

Supplementary Material.

Supplementary Table 1. Strains and plasmids used in this study.

All strains constructed for this work were built in an *E. coli* MG1655 or DH5 α backgrounds (references A072 and A093 in lab collection).

Strain	Genetic background	Plasmid	ARC cloned	Source
A249	MG1655	pMBA empty vector	-	This study
C381	DH5 α	pMBA empty vector	-	This study
A223	MG1655	pMBA <i>dfrA1</i>	<i>dfrA1</i>	This study
A224	MG1655	pMBA <i>dfrA5</i>	<i>dfrA5</i>	This study
A225	MG1655	pMBA <i>dfrA6</i>	<i>dfrA6</i>	This study
A226	MG1655	pMBA <i>dfrA7</i>	<i>dfrA7</i>	This study
A241	MG1655	pMBA <i>dfrA12</i>	<i>dfrA12</i>	This study
A227	MG1655	pMBA <i>dfrA14</i>	<i>dfrA14</i>	This study
A228	MG1655	pMBA <i>dfrA15</i>	<i>dfrA15</i>	This study
A229	MG1655	pMBA <i>dfrA16</i>	<i>dfrA16</i>	This study
A230	MG1655	pMBA <i>dfrA17</i>	<i>dfrA17</i>	This study
A231	MG1655	pMBA <i>dfrA21</i>	<i>dfrA21</i>	This study
A500	MG1655	pMBA <i>dfrA22</i>	<i>dfrA22</i>	This study
A232	MG1655	pMBA <i>dfrA25</i>	<i>dfrA25</i>	This study
A233	MG1655	pMBA <i>dfrA27</i>	<i>dfrA27</i>	This study
A613	MG1655	pMBA <i>dfrA29</i>	<i>dfrA29</i>	This study
A248	MG1655	pMBA <i>dfrA30</i>	<i>dfrA30</i>	This study
A234	MG1655	pMBA <i>dfrA31</i>	<i>dfrA31</i>	This study
A235	MG1655	pMBA <i>dfrA34</i>	<i>dfrA34</i>	This study
A242	MG1655	pMBA <i>dfrA35</i>	<i>dfrA35</i>	This study
A236	MG1655	pMBA <i>dfrB1</i>	<i>dfrB1</i>	This study
A245	MG1655	pMBA <i>dfrB2</i>	<i>dfrB2</i>	This study
A246	MG1655	pMBA <i>dfrB3</i>	<i>dfrB3</i>	This study
A237	MG1655	pMBA <i>dfrB4</i>	<i>dfrB4</i>	This study
A238	MG1655	pMBA <i>dfrB5</i>	<i>dfrB5</i>	This study
A239	MG1655	pMBA <i>dfrB6</i>	<i>dfrB6</i>	This study
A240	MG1655	pMBA <i>dfrB7</i>	<i>dfrB7</i>	This study
A247	MG1655	pMBA <i>dfrB8</i>	<i>dfrB8</i>	This study
A243	MG1655	pMBA <i>dfrB9</i>	<i>dfrB9</i>	This study
A390	MG1655	pMBA <i>bla</i> _{BEL-1}	<i>bla</i> _{BEL-1}	This study
A380	MG1655	pMBA <i>bla</i> _{GES-1}	<i>bla</i> _{GES-1}	This study
A387	MG1655	pMBA <i>bla</i> _{IMP-2}	<i>bla</i> _{IMP-2}	This study
A383	MG1655	pMBA <i>bla</i> _{IMP-31}	<i>bla</i> _{IMP-31}	This study
A441	MG1655	pMBA <i>bla</i> _{OXA-1}	<i>bla</i> _{OXA-1}	This study
A373	MG1655	pMBA <i>bla</i> _{OXA-2}	<i>bla</i> _{OXA-2}	This study
A381	MG1655	pMBA <i>bla</i> _{OXA-5}	<i>bla</i> _{OXA-5}	This study
A384	MG1655	pMBA <i>bla</i> _{OXA-9}	<i>bla</i> _{OXA-9}	This study
A374	MG1655	pMBA <i>bla</i> _{OXA-10}	<i>bla</i> _{OXA-10}	This study
A385	MG1655	pMBA <i>bla</i> _{OXA-20}	<i>bla</i> _{OXA-20}	This study

A382	MG1655	pMBA <i>bla</i> OXA-21	<i>bla</i> OXA-21	This study
A395	MG1655	pMBA <i>bla</i> OXA-46	<i>bla</i> OXA-46	This study
A375	MG1655	pMBA <i>bla</i> OXA-118	<i>bla</i> OXA-118	This study
A391	MG1655	pMBA <i>bla</i> OXA-129	<i>bla</i> OXA-129	This study
A376	MG1655	pMBA <i>bla</i> OXA-198	<i>bla</i> OXA-198	This study
A803	MG1655	pMBA <i>bla</i> PBL-1	<i>bla</i> PBL-1	This study
A388	MG1655	pMBA <i>bla</i> VIM-1	<i>bla</i> VIM-1	This study
A396	MG1655	pMBA <i>bla</i> VIM-2	<i>bla</i> VIM-2	This study
A389	MG1655	pMBA <i>bla</i> VIM-7	<i>bla</i> VIM-7	This study
A327	MG1655	pMBA <i>aacA2</i>	<i>aacA2</i>	This study
A266	MG1655	pMBA <i>aacA3</i>	<i>aacA3</i>	This study
A328	MG1655	pMBA <i>aacA4</i>	<i>aacA4</i>	This study
A267	MG1655	pMBA <i>aacA7</i>	<i>aacA7</i>	This study
A268	MG1655	pMBA <i>aacA8</i>	<i>aacA8</i>	This study
A263	MG1655	pMBA <i>aacA16</i>	<i>aacA16</i>	This study
A543	MG1655	pMBA <i>aacA17</i>	<i>aacA17</i>	This study
A264	MG1655	pMBA <i>aacA27</i>	<i>aacA27</i>	This study
A256	MG1655	pMBA <i>aacA28</i>	<i>aacA28</i>	This study
A257	MG1655	pMBA <i>aacA29</i>	<i>aacA29</i>	This study
A270	MG1655	pMBA <i>aacA30</i>	<i>aacA30</i>	This study
B657	MG1655	pMBA <i>aacA31</i>	<i>aacA31</i>	This study
A272	MG1655	pMBA <i>aacA34</i>	<i>aacA34</i>	This study
A329	MG1655	pMBA <i>aacA35</i>	<i>aacA35</i>	This study
A258	MG1655	pMBA <i>aacA37</i>	<i>aacA37</i>	This study
A603	MG1655	pMBA <i>aacA38</i>	<i>aacA38</i>	This study
A273	MG1655	pMBA <i>aacA42</i>	<i>aacA42</i>	This study
C117	MG1655	pMBA <i>aacA43</i>	<i>aacA43</i>	This study
A265	MG1655	pMBA <i>aacA45</i>	<i>aacA45</i>	This study
A274	MG1655	pMBA <i>aacA47</i>	<i>aacA47</i>	This study
A259	MG1655	pMBA <i>aacA48</i>	<i>aacA48</i>	This study
B656	MG1655	pMBA <i>aacA49</i>	<i>aacA49</i>	This study
A260	MG1655	pMBA <i>aacA50</i>	<i>aacA50</i>	This study
A261	MG1655	pMBA <i>aacA51</i>	<i>aacA51</i>	This study
A326	MG1655	pMBA <i>aacA52</i>	<i>aacA52</i>	This study
B655	MG1655	pMBA <i>aacA54</i>	<i>aacA54</i>	This study
A262	MG1655	pMBA <i>aacA56</i>	<i>aacA56</i>	This study
A303	MG1655	pMBA <i>aacA59</i>	<i>aacA59</i>	This study
A302	MG1655	pMBA <i>aacA61</i>	<i>aacA61</i>	This study
A566	MG1655	pMBA <i>aacA64</i>	<i>aacA64</i>	This study
A331	MG1655	pMBA <i>aacAX</i>	<i>aacAX</i>	This study
A308	MG1655	pMBA <i>aacC1</i>	<i>aacC1</i>	This study
A304	MG1655	pMBA <i>aacC2</i>	<i>aacC2</i>	This study
B625	MG1655	pMBA <i>aacC3</i>	<i>aacC3</i>	This study
A320	MG1655	pMBA <i>aacC4</i>	<i>aacC4</i>	This study
A305	MG1655	pMBA <i>aacC5</i>	<i>aacC5</i>	This study
A306	MG1655	pMBA <i>aacC6</i>	<i>aacC6</i>	This study
A332	MG1655	pMBA <i>aacC11</i>	<i>aacC11</i>	This study
A309	MG1655	pMBA <i>aacC13</i>	<i>aacC13</i>	This study
A311	MG1655	pMBA <i>aadA1</i>	<i>aadA1</i>	This study
A333	MG1655	pMBA <i>aadA2</i>	<i>aadA2</i>	This study
A319	MG1655	pMBA <i>aadA4</i>	<i>aadA4</i>	This study

A313	MG1655	pMBA _{aadA5}	<i>aadA5</i>	This study
A321	MG1655	pMBA _{aadA6}	<i>aadA6</i>	This study
A397	MG1655	pMBA _{aadA7}	<i>aadA7</i>	This study
A315	MG1655	pMBA _{aadA10}	<i>aadA10</i>	This study
A312	MG1655	pMBA _{aadA11}	<i>aadA11</i>	This study
A322	MG1655	pMBA _{aadA13}	<i>aadA13</i>	This study
A316	MG1655	pMBA _{aadA16}	<i>aadA16</i>	This study
A318	MG1655	pMBA _{aadA24}	<i>aadA24</i>	This study
A604	MG1655	pMBA _{aadA28}	<i>aadA28</i>	This study
A314	MG1655	pMBA _{aadA29}	<i>aadA29</i>	This study
A398	MG1655	pMBA _{aadA34}	<i>aadA34</i>	This study
A292	MG1655	pMBA _{aadB}	<i>aadB</i>	This study
A422	MG1655	pMBA _{aphA15}	<i>aphA15</i>	This study
C116	MG1655	pMBA _{aphA16}	<i>aphA16</i>	This study
A293	MG1655	pMBA _{sat2}	<i>sat2</i>	This study
A368	MG1655	pMBA _{arr2}	<i>arr2</i>	This study
A334	MG1655	pMBA _{arr5}	<i>arr5</i>	This study
A363	MG1655	pMBA _{arr6}	<i>arr6</i>	This study
A440	MG1655	pMBA _{arr7}	<i>arr7</i>	This study
A364	MG1655	pMBA _{arr8b}	<i>arr8b</i>	This study
A335	MG1655	pMBA _{catB2}	<i>catB2</i>	This study
A336	MG1655	pMBA _{catB3}	<i>catB3</i>	This study
A365	MG1655	pMBA _{catB5}	<i>catB5</i>	This study
A625	MG1655	pMBA _{catB6}	<i>catB6</i>	This study
A393	MG1655	pMBA _{catB10}	<i>catB10</i>	This study
A338	MG1655	pMBA _{ereA2}	<i>ereA2</i>	This study
A423	MG1655	pMBA _{ereA3}	<i>ereA3</i>	This study
A657	MG1655	pMBA _{fosC2}	<i>fosC2</i>	This study
A339	MG1655	pMBA _{fosE}	<i>fosE</i>	This study
A624	MG1655	pMBA _{fosF}	<i>fosF</i>	This study
A354	MG1655	pMBA _{fosG}	<i>fosG</i>	This study
A355	MG1655	pMBA _{fosH}	<i>fosH</i>	This study
A356	MG1655	pMBA _{fosI}	<i>fosI</i>	This study
A626	MG1655	pMBA _{fosK}	<i>fosK</i>	This study
A621	MG1655	pMBA _{fosL}	<i>fosL</i>	This study
A622	MG1655	pMBA _{fosM}	<i>fosM</i>	This study
A627	MG1655	pMBA _{fosN}	<i>fosN</i>	This study
A337	MG1655	pMBA _{smr1}	<i>smr1</i>	This study
A359	MG1655	pMBA _{smr2}	<i>smr2</i>	This study
A366	MG1655	pMBA _{smr3}	<i>smr3</i>	This study
A367	MG1655	pMBA _{qacE}	<i>qacE</i>	This study
B091	MG1655	pMBA _{qacEA-sul1}	<i>qacEA-sul1</i>	This study
C382	DH5 α	pMBA _{qacEA-sul1}	<i>qacEA-sul1</i>	This study
A323	MG1655	pMBA _{qacF}	<i>qacF</i>	This study
A357	MG1655	pMBA _{qacG}	<i>qacG</i>	This study
A324	MG1655	pMBA _{qacH}	<i>qacH</i>	This study
A623	MG1655	pMBA _{qacK}	<i>qacK</i>	This study
A325	MG1655	pMBA _{qacL}	<i>qacL</i>	This study
A358	MG1655	pMBA _{qacM}	<i>qacM</i>	This study
A086	MG1655	R388 _{dfrA5-aadB-bla_{VEB}-1}	<i>dfrA5-aadB-bla_{VEB}-1</i>	<i>Souque et al, 2021</i>
A078	MG1655	R388 _{aadB-dfrA5-bla_{VEB}-1}	<i>aadB-dfrA5-bla_{VEB}-1</i>	<i>Souque et al, 2021</i>

Supplementary Table 2. Antimicrobial resistance cassettes (ARC) sequences.

In silico predicted main ORFs of each antimicrobial gene are underlined. ARCs described in *E. coli* in the data bases are also underlined.

ARC	Sequence (5' → 3')
<u>dfrA1</u>	TTAACTCTGAGGAAGATTGTGAACTATCACTAATGGTAGCTATATCGAAGAATGGAGTTATCGGGAATGGCCCTGAT ATTCATGGAGTGCCAAAGGTGAACAGCTCCTGTTTAAAGCTATTACCTATAACCAATGGCTGTTGGTTGGACGCAAGAC TTTTGAATCAATGGGAGCATTACCAACCGAAAGTATGCGGTCGTAACACGTTCAAGTTTACATCTGACAATGAGAACG TATTGATCTTTCCATCAATTAAAGATGCTTTAAACCAACCTAAAGAAAATAACGGATCATGTGCTATTGTTTCAGGTGGTGGGG AGATATACAAAAGCCTGATCGATCAAGTAGATACACTACATATATCTACAATAGACATCGAGCCGGAAGGTGATGTTTAC TTTCCTGAAATCCCAAGCAATTTTAGGCCAGTTTTTACCACAGACTTCGCCTTAACATAAAATTATAGTTACCAAACTCGG CAAAAGGGTTAAACAGTGGCAGCAACGGATTGCAAACTGTCACGCCTTTTGTGCCAAAAGCCGCCAGGTTTGGCAT CCGCTGTGCCAGGCG
<u>dfrA5</u>	TTAACCCGGAACCAAAATTGTGAAAGTATCATTAAATGGGTGCAAAAAGCGAAAACGGAGTGATTGGTTGCGGTCCACAC ATACCTGTGTCGCGAAAGGAGAGCAGCTACTCTTAAAGCCTTGACGTACAAACAGTGCGCTTTTGGTGGCCGCAAGAC GTTTCAATCTATGGGAGCACTCCCTAATAGGAAATACGCGGTCGTTACTCGCTCAGCCTGGACGGCCGATAATGACAACG TAATAGTATTCGCGTCGATCGAAGAGGCCATGTACGGGTGGCTGAACTCACCGATCAGCTTATAGTGTCTGGTGGCGGG GAGATTACAGAGAAACATTGGCCATGGCCTCAGCTCCATATATCGACGATTGATATTGAGCCGGAAGGAGATGTTT CTTCCGAATATTCCCAATACCTTCGAAGTGTGTTTGTAGCAACACTTTAGCTCAAACTAACTATTGCTATCAAAATTGG CAAAAGGGTTAAACAAAGCTATGCAATTGACGGTAAAAAGCTTCGTTGCTTCGCTTGTACGCTTCTTACCGCAATTGATA ACGGCG
<u>dfrA6</u>	TTAGCCCTCAGGAGGAAAAATGAAAAATATCTCTTATGGCAGCTGTTTCCGAGAATGGAGTAATGGCTCTGGATTGGATA TACCTTGGCATGTACAAGGCGAGCAGCTCCTATTCAAAGCCTAGACTTACAATCAATGGCTTCTAGTTGGTCGTAAAACTT TCGACTCAATGGGTAACTTCCGAATAGAAAAATAGCAGTGGTTACTCGTTCTAAAAATTATCTCGAATGACCCTGATGTTG TGATTTCGCAAGGTGTGAATCGGCATTAGCTTACCTAAACAATCGGACAGCACATATCTTTGTTTCTGCTGGTGGGTGAAA TATATAAAGCTTTAATCGATCAAGCAGATGTTATCCATCTTCAGTGATTACAAGCATATCTCTGGCGCATGTTTTCCTC TCAGTTCCACAGGGCTTCAAGCAACATTTGAGCAAAAGTTTCAGTTCAAATATTGATTACAGTACCAATTTGGGCCAA AGGGCTAAACATCTGTTTAAAGAGTGATTGCAACGCGTGAATTTTACTATGCGTTGCGTTAGTGTTTAAAGGTGGTATG CGGAGGCTTCGGTATTGCGTTGCTCACACCTTAACAGGGCG
<u>dfrA7</u>	TTAGCCATTACGGGGGTGAATTGAAAAATTTCAATTGATTCTGCAACGTCAGAAAAATGGCGTAATCGGTAATGGCCCTGAT ATCCCATGGTCAGCAAAAGGTGAGCAGTACTCTTAAAGCGCTCACATATAATCAGTGGCTCCTTGTGGAAGGAAAAAC ATTTGACTCTATGGGTGTTCTTCCAAATCGAAAAATAGCAGTAGTGTGCGAGGAAAGGAATTTCAAGCTCAAAATGAAATG TATTAGTCTTTCTTCAATAGAAAAATCGCTTTGCAAGAACTATCGAAAAATTACAGATCATTATATGTCTCTGGTGGCGGTG AAATCTACAATAGTCTTATTGAAAAAGCAGATATAATTCATTTGCTACTGTTACGTTGAGGTTGAAGGTGATATCAATT TTCTCAAAATTCAGAGAAATTCATTTGGTTTGTGACAGTGTGTTTGTCTAATATAAATACACATCAGATTGGA AAAAAGGCTAAACAGTCGTTCCAGCACCGAGTCGCTGCGCTCCTTGGACAGTGTTTTAAAGTCGCGGTTTATGTTTGTGTCG GCAAAAGTATTCCATAAAACCAACTTAAAAACCGCGCTGAACTCGGCG
<u>dfrA12</u>	TTAGCCATATGAACTCGGAATCAGTACGCATTATCTCGTTGCTGCGATGGGAGCCAAATCGGGTTATTGGCAATGGTCCTA ATATCCCCTGGAAAAATTCGGGTGAGCAGAAGATTTTTCGCACTACTGAGGGAAGAGTCGTTGTCATGGGGCGAAAG ACCTTTGAGTCTATCGGCAAGCCTCTACCGAACCGTCACACATTGGTAATCTCACGCGCAAGCTAACTACCGCGCACTGG CTGCGTAGTTGTTTCAACGCTGTCGACGCTATCGCTTTGGCATCCGAACTCGGCAATGAACTACGTCGCGGGCGGAGC TGAGATATACACTCTGGCACTACCTCACGCCACCGCGTGTCTATCTGAGGTACATCAAACTTCAGGGGTGACGCCCT TTCTCCAATGCTCAACGAAACAGAATTGAGCTTGTCTCAACGAAACCAATCAAGCTGTAATTTCGTCATCAACCACTCCGT TTATGCGCGTCGAAACCGCTAAACCATTCGCTCAACGGGACGCCAAAAATGCTGCGCATTTTGGTTCCCTCCGCTGCGCTCCG GCTCTCGTTACGTCCAACG
<u>dfrA14</u>	TTAACCCAGGATGAGAACCTTGAAAGTATCATTGATAGCTGCGAAAGCGAAAAACGGCGTATTGGTTGCGGTCCAGAC ATACCGTGTGTCGCGAAAGGGGAGCAGCTACTTTTAAAGCATTGACCTACAATCAGTGTCTTCTGGTGGGTGCGAAGAC GTTTGAATCTATGGGCGCACTCCCAATAGGAAATACGCGGTGCTTACCGCTCAGGTGAGACATCAAAATGATGACAATG TAGTTGTATTTCAGTCAATCGAAGAGGCCATGACAGGCTAGCTGAATTCACCGGTACGTTATAGTGTCTGGTGGCGGGA GAAATATCCGAGAAACATACCCATGGCCTCTACGCTCACTTATCGACGATCGACATCGAGCCAGAGGGGATGTTT CTTCCGAGTATTCAAAATACCTTCGAAGTGTGTTTGTAGCAACACTTTACTTCAAACTAACTATTGCTATCAAAATTGG AAAAAGGGTTAAACAAAGCTATGCAATCGACGGCAAAAAGCTTCGTTGCTTCGCGCATACGCTTTTTCGCGCATGTGATA GCGACG
<u>dfrA15</u>	TTAACCCCTAAGGAAGTATCGTGAACTATCACTAATGGCAGCAATTCGAAGAATGGAGTTATCGGAAATGGCCAGAT ATTCATGGAGTGCCAAAGGGGAACAATTACTCTTCAAAGCGATTACCTATAATCAGTGGCTTTTGGTAGGCCGAAAGAC TTTCGAGTCAATGGGGGCTTACCCAACCGGAAATATGCCGTGTGAACCTGTTCAAGCTTCACTTCCAGTGATGAGAAATG ATTGGTATTTCATCTATCGATGAAGCGCTAAATCATCTGAAGACGATAACGGATCATGTGATTGCTCTGGTGGGTGGA AATATACAAAAGCCTGATCGATAAAGTTGATCTTACATATTCAACAATCGACATTGAGCCAGAAAGGTGATGCTATTT TCCAGAAATCCCAAGTATTTTAGGCCAGTTTTAGCCAAGACTTCGTGTCTAACATAAAATTATAGTTACCAATCTGGCA AAAGGGTTAAACAGTGGCAGCAACTGACGCCAAAGGTGTCATTTGTTTGGCAAAAAGCCGCAAAAACAGCGCCAAAT TTTGTCCGCACTGTGCCAGGCG
<u>dfrA16</u>	TTAACTCGAGGGAGAAATCGTGAAAGTATCACTAATGGCTGCCAAGTCGAAGAACGGTATTATCGGTAATGGACCAGATA TTCCATGGAGCGCCAAAGGCGAGCAACTCTATTAAAGGCAATTACATATAATCAATGGCTTTTATGTTGACGCAAACT TTTGAGTCAATGGGCGCTCTCCCAATCGAAAGTATGCAGTTGTAACCTCGCTCAATTTTCTACGAATGATGAGGGTGTA ATGTTTCTCTCTCAATTCAGGATGCCTTAATAAATTTAGAGGAAATCAGGATCATGTTATCGTTTCTGGTGGTGGTGAA ATATACAAAAGCTTGATTTCAAAAGTAGATCTTTGCATATTTCAACAGTCGACATCGAGCGAGATGGAGACATAGTTTTT CCTGAAATCCAGATACATTCAAGTTGGTATTGAGCAAGATTTCGAGTCTAACATTAACTATTGTTATCAAAATCTGGCAA AAGAGTTAAACAGCGCCTGCAATCTGACCTCGGTTACTGTACCTTTTGTGCGGTGGAGCTGCAAAAAGGCGCAAT AACCTCCGCGAGTTGAGCGGGCG
<u>dfrA17</u>	TTAGCCATTAAAGGAGTTAAATTTGAAAAATATCATTTGATTCTGCAAGTGTGCAAAAATGGCGTAATCGGTAGTGTCTGTA TATCCCGTGGTCAGTAAAAGGTGAGCAACTACTCTTAAAGCGCTCACATATAATCAATGGCTCCTTGTGCGGAAGAAAAA CATTTGACTCTATGGGTGTTCTTCCAAATCGCAAAATATGCAGTAGTGTCAAAGAACGGAATTTCAAGCTCAAAATGAAAAA GTCCTAGTTTTCCTTCAATAGAAAAATTTGAAAGAGCTATCAAAAAGTTACAGATCATGTTATGTTCTGCGGGGGGT CAAATCTATAATAGCCTATTGAAAAAGCAGATATAATTCATTGTTCTACTGTTACGTTGAAGTCGAAGGTGATATCAAA TTCCCTATAATGCCTGAGAAATTTCAATTTGGTTTTTGAACAGTTTTTATGTTCTAATAATAAATATACATACCAAGATTGGA AAAAAGGCTAAACATGCGTTGACGACCAAGCTCGCTTCTGTTGAGACAGCTTTTAAAGTCGCGCTTGTGTTGTTGTTGCTG GCAAAAGTATTCCAAAGCCGCAACTTAAAGAGCTGCCGTGAACCTAAACG
<u>dfrA21</u>	TTAGCGGTATGAACCCGGAATCGGTCCGCAATTTACTGCTGCGTGCATGGGTGCCAATCGGGTATTGGCAATGGTCCCG ATATCCCCTGGAAAAATCCAGGTGAGCAGAAGATTTTTCGCAAGCTCACGAGAGCAAGTGGTGGTATGGGCCGCAAG ACATTTGAGTCCATAGGCAAGCCCTTACCAACCCGCGCACAGTGGTGTCTCTGCGCCAAAGCTCGTTATAGCGCTCTGCTG TTGTGCAAGTTGTTCAACGCTGTCACAGGCTATGCCATCGCAGCCGAACACGGCAAGAACTCACGTGCGCGGGAG CCGAGGTATATGCGCTGGCGTACCGCATGCCAACGGCGTCTTCTATCTGAGGTACATCAACCTTTGAGGGTGACGCT

	TCTTCCAGTGCTTAACGCAGCAGAAATTCGAGGTTGTCTCATCCGAAACCATTCAAGGCACAATCACGTACACGCACTCC GTCTATGCCGCTCGTAACGGCTAAACAAGTCCGTCAACGGGACACCCAAATGCTGCGCATTGGGTTCCTTGGCTGCGCC TCGGCGCCCGTTACGTCCAACG
<i>dfrA22</i>	TTAGCCGTATGAACCCGGAATTTGGTCCGATTATCTGGTTCGCTGCCATGGGTGCCAATCGGGTTATTGGCAATGGCCCCG ATATTCCTTGGAAAAATCCCGGGTGAGCAAAAAGATCTTTCGAGGCTCACCGAGGGCAAAAGTGGTCTGTTATGGGCGCGCAAG ACGTTTGAGTCCATAGGCAAGCCCTTACCAAACCGCGCGCAGAGTGGTCTCTCGCGCCAAGCCAGTTATAGCGCTGCTGG TTGTGCAGTTGTTTCAACGCTGTCGAGGCTATTGCCATCGCAGCCGAACACGGCAAAAGAGCTCTACGTGGCCGGCGGAG CCGAGGTATATGCACCTGGCACTACCTCGTGCCGACGGCGCTTTCTATATGAGGTACATCAAAACCTTCGAGGGTGACGCCCT TCTTCCCTGTGCTCGACGAAGCAGAAATTCGAGGTTGTCTCAGCCGAAACCGTTCAAGCCACAATCACGTACACGCACTCC GTCTATGCACGTGTAACGGCTAACAGTCCGTCAACGGGACACCCAAATGCTGCGCATTGGGGTCCCTCGGCTGCGCC TCGGTGGCCGTTACGTCCAACG
<i>dfrA25</i>	TTAACCCAGGACGAGTACCTTGAAAGTATCATTTGATGGCTGCAAGAGCGAAAAATGGCGTAATCGGTTGCGGTCCTGACA TTCCTTGGTCTGCCAAAAGGGGAACAGCTTCTTTTCAAAGCACTGACCTATAACCAATGGCTTTTGGTAGGGCGCAAAACAT TTGAGTCTATGGGGCCGCTGCCCAATAGGAAATACCGGGTTGTTACCCGCTCAAACCTGGACAGCGGCTAATGAAAACGTA GTGGTTTTCCCGTCGATTGACGAAGCGATGGGTAGATTAGGCGAGATCACTGACCATGTCATCGTCGCCGGTGGTGGAGA AATCTACCAATGAAACGATACCCATGGCCCTACTCTGCATGTGTGCGACAATCGACGTGGAGCGCAGAGGGGCAATGTTTTCT TCCGAACATTCTCGGGAAGTTTGATGTCGTTTTTGAGCAACAATTTACATCAAAACATTAACATTGTGCTATCAAACTCGGCA AAAGGGTTAAACAAAGCTATGCAATTGACGGCAAAAAGCTTCGTTTCGCTTCACTCACTACGCAATTTGCCGCACTTGATAG CGGCG
<i>dfrA27</i>	TTAACCCAAAGGAGTATCGTGAAATATCACTAATGGCTGCAAAAAGCAAGAAATGGGGTTATTGGCTGCGGCTCGGATAT CCCGTGGAAACGCTAAAGGTGAGCAGCTGCTTTTAAAGCAATAACTTACAATCAATGGCTCTTAGTCGGCGCTAAACAT TTGAGGCAATGGGGGCTCTCCCAATAGAAAGTATGCAAGTTGTCAGCCGCTCAGGATCGGTAGCTACTAACGATGATGTG GTTGTGTTTCCATCTATAGAAGCAGCAATGAGGGAGCTAAAGACTCTTACGAACCATGTTGTTGTTTCTGGTGGTGAGA GATCTACAAGAGTCTGATCGCCCATGCCGACAGCTACATATCTCGACAATAGATTCCGAGCGCAGAGGGCAATGTTTTCT TTCCGGAATTCGCCAAAGAGTTCAATGTGGTGTTCGAGCAGGAATTTCAATCAAAATATAAATATCGCTATCAAACTCGGC AAAGGGTTAAACCATCAAGCATCGGACACATTTGCTTCGCTGCGCTCAAAACGCAAAATGTGCCGCTGCTTAGCGGC G
<i>dfrA29</i>	TTAACCATACGGAATTTAATGAAAAATTTCTTAACTCGCAGCTCAGTCAGAAAAACGGTGTATTGGTAATGGCCCAGAT ATTCCATGGTCAGCAAAAAGGGGAGCAGTTACTTTTCAAAGCGCTAACATATAATCAAGTGGCTTTGTGCGGAAGAAAAAC ATTTGAGTCAATGGGTATTCTTCTAATCGAAAGTATGCTGTCTTTCAAAAAATGGAATTTACACCTTCTGAAAACGT ACTAGTTTTTTCGTCTATAGAAAAATGCATTATAGAAGTGGCTAAGGTAAACAGACCATTTATATATTTCTGGCGGTGGTCA AATATATAATAGTCTTATTGAAAGTGCTGATACCATCCACTTATCTATCATCCAAAGAGGTAGAAGGTGAAGTAAGGT TTCCCAAAATACCTCCTAATTACAAGTTGGTATTGAGCAATATTATCTTCAAATATTAATTACACTATCAAAATTTGGCA AAAAGGTTAAACAAGTCGCTCAAGCACCAGTCGCTTCGCTCTTGGACAGTTTTTAAGTCGAGTTTTGTGGTTTTGCTGCG CAAAAAAGTTTCCACAAAACCAACTTAAAAACTGCGCTTAGCTCGGCG
<i>dfrA30</i>	TTAACCCGGGACCAAAATTTGTGAAAGTATCATTAAATGGCTGCAAGAGCGAGAAACGGAGTGATCGGTTGCGGTCCACAC ATACCTGTGTCGCGAAAGGAGAGCAGCTACTCTTAAAGCCCTGACGTACAACACAGTGGCTTTTGGTTGGCGCGCAAGAC GTTTGAATCAATGGGGGCGCTCCCAACAGGAAATACGCGGTCTGTTACTCGCTCAGCCTGGACGGCCAATATGACAACG TAGTAGTATTCGGTCGATCGAAGAGGGCATGGGCGGTCTAGCTAAACTCAACGGTCACGTTATAGTGTCTGGTGGCGGG GAGATTTACAGAGAAACGTTGCCCATGGCCCTCAGCTCCATGTATCGACGATCGACATTGAGCGCAGAAAGGGGATGTTTT CTTCCGAATATTCCTCAACTCTTCGAAGTTGTTTTTGAGCAACATTTTAGTTCAAACATTAACATATGCTATCAAAATTTGG AAAAAGGTTAAACAAAGCTATGCAATTGACGGCAAAAAGCTTCGTTCCGCGCGCTCACTACGCTTTTACCAGCAATTGAT AGCGGCG
<i>dfrA31</i>	TTAGCCCTCAGGAGGAAAAATGAAAAATATCCATTATGGCAGCAGTTCTGAGAATGGAGTAATGGCTCTGGATTGGATA TACCTTGGCATGTACAAGGTGAGCAGCTCTGTCTCAAAGCTATGACTTACAATCAATGGCTTTTATGCTGGCTGCAAAACTT TCGACTCAATGGGTAAACTTCCCAATAGGAAATATGCTGTGGTTACTCGCTCAGAAATGGTCTCGAATGATCCAGATGTT ATTTATTTTACCAGCATTTGAATCGGCATTATCTTACTTAGACAATACGACAACACATGTCTTGTCTTCTGGTGGTGGTGA ATTTACAAAGCATTAACTCGAACAAGCAGATGATTATCCATCTTTTCAAGTGTATCATAAGCACATCTCTGGCGACGTTCTTTC CCTTCAGTTCCACAGAGTTTCAACAAACATTTGAGCAAAAGTTTCAAGTTCAAATATTGATTACACGTACCAAAATTTGGGCA AAGGGCTAAACAACTGTTTAAAGAGGATTACAACGCGTGGCATTTTACTATGCGTTGGTTTTAGTGTTTAAAGCGGTAT GCGGAAGCTTCGGTATTGCGTTGCTCACCCCTTAAACAGGCG
<i>dfrA32</i>	TTAGCCATATCGGGAGTTAAATTGAAAAATTTCAATTGATTCTGCAAGTGTGAGAAAAATGGCGTAATCGGTAGTGGTCTGAT ATTCCGTGGTCAGCAAAAAGGTGAGCAGCTAATCTTAAAGCGCTCACATACAATCAAGTGGCTTCTTGTGGAAAGAAAAAC ATTTGACTCTATGGGAGTTCTTCCAAATCGCAAAATATGCAGTAGTGTCAAAGAATGGAAATTTACAGGTCAAAATGAAAACG TCTTGGTTTTTCTTCAATAGAAAAATGCTTTGCAAGAACTATCTAAAATACAGATCATGTATATATTTCGGGTGGGGGGC AAATCTATGAAAGCCTTATTGAAAAAGCAGATATAATTCATCTATCTACTATTCAATGTTGAGGTGATGATTAAT TCCCTATATTACTGAAGGTTTCAACTTGGTTTTTGAACAGTTTTTGTGTCTAATATAAATATACATATCAAAATTTGGA AAAAGGCTAAACAAGTCGTTGACGACACAGTCGCTCCGCTCTTGACAGTTTTTAAGTTGTGGTTTTATGGTTTTGCTGCG CAAAATATTCCATAAAACCAACTTAAAAACTGCCGCTGAACCTCGGCG
<i>dfrA34</i>	TTAACCCAGGACCAAAACCTTGAAAGTATCATTAAATGGCTGCAAGAGCGAAAAACGGAGTGATCGGTTGTTGGTCCAGAC ATACCTGTGTCGCGAAAGGAGAGCAGCTACTTTCAAAGCCTTGACGTACAATCAAGTGGCTTTTGGTAGGCGCAAAAC GTTTGAATCTATCGGGGCGCTCCCTAATAGGAAGTACGCGGTCTTACCCGCTCAGACTGGACAATGGATCGTGACGATG TAGTAGTATTCGGTCAATCGAAGAGGGCATGGACGGGCTAGCTAAACACACCACTGACGTTATAGTGTCTGGTGGTGGG GAGATTTACAGAGAAACCTTGCCGATAGCCTTACCTTCCAGTATCGACAATCGACATTGAGCGCAGAGGAGACGCTTTCT CTTCCGAATATTCCGAATACCTTCGACGTTGTTTTTGAGCAACACTTTACTTCAAATATTAATTACTGCTATCAAAATTTGG CAAAAAGGGTTAAACAAAGCTATGCAATTGACGGCAAAAAGCTTCGTTTCGCTTCACTCACTACGCTTTTGGCGCAATTGA TAGCGGCG
<i>dfrA35</i>	TTAACTAGGAGAAATCGTTAAACTATCACTAATGGCAGCAATATCGAAGAATGGAGTCATCGGAAATGGCCCAGATATTC CATGGAGTGCCAAAAGGGGAACAATTACTGTTTAAAGGCAATTACCTATAATCAATGGCTTTTGGTAGGTCGGAAGACTTTC GAATCTATGGGAGCTTTACCAATCGAAAGTATGCGGTGTGTAACCTCGTTCAAGCTTCACATCAAAATGAAGAGAAATGTATT GGTATTTCATCTATCGAAGATGCGCTAAACCAATTAGAGAAAAATAACGGATCATGTGATTGTGCTGGTGGTGGTGA TATCAAAAAGCCTAATATCTAAAGTAGATACATATCATATCTCTACCATGATATTGAGCCTGAAGGTGATGTTGTTTTTC CTAAAATTCAGATTCAATTAAGTTAGTATTAGCCAGGAATTCGAGTCTAACATTAATTATTGTTACCAAACTCTGGCAGA TGGGTTAAACAGGGCCTGCAATTGACCTCCGGCCACTGTACCTTTTGTGCAAAAAGCCGACAAAAGGGCGCAATTGGC CTCCGCGAGTTGAGCGGGCG
<i>dfrB1</i>	TTGGGCGTGACCAATGCAGCGTGTGCTGGGGCCACATAGAACACCTAGAAGTTCAAGAAGGTCGGAATGGAACGA AGTAGCAATGAAGTCAGTAATCCAGTTGCTGGCAATTTGTATTCCATCGAACGCCACGTTTGGTATGGGAGATCGCGT GCGCAAGAAATCCGGCGCGCGCTGGCAAGTGCAGATTGTGCGGTGGTACTGCAAAATTTGACCCCCGAGGCTACGCC GTCGAGTCTGAGGCTCACCCAGGCTCAGTACAGATTATCCTGTTGCGCGCGCTTGAACGCATCAACTGAGTTCAGGTTG AAGTGGCCGCTCAACGCTCAACCGGGCATCACCAGTACAGCCCAACTGTGCTCCAGCGACGGCTTCGCCGCCG CTGAGCTAATTGC
<i>dfrB2</i>	TTAGGCAGCCGTTGTGCTGGTGTCTTCTGATAGTTGTTGTGGGGTAGGCAGTCAGAGTTCGATTGTGTTGTGCGCCATAA GATTCACAAGAAGGATTGACATAGGTTCAAGTAGCGATGAAGCAACGCTCCGTTGACGGGCAATTTGCGCTTCCCT GAGTGCCACCTTTGGCTTAGGGGATCGCGTACGCAAGAAATCTGGTGGCGCTTGGCAGGGTCAAGTCGTCGGTTGGTATT GCACAAAACCTCACTCTGAAGGCTATGCGGTGCGATCCGAATCCACCCAGGCTCAGTGCAAAATTTATCTGTGGCTGCA CTTGAACGTTGTGGCTAAACATTCGCTCAGCGGACGGCTTCGCCGCCGCTGAGCTTCACTG

