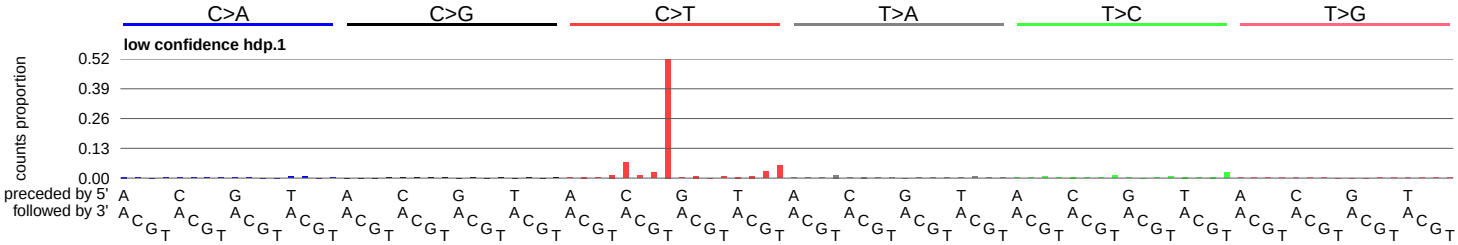
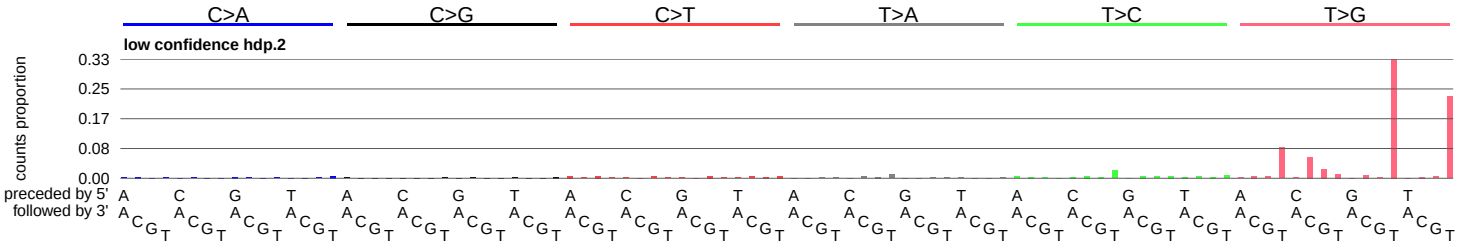

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.1
counts proportion
0.52
0.39
0.26
0.13
0.00
preceded by 5'
followed by 3'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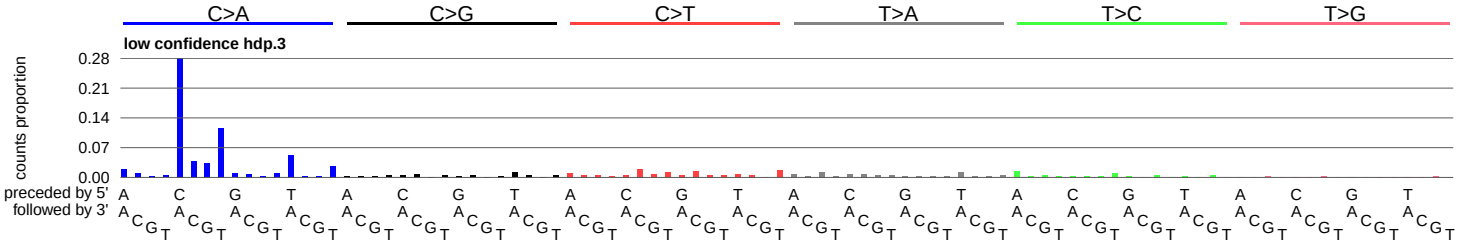
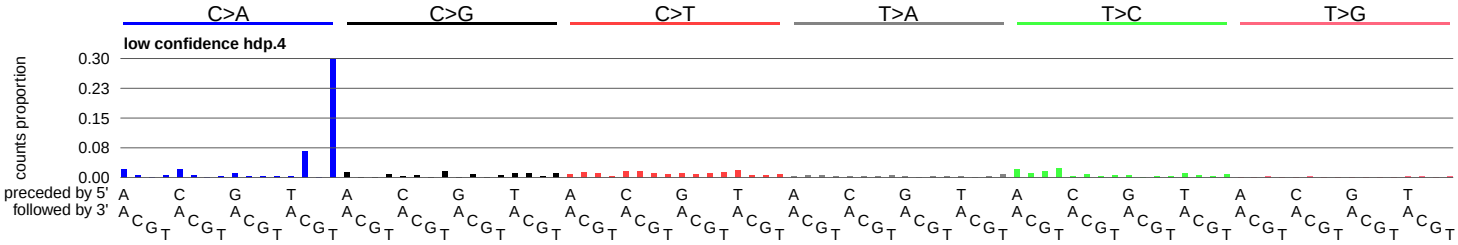
C>G
C>T
T>A
T>C
T>G
low confidence hdp.2
counts proportion
0.33
0.25
0.17
0.08
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.3
counts proportion
0.28
0.21
0.14
0.07
0.00
preceded by 5'
followed by 3'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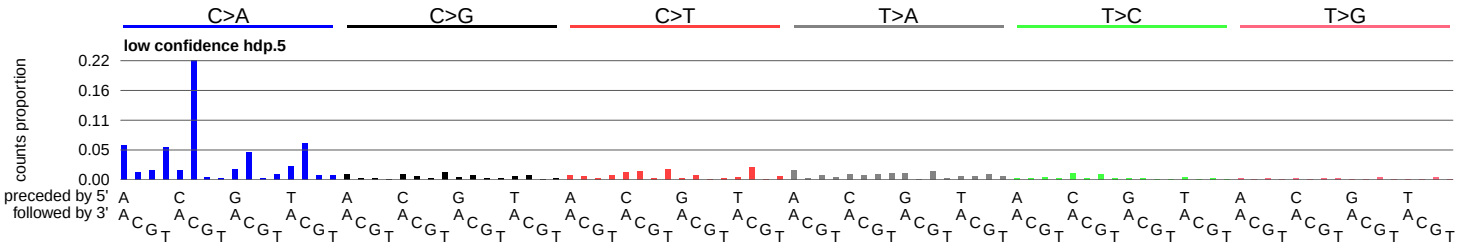
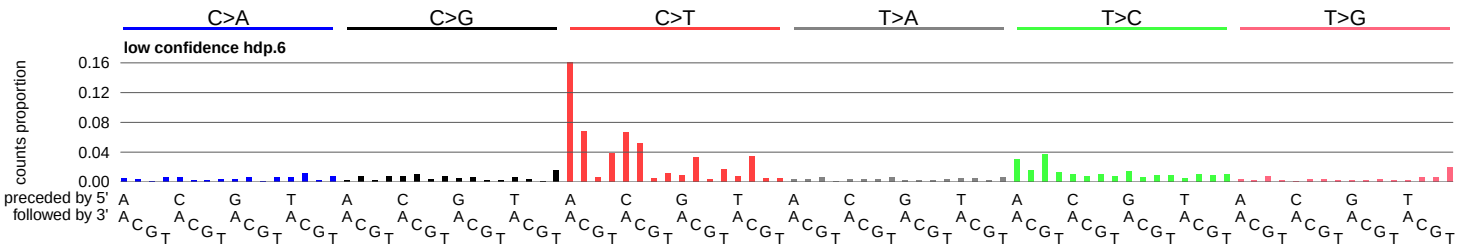
