Edinburgh Genome Foundry

Compendium of overhangs

There are **136** overhangs in this report. The restriction enzyme used in this compendium is **BsaI**.

Please see the Appendix on the last page for an explanation of details.

☑ AAAA TTTT

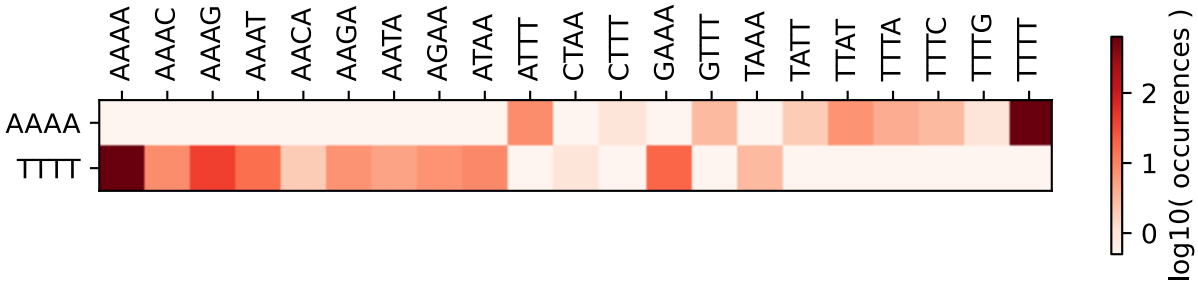
Extreme GC content: 0 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

K[NISRKMT]
[PAVISGRKLEQT*]K
[EQK*][NK]
F[YSWCLF*]
[PDANVYSIGRCLHFT]F
[LIFV][LF]

Misannealing overhangs:



☑ AAAG CTTT

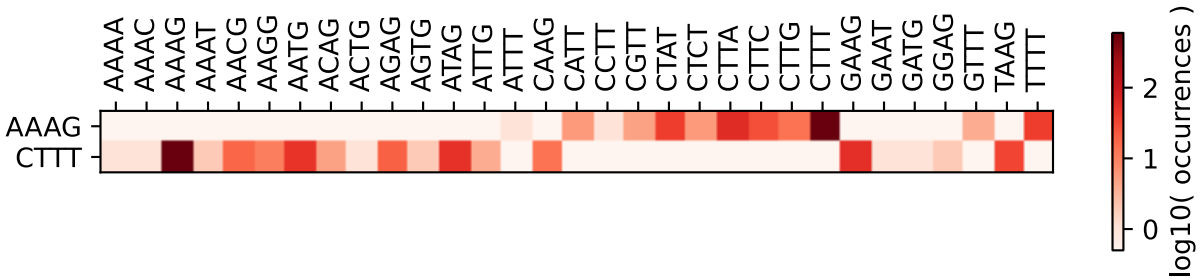
GC content: **25 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

K[ADVGE]
[PAVISGRKLEQT*]K
[EQK*][SR]
L[YSWCLF*]
[PDANVYSIGRCLHFT]F
[PSAT][LF]

Misannealing overhangs:



☑ AAAT ATTT

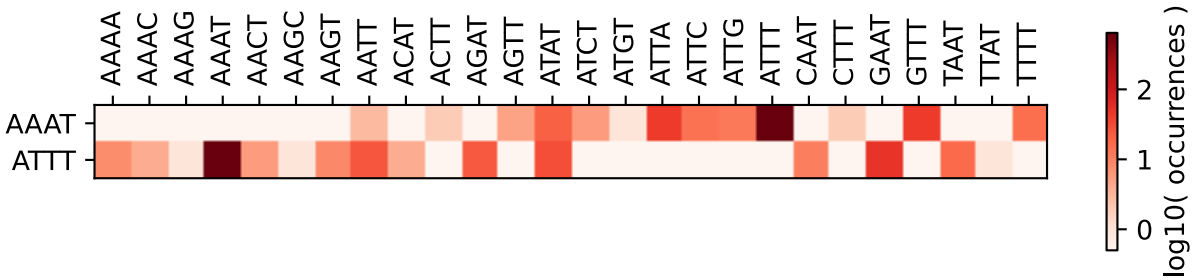
Extreme GC content: 0 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

K[YSWCLF*]
[PAVISGRKLEQT*]N
[EQK*][IM]
I[YSWCLF*]
[PAVISGRKLEQT*]F
[YDHN][LF]

Misannealing overhangs:



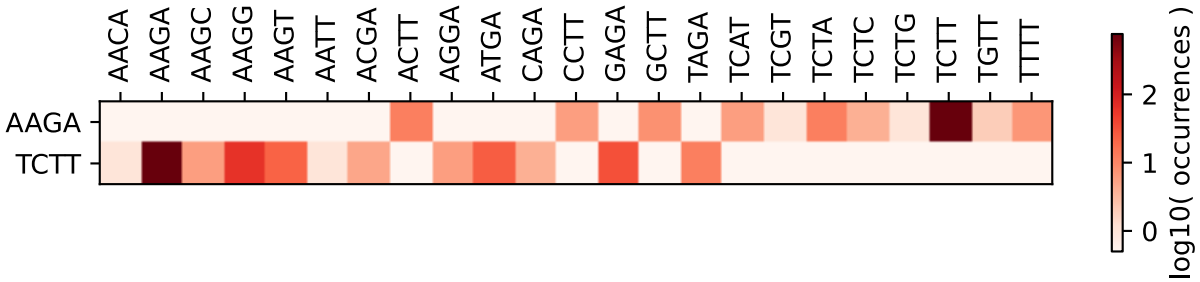
☑ AAGA TCTT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

K[NISRKMT]
[PAVISGRKLEQT*]R
[EQK*][ED]
S[YSWCLF*]
[PDANVYSIGRCLHFT]L
[LIFV][LF]

Misannealing overhangs:



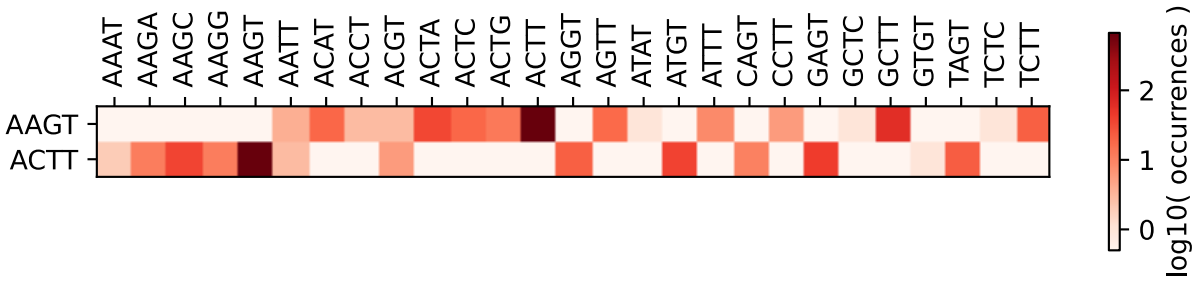
☑ AAGT ACTT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

K[YSWCLF*]
[PAVISGRKLEQT*]S
[EQK*][V]
T[YSWCLF*]
[PAVISGRKLEQT*]L
[YDHN][LF]

Misannealing overhangs:



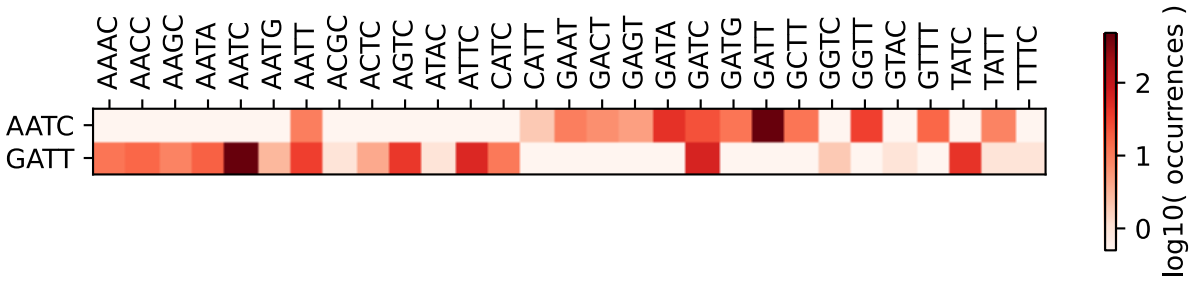
☑ AATC GATT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

N[PRLHQ]
[PAVISGRKLEQT*]I
[EQK*][S]
D[YSWCLF*]
[PAVSGWRKLMEQT*]I
[GR*][LF]

Misannealing overhangs:



☒ AATT AATT

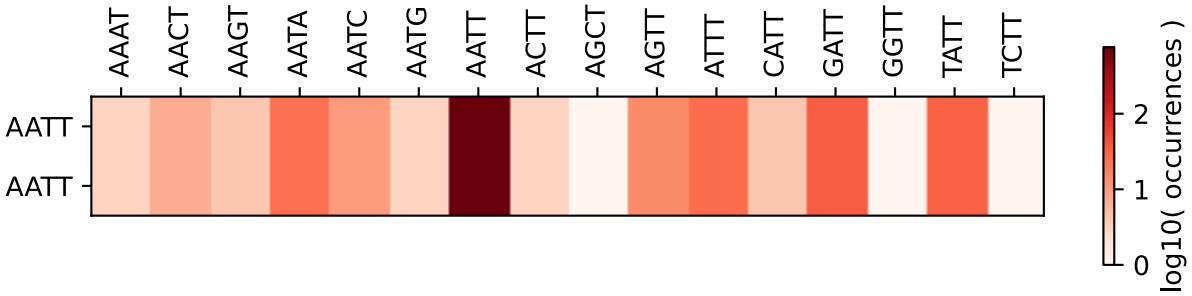
Extreme GC content: 0 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

N[YSWCLF*]
[PAVISGRKLEQT*]I
[EQK*][LF]
N[YSWCLF*]
[PAVISGRKLEQT*]I
[EQK*][LF]

Misannealing overhangs:

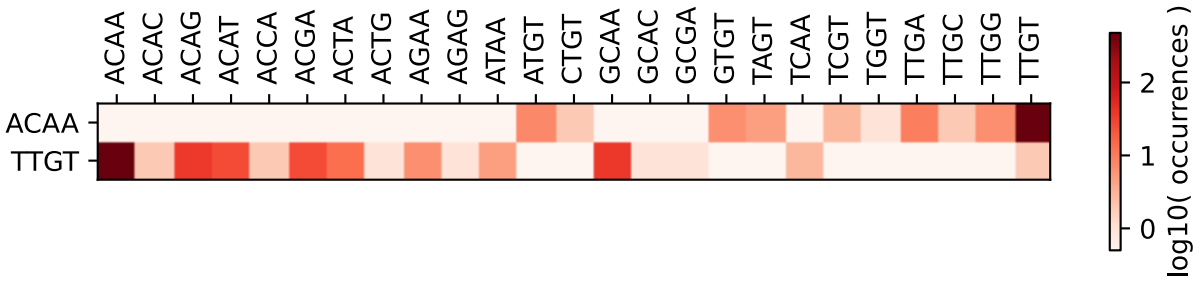


GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

T[NISRKMT]
[PAVISGRKLEQT*]Q
[YDHN][NK]
L[YSWCLF*]
[PDANVYSIGRCLHFT]C
[LIFV][V]

Misannealing overhangs:



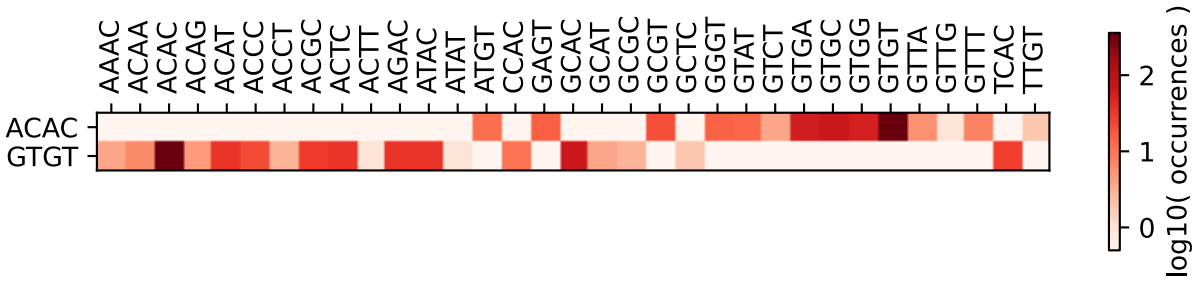
☑ ACAC GTGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[PRLHQ]
[PAVISGRKLEQT*]H
[YDHN][T]
V[YSWCLF*]
[PAVSGWRKLMEQT*]C
[CSGR][V]

Misannealing overhangs:

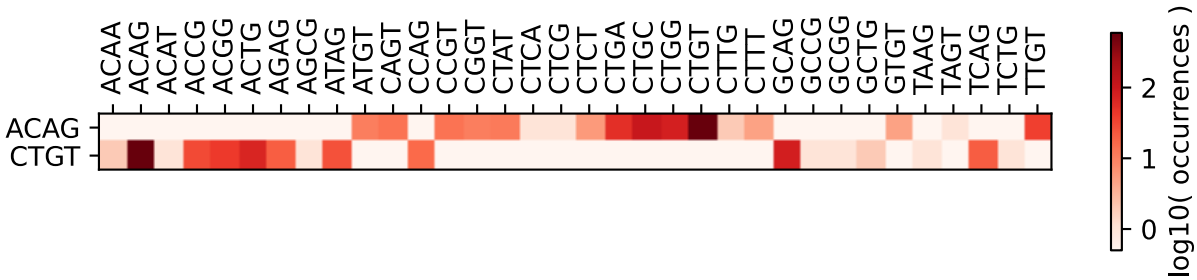


GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[ADVGE]
[PAVISGRKLEQT*]Q
[YDHN][SR]
L[YSWCLF*]
[PDANVYSIGRCLHFT]C
[PSAT][V]

Misannealing overhangs:



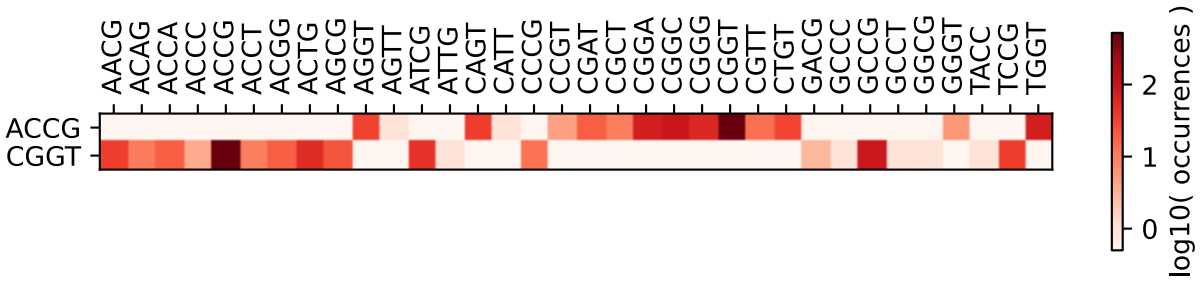
☑ ACCG CGGT

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

T[ADVGE]
[PAVISGRKLEQT*]P
[YDHN][R]
R[YSWCLF*]
[PDANVYSIGRCLHFT]G
[PSAT][V]

Misannealing overhangs:



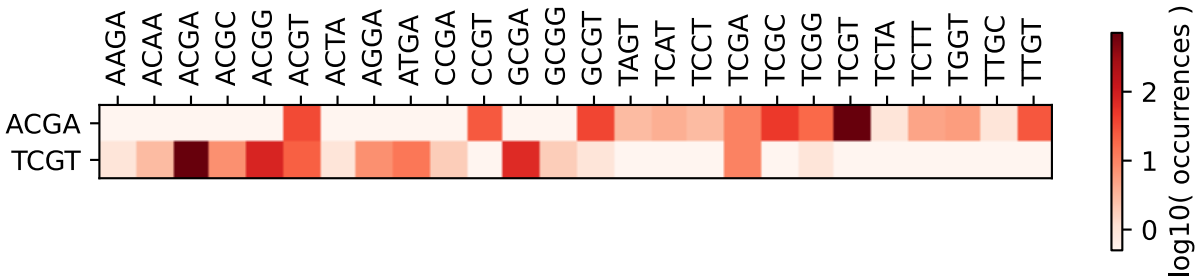
☑ ACGA TCGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[NISRKMT]
[PAVISGRKLEQT*]R
[YDHN][ED]
S[YSWCLF*]
[PDANVYSIGRCLHFT]R
[LIFV][V]

Misannealing overhangs:



☒ ACGT ACGT

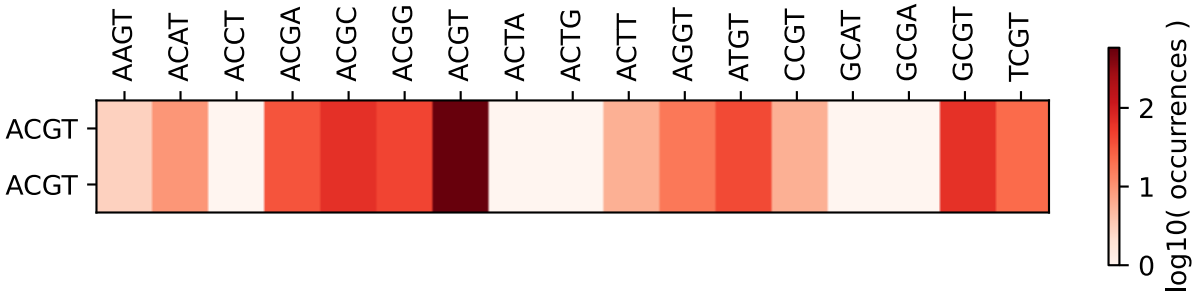
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

T[YSWCLF*]
[PAVISGRKLEQT*]R
[YDHN][V]
T[YSWCLF*]
[PAVISGRKLEQT*]R
[YDHN][V]

Misannealing overhangs:



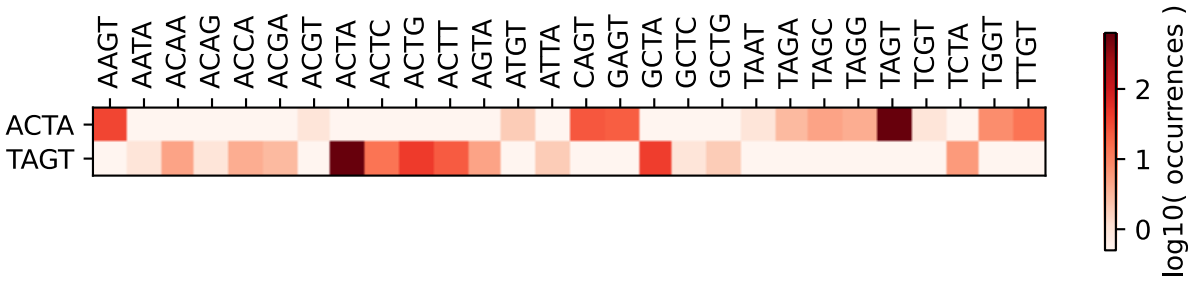
☑ ACTA TAGT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

T[NISRKMT]
[PAVISGRKLEQT*]L
[YDHN][Y*]
[YSWCLF]
[PDANVYSIGRCLHFT]S
[LIV][V]

Misannealing overhangs:



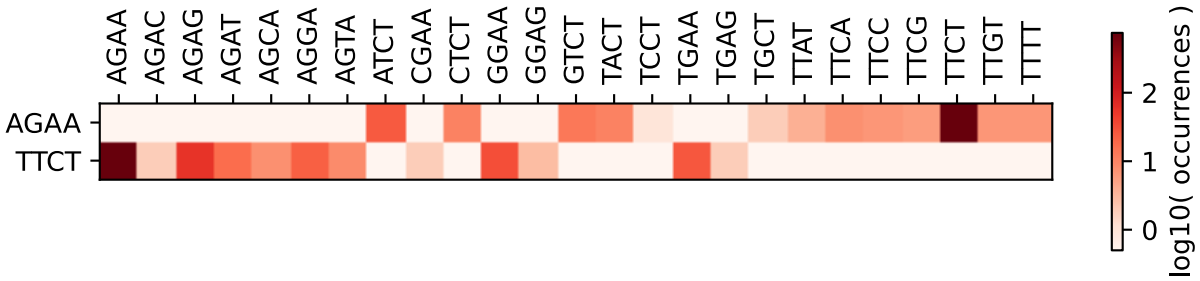
☑ AGAA TTCT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PAVISGRKLEQT*]E
[EQK*][NK]
F[YSWCLF*]
[PDANVYSIGRCLHFT]S
[LIFV][L]

Misannealing overhangs:



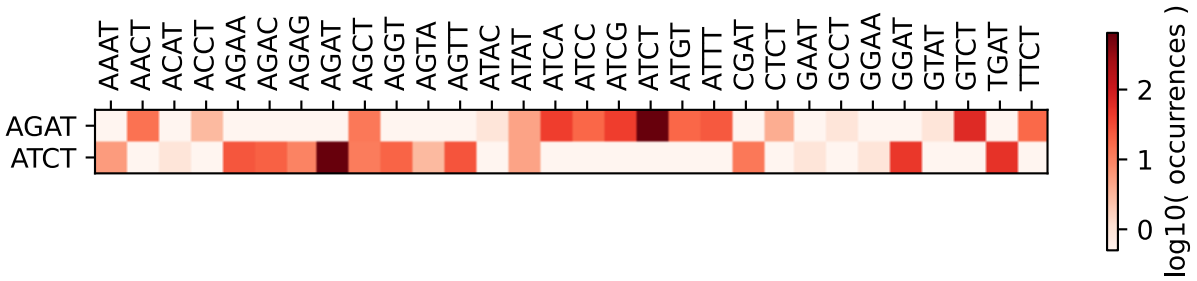
☑ AGAT ATCT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

R[YSWCLF*]
[PAVISGRKLEQT*]D
[EQK*][IM]
I[YSWCLF*]
[PAVISGRKLEQT*]S
[YDHN][L]

Misannealing overhangs:



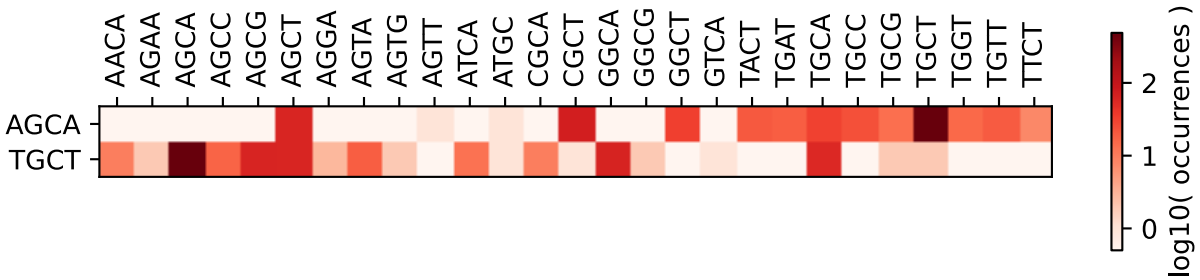
☑ AGCA TGCT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