<i>dfrB3</i>	TTGGGCTTACCAGCGCAGCGTTGTGCGGGCTAGCAAGCATCTCAAGAAATTCACAAGAAAGGTCAGATATGGACCAACAC AACAAATGGAGTCAGTACTCTAGTTGCTGGCCAGTTTGCGCTCCCATCGCACGCCACGTTTGGCCTGGGAGATCGCGTGCG CAAGAAATCTGGCGCCGCTTGGCAGGGTCAAGTTGTGCGGTGGTACTGCACAAAACCTGACCCCTGAAGGCTATGCCGTGC AGTCCGAGTCTCACCCCGGTTCACTACAGATTACCTGTGGCTGCGCTTGAACGCGTGGCCTGAATTACGGTTGAGTGC ACCGCTCAGCGCTCAAGCCGTGCAGTACCGCCACAGCCCAACTGGTGCCTCCAGCGGACGGCTTCGCCGCCCGCTGAGC TAGAGCG
<i>dfrB4</i>	TTGGGCTTACCAGAGTATCAAGTTGCCGAGCTGGCGATAACCTAAAACATTA AAAAGAGGTTTGAATGAATGAAGGA AAAAATGAGGTCAGTACTTCACTGCTGGCCGGTTCGCATTCCCATCAAACGCCACGTTTGGCCTGGGGGATCGCGTACG CAAGAAGTCTGGCGCTGCTTGGCAGGGGCGATTGTGCGGTGGTACTGCACAACTTACCCCTGAAGGCTACGCCGTGC AGTCCGAATCTCACCCAGGCTCAGTCCAGATTATCCCATGACTGCGCTTGAACGGGTGGCCTGAAGTCAAGGTTGAAAT GCACCGCTGACGGCCAAATCATGCGGCACCGTCCACAGCCCACTAGTGCCTCCAGCGGATGCTTCGCCGCCCGCTGA GCTAATTCTG
<i>dfrB5</i>	TTGGGCGTGACGATTGACGCGTGTGTGCGGGCTACGCAGCAACCTAGAAATTCAAAGAAGGGTCAATAATGGACCAA GGCAGAAGTGAAATCAGTAATCCAGTTGCTGGCCAGTTTGCCTTCCCTTCAAACGCCCGCTTCGGAATGGGAGATCGCGT GCGCAAGAAATCTGGCGCCGCTTGCCAAAGGTCAGATTGTGCGGTGGTACTGCACAAAATTGACCCCTGAAGGTTGAGGCTG TCGAGTCTGAGGCTCACCTGGCTCGGTACAGATTATCTCTGTGCGGCACTGGAACGCATCAACTGAGTTCAAGATTGA AGTGTCTCACTCAACGGCCATACCGTGCATCACGCCCAAAGGCCAACTTGTGCTCCAGCGGACGGCTTCGCCGCCAC TGAGCTAATTCTG
<i>dfrB6</i>	TTGGGCGTGACACAGCTGCGTGTGTGCGGGTACATAGCACCCCTAAAATTCACAAGAAAGGTCAGAAATGGACCAAGG TAGCAATGAAGTCATTAATCCAGTCGCTGGCCAGTTTGCCTCCCATCGAACGCCACGTTTGGCTATGGGAGATCGCGTGC GCAGAAATCTGGCGCCGCTTGGCAAGGTCAGATTGTGCGGTGGTACAGCACAAGATTGACCCCTGAAGGCTACGCTGTC GAGTCTGAGGCTCACCTGGCTCGGTGACAGTTTATCTGTGCGCCGCTTGAACGCGTCAACTGAGTTCAAGGTTGAAAT GCGCCACTAAGGGCCAAACCGTGCATCACGCCCAAAGGCCAACTTGTGCTCCAGCGGACGGCTTCGCCGCCCGCTGA GCTAATTCTG
<i>dfrB7</i>	TTAGGCCCCGACGGGAGAGTCGGCGCTTTGAACTTCTTAGCTGCGCAGAAAGTTGTAGTTTCCACGCTAGCGCCGCA GTTCTTGGCAGCTCACCGCGGATGCAACCAACGCTCACCCAGTCAAATGGTAGATATGGATCACCAGATCCCTCAAGGC ATCCACAAGAAAGGTTAGGTATGGATCAAAGTAGTAAGGAAGTCAGTTCTCCAGCTACTGACCAAGTTTGGCGTCCCATTC CGCGCCAGCTTTGGCCTGGGAGATCGCTACGCAAGAAATCTGGCGCCGCTTGGCAGGGTCAAGTTGTGCGCTGGTACAG CACAAACTAACCCAGAAAGGCTATGCCGTGAGTCCGAGTCTATCCGGGCTCTGTACAAATCTATCCTGTTGCCGCGC TTGAACGCGTGGCCTAACCCTTCCATCGAGAGGACGTCACAAGGGCTACGCCCTTGGCGCGCTCTCATGTCAAAACG
<i>dfrB8</i>	TTGGGCATGACCACCGCAGCGTGTGTGCGGGCATATTGCACCCCTAGAAATTCACAAGAGAGGTCAGAAATGGACCAA GGTAGCAATGAAGTCGGTAAATCCAGTTGCGGGCCAGTTTTCGTTCCCATCGAACGCCCGGTTTAGTATGGGAGATCGCGT GCGCAAGAAATCGGGCGCCGCTTGGCAAGGTAGATTGTGCGGTGGTACTGCACAAAGTTGACCCCTGAAGGCTACGCTG TCGAGTCTGAGGCTCACCTGGCTCGGTACAGATTATCTGTGCGGCGCTTGAACGCATCAACGGGTTCAAGGTTGA AGTGGCCACTCAACGGCCAAACCGTGCATCACGCCCACGGCCAACTGTGCTCCAGCGGACGGCTTCGCCGTCCGC TGAGCTAATTCTG
<i>dfrB9</i>	TTAGGCCCCGCAATGCGAACCTCTCGTGGTGCCAGACGATTTGCGGCATCCCGTCAGGAATTGAACAGTCGCCGCTGCGCT GAATTCATCTCCCTACGACATTCAACGAGGCTGCTGCCACCACGACAGCCCAAGTGGATCATGGGCGAAAGATCTCA AGGTCATCGACCAATCAGTAGTAAATGGACCAAGGTCGAAGACGATCACAAGAAAGGTTATGTATGAATCAA AGTAGCAATTGCATCAGCACTCCAGTTGTGTGACAGTTTGTGCGTGGCATTTCAACCCACGTTTGGCCTGGGAGATCGCGTA CGCAAGAAAGTCTGGCGCCGCTTGGCAAGGTAAAGTTGTGCGGTGGTACTGCACAAAATTAACCCCTGAAGGCTACGCGGT CGAGTCCGAAAGTCAATCCAGGCTCAGTGCAGATTATCTGTGCGCTGCGCTTGAACGCGGTGGGCTAACCCCTCAGTGCAG GGCAGAAATTCAGCAAGCTGCAATTTGCGCCTCACTCGAAGC
<i>bla_{BEL-1}</i>	TTAGACGTAAGCCTATAATCTCTAGTATTTTGAATCGAGATCAAGATGAAATGCTGCTTACCCGTTATTGCTGTTC TTGTCATTTCCAGCCTTTGCCAGGCGGACTTTGAACATGCCATTTTCAGATCTTGAGGCGCACAATCAAGCCAAAGATCGGA GTGGCCCTAGTTAGTGAATAAGTGGCAACCTGATTCAAGGGTATCGTGCGAATGAAAGGTTTCGCGATGTGCTCAACTTTCAA GTTGCCGTTGGCGCTCTTGTCTGAGTGCATTTGACGCTGGGGAAGAGAAATCCTGAGCGCAAGCTTCATTACGATTCCCG GTTCTTTGAAGAGTACGCCCCAGCCGCAAAACGATGTGTGCAACTGGATATATGACTGTAAGTGAAGCAATTCAATCCG CCCTCCAACCTCAGCGCAATGCCGCGAGCTAACCCTGCTGTAAAAGAGGTTGGCGGCCACCTTTATTGACAAAGTATTTTC CGTAGCCTGGGTGATAAAGTAAGTCGCTTGATCGTATTGAACCGGACTTTGAACCAACCAATCGCCCGGAGATGAGGAGAGA TACAAACAGCCCATGTCCATGGCACAGACTGTGTCAAAGCTGATTTTGGAGACAGCTTGACATATAAATCCAAAGGGGCG AGCTAAGGCGATTACTCATCGCAATCAGACCGGGGACAAAACCTTCGAGCTGGCTTGCTTATCTATGCTTAACCGGT GACAAGACAGGCTCGTGTGCGAATGGCGGCCGTAAACGATGTGGCGTTTTTTATAACCACTGCCGGA AAAAAATATGTTCT TCTGTATATACCAATGCACCTGAAATGCAAGGCGAGGAAAGGGCGTTATTAATTTGCTTCTGTAGCAAAAGTTAGCAGCTC AATATGTTGTTCACTGAATCCGCATACGTCTAACAATTTCGCTTAAGCCGGACGCTCGCATGGCTCGCGCTTGCTTGCT
<i>bla_{BIM-1}</i>	TTAGAAAGGAATAAAAATGAGAATATCGTTAGCTTTATGCTTGCTTAGTATTTTAAATTTTGTGCTTGACAGAGAGGTATT GCCAGAAATAAAGTTGAAAAGCTAGAAGAAAGGAATCTATCTTCACACATCTTATCTAGAGTATCAGGGAAATATTTATG AAAAACATGGGTGGTAGTTTATGATGATCGTAAGGCATATAATAATTGATACGCGAGTTTGGCTATGAGGCGG CTAGTAAAGTGGTTTGAAGAGCGTAACCTTACTATAGGGGCTAGTTTCTCAACACATTTTCATAGTGACAGTTCCGGCGGC ATAGAATGGCTAAATAAAAATTTCTATCTACATATGCTGAATTAACAAATGAACCTCTAAATAAAGACGGCAAGGC GCAAGCTAAAAACTCTTTTAAATGCAAGTATGTTTTTGGCTAGTTAAAAACAAAAATGAAAGTTTTTATCCGGGGCCAGGGCA TACACAGGATAAACGAGGTCGTGTGGATACCTAGTAAGAAAAATATTTATCGGTGGTTGTTTTGTTAAGCCAGACGGTCTTG GGTATTTGGGTGACGCAAAATTAAGAGCTTGGCCAAATCTGCTAGAAAGTTAATGTCTAAATATAGCAACGCAAAAACGT GTTATTTCAAGCCATAGTGAAATAGGAAATGCATCACTCTTGAAGCGTACATGGGAGCAGGCTGTTAAAGGGCTAAATGA CAGTAAAAAAACATCAGCTCAGCAATAAATTTCTAACAAGTCGCTCAAGCACCAGTCGCTACGCTCCTTGGACAGTT TTAAGTCGCAAGTTTGTGGTTTTGCTGCGCAAAAGTATTCACAAAAACCACAACCTTAAAAACTGCCGTTAGCTCGGGC
<i>bla_{CARB-1}</i>	TTAGCCATATTATGAGCCTCATGCTTTTATATAAAATGTGTGACAATCAAATTTATGGGGTTACTACATGAAGTTTTTA TTGGCATTTTCGCTTTTAAATACCATCCGTGGTTTTTGCAGTAGTTCAAAGTTTCAGCAAGTTGAACAAAGGATTAAGGCA ATTGAAGTTTCTCTTTCTGCTCGTATAGGTGTTTCCGTTCTTGATACTCAAAATGGAGAAATATGGGATTACAATGGCAAT CAGCGCTTCCCGTTAACAAGTACTTTTAAAACAATAGCTTGCCTAAATTTACTATATGATGCTGAGCAAGGAAAGGTTAA TCCCAATAGTACAGTCGAGATTAAAGAAAGCAGATCTTGTGACCTATTCCTGTAAATAGAAAGGATTAAGGCGAGGCA TCACACTCGATGATGCGTGCTTCGCAACTATGACTACAAGTGATAATACTCGGCAAAATATCATCTCAAGTGCTGATAGGT GGCCCCAAAGGCGTTACTGATTTTTAAGACAAAATTTGGGGACAAAGAGACTCGTCTAGACCGTATTGAGCCTGATTTAAA TGAAGGTAAGCTCGGTGATTTGAGGATACGCAAACTTAAAGGCAATAGCCAGTACTTTGAATTAATTTTATTTTGGTTCT CGCGCTATCTGAAATGAACGAGAAAAAATAGAGTCTTGGATGGTGAACAAATCAAGTCACTGGTAAATTTACTACGTTAG TATTGCGCGGGATGGAACATTGCGGATCGCTCAGTGTGCGGATTGGTGCTCGGAGATTACAGCAAGTTGTGTGG AGTGAGCATCAAGCCCCAATTTATGTGAGCATCTATCTAGCTCAAAACACAGGCTTCAATGGGAAGAGCGGAATGTGCGAT TGTTAAAAATTGGTCATTCAATTTTGAACGTTTATACATCAGAGTCGCGCTGATAAGGCTAACAAGGCCATCAAGTTGACGG CTTTTCCGTGCTGTTTTGTGGTTTAAAGCTACGCTACCAACAAAACATCAACTCCAAAGCCCAACTTATGGCGGCG
<i>bla_{CARB-4}</i>	TTAGCCTTATTTGAATACTTCACACTCTGATATAAGATGTAAGCCAATCAAATGATGAGGTTATTACATGAAGCTTTTAC TGGTATTTTCGCTTTTAAATACCGTCTATGGTGTTTGCAAAATAGTTCAAAGTTTCAACAGGTTGAACCAAGATGCTAAGGTA TTGAAGCATCTCTTTCTGCGCATATAGGGATTTCTGTTCTTGATACTCAAACTGGAGAGTATGGGATTACAATGGCAATC AGCGTTTTCTTTGACAAAGTACTTTTAAAACAATAGCTTGTGCTAAATTTATATATGATGCTGAGCAAGGGAATTAACCC CTAAGAGTACAATTGAGATCAAAAAAGCAGATCTTGTGACCTATTTCCCGTAATAGAAAAGCAAGTAGGCAAGCAAT AACGCTCGATGATGCGTGTGTTTGCAACTATGACGAAAGTGATAATGCAGCAGCAAAATATCATCTTAAATGCCCTAGGAG

	<u>GTCTTGAAAGCGTGACGGATTTTCTAAGACAAATCGGAGATAAAGAAACCCGCTAGACCGTATTGAACCTGAATTAAT</u> <u>GAAGGCAAGCTTGGTGATTGAGGGATACGACAACCTCTTAATGCAATAGTGAATACTTTAAATGAATTAATTATTGGTTCC</u> <u>ACATTGTCTCAAGATGGCCAGAAAAAATTAGAGTATTGGATGGTGAATAATCAAGTCACCTGGTAATTTATTGCGGTCAGT</u> <u>ATTGCCAGAGGGATGGAATATTGCGGATCGTTCAGGTGCTGGCGGATTGGTGCTCGGAGTATTACAGCCGTTGTTTGGGA</u> <u>GTGAAGCTCAATCCCAATCATAGTTAGTATCTATCTAGCGCAAAACAGAGGCTTCAATAGCAGATCGAAATGATGCAATT</u> <u>GTTAAAAATTGGTCGTTCAATTTTTGAAGTTTATTATCATCACAATCGCGTTGATAAGGCTAACAAAGCATTTAAGAGGGACAG</u> <u>CCAACGCGTGGCACTTTATTATGCGTTGGTTTTGTGGTTACGGTGTATGCGGTAAGTTGGTAGTAGCGTTGGCTGCC</u> <u>CTTAATGCGGCG</u>
<i>bla_{DIM-1}</i>	<u>TTAGAGGGAAAAATCGAATGAGAACACATTTTACAGCGTTATTACTTCTATTACAGCTTGTCTTCGCTTGCTAACGACGAGG</u> <u>TACCTGAGCTAAGAATCGAGAAAAGTAAAGAGAACATCTTTTGCACACATCATACAGCTGCTGTAATGGGTTTGGTTTG</u> <u>GTCAGTTCAACCGCCTTGTGTGCATAGATAAGGGTAATGCTTTCATTGTTGATACACCTTGGTCAGACCGAGATACAGAA</u> <u>ACGCTCGTACATTGGATTCGTAAAAATGGTTATGAGCTACTGGGGAGTGTTTCTACTCATTGGCATGAGGATAGAACC</u> <u>AGGAATTAATGGCTTAATGACCAATCAATTTCTACGTATGCCACGACTTCAACCAACCATCTCTTGAAAGAAAAATAAAA</u> <u>AAGAGCCAGCGAAATACACCTTGAAAGGAAATGAGTCCACATTGGTTGACGGCCTTATCGAAGTATTTTATCCAGGAGGT</u> <u>GGTCATACAATAGACAACGTAGTGGTGTGGTTGCCAAAGTCGAAAATCTTATTGGCGGCTGTTTGTGCGTAGGCTTGAT</u> <u>TCCGAGGGGTTAGGCTACACTGGTGAAGGCCAATTGATCAATGGTCCGATCAGCTCAGAATGCTCTGTCTGACTGCT</u> <u>AGAAGGCCAGATAGTAATTCCTGGCCATGGGAAATCGGGGATATAGCGCTGTTAAAAACACACCAAAAGTCTGGCTGAG</u> <u>ACAGCCTCTAACAAATCAATCCAGCGAACGCTAACGCGTCGGCTGATTGAGGCG</u>
<i>bla_{GES-1}</i>	<u>TTAGACGGGCGTACAAAGATAATTTCCATCTCAAGGGATCACCATGCGCTTCATTACGCACTATTACTGGCAGGGATCG</u> <u>CTCACTTGCATATGCGTCGGAAAAATTAACCTTCAAGACCGATCTTGAGAAAGCTAGAGCGCGGAAAAAGCAGCTCAGATC</u> <u>GGTGTTCGATCGTCGATCCCAAGGAGAGATCGTCGCGGGCCACCGAATGGCGCAGCGTTTTCGCAATGTCCTCAACGT</u> <u>CAAGTTTCCGCTAGCCGCGCTGGTCTTTGAAAGAATTGACTCAGGCACCGAGCGGGGGGATCGAAAACTTTCATATGGGC</u> <u>CGGACATGATCGTCGAATGGTCTCTGCCACGGAGCGGTTTCTAGCATCGGGACACATGACGGTCTCTCGAGGCAGCGCAA</u> <u>GCTGCGGTGCAGCTTAGCGACAATGGGGCTACTAACCTCTTACTGAGAGAAAATTGGCGGACCTGCTCAATGACGCAAGTA</u> <u>TTTTCGTAAAAATTGGCGACTCTGTGAGTCGGCTAGACCGGAAAGAGCCGGAGATGGCGCACAACACACCTGGCGACCTCA</u> <u>GAGATACAACCTACGCCTATTGCTATGGCAGTACTGTGGCTAAAAGTCTCTATGGCGGCGCACTGACGTCCACTCGAC</u> <u>CACACCATTGAGAGGTGGCTGATCGGAAACCAACGGGAGACGCGACACTACGAGCGGGTTTCTCTAAAGATTGGGTTG</u> <u>TTGGAGAGAAAACTGGTACCTGCGCCAACGGGGGCGGGAACGACATTGGTTTTTTAAAGCCCAAGGAGAGAGATTACGCT</u> <u>TGAGCGGTGTATAACAACGGCCCGAAACTATCGCGGTAGAACGTGACGAATTAGTTGCCTGTGTCGGTCAAGTTATTAC</u> <u>ACAACCTATCCTGAGCAGGACAAATAGTTGACGCCCGTCTAACAAATTCGTTCAAGCCGACGTTGCTTCGTGGCGGCGCT</u> <u>TGCGTGCTACGCTAAGCTTCGACGCCGCTTGCCACTGCGCACCGCGGCTTAACCTAGGCG</u>
<i>bla_{GIM-1}</i>	<u>TTAGAAGGATGATTTCAAAATGAAAAATGTATTAGTGTTTTTAATATTACTTGTAGCGTTGCGCAGCTTAGCTCAGGGTCA</u> <u>TAAACCGCTAGAAGTTATAAAAAATTGAAGATGGAATATATCTTCATACCTCCTTAAAGAAATTGAAGGCTTAGGGTTAG</u> <u>TGATTTCGAATGGGTGGTAGTTCTGGATAATAATCAAGCCTATATTATCGACACACCTTGGTCTGAAGAAGACACGAAG</u> <u>TTGTTATTATCTGGCGACTGACAGGGGATACCAGGTTATGGCTAGCATCTCAACTCATTCTCATGAAGATCGCACTGCT</u> <u>GGTATCAAGTTGCTAAATTCAAAGTCAATTCCTACATACACATCAGAGTTAACTAAAAAGCTTCTTGCCCGTGAAGGAAA</u> <u>GCCGGTTCTACCCACTACTTTAAAGAGCGACGAATTCACACTGGGAAATGGGCTTATAGAGCTCTACTATCCAGGTGCTG</u> <u>GGCATACAGAGGATAATATTGTGTCTGGTTACCCAAAAGCAAAATACATTATTGGTGGCTGCCTCGTGAGGAGTCATGAG</u> <u>TGGGAAGGCTTAGGTTACGTAGGCGACGCTCAATTAGCTCTGGGCTGACTCAATTAATAATATTGATATCGGAAAAATA</u> <u>TCCGTTCAAAATGGTCGTTCCGGGGCATGGCAAAGTTGGAAGTTCAGATATATTAGATCACACCATTTGATCTTGTAATC</u> <u>AGCTTCTAACAAATTAATGCAACCGACCGCTGAAGCGTCGGCTGATTAAAGGCG</u>
<i>bla_{IMP-1}</i>	<u>TTAGAAAAGGAAAAGTATGAGCAAGTTATCTGTATCTTTATATTTTGTTTTTCGAGCATTGCTACCCGAGCAGAGTCTTT</u> <u>GCCAGATTTAAAAAATTGAAAAGCTGATGAAGGCGTTTATGTTTCATCTTCGTTTGAAGAAGTTAACGGGTGGGGCGTTG</u> <u>TTCTAAACATGGTTTGGTGGTTCTTGTAATGCTGAGGCTTACCTAATTGACACTCCATTACGGCTTAAAGATACTGAAAA</u> <u>AGTTAGTCACTTGGTTTGTGGAGCGTGGCTATAAAATAAAAGGCAGCATTTCCTCTCATTTTTCATAGCCACGACCGGCG</u> <u>GGAATAGAGTGGCTTAATTCGATCTATCCCAACGTATGCATCTGAATTAACAAATGAACGTCTTAAAAAAGACGTTAA</u> <u>GGTTCAAAGCCACAAATTCATTTAGCGGAGTTAACTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCCAGGCCGCGG</u> <u>ACACACTCAGATAACGTAAGTGGTTTGGTTGGCTGAAAGGAAAAATAATTATCCGGTGGTTGTTTATTAACAGGCTACGGGTT</u> <u>AGGCAATTTGGGTGACGCAAAATATAGAAGCTTGGCCAAAGTCCGCCAAATTTATTAAGTCCAAATATGGTAAAGGCAAAA</u> <u>CTGGTTGTTCCAAGTCACAGTGAAGTTGGAGACGCATCACTCTTGAAACTTACATTAGAGCAGCGGTTTAAAGGTTAAA</u> <u>CGAAAGTAAAAAACCATCAAAACCAAGCACTAAATTTCTAACAAAGTCGTTGCAGCAGCCACTACGTGGCTGGACAGTT</u> <u>TGTAAGTTGCGCTTTTGTGGTTTGTCTCGCAAGTATTTCCACAACCGCGCAACTTACAAACTGCCGCTGAACCTTAGCG</u>
<i>bla_{IMP-2}</i>	<u>TTAGAAAAGGGCAAGTATGAAGAAATATTGTTTATGTTATGCTTCCCTTTGTAGCATATGCTGCCCGGGAGCGCGTTT</u> <u>GCCTGATTTAAAAATCGAGAAGCTTGAAGAAGGTGTTTATGTTTCATACATCGTTTGAAGAAGTTAACGGTTGGGGTGTG</u> <u>TTTCTAAACACGGTTTGGTGGTTCTTGTAACACTGACGCGCTATCTGATTGACACTCCATTACCTGCTACAGATACTGAAA</u> <u>AGTTAGTCAATTGGTTTGTGGAGCGCGCTATAAAATCAAAGGCACTATTTCCTCACATTTTCCATAGCCACGACGCAAGG</u> <u>GGAAATAGAGTGGCTTAATTCCTCAATCTATCCACGTATGCATCTGAATTAACAAATGAACCTCTTAAAAAAGACCGGTA</u> <u>GGTGCAAGCTAAAAACTCATTAGCGGAGTTAGTTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCCCGGCCGG</u> <u>GGCACACTCAAGATAACGTAGTGGTTTGGTTACCTGAAAAAGAAAAATTTTATCCGGTGGTTGTTTGTGTTAAACCGGACGGTC</u> <u>TTGGTAATTGGGTGACGCAAAATTAGAAGCTTGGCCAAAGTCCGCCAAAAATTAATGTCTAAATATGTTAAAGCAAAA</u> <u>CTGGTTGTTTCAAGTCATAGTGAAATTGGGGACGCATCACTCTTGAAACGTACATGGGAACAGGCTGTAAAGGGCTAAA</u> <u>TGAAAGTAAAAAACCATCACAGCCAAGTAACATAAATTTCTAACAAAGGCGGTGAAACTCATTCCGCTTCGCTTCACTGGAC</u> <u>GCCGCAAGCGGCGCGGTTTACCTTCGCG</u>
<i>bla_{IMP-4}</i>	<u>TTAGAAAAGGGAAAAGTATGAGCAAGTTATCTGTATTCTTTATATTTTGTTTTGTAGCATTGCTACCCGAGCAGAGCCTTT</u> <u>GCCAGATTTAAAAAATTGAAAACTTGATGAAGGCGTTTATGTTTCATCTTCGTTTGAAGAAGTTAACGGGTGGGGGTGTG</u> <u>TTCTAAACATGGTTTGGTTGTTCTGTAGATGCTGAAGCTTATCTAATTGACACTCCATTACCGGCTAAAGATACTGAAA</u> <u>AGTTAGTCACTTGGTTTGTGGAACGTGGCTATAAAATAAAAGGCAGTATTTCCTCTCATTTTCATAGTGACAGCAGCGGGCG</u> <u>GAATAGAGTGGCTTAATTCCTCAATCCATCCCCACGTATGCGTCTGAATTAACAAATGAGCTGCTTAAAAAAGACGGTAAAG</u> <u>GTTCAGCTAAAAAATTCATTGGCGGGTTAACTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCCAGGCCCAGGA</u> <u>CACACTCCAGATAACCTAGTAGTTTGGCTGCCTGAAAGGAAAAATAATTATCCGGTGGTTGTTTATTAACCGTACGGTCTA</u> <u>GGTAATTTGGGTGACGCAAAATTAGAAGCTTGGCCAAAGTCCGCTAAATTTATTAATATCCAAATATGGTAAGGCAAAACT</u> <u>GGTTGTTCAAAGTCACAGTGAAGCTGGAGACGCATCACTCTTGAAACTTACATTAGAGCAGGCGGTTAAAGGGTTAAACG</u> <u>AAAGTAAAAAACCATCAAACTAAGCACTAAATTTCTAACAAAGTCGTTGCAGCATCGTGGCGCTGCGGCACTGGACAGT</u> <u>TTTTAAGTCGCGGTTTTATGGTTTTCGTCGAAAAAATTTCCATAAAACCACAACCTTAAAAACTGCCGCTGAACCTCGCGG</u>
<i>bla_{IMP-5}</i>	<u>TTAGAAAAGGGAAAAGTATGAGCAAGTTATTTGTATTCTTTATGTTTTTGTTTTGTAGCATTACTGCCGACGACAGAGTCTTT</u> <u>GCCAGATTTAAAAAATTGAGAAGCTTGACGAAGGCGTTTATGTTTCATCTTCGTTTGAAGAAGTTAACGGTTGGGGTGTG</u> <u>TCCTAAACACGGCTTGGTGGTTCTTGTAATAACTGAGGCCTATCTGATTGACACTCCATTACGGCTAAAGATACTGAAA</u> <u>GTTAGTCACTTGGTTTGTGGAACGCGGCTATAAAATAAAAGGCAGTATTTCCTCTCATTTTCATAGCGACAGCAGCGGGCG</u> <u>GAATAGAGTGGCTTAATTCCTCAATCTATCCCCACGTATGCATCTGAATTAACAAATGAACCTCTTAAAAAAGACGGTAAAG</u> <u>GTCAAGCTAAAAATTCATTGGCGGGTTAGCTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCTCGGCTTAAAGCG</u> <u>GCACACTCCAGATAACGTAGTGGTTTGGCTACTGAAAAATAGAGTTTTTGTTCGGTGGTTGTTTGTGTTAAACCGTACGGTCT</u> <u>AGGTAATTTGGGTGACGCAAAATGAGAAGCTTGGCCAAAGTCCGCCAAATTTAATGTCTTAAATATGGTAAGGCAAAAAC</u> <u>TGGTAGTTCCAAGTCACAGTGAAGTTGGAGACGCATCACTCTTGAAACGTACGTTAGAACAGGCGGTTAAAGGGTTAAAC</u> <u>GAAAGTAAAAAACCATCAAAACCAAGTAACATAAATTTCTAACAAAGTCGTTGCAGCAGCGGTTCCGCTTCGCTGCACTGGAC</u> <u>AGTTTTAAAGTTGCAGTTTATGGTTTGTGCGCAAAATTTCCATAAAACCACAACCTTAAAAACTGCCGCTGAACCTCGGC</u> <u>G</u>

<i>bla_{IMP-9}</i>	TTAGAAAAAGGGAAGTATGAGCAAGTTATTGTATTCTTTATGTTTTGTTTTGTAGCATTACTGCCGACGGAGAGTCTT TGCCAGATTAAAAATTGAGAAGCTTGACGAAGCGGTTTATGTTTCATACCTCGTTTGAAGAAGTTAACGGTTGGGGTGTTA TTCCTAAACACGGCTTGGTGGTCTTGTAAATACTGATGCGCTATCTGATAGACACTCCATTACTGCTAAAGATACTGAAA ATTTAGTTAATTGGTTTGTGAGCGCGGCTATAGAATAAAGGAGCAGTATTCCTCACATTTCATAGCGACAGCAGCGGGT GAATAGAGTGGCTTAATTCTCAATCTATCCCCAGTATGCATCTGAATTAACAAATGAACCTTCTTAAAAAAGACGGTAAAG GTACAAGCTAAATATTCAATTAGCGGAGTTAGCTATTGGCTAGTTAAGAAAAAGATTGAAGTTTTTATCCTGGTCCAGGG CACCGTCCAGATAACGTAAGTGGTTTGGCTGCGTGAATAAAGAGTTTGTTCGGTGGTTGTTTGTAAACCTACGGTCTA GGTAATTTGGGTGACGCAAAATTTAGAAGCTTGGCCAAAATCCGCCAAATTTATTAATGTCAAAATATAGTAAGGCAAAAT GGTTGTACCAAGTCATAGTGACATAGGAGATTCTGTCGCTCTGAAGCTTACATGGGAGCAGACGGGTAAAAAGGATTCAATG AAAGCAAAAAAAGTACCCTGCACATTAACCAAAATTTCTAACAAAGTCGCTCAAGCATCGACCTTCGGTGCTGGACAGTT TTAAGTCGCGCTTTTGTGGTTTTGCTACGCAAAAGGTTCCACAAAATCACAACCTAAAAACTGCCGCTTAGCTCGGCG
<i>bla_{IMP-11}</i>	TTAGAAAGGAGTAAGTATGAAAAAATATTGTTTTATGTATATTTTTGTTTTGTAGCATTACTGCCGACGAGCGTCTTT GCCTGATTTAAAAATTGAGAAGCTTGAAGAGGGTGTTTATGTTTCATACATCGTTTGAAGAAGTTAACGGCTGGGGTGTTG TTCTTAAACACGGTTTGGTGGTCTTGTAAATACTGACGCGCTATCTGATTGACACTCCATTACTGCTAAAGATACTGAAA AGTTAGTCAATTGGTTTGTGAGCGCGGCTATAAAATCAAAGGAGTATTCCTCACATTTCATAGCGACAGCAGGGT GGAAATAGAGTGGCTTAATTCTCAATCTATTCCACGATGTCATCTGATTAACAAATGAACCTTCTCAAAAAAGACGGTAA GGTGCAAGCTAAAAACTCATTAGCGGAGTTAGCTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCCAGGCCAG GGCACACTCAAGATAACGTAAGTGGTTTGGCTACCTAAAAATAAAATCTTATTGGTGGTTGTTTGTAAACCATATGGTCT TTGGTAATCTAGATGACGCAAAATGTTGAAGCATGGCCACATTCGGCTGAAAAATTAATATCTAAGTATGGTAATGCAAAA CTGGTTGTTCAGCCATAGTGACATAGGAGATGCGTCGCTCTTGAAGCTTACGTGGGAACAGCGCGGTAAAGGGGCTTAA TGAAAGCAAAAAAAGTAACACTGTTCAATTAACCAAAATTTCTAACAAAGTCGCTGAAGCATCGCAGTCTGGTGCTGGACAG TTTTTAAGTCGCGCTTTTGTGGTTTTGCTACGCAAAAGGTTCCACAAAATCACAACCTAAAAACTGCCGCTTAGCTCGGC G
<i>bla_{IMP-12}</i>	TTAGAAAAGGGAAGTATGAAGAAATATTGTTTTATGCAATTTTTTGTTTTTAAGTATTACTGCCTCAGGTGAGGTTTTG CCTGATTTGAAAAATTGAGAAGCTTGAAGAGGGTGTTTATCTTCATACATCTTTTGAAGAGGTTAACGGTTGGGGTGTTGT ACTAAACATGGTTTGGTAGTTCTTGTAAATAATGACGCTATCTAATTGACACTCCATTACAATAAAGATACTGAAAAA TTAGTTGCTTGGTTTGTAGGGCGCGGCTTACAATAAAGGGAAGTGTTTCTCACATTTTCATAGCGACAGTACGGGTGGA ATAGAGTGGCTTAATCTCAATCTATTCCACGATATGCATCTGAGTTAACAAATGAACCTTCTGAAAAAGAACCGTAAAGGT GCAAGCTACAAATTCATTTAGCGGGGTAGTTATTGGCTAGTTAAAAATAAAATGAAGTTTTTATCCCGGCCAGGACA TACTCAAGATAACGTAAGTGGTTTGGCTACCTGAAAAACAAATTTTATTCGGTGGTTGTTTTGTAAACCGGACGGTCTGG TAATTTGGATGACGCAAAATTTAAAGCTTGGCCAAAGTCCGCAAAAATATTAATGTCTAAATATGGTAAAGCAAAAGTAG TTGTTTCAGGTACATAGTGAATTTGGGAACGCATCACTCTTGAACCTTACTTGGGAGCAGGCTGTAAAGGGCTAAAGTAA AGTAAAAAACCATTAAGTCCCAAGTAACATAATTTCTAACAAAGTCGTTGACGACCGGCTTCCTCGCTCCACTGGACAGTTT TAAGTCGCGGTTTTATGGTTTGTGCGCAAAAGTATTTCATAAAACCAACCTTAAAAACTGCCGCTGAACCTCGGCG
<i>bla_{IMP-13}</i>	TTAGAAAAGGGAAGTATGAAGAAATATTGTTTTATGTGTATGCTTCTTTGTAGCATTACTGCCGACGGAGCGGCTTT ACCTGATTTAAAAATCGAGAAGCTTGAAGAAGGGTGTTTGTTCATACATCGTTTGAAGAGGTTAACGGTTGGGGGGTTG TTACTAAACACGGTTTGTGGTGGTTGTGTAACACAGACGCGCTATCTAATTGACACTCCATTACTGCTACAGACACTGAAA AATTAGTCAATTGGTTTGTGGAGCGCGGCTATGAAATCAAAGGCACTATTCATCACATTTCCATAGCGACAGCACAGGA GGAATAGAGTGGCTTAATTCTCAATCTATTCCACGATGTCATCTGAATTAACAAATGAACCTTTGAAAAAATCCGGTAA GGTACAAAGCTAAATATTCAATTAGCGGAAGTTAGCTATTGGCTAGTTAAAAATAAAATGAAGTTTTTCTACCTGGCCAGG TCACACTCAAGATAACCTAGTGGTTTGGTTGCTGAAAGTAAAAATTTTATTCGGTGGTTGCTTTATTAACCTCAAGGCT TGGCAATTTAGGTGACGCAAAATTTAGAAGCTTGGCCAAAGTCCGCCAAAATATTAATGTCTAAATATGGCAAAAGCAAGC TTGTGTTTCAAGTCATAGTGA AAAAGGGGACGCATCACTAATGAAACGTACATGGGAACAAGCCCTTAAAGGGCTTAA GAAAGTAAAAAACATCATCACCAAGTAACATAATTTCTAACAAAGTCGTTGACGACCGCGCACTTCGTGCTGGACAG TTTTAAGTCGCGGCTTTATGGTTTGTGCGCAAAAGTATTCCATAAAACCAACCTTAAAAACTGCCGCTGAACCTCGGC
<i>bla_{IMP-14}</i>	TTAGAAAAGGATAAGTATGAAAAAATATTGTTTTATGTGTATCTTCTCTGCAACATTGCGAGTTGCGAAGAATCTTT GCCTGATTTAAAAATTGAGAAGCTTGAAGAAGCGGTTTATGTTTCATACCTCGTTTGAAGAAGTTAAAGGTTGGAGTGTGG TCTATAAACACGGTTTGGTGGTCTTGTGTA AAAATGACGCGCTATCTGATTGATACTCCAATTACTGCTAAAGATACTGAAA AATTAGTCAATTGGTTTGTGAGCGGGGCTATAAAATCAAAGGAGTATTTCAACACATTTCCATGGTGAACAGTACGGCT GGAATAGAGTGGCTTAATTCTCAATCTATCCACCATATGCTTCTGAATTAACAAATGAACCTTCTTAAAAAAGACAATAA GGTACAAAGCTAAACACTCTTTTAATGGGGTATGATTATCACTAATTA AAAACAAATGAAGTTTTTATCCAGGCCAGG GCACACTCAAGATAACGTAAGTGGTTTGGTTACCTGAAAAAGAAAATTTTATTCGGTGGTTGCTTTGTAAACCGGACGGTCT TGGCTATTTGGGGGACGCAAAATTTAGAAGCTTGGCCAAAGTCCGCTAAAATATTAATGTCTAAATATGGTAAAGCAAAAC TAGTTGTGTCGAGTCATAGTGATATTGGAGATGTATCACTCTTGAACGTCATGGGAGCAGGCTGTTAAAGGGCTGAAT GAAAGTAAAAAATCATCACAGCCAAGCGACTAAATTTCTAACAAAGCGCTTCAGCACC CGCACTTCGTGCGCTGGACAG TTCGTAAGCGCTTTTGTGGTTTTGCTACGCAAAAGGTTCCACAAAAATCAACTTACAACCTGCGGCTGAGCTTAAC G
<i>bla_{IMP-15}</i>	TTAGAAAAGGTAAAGTATGAACAAAGTTATCTGTATTTCTTTATGTTTATGTTTTGTAGCATTACTGCCGACGGAGAGTCTTT GCCAGATTTAAAAATTGAGAAGCTTGACGAAGGTGTTTATGTTTCATACCTCGTTTGAAGAAGTTAACGGTTGGGGTGTTGT TCTTAAACACGGCTTGGTGGTCTTGTGTAATACTGAGGCTATCTGATTGACACTCCATTACGCGAAAAGATACTGAAAA GTTAGTCACTTGGTTTGTGGAGCGCGGCTATAAAATAAAGGAGTATTCCTCTCATTTTCATAGCGACAGCAGCGGCG GAATAGAGTGGCTTAATCTCAATCTATCCCCACGATATGCATCTGAATTAACAAATGAACCTTCTTAAAAAAGACGGTAAAG GTACAAGCTAAAAATTCATTTAGCGGAGGTAGCTATTGGCTAGTTAATAATAAGATTGAAGTTTTTATCCTGGTCCAGGG CACACTCCAGATAACGTAAGTGGTTTGGCTACCTGAAAAATAGAGTTTGTTCGGTGGTTGTTTGTAAACCGTACGGTCTT GGTAATTTGGGTGACGCAAAATTTAGAAGCTTGGCCAAAGTCCGCCAAAATATTAATGTCTAAATATGGTAAAGCAAAAGT GGTTGTTTCAAGTCATAGTGAACCTGGGAACGCATCACTCTTGAACCTTACTTGGGAGCAGGCTGTTAAAGGGCTAAAAAG AAAGTAAAAAACCATCACTGCCAAGTAACATAATTTCTAACAAAGTCGTTGACGACCGCTCCGGCACTTCGTGCTGGCG TGGACAGTTTTTAAGTCGAGTTTTATGTTTTGTGCGCAAAAGTATTCATAAAACCAACCTAAAAACTGCCGCTGACCGCTGA ACTCAGCG
<i>bla_{IMP-16}</i>	TTAGAAAAGGGCGAGTATGAAAAAATATTGTTTTATGTATCTTTTGTTTGTAGCATTACTGCCGACGGAGAGTCTTT GCCTGATTTAAAAATTGAGAAGCTTGAAGAGCGGTGTTTATGTTTCATACATCGTTTGAAGAAGTTAACGGTTGGGGTGTTGT TACTAAACACGGTTTGGTGTCTTGTGTAACACAGACGCGCTATCTGATTGACACTCCATTACGCTGCTAAAGACACTGAAAA GTAGTAAATTGGTTTGTGGAGCGCGGCTATAAAATAAAGGAGTATTCCTCACATTTTCATAGCGACAGTACGGGTG GAATAGAAATGGCTTAATCTCAATCTATTCACGATATGCATCTGAATTAACAAACGAACCTTCTTAAAAAAGAACGGTAAAG GTGCAAGCTAAAAACTCATTAGCGGAGTTAGTTATTGGCTACTTAAAAATAAAATGAAGTTTTTATCCGGGCCCTGGG GCACACTCAAGATAACGTAAGTGGTTTGGTTGCTGAAAAAGAAAATTTTATTGGTGGGTGTTTGTAAACCGTACGGTCTT GGAAATCTCGATGATGCAAAATGTTGAAGCGTGCCACATCTGCTGAAATATTAATGTCTAGGTATGGTAATGCAAAACT GGTTGTCCAAGCCATAGTGACGTCGGAGATGCGTCGCTCTGAAGCTTACATGGGAGCAGGCTGTTAAAGGGCTAAAAAG GATGAAAAAACCATCACAGCCAAGTAACATAATTTCTAACAAAGTCGCTAACGATCGGCACTTCGTGCTGGACAGT TTTTAAGTCGAGTTTTGTGGTTTTGCTGCGCAAAAGTATTCACAAAACTACAACCTAAAAACTGCCGCTTAGCTCGGCG
<i>bla_{IMP-18}</i>	TTAGAAAAGGGTAAGTATGAAAAAATATTGTTTTATGTGTATCTTCTCTTGAACATTGCTGCGAGATGATTTCTT CCTGATTTAAAAATTGAGAAGCTTGAAGAAGCGGTTTATGTTTCATACATCGTTTGAAGAAGTTAAAGGTTGGGGTGTTAGT CACAAACACGGTTTGTGGTTCTTGTGTAAGAATGATGCTTATCTGATAGATACTCCAATTACCGCTAAAGATACTGAAA AATTAGTTAATTGGTTTATTGAGCAGCGCTATAGAATCAAAGGAGTATTCACACATTTCCATGGGACAGTACGGCTG GAATAGAGTGGCTTAATCTCAATCTATCTCCACGATATGCTTCTGAATTAACAAATGAACCTTCTAAAAAAGACAATAAG

