



```
>NC_009964
GCUUGUUUUGCAUUUG-----CAAAGCCCAAGGUGCUAAAUCCAGCAAGCGUUUUUAGCUUGGAAGAUAGAAGAAGCGU--UAAACCCCUUCUUAUGAAGAAAGGGUUUUUA
>NC_009725
GUUJGUUUUGCCGGGAAGGCAAAGGUGCAAAGGUJGUAAAUCCAGCAAGCGAUUUCACAGCUUGGAAGAUAGAAGAAAGAGA--AAAGCUCCUUCUUAUGAAGAAAGGGGCUUUUUU
#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
..(((((((.....))))))(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
..(((((((.....))))))(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
..(((((((.....))))))(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
..(((((((.....))))))(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
..(((((((.....))))))(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
```

```
#yxD
#The following shows an alignment in 5'-UTR of yxD and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
UUGGACUGUGACCGAGAGAAAAACAUAGCAGCUUGGUGUUUAGUACACACGUGGGUAAGCCAGGAGUUUCUGCUCUUU--UCGAGAGCGUUCUCCU-GGGUUUUUUUUUUUGCU
>NC_014479
UUGGACUGUGACCGAGAGAAAAACAUAGCAGCCCGGCGUUUAGUACACACGUGGGUAAGCCAGGAGUUUCUGCUCUUU--GCGAGAGCGUACUCCU-GGGUUUUUUUUUGUU----
>NC_009725
UUGGUCUG-GACCGAGAGAAAAACACACAGCAGGUUC-CUGCUGUGACACACGUGGGUAAGCCCGGAGUUUCUGCUCUUUUAUAGAAGAGUGCUCUCC-GGGUUUUUUUGAU----
>NC_014551
UUGGUCUG-GACCGAGAGAAAAACACACAGCAGGUUU-UUGCUGUGACACACGUGGGUAAGCCCGGAGUUUCUGCUCUUUUAUAGAAGAGUGCUCUCCCGGGCUUUUUUGAU----
>NC_006270
CUGGUCUG-GUCCGAGAGAAAAACAUAGCGGAGUA-JCGUUUAGACACGUGGGUAAGCCAGGAGUUUUGCUCUUAU-CAAAGAGCUUCUCUGGGCUUUUUUACUUUUU
```

```
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
..(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
```

```
#ileS
#The following shows an alignment in 5'-UTR of ileS and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_011658
UACGUUGCUAAGUGCUAUUAGUGAAGA-GCUAAUAGAA-UUAGGGUGGUUUCGCGGGUAA-CCCGUCCUUAUUUAUAGGGACGGGUUU-UUUGUGUGUUCUUA-AAAACAUUCAA
>NC_005957
UACGUUGCUAAGUGCUAUUAGUGAAGA-ACUAAUAGAA-UUAGGGUGGUUUCGCGGGUAG-CCCGUCCUACUUUAUAGGGACGGUUUU-UUUGUGUGUUCUUA-AAAACAUUCAA
>NC_008600
UACGUUGCUAAGUGCUAUUAGCGAAGA-GCUAAUAGAA-UUAGGGUGGUUUCGCGGGUAA-CCCGUCCUACUUUAUAGGGACGGGUUU-UUUGUGUGUUCUUA-AAAACAUUCAA
>NC_011725
UACGUUGCUAAGUGCUAUUAGUAAAAUAGUAGAA-UUAGGGUGGUUUCGCGGGUAA-CCCGUCCUACUUUAUAGGGACGGGUUU-UUUGUGUGUUCUUA-AAAACAUUCAA
>NC_011772
UACGUUGCUAAGCGCUAUUAGUGAAGAA-GCUAAUAGAA-UUAGGGUGGUUUCGCGGGUAA-CCCGUCCUACUUUAUAGGGACGGGUUU-UUUGUGUGUUCUUA-AAAACAUUCAA
>NC_014019
UACGUUGCUGAGUCUUAUUGAUAACGGAUCAAUAGAACCCAGGUGUACCGCGGUUAACCCGUCUUAU-CAUAGGGACGGGUUCUUAUGUGUGUUCUUA-UAAC-UUUUAAA
```

```
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
```





















```

>NC_014335
CUAGAGCGGUUUUAACCUAUUUC - AUUAGGUUAAAACCGUCUUUUUGCUUUUACAGGGGAAAAA - CAUGUUGACGUUAGAAACGUGGGAAGAAAUAUGUUUUCAUUUUUCA
>NC_003909
CUAGAGCGGUUUUAACCUAUUUC - AUUAGGUUAAAACCGUCUUUUUGCUUUUUAUAGGGGAAAAACAUGUUGACGUUAGAAACGUGGGAAGAAAUAUGUUUUCAUUUUUCA
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
#odhB
#The following shows an alignment in 5'-UTR of odhB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_011725
UAACAAUGAAGGUUUUCUAGCUUGGCGAGAUUUCUGCCCAAGCCAGGCUAA - CAAUUGGAGAUUACCGAAGACAAAAGAAAGAAAACACACCGGUUAGGCCAAAUAAGGGG
>NC_014171
UAACAAUGAAGGUUUUCUAGCUUGGCGAGAUU - CUGCCCAAGUCCAGGCUAA - CAAUUGGAGAUUACCGAAGACAAAAGAAAGAAAACACACCGGUUAGGCCAAAUAAGGGG
>NC_003997
UAACAAUAAGAUAUUUCUAGCUUGGCGAGAUUUCUGCCCAAGGUCAGGCUAAAACAAUUGGAGAUUACCGAAGACAAAAGAAAGAAAACACACCGGUUAGGCCAAAUAAGGGG
>NC_003909
UAACAAUGAAGAUUUUCUAGCUUGGCGAGAUUUCUGCCCAAGGUCAGGCUAA - CAAUUGGAGAUUACCGAAGACAAAAGAAAGAAAACACACCGGUUAGGCCAAAUAAGGGG
>NC_011772
UAUAUAUGAAGGUUUUCUAGCUUGGCGAGAUUUCUGCCCAAGCCAGGCUAA - CAAUUGGAGAUUACCGAAGACAAAAGAAAGAAAACACACCGGUUAGGCCAAAUAAGGGG
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
#glyA
#The following shows an alignment in 5'-UTR of glyA and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_006274
UGUUGUCUGACUUAUC - AUAGAAGAAAAGAACCGAUUUUCGGUCUUUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
>NC_003909
UGUUGUCUGACUUAUU - AUAGAAGAAAAGAACCGAAAAUCGGUCUUUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
UGUUGUCUGACUUAUA - GUAGAAGAAAAGAACCGAUUUUCGGUCUUUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
>NC_009674
-----UAU--UAU - AGGAAAGAAAAGAACCGGACUUGG----UCUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
>NC_010184
UGUGGUCUGACUUAUA - AUAGAAGAAAAGAACCAAUUUUGGUCUUUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
>NC_012472
-UCUUUUUAUACUGUCUACUUGACAGGGAUAAGACC - AUUUUCGGUCUUUUUUUUUUUAUAGAAAGUCAUGUUGAAUGUAGUUGAAACAUAGAAAGGUUCGAAAAGAAUUAUC
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
..((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
#glgA

```



#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((-----))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....

#gabP  
#The following shows an alignment in 5'-UTR of gabP and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_009725  
GAC--GAGAAAAAUUGUCAUUUUUCACUAAUCUGCCUGUGGCAUU-UUAUUAUG-AAUAUAUACUUGCGGAAUAUUCAGCAUAA  
>NC\_003909  
AUCGGCAUUUACGGGAGAGAUUCCACCUAACUUUUCUUCUCCCGAAUUUUGAGUGGGGUUAUA-CUGCCCGUUAUUGCGGGCAA  
>NC\_005957  
AUCGGCAUUUACGGGCGAGUAGAUUCCGCCUAACUGCUUUUUCGCGUAAUUUGGAGUGGGGUUAUA-CUGCCCGUUAUUGCGGGCAA  
>NC\_006274  
AUCGGCAUUUACGGGCGAGUAGAUUCCGCCUAACUUUUCUUCGCGUAAUUUUGAGUGGGGUUAUA-CUGCCCGUUAUUGCGGGCAA  
>NC\_011658  
AUCGGCAUUUACGGGCGAGUAGAUUCCGCCUAACUUUUCUUCGCGUAAUUUUGAGUGGGGUUAUA-CUGCCCGUUAUUGCGGGCAA  
>NC\_012659  
AUCGGCAUUUACGGGCGAGUAGAUUCCGCCUAACUUUUCUUCGCGUAAUUUUGAGUGGGGUUAUA-CUGCCCGUUAUUGCGGGCAA

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....

#ribD  
#The following shows an alignment in 5'-UTR of ribD and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_009964  
--CUAAGCCCCGAA-----UUUUUUUAAAAUUUCGGGC-U-----UUUUUACGGU--AAUAACA--AAAGAGGGGGGAAACAAUGGAAGA  
>NC\_003909  
AACUUAUUUCUAGAAAAUCGUCUCCAAACCACCAAGGAUUA-AAAAUCCUUGGGUUUUUUUAUUUUUUGAGUGGAAUGACAGAUCA  
>NC\_006274  
AACUUAUUUCUAGAAAAUCAGUCCUCCAAAACCCCAAGGAUUAUUUUUUUAGGAGGAGGAGGUGAAGAAAAUGACAGAUCA  
>NC\_003997  
AACUUAUUUCUAGAAAAUCGUCUCCAAACCACCAAGGAUUAUUUUUUUUGGGUUUUUUUAGGAGGAGGUGAAGAAAAUGACAGAUCA  
>NC\_011658  
AACUUAUUUCUAGAAAAUCAGUCCUCCAAAACCCCAAGGAUUAUUUUUUUAGGAGGAGGAGGUGAAGAAAAUGACAGAUCA  
>NC\_011772  
AACUUAUUUCUAGAAAAUCGUCUCCAAACCACCAAGGAUUAUUUUUUUUGGGUUUUUUUAGGAGGAGGUGAAGAAAAUGACAGAUCA

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....  
.....(((((((.....))))))....(((((((.....))))))....(((((((.....))))))....



```
-----UAUUAAGGAGGCGUCUCAAAGAGUCGCGUAAGCU-AUAAACUUAUAAAAUAGAAAGCUAACUGUAGAAAGUUGGCUAAUUAAAAAGAAAGCUAGGAG
>NC_003909
CUCGAUUCUAUAAAAAGCGGCUCAUUCAAAAGAGCCGGUAAGCUUUAACCAUAAAAUUAAGAAAGCUAGCUCGUAAGAAAGUUGGCUAAUUAAAAAGAAAGCUAGGAG
>NC_011725
CUGGAUUCUAUAAAAAGCGGCUUUCAGGAGUCGCGUAAGCU---AAACUUAUAAAAUUAAGAAAGCUAAUCUCUGAUAGAGGCUAAUUAAAAAGAAAGCUAGGAG
>NC_011772
CUAGAUUCUAUAAAAAGCGGCUUUCAAAAGAGUCGCGUAAGCU---AAACUUAUAAAAUUAAGAAAGCUAAUCUCUUAAGAAAGCUGGCUAAUUAAAAAGAAAGCUAGGAG
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```
.....((((((((.....))))))....((((((((.....))))))....((((((((.....))))))....
.....((((((((.....))))))....((((((((.....))))))....((((((((.....))))))....
.....((((((((.....))))))....((((((((.....))))))....((((((((.....))))))....
```