S[NISRKMT]
[PAVISGRKLEQT*]A
[EQK*][HQ]
C[YSWCLF*]
[PDANVYSIGRCLHFT]A
[LMV][L]

Misannealing overhangs:

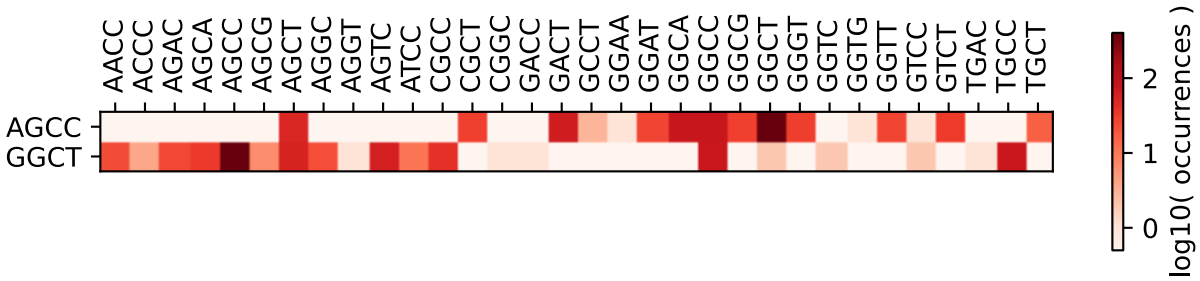


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

S[PRLHQ]
[PAVISGRKLEQT*]A
[EQK*][P]
G[YSWCLF*]
[PAVSGWRKLMEQT*]A
[GWR][L]

Misannealing overhangs:



☒ AGCT AGCT

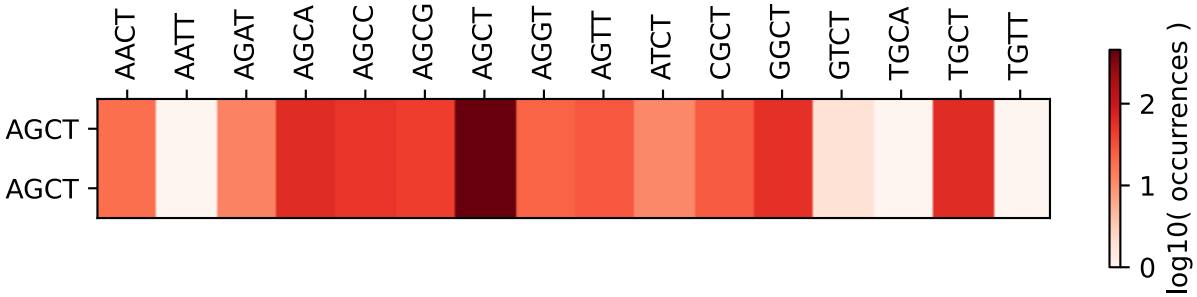
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

S[YSWCLF*]
[PAVISGRKLEQT*]A
[EQK*][L]
S[YSWCLF*]
[PAVISGRKLEQT*]A
[EQK*][L]

Misannealing overhangs:



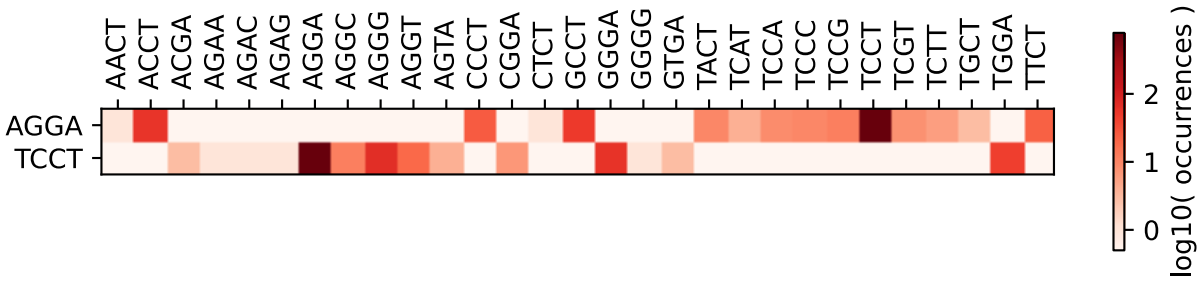
☑ AGGA TCCT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PAVISGRKLEQT*]G
[EQK*][ED]
S[YSWCLF*]
[PDANVYSIGRCLHFT]P
[LIFV][L]

Misannealing overhangs:

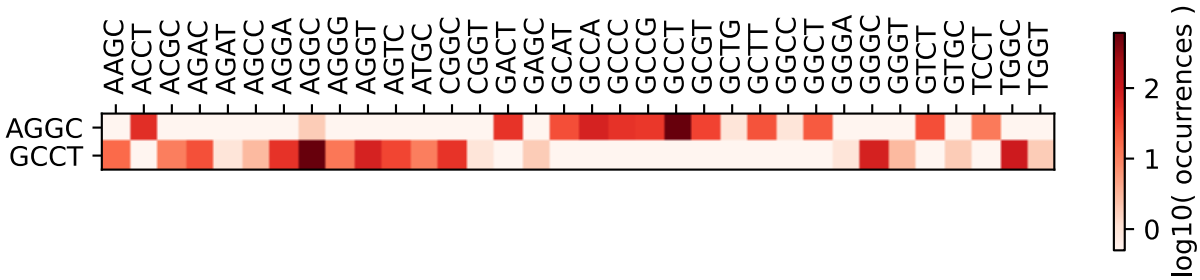


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PAVISGRKLEQT*]G
[EQK*][A]
A[YSWCLF*]
[PAVSGWRKLMEQT*]P
[CSGR][L]

Misannealing overhangs:



☑ AGGG CCCT

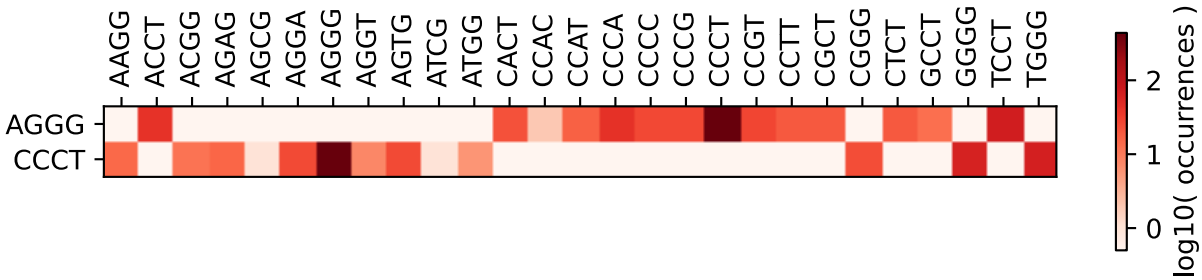
GC content: **75 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

R[ADVGE]
[PAVISGRKLEQT*]G
[EQK*][G]
P[YSWCLF*]
[PDANVYSIGRCLHFT]P
[PSAT][L]

Misannealing overhangs:



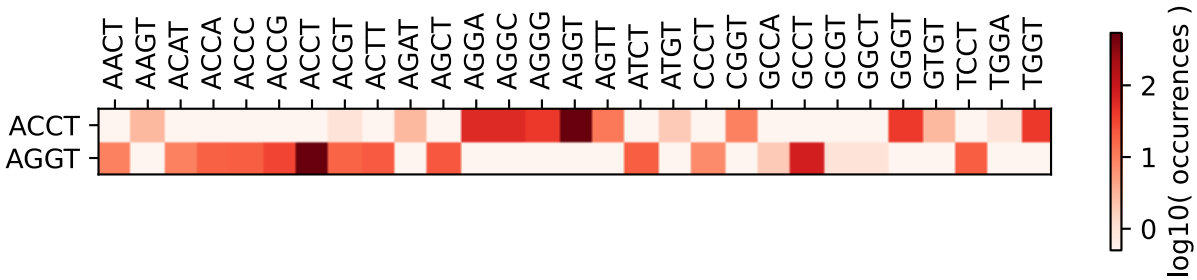
☑ ACCT AGGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[YSWCLF*]
[PAVISGRKLEQT*]P
[YDHN][L]
R[YSWCLF*]
[PAVISGRKLEQT*]G
[EQK*][V]

Misannealing overhangs:



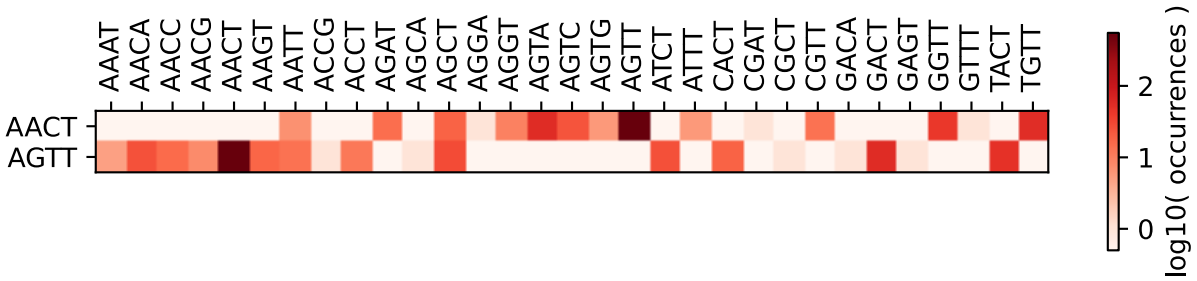
☑ AACT AGTT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

N[YSWCLF*]
[PAVISGRKLEQT*]T
[EQK*][L]
S[YSWCLF*]
[PAVISGRKLEQT*]V
[EQK*][LF]

Misannealing overhangs:



☒ ATAT ATAT

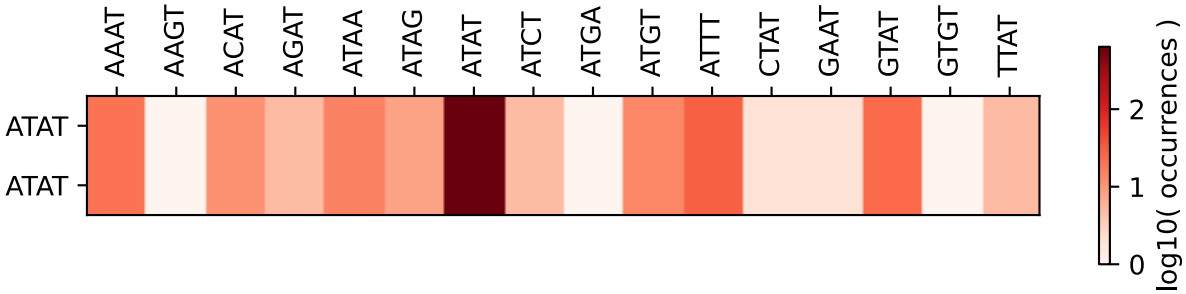
Extreme GC content: 0 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

I[YSWCLF*]
[PAVISGRKLEQT*]Y
[YDHN][IM]
I[YSWCLF*]
[PAVISGRKLEQT*]Y
[YDHN][IM]

Misannealing overhangs:



☑ ATGC GCAT

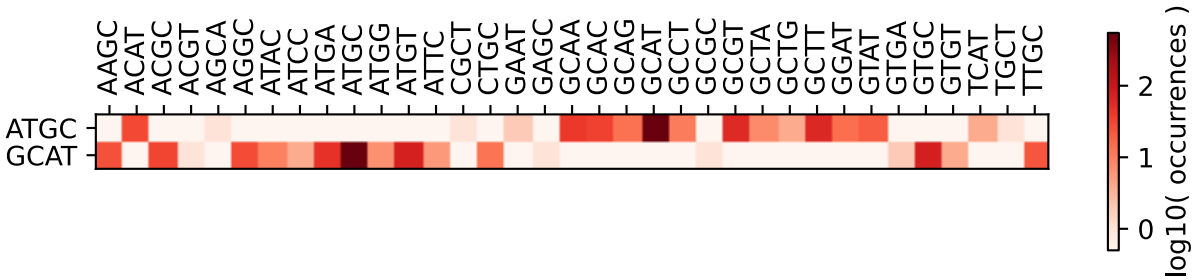
GC content: **50 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

M[PRLHQ]
[PAVISGRKLEQT*]C
[YDHN][A]
A[YSWCLF*]
[PAVSGWRKLMEQT*]H
[CSGR][IM]

Misannealing overhangs:



☑ ACAT ATGT

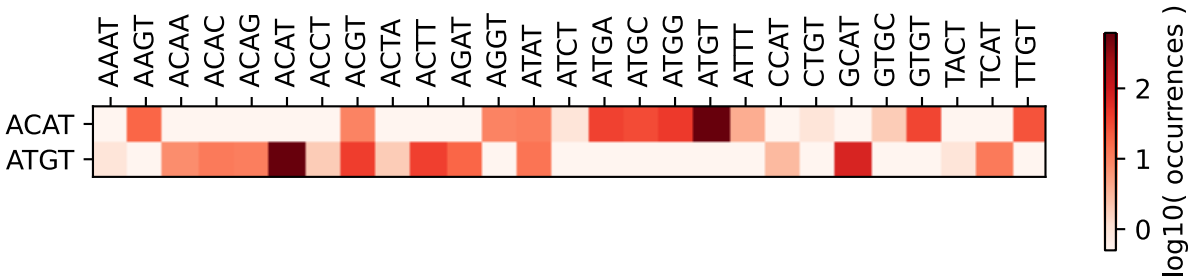
GC content: **25 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

T[YSWCLF*]
[PAVISGRKLEQT*]H
[YDHN][IM]
M[YSWCLF*]
[PAVISGRKLEQT*]C
[YDHN][V]

Misannealing overhangs:



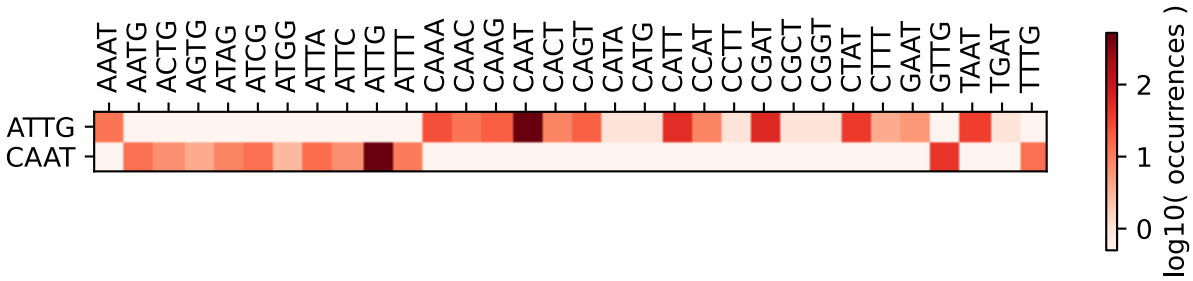
☑ ATTG CAAT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

I[ADVGE]
[PAVISGRKLEQT*]L
[YDHN][CW*]
Q[YSWCLF*]
[PDANVYSIGRCLHFT]N
[PSAT][IM]

Misannealing overhangs:

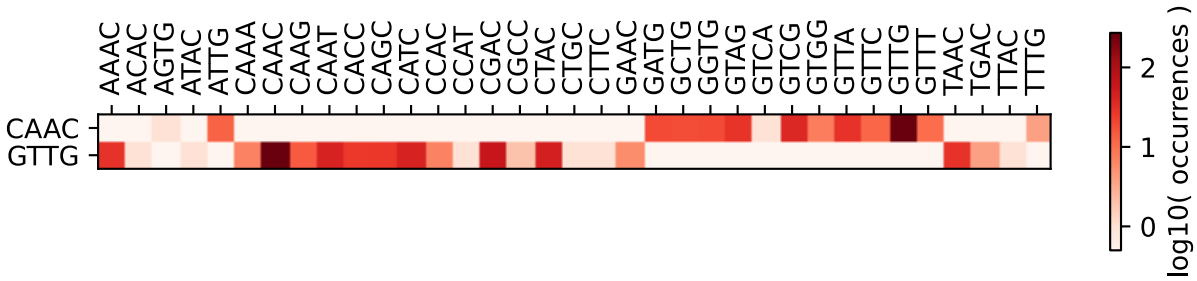


GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

Q[PRLHQ]
[PDANVYSIGRCLHFT]N
[PSAT][T]
V[ADVGE]
[PAVSGWRKLMEQT*]L
[CSGR][CW*]

Misannealing overhangs:



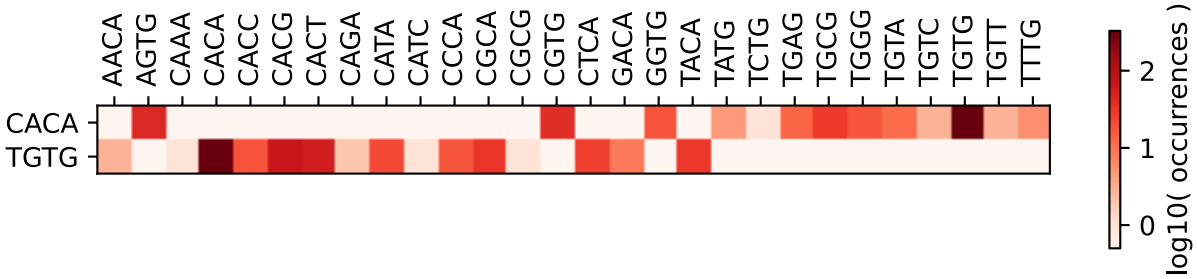
☑ CACA TGTG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

H[NISRKMT]
[PDANVYSIGRCLHFT]T
[PSAT][HQ]
C[ADVGE]
[PDANVYSIGRCLHFT]V
[LMV][CW*]

Misannealing overhangs:



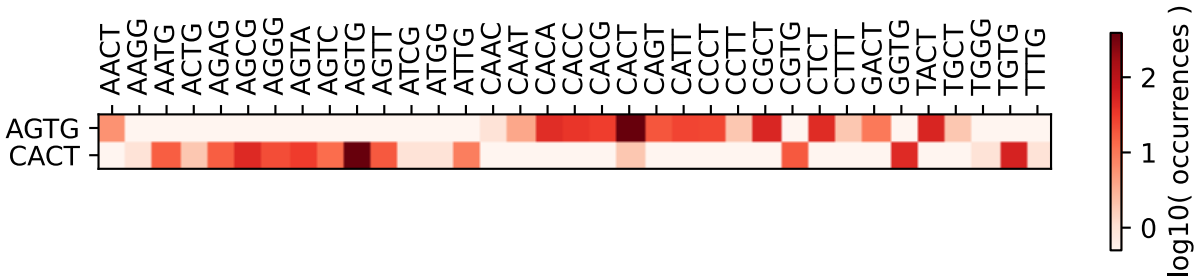
☑ AGTG CACT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

S[ADVGE]
[PAVISGRKLEQT*]V
[EQK*][CW*]
H[YSWCLF*]
[PDANVYSIGRCLHFT]T
[PSAT][L]

Misannealing overhangs:



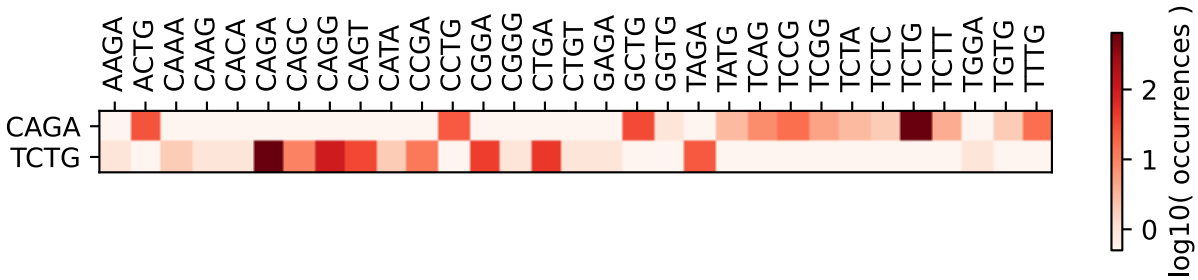
☑ CAGA TCTG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

Q[NISRKMT]
[PDANVYSIGRCLHFT]R
[PSAT][ED]
S[ADVGE]
[PDANVYSIGRCLHFT]L
[LIFV][CW*]

Misannealing overhangs:



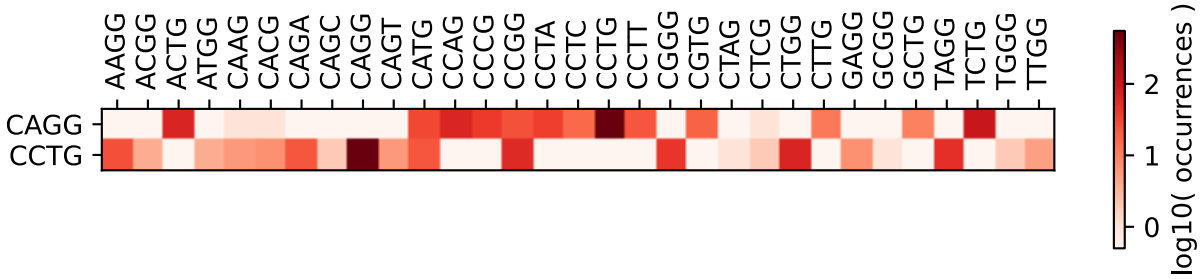
☑ CAGG CCTG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

Q[ADVGE]
[PDANVYSIGRCLHFT]R
[PSAT][G]
P[ADVGE]
[PDANVYSIGRCLHFT]L
[PSAT][CW*]

Misannealing overhangs:



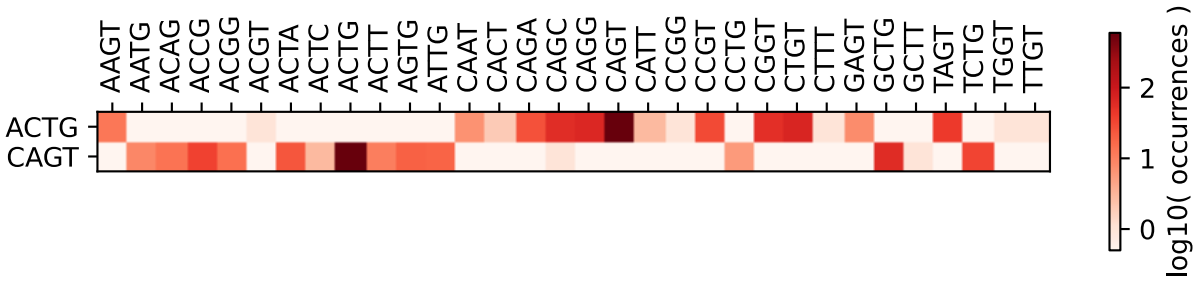
☑ ACTG CAGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[ADVGE]
[PAVISGRKLEQT*]L
[YDHN][CW*]
Q[YSWCLF*]
[PDANVYSIGRCLHFT]S
[PSAT][V]

Misannealing overhangs:



☒ CATG CATG

GC content: **50 %**.

