

SUPPORTING INFORMATION

Fluorescent proteins and in vitro genetic organization for cell-free synthetic biology

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Table S1. Multiple regression model parameters.

Coefficients	Estimate	Std. Error	t value	Pr (> t)
(Intercept)	10.343	6.656	1.554	0.137
%G_5'to RBS 2	-460.799	63.143	-7.298	6.38e-07
%U 3' to RBS 2:%A 3' to RBS 2	364.405	45.752	7.965	1.79e-07

Table S2. DNA sequences used in this study. Each sequence was immediately preceded by a T7 transcriptional promoter (TAATACGACTCACTATA) and immediately followed by a T7 transcriptional terminator (CTAGCATAACCCCTTGGGGCCTCTAAACGGGTCTTGAGGGGTTTTTTG) without additional residues. Start and stop codons are in bold and in bigger font and the ribosome binding site is underlined.

NAME	NOTE	SEQUENCE
RL001A	mYpet	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGTCCAAAGGCGAAGAAGTGT TTACCGGTGTGGTTCCGATTCTGGTGGAAGTGGATGGCGACGTTAACGGTCATAAAATTTAGTGTGCCGCGAAGGTGAAGGCGATGCGACCTATG GCAAACCTGACGCTGAAACTGCTGTGCACCACCGGTAACTGCCGGTCCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGCGTGCAAGTGTTCG CGCGCTACCCGGACCACATGAAACAACACGATTTCTTTAAAAGTGCCATGCCGGAAGGCTATGTTCAAGAACGATGACCGG TAACTACAAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTCAACCGTATTGAAGTGAAGGATCGACTTCAAAGAAGATGGCAATAT TCTGGGTCATAAACTGGAATATAACTACAATAGCCACAACGTTATATTACCGCGGATAAACAGAAAAACGGCATCAAAGCCAACCTCAAATCCGC CATAACATCGAAGACGGCGGTGTTCAACTGGCCGATCACTACCAGCAAAACACCCGATTGGTGATGGTCCGGTCTGCTGCCGGATAATCATTATC TGTCATACCAAGTGGCACTGTTAAAGACCCGAATGAAAAACGTGATCACATGGTGTCTGGAATTTCTGACCGCGCCGGCATTACGGAGGGTA TGAACGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL002A	Ypet	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGTCCAAAGGCGAAGAAGTGT TTACCGGTGTGGTTCCGATTCTGGTGGAAGTGGATGGCGACGTTAACGGTCATAAAATTTAGTGTGCCGCGAAGGTGAAGGCGATGCGACCTATG GCAAACCTGACGCTGAAACTGCTGTGCACCACCGGTAACTGCCGGTCCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGCGTGCAAGTGTTCG CGCGCTACCCGGACCACATGAAACAACACGATTTCTTTAAAAGTGCCATGCCGGAAGGCTATGTTCAAGAACGATGACCGG TAACTACAAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTCAACCGTATTGAAGTGAAGGATCGACTTCAAAGAAGATGGCAATAT TCTGGGTCATAAACTGGAATATAACTACAATAGCCACAACGTTATATTACCGCGGATAAACAGAAAAACGGCATCAAAGCCAACCTCAAATCCGC CATAACATCGAAGACGGCGGTGTTCAACTGGCCGATCACTACCAGCAAAACACCCGATTGGTGATGGTCCGGTCTGCTGCCGGATAATCATTATC TGTCATACCAAGTGGCACTGTTAAAGACCCGAATGAAAAACGTGATCACATGGTGTCTGGAATTTCTGACCGCGCCGGCATTACGGAGGGTA TGAACGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL003A	Venus	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG AGCAAAGGCGAAGAAGTGTTC CGGGTGTGGTTCCGATCTGGTGAAGTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGC AAACTGACGCTGAAACTGATTTGCACCACGGTAACTGCCGGTCCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCAC GTTACCCGGATCACATGAAACGCCATGATTTCTTTAAATCTCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAA CTACAAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCT GGGTCACAACTGGAATACAATACAACAGTCATAACGTGTACATTACCGCGGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCAC AACATCGAAGATGGCGGTGTTCACTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTCTGCTGCCGGATAATCATTATCTG AGTTACCAGAGCGCTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGATGGTATG GATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGGCT GCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA

RL004A	mCyPet	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTCTCTAAAGGCGAAGAAGCTGT TTGGCGGTATTGTGCCGATCTGTTGAACTGGAAGGTGATGTCAACGCCATAAAATTTAGCGTGTCTGGCGAAGGTGAAGGCGATGCAACCTATG GTAACTGACGCTGAAATTCATTTGCACCACCGGTAAGCTGCCGTTCCGTGGCCGACCTGGTCACCACCTGACCTGGGGTGTGCAGTGTTC GCGCTACCCGGATCACATGAAACAACGACTTTTTCAAAGCGTGATGCCGGAAGTTATGTTCAAGAACGTACCATTTCTTTAAAGATGACGGC AACTACAAAACCCGCGCGAAGTTAAATTTGAAGGTGATACGCTGGTCAACCGTATTGAACTGAAAGGCATCGATTCAAAGAAGACGGTAATATC CTGGCCATAAACTGGAATACAACCTACAACCTCACATCGTTTACATCACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAAGCTCGCC ATAACATCACCGATGGCTCCGTGCAACTGGCCGACCACTATCAGCAAAACACGCGGATTTGGTGTATGGCCCGTTATCTGCCGGACAATCATTACCT GAGTACCCAGTCCAACTGTCAAAGATCCGAATGAAAAACGTGACCACATGGTCTGCTGGAATTTGTACGGCGCGCGGTATTACCTGGGCAT GGATGAACTGTATAAAGGCAAAGAAAACCTGGATTTCAAAGG TAAG CGGATCCGAATTCGAGCTCCGTGACAAGCTTGGCCGCGACTCGAGCA CCACCACCACCACCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL005A	mCerulean	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAAGAGCTG TTCACAGGGTGTTCGATTCTGTGCAACTGGACGGGACGTTAATGGTCACAAATTCAGCGTTAGCGGTGAGGGCGAGGGTATGCCACTTAT GGTAACTGACCTGAAATTCATCTGTACCACCGCAAACCTGCCTGTTCTTGGCTACACTGGTTACAACACTGACTTGGGGTTCATGTTTTGC TCGCTATCCGGATCACATGAAACAGCACGATTTCTTCAAAGCGCCATGCCGTAAGGTTATGTCCAAGAGCGTACGATCTTCTTAAAGACGACGGC AACTATAAAACCCGTGCCGAGGTGAAATTCGAAGGTGATACCTGGTAAACCGTATCGAACTGAAAGGGATCGACTTCAAAGAGGACGGGAACAT TCTGGCCATAAACTGGAGTATAACGCCATCAGCGATAATGTGTATATTACCGCCGACAAACAGAAAAACGGGATCAAAGCCAACCTCAAATCCG CCACAACATCGAGGATGGTAGCGTTCAACTGGCCGATCACTATCAACAGAATACCCCGATTGGTGTATGGTCTGTTCTGCTGCTGATAACCACTAT CTGAGCACCGTCAAACCTGTCAAAGACCCGAACGAGAAACGTGATCACATGGTCTGCTGGAGTTTGTACCCTGCCGCGACTTACTCTGGGTA TGGATGAACTGTATAAA TAAG CGGATCCGAATTCGAGCTCCGTGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL006A	Tag-RFP-T	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGTCAAAGGCGAAGAAGCTGA TTAAAGAAAACATGCACATGAAACTGTATATGGAGGACGGTGAACAATCATCACTTTAAATGCACCAGTGAAGGCGAAGGTAAACCGTACGAAG GCACCAGACGATCGCATCAAAGTGGTTGAAGGCGGTCCGCTGCCGTTTCTTTCGATATTCTGGCGACAGCTTTATGTATGGTCTCGCACCTTC ATTAATCATACGACGGGCATCCCGATTTCTTAAACAGAGCTTCCGGAAGGTTTACGTTGGGAACGTGTCAACACGTATGAAGATGGCGGTGTGC TGACCGCCACGAGATACCAGCTGCAAGACGGCTGTCTGATTTACAACGTTAAATCCGCGGTGTCAACTTTCCGTCTAATGGCCCGGTGATGCA GAAGAAAACCTGGGTTGGGAAGCCAATACGGAATGCTGTATCCGGCAGATGGCGGTCTGGAAGGCCGTACCGACATGGCACTGAAACTGGTTG GCGGTGCCATCTGATCTGCAACTTCAAACACCGTACCGCAGCAAAAACCCGCGAAAAATCTGAAAATGCCGGGTGTATTACGTTGATCACC GTCTGGAACGATTAAGAAGCCGACAAAGAAACCTATGTGGAACAGCATGAAGTGGCGGTTGCCCGTACTGTGATCTGCCGCTAAACTGGGTG ACAACTGAACGGCATGGACGAACTGTACAAG TAAG CGGATCCGAATTCGAGCTCCGTGACAAGCTTGGCCGCGACTCGAGCACCACCACCACC ACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL007A	mCherry	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCAAGAGTTCGAAATTCGAGGCGAAGGCGAAGG TCGTCGGTATGAGGATACAGACCGCTAAACTGAAAGTCAAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAAAAAACGATGGGTTGGGAGGCCTTAGTGAGCGTATGTATCCAGAAGATGGCGCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATATAAAGCAAAAAACCTGTCAAACCTGCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATTCGAGCTCCGTGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCTGAGATCCGGCTGCTA ACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL008A	mRFP1	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GCTTCTCCGAAGACGTTATCAA AGAGTTCATGCGTTTCAAAGTTCGATGGAAGGTTCCGTTAACGGTCAAGGTTTCGAAATCGAAGGTGAAGGTGAGGTCGTCGACGAAGGTAC CCAGACCGCTAAACTGAAAGTTACCAAAGTGGTCCGCTGCCGTTCCGTTGGGACATCTGTCCCGCAGTTCACGACGGTTCCAAAGCTTACGTT AAACACCCGGCTGACATCCCGACTACCTGAAACTGTCTTCCCGAAAGGTTTCAAATGGGAACGTGTTATGAAACTCGAAGACGGTGGTGTGTTA CCGTTACCCAGGACTCTCCCTGCAAGACGGTGAAGTTCATCTACAAAGTTAAACTGCGTGGTACCAACTCCCGTCCGACGGTCCGTTATGCAAG AAAAACCATGGGTTGGGAAGCTTCCACCGAACGTATGTACCGGAAGACGGTCTGCTGAAAGGTGAAATCAAATGCGCTGAAACTGAAAGACG GTGGTCACTACGACGCTGAAGTTAAACACCTACATGGCTAAAAAACCGTTACGCTGCCGGTCTTACAAAACCGACATCAAACCTGGACATCAC CTCCACAACGAAGACTACACCTCGTTGAACAGTACGAACGTGCTGAAGTCTACTCCACCGGTGCT TAAG CGGATCCGAATTCGAGTCCGT CGACAAGCTTGGCGCGACTCGAGCACCACCACCACCACCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACC GCTGAGCAATAA