#nadD

#The following shows an alignment in 5'-UTR of nadD and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_004722
GACUAGCAUGCGCUUUUUUAUCGUUUUAUGCGUAUUGAUAGAGAGCGAAACCAAUUGACUUUUUAUUAUAGCAA-CUCUCUUCUUAUUCUAAACCGGAGAGUUGCUGUU
>NC_011772
GAUJAGCAUGCGCUUUUUUAUCGUUUAUGAUAGAGAGCGAAACCAAUUGACUUUUUAUUAUAGCAA-CUCUCUUCUUAUUCUAAACCAAGGAGAGUUGCUGUU
>NC_012581
AAUJAGCAUACGCUUUUUUAUCACUA----GUAUUGGUGUAGAGAUUCGAAACCAAUUGACUUUUUAUUAACAGUAAACUCUCUGGAUGGAAUUAAGAGAGUUGCUGUU
>NC_011658
AAUJAGCAUUGCUUUUUUAUCACUA---GCAUUGGUGUAGAGAUUCGAAACCAAUUGACUUUUUAUUAACAGUAAACUCUCUGGAUGGAAUUAAGAGAGUUGCUGUU
>NC_003909
GAUJAGCAUGCGCUUUUUUAUCGUUUAUGAUAGAGAGCGAAACCAAUUGACUUUUUAUUAUAGCAA-CUCUCUUCUUGUAGGAUUAAGAGAGUUGCUGUU
>NC_010184
GAUUAUCGUGAGUUAUUC-GUAUUGGAGCGUUGAU-AUGUAGAAAGCGAAACCAAUUGACUUUUUAUUAACAGUGGGCUCUCUGAAUUUGAUUGGGGAGAGUUGCUGUU
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```
..((((.....)))((((.....)))).....((((((((.....))))))....((((((((.....))))))....
.....((((((((.....))))))....((((((((.....))))))....((((((((.....))))))....
.....((((((((.....))))))....((((((((.....))))))....((((((((.....))))))....
```

#pel

#The following shows an alignment in 5'-UTR of pel and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_000964
----AGCAAGGAAAAACC-AAAAGGCCAA-UGUCGGCCUUUUGG--UUUUUUUGC--GUCUUUGCGGUGGG-AUUUUGCAGAAUCCCGCAUAGGAUAGCGGAACAUUUUCGGUUCU
>NC_014479
----UGCAGGGAUUAJAAACCCAAAAGGCCAA-CUUCGGCUUUUUGGGUUUUUUUGC--GUCUUUGCGGUGUAGUUGCAGAAUUGCCGCAUUAAGAUAGCGGAACAUUUUCGGUUCU
>NC_009725
----GCU-GAACAGAUCCCAAGGGU----UUUUGGUCUUUGGGAUUUUUUUGC--GUUUCCGCAUAAA-----ACCGAAAGGCACAUU-----CUGUACAUUUUCGGUGCU
>NC_014551
----GCU-GAACAGAUCCCAAGGGU----UUUUGGUCUUUGGGAUUUUUUGC--GGUUCGCAUAAA-----ACCGAAAGACACUUU-----CAGUACAUUUUCGGUGCU
>NC_006270
UGCUAUUUUCAGAAAAAUUAAGAGUCUGUUUUUUUAUUCGUUGAUAAAAAUGAACAGGCAUUUUGCAUAAAAUUUUGAAAAUUGGUGUCACAAAAAUJAGGAGGAAAAAUJAGUUUGUUU
```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```
.....((((((((.....))))))....((((((((.....))))))....
.....((((((((.....))))))....((((((((.....))))))....
```



----.(((((((.....)))))))))--.....(((((((.....)))))))))....

#ipk  
#The following shows an alignment in 5'-UTR of ipk and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_012581  
ACUUUCUAUGCUACGGUAGCCGAGGAUUAUCCUGGCUUUUUGUACUAUAAAAGGUGCAUCAUUUUACUAUAAAGUAGUUUCAUUCUGAAUGCUUUUC  
>NC\_006274  
ACUUUCUAUGCUACGGUAGCCGAGGAUUAUCCUGGCUUUUUGUACUAUAAAAGGUGCAUCAUUUUACUAUAAAGUAGUUUCAUUCUGAAUGCUUUUC  
>NC\_011969  
ACUUUCUAUGCUACGGUAGCCGAGGAGUUAUCCUGGCUUUUUGUACUAUAAAAGGUGCAUCAUUUUACUAUAAAGUAGUUUCAUUCUGAAUGCUUUUC  
>NC\_004722  
ACUUUCUAUGCUACGGUAGCCGAGGAGACUAUCCUGGCUUUUUGUACUAUAAAAGGUGCAUCAUUUUACUAUAAAGUAGUUUCAUUCUGAAUGCUUUUC  
>NC\_010184  
ACUUUCUAUGCUACGGUAGCCGAGGAGAUUCCUGGCUUUUUGCACGCUAAAAGGUGCAUCAUUUGACUAUAAAGUAGUUUCAUUCUGAAUGCUUUUC  
>NC\_009674  
A-UUCCUAUGCGGUAGCCGAGGUAUUAUCCUGGCUUUUUGCACGCCCAAAGGUGCAUCAUUUUUGCAUAAAGUAGUUUCAUUCUGAAUGCUUUUC

#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....(((((((.....))))))))).....(((((((.....)))))).....(((((((.....)))))).....  
.....(((((((.....))))))))).....(((((((.....)))))).....(((((((.....)))))).....  
.....(((((((.....))))))))).....(((((((.....)))))).....(((((((.....)))))).....  
.....(((((((.....))))))))).....(((((((.....)))))).....(((((((.....)))))).....

#serS  
#The following shows an alignment in 5'-UTR of serS and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_002570  
CCGGUUC- --UGCCGUUAUCCAGAU- -GAGUGGUCAGCGGU- ----AUAGCU- --GGACAAGGGUGGCAACGCGGGU- -GCUCUCGUCUUUUUAG- GGAUG  
>NC\_014479  
ACGGGAUAA- ---CCGUUAUGUGUG- -AAAGUGGAAAAUAGUCUUU- GGUUUUUUAUCAGGGUGGCAACGCGGAGA- -GCUCUCGUCUUUUU- ---GGGGAUG  
>NC\_000964  
ACGGGAUAA- ---CCGUUAUGUUUG- -AAAGUGGAAAAACGAGUCUUU- GAUUUUUUUAUCAGGGUGGCAACGCGGAGA- -GCUCUCGUCUUUUU- ---GGGGAUG  
>NC\_009725  
ACGGGAAAA- ---CCGUUAUGUGUU- -AAAGCGGGAAGCAAGUGUG- -AGCUUUUUUAUCAGGGUGGCAACGCGGAGA- -GCUCUCGUCUUUUU- ---GGGGAUG  
>NC\_015634  
ACGGGAAAAAAA- CCCGUUAUCCUUAUC- AAAGCGGAAAAAC- -----UCUUUUUUUAUUUGGGUGGCAACGCGGGUUAACUCUCGUCUUUUUC- AGGGCGGG  
>NC\_014019  
UCGGUUA- ---UCCGUUAUCUG- GUUUUAGAGGAAGGCUU- ----AUUUUAGUUUAUUAGGGUGGCAACGCGGGUUAACUCUCGUCUUUU- CAU- ---GGGGAUG

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
(((((((.....))))))))).....(((((((.....))))))))).....(((((((.....))))))))).....  
(((((((.....))))))))).....(((((((.....))))))))).....(((((((.....))))))))).....  
(((((((.....))))))))).....(((((((.....))))))))).....(((((((.....))))))))).....  
(((((((.....))))))))).....(((((((.....))))))))).....(((((((.....))))))))).....  
(((((((.....))))))))).....(((((((.....))))))))).....(((((((.....))))))))).....

#rho  
#The following shows an alignment in 5'-UTR of rho and the predicted ConSLOpt structures produced by RNAConSLOpt



```

>NC_011772
UGUUUAUUAUUGAAAGAAA - GAACCGUUAUUUUCUCUCUAUUAGUCAUUUAAAUAAGAGAGAAAGGAAACGGUUUUUUU - CUGUGAAAAAAUAUUUCAAAUUUG
>NC_012659
UGUUUAUUAUUGAAAGAAA - UAACCGUUUUUUCUCUCUAUUAGUCAUUUAAAUAAGAGAGAAAGGAAACGGUUUUUUUUCUGUGAAAAAAUAUUUCAAAUUUG
>NC_006274
UGUUUAUUAUUGAAAGAAA - UAACCGUUAUUUUCUCUCUAUUAGUCAUUUAAAUAAGAGAGAAAGGAAACGGUUUUUUU - CUGUGAAAAAAUAUUUCAAAUUUG
>NC_008600
UGUUUAUUAUUGAAAGAAAUAACCGUUAUUUUCUCUCUAUUAGUCAUUUAAAUAAGAGAGAAAGGAAACGGUUUUUUUUCUGUGAAAAAAUAUUUCAAAUUUG
UGUUUAUUAUUGAAAGAAAUAACCGUUAUUUUCUCUCUAUUAGUCAUUUAAAUAAGAGAGAAAGGAAACGGUUUUUUUUCUGUGAAAAAAUAUUUCAAAUUUG

```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

.....((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....
.....((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....

```

#prpD

#The following shows an alignment in 5' -UTR of prpD and the predicted ConSLOpt structures produced by RNAConSLOpt

```

>NC_012659
-AAACAACUGGGGAGUUUAGCACCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG
>NC_009674
AAACAACUGGGGAGUUUAGGUUUAAGGUUGCCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG
>NC_011658
-GAACAACUGGGGAGUUUAGCACCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG
>NC_010184
-AAACAACUGGGGAGUUUAGCGCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG
>NC_003909
-GAACAACUGGGGAGUUUAGCGCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG
>NC_006274
-AAACAACUGGGGAGUUUAGCGCCGCCAGAUUGGUGUUUGACCCACACCCCAUUAUAAUAACGAAUUUUCGACAGAAAGG

```

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

-((((((((.....(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....
-((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....
-((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....
-((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....
-((((((-(((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((.....

```

#rpsJ

#The following shows an alignment in 5' -UTR of rpsJ and the predicted ConSLOpt structures produced by RNAConSLOpt