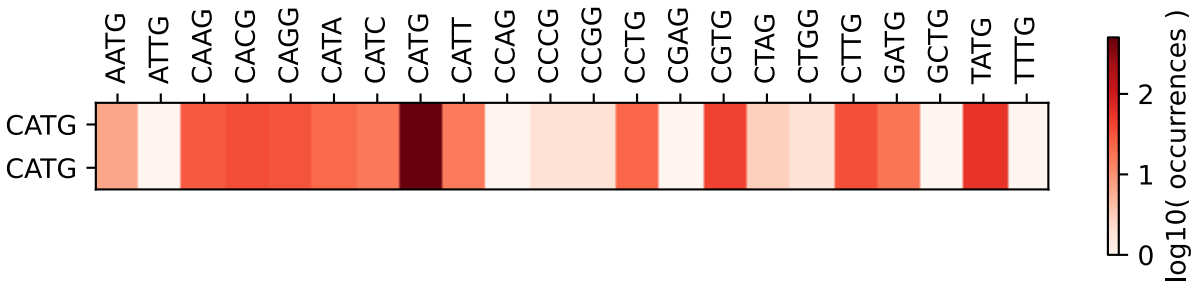
The overhang is palindromic, cannot be used for DNA assembly.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

H[ADVGE]
[PDANVYSIGRCLHFT]M
[PSAT][CW*]
H[ADVGE]
[PDANVYSIGRCLHFT]M
[PSAT][CW*]

Misannealing overhangs:



☑ AATG CATT

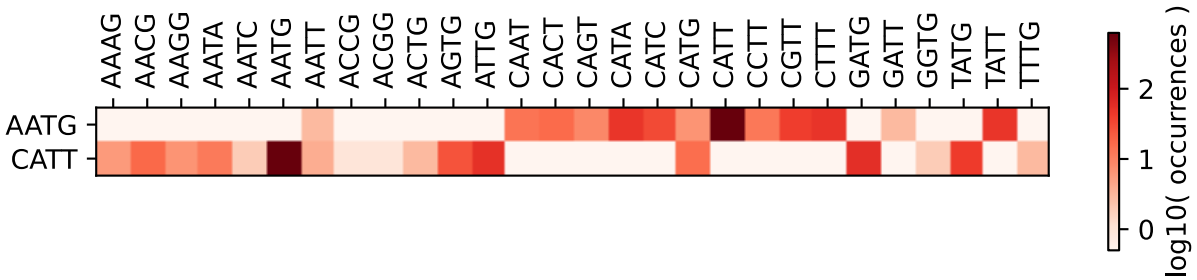
GC content: **25 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

N[ADVGE]
[PAVISGRKLEQT*]M
[EQK*][CW*]
H[YSWCLF*]
[PDANVYSIGRCLHFT]I
[PSAT][LF]

Misannealing overhangs:



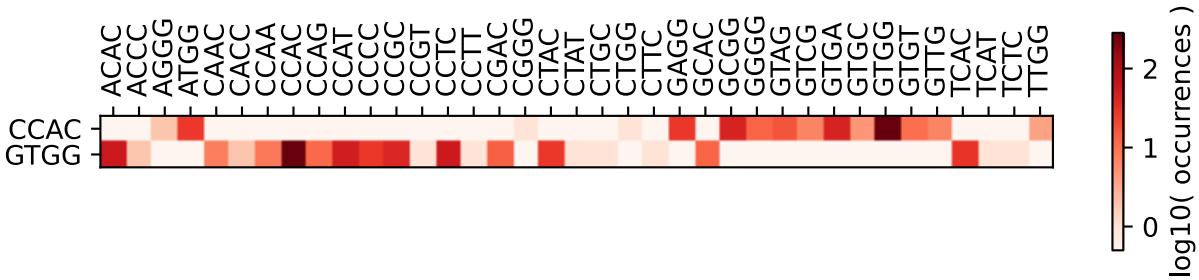
☑ CCAC GTGG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

P[PRLHQ]
[PDANVYSIGRCLHFT]H
[PSAT][T]
V[ADVGE]
[PAVSGWRKLMEQT*]W
[CSGR][G]

Misannealing overhangs:



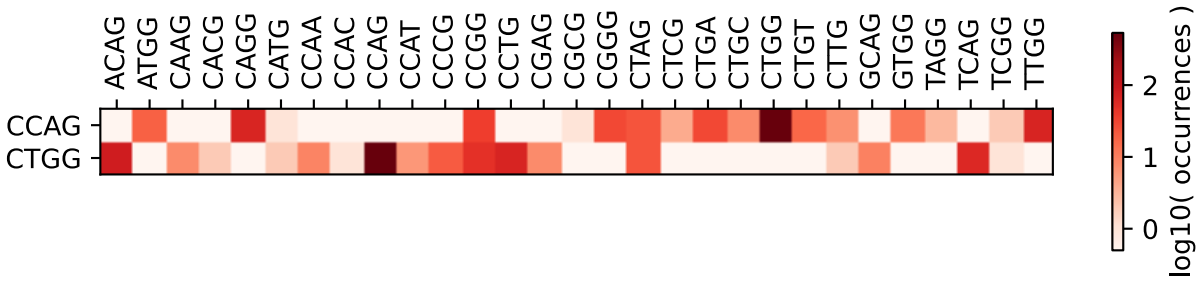
☑ CCAG CTGG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

P[ADVGE]
[PDANVYSIGRCLHFT]Q
[PSAT][SR]
L[ADVGE]
[PDANVYSIGRCLHFT]W
[PSAT][G]

Misannealing overhangs:



☑ ATGG CCAT

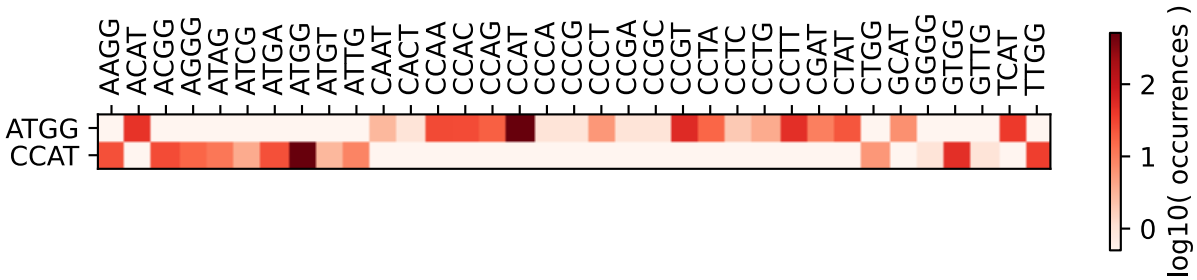
GC content: **50 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

M[ADVGE]
[PAVISGRKLEQT*]W
[YDHN][G]
P[YSWCLF*]
[PDANVYSIGRCLHFT]H
[PSAT][IM]

Misannealing overhangs:



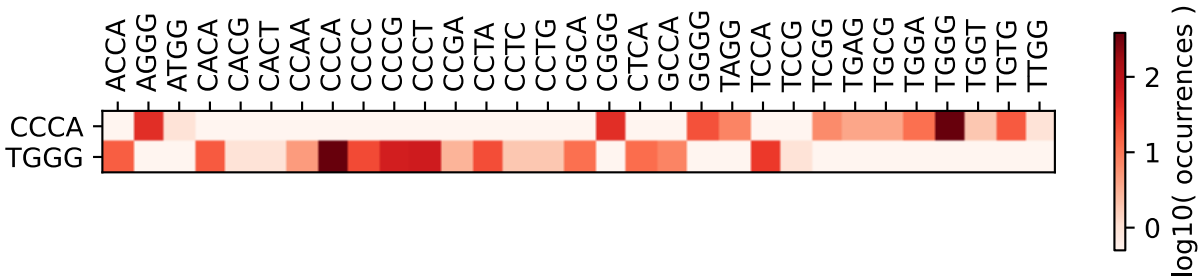
GC content: **75 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

P[NISRKMT]
[PDANVYSIGRCLHFT]P
[PSAT][HQ]
W[ADVGE]
[PDANVYSIGRCLHFT]G
[LMV][G]

Misannealing overhangs:



☑ CCCC GGGG

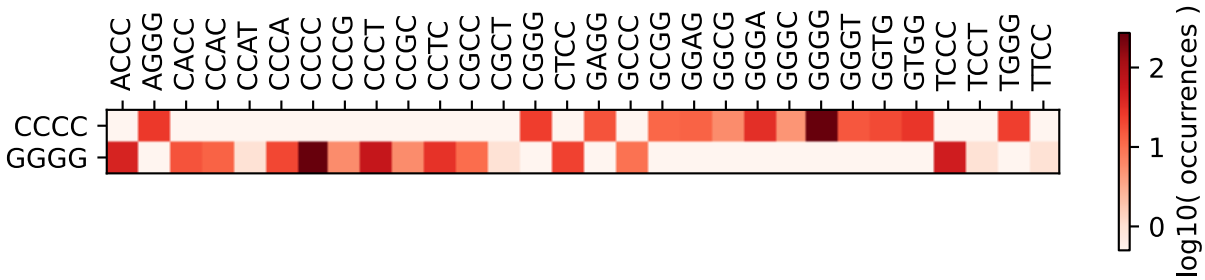
Extreme GC content: 100 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

P[PRLHQ]
[PDANVYSIGRCLHFT]P
[PSAT][P]
G[ADVGE]
[PAVSGWRKLMEQT*]G
[GWR][G]

Misannealing overhangs:



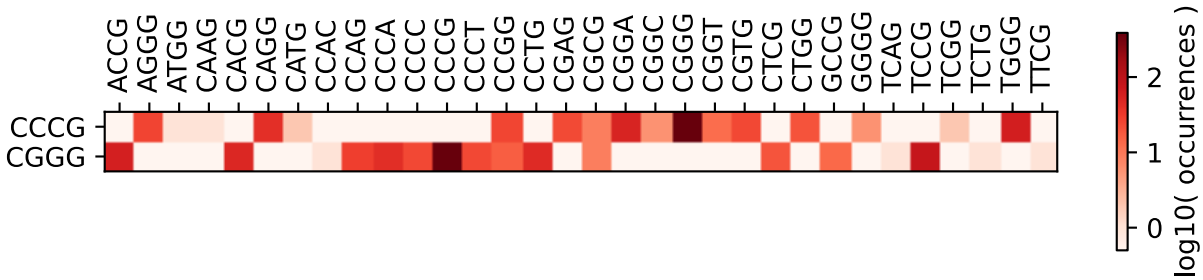
Extreme GC content: 100 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

P[ADVGE]
[PDANVYSIGRCLHFT]P
[PSAT][R]
R[ADVGE]
[PDANVYSIGRCLHFT]G
[PSAT][G]

Misannealing overhangs:



☒ CCGG CCGG

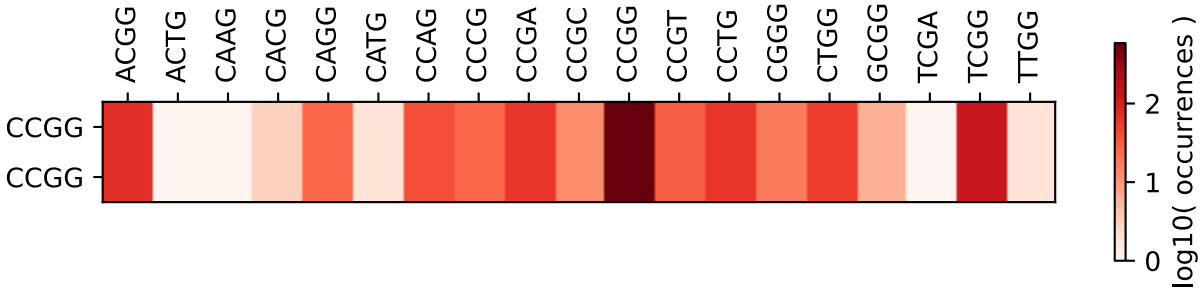
Extreme GC content: 100 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

P[ADVGE]
[PDANVYSIGRCLHFT]R
[PSAT][G]
P[ADVGE]
[PDANVYSIGRCLHFT]R
[PSAT][G]

Misannealing overhangs:

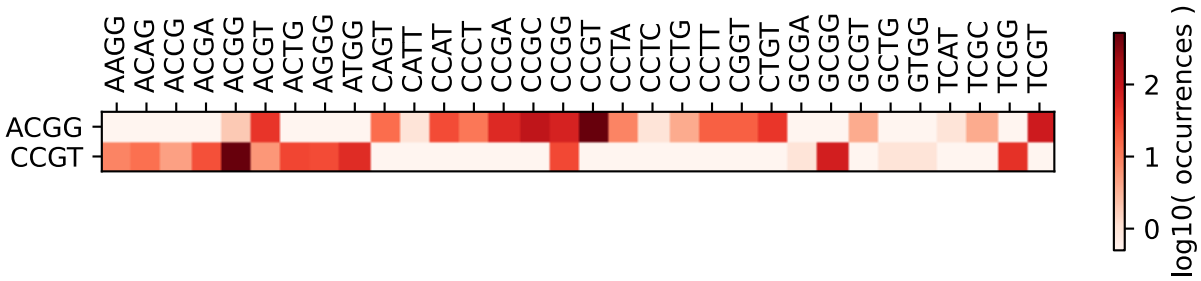


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

T[ADVGE]
[PAVISGRKLEQT*]R
[YDHN][G]
P[YSWCLF*]
[PDANVYSIGRCLHFT]R
[PSAT][V]

Misannealing overhangs:



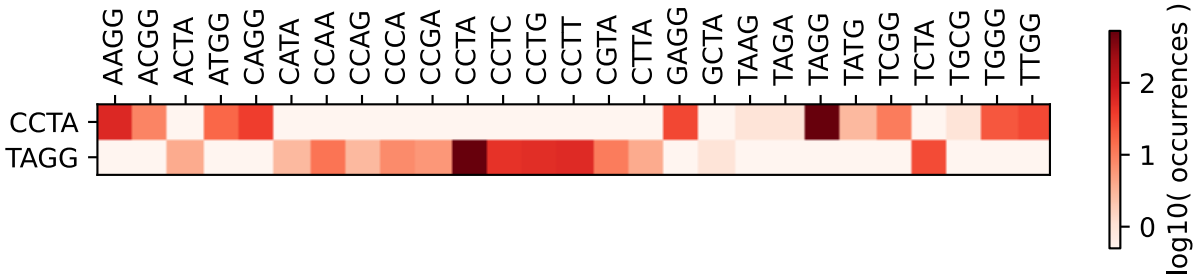
☑ CCTA TAGG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

P[NISRKMT]
[PDANVYSIGRCLHFT]L
[PSAT][Y*]
*[ADVGE]
[PDANVYSIGRCLHFT]R
[LIV][G]

Misannealing overhangs:



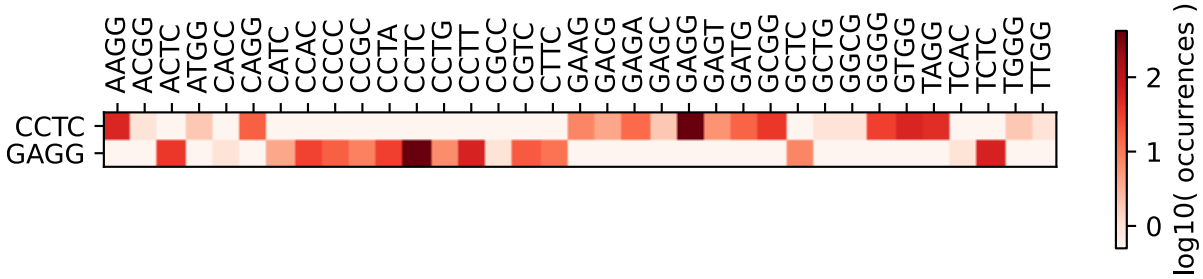
☑ CCTC GAGG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

P[PRLHQ]
[PDANVYSIGRCLHFT]L
[PSAT][S]
E[ADVGE]
[PAVSGWRKLMEQT*]R
[GR*][G]

Misannealing overhangs:



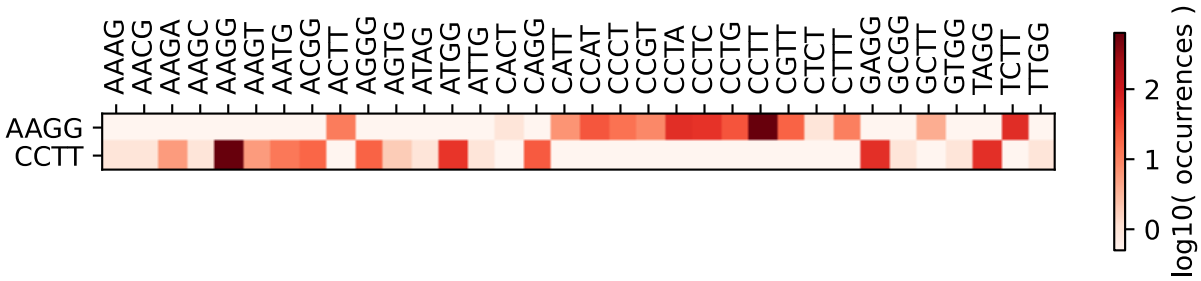
☑ AAGG CCTT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

K[ADVGE]
[PAVISGRKLEQT*]R
[EQK*][G]
P[YSWCLF*]
[PDANVYSIGRCLHFT]L
[PSAT][LF]

Misannealing overhangs:

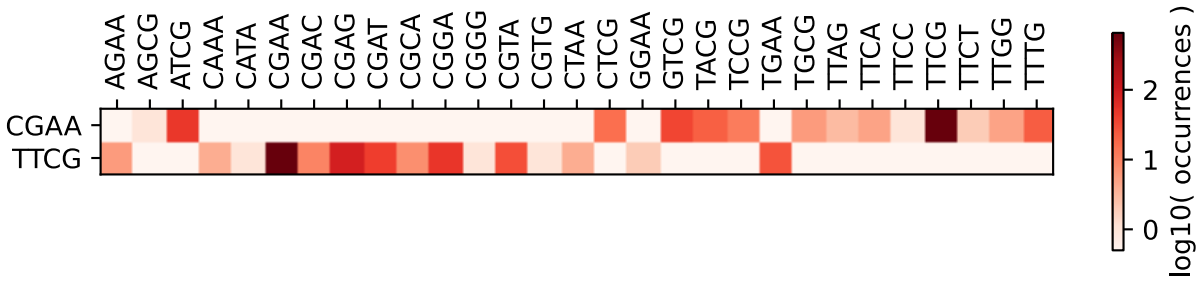


GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PDANVYSIGRCLHFT]E
[PSAT][NK]
F[ADVGE]
[PDANVYSIGRCLHFT]S
[LIFV][R]

Misannealing overhangs:

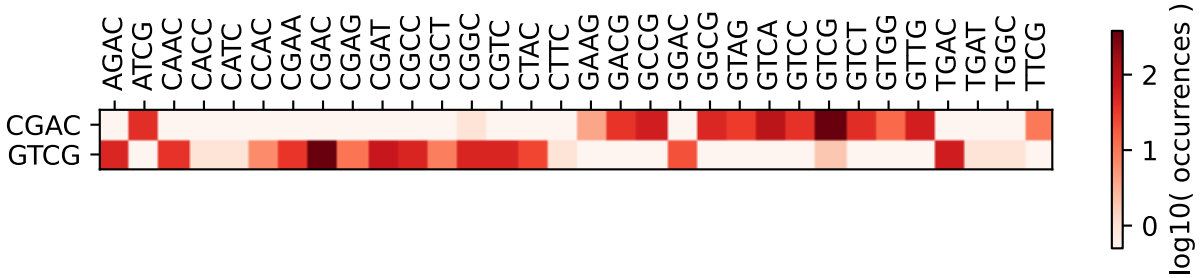


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PDANVYSIGRCLHFT]D
[PSAT][T]
V[ADVGE]
[PAVSGWRKLMEQT*]S
[CSGR][R]

Misannealing overhangs:



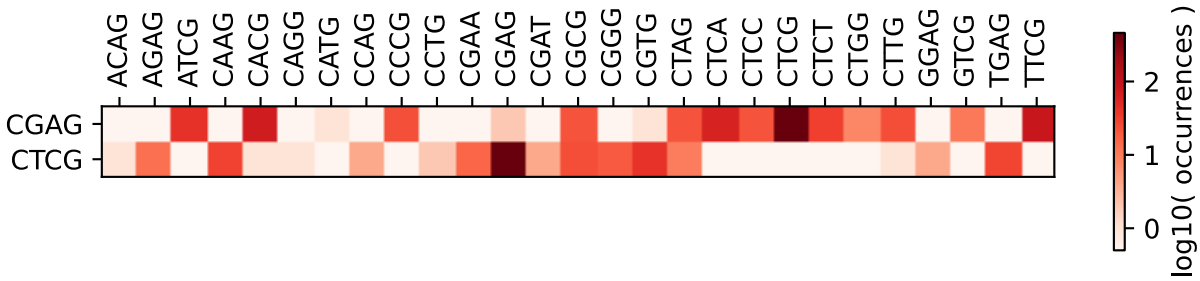
☑ CGAG CTCG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[ADVGE]
[PDANVYSIGRCLHFT]E
[PSAT][SR]
L[ADVGE]
[PDANVYSIGRCLHFT]S
[PSAT][R]

Misannealing overhangs:

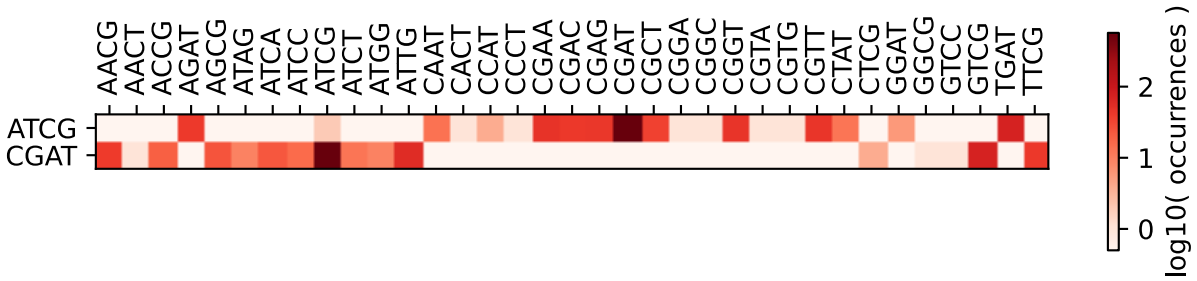


GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

I[ADVGE]
[PAVISGRKLEQT*]S
[YDHN][R]
R[YSWCLF*]
[PDANVYSIGRCLHFT]D
[PSAT][IM]

Misannealing overhangs:



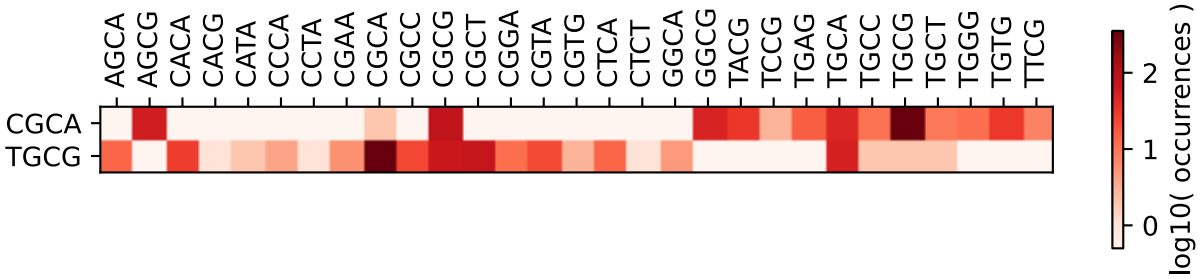
☑ CGCA TGCG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PDANVYSIGRCLHFT]A
[PSAT][HQ]
C[ADVGE]
[PDANVYSIGRCLHFT]A
[LMV][R]