RL009A	mVenus	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG AGCAAAGGCCGAAGAAGCTGTTCA CGGGTGTGGTTCCGATCCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCCGAAGGTGATGCGACCTACGGC AAACTGACGCTGAAACTGATTTGCACCACGGGTAAGTCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCAC GTTACCCGGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAA CTACAAAACCCGCGGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCT GGGTCACAACTGGAATACAACAGTATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATTTCAAATCCGTCAC AACATCGAAGATGGCGGTTCAGCTGGCCGATCATTACAGCAGAACACCCCGATTGGCGATGGTCCGGTCTGCTGCCGGATAATCATTATCTG AGTTACCAGAGCAAATGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCGATGGTATG GATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGGCT GCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL010A	T-sapphire	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGCGAAGAGCTG TTCACAGGGTGTTCGATTCTGGTGAAGTGGAGCTGGACGGGACGTTAATGGTCAAAAATTCAGCGTTAGCGGTGAGGGCGAGGGTATGCCACTTAT GGTAAACTGACCTGAAATTCATCTGTACCACGGCAAAGTCCGTTCTTGGCTACACTGGTTACGACCTTCTCGTATGGGTAATGGTTTTTGC TCGCTATCCGATCACATGAAACAGCACGATTTCTTCAAAGCGCCATGCCGTAAGGCTATGTCCAAGAGCGTACGATCTTCTTAAAGACGACGGC AACTATAAACACGTGCCGAGGTGAAATTCGAAGGCGATACCTGGTAAACCGTATTGAACTGAAAGGGATTGACTTCAAAGAGGACGGGAACAT TCTGGCCATAAAGTGGAGTATAAATCAACTCTCATAATGTGTATATCATGGCCGACAAACAGAAAAACGGGATCAAAGCCAATTTCAAATCCGC CACAACATCGAGGATGGAGGGTTCAGCTGGCAGATCACTATCAACAAAACACCCCGATTGGTGTGGTCTGTACTGCTGCTGATAATCACTATC TGAGCATCCAGAGTCCCTGTCTAAAGATCCGAACGAAAAACGTGATCACATGGTGTGCTGGAGTTTGTACAGCTGCCGGCATTACGCTGGGTA TGGATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL011A	eGFP	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGCAAGGGCGAGGAGCTG TTCACCGGGTGTGTCCTCCTGGTGCAGCTGGACGGGACGTTAACGGCCACAAGTTACGCGTGTCCGGCAGGGGCGAGGGCGATGCCACCTA CGGCAAGCTGACCTGAAGTTCATCTGCACCACCGCAAGTCCCGTGCCTGGCCACCCTCGTACCACCTGACTACGGCGTGCAGTGCTTC AGCCGCTACCCCGACCATGAAGCAGCAGACTTCTTCAAGTCCGCATGCCGGAAGGCTACGTCCAGGAGCGACCATCTTCTTCAAGGACGACG GCAACTACAAGACCCGCGCGAGGTGAAGTTCGAGGGGACACCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAA CATCTGGGGCACAAGCTGGAGTACAACACAACGCCACAACGTCTATATCATGGCCGACAAGCAGAAGACGGCATCAAGGTGAACCTCAAGAT CCGCCACAACATCGAGGACGGCAGCGTGCAGCTCCCGACCACTACCAGCAGAACACCCCATCGCGCAGCGCCCGTCTGCTGCCCGACAACCA CTACCTGAGCACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCATCACATGGTCTGCTGGAGTTCGTGACCGCCCGGGGATCACTCT CGGCATGGACGAGCTGTACAAG TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCCTGAGA TCCGGTGTCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL012A	GFP	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTCTCTAAAGCGAAGAAGCTGT TTACGGGTGTGTCGCCGATTCTGGTTGAACTGGATGGCGATGTTAATGGTCAAAAATTTCCCGTTTCTGGCGAAGGTGAAGGCGATGCGACCTATG GTAAACTGACGCTGAAATTTATTTGCACCACGGGTAAGTCCCGTGCCTGGCCGACCCCTGGTTACCACGTTTTCTATGGTGTTCAGTGTTCCTCA CGCTACCCGGATCACATGAAACAACACGACTTTTTCAAATCCCGATGCCGGAAGGTTATGTCCAGGAACGTACCATTTTTCTTAAAGATGACGGCA ACTACAAAACCCGCGCGAAGTCAAATTTGAAGGTGATACGCTGGTGAACCGTATTGAACTGAAAGGCATCGATTTCAAAGAAGACGGTAAATATCC TGGGCCATAAAGTGAATATAACTACAATTCGACAACGTTTACATTATGGCAGATAAACAGAAAAACGGTATCAAAGTCAACTTAAAAATCCGCCA TAACATCGAAGATGGCAGCGTGAACCTGGCTGACCACTATCAGCAAAAACACCCCGATCGGTGATGGCCGGTCTGCTGCCGGACAATCATTACCTG AGCACGCAGTCTGACTGAGTAAAGATCCGAACGAAAAACGTGACCACATGGTGTGCTGGAATTTGTTACGGCGGCTGGTATTACGCACGGTATG GATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGGCT GCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL013A	GFPuv	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGCAAAGGTGAAGAAGCTGT TTACGGGGTGTGTCGCCGATCCTGGTGGAACTGGACGGTGTGTAATGGTCAAAAATTTCCGGTGGAGCGGCAAGGTGAAGGCGATGCGACCTAT GGTAAACTGACGCTGAAATTTATTTGCACCACGGGTAAGTCCCGTGCCTGGCCGACCCCTGGTTACCACGTTTTCTATGGTGTGTCAGTGTTCCTC ACGTTACCCGGATCACATGAAACGCCACGACTTTTTCAAATCCGCAATGCCGGAAGGTTATGTCCAGGAACGTACCATTTTTCTTAAAGATGACGGCA AATTACAAAACCCGCGCTGAAGTCAAATTCGAAGGTGATACGCTGGTGAACCGTATTGAACTGAAAGGCATCGATTTTAAAGAAGACGGTAAATATC CTGGGCCATAAAGTGAATACAACCTCAACTCTCACAACGTTTACATTACCGCGGATAAACAGAAAAACGGTATCAAAGCCAATTTCAAATCCGCC ATAACATCGAAGATGGTCCGTTCAACTGGCGGACCACTATCAGCAAAAACACCCCGATCGGTGATGGTCCGGTCTGCTGCCGGACAATCATTACCT GAGCACGAGTCTGCCCTGAGTAAAGATCCGAACGAAAAACGTGACCACATGGTCTGCTGGAATTTGTTACGGCGGCGGGTATACGCACGGTAT GGATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTCGACAAGCTTGGCCGCGACTCGAGCACCACCACCACCACCCTGAGATCCGGC TGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA

CD100A	GFPmut3b	GGGGAATTGTGAGCGGATAACAATCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG CGTAAAGGAGAAGAACTTTCA CTGGAGTTGTCCCAATTTCTGTTGAATTAGATGGTGATGTTAATGGGCACAAATTTCTGTCTAGTGGAGAGGGTGAAGGTGATGCAACATACGGAA AACTTACCTTAAATTTATTTGCACTACTGGAAAACCTGTTCCATGGCCAACACTTGTCACTACTTTTCGGTTATGGTGTTCATGCTTTGCGGAGAT ACCCAGATCATATGAAACAGCATGACTTTTTCAAGAGTGCCATGCCCGAAGGTTATGTACAGGAAAGAAGTATATTTTTCAAAGATGACGGGAACTA CAAGACACGTGCTGAAGTCAAGTTTGAAGGTGATACCTTGTAAATAGAAATCGAGTTAAAAGGTATTGATTTTAAAGAAGATGGAACATTCTTGGGA CACAAATTGGAATACAATAACTCACACAATGTATACATCATGGCAGACAAAACAAAAGAATGGAATCAAAGTTAACTTCAAATTTAGACACAACA TTGAAGATGGAAGCGTTCAACTAGCAGACCATTATCAACAAAATACTCCAATTGGCGATGGCCCTGTCTTTTACCAGACAACCATTACCTGTCCACA CAATCTGCCCTTTTCAAAGATCCCAACGAAAAGAGACCCACATGGTCTTCTTGAGTTTGTAAACAGCTGCTGGGATTACACATGGCATGGATGAAC TATACAAA TAA GCGGATCCGAATTCGAGCTCCGTGACAAAGCTTGGCGCCGACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAA AGCCCCAAAAGGAAGCTGAGTTGGTCTGCTGCCACCGCTGAGCAATAA
CD101A	sfGFP	GGGGAATTGTGAGCGGATAACAATCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG CGTAAAGGCGAAGAGCTGTTC CTGGTGTCTGCCATTTCTGGTGGAACTGGATGGTGATGTCAACGGTCATAAGTTTTCCGTGCGTGGCGAGGGTGAAGGTGACGCAACTAATGGTA AACTGACGCTGAAGTTTCTGTACTACTGGTAAACTGCCGGTACCTTGGCCGACTCTGGTAACGACGCTGACTTATGGTGTTCAGTGTCTTGTCTGT TATCCGACCATATGAAGCAGCATGACTTCTTCAAGTCCGCCATGCCGGAAGGCTATGTGCAGGAACGCACGATTTTCTTTAAGGATGACGGCACGT ACAAAACGCGTGGGAAGTAAATTTGAAGGCGATACCCTGGTAAACCGCATTGAGCTGAAAGGCATTGACTTTAAAGAAGACGGCAATATCTCG GGCCATAAGCTGGAATACAATTTTAAACAGCCACAATGTTTACATCACCGCCGATAAAACAAAAAATGGCATTAAAGCGAATTTTAAATTCGCCACA ACGTGGAGGATGGCAGCGTGCAGCTGGCTGATCACTACCAGAAAACACTCCAATCGGTGATGGTCTGTCTGCTGCCAGACAATCACTATCTGA GCACGCAAAGCGTCTGTCTAAAGATCCGAACGAGAAACGCGATCATATGGTCTGCTGGAGTTCGTAACCGCAGCGGGCATCACGCATGGTATGG ATGAACTGTACAAA TAA GCGGATCCGAATTCGAGCTCCGTGACAAAGCTTGGCGCCGACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGC TAAACAAAGCCCGAAAGGAAGCTGAGTTGGTCTGCTGCCACCGCTGAGCAATAA
CD102A	CyPet	GGGGAATTGTGAGCGGATAACAATCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTCTCTAAAGGCGAAGAAGCTGT TTGGCGGATTGTGCCGATCCTGTTGAACTGG AAGGTGATGTCAACGCCATAAATTTAGCGTGTCTGGCGAAGGTGAAGGCGATGCAACCT AT GGTAAACTGACGCTGAAATTCATTTGCACCACCGGTAACCTGCCGGTCCGTGGCCGA CCCTGGTCACCACCCTGACTGGGGTGTGCAGTGTTTTT CGCGCTACCCGGATCACATGAAACAACACGACTTTTTCAAAGCGTGATGCCGGAAGGTTATGTTCAAGAACGTACCAATTTTCTTTAAAGATGACGG CAACTACAAAACCCGCGCCGAAGTAAATTTGAAGGTGATACGCTGGTCAACCGTATTGAACTGAAAGGCATCGATTCAAAGAAGACGGTAATAT CCTGGGCCATAAACTGGAATACAATACTCAACTCTCACATCGTTTACATCACCGGGATAAACAGAAAACGGTATCAAAGCAAACCTCAAAGCTCGC CATAACATCACCGATGGCTCCGTGCAACTGGCCGACCATAATCAGCAAAACACGCCGATTGGTGTGGCCGGTATCCTGCCGACAAATCATTACC TGAGTACCCAGTCCGACTGTCAAAGATCCGAATGAAAACGTAACCATGTTCTGCTGGAATTTGTGACGGCGCCGGTATTACCTGGGCA TGGATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTGACAAAGCTTGGCGCCGACTCGAGCACCACCACCACCACCCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGTCTGCTGCCACCGCTGAGCAATAA
CD103A	Cerulean	GGGGAATTGTGAGCGGATAACAATCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAAGAGCTG TTCACAGGGGTTGTTCCGATTCTGGTCAACTGGACGGGGACGTTAATGGTCACAAATTCAGCGTTAGCGGTGAGGGCGAGGGTATGCCACTTAT GGTAAACTGACCTGAAATTCATCTGTACCACCGGCAAACTGCCTGTTCTTGGCCTACACTGGTTACAACACTGACTTGGGGTGTTCATGTTTTGC TCGCTATCCGGATCACATGAAACAGCAGATTTCTTCAAAGCGCCATGCCTGAAGGTTATGTCCAAGAGCGTACGATCTTCTTTAAAGACGACGGC AACTATAAAACCCGTGCCGAGGTGAAATTCGAAGGTGATACCCTGGTAAACCGTATCGAACTGAAAGGGATCGACTTCAAAGAGGACGGGAACAT TCTGGGCCATAAACTGGAGTATAACGCCATCAGCGATAATGTGTATATTACCGCCGACAAACAGAAAACGGGATCAAAGCCAACCTCAAATCCG CCACAACATCGAGGATGGTAGCGTTCAACTGGCCGATCACTAT CAACAGAATACCCGATTGGTGTGGTCTGTTCTGCTGCCTGATAACCACTAT CTGAGCACCCAGTCTGCACTGTCAAAGACCCGAACGAGAAACGTGATCACATGGTCTGCTGGAGTTTGTACCCTGCCGGCATTACTCTGGGTA TGGATGAACTGTATAAA TAA GCGGATCCGAATTCGAGCTCCGTGACAAAGCTTGGCGCCGACTCGAGCACCACCACCACCACCCTGAGATCCGG CTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGTCTGCTGCCACCGCTGAGCAATAA

RL014A	sfGFP mRFP1	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACATATGGCTAGC ATG CGTAAAGCGAAAG AGCTGTTCACTGGTGTCTGCTCCCTATTCTGGTGAAGTGGATGGTGTGATGTCAACGGTCATAAGTTTTCCGTGCGTGGCGAGGGTGAAGGTGACGCAA CTAATGGTAAACTGACGCTGAAGTTCATCTGTACTACTGGTAAACTGCCGGTACCTGGCCGACTCTGGTAAACGACGCTGACTTATGGTGTTCAGTG CTTTGCTCGTTATCCGGACCATATGAAGCAGCATGACTTCTCAAGTCCGCCATGCCGGAAGGCTATGTGCAGGAACGCACGATTTCCTTAAGGAT GACGGCACGTACAAAACGCGTGCAGGAAAGTAAATTTGAAGGCGATACCTGGTAAACCGCATTGAGCTGAAAGGCATTGACTTTAAAGAAGACGG CAATATCCTGGCCATAAGCTGGAATACAATTTAACAGCCACAATGTTACATCACCGCCGATAAAACAAAAAATGGCATTAAAGCGAATTTAAAA ATTCGCCAACAGTGGAGGATGGCAGCGTGCAGCTGGCTGATCACTACCAGCAAAACACTCCAATCGGTGATGGTCTGTTCTGTGCTCCAGACAATC ACTATCTGAGCACGCAAAGCGTTCTGTCTAAAGATCCGAACGAGAAACGCGATCATATGTTCTGCTGGAGTTCGTAACCGCAGCGGGCATCACGC ATGGTATGGATGAAGTGTACAAA TAAG CGGATCCGAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GCTTCCCTCGAAGACGTTATCA AAGAGTTCATGCGTTTCAAAGTTCGTATGGAAGTTCGGTAAACGGTACAGAGTTCGAAATCGAAGGTGAAGGTGAAGGTGCTCCGTACGAAGGTA CCCAGACCCGCTAAACTGAAAGTTACCAAAGGTGGTCCGCTGCCGTTGCTTGGGACATCCTGTCGCCCGCAGTTCAGTACGGTTCCAAAGCTTACGT TAAACACCCGGTGCATCCCGACTACCTGAAACTGTCTTCCCGAAGGTTCAAATGGGAACGTTATGAACCTCGAAGACGGTGGTGTGTT ACCGTTACCAGGACTCCTCCCTGCAAGACGGTGAAGTTCATCTACAAAGTTAAACTGCGTGGTACCAACTCCCGTCCGACGCTCCGGTTATGCAGA AAAAAACCTGGGTTGGGAAGCTTCCACCGAACGTATGTACCCGGAAGACGGTGTCTGAAAGGTGAAATCAAATGCGTCTGAAACTGAAAGAC GGTGGTCACTACGACGCTGAAGTTAAACACCTACATGGCTAAAAACCGGTTGAGTCCCGGGTCTTACAAAACCGACATCAAAGTGGACATC ACCTCCCAACGAAGACTACACCATCGTTGAACAGTACGAACGTGCTGAAGGTGCTCACTCCACCGGTGCT TA ACTCGAGCACACCACCACCAC CACTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGTGAAGTGGCTGCTGCCACCGCTGAGCAATAA
RL015A	sfGFP mCherry	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GCTAGCATGCGTAAAGCGAAAG AGCTGTTCACTGGTGTCTGCTCCCTATTCTGGTGAAGTGGATGGTGTGATGTCAACGGTCATAAGTTTTCCGTGCGTGGCGAGGGTGAAGGTGACGCAA CTAATGGTAAACTGACGCTGAAGTTCATCTGTACTACTGGTAAACTGCCGGTACCTGGCCGACTCTGGTAAACGACGCTGACTTATGGTGTTCAGTG CTTTGCTCGTTATCCGGACCATATGAAGCAGCATGACTTCTCAAGTCCGCCATGCCGGAAGGCTATGTGCAGGAACGCACGATTTCCTTAAGGAT GACGGCACGTACAAAACGCGTGCAGGAAAGTAAATTTGAAGGCGATACCTGGTAAACCGCATTGAGCTGAAAGGCATTGACTTTAAAGAAGACGG CAATATCCTGGCCATAAGCTGGAATACAATTTAACAGCCACAATGTTACATCACCGCCGATAAAACAAAAAATGGCATTAAAGCGAATTTAAAA ATTCGCCAACAGTGGAGGATGGCAGCGTGCAGCTGGCTGATCACTACCAGCAAAACACTCCAATCGGTGATGGTCTGTTCTGTGCTCCAGACAATC ACTATCTGAGCACGCAAAGCGTTCTGTCTAAAGATCCGAACGAGAAACGCGATCATATGTTCTGCTGGAGTTCGTAACCGCAGCGGGCATCACGC ATGGTATGGATGAAGTGTACAAA TAAG CGGATCCGAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GAGTAAAGGCGAGGAGGA CAATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTACAGAGTTCGAAATGAGGGCGAAGGCGAAG GTCGTCGGTATGAGGGTACACAGACCGCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTCATGTA TGGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCGGGACTATCTGAAACTGAGCTTCCCTGAAAGGTTCAAATGGGAACGTGTATGAACTTT GAGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCACGAATTTCCGAGT GATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCTCTAGTGAAGGATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACA GCGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTGAAGAACCGTATAAAGCCAAAAACCTGTCCAAGTGCCTGGTGCCTATAACGT TAACATCAAAGTGGACATCACTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGA TGAGCTGTATAA TA ACTCGAGCACACCACCACCACCACCAGTATCCGGCTGCTAACAAAGCCCGAAAGGAAAGTGAAGTGGCTGCTGCCACCG CTGAGCAATAA
RL016A	mYPet mCherry	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GGTGTCAAAGGCGAAGAAGTGT TTACCGGTGTGGTTCGATTCTGGTGAAGTGGATGGCGACGTTAACGGTCATAAATTTAGTGTGCCGGCGAAGGTGAAGGCGATGCGACCTATG GCAAATGACGCTGAAACTGCTGTGCACCACCGGTAAGTCCGGTCCCGTGGCCGACCCTGGTGAACGACGCTGGGTTATGGCGTGCAGTGTTCG CGCGTACCCGGACCATGAAACAACACGATTTCTTTAAAGTGCATGCCGGAAGGCTATGTTCAAGAACGTACCATCTTTTCAAAGATGACGG TAACTACAAAACCCGCGGAAAGTAAATTTGAAGGCGATACGCTGGTCAACCGTATTGAACTGAAAGGTATCGACTTCAAAGAAGATGGCAATAT TCTGGGTATAAACTGGAATATAACTACAATAGCCACAACGTATATTACCGGATAAACAAGAAACCGGATCAAAGCCAACTTCAAATCCGC CATAACATCGAAGACGGCGGTGTTCAACTGGCCGATCACTACCAGCAAAACACCCGATTGGTGTGATGGTCCGGTCTGCTGCCGGATAATCATTATC TGTCATACCAGTCAAAGTCTTTAAAGACCCGAATGAAAAACGTGATACATGGTGTGCTGGAATTTCTGACCGCGCCGGCATTACGGAGGGTA TGAACGAAGTGTATAA TAAG CGGATCCGAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GAGTAAAGGCGAGGAGGACAATAT GGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTACAGAGTTCGAAATGAGGGCGAAGGCGAAGGTCGTC CGTATGAGGGTACACAGACCGCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTCATGTATGGCTC CAAAGCCTATGTGAAACATCCGGCCGATATCCGGACTATCTGAAACTGAGCTTCCCTGAAAGGTTCAAATGGGAACGTGTGATGAACTTTGAGGAT GGTGGTGTGTGACAGTGACACAGGATTCTAGCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCACGAATTTCCGAGTGTGGC CCGGTTATGCAGAAAAAACGATGGGTTGGGAGGCTCTAGTGAAGGATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAGCGTCT GAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTGAAGAACCGTATAAAGCCAAAAACCTGTCCAAGTGCCTGGTGCCTATAACGTTAAT CAAAGTGGACATCACTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGATGAGCT GTATAA TA ACTCGAGCACACCACCACCACCACCAGTATCCGGCTGCTAACAAAGCCCGAAAGGAAAGTGAAGTGGCTGCTGCCACCGCTGAGC AATAA