```

>NC_000964
-UUUUAUAUAAGUC - UUGCAACAUUGCUCUAUUUCUGUAUAUAGGUUAUGUUAUGUCUGCGAUGAAGUGAGAGGUUGCUGACACACCCGGCCGCUUUGCCCAUUGGCAA - GGUG
>NC_006270
UAUUCAAUUUACC - UUGCAACAUGCCUAUAAUUUUGUAUAUAUAGUCAUGUUGUUAUAGUCAUGCGAUGAAGUCAACCCGGCCGCUUUGCCCAUUGGCAAAGGUGA
>NC_014019
UUUUUAACUUUUAUUGCAUAUAUGAACCCAUUUUUUAUAUAUAUAA - AAUUGUUGUUAUUAUAGUCAUGCGAUGAAGUGAUGAAGUCAACCCGGCCGCUUUGCCCAUUGGCAAAGGUGA
>NC_009725
UCUUUAUUAAUAAACC - UUGCAACAUUGCUCUAUUUUUUCUGUAUAUAUAGUUAUUGUUAUGUCAUGCGAUGAAGUCAACCCGGCCGCUUUGCCCAUUGGCAAAGGUGA
>NC_014639
-AUUUAUUUAGGUC - UUGCAACAUUGCUCUAUUUUUUAUAUAUAGUCAUGUUGUUAUAGUCAUGCGAUGAAGUCAACCCGGCCGCUUUGCCCAUUGGCAAAGGUGA
>NC_009848

```







ACCACUGAACGAGUGUCUUUUUAGCCGUAUAUAAUUAUCACUGAUGAAAUAGGAGUGUCAUUUGAUAAGAAAAAAGAAUUAUUAAAAAAUAUGAAUUUCAG

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))

#rpsS  
#The following shows an alignment in 5'-UTR of rpsS and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_006582  
GGUUGCCUGCGGCUUCACGACCGGUAACCGAUAUCCGGAAAGAGGAACAUCACUAGCCGUAGUUUAAAAAGGACCUUUCGUUGAUGGUAU  
>NC\_013791  
GGUUGCCUGCGGCUUCGUAAGAACCGGUAACACGAAAGGAGGUUUUCUACUGGUGUAGUUUAAAAAGGACCUUUCGUUGAUGAUCAU  
>NC\_006270  
GGUUGUC-UACGGUUAUAUC--GGACCGUAGUGCAAUCACGAAAGGAGGUUCCAAAUGCUCGCGAUUUAAAAAGGACCAUUUUGUCGAUGAUCAU  
>NC\_009848  
GGUUGUC-UACGGUUAUUUA--GGACCGUAGUUAUCACGAAAGGAGGUUCCACAAUGCUCGCGAUUUAAAAAGGACCAUUUUGUUGAUGAUCAU  
>NC\_014019  
GAUUGAGUAACGGUUAAC--GAACCGUAGGACAAUCACGAAAGGAGGUUUAUUUUGGUGCGCAUAAAAGGACCUUUUUGUAGGACCAU  
>NC\_002570  
GGUUGCCUGCGGCUUUAAGAAAGAACCGUGGCAACACGAAAGGAGGUACACACAAUGGUGUAGUUUAAAAAGGACCUUUUGUGAUGACCAC

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))

#ydfQ  
#The following shows an alignment in 5'-UTR of ydfQ and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_009725  
AGUAUCUAAAGAACAGUUACUGAAAAAGCGUAACUGUUUUUAUUU-----UUAAAGCAAACGUAACGAGGUGCUGAAUUAUCAAAGGAGGAUAUAAUUAUUAAGUAAUUAAG  
AGUAUCUAAAGAACAGUUACCGAAAGCGGUAACUGUUUUUUGGAAUUUUAAAGCUAUUUUGCGGGGUGCUCGCAAAAGCAAAAAGGAGGAUAUAAUUAUUAAGUAAUUAAGUAAUUAAGUAAUUAAG  
>NC\_009964  
AGUAUGUAAGAACAGUUUGCUGCUUGUAGUAACUGUUUUUUAUUUUAUUUUCG-GAAGCUUGACGAGGUACUCUGCAAAGCAAAAAGGAGGAUAUUAUUAUUAAGUAAUUAAGUAAUUAAGUAAUUAAG  
>NC\_014479  
AGUAUGUAAGAACAGUUUACUGGACGCGUAACUGUUUUUUGUUGUUGCAUUUUUGGAAUUUUGCAAGGUGCCUAGCAAAAAGGAGGAUAUUAUUAUUAAGUAAUUAAGUAAUUAAGUAAUUAAG

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))  
..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))..(((((((.....))))))

#alaS  
#The following shows an alignment in 5'-UTR of alaS and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_002570  
GU--UUGCUGCGUUAAGGCUU---AAAGUGAUGGAC--CUAUGU-----CCAAUUUAGGUGGUACCGGUGACUUCAGCUCGUCGCCUUUC-----









>NC\_013791  
CUGUUAAAAGGAAGCAAGUUCAGUUUGCUUCAAUUAGGGUGGCACACGGGUUAUACUCUGUCCUGAUG--UAGAUACAUCAGAGCGGGAGUUUUGUGUUU-----

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
((((--(((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....

#yda0  
#The following shows an alignment in 5'-UTR of yda0 and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_009964  
AGCGUUCGUGAGAGGAGAUAAAACUGUGUU-CGAUGUUUUGGCACAGGGGCAUCGUUCCUCUGUGU-UUUUUUGUUUGUUC--AUUUUUU-GAA  
>NC\_014479  
AGCGUUCGUGAGAGGAGAUAAAACUGUGUU-CGAUGUAUUGGCACAGGGGCAUCGUUCCUCUGUGU-UUUUUUGCUGUUC--AUUUUUUAGAA  
>NC\_009725  
AGCGUUCAGUAGAGGAGAUAAAACUGUGCA-CGA--UUUUGGCAGGGGCAUCGUUCCUCUGUGUCUUUUUGCUGUGCUGAAAUAAGGCA  
>NC\_014551  
AGCGUUCAGUAGAGGAGAUAAAACUGUGCA-CGA--UUUUGGCAGGGGCAUCGUUCCUCUGUGUCUUUUUGCUGUGCUGAAAUAUGGCA  
>NC\_006322  
AGCGUUAA-GAGAGGGGAGA--UAACUCGGAA-UAAAAUCCGAUUCGCCAGGGGCU-UUGCCUCUGCGUUUUUGU-----  
>NC\_009848  
AGCGUUAAAAGAGAGCAAGAC---CAACCUGUGAUAAAACAUAAGACACAGGGGCAUUUAUUGCCUCUGUGUCUUUUUGG-----

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....

#cbi0  
#The following shows an alignment in 5'-UTR of cbi0 and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_011773  
AAGGGCAGGACAGUUUUUCAAGAAACUGGUCUUGGCCUUUUUUUU---AAAUUAUUUUU-AGGCUUACUUGGCGAAGGAAAGGGUGCCUUGUUAU  
>NC\_003997  
AAGGGCAGGACAGUUUUUCAAGAAACUGGUCUUGGCCUUUUUUUU---AAAUUAUUUUU-AGGCUUACUUGGCGAAGGAAAGGGUGCCUUGUUAU  
>NC\_004722  
AAGGGCAGGACAGUUUUUCAAGAAACUGGUCUUGGCCUUUUUUUU---AAAUUAUUUUU-AGGCUUACUUGGCGAAGGAAAGGGUGCCUUCUUAU  
>NC\_011772  
AAGGGCAGGACAGUUUUUCAAGAAACUGGUCUUGGCCUUUUUUUU---AAAUUAUUUUU-AGGCGAGCUUGGCGAAGGAAAGGGUGCCUUCUUAU  
>NC\_010184  
AAGGGCAGGACAGUUUUUCAAGUAAACUGGUCUUGGCCUUUUUUUU---AAGUUAUUUUU-AGGCUUACUUGGCGAAGGAAAGGGUGCCUUGUUAU  
>NC\_009674  
AAGGGCAGGACAGUUUUUCAAGUAAACUGGUCUUGGCCUUUUUUUUUAUUUAUAGGAUGAGGCUAACUCGAAAAAAGAAAGGGUGCCUUAUUAU

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....

```

#pyrR
#The following shows an alignment in 5' -UTR of pyrR and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009725
GGAUAAACGGAUAGGACAGAAGAGAUACGCAUGUGUCUCCUGGAAAGGAAACCCUCAUGCUCUGGCAAGGAGGGUUUU- - - - -U-UUCUUCUUUAUAUACGAAUGGAGAGGUGU-
>NC_014551
GGAUAAACGGAUAGGACAGAAGAGAUACGUGUGUCUCCUGGAAAGGAAACCCUCAUGCUCUGGCAAGGAGGGUUUU- - - - -U-UUCUUCUUUAUAUACGAAUGGAGAGGUGU-
>NC_011725
GGUAAACGGUUUGAAAUACUUAAGGGUUAUGU- -GUACCCUUUUUU- -CAAAGUCCUCUGACACGCGUGAGAGGACUUUUUUU- -AUACCAUUACUCUCACGCAAGAAAAA- -GCUUGGA
>NC_011772
GGUAAACGGUUUGAAAUACUUAAGGGUUAUGCU- -GUACCCUUUUUU- -CAAAGUCCUCUGACACGCGUGAGAGGACUUUUUUU- -AUACCAUUACUCUCACGCAAGAAAAAAGGCUUGGA
>NC_003909
GGUAAACGGUUUGAAAUACUUAAGGGUUAUGCU- -AUACCCUUUUUU- -CAAAGUCCUCUGACACGCGUGAGAGGACUUUUUUUUAUACCAUUACUCUCACGCAAGAAAAA- -GCUUGGA
>NC_012659
GGUAAACGGUUUGAAAUACUUAAGGGUUAUGCU- -GUACCCUUUUUU- -CAAAGUCCUCUGACACGCGUGAGAGGACUUUUUUU- -AUACCAUUACUCUCACGCAAGAAAAA- -GCUUGGA

```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....

```

```

#purM
#The following shows an alignment in 5' -UTR of purM and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_012659
AAAAAAGCUUCUACUUCUUUU- -GAUGUAGAAGCUAGCUUCUUUUUAUAAAUGCCCGCUGGAGGGAAGAAUUUAAAAGACGAGGUGUAAAUA
>NC_003909
AAAAAAGCUUCUACUUCUUUUUAUGUAGAAGCUAGCUUCUUUUUA- -AAACGGCCCGCAGGAUAGGGAGAAUUUAAAAGACGAGGUGUAGAUA
>NC_011969
AAAAAAGCUUCUACUUCUUUU- -GAUGUAGAAGCUAGCUUCUUUUUA- -AAACGGCCCGCAGGAUAGGGAGAAUUUAAAAGACGAGGUGUAAAUA
>NC_006274
AAAAAAGCUUCUACUUCUUUU- -GAUGUAGAAGCUAGCUUCUUUUUA- -AAUAGCCCGCUGGAGGGAGAAUUUAAAAGACGAGGUGUAAAUA
>NC_011772
AAAAAAGCUUCUACUUCUUUU- -GAUGUAGAAGCUAGCUUCUUUUUA- -AAUAGCCCGCUGGAGGGAGAAUUUAAAAGACGAGGUGUAAAUA
>NC_011725
AGAAAAGCUUCUUCUUUU- -GAUGUAGGAGCUAGAUCCUUUUUA- -AAUAGCCCGCUGGAGGGAGAAUUUAAAAGACGAGGUGUAAAUA

```

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....
.....(((((((.....)))))).....(((((((.....)))))).....(((((((.....)))))).....

```

```

#lepA
#The following shows an alignment in 5' -UTR of lepA and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_014479
-----GUGCGUGAAAGAGAAAAG-- - - - - -GAGCCAGGUUAGACAGGGAACUUUUUCUUUU
>NC_012581
AAACGGAGGCGGUUUGUUUACAGAUUUUAAGACGACCGGUUUUUUAUUUAAAAGGUUGUCUUCUUUAUGUUUUGUUCGCAUAAGAUAGAUUUUGUAUUUGUAAGCAGC

```

```
>NC_005957
AAACGGAGGACGGUUGUUUACAGAUUUUUAAGACGGCCGUUUUUAAAAUUUGAAAAAGGUUGUCUUUAUGGUUUUCGAUAAGAUUAGAAUGAUUUUGUUAUGUAAAGCAGC
>NC_011658
AAACGGAGGACGGUUGUUUACAGGUUUUUAAGACGGCCGUUUUUAAAAUUUGAAAAAGGUUGUCUUUAUGGUUUUCGAUAAGAUUAAAUAGAAUGAUUUUUGUUAUGUAAAGCAGC
>NC_011725
ACAUGGGAGCGGUUUGUUUACUGGUUUUGUAAGACAGCCGUUUUUAAGAUUUGAAAAAGGUUGUCUUUAUGGUUUUUAAGAUUAGAAUGAUUAGAAUGAUUUUGUUAUCGUAAAGCAGC
>NC_011772
GCAUGGGAGAUGGUUUGUUUACUGAUUUUGUAAGACAAACCCGUUUUAAAAUUUGAAAAAGGUUGUCUUUAUGGUUUUUAAGAUUAGAAUGAUUAGAAUGAUUUUGUUAUCGUAAAGCAGC
```

```
#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((((((((((((((((.....((((.....((((((((((((((((((((.....((((.....((((((((((((((((((((.....))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
```

```
#yrvC
#The following shows an alignment in 5'-UTR of yrvC and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009725
CAGGUCUGUCCUCCGGAAGGCAGCCUGUUUUUUUAGGGCCGAUUUAAACCUUAAACCUUAAUAGCAUAUCGCUUACAUA-----AUCAAUCAUCAUGUAA
>NC_014511
CAGGUCUGUCCUCCGAGAGACAGCCUGUUUUUUUCAAGCUGCAUUGAAACCUUAAACCUUAAUAGCAUAUCGCUUACAUA-----AUCAAUCAUCAUGUAA
>NC_009964
CAGGUCUGUCCUCGACGGCAGCCUGUUUUUUUGAAGUUCAUUGAAACCUUAAAUAGCAUAUCGCUUACAUAUAAACAUUUAUUGGUUUUUAAAGUGUUUUUUGG
>NC_014479
CAGGUCUGUCCUUGCAGGGCAGCCUGUUUUUUGAAGUUUCGUGAACCUUAAAUAGCAUAUCGCUUACAUAUAAACAUUUAACACUUUAAUAAAGGUUUUUGUGA
```

```
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
```

```
#rpoB
#The following shows an alignment in 5'-UTR of rpoB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
UCUUGUAAAAGUAUUUUCUUUC-----UUUGGAA--GAAUUGCUUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAUAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
>NC_014479
UCUUGUAAAAGCAUUUUCUUUC-----UUUGAAAAGAAUUGCUUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
>NC_016047
UCUUGUAAAAGUAUUUUCUUUC-----UAUGAAAAGAAUUGCUUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAUAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
>NC_014639
UCUUGUAAAAGUAUUUUCUUUCUUUUUACUUAUUUAAAAGAAAUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
>NC_006270
UCUUGUAAAAGUAUUUUCUUUC-----UUUGAGGAAGAAUUGCUUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAUAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
>NC_014511
UCUUGUAAAAGUAUUUUCUUUC-----UGUAAGGGGAUGCUUUAUUCACACAUUAAACCGCAUGAUUUUGAGGGGUGAUAUCAGUIUGACAGGCAACUAGUUUCAGU AUGGACG
```

```
#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
.((((((((((((((((((((.....))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
```









```
#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
```

```
#yLxY
#The following shows an alignment in 5' -UTR of yLxY and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_006270
AAGCAACAGGAGCCUGGGUA---ACC CGGCUUUUUGUUUAAGCCGU---GAAAACGUCGGUUCUAUCUUGUUCACAUUUUUGUGGGAAAGGGAGAAU
>NC_014479
ACAUAAAAGGAGCCUGGGAG---ACC CGGCUUUUUAUUUGAAGCUUUUAAAAAGCGGGUUCUACCCUUCUCCUUAUAUUGAGGGUGAGGGGGG-ACA
>NC_009964
ACAUAAAA-GGAGCCUGGGAG---ACC CGGCUUUUUAUUUGAAGCUUUUCAAAGCGGGUUCUACCCUUCUCCUUAUAUUGAGGGUGAGGGGGGACA
>NC_009725
ACCUAACAGGAGCCUGGGAG---ACC CGGCUUUUUAUUUGAGAA---AGACAACGACGGUUCUACCCUUCUCCUUAUAUUGAGGGUGAGGGGG--AA
>NC_014511
ACCUAACAGGAGCCUGGGAG---ACC CGGCUUUUUAUUUGAGAA---AGACAACG-CGGGUUCUACCCUUCUCCUUAUAUUGAGGGUGAGGGGG--AA
>NC_009848
AAUUAUGAAGCCAGGUUCCAGGCUUUUCUUUCUUGC-----GCUAAACA--UAGUUCUAGCUUUUUCUCCCAUCAUAUUUUGGUAAAAGGGGA-GGG
```