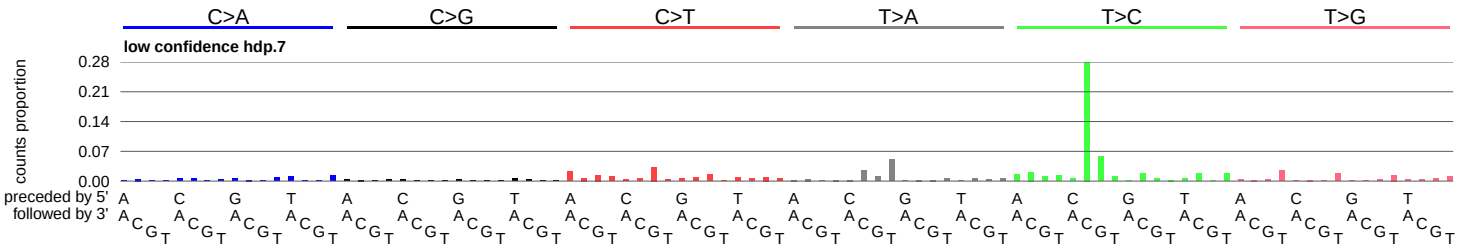
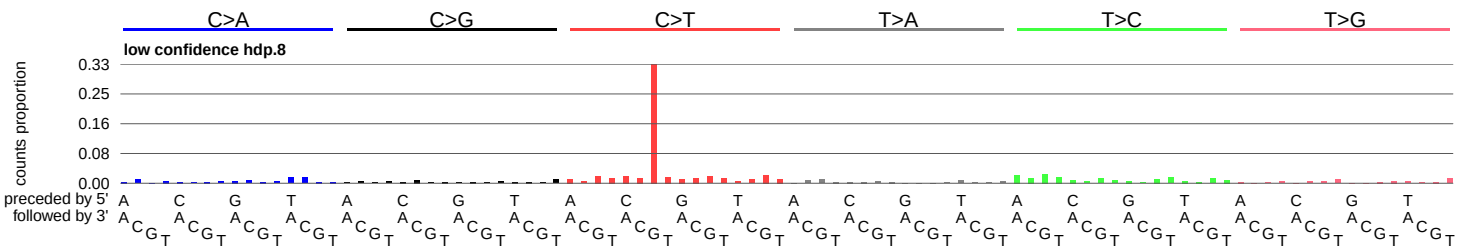
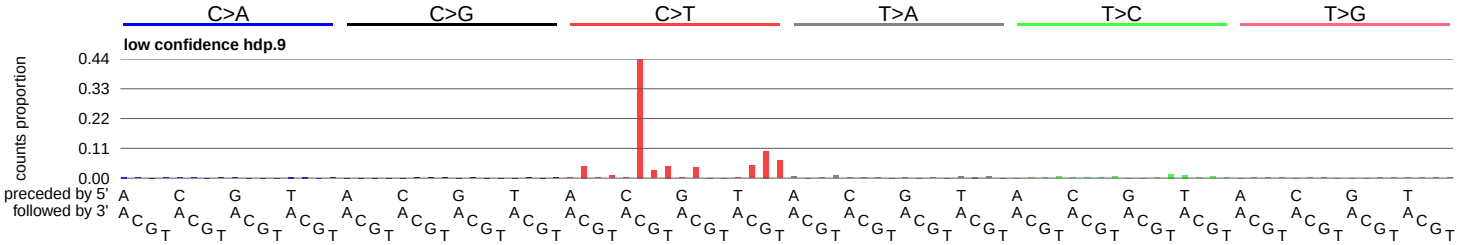
C>G
C>T
T>A
T>C
T>G
low confidence hdp.4
counts proportion
0.30
0.23
0.15
0.08
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.5
counts proportion
0.22
0.16
0.11
0.05
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.6
counts proportion
0.16
0.12
0.08
0.04
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.7
counts proportion
0.28
0.21
0.14
0.07
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.8
counts proportion
0.33
0.25
0.16
0.08
0.00
preceded by 5'
followed by 3'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C>G
C>T