RL017A	YPet mCherry	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGTCCAAGGCGAAGAAGCTGT TTACCGGTGTGGTTCCGATTCTGGTGGAAGTGGATGGCGACGTTAACGGTCATAAATTTAGTGTGCCGCGAAGGTGAAGGCGATGCGACCTATG GCAAATGACGCTGAAACTGCTGTGCACCACCGGTAAGTCCGGTCCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGCGTGCAAGTGTTCG CGCGCTACCCGGACCACATGAAACAACACGATTTCCTTAAAAGTGCCATGCCGGAAGGCTATGTTCAAGAACGTACCATCTTTTCAAAGATGACGG TAACTACAAAACCCGCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTCAACCGTATTGAACTGAAAGGTATCGACTTCAAAGAAGATGGCAATAT TCTGGGTCATAAAGTGAATATACTACAATAGCCACAACGTGTATATTACCGCGGATAAACAGAAAAACGGCATCAAAGCCAACCTTCAAATCCGC CATAACATCGAAGACGGCGGTGTTCAACTGGCCGATCACTACCAGCAAAACACCCCGATTGGTGATGGTCCGGTCTGCTGCCGGATAATCATTATC TGTCATACCAGTCGGCACTGTTTAAAGACCCGAATGAAAAACGTGATCACATGGTGTGCTGGAATTTCTGACCGCGCCGCGATTACGGAGGTA TGAACGAACTGTATAAA TAA GCGGATCCTAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATATGGC GATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTTAGGGCGAAGGCGAAGGTCGTCCT ATGAGGGTACACAGACCGTAAACTGAAAGTCAAGGACGAAAGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTCATGATGGCTCAA AGCCTATGTGAAACATCCGGCCGATATCCGGACTATCTGAAACTGAGCTTCCCTGAAGGTTCAAATGGGAACGTGTGAACTTTGAGGATGG TGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCACGAATTTCCGAGTGATGGCC GGTTATGCAGAAAAAACGATGGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCTGA AACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAAGTGCCTGATGCTATAACGTTAACATCA AACTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGATGAGCTGT ATAAA TAA CTCGAGCACCCACCACCACCCTGAGATCCGGTGTCTAACAAAGCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAA TAA
RL018A	mCerulean mCherry	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAAGAGCTG TTCACAGGGGTTGTTCCGATTCTGGTGAAGTGGACGGGACGTTAATGGTCACAAATTCAGCGTTAGCGGTGAGGGCGAGGGTGATGCCACTTAT GGTAAACTGACCTGAAATTCATCTGTACCACCGCAAACCTGCCTGTTCTTGGCCTACACTGGTTACAACACTGACTTGGGGTGTCAATGTTTTGC TCGCTATCCGGATCACATGAAACAGCACGATTTCTTCAAAGCGCCATGCCTGAAGGTTATGTCCAAGAGCGTACGATCTTCTTAAAGACGACGGC AACTATAAAACCGTGCCGAGTGAAATTCGAAGTGATACCTGGTAAACCGTATCGAACTGAAAGGGATCGACTTCAAAGAGGACGGGAACAT TCTGGGCCATAAAGTGAATATAACGCCATCAGCGATAATGTGTATATTACCGCCGACAAACAGAAAAACGGGATCAAAGCCAACCTCAAATCCG CCACAACATCGAGGATGGTAGCGTTCAAAGTGGCCGATCACTATCAACAGAATACCCCGATTGGTGATGTCCTGTTCTGCTGCCTGATAACCACTAT CTGAGCACCGAGTCAAAGTGTCCAAAGACCCGAACGAGAAACGTGATCACATGGTCTGCTGGAGTTTGTACCCTGCCGCGATTACTCTGGGTA TGGATGAACTGTATAAA TAA GCGGATCCGAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATAT GGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTTAGGGCGAAGGCGAAGGTCGTC CGTATGAGGGTACACAGACCGTAAACTGAAAGTCAAGGACGAAAGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTCATGATGGCTC CAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGTTCAAATGGGAACGTGTGATGAACTTTGAGGAT GGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCACGAATTTCCGAGTGATGGC CCGGTTATGCAGAAAAAACGATGGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCT GAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAAGTGCCTGATGCTATAACGTTAACAT CAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGATGAGCT GTATAAA TAA CTCGAGCACCCACCACCACCCTGAGATCCGGTGTCTAACAAAGCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGC AATAA
RL019A	Cerulean mCherry	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAAGAGCTG TTCACAGGGGTTGTTCCGATTCTGGTGAAGTGGACGGGACGTTAATGGTCACAAATTCAGCGTTAGCGGTGAGGGCGAGGGTGATGCCACTTAT GGTAAACTGACCTGAAATTCATCTGTACCACCGCAAACCTGCCTGTTCTTGGCCTACACTGGTTACAACACTGACTTGGGGTGTCAATGTTTTGC TCGCTATCCGGATCACATGAAACAGCACGATTTCTTCAAAGCGCCATGCCTGAAGGTTATGTCCAAGAGCGTACGATCTTCTTAAAGACGACGGC AACTATAAAACCGTGCCGAGTGAAATTCGAAGTGATACCTGGTAAACCGTATCGAACTGAAAGGGATCGACTTCAAAGAGGACGGGAACAT TCTGGGCCATAAAGTGAATATAACGCCATCAGCGATAATGTGTATATTACCGCCGACAAACAGAAAAACGGGATCAAAGCCAACCTCAAATCCG CCACAACATCGAGGATGGTAGCGTTCAAAGTGGCCGATCACTAT CAACAGAATACCCCGATTGGTGATGGTCTGTTCTGCTGCCTGATAACCACTAT CTGAGCACCGAGTGTCACTGTCCAAAGACCCGAACGAGAAACGTGATCACATGGTCTGCTGGAGTTTGTACCCTGCCGCGATTACTCTGGGTA TGGATGAACTGTATAAA TAA GCGGATCCGAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATAT GGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTTAGGGCGAAGGCGAAGGTCGTC CGTATGAGGGTACACAGACCGTAAACTGAAAGTCAAGGACGAAAGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTCATGATGGCTC CAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGTTCAAATGGGAACGTGTGATGAACTTTGAGGAT GGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCACGAATTTCCGAGTGATGGC CCGGTTATGCAGAAAAAACGATGGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCT GAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAAGTGCCTGATGCTATAACGTTAACAT CAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGTGAAGGACGTCATTCTACCGGTGGTATGGATGAGCT GTATAAA TAA CTCGAGCACCCACCACCACCCTGAGATCCGGTGTCTAACAAAGCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGC AATAA