```
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
```

```
#yxjB
#The following shows an alignment in 5' -UTR of yxjB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009725
UCAUUCGUUACAGAUAAUGAGAGGUAUAGAUAAUAGGUUAAACCUUCCAAUUU-----GGCGAGUUUUUUUUGUCUAGCCUUUUUCAUUUCAUCGGAUAAACGAAUGAUGAG
UCAUUCGUUACAGAUAAUGAGAGGUAUAGAUAAUAGGUUAAACCUUCCAAUUU-----GGUGAGGUUUUUUUGUUAUGCCUUUUUCAUUUCAUCAGAAUAAACGAAUGAUGAG
>NC_009964
UCAUUCGUUUAUAGAUAAUGACAGGUAACAAACUCCAGCCUGGCAUUUUUUGAGUAGCCUAGGCUUAGUUUUUUGUUAUUUUCAUUU-AUCUAAA-AAUGAAUGAUGAGGG
>NC_014479
UCAUUCGUUUAUAGAUAAUGACAGGUAUAGACAACUCCAGCCUGGCAUUUUUUGAGUAGCCUAGGCUUAGUUUUUUGUUAUUUUUUGUUAUUUUCAUUU-AUUGAAUGAUGAG
```

```
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
...(((.....)))...(((.....)))...(((.....)))...(((.....)))...(((.....)))
```

```
#pyrB
#The following shows an alignment in 5' -UTR of pyrB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
-----AACCUUUUAUUGAAGCCAGGCUUGGAAAGGUUUAUGAAGAGAAAGGAGCU-CAAU-GCUGCCUUCUUAUUUAACCAUACCCCGAGUCUAUCUU-AGACCGGGUUUUUUU
```



>NC\_014335  
UAUUUGAAUAGAAAAACGAGCAUAGCUUAGUUUAGUUUUUAGAAUUAUUGGGGAUUGGGGUUUAGAAUUUGGUCGGGUGGCGGAGCUUUAAGCU

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....

```
#comFA
#The following shows an alignment in 5'-UTR of comFA and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_012581
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
>NC_008600
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
>NC_006274
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
>NC_014335
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
>NC_011658
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
>NC_003909
GGUUAUCCGGCUUUUUGAGUUUJACGAGAUUUUAAGAAAAGGUUUUAAGUAAUAGCUGGGGGUGGUCUGAUCCGCGUGAAAGCAGUUACUAAUAGAAACUCCCUUCAGAUUUAC
```

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....  
.....((((((((((((((((((((.....)))))))))))))))).....((((((((((((((((((((.....)))))))))))))))).....

```
#uups
#The following shows an alignment in 5'-UTR of uups and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_000964
ACUUAUGUACAUAUAGUAAUAGUG-AAAAGACCCUCUCAUUUUACAGGGGGUUUUUU-UGUUAAUACU--GUU-GAUUACAUUGAUUUU- CAGCAGGGAUUGUA
>NC_012581
-----UAGCGAUACCUUCGCAAAUUAUGACCCUCU--UCUUAAGGGGGUCUUUUUUAACUUUUAAGGCAUACGUCUUGCGUGAGGGUAUGAAUGAUUUUAAA
>NC_003909
-----UAGCGAUACUUUCGCAAAUUAUGACCCUCU---UCUUAAGGGGGUCUUUUUUAACUUUUUUAAGGCAUACGUCUUGCGUGAGGGUAUGAAUGAUUUUAAA
>NC_014335
-----UAGCGAUACUUUCGCAAAUUAUGACCCUCU--UCUUAAGGGGGUCUUUUUUAACUUUUUUAAGGCAUACGUCUUGCGUGAGGGUAUGAAUGAUUUUAAA
>NC_011725
-----UAGCGAUACUUUCGCAAAUUAUGACCCUCU---UCUUAAGGGGGUCUUUUUUAACUUUUUUAAGGCAUACGUCUUGCGUGAGGGUAUGAAUGAUUUUAAA
>NC_011772
-----UAGCGAUACUUUCGCAAAUUAUGACCCUCU--UCUUAAGGGGGUCUUUUUUAACUUUUUUAAGGCAUACGUCUUGCGUGAGGGUAUGAAUGAUUUUAAA
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):





```

AUAG--UAGUAUUGUUUAUAAAAAGAGUAAGGUACCUUCAACAGAGUGGUUAACGAAAAUAAAGUUUCAUCUUUUUUUUUCAAA
>NC_006274
AUAGAGUAGCAUUGCUUAGAAAAAGAGUAUAAGUAGACUACCUUCAACAGAGUGGUUUUUAACGAGAAUAAAAGUUUCAUCUUUUUUUCAAA
>NC_011658
AUAGAGUAGUAUUGCUUAGAAAAAGAGUAUAAGUAGACUACCUUCAACAGAGUGGUUUUAAAGAGAAUAAAGGUUUUUAUUUUUUCAAA
>NC_003909
AUAGAGUAGUAUUGCUUAGAAAAAGAGUAUAAGUAGACUACCUUCAACAGAGUGGUUUUAAAGAAUAAAGGUUUUUAUUUUUUCAAA

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
.....((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((

#rbsR
#The following shows an alignment in 5' -UTR of rbsR and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_006270
CAUUGUUAUCUGUAUUCGCCCAUUAACGCCCCUUAUAUAUGUCUGAUUACCCAGCCCGGUUAAAAUUUCAGUGUUCAUC-CAUUUUUUUUUAUUGUGAUUUAAAUGGAUCGUGAUAAUC
>NC_007530
UCGJAAUUGAAAAAGCAUCGCCUUAUUGGCCAUUUUUUUU-----GAGUAUAACUUAAAAAGCUUUUUUCUUGA-GAAAUUGAUUGAC--GUAUUUCUAGAAAUACGGUUUAUUUA
>NC_012581
-----UGAAAAAGCAUCGCCUUAUUGGCCAUUUUUUU-----GAGUAUAACUUAAAAAGCUUUUUUCUUGA-GAAAUUGAUUGAC--GUAUUUCUAGAAAUACGGUUUAUUUA
>NC_006274
-----UGAAAAAGCAUCGCCUUAUUGGCCAUUUUUUU-----GAGUAUAACUUAAAAAGCUUUUUUCUUGA-GAAAUUGAUUGAC--GUAUUUCUAGAAAUACGGUUUAUUUA
>NC_011772
-----UGAAGAAGCAUCGCCUUAUUGGCCGUGCUUUUUU-----GAGUAUAACUUAAAAAGCUUUUUUAGUGA-GAAAUUGAUUGAC--GUAUUUUUAGAAAUACGGUUUAUUUA
>NC_011725
-----UGAAGGAGCAUCGUUUUUGGCCGUGCUUUUUU-----GAGUAUAACUUAAAAAGCUUUUUUAGUGA-GAAAUUGAUUGAC--GUAUUUUUAGAAAUACGGUUUAUUUA

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
-----((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
-----((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
-----((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((
-----((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((((

#panB
#The following shows an alignment in 5' -UTR of panB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_00964
CUUUAGA--AAGUGAAGAAUCCUUCUGUUAACGGAAGGUUUUUUUGCCUUGCAGAAAAACGGCAGAUCAUCUCCUCUA-AACAUGAGGGAGGAAAAACAUGAAAAACAAACUG
>NC_012581
UAACACACA--ACCCUUCUGCCCUUUUAUGGC--CAGAGGGGUUUUU--UAUAUGAUUCG--GCCAUCUCCUCUCUCUGUAU-AAAGGAGGAGUUUUUUGAAAAACAAAAACA
>NC_014335
UAACACACA--ACCCUUCUGCCCUUUUAUGGC--CAGAGGGGUUUUU--UAUAUGAUUCG--GCCAUCUCCUCUCUCUGAUUAAAAGGAGGAGUUUUUUGAAAAACAAAAACA
>NC_004722
-----CCCUUCUGCCCUUUUAUGGU--CAGAGGGGUUUUU--UAUAUGAUUCG--GCCAUCUCCUCUCUCUGAU-AAAAGGAGGAGUUUUUUGAAAAACAAAAACA
>NC_014171
UAACACACA--ACCCUUCUGCCCUUUUAUGGU--CAGAGGGGUUUUU--UAUAUGAUUCG--GCCAUCUCCUCUCUCUGAU-AAAAGGAGGAGUUUUUUGAAAAACAAAAACA
>NC_009674
UUACAAACACUACCCUUCUGCCCUUUUAUGGU--CAGAGGGGUUUUU--UAUAUGAUUCG--GCCAUCGCCUCUCUCUCAAUU-AAAAGGAGGAGUAAUUAUUUGAAAAACGAAAAACA

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

```
.....(--(((((((.....)))))).....((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
```

```
#thrS
#The following shows an alignment in 5'-UTR of thrS and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_000964
AGGUCC-GU-GUAUUGGCUUU-GCGGAAAAAAGGGUGGAACCACCAUGUCCGUUUUAUUCAC-CUCGUCCUUUCAUAGGGGGCGGGG--UUUUU-AUAUGCA-AAAA
>NC_012581
--GCAAUU--AACAAUAAGGUAAUUUGGAACCAAGGGUGGAACCACCA------AUUCACACUCGUCCUUUU-UACGGGAUGAGUUUUUUUUUUUUGAGAAAAA
>NC_004722
--GCAAUU--AACAAUUUAUUUGGAACCAAGGGUGGAACCACCA------AUUCACACUCGUCCUUUU-UACGGGAUGAGUUUUUUUUUUUUGAGAAAAA
>NC_010184
--GCAAUU--AACAAUAAGGUAAUUUGGAACCAAGGGUGGAACCACCA------AUUCACACUCGUCCUUUU-UACGGGAUGAGUUUUUUUUUUUUGAGAAAAA
>NC_011772
--GCAAUU--AACGAUCAUUUUUGGAACCAAGGGUGGAACCACCA------AUUCACACUCGUCCUUUU-UACGGGAUGAGUUUUUUUUUUUUGAGAAAAA
>NC_009674
--GCAAUU--AACAGUUUAUUUGGAACCAAGGGUGGAACCACCA------AUUCACACUCGUCCUUUU-AUGGGGAUGAGUUUUUUUUUUUUGAGAAAGAA
```

```
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
--(((((((.....))))).(((((((.....))))).(((((((.....)))))).
--(((((((.....))))).(((((((.....))))).(((((((.....)))))).
--(((((((.....))))).(((((((.....))))).(((((((.....)))))).
```

```
#proS
#The following shows an alignment in 5'-UTR of proS and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_003909
UUUCAA AAAAAGAGAGCAUGCACAAUUUUUGUGCAUGAAUCAGGGUGGUAACGCCGGCAAGCUCGGUCCUAUUUAGGGGCGGGGUUUUUUGAUUUUUAAGAGGAAAGACUGA
>NC_006274
UUUCAA AAAAAGAGAGCAUGCGCAUUUUUGUGCAUGAAUCAGGGUGGUAACGCCGGCAAGCUCGGUCCUAUUUAGGGGCGGGGUUUUUUGAUUUUUAAGAGGAAAGACUGA
>NC_011969
UUUCAA AAAAAGAGAGCAUGCACAAUUUUU-GUGCAUGAAUCAGGGUGGUAACGCCGGCAAGCUCGGUCCUAUUUAGGGGCGGGGUUUUUUGAUUUUUAAGAGGAAAGACUGA
>NC_008600
UUUCAA AAAAAGAGAGCAUGCGCAUUUUUGUGCAUGAAUCAGGGUGGUAACGCCGGCAAGCUCGGUCCUAUUUAGGGGCGGGGUUUUUUGAUUUUUAAGAGGAAAGACUAA
>NC_006270
CUGA-----
```

```
#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
.....(((((((.....))))).(((((((.....))))).(((((((.....)))))).
```

```
#ybxF
#The following shows an alignment in 5'-UTR of ybxF and the predicted ConSLOpt structures produced by RNAConSLOpt
```

```

>NC_009964
AUGUCAUACC - -UUUUUGACAUUUGUUCUAGAAUAUUAACAAGGUGUCUGCAAUAAA - CCUGU - UACUUUUGGAGGAUAUGUUUUAUGUCUIUAUGAUAAAGUAUACACAGGCCA
>NC_009725
AUGUCAUACG - -UUUUUGACAUUCCCGCAGAGUGAUAAUUAACAAGGUGUCUGCAAUAAAACCUGU - UACUUUUGGAGGAUAUGUUUUAUGUCUIUAUGAUAAAGUAUACACAGGCCA
>NC_006270
UUUGUCAU - -AUGUUUGACAUUCCUUCUUCAGGAUGAAUUAUUAACAAGGUGUCUCAAUAAA - CCUGU - UACUUUUGGAGGAUAU - AUGAUGUCUIUAUGAUAAAGUAUACACAGGCCU
>NC_009848
CUGUCAUUG - -AUUUUGACAUUCCUUGCCAUGAUAAUUAACAAGGUGUCUCAAUAAAACCUGU - UACUUUUGGAGGAUAU - UJCGAUGUCUIUAUGAUAAAGUAUACACAGGCCU
>NC_013791
UAUUAAUAG - -UGGUUGACACACAUAUACAGGGUGUAAGAUA - UCAAAAGUGUC - -UCAGAACCUGU - UGCUUUUGGAGGAUA - ACAUUGUCUIUAUGAUAAAGUAUAAAGCAGGCCUA
>NC_015634
UUUUUACAGCGGUGUUCUUAAGUUUAACAAGUGAUUUUAUUAUUAACAAGGUGUCUUAAGAUUAUUAACAAGGUGUUAUGAAUUAUGGAGGAUAUUGGAGGUAUUAUUAACAAGGUGUUAUUAACAAGGUGU

```

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

.....((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).
((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).
((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).
((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).
((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).

