAGAATATCAACGAACGCATTAAACTGATGAACAAATTCAGCCAGATCTTTCTGAATGGCCTGAGCAAATAATCTTTAAAAAGAAAC CTCCGCATTGCGGAGGTTTCGCCTTTTGATACTCTGTCTGAAGTAATTCTTGCCGCAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGCTTCCATTAGAA AGCAAAAAGCCTGCTAGAAAGCAGGCTTTTTTGAATTTGGCTCCTCTGACAATGCGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTA CCGTATCGTTAAGGTAGGGGTCAGTTGATGTGCTTTCAACTCTGATGAGTCAGTGATGACGAAACCCCCTCTACAAATAATTTTGTTTAATACGCTATGGACTAT GTTTCAAACAGGAGCTAATAGATGAACAAAACCATTGATCAGGTGCGTAAAGGTGATCGTAAAAGCGATCTGCCGGTTCGTCGTCGTCCGCGTCATAGTGCCGAA GAAACCCGTCGTGATATTCTGGCAAAAGCCGAAGAACTGTTTAGTGAACGTGGTTTTAATGCAGTTGCCATTGCAGATATTGCAAGCGCACTGAATATGAGTCCG GCAAATGTGTTTAAACATTTTAGCAGCAAAAACGCACTGGTTGATGCAATTGGTTTTGGTCAGATTGGTGTTTTTGAACGTCAGATTTGTCCGCTGGATAAAAGC CATGCACCGCTGGATCGTCTGCGTCATCTGGCACGTAATCTGATGGAACAGCATCATCAGGATCATTTCAAACACATACGGGTTTTTATTCAGATCCTGATGACC GCCAAACAGGATATGAAATGTGGCGATTATTACAAAAGCGTGATTGCAAAACTGCTGGCCGAAATTATTCGTGATGGTGTTGAAGCAGGTCTGTATATTGCAACC GATATTCCGGTTCTGGCAGAAACCGTTCTGCATGCACTGACCAGCGTTATTCATCCGGTTCTGATTGCACAAGAAGATATTGGTAATCTGGCAACCCGTTGTGAT CAGCTGGTTGATCTGATTGATGCAGGTCTGCGTAATCCGCTGGCAAAATAAACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACA GTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGAGGTAACGAATGGCTCATGTCTGATTCGTTACCAATTGACGGAATGAACGTTCATTCCGATAATGCTAG CAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATG GTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGC GATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGC TTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAAC TACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAG CTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGC GTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGAC CCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAGCCTGTGTTATAAACCTG TGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATT GTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAA CCAGA
YJP_MKC264_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAAGCGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTATCGCCCTCTAGTGACGAACCTCATAAAAAAATGGCGCCGATGG CGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTATTAAATGTTTATTTGCCAGCGGATTACGCAGACCTGCATCAATCA GATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTTCTGCCA GAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCACATTTCA TATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCAGACGAT CCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAAAATGTT TAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCAGAATAT CACGACGGGTTTCTTCGGCACTATGACGCGGACGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCTATTAGC TCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCAGAGTTGAAAGCACATCAACTGACCCCTAG CGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCAGATGAGGGGGATCAGAGCATGCTCGCGCAAAAG TGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTCGCGTT GGACGCACAAAGGGACTTTTGTGCTACCACATTAAAAGAGGTGGCCAGGGGGATCACCTGGCAGCATGCTGCCTAATAAAAAAGGCCGGAAAATCCGGCCTTTTG ACGCTTTAGCTCTGACGGCTCAGTGCTGCCCACAGGCTTTCTTCAACACCGGTCAGCAGTTCATCGGTCAGGCTCAGATAATCGTTCTCGATCATTTCATACACT TCCATAAAGCTGCCAAACAGAATTGCAATCAGTGCATTTTCCGGCAGATTACGAATCACACCCTGTTTCTGACCTTCACGAAAAAAGGTGCACACAAATTCAACC AGTTTCTGATATGCCAGACGGCTTTCTTCGGTCAGAAAGGTGCCCTGGCTATGGGTTTTGATAAAACCCAGTGCACGCGGATGATTTTTGGTAAAGGTCACCATA CCTTCAAAAATGTGATGAAAGCCATCACGATAACCATCACGTTCAGACCGCTTTCAATCACTGCAGAAATTCATTAACATGCTGCTGAAACAGTTCG TTCACCAGGCTTTCTTTGTTTTTGAAATAGCGATAAATGGTGCCTGCACCAACTTTTGCATTTTCTGCAATCATCGGCATGGTGGTTGCATCAAAACCACGTTCT GCAAACAGCAGCAGGCTTGCGCTAAAAATTGCTTTCTGTTTGGTCGGGGTGCTTTCCATCCTCCCGGCCTCGTTTGGTTAAACAAAATTATTTGTAGAGGACTGT TTCGGCCCTTTTGGGCCATCGTCAGGTCGGATACACATCCGGCGACAGTCTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGA GCGAGAGTGGTTGCGAGTAGGACCAAAACGAAAAAAGGCCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGG TTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTC GGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTT TTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACA AATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTC ATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAGACGCTTTCAATGCTCAGACCGCTATA ACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTA GTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCT TATAGACCGATCGCACGGTCTATATACTAAAGTAGGACTGAGCTAGCTGTCAATTGGTAACGTATAGCTTCCATACCCTCCCAGTACAATCTGCTCTGATGCCCT CGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAAACACCCTTTCG GGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCC
YJP_MKC264_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGCGACGTACGGTGGAATCTG ATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGACTGTCGCCGGATGTGTATCCGACCTGACGATGGCCCAAAAGGGCCGAAACAGTCC TCTACAAATAATTTTGTTTAACCAAACGAGGCCGGGAGGATGGAAAGCACCCCGACCAAACAGAAAGCAATTTTTAGCGCAAGCCTGCTGCTGTTTGCAGAACGT GGTTTTGATGCAACCACCATGCCGATGATTGCAGAAAATGCAAAAGTTGGTGCAGGCACCATTTATCGCTATTTCAAAAACAAAGAAAGCCTGGTGAACGAACTG TTTCAGCAGCATGTTAATGAATTTCTGCAGTGATTGAAAGCGGTCTGGCAAATGAACGTGATGGTTATCGTGATGGCTTTCATCACATTTTTGAAGGTATGGTG ACCTTTACCAAAAATCATCCGCGTGCACTGGGTTTTATCAAAACCCATAGCCAGGGCACCTTTCTGACCGAAGAAAGCCGTCTGGCATATCAGAAACTGGTTGAA TTTGTGTGCACCTTTTTTCGTGAAGGTCAGAAACAGGGTGTGATTCGTAATCTGCCGGAAAATGCACTGATTGCAATTCTGTTTGGCAGCTTTATGGAAGTGTAT GAAATGATCGAGAACGATTATCTGAGCCTGACCGATGAACTGCTGACCGGTGTTGAAGAAAGCCTGTGGGCAGCACTGAGCCGTCAGAGCTAAAGCGTCAAAAGG CCGGATTTTCCGGCCTTTTTTATTAGGCAGCATGCTGCCAGGTGATCCCCCTGGCCACCTCTTTTTACTAACGATCGTTGGCTGTGTTGACAATTAATCATCGGC TCGTATAATGTGTGGAATTGTGAGCGCTCACAATTAGTCGTCAAGTGCTGTGCTTGCACTTCTGATGAGGCAGTGATGCCGAAACGACCTCTACAAATAATTTTG TTTAAGCCATGCCATTGGCTTTTGATAGAGGACAACTACTAGATGAACCTGAAAGATAAAATTCTGGGCGTTGCCAAAGAACTGTTTATCAAAAATGGCTATAAC GCAACCACCACCGGTGAAATTGTTAAACTGAGCGAAAGCAGCAAAGGCAATCTGTATTATCACTTTAAAACCAAAGAGAACCTGTTTCTGGAAATCCTGAACATC GAAGAAAGCAAATGGCAAGAGCAGTGGAAAAAAGAACAAATCAAATGCAAAACCAACCGCGAGAAATTCTATCTGTATAATGAACTGAGCCTGACCACCGAATAT TACTATCCGCTGCAGAATGCCATCATCGAGTTTTATACCGAGTACTATAAAACCAACAGCATCAACGAGAAAATGAACAAACTGGAAAACAAATACATCGATGCC TACCACGTGATCTTTAAAGAAGGTAATCTGAACGGCGAATGGTGCATTAATGATGTTAATGCCGTGAGCAAAATTGCAGCAAATGCCGTTAATGGCATTGTTACC TTTACCCATGAGCAGAATATCAACGAACGCATTAAACTGATGAACAAATTCAGCCAGATCTTTCTGAATGGCCTGAGCAAATAATCTTTAAAAAGAAACCTCCGC ATTGCGGAGGTTTCGCCTTTTGATACTCTGTCTGAAGTAATTCTTGCCGCAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGCTTCCATTAGAAAGCAAA AAGCCTGCTAGAAAGCAGGCTTTTTTGAATTTGGCTCCTCTGACAATGAACGAATGGCTCATGTCTGATTCGTTACCAATTGACGGAATGAACGTTCATTCCGAT AATGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAAT ACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGG GCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCC

	TGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACG ACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGG GGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGG ACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGA GCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAGGTGTGTTA TAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAG GTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTA ATCGATAACCAGA
YJP_MKC265_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCAAGCGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTGCTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACT GCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGGAGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTG AATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTAACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCA TTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCATCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTT TTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATATTCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTT TTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATGTTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGA TTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTATAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTC AGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAAATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCA CAGCACTTGACGACTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAGGGAGCGAGAGTGGTTGCGACCTCATAAAAAAATGGCGCC GATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTATTAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCAT CAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAACCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTT CTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGGCCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCAC ATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCTGATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCA GACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGACCAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAA AATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCATTAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCA GAATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGAACCGGCAGATCGCTTTTACGATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCT ATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGTCATCACTGACTCATCAGAGTTGAAAGCACATCAACTGAC CCCTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAGATAGGCCCCCCCAGATGAGGGGGATCAGAGCATGTCGCG CAAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCGAATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGT CCGTTTGGACGCACAAAGGGACTTTTGTGCTACCACATTAAAAGAGGTGGCCAGGGGGATCACCTGGCAGCATGCTGCCTAATAAAAAAGGCCGGAAAATCCGGC CTTTTGACGCTTTAGCTCTGACGGCTCAGTGCTGCCCACAGGCTTTCTTCAACACCGGTCAGCAGTTCATCGGTCAGGCTCAGATAATCGTTCTCGATCATTTCA TACACTTCCATAAAGCTGCCAAACAGAATTGCAATCAGTGCATTTTCCGGCAGATTACGAATCACACCCTGTTTCTGACCTTCACGAAAAAAGGTGCACACAAAT TCAACCAGTTTCTGATATGCCAGACGGCTTTCTTCGGTCAGAAAGGTGCCCTGGCTATGGGTTTTGATAAAACCCAGTGCACGCGGATGATTTTTGGTAAAGGTC ACCATACCTTCAAAAATGTGATGAAAGCCATCACGATAACCATCACGTTCATTTGCCAGACCGCTTTCAATACACTGCAGAAATTCATTAACATGCTGCTGAAAC AGTTCGTTCACCAGGCTTTCTTTGTTTTTGAAATAGCGATAAATGGTGCCTGCACCAACTTTTGCATTTTCTGCAATCATCGGCATGGTGGTTGCATCAAAACCA CGTTCTGCAAACAGCAGCAGGCTTGCGCTAAAAATTGCTTTCTGTTTGGTCGGGGTGCTTTCCATCCTCCCGGCCTCGTTTGGTTAAACAAAATTATTTGTAGAG GACTGTTTCGGCCCTTTTGGGCCATCGTCAGGTCGGATACACATCCGGCGACAGTCTTATAGACCGATCGCACGGTCTATATACTAAAGTAGGACTGAGCTAGCT GTCAATTGGTAACGTATAGCTTCCATACCAGTAGGACCAAAACGAAAAAGGCCCCCTTTCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAA AAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAAACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCA ACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGCAGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCA TTTTCAACCAGTTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGGGTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGA AATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCCAGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGT TCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAAATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATG CTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTATGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGG GTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTTGTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCAC ATGCGTTGACCGCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTATCGCCCTCTAGTGACGACTCCCAGTACAATCTGCTCTGATGCCCT CGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCG GGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCC
YJP_MKC265_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGGAGCCTACCTGCCTTATTG GATCCAATTGACAGCTAGCTCAGTCCTAGGTACCATTGGATCCAATAGCGGTCAACGCATGTGCTTTGCGTTCTGATGAGACAGTGATGTCGAAACCGCCTCTAC AAATAATTTTGTTTAACTATGGACTATGTTTGAAAGGGAGAAATACTAGATGGCACGTACCCCGAGCCGTAGCAGCATTGGTAGCCTGCGTAGTCCGCATACCCA TAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGTGGTTATAGCGGTCTGAGCATTGAAAGCGTTGCACGTCGTGCCGGTGCAAGCAAACCGACCAT TTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCCGAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATTTCCGGATCTGGGTAGCTTTAAAGCCGATCT GGATTTTCTGCTGCGTAATCTGTGGAAAGTTTGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGCAGAAGCACAGCTGGACCCTGCAACCCTGAC CCAGCTGAAAGATCAGTTTATGGAACGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGGTGAACTGCCGAAAGATACCAATCGTGAACT GCTGCTGGATATGATTTTTGGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGAAGAATTTACCTTCCTGCTGATTAATGGTGT TTGTCCGGGTACACAGCGTTAATCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAAGAGGCCTCCCGA AAGGGGGGCCTTTTTTCGTTTTGGTCCTACTCGACGTACGGTGGAATCTGATTCGTTACCAATTGACATGATACGAAACGTACCGTATCGTTAAGGTAGACTGTC GCCGGATGTGTATCCGACCTGACGATGGCCCAAAAGGGCCGAAACAGTCCTCTACAAATAATTTTGTTTAACCAAACGAGGCCGGGAGGATGGAAAGCACCCCGA CCAAACAGAAAGCAATTTTTAGCGCAAGCCTGCTGCTGTTTGCAGAACGTGGTTTTGATGCAACCACCATGCCGATGATTGCAGAAAATGCAAAAGTTGGTGCAG GCACCATTTATCGCTATTTCAAAAACAAAGAAAGCCTGGTGAACGAACTGTTTCAGCAGCATGTTAATGAATTTCTGCAGTGTATTGAAAGCGGTCTGGCAAATG AACGTGATGGTTATCGTGATGGCTTTCATCACATTTTGAAGGTATGGTGACCTTTACCAAAAATCATCCGCGTGCACTGGGTTTTATCAAAACCCATAGCCAGG GCACCTTTCTGACCGAAGAAAGCCGTCTGGCATATCAGAAACTGGTTGAATTTGTGTGCACCTTTTTCGTGAAGGTCAGAAACAGGGTGTGATTCGTAATCTGC CGGAAAATGCACTGATTGCAATTCTGTTTGGCAGCTTTATGGAAGTGTATGAAATGATCGAGAACGATTATCTGAGCCTGACCGATGAACTGCTGACCGGTGTG