RL020A	mVenus mCherry	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCGATCCTGTTGAACTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAACTGATTTGCACCACGGGTAACCTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGCGGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTCACAACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATTTCAAATCCGTCACAAACATCGAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTCTGCTGCCGGATAATCATTATCTGAGTTACCAGAGCAAAGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAATTTGTACCAGCGCCGGCATTACGCATGGTATGATGAACTGTATAAA TA AGCGGATCCTGAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTACAGAGTTCGAAATTGAGGGCGAAGGCGAAGGTCGTCCGTATGAGGGTACACAGACCGCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTTATGTATGGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTGAGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAACCTGCGTGGCACGAATTTCCGAGTATGGCCGGTTATGCAGAAAAACGATGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAACCTGCCTGGTGCCTATAACGTTAACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAAGACGTCATTCTACCGGTGGTATGGATGAGCTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTGAGCAATAA
RL021A	Venus mCherry	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCGATCCTGTTGAACTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAACTGATTTGCACCACGGGTAACCTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGCGGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTCACAACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATTTCAAATCCGTCACAAACATCGAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTCTGCTGCCGGATAATCATTATCTGAGTTACCAGAGCGCGCTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAATTTGTACCAGCGCCGGCATTACGCATGGTATGATGAACTGTATAAA TA AGCGGATCCGAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTACAGAGTTCGAAATTGAGGGCGAAGGCGAAGGTCGTCCGTATGAGGGTACACAGACCGCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTTATGTATGGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTGAGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAACCTGCGTGGCACGAATTTCCGAGTATGGCCGGTTATGCAGAAAAACGATGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCTGAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAACCTGCCTGGTGCCTATAACGTTAACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAAGACGTCATTCTACCGGTGGTATGGATGAGCTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTGAGCAATAA
RL024A	mCherry mVenus 20 bp	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGACAATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTACAGAGTTCGAAATTGAGGGCGAAGGCGAAGGTCGTCCTGATGAGGGTACACAGACCGCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTGGGATATTCTGAGCCACAGTTTATGTATGGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTGAGGATGGTGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAACCTGCGTGGCACGAATTTCCGAGTATGGCCGGTTATGCAGAAAAACGATGGTTGGGAGGCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAGCGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACACGATAAAGCCAAAAACCTGTCCAACCTGCCTGGTGCCTATAACGTTAACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAAGACGTCATTCTACCGGTGGTATGGATGAGCTGTATAAA TA AGCGGATCCGAATCAATTAGAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCGATCCTGTGAACTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAACTGATTTGACCACCGGTAACCTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGCGGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAACCTGGAATACAACACTACAACAGTACATACGTTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATTTCAAATCCGTCACAACTCGAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTCTGCTGCCGGATAATCATTATCTGAGTTACCAGAGCAAACCTGCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAATTTGTACCAGCGCCGGCATTACGCATGGTATGGATGAACTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTGAGCAATAA

RL025A	mCherry mVenus 0 bp	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAACCACGTATAAAGCCAAAAACCTGTCCAACCTGCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCTGGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAA AAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTCCGATCCTGGTGAAGTGGATGGCGATG GAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAACTGATTGCAACACGGGTAAGTCC GGTTCGGTGGCCGACCCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTTAAATCTG CGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGCGCGAAGTTAAATTTGAAGCGATACGC TGGTGAACCGTATTGAACTGAAAGGTATCGATTCAAAGAAGATGGCAATATTCTGGGTCACAACTGGAATACAACAGTACATAACGTGTA CATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGATGGCGGTGTTAGCTGGCCGATCATTACCA GCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCCGATAATCATTATCTGAGTTACCAGAGCAAACCTGTCTAAAGATCCGAATGAAAAACG CGATACATGGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTATAAA TA ACTCGAGCACCACCACCACCA CTGAGATCCGGCTGCTAACAAGCCCGAAAGGAAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL026A	mCherry mVenus 5 bp	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAACCACGTATAAAGCCAAAAACCTGTCCAACCTGCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCTGGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TA AGCGGAAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTCCGATCCTGGTGAAGTGGATGG CGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAACTGATTGCAACACGGGTA ACTGCCGTTCCGTGGCCGACCCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTTA AATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGCGCGAAGTTAAATTTGAAGCGG ATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTCAAAGAAGATGGCAATATTCTGGGTCACAACTGGAATACAACAGTACATAA CGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGATGGCGGTGTTAGCTGGCCGATCA TTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCCGATAATCATTATCTGAGTTACCAGAGCAAACCTGTCTAAAGATCCGAATGAA AAACCGCATCACATGGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTATAAA TA ACTCGAGCACCACCACCAC CACCCTGAGATCCGGCTGCTAACAAGCCCGAAAGGAAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
RL027A	mCherry mVenus 31 bp	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAACCACGTATAAAGCCAAAAACCTGTCCAACCTGCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCTGGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TA AGCGGATCCGAATCAATTAGTTTGAACCTTAAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGTAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCAACACGGGTAACCTGCCGTTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTCAAAGAAGATGGCAATATTCTGGGTCACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTAGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AAA TA ACTCGAGCACCACCACCACCACCTGAGATCCGGCTGCTAACAAGCCCGAAAGGAAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATA A

RL030A	mCherry mVenus 50 bp	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATCATAGTCATATCTTTCAATA AAGGAGA AATACT ATG AGCAAAGGCGAAG AACTGTTACGGGTGTGGTTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGA CCTACGGCAAAGTACGCTGAAACTGATTGACCACGGGTAAGTCCGGTCCGTTCCGTTGGCGACCTGGTACCACGCTGGGTTATGGTCTGATGT GTTTCGCACGTTACCGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTCAAAGAT GATGGTAACTACAAAACCCGCGCGAAAGTTAAATTTGAAGGCATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGCG AATATTCTGGGTACAAAAGTGAATACAACAGTACAACGTACATACCTGACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAA TCCGTCACAACATCGAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCCGGATAATC ATTATCTGAGTTACCAGAGCAAAGTGTCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTACCAGCGCGCCGATTACGCA TGGTATGGATGAAGTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCGAAAGGAAAGCTGAGTTGGCTG CTGCCACCGCTGAGCAATAA
RL031A	mCherry mVenus 3 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATA ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTC CGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACTACGGCAAAGTACGCTG AAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATC ACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTCAAAGATGATGGTAACTACAAAACCCG CGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAA GGAAATACAACAGTACAACTGATACCTGATACCTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGAT GGCGGTGTTAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGGATAATCATTATCTGAGTTACCAGAGC AACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACCGATGGTATGGATGAAGTGTAT AAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCGAAAGGAAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATA A
RL032A	mCherry mVenus -2 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAG ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTCCGATC CTGTTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACTACGGCAAAGTACGCTGAAACT GATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATG AAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTCAAAGATGATGGTAACTACAAAACCCGCGCG AAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAAGTGAAT ACAACAGTACAACTGATACCTGATACCTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGATGGCG GTGTTAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGGATAATCATTATCTGAGTTACCAGAGCAA GTCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACCGATGGTATGGATGAAGTGTATAAA TA ACT CGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCGAAAGGAAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA

RL033A	mCherry mVenus 7 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAAAGGAGAATAATCTA ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTG GTTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACG CTGAAACTGATTTGCACCACGGTAAACTGCCGTTCCGTGGCCGACCTGGTACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCGG ATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAC CCGCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAA ACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAA GATGGCGGTGTTACAGTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAG AGCAAAGTGTCAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGT TATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCA ATAA
RL034A	mCherry mVenus 9 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAAAGGAGAATAATCTACT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTG GGTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACG GCTGAAACTGATTTGCACCACGGTAAACTGCCGTTCCGTGGCCGACCTGGTACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCG GATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAA CCCGCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAA AACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGA AGATGGCGGTGTTACAGTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCA GAGCAAAGTGTCAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGT GTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGC AATAA
AS001A	mCherry mVenus 5 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGT TCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCT GAAACTGATTTGCACCACGGTAAACTGCCGTTCCGTGGCCGACCTGGTACCACGCTGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGAT CACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGA TGGCGGTGTTACAGTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATA A

AS002A	mCherry mVenus 4 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCCGTATGAGGGTACACAGACCCTAAACTGAAAGTCACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATAAT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTT CCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCT GAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGTGACCACGCTGGTGTATGGTCTGATGTGTTTCGACGTTACCCGGAT CACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTCCGGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCAGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGCTGTGCCACCCTGAGCAATA A
AS006A	mCherry mVenus -1 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCCGTATGAGGGTACACAGACCCTAAACTGAAAGTCACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCGAT CCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGCTGAAAC TGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGTGACCACGCTGGTGTATGGTCTGATGTGTTTCGACGTTACCCGGATCACAT GAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACACAAAACCCGCGG GAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAACTGGAA TACAACACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCGAAGATGGCG GTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTCCGGATAATCATTATCTGAGTTACCAGAGCAAAC GTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCAGCGCCGGCATTACGCATGGTATGGATGAAGTGTATAAA TA ACT CGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGCTGTGCCACCCTGAGCAATAA
AS007A	mCherry mVenus 10 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCCGTATGAGGGTACACAGACCCTAAACTGAAAGTCACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATACTACT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTG TGGTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGA CGCTGAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTGTATGGTCTGATGTGTTTCGACGTTACCC GGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACACAAA ACCCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTAC AAACTGGAATACAACACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCG AAGATGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTCCGGATAATCATTATCTGAGTTACCA GAGCAAAGTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCAGCGCCGGCATTACGCATGGTATGGATGAAGT GTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGCTGTGCCACCCTGAGC AATAA

DT006A	mCherry mVenus 2 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGAATAATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCC GATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCTGA AACTGATTTGCACCACGGGTAAGTCCGGTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCA CATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGCAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCGC CGGAAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGTCCAAAACG GAATACAACTACAACAGTCATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGATG GCGGTGTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGCA AACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTATA AA TA ACTCGAGCACACCACCACCACCCTGAGATCCGGTCTAACAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
DT007A	mCherry mVenus 0 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGAATAATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCGA TCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCTGAAA CTGATTTGCACCACGGGTAAGTCCGGTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACA TGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGCAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCCGCG GGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTCAAAAACCTGGA ATACAACACTACAACAGTCATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGATGG GGTGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGCAAAC TGCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTATAAA T AA CTCGAGCACACCACCACCACCCTGAGATCCGGTCTAACAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA
DT008A	mCherry mVenus 1 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTGAAGTGCCTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCCTGCCAACTGCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCATTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGAATAATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGGTTCCG ATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCTGAA ACTGATTTGCACCACGGGTAAGTCCGGTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCAC ATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGCAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCCCGCG CGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTCAAAAACCTGG AATACAACACTACAACAGTCATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTCACAACATCGAAGATGG CGGTGTTGAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGCAAAC CTGTCTAAAGATCCGAATGAAAAACGCGATCACATGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTATAAA TA ACTCGAGCACACCACCACCACCCTGAGATCCGGTCTAACAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCGCTGAGCAATAA

LM003A	mCherry mVenus 8 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTGAACCACAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATAATCT ACATG AGCAAAGGCGAAGAAGTGTACCGGGTGT GGTCCGATCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTAC GCTGAAACTGATTTGCACCACGGGTAAACTGCCGGTCCGTTCCGTTGGCCGACCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCG GATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAA CCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCTGGGTACACA AACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTTCAAATCCGTCACAACATCGA AGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCA GAGCAAAGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACT GTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTGAGC AATAA
LM022A	mCherry mVenus 11 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTGAACCACAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATAATCTACTT CAATG AGCAAAGGCGAAGAAGTGTACCGGGT GTGGTCCGATCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTAC ACGCTGAAACTGATTTGCACCACGGGTAAACTGCCGGTCCGTTGGCCGACCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACC CGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAA AACC CGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCTGGGTCA CAAAGTGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTTCAAATCCGTCACAACATC GAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTAC CAGAGCAAAGTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAA CTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTGA GCAATAA
LM023A	mCherry mVenus 12 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTGAACCACAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTATA AAGGAGA AATAATCTACTT CAATG AGCAAAGGCGAAGAAGTGTACCGGG TGTGGTCCGATCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTAC GACGCTGAAACTGATTTGCACCACGGGTAAACTGCCGGTCCGTTGGCCGACCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTAC CCGGATCACATGAAACGCCATGATTTCTTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACA AAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTGAAGGATCGATTTCAAAGAAGATGGCAATATTCTGGGTCA ACAACTGGAATACAACAGTACATAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAACCTTCAAATCCGTCACAACATC CGAAGATGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTA CCAGAGCAAAGTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGA ACTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTG AGCAATAA

LM024A	mCherry mVenus 13 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAATCTACTTCAA ATG AGCAAAGGCGAAGAAGTGTTCACGG GTGTGGTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAC TGACGTGAAACTGATTTGACCACGGGTAAGTCCGGTCCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTA CCCGGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAAGTAC AAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGATTCGATTTCAAAGAAGATGGCAATATTCTGGT CACAACTGGAATACAACAGTCAACAGTCAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATCTCAAATCCGTCACAACA TCGAAGATGGCGGTGTTAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGGATAATCATTATCTGAGTTA CCAGAGCAAAGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGCGCATTACGCATGGTATGGATGA ACTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACCCTG AGCAATAA
RL043A	mCherry mVenus 14 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAATCTACTTCAAT ATG AGCAAAGGCGAAGAAGTGTTCACG GGTGTGGTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAA ACTGACGCTGAAACTGATTTGACCACGGGTAAGTCCGGTTCGGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACCT TACCCGGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACT ACAAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGATTCGATTTCAAAGAAGATGGCAATATTCTGG GTCACAACTGGAATACAACACTACAACAGTCAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATCTCAAATCCGTCACAA CATCGAAGATGGCGGTGTTAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGGATAATCATTATCTGAG TTACCAGAGCAAAGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGCGCATTACGCATGGTATGGA TGAAGTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACC CTGAGCAATAA
RL044A	mCherry mVenus 15 bp spacer	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAATCTACTTCAAT ATG AGCAAAGGCGAAGAAGTGTTCAC GGTGTGGTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCA AACTGACGCTGAAACTGATTTGACCACGGGTAAGTCCGGTTCGGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACG TTACCCGGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACT ACAAAACCCGCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGATTCGATTTCAAAGAAGATGGCAATATTCTGG GTCACAACTGGAATACAACACTACAACAGTCAACGTGTACATTACCGCCGATAAACAGAAAAACGGTATCAAAGCAAATCTCAAATCCGTCACAA CATCGAAGATGGCGGTGTTAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGGATAATCATTATCTGAG TTACCAGAGCAAAGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTCTGCTGGAATTTGTGACCGCGCCGCGCATTACGCATGGTATGGA TGAAGTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTTGGCTGCTGCCACC CTGAGCAATAA

LM005A	mCherry mVenus 3' NdeI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGCATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCCAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAACAT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGGTAACCTGCCGTTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
LM006A	mCherry mVenus 3' BamHI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGCATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCCAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AAGGATCC ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGGTAACCTGCCGTTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
LM007A	mCherry mVenus 3' NheI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGCATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCCAGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAACCTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AAGTAGC ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGGTAACCTGCCGTTCCGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A

LM008A	mCherry mVenus 3' EcoRI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AAGAATTC ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
LM009A	mCherry mVenus 3' NotI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGG CGCGCC ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
LM010A	mCherry mVenus 3' scar 1	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGT ACTAGAG ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A

LM011A	mCherry mVenus 3' scar 2	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATACTAG ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
LM012A	mCherry mVenus - 3 A	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAACT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
LM013A	mCherry mVenus RBS +1	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCACTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA GATAATCT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGAGGAACTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAAAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A

LM014A	mCherry mVenus RBS +2	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAG ATTAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGGT TCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCT GAAACTGATTTGACCCAGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGACGTTACCCGGAT CACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGTTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
LM015A	mCherry mVenus RBS +1+2	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAG GTTAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGG TTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGACCCAGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGACGTTACCCGGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
LM016A	mCherry mVenus 3' pET21b	GGGGAATTGTGAGCGGATAACAATCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAG ATATACAT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGG TTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGACCCAGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTTATGGTCTGATGTGTTTCGACGTTACCCGGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACGCGATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A

RL050A	mCherry mVenus 3' C-rich	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAG CCCCCTCC ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGGT TCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCT GAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTATGGTCTGATGTGTTTCGCACGTTACCCGGAT CACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAAACAAAGCCCGAAAGGAGCTGAGTTGGTGTGCCACCGCTGAGCAATA A
LM018A	mCherry mVenus GTG	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAATCT GTG AGCAAAGGCGAAGAAGTGTTCACGGGTGGTGG TTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTATGGTCTGATGTGTTTCGCACGTTACCCGGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAAACAAAGCCCGAAAGGAGCTGAGTTGGTGTGCCACCGCTGAGCAATA A
LM019A	mCherry mVenus TTG	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAA AGGAGA AATAATCT TTG AGCAAAGGCGAAGAAGTGTTCACGGGTGGTGGT TCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCT GAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGTATGGTCTGATGTGTTTCGCACGTTACCCGGAT CACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAAGCAAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAAACAAAGCCCGAAAGGAGCTGAGTTGGTGTGCCACCGCTGAGCAATA A

LM020A	mCherry mVenus CTG	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAAAGGAGAATAATCT CTG AGCAAAGGCGAAGAAGTGTTCACGGGTGGTGG TCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCT GAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGACGTTACCCGGAT CACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGTTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
LM021A	mCherry mVenus 5' G	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAACCTTAGAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGGTGG TTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGACGTTACCCGGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
RL036A	mCherry mVenus 5' NdeI	GGGGAATTGTGAGCGGATAACAATTCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACTTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATTTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTACATATGAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTGTTCACGGGTGGTGG TTCCGATCCTGGTTGAAGTGGATGGCGATGTGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAAGTACGCG TGAAACTGATTTGACCACGGGTAAACTGCCGGTCCGTGGCCGACCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGACGTTACCCGGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAACCC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAAGTAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTTCAGCTGGCCGATCATTACCAGCAGAACACCCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A

RL037A	mCherry mVenus 5' BamHI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGGAGTCCAAGGAGAATAATCT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGTAAACTGCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTACTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
RL038A	mCherry mVenus 5' NheI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAAGTACCAAGGAGAATAATCT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGTAAACTGCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTACTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A
RL039A	mCherry mVenus 5' EcoRI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTCGAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCCAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGAGCAGTATGAGCGTGCTGAAGGACGTCAATCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTGAAGTCCAAGGAGAATAATCT ATG AGCAAAGGCGAAGAACTGTTACGGGTGTGG TTCCGATCCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACCTACGGCAAACCTGACGC TGAAACTGATTTGCACCACGGTAAACTGCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTACTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAACTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCGCTGAGCAATA A