```

#thrZ

#The following shows an alignment in 5' -UTR of thrZ and the predicted ConSLOpt structures produced by RNAConSLOpt

```

>NC_009964
UGCUGGUUAACAGCACCGCCGACAA - CAUAGUAUUUGUC - - -GGGAACUUGGGUGACCCACGGGUUAUCACACACACUCGUCCCUAUCUGCGGG - ACGGGUGUGUUUUUUUAUAUA
>NC_014479
UGCUGGUUAACAGCACCGCCGACAA - CAUAGUAUUUGUC - - -GGGAACUUGGGUGACCCACGGGUUAUCACACACACUCGUCCCUAUCUGCGGG - ACGGGUGUGUUUUUU - AUAUC
>NC_009848
UGCCACGUUACGGCACCGCCGACAA - CAUAGUAUUUGUC - - -GGGAACUUGGGUGACCCACGGGUUAUCACACACACUCGUCCCUAUCUGCGGG - ACGGGUGUGUUUUUUUAUAUA
>NC_014551
-GCCGGUUAACGGCAA - AAUAGAGCCGUCACUUAAGAGUC - - -GGGAACUUGGGUGACCCACGGGUUAUCACACACACUCGUCCCUAUCUGCGGG - AUGGAGUGUGUUUUU - AUUUU
>NC_006270
UGCAACGUUACAGCAUCAGAGCCAUAAAGUUGUCCAUUUAACUUAUGGGAUUUGGGUGGACCCACGG - - -GUAAUGCACUCGUCCCUAUGCUUUUGGGGAUUAUGUACAUUUUUUUAUAUUU

```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```

((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).
((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).((((.....)))).

```

#ypbR

#The following shows an alignment in 5' -UTR of ypbR and the predicted ConSLOpt structures produced by RNAConSLOpt

```

>NC_009964
UAAAUUCUGU - - - -UUUGAUAUCUGGAACUUGUAAAAGUUUGCAGAUUUUCUUU - -UAUGAAGCUGCCG - UAAUGGGCGUUUUUUUAUUCUUAUUCUAAAAGAAUUUGUUUAUUCUUG
>NC_014479
UAAAUUCUGU - - - -UUAA - AAUUCUGGAACUUGUCAAAGUUGCAGAUUUUCUUU - -UAUGAAGCUGCCG - UAAUGGGCGUUUUUUUAUUCUUAUUCUAAAAGAAUUUGGCUCAUUCUUG
>NC_009725
UAAAUCAUGUCUUAUAAACAUUCGGUUUUUCCU - GCCCGGGUGUUUUU - CUUUUACGUCGCCGAUAUCGGCGUUUUUUGC - GUUUUCUGAAAGAAAGUAGGCCAUUCUUG
>NC_014551
UAAAUCAUGUCUUAUAAACAUUCGGUUUUUCCU - GCCCGGGUGUUUUU - CUUUUACGUCGCCGAUAUCGGCGUUUUUUGC - GUUUUCUGAAAGAAAGUAGGCCAUUCUUG
>NC_006270

```



```
-----AUAGAUACA-CGUGCUGAAGCUGCCGA-----AACGGCAGCUUUUUCGUUUUUUCUCCGAUUGUGAAGAAAAUUACAGCAAGGUUG
>NC_006322
AGCGAAUCCGCAAAAUAUAGAUACA-CGUGCUGAAGCUGCCGA-----AACGGCAGCUUUUUCGUUUUUUCUCCGAUUGUGAAGAAAAUUACAGCAAGGUUG
```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....

#gabR  
#The following shows an alignment in 5' -UTR of gabR and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_009964
AUUUUCUUAUCAUUCUGACUUCUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGAAACUACAAAUGGAUAUC-ACGAUUACACUC
>NC_014479
AUUUUCUUAUCAUUCUGACUUCUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGAAUUCGAAA-UGGACAUC-ACAUUCACACUC
>NC_009725
GUUUUCUUAUCAUUCUGACUUCUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGAAUUCGAAA-CAAGGUCUGGAUUCGACGAUUUCCAUI
>NC_014551
GUUUUCUUAUCAUUCUGACUUCUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGAAUUCGAAA-CAAGGUCUGGAUUCGACGAUUUCCAUI
>NC_006270
UUAUUUCUUAUCAUUCUGAAUUAUUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGGCGUAUGAUC-----ACAAUACCGAUU
>NC_009848
UCUUUUUUAUUAUUCUGAAUUAUUUGGUUGAUAGAAAAGUACCAAAUUAUUAUGGUUAUCAGAAAGGAGG- AAUGACGCAUCGACAAUUCAACUA
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....

#ydbJ  
#The following shows an alignment in 5' -UTR of ydbJ and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_009964
UAUAAUA--CAAACAGUGCCUUAUGUU-GGGCACUGUUUAUUUUUUGUCGA--AAAAGGGGAAG-GCUUUUUGGCUGAGCCGAUUUAUAUUUGAAGGCCUCGAUAAAAAAUUUGGG
>NC_014479
UAUAAUA--CUAACAGUGCCUUAUUUUGGCACUGUUUAUUUUUUGUCGA--AAAAGGGGAAG-GCUUUUUGGCUGAGCCGAUUUAUAUUUGAAGGCCUCGAUAAAAAAGAUUGGG
>NC_006270
UAUAAU---CAAACAGUGCCU---UUUCGGCACUGUUUAUUUUUUUG-GA--AAGAGGGGGGG-CUAUGACAAAAGCAGCCUGUUUAUAUUAGAAAAUUUGAUAAAAUCAUAGA-
>NC_009725
UAUAAUG--CAGACAGUGCCU-AUGUACGGGCACUGUUUAUUUUUUGU-GA--AAAAGGGGAAG-GCUGUAGACUGAGCCGAUUUAUAUUUGAAGGCCUUGACAAAACAAUAGGC
>NC_014551
UAUAAUG--CAGACAGUGCCUUAUGUACGGGCACUUAUUUAUUUUUUGU-GA--AAAAGGGGAAG-GCUGUAGACUGAGCCGAUUUAUAUUUGAAGGCCUUGACAAAACAAUAGGC
>NC_014019
UAUAGUAGACAAUAGUAAAAAAGAAACAUAUAGAAGGGUUAUUGCUAAUUUAAGAAAGGAUGUACUAGUAGACAGAAAACAGUACAAAGAUCAUAGUAGUAAAAAGUAAUUUGGG
```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....  
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....





```

>NC_003909
GUUJAGACAAAUAAGA---GGGCUACGAGAU--GCCUCUUUUCUUGUACGACAAAGAAUUUUUUAUAGUAAAAGUAGGAG--AUAAAAACGAUUAUGG
>NC_011772
GUUJAGACAAAUAAGA---GGGCUACGCGGAUA--GCCUCUUUUCUUGUACGAGAAGGAGAAA--CGUUUAUAGACGAAAGUAGGAA--CUAUAAAAAGGUUAUGG
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
(((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))
(((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))

#thiC
#The following shows an alignment in 5'-UTR of thiC and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009725
UUUU-CUGACUGCAAAACGGGUUCUUC-UUUGAACCGGUUUUUUUGUCUGG--UGCGAGCUUG-GUUUCGUUUUU-CAAUGAUAAA---GGAGAGA
>NC_012581
--U-AUGAGC-CAGGUCCUUUUUUUAUGGACCUGGUCUUUUUUUUUUUUGGCAUACCGCCAUUCUGUCUUCUUGUCAC-GUACAGGGGGGCAACA
>NC_011658
--UUUAUGAGC-CAGGUCCUUUUUUUAUGGACCUGGUCUUUUUUUUUUUUGGCAUACCGCCAUUCUGUCUUCUUGUCAC-GUACAGGGGGGCAACA
>NC_011725
--U-AUGAGC-CAGGUCCUUUUUUUAUGGACCUGGUCUUUUUUUUUUUUGGCAUACCGCCAUUCUGUCUUCUUGUCAC-GAACAGGGGGGCAAUUA
>NC_011772
--U-AUGAGC-CAGGUCCUUUUUUUAUGGACCUGGUCUUUUUUUUUUUUGGCAUACCGCCAUUCUGUCUUCUUGUCAC-GAACAGGGGGGCAACA
>NC_006274
--U-AUGAGC-CAGGUCCUUUUUUUAUGGACCUGGUCUUUUUUUUUUUUUUGGCAUACCGCCAUUCUGUCUUCUUGUCAC-GUACAGGGGGGCAAUUA
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
-----(((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))
----(((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))

#rplJ
#The following shows an alignment in 5'-UTR of rplJ and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
GGG GCC-UAACCGCUUAUUUACCGAGGUUAUUAUUCACAGCUUUUACGCUUAGUUAUGCUUUAUACAGCCUCCAUUCUGUCUUUUUAUUGGA-AUCCGU
>NC_004722
GGUGUCAUUA-GACUUAAU-UUCCUACCAGGUUAUAUAUACGAGCGGAUUCUUUUUCUGUGACUUAU-----GCCUCCAUUCU-----ACAAGUUGGGCAUGGAGGUUUUU
>NC_008600
GGUGUCAUUA-GACUUAAU-UUCCUACCAGGUUAUAUAUACGAGCGGAU-UUUUUUCUGUGACUUAU-----GCCUCCAUUCU-----ACAAGUUGGGCAUGGAGGUUUUU
>NC_011772
GGUGUCAUUA-GACUUAAU-UUCCUACCAGGUUAUAUAUACGAAACGGAAUUUUUUUCUGUGACUUAU-----GCCUCCAUUCU-----ACAAGUUGGGCAUGGAGGUUUUU
>NC_010184
GGAGUCGUAUUUGGCUUAAU-UUCCUACCAGGUUAUAUAUACGAGCGGAUUCUUUUUCUGUGACUUAU-----GCCUCCAUUCU-----ACAAGUUGGGCAUGGAGGUUUUU
>NC_009674
GGUGCCAAAUUGGCUUAAU-UUCCUACCAGGUUAUAUAUACGAAACGGAAU-UUUUUUCUGUGACUUAU-----GCCUCCAUUCU-----ACAAGUUGGCAUGGAGGUUUUU
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
((((((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))
((((((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))
((((((((((((((((-----)))))))))))))))))))))))))))))))))))))))))))))))))