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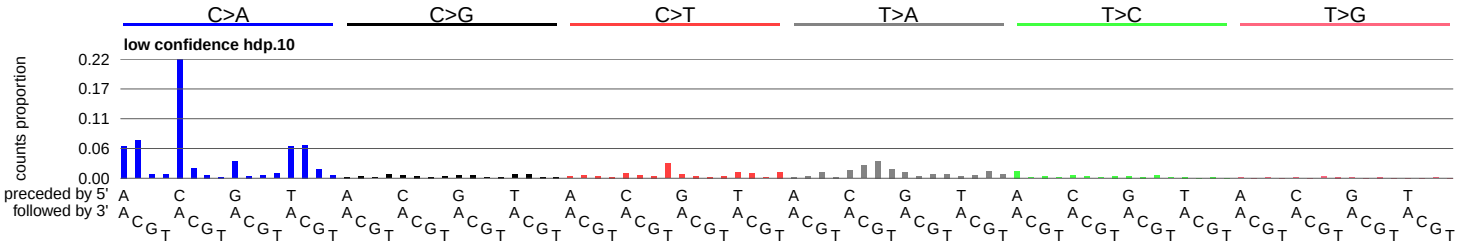
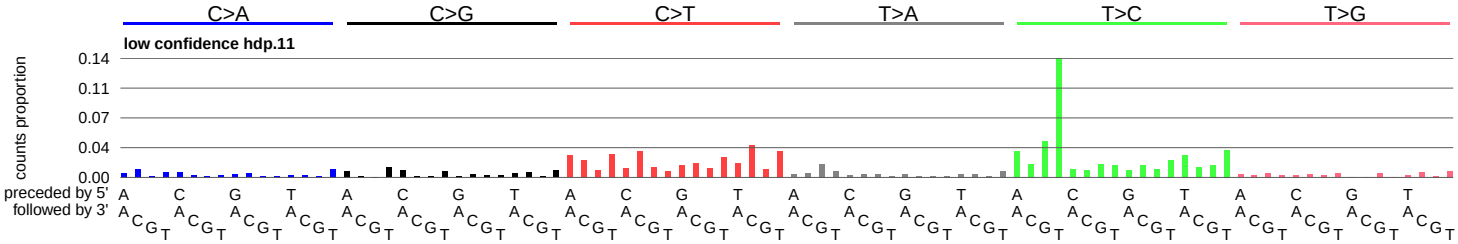
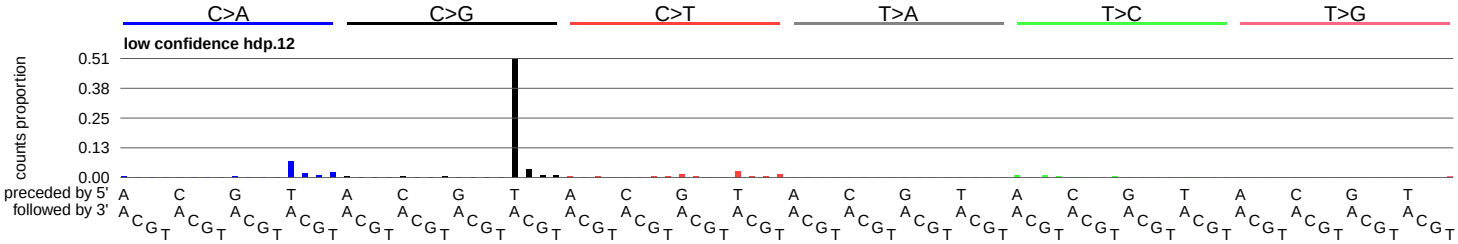
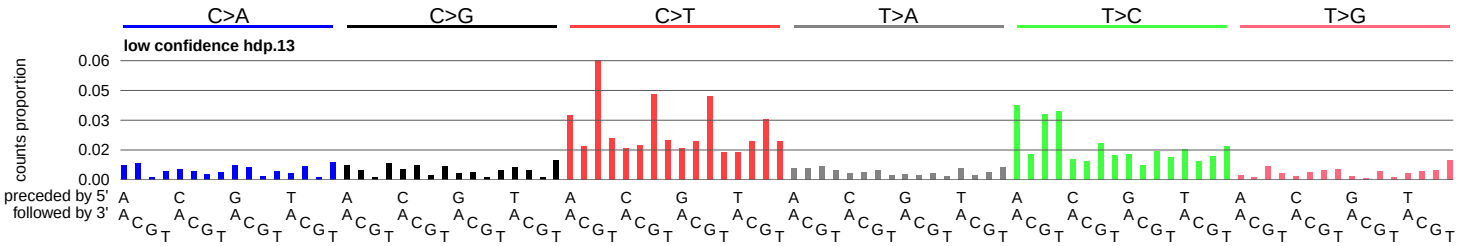
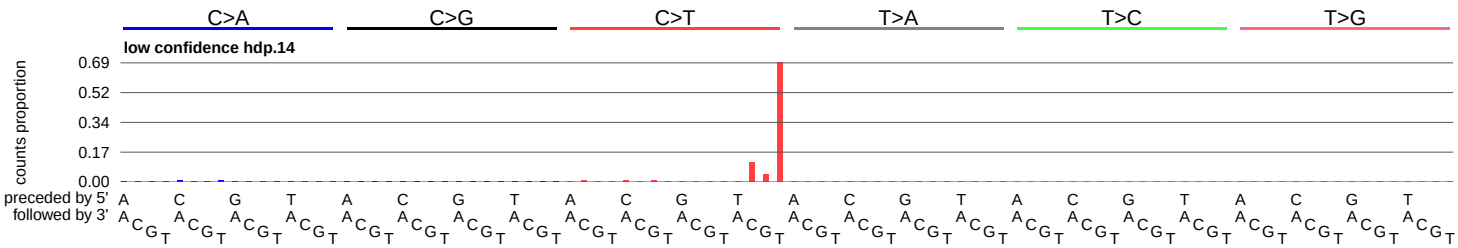
T>C
T>G
low confidence hdp.9
counts proportion
0.44
0.33
0.22
0.11
0.00
preceded by 5'
followed by 3'

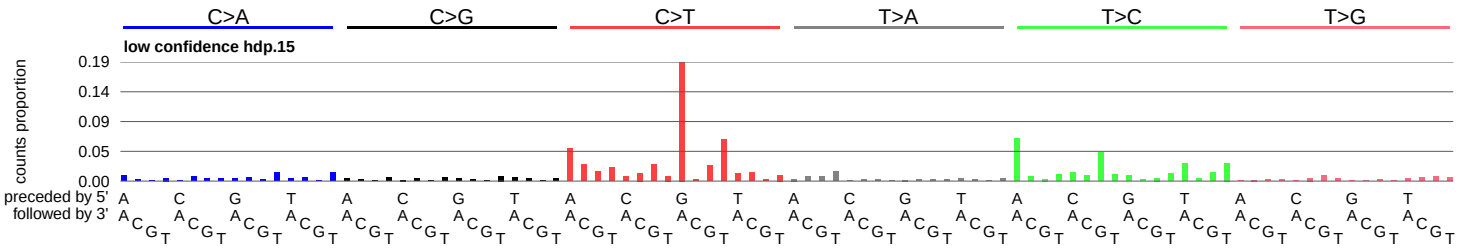

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.10
counts proportion
0.22
0.17
0.11
0.06
0.00
preceded by 5'
followed by 3'

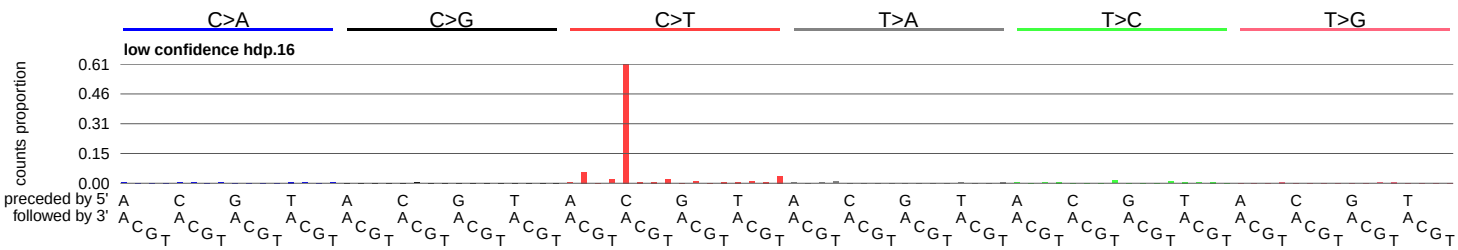

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.11
counts proportion
0.14
0.11
0.07
0.04