RL040A	mCherry mVenus 5' NotI	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTTCGCGCCGCAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTTCACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCGCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
RL041A	mCherry mVenus 5' scar 1	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAAG CGGATCCGAATCAATTAGTTTACTAGAGAAGGAGAATAATCT ATG AGCAAAGGCGAAGAAGTTCACGGGTGTGG TTCCGATCTGGTTGAACTGGATGGCGATGGAACGGTCATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACTACGGCAAAGTACGCG TGAAACTGATTTGCACCACGGGTAAGTCCGGTTCGGTGGCCGACCCTGGTGACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGA TCACATGAAACGCCATGATTTCTTAAATCTGCGATGCCGGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAAAACC GCGCGGAAGTTAAATTTGAAGGCGATACGCTGGTGAACCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAAC TGGAATACAACAGTACATAACGTGTACATTACCGCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGA TGGCGGTGTTACGCTGGCCGATCATTACCAGCAGAACACCCGATTGGCGATGGTCCGGTGTCTGCGCGATAATCATTATCTGAGTTACCAGAGC AAACTGTCTAAAGATCCGAATGAAAAACCGCATCACATGGTTCTGCTGGAAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTAT AA TA ACTCGAGCACCACCACCACCACCCTGAGATCCGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATA A
RL045A	mCherry mVenus minimal	GGGGAATTGTGAGCGGATAACAATTCCCCTCTAGAAATAATTTTGTAACTTTAAGAAGGAGATATACAT ATG GTGAGTAAAGGCGAGGAGGAC AATATGGCGATCATCAAAGAGTTTCATGCGCTTCAAAGTCCACATGGAAGGCAGCGTTAATGGTCACGAGTTTCAAATTGAGGGCGAAGGCGAAGG TCGTCGGTATGAGGGTACACAGACCCTAAACTGAAAGTACAGAAAGGTGGTCCACTGCCATTTGCTTGGGATATTCTGAGCCACAGTTTCATGTAT GGCTCAAAGCCTATGTGAAACATCCGGCCGATATTCCGGACTATCTGAAACTGAGCTTCCCTGAAGGGTTCAAATGGGAACGTGTGATGAACCTTG AGGATGGTGGTGTGTGACAGTGACACAGGATTCTAGCCTGCAAGACGGTGAAGTTCATCTATAAAGTAAACTGCGTGGCAGCAATTTCCGAGTG ATGGCCCGTTATGCAGAAAAAACGATGGGTTGGGAGGCCTCTAGTGAGCGTATGTATCCAGAAGATGGCGCTCTGAAAGGCGAATCAAACAG CGTCTGAAACTGAAAGATGGTGGCCACTATGATGCCGAAGTAAAACCACGTATAAAGCCAAAAACCTGTCAAAGTCCCTGGTGCCTATAACGTT AACATCAAAGTGGACATCACCTCACACAATGAGGACTATACGATCGTGGAGCAGTATGAGCGTGCTGAAGGACGTCTTCTACCGGTGGTATGGAT GAGCTGTATAAA TAA AAGGAG ATG AGCAAAGGCGAAGAAGTTCACGGGTGTGTTCCGATCCTGGTTGAACTGGATGGCGATGGAACGGT CATAAATTTAGCGTGTCTGGTGAAGGCGAAGGTGATGCGACTACGGCAAAGTACGCGTAAACTGATTTGCACCACGGGTAAGTCCCGTTCGG TGGCCGACCCTGGTACCACGCTGGGTTATGGTCTGATGTGTTTCGCACGTTACCCGGATCACATGAAACGCCATGATTTCTTAAATCTGCGATGCC GGAAGGCTATGTGCAGGAACGTACCATCTTTTTCAAAGATGATGGTAACTACAAACCCGCGGGAAGTTAAATTTGAAGGCGATACGCTGGTAA CCGTATTGAACTGAAAGGTATCGATTTCAAAGAAGATGGCAATATTCTGGGTACAAACTGGAATACAACAGTACATAACGTGTACATTACC GCCGATAAACAGAAAAACGGTATCAAAGCAAACCTCAAATCCGTACAACATCGAAGATGGCGGTGTTACGCTGGCCGATCATTACCAGCAGA ACCCGATTGGCGATGGTCCGGTGTCTGCTGCCGATAATCATTATCTGAGTTACCAGAGCAAAGTGTCTAAAGATCCGAATGAAAAACCGCATCACA TGGTTCTGCTGGAATTTGTGACCGCGCCGGCATTACGCATGGTATGGATGAAGTGTATAAA TA ACTCGAGCACCACCACCACCACCCTGAGATC CGGCTGCTAACAAAGCCCGAAAGGAGCTGAGTTGGTGTCTGCCACCCTGAGCAATAA

Table S3. Excitation and emission wavelengths used for each fluorescent protein. The same excitation and emission wavelengths were used for the monomeric versions of the fluorescent proteins.

Protein	Excitation wavelength (nm)	Emission wavelength (nm)
Cerulean	433	475
CyPet	435	477
GFPuv	395	509
T-Sapphire	399	511
eGFP	488	507
GFP	475	509
sfGFP	485	510
GFPmut3b	501	511
Venus	515	528
YPet	517	530
TagRFP-T	555	584
mRFP1	584	607
mCherry	587	610

Table S4. Fitting of single fluorescent protein synthesis kinetic data.

Protein	Upper Asymptote (a.u.)	$t_{f/2}$ (min)	Growth Rate (intensity min^{-1})
mCerulean	6182	121.6	0.030
Cerulean	5843	88.8	0.042
GFPuv	9632	125.5	0.026
T-Sapphire	40919	226.0	0.025
eGFP	2136	88.5	0.032
GFP	1765	120.0	0.024
sfGFP	27714	91.7	0.038
GFPmut3b	15967	78.7	0.040
mVenus	37556	103.6	0.031
Venus	51874	116.6	0.036
mYPet	48637	118.5	0.036
YPet	51212	149.3	0.034
TagRFP-T	1838	370.0	0.013
mRFP1	1981	171.2	0.035
mCherry	1588	192.9	0.029

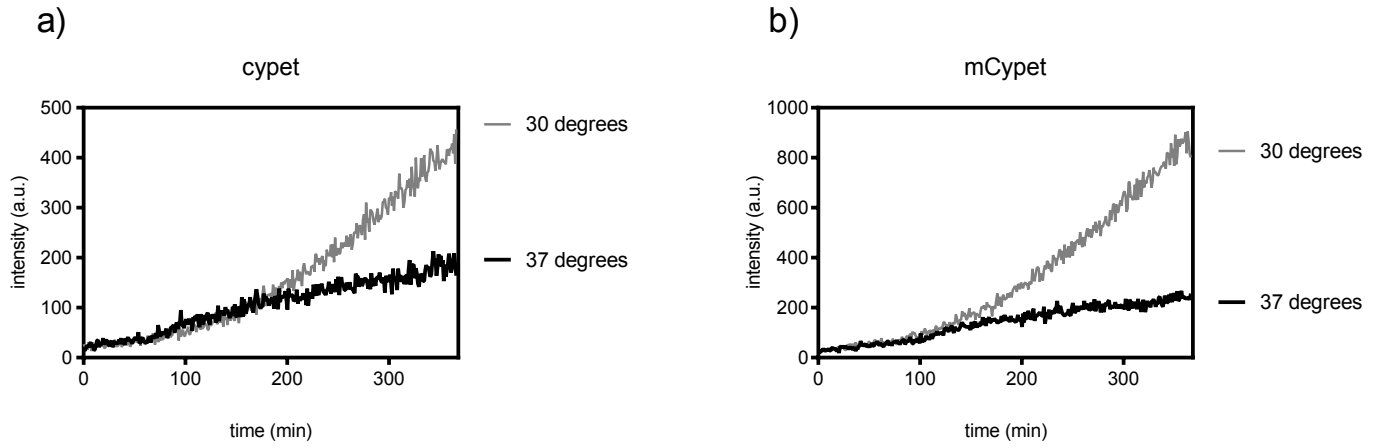


Figure S1. CyPet (a) and mCyPet (b) *in vitro* expression at 30 °C and 37 °C with the PUREsystem.

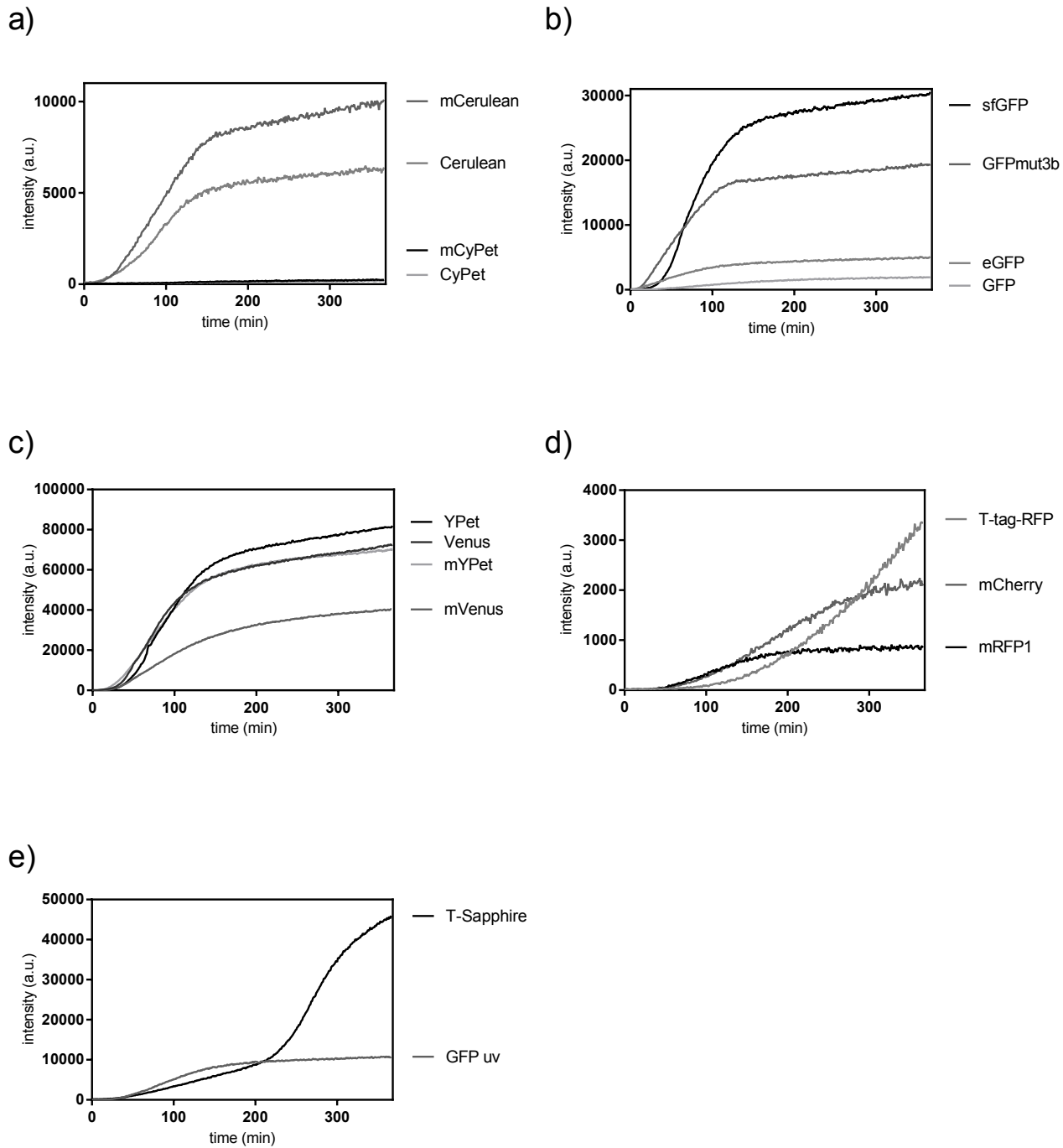


Figure S2. The kinetics profiles of the 17 different fluorescent proteins screened.