AAGAAAGCCTGTGGGCAGCACTGAGCCGTCAGAGCTAAAGCGTCAAAAGGCCGGATTTTCCGGCCTTTTTTATTAGGCAGCATGCTGCCAGGTGATCCCCTGGC CACCTCTTTTAATGAACGAATGGCTCATGTCTGATTCGTTACCAATTGACGGAATGAACGTTCATTCCGATAATGCTAGCAGCTGTCACCGGATGTGCTTTCCGG TCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCAC CGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCT GAAGTTCATCTGCACCACCGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAA GCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTT CGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAA CGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCA GAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGT CCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAGGTGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAA AGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGG CGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAACCAGA
YJP_MKC266_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTAGTTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAG GGCGGACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTC GATGTTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAG GATGTTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTC CTTGAAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCC GTAGCCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTC GCCGGACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTT CTCCTCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTACCTTAACGATAC GGTACGTTTCGTATCATGTCAATTGGTAACGAATCAGATTCCACCGTACGTCGAAGCGTCAGAGGAGCCAAATTCAAAAAAGCCTGCTTTCTAGCAGGCTTTTTG CTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGG AGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTGAATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTA ACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCATTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCA TCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTTTTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATAT TCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTTTTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATG TTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGATTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTA

	TAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTCAGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAA ATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCACAGCACTTGACGACTATTGGATCCAATGGTACCTAGGACTGAGCTAGCTGTCAA TTGGATCCAATAAGGCAGGTAGGCTCACCTGCGGAGAAAAGGTCCGAAAATTCGGACCCGATGGAATTGGATAAAAAAAGGCCCCTGTTGAAATTGCAGGGGCCT GGTACGAGCATTATTTTGCATCTGCCTGTTTAATCAGTTCCAGGGTTTTTCAACACGATCTGCAGGCAGCGGTGCACCCAGAACTGCCAGGCTTGCATCTGCCA GCATAATTGCGGTTTCCGGCAGGCTATCTGCGCTCAGCGGACTCGGAATTTTACCATCATTGCGACGCATTTCAATAACGCTCATGGTAATATGAAACGGCAGTT CTGCACGCGGATCATCACCAACAATTTCGGTTGCCAGATCACGAAAAACATTGGTCAGTGCTTCACGCTGGCTATGATATTCTGCAAATTCTTCGCTACCAACAA TCGGCAGCTGATACAGACGACCAACATTCCATTTGGTGCTCAGCAGCAGACGAACTTCGCTTGCAACAATTGCCCACAGACGCATTTCCGGACCTGCATCCAGGG TGCTCAGATCTTCTGCCAGAACGGTGCTCGGTTCAACGGTGCTTTTCAGCAGGGTCAGAAAGATTTCGGTTTTGCTCGGAAAATGATAATACAGGCTTGCCTGAC GAATACCAACTGCATCTGCAATCTGATGGGTACTGGTGGTTGCAAAACCCTGACGGGTAAACAGTTCTGCGCTTGCATCCAGAATTTCTTCACGCGGATTTTTAC CTGCACGACGCGGTGCACTACGACGCGGACGACCAACTGCGCCTGCCATCTAGTAACCTCTTTGCTGATTATTAGGGAACATTTTAAACAAAATTATTTGTAGAG GGGTGTTTCGTCCTTTCGGACTCATCAGTCAAGGTACGCACCTTGAGACACCCTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAG GGAGCGAGAGTGGTTGCGCATTCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTAT TAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCATCAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAA CCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTTCTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGG CCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCACATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCT GATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCAGACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGAC CAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAAAATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCAT TAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCAGAATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGACGAACCGGCAGATCGCTTTTAC GATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCTATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGT CATCACTGACTCATCAGAGTTGAAAGCACATCAACTGACCCCTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAG ATAGGCCCCCCCAGATGAGGGGGATCAGAGCATGTCGCGCAAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCG AATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTCCGTTTGGACGCACAAAGGGACTTTTGTGCTACCAAGTAGGACCAAAACGAAAAAAGGCCCCCCTT TCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAA ACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGC AGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGG GTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCC AGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAA ATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTA TGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTT GTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTA TCGCCCTCTAGTGACGACTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTT CTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCA GGTGCGGGCTTTTTTCTGTGTTTCC
YJP_MKC266_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGGGTATGGAAGCTATACGTT ACCAATTGACAGCTAGCTCAGTCCTACTTTAGTATATAGACCGTGCGATCGGTCTATAAGCGGTCAACGCATGTGCTTTGCGTTCTGATGAGACAGTGATGTCGA AACCGCCTCTACAAATAATTTTGTTTAACTATGGACTATGTTTGAAAGGGAGAAATACTAGATGGCACGTACCCCGAGCCGTAGCAGCATTGGTAGCCTGCGTAG TCCGCATACCCATAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGTGGTTATAGCGGTCTGAGCATTGAAAGCGTTGCACGTCGTGCCGGTGCAAG CAAACCGACCATTTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCCGAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATTTCCGGATCTGGGTAGCTT TAAAGCCGATCTGGATTTTCTGCTGCGTAATCTGTGGAAAGTTTGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGCAGAAGCACAGCTGGACCC TGCAACCCTGACCCAGCTGAAAGATCAGTTTATGGAACGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGGTGAACTGCCGAAAGATAC CAATCGTGAACTGCTGCTGGATATGATTTTTGGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGAAGAATTTACCTTCCTGCT GATTAATGGTGTTTGTCCGGGTACACAGCGTTAATCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCGGTACCAAATTCCAGAAAA GAGGCCTCCCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCTACTCTTGTCCAACCAAATGATTCGTTACCCTTTGACAGTTTCTATCGATCTATAGATAATGCTAG CAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAAGAGGAGAAATACTAGATG GTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGC GATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAATGC TTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGACGGCAAC TACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAG CTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCACAACATCGAGGACGGCAGC GTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAGTCCGCCCTGAGCAAAGAC CCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAAAATGGTGTTATAAACCTG TGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAATGGCGCACAATGTGCGCCATTTTTCACTTCACAGGTACTATT GTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTTTTTTTATTTAATCGATAA CCAGA
YJP_MKC267_LP#1	AAAAAAAACCCCGCCCTGTCAGGGGCGGGGTTTTTTTTTTTCTTTTGGGTATAGCGTCGTGGACAGTCATTCATCTTTCTGCCCCTCCAAAAGCAAAAACCCGC CGAAGCGGGTTTTTACGTAAATCAGGTGAAACTGACCGATAAGCCGGGACGAGCTGAGCAGTATGTCGACGGTCCGGCGAGAATCTCGCGTAGACACATACATGA GCTAGTTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCATGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAG GGCGGACTGGTAGCTAAGGTAGTGGTTGTCGGGCAGCAGCACGGGGCCGTCGCCGATTGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTC GATGTTGTGGCGGATCTTGAAGTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCCCCAG GATGTTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACCTCGGCGCGGGTCTTGTAGTTGCCGTCGTC CTTGAAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTTGAAGAAGTCGTGCAGCTTCATGTGGTCGGGGTAGCGGGCGAAGCATTGCAGGCC GTAGCCGAAGGTGGTCACGAGGGTGGGCCAGGGCACGGGCAGCTTGCCTGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTC GCCGGACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTCGCCCTTGCTCACCATCTAGTATTT CTCCTCTTTCTCTAGTATTAAACAAAATTATTTGTAGAGGCTGTTTCGTCCTCACGGACTCATCAGACCGGAAAGCACATCCGGTGACAGCTACCTTAACGATAC GGTACGTTTCGTATCATGTCAATTGGTAACGAATCAGATTCCACCGTACGTCGAAGCGTCAGAGGAGCCAAATTCAAAAAGCCTGCTTTCTAGCAGGCTTTTTG CTTTCTAATGGAAGCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGCGGCAAGAATTACTTCAGACAGAGTATCAAAAGGCGAAACCTCCGCAATGCGG AGGTTTCTTTTTAAAGATTATTTGCTCAGGCCATTCAGAAAGATCTGGCTGAATTTGTTCATCAGTTTAATGCGTTCGTTGATATTCTGCTCATGGGTAAAGGTA ACAATGCCATTAACGGCATTTGCTGCAATTTTGCTCACGGCATTAACATCATTAATGCACCATTCGCCGTTCAGATTACCTTCTTTAAAGATCACGTGGTAGGCA