Misannealing overhangs:



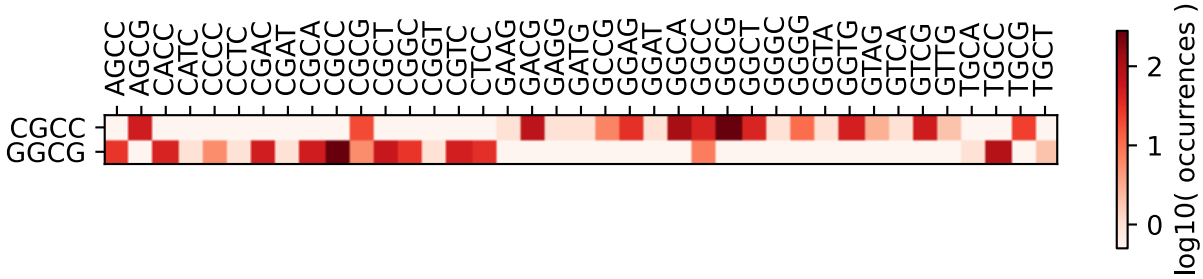
CGCC GGCG

Extreme GC content: 100 %.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PDANVYSIGRCLHFT]A
[PSAT][P]
G[ADVGE]
[PAVSGWRKLMEQT*]A
[GWR][R]

Misannealing overhangs:



☒ CGCG CGCG

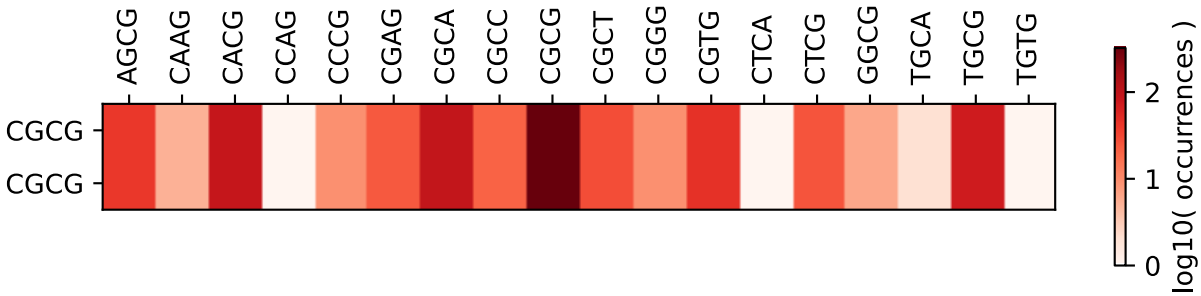
Extreme GC content: 100 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

R[ADVGE]
[PDANVYSIGRCLHFT]A
[PSAT][R]
R[ADVGE]
[PDANVYSIGRCLHFT]A
[PSAT][R]

Misannealing overhangs:

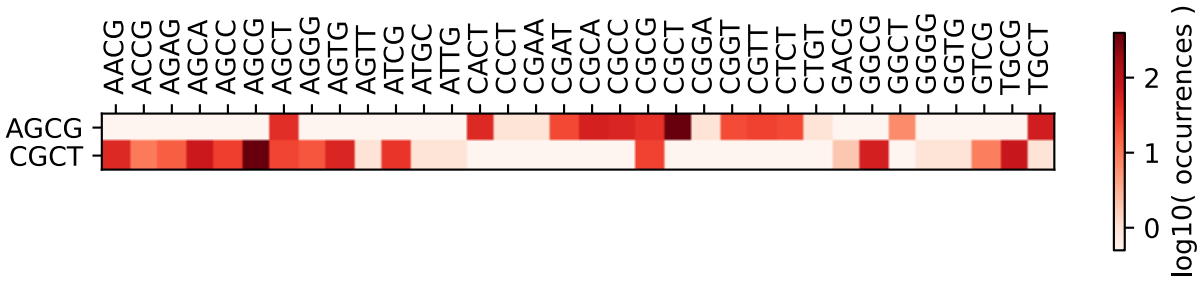


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

S[ADVGE]
[PAVISGRKLEQT*]A
[EQK*][R]
R[YSWCLF*]
[PDANVYSIGRCLHFT]A
[PSAT][L]

Misannealing overhangs:



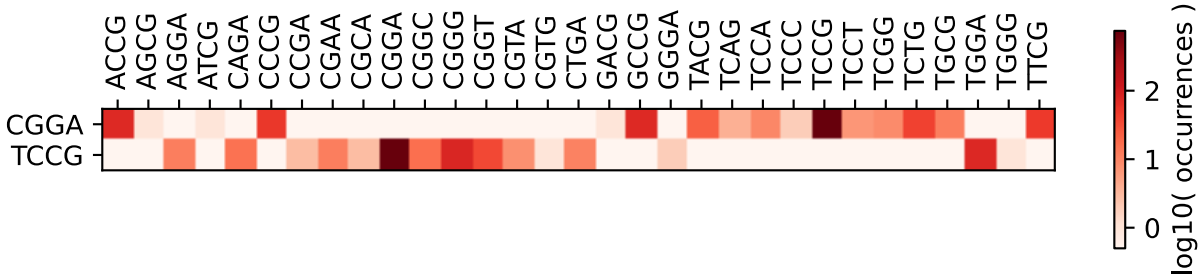
☑ CGGA TCCG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PDANVYSIGRCLHFT]G
[PSAT][ED]
S[ADVGE]
[PDANVYSIGRCLHFT]P
[LIFV][R]

Misannealing overhangs:



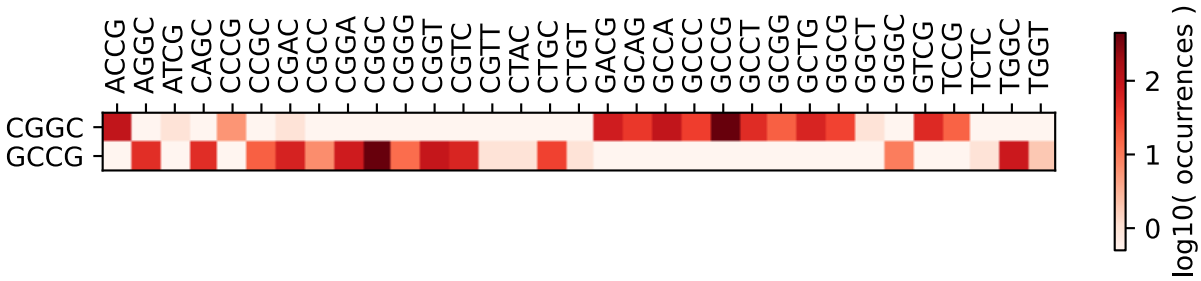
☑ CGGC GCCG

Extreme GC content: 100 %.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PDANVYSIGRCLHFT]G
[PSAT][A]
A[ADVGE]
[PAVSGWRKLMEQT*]P
[CSGR][R]

Misannealing overhangs:



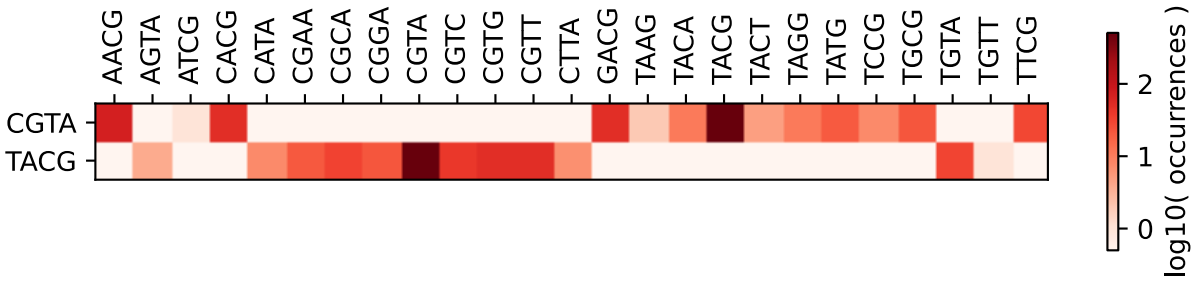
☑ CGTA TACG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

R[NISRKMT]
[PDANVYSIGRCLHFT]V
[PSAT][Y*]
Y[ADVGE]
[PDANVYSIGRCLHFT]T
[LIV][R]

Misannealing overhangs:



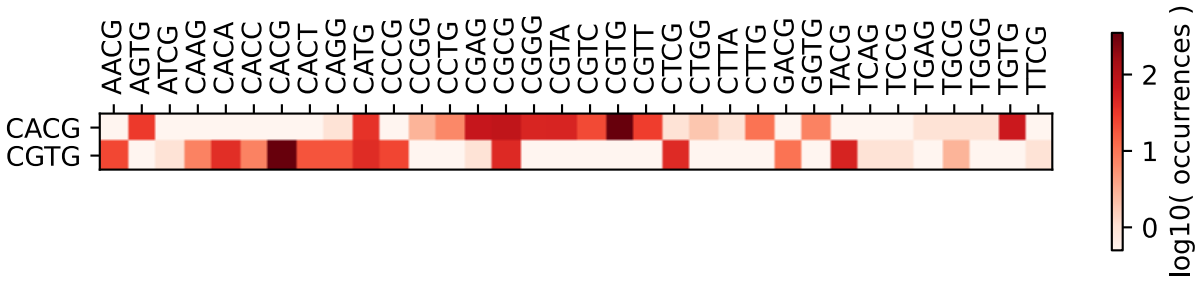
☑ CACG CGTG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

H[ADVGE]
[PDANVYSIGRCLHFT]T
[PSAT][R]
R[ADVGE]
[PDANVYSIGRCLHFT]V
[PSAT][CW*]

Misannealing overhangs:



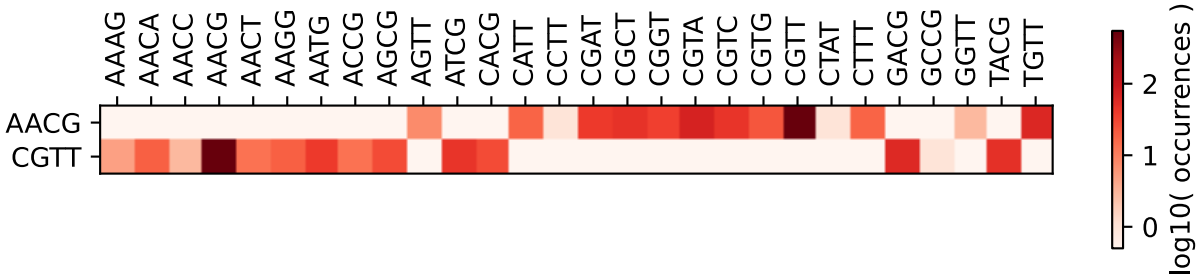
☑ AACG CGTT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

N[ADVGE]
[PAVISGRKLEQT*]T
[EQK*][R]
R[YSWCLF*]
[PDANVYSIGRCLHFT]V
[PSAT][LF]

Misannealing overhangs:



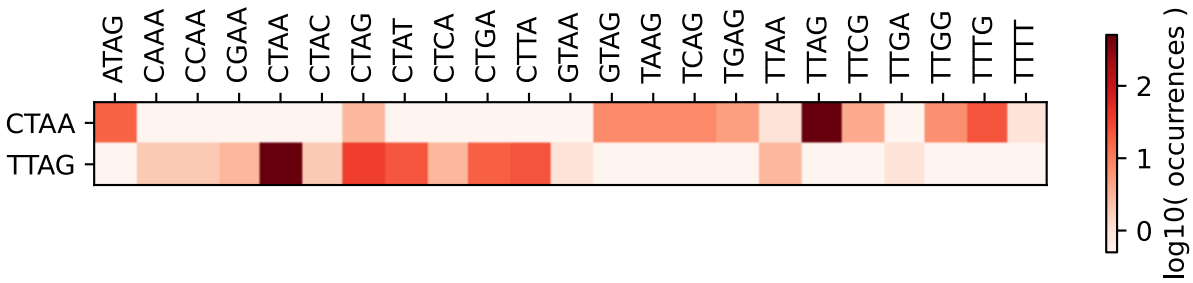
☑ CTAA TTAG

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

L[NISRKMT]
[PDANVYSIGRCLHFT]*
[PSAT][NK]
L[ADVGE]
[PDANVYSIGRCLHFT]*
[LIFV][SR]

Misannealing overhangs:



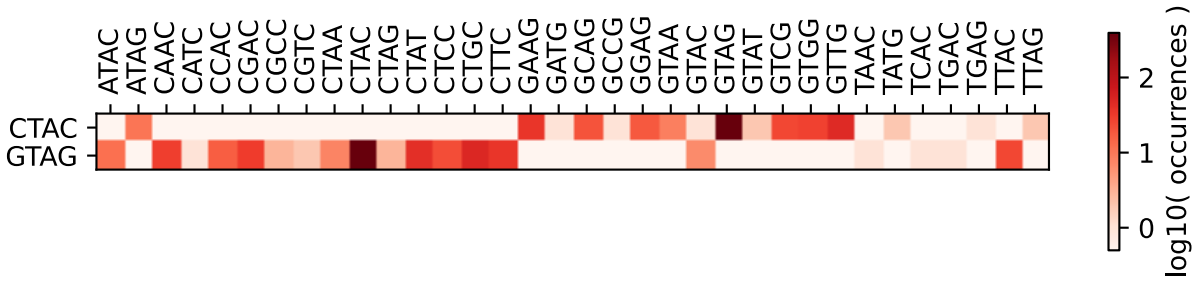
☑ CTAC GTAG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

L[PRLHQ]
[PDANVYSIGRCLHFT]Y
[PSAT][T]
V[ADVGE]
[PAVSGWRKLMEQT*]*
[CSGR][SR]

Misannealing overhangs:



☒ CTAG CTAG

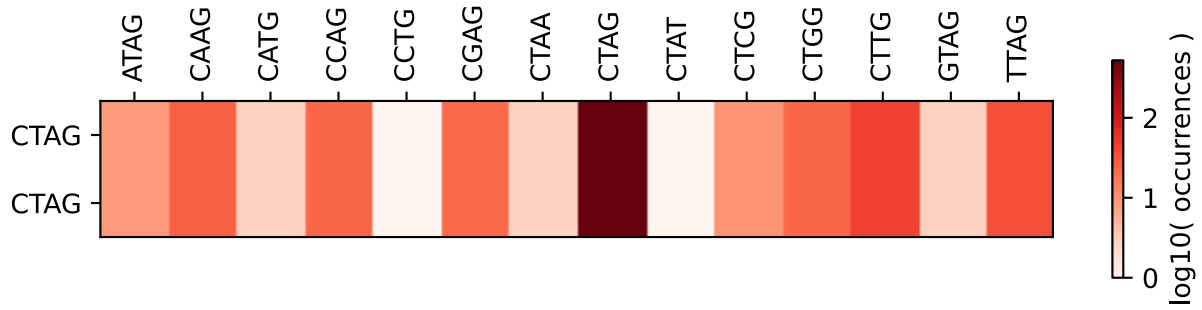
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

L[ADVGE]
[PDANVYSIGRCLHFT]*
[PSAT][SR]
L[ADVGE]
[PDANVYSIGRCLHFT]*
[PSAT][SR]

Misannealing overhangs:



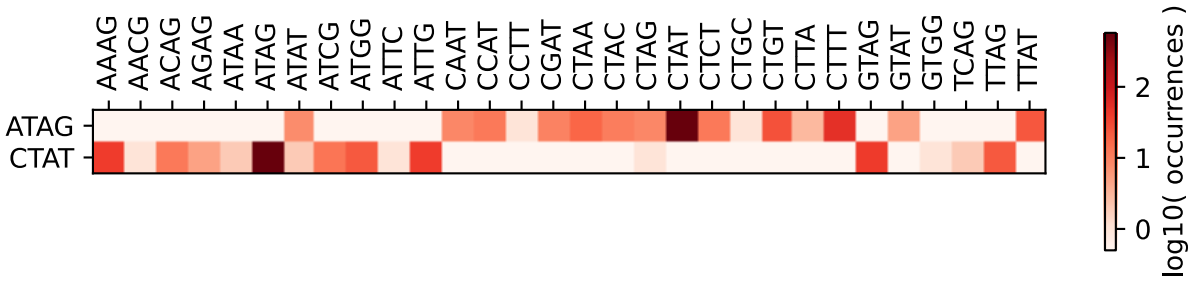
☑ ATAG CTAT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

I[ADVGE]
[PAVISGRKLEQT*]*
[YDHN][SR]
L[YSWCLF*]
[PDANVYSIGRCLHFT]Y
[PSAT][IM]

Misannealing overhangs:

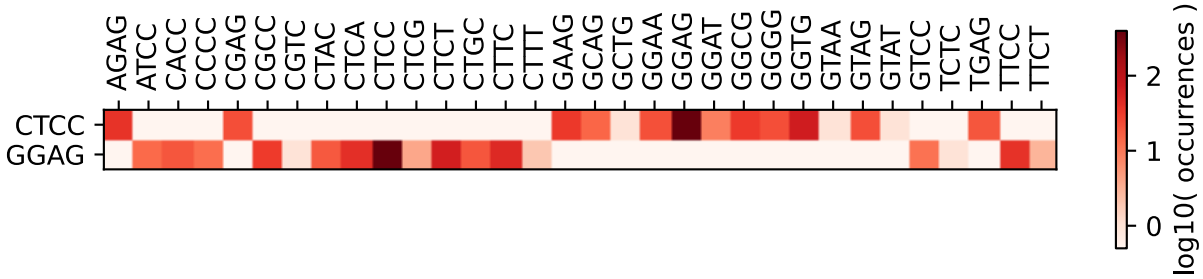


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

L[PRLHQ]
[PDANVYSIGRCLHFT]S
[PSAT][P]
G[ADVGE]
[PAVSGWRKLMEQT*]E
[GWR][SR]

Misannealing overhangs:



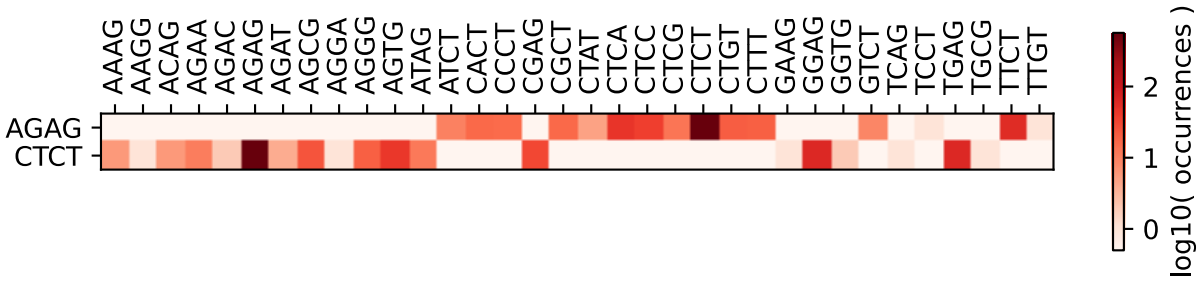
☑ AGAG CTCT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

R[ADVGE]
[PAVISGRKLEQT*]E
[EQK*][SR]
L[YSWCLF*]
[PDANVYSIGRCLHFT]S
[PSAT][L]

Misannealing overhangs:



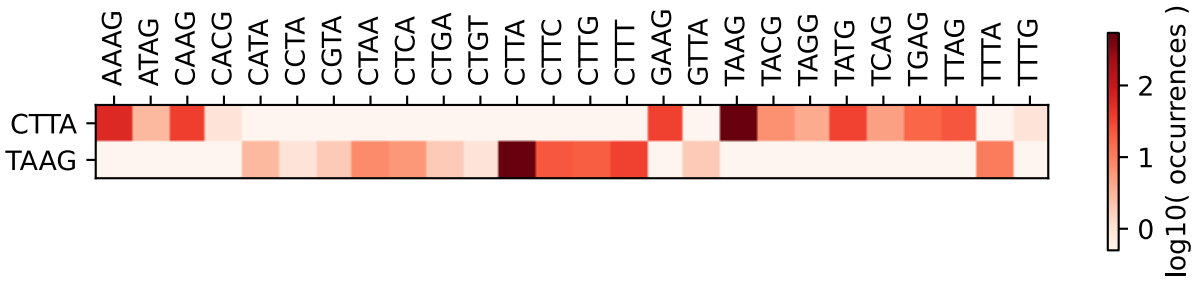
☑ CTTA TAAG

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

L[NISRKMT]
[PDANVYSIGRCLHFT]L
[PSAT][Y*]
*[ADVGE]
[PDANVYSIGRCLHFT]K
[LIV][SR]

Misannealing overhangs:



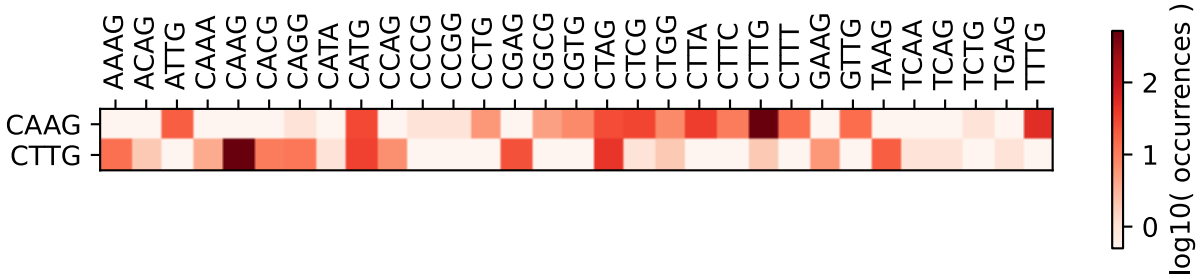
☑ CAAG CTTG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

Q[ADVGE]
[PDANVYSIGRCLHFT]K
[PSAT][SR]
L[ADVGE]
[PDANVYSIGRCLHFT]L
[PSAT][CW*]

Misannealing overhangs:



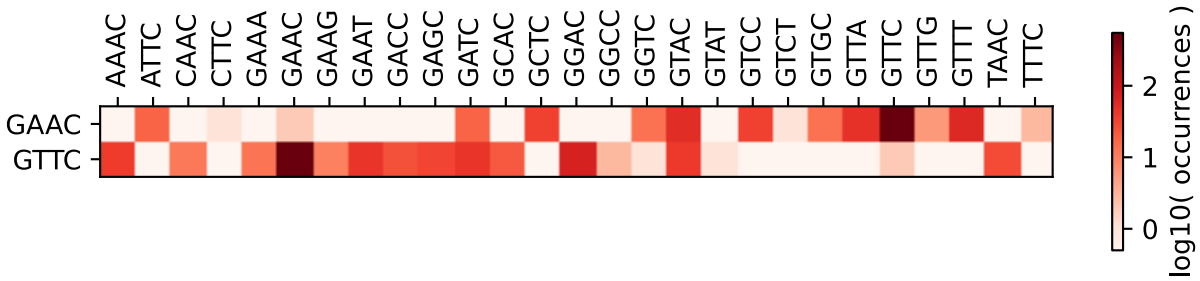
☑ GAAC GTTC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