```



```
>NC_014551
UAGGCCUCGGGAUACUUUUAUAGCCAUGCAGUUGUCCACAUGUGGAUAGGCGUGUUUCCUGUCUUUUUACAACUUUUAUCCACAAAUCCA
>NC_006270
-----GUGAUGAGC--GGGAA-AGUGUGAAUAACUUGAACAUJGGCCUUACACAGUUGUCCACAUGUGGAUAGGCGUGUUUCCGUUUUUUUAACA-CUUUUAUCCACAAAUCCA
>NC_014019
-----GCUUUUUUAUCUUGUAUUUUGUGUAUAAAGUGAGUAUAGGAUUGUACACAGUUGUCCACAUGUGGAUAGGCGUGUUUCCACGUAUUU-U-AGGGGUUAUCCACAUUUUCCA
```

```
#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
-.....(((.....(((.....(((.....(((.....))).....))).....))).....))).....
-.....(((.....(((.....(((.....))).....))).....))).....
-.....(((.....(((.....))).....))).....
-.....(((.....))).....
-.....(((.....))).....
```

```
#yrhE
#The following shows an alignment in 5'-UTR of yrhE and the predicted ConSLOpt structures produced by RNAConSLOpt
```

```
>NC_000964
UAUAGUCUAUCGUUUUAUAAAUAAGGUAUUGUCU-GUUAGUA--AGACUUGCUAGGAACUAUUCGCCAUUGUGUUUACACC--UUCUUAGAAUUAAGGCGGUGUAUCUAU
>NC_014479
UAUAGUCUAUCGGUUUAUAAAUAAGGUAUUGUCU-GUUAGUA--AGACUUGCUAGGAACUAUUCGCCAUUGUGUUUACACC--UUCUUAGAAUUAAGGCGGUGUAUCUAU
>NC_009725
UAUAGUCUAUCGUUUUAUACAAU--AGGAUUGGUCU-GUUAGUA--AGACUUGCUAGGAACUAUUCGCCAUUGUUAUUUUAUACCG-UUCUCCGUJACAGGAGCCGGUUAUCUAUGU
>NC_014551
UACGAGUCUAUCGUUUUAUACAAU--AGGAUUGGUCU-GUUAGUA--AGCUUUGCUAGAAACUAUUCGCCAUUGUUAUUUUAUACCG--UUCUCCGGUUAUUUGUAUUUUAUCCUGAAG
>NC_006270
UAUGAAUCUAUCGAAUC-UGACAAUAAGGAUUGUCU-GUUAGUA--AGCUUUGCUAGAAACUAUUCGCCAUUGUUAUUUUAUACCG--UUCUCCGGACAGGAGCCGGUUAUCUAUGU
>NC_015634
GGUUUGUUAUUUUGCAUCAGAUUCAGAAUAAAAAAGAGAAUAGUAGUUUAUUUUGCAAAAGGUUUGGUAUAGUA---ACAGAG-UUGCCGGUUUUUUUGUAUUUUAUCCUUUCUGAAG
```

```
#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
```

```
.....(((.....))).....
(((((.....))).....))).....
((((.....))).....))).....
```

```
#rpsL
```

```
#The following shows an alignment in 5'-UTR of rpsL and the predicted ConSLOpt structures produced by RNAConSLOpt
```

```
>NC_012581
UUUGAGGAGGAGCAUUUGCUCUCCUUGCAAAACUUUUGUUUUCAACAAUAAUAGACCACCUGGAUAUUGGUCAUACAAACAUGC-----GA
>NC_011969
UUUGAGGAGGAGCAUUUGCUCUCCUUGCAAAACUUUUGUUUUCAACAAUAAUAGACCACCUGGAUAUUGGUCAUACAAACAUGC-----GA
>NC_011772
UUUGAGGAGGAGCAUUUGCUCUCCUUGCAAAACUUUUGUUUUCAACAAUAAUAGACCACCUGGAUAUUGGUCAUACAAACAUGC-----GA
>NC_009674
UUUGAGGAGGGGGCAUUUGCUCUCCCGCGCAAAACUUUUGUUUUCAACAAUAAUAGACCACCUGGAUAUUGGUCAUACAAACAUGC-----GA
>NC_009725
U--GUUUUUUAUUAAGAUACAUCUUGUGUAAGACAUUGUUUUUGCCUAAUAGUAGACCACCUGGGUAUGUGGG-UU-AUAAAAC--GUAAUGA
>NC_014551
U--GUUUUUUAUUAAGAUACAUCUUGUGUAAGACAUUGUUUUUGCCUAAUAGUAGACCACCUGGGUAUGUGGG-UU-AUAAAAC--GUAAUGA
```

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
 ((((((((((((((((.....))))))))).....)))))).....(((.....))).....  
 ((((((((((((((((.....))))))))).....)))))).....(((.....))).....

#gtaB  
 #The following shows an alignment in 5'-UTR of gtaB and the predicted ConSLOpt structures produced by RNAConSLOpt  
 >NC\_008600  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAACUCCCCUUUUGUCUAUGUAAGGAAUAUUCGUUAUUGAUUCUGACAGAGAGAGAGG  
 >NC\_011658  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAUUCUCCCCUUUUGUUAUGUA - GGAUUGAUUGUUAUUGAUUCCGACAGAGAGAGG  
 >NC\_014171  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAUUCUCCCCUUUUGUUAUUGUA - GGAUUGCUUGCUUAUUGAUUCCGACAGGAGAGAGG  
 >NC\_011772  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAUUCUCCCCUUUUGUUAUUGUA - GGAUUGAUUGUUAUUGAUUCCGACAGGAGAGAGG  
 >NC\_011725  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAUUCUCCCCUUUUGUUAUUGUA - GGAUUAUUGCUUAUUGAUUCCGACAGGAGAGAGG  
 >NC\_003909  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAACUCCCCUUUUGUUAUUGUA - GGAUUAUUGCUUAUUGAUUCCGACAGGAGAGAGG  
 >NC\_011725  
 UAAUUUUUUAAGUAGUAGGAACAACAAAAGGGAGCGAAACUCCCCUUUUGUUAUUGUA - GGAUUGAUUGUUAUUGAUUCCGACAGGAGAGAGG

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
 .....(((.....))).....(((.....))).....(((.....))).....  
 .....(((.....))).....(((.....))).....(((.....))).....

#clpE  
 #The following shows an alignment in 5'-UTR of clpE and the predicted ConSLOpt structures produced by RNAConSLOpt  
 >NC\_00964  
 UAGCCUUUUUUUUUUCAC - UUUCAUUUGGUCAAAGAUCAAAUUU - ----UAAGGAGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUUAAAC  
 >NC\_014479  
 ACGACUUUUUUUUUUCAC - AUUCAUUUGGUCAAAGAUCAAAUUU - ----UAAGGAGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUUAAAC  
 >NC\_009725  
 --GACCUUUUUUUUUA - UCCAUUUUGGUCAAAGAUCAAAUUU - ----UUCGAGGAGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUGAAC  
 >NC\_014511  
 --GACCUUUUUUUUUA - UCCAUUUUGGUCAAAGAUCAAAUUU - ----UCAAGGAGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUGAAC  
 >NC\_006270  
 --GACCAUUUUUUUUA - GUCAUUUGGUCAA AAAAGGUCAAAUUU - ----AAUA - AAGGGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUUAAAC  
 >NC\_009848  
 --GACCAUUUUUUUUA - GUCAUUUGGUCAA AAAAGGUCAAAUUU - ----AAUA - AAGGGUUUUGGCAAAUUGUUUGUUAUUGAUUCAAAACGAGGCGCGAUUCGCCUGAAU

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
 ---((((.....)))).....(((.....))).....(((.....))).....(((.....))).....  
 ---((((.....)))).....(((.....))).....(((.....))).....(((.....))).....  
 ---((((.....)))).....(((.....))).....(((.....))).....(((.....))).....  
 ---((((.....)))).....(((.....))).....(((.....))).....(((.....))).....

#ydeB

#The following shows an alignment in 5'-UTR of ydeB and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_009725
AU-ÄUCUCAC - UC CAUUAUUGGUAACCUUAAAGUUCCCAUUAUUGGAGGUGGAUUUUAUGUUUCAAUUUGGCGAUAAACAUUUGUUUUAUCCAAUGCA
>NC_014479
AU-ÄUACACCUACGUUAUGGUAUCUUAAG - -AAGGUACAA -AU AUUGGAGGUGGAUGUAUGUUUCAAAUUGGCGAUAAACAUUUGUUUUAUCCAAU ---
>NC_009848
AUUÄUUUUUUUUAUCCAAAGUGGUACCCUUAAG -UAGAUACAU GAU AUUGGAGGCGGAUGUAUGUUUCAAAUUGGUGAUAAACAUUUGUUUUAUCCAAUGCA
>NC_009964
AU-ÄUACACCUCAUUAUUGGUAUCUUAAGA -AGGAUACCAUUAUUGGAGGUGGAUGUAUGUUUCAAAUUGGCGAUAAACAUUUGUUUUAUCCAAUGCA
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```
((-((((((.....(((.....-)))))))))).....(((.....))))))....(((.....))))))....
..-.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
..-.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
```

#cotG

#The following shows an alignment in 5'-UTR of cotG and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_014479
GGUÄUUAAGGAUUCGUCCUUA AAAUACACUUUUAAAAGGAGGUAUUUCAAAUUGGCGCAUUAUCCCAUUCUGACAUCAAAAGAGCGGUAUCCGCA
>NC_016047
GGUÄGUUAGGAUUCUUAUCCUUAACAUCAUUUUCAAAAGGAGGUAUUUCAAAUUGGCGCAUUAUCCCAUUCUGACAUCAAAAGAGCGGUAUCCGCA
>NC_009964
GGUÄGUUAGGAUUCUUAUCCUUAACAUCAUUUUUAAAAGGAGGUAUUUCAAAUUGGCGCAUUAUCCCAUUCUGACAUCGAAAGAGCGGUAUCCGCA
>NC_009725
G -UÄGUUAGGAUCG -CAUCCUUA AAAUUAUCAUGAGGAGG -UUUCAAAUUGGCGCAUUAUCCCAUUCUGAUUCCGAAAGAGCGUAUAAAGUCCGCA
```

#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):

```
.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
.....(((.....)))))).....(((.....)))))).....(((.....)))))).....(((.....))))))....
```

#yunB

#The following shows an alignment in 5'-UTR of yunB and the predicted ConSLOpt structures produced by RNAConSLOpt

```
>NC_009964
CUÄUUAUUAUGUCCCUUUAACAAGCAUUAUGUAUGUAAGGGGGGAUUUU -CUUCCAAGAUUUCGCGGCCCUUUUUCGC -AAGAGAGGAC
>NC_016047
CUÄUUAUUAUGUCCCUUUAACAAGCAUUAUGUAUGUAAGGGGGGAUUUU -CUUCCAAGAUUUCGCGGCCCUUUUUCGC -AAGAGAGGAC
>NC_014479
CUÄUUAUUAUGUCCCUUUAACAAGCAUUAUGUAUGUAAGGGGGGAUUUU -CUUCCAAGAUUUCGCGGCCCUUUUUCGC -AAGAGAGGAC
>NC_006270
UGÄÄUGUAUUAUCCCUUUAACAAGCAUACACU -UGUGUAUGUAAGGGGGGAUUUUGCUUGAAGACUUCGCGGCCCUUUGUCA -AAAAGAGGAC
>NC_009725
AAAÄUUAUUAUGUCCCUUUAACAAGCAUUAUGUAUGUAAGGGGGGAUUUUCUUAUCCUAGAUUCCGAGCGGCUUUCGC -AAGAGAGGAC
>NC_014019
AGAÄGGUGAACCUCUUAUCAUGCAUACA -UAUJAGCUUGUAAGGAGGGGAUUUUUUUUAACUUCGUCGGAAUUUAACAA -GAAAAAGGCC
```

#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):









```

#arfM
#The following shows an alignment in 5' -UTR of arfM and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
UUACCCUCCUGAUA-AGUGACAUUUAUACAUACAGGC-UGUGAAAUUAUACACUCGUGCAGGCUCAGUCGAGCUACACUAAAGCUAUCCUUAGCACAGAGGUUUUUCUUAUGAAUUA
>NC_014479
GUCAUCCUCCCGAUA-AGUGACAUUUAUACAUACAGGC-UGUGAAAUUAUACACUCGUGCAGGCUCAAUCGAGCUACACUAAAGCUAUCCUUAGCACAGGAGGUUUUUCUUAUGAAUUA
>NC_009725
UACACUCUCCUGAUA-AGUGACUUUUUAUACAUACAAGC-UGUGAAAUUAUACACUCGUGCAGGCUCAAUCGCGCUACACUAAAGCUAUCCUUAGCACAGGAGGUUUUUCUUAUGAAUUA
>NC_006270
UUCGUUUUUUUAACACAGAGCAUUUUGCAUACAGUCGUGUGAAUUAAAUAUACUCGCGCCGCGGCGUUUAUACUAAAAGCCAAUUAUAGAGAAGGAGGAUUAUACCAUGGAGCCG

```

```

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.((((.....)))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....