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.12
counts proportion
0.51
0.38
0.25
0.13
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.13
counts proportion
0.06
0.05
0.03
0.02
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.14
counts proportion
0.69
0.52
0.34
0.17
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.15
counts proportion
0.19
0.14
0.09
0.05
0.00
preceded by 5'
followed by 3'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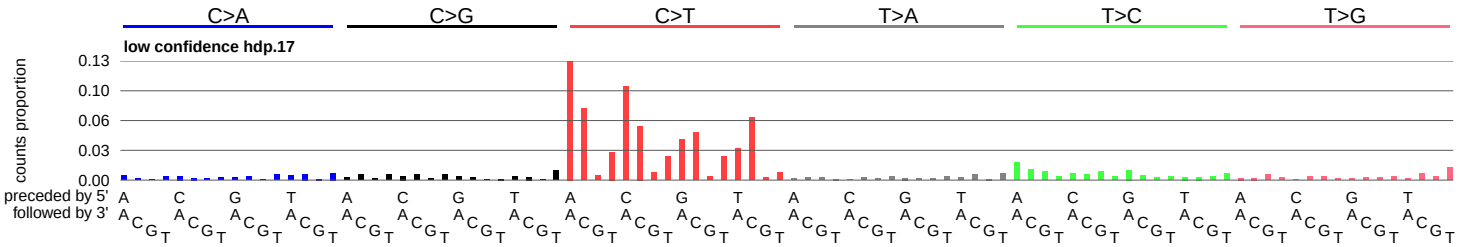
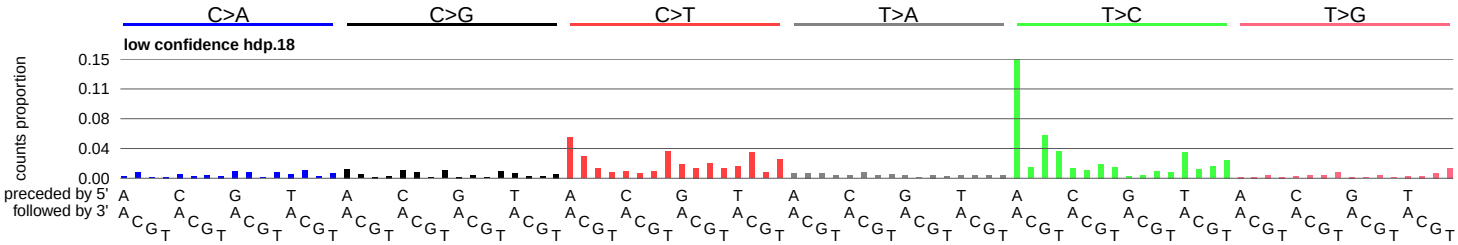
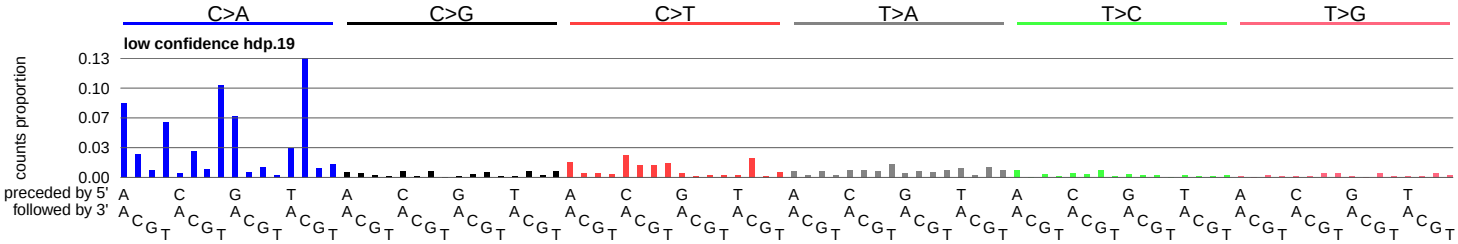
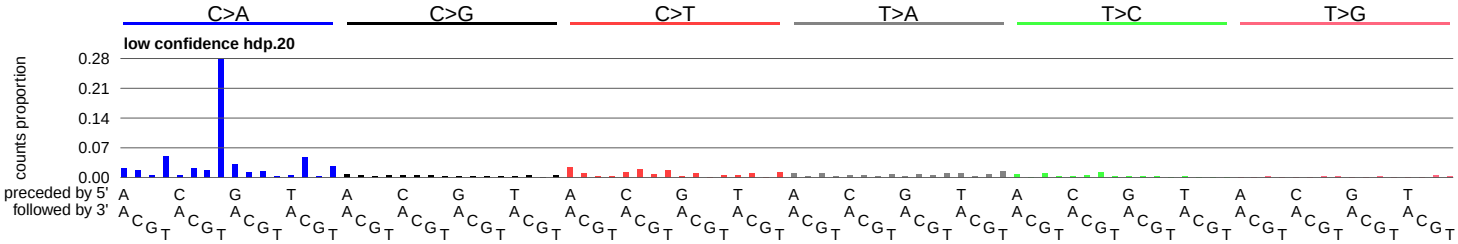
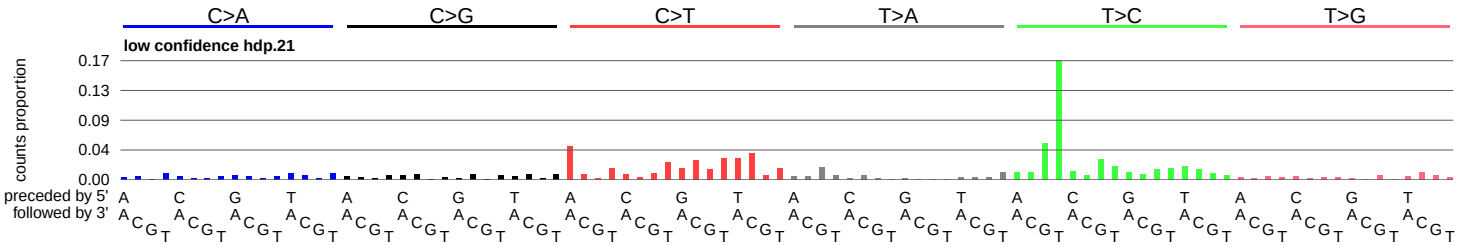
C>G
C>T
T>A
T>C
T>G
low confidence hdp.16