E[PRLHQ]
[PAVSGWRKLMEQT*]N
[GR*][T]
V[PRLHQ]
[PAVSGWRKLMEQT*]F
[CSGR][S]

Misannealing overhangs:



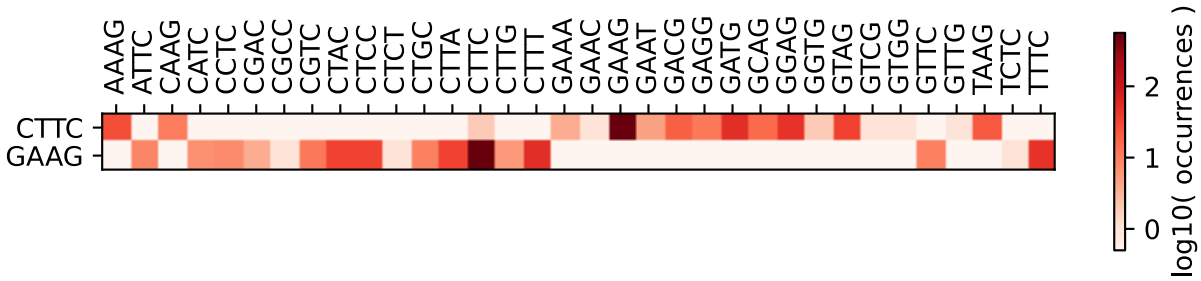
☑ CTTC GAAG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

L[PRLHQ]
[PDANVYSIGRCLHFT]F
[PSAT][S]
E[ADVGE]
[PAVSGWRKLMEQT*]K
[GR*][SR]

Misannealing overhangs:



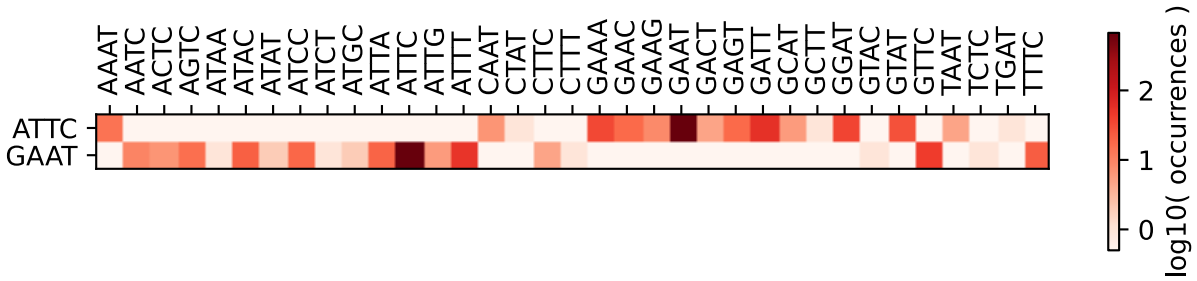
☑ ATTC GAAT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

I[PRLHQ]
[PAVISGRKLEQT*]F
[YDHN][S]
E[YSWCLF*]
[PAVSGWRKLMEQT*]N
[GR*][IM]

Misannealing overhangs:

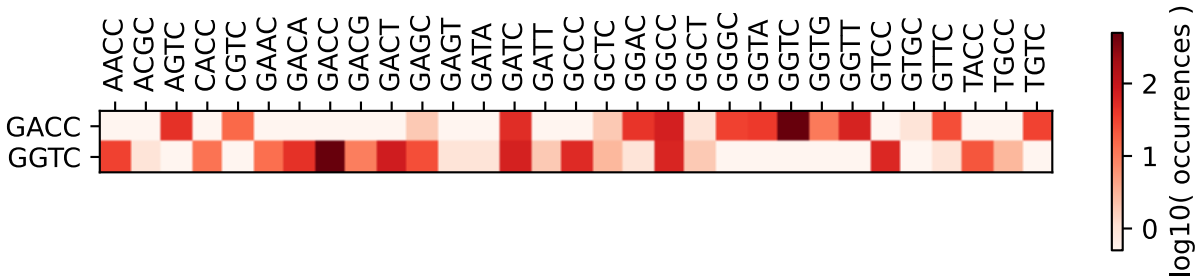


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

D[PRLHQ]
[PAVSGWRKLMEQT*]T
[GR*][P]
G[PRLHQ]
[PAVSGWRKLMEQT*]V
[GWR][S]

Misannealing overhangs:



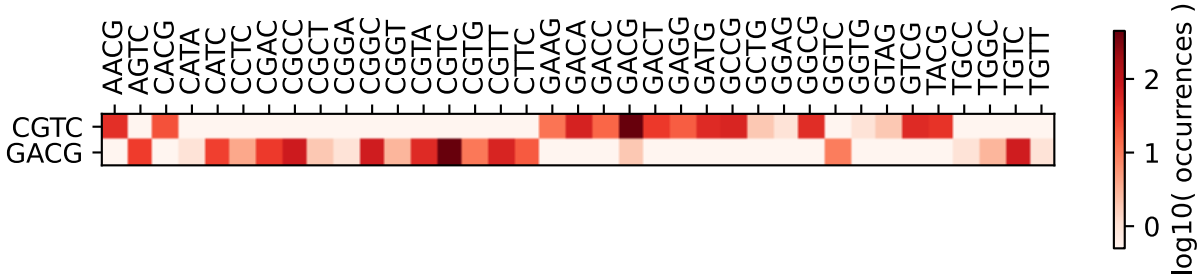
☑ CGTC GACG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PDANVYSIGRCLHFT]V
[PSAT][S]
D[ADVGE]
[PAVSGWRKLMEQT*]T
[GR*][R]

Misannealing overhangs:



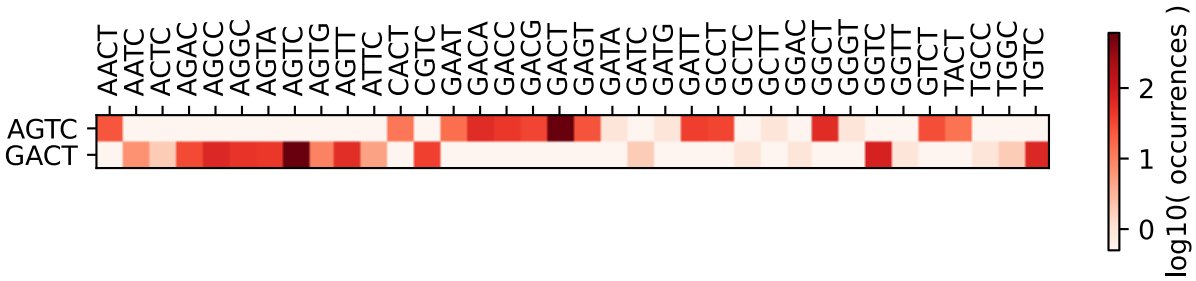
☑ AGTC GACT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

S[PRLHQ]
[PAVISGRKLEQT*]V
[EQK*][S]
D[YSWCLF*]
[PAVSGWRKLMEQT*]T
[GR*][L]

Misannealing overhangs:

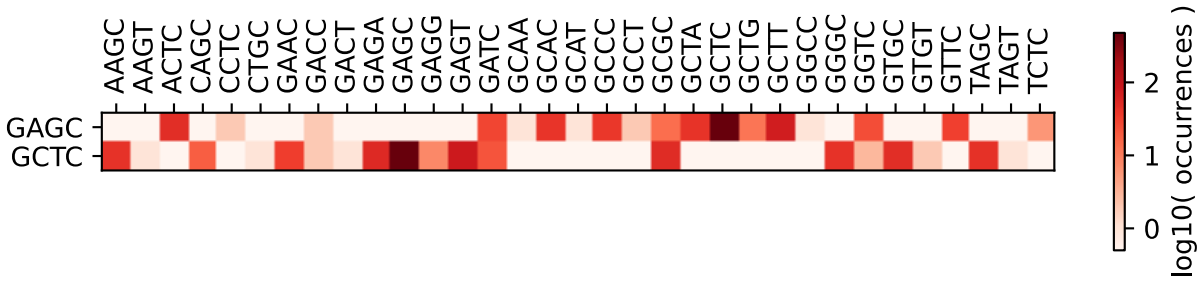


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

E[PRLHQ]
[PAVSGWRKLMEQT*]S
[GR*][A]
A[PRLHQ]
[PAVSGWRKLMEQT*]L
[CSGR][S]

Misannealing overhangs:



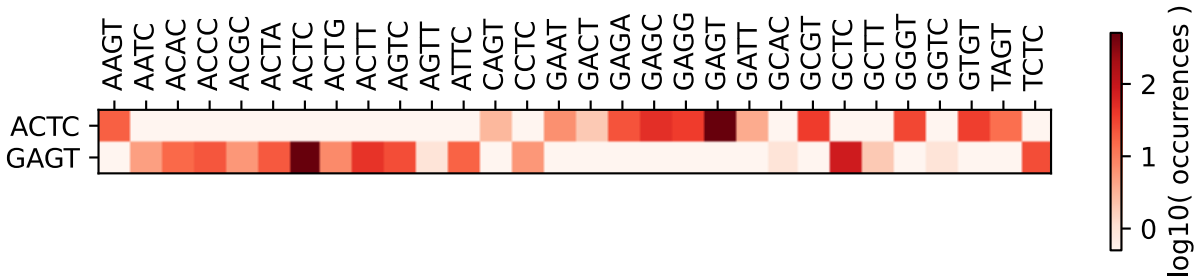
☑ ACTC GAGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[PRLHQ]
[PAVISGRKLEQT*]L
[YDHN][S]
E[YSWCLF*]
[PAVSGWRKLMEQT*]S
[GR*][V]

Misannealing overhangs:



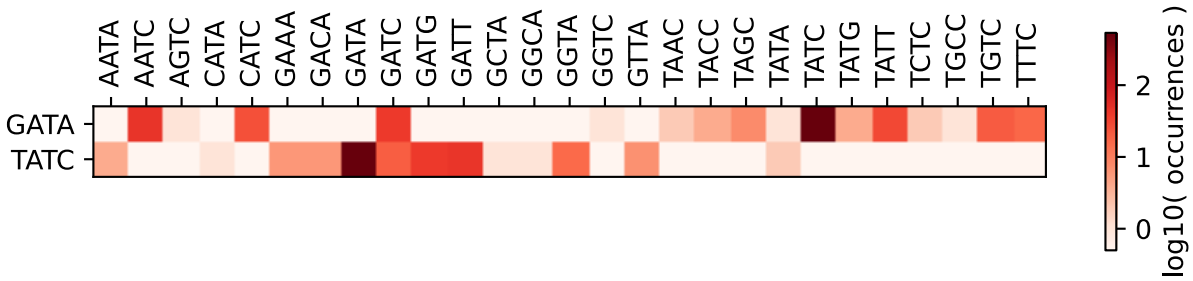
☑ GATA TATC

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

D[NISRKMT]
[PAVSGWRKLMEQT*]I
[GR*][Y*]
Y[PRLHQ]
[PDANVYSIGRCLHFT]I
[LIV][S]

Misannealing overhangs:



☒ GATC GATC

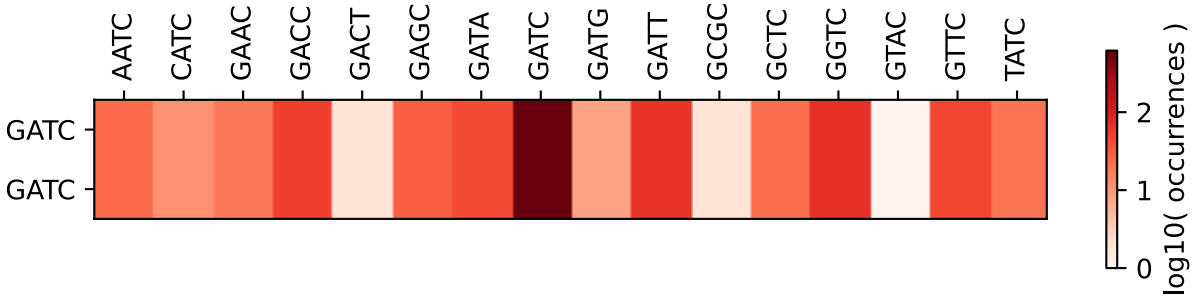
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

D[PRLHQ]
[PAVSGWRKLMEQT*]I
[GR*][S]
D[PRLHQ]
[PAVSGWRKLMEQT*]I
[GR*][S]

Misannealing overhangs:



☑ CATC GATG

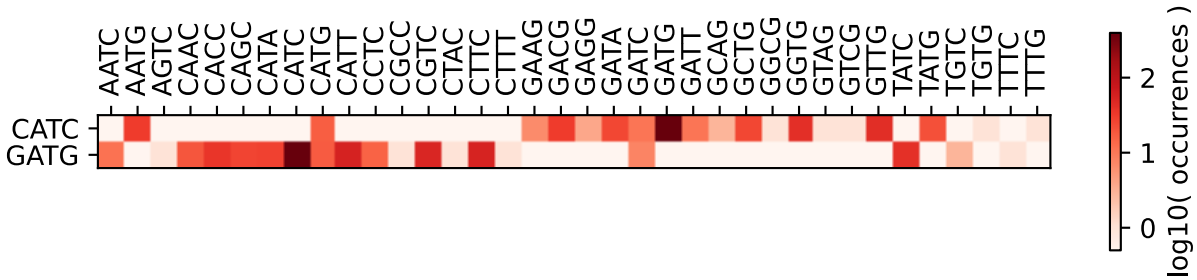
GC content: **50 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

H[PRLHQ]
[PDANVYSIGRCLHFT]I
[PSAT][S]
D[ADVGE]
[PAVSGWRKLMEQT*]M
[GR*][CW*]

Misannealing overhangs:

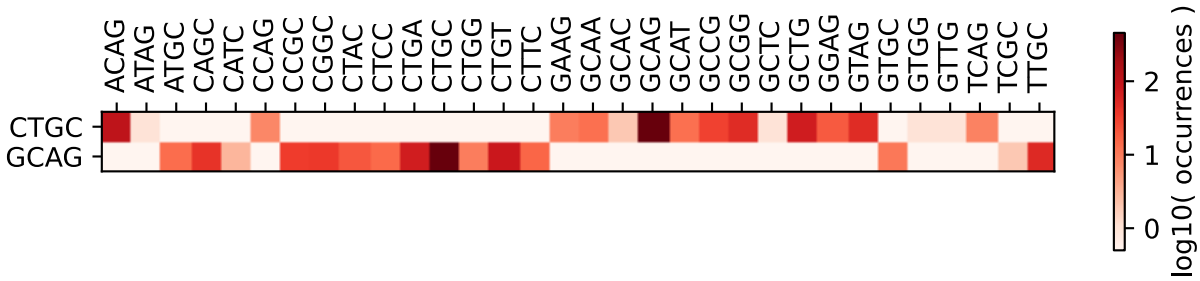


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

L[PRLHQ]
[PDANVYSIGRCLHFT]C
[PSAT][A]
A[ADVGE]
[PAVSGWRKLMEQT*]Q
[CSGR][SR]

Misannealing overhangs:



☑ GCCC GGGC

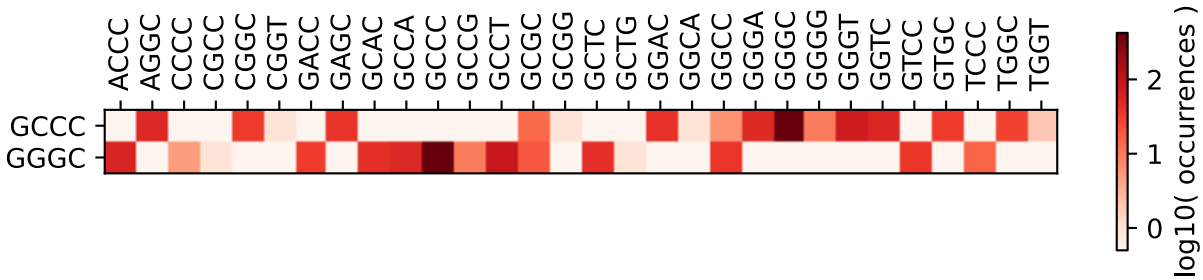
Extreme GC content: 100 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

A[PRLHQ]
[PAVSGWRKLMEQT*]P
[CSGR][P]
G[PRLHQ]
[PAVSGWRKLMEQT*]G
[GWR][A]

Misannealing overhangs:



☒ GCGC GCGC

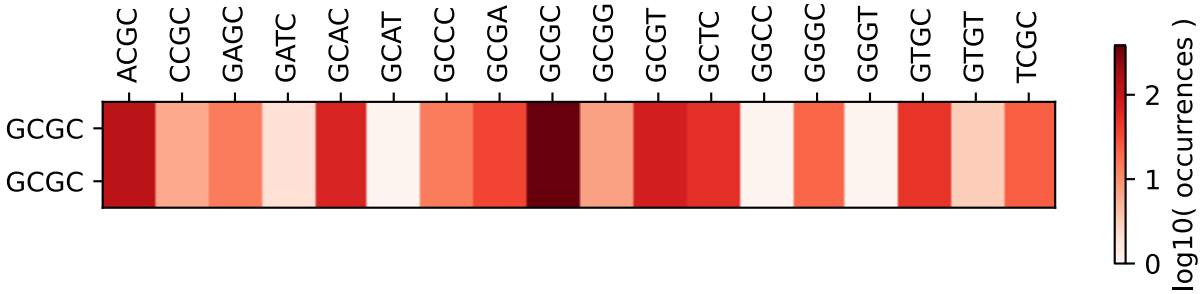
Extreme GC content: 100 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

A[PRLHQ]
[PAVSGWRKLMEQT*]R
[CSGR][A]
A[PRLHQ]
[PAVSGWRKLMEQT*]R
[CSGR][A]

Misannealing overhangs:

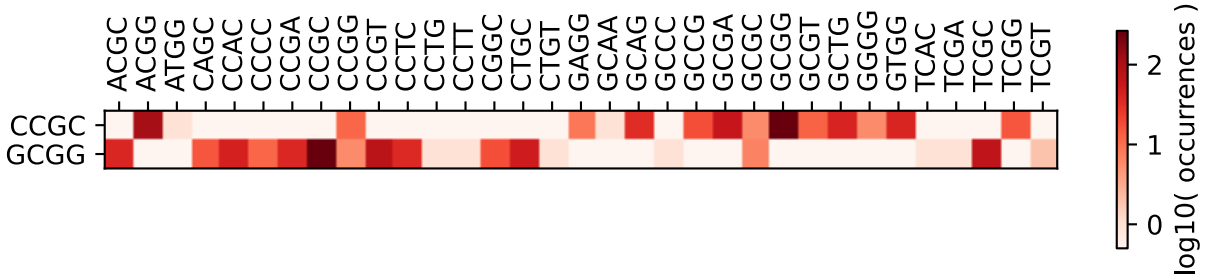


Extreme GC content: 100 %.

Can form the following amino acids in 6 translation frames:

P[PRLHQ]
[PDANVYSIGRCLHFT]R
[PSAT][A]
A[ADVGE]
[PAVSGWRKLMEQT*]R
[CSGR][G]

Misannealing overhangs:

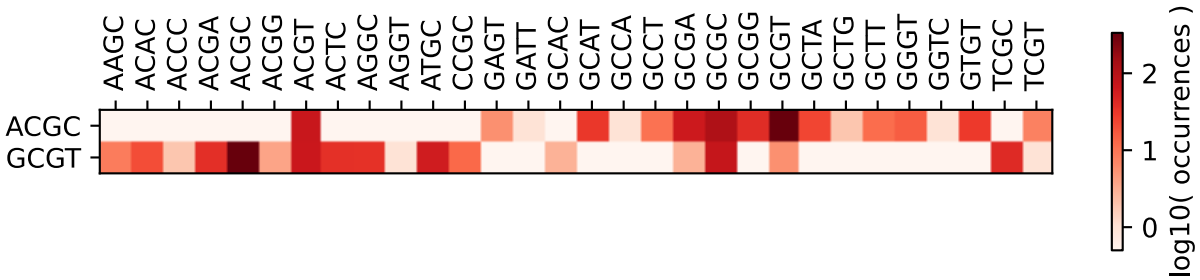


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

T[PRLHQ]
[PAVISGRKLEQT*]R
[YDHN][A]
A[YSWCLF*]
[PAVSGWRKLMEQT*]R
[CSGR][V]

Misannealing overhangs:



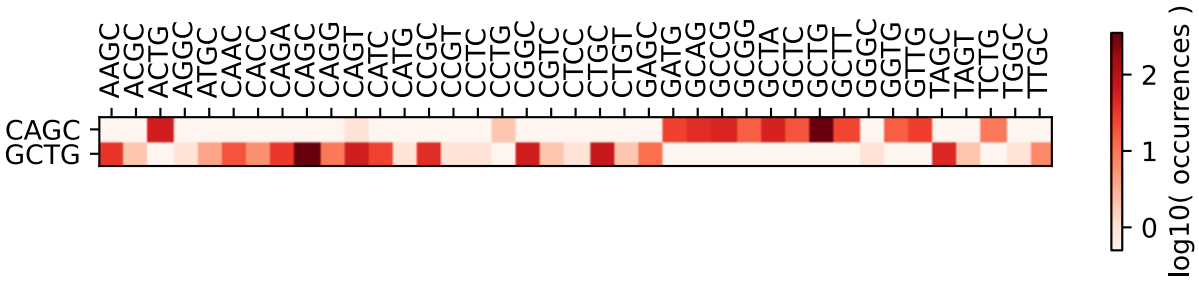
☑ CAGC GCTG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

Q[PRLHQ]
[PDANVYSIGRCLHFT]S
[PSAT][A]
A[ADVGE]
[PAVSGWRKLMEQT*]L
[CSGR][CW*]

Misannealing overhangs:



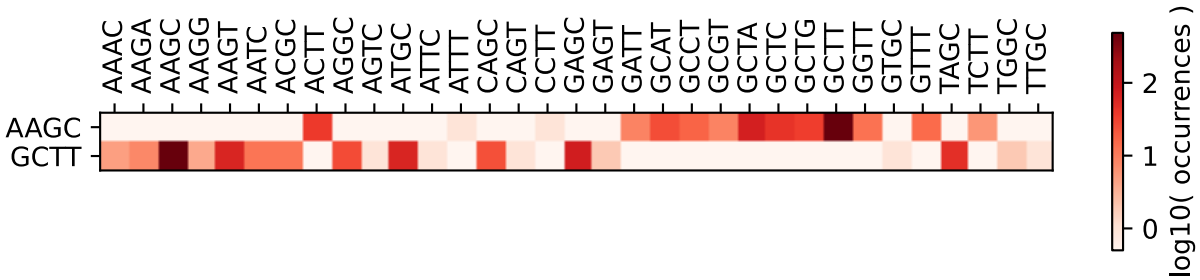
☑ AAGC GCTT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

K[PRLHQ]
[PAVISGRKLEQT*]S
[EQK*][A]
A[YSWCLF*]
[PAVSGWRKLMEQT*]L
[CSGR][LF]

Misannealing overhangs:



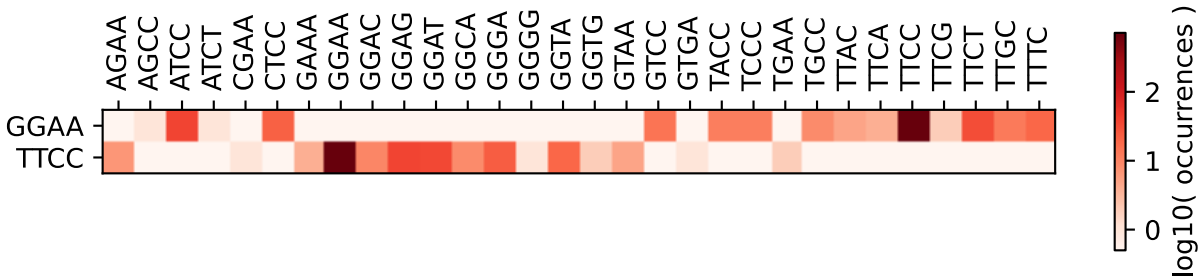
☑ GGAA TTCC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

G[NISRKMT]
[PAVSGWRKLMEQT*]E
[GWR][NK]
F[PRLHQ]
[PDANVYSIGRCLHFT]S
[LIFV][P]

Misannealing overhangs:



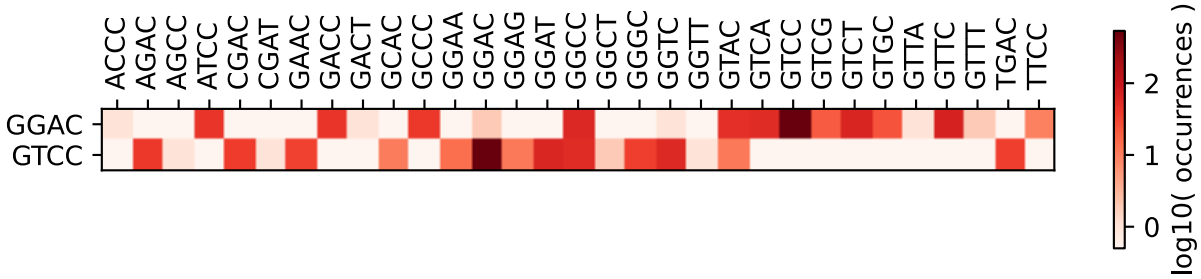
☑ GGAC GTCC

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

G[PRLHQ]
[PAVSGWRKLMEQT*]D
[GWR][T]
V[PRLHQ]
[PAVSGWRKLMEQT*]S
[CSGR][P]

Misannealing overhangs:



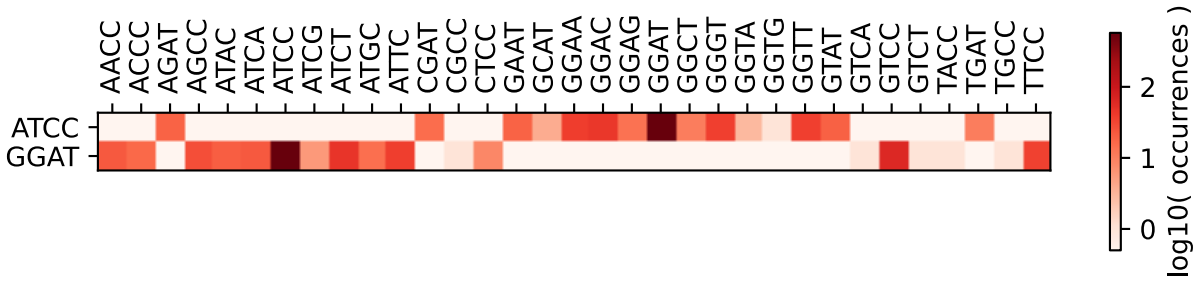
☑ ATCC GGAT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

I[PRLHQ]
[PAVISGRKLEQT*]S
[YDHN][P]
G[YSWCLF*]
[PAVSGWRKLMEQT*]D
[GWR][IM]

Misannealing overhangs:



☒ GGCC GGCC

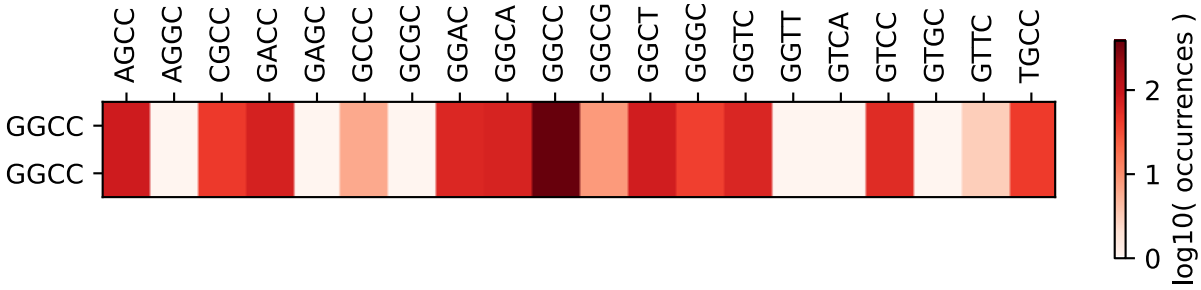
Extreme GC content: 100 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

G[PRLHQ]
[PAVSGWRKLMEQT*]A
[GWR][P]
G[PRLHQ]
[PAVSGWRKLMEQT*]A
[GWR][P]

Misannealing overhangs:



☑ GGGA TCCC

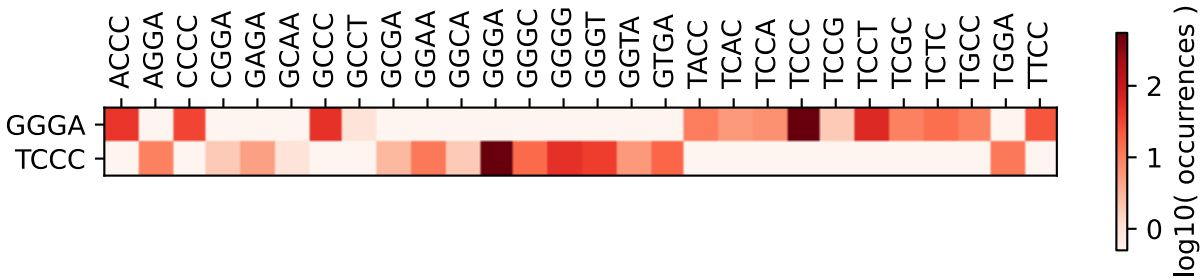
GC content: **75 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

G[NISRKMT]
[PAVSGWRKLMEQT*]G
[GWR][ED]
S[PRLHQ]
[PDANVYSIGRCLHFT]P
[LIFV][P]

Misannealing overhangs:



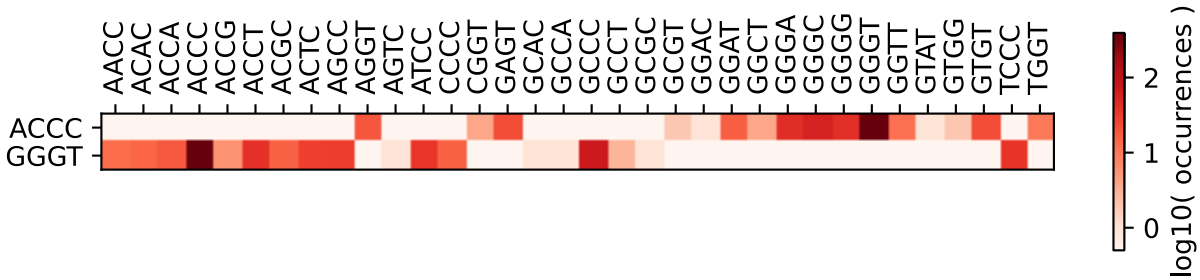
GC content: **75 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

T[PRLHQ]
[PAVISGRKLEQT*]P
[YDHN][P]
G[YSWCLF*]
[PAVSGWRKLMEQT*]G
[GWR][V]

Misannealing overhangs:



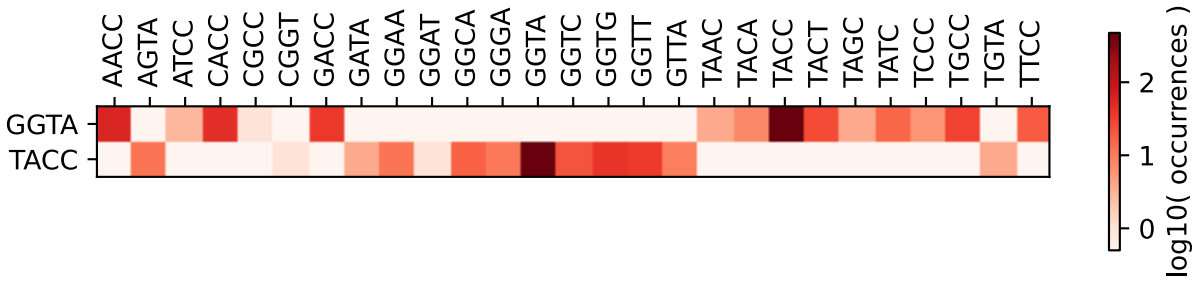
☑ GGTA TACC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

G[NISRKMT]
[PAVSGWRKLMEQT*]V
[GWR][Y*]
Y[PRLHQ]
[PDANVYSIGRCLHFT]T
[LIV][P]

Misannealing overhangs:



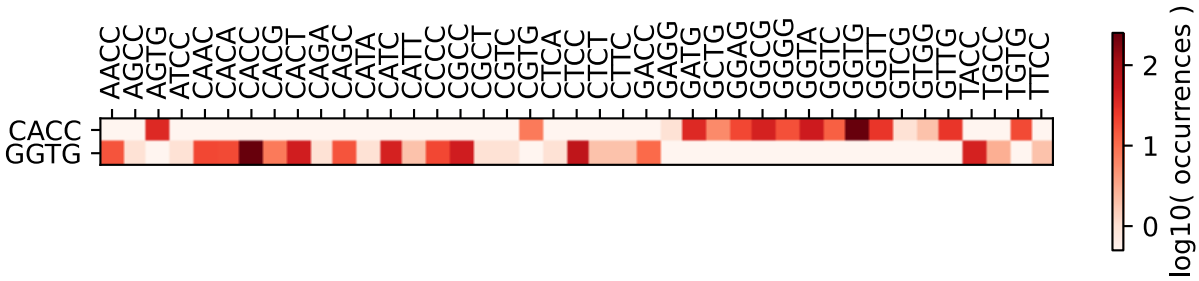
☑ CACC GGTG

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

H[PRLHQ]
[PDANVYSIGRCLHFT]T
[PSAT][P]
G[ADVGE]
[PAVSGWRKLMEQT*]V
[GWR][CW*]

Misannealing overhangs:



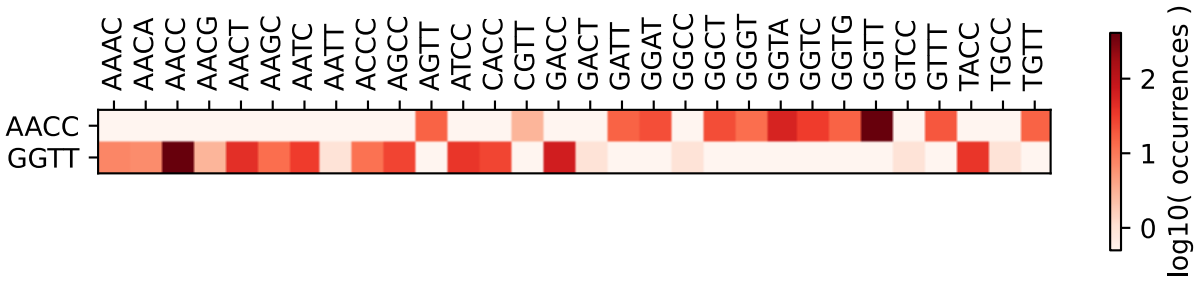
☑ AACC GGTT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

N[PRLHQ]
[PAVISGRKLEQT*]T
[EQK*][P]
G[YSWCLF*]
[PAVSGWRKLMEQT*]V
[GWR][LF]

Misannealing overhangs:



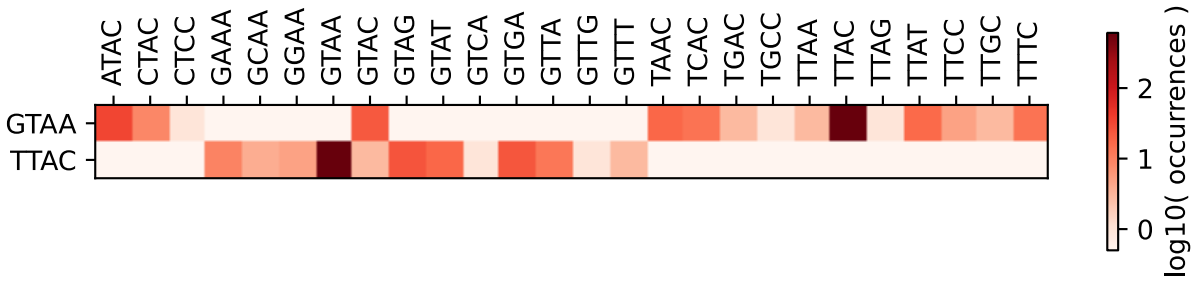
☑ GTAA TTAC

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

V[NISRKMT]
[PAVSGWRKLMEQT*]*
[CSGR][NK]
L[PRLHQ]
[PDANVYSIGRCLHFT]Y
[LIFV][T]

Misannealing overhangs:



☒ GTAC GTAC

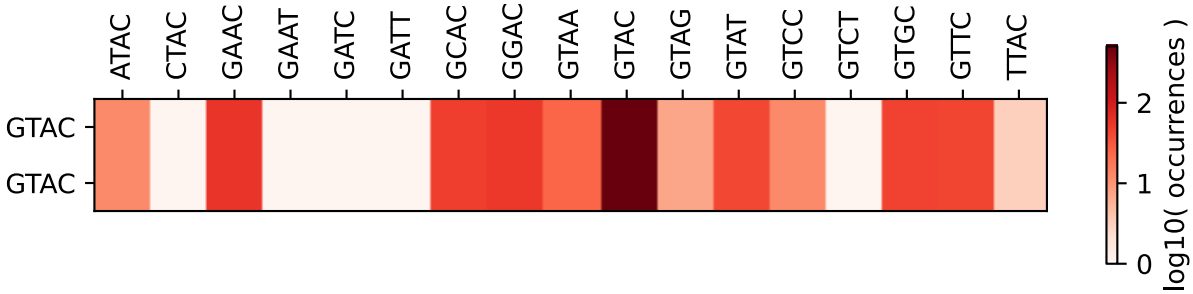
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

V[PRLHQ]
[PAVSGWRKLMEQT*]Y
[CSGR][T]
V[PRLHQ]
[PAVSGWRKLMEQT*]Y
[CSGR][T]

Misannealing overhangs:



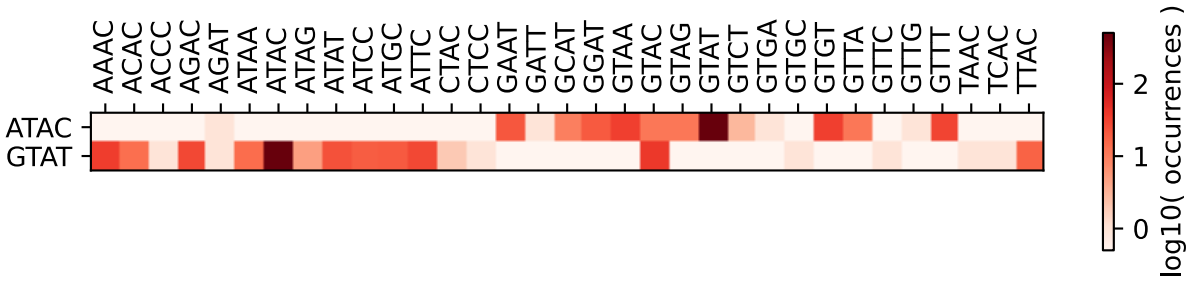
☑ ATAC GTAT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

I[PRLHQ]
[PAVISGRKLEQT*]Y
[YDHN][T]
V[YSWCLF*]
[PAVSGWRKLMEQT*]Y
[CSGR][IM]

Misannealing overhangs:



☑ GTCA TGAC

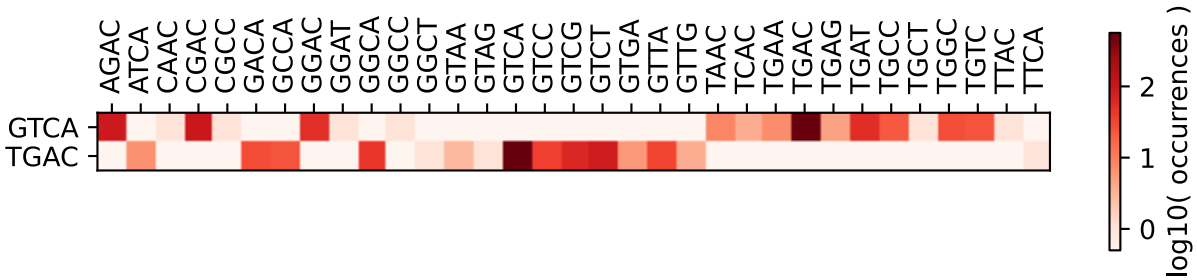
GC content: **50 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

V[NISRKMT]
[PAVSGWRKLMEQT*]S
[CSGR][HQ]
*[PRLHQ]
[PDANVYSIGRCLHFT]D
[LMV][T]

Misannealing overhangs:



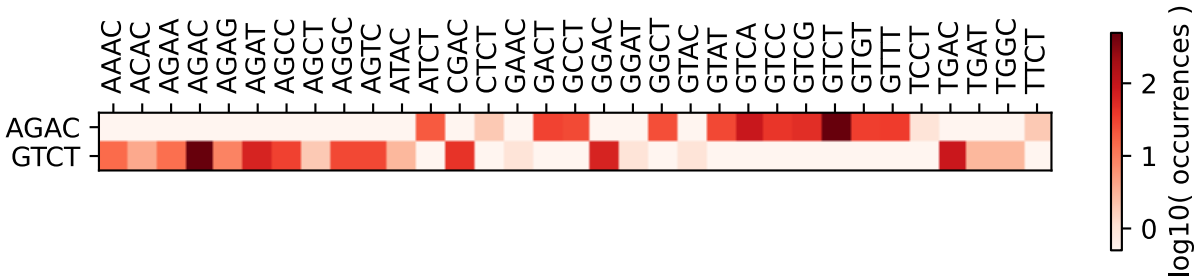
☑ AGAC GTCT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

R[PRLHQ]
[PAVISGRKLEQT*]D
[EQK*][T]
V[YSWCLF*]
[PAVSGWRKLMEQT*]S
[CSGR][L]

Misannealing overhangs:



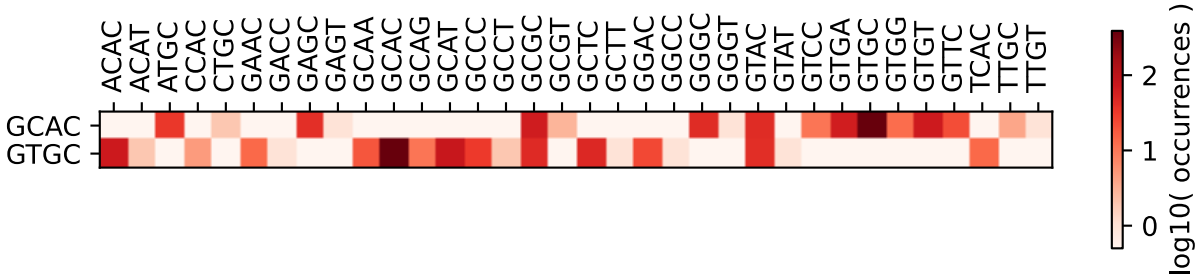
☑ GCAC GTGC

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

A[PRLHQ]
[PAVSGWRKLMEQT*]H
[CSGR][T]
V[PRLHQ]
[PAVSGWRKLMEQT*]C
[CSGR][A]

Misannealing overhangs:



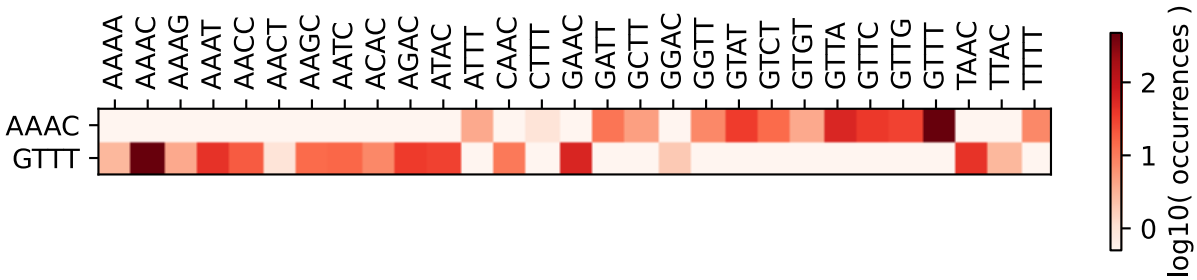
GC content: **25 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

K[PRLHQ]
[PAVISGRKLEQT*]N
[EQK*][T]
V[YSWCLF*]
[PAVSGWRKLMEQT*]F
[CSGR][LF]

Misannealing overhangs:



☑ TAAA TTTA

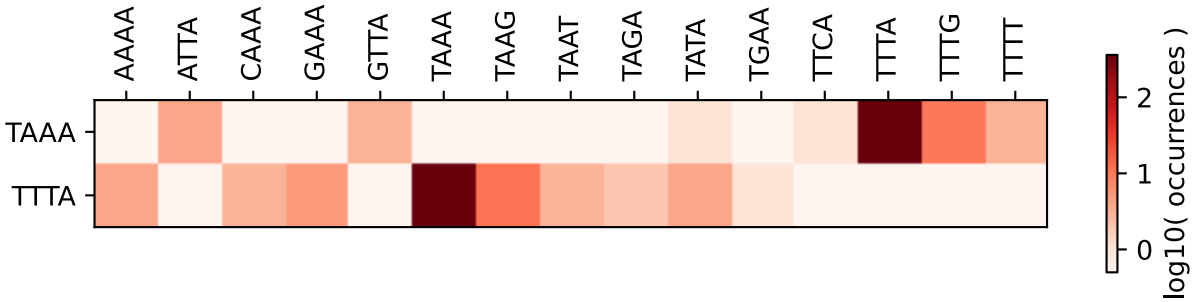
Extreme GC content: 0 %.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

*[NISRKMT]
[PDANVYSIGRCLHFT]K
[LIV][NK]
F[NISRKMT]
[PDANVYSIGRCLHFT]L
[LIFV][Y*]

Misannealing overhangs:



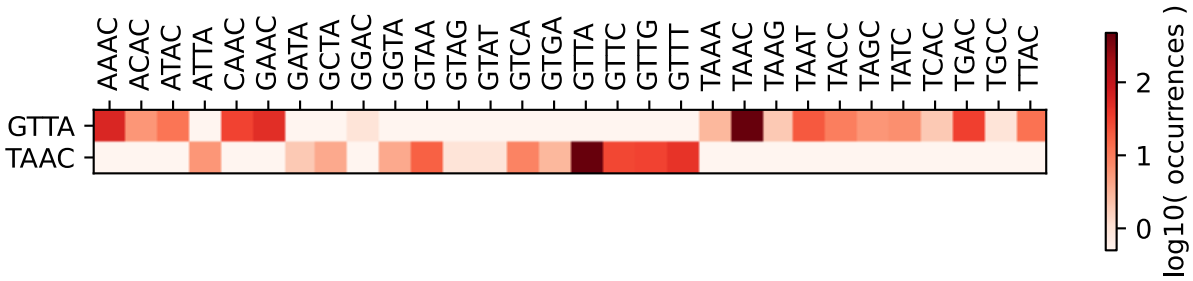
☑ GTTA TAAC

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

V[NISRKMT]
[PAVSGWRKLMEQT*]L
[CSGR][Y*]
*[PRLHQ]
[PDANVYSIGRCLHFT]N
[LIV][T]

Misannealing overhangs:



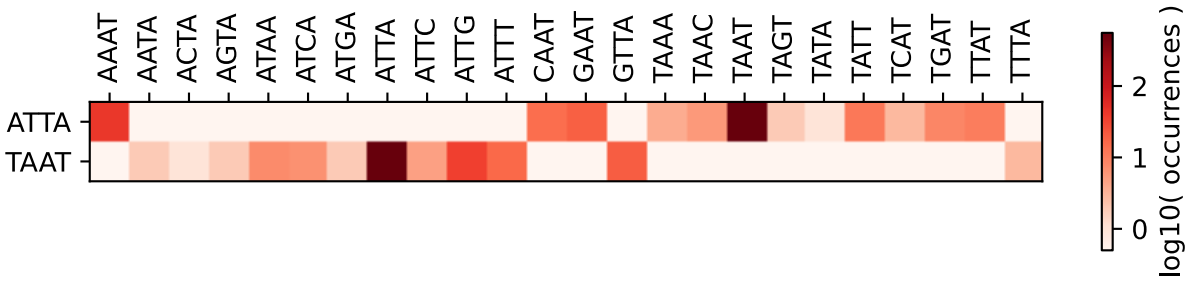
☑ ATTA TAAT

Extreme GC content: 0 %.