TCGATGTATTTGTTTTCCAGTTTGTTCATTTTCTCGTTGATGCTGTTGGTTTTATAGTACTCGGTATAAAACTCGATGATGGCATTCTGCAGCGGATAGTAATAT TCGGTGGTCAGGCTCAGTTCATTATACAGATAGAATTTCTCGCGGTTGGTTTTGCATTTGATTTGTTCTTTTTTCCACTGCTCTTGCCATTTGCTTTCTTCGATG TTCAGGATTTCCAGAAACAGGTTCTCTTTGGTTTTAAAGTGATAATACAGATTGCCTTTGCTGCTTTCGCTCAGTTTAACAATTTCACCGGTGGTGGTTGCGTTA TAGCCATTTTTGATAAACAGTTCTTTGGCAACGCCCAGAATTTTATCTTTCAGGTTCATCTAGTAGTTGTCCTCTATCAAAAGCCAATGGCATGGCTTAAACAAA ATTATTTGTAGAGGTCGTTTCGGCATCACTGCCTCATCAGAAGTGCAAGCACAGCACTTGACGACTATTGGATCCAATGGTACCTAGGACTGAGCTAGCTGTCAA TTGGATCCAATAAGGCAGGTAGGCTCACCTGCGGAGAAAAGGTCCGAAAATTCGGACCCGATGGAATTGGATAAAAAAAGGCCCCTGTTGAAATTGCAGGGGCCT GGTACGAGCATTATTTTGCATCTGCCTGTTTAATCAGTTCCAGGGTTTTTCAACACGATCTGCAGGCAGCGGTGCACCCAGAACTGCCAGGCTTGCATCTGCCA GCATAATTGCGGTTTCCGGCAGGCTATCTGCGCTCAGCGGACTCGGAATTTTACCATCATTGCGACGCATTTCAATAACGCTCATGGTAATATGAAACGGCAGTT CTGCACGCGGATCATCACCAACAATTTCGGTTGCCAGATCACGAAAAACATTGGTCAGTGCTTCACGCTGGCTATGATATTCTGCAAATTCTTCGCTACCAACAA TCGGCAGCTGATACAGACGACCAACATTCCATTTGGTGCTCAGCAGCAGACGAACTTCGCTTGCAACAATTGCCCACAGACGCATTTCCGGACCTGCATCCAGGG TGCTCAGATCTTCTGCCAGAACGGTGCTCGGTTCAACGGTGCTTTTCAGCAGGGTCAGAAAGATTTCGGTTTTGCTCGGAAAATGATAATACAGGCTTGCCTGAC GAATACCAACTGCATCTGCAATCTGATGGGTACTGGTGGTTGCAAAACCCTGACGGGTAAACAGTTCTGCGCTTGCATCCAGAATTTCTTCACGCGGATTTTTAC CTGCACGACGCGGTGCACTACGACGCGGACGACCAACTGCGCCTGCCATCTAGTAACCTCTTTGCTGATTATTAGGGAACATTTTAAACAAAATTATTTGTAGAG GGGTGTTTCGTCCTTTCGGACTCATCAGTCAAGGTACGCACCTTGAGACACCCTGTGCTCATTATATCTATCACTGATAGGGATGTCAATCTCTATCACTGATAG GGAGCGAGAGTGGTTGCGCATTCATAAAAAAATGGCGCCGATGGGCGCCATTTTTCACTGTGTCATACGTAAAAAAGGGCGATCTTGCGACCGCCCTTTTTTTAT TAAATGTTTATTTTGCCAGCGGATTACGCAGACCTGCATCAATCAGATCAACCAGCTGATCACAACGGGTTGCCAGATTACCAATATCTTCTTGTGCAATCAGAA CCGGATGAATAACGCTGGTCAGTGCATGCAGAACGGTTTCTGCCAGAACCGGAATATCGGTTGCAATATACAGACCTGCTTCAACACCATCACGAATAATTTCGG CCAGCAGTTTTGCAATCACGCTTTTGTAATAATCGCCACATTTCATATCCTGTTTGGCGGTCATCAGGATCTGAATAAAAACCCGTATGTGTTTGAAATGATCCT GATGATGCTGTTCCATCAGATTACGTGCCAGATGACGCAGACGATCCAGCGGTGCATGGCTTTTATCCAGCGGACAAATCTGACGTTCAAAAACACCAATCTGAC CAAAACCAATTGCATCAACCAGTGCGTTTTTGCTGCTAAAATGTTTAAACACATTTGCCGGACTCATATTCAGTGCGCTTGCAATATCTGCAATGGCAACTGCAT TAAAACCACGTTCACTAAACAGTTCTTCGGCTTTTGCCAGAATATCACGACGGGTTTCTTCGGCACTATGACGCGGACGACGACGAACCGGCAGATCGCTTTTAC GATCACCTTTACGCACCTGATCAATGGTTTTGTTCATCTATTAGCTCCTGTTTGAAACATAGTCCATAGCGTATTAAACAAAATTATTTGTAGAGGGGGTTTCGT CATCACTGACTCATCAGAGTTGAAAGCACATCAACTGACCCCTAGCGTTTTCAAGTTCGTGGAAAGCAGAATGGTTCAGGCGAGCCGGATCGGAAATTCCCTCAG ATAGGCCCCCCCAGATGAGGGGGATCAGAGCATGTCGCGCAAAAGTGTGCAGCGGTTTTGCGATAACGACATGCGCCAAAACAAAGACTGAAAGCGCGAGGAGCG AATCTGAAAGATCGCGACCCGCTTTAGAGCGCCGTGCGTCCGTTTGGACGCACAAAGGGACTTTTGTGCTACCAAGTAGGACCAAAACGAAAAAAGGCCCCCCTT TCGGGAGGCCTCTTTTCTGGAATTTGGTACCGAGTGCAGACGTAAAAAAAGCGGCGTGGTTAGCCGCTTTTTTAATTGCCGGATTAACGCTGTGTACCCGGACAA

	ACACCATTAATCAGCAGGAAGGTAAATTCTTCAATATCCTGTTCAACGGTCAGCTGTTCGGTCAGCAGGCGATACCAACAAAAACCAAAAATCATATCCAGCAGC AGTTCACGATTGGTATCTTTCGGCAGTTCACCATTGCTAATGGCATTTTCAACCAGTTTTTTCGGCATCTCACGACGACGTTCCATAAACTGATCTTTCAGCTGG GTCAGGGTTGCAGGGTCCAGCTGTGCTTCTGCAATAACACAACGAAATGCTTCACCACAAATGGTTTCACGCCAAACTTTCCACAGATTACGCAGCAGAAAATCC AGATCGGCTTTAAAGCTACCCAGATCCGGAAATTTACGCACCTGTTCGCTTTCATTTTCATACACTTCGGCAATCAGTGCTGCTTTATTGGTCCACCAACGATAA ATGGTCGGTTTGCTTGCACCGGCACGACGTGCAACGCTTTCAATGCTCAGACCGCTATAACCACATTCTTTCAGGATTTCAATGGTGCTGGTCAGAATTGCTTTA TGGGTATGCGGACTACGCAGGCTACCAATGCTGCTACGGCTCGGGGTACGTGCCATCTAGTATTTCTCCCTTTCAAACATAGTCCATAGTTAAACAAAATTATTT GTAGAGGCGGTTTCGACATCACTGTCTCATCAGAACGCAAAGCACATGCGTTGACCGCTGCTAGCAGCCTACGTAGGAAGTGATGAGTTGTCAAGTTTGTCACTA TCGCCCTCTAGTGACGACTCCCAGTACAATCTGCTCTGATGCCCTCGAGTGCGGCCGCACTAGTGTCGACGGAGCTCGAATTCGGATCCGAAGTTCCTATACTTT CTAGAGAATAGGAACTTCGGAATAGGAACTTCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACCATGCCTATTTGTTTATTTTTCTAAATACA TTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCTTGCTCTAG GCCGCGATTAAATTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGCAATCAGGTGCGACAATCTATCGATTGTATGGGAAGCC CGATGCGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCTGACGGAATTTATGCCTCTTCC GACCATCAAGCATTTTATCCGTACTCCTGATGATGCATGGTTACTCACCACTGCGATCCCCGGGAAAACAGCATTCCAGGTATTAGAAGAATATCCTGATTCAGG TGAAAATATTGTTGATGCGCTGGCAGTGTTCCTGCGCCGGTTGCATTCGATTCCTGTTTGTAATTGTCCTTTTAACAGCGACCGCGTATTTCGTCTCGCTCAGGC GCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCC ATTCTCACCGGATTCAGTCGTCACTCATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGGGAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAAT CGCAGACCGATACCAGGATCTTGCCATCCTATGGAACTGCCTCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTCAAAAATATGGTATTGATAATCCTGA TATGAATAAATTGCAGTTTCATTTGATGCTCGATGAGTTTTTCTAAAGCTCGCTTGGACTCCTGTTGATAGATCCAGTAATGACCTCAGAACTCCATCTGGATTT GTTCAGAACGCTCGGTTGCCGCCGGGCGTTTTTTATTGGTGAGAATCCAAGCACAAGAAGATCCGGCCACGATGCGTCCGGCGTAGAGGATCTGAAGATCAGCAG TTCAACCTGTTGATAGTACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTAACGTACTAAGCTCTCATGTTTAACGAACTAAACCCTCATGGCTA ACGTACTAAGCTCTCATGGCTAACGTACTAAGCTCTCATGTTTCACGTACTAAGCTCTCATGTTTGAACAATAAAATTAATATAAATCAGCAACTTAAATAGCCT CTAAGGTTTTAAGTTTTATAAGAAAAAAAAGAATATATAAGGCTTTTAAAGCTTTTAAGGTTTAACGGTTGTGGACAACAAGCCAGGGATGTAACGCACTGAGAA GCCCTTAGAGCCTCTCAAAGCAATTTTGAGTGACACAGGAACACTTAACGGCTGACATGGGAATTAGCCATGGGCCCGTGCGAATCATTTTTACGGTTCCTGGCC TTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTGGATAACCGTATTACCGCCTGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGG TACCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCCAGCCAAGAGCAGTGCCTTGCAGAAGTTCTCGGGCGAAGAGC TACTCCCCTTCTGCGCCGTCCGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCGGACCAAAACGAAAAAACACCCTTTCGGGTGTCTTTTCTGGAATTTGGTA CCGAGCCTTTGGTCGAAAAAAAAAGCCCGCACTGTCAGGTGCGGGCTTTTTTCTGTGTTTCC
YJP_MKC266_LP#2	ACATTTAATAAAAAAAGGGCGGTCGCAAGATCGCCCTTTTTTACGTATGACACAGTGAAAAATGGCGCCCATCGGCGCCATTTTTTTATGGAAGTTCCTATTCTC TAGAAAGTATAGGAACTTCAGACGAGAAACGTTCCGTCCGTCTGGGTCAGTTGCCTAACCTTAACTTTTACGCAGGTTCAGCTTGGAAACACAGAAAAAAGCCCG CACCTGACAGTGCGGGCTTTTTTTTTCGACCAAAGGCTCGGTACCAAATTCCAGAAAAGACACCCGAAAGGGTGTTTTTTCGTTTTGGTCCAGGCGGTAATACGG TTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAATGATTCGCACGGGCCCATGGCTAATTAC CATGTCGGTAATGACTCCAACTTATTGATAGTGTTTTATGTTCAGATAATGCCCGATGACTTTGTCATGCAGCTCCACCGATTTTGAGAACGACAGCGACTTCCG TCCCAGCCGTGCCAGGTGCTGCCTCAGATTCAGGTTATGCCGCTCAATTCGCTGCGTATATCGCTTGCTGATTACGTGCAGCTTTCCCTTCAGGCGGGATTCATA CAGCGGCCAGCCATCCGTCATCCATATCACCACGTCAAAGGGTGACAGCAGGCTCATAAGACGCCCCAGCGTCGCCATAGTGCGTTCACCGAATACGTGCGCAAC AAACGTCTTCCGGAGACTGTCATACGCGTAAAACAGCCAGCGCTGGCGCGATTTAGCCCCGACATAGCCCCACTGTTCGTCCATTTCCGCGCAGACGATGACGTC ACTGCCCGGCTGTATGCGCGAGGTTACCGACTGCGGCCTGAGTTTTTTAAGTGACGTAAAATCGTGTTGAGGCCAACGCCCATAATGCGGGCTGTTGCCCGGCAT CCAACGCCATTCATGGCCATATCAATGATTTTCTGGTGCGTACCGGGTTGAGAAGCGGTGTAAGTGAACTGCAGTTGCCATGTTTTACGGCAGTGAGAGCAGAGA TAGCGCTGATGTCCGGCGGTGCTTTTGCCGTTACGCACCACACCGTCAGTAGCTGAACAGGAGGGACAGCTGATAGAAACAGAAGCCACTGGAGCACCTCAAAAA CACCATCATACACTAAATCAGTAAGTTGGCAGCATCACCTCCCATGTCAGCCGTTAAGTGTTCCTGTGTCACTCAAAATTGCTTTGAGAGGCTCTAAGGGCTTCT CAGTGCGTTACATCCCTGGCTTGTTGTCCACAACCGTTAAACCTTAAAAGCTTTAAAAGCCTTATATATTCTTTTTTTTCTTATAAAACTTAAAACCTTAGAGGC TATTTAAGTTGCTGATTTATATTAATTTTATTGTTCAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTTAGCCATGAGAGCTTAGTACGTTAGC CATGAGGGTTTAGTTCGTTAAACATGAGAGCTTAGTACGTTAAACATGAGAGCTTAGTACGTGAAACATGAGAGCTTAGTACGTACTATCAACAGGTTGAACTGC TGATCTTCAGATCCTCTACGCCGGACGCATCGTGGCCGGATCTTCTTGTGCTTGGATTCTCACCAATAAAAAACGCCCGGCGGCAACCGAGCGTTCTGAACAAAT CCAGATGGAGTTCTGAGGTCATTACTGGATCTATCAACAGGAGTCCAAGCGAGCTTTACGCCCCGCCCTGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCA TTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTGAATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGG GGGCGAAGAAGTTGTCCATATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGAGACGAAAAACATATTCTCAATAAACCCTTTAGGGA AATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTGGTATTCACTCCAGAGCGATGAAAACGTTTCAG TTTGCTCATGGAAAACGGTGTAACAAGGGTGAACACTATCCCATATCACCAGCTCACCGTCTTTCATTGCCATACGAAATTCCGGATGAGCATTCATCAGGCGGG CAAGAATGTGAATAAAGGCCGGATAAAACTTGTGCTTATTTTTCTTTACGGTCTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTGAG CAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTTTCTCCATTTTAGCTTCCTTAGCTCCTG AAAATCTCGATAACTCAAAAAATACGCCCGGTAGTGATCTTATTTCATTATGGTGAAAGTTGGAACCTCTTACGTGCCGATCAACGTCTCATTTTCGCCAATTTA AATCGTAATTATTGGGGACCCTGTATTTAGAAAAATAAACAAATAGGCATGGTCTAAGAAACCATTATTATCATGACATTAACCTATAAAAATAGAAGTTCCTAT TCCGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCGGATCCGAATTCGAGCTCCGTCGACACTAGTGCGGCCGCACTCGAGGGCATCAGAGCAGATTGGGAGG GTATGGAAGCTATACGTTACCAATTGACAGCTAGCTCAGTCCTACTTTAGTATATAGACCGTGCGATCGGTCTATAAGCGGTCAACGCATGTGCTTTGCGTTCTG ATGAGACAGTGATGTCGAAACCGCCTCTACAAATAATTTTGTTTAACTATGGACTATGTTTGAAAGGGAGAAATACTAGATGGCACGTACCCCGAGCCGTAGCAG CATTGGTAGCCTGCGTAGTCCGCATACCCATAAAGCAATTCTGACCAGCACCATTGAAATCCTGAAAGAATGTGGTTATAGCGGTCTGAGCATTGAAAGCGTTGC