Cyan fluorescent proteins (a), Green fluorescent proteins (b), yellow fluorescent proteins (c), red fluorescent proteins (d) and UV-excitable fluorescent proteins (e) were expressed *in vitro* with the PUREsystem at 37 °C.

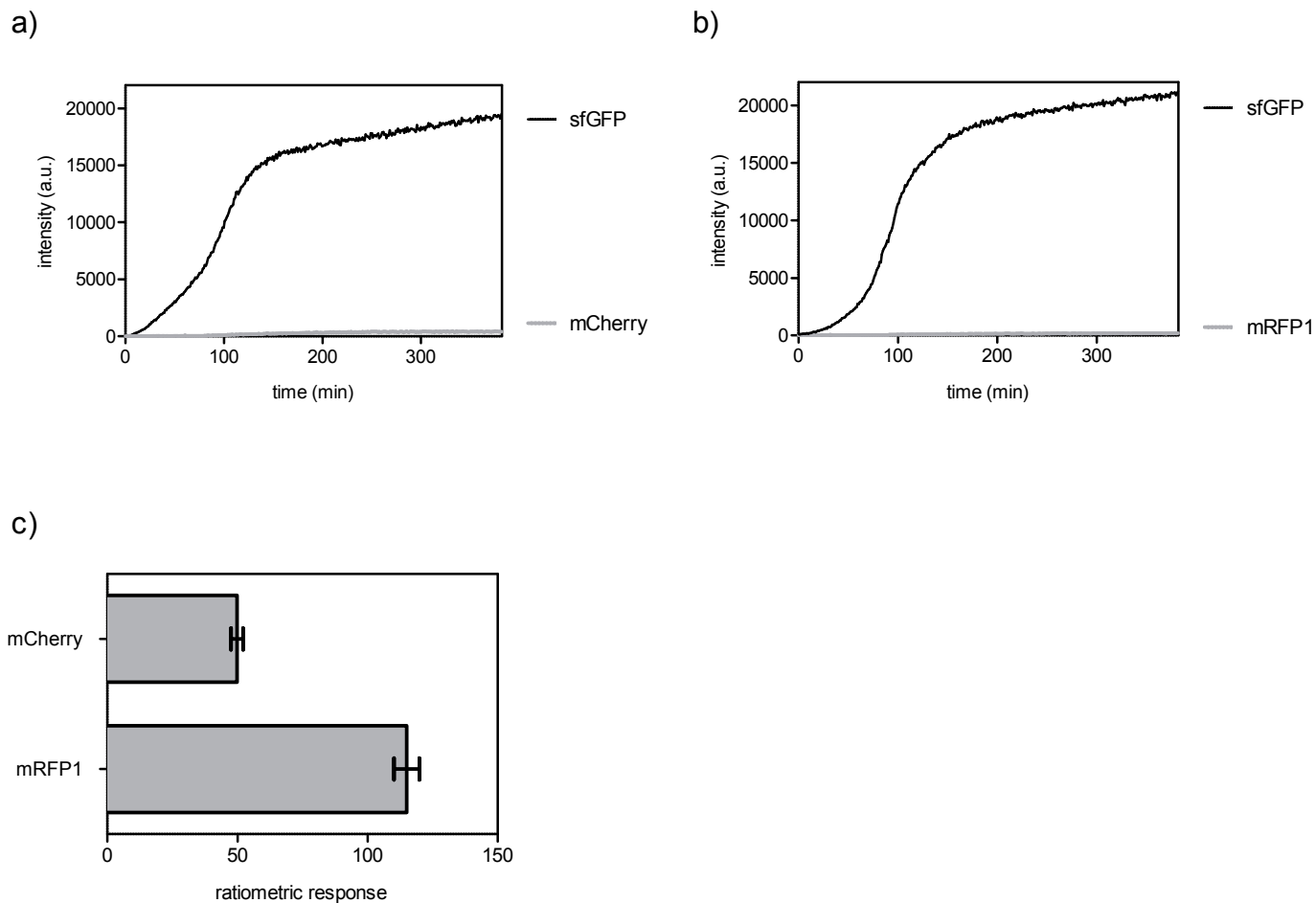


Figure S3. Green and red fluorescent proteins expressed from a bicistronic message.

Bicistronic constructs containing sfGFP and mCherry (a) and sfGFP and mRFP1 (b) were expressed *in vitro* with the PUREsystem at 37 °C. (c) The ratio of sfGFP fluorescence intensity divided by the fluorescence intensity of the red fluorescent protein after six hours shows that the sfGFP - mCherry pair is more similar in intensity.

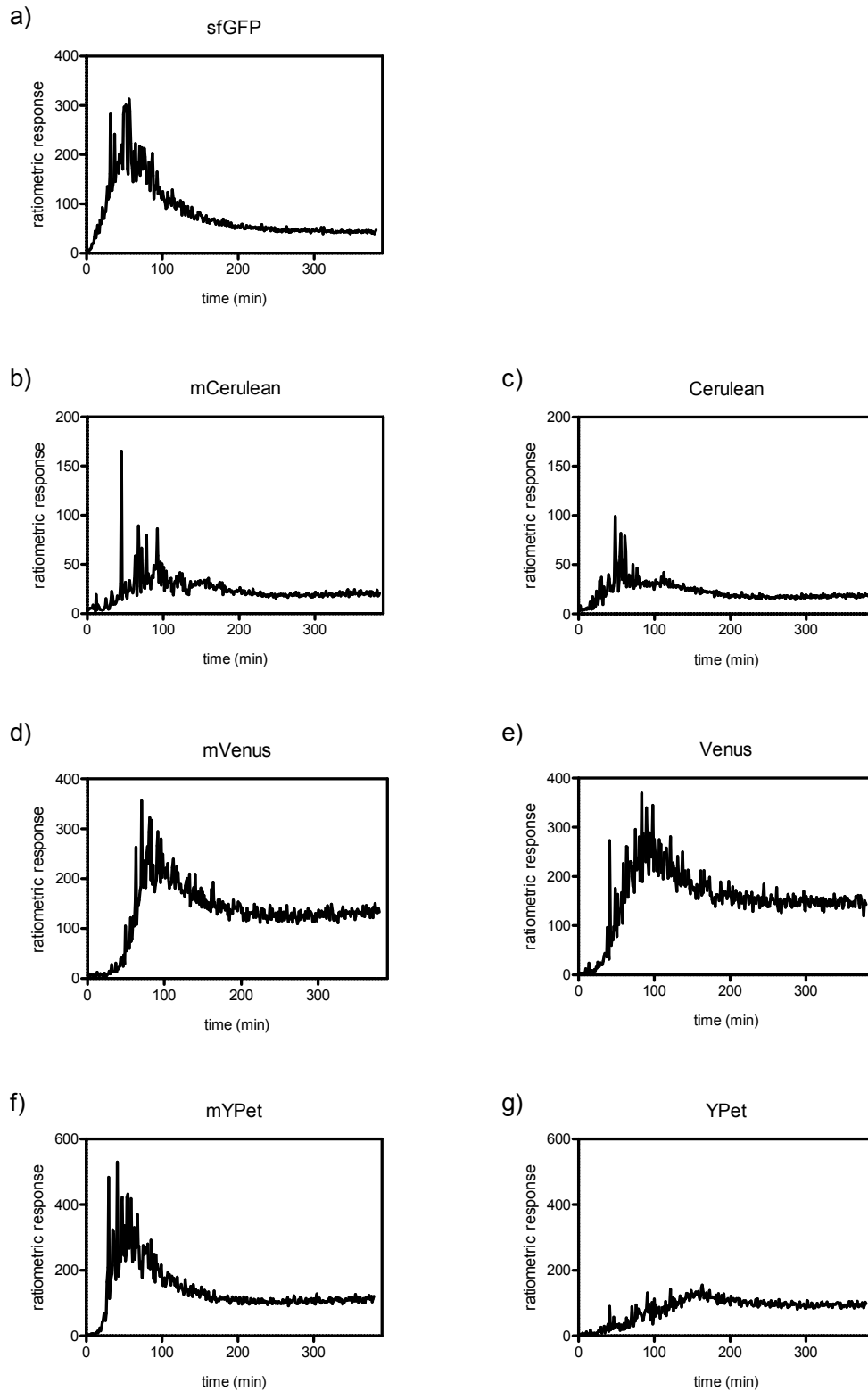


Figure S4. Representative ratiometric profiles of bicstronic constructs containing mCherry over 6 h.

The bicstronic constructs were expressed *in vitro* with the PUREsystem at 37 °C. The ratio was obtained by dividing the intensity of the first protein by the intensity of mCherry. sfGFP-mCherry (a), mCerulean-mCherry (b), Cerulean-mCherry (c), mVenus-mCherry (d), Venus-mCherry (e), mYPet-mCherry (f), and YPet-mCherry (g) all show stable readings after 3 h of expression.

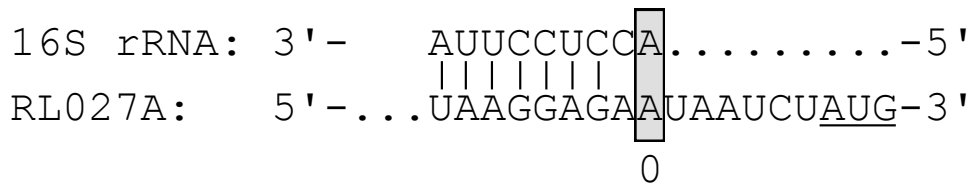


Figure S5. Aligned spacing between E. coli 16S rRNA and the reference construct RL027A.

The 3'-terminus of E. coli 16S rRNA that contains the anti-RBS sequence is shown base-paired with the reference construct RL027A. The boxed and grey shaded region is assigned as position 0. Therefore, in RL027A the aligned spacing between the RBS and the start codon is 6. The start codon is underlined.