counts proportion
0.61
0.46
0.31
0.15
0.00
preceded by 5'
followed by 3'

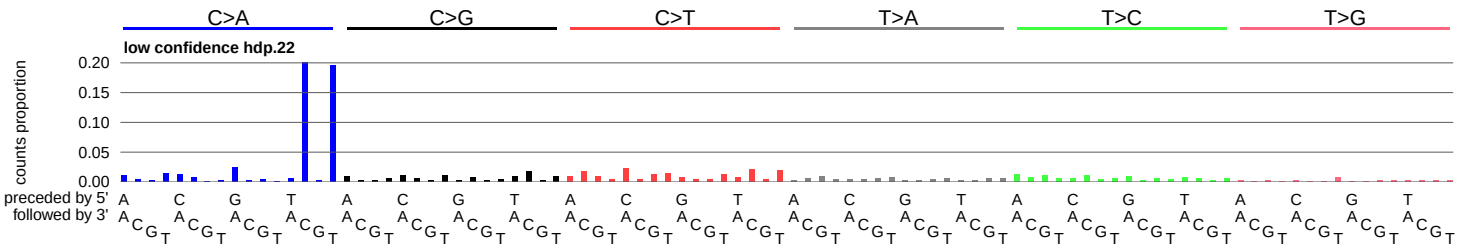

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.17
counts proportion
0.13
0.10
0.06
0.03
0.00
preceded by 5'
followed by 3'

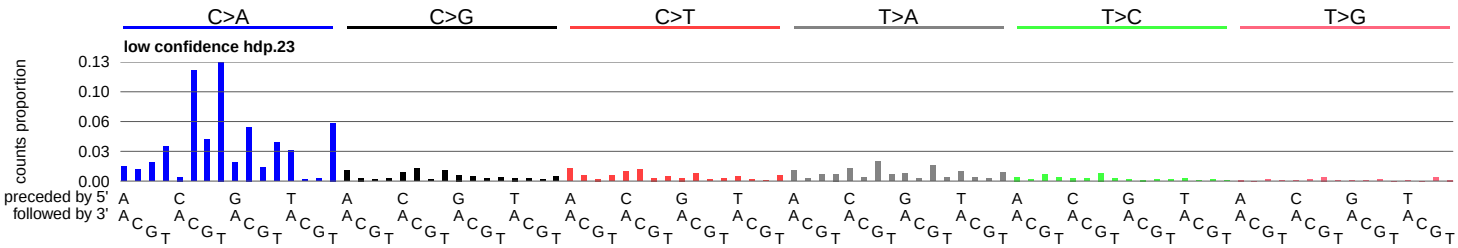

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.18
counts proportion
0.15
0.11
0.08
0.04
0.00
preceded by 5'
followed by 3'

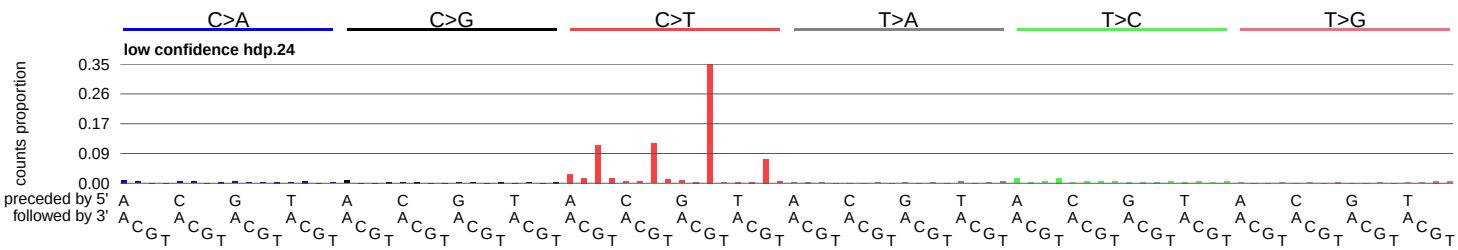

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.19
counts proportion
0.13
0.10
0.07
0.03
0.00
preceded by 5'
followed by 3'

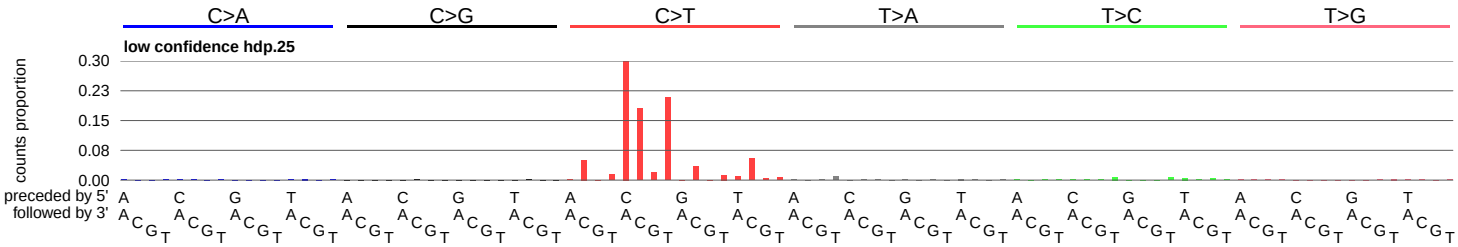

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.20