```

```

#csbX
#The following shows an alignment in 5' -UTR of csbX and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_006274
UCGUUAUGUAAGCGUAUACUUUUUUUAUCAAAGAAUUUUAAGCGCUUAACCAAAAUAUCUUA--UCGGUGGUGG-GAGAAUGAACGCUAUUAGUUCAAAACAACAAUUAUUGGACAG
>NC_014335
UCAUUUAUGUAAGCGUAUACUUUUUU- AUCAAAAAGAAUUUUAAGCGCUUAACCAAAAUAUCUUA--UCGGUGGUGG-GAGAAUGAACGCUAUUAGUUCAAAACAACAAUUAUUGGACAG
>NC_005957
UCAJAAUUAUGUAAGCGUAUACUUUUUUUAUCAAAGAAUUUUAAGCGCUUAACCAAAAUAUCUUA--UCGGUGGUGG-GAGAAUGAACGCUAUUAGUUCAAAACAACAAUUAUUGGACAG
>NC_012472
UUUAUAUGUAAGCGUAUACUUUUUUUAUCAAAGAAUUUUAAGCGCUUAACCAAAAUAUCUUA--UACUUA--UCGGUGGUGG-GAGAAUGAACGCUAUUAGUUCAAAACAACAAUUAUUGGACAG
>NC_012581
UCAJAAUUAUGUAAGCGCAUACUUUUUU- AUCAAAAAGAAUUUUAAGCGCUUAACCAAAAUAUCUUA--UCGGUGGUGG-GAGAAUGAACGCUAUUAGUUCAAAACAACAAUUAUUGGACAG
>NC_009964
-----UCUAACAGGAUUACAUAUCAGCAAGCUUGGGUUAUUAUACUCCAUUGAUUUUAAGCGGUGGAGAAUUAUACAGUACAUAGGAAUUAAGGAAUUAAGGAAUUAUUGAACAA

```

```

#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....
.....(((((((.....-(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....(((((((.....)))))))).....

```

```

#ycsF
#The following shows an alignment in 5' -UTR of ycsF and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
UUUAUAUGAAUUAAGUUCAAAAAGUUUCGGAAUAGUCGUUCCGAAUUUCGGACAAUUAAGCAUUAAGCAUAUC-----GUUUGCUUUGG-----CAGGAGGGAUUUCUGUGUUUA
>NC_014479
UUUAUAUGAAAGCAAAGUUCAAAAAGUUUCGGAAUAGUCAUUCCGAAUUUCGGAAACAUAUUA-ACAUAAAGCAUAUC-----GUUUGCUUUGG-----CAGGAGGGAUUUCUGUGUUUA
>NC_009725
AUUAUAUGAAGAGAAUCCAACAUAUUCGGAAUAGUCAUUCCGAAUAGCGGAUAGUAUU-----AUUAUAAAAC-----GUUUAACAUA-----CAGGAGGGAUUCUUAUGUUUA

```



```
#The following shows an alignment in 5'-UTR of zur and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_014479
UGGUAUAUUUUAUCUCAGUAGAGAAAUGGCCUUGCUGGUCAGACAGCUGCCAUUUUUUUUCAUAUGUAUCGUUUUAAAGCAAAGCGAAAGGGGAAACCUUCAUGAACCGU
>NC_009964
UGGUAUAUUUUAUCUCAGUAAAGAAAUGGCCUUGCUGGACAGACAGCUGCCAUUUUUUUUCAUAUGUAUCGUUUUAAAGCAAAGCGAAAGGGGAAACCUUCAUGAACCGU
>NC_009725
UAGGUAUAUUUUAUCUCAGUAAAGAAAUGGCCUUGCUGGACAGACAGCUGCCAUUUUUUUUCAUAUGUAUCGUUUUAAAGCAAAGCGAAAGGGGAAACCUUCAUGAACCGU
>NC_014551
UAGGUAUAUUUUAUCACAGCAUA - GGAAAUGGCCUUGCUGUUCAGACAGCUGCCAUUUUUUUUGGA - - - - - GCGAUAC - - - - - CGUJUUGUAAAAGGGGAGGUCCUCAUGAACCGU
UAGGUAUAUUUUAUCACAGCAUA - GGAAAUGGCCUUGCUGUUCAGACAGCUGCCAUUUUUUUUGGA - - - - - GCGAUAC - - - - - CGUGAUGUAAAAGGGGAGGUCCUCAUGAACCGU
```

```
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
..(((.....(((.....)))))).....(((.....)))).....
.(((.....))).....(((.....))).....(((.....))).....
```

```
#yaaH
#The following shows an alignment in 5'-UTR of yaaH and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
AUCAGCCUUUUUCAUAUAU - GAUAGCG - AUAUGAAA - GGAGGCGUUUU - UCAUUAAAUAUUUAUGUGUA AAAACAAGGCGACACUCUUUCUGCUAUCGUUCACAUAACAGAAC -
>NC_014479
AUCAGCCUUUUUCAUAUAU - GAUAGCG - AUAUGAAA - GGAGGCGUUUU - UCAUUAAAUAUUUAUGUGUGUA AAAACAAGGCGACACUCUCUGCUAUCGUUCACAUAACAGAAC -
>NC_009725
AUCAGCCUUUUUCAUAUAUUUAUGAUGCGGAUAUGAAA - GGAGGCGUUUU - UCAUUAGAUCUAUAUAGUAAGAAAACGGGGCGACCGUUUCCGUUUGCGGCGCUACCCGGACU
>NC_014551
AUCAGCCUUUUUCAUAUAUUAUGAUGCGGAUAUGAAA - GGAGGCGUUUU - UCAUUAGAUAUUUAUGUAUGUAAGAAAACGGGGCGACACACUUUCUGCUAUCGUUCGCGCUACCCGGAAU
>NC_014019
AAAAGCCUUUCAUAUGAUGGA - - - AGUAAGUCAUAUGAAAUGGAGGCGUUUUUAUUUAUGAAAUAUCACUGUUAAAAGCAGGUGACAGUAUAUAGUAUUGCAA - - - - -
```

```
#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
...(((.....))).....(((.....))).....(((.....))).....(((.....))).....
..(((.....))).....(((.....))).....(((.....))).....(((.....))).....
.(((.....))).....(((.....))).....(((.....))).....(((.....))).....
.(((.....))).....(((.....))).....(((.....))).....(((.....))).....
.(((.....))).....(((.....))).....(((.....))).....(((.....))).....
```

```
#trpS
#The following shows an alignment in 5'-UTR of trpS and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009964
GUCUCGGUUAACAACGUA - GAGUGAUUCCAUIU - - - - - UAAUGGAAUAUAUCAGGGUGUACACCGGUUAUCUGCCUUUUUUUAACA - - - GGGGAAAGAAUGA
>NC_016047
GUCUCGGUUAACAACGUA - GAGUGAUUCCAUIU - - - - - UAAUGGAAUAUAUCAGGGUGUACACCGGUUAUCUGCCUUUUUUUAUA - - - GGGGAAAGAAUGG
>NC_009725
GCCUCGGUUAACAACGUA - GAGUGAUUCCAUIU - - - - - UAAUGGAAUAUAUCAGGGUGUACACCGGUUAUCUGCCUUUUUUUAUA - - - GGGGAAAGAAUGG
>NC_014551
GCCUCGGUUAACAACGUA - GAGUGAUUCCAUIU - - - - - UAAUGGAAUAUAUCAGGGUGUACACCGGUUAUCUGCCUUUUUUUAUA - - - GGGGAAAGAAUGG
>NC_006270
GACUCGGUUAACAACGUA - GAGUGAUUCCAUIUUAUGAUAUAUAUCAGGGUGUACACCGGUUAUCUGCCUUUUUUUAUA - - - AAGGGAAAGAAUGG
>NC_011772
CCAGACGUUAUAUGGUAUAGAGAUUUCACAGUA - - - GUGA - - - AAUAUUAGGGUGUACCGGGUUAUCUGCCUUUAUAGUUUUUU - - - GGGGAAAGAAUGG
```

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.....((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.....((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.....((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))

#ydcC  
#The following shows an alignment in 5'-UTR of ydcC and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_000964  
GA\_CAAAGUUUUU-GAGGCUUUUUAUGGUACGCAUCU--GUUCUGCCUAAA-CGUGUACCAGCGUACCGUUAAAAGUCAAAACAAAGCGAUUUCUCCUUUU  
>NC\_014479  
GA\_CAAAGUUUUU-GAGGCUUUUUAUGGUACGCAUC--GUUCUGCCUAA--CGUGUACCAGCGUACCGUUAAAAGUCAAAACAAAGCGAUUUCUCCUUUU  
>NC\_006270  
GA\_CGAGUCGUUG-CAGGCUUUUUAUGGUACGCGCCGCGAUACAGCCGCCCCUGUUUUAAGGCGUACCGUUAAAAGUCGAAACAAGCGGUUUCUCCUUUU  
>NC\_009848  
GGG\_CGAGUUUCUAAACAGGCUUUGAUUGUCGGU---ACGCAGUUAAAC-----UCUUGGGCGUACUGUUAAAAGUCAAAACAAAGCGGUUUCUCCUUUU  
>NC\_009725  
GA\_CAAAGUUUUU-GAGGCUUUUUAUGGUACGCGUC-----CGUCCG-----UUCAGGCGUACCGUUAAAAGUCAAAACAAGCGAUUUCUCCUUUU  
>NC\_014551  
GA\_CAAAGUUUUU-GAGGCUUUUUAUGGUACGCGUC-----CGGCCG-----UUCAGGCGUACCGUUAAAAGUCAAAACAAGCGAUUUCUCCUUUU

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
..-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
(-((.....)))-((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))

#pheS  
#The following shows an alignment in 5'-UTR of pheS and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_012659  
GG\_CGACACUUGUUCUCAAU---UUAGGGUGGUJACCGCGAAUUUACCUCGUCCUUU-UUGGGAGCGAGG---UUUUUUUUUUUUUUUUUUUUUAGGGGUUCCAAA  
>NC\_011725  
GG\_CGACACUUGUUCUCAAU---UUAGGGUGGUJACCGCGAAUUUACCUCGUCCUUU-UUGGGAGCGAGG---UUUUUUUUUUUUUUUUUUUUUAGGGGUUCCAAA  
>NC\_009674  
GG\_A\_CAGACUUGUUCUCAAU---UUAGGGUGGUJACCGCGAAUUUACCUCGUCCUUU-UUGGGAGCGAGG---UUUUUUUUUUUUUUUUUUUUUAGGGGUUCCAAA  
>NC\_010184  
GG\_CGACACUUGUUCUCAAU---UUAGGGUGGUJACCGCGAAUUUACCUCGUCCUUU-UUGGGAGCGGGG---UUUUUUUUUUUUUUUUUUUUUAGGGGUUCCAAA  
>NC\_002570  
GG\_AUGCACUCAGUUUGUCAUUUAUGGGUGGUJAUJCGCGAAAC--CUUCGUCCUUUGUUGGGAAACGAAAGUUUUUUGCACUUGCACGAAAAAGUUUUUUUUUA  
>NC\_009725  
-GU\_CGCGAUGAUGUCUCCUUUAAAAGGGUGGUJACCGCGGCCACAAACUCGUCCUUCCUC-AAGGGCGGGUUUUUUUGUUUUUCUGAAAAAGCGAUAGAACG-GU

#The top 5 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
..-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))  
.-((((.....))))).....((((.....))))).....((((.....))))).....((((.....))))).....((((.....)))))

```

#adk
#The following shows an alignment in 5'-UTR of adk and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_000964
-----AGGAAUJGGAUU-UAUCCAUCCCUUUAUAAGAGAGGACGGGGAAUJCGAA--UGAACUUAGUCUUAUUGGGGUUCCUGGUGCCGGUAAAGGCACACAG
>NC_004722
GUGAGUAAGUGGGGAAGAA--UUGUCUCCUACAUJGCUAUG-UACUCUGAGGGGAA--AAGGA-UGAACUUUAUUUAUUGGGGUUCCUGGUGUAAAGGUJACACAA
>NC_009674
GUAAGUAUGGGGAAGAGA--AUGUJUCCUACAUJGCUCAU--UA---UGAGGGGAA-AAAGA-UGAACUUUAUUUAUUGGGGUUCCUGGUGUAAAGGUJACACAA
>NC_010184
>--GUAAGUGGGGAAGAA--CUGUCUCCUACAUJGCUAUG-UAC--UGAGGGGAA--AAGGA-UGAACUUUAUUUAUUGGGGUUCCUGGUGUAAAGGUJACACAA
>NC_011772
>--GUAAGUGGGGAAGAA--CUAUJUCCUACAUJGCUAUG-UAC--UGAGGGGAA--AAGGA-UGAACUUUAUUUAUUGGGGUUCCUGGUGUAAAGGUJACACAA
>NC_014019
GCUGUUUJAGUGGGGAAGCAAGCUGUUUCCAUUAAACGGUAUAGAUACUGAGGGGGAAGAAUUAUGUUUAUGUUUUAUGGGGUUCCUGGUGUAAAGGUJACUCAA

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....

#glpX
#The following shows an alignment in 5'-UTR of glpX and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_004722
-----GUGAUACUUCGCAAGGGGGAAGCGAAGCAUCUACUUGCGGAGUACACUUUAUJAGAAAAA--CACGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA
>NC_012581
-----GUGAUACUUCGCAAGGGGGAAGCAUCUACUUGCGGAGUACACUUUAUJAGAAAAA--CACGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA
>NC_011658
-----GUGAUACUUCGCGAGGGGGAAGCGAAGCAUCUACUUGCGGAGUACACUUUAUJAGAAAAA--CACGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA
>NC_003909
-----GUGAUACUUCGCGAGGGGGAAG---UAUCACUACUUGCGGAGUACACUUUAUJAGAAAAA--CACGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA
>NC_011772
-----GUGAUACUUCGCAAGGGGGAAGCGAAGCAUCUACUUGCGGAGUACACUUUAUJAGAAAAA--CACGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA
>NC_010184
AAUCGGGAUAAGGUGUACUUCGUAUUGGGGAGCGAAGAAUACUAACGCGGAGUACACUUUAUJAGAAAAA--UAAGGUUCACAAAUAUACGGCAGAAAUAUAAAAGGCUUAAAA

#The top 3 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....
.....((((((((.....)))))).....((((((((.....)))))).....((((((((.....)))))).....

#ywcI
#The following shows an alignment in 5'-UTR of ywcI and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_009725
AAACAUAUUCGCCCGGACCGGUCUAUCAUJAGAGUCAUJAGGGUU--GCUJAGACCCGCUAGUUUJAGGGAGAAUGGAGGUAUUGGGCCUUUCCGUUAAA--GCGGAGAGAAAAACAGGCCUCG
>NC_014551
AAACAUAUUCGCCCGGACCGGUCUAUCAUJAGAGUCAUJAGGGUU--GCUJAGACCCGCUAGUUUJAGGGAGAAUGGAGGUAUUGGGCCUUUCCGUUAAA--GCGGAGAGAAAA--CAGGCCUCG
>NC_000964
AAAGAAUUCUUCUCCACGGGUCUAUCAUJAGAGUCAUJAGUUUUCUJAGAGCCGCUAGUJGCGA--GAAAAAGAAUUGGGCCUUCUUUUCUGGGCCUGGAGAAAAACAGGCCUCG