Can form the following amino acids in 6 translation frames:

I[NISRKMT]
[PAVISGRKLEQT*]L
[YDHN][Y*]
[YSWCLF]
[PDANVYSIGRCLHFT]N
[LIV][IM]

Misannealing overhangs:



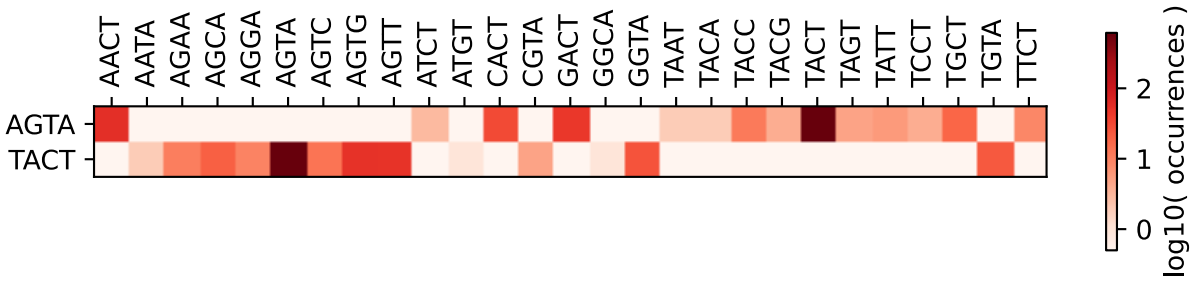
☑ AGTA TACT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

S[NISRKMT]
[PAVISGRKLEQT*]V
[EQK*][Y*]
Y[YSWCLF*]
[PDANVYSIGRCLHFT]T
[LIV][L]

Misannealing overhangs:



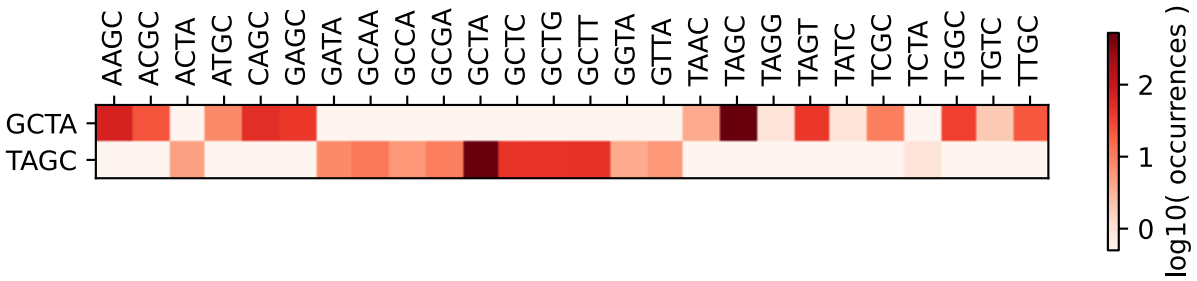
☑ GCTA TAGC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

A[NISRKMT]
[PAVSGWRKLMEQT*]L
[CSGR][Y*]
*[PRLHQ]
[PDANVYSIGRCLHFT]S
[LIV][A]

Misannealing overhangs:



☒ TATA TATA

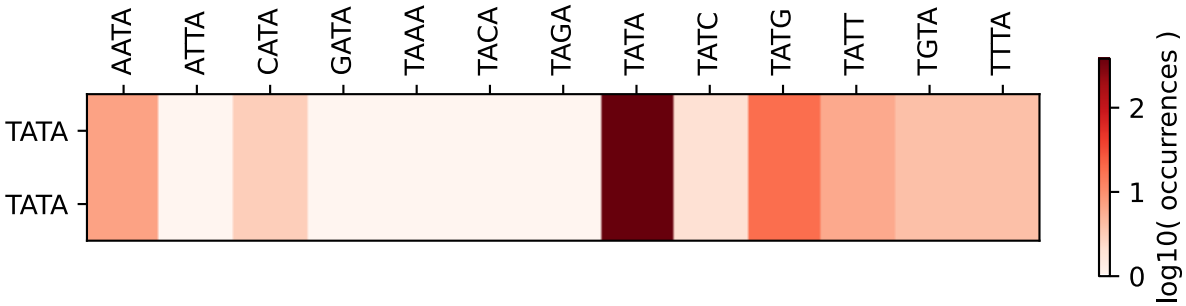
Extreme GC content: 0 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

Y[NISRKMT]
[PDANVYSIGRCLHFT]I
[LIV][Y*]
Y[NISRKMT]
[PDANVYSIGRCLHFT]I
[LIV][Y*]

Misannealing overhangs:



☑ CATA TATG

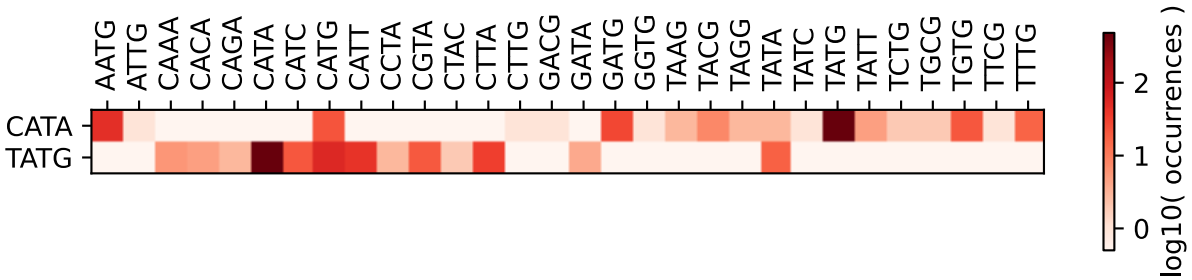
GC content: **25 %**.

The overhang contains the start codon ATG.

Can form the following amino acids in 6 translation frames:

H[NISRKMT]
[PDANVYSIGRCLHFT]I
[PSAT][Y*]
Y[ADVGE]
[PDANVYSIGRCLHFT]M
[LIV][CW*]

Misannealing overhangs:



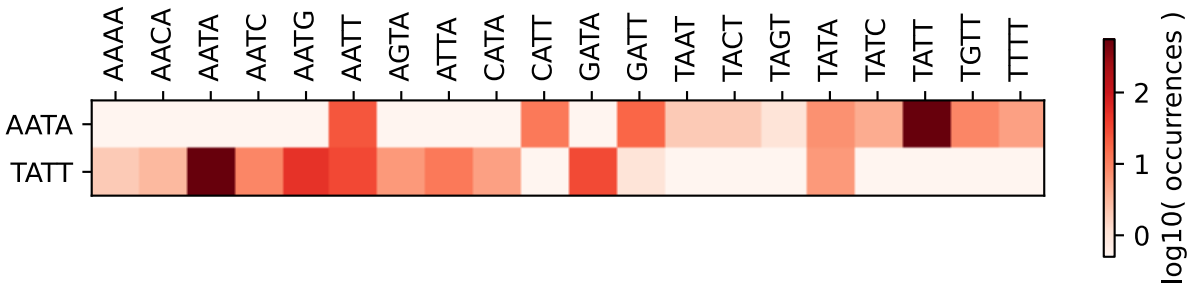
☑ AATA TATT

Extreme GC content: 0 %.

Can form the following amino acids in 6 translation frames:

N[NISRKMT]
[PAVISGRKLEQT*]I
[EQK*][Y*]
Y[YSWCLF*]
[PDANVYSIGRCLHFT]I
[LIV][LF]

Misannealing overhangs:



☑ TCAA TTGA

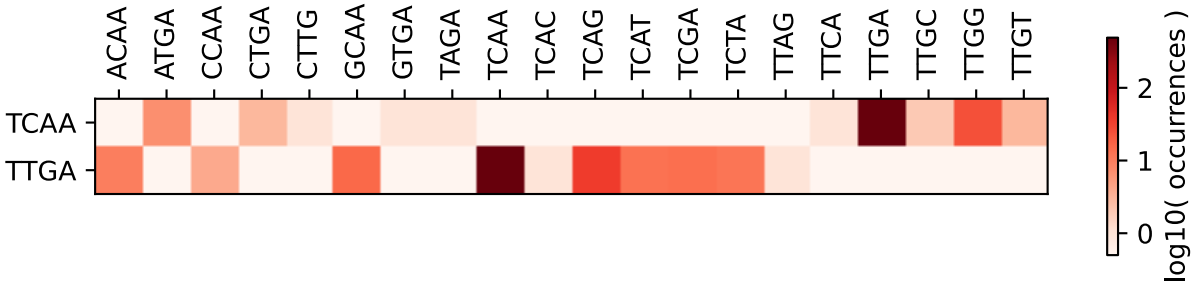
GC content: **25 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

S[NISRKMT]
[PDANVYSIGRCLHFT]Q
[LIFV][NK]
L[NISRKMT]
[PDANVYSIGRCLHFT]*
[LIFV][ED]

Misannealing overhangs:



☑ GTGA TCAC

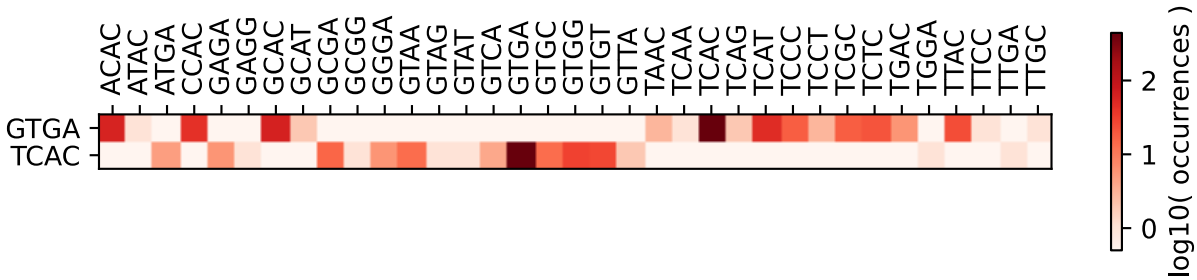
GC content: **50 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

V[NISRKMT]
[PAVSGWRKLMEQT*]*
[CSGR][ED]
S[PRLHQ]
[PDANVYSIGRCLHFT]H
[LIFV][T]

Misannealing overhangs:



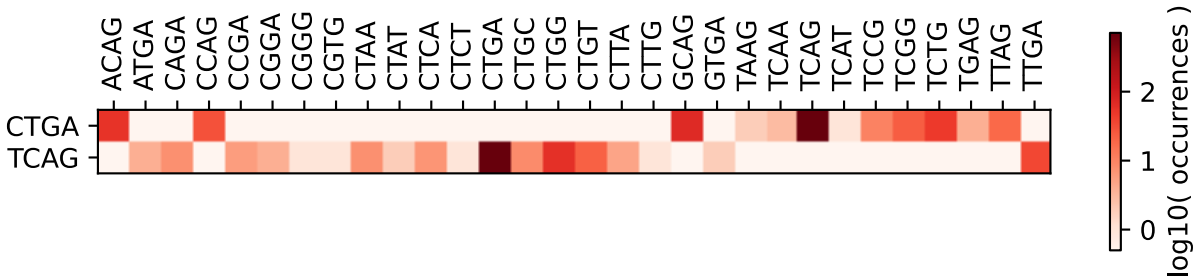
GC content: **50 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

L[NISRKMT]
[PDANVYSIGRCLHFT]*
[PSAT][ED]
S[ADVGE]
[PDANVYSIGRCLHFT]Q
[LIFV][SR]

Misannealing overhangs:



☑ ATGA TCAT

GC content: **25 %**.

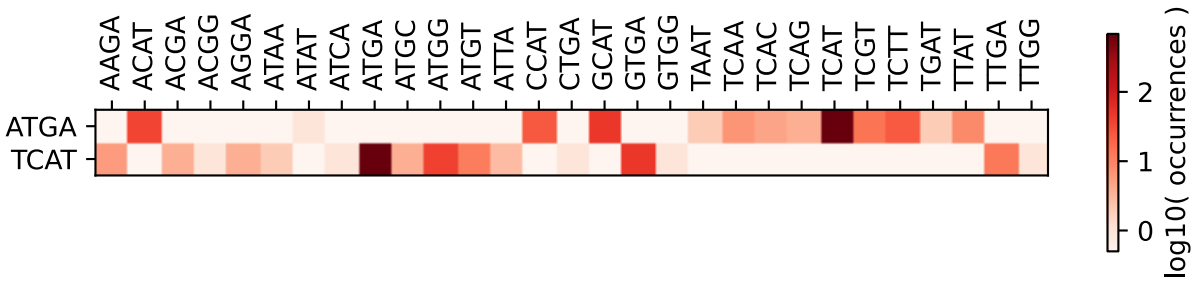
The overhang contains the start codon ATG.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

M[NISRKMT]
[PAVISGRKLEQT*]*
[YDHN][ED]
S[YSWCLF*]
[PDANVYSIGRCLHFT]H
[LIFV][IM]

Misannealing overhangs:



☒ TCGA TCGA

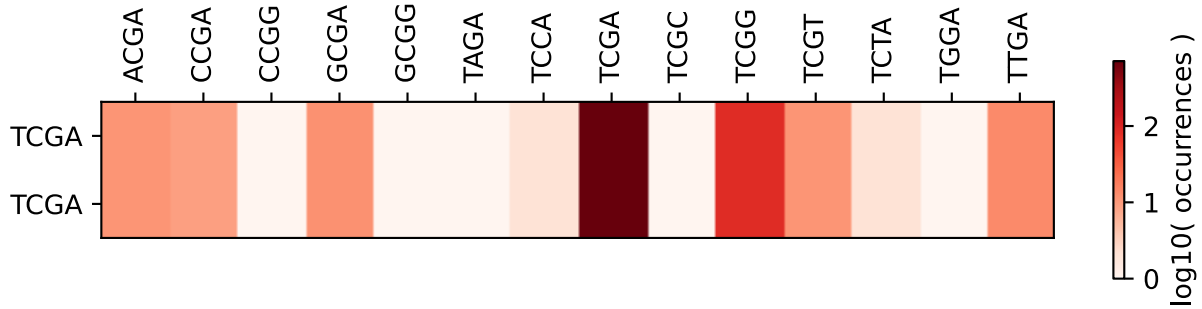
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

S[NISRKMT]
[PDANVYSIGRCLHFT]R
[LIFV][ED]
S[NISRKMT]
[PDANVYSIGRCLHFT]R
[LIFV][ED]

Misannealing overhangs:



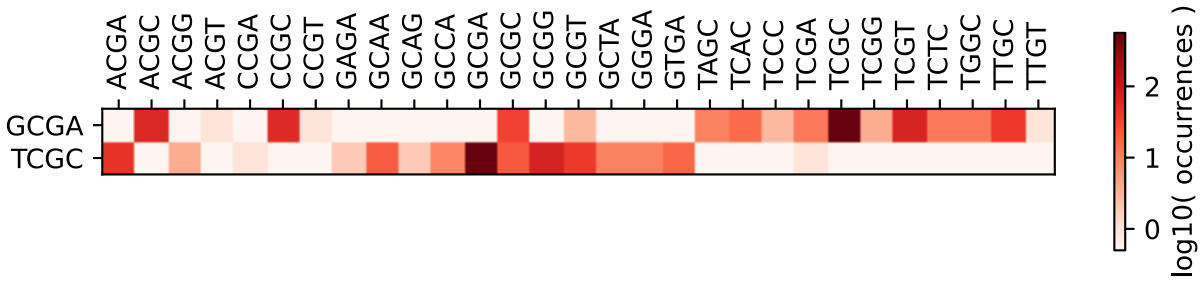
☑ GCGA TCGC

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

A[NISRKMT]
[PAVSGWRKLMEQT*]R
[CSGR][ED]
S[PRLHQ]
[PDANVYSIGRCLHFT]R
[LIFV][A]

Misannealing overhangs:

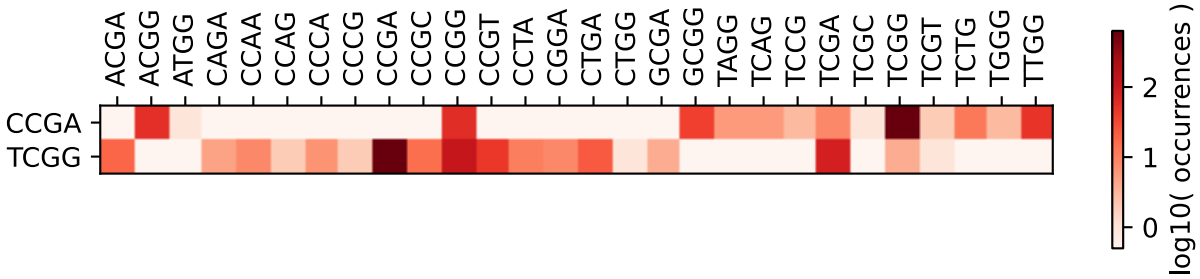


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

P[NISRKMT]
[PDANVYSIGRCLHFT]R
[PSAT][ED]
S[ADVGE]
[PDANVYSIGRCLHFT]R
[LIFV][G]

Misannealing overhangs:



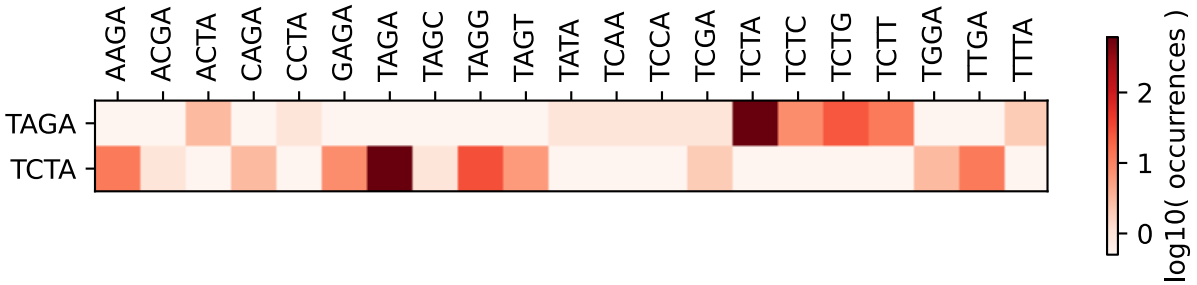
☑ TAGA TCTA

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

*[NISRKMT]
[PDANVYSIGRCLHFT]R
[LIV][ED]
S[NISRKMT]
[PDANVYSIGRCLHFT]L
[LIFV][Y*]

Misannealing overhangs:



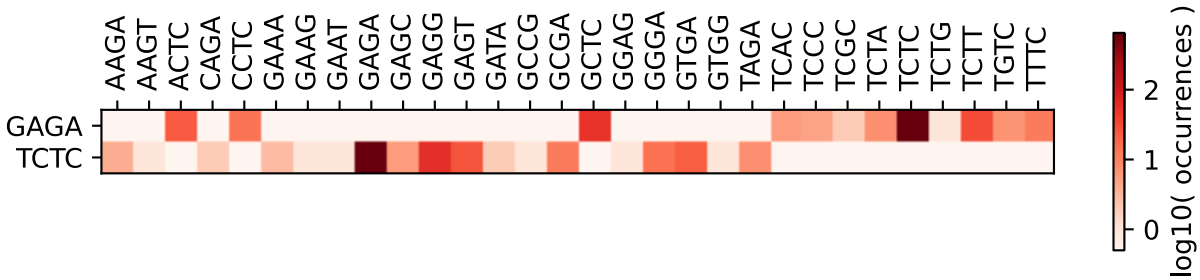
☑ GAGA TCTC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

E[NISRKMT]
[PAVSGWRKLMEQT*]R
[GR*][ED]
S[PRLHQ]
[PDANVYSIGRCLHFT]L
[LIFV][S]

Misannealing overhangs:



☑ CTCA TGAG

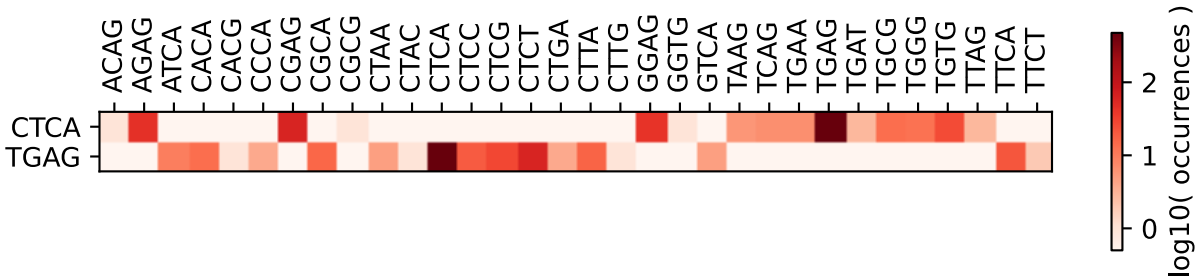
GC content: **50 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