ACGTCGTGCCGGTGCAAGCAAACCGACCATTTATCGTTGGTGGACCAATAAAGCAGCACTGATTGCCGAAGTGTATGAAAATGAAAGCGAACAGGTGCGTAAATT TCCGGATCTGGGTAGCTTTAAAGCCGATCTGGATTTTCTGCTGCGTAATCTGTGGAAAGTTTGGCGTGAAACCATTTGTGGTGAAGCATTTCGTTGTGTTATTGC AGAAGCACAGCTGGACCCTGCAACCCTGACCCAGCTGAAAGATCAGTTTATGGAACGTCGTCGTGAGATGCCGAAAAAACTGGTTGAAAATGCCATTAGCAATGG TGAACTGCCGAAAGATACCAATCGTGAACTGCTGCTGGATATGATTTTTGGTTTTTGTTGGTATCGCCTGCTGACCGAACAGCTGACCGTTGAACAGGATATTGA AGAATTTACCTTCCTGCTGATTAATGGTGTTTGTCCGGGTACACAGCGTTAATCCGGCAATTAAAAAAGCGGCTAACCACGCCGCTTTTTTTACGTCTGCACTCG GTACCAAATTCCAGAAAAGAGGCCTCCCGAAAGGGGGGCCTTTTTTCGTTTTGGTCCTACTCTTGTCCAACCAAATGATTCGTTACCCTTTGACAGTTTCTATCG ATCTATAGATAATGCTAGCAGCTGTCACCGGATGTGCTTTCCGGTCTGATGAGTCCGTGAGGACGAAACAGCCTCTACAAATAATTTTGTTTAATACTAGAGAAA GAGGAGAAATACTAGATGGTGAGCAAGGGCGAGGAGCTGTTCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCGTG TCCGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACAGGCAAGCTGCCCGTGCCCTGGCCCACCCTCGTGACCACCTTC GGCTACGGCCTGCAATGCTTCGCCCGCTACCCCGACCACATGAAGCTGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCTTC TTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGC AACATCCTGGGGCACAAGCTGGAGTACAACTACAACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAACTTCAAGATCCGCCAC AACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCAATCGGCGACGGCCCCGTGCTGCTGCCCGACAACCACTACCTTAGCTACCAG TCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTAA AATGGTGTTATAAACCTGTGTGAGAGTTAAGTTTACATGGGCAAAGTTGATGACCGGGTCGTCCGTTGCAGACAAAAAAAAATGGCGCACAATGTGCGCCATTTTT CACTTCACAGGTACTATTGTTTTGAATTGAAAAGGGCGCTTCGGCGCCCTTTTTGCATTTGTTGACGGCATATATTTGTATATCGAAGCGCCCTGATGGGCGCTT TTTTTATTTAATCGATAACCAGA

a. *Annotation colors. Blue: Promoters; Purple: Ribozymes; Green: Repressors, YFP and Sensor ORFs; Red: Terminators; Orange: FRT sites and att sites; yellow highlight: RBSs; Gray highlight: antibiotic resistance gene and origin of rep; Green highlight: Transposase (Tn5, Tn7) recognition sites*

Appendix Table 8: Strains used in this study

Strain Name	Plasmid Integrated	Related figure	Marker removal
YJP_DHC404	pIYJP019	Fig 1b	N
YJP_MKC172	Landing pad DNA, pIYJP072	Fig 1c	N
YJP_MKC173	Landing pad DNA, pIYJP072	Fig 1c, Fig 5	Y
YJP_MKC174	pIYJP064-Sensor	Fig 2c, Appendix Fig 5	N
YJP_MKC108	pIYJP064-Sensor, pIYJP067-PTac	Fig 2c, Appendix Fig 5	N
YJP_MKC110	pIYJP064-Sensor, pIYJP067-PBadmc	Fig 2c, Appendix Fig 5	N
YJP_MKC111	pIYJP064-Sensor, pIYJP067-PTet	Fig 2c, Appendix Fig 5	N
YJP_MKC112	pIYJP064-Sensor, pIYJP067-PCymRC	Fig 2c, Appendix Fig 5	N
YJP_MKC113	pIYJP064-Sensor, pIYJP067-PVanCC	Fig 2c, Appendix Fig 5	N
YJP_MKC114	pIYJP064-Sensor, pIYJP067-PCinR	Fig 2c, Appendix Fig 5	N
YJP_MKC115	pIYJP064-Sensor, pIYJP067-PTtg	Fig 2c, Appendix Fig 5	N
YJP_MKC254	pIYJP067-PJ23101H	Fig 2a, 2b	Y
YJP_MKC255	pIYJP067-PJ23101L	Appendix Fig 4	Y
YJP_MKC140	pIYJP064-Sensor, pIYJP066-P3-PhlF, pIYJP070-PPhlF	Appendix Fig 7	N
YJP_MKC141	pIYJP064-Sensor, pIYJP066-Q1-QacR, pIYJP070-PQacR	Fig 2d	N
YJP_MKC142	pIYJP064-Sensor, pIYJP066-A1-AmtR, pIYJP070-PAmtR	Fig 2d	N
YJP_MKC146	pIYJP064-Sensor, pIYJP066-F1-AmeR, pIYJP070-PAmeR	Appendix Fig 7	N
YJP_MKC149	pIYJP064-Sensor, pIYJP066-B3-BM3R1, pIYJP070-PBM3R1	Fig 2d	N
YJP_MKC154	pIYJP064-Sensor, pIYJP066-F1-AmeRs, pIYJP070-PAmeR	Fig 2d	N
YJP_MKC155	pIYJP064-Sensor, pIYJP066-E0-BetI, pIYJP070-PBetI	Appendix Fig 7	N
YJP_MKC156	pIYJP064-Sensor, pIYJP066-P1-PhlF, pIYJP070-PPhlF	Fig 2d	N
YJP_MKC158	pIYJP064-Sensor, pIYJP066-E1-BetI, pIYJP070-PBetI	Fig 2d	N
YJP_MKC258	pIYJP064-Sensor, pIYJP066-NOR-Tandem, pIYJP070-PPhlF	Fig 3a, 3c	N
YJP_MKC259	pIYJP064-Sensor, pIYJP066-NOR-Split, pIYJP070-NOR-Split	Fig 3b, 3c	N
YJP_MKC260	pIYJP064-Sensor, pIYJP066-AND-Tandem, pIYJP070-PPhlF	Fig 3d, 3f	Y
YJP_MKC261	pIYJP064-Sensor, pIYJP066-0x08-Tandem, pIYJP070-PPhlF	Fig 3f, Appendix Fig 9	Y
YJP_MKC262	pIYJP064-Sensor, pIYJP066-AND-Split, pIYJP070-AND-Split	Fig 3e, 4	Y
YJP_MKC263	pIYJP064-Sensor, pIYJP066-XNOR-Split, pIYJP070-XNOR-Split	Fig 4	Y
YJP_MKC264	pIYJP064-Sensor, pIYJP066-0x08-Split, pIYJP070-0x08-Split	Fig 4	Y
YJP_MKC265	pIYJP064-Sensor, pIYJP066-0x0B-Split, pIYJP070-0x0B-Split	Fig 4	Y
YJP_MKC266	pIYJP064-Sensor, pIYJP066-0xF1-Split, pIYJP070-0xF1-Split	Fig 4	Y
YJP_MKC267	pIYJP064-Sensor, pIYJP066-0xF1-Split, pIYJP070-0xF1-Split	Fig 5	N

References

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