	GTGCAAGCTACAAATCTTTTAGTGGAGTTAGTTATTCACCTTATCAAAAACAAATTTGAAGTTTTCTATCCAGGTCAGGACACACTCAAGATAACGTAAGTGGTTTGGTTACCTGAAAAAGAAAATTTTATTCGGTGGTTGCTTTGTTAAACCGGACGGTCTTGGAAATTTAGGGGATGCAAAATTTAGAAGCTTGGCCAAAGTCCGCTAAAAATATTAATGTCTAAATATGGTAAAGCAAACTGGTTGTTTCAAGTCATAGTGAAATTTGGAACGCATCACTCTTGCAGCGCACATGGGAGCAGGCTGTTAAAGGGTTAAATGAAAGTAAAAAACCGTTACAGCCAAAGTAAATTTCTAACAAAGTCGTTGCAAGCATCGTTCCGCTTTGCTCCACTGGACGGTTTTAAGTCGCATTTTTGTGGCTCGCTGGCGCTCACTTTATCACAAAAATACAACCTAAAACCCGCCGCTGAACCTCGGCG
<i>bla_{IMP-22}</i>	TTAGAAAAGGGGAAAGTATGAAGAAATATTTGTTTTATGTGTGTTTTGTTTTGTAGCATTACTGCCGAGGAGAGTCTTTGCCCGATTAAAAATGAAAAGCTTGAAGAAGGTGTTATGTTCATACATCGTTTGAAGAAAGTTAATGGTTGGGGCGGTTGTTTCTAAACACGGTTGGTTATTCTTGTGAATACTGACGCCATCTGATTGACACTCCATTACGGCTAAAGATACTGAAAGGTTAGTCACCTGGTTTGTGGAGCGCGGCTATAAAATCAAAGGTAGCATTTCCTCACATTTCCATAGCGACAGCACGGGTGGAATAGAGTGGCTTAATTCCTCAATCAATTCACCGATGATGCATCTGAATTAACAAATGACCTTCTTAAACAAAAACGGTAAAGGTACAAGCTAAAACTCATTAGCGGAGTTAGTTATTGGTTAGTTAAAAATAAAATTGAAGTTTTCTATCCCGGCCCGGGCACTCAAGATAACGTTAGTGGTTTGGTTGCCTGAAAAAGAAAATTTTATTGGTGGGTGCTTTGTAAACCGTACGGTCTTGGAACATCTCGATGACGCAATGTTGTAGCATGGCCACATTCTGCTGAAATATTAATGTCTAGGTATGGTAATGCAAAACTGGTTGTTTCCAAGCCATAGTGACATCGGAGATGCGCTCGCTTGAAGCTTACATGGGAGCAGGCTGTAAAGGGCTAAAAAGAAAGTAAAAAACCATCAGAGCCAAGTAACATAATTTCTAACAAAGTCGTTAAGCATCAGTCGCTACGCTCCTTGGACAGCTTTAAGTCGCAGTTTTGTGGTTTTGCTGCGCAAAAGTATTCCAAAAACCGCAACTTAAAACTGCCGCTTAGCTCGGCG
<i>bla_{IMP-31}</i>	TTAGAAAATGGTGGCTATGAAAAAATTTTGTGTTATTGTATTTTTGTTTTGTCAGTATTACTGCCCGCGGAGAGTCTTTGCTGATATAAAAAATGAGAACTTGACGAAGATGTTTATGTTCATACTCTTTTGAAAAAGATAACCGGCTGGGGTGTATTACTAAACACCGCTTGGTGGTTCTTGTAAATACTGATGCCTATATAATTGACACTCCATTTACAGCTAAAGATACTGAAAAATAGTCCGCTGGTTTGTGGGGCGTGGTTATAAAATCAAAGGCAGTATTTCCTCACATTTTCAATAGCGATAGCGCAGGTGGAATTGAGTGGCTTAATTCCTCAATCTATCCCAATATGCATCTAAATTAACAAATGAGCTTCTTAAACAAACCGGTAATGCGCAAGCGGAAAACTCATTAGTGGCGTTAGCTATTGGCTAGTTAAACATAAAATTTGAAGTTTTCTATCCGAGGACAGGGCACTCAGGATAATGTAGTGGTTTGGTTGCCTGAAAAAGAAAATTTTATTGGCGGTTGTTTTATTAGGACTGACGGCTTGGTTATTGGGAGACGCAAACTCTAGAAGCATGGCCCTAAGTCCGCAGAAACATTAATGTCTAAGTATGGTAATGCAAAAACCTGGTTGTTTCGAGTCATAGTGAATTTGGGGGCGCATCACTATTGAAGCGCACTTGGGAGCAGGCTGTAAAGGGGCTAAAAAGAAAGTAAAAAACCATCAGAGCCCAAAATACTAATTTCTAACAAAGTCTCTCAAGCGGGAAGTCCCAACCGCGCTGATTTCAGCATAGCGCGGTTGCGTACGTTTTCGCGCTGCGCGCTCCACTCAGCCCTTAGCTCTGCG
<i>bla_{OXA-1}</i>	TTGGGCGAACCCGGAGGCTCATTAATTTGTTAGCCGTTAAAAATTAAGCCCTTACCACAAACCAATCTATTATGAAAAACACAAATACATATCAACTTCGCTATTTTTTTAATAATTGCAAAATATTATCTACAGCAGCGCCAGTGATCAACAGGATATCTCTACTTGTGCATCTCCATTATTGAAGGAACCTGAAGGTTGTTTTTACTTTACGATGTCATCCACAAACGCTGAAATTTGCTCAATTTCAATAAGCAAAAGTGTGCAACGCAAAATGGCCACGATTCAACTTTCAAGATCGCATTATCACTTATGAGTATGTCGGAATAATAAGATCAGAAAAACCATATTCAAATGGGATAAAACCCCAAAAGGAATGGAGATCTGGAACAGCAATCATACCCAAGACGTTGGATGCAATTTCTGTTGTTGGGTTTCGCAAGAAAAATAACCAAAAAAATTTGGATTAAATAAAAATCAAGAAATTACTCAAAAGATTTTGATTATGGAAATCAAGACTTCTCTGGAGATAAAGAAAGAAACAACGGATTAAACGAAGCATGGCTCGAAAGTAGCTTAAAAATTTACCAGAAAGAACAAATTCAAATTCCTGCGTAAAAATTAATTAATCACAAATCTCCAGTTAAAAACTCAGCCATAGAAAAACCATAGAGAACATGTATCTACAAGATCTGGATAATAGTACAAAACCTGTATGGGAAAACTGGTGCAAGTTACAGCAAAATAGAACCTTACAAAAACGGATGGTTTGAAGGGTTATTATAAGCAAAATCAGGACATAAATATGTTTTGTGTCGCGCACTTACAGGAAACTTGGGGTTCGAATTTAACATCAAGCATAAAAAGCCAAGAAAAATGGCATCACCATTCTAAACACACTAAATTTATAAAAAATCTAATGGCAAAATCGCCCAACCCCTCAATCAAGTCGGGACGGCCAAAAAGCAAGCTTTGGCTCCCTCGCTGGCGCTCGGCGCCCTTATTTCAAACG
<i>bla_{OXA-2}</i>	TTGGGCATTAAAGGAAAAGTTAATGGCAATTCGGAATCTTCGCGATACTTTTCTCCATTTTTCTCTTGCCACTTTTCGCGCATGCGCAAGAAAGCACGCTAGAACCCTTCGACTGGAGGAAGTTTTTTCAGCGAATTTCAAGCCAAACGATAGTTTGGGCAAGCAACGCCAAGCGGATCGTGCCATGTTGGTTTTTGTACTGTGCGATCGAAGAAACGCTACTCGCTGCATCGACATTCAAGTACCTCATACACTTTTGCACCTTGATGCAAGGCGCTGTTCTGTGATGAGTTCAGATTTTTCGATGGGACGGCGTTAAACAGGGGCTTTGCAAGCCACAATCAAGACCAAGATTGCGGATCAGCAATGCGGAATTCAGTCTTTGGGTGATAGGCTATTGCAAAAGGAAATTTGGTGATGCAAAAGCTTCGGCGCTATTGGAAGAAAATCGCATATGGCAACCGCGATCTTCGACAAAGTAATGGCGATTACTGGATAGAAGCGAGCTTGTCAATCTCGGCGCAGGAGCAAAATGTCATTTCTCAAGAGCTTACTGTGAACGAGCTGCGCTTTTCGGGTAGAACATCAGCGCTTGGTCAAGGATCTCATGATTGTGGAAGCCGGTTCGCAACTGGATACTGCGTGCAAAAGACGGGCTGGGAAGGGCCGATGGGTTGGTGGGTAGGATGGGTGAGTGGCCGACTGGCTCGGTATTTCTTCGCACTGAATATTGATACGCCAAACAGAAATGGATGATCTTTTCAAGAGGGAGGCAATCGTGGCGGCAATCGTCTGCTCTGATTCAGCGTTACCGCCCAACCCGGCAGTCAACTCGGACGCTGCGCGATAAAACCGCGCAGCGCCGGTTACTTCAACG
<i>bla_{OXA-5}</i>	TTAGCCACCAAGGTACCATGAAAAACCATAGCCGATATTAGTTCTAGTTTTTATGCAAGCACCGCGCTCTCAGAGTCTATTCTGAAAAATTTGGCGTGGAAATAAGAAATTTTCTAGTGAATCCGTACATGGCGTTTTTGTACTTTGTAAGAAAGTAGTACGAATTCCTGTACTACAAATAATGCGGCACGTGATCTACAGCCTATATCCAGCATCAACATTCAAAATTCCTAATGCTCTAAAGGTTCTTGAAACCGCGGCCATAAAAGATGAACGGAGGTTTTCAAATGGGACGGCAAGCCAGACGATGAAGCAATGGAAGAAAGACTTAAAGCTAAGGGGCGCTATACAGGTTTCTGCTGTTCCGGTATTTCAACAAATTTGCCAGAGAAATTTGGCGAAATAAGAAATGCAAAAAATACCTTAACCTGTTTTTCATACGGCAACGCCAATATAGGGGGAGGCAATTGACAAATTTCTGGTGAAGGTCAGCTTAGAATCTCAGCATTCAATCAAGTTAAATTTTATAGATTCGCTTACCTGAATTTGCCAGCATCAAAAGCAAACTAATAGTAAAAGAGGCAATAGTTACAGAAGCAACTCCAGAATATATAGTTCAATCAAAAACCTGGGTATTCGGGTGTGGCACAGAATCAAGTCCTGGTGTGCTTGGTGGGTGGTTGGGTAGAGAAAGGAACTGAGGTTTACTTTTTTGTCTTTAAACATGGACATAGACAATGAGAGTAAATTTCCGCTCAAGAAAAATCCATTTCACGAAAAATCATGGCAAGTGAAGGATCATCATTTGGTGGCTAAACAGGCGCTCAAGGCTCGGTTGCGCACTGGACGCTCTCAATCGGCGCATCGTTCCGATTTTACGCGCGCTTGTAGCCGCCCTTAGCTTTGCG
<i>bla_{OXA-9}</i>	TTATGCACCTATTAAGCGCACAGCGGAGCAATGAAGGATACCTTGATGAAAAAAATTTTGTCTGTCATATGTTGGTGTTCGTTTCCGCCACTCTCCCAATCAGTTCCGTGGCTTCTGATGAGGTGAAACGCTTAAATGCACCATCATCGCAGAGCCCATTACCGGAAATACCTTATATGAGACCGGAGAATGTGCCCGTCGTGTGCTCCGTGCTCGTCTTTTAAACCTCCATTGGCAATCATGGGGTTTGATAGTGGAATCTTGCAGTCGCCAAAAATCACTACGTGGGAATTGAAGCCGGAATACAACCCGCTCTCCGAGAGATCGCACATACAAAACAAGTCTATCCGGCGCTATGGCAAAAGCGACTCTGTTGCTGTTCTCGCAGCAATTAACAAGCGTCTGGGAGTTGATCGGTTTACCGGAATACGTAAGAAATTTGAGTACGGTAATCAAGATGTTTCCGGTACTTCGGGGAAAGCATAACGGCTTACCCAGTCATGGCTGATGTCGTCGCTACCATATCTCCCAAGGAGCAAAATTCAGTTTCTTCTACGCTTGTGCGCATAGCTGCTGATCCGAAGCGGCTTATGACATGGCGTATGCCACAATCCCGAGTACAGGACGCCGAAGGATGGGCTGTACATGGAAAAAGCGGACGGGCTGCGCTCGGGACAATAACGGCAAGATAAATGAAAGTCTGTCGCAAGGCTGTTGTTGTTGGGCTGGGCTGAAAAAAACGGACGGCAAGTTGTTTTTCGCCCCGATTGGAAATAGGAAAGGAAAAAGTCCGATATTCCCGCGGGTCTAAAGCACGAGAGGATATTCTGTTGGAATTAACCGTGTGATGGGTAACAAATGATATGTGGCGTATCGAGAGCAGATGCATAACCTGCGCTCGAGCGGACCTCGCGCATAAAGCCGCGCGAGTCCGCTACCTTGAACG
<i>bla_{OXA-10}</i>	TTAGCCACCAAGAAGGTGCCATGAAAAACATTGCGCGCATATGTAATATTCGCGTGTCTTTTCGAGTACGGCATTAGCTGGTTCAATTACAGAAAAATACGCTCTTGGAAACAAAGAGTTCTCTGCCGAAGCCGCTCAATGGTGCTTCGTGTTTTGTAAGAGTAGCAGTAAATCTCTGCGCTACCAATGACTTAGCTCTGTGCATCAAAAGGAATATCTCCAGCATCAACATTTAAGATCCCCAAACGC AATATTGCGCCTAGAAACTGGTGTCTATAAAGAAATGAGCATGAGTATTAATTTTCAAAATGGGACGGAAGCCAAAGCAATGAAGCAATGGGAAAGAGACTTGACCTTAAGAGGGGCAATACAAAGTTTCAGCTGTTCCCGTATTTCAACAAAAATCGCCAGAGAAGTTGGCGAAGTAAGAAATGCAAGAAATACCTTAAAAAATTTTCTATGGCAACCAGAAATATCAGTGGTGGCATTGACAAATTTCTGGTGAAGGCCAGCTTAGAATTTCCGCAGTTAATCAAGTGGAGTTTCTAGAGTCTCTATATTAATAAATTTGTCAGCATTAAGAAAAACCGCTAATAGTAAAAAGAGGCTTTGGTAACGGAGGCGGCACCTGAATATCTAGTGCATTCAAAAACCTGG

	TTTTTCTGGTGTGGGAACCTGAGTCAAATCCTGGTGTGCGATGGTGGGTGGGTGGGTGAGAAGGAGACAGAGGTTTACT TTTTCGCCTTTAACATGGATATAGACAACGAAAGTAAGTTGCCGCTAAGAAAAATCCATTCCCACCAAAATCATGGAAAGT GAGGGCATCATTTGGTGGCTAAACAAGTCGCTCAAGGTCGCTCCCTGCGGTGCGTGGACAGTCCCAGTCGGCGCATGCTTCG CATTTTATGCGCCGCTGTGCCTGCCCTTAGCTCCAACG
<i>bla</i> _{OXA-20}	TTAGGCCACAAAGGAGGCTCCTTGATAATCCGATTTCTAGCACTGCTTTTCTCAGCTGTGTACTTGTCTCTTGGTCATG CACAAAGAAAAACGCATGAGAGCTCTAATTTGGGGGAAAACTTTAGTGATTTCAACGCTAAAGGTACAATAGTTGTAGTA GATGAACGCACAAACGGTAATTCACATCGGTTTATAATGAATCCCGGGCTCAGCAGCGCTATTCGCTCGCTCCACATT CAAGATTCCGCATACCCCTTTTTCGCTGGATGCAAGGGCGGTTTCGCGATGAGTTTCATGTTTTCGATGGGACGGCGCTAA AAGAAGCTTTGCAAGGTCAAAATCAAGACCAAAACCTACGATCGGCAATGCGCAATTCACCGTTTGGGTCTATCAACTAT TCGCAAAAGAAATAGGCGAAAAACAAAGCACGAAGCTACCTAGAAAAATTAACCTACGGCAATGCAGACCCCTCGACCAA GAGCGGTGACTACTGGATAGATGGAAATCTTGCAATTTACGCAATGAACAAATTTCCATCCTAAAAGAGCTTTATCGAA ATGAGCTTCTCTTTAGGGTAGAGCACCAACGCTTGGTTAAAGACTTGATGATTGTCGAAGCCAAACGCGATTGGATACTA CGTGCCAAAACAGGCTGGGATGGTCAATGGGTTGGTGGGTCGGTTGGGTAGAGTGGCTACAGGCCCACTATTTTTTGC GTTAAATATCGACACGCCAAACAGGATGGAAGACCTTCATAAACGAGAGGCAATTGCGCGTGACTTCTCAATCCGTCA ATGCTTTGCCACCAACTAGCAGCCCAACCCCTGTTGTGCTAACAGGCGCTCAAGTCGACAGCCCAACCCAGCGCGC ATGCTTCGCAATTATGCGCGCGGTTTCGGTACGTTGCGGCTTCGCGCTCCACTCTGCCGCTTAGCTTGGCG
<i>bla</i> _{OXA-21}	TTGGGCGTCAAGGAAAACTTAATGGCAATCCGAATCTTCGAATACTTTTCTCCACTTTTGTGTCAGCTGTGCGCAT GCACAAGAAGGCATGCGCGAACGTTCTGACTGGCGGAAGTTTTCAGCGAAATTCAGGCCAAAGGCATAGATTGTGGC AGACGAACGCCAAACAGATCGTGTCAATATTGGTTTTTGATCAGGTGCGGTGAGAGAAACGCTACTCGCGCGCTCGCAT TCAAGATTCCACATACACTTTTTCGACTTGACGAGCGCGCTGCACGTGATGAGTTTCAAGTTTTCGATGGGACGGCATCA AAAGAAGCTTTGCAAGCTCACAACCAAGACCAAGACTTGCAGTACGCAATGCGGAATTCCTACTGTGGATTATGAGCTA TTTGCAAAAGAGATCGGTGAAGACAAGGCTCGACGCTATTGAAGCAAAATCGACTATTGGCAACGCCGATCCTTCGACAAG TAATGGCGATTACTGGATAGATGGCAATCTTGCTATCGCGGCACAAGAACAGATTGCAATTTCTCAGGAAGCTCTATCAT ACGAGTTGCCCTTTCGGGTAGAACAATCAGCGCTTGGTCAAGGACCTCATGATTGTGGAAGCCGCTGCAACTGGATACTG CGCGCAAGACGGGCTGGGAAGGCCGCTATGGGTTGGTGGGTAGGATGGGTTGAGTGGCGCACTGGCCCGGATTTCTTCGC ATGGAATATTGATACGCCAAACAGGATGGATGACCTTTTCAAAAGGAGGCAATAGTGGCGGCAATCCTTCGCTCTATCG AAGCGTTGCCGCCCAACCCGGCAGTCAACTCGGACGCGAGCGGATAAAGCCGCGCAGCGCGGTTACTTCTACG
<i>bla</i> _{OXA-46}	TTGGGCATCAAGGAAAAATTAATGGCAATCCGATCTTCACCATACTGCTATCCACCTTCTTTTACCTCATTCGTGTATG CGCAAGAACATGTGGTAATCCGTTTCGGACTGGAAAAAGTTCTTCAGCGACCTCCAGGCCGAAGGTGCAATCGTTATTGCA GACGAACGTCAAGCGAAGCATACTTTATCGGTTTTTGATCAAGAGCGAGCGCAAAAGCGTTACTCGCCAGCTTCAACCTT CAAGATACCCACACACTTTTTGCACTTGATGCAGACGCGGTTCTGTATGAGTTCCAGGTTTTTCGATGGGACGGCGTTAA CGAAGCTTTGCAAGGTCACAATCAAGACCAAGATTTCGCGATCAGCGATGCGAAATTCACGGTTTGGGTTATGAGCTGT TTGCAAAAGATATCGGAGAGGACAAAGCAAGACGTTATTAAAGCAAAATGATTATGGCAACGCTGATCCTTCGACAAATC AAGGGCGATTACTGGATAGATGGAAATCTTAAATCTCAGCGCACGAACAGATTTTGTTTCTCAGAAACTCTATCGAA TCAGTTACCATTTAAGGTGGAGCACGAGCGCTTGGTGAAGATCTCATGATTACGGAAGCCGGGCGCAGTTGGATACTAC CGGCAAGAGCCGGCTGGGAAGGCGAGGTTTGGCTGGTGGGTAGGGTGGATTGAATTGGCCAAACAGGCCCGGTAATCTTTGCG CTGAATATTGATACGCCAAACAGAACGACGATCTTTTCAAAAGAGAGGCCATCGCACGGGCAATCCTTCGCTCTATTGA CGCATTTGCCACCAACTAACCAATCCAGCCGACGCTTCGACGCGGCTGATTTCAAACG
<i>bla</i> _{OXA-53}	TTGGGCATCAAGGAAAAATTAATGGCAATCCAAATCTTCGCAATACTTTTCTCCACTTTTGTCTTCCCACTTTTGCACATG CGCAAGATGGCACGCTGGAACGTTCTGACTGGGGGAAATTTTCAGCGATTTCAGGCCAAAGGTACGATAGTTGTGGCA GACGAACGCCAAGCGGATCATGCGATATTGGTTTTTGATCAAGACGCTCAATGAAACGCTACTCGCTCGCTGACATT CAAGATTCCACATACACTTTTTCGACTTGATGCAGCGCCGTTTCGCGATGAGTTTCAGATTTCGCTGGGACGCGTCAA AAGGAGCTTTGCAAGGTCACAATAAAGACCAAGATTTCGCGATCAGCAATGCGAAATTCCTACTGTCTGGGTTATGAGCTAT TTGCAAAAGGAAATCGGTGATGGCAAGGCTCGACGCTATTGAAGCAAAATCGGCTATGGCAACGCCGATCCTTCGACAAGT CATGGCGATTACTGGATAGAAGGCAGCCTTGCAATCTCAGCACAGGAACAGATCGCGTTTCTCAGAAAGCTATCAAAA CGATCTGCCCTTAGGGTGAACATCAGCGCTTGGTCAAGGATCTGATGATTGTGGAAGCGGACGCAACTGGATTCTGC GCGCAAGACGGGCTGGGAAGGCAGCATGGGTTGGTGGGTGGGTGGGTGGAATGGCCAACCGGTCGCGTATTCTTTGGC TTGAATATCGATACGCCAAACAGAAATGGACGATCTTTTCAAGAGGGAAGCAATAGCGCGAGCATATTCTCTCTATTCGA AGCGTTGCCGCCCAACCCGGCAGTCCACTCGGACGCTGCGCGATGAGGACGCGCAGCGCGGTAACCTTCTACG
<i>bla</i> _{OXA-118}	TTGGGCGTCAAGGAAAACTTAATGGCAATCCGATCTCTCACCATACTGCTATCTACTTTTTTCTTACCTCATTCTGTCATG CGCAAGAACACGCTGCTAGAGCGTTCTGACTGGAAGAAGTTCTTCAGCGACCTCCGGGGCGAAGGTGCAATCGTTATTTC GACGAACGCTCAAGCGGAGCATGCTTTATTTGGTTTTTGGTCAAGAGCGAGCAGCAAAAGCGTTACTCGCTGCTCAACCTT CAAGCTTCCACACACACTTTTTCGACTTGATGCAGACGCCGTTCTGTGATGAGTTCCAGGTTTTTTCGATGGGACGGCTTAA ACGGAGCTTTGCGGGCCATAATCAAGACCAAGACTTGCATCAGCGATGCGAAATTCGCGGTCTGGGTTATGAGCTAT TTGCAAAAGAGATCGGAAAGGACAAAGCAAGACACTATTAAAGCAAAATGGAATTAGGCAACGCCGACCCCTCGCAAT CAAGGGCGATTACTGGATAGATGGCAATCTTGAATCTCAGCGCACGAACAGATTTCGTTTCTCAGAAAACTCTATCGAA ATCAGCTGCCATTTCAGGTGGAACATCAGCGCTTGGTCAAAGATCTCATGATTACGGAAGCCGGGCGCAACTGGATACTA CGCGCAAGACCGGCTGGGAAGGCAGGTTTGGCTGGTGGGTAGGGTGGAGTGGCAACCGGTCGCGTATCTTCGCG GCTGAATATTGATACGCCAAACAGAACGGATGATCTTTTCAAAAGAGAGGCAATCGCGCGGGCAATCCTTCGCTCTATCG ACGCTTTGCCGCCCAACTAATCAATCCAGCGGACGCTTCGCGCGCGCTGATTTCAAACG
<i>bla</i> _{OXA-129}	TTAGCCACCAAGGTACCATGAAACCATAGCCGCATATTAGTTCTAGTATTTTTTGCAGGCACTGCATTTTCAGAGTCTA TTTCTGAAAAATTAGCTTGAATAAAGAAATTTCCAGTGAATCAGTGCATGGGTGTTTTGTACTTTGTAAAAGCAGTAGTA ATTCTGTACAACAAATAATGCAACACGTGCATCTACGGCCTATATTCCAGCATCAACATTCAAAAATTCCTAATGCTCTCA TAGGCCTTGAAACCGGGCGCCATAAAGATGCGCGGCGAGGTTTCAAAATGGGACGGCAAGCCGAGGCCATGAAGCAATG GGAAAAAGACTTAACGCTAAGGGGCGCTATACAAAGTTTCTGCTGTTCGGGTATTTCACAAATTTGCCAGAGACATTTGGCA AAAAAAGAAATGCAAAATACCTTAACCTTTTTTATATGGCAACGCCAATATAGGCGGAGGCATTGACAAATTTTGGCTA GAAGGTACAGCTTAGAATCTCAGCAGTCAATCAAGTTAAATTTTTAGAGTCGCTTTACCTAAATAATTTGCCAGCATCTAAA GCAAAACCAACTTATAGTAAAAAGAGCAATAGTTACAGAAGCAACTCCAGAATATATAGTGCATTCAAAAACCGGGTATT CCGGTGTGGGCACAGAATCAAAATCCTGGTGTGCTTGGTGGGTTGGTTGGGTAGAAAAAGGAAGTGAAGGTTTACTTTTT GCATTTAATATGACATAGACAATGAGAGTAAGTTGCCGTCAAGAAAAATCCATCCAACGAAAAATCATGGCAAGTGAAG GTATCATCATTTGGTGGCTAAACAAGCGCTCAAGGCCGTGGCTGCGCACTGGACGCTCTCCAATCGGCGCATGCTTCGCAT TTTGGCGCGCTTGTAGCCGCCCTTAGACTTTGCG
<i>bla</i> _{OXA-198}	TTATGCATAAACACATGAGTAAGCTCTTCATCGCTTTTTAGCCTTTCTGTGTGCGGTGCCAGCAGCGCTGAAGACCAGA CACTTGCCGAGCTTTTCCCAACAAGGCATTGACGGGACTATAGTGATTTCGTGCTACACAACGAAAGACATTTATC CACACGATCCCCGCGCAAAACAGAGATTCTGACAGCATCCACGTTCAAGATACCTGAACACGCTGATCTCGCTCGAAGA AAAAGCCATCTCTGGAAGAGAGATGTGCTGAAATGGGACGGGCATATTACGATTTTCAGATTGGAATCGTGACCAGA CGCTGAAAGTGGCTTCAAGGTTTCTGTGCTGTGTTATCAGGCGCTTGACGCGCAAGGTGCGGCGGAGAACTGCA AATTATTTACGCAAGTCAGTTACGGAGAATTACGCGAGCCTTTTGAAGAAACAACATCTGGCTTGATGGTTCATCTCAA ATCAGCGCAATTGAACAAGTGAATTTCTCAAGAAAGTTTATCTGCGCACTCTCCATTCAGTGCATCTGCTACGAAACG CTACGCAAAATCATGTTTATCGAGCAAAACGCCGCTTTTACGCTGCGGGCCAAGACAGGCTGGGCAACAGAGTAAAG CGCAAGTTGGCTGGTATGTGGGCCATGTGCAAACTCCAACGGATGTATGGTTCTTTGCCACGAATATTGAAGTCCGTGAC AAAAAGACTTGCCCTTACGTCAAGACTAACCGCAAAAGCATTAACAAGCAAAAGGGGATCATCGAATAATGCATAACAT GGCGCTCAAGCGGGACGCGGCAAAATGCCGCGCGCCCTTAGCTCTACG
<i>bla</i> _{PBL-1}	TTAGCCCGCACAATCAGCACATCATGTGACTTATGTTTCTTGAACAAACATATGCACGTCATATCGCGGTCTCATAG ACAATCATTAAGGAAGGAGATAGGAATGGTTACAAGGCGAGATTTTTGATTGCTTACGCGCGCAACGGGCTCTTCTA ACTTTGCCAGCTACTGCAAAAGTTCCCTCGCGTCGCTTTGACGATCAGCGAAGCTTCAGTCGCTGAAGCGGGACAGGC