```









```
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....
```

#recJ  
#The following shows an alignment in 5'-UTR of recJ and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_000964

-----UUUUCGAAUUUUUUUUGAAACCCUCAGCCUGUCUAGUAAUUAGGGUGGUUUGAGGGGGUGAAU  
ACAUUUUUAAUUUUUAGUUUUAGUAUUUGCAUUCGUAGUUUGCAUUUAUUUUGUCACCCUUAAUUCUG-UUUUUUUAUUAAUGAACACAGGUUUAAGGGGGUGAUU  
>NC\_006274  
AUUUUUAAACAUUUUUAGUUAUUGAUAUUUGCAUUCGUAGUUUGCAUUUAUUUUGUCACCCUUAAUUCUG-UUUUUUUAUUAAUGAACACAGGUUUAAGGGGGUGAUU  
>NC\_011725  
ACAUCAUUUAAAAUUUAGUAUUUGAUAUUUGCAUUCGUAGUUUGCAUUUAUUUUGUCACCCUUAAUUCUG-UUUUUUUAUUAAUGAACACAGGUUUAAGGGGGUGAUU  
>NC\_011772  
ACAUCAUUUACAUUUUUGUAUUUGAUAUUUGCAUUCGUAGUUUGCAUUUAUUUUGUCACCCUUAAUUCUG-UUUUUUUAUUAAUGAACACAGGUUUAAGGGGGUGAUU  
>NC\_003909  
ACAUUAGUAACAUUUUUAGUAUACAGAUUUACAUCGUAGUUUGCAUUCGUAGUUUGCAUUUAUUUUGUCACCCUUAAUUCUG-UUUUUUUAUUAAUGAACACAGGUUUAAGGGGGUGAUU

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....  
.....((((((((((((((.....)))))).....((((((((((((((.....)))))).....)))))).....)))))).....

#ykgZ  
#The following shows an alignment in 5'-UTR of ykgZ and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_009725  
-AAGGGAUUUUUUGU---UUUUUUGAAAGUCCUU-UUUUUGCUCGAGACUUUUCCUUUUAACCGUUUUUUGGAAUUAAUAGAAUAGCGAGUCUAACAUACGGCAUUUAAGGGAGAUUUUG  
>NC\_000964  
CAAGGGACUUUUUCAC---UUUUUUGAGAGAUCCUUUUUUUUGCUCUAAAGGCUUUUCCUUUUAUUUCCUUUUAUUUCGAAUUAAUAGAAUAGCGGAGUCUAACAUACGGCAUUUAAGGGAGAUUUUG  
>NC\_014479  
CAAGGGGAUUUUUCAC---UUUUUCGAGAGAUCCUUUUUUUUGCUCUAAAGGCUUUUCCUUUUAUUUCCUUUUAUUUUGGAAUUAAUAGAAUAGCGGAGUCUAACAUACGGCAUUUAAGGGAGAUUUUG  
>NC\_009848  
-AAAGGAUUUUUCCGGCACAUUUUGCUCAGAGAUUUUCCUUUUAUUUUGCGUUUUUUUUUUUAUUUAAUUAUUAGAAUUAGCGGAGUGUAACAUACGGUUAUUUAAGGGAGAUUUUG  
>NC\_006270  
-AAAGGACCUUCACUC--GUGUGGAAAGGGUCCUUUUUUUUCAGGGCCUUUUUUAUUUGACCAUUUUCGAAUUAAUAGAAAGA-CGAGUCUAACAUACGGCAUUUAAGGGAGAUUUUG

#The top 4 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
-((((((((((((((((((((.....)))))).....)))))).....)))))).....((((((((((((((((.....)))))).....)))))).....)))))).....)))))).....  
-((((((((((((((((((((.....)))))).....)))))).....)))))).....((((((((((((((((.....)))))).....)))))).....)))))).....)))))).....  
-((((((((((((((((((((.....)))))).....)))))).....)))))).....((((((((((((((((.....)))))).....)))))).....)))))).....)))))).....  
-((((((((((((((((((((.....)))))).....)))))).....)))))).....((((((((((((((((.....)))))).....)))))).....)))))).....)))))).....

#ytvB  
#The following shows an alignment in 5'-UTR of ytvB and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_006270





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>NC_009964
UUUCAUGGAUUG---UAUCCAUGGGCUU-----
>NC_014479
UUUCAUGGAUUUGGAUAUCCAUGG-----
>NC_006270
GUUCAUGGAUCUUC--AUCCAUGGGUUUGGCAUUUAUAAGUAACCAUGCUAGCAAGACCUUUUGCCUAAUGUUGGCAGAGGUCUUUUUUUCUGAAAAUACCCUG
>NC_009725
AUUCAUGGAUCAU---AUCCAUGGGUUUGGCAUGCC-----AAUCAU--UCAUGCUAGCAAGACCUUUUGCCUUAUAUCGGCAAAGGUCUUUUUUUGCGU- ---AAAAA-CCGC
>NC_014551
AUUCAUGGAUCAU---AUCCAUGGGUUUGGCAUGCC-----AAUGAU--UCAUGCUAGCAAGACCUUUUGCCUUAUAUCGGCAAAGGUCUUUUUUUGCGU- ---AAAAAACCGC
>NC_009848
UUAACAUGGACUUA- GUUCCAUGGGUUUGGCAUGAUUCACAUUA- ---CAUGCUAGCAAGACCUUUUGCCAU- UACAGGCAAAGGUCUUUUUUUGCAUUC-----AUAAGCCU
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((-.....)))))).....((((((-.....)))))).....((((((-.....)))))).....((((((-.....)))))).....
#oppB
#The following shows an alignment in 5'-UTR of oppB and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_014479
-GUCU-AUGUGAAAAACAAAACCUCAAGG--UAUAUGGG-ACCUA-----UUUCCAAUAACCUUUCUACUGA-----UAAUGUAAAAACA AUGGAGGUGUUUCCCCCUUGC
>NC_016047
-GUCUUUAUUUGUAAAAACAAAACCUCAAGG--UAUAUGGGGACCUA-----UUUCCCAUAACCUUUCUGAAAGAUAAAAAUAAAAUUAUGAUGGAGGUGUUUCCCCCUUGC
>NC_009964
-GGCUACGUCUGAAAAUAUAAGACCUCUAGG--UAUAUGGGGAGAAA-----AGCCCCAAUAACCUUUCUGAUUGGAGUAUAAAAUUAUGAUGGAGGUGUUUCCCCCUUGC
>NC_009725
AAGACGGUUCUGAAAAACAAAAGACC-CAAGG--UAUAUGGGGAGAU-----GUCCCCAAUAACCUUUCUGAUUUAAGAUAAAAUUAUGAUGAUGGAGGUGUUU-CACCUUUGC
>NC_006270
-----AAUUGCAUGAAAG--UAUAUGGGGCUUAGACUUUCCCCCAUAUCUUUUAUUGAAAAAGAAUUAUAGACUGAAUUAUUCGGAGGUGUAAAAAUUGA
>NC_014019
-----GUAACAUAUUUGACAAGGUAUAUGGGGCCUGG-----UGCUCCAAUAACUUUUCUUUGUGCG--CGAAUUUUUUAUAAAAUUAUGGAGGUGUUCAGGGGUGU
#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):
.....((((((-.....)))))).....((((((-.....)))))).....((((((-.....)))))).....((((((-.....)))))).....
#nagA
#The following shows an alignment in 5'-UTR of nagA and the predicted ConSLOpt structures produced by RNAConSLOpt
>NC_012581
AACAGACGUACUAAGUUUCCUUUUU-UGUUAAACAAAGAGGAAUUUCAUUAGAUAUGACAAUCUACUCGCGCAUAUUAUUAAGAUUGGAAUUAUGGCGAAUAAAGGUAUAUAUA
>NC_012472
---AGACGUACUAAGUUUCCUUUUU-UGUUAAACAAAGAGGAAUUUCAUUAGAUAUGACAAUCUACUCGUGCAUAUUAUUAAGAUUGGAAUUAUGGCGAAUAAAGGUAUAUAUA
>NC_005957
GAGAGACGUACGAAACUUCUUUUU-UGUUAAACAAAGAGGAAUUUCAUUAGAUAUGACAAUCUACUCGUGCAUAUUAUUAAGAUUGGAAUUAUGGCGAAUAAAGGUAUAUAUA
>NC_011725
AAGAGACGUAAAGAAUUUCCUUUUUUGUUUUAUAAAAAGGAAUUUUAUUAGAUAUGACAAUCUACUCGUGUGUAUUAUUAAGAUUGGAAUUAUGGCGAAUAAAGGUAUAUAUA
>NC_014171
AAGAGACGUAAAGAAUUUCCUUUUUUGUUUUAUAAAAAGGAAUUUCAUUAGAUAUGACAAUCUACUCGUGCGUAUUAUUAAGAUUGGAAUUAUGGCGAAUAAAGGUAUAUAUA

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#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
(((.....(((.....)))))).....(((.....)))).....  
.....(((.....))).....(((.....)))).....(((.....)))).....

#exoA  
#The following shows an alignment in 5' -UTR of exoA and the predicted ConSLOpt structures produced by RNAConSLOpt  
>NC\_003997  
--UUUGUAUAGCAUGAAAUUUGGAAAGAAACAUCAAGAGGAGGACUAUAAGUGAAGUUCUUCGUGGAAUGUAAAUGGUUUUACGUGCAGUUUAUCGCAA  
>NC\_011725  
--UUUGUAUAGCAUGAAAUUUGGAAAUAAAACAUCAAGAGGAGGACUAUAAGUGAAGUUAUUUCAUGGAAUGUAAAUGGUUUUGCGAGCGUUUAUCGCAA  
>NC\_014171  
--UUUGUAUAGCAUGAAAUUUGGAAAUAAAACAUCAAGAGGAGGACUAUAAGUGAAGUUAUUUCAUGGAAUGUAAAUGGUUUUGCGAGCGUUUAUCGCAA  
>NC\_011772  
--UUUGUAUAGCAUGAACUUUGAAAGUGAACAUCAAGAGGAGGACUAUAAGUGAAGUUAUUUCAUGGAAUGUAAAUGGUUUUACGUGCAGUUUAUCGCAA  
>NC\_006274  
--UUUGUAUAGCAUGAAAUUUGGAAAGAAACAUAUAAGAGGAGGACUAUAAGUGAAGUUCUUCGUGGAAUGUAAAUGGUUUUACGUGCAGUUUAUCGCAA  
>NC\_006582  
AUCUAUGCACACUCUGGCACUGGAUAAAAGAGAGGGAGUACGACAACUA-UGAAAUUCUAUCGUGGAAUGUCAAUUGCCUGCGCGCAUGUGUAAAAA

#The top 2 predicted ConSLOpt structures ranked by RankB (structures' associated minimal energy barriers):  
--(((.....(((.....)))))).....(((.....)))).....(((.....)))).....  
--(((.....(((.....)))))).....(((.....)))).....(((.....)))).....