counts proportion
0.28
0.21
0.14
0.07
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.21
counts proportion
0.17
0.13
0.09
0.04
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.22
counts proportion
0.20
0.15
0.10
0.05
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.23
counts proportion
0.13
0.10
0.06
0.03
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.24
counts proportion
0.35
0.26
0.17
0.09
0.00
preceded by 5'
followed by 3'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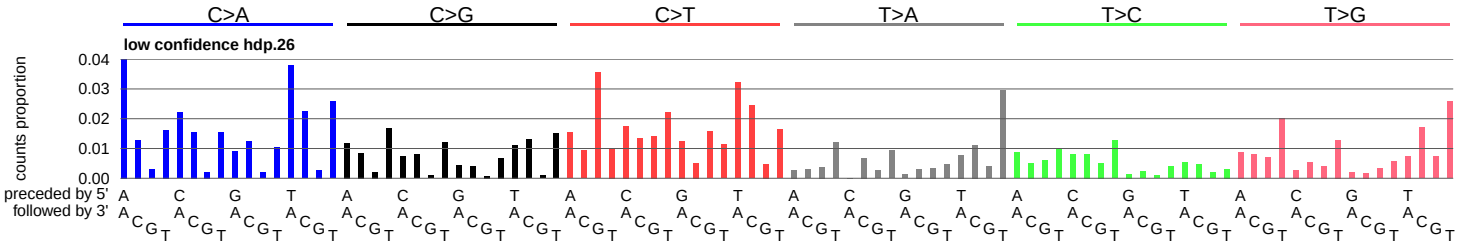
C>G
C>T
T>A
T>C
T>G
low confidence hdp.25
counts proportion
0.30
0.23
0.15
0.08
0.00
preceded by 5'
followed by 3'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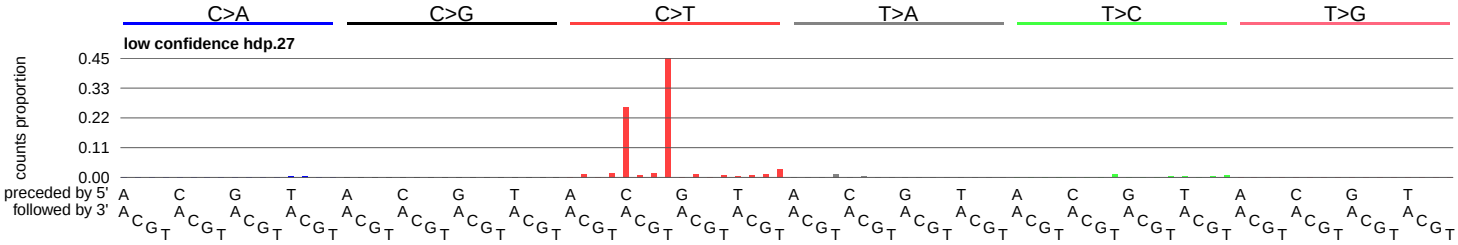
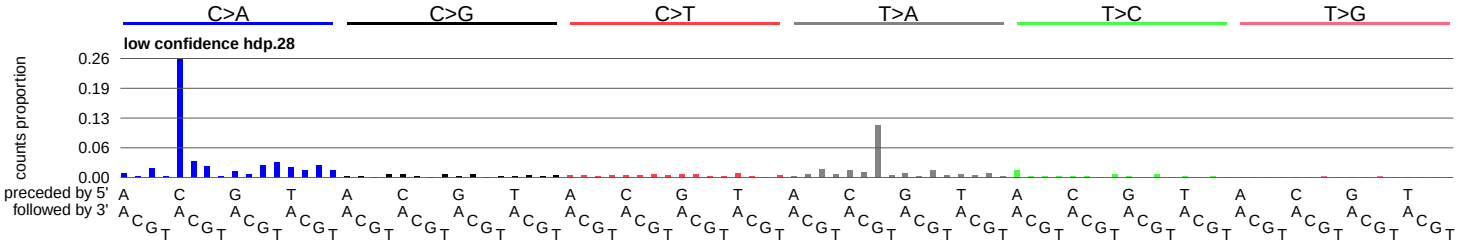
C>G
C>T
T>A
T>C
T>G
low confidence hdp.26
counts proportion
0.04
0.03
0.02
0.01
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.27
counts proportion
0.45
0.33
0.22
0.11
0.00
preceded by 5'
followed by 3'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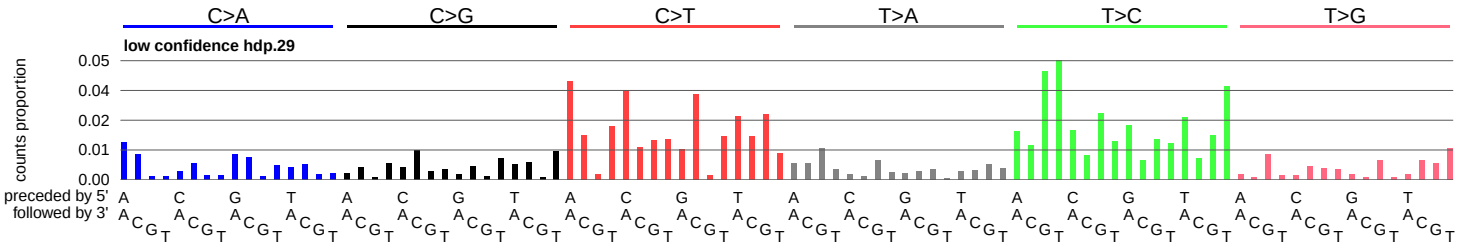
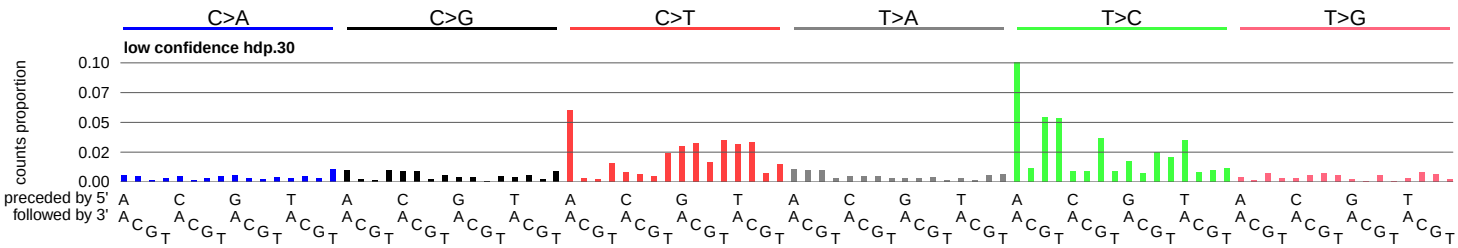
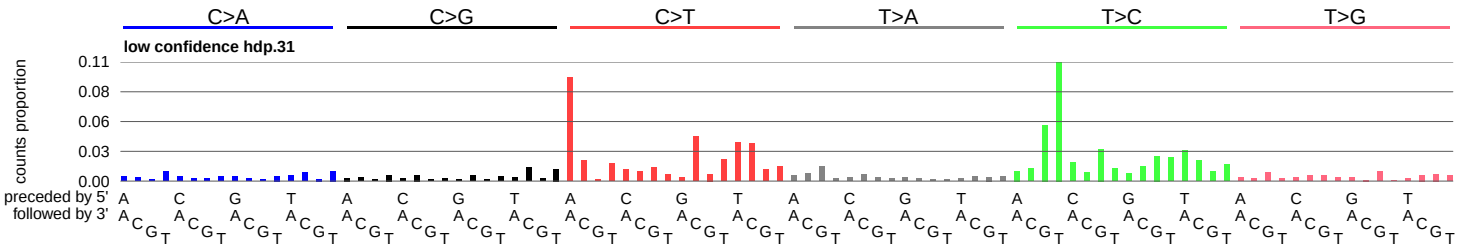
C>G
C>T
T>A
T>C
T>G
low confidence hdp.28
counts proportion
0.26
0.19
0.13
0.06
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.29
counts proportion
0.05
0.04
0.02
0.01