	<u>GCGCCTTGGTGT</u><u>TTGCTT</u><u>CCTCGATACGGT</u><u>TACTGGTGAAGTCAGCGGTAACCGTATCGAGGAGCGCTT</u><u>TGCAATGTGCTC</u> <u>GACGGTCAAGCTGGCAATAGTTGCCGCTGCTT</u><u>GCGCGAGGCGAGATAAGGCGCGCTTGAATCTCGAGGAGATACTGACCT</u> <u>ATT</u><u>CAGAGGCGGATCTTCTT</u><u>CCTTGGGCGCCAGTGACGCGCAAGAATCTCGCCAAAGCGGCT</u><u>CTGAGTATTCCGCTCTG</u> <u>GCGCAAGCGGCTCAAGAAATGAGCGATGGTGT</u><u>TGCCGCTAACCTTTAATCAAAACGCTAGGCGGCTCTGCGCCGCTAC</u> <u>CGCGAAGTTCGAGAAATGGGGGATTCCGTTGACCCGCTTGATCGTTATGAGCCAGACTTAGGTTCTT</u><u>CTAGCCG</u> <u>ATGTTCCGCGACACCACCGCCCTTGCTTATGCGCAACTTGTCCTCGAATACGACTGGCCGTGTTT</u><u>GTTCGCGACGGAT</u> <u>CGCGGGAACAACTTTTAGAGTGGATGCGAAATACAGTCACAGGCGCCAGTCGGCTGCGAGCCGCTCCCACTGAAT</u> <u>GCGTACTGGGAACAAGACAGGGACTGGGCGCGACGAAGGGACGACCAACAAGTGCAATGACGTCGCTATTACTTTCCG</u> <u>CCAAGCAAGAACCAATCATCTATGACGCTATTT</u><u>CGACAGCGCGGAATACACAGAAAAGGTAGAGGCGAGGCATGAGG</u> <u>CTGTCTCGCTGAAGTGGGAAAGATTGCTGCCGAATGGGGCGAGAGTTAGTGTGCGAACTACACAATCACTTTATTTAAA</u> <u>AAATTAGAATCTAGGTAGGTACTTACGCTTTTGAAGAATTTCTAATTTTGTATGAAAAGGGATTAAAAAAAAGAAG</u> <u>CCTAACAAATCGCTCAAGCACCGCACACTTCGTGTGCGGGACAGTTT</u><u>TAAAGTCGACGTTTGTGGT</u><u>TTTGTCTGCGCAAAA</u> <u>TTATTCCAAAAACCGCAACTTAAAAACTGCCGCTTAGCTCGGCG</u>
<i>bla_{SIM-1}</i>	<u>TTAGAGGTAGTAAAAATGAGAACTTTATGATTTTATGTTTATTCCGCACTTTAAATACCGCGTTT</u><u>TCGGAAGAAGCCCA</u> <u>GCCAGATTTAAAAATTGAAAAATAGAAGAAGGGATCTATCTCATACATCTTTTCAAGAGTACAAGGGATTCGGCATCG</u> <u>TAAAAAACCAAGGCTTAGTAGTCTTGACAAATCACAAAGGCATATCTCATCGACACTCCAGTCTCCAGGGAGATACTGAA</u> <u>AAAGCTAGTAACTGGCTCGAAAAAAATGATTTCACGTGCAATGGAAGCATTTCAACACATTTCCACGACGACAGTACTGC</u> <u>TGGGATAGAGTGGCTTAATACAAAGTCCATCCCCACATATGCATCTAAATTGACAAATGAATTGCTAAATAAAAATGGCA</u> <u>AAACTCAAGCCAAGCACTCTTTGATAAAGAGAGCTTTTGGTGGTCAAAAAATAAAATTGAAATTTTATTCAGGCCCA</u> <u>GGACACACTCAAGATAACGAAGTTGTCTGGATACCTAATAAAAAAATCCTATTCGGGGGCTGTTTATAAAACCGGAATGG</u> <u>CCTTGGCAATCTAAGTGACGCAAAATTGGGAAGCTTGGCCAGGCTCCGCAAAAAAAATGATATCAAAATACAGTAAGGCA</u> <u>AAACTTGTATCCCAAGCCACAGTGAAATCGGAGACGCATCACTATTGAAACTCACATGGGAACAGGCCATTAAGGTTT</u> <u>AAGTAAAGCAAAATCAAAACCGCGCTATTAATTAACCCCCCAAGGTCATTACGAAAACTCTGAGTGCCTCTAACAAAT</u> <u>GGCTAAACACCGCTCGCTTCGCTCACTGGACTCGCAAAAGCTGCGCTTTTGTCTGCGCTGTTAGCTTAATCG</u>
<i>bla_{TMB-1}</i>	<u>TTAGAGGAATAATGGAATGCGACCATTTTATTTTAAATAATTTTATCAGTCATTTCGCTTTTGCCAAGGAAGAAATACC</u> <u>CGGATTTGGAAGTTGAGGAAATTGACAACGCGCTTTT</u><u>TGTGCAAAAGTCATACAGCCGGGTGGAAGGCTCGGTAA</u> <u>GTTCAAAACGGACTTGTGTCATCAGCGCGGAAAAAGCATTTCATTATGACACTCCATGGTCGGAATCAGATACAGAAAAAG</u> <u>CTTGTAGATTGGATACGATCAAAAAAGTATGAGCTGGCGGGAAGCATTTCTACACATTACACGGAAGACAAGACTGCCGG</u> <u>TATAAAATGGCTAAACGGCAAAATCCATTACTACATATGCCTCAGCGCTGACTAATGAAATTTCTAAAAAGAGAGGGTAAGG</u> <u>AGCAGGCAAGGAGCTCATTCAAAGGTAATGAATTTTCGCTGATGGACGGTTTCTAGAAGTCTATTATCCCGAGGCGCGC</u> <u>CATACATTGATAAATCTAGTGGTATGGATCCCTAGTTCAAAAAATATGTTATGGCGGCTGTTTCAATCAGTAGCTTGAATCC</u> <u>AGTGGGCTAGGTTACACTGGTGAAGCTAAAAATTGATCAGTGGCCACAATCCCGTAGAAAAATCATAAATTTCGAAATTCCTGA</u> <u>AGCTAAGATTGTGGTGCCTGGTCTATGGAATAATTTGGCGATTTCGAGTTGTTAAACATACCAAGGTCCTTGCAGAAAAAGG</u> <u>CCTCTAACAAAGGCAATCACGCGCAGCGCTGACGCGCGCGTGTGGCATAG</u>
<i>bla_{VEB-1}</i>	<u>TTAGCGGTAATTTAACAGATAGGAGTACAGACATATGAAAAATCGTAAAAAGGATATTATTAGTATTGTTAAGTTATTTT</u> <u>TTACAATTGTGTAATCAAAATGCTCAAACTGACAACCTTAACTTTGAAAAATGAGAAATGTTTAAAGGCAAAAAATGCCAGA</u> <u>ATAGGAGTAGCAATATTCAACAGCAATGAGAAGGATAC</u><u>TTTGAAGATTAATAACGACTTCCATTTC</u><u>CCGATGCAAAAGCT</u> <u>TATGAAATTTCCGATTGCTTTAGCCGTTTGTCTGAGATAGATAAAAGGGAATCTTCTTTTGAACAAAAATAGAGATTAC</u> <u>CCCTCAAGACCTTTTGCTAAAACGTGGAGTCCGATTAAAGAGGAATTCCTAATGGAACAACCTTTGACGATTGAACAAA</u> <u>TACTAAATATACAGTATCAGAGAGCGACAATATTGGTGTGATAATTTTGCTAAAAATTAATTCGGAGAGCACTGATTCTGTTC</u> <u>AAAAATTTCTTGAATGCTAATCATTCTACTGATATTCAATCAAAAGCAACGAAGAACAAATGCACAAGGATTGGAATACC</u> <u>CAATATCAAAATTTGGGCAACCCCAACAGCGATGAACAACTGTTAATAGATACTTATAATTAAGAACAACCAATCTTCT</u> <u>TAAAAAAAGTTATGATTTTATTTGAAAAATATGAGAGAAAAACAACAACAGGAAGTAACCGATTAAAGGACAATTACCA</u> <u>AAGAATACAATTTGTGCTATAAAACAGGACTTCCGGAATAAAATATGGAATTGCAGCAGCCCAATGATGTTGGGGT</u> <u>AATTACTTTACCGAATGGACAATTAATTTTATAAGCGTATTGTTGTCAGAGTCCAAAGAAACTTCGGAATTAATGAAA</u> <u>AGATTATTTACAGACATTGCAAAAAATAACGTGGAATTACTATTGAAATAAATAAAAACTACCGCTAACACTGGCTCATAG</u> <u>GCAATGGCGGGTTGAAGTGCAATTTGCAAAAGTCGGTAGCCCGCCCGAGCGTTTTCTCGGTTTGACAGGAAAGGCTCACGC</u> <u>AAACCGCACTGCCATAGCCCAACCG</u>
<i>bla_{VIM-1}</i>	<u>TTATGCCGCAACCACCCCTATGGAGTCTTGATGTTTAAAGTTATTAGTAGTTTATTGGTCTACATGACCGCGTCTGTCA</u><u>TG</u> <u>GCTGTGCAAGTCGGTATGCCCATTC</u><u>CGCGGGAGCGAGTGGTGAGTATCCGACAGTCAACGAATTC</u><u>CGGTGCGGAGGT</u> <u>CCGACTTTACCAGATTGCCGATGGTGT</u><u>TTGGTTCGCATATCGCAACGCAGTCGTTGATGGCGCGGTCTACCCGTCCAATGG</u> <u>TCTCATTGTCCGTGATGGTGATGAGTTGCTTTT</u><u>GATTGATACAGCGTGGGGTGCGAAAAACACAGCGGCACTTCTCGCGG</u> <u>AGATTGAAAAAGCAAAATGGACTTCCGTAACCGGTGCAGTCTCCACGCATTT</u><u>CATGACGACCGCTCGCGCGGTGAT</u> <u>GTCTTCGGGCGGCTGGGGTGGAACGTCACGCATCACCGTCGACACGCCGGCTAGCCGAGGCGAGGGGAACGAGATT</u> <u>CCACGCATTTCTAGAAGGACTCTCATCGAGCGGGGACGCAGTGCCTTCGGTCCAGTAGAGCTTCTATCTCGTGGTGCTG</u> <u>CGCATTCGACCGACAATCTGGTTGTATACGTC</u><u>CCCGTCAGCGAACGTGCTATACGGTGGTGTGTCGGCTT</u><u>CATGAGTTGTCAA</u> <u>GCACGTCTGCGGGGAACGTGGCCGATGCCGATCTGGCTGAATGGCCCACTCCGTTGAGCGGATTCAAAAACACTACCCG</u> <u>GAGCAGAGGTGCTCAATCCCGGGCACGGTCTACCGGCGGTCTAGACTTGCTCCAGCACACGCAACGTCGTAAGG</u> <u>ACACAAAAATCGCTCAGTCGCCGAGTAGCAGATGCGGCATAACAATCGTTGGAGCGGGACTTTTGCTACGCAGGCTGCG</u> <u>CCTACTCGCAAAAGCCCTCAACTCAGCGC</u>
<i>bla_{VIM-2}</i>	<u>TTATGCCGCACTCACCCCATGGAGTTT</u><u>GATGTTCAAACTTTT</u><u>GAGTAAGTTATTGGTCTATTGACCGGCTATCATGG</u> <u>CTATTGCGAGTCCGCTCGCTTTT</u><u>CCGTAGATTCTAGCGGTGAGTATCCGACAGTCAGCGAAATTC</u><u>CGGTGCGGGAGGTCC</u> <u>GGCTTTACCAGATTGCCGATGGTGT</u><u>TTGGTTCGCATATCGCAACGCAGTCGTTGATGGCGCAGTCTACCCGTTCAATGGTC</u> <u>TCATTGTCGGTGATGGTGATGAGTTGCTTTT</u><u>GATTGATACAGCGTGGGGTGCGAAAAACACAGCGGCACCTTCTCGCGGAG</u> <u>ATTGAAAGCAAAATTGGA</u><u>CTTCTGTAAACGCGTGCACTTCCACGCATTT</u><u>CATGACGACCGCTCGGCGCGGTGATGT</u> <u>CCTTCGGGCGGCTGGGGTGGAACGTCACGCATCACCGTCGACACGCCGGCTAGCCGAGGTAGAGGGGAACGAGATTCCC</u> <u>ACGCACTCTCTAGAAGGACTCTCATCGAGCGGGGACGCAGTGCCTTCGGTCCAGTAGAACTCTTCTATCTCGTGGTGCTGC</u> <u>GCATTTCGACCGACAATCTAGTTGTGTACGTC</u><u>CCGCTCGCGAGTGTGCTCTATGGTGGTGTGTCGATTATGAGTTGTACG</u> <u>CACGTCTGCGGGGAACGTGGCCGATGCCGATCTGGCTGAATGGCCCACTCCATTGAGCGGATTCAACAACACTACCCGG</u> <u>AAGCAGAGTTCGTCATTCCGGGGCACGGCTCGCGGGCGGTCTAGACTTGCTCAAGCACACAACGAATGTTGTAAAGCG</u> <u>CACACAAATCGCTCAGTCGTTAGTAGCAGGCGAGATGCGGCATAACATGAAGTTGACGCCGACCATCACTCCGCTGCGCT</u> <u>CCGTTCTGGCGGCTGAACTTCGGCG</u>
<i>bla_{VIM-7}</i>	<u>TTATCGCAGTCGCGCCCGAGGAGATTGATGTTTCAAAATTCGACGCTT</u><u>CTGGTTGGTATCAGTGCAATTCGTCATGGCCG</u> <u>TACTTGGATCAGCAGCATATTCCGCACAGCCTGGCGGTGAATATCCGACAGTAGATGACATACCGTAGGGGAAGTTCCG</u> <u>CTGTACAAGATTGGCGATGGCGTTTGGTTCGCATATCGCAACTCAGAACTCGGTGACACGGTGTACTCGTCTAATGGACT</u> <u>TATCTTCGCGGATGCTGATGAGTTGCTTCTTATTGATACAGCGTGGGGGCGAAGAACACCGGTAGCCCTTCTCGCGGAGA</u> <u>TGAAAAGCAAAATTGGA</u><u>CTTCCAGTAACGCGCTCAATTTCTACGCACTTCCATGACGATCGAGTCGGTGGAGTTGATGCTC</u> <u>TCCGGGCGGCTGGAGTGGCAACGTACACCTACCCCTTGACACGCCAGCTGGCCGAAGCGCGGGAAACGAGGTGCCTGC</u> <u>GCATCTCTAAAAAGCGCTCTCTCTAGTGGAGATGTGGTGCCTTCGGTCCCGTAGAGGTTTCTATCTCGTGGTGTGCGCA</u> <u>TCGGGCGCACAATCTTGTGGTATACGTGCGCGCGTACTGTTTGGTGGCTGTGCAATGAGGCGTACGCGCTACGCGCA</u> <u>ATCCCGGGTAATGTTGCCGATGCCAATTTGGCAGAATGGCCTGCTACCATTAACGAATTAACACCGGTATCCGGAAG</u> <u>CAGAGTGTCTATCCCGGCCACGGTCTACCGGCGGTCTGGAATTGCTCCAACACACAACACTGTCGTAACACGAC</u> <u>AAAGTACGCCCGTGGCCGAGTAAACAAATGCGGCATAAACACGCCAAGGAGGGGACGCATTTTCACTACGCCCTTCG</u> <u>GGCTTCCCTCCAAAGCGCCCTCATGCGGGCG</u>
<i>bla_{VIM-13}</i>	<u>TTATGCCGCAACCACCCCTATGGAGTTT</u><u>GATGTTTAAAGTTATTAGTAGTTTATTGTTCTACATGACCGCTCTCTAATGG</u> <u>CTGTAGCTAGTCCGTTAGCCCATTC</u><u>CGGGGAGTCGAGAGGTGAGTATCCGACAGTCAGCGAAATTC</u><u>CGGTGCGGAGAGTT</u>

	CGCGTGTACCAGATTGACGATGGTGTGTTGGTTCGCATATCGCAACGCATACGTTTGTATGGCGTGGTGTACCCGTCCTCAATGGTCTCATTTGTCGGTGATGGCGATGAGTTGCTTTTGATGTATACAGCTTGGGGTACGAAAAACACAGTGGCCCTTCTCGCGGAGATTGAGAAGCAAAATTGGACTTCCCGTAACGCGTTCAGTCTCCACGCACCTTTCATGACGACCCGCGTCGGCGGAGTTGATGTCCTTAGGGCGGGTGGAGTGGCGACGTACGCATCGCCCTCGACACGCCCTTACGCCGAGGAGAGGGGAACGAGGTTCCACACACTCTCTAGAAGGGCTCTCATCGAGTGGGGACGCAGTGGCTTTCGGTCCAGTAGAGCTTCTATCTCTGGTGTCTGCGCATTCGACCGACAATCTGGTTGTATACGTCCCGTCAGCGAACGTGTATACGGTGGTTGTGCGGCTTCTGGAATTTGTACCGACATCGCGCGGGAAACGTTGGCCGATGCCGACCTGGCTGAATGGCCCGGTTCCGTTGAGCGGATTAACAACATTACCCAGAAGCAGAGGTGGTCTATCCCGGGCACGGTCTACCGGGCGGTCTAGACTTGCTCCAGCACACAGCGAACGTTGTCAAAGCACACAAAAATCGCTCAGTCGCCGAGTAGCAGATCGGGCATAACAAATCGCTGCAGTTGACCGCCCAACCCGCTGTCCGGGCTGGGTTCCCTCCGCGCTTCGCGCTCCGCGCGCAACTGAGCTCAGGCG
<i>aacA1</i> <i>AAC(6')-Ia</i>	TTAGGGCGACGCCGCTATTGCGGCGCGAATAACAAGAGGAAGAGATGAATTATCAAAATTGTGAATATTGCGGAATGCAGCAATTATCAGTTAGAAGCAGCAAAATATACATAACAGAAAGCGTTCAATGATCTTGGTAACAATTTCATGGCCAGATATGACGAGTGCAACAAAAAGAGTAAAAGAATGTATTGAGAGTCCAAACCTTTGTTTCGGTCTGCTAATAAATAACTCTTAGTTGGCTGGATAGGCTTAAGGCCAATGTACAAGGAAACCTGGGAATTGCATCCATTGGTTGTGACAGCAGATTATCAAAATAAAGGTATTGGCAAGATCTCTGCTTAAGGAATTAGAAACAGAGCTAGAGAGCAAGGTATTATTGGAATCGCTTTAGGAACAGATGATGAATACTATAAGAACAGTCTCTCTTTAATAACTATAACAGAAAGATAATATTGATTCATAAAAAATATTAAAAATATTAATAAACATCCATATGAGTTTATCAGAGAAGATGGTTATTATATTGTTGGAATAATTCCAAATGGCAATGGTAAAAAACAAACAGATATTGGATGTGGAAGAAGTTTAATCAAGAGTAAAAACAATGGAACAGATTAATAACATAGAAGCTGTAGATCCATCTATCTACCCAACAGATGAATCTTAAAAAGAATACTTGGAAAAATCGTTTAGTGATATTTAAAAATTAACGACTCTATGAAAAATTATAGTTAATACCAGAGTGGAAAGTATATAAAGATGGAAGAGCTTGGTTATGTAAGTTATAAAGGGGAAAGAAAACGAGTGTGGATGTCTGCATGGAAAGTACATAAAAAGCTACTATATATCTTCCAGAAAAACATTAACGGTGTTATAGTATTAGATATTATGAGATTACAAAGAAAGCATTATAGAGACAAATAATATTGGAAGATCAAGGCCTTGCATGTTTGAATTAAGAAAGAAAAATATTAGAAGATTTCATAAAGTAATGCAGTTCAAAATGACATTAAATGACTCAACCGGAATTTGCCCTAACAAATGCTTCAACCTGACAAATTCCTGTTGTATGTTGTGCTGTGCTTTGCTCAGCAGCAAAACACGCGCAAGCCCTTCGGGCGCGGAATTGCAGGTTAAGCAAAATG
<i>aacA2</i> <i>AAC(6')-Id</i>	TTAGCGCTCATGATCGAAGCGTGTCACTCCGTGCAATGCCCTGGCTGGCTGCAACTTCGTTTTCTCCTCTGCGCGCAAGATAGCGCCGACGAACACCTTGCTGAAATGGCAATCTTCGTGGCTGAGCCAAATCGGTTTCGCGCAGTTCATCGCTTACGACGAGCGCAACAAACCACTAGGCTTCGTTGAGGCTGCGCTCCGATCTGACTACGTAACCGGAACCAATTTCGTCGCCAGTAGGCTTCTTTGAAGGGGTCTATGTCTTACCGGAAGCACGGCGTCGCGGCATCGCTCATGCTTGGTGTGCTCGGATATGGGCTCGTAATCGGGCCTGTACCGAGTTCGCATCCGATGCATCAACTGACAACCCGGAAGGCCATAGATTTACCAGTCACTTGGGTTCAAGAAACCGAGCGTGTGCTGTACTTTCAGGAAGATGCTTGCGCCAGAATGACGCCTAACCCCTTCATCGAGGGGATGCCCAAAGGCTGCGCCTTCTGTGACCCCTCATGTCAAAACG
<i>aacA3</i> <i>AAC(6')-IIa</i>	TTAGGCAGCACAGAGCGACCAATTTATGTCGCGAGCACCCCGCCCATAACTCTTCGCCTCATGACCGAGCGCGACCTGCGATGCTCCATGATTGGCTCAACCGGCCGCACATCGTTGAGTGGTGGGGTGGTGACGAAAGACGCACTTTGATGAAGTGCTGGAACACTACCTGCCCAGAGCGATGGCGGAAGAGTCCGTAAACCCGTACATCGCAATGCTGGGCGAGGAACCGATCGGCTATGCTCAGTCGTACGTCGCGCTCGGAAGCGGTGATGGCTGGTGGGAAGATGAAACTGATCCAGGAGTGGCGAGGAAATAGACCAAGTCTCTGGCTGACCCGACACAGTTTGAACAAAGGCCTAGGAACAAGGCTTGTCCGCGCTCTCGTTGAACTACGTTCTCGGACCCCAACCGTGACGAAGATTACAGCCGACCCGACTCCGAACAACCATCGAGCCATACGCTGCTATGAGAAGGCAGGATTCTGTGCGGAGAAAGATCATCACCACGCTGACGGGCGGCGGTTTACATGGTTCAAAACAGCAACGCTTCGAGAGAAAGCGCGGTGTTCCTTAACAACACTCATTAAGCCGACGCGCTTCGCGCGCGGCTTAATTCAGGTG
<i>aacA4</i> <i>AAC(6')-Ib</i>	TTAGGCATCAAAAGTACAGCATCGTGACCAACAGCAACGATTCCGTCACACTGCGCCTCATGACTGAGCATGACCTTGCATGCTCTATGAGTGGCTAAATCGATCTCATATCGTCGAGTGGTGGGCGGAGAGAAGACGACCCGACACTGTGTCGACTACAGGAACAGTACTTGCCAAGCGTTTATAGCGCAAGAGTCCGTCACTCCATACATTGCAATGCTGAATGGAGAGCCGATTGGGTATGCCCAAGTCGTACGTTGTCTTGGAAAGCGGGGACGGATGGTGGGAAGAAAGAACCGATCCAGGAGTACGCGGAAATAGACCAGTTACTGGCGAATGCATCAAACTGGGCAAAAGGCTTGGGAACCAAGCTGGTTGAGCTCTGGTTGAGTTGCTGTTCATATGATCCCGAGGTACCAAGATCCAAACGGACCCGTGCGCCGAGCAACTTGCAGGCGATCCGATGCTACGAGAAAGCGGGGTTTGAGAGGCAAGGTACCGTAACCAACCCAGATGGTCCAGCCGTGTACATGGTTCAAAACAGCCGACGATTCGAGCGAACCGCAGTGTATGCCTAACCCCTTCATCGAGGGGACGTCCAAGGCTGGCGCCCTTGGCCGCTCATGTCAAAACG
<i>aacA5</i> <i>AAC(6')-IIb</i>	TTAGGCAGCACGGAGACACTTCAGCATGCATCCCGCGTGTGTTACTCTGCGTCCGATGACCGAAGACGACATCGGTATGCTTCACGAATGGTGAATCGGCGGCACATTGTGCAATGGTGGGGTGGTGAGCGGCCCTCGCTCGAAGAGGTGAAAGAGGACTATCGGCCACGCGCTTGGCCGAAGAAGGAGTAGCGCCGTACATCGGTTGTCTTGACGGAACTCCATTCCGCTTCGCGAGTCGTACGTTACGTTGCGCTCGGGTCTCGGATGGTGGAGGTTACGGCACTCGGCTGGTGACGGCGCTGTGATTGTTGCTGTTCGCCGACCCGACGGTATCCAAGGTTACAGACGACCCCTCCCCGAACAATGCGCGCGATACGCTGCTATGAGAAGGCAAGGCTTCGGCAACCTCGGCGGATGGGCGGCGCATGTACATGTTGCAACGAGCGCTTCGCGCATTCGCGCAGTGGCGCTTAACCTTTTCGCTCAACGGACGCTGTACCCGTGCGCCCGGCGCTGCCGACGCGGACCGCGCGCTCAACCGCCGCTGACCTCCGGAG
<i>aacA7</i> <i>AAC(6')-II</i>	TTAGGCACCAATGGATAGTTTCGCCGCTCGTCAAGGCTGTTGAAACTACCGATTTCGGCCAGTTGGCTAAGCATGCGCTGTGAGCTGTGGCCAGATGGCACATGTCAAGAGCACCAAGTACAGAGATCGCAGAAATTTCTGTCCGGAAAAAGTCGCCCGGCTGCTGCTGCTCAATTGCTGTAGCACCCCGACGGAGACTAGGGTTTGCCGAGCTTTCGATCCCGGAGAGTGTCTACTCCGCAACGTTGCGTTCTTGGAGGGTTGGTACGTTGTGCCAAGTGCAGCGCGCTCAGGGCGTAGGTGTAGCTCTGGTAAAAGCGCGGAGCATTGGGCTCGTGGTTCGCGGATGCACCGAATTTCGCCTCCGACACTCAACTTACCAACAGCGCAAGCACTCGGCGCACCTGGCGGCTGGATTACGGAAGGTTGCTCAAGTACGCTGCTTCGGGAACCCGTTGTAGGGGCGCGCGCTGGTGGCTAACCAATTCTGTTCAAGCCGAATTTGCTTCGTTACACCAAGCCATGGCAGAATGAGCTTGCCATGGCTTGGCTCCACTACGCAAGTCGGCTTAACCTACGCG
<i>aacA8</i>	TTAGGCAGCACAAACTCCGTCTCATGACATCCAGCATTAGTTTCGTCGAAGCTGCGCCTCATGACCGAGCAAGACCTTCCGATGCTCCATGAGTGGCTAAACCGGCCTCACATCGTTGAGTGGTGGGGCGGAGAGAAGACAGTCCAACTATGCTGGAAGTGCAAGGAGCAATACCTGCCAAGCGCTTGGCGAGAGATCCGTCACCTACATCGCAATGCTGGATGAAGAACCAGTATGGGTACGCTCAGTCGTACGTTGCACTCGGAAGCGGTGGCGGATGGTGGGAAGACGAAACGGATCCAGGAGTACGCGGAATTGACCAAGTCCCTGGCAAATCCATCGCAAGTGGGAAAGGGGCTAGGAACCAAGCTTGTTCGCGCGCTCGTTGAGATGCTGTTCAGAAAGACGCTAAGGTAACCAATATGACAGACAGCCCGTCGCGGAACAACTTGCAGCAATCCGGTGTCTACGAGAAGCGGGGTTTGTGACGCAAGAAACCATAAACCAACCCAGACGGGCGCGCTGTGTACATGGTTCAAAACAGCTCAGGCGTTTCGAGCAGGCGCGCAGTGTGCTCAACCTTCCATCGAGAGGGACGTCCAAGAGCTATCGCTCTTGGCCGCCCTCATGTCAAACG
<i>aacA16</i> <i>AAC(6')-Ip</i>	TTGGGCTGATTGATTGTTGTTTCTAGCATTACCTATCTGGAGTTGTTTGAACATTTCAATATGCGATATAGCTGAATCAATGAATTAATCCTTGAAGCAGCAAAAGATGCTTAAGAAAAAGCTTTCTTGATGCTGGAAAAATGATCGGGAGATATTAATAATGCTATTGAAGAAGTGAAGAATGTATAGAATCCAAATATATGCTTGGGAATATGTCTGGATGATAAACTGATTGATGGACCGGATTAAGGCCGATGTACGATAAGACTGGGAACCTTCATCCCATGGTTATAAAAACTGAATATCAAGGCAAGGGTTTGGGAAGTACTACTAAGAGAACTAGACAGGAGCGGAAGAGTAGGGGAATTAATCGGAATTCGGAAGTATGATGCAAGTATACAGAAACTAGTTTGTCTATGATTGATATAAACGAACGAATATCTTCGATGAAATCGGGAATATAAAGAACGTTAATAATCATCCATATGAGTTTATAAGAAATGTGGTTATATGATCGTTGGAAATAATCCCTAATGCTAATGGAAAGAAAGAACAGATATATGGATTGGCAGATATTAGTAGGAAGAACCCCAACAATCGCTTCAACCTGCTCAAGGCGCGGACAGGCTTTCGCTAGTTATCCTTGGGACGCAAAATCGCGCCAACGCCCTTCGCAAGTTAAGCGAATGTTG
<i>aacA17</i>	TTGGGCTGATTGATTGTTGTTTCTAGCATTACCTATCTGGAGTTGTTTGAACATTTCAATATGCGATATAGCTGAATCAATGAATTAATCCTTGAAGCAGCAAAAGTACTTAAAGAAAAAGCTTTCTTGATGCTGGAAAAATGATCGGGAGATATTAATAATGCTATTGAAGAAGTGAAGAATGTATAGAATCCAAATATATGCTTGGGAATATGTCTGGATGATAAACTGATTGATGGACCGGATTAAGGCCGATGTACGATAAGACTGGGAACCTTCATCCCATGGTTATAAAAACTGAATATCAAGGCAAGGGTTTGGGAAGTACTACTAAGAGAACTAGACAGGAGCGGAAGAGTAGGGGAATTAATCGGAATTCGGAAGTATGATGCAAGTATACAGAAACTAGTTTGTCTATGATTGATATAAACGAACGAATATCTTCGATGAAATCGGGAATATAAAGAACGTTAATAATCATCCATATGAGTTTATAAGAAATGTGGTTATATGATCGTTGGAAATAATCCCTAATGCTAATGGAAAGAAAGAACAGATATATGGATTGGCAGATATTAGTAGGAAGAACCCCAACAATCGCTTCAACCTGCTCAAGGCGCGGACAGGCTTTCGCTAGTTATCCTTGGGACGCAAAATCGCGCCAACGCCCTTCGCAAGTTAAGCGAATGTTG

<i>AAC(6')-Iq</i>	AAAGGCTATTGAAGAAAGTTGAGGATTGTATAGAACACCCAAATCTATGCTTGGGAATATGTCTGGATGATAAACTGATTG GCTGGACCGGATTAAGGCCGATGTACGATAAAGACCTGGGAACTTCATCCCATGGTTATAAAAACTGAGTATCAATGACGG GGTATTGGGAAAGTCTTAATAAAGAAGCTAGAGAAGAGAGCGAAGGGTAGGGGAATTATCGGAATAGCTCTTGGAACTG ATGATGAATATCAGAAAACTAGTTTGTCTATGATTGATATAAACGAACGAAACATCTTCGATGAAATCGGGAAACATAAAG AACGTTACTAATCATCCATATGAGTTTATAAAGAAATGGTGTTATATGATCGTTGGAAATATCCCTAATGGAAATGGAAAA AGAAACCCAGATATTGGATGTGGAAAGATATTAGCTAGGAAGAAGACGCCAACCAACCGCTTCAACCTGACTACGAGGCG CTGTCACGATTCTGCAGGTAATTCTGGACGCAGAAATCGCGCCAACCGCCTTCGCAGGTTAAGCGAAGTG
<i>aacA27</i> <i>AAC(6')-IIc</i>	TTAGGCCGACACGGAATCAACATCTCATGTCCGCCAACAAATGCCGCAATAGTCTACGAGTCAATGGCCGAGAACCGATCTG CCAATGCTCCATGCTTGGCTGAACCGCCGCCACATAGTCGAGTGGTGGGGCGGCGAGGATGAACGCCCAACTCTTGACGA AGTCTTAGAACACTATTCCGCCGAAGTTCTGGCAAAGCAAGCTGTAGTGCCCTACATCGCAATGCTAGATGACGAACCCA TCGGCTACGCCCAATCTACATCGCACTTGGAAAGTGGCGATGGATGGTGGGAAGACGAACTGATCCAGGGGTCCGCGG GATTGACCACTTGTGGCTAATCCATCAGCTTAAACAAGGGGTGGGTACAAAGCTCGTACGCTCGCTCGTTGAACTCTCT GTTTAGCGACCCGCGCGTAACGAAAAATCCAAACCGATCCATCTCTAGCAACCATCGCGCCATTTCGCTGCTACGAGAAGG CCGGGTTTCGTTCAAGAAAAAACATCTCACACTGACGGCCCTGCGGTGTACATGGTCCAAACACGCCAGGCGGTTTCGAA AGCCTGCGCACTGTTCAAAGCTTCAAAATCAAGGGGAAGTGGTCATGAATGGCTGCACCATCTCTACCAACTGGTATCT GGCGTGTCTCATCTGCTTCGCTATGTGTCACGCTAACCGGGCGTTCAACCGGACATCAACCTGTGCGCATGTTGAT GTCGGTTAACTGGGGCG
<i>aacA28</i> <i>AAC(6')-Iae</i>	TTAGCCGACGCTGCGCGCGAAGAGGTTTATGAAATACAACTTGTAAATATTAAGATTCTGAAAAGTATATAACGCA AGCTGCAGAAATCTATTGTATGATTTTACACATAAATTCGATTCTTGCCGCTCACTCCAAAAGGCTACAGAACTGT AATAGAAATGATTAGCGCCGAAAAACATTGTATTTGGCATTTTAAATAACAGATGAATTGTGTGGTTGGGTTGGATTAAAGAG AAATGTATAAAAAAACTTGGGAACCTACATCCAAATGGTTATTAAAGAAAAAACATCAAAATTAAGGTTTGGTAAATGACT AATTTTGAACAGAAAAAGAAAGCGAAAGAAATTTAGAAGGAATTGTACTTGGAAACAGACGATGAAACATTTAGA ACTACATTATCAATGTCAGAAATTAATTAATGAAATATATTCCATGAAATAAAAATATAAAAAATCTAAAAATCATCC ATTGAAATTTTATGAAAAATGGTGTACAGTATTATGGTGTGATTCTTAATGCAAAATGGGAAATCAAACTGATATATT AATGTGGAAAAATATAATGTAAAAAAATTTCCGCTAACAACTGCTTCAACTTGATAATTGCTTGAGCAATTACAAAGTTAA GCAAAATG
<i>aacA29</i> <i>AAC(6')-29</i>	TTAGACGGCTTTGAGCGTTTCGATCTTACCTGTGAAAGAACAAAGACGCTGCCGACTGGCTAGCGCTGCGGAATCTTCTTTG GCTCGCGGATGATCAGCCTCGGAGATTGAGCAGTACTTCTCTGGTGGACTTGAGGAGCCTGTAGAAGTGCTCATCGCAC GTGATGCTACCGCGCGGCTGTGGGCATGTGCAACTCTCGATAAGACATGACTTGGAAAGAACCTCAAGGAATCAAGAAC GGCTACATCGAAGGCCTTTATGTGGCCCAAGCCATCGATCAACAGACCTTGTGAAGCGTTTCTTGGCTGAGTCCGAGAA GTGGGCGCTAGAACAAAGGGTGACGCAATTTGCTCAGACAGAAGTGATCGGGTCAACGCAACCGCAAGTTCGCGAGG AGCGCCGCTAACCAACTCGTTCAAGCCGAACCCGCTTCGCTCCGGCAACGGCGTGCAGGTTAAGTGTGCCACCGCGCG CTTCACTATGCGGGTCGGCTTAACTCAGGCG
<i>aacA30</i> <i>AAC(6')-I30</i>	TTAGGCTGCGCGCTTCCGCGGAAAGACTTTATGGCTACTCGAGACCTTAAATGGCATATGCGTTCTGCGAAATTTGGAG AATCAAAATGAATATATTATTCAGGCAGCTAGAATCTTAAACGAAATCATTCTTGATATTGGAATGATTCTTGGCCTGATA TGAAAAAGTGCCACCAAGAAAGTTGAAGAATGTATTGAGAAGCCAAACATATGCTTGGAAATACATGAAAACGAAAAACT ACTTGGATGGATTGGTCTTAAAGCCATGTACAAATTAACATGGGAATTACATCCCTTGGTAATGAAGTACCGAATATCAGA ATAAAGGTATTGGAAGACTTCTAATAAATGAATTGGAAGAAACAAAGCAAAATGGAATAATCGGAATAGTATTGGG AACTGACGATGAATACTTTAAGACTTCTATTATCAGATGTGGATCTTCCGGGAAAAATATACTTGATGAGATAAGGAATA TTAAAAATATAAGGAATCATCCGTACGAATTTATCAACGATGTGGTTATTCCATTGTCCGGAATACCCGATGCAAAAT GGCAAAAGAAAGCCAGATATTGGATGTGGAAAGAAAGATTAGTGATTAGGGCAAAACGACAGCCTAACAAATCGCTTTCA CCTCGACAACCCCGCCTGTACGCAATCTGCTAGTTTGATCCATGAGGCAGATTGCGCGCCAGGCTCGGGTTGCGGGTGA AGCGTATG
<i>aacA31</i> <i>AAC(6')-31</i>	TTAGGCAGCACAAAGACCGTTCTCATGACCCTACCATTAAGCTTCGTCACGCTGCGCCTCATGACCGAGCAGACCTTCC GATGCTCCATGACTGGCTAAATCGGCCTCACATCTGTTGAGTGGTGGGCGGAGAAAGAAACACGCTCAACACTTGTGGAAG TGCTGGAGCAATACCTACCAAGCGCCTGGCGAAAGAGTCCGTCACTCCCTACATCGCAATGCTGGATTGAAGAACCGATT GGGTACGCTCAGTCGTACATTGCACTCGGAAGCGGTGACGGATGGTGGGAAGACGAAACCGATCCAGGAGTACGCGGAA TAGACCACTCTGCGCAATCCATCGCAGCTGGGCAAGGGCTTGGGAACCAAGCTCGTTTGGCGGCTGCTGTGAGATCGTG TTCAAAAGACGCTGAGGTAACCAAGATCCAAACGCGCCGCTCGCGCAACAACTACGCGCAATCCGGTGTACGAGAAAG CGGCTTTTGTGGCGAAAGAACCAATAAACACCCAGATGACCCGCGCTATACATGGTTCAACACGCTCAGGCGTTCCGAG CAGGCGCGCAGTGTCTTAACCTTCCATCGAGGGGACGTTCAAGGGCTATCGTCTTGGCGCCCTCATGTCAAAAC G
<i>aacA32</i> <i>AAC(6')-32</i>	TTAGGCAGCACAAAGACCGTCCCATGTCCCGAGCAAAACACCCGTTACCTTGGCGCTCATGACCGAGCGCAGCTAC CGATGCTGCATGCATGGCTGAACCGGCCGCACATTGTGAGTGGTGGGGTGGAGAAGAAGAACGCCGACTCTTCATGA AGTGGTCAAAACACTACCTGCCGAGGGTTTGGCAGAAAGAACCGCTCACACCATACATCGCGATGTGGGCGACGAACCC ATCGGCTACGCTCAGTCATACGTGCGCACTCGGAAGCGGTGATGGATGGTGGGAGGATGAACCCGACAGCGGTACGAG GGATAGACCAATTCGTGCGAACCATACACAGTTGAACAGGGGCTAGGTACAAGCTCGTCCAGGCACTCGTTGAAGTG CTGTTCTCAGATCTACCGTGACGAAGATCCAAACCGGCGCCAAACAACTCGAGCGATTCTGCTGTACGAGAA AGCTGGCTTGTTCAGCAAAACGTCATCACCAACAGCAGCGGCCAGCGCTCATACATGGTTCAAAACAGGCGAGGCTTCG AGCGTGTGCGCAGTGTGCTTAACCCCTCGCTCAAGCGGAGCGCAACGGCAGGCCACCGGCCGGGCGGTTGGTACG CTGTACATTTTACCGGCCCGGGCTTGGCGTCTTGGCGCCGCTTAGCTCGAAGC
<i>aacA34</i>	TTAGAAGGCCAGGCTATGCAGTACTCCATTGCTCGGTTCTGTTTTCGGATACATCTGATTGGTTACGCGCTTCGCAATCT CCTGTGGGAAGGGGATGACCAGAAACCGAGATCGCCAGTTTTCGCGGAGCCCTGGCCGAGCCCAACGAAGTGCTG GTAGCCCATGATGATCGGGGGCGGTTGTTGGGCATGTGCGAGTTATCCATCCGCGAGGATGTCCGAGGCTGGAAAGGCAT CAGAGCGGGCTATATCGAAGGCGTGTACATCGAGGAGGCCATCGCTCGTCCAGCGTCGCGACGCAATTACTACGGCACT CCGAGCAATGGGCCCAAAGTCAGGGATGCGGGCGTTTTCATCGGATCGAGAGGATCGCCTGATCATCCATAAGCGGTTT TCTGTGAGTCCGCTTTCTAACCCTTCAATCCAGCGGACCGCCTTCGGCGGCCGCTGAATTGGAACG
<i>aacA35</i>	TTAGGCAGCACAGGGCCACCTTCTTATGCCCTCCACGATCATCTGTCACTTGGCGCTTATGACGAGCAAGACCTGCC TATGCTCCATGAATGGCTGAATCGGCCGCACATAGTCGAGTGGTGGGGCGGTGAAGAGCAACCTCCGACACTGGCGGAT GTACTGGAACACTACAGGCCAGAATCTTGGCGCACGAGTGGTCACTCCATACATCGCCATGCTGGGCGAAGAACCAAT CGGATATGCGCAGTCGTACGTCGCGCTCGGAAGCGCGGATGGATGGTGGGAAGAGGAAACCCAGCCAGGATACGAGGA ATCGATCAGTCGTTGGCGAATCTACGCAAGTTGAACATGGGCCCTGGGAACAGAGCTTGTGCGAGCGCTGTTGATCGGTT GTTCTCCGACCCAAACGGTGACAAAGATCCAGACTGATCCGGCCCCAAACAATCGCCGCGCGATCCGCTGCTACGAGAA GCGGGCTTTGTGCAAGGAGAGTATCACGACACCCGACGGCGAGGCCGCTCATATGACCAATCTAGGCAAGCCCTACG AGCGTGGCGCGGTTGCTGCTTAACCCCTCGCTCAACCCCGACTCGTACGGCAGGCGTGTGAAGCCGCTGCGCGGCGAG CCGTAACATCATCGCGTACCAGGCTTACGACACCTGCCTTCGCTCGCGGGGTTAGCTCGAAGC
<i>aacA37</i>	TTAACCGCGGCTATGAAGTACTCTTAAATCAATTCGTCGGAAGAATCACACGATTGGCTGCGCTTCGAGATCTGCTT TGGGAAGCTGATGACCATGCGATAGAAATGGGAGATTCTTACTGGCGAGCTAGAGGAAACCGGTTGAAGTACTGATCGC ACGCGACCTCGAAGGACGTCGCGTGAAGGACGCTTGGAGCTTCCATCCGTGAAGACATAGATGGTCTGAATGGCGTCAAGA CCGGATACATCGAGGGGTTGTACGTTGATGTATGTCATCGCTCAAGCGGTCTGGTCAGGCAAGTTCTGAGAGCATCGGA CAATGGGCAAAAGATCAAGGCTGTAGCGCATTCGCATCTGATCGGCAAGACCGAGTATCATCCACAGGCGGTTCTCCGG TGGCTCCGCTAAACAATTCATTCAAGCCGACGCCGCTTCGCGGCGCGGCTTAATTCACGCG
<i>aacA38</i>	TTAGGCAGCACATAACACCGTCACACATGCTTACCAAAAGCGATCGCTGTCACTTACGCGCATGACCGAGGATGATC TTCGATGCTGTACGACTGCTCAACCGACCCACATCGTTGAATGGTGGGAGGCGAGGGGACGCGCTCCCACTCCCTCA GACGTGGTGAGCACTACCGGCCACGAGTCTGCGAGAAGAGCGCGTACGCGGTACATCGCCATGCTTGGTGGAAATGAAC CAATCGGCTATGCGCAGTCGTACATTGCTCTCGGAGTGGCGAAGGTTGGTGGCAGGACGAAACTGACCTGGAGTTTCGCG