L[NISRKMT]
[PDANVYSIGRCLHFT]S
[PSAT][HQ]
*[ADVGE]
[PDANVYSIGRCLHFT]E
[LMV][SR]

Misannealing overhangs:



☑ ATCA TGAT

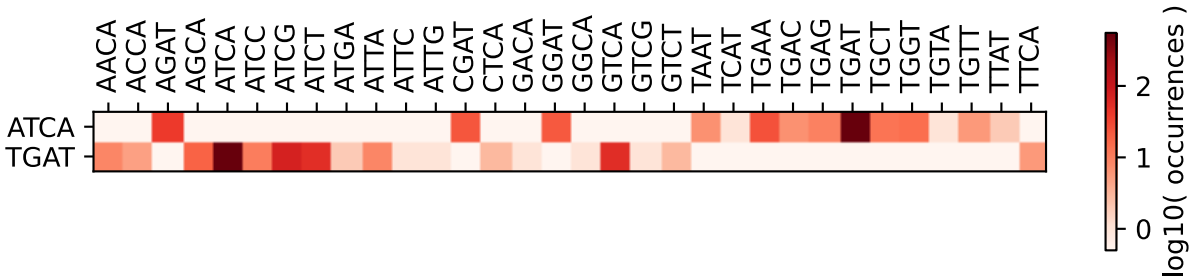
GC content: **25 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

I[NISRKMT]
[PAVISGRKLEQT*]S
[YDHN][HQ]
[YSWCLF]
[PDANVYSIGRCLHFT]D
[LMV][IM]

Misannealing overhangs:



☒ TGCA TGCA

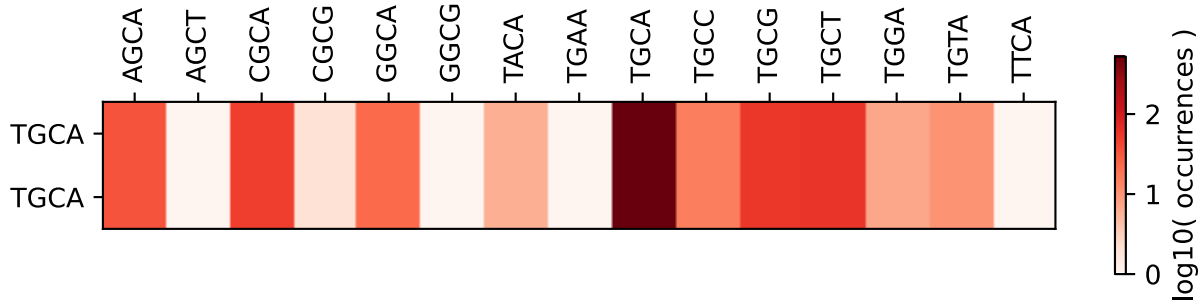
GC content: **50 %**.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

C[NISRKMT]
[PDANVYSIGRCLHFT]A
[LMV][HQ]
C[NISRKMT]
[PDANVYSIGRCLHFT]A
[LMV][HQ]

Misannealing overhangs:

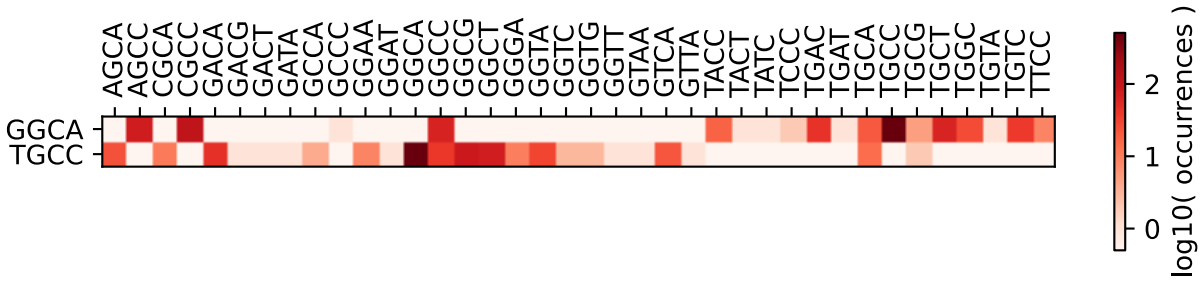


GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

G[NISRKMT]
[PAVSGWRKLMEQT*]A
[GWR][HQ]
C[PRLHQ]
[PDANVYSIGRCLHFT]A
[LMV][P]

Misannealing overhangs:



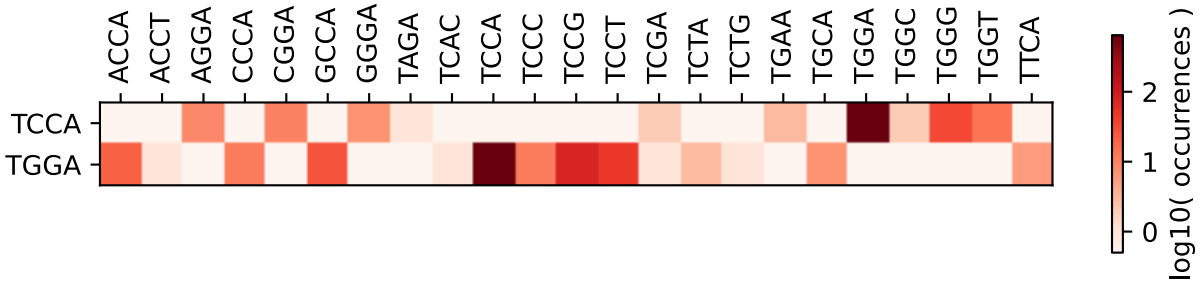
☑ TCCA TGGA

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

S[NISRKMT]
[PDANVYSIGRCLHFT]P
[LIFV][HQ]
W[NISRKMT]
[PDANVYSIGRCLHFT]G
[LMV][ED]

Misannealing overhangs:



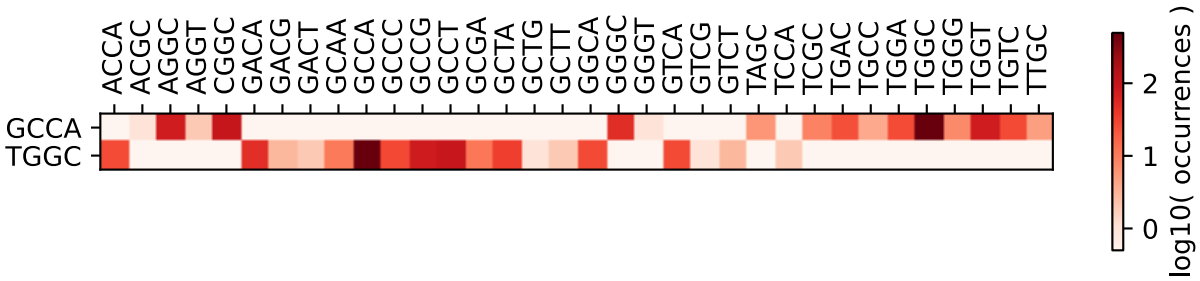
☑ GCCA TGGC

GC content: **75 %**.

Can form the following amino acids in 6 translation frames:

A[NISRKMT]
[PAVSGWRKLMEQT*]P
[CSGR][HQ]
W[PRLHQ]
[PDANVYSIGRCLHFT]G
[LMV][A]

Misannealing overhangs:



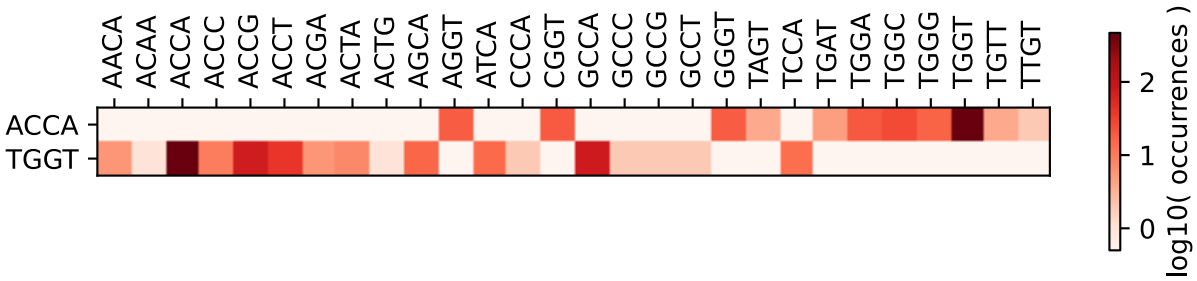
☑ ACCA TGGT

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

T[NISRKMT]
[PAVISGRKLEQT*]P
[YDHN][HQ]
W[YSWCLF*]
[PDANVYSIGRCLHFT]G
[LMV][V]

Misannealing overhangs:



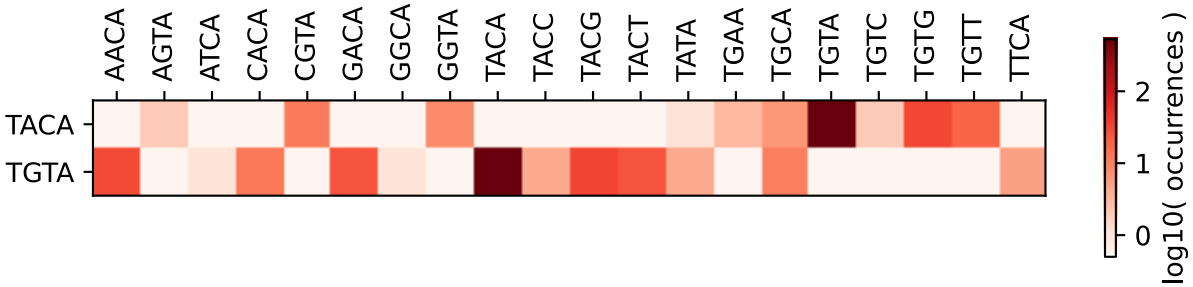
☑ TACA TGTA

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

Y[NISRKMT]
[PDANVYSIGRCLHFT]T
[LIV][HQ]
C[NISRKMT]
[PDANVYSIGRCLHFT]V
[LMV][Y*]

Misannealing overhangs:



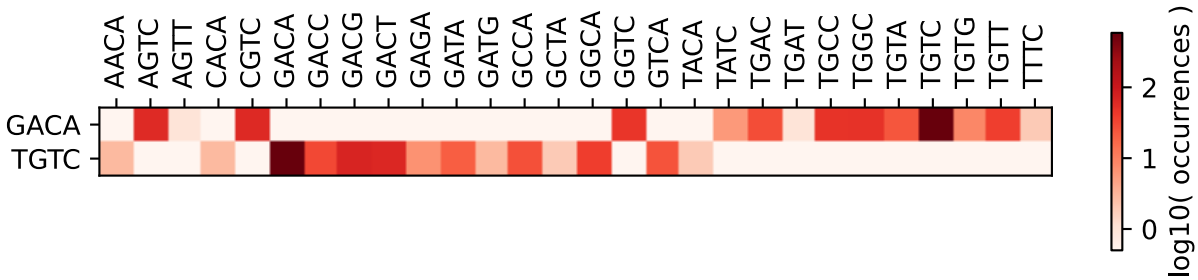
☑ GACA TGTC

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

D[NISRKMT]
[PAVSGWRKLMEQT*]T
[GR*][HQ]
C[PRLHQ]
[PDANVYSIGRCLHFT]V
[LMV][S]

Misannealing overhangs:



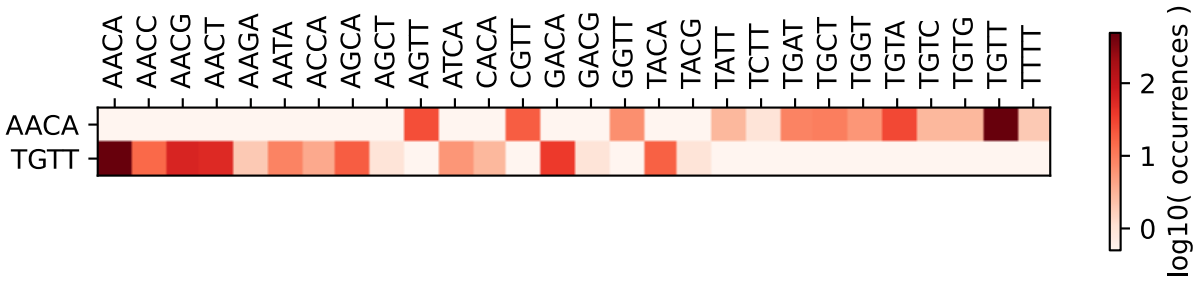
☑ AACA TGTT

GC content: **25 %**.

Can form the following amino acids in 6 translation frames:

N[NISRKMT]
[PAVISGRKLEQT*]T
[EQK*][HQ]
C[YSWCLF*]
[PDANVYSIGRCLHFT]V
[LMV][LF]

Misannealing overhangs:



☒ TTAA TTAA

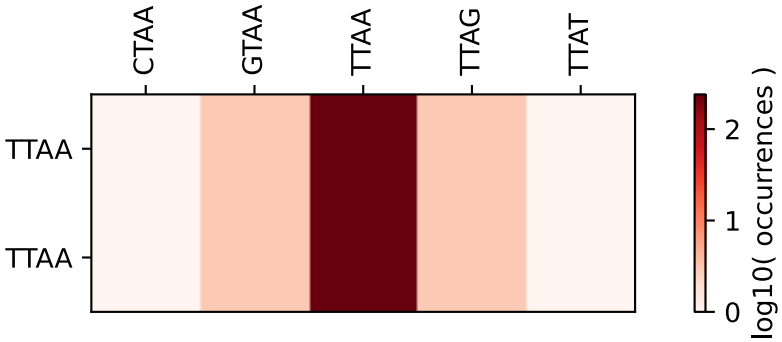
Extreme GC content: 0 %.

The overhang is palindromic, cannot be used for DNA assembly.

Can form the following amino acids in 6 translation frames:

L[NISRKMT]
[PDANVYSIGRCLHFT]*
[LIFV][NK]
L[NISRKMT]
[PDANVYSIGRCLHFT]*
[LIFV][NK]

Misannealing overhangs:



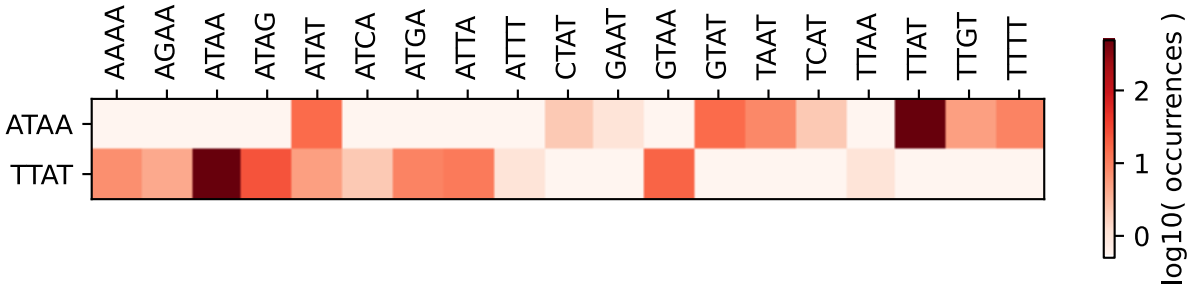
☑ ATAA TTAT

Extreme GC content: 0 %.

Can form the following amino acids in 6 translation frames:

I[NISRKMT]
[PAVISGRKLEQT*]*
[YDHN][NK]
L[YSWCLF*]
[PDANVYSIGRCLHFT]Y
[LIFV][IM]

Misannealing overhangs:



☑ TGAA TTCA

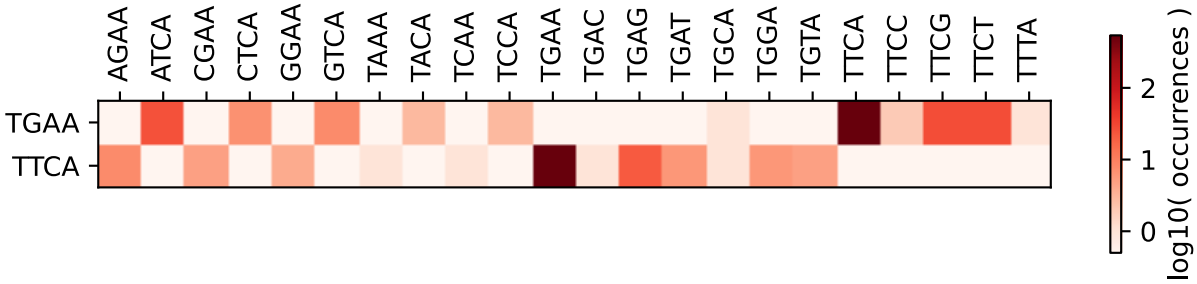
GC content: **25 %**.

The overhang contains a stop codon (TAA, TAG or TGA).

Can form the following amino acids in 6 translation frames:

*[NISRKMT]
[PDANVYSIGRCLHFT]E
[LMV][NK]
F[NISRKMT]
[PDANVYSIGRCLHFT]S
[LIFV][HQ]

Misannealing overhangs:

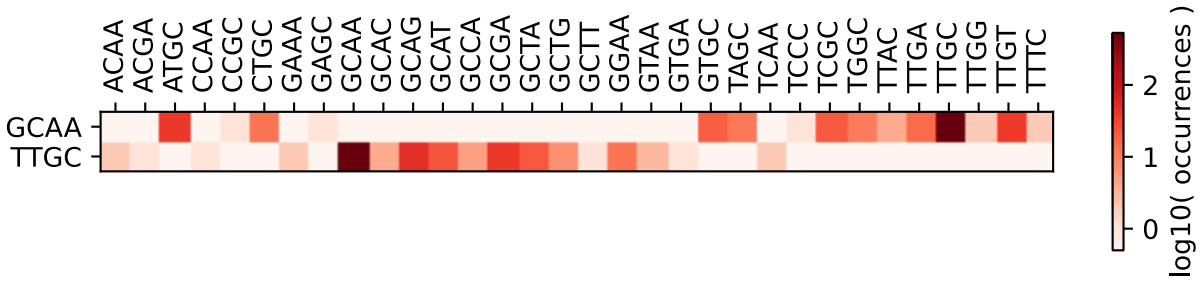


GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

A[NISRKMT]
[PAVSGWRKLMEQT*]Q
[CSGR][NK]
L[PRLHQ]
[PDANVYSIGRCLHFT]C
[LIFV][A]

Misannealing overhangs:



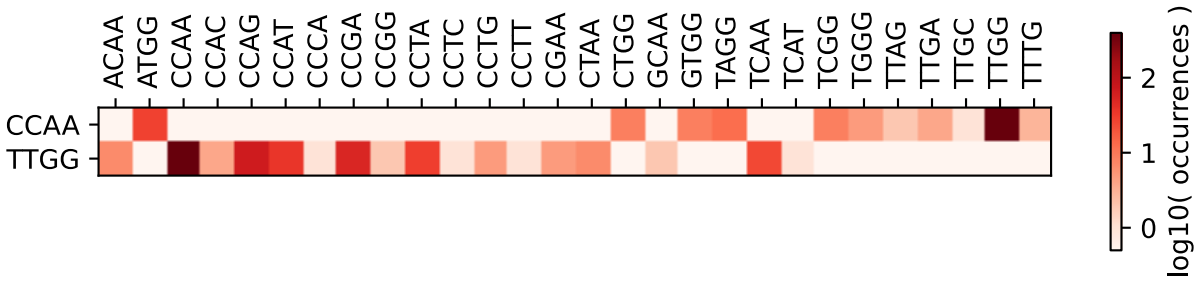
☑ CCAA TTGG

GC content: **50 %**.

Can form the following amino acids in 6 translation frames:

P[NISRKMT]
[PDANVYSIGRCLHFT]Q
[PSAT][NK]
L[ADVGE]
[PDANVYSIGRCLHFT]W
[LIFV][G]

Misannealing overhangs:



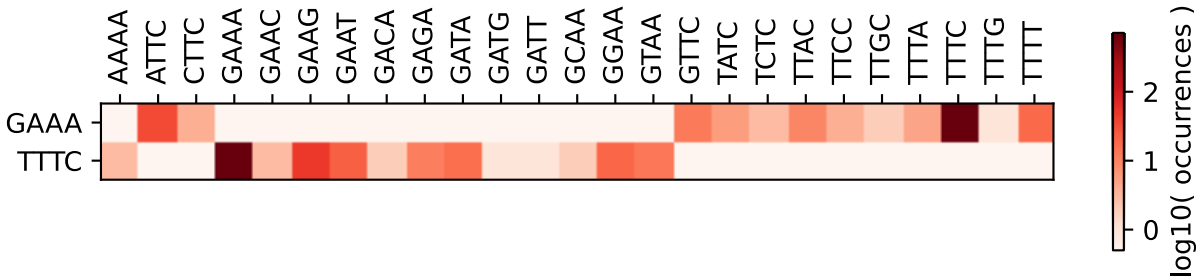
GC content: **25 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

E[NISRKMT]
[PAVSGWRKLMEQT*]K
[GR*][NK]
F[PRLHQ]
[PDANVYSIGRCLHFT]F
[LIFV][S]

Misannealing overhangs:



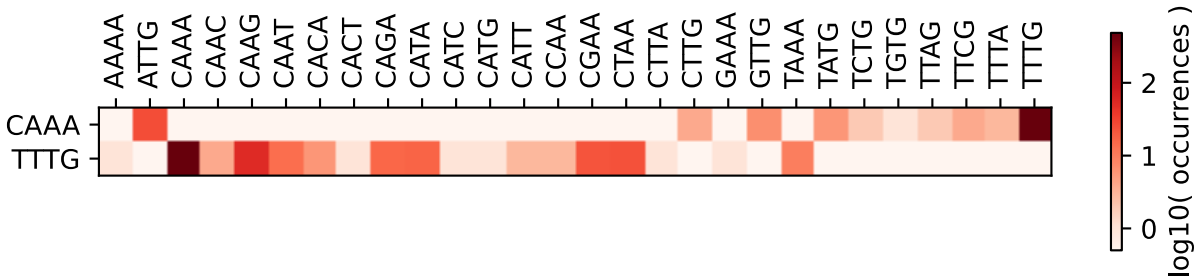
GC content: **25 %**.

Has 3 identical bases in a row. However, this has not shown to be very important.

Can form the following amino acids in 6 translation frames:

Q[NISRKMT]
[PDANVYSIGRCLHFT]K
[PSAT][NK]
F[ADVGE]
[PDANVYSIGRCLHFT]L
[LIFV][CW*]

Misannealing overhangs:



Appendix

The report consists of 3 sections: summary, overhangs, appendix.

Summary page(s)

The first page summarises the compendium.

Overhang pages

Each overhang is analysed separately. The result is summarised with a symbol:

☑ : good overhang

☒ : unusable palindromic sequence

Overhangs are unpaired nucleotides at the end of a double-stranded linear DNA molecule. Overhangs can be on either strand; 5' or 3' overhangs. After DNA ligation with another DNA with a complementary overhang, these remain in the sequence as fusion sites ("scars").

Overhang sets

Use the GoldenHinges Python package to generate a set of mutually compatible overhangs that can be used for DNA assembly.