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.30
counts proportion
0.10
0.07
0.05
0.02
0.00
preceded by 5'
followed by 3'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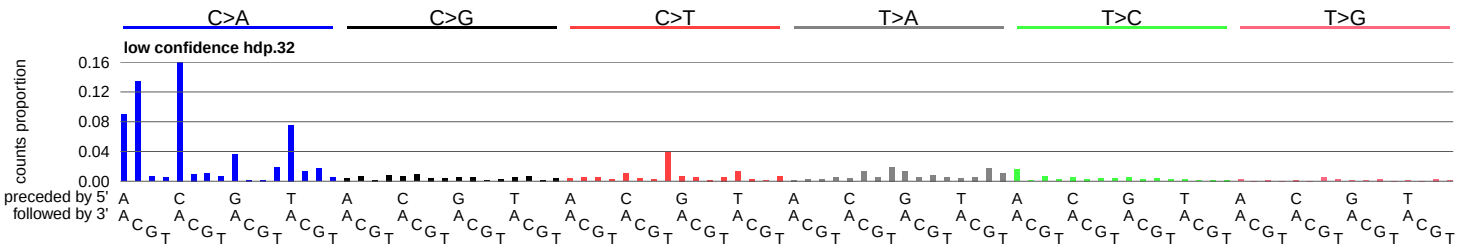
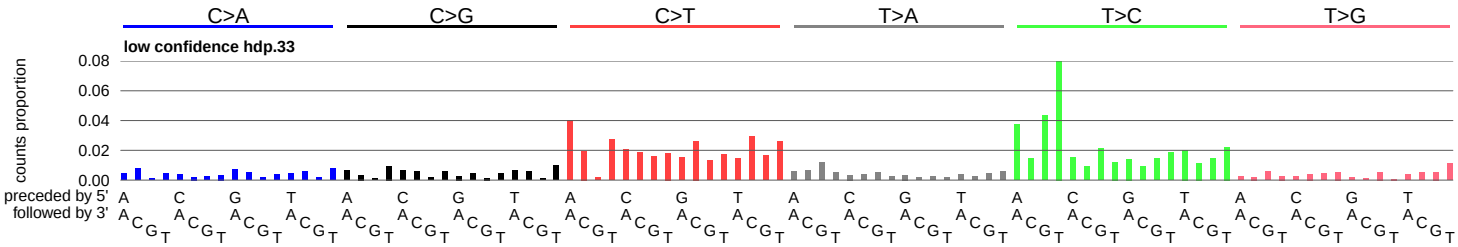
C>G
C>T
T>A
T>C
T>G
low confidence hdp.31
counts proportion
0.11
0.08
0.06
0.03
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.32
counts proportion
0.16
0.12
0.08
0.04
0.00
preceded by 5'
followed by 3'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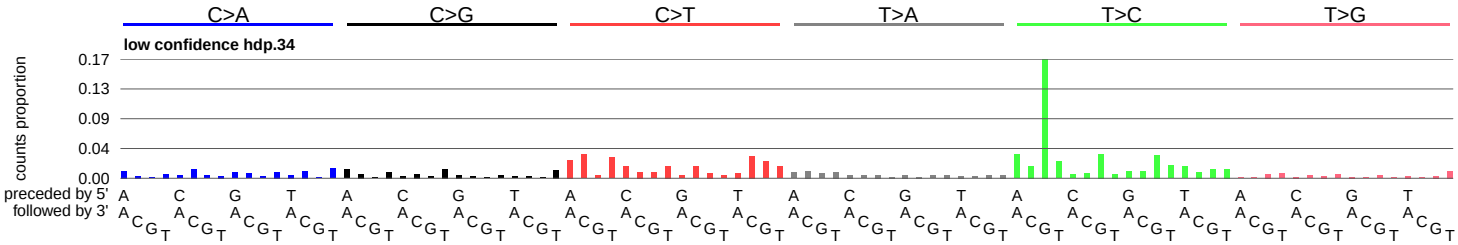
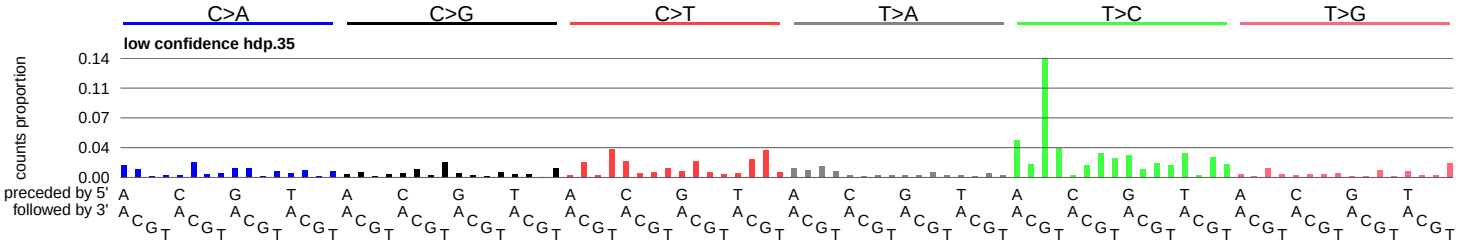
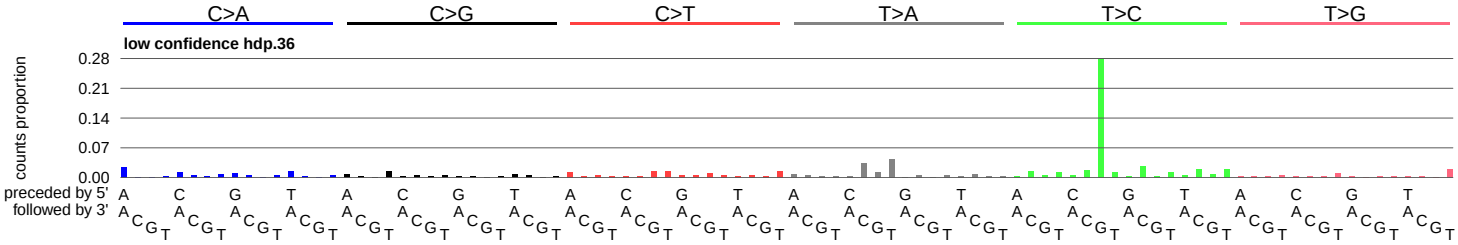
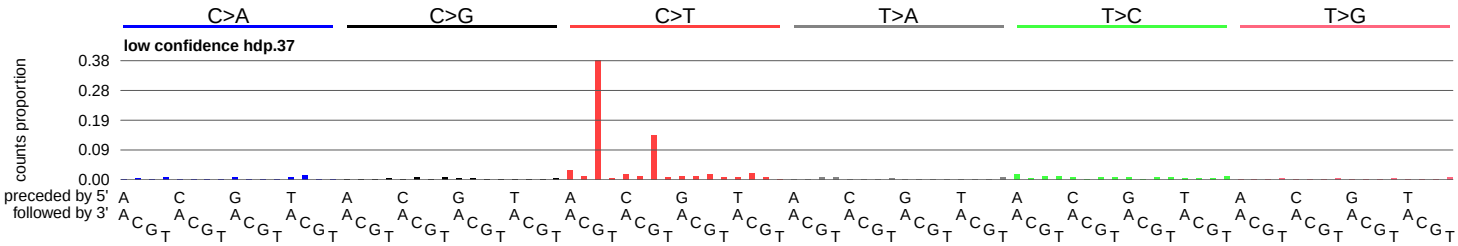