	GGCATCGATCAATCGCTTGCCAATCCCTCCAGTTGAACAAAGGTCTCGGAACGGAGCTTGTGCGATCACTCGTCAAACT GTTGTTCTTGGATCCCGAGGTAAACCAAGATTGAGACTGATCCGGCTCTACTAACCATCGTGCAATCAGGTGCTACGAAA AAGCAGGGTTTGTGGTGAGAACACAATCACTACCCCGATGGTCCGGCCGTCTATATGGTTCAAACTCGTCACGACTTC GAGCGAGCGCGCTGTGCTGCCTAACTGTTTGGTCAAGGTGAACGCCAAAAGCTGCGCTTTTGGTGCCCTCACTCCGCTTCG CTCTTTCGGCGCAGCTTACCGCGGGC
<i>aacA39</i> <i>AAC(6')-Iai</i>	TTAGCCGGACGCTTCGCGCAAGAGGTATTATGAAATACACTATTATTGATATTAAGATTCAAGAAACGTACATTACTCA AGCTGCAGAAATATTATTGATGTAATTTTCAAGAAATAGCCAGAATCATGCGCAACACTCCAAAAAGCAAAAGAGATG TTATTGAATGTATAGAAGGTGAAAAACATTGCAATTGGCATTATAATAAATAAAGAATTAAATTGGATGGATTGGATTAAAGA GAAATGTATAAAAAACATGGGAATTACATCCTATGGTTATCAAGAAAAACACATCATAATATGGGATTGGAAAAATACT AATTAATGAAATAGAAAAAAAGCAAGAGAAAATAATTAGAAGGTATTGACTTGGAACAGATGATGAAACATATAGA ACTTCATTATCAATGATTGAATTAATAATGAAAAATATTTGCAAGAAATAAAGAATATTAGAAATTTAGAAAAATCATCC TTATGAATTTTATAAAAAATGTGGATATTGTAATTATGGTGTAAATTCGCAACGCAAAATGGGAAGAATAAGCCAGATATAT TAATGTGGAAAAATATTATGGAAGAAAAATTGCGGCTAACAACTGCTTCAACCTGACTACCTATTGGCATGGTTTATGCTT TCGCTTCGCTTGGCATAAACCATGCCAATGTACGGTTCGACGGTTAAGCAAAATG
<i>aacA40</i>	TTAGGCAGCACAGTCCAGACTCCGCATGCCCTCCACTGCCCTGAAGTCACCCAGCGACTCATGGTCAAGCGCGACCTGG TAATGCTTCACGAATGGCTCAATCGCCCTCACATCGTTGAGTGGTGGGGAGCGGAAGAAGCCCGCCGACGCTGCAAGA AGTGCAATCGCACTACCTACCTCGCGTGTGGCCGAAGAGGCGGTACGCGCTATATCGCGATGCTCGGGAGTGAGCCAA TTGGGTACGCGCAGTCTTACGTTGCAATTGGGAAGTGGCGATGGGTGGTGGGAGGATGAACACAGAGCCGGGTGCGCGG AATAGATCAGTCGCTGGCCAATCCAGAACAACTGGGCAAGGGCTCGGGACCAGGCTTGTGTACCTTGGTCAAGACAC TGTTCAACGATCCATCCGTGACCAAGATTCAAACCGACCCGGCGCCAAACAACTGCGCGCATCCGCTGCTACGAGAAG GCTGGCTTCAGACAACAGAAAGGTATCACACCGCCGACGGCCGCGCTCTACATGGTTCAAAACCGCGCTCTTTGCGA GGCAGCGCGCGGTGCTGCCTAACCCCTCGCCCAAGGCGCCGACGCGCTACGGCAAGCAGCGTAAGCCTAGTCCGCGGCC TATACCGCATCATCCCGCACTAGGCTTACGCTGCTCGCTCCGCGCGCAGCTTAGCTCGAAGC
<i>aacA42</i>	TTAGGCTGACGCGCTTCGCGCGGAAGACTTTATGGCTACTCGGAGACTTTGAATGGCGTATGAGTTCTGCGAAAAAGGTG AATCAAACGAATATATTATTCGCGCGGTAGAATCTTAACGAAATCATTCCTAGATATCGGTAATATATCTCGGCTGACA TGAAAAAGTGCTACTAAAGAAAGTTGAAGAATGCAATTGAGAAGCCAAACATATGCTTGGAAATCATGAAATGAAAAAT GCTTGGATGGATTGGCCTTAGGCCCATGTACAAATTAACATGGGAATTACATCCCTTGGTAATAAGTACTCAATATCAGA ATAAAGGTATTTGGAAGACTTTTAATAAAATGAATTAGAAAAAAAGCAAAAGCAAAATGGGAATAATTGGAATAGTATTGGG AACTGACGATGAATACITTAATAAATCTTATATCAGCTGTGTGATCTTTACGGCGAAAAATATTCTGTAGATTAAGGACTAT TAAAAACATAAAAAATCATCCGTACGAATTTCTATCAAAAAATGTGGGTATTCCATTGTGCGAGTAATACCCGATGCAAAATG GAAAAAGGAAGCCAGATATTGGATGTGGAAGAAGATAAATGATTAGGGTAAAAATGACAGCCTAACCAATCGGCTTTCAC CTGCAACACCGCGCTGTACGCAATCTGTAGTTAATCTTGTGGAAGATTGCGCGCCAGGCTGGAATGCGGTGAA GCGTATG
<i>aacA43</i>	TTAGCCAGACGCTTCGCGCCGAGGACAATTGATGATTATAACATAAATTAACATTGCTGATTCTGAAAAAGACAAGGAAG ACGCTGCACGAATTCTATATTCTGCATTTTCGCGGAAAGGGAAAAAGATGCTTGGCCTACATTAGATTACGCTCGTGAAGAA ATAGCAGAGTGATAGCAAGTCTTAATATTGCTTGGGCATAACCTTAGATGATCGCTTAGTAGGGTGGGGCGGACTTCG TCCCATGTATGAAACACATGGGAATTGCAATCCCTTAGTAATAGATCCTGATTATCAAGGTAATGGAATTAGGAAGACTGC TCCTATCAAAGATTGAGAGCACTGCAACCAACAATAGAATAATTGGTATAATGCTTGGAAACAGATGATTGAGACATTGAGT ACAAGTCTTCAATGACTGATATAGATGAGTCTAATATTTTCCAAGAGATAAAAAATATAATTAATATAAAGAATCATCC ATTGGAATTTTATAAAAAATGCGGGTACATCATTTGTCGGTATAGTAGCTAACGCAAAATGGGATAGAAAACTGTACATT GGATGTGGAAGAATCTAGAAAAAGAAAGTGGCTAAACAATCGCTTCAAGCGGATAAAACGGCGGTGTCACGGTTCTTGCTT ACGCAAGAACACGCGCCACACTCGTTTTACCGCTTAAGCGTATG
<i>aacA44</i>	TTAGGCAGCACAAGACCACCTGTTTCATGCCCCGCAACGAAAAACCCGTAACTACGTCTGATGACTGAGCACAATTGGT GATTAATGAACATTGACAACAGAACCGTAACCTACGTCTGATGACTGAGCAGCACTCTCGATGCTCCATGAGTGGGT GAACCGGCCACACATAGTTGAATGGTGGGCGGTGAGGACGAACGTCACCAACTGGACGAGGTATATGAACACTACCTG CCAAGAGTTCTGCGCAGGAATCGGTACCCCGTACATCGCCATGCTCGGCAACGAACCGATTGGCTACGCGCAGTCTGTA CGTAGCGCTCGGTAGCGGTGACGGATGGTGGGAAGAGGAAACTGACCCAGGGGTGCGAGGAATCGATCAGTCTGCGTGGCC AACCCCAACGAACTGAACAAAGGCTCGGAACGAAGCTTGTACGCGCGTGGGTGATCTGCTGTTCTCAGATGCGTACGT GACAAAGATCCAGACCGACCCGGCTCCGGTAAACCATAGAGCTATTCTGTTGCTACGAGAAAGCGGGGTTTGAAGAGCAA GGTACCGTAACCAACCCAGATGGTCCAGCGGTGATGATGGTTCAACACGCGCAGGCAATTCGAGCGAACACGCAAGTATGC CTAACCCCTTCCATCGAGGGGACGTCCAAGGGCTGGCGCCCTTGGCCGCCCTCATGTCAAACG
<i>aacA45</i>	TTAAAGGGCTCAGCCAATGCTGTACCTCATCCACCCGGTCAGTAGTTCCGACTCGCTCGATTGGCTTCGCCTTCGAAACCG GCTCTGGACTGGACACGACCCAGCGGAAGAAATTTGTAATTTCTTAACGGAATTTGGTGGAGCTGGACGAGGTATTGA TCGCACATGACGACACCGGCATGGCCGTAGCTCATGTTGAGTTGTCAATCCGACAAGACATTGTTGGACTGGAGGGAGTC CGAACAGGTTACATCGAAGGGCTCTATATCGATGAATTTTCATCGCTCGTCCGGCATCGCACTCCAACCTTTCGCGGGCTCC GAGCTTTGGGCTCTGGATCAGGGGTGCCAAGCATTCGCTTCTGACCGCGAAGATCGCATCATCTGTTACAAAGCGGTTTCT GGAATCCGCTTCTAACATTTCAGTCGACCGGACCGCCTGCGGCGTCCGGTCACTTTCACGTGTTGGGCATTAAAGGAAAAAG TTAATGGCAATCCGAATCTTCGCGATACTTTTCTCATTTTCTTGGCACTTTTCGCGCATTCGCAAGAAAGGACCGCTAG TTAGGCGACGCGCAATTCGCGCGCGTGAAGAAAGAGGATCTTATGGAATATTCAATTAATAGTAGAGCAAGAAC AATATCAGATCGATGCTGCAAGAATCTTACAAATACTTTTCTTGATATAGGTAATAAACTTGGCCAACTATCAAAGC GCAATCGATGAAGTCGAAGAGTGTATTGATCTGCCCAATATATGATATAGGTTTAATTCTAACAACTAATTAATTGGAATG GGTCCGATTACGTCCGATGTATGATAAACGTTGGGAATTGCACCCATTAGTTGTAAGAAGTACTATCAAAGTAAGGGGA TCGGTAGTGATTAATTGCTGAAGTTGAAAAAAGGGCAAGAGAAGTTGGAATAAATTGGAATAATATTAGGAAGTATGAT GAATATAACAAAAACAAGTCTTTCTGAAATAACTATAGATGAAAAATAATATATTTCGATGCAATACAAAAATTAAGAAATAT ACATAATCATCCATATGAGTTTTACAAAAAAATGGATATATGATTGTTGGAATAATTCCAATGCAAAATGGACTAAGAA AACCCGATATTTGGATGTGGAAGGCTACTCAATTTGAATGGAACAAATAATAACTATAGATAAGCTGTAAAAAATACTT TGACGAAATAAATTCGGTTGAAGTTATTATAGAAAAAGAAATATTAAGAAAAAATTTGTAAGAAAAAATTTTATCAAA AAATATCATTTGATTCTTCTGGAAGAAACAGAAAAAGAAATGATTTACTTTGGTAATAATCTACTTAATACACAATAGTTTT ATTCAAAAAATATGTTCAATTAGTTATAGGAAATTTGCCCTAACAACTGTTTCAACCTGACATTGCTATTGTCACACTTTTT GCTTTCGCTTCGCGGCAAAAAGTGGCGCAATTGACGCAATGCAGGTAAACAAATG
<i>aacA47</i>	TTATGCATCACAGAACCACTATCTATGTCGCGATCGACACCCCGTACCTTGCCTCATGACCCAGCAAGATCTTC CGATGCTCCATGACTGGCTGAACCGGACCCACATATTTCGAGTGGTGGGCGGTGAAGAGGAAACGCGCCGCTTGTATGA GTGCTGGAACACTACCTGCCAAGAGTTCTGGCAAGAAGTCCGTACGCGCTACATCGCAATGCTGGGCGAGGAGCCGA TCGGCTACGCCCAGTCTTACGTGCACTCGGCAGCGGTGATGGATGGTGGGAAGACGAAACTGACCCAGGAGTGGGGG AATTACCAAGTCTCTGGCTAATCCGACACAGTTGAGCAAGGGTCTGGGAACAAAGCTTGTCCGTGCGGCTCGTTGAGCGGT TGTTCTTGGACTCCATGTGACGAAGATCCAAACCGACCCAACTCCGCAACAACTCGGGCGATCCGTTGCTACGAGAAAG CGGGGTTTGTACGGCAGAAAGATAATCACCAAGCTGATGGCCAGCGCTTACATGGTTTCAACAGCTCAAGCTGATCTGGA GAACGCGGTAGTACTGCCTAACAGCCAATGGAGCCGATGCGGTGACGATTGCGAGGTTTATGTTGCTGGTGGCCCGCGC GGCTCATCGCAACG
<i>aacA48</i> <i>AAC(6')-Iag</i>	TTAGTCCCACTAAACCTGCACCGAGCATGGCGAACACTCCGGTTGGAACGTCGTCGCATGCAAGACGCCAGATACCC TGGCTGGCTTGAGTTGCGCCTGCAGCTGTGGCCAGATGGCTCAACCGAGGAGTTCTTCCCGAGATGGCTGCGCGCTTCG CTGAACCCGACCGCTTCGGCCAGTTTTTGTCTGTGCGCGGGCGGCTTGGCGGAGGGCTGGTGGAGGTGGCGCTTCGC ACGGACTACGTCAACGGCACCGGAAGCTGCAAGCTCGCCCTTTCTCGAAGGCGTCTTCTGGTGGTCCAGTGGCTGAGGCT TGGCATCGCCAGAGCGCTGTGGTGTGCGCGGAAGGCTGGGCTAGAGATCGTGGCTGCACTGAGTTCGCTCGGACGCC GAGGTGAGCAACGTTGGTAGTCACCGCTGACGCGCTTGTGTTTCGTCGAAACTGAGCGGCTGCTGTTCTCCGTAAG GTCGTGGCACCGTGAGACCTAACCCCTCCATAGAGCGGACAGCCAAAAGCTGGCGGCTCATGTGCAAGC

<i>aacA49</i>	<u>TTAGCTTGACGCTTCGCGCAGAGGAGAGTTTCAATGAATATACAAATTTTGAACCTAGCAGAATGTACCGAATTTCAAGA</u> <u>GAGTGCAGCAAGAGTCCTATTAGATGGATTAGAGAGGTTGGCAAGATTGCATGGGCTACCTATGAAGAAGCTATGGTCG</u> <u>AAGTACAGGAATGTACTGAGATTCTTAATATAGCAATATGTGCTGTCGATAATAATAAAGTCGTTGGTTGGGTTGGAATT</u> <u>CGTCCAATGTACGATTACGTTTGGGAACCTACATCCAATGATAGTAACCAAGAAATACCAAAAAAAGGAATAGGGACCA</u> <u>AACTACTTAAGGAAATTGAACAGATTGGCAAAGAGAAAGGTTTACTAGGACTGGCTCTTGGAACTGATGATGAAACTGAT</u> <u>AGTACAAGTCTATCGAAATGCGATTTCCTCCGAGATAAATATATTGATCGAGATAGCGAATATCAAACTCATCTATGTGCGAC</u> <u>CCCTATGCGTTCTATGAAAAGAACGAGTACTTATTGTAGGAGTGATTCCGAATGCGAATGGAAGAAACACAGACAT</u> <u>TTGGATGTGGAAAGAACTTGAAGCTAAACATCTAGTTCAACTTGACTTATTTAGCCGTCACGGGTTCTGCTTCGCAACA</u> <u>ACCGCGGCCAGCCAAAACGCAAGTTAATATAGGCG</u>
<i>aacA50</i>	<u>TTAGCAGCACAAAGACAATTCTCATGATCAACAGCATTAGCCTCGTTACGCTGCGCCTCATGACCGAGCAAGACCTACC</u> <u>GATGCTCCACGACTGGCTAAACCGGCCGCACATCGTTGAGTGGTGGGGTGGAGAAGAGGCACGGCCATCACTCGCTGAG</u> <u>GTACACGAGCAATACCTACCAAGTGTCTGGCGAAAGAGTCGGTTACTCCATACATCGCAATGCTGAATCAAGAGCCGAT</u> <u>CGGGTACGCTCAGTCATACGTTGCCCTCGGAAAGCGGTGACGGATGGTGGGAAGACGAAACCGGATCCAGGGGTGCGTGGA</u> <u>ATCGAACAGTTCCTCGCGAGTCCACTACAACCTTGGAAAAGGCCTTGGAAACCAAGCTCGTTCGCGCGCTGGTAGAGACGCT</u> <u>GTTCAAAAGATCCCGAGGTAACCAAGATCCAAACGGACCCGTCGCCGAGTAACCTACGCGCGTACCGTGCTATGAGAAG</u> <u>GGCGGGTTCGTGAGACAAAAGACAGTAGCCACGCCAGATGGGCCAGCTGTGTACATGGTTTCAAAACGCCACGAGTTCG</u> <u>GGCGGGCGCGCAGTGCTGCCTAACCTTCCTATCGAGAGGACATGCCCGGCAAGCCGGGTATGCCTCTATGTCAAACG</u>
<i>aacA51</i>	<u>TTAGGCCACAAGGAACCGTCCAGTATGAGCCCCGGCGTTGTACCTTTCGGGAGCATGACCGAAGAGGATCTCGGTATGC</u> <u>TTACGACTGGTGAACCGGCCACATCGTCAATGGTGGGGTGGCGAGCGTCTTCGCTTGAGGAGGTGCAAGAGCAC</u> <u>TATCACCTTGTGCCCTTCGAGAAGCCAACGTGACTCCGTACGTCGGGATGCTCGATGGCGGCCCTTTTGATATGACAG</u> <u>TCGTATGTCGCCCTGGGATCGGGAGATGGGTGGTGGCAGGACGAAACCGATCCGGGCATACGCTATCGACCGATCAAT</u> <u>TGGCGAGTCCGCGCTTCTAGGGCAAGGTTACGGTACGTTGCTGGTACGCGCGCTCGTTGATCTGCTCTTCGCGCACCCGCG</u> <u>CGTATCGAAAGTTCAGACAGATCCTTCTCCCCGAACTTGCGCGCCATACGATGCTATGAGAAGGCTGGCTTCGCGAGGA</u> <u>TCAAGACCATTTAGACACCTGATGGACCGAGATATACATGTTGCACGAGCGCCCATAGCCAGGGAATCCGACCGTGT</u> <u>GGCCTAACAGATCGCTGCAACGAGACGTTGACCGAGCGCTCGCGCGCTACCGCACGCGATCGTCCGCGTCAACTGCCCG</u> <u>TGAGCTCCGGAG</u>
<i>aacA52</i>	<u>TTAGGCAGCACAAAGATGACCGCGAACGAAAACCCGTAACCTTGCGCCTGATGACTGAGCACGACCTCCCCATGCTCCAT</u> <u>GAATGGCTGAACCGGCCACACATAGTTGAATGGTGGGGCGGTGAGGAAAGAACGTCCAACACTGGACGAGGTATATGACC</u> <u>ACTACTGCCAACAGTTCTGGCGCAGGAATCAGTCACCCCGTACATCGCCATGTAGGCAACGAACCGATTGCTACCGCG</u> <u>CAGTCGATGTGTCGCGCTTGGCAGCGGTGACGGGTGGTGGGAAGAGGAAACCGACCCAGGCGTGCAGAGGAATCGATCAGT</u> <u>CGCTGGCCAAACCAACGAAACTGAACAAAGGCCTCGGGACCAAGCTTGTACGCGCGCTGGCTGATCTGCTGTTCTCAGAT</u> <u>CGCTCAGTGACAAAAGATCCAGACGACCCGGCTCCGGGTAAACCATAGAGCTATCCGTTGCTACGAGGAGGCGGATTTT</u> <u>GCAGGAAAAGGTCTACCCACACCTGACGGGCCGGCTGTCTACATGGTTTACGTCAGGCAAAACATACGAGCGTGC</u> <u>GGTGTGCTTAAACCCCTGTTCAAGCGGACCGCCAACGGCGTGGCGCCTTGGCGGCCGCTTAACTCGAACG</u>
<i>aacA54</i>	<u>TTAGCCGCGACAAAATCAACGCCTTATGTACACCAAGAATGCCGCAATAGTTCTGCGCCTCATGACTGAGAGCGATCTGC</u> <u>CAATGCTCCATGCGTGGCTGAACCGGCCACATAGTTCGAGTGGTGGGGAGGAGAAGATAAACGCCCCACACTTGGCGA</u> <u>AGTTTTAGAACATTATTCGCCCGAGTTCTCGCAGAGCAAGCAGTAGTACCCTACATCGCAATGCTAGATGATGAACCCA</u> <u>TTGGTACCGCGCAGTCTACACCGCCCTTGGAAAGTGGCGATGGATGGTGGGAAGACGAAACTGATCCAGGGGTCCGTGGC</u> <u>ATTGACCAGTCATTGGCCAATCCGTCGCAGCTAAACAAGGGCCTTGGAAACAACGCTCGTACGCTCACTGGTTGAACCTCT</u> <u>GTTCAAGTGATCCGGCCGTGTCGAAGATCCAACTGATCTTCTCCTAACCAACCATCGCGCTATCCGCTGTGTACGAAATAAG</u> <u>CCGGGTTTCGCACAAGACAAAATCATCCTGACGCGCTGACGGCCCTCGCGTGTATATGGTTCAAAACACGCCAAGCGTTCGAA</u> <u>AGCCAGCGCAATGCTGCCTAAAATTGAGGTCAAGCGCGCTCGCGTTCATGAAGAGCCTCATCTACATCTATCTCATCTGCG</u> <u>ATCTCGCGTGTTTTCTACGCTTGGCATCTGTCCTAGCCTAACTGGGCGCTCAACTGGACATCAACGTGCTGCGCACG</u> <u>TTGCTGCCAGTTAACTGGGGCG</u>
<i>aacA56</i>	<u>TTAGCCGGACGCTTCGCGCAGGAGTAAGAATGGAATACAAAATAGTAGATATTGCACCTTGATAGTAAGCTGGTGAAGTT</u> <u>GCAGCAGAGATTTTTGTTTATACTTTTCTGAAATTAATAATGAATCTTGGCCAACAATTAACCTGCGCACTGAGGAAGTG</u> <u>AAAAGATGTATAGAAGATAAGAATATTTGATTATGGAGTTTGGTAGAAGACAAGCTGGTAGGTTGGATTACGTCC</u> <u>AATGTATGAAAAATCTTGGGAATTACATCCAAATGGTGGTTTATCAAAAATGGCAAGGCAAGGATTAGGGAATAATTAA</u> <u>TATTTGAATTAGAAAAAAGAGCAAAAGAACCAAGGAATAAACCGAAATGTGTTTAGGAACTGACGATGAGACATTTCCGAC</u> <u>ATCTTTATCTATGAAAGAATTGGATAAAAATGATCTATTGAAGAAATAAAAAACATTAATAATTAATCATCATCCCT</u> <u>ATGAGTTTTATCAGAAATGTGGATATAAAAATTATGGAGTAATCCACAGATGCTAATGGTAAGAATAAACCGGATATTGG</u> <u>ATGTGGAAGAAAAATATGTAGGAAGAACGGCTAACAAACGGTTTAACTGACTTGGCCTTGTACAGGTTTGTGATGAC</u> <u>GCTTCGCGCTGCGCCGCTTCTCATGCAACAACCGCGCCAACTCCGCTTCGCGGAACGGGCTGCGCAGGTTAAAC</u> <u>CAATG</u>
<i>aacA59</i>	<u>TTAGGCAGCACAGAAGCCGCATCCATGCCCGCGAGCACATCCGTTGTGACCTTGCGCCTGATGACCCGAGCACGACCTGC</u> <u>CAATGCTCCACGAATGGCTGAACCGGCCGCACATCGTCGAGTGGTGGGGCGGGCAGGAGAAGAGTACCGCCCACTTTCAGCA</u> <u>AGTCCGCGAGCACTACTTCCGAGAGTCTTGGCTGAAGAGCGGTTACGCCGTACATCGCAATGCTGGACGGCGAGGCAA</u> <u>TTGGTACGCCAGTCTTACGTCGCACTGGGAAGCGGCGATGGGTGGTGGGAAGACGAAACTGATCCGGGAGTACGAGG</u> <u>GATTGACAGTCGCTGGCAACCCACACAGTTGAGCCGGGGCCTCGGAACCGCAGCTTGTCCGCTGCGCTCGTAGAGATGC</u> <u>TGTTCTCAACCCCGCGGTGACTAAAATTACAGACCGATCCCGATCCCAAGAACCTACGTGCAATCCGGTGCTATGAGAAAG</u> <u>CGAGGGTTTGTACAGCAGAAGGTCTACCAACGCCCGATGGCCCGCGCTTACATGGTTTCAACCGCAACCGCGTTCGA</u> <u>GAGTTCGCGCAGTGTCTTAACCTCGTTCAACCCCGACCCGCTACGGCAGGCACTGTAAGCCTGGCCCGAGGTACT</u> <u>CCGTACATTGTCTCGGTCCAGGCTTACAGTGCCCGCCTCCGCGGTGCGGGTTAACTCGAAGC</u>
<i>aacA61</i>	<u>TTAGGCAGCACAGGGCCACCGCTTATGTCTCCAGCGAATCCAAAGTACGTTGCGCCTCATGACCGAGCACGACCTGCC</u> <u>AATGCTCCACGACTGGCTAAACCGGCCTCACATCGTTGAATGGTGGGGCGGTGAGGATGAGCGCCCTACTCTCGACGAAG</u> <u>TACTCGAGCACTACCTGCCACGAGTAATGGCGGAGGAATCAGTAACCTCCATACATTGCCATGCTGGCGGATGAACCGATC</u> <u>GGCTAGCAGCAGTCTTACGTCGCACTCGGGAGCGGTGATGGATGGTGGGAAGACGAGACCGACGACGAGGGGTACGAGGAA</u> <u>TTGACCAATCTCTAGCCAATCCAGCGCAGTTGAGCAAGGGCCTGGGAACACTCCTGGTCCGAACGCTCGTTGAAACCTTG</u> <u>TTCGCGGATCCGGCCGTCACGAAGATCCAAACCGATCCGCTCTCAAAACAACTACCGCGCAATCCGCTGCTACGAGAAGGC</u> <u>AGGGTTTGCACAGCAGGGCGTCATACCACGCGCTACGGGGCGGGCTTACATGGTTCAAAACCGGCAAGCGTTCGAG</u> <u>CGCGCGCGCGGTGCTGCCTAAACAACTCGCTCAACCGGACCCGCTACGGCAGGCGGTTAGCTCGAAGC</u>
<i>aacA64</i>	<u>TTAGCCGGACGCTTCGCGCTAGGAATAAAAATGGAATAITCAATTGTTAATAATTGGCTTAAACAGATAATTATATCCCA</u> <u>AGCAGCTGTTGTTTATATAATGTATTTAATACTTGAACCAATCATGGCCAACTATTGATTCTGCCAAAAATGGAAGT</u> <u>AAATGAATGCTTAGAAAAATAAACATCTGTAATTGGAATGTTGATAGATAATAAATAGTCGGTTGGGTAGGCCTAAGGC</u> <u>CAATGTATGAAAAAACTTGGGAATTACATCTGATTGTTGTCATTGATGATTATCAAAATATGGGTGTTGGTAAGAAATATTA</u> <u>TGAATTGAAATAGAAAAAAGGGCAAAAGAAAAGGGAATTATAGGGGTTGTAATTGGAACATGATGATGAAGAAATATAA</u> <u>CATCGTTATCAAAAGTTGATTAAATAATAAGAATATATCTACTGAAATAGAAAAATATTAATAATATCATCATCCAT</u> <u>TCGAGTTTTATCAAAAATGTGGATATTTTATTGTTGGTGTAATACCAAAATGCAAAATGGAAAAAATAAGCCAGATATATGG</u> <u>ATGTGGAAAAGAAATACAAATAAGAAAGTTCGGCTAACAACTGCTTCAACCTGAGTCGCTATTGTCTGATTTTGTGCTGCT</u> <u>GCTTCGCTGCTTACGCAAAAATACGCCAAATTTACGGCTCCGAGTTAAGCAAAATG</u>
<i>aacAX</i>	<u>TTATGCATACAAATCATACCGTGATTACTCTTACCAGGAAAGCTGAAGAAACAGATAGAGAAGCCATCTACCAATTGTA</u> <u>TTGCTTGGTAATGCGCGGCTTCATTTCTGAAAATTGGGGTTGGGATGAACAGTGGCAAGGAAACGATTTTCTGCTCACTT</u> <u>TGATACCAAGGCCATTACGTTGGTACACCAAAAACAGAGTTGGTTGGGTATTCCTCATGTCCGAGGATCCGAGGGGCCAGTG</u> <u>TCATAAGAATGATCGTTGTTTCCTCATCACAGCGGAAGGGTATCGGGAGAAAACCTGCTTGAGTCTGTTATTGCGTCTG</u> <u>GCAATGAGCAATCCAAGGCATCGGATTGGAGGTATTCAAAATCAATGATGAGGCAAGAAATCTATGAAAGATTGG</u>

	CTTTAATGTTGAAGGTGAAAACCCACCAGTTACGTCATGGCACATGCATAAACCCGGCGCTCAACCTCGCTCCCTTCGGTC GCTGGACTCCGGGCGATAAAGCCGCCCGGAGCCGGTTAGCTCTACG
<i>aacC1</i> <i>AAC(3)-Ia</i>	TTAGGTGGCTCAAGTATGGGCATCATTGCGACATGTAGGCTCGGCCCTGACCAAGTCAAATCCATGAGGGCTGCTCTTGA TCTTTTCGGTCGTGAGTTCGGAGACGTAGCCACCTACTCCCAACATCAGCCGGACTCCGATTACCTCGGGAACTTGCTCCG TAGTAAGACATTTCATCGCGCTTGCTGCCTTCGACCAAGAAAGCGGTTGTTGGCGCTCTCGCGGCTTACGTTCTGCCAAAGTT TGAGCAGGCGCGTAGTGAGATCTATATCTATGATCTCGCAGTCTCCGGCGAGCACCCGGAGGGCAAGGCATTGCCACC CGCG TCATCAATCTCCTCAAGCATGAGGCCAACCGCTTGGTGCTTATGTGATCTACGTGCAAGCAGATTACGGTGACGATCCC GCAGTGGCTCTCTATAACAAAGTTGGGCATACGGGAAGAAGTGATGCACTTTGATATCGACCCAAAGTACCGCCACCTAAACA ATTCGTTCAAGCCGAGATCGCTTCGCGGCCGCGGAGTTGTTGCGAAAAATTGTGCAACGCCCGCGGCCGCAAAAGCGCTCC GGCTTAACCTCAGGCG
<i>aacC2</i> <i>AAC(3)-Ib</i>	TTAGGTGGCTCAATGAGCATCATTGCAACCGTCAAGATCGGCCCTGACGAAAATTTACGCCATGAGGGCTGTGCTCGATCT CTTCGGCAAAAGAGTTTGAGGACATTCCAACTACTCTGATCGCCAGCCGACCAATGAGTATCTTGCCAATCTTCTGCGACAG CGAGACGTTTCATCGCGCTCGCTGCTTTTGACCGCGGAACAGCAATAGGTGGGCTCGCCGCTTACGTTCTACCCAAGTTTCG AGCAAGCGCGAAGCGAGATCTACATTATGACTTGGCAGTCGCTTCCAGCCATCGAAGGCTAGGAGTCGCAACTGCCTTG ATTAGCCACTGAAGCGTGTGGCGGTTGAACTTGGCGCGTATGTAATCTATGTGCAAGCAGACTACGGTGACGATCCGGC AGCTCGCTCTCTACACAAAGCTTGGAGTTCCGGGAAGACGTATGCACTTCGACATTGATCCAAAGTACCGCCACCTAAACA TCGTTCAAGCCGAGACCGCTTCGCGGCTCGGCTTAGTGCGGTAACTGTATACACACCGCCGTGCCGCGCAGCGGTCCGGC TTAACTCAGGCG
<i>aacC3</i> <i>AAC(3)-Ic</i>	TTAGGCAGCAGCAGCTAAGATGATCTCTACTCAAACCAAGATTACCCGCCCTCAACTCTCAAGACGTTGGTGTAATGCGGG CAATGCTAGGCGATGTTTCGGCGAGGCTTTTGAGGACGCTGAGAACTATTGCCGCGCTCAACCAAGCGCAGATTACCTACAA GACTCTGTGCGCTTCGCTTCATCGCAATCGCTGCTTACAGGGGCAAGAGGTTCATCGGTGGCTCGCCGCGTATGAT GCTCCCAAAGTTTGAACAACAGCGCAAGAAATCTATATCTACGACTTAGGCGTGCAAGGAGCCTATCGCCGACGAGGC ATCGCCACAGCCTTGATCAATGAACTCCAGCGTATCGCACATGATATTGGCGCTTATGTAATTTTGTCCAGGCTGACTAT GGGAGCAGATCTCGCGTAGCGCTCTACACAAAACCTCGGATCCGGGAGGACGTGATGCACTTTGATATCGACCCAAAGTACCG TGCTGCCTAAACAGTCTGTTCAAGCCGACGCTGCTTCGTGGCAGCAACTGCGTGCAATACGCTACGCTAGCAGCGGTGCGG GCACTACCGCAGCGCGGCTTAACCTCAAGTG
<i>aacC4</i>	TTAGGTGGCTCAGTATGGGCATCATTGCGACATGTAGGCTCGGCCCTGACCAAGTCCAATCCATGCGGGCTGCTCTTGAT CTTTTCGGTCGTGAGTTCGGAGACGTAGCCACCTACTCCCAACATCAGCCGGACTCCGATTACCTCGGGAACTTGCTCCGT AGTAGGACATTTCATCGCGCTTGCTGCTTCGAGCAAGAAGCGGTTGTTGGCGCTCTCGCGGCTTAGCTTGCCCAAAGTT GAGCAGGCGCGTAGTGAGATCTATATCTATGATCTCGCAGTCTCCGGCGAGCACCCGCCGCGAGGGCATTGCCACC CGCT CATCAATCTCCTCAAGCATGAGGCCAACGCGCTTGGTGCTTACGTGATCTACGTGCAAGCGGATTACGGTGACGATCCCG CAGTGGCTCTCTATAACAAAGTTGGGCATACGGGAAGACGTGATGCACTTTGATATCGACCCAAAGTACCGCCACCTAAACA TTCGTTCAAGCCGAGATCGCTTCGCGGCCGCGGAGTTGTTGCGTAAATTTGCAAAACGCCCGCGGCCGCAAAAGCGTCCGG CTTAACCTCAGGCG
<i>aacC5</i> <i>AAC(3)-Id</i>	TTAGGCATCAGGAGCAGACGAGTGTCAGTCGAAATCATCCATCTCACTGGAACGATGTTGCGTTGTGTCAGTCAATAAA TGCCATGTTTCGGCGAGGCAATTCAACGACCAAGATAGTTATGCCCGCAACAAGCCGTCATCAAGCTATCTTCAAAAACCTGC TTAGCACTCTAGTTTATTGCGTTGGCTGCGGTTGACGAGCAAAAAGTCATTGGCGCTATCGCGCGGTATGAGTTGCAAA AATTCGAGCAGCAAGAAGCGAGATTATATCTACGATCTCGTGTAGCGGCAACCCGCGCAGAGAAGGCATAGCTAC AGCTCTAATTAAAAACTCAAGGCTATAGGGCGAGCGCGTGGAGCTTATGTGATTACGTCCAAGTGATAAAGGCGTAG AAGACCAACCAGCCATAGAGCTCTATAAAAAACTAGGAACCATCGAAGACGTATTTCATTTCGACATTGCGGTTGAGCAG AGTAAAAATCATGCTTAAACAGGCACTCCAGCCGACGCTTGCCTTCGCTGCGCTACGGCAAAATCCGCGCTGAGTTTG GGCG
<i>aacC6</i> <i>AAC(3)-If</i>	TTAGGTGGCTCAATGAGCATCACTGCTACCATCAGGATTGGTCTGATGAGATTCCGGCCATGCGGGCTGTGCTCGACCTG TTCGGCAGAGAGTTTGAGGACATGTCGGCTACTCGGATCGCCAGCCGACAAATGATTACTTGGCCAAAGCTTTCGGCAG CGAGACGTTTCATCGCGCTAGCCGCAATTGACCAAGGAACAGCAATAGGTGGGCTCGCTGCTACGTTTGTGCCAAAGTTTCG AGCAAGCGCGTAGTGAGATCTACATTATGACTTAGCAGTCGCATCCAGCTATCGACGGCAAGGAATCGCAACTTCCCTG ATTAGCCACTGAAGCGTGAGGCAATCAAGATTGGGGCATATGTGATCTATGTGCAAGCAGACTACGGGAGACGACCCG CGGTGGCTCTCTACACCAAGCTTGGTGTTTCGGGAAGAGATGTCATGCACTTTGACATTGATCCAGGAACCCGCACTAAACA TTCGTTCAAGCCGAACCTGCTTCGTTACACCAGCGCCGTGGCAGGTTAAGCTTGCCACGTCGCCGCTACACTTCGCAAGT CGGCTTAACCTCAGGCG
<i>aacC11</i>	TTAGGTGGCTCAGTATGGGCATCATTGCGACATGTAGGCTCGGTCCGGACCAAGTGCAATCCATGCGGGCTGCTCTTGAT CTCTTCGGTCGTGAGTTCGGAGACGTAGCCAGCTACTCCCAACATCAGCCGGACTCCGATTACCTCGCGAAATTTGCTCCAC AGCAGGACATTTCATCGCGCTTGCCGCTTTCGACCAAGAAATCGGTTGTTGGCGCTCTTGCCGCTACGTTTGTGCCAAAGTT GAGCAAGCAGTAGCGAGATCTACATCTATGATCTCGCAGTCTCCGGCGAGCACCCGGCGCAAGGCATAGCCACC CGCG TCATCAATCTCCTCAAGCAAGAGGCCAATGCGCTTGGTGCTTACGTGATCTATGTGCAAGCTGACTACGGTGACGATTC CGAGTGGCCCTCTACACAAAGTTGGGCATACGGGAAGACGTATGCACTTTGATATCGACCCAAAGTACCGCCACCTAAACA ATTCGTTCAAGCCGAACCTGCTTCGTGGCCCGGCTAATGTGCTAGCGTGTAGCACAAAGCCGTGCCACTACGAGGTCCG CTTAACCTCAGGCG
<i>aacC13</i>	TTAGGCATTAGGAGCCGATGAATGTCAGTCAAGATTATTCAACTCACTGAAAAAGATGTTGGCTTAATGCAGTCTATAAA TGCCATGTTTCGGTGAGGCAATTCGATGATAAAGAGCATTATCCAGCAACAAGCCGACCTCAAGCTATCTTAAAAAACTGC TTGCAAGTCAAGTTTATTGCGTTGGCTGCGGTTACGAGGAAAAAAGTCATAGGCGCTATAGCTCGGTATGGTTGCA AAATTTGAGCAGCAAGAAGCGAAATCTACATCTACGACCTCGCTGTAGCGGCAACCCACCGCAGAGCAGGCGTAGCTA CAGCACTAATTCACAAATTAAGGCGATAGGCGCGGAGCGCGGCGCTTATGTCATATACGTCCAAGCGCATAAAGGCGTGA GAAGACCAACCGCCATAGAGCTTTATAAAAACTGGGAACCATCGAAGACGTATTCCACTTCGATATTGCAATTGAGGGA TAATAAAAAATGCCTAAACAGGCGTTGACCCGAAAAAATTTGCCTTCGCTTCGCTACGGCAATTTTCAGGTGAACTTGGG CG
<i>aadA1</i> <i>ANT(3')-1</i>	TTAAACATCATGAGGGAAGCGGTGATCGCCGAAGTATCGACTCAACTATCAGAGGTAGTTGGCGTCATCGAGCGCCATCT CGAACCCGACGTTGCTGGCCGTACATTTGTACGGCTCCGAGTGGATGGCGGCTGAAGCCACACAGTGATATTGATTTGCT GGTTACGGTGACCGTAAGGCTTGATGAAACAACCGCGCGAGCTTTGATCAACGACCTTTTGAAACTTTCGGCTTCCCT GGAGAGAGCGAGATTCTCCGCGCTGTAGAAGTCAACATTGTTGTGACAGCAGACATCAITCCGTGGCGTTATCCAGCTAA CGCGCAACTGCAATTTGGAGAATGGCAGCGCAATGACATTCTTGCAAGTATCTTCGAGCCAGCCACGATCGACATTGATC TGGCTATCTTGCTGACAAAAGCAAGAGCAATAGCGTTGCTTGGTAGGTCCAGCGCGGAGGAACTTTTGATCCGGTT CCTGAACAGGATCTATTGAGGCGCTAAATGAAACCTTAACGCTATGGAACCTCGCCGCCGACTGGGCTGGCGATGAGCG AAATGTAGTGCTTACGTTGTCCCGCAATTTGGTACAGCGCAGTAACCGGCAAAATCGCGCCGAAGGATGTCGCTCGCGACT GGGCAATGGAGCGCTTCGCGGCCAGTATCAGCCGCTACTATCTGAAGCTAGACAGGCTTATCTGGACCAAGAAGAAGAT CGCTTGGCTTCGCGCGCAGATCAGTTGGAAGAATTTGTCCACTACGTGAAAGGCGAGATCACCAGGTAGTCGGCAATA ATGTCTAACCAATTGTTCAAGCCGACGCGCTTCGCGGCCGCGGCTTAACCTCAAGCG
<i>aadA2</i>	TTAGACATCATGAGGTGAGCGGTGACCATCGAAATTTGCAACCAACTATCAGAGGTGCTAAGCGTCAATTGAGCGCCATCT GGAATCAACGTTGCTGGCCGTGCATTTGTACGGCTCCGAGTGGATGGCGGCTGAAGCCATACAGCGGATATTGATTTGT TGGTTACTGTGGCGTAAAGCTTGATGAAACGACCGCGGAGCATTGCTCAATGACCTTATGAGGCTTCGGCTTCCCTG GCGAGAGCGAGACGCTCCGCGCTATAGAAGTACCCCTTGTGCTGATGACGACATCATCCGTGGCGTTATCCGCTAAG CGCGAGCTGCAATTTGGAGAAATGGCAGCGCAATGACATTCTTGCGGGTATCTTCGAGCCAGCCATGATCGACATTGATCT AGCTATCCGTGCTTACAAAAGCAAGAGAATAGCGCTTGGCTTGGTAGGTCCGGCAGCGGAGGAATTTCTTGACCCGGTT CTGAACAGGATCTATTGAGGCGCTGAGGGAAACCTTGAAGCTATGGAACCTCGCAGCCGACTGGGCGGCGATGAGCG AAATGTAGTGCTTACGTTGTCCCGCAATTTGGTACAGCGCAATAACCGGCAAAATCGCGCCGAAGGATGCTGCGGACT GGGCAATAAAACGCTACCTGCCAGTATCAGCCGCTTACTTGAAGCTAAGCAAGCTTATCTGGGACAAAAAGAAGAT

	CACTTGGCCCTCACGCGCAGATCACTTGGGAAGAATTTATTCGCTTTGTGAAAGGCGAGATCATCAAGTCAGTTGGTAAATG ATGTCATAACAATTGTTCAAGCCGACCGCGTACGCGCGCGCGGCTTAACCTCCGGCG
<u><i>aadA4</i></u>	TTAGGCATCTTTCATGGGTGAATTTCTTCTGCACAAATTTCCGAGCAGCTATCCCACGCTCGCGGGGTGATCGAGCGCCAT CTAGCTGCAACGCTGGACACAATCCACCTGTTCCGGATCTGCGCTCGATGGAGGGTTGAAGCCGGACAGCAACATCGACTT GCTCTGTGACCGTCAAGCCCGCACCTAACGATTCTGCTCCGGCAGGCACCTAATGCTCGACCTGCAAAAAGTCTCATCCCGC CAGGCAATGCGCGACCATGCGCAGCCGCTGGAGGTGACTGTTGTCGCTCGAAGCGAAGTAGTGCCCTGGCGCTATCCGGC GCGACGTGGGCTTCAGTTCGGTGAGTGGCTCCGCCACGACATCCTCTCCGGAACGTTTCGAGCCTGCCGTTCTGGATCACG ATCTTGGGATTTTGTGACCAAGGCGAGGCAACACAGCCTTGCACTGCTAGGTCCATCCGACGTACAGTTCTTCGAGCCG GTGCCGAACGAGCATTTCCTCAAGGCGCTTTTCGACACGATTGCCAGTGGAATTCAGAGTCGGATTGGAAGGGGTGACGA GCGGAACGTGCTTCTTGCTCTTGCTCGCAATTTGGTACAGTGCTTCAACGGGTCTCATTGCTCCTAAGGACGTTGCTGCCGC ATGGGTATCGGAGCGTTTGCCTGCCGAGCATCGGCCCATCATTTGCAAGGCACGCGCGCGTACCTGGGTAGCGAGGACG ACGACCTAGCAATGCGCGTCAAGAGACGGCTGCGTTGCTGATATGCCAAAGCAACGATTGAGAGAAATCTTGGCTTGA GCACGAGTGCAGAAAGTGCATCGACCGCGCCAGGCACCTTGATGCCTAACTCCGCGTTGAAAGTGAGGGCTGCGCCGCC GCTCAACTATGCG
<u><i>aadA5</i></u>	TTAGGCATCATGGGTGAATTTTCCCTGCACAAGTTTCAAGCAGCTGTCCACGCTCGCGCGGTGATCGAGCGCCATCTG GCTGCGACACTGGACACAATCCACCTGTTCCGGATCTGCGATCGATGGAGGGCTGAAGCCGGACAGCGACATAGACTTGCT CGTGACCGTCAAGCGCCGACCTAACGATTCTGCTCCGGCAGGCGCTAATGCTCGATTGCTGAAAGTCTCATCACCGCCAG CGGATGGCGGAACATGGCGAGCGCTGGAGCTAATGTTGTGCTCGTCAAGCGAAGTAGTGCTTCCGCGCTATCCGGCGCGG CGTGAGCTTCAGTTCGGTGAGTGGCTCCGCCACGACATCCTTTCCGGAACGTTTCGAGCCTGCCGTTCTGGATCACGATCTT GCGATTTTGTGACCAAGGCGAGGCAACACAGCCTTGCGCTTCTAGGCCCATCCGACGACCGTTTTCGAGCCGGTGGC GAAGGAGCATTTCTCAAGGCGCTTTTCGACACTATTGCCAGTGGAATGCAGAGTCGGATTGGAAGGGGTGACGAGCGGA ACGTGCTTCTTGCTCTTGCTCGCAATTTGGTACAGCGCTTCAACTGGTCTCATTGCTCCTAAGGACGTTGCTGCCGATGGGT ATCGGAGCGTTTGCCTGCCGAGCATCGGCCCTCATCTGCAAGGCACGCGCGCGTACCTGGGTAGCGAGGACGACGACC TAGCAATGCGCGTCAAGAGACGGCCGCGTTCGTTCGATATGCCAAAGCAACGATTGAGAGAAATCTTGGCTTGGCGCA TGTGCGAAAAGTGCATCGACCGCGCCGAGGGCATCTGATGCCTAACTCGCGGTTCAAGCGGACGGGTGCGCCGCCCGC TCAACTATGCG
<u><i>aadA6</i></u>	TTAGACATCATGAGTAACGCAGTACCCGCGGAGATTTCCGGTACAGCTATCACTGGCTCTCAACGCCATCGAGCGTCATCT GGAATCAACGTTGCTGGCCGTGCATTTGTACGGCTCTGCAGTGGAGCGTGGCCTGAAGCCATACAGTGATATTGATTGTCT GGTTACTGTGGCTGCACGGCTCGATGAGACTGTCCGCAAGCCCTGGTCTGATCTCTTGAAATTTCTGCTCCCTCGG CCAAAGTGAAGCTCTCCGCGCTTGGAAGTTACCATCGTCGTGATGGTGTGTTGCTCCTTGGCGTTATCCGGCCAGACG GGAACGTGCAATTCGGGGAGTGGCAGCGTAAGGACATCTTTCGGGCGATCTTCGAGCCCGCCACAACCGATGTTGATCTGG CTATTCTGCTAACTAAAGTAAGGACGATAGCTTTGCAATTTGGCAGGTTTCGGCCCGCAGAGGATTTCTTAAACCAGTTCCGG AAGGCGATCTATTCAAGGCATTGAGCGACACTCTGAAACTATGGAATTCGCAAGCCGGATTGGGAAGGCGATGAGCGGAA TGATGTTGCTTACCTTGTCTCGCATTTGGTACAGCGCAGCAACCGGCAAGATCGCACCGAAGGATCGTTGCCAACTGGG CAATGGAGCGTCTGCCAGATCAACATAAGCCCGTACTGCTTGAAGCCCGGCGAGGCTTATCTTGGACAAGGAGAAGATTGC TTGGCCTCACGCGCGGATCAGTTGGCGCGGCTCGTTTCACTTCGTGAAACATGAAGCCACTAAATGCTTAGTGCCATGCCA GTGATGTCTAACCAATTCAATTCAGCCGACGCGGCTTCGCGGCGCGGCTTAATTCAGGCG
<u><i>aadA7</i></u>	TTAGACATCATGAGTGAAGAAAGTGCCCGCGGAGATTTCCGGTGCAACTATCACAGCACTCAACGTCATCGGGCGCCACTT GGAGTCGACGTTGCTGGCCGTGCATTTGTACGGCTCCGCACTGGATGGCGGATTGAAACCGTACAGTGATATTGATTGTCT GGTGACTGATGCTGCACCGCTCAATGATGCGCGTGGCGCAAGCCCTGCTCGTCGATCTCTTGGAGGTTTCAGCTTCCCTGG CCAAAACAAGGCATCCGCGCCTTGGAAGTGACCATCGTCGTGCACAGTGACATCGTACCTTGGCGTTATCCGGCCAGGC GGGAACGTGAGTTCCGAGAGTGGCAGCGCAAGACATCCTTGGCGGCACTCTTCGAGCCCGCCACAACCGATTCTGACTTGT GCGATTTCTGCTAACAAAGGCAAGCAACATAGCGTCTGCTTGGCAGGTTACAGCAGCGAAGGATCTCTTCAGCTCAGTCCC AGAAAGCGATCTATTCAAGGCACTGGCCGATCTCTGAAGCTATGGAACCTCGCCCGCAGATTGGGCGGGCGATGAGCGG AATGTAGTGCTTACTTTGCTCGTATCTGGTACCCGCAAGCAACCGGCAAGATCGCGCCAAAGGATGTTGCTGCCACTTGG GCAATGGCACGCTTGCCAGCTCAACATCAGCCCATCTGTTGAATGCCAAGCGGGCTTATCTTGGGCAAGAGAAGATTA TTTGGCCGCTCGTGCGGATCAGGTGGCGGGCGCTATTAATTCGTGAAGTATGAAGCAGTTAAACTGCTTGGTGCCAGCC AATGATGTCTAACCAATTCAATTCAGCCGACGCGGCTTCGCGGCGCGGCTTAATTCAGGCG
<u><i>aadA9</i></u>	TTAGACATGATGAGCAACTCTATACACACCGGAATCTCAAGACAGCTTTCACAGGCACGCGATGTAATTAACGCCATTT GGCATCAACGCTGAAAGCCATACACTTGTATGGTTTGCATTTGATGGTGGCCTCAAACCATATAGGCATTTGATCTGCT GGTTACCGTGATGACGCTTGGATGAAGCTACCAGACGCTCCCTGATGCTCGATTCTTGAATATCTCGGACACCCATG CGAAAGCTCAATACTCCGGCGCTAGAGGTAACCTGTTGTGATGCAACGAAGTAGTGCTTGGCGTTATCCGGCACGACG GAGAACTGCAAGTTCCGGGAGTGGCTGCGGAGGATTAATCTTGAAGGTGCTTTCGAGCCAGCCGCTTGGACCGCCAGCTT GCAATTTCTAATAACGAAAGCTAGGCAACACAGCATCGCTTTAGTAGGTCAGTGCTCAAAAAGTCTTCATGCCGGTGCC AGAGCATGACTTTCTCCAGGTGCTTTCCGATACCTTAAAGCTGTGGAATACTCATGAGGATTGGGAAAAATGAGGAGCGGA ACATCTGACTACGTTAGCTCGGATCTGGTATAGCACTGAAACTGGAAGGAATCGTCCCAAGGATGTTGGCCGCAAGTGG GTTTGTAGAGCGCTTGCAGCTGAGCATAAAGCAATACTGGTTGAGGCGCGGCAAGCCTATCTTGGGCTTTGCAAGGATAG TCTTGGCTTGGCTGAGATGAGACTTCGGCGTTCATTGGCTATGCAAAAGTCTGCGGTCGCTGATTGCTCGAAAGCGAAA ATCTCAAACTTCGCATATTGCGATGGCGCCAAGAACGCTAACTGCTAACTATTATTAAGCCGAAGCCGCTTCGCGCG TCGGCTTAATTCAGGCG
<u><i>aadA10</i></u>	TTAGACATCATGATAAACACAGTGGCCGCGGAGATTTCCGGTACAGTTATCACAGGCACCTCAACGTCATCGAGCATCATCT GGGATCGACGTTGCTGGCCATGCAATTTGATGGCTCTGCAGTGCAGGCTGGCCTGAAGCCATACAGTGATATTGATTGCT GGTTACTGTGACCGCACGGCTCGATGAGAGTGTGCGGCAAGCTCTGTTCTGTCGATCTCTTGGGGGTTTCCGTTTTCCTTGG TCAAAGCAGAGTTCTCCGCGCTTGGAAGTTACCATTTGCTGTCACAGTGACATCGTTTCTTGGCGCTATCCGGACAGACG GGAACCTGCAATTCGGGGAGTGGCAGCGCAAAAGACATTTCTGCGGGCATCTTCGAGCCTGCGACAAACCGATTGATCTAG CCATTCTGCTAACAAAAGCAAGGCAACATAGCCTTGCCCTTGGCCGGTTGCGCTGGGGAAGATTCTTCAACCCAGTCCCG GAAAGCGATCTATTCAAGGCAGTGGCCGACACCTGAAACTATGGAACCTCACAGCCGATTTGGATAGGTGACGAGCGGA ATGTAGTGCTTACTTTGTCTCGTATTGTTACAGCGCAGCAACCGGCAAGATCGCGCCGAAGGATGTTGCCGCCAACTGG GTAATGGAGCGTTTGCCAGTTCAACATCAGCCGCTGCTGTTGAAGCCCGCAGGCTTATCTTGGACAAGGAGAAGATTG CTTGGCTTCGCTCACGGATCAGTTAGAGCGTTTGTTCACCTTCGTGAAGCATGAAGCCACTAAACTGCTTGGTGCCACGCC AATGATGTCTAACCAATTCAATTCAGCCGACGCGGCTTCGCGGCGCGGCTTAATTCAGGCG
<u><i>aadA11</i></u>	TTAGACATCATGAGGGAAGCGGTGACCCGCGAAATTTCAACACAACATATCAGAGGTTGTTTAGCGTCATCGAGCGCCATCT GGAGCCGACGTTGCTTCCCGTGCATTTGTACGGCTCCGCACTGGATGGCGGCTTGAAGCCATACAGCGATATTGATTGTCT GGTTACTGTGACCGCAAGGCTTAATGAAGCAACACGCAAGCTTTGCTCAACGACCTTTTGGAGGCTTCGCTTTCCCTGG CGAGAGCGAGACTCTCCGCGCTATAGAAGTCACCTTTGCTGTCGACGACGATCATCCGCTGGCGTTATCCAGCTAAGC GCGAATCTGCAATTTGGAGAATGGCAGCGTAATGACATTTCTTGGGGTATCTCCGAGCCAGCCGCGATCGACGTTGATCTG GCTATCTTGTGACAAAAGCAAGAGAACATAGCGTTGCTTGGTAGGTCAGCTGCGGAGGAACCTTTGATCCCGTTCC TGAACAGGATCTATTTCGAGGCACTGAATGAACTTGAAGCTATGGAACCTCGCAGCCCGACTGGGCCGGCGATGAGCGA AATGTAGTGCTACGTTTGTCCGCAATTTGTTACCCGAAGTAACCGGAAAAATCGTGCCGAAGGATGTCGCTGCGGCACTG GGCAATGGAGCGCTACCTGCCAGCATCAGCCGCTTCTTGAAGCTAGACAGGCTTATCTTGGACAAGGAGAAGATGCT GCTTGGCCTCGCGCGCAGATCAGTTGGAAGAATTTGTTCACCTTCGTGAAAGGCGAGATCACTAAGGTAGTCGGCAAAATGA TGTCTAACAAATTCGTTCAAGCCGATTCCGCTTCGCGGACGCGCTTAACCTAGGCG
<u><i>aadA13</i></u>	TTAGACATCATGAGGGAAGCGGTGACCCGCGAAATTTCAACACAACATATCAGAGGTTGTTTAGCGTCATCGAGCGCCATCT GGAACCGACGTTGCTTCCCGTACATTTGTACGGCTCCGCACTGGATGGCGGCTTGAAGCCATACAGTGATATTGATTGTCT GGTTACTGTGACCGCAAGGCTTATAGAAGTCACCTTTGCTGTCGACGACGATCATCCGCTGGCGTTATCCAGCTAAGC GCGAATCTGCAATTTGGAGAATGGCAGCGTAATGACATTTCTTGGGGTATCTCCGAGCCAGCCGCGATCGACGTTGATCTG GCTATCTTGTGACAAAAGCAAGAGAACATAGCGTTGCTTGGTAGGTCAGCTGCGGAGGAACCTTTGATCCCGTTCC TGAACAGGATCTATTTCGAGGCACTGAATGAACTTGAAGCTATGGAACCTCGCAGCCCGACTGGGCCGGCGATGAGCGA AATGTAGTGCTACGTTTGTCCGCAATTTGTTACCCGAAGTAACCGGAAAAATCGTGCCGAAGGATGTCGCTGCGGCACTG GGCAATGGAGCGCTACCTGCCAGCATCAGCCGCTTCTTGAAGCTAGACAGGCTTATCTTGGACAAGGAGAAGATGCT GCTTGGCCTCGCGCGCAGATCAGTTGGAAGAATTTGTTCACCTTCGTGAAAGGCGAGATCACTAAGGTAGTCGGCAAAATGA TGTCTAACAAATTCGTTCAAGCCGATTCCGCTTCGCGGACGCGCTTAACCTAGGCG

	CGGAAGTGAATTTGGAGAATGGCAGCGCAATGACATTTCTTGGGGTATCTTCGAGCCAGCCACGATCGACATCGATCTG GCTATCTTGCTAACGAAAGCGAGAGAACATAGCGTGGCTTTGGTAGGTCGGCGCGCGGAGGAACCTTTTGATCCAGTTCC TGAACAAGATCTAATCAAGGCGCTGAATGAAACCTTGAAGCTATGGAACTCGCGAGCCGACTGGGCCGCGGATGAGCGA AATGTAGTGCTTACGTTGTCCCGCATTGTGTACAGCGCAGCAACTGGTAAAATCGCGCCGAAGGATGTCGCTGCCAACTG GGCAATTGGAACTCTACCTGCCAGCATCAGCTGTCTTGTCTGAAAGCTAGACAGGCTTATCTTGGGCAAGGGAAGATC GCTCGGTCTTGCAGCGCAGATAAGTTGGAAGAATTATTCACCTTCATGAAAAGCGAGATACCAAGGTGCTCGGCAATGAT GTCTAACAAATGCGTTCAAGCCGATGCCGCTTCGCGGCACGACTTAACCTCGGCG
<u><i>aadA16</i></u>	TTAGACATCATGAGCAACGCAAGTGGCCGCGAGATTTCCGTTACAGCTATCACAGGCACTCAACGTCATCGAGCATCATCT GGGATCGACGTTGCTGGCCGTGCATTTGTACGGCTCTGCACCTCGACGGTGGCCTGAAGCCATGCAGTGATATTGATTGTCT GGTTACTGTGACTGCACAGCTCGATGAGACTGTGCGGCAGGCTCTGTTCTGATAGATTTCCTGGAAAGTTCCGCTTCTCCCGG CCAAAGTGAAGCTCTCCGTGCCTTGGAAAGTTACCATCGTCGTGTACGGCGATGTTGTCTTCTTGGCGTTATCCAGCCAGACG GGAACTGCAATTCGGGGAGTGGCAGCGCAAGGACATTTCTTGGCGGCATCTTCGAGCCCGCGGACAACCGATGTTGATCTGG CTATTCTGCTAACTAAAGCAAGGCAACACAGCCTTGCCCTTGGCAGGTTTCGGCCCGCGGAAGATTCTTCAACTCAGTCCCG GAAAGCGATCTATTCAAAGCACTGGCCGACACCTTGAAACTATGGAACTCACAACCGGATTGGGCGAGCGCAGCAGCGGA ATGTAGTGCTTACTTTGTCTGCAATTTGGTACAGCGCAGCAACCGCAAGATCGCGCCGAAGGATGTAGCTGCCAACTGG GTAATTGGAACGCGCTGGCCGTCCAACATCAGCCCGTGCTGCTTGAAGCCAGCAGGCTTACCTTGGACAAGGAGGATGATTG CTTGGCCTCAGCGCTGATCAGTTGATGCTGCTTCACTTTACTTTGTGAAGCAGCAAGCCGCGCAGCTGCTCGGCTCCACGCC AATGATGTCTAACAGTTTCAATCAAGCCGACGCGCTTCGCGCGCGAGCTTAATTCAAGCG
<u><i>aadA24</i></u>	TTAGACATCATGAGGACGCAAGTGCAGCGAAATTTGCACACAACCTGTTAGAGGTGCTTAGTGTCTATTGAGCGCCATCT GGAGCCGACGTTGCTGGCCGTGCATTTGTACGGCTCCGCAAGTGAATGGCGGCTGAAGCCATACAGCGATATTGATTGTG TGGTTACTGTGACTGAAGGCTTAATGAAACAACGCGCGAGCTTTGCTCAACGACCTTCTCGAGGTTTCTCCCG GCGAGAGTGAAGGCTCTCCGCGCTATAGAAGTCACCATTTGTCGTGCACGACGACATCATTCCGTGGCGTTATCCAGCTAAG CGAAGACTGCAATTTGGAGAATGGCAGCGCAATGACATTTCTTGGGGTATCTTCGAGCCAGCCAGCATGACATGTATCT GGCTATCTTGTGACAAAAGCAAGAGAACATAGCGTTGCCCTTGGTAGGTCCAGCGCGGAGGAAGCTTTTGATCCGGTCC CTGAACAGGATCTATTGAGGCACTAAATGAAACCTTGAAGCTATGGAACTCGACGCCGACTGGGCTGGCGATGAGCG AAATGTAGTGCTTACGTTGTCTGATTTTGGTACAGCGCAGTAACGGCAAAATCGCGCCGAAGGATGTCTGCTGCCACTG GGGCAATGGAGCGCTACCGGCCAGTATCAGCCGCTTGTCTTGAAGCTAGACAGGCTTATCTTGGACAAGAAGAAGAT CGCTTGGCCTTGCACGCTGATCAGTTGGAAGAATTTGTTCACTACGTGAAAGGCGAGAGCACCAGGTAGTCGGCAAAATG ATGTCTAACAAATTCGTTCAAGCCGACGCGCTTCGCGCGCGGCTTAACCTCAGCG
<u><i>aadA28</i></u>	TTAGACATCATGAGGACTCAGTGACCGCGCAAAATTTGCAGCACAACCTTCAAGGTGCTTAGTGTATTCGAGCACCATCT GGAACCGACGTTGCTTGCCGTACATTTGTACGGCTCCGCAAGTGGATGGCGGCTGAAGCCATACAGTGATATTGATTGTCT GGTTACTGTGACCGCAAGGCTTGATGACACAACGCGCGAGCTTTGTCAACGATCTTTGGAGGTTTCCGCTTCTCCAGG CGAGAGTGAGATTCTCCGCGCTATAGAAGTCACCATTTGTCGTGCACGAAAGACATTAAGCGTGGCGTTATCCAGCACAAG CGCAACTGCAATTTGGAGAATGGCAGCGCAATGACATTTCTTGGGGTATCTCCGAGCCAGCCATGATCGACGTTGATCTG GCTATCTTGTGACAAAAGCAAGAGAACATAGCGTTGCCCTTGGTAGGTCCAGCTGCGGAGGAACCTTTTGATCCCGTTC TGAACAGGATCTATTGAGGCACTGAATGAAACCTTGAAGCTATGGAACTCGACGCCGACTGGGCGCGGATGAGCGA AATGTAGTGCTTACGTTGTCCCGCATTTGGTACAGCGCAATAACCGGCAAAATCGCGCCGAAGGATGTCTGCTGCCACTG GGCAATAAAACGCTTACCTGCCAGTATCAGCCGCTTACTTGAAGCTAAGCAAGCTTATCTGGGACAAAAGAAGATC ACTTGGCCTCAGCGCAGATCACTTGGAGAATTTATTCGCTTTGTGAAGGCGAGATCAAGTCAAGTGTGTAATGTA TGTTCTAACAAATTCGTTCAAGCCGACGCGCTACGCGCGCGGCTTAACCTCCGCG
<u><i>aadA29</i></u>	TTAGACATCATGAGTAAACGCAAGTACCCGCGGAGATTTCACTACAGCTATCACAGGCACTCAACGTCATCAAGCGTCACT GGAATCAACGTTGCTGGCCGTGCATTTGTACGGCTCCGCACTGGACGCGCGGCTGAAGCCATACAGTGATATTGATTGCT TGGTTACTGTGGACACACGGCTCGATGAGACCGTAAGGCAAGCTCTGTTCTGTCGATCTGTGGAGATTTCGGCTTTCCTTG GCCAAAGCAAAGTGCTCCGCGCTTGGAAAGTCACCATCTGTCGTGTACAGCGACGTCGTCCTTGGCGTTATCCGGCCAGA CGGAACTACAGTTCCGAGAGTGGCAGCGCAAGACATTTTGGGGTATCTTCGAGTCCGCCACAATGATGTGATCTGCT GGCGATCCTACTAACAAAGCAAGGCAACATAACATCGCATTTGGTGGGTTCCGCTCGCGAGGATTCTTCAACCCAGTTC CGGAAAGCGATCTATTCAAGGCACTGGCCGCGCACCCTGAAACTATGGAACCTCGCAGCCGATTTGGGAAGGTGACAGCG TAATGTAGTGCTTACTTTGTCTGATTTTGGTACAGCGCAGCAACTGGTAAGATCGCGTCCAAAGGATGTGCTTCTAAGCT GGCAATTGGAGCGCTGCGCAGCTCAACATCAGCTTGTGCTATTTGAAGCCCGCGAGGCTTATCTTGGAGATGGAGGAGATT GCTTGGCTTCGCGCGCAGATCAGTTGACGGCTTCTGTTCACTTTGTGAAGTATGAAGCGCGCAGACTCCTTGGCTCCACAC CAATGATGTCTAACAGTACATTTCAAGCCGACGCGCTTCGCGCGCGGCTTAATTCAAGCG
<u><i>aadA34</i></u>	TTAGACATCATGAGTAAACGCAAGTACCCGCGGAGATTTCCGTTACAGCTATCACTGGCTCTCAACGCCATCGAGCGTCACT GGAATCAACGTTGCTGGCCGTGCATTTGTACGGCTCTGCACCTGGACGCGTGGCCTGAAGCCATACAGTGATATTGATTGCT GGTTACTGTGGCTGCACGGCTCGATGAGACTGTCCGACAAGCCTTGGTCGTAGATCTCTTGGAAATTTCTGCCTCCCTGG CCAAAGTGAAGCTCTCCGCGCTTGGAAAGTTACCATCGTCGTGATGGTGTGTTGCTTGGCGTTATCCGGCCAGACG GGAACTGCAATTTGGAGAATGGCAGCGCAATGACATTTCTGCAAGTATCTTCGAGCCAGCCAGCATGACATTTGATCTGG CTATCTTGTGACAAAAGCAAGAGAACATAGCGTTGCCCTTGGTAGGTCCAGCGCGGAGGAAGACTCTTGTATCCGTTCTCT GAACAGGATCTATTGAGGCGCTAAATGAAACCTTAACGCTATGGAACTCGCGCCGCGACTGGCTGGCATGAGCGAA ATGTAGTGCTTACGTTGTCCCGCATTTGGTACAGCGCAGTAACCGGCAAAATCGCGCCGAAGGATGTCTGCTGCCGACTGG GCAATTGGAGCGCTGCCGCGCCAGTATCAGCCGCTCACTTGAAGCTAGACAGGCTTATCTTGGACAAGAAGAAGATCG CTTGGCTCCCGCGCAGATCAGTTGGAAGAATTTGTTCACTACGTGAAAGGCGAGATCACAAGGTAGTCGGCAATAAT GTCTAACAAATTCGTTCAAGCCGACGCGCTTCGCGCGCGGCTTAACCTCAAGCG
<u><i>aadB</i></u> <u><i>ANT(2'')-Ia</i></u>	TTAGGCCGATGGACACAACGCGAGTTCACATTGATACAAAAATTTAGTCTGCGGCAGATGAGCGAAATCTGCCGCTCTG GATCGGTGGGGCTGGGCGATCGATGCACGGCTAGGGCGGTGAACACGCAAGCACGATGATATTGATCTGACGTTTCCCG GCGAGAGGCGCGGCGAGCTCGAGGCAATAGTTGAAATGCTCGCGCGGCGCGTCAATGGAGGATTTGGAATCTGGAATCTT AGCGGAGATCGGGGATGAGTTACTTGAATGCGCAACCTGCTTGGTGGGAGACGCAAGCGTATGAAATCGCGGAGGCTCCG CAGGGCTCGTGCCAGAGCGGCTGAGGGCGTATCGCCGGCGCGCCAGTCCGTTGTAAACAGCTGGGAGGCGATCATCT GGGATTACTTTTACTATGCCGATGAAGTACCACAGTGGACTGGCCTACAAAGCACATAGAGTCTACAGGCTCGCATGCG ACCTCACTCGGGGCGGAAAAGGTTGAGGTTTGCCTGCGGCTTTCAGGTTCGCGATATGCGGCCATAACAATTCGTTCAAGC CGACGCGCTTCGCGCGCGGCTTAACCTCAGGTG
<u><i>aphA15</i></u> <u><i>APH(3')-XV</i></u>	TTAGACCGCTATGACAGTCCGCCCTCGACGAAGTATCTGAACTAAAGAAATTTGCTTTCACCTTGTGGATGAATGCACTTT TGAAGAAGTTGAGTATGGTCACTGAGATGCTGAGTTCAGTTCGATTTCTATTCTGATCGCAATACCGGCTATCAAAAGTA CGCCTCCGGATCTTCTGCTCAAGAAATTTCTTAAGAGCATCAGCGCACTAGATGGCTCAGAACACAGCTCTCTGATCCGG AAGTATCTCATATGCTCGACTTCAACTGTCACCTGTTGACAAAAGCATTGATTGGCCACATCCGCTGACGCCG CAGATGCAGATCCAGTTATTGTTGTGACAGAGTGGCAGCGGCTTACGCGACCTCCATTGACATCTCGCTGACGATTGCC CATTGACGAAAAGGCTCCACCTGCGACTGAAGCTGGCTTCGGGCCGTTTGAAGCCGGGTTAGTTGATGAGGAGGACTTT GATCAGCAAGGCAAGGATGCTGGCGCGGATGTTTACGAGCAACTTTTATACAAATGCCTGGAGCGGAGCAGCTGGT AGTCACACATGGCGACGCGCTGTCCGAGAACTTCATCTTCAAGGTAATGCCTTCGTCGGCTTCATAGACTGCGGTCGGGT CGGGCTTGGCGATAAGTATCAAGACCTGGCGCTTGCATCGAGAAACATTGACGCGGTTATTGGACAGAACTCACTAACC AGTTCTTCATCAGATATGGAGAGCCAAATCGCAACATAGCTAAGATTGAGTACTACCGGATCTTGGATGAGTTCTTAA GCGCGGTCTAACAAATTCGTTCAAGCCGAGATCGCTTCGCGCGCGCGGAGTTGTTCTGTAATTTGTCAACGCGCGCGCC GCAAAGCGCTCCGGCTTAACCTCAGGCG
<u><i>aphA16</i></u>	TTAGCTTGACGCTCCGCGCAGGAAAGAGAAAATGGATAAACTTCCAAATTTTCATATTTGAAAATATAGTGACTTAAAAA TTGACAGAGATACTGAGGGTTGGTCTCCGGGTGAGGTATATAGTGTACAACCAAGAAAAAGAGGTGGTTTCTAAAAAGA AGTCATACGAGATACAATAAAACTACATATAATTGAAGAAGAGAGAAAAGAAATTTAATGAATGGGCTTATCCAAAGTTA GAGTACCACAAATAATACATTATGAAGAAGCAAAAAGATATAATTCACTTACTAATGAATCAGTTGGCGGCTTAGCCTT

	<u>GAAATGCTTGGTCCATCAATTACTTTAGAGAAATATATCGATTACTATGTACAATCCTTAAAAATTAATGCAGTCCATTAAC ATCGAAAACTGTCCATACAATAAATTGTATAAAGAATAAGAATAATCGAATTAGAATATTTATTAGAGAATGATCTAGCAGA TATTAATTCAAAACTGGGAAGAAGATACGCGTGAGCATTTCAGAAAACGGTAAAGACTTATTTAATTATATAGTAAATA ATAAGCCAAATGAAGACTTAGTTTTCTCACATGGAGATATGACAACTCTAACATATTTATTGAAAACGAAGAAGTTGGA TTTATAGATCTCGGTGATGTGGATTAGCTGATAAGTGGGTTGATATTGCATTTTGTGTTAGAGATATAAGAGAAAATAAGT AATGAAAAATAAATGGATAAAGATGTTATTGTATAAATAGAAAATAGTACCCAAATTGGGATAAAAATGAGATACTACATTTT GTTAGATGAGCTGTTCTAAGAATAAGCTAACACCGCTTCAACCTGGCAACGCTACTGTCACGGTTTATGCTACTCGCTTC GCTCGCTTACGCATAAACCGCGCCAGTTTACGCGTTGCAGGTTAAGCGAATG</u>
<i>sat2</i>	<u>TTAGGCGTCATATGAAGATTTTCGGTGATCCCTGAGCAGGTGGCGGAAACATTGGATGCTGAGAACCATTTTCATTGTTTCGT GAAGTGTTCGATGTGCACCTATCCGACCAAGGCTTTGAACTATCTACCAGAAGTGTGAGCCCTACCGGAAGGATTACAT CTCGGATGATGACTCTGATGAAGACTCTGCTTGCTATGGCGCATTTCATCGACCAAGAGCTTGTGGGGAAGATTGAAGTCA ACTCAACATGGAACGATCTAGCCTCTATCGAACACATTTGTTGTGTCGCACACGCCACCGAGGCAAGGAGTCGCGCACAGT CTCATCGAATTTGCGAAAAAGTGGGCACTAAGCAGACAGCTCCTTGGCATAACGATTAGAGACACAAACGAAACAATGTAC CTGCCCTGCAATTTGTACGCAAAATGTGGCTTTACTCTCGGCGGCATTGACCTGTTACAGTATAAACTAGACCTCAAGTCT CGAACGAAACAGCGATGTAAGTGTACTGGTTCTCGGGAGCACAGGATGACGCCTAACAAATTCATTCAAGCCGACACCGCT TCGCGGCGCGGCTTAATTCAGGAG</u>
<i>arr2</i>	<u>TTATGCGACCAAAATCCCAACAATTAAGGGTCTTAAATGGTAAAAGATTGGATTCCCATCTCTCATGATAATTACAAGCA GGTGCAAGGACCGTTCTATCATGGAACCAAGCCAAATTTGGCGATTGGTGACTTGCTAACCAACAGGTTTCATCTCTCATTT CGAGGACGGTCGTATTCTTAAGCACATCTACTTTTCAGCCTTGATGGAGCCAGCAGTTTGGGAGCTGAAGTTGCTATGTC ACTGTTGCGCTCGAGGGTTCGCGGCTACATATACATAGTTGAGCCAAACAGGACCGTTTGAAGACGATCCGAAATCTTACGA ACAAAAAATTTCCCGTAATCCAAACACAGTCCCTATAGAACCTGCGAACCTTGAAGAATTGTTGGCATTGTTGAAAGACTGG GAGGGGCATCTGTTGAATTAATAAGGGGAATGTTGATTCTGTTAGAGGACTTAAAGCGCCGTGGTTTACACGTCATTGA AGACTAGTCTTTGCTATAACAAAGCCATCAACCGGACGCCAGAGATTCCGCGCTGTTGGCGATGGCTTCGCCATTTTAT GCGCAATAGGCGGCCACCTGTCGCCGTTTATGGCGCG</u>
<i>arr5</i>	<u>TTAGGCAACAAACCAATCTTTTCGCTACATGGAACAAACGATGACGGTAGACTGGATCCCCATTTCGCACGACAACTAC CTCAAGTGGCTGGCCGTTTATACCGGAACAAAGCCGAACCTGCGCAATTGAATTTCAACCGGATTAATTTCT CACTTTGAGCGGGACAGAGCACTAAAGCATGTGTACTTTTCCGCGCTGATGGAGCCAGCAATCTGGGGGGCGGAGCTCGC TGTAGCACTCTCTGGCTCTGACGGGCCAGGCCATATTTACATCATTGAGCCAAACCGGCCGTTTGAAGACGACCCCAATCT CACAACAAACGATTTCCCTGGCAATCCAAACACAGTCCCTATCGCACATGCCACCCACTTAAATTTGTTGGCATTGCTCGGG AGTGGGAGCGCCATTCTCTGAAGCATTGAAGACCATGCTAGATTCTCTGCGAGACCTCAAGCGACGCGGCTTGGCCATC ATTGAAGAATGAATTTGTGCTAACAATTCATTCAAGCCGACGCGCTTTCGCGGCGCGGCTTAATTCAGGCG</u>
<i>arr6</i>	<u>TTAGGCAGCAACCCCAATTTCTCGCCCTTGGAACTTAAGAAATGTCGAGTGACTGGACTCCCATCTCACATGGAATTTGCC AGCAGGTGCGTGGGCCGTTCTATCACGGCACCAAGCCCATCTATCGATTGGCGACTTGATAACAACCTGGGCACTCTCTCC CACTTTGAAGATGGACGCGCTTTAAACACGCTACTTTTCAGCTTTGATGGAGCCTGCCATTTTGGGGGCGGAATCTGCA ATGTGCTGTGTCACGCCTAGATGGCGCTGGCTACATATACATCGTCGAACCAACTGGAGCGTTTGGAGGACGCCGAATCT TACGAACAAAGATTTCTGGAAATCCAAACAAAGTCTATTCGCACGTGCGCTACGAAATTTGCGGGTCAGTCGAAG ACTGGCAAGGGCATCCCGCTGATGTGCTGCAACAGATGTTGGAGTCTTTAGAGGACCTAAAGCGCCGCTGGTCTTGCCATC ATCGAGGATTAGAAGTGTGCTAACAATTCATTCAAGCCGACGCCCCCTTCGGGGCGCGGCTTAATTCAGGCG</u>
<i>arr7</i>	<u>TTAGGCAGCAAAACCACTTCTCTGCTAGACGGAACCAACGAATGCCGAATGACTGGATTCCCACCTCGCACGAAAACTGC TCGCTCGTGGCGGGCGGCTTCTACACGGCACCAAGCAAACTCGCAATAGGTGACTTGCTTTTCGCTTGGAGTGGAGTGGC TCATCTTTGAGCAAGGCGTAGGCTCAAAACACATCTATTTTGGCGCACTGATGGAGCCAGCCATCTGGGGTGTCTGAGCTTG CAATGTCAATTGTACCGCAAGAGGGGCGCGGCTTACATTTACATTTGTAACCGCTTCGGGCGCTTTGAGGACGCCAAAC CTTACAAACAAAAAATTTCCGGGCAATCCAAACCAAGTCTTACCGCACCAGTGAGTCTGACGGATTGTGGAGGTAGTAGA GGACTGGCAAGGCCACTACCGGATGTGCTGCAAGGCGATGTTGGCATCACTGGAGGATCTTCAGCGCTCGCGGCTTCGCAA TCATTGGAGCTAGAAATTGCTGCCTAACAATTCGTTCAAGCCGAACCTGCTTTCGTTCCACCAAGCCATGGCAGATTAA GCTTGCCATGGCTTTGGCTCCACTACGCAAGTCGGCTTAACCTAGGCG</u>
<i>arr8b</i>	<u>TTAGGCTGCCAAACCTTTTTCACCTTCGGAGTGAAGAATGATGAAAAGATTGGGTTCCAATCACGCATGCAAAATGTAA AGATATGCAAGGACCGTTTATCATGGTACCAAGCTTAAATTTATCGGTAGGTGAACCTCCTAAACCTGGGTTCAACACTC ATTTTGAAGAGGGTCGCACACTCAAAACACGTTTATTTTCAGCTATGCTTGAGCCAGCAATTTGGGGCGCTGAAGTTGCTG TTTCACTGTCAGGTCTAGATGGCCGGGGATACATATACTTAGTTGAACCAACTGGACCTTTTGAGGATGACCCTAATCTTA CCAATAAGAAATTTCCAGGGAATCCAAACAATGCTCTATCGAACTTCGGAACCCCTCCAGATTTGTTGGCTTTGAAGAG TGGGAGGGCACTCTGCTGAAGCCCTGAAACAGATGCTGGATTCTTGGAAGATCTAAAGCGCAATGGTCTTCATGTCTAT ATATGATTAAAGCGGAGCTGCTAACAATTCGTTCCAGCAACGTGCGCTTCGCGCACTCGACAGTGTGAAGTCGCTTTT TGTGGTTTGTACGCAAAAGTATTCACAAAAAACCACTTACAGACTGCGGCTGAAGTTAGCG</u>
<i>catB2</i>	<u>TTAGGCGACGCGTGGAGTCTGCTTATGAAATTTTCGGGTACAAAATTTATGACGAATTTATTTGAGAGTCCCTTCAAAGGGAA GCTTCTGACTGAGCAGGTGAAGAATCCGAACATCAAGGTAGGGCGGTATAGCTACTATTCGGGCTATTACCATGGGCACT CGTTTGATGATTGTGCTCGCTACCTTCTACAGACCGTGATGACGTTGATCAGCTGATTATCGGCAGCTTCTGCTCCATCG GATCAGGCGCAGCTTTTATATGGCTGGGAATCAAGGCCACCGATATGATTTGGGTCTCTTCTTCCCTTCTTCTACATAG ACGAGGAGCCCGGCTTTGCAAAATCAGTCGATGACTTCCAGCGGGCTGGCGACACAGATTATAGGAAGTGATGTGGAGT GGTTCGGAGGCCATGATCATGCCCGGGATCAAGATCGGGCATGGAAGCGGTGATAGGTAGCCGCGCTTTGGTTGCCAAAG ACGTGGAACCTACACCATAGTTGGGGGGAACCCCTGCAAAAGTTCGATTAGGAAGCGCTTTTCTGAAGAAATTTCTATG CTTTTAGATATGGCTTGGTGGGATTGGCCGCTGGAACAAATCAAGGAAGCAATGCCTTTTCTTGTTCGCTGGCATTGCC AGCCTGTATCGTCTGCGGAAGGCAACAGCGCTAACAATACGCTACACACGACAAATTAAGTCTGCTGCGCTCTAATTT GCCGGTGAGCGTGGCG</u>
<i>catB3</i>	<u>TTAGACGGCAAAAGTCACAGACCGCGGATCTCTTATGACCAACTACTTTGATAGCCCTTCAAAGGCAAGCTGCTTTCTG AGCAAGTGAAGAACCCCAATATCAAAGTTGGGCGGTACAGCTATTACTCTGGCTACTATCATGGGCACTCATTCGATGAC TGCGCACGGTATCTGTTTCCGGACCGTGATGACGTTGATAAAGTTGATCATCGGTAGTTTCTGCTCATCGGGAGTGGGGCT TCCTTTATCATGGCTGGCAATCAGGGGCATCGGTACGACTGGGCATCATCTTCCCGTCTCTTTATATGCAAGGAAGAACCT GCATTTCAAGCGCACTCGATGCCCTTCCAAAAGACAGGTAATACTGTTCATTGGCAATGACGTTTGGATCGCTGAGGC AATGGTCATGCCCGGAATCAAGATCGGGCACGGTGGCGTGATAGGCAGCCGCTCGTTGGTGACAAAAGATGTGGAGCCT TACGCTATCGTTGGCGGCAATCCCGCTAAGAAGATTAAGAAACGCTTCACCGATGAGGAAATTTATGCTTCTGCTGGAGAT GGAGTGGTGAATTTGGTCACTGGAGAAGATCAAAAGCGGCAATGCCCATGCTGTGCTCGCTCAATATTGTTGGCCTGCACA AGTATTGGCTCGAGTTTGGCGTCTAACAATTAATCAAGCCGATGCCGCTTCGCGGCACGGCTTATTTCAAGGCG</u>
<i>catB5</i>	<u>TTAGACGGCAAGAAAGGTTCCACGAACCTCTGATGAAAACTACTTTTGACAGCCCTTCAAAGGGGAGCTTCTTCTGAG CAAGTGAAAAATCCAAACATCAAAGTAGGCGGATTAAGCTATTACTCTGGCTACTATCAGGGCACTATTGATGAATG CGCGGCACTATTGCATCCAGATCGTGATGACGTTGATAAATGATCATTTGGCAGCTTTTGTCTATAGGAAGCGGGGCTTC CTTCATCATGGCTGGCAATCAGGGCATCGGCATGACTGGGCATCATCTTCCCTTCTCTATATGCAAGAGGAACTGCG TTTCTCAAGCGCACTCGATGCTTCCAAAGAGCAGGTGATACCGCCATTGGCAATGATGTCTGGATAGGCTCGGAGGGCAA TGATTATGCCCCGAATCAAAATTTGGAGACGGTGCCGTTGATAGGTAGTCTGCTGTTGGTGACAAAAGATGTAGTGCCTTAT GCCATCATCGGAGGAAGTCCCGCAAAAGCAAAATTAAGAAAGCGCTTCCGATGAGGAATTCATTGCTCATGGAGATGGA GTGGTGGAACTGGCCACTGGATAAAATTAAGACAGCAATGCCTCTGCTGTGCTCGTCAAAATTTTTTGGTCTGCATAAGTA TTGGCGCGAGTTTGTGCTCTAACAATTCATTCAAGCCGACGCGCTTCGCGGCACGGCTTAATTTCTGGCG</u>
<i>catB6</i>	<u>TTAGACGGCAGAAATAAATTTTGGCATCTCTTATGGAAAAATTAAGTGAACCTTTCAGAGGAACTACTTTTCAGAGC AAGTGACTAACCGCAACATCAAAGTTGGTCGGTACAGCTACTACTCTGGTACTATCAGCGGCATCAATTGATGATGCGC CAGTACTTGTCTCCAGACCGTGATGACGTTGACAACTAATCATCGGCAGCTTTTGTCTCCATCGGAAGCGGGGCTTCT TCATCATGGCGGCAATCAGGGTACCGGCATGACTGGGTAACATCTTCCCTTCTCTACATGCAAGAAGAGCCAGCTT</u>

	TTTCAAGTTCAACGGACGCCCTTTCAAAGGCCGGTGACACCATCGTCGGCAATGATGTCTGGATAGGATCAGAGGCAATG ATTATGCCCGGCATCAAGATTGGAGATGGCGCGGTAATAGGCAGCCGATCGTTGGTGACGAGAGATGTAGAAACCTATAC CATCATTGGCGGAAACCTCGCAAAGCAAATTAAGCGGATTCTCTGACGAGGAGATTTCATTACTCATGAAATGGAGT GGTGGAACTGGCCGTTAGATAAAATCAAAACAGCTATGCCCTTCTCTGCTCTTCAGACATTTTGGTCTGCACAGGCATT GGCGTGGGATTGCCGTCTAAACAAGCGCAGCACCATCGCTCGCGCGCTGGACTCGCAACAATGTTGCTCGCCCGTGGCG GGGCG
<i>catB10</i>	TTAGACGGCAAGAAATACGCTCCGTGAAAATCCCATGACCAACTATTTTGAAAAGTCCATTTAAAGGCCAACTGCTGGCCG ACCAGGTAAAGAACCAGAACATCAAAAGTCGGACGGTATAGCTAATTATCCGGCTATTACCATGGCCATTCGTTTGACGAG TGCGCTCGCTTCTCTTGCCAGATCGCGATGACATCGACCAACTGATCGTTGGTAGCTTCTGTTCCATCGGCACCGGGCGCC TCCTTCATCATGGCCGGAATCAGGGGCACCGTTATGACTGGGCGTCTCTTTCCCTTCTCTACATGAAAGAGGAGCCA GCATTCTCGGGCGCACTTGATGCATTCCAAAAAGCCGGTGACACAGTCATCGGAAGTGATGTCTGGATAGGCTCTGAGGC CATGATCATGCCCGGCATCAACGTTCGGTCATGGCGCTGTGATTGGAAAGCCGCGCTTGGTACAGGAAAGATGTGGAGCCGT ACACTATCGTTGGCGGAAATCCCGCCAAACCGATCAAGAAACGCTTCTCCGACGAGGAGATCGCCATGCTTTTGAAAAATG AATTGGTGGGATTGGCCAACTGAAAAAATGAGGAAGCAATGCCTTGTCTATGCTCATCAACATCGTTGGGCTGCATCG ATACTGGCAAGGCTTTGCCGTCTAAACAATTTATCAAGCCGACTCCGCTTCGCGGCGCGGCTTAATTCAGGCG
<i>catB11</i>	TTAGGCAACCGGTGTGTGTCAGATTTTGGTGGGAATTATGAAGAACTATTTTGAGAGCCCGTTTAAAGGGAAAAACCTC TCGTGCAACAGGTAAAGAACCCTAATATCAAGGTGGGCGGTTATAGCTAATTATTCAGGCTATTACCACGGGCATTCATT GATGATTGCGCTCGCTACCTCTGCTGATCGTGATGACGTTGATAAAATTGATAAATTGGAAGCTTTTGCTCCATAGGGACG GGTGCATCTTTATCATGGCTGGAATCAAGGTACCGGATATGATTGGGTACATCATTCCCTTTTTTCTATATGAATGAG GAACCGGCATTTTCGGAATCAGTTGATGCTTTCCAGGCGGCAGGTAATACCGTCATAGGAAGCGACGTGNGGATTGGCTC TGAAGCAATGATTATGCTTGGAGTAAAGGTGGCCATGGAGCGGTAATTGGCAGCCGGGCTTTGGTTACCAAGATATAG AGCCATACACAATTTGTTGGTGGCAACCTTGCAAAAGAGATAAAGAAGCGCTTTTCAGAACAGGAAATTTCAATGTTGCTA GATATGAAGTGGTGGGATTGGCCGTTGGAGCAAAATTAAGAAGCAATGCCTCTTTGTGCTCGTGTGATATTCGAGGCTT TGACCATTTTGGCAGCGTTCAAGTGCCCTAACAAACGGCTGTTGTGCGCCCTTCGGGCGTGGGACGGCCCTTTCCGCGCTT TGCGGCTACAAGTCCGCCCCAAAGCCGGGCG
<i>cmlA1</i>	TTGGGCGCAAAATAAGGCTCCTTGCAGAGTTGCTTGAAAAGTTGTTACGATTCAAATTCATGATAGATAGTCAGCAGAT GAGCACTTCCAAGAACGCAGACAAGTAAGCCGACGAAACCTTCATTTTTCGGTGTGTGCGGCGTCTCATGAATCCTTTTG CTCTACGGGAGCGCCGCCAAATCCTTTGTTCAAGGAGATGGTTTCGTGAGCTCAAAAAACTTTAGTTGGCGGTACTCCCTT GCCGCCACGGTGTGTTGTTTATCACCCTTCGATTTATGGCATCACTCGGCATGGACATGATCTTGCCAGCATGCGCGCTT ATGCCAAACGCGCTTGTACGACAGCGAGCACAAATTCAGCTTACGCTGACAACGTAAGTGGTCAATGATTGGTGGCGGTCA GCTCTGTGTTGGACCGCTATCGGACCGACTGGGGCGCGCCCGTCTACTGGGAGGTGGGCTCGCTACGTTGTGGCGCTC AATGGGCTCGCTTACGTCATCGGCTGAAGTCTTTCTGGGCTTCGGGATTTCTCAGGCTTGTGGTGGCTCGGCGTGGCCCT GTTTCCACATTTGCAACAGTACGTGACATTTACGAGGTGCGGAGGAAAGTAATGTCATTTACGGCATCATCGGCATCAT GCTGGCCATGGTCCCGCGGTAGGCCATTGCTCGAGCGCTCTGCGACATGTGGCTTGGGTGGCGGTCTCTTTGCGCTT TCTAGGTTTGGGCATGATCGCTGCATCTGACGAGCGTGGCGATTCTGGCTGAAACCCGGGTGCAACGAGTTGCGGGCT TGCAATGGTTCGACGCTGCTACTCCCGTTAAAGTGCTGAACCTTCTGGTTGTACACGTTGTGTTACGCCGCTGGAATGGGTA GCTTCTTCGCTTTTCTCCATTGGCGCCGGACTAATGATGGGCAGGCAAGGTGTGCTCAGCTTGGCTTCAGCCTGCTGTT CGCCACAGTGGCAATTGCCATGGTGTTCACGGCTCGTTTTATGGGCGGTGTGATACCCAAGTGGGGCAGCCCAAGTGTCTT GCGAATGGGAATGGGATGCCTGATAGCTGGAGCAGTATTGCTGCCATCACCAGAAATATGGGCTTTGCAGTCCGTTAG GCTTTATTGCTCCAATGTGGCTAGTGGGTATTGGTGTGCGCACAGCGGTATCTGTGGCGCCCAATGGCCCTCTTCGAGGAT TCGACCATGTTGCTGGAACGGTACGCGCAGTCTACTTCTGCTTGGGCGGTGTACTGTAGGAAGCATCGGAACGTTGATC ATTTGCTGTGTTGCCGCGCAACACGGCTTGGCCGTTGTGCTGTACTGTTGACCCCTTGCAACAGTCTGCTCGGTCTGCTT GTGTTTCCCGAGTGAAGGGCTCTCGCGGCCAGGGGGAGCATGATGTGGTTCGCGCTACAAAGTGGCGAAAGTACATCAAA TCCCAATCGTTGAGAGAAATGTGGCAAGCTATCGCCCAACAAATCGCTGCAGCCGACCCAAAACCGCTACGCGGTTTCGGT CGGCTGAGCTCAGGCG
<i>cmlA2</i>	TTGGGCGAACAAAAGATTCTTCGCGGAATTGCTTGAGAATTGTTACGATTCAAATTCAGCCATGAGATAGTCAGCAAT GAGCACTTCCAAGAAAGCAGACAAGTAAGCCGACGAAACCTTCATTTTTCGGTGTGTGCGGCGTCTCATGAACCTTTTG CTCTACGGGAGCGCCGCCAAATCCTTCGTTCAAGGAGATGGTTTTCGTGCGCTCAAAAGAACTGTAATTGGCGGTTATCCCTT GCCGCTCACTGTGTTGTTGTTATCACTTTCGATTTACTGGCATCACTCGGCATGGACATGATCTTGCAAGCGGTGCTTTCA TGCCACATGCTCTTGGTACGACAGCGGGCACAAATTCAGTTCAGCTGACAACGTAATTTGGTCAATGAGGGGCGGTGAG CTTTTGTGTTGGCCACTGTGCGACCGGCTGGGACGTGCTCCCGTGCTACTGGCGGGCGGTGCGCGCTACGTTGCGGCTCA ATCGGCTCGTCGTCACGTCATCGGCTGGAGTATTCTGGGTTTTCGGATTCTCCAAGCTTGTGGTGCCTCGGCATGCTGCTG TGGCAATTTGCAACAGTGCCTGATATCTACGCAAGTTCGCAAGGAAAGTAACGTCATCTACGGCTTGTGTTGCTATGCT TTGCTATGGTTCGGCGATAGGCCCAATTGCTGGGAGCGGTATAGACACCTGGTTCGGGTGGCGGGCGATCTTTGCGTCT TGGGATTGGGAATGATCGCTGCATTGACAGCAGCGTGGCGCTCTGGCTGAGACCCGGGTGACGCGACAGCAGCTTTG CAATGGTCACAACTTCTGCTTCCCATCAAGCACTTAACCTTCTGGTTGTACACAGTGTGTTATGGCGAGGAATGGGACG TTCTTCTGCTTCTTCTCCATAGCGCCCGGATTGATGATGGGTAGGCAAGGCATGTCCAGTTTGGCTTCACTGCTGTGTTG CAACAGTGGCAATTGCGATGATGCTTGGCGCCGCTTTCATGGGGCGCGTAATCGCCAAAGTGGGGCAGCTGAGTGGCTTG CGAATGGGGATGGGCTGCCTGATAGCAGGCGCAGTCTTGTCTGTGTCATACCGAGCTATGGATTCCGCACTCCGTTGTTGG CTTTATTGCCCAATGTGGCTAGTGGCGGTGCGGCTCGCGACAGCGGTATCCGTTGCACCCAAATGGTGGCTTCGAGGGTT CGACCATATGTGAGGAGCGGTTACGGCAGTCTACTTCTGCTTGGGGGGGTGCTGCTGGGAGTGTGGAACGATTTGCGA TTTCGCTGTGTCGCGCGCACACGGCTTGGCCAGTTATCGCGTATTGTTTGGTCTTTCGCAACAATCGTGTCTGGACTGTGCT GTGTTTCCGAGCGAGAGACCTTCGCGGTACGCGGAGTATGATGCGGTTGCACGCACATAGTGGCGGAAACACACCA ATCCGATCACTGGGAATATGGCAAGTTGTGCCCAACAAATCGCTGCAGCCGACCCAAAACCGCTACGCGGTTTCGCTG GGCTGAGCTCAAGCG
<i>ereA1</i>	TTATGCTCTGTGAGCCGGGTATTGGCGAAGCGAAGCTATGACGATTACAGCAATAAACGCAAAAGTTAAAAAATGACA TGGAGAACGACCAGAACACTTTTACAGCCTCAAAAGCTGGACTTCAATGAGTTTGAGATTCTTACTTCCGTAATTGAGGG CGCCCGAATTGTGCGCATTTGGCGAGGGGCTCATTTTGTGCGGGAGTTTCACTGGCTAGAGCTAGTCTTATCCGCTATT GGTCGAAAGGCATGAGTTAATGCGATTGGTTTGGAAATGGGGGCGATTACGGCATCCCGGTTATCTGAATGGCTCAACT CAACAGCCGGTGTCTATGAACCTTGAGCGATTTTCGGATACCTTGACCTTTTCTGTGTATGGCTAGTGTGATCTGGCTGA AATCATATCTCCGCGAATCAGGAAGAAAACTGCACTTAGTCGGAATCGACTTACCAACACCTTGAAACCCAGGGACGA CCTAGCGCAATTGGCCGAAATATTCAGCTCATCGTACCTCATGAAACCGCAGCTGTGATATGTGACTACTGTGTTGGC GTCCATTGATGGCCAGTCGGCGGTTATTTTCATCGGCAAAATGGGGGAGCTAGAAACCGCTCGGCAGGAGAAAGCTATCT CAGGAGTAACAGATTGAAGTCCGCTTGGCGTCTGTCGCCCCGCTCTGAAAAAACAACGCTCAACAGGCTTGTTCGGA AAAGCCTCTGATCGAATAGAGTCGATAGAGTATACGTTGGAACCTTGGCTATAATGAAAACTTCTTCGATGGTACCTCT CTTGAGGGAGATACTTCCGTACGTGACTCGTATATGGCGGGCGTAGTAGATGGAATGGTTTCGAGCGAATCCGGATTGTGA GATAATTTCTGCTGGCGCACAACTCATCTACAAAAAATCTCCAGTCTCTTTTCAGGGCGAGCTACGGCTGTTTCCATGGG GCAGCACCTCGCAGAGAGGGTGAATTACCGTGCATTGCACTTACCCATCTTGGACCCACCGTGGCGGAAATGCAATTTCC CATCGCCAAAAAGTCTCTTGGATTCTCTGTTGTGACCACGCTGCGGATGCAATCCGTGAGGATAGTATGGAACAGTAT GTATCTGACGCGCTGTGGTACGGAGAATTATGTTGACATTGACAGATGCCCCCATGGAAGCAAGGCAATGCGGTTCTCA AAGCGCTCTGTAGAAACGAAATGAGCGAGGCAATTTGATGCCATCGTCTGTGTTACAAGCGCGCGCAAGGACAGCTGG TTGCCCTATAGGAACCGGAAATGAAATGAGGGAGCATAACCTGCGAATCCACCGGACGGTTTCAACCGCCGGTGATC AGCGCG
<i>ereA2</i>	TTATGCTCTGTGAGCTGGTTATTGGCGAAGCGAAGTATGACGATTTCAGCAATAAACGCAAAAGGATAAAAAATGAC ATGGAAGACGACCAGAACACTTTTACAGCCTCAAAAGCTGGACTTCAATGAGTTTGAGATTCTTACTTCCGTAATTGAGGG CGCCCGAATTGTGCGCATTTGGCGAGGGGCTCATTTTGTGCGGGAGTTTCACTGGCTAGAGCTAGTCTTATCCGCTATT GGTCGAAAGGCATGAGTTAATGCGATTGGTTTGGAAATGGGGGCGATTACGGCATCCCGGTTATCTGAATGGCTCAACT CAACAGCCGGTGTCTATGAACCTTGAGCGATTTTCGGATACCTTGACCTTTTCTGTGTATGGCTAGTGTGATCTGGCTGA AATCATATCTCCGCGAATCAGGAAGAAAACTGCACTTAGTCGGAATCGACTTACCAACACCTTGAAACCCAGGGACGA CCTAGCGCAATTGGCCGAAATATTCAGCTCATCGTACCTCATGAAACCGCAGCTGTGATATGTGACTACTGTGTTGGC GTCCATTGATGGCCAGTCGGCGGTTATTTTCATCGGCAAAATGGGGGAGCTAGAAACCGCTCGGCAGGAGAAAGCTATCT CAGGAGTAACAGATTGAAGTCCGCTTGGCGTCTGTCGCCCCGCTCTGAAAAAACAACGCTCAACAGGCTTGTTCGGA AAAGCCTCTGATCGAATAGAGTCGATAGAGTATACGTTGGAACCTTGGCTATAATGAAAACTTCTTCGATGGTACCTCT CTTGAGGGAGATACTTCCGTACGTGACTCGTATATGGCGGGCGTAGTAGATGGAATGGTTTCGAGCGAATCCGGATTGTGA GATAATTTCTGCTGGCGCACAACTCATCTACAAAAAATCTCCAGTCTCTTTTCAGGGCGAGCTACGGCTGTTTCCATGGG GCAGCACCTCGCAGAGAGGGTGAATTACCGTGCATTGCACTTACCCATCTTGGACCCACCGTGGCGGAAATGCAATTTCC CATCGCCAAAAAGTCTCTTGGATTCTCTGTTGTGACCACGCTGCGGATGCAATCCGTGAGGATAGTATGGAACAGTAT GTATCTGACGCGCTGTGGTACGGAGAATTATGTTGACATTGACAGATGCCCCCATGGAAGCAAGGCAATGCGGTTCTCA AAGCGCTCTGTAGAAACGAAATGAGCGAGGCAATTTGATGCCATCGTCTGTGTTACAAGCGCGCGCAAGGACAGCTGG TTGCCCTATAGGAACCGGAAATGAAATGAGGGAGCATAACCTGCGAATCCACCGGACGGTTTCAACCGCCGGTGATC AGCGCG

	TTGTCGAGAGGCATGATTTTAATGCGATTGGTTTGAATGTGGGGCGATTTCAGGCATCCCGGCTATCTGAATGGCTCAACT CAACAGCCGGTGTCTCATGAACCTTGAGCGATTTTCGGGATACCCTGACCTTTCTTTGTATGGCTCAGTGCTGATTTGGGT AATCATATCTACCGCAATCAGGAAGAAAACCTGCAGTTAGTCGGAATCGATTTACCAACACCTTGAATCCAAGGGACGAC CTAGCGCAATTTGGCCGAAATTATCCAGGTCATCGACCACCTCATGAAACCCACGTTGATGCGCTGACTCAGTTGTTGAC GTCCATTGATGGCCAGTCGGCGGTTATTTTCATCGGCAAAATGGGGGAGTTGGAAACGGCTCAGCAGGAGAAAGCTATCT CAGGGGTAAACAGATTGAAGCTCCGTTTGGCGTCGCTTGCCCCCTGCTCTGAAAAATCAGCTCAACAGCGATTTTTCGGA AAGCCTCTGATCGAATAGAGTCGATAGAGTATACGTTGGAAACCTTGCCTGTAATGAAAGCTTTCTTCGATGTACCTCTC TTGAGGGAGATACTTCCGTACGTGACTCGTATATGGCGGGCGTGGTGGATGGAATGGTTTCGAGCGCAATCCGGATGTAAGG ATAATTTCTGCTGGCGCACAAACATCATTACAAAAAATCCAGTTTCTCTTTACAGCGGAGCTTACGGCTGTTCCCATGGGA CAGCATCTCGCAGAGAGGGAGGAGGGGATTACCGTGCATTGCATTACCCATCTTGGACTACCCGTGCCGGAATGCA TTTCCCATCGCCGACAGTCTCTTGGATTCTCTGTTGTGACCACGCTGCCGATGCAATCCGTGAGGATAGTGTGGAACA GTATGTATCGATGCCCTGTGGTAAGGAGGATTCATGCCTGACATTGACAGATGACCCCATGGAAGCAAAAGCGAATGCGGT CCCAAGCGCTCTGTAGAAACGAATTTGAGCGAGGCATTTGATGCCATCGTCTGCGTTCACGCGCGGCAAGGACAGC CTGTTTGCCTATAGGAAACGAAATGAAATGAAGGAGCATAACCTGCCAATCCACCGGACGCTTTTCAACCGCGCGGTG ATCAGCGCG
<i>ereA3</i>	TTAGAATCACTGAAAACATAAAATAATTGCACAAATCCGGCTCTACAGGTGGCAGAAGAAGTTATGACGGCATTGAATGGT TGAAAAAATTAAGACAATTACAGGACAATGAAATTAATTGGCGAAGCGAAGCATGACAGCAATTGAGCGCAAAAGGCTAAAA AAATGACATGGAGAACTACCAAGAACCTTTTACAGCCTCAAAAGCTGGACTTCAATGAGTTTGAGATTCTTACTCCCTG GTTGAGGGCGCCCGAATTGTGCGGCTTGGCGAGGGCGCTCACTTGTGCGGGAGTTTCACTGGCTAGAGCTAGTCTTATT CGCTATTGTGTCGAGAGGCATGATTTTAATGCGATTGGTTTGGAAATGTGGGGCGATTTCAGGCATCCCGGCTATCTGAATAC CTCAACTCAACAGCCGGTGTCTATGAACCTTGAGCGATTTTCGGATCCACTGACCTTTTCTTGTATGGCTCAGTGCTGATTT GGATTAATCATATCTACGCGAATCAGGAAGAAAACCTGCAGTTAGTCGGAATCGATTACCCAACACCTTGAATCCAAGG GACGACTGGCACAATTGGCCGAAATTATCAAGTTCATCGATCACTCATTAACCCGATGTTGATGAGCTGACTCACTT GTTGGCATCCATTGATGGTCAGTCGGCGGTTATTTTCATCGGCAAAATGGGGGAGATGGAACGGCTCAGCAGGAGAAA GCTATCTCAGGGGTAAACCAGATTGAAGCTACGTTTGGCATCTCTTGCCCTGTCTGAAAAAACATGTCAACACGCGATTTG TTCCGAAAGCCTCTGATCGAATAGAGTCGATAGATTATACGTTGGAAACCTTGCCTATAATGAGAACTTTCTTCGATGG TACCTCTCTTGAAGGAGATACTTCCGTACGTGACTCGTATATGGCGGGCGTAGTGGATAGAATGGTTTCGAGCAAAATCCGG ATGTGAAGATAATTCTGCTGGCGCACAAACATCATTACAAAAAATCCAGTCTCTCTTTTCGGGCGAGCTTACGGCTGTTC CCATGGGGCAGCACTCGCAGAGAGGGAGGAGGAGGATTACCGTGCATTGCATTACCCATCTTGGATCCACCGTGGCGG GAAATGCAATTCCCATCGCCCGGAGTCTCTTGGATTCTCTGTTGTGACCACGCTGCCGATGAATCCGTGAGGATAGT ATGGAACAGTATATCATCGATGCTGTGGTACGAGGAGTTCATGTCTGACATTGACAGATGCCCATGGAAGCAAAAGCG AATGCGGTCCCAAGCGCTCTGTAGAAACGAATTTGAGCGAGGCATTTGATGCCATCGTCTGCGTCCCAAGCGCGGCA AGGACGGCTGGTTGACCTATAGTAAACCGGTAGATGAAATGATGGAGAATAACCTGCCAATCCACCGGACGCTTTTCA ACCGCGGTGATCAGCGCG
<i>fosC2</i>	TTATGTTGCTGAGGAGAGTCAGTGTTACGAGGATTGAATCATATTACTATTGCAGTAAGTGACCTTGAACGTTCCGTGGA GTTCTATACGCGTCTATTAGGAATGAAGGCACATGTCGCTGGGATAGTGGGGCATATCTGAGCTTGGAGGCTACTTGGTA TTTGCTTGTCTTGACGAAGTGCATCCGAGCCAAGATTACTGTACATCGCGTTTGATGTTTCCGAAGAGAATTTGGAAC CAGTTACTAAAAAGCTTCGCGAAGCACATGTCGTTGAATGGAACAAAAATAGAAGCGAAGGACTTTCTTTATACTTGCTC GATCTGACGGCCATAAATTGGAATCCATAGCGGTAGCCTACAAAGTCGTTTGAATCGTTGAAGTCAACACCCATCA AGGGTTAGTATGGCTATAAGCAAAACATAAACAAGTCAATTAACCTACGCGCTGCGGCGCGAGCTGTCTAGCAGCGCGC GTTATTTTCGGGCG
<i>fosE</i>	TTAGCGCCATGGAAGGTATCAGCCACATCACGCTTATTGTCCGCGACCTCTCGCGCATGACCACCTTCTTTGCGATGGT CTCGGTGCGCGAGAGGTTTATGACAGTGTGCGCCACAATTACTCGCTTCCCGCGAGAAATTTCTTTGCTCTGGTGGCGTT TGGTTGGCGCTATGGAAGGAGTGCGCCATCTGAGCGCTCCTATCAGCATGTGCGCTTTCGGGTGAGTGAGTCAGATCTT CCGCTATATCAGGCAAGACTTGGGTGCTGCGGTGGAGATTTCGCCACCCAGGCCACGCTGAATGGAGAGGGGTGCTG CCCTGTACTTCTATGATTTTGACAACCATCTGTTTGAAGCTGCACACCGGCACATTTGAGGAGCGCCTTGCAGGTACGGAG CTGGGCGCTAAACAATTCATTAAGCCGAAGCGCTTTCGCGGCTCGGCTTAATTCAGGCG
<i>fosF</i>	TTACGTTTCTCAAGGTTCTCTGCTATGATTACCGGCATCAATCACATCACATTTTCGTTTCGGGACCTGCGGGCATCGATT GAGTTCTACCGTGATCTTCTGGGAATGAAGTTGCACGTATTCTGGGACACAGGTGCTTATCTCCTGCGAGCAATACGTGG TTATGTTTGAGTTTGGGGCAGCCCGAACCCGCAAGGACTACACACAGCTCGCTTTCAGTGTCCCGGAAGGGGAGCTCT GGAGTTGCGAGCTAAACTAAAGCAGGCTGGCGTTGAAGAGTGGAAAGCAGAATACCAGTGAGGGTGACTCCATCTATTTA CTTGACCCAAATGGGCATCGCTTGAAGTGCATTCGCGAACACTTGGCCACTCGCTTAGCTGAGCTGGAAGGCTCGCCTTA TAAGGGGCTGGTGTGGAGCTGAACGTAACAATCGGCTGTTGTGCGCCCTTCGGGGCTGGGACGCGCTTTTCGCGCTGC GCGGCTACAAGTCCGCCCAAAGCCGGGCG
<i>fosG</i>	TTATGTTTGTAAAGGTAGATTGTGCTCCGAGGATTGAACCACATCACCATCGCTGTAAGCGATTTAGGCCGTTCTCTCGC CTTTTATACTGATATCGTCGGTATGCTCGCTCAGCTAGCGTGGGATAACGGGTGCTTACCTTAGCTAGCGGCTTTTGGTTT TGCTTTCTCTGTGACAAGGTGATGCCAAGTAAGGATTATTCTCATATTGCTTAGATATTTCAGAAAGATGACTTTGCATCA TTTTTGAGAAACTGAGGAGAGCCGATGTCAGTGAGTGGAACAAAAATCAAGTGAAGGCTATTTCGGTGTATTCTTAGA TCTTGATGGAATAAACTAGAAGCGCATAGCGGCTCGTTACAATCTCGTTTAAAGTCTTTAAAAAGACAAACCTTATCCGG GCTTAGTATGGCTTTAAACAAACATAACAAGCGCCATCAAAACGCGCTTCGCGGCTCGACTCGAACAAGTTGCTCGCG TTTGTGGCGGGCG
<i>fosH</i>	TTAAAGCTCATATGGGAATTTCTTGGCATTAGTCATCTGCATTCGTGGTCCGCGATGTAGAGCGCACTGCGAGACTGGTC TGCGAAGGACTTGGGGCGGAAGAGGTATACGACAGCAAAAGCCAAAAAATTTTCGCTGTACGAGAGAGAAATTTTCTCTT GGGCGCGGTATGGCTTGCTTTTATGGAAGGAGTGCCATCGGAGCGGTCTATCGGCACGTCGCTTTTGAAGTGACCGGAAG AGGAAATTGCAAGATATGAGGCTAGCCTTAGAAACCTCGGTGTGGAAGTCAGAGAGCCGCGGCCAAGAGTGCGTGGAGA GGGCGTGTCACTGTATTCTACGACTATGACAACAACCTATTTCAGTGTACATGCGGGAACACTGCGGCAACGACTTGA GGTATACGCAATGAGTTCTACAATCCGCTCCAGTGGACCGCTGCGGCGTCCGCTGAGCTATCTCG
<i>fosI</i>	TTAGTCCCATGAAAGGCATCAGCCACATCACATTCATCGTCCGCGACCTGAATCGTATGGCGCACTTCTCTGTGAGGG ACTGGGTGCGCGTGAGGTGTATGACAGCTCAAAACGAACTTCTCGTTGTCCCGGAAAAAGTTCTTTGTGCTTGGTAGTAC GTGGCTAGCTGCAATGGAAGGTGAACCGCCCGCGAGCGTTCATATCAGCATGTTGCCTTTTCGGGTGAGTGAGACGGACT TGCCTGCGTATCAAGCCAGACTTGAGGCACTCGGCGTTGAGATTTCGGCCACCGCGTAGCCGTGTGACGGGTGAGGGCTC TCCCTGTACTTCTACGACTTTGACAATCATTATTTGAACCTTCACTCAGGTACTTTAGAGCAGCGCTTGTCCGGTATCAGG CGGGGCGCTAAACAATTCATTCAAGCTGACACCGCTTCGCGAGCGAGCTTAACCTCAAGCG
<i>fosK</i>	TTACGTTTTAGGATCAGTCGTATGATCACTGGTATCAATCACATCACCTTTTCCGTCAGGAGACTTGAGCTCTTCAATCGAG TTCTACTGTGACTTGTGGGAATGAGGCTGCACGTGGAGCTGGGAAGCAGGTGCTTATTTACAGCGGGTGATACGTGGGT ATGTCGTGAGCGTCGGGGAACCTAAACCCGCCAACGACTACACGCTATGTCGATTCAGTGTGCGGAAAGAGAGCTTGTG AGCTGCACGCTAGGCTAAAAGAAGCCGGGTTGAGGAGTGGAAAGCAATAACAAGTGAAGGTAACCTCGGTATCTGCT TGATCCAACCGGCATCGCATTGAGCTTCACTGCGGAACGTTGGCAACCCGCTTAGCTGAGTTGGAGAAGTGCCTATA AAAGGTTGGTCTGGTGTGAACGTAAACAATCGGCTGTTGCCGCCCTTCGGGGCTGGGACGGCCTTTCCGCCGCTCCGC GGCTACAAGTCCGCCCAAAGCCGGGCG
<i>fosL</i>	TTAGCGCTCACTATGCAGATCAGGGGCATTAGTCAGTAACTTTCGTCGTAAGGACCTAGAAGTGCATCCCGATTTTTC TGTCAAGGCTTGGGAGCAACGGAGGTATACGACAGCAAGGGCAGCAACTTCTCTTTCACGAGAGAAGTTCTTTTGGT TGGTGGTGTCTGGGTTGGCGCAATGGAGGGGCACACCACCGCCACCGCTTATCAGCAGACTTGGCGCTCAAGGTGGCGC CCGAAGACTTGCCGCAAGTTGAGGCTCGTCTCCGCGCAATTGTTGTTGCCATCTACCGCGCGCGGCGCGGTGTTCAAGGC GAGGGCTTGTGCTGTACTTCCAGACTTCGACAATCACTCTTCGAGCTCCACACTGGAACGCTTACTGAGCGCCTTCAA

	GCCTATGCAGCCCCGCGCTAAACAAGTCCGTCAACGGGACGCCAAAAATGCTGCGCATTTTGGTTCCCTCCGCTGCGCTCCG GCGCCCGTTACGTCCAACG
<i>fosM</i>	TTAGGCCACATAAACAAAGCGCCCAAGAATATGCCAGTCAGTGGGGTTAGCCATATACAGTTTCATGTCGCGCGACTTGGC ACGCACAGCAAGAATATGGACCTATGGATTGGGTGCCACTGAGGTCTACGACTCGGGTGAGACGACGTTCTCACTGTCTC AAGAGAAATTTCTTACTTTGGGAGCACATGGATTGCGGTTCATGCTTGGCGAGCCGGCACCAAGGTCGTATCACACAGTC GCGTTTGAAGTAGACGACATTGACCTGCCCTCAATTGAGACGAAGCTAAAGGAGCTAGGTGTGAGTTTCATGCCCGCGG GGCCCGAGTCGATGGAGAAGGCAATTCGCTTTACTTCTATGACTTCGATGACAACCTGCTCGAGCTCCATGCAGGAACCC TCCAACAGCGACTTGAGCGCTACAAGAAGGGGAAAAATGTCTAGTACGGAACGTCCTATCCTCATGTGCGAGCGCCTAAC CGTTTGGTCAAGCCGACGCCCAAGCCTCGCTTGTGGGTACCTCCGTGCTACGCACTACGCGCGCGGTTACCGCGAGC G
<i>fosN</i>	TTACGTTTTTTGAGGGACTGCATGATCACCGBAATAAACACATTACTTTTTCTGTCAGTGATCTGGACTCATCGATCCAG TTCTATCGTGGTTTCTCGGGCATGAAGCTTCACGTTCTTTGGGACACGGGTGCGTATCTGACAGCCGGTGATACATGGCTT TGCTTGAGTTTGGGAGAGCCCGACCCCGCTAAAGACTATACGCATGTGGCCTTTAGTATCAGTGAAAAACGCGCTCTCGGA GCTACGCGCCAAACGGGGCGAGATGGGATTCAAGGAATGGAAGCAAAACACTAGTGAGGGCGAATCGCTGTACCTACTT GATCCCAACGGCCATCGCTAGAGCTTCACTGTGGCACTTTGGCAACTCGCTTGGCGGAGTTGGGAACTACCTTACAA GGGCTGGTATGGTGTGAACGTAAACAATCGCGCACTGCGACCGCTTTTCGCGCGCTTTCGCGCTCAAAACGGCGC GTGAGCCGGCGG
<i>fosO</i>	TTAGCGCTACGATGCGAGATCGAAGGCATTAGTCACGTTACTTTTGTGCTTAAGAGCTTGGCAGGTGCTGCCGAATTTCTC TGCCAAGGTCTCGGAGCAACTGAGGTCTACGACACGGGGGGCAGAACTTCTCGCTCTCTCGAGAGAAGTTCTTTAGT AGGTGGTGTCTGGGTGGCGGCAATGGAGGGCATCCCACTGCTGCCCGTTCTTATCAACACTTTGGCGTTCAAAGTTCGGC CGGAAGACTTGCCAAAGTTTGAAGCTCGTCTCGCGCAATCGGCGTTGAGATTTCCCGCCTCGACCGCGGGTCCAAGGA GAGGGGTTGTGCTGTACTTCCAGCACTTCGACAACCACTCTTCGAATCCACACCGGAACGCTGACAGAGCGCTGAA CACCTATGCAGCCCCGCGCTAAACAAGTCCGTCAACGGGACGCCAAACTGCTGCGCAGTTTGGTTCCCTCCGCTGCGCTCC GGCGCCCGTTACGTCCAACG
<i>lnu(F)1</i>	TTGTGCGTAAGAAATAAAACAAAGCTGCGTATACCTTTCCGCAAGATCAGTGGCTTCAATAAAAGGATGTTTCAATGCTT CAGCAAAAAATGATCGAACCGCTTCAAGGAAGCTTGCATGAGGATGCACGAATAATCGCGCGCTGATGTTCCGCTCATT TGCTATCGGAGAGGGGTGACGAGTTCTCTGATATCGAATTGTCAGTGTTCATCCAGAATAATCATTTTGAAAAATTCGATCA GCGCTCGTGGCTTAATGCTGTAAGTCCGGTTGACGCTTACTTTCCGGATGACTTCGGCCACCACACCGCGCTTTTGA CGGCATTTCGCGGTGAATTTCCATTTATGCGAAAAATCGGACATACCGGCTCATTTCCTTGGCAAGGCTACGGGTGGTTTCC CTCGCTTGAGGAGGCTTTTGTGTGACCGATCAGGAGAGTTGTCAAGGTACGCGAGTGTCTCTGTTGGGAGTCCCCCGA AACGTGAAGGCGCGCGCTGGTGGAAGGACTTGTATTGAACCTCATCAGCCTGATGCTCTTTGGGGCAAACTTTTAAAT CGGGGAGAGTATGCTCGCGCCTGGGCTTTGCTCAGCAAAAGCACATGAAAACTTACTCAAGTTGGTTCGCTCCATGAAGG GGCAACAGACCACTGGCCGACACCTTCACGCGCGCTCGAAAAAGGATGTCTCGGAGGACTCGTATAATCGCTACCTGGCAT GCACAGGACGCGCGGAACCAAAAGCACTATGTGTAGCCTATCATGAAACGTGGAAGTGGAGTCTCGAATTGTTCAGGAG TGTGGCTGGACTCTGAATATCGAGCTTCCGAGAATTGTAAATTGCGCAGACAAAAAGGTTGTCTAAATGAAATCTCGCAGCG CGCACACAAGTAAATCCAGCGGACGCATAAAAAGCGCGCGCTGATTAAACGCG
<i>lnu(F)2</i>	TTGTGCTACGAAAAAAACAAAAATCTGCGTATACCTTTCTCATATACTGTGGCTTCAATAAAAGGATATTTCTATGCT TCAGCTGAAAAATGATCGAACTCTTCAAGGAAGGTTGTCATGAGGATGCACGAATAATCGCGGCTGATGTTTCGCGCTCAT TTGCTATCGGAGAGGGTGACGAGTTCTCTGATATCGAATTTCGCAAGTGTTCATCCAGGATGACCATTTTGAAAAATTCGATC AGCGCTCGTGGCTTAATGCCGTAAGTCCGGTTGCTGCTTACTTTCCGGACGACTTCGGCCACCACACCGCACTTTTGA ACGGCTATTTCGCGGTGAATTTCCATTTATGCGAAAAATCGGACATACCGGCTCATTTCCTTGGCAAGGCTATGGGTGGTTTTC CTCGCTTGAGGCGGCTTTTGTGTGACCGATCAGGAGAGTTGTCAAGGTACGCAAGCGCTCTCGTGGGCGGTCCCCG ATACGTGAAGGCGCGCGCTGGTGGAAGGCTTGTGTGAACCTCATCAGCCTGATGCTCTTTGGGGCAAACTTTTAAAT CGGGGAGAGTACGCTCGCGCCTGGGCTTTGCTCAGCAAAAGCACATGAAAACTTACTCAAGCTGGTTCGACTCCAGGAAGG GGCAACAGACCACTGGCCGACACCTTCACGCGCGCTCGAAAAAGGATATCTCGGAGGACTCGTATAATCGCTATCGGCAT GCACAAGCAGTGCAGAACCAAGAGCACTATGTGACGCTATCATCAACGTGGACGTGGAGTCTCGAATTGTTCAGAG CGTGACAGAACCTCTGAATATCGAGCTTCCGAGAATGTAAATTGCGCAGGCAAAAAAGGTTGCTCAATGAGTCTGCGACGC CGCACACAAGTAAATCCAGCGGACGCATAAAAAGCGCGCGCTGATTTTGACG
<i>smr1</i>	TTAGCCCCACAATCGGAGATCGTTATGGGTTGGATATATCTCATTCTCGCTGGCGTCTTTGAAGTTGGTTGGCCAGTCGG GCTCAAGATGGCGCAGACACCGGAGACTCGCTGGAGCGGCATCGGAGTGGCGGTTGCATTTATGACTGTGAGTGGGTTTT TACTCTGGCTTTCGCGAGCGGCAGATCCCCATTGGCACCGCATACGCGGTGTGGACAGGCATTTGGTGTCCGCGGACCTTT TTCGTAGGCGTGCTGACTACGGCGATCCGACTTCGTTCTTTCCGTTACATGGGCGTCCGCCGTGATAATAGCGGGCGTTATT ACCCTCAAGTTGGCTCATTAGAGGTGTGCGCTAACAAATTCATTCAAGCCCCGACGCCCGCTTCGCGCGCGGCTTAATTCA GGCG
<i>smr2</i>	TTAGCGCCACGAACGGAGATCAGATGGCGCTGGATATACCTGATCCTCGCTGGACTCTTTGAGATTGGCTGGCCCGTCG GACTGAAGATGGCGCAGGTACCGGAAACCCGATGGAGTGGTGTGGCAATTGCGGTTCGCTTTATGGCCGTGAGTGGCTTT CTGCTATGGCTGGCTCAGCGGCACATTCCCATCGGTACTGCCTACGCTGTTTGGACGGGCATCGGTGCGGCTGGCACCTTC CTCGTCGGCGTCTTTACTACGGAGATCCAACATCAGTTGCGCGGTACTTTGGCGTGGCGCTCATGTTGCGCGGGTCA ACGCTCAAGCTCGCGCACTGAGGTGTGGCGCTAACAAATTCATTCAAGCCGAAGCCGCTTCGCGGCGCGGCTTAATTCG GCG
<i>smr3</i>	TTAGACGCCACGGAACGGGAGATCAGGAGGCGCTGGATGGACCTGATCTCGCTGGACTCTTTGAGATTGGCTGGCCCG TCGGACTGAAGATGGCGCAGGTACCGGAAACCCGATGGAGTGGTGTGGCAATTGCGGTTCGCGTTTATGGCCGTGAGTGGC TTTCTGCTATGGCTGGCTCAAGCGGCAACATTCCCATCGGTACTGCCTAACCGCTGTTTGGACGGGCATTCGGTGGCGCTGG CACCTTCTCGTCGGCGTCTTTACTACGGAGATCCAACATCAGATTGCGCGGTACTTTGGCGTGGCGCTCATTTGTTGCGCG GGTCATCAGCTCAAGCTCGCGCACTGAGGTGTGGGCGCTAACAAATTCATTCAAGCCGAAGCCGCTTCGCGGCGCGGCT TAATTCGGGGC
<i>qacE</i>	TTAGATGCATAAGCACATAATTGCTCACAGCCAACTATCAGGTCAAGTCTGCTTTTATTATTTTAAAGCGTGCATAATA AGCCCTACACAAATTGGGAGATATATCATGAAAGGCTGGCTTTTCTTGTATCGCAATAGTTGGCGAAGTAATCGCAAC ATCCGCATTAAAACTAGCGAGGGCTTTACTAAGCTTGCCCTTCCGCCGTTGTCATAATCGGTTATGGCATCGCATGCTTTA TTTTCTTTCTGGTTCTGAAATCCATCCCTGTGCGGTGTGCTTATGCAGTCTGGTGGGACTCGGCGTCTGATATAATTACA GCCATTGCTCGGTTGCTTATGGGCAAAAGCTTGATGCGTGGGCGTTTGTAGGTATGGGGCTCATAGTTAGTGGTGTAGTA GTTTTAAACTTGTCTTTCCAAAGCAAGTGCCCACTAAATAAATCAGTCACTCAACAAAGTCGTGACGACCCGCTCCAGCACT TCGTGCTGCGCTGGACAGTTTAAAGTGCGGCTTTATGTTTGTGCTGCGCAAAAGTATTCCATAAAATCACAATTTAA AACTCGCGCTGAACCTCGCG
<i>qacEA-sul1</i>	TTAGATGCATAAGCACATAATTGCTCACAGCCAACTATCAGGTCAAGTCTGCTTTTATTATTTTAAAGCGTGCATAATA AGCCCTACACAAATTGGGAGATATATCATGAAAGGCTGGCTTTTCTTGTATCGCAATAGTTGGCGAAGTAATCGCAAC ATCCGCATTAAAACTAGCGAGGGCTTTACTAAGCTTGCCCTTCCGCCGTTGTCATAATCGGTTATGGCATCGCATGCTTTA TTTTCTTTCTGGTTCTGAAATCCATCCCTGTGCGGTGTGCTTATGCAGTCTGGTGGGACTCGGCGTCTGATATAATTACA GCCATTGCTCGGTTGCTTATGGGCAAAAGCTTGATGCGTGGGCGTTTGTAGGTATGGGGCTCATAGTTAGTGGTGTAGTA GTTTTAAACTTGTCTTTCCAAAGCAAGTGCCCACTAAATAAATCAGTCACTCAACAAAGTCGTGACGACCCGCTCCAGCACT GACTCTTCTTCGATGAGAGCCGGCGGCTAGACCCCGCCGGCGCTGTACCGCGCGCATCGAAATGCTGCGAGTGGGATC AGACGTCGTGGATGTGCGACCGCGCCGACCATCCGGACGCGAGGCGCTGATCGCGCGCGCATGAGATCAGACGTAATC GCGCCGCTCTTAGACGCGCTGTCCGATCAGATGCACCGTGTTTCAATCGACAGCTTCCAACCGGACCCGAGCCTATGCG GCTCAAGCGCGCGTGGGCTACTGAAACGATATCCAAGGATTTCTGACCTGCGCTCTATCCGATATTGCTGAGGCGG ACTGACGGTGGTGGTTATGCATCAGCGCAGCGGATGGCATCGCCACCCGACCGGTCACCTTCGACCGAAGACGCG CTCGACGAGATTGTGCGGTTCTTCGAGGCGCGGGTTTCCGCTTGCACGAGGCGGGGTCTGCCGACCGGCTCATCTCT

	<u>CGATCCGGGGATGGGATTTTCTTGAGCCCCGCACCGGAAACATCGCTGCACGTGCTGTGCAACCTTCAAAGGCTGAAGT</u> <u>CGGCGTTGGGGCTTCCGCTATTGGTCTCGGTGTCCGGGAAATCCTTCTTGGGCGCCACCGTTGGCCTTCTGTAAAGGATC</u> <u>TGGGTCCACGCGAGCCTTGGCGCGGAACTTCACGCGATCGGCAATGGCGGTGACTACGTCCGCACCCACGCGCCTGGAGAT</u> <u>CTGCGAAGCGCAATCACCTTCTCGGAAACCCCTCGCGAAATTTTCGCAGTCGCGGACGCCAGAGACCGAGGGTTAGATCATGC</u> <u>CTAGCATTACCTTCCGGCCGCGCTAGCGGACCTTGGTCAGGTTCCGCGAAGGTGGGCGCAGACATGCTGGGCTCGTC</u> <u>AGGATCAAACCTGCACTATGAGGCGCGGTTTCATACCGCGCCAGGGGAGCGAATGGACAGCGAGGAGCCTCCGAACGTTCC</u> <u>GGTCCGCTGTCTCGGGTGATATCGACGAGGTTGTGCGGCTGATGCACGACGCTGCGGCGTGGATGTTCGCGCAAGGGAACG</u> <u>CCCGCTGGGACGTGCGCGGATCGACCGGACATTGCGGGAGACCTTCGTCTGAGATCCGAGCTCTAGTCGCGAGTTG</u> <u>CAGCGACGGCATCGTCGGCTGTTGCACCTTGTGCGGCCGAGGATCCCGAGTTCTGGCCCCGACGCCCTCAAGGGGGAGGCCG</u> <u>CATATCTGCACAAGCTCGCGGTGCGACGGACACATGCGGGCCGGGTTGTCAGCTCCGCGCTGATCGAGGCTTGCCGCCAT</u> <u>GCCGCGGAAACGCAAGGGGTGCGCCAAGCTGCGGCTCGACTGCCACCCGAACTGCGTGGCCTATACGAGCGGCTCGGAT</u> <u>TCACCCACGTCGACACTTTCAATCCCGGCTGGGATCCAACCTTCATCGCAGAACGCCTAGAACTCGAAATCTAA</u>
<i>qacF</i>	<u>TTAGATGCCAGATTTGGCGTTGCGTATCTCACAGAAAATCGATAGCCGCAAGACTGTTTTTGGCAACTCATAGCCACTACA</u> <u>ATTTCTCCTTCATACCGTAGAGGAGATTGCGCGTGGAAGAACTGGATATTCTGGCTGTTTCAATCTTTGGCAGGTCATCG</u> <u>CAACTTCGCGACTGAAGTCTAGCCATGGATTACAGTTAGTTCCTTCCGTTGAGTTGTGGCTGGTCAAGGCTTGGCT</u> <u>TCTATTCTTGCTCTCGCGCTCAAGTCCATTCCGGTTCGGTATTGCTTACGCTGATGGGCTGGGCTTGGCATCTGCTGTTGT</u> <u>GGCAGCTATTGCTTGGATTTTCCATGGCCAAAACTAGACTTCTGGGCGTTCATTGGCATGGGACTTATCGTCAGTGGCGT</u> <u>CGCCGTTCTAAACCTGCTATCCAAGGTCAGCGCACATTGACCGGGTTGGCATCTAACAATTCAAGCCGACGCGCGCTT</u> <u>CGCGGCGCGGCTTAATTCAGGCG</u>
<i>qacG</i>	<u>TTAGATGCTTTGCTGTGCGCACAAATTTCCGGCCAGCAACAAGACTGTTTTTCTTAAATCGAACCTAAAAATTTCTTCGCG</u> <u>GAACTCCATGGAGAAATATTTTGAAAAATTTGGTATTCTGGCTACGGCCATTATTTCTGAGGCTTACGCTTTCGCG</u> <u>TCAAGTCTAGTGAGGGCTTTACTAGGTTAGTACCGTCTTTATCGTCGTAGCGGGATACGCTGCTGCTTTTATTCTCTGTC</u> <u>GCTGACACTCAAATCGATTCTGTGCAATCGCCTACGCAGTTTGGTCGGGCTCGGGATCGTCTTGGTCACTGCGATTGC</u> <u>ATGGGTTTTGTCATGGTCAAAAAGTATGTTGGGATTGTTGGTGTGCGGCTTCATTATCAGCGCGCTTGCTGCTGCTCAA</u> <u>CTTGCTATCTAAGGCAAGGTTCCTAAACGGTTCGATCTAACCATTCCGTCGAGAGGGACCGCCACAAGCTGCGCTT</u> <u>GCGGGTTCCCTTCGCGGCTTCGCCGTACGGCGGCCCTCACGTCAAACG</u>
<i>qacH</i>	<u>TTAGATGCCAGATTTGGCGTTGCGTATGCTCACAGAAAATCGACAGCCGCAAGACTGTTTTTGGCAACTCATAGCCACCA</u> <u>CTATTATCCTTCATACCGTAGAGGAGATTGCACGTGAAGAACTGGCTCTTTCTGGCTATTGCAATATTGGTGAGGTCGT</u> <u>CGCAACTTCGCGACTGAAGTCCAGCCATGGATTACCCAAGTTAGTTCCCTCTGTTGTAGTTGTGGCTGGCTACGGGCTTGC</u> <u>GTTCTATTTCCTCTCTCGCAATCAAGTCCATCCCGGTGCGCATTGCTTATGCTGTTTGGGCTGGCCTCGGCATCGTACTT</u> <u>GTGGCAGCTATCGCTTGGATCTTCCATGGCCAGAACTAGACTTGTGGGCGTTTCGTTGGCATGGGACTTATCGTTAGTGGC</u> <u>GTCCGCGTTCTAAATCTGCTATCCAAGGTCAGCGCACATTGATCGGGCTGGCATCTAACAATTCAAGCCGACGCGCG</u> <u>CTTCGCGGCGCGGCTTAATTCAGGTG</u>
<i>qacK</i>	<u>TTAGCATGTAATTAACCGAAAGTTGCGCACGAATAATTTTTTCTTCAAGACTACAATTTTAAGAGAAAAAGACACATA</u> <u>CTCCCTTCGAATCATATTGGAGGCGGATCATGAAAAGCTGGTTATTCTTACTATTTCGATTCTTGGAGAGGTAGTTGCAA</u> <u>CATCTGCATTAAAGTCCAGTGAAGGTTTTACGAAGCTCGTACCATCTTTCATCGTAATTGTTGGCTATGGAATTGCATTTT</u> <u>ATTTCTTTCATTGGTCTTGAAGTCTATTCTGTAGGGGTGGCCTATGCAGTTTGGTCTGGCCTTGGCGTAGATTAGTAC</u> <u>TGCTTTTGATGGGGGCTTTACGGGCAAAAGATTGATGCATGGGGTTTCGTGGGTATTAGTTTAATAGTTTGGCGTGTATT</u> <u>GGTTTTAAATTTGCTTTCTAAGGCAAGCGTTCATTAAGTGGCACTGGCATCTAACAATCGGCAGCAGGCGGACAGCCTAC</u> <u>ACTACCGCGTTTTTGTGTTACTCGCTGCGCTCAAACATTAAACAAAAACCGCTCCGTTACGGCTGCGGCTGTGCGCGGCG</u>
<i>qacL</i>	<u>TTGGGCGTCTCAATACTGAGGATACCCGAAATGCCTGGATCTTCTGACCGCAGCGATTATTAGTGAGGTTCATCGGCA</u> <u>CGACTCGGCTTGAAGGCATCGGAAGGTTTCTCGCGTCTATGGCCTCAGTTATTGTCAACATTGGCTACGCGTACGCGCTTCT</u> <u>ACTTCTCTCACTACGCTCAAAAACAATTCCAGTTGGGGTGGCCTACGCAATCTGGTCCGGAATTGGCATCGTTCTAATTG</u> <u>CATTGGTTGCGTGGGTTCTCTATGGGCAAGCTCTTGATCTTCCGGCAATCATAGGCATGTCGCTCATCGTGGCTGGCGTTG</u> <u>TGTTCTCAATCTGTTTTCCAAGTCCGTCTCTCACTCATGAACCGCCCAACCCATCATCCACCGACCTGCGCAAAAAAGC</u> <u>CGCGCAGTCCGGTGAATTCAAACG</u>
<i>qacM</i>	<u>TTAGATGCCAGTGGTAGTTCCCGTAGGCGCACAGCTTTAGAGACAATACAGGCCTGCCGATTTTGAGATACAAGCCACAT</u> <u>AATTGGCGCGCCATTATTTGGAGTGAACCTATGAAAGCTTGGATCTACTTTCGCGTCGCGCATCAAGCCGCAAGTGGTCGC</u> <u>AACTTCAGCGCTCAAATCGAGTGAAGGATTACCAAACTTGCCCCGTCTGCGGTAGTTGTCATCAGCTACGGTGTAGCTTT</u> <u>CTATTTTTTGTGCTCGTCTTGAAGACCGTTCCAGTCGGCGTTGCCATCGCTGTTTGGTCTGGCCTCGGCATCGTGTGATC</u> <u>GCAGCAGTTGCGTGGCTTTCTATGGACAAAAAGCTCGACACATGGGCCCTTCGTTGGCATGGGACTGATAGTCCGGAAGT</u> <u>AGCGGTTCTCAACGTACTCTCCAAAACGAGCGCCCACTGATCCGGTGCTGGCATCTAACAGTTCATTCAAGCCGATACCG</u> <u>CTTCGCGGCACGGCTTAACCTATTG</u>
<i>qnrVC1</i>	<u>TTATGTGCTTTCTCTAAAAACAAGCCAGATTCACTGAAACTTTCTTCTGGCTGGCCGCATCGGTGCTTTCGAATTAGCCACCT</u> <u>TTAAAATGCCGTTTTGATGCTTATTTTGGCTAAAAACGGGGTGTTTAAGTTTCTGTTTTTATTGGTTTTGTTTTTGTGAGA</u> <u>ACTTTCAGGTAATGATAGTCTTCAAAATCAAAATGTTTTTGGAGCCACAGCATGGAAAAATCAAAGCAATTATATAATCA</u> <u>AGTGAATCTCTACATCAGGACTTGCAAGAACATATCTTTAGCAATTGTACTTTTATACATTGTAATTTAAGCGCTCAAA</u> <u>CCTCCGAGATACACAGTTCATTAAGTACTTTCATAGAGCAGGGGGCAATTGGAAGGGTGCGATTTTCTTATGTCTGATCT</u> <u>TCGAGATGCTTCATTTAAAAAGTGTACGCTTTCAGTTTCCCATTTTAAAGGGGGCAAAATGCTTTTGGATTGAAGTGAAGAGA</u> <u>TGTGATCTTAAAGGAGCAAAATTTAGTCAAGTTAGTTTGTAAATCAGGTTTCGAATAAAATGTACTTTTGTCTGCATA</u> <u>CATAACAGGTTGTAACCTATCCTATGCCAATTTTGAGCAGCAGCTTATTGAAAAATGTGACCTGTTCGAAATAGATTGGAT</u> <u>TGGTGCAATCTTCGAGGCGCTTCATTTAAAGAATCAGATTAAAGCCGTGGTGTTTTTTCGGAAGACTGCTGGGAACAGTT</u> <u>TAGAGTACAAGGCTGTGATTTAAGCCATTAGAGCTTTATGGTTTATAGATCTTCGAAAGATTGATCTTACGGGTGTAATAAAT</u> <u>ATGCTCGTGGCAACAGGAACAGTTACTGGAGCAATTAGGGGTAATCATTGTTCCCTGACTAAGCGCAAGGATCTGGCTACGC</u> <u>ACATAACAAACGCTTTAAGACGGAATTCGCAACGTTTGGCGGTTTTAGTTTGAATTGGCTTTTGTATTTACGGTGAATAAT</u> <u>TGAGTGTGTGGTAGCGTTGCTCACCCTTAAGCGGGCG</u>
<i>qnrVC6</i>	<u>TTATGTGCTTTCTCTAAAACTCACAGGTTCAACAAAACTTTTCTAGCTGGCCGCATCGCTTATTTGAATTAGCACCTT</u> <u>TTAAAATGCCATTTTATGCTTATCTTGGCTAAAAACGGGGTGTTTAAGTGTCTGTTTTATTTGGTTTTGTTTTTGTGACA</u> <u>ACTTTCAGGTAATGGTAGTCTTCAAAATCAAATGTTTTTGGAGCTACAGCATGGAAAAATCAAAGCAATTATATAATCA</u> <u>AGTGAATCTCTACATCAGGACTTGCAAGAACATATCTTTAGCAATTGTACTTTTATACATTGTAATTTAAGCGCTCAAA</u> <u>CCTTCGAGATACACAGTTCATTAAGTACTTTCATAGAGCAGGGGGCACTGGAAGGGTGCGATTTTCTTATGTCTGATCT</u> <u>TCGAGATGCTTCATTTAAAGATTGTACGCTTTCAAATGTCCCATTTTAAAGGGGGCAAAATGCTTTTGGTATTGACTGAGAGA</u> <u>TGTGATCTTAAAGGGGCAAAATTTAGCCAAGTTAGTTTTGTAATCAGGTTTCGAATAAAATGTACTTTTGTCTGCGATA</u> <u>CATAACAGGTTGTAACCTATGCCAATTTTGAGCAGCAGCTTATTGAAAAATGTGACCTGTTCGAAAATAGATTGGAT</u> <u>TGGTGCAAACTTCGAGGCGCTTCATTTAAAGAAATCAGATTTAAAGTCCGTGGCGTTTTTTCAGAGAGCTTGGGAACAGTT</u> <u>TAGAGTACAAGGCTGTGATTTAAGTCAATTCAGAGCTTTATGGTTTATAGATCTTCGAAAGATTGATCTTACAGGTTGAAAAAT</u> <u>ATGCTCGTGGCAACAGGAGCAGTTACTGGAGCAATTAGGGGTAATCATTGTTCCCTGACTAAGCGCAAGGATCTCGGTACGC</u> <u>ACATAACAAACGCTTTAAGACAGATTTCGCAACGCTGGGCATTTTCGGTTTGTGTTTGAATTTAGTGTTTACGGCACAAATGGT</u> <u>TTAGTTGGGTGGCATGTTGCTCACTACTTAACCGGGCG</u>
<i>sul4</i>	<u>TTAGCTGACCCCTTCGGGCGGAGGAGAAAAATGTCATCAATTTATAATAAACTAAAAGTGGATTTTGTTCGGATTGTGGA</u> <u>AATTGTAAGAAAGACAGCGTTTTTCTCCAGTTTTGAAATTGGGCGTAAACCCACTTTTAAATGGGGCGCGCGCTCATCG</u> <u>ACATCGACATCCTTTCTATGACAACATGATCATGAACGACGATATCTGGCTATTCCTCATCCCTTCGTCGATGAACGTG</u> <u>CTTTTGTCTGGCACCCCTGGCTGACATTGCGCCGATTACGAACATCCCGAGCCCAAAAGTCTGTAGCCCCAAATGCTCG</u> <u>CTGACGATCCTCATCCGTAGATGAGGCCACACGGCCGTTTACC GTTTACC GGATCAACCAACTTCATGGGCATTA</u> <u>CCCCACCTTAACCTCCCTTAAATGGGAGGGAACATCTCCCTCTCCGGTGGGAGAGGCTGGGAGAGGGTGA</u> <u>AAAAATTTCAAGGAAGTCTATTGATGTCAACCACACTAACAGCTTCAAAATGGGGTGAACGCACCTACATCATGGGCA</u>

TCCTCAACGTCACCTCCAGACAGCTTTTCTGGAGATGGCGTTATGGTTGAAGAAGATGTCATCGCCAAAGCGGTAGCCAG
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TTGCCGTCG

Supplementary Table 3. Antibiotic discs used in this study.

Reference	Antibiotic (Ab.)	Ab. content (µg)
CT0026B	Kanamycin (K)	30
CT1897B	Streptomycin (S)	300
CT0024B	Gentamicin (CN)	10
CT0056B	Tobramycin (TOB)	10
CT0107B	Amikacin (AK)	30
CT0545B	Apramycin (APR)	15
CT0033B	Neomycin (N)	30
CT0003B	Ampicillin (AMP)	10
CT0623B	Ciprofloxacin (CIP)	1
68042	Amoxycillin (AMO)	20
66178	Amoxycillin Clavulanic Acid (AMC)	20/10
CT0149B	Cefaclor (CEC)	30
CT0166B	Cefotaxime (CTX)	30
CT0119B	Cefoxitin (FOX)	30
CT0412B	Ceftazidime (CAZ)	30
CT0455B	Imipenem (IPM)	10
CT0774B	Meropenem (MEM)	10
CT1761B	Ertapenem (ETP)	10
CT0264B	Aztreonam (ATM)	30

Supplementary Table 4. Oligos used in this study.

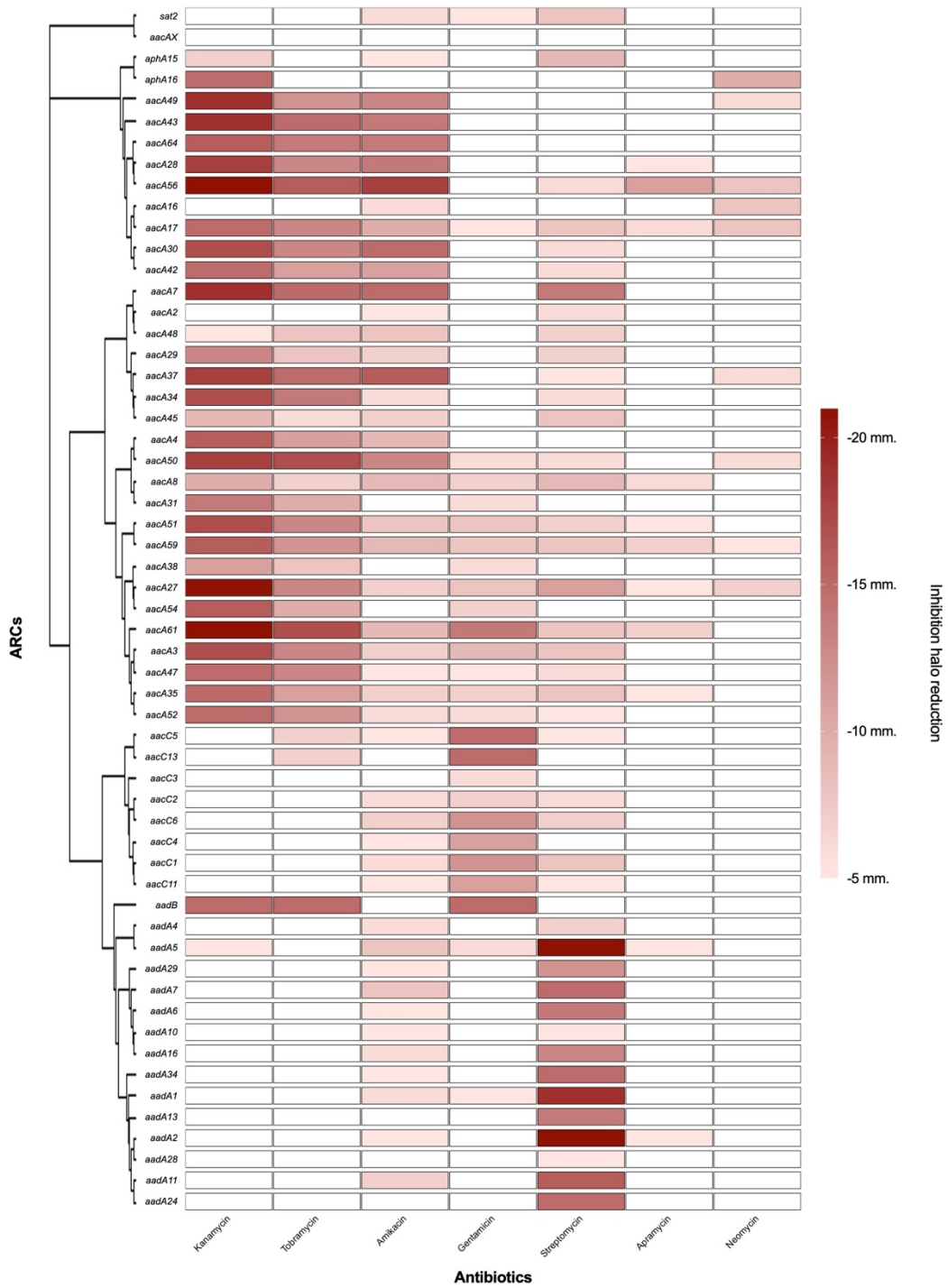
Oligo	Sequence 5'→3'	Description
Int R bb	CTTTGTTTTAGGGCGACTGC	plasmid linearisation
GFP F bb	TTAGGCGTCGACGCTGCA	plasmid linearisation
gBlock F	GCAGTCGCCCTAAAACAAAG	ARC amplification
gBlock R	GCTGCAGCGTCGACGCCTAA	ARC amplification
Int F	AACGCAATTACAGAAATG CCTCGACTTCGC	Sequencing
GFP R	AAAGCGCTGTCTAGACTATT	Sequencing
GFP 2.0 R	CTCGATTCTATTAACAAGGG	Sequencing

Supplementary Table 5. Antimicrobial compounds used in this study.

Reference	Trader	Antimicrobial
T7883-5G	Sigma Aldrich	Trimethoprim
K4000-5G	Sigma Aldrich	Kanamycin sulfate
S6501-25G	Sigma Aldrich	Streptomycin sulfate salt
G1914-5G	Sigma Aldrich	Gentamicin sulfate
PHR1079-1G	Sigma Aldrich	Tobramycin
A1774-1G	Sigma Aldrich	Amikacin
A2024-1G	Sigma Aldrich	Apramycin sulfate salt
A8523-5G	Sigma Aldrich	Amoxicillin
C6895-1G	Sigma Aldrich	Cefaclor
CDS020667-50MG	Sigma Aldrich	Ceftazidime
901967-H	MSD	INVANZ (Ertapenem)
PZ0038-25MG	Sigma Aldrich	Aztreonam
P5396-1G	Sigma Aldrich	Phosphomycin disodium salt
E5389-1G	Sigma Aldrich	Erythromycin
R3501-1G	Sigma Aldrich	Rifampicin
C0378-25G	Sigma Aldrich	Chloramphenicol
B6295-100G	Sigma Aldrich	Benzalkonium chloride
282227-1G	Sigma Aldrich	Chlorhexidine
H6269-100G	Sigma Aldrich	CTAB (Hexadecyltrimethylammonium bromide)
S7507-10G	Sigma Aldrich	Sulfamethoxazole

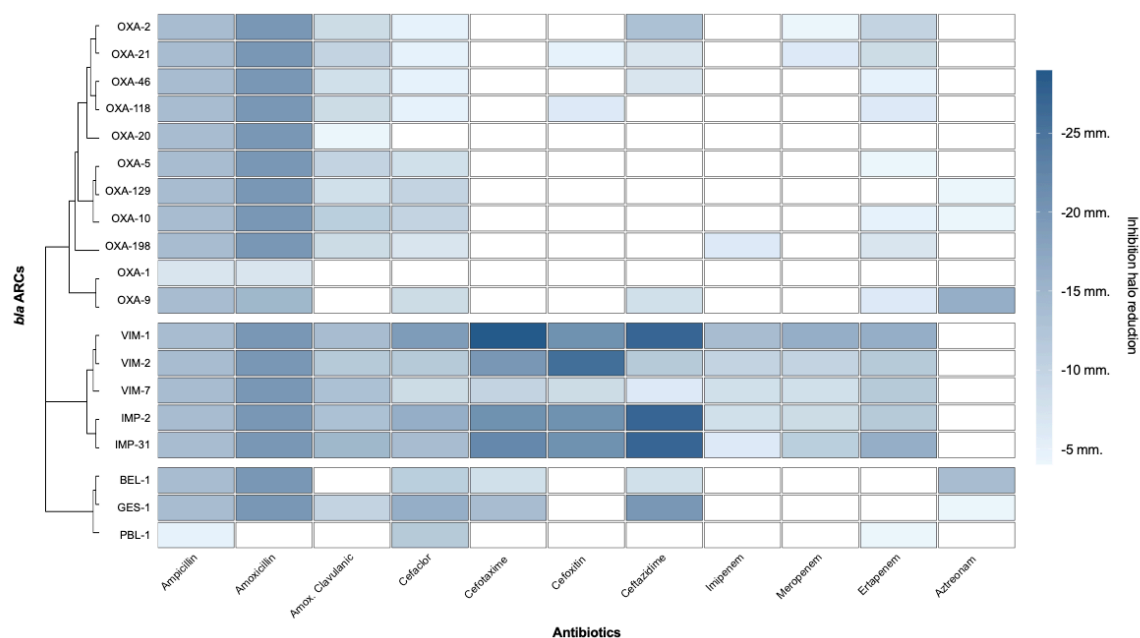
Supplementary Figure 1. Resistance characterisation of *aa* ARCs by agar diffusion test.

Antimicrobial resistance to several aminoglycosides is shown as a reduction in growth inhibition halo (mm) in comparison with the parental strain in the presence of these antibiotic discs. Dark red correlates with higher resistance (smaller inhibition halo), while lighter red denotes lower resistance. Blank cells represent a variation in inhibition halo ≤ 5 mm (as observed for control antibiotic discs of ampicillin and ciprofloxacin). A phylogenetic tree showing sequence homology between the encoded proteins is shown in the left side of the graph.



Supplementary Figure 2. Resistance characterisation of *bla* ARCs by agar diffusion test.

Antimicrobial resistance to several beta-lactams is shown as reduction in growth inhibition halo (mm) in comparison with the parental strain in the presence of these antibiotic discs. Dark blue correlates with higher resistance (inhibition halo decrease), while light blue denotes lower resistance. Blank cells represent a variation in inhibition halo ≤ 4 mm (as observed for control antibiotic discs of kanamycin and ciprofloxacin). A phylogenetic tree showing sequence homology between the encoded proteins is shown in the left side of the graph.



Supplementary Figure 3. Schematic representation of the cloning region in pMBA derivatives. Each ARC was cloned in its native environment in the first position of the array (integron attachment site or *attI* site) and followed by a GFP gene. The primers used both for backbone and ARCs amplifications are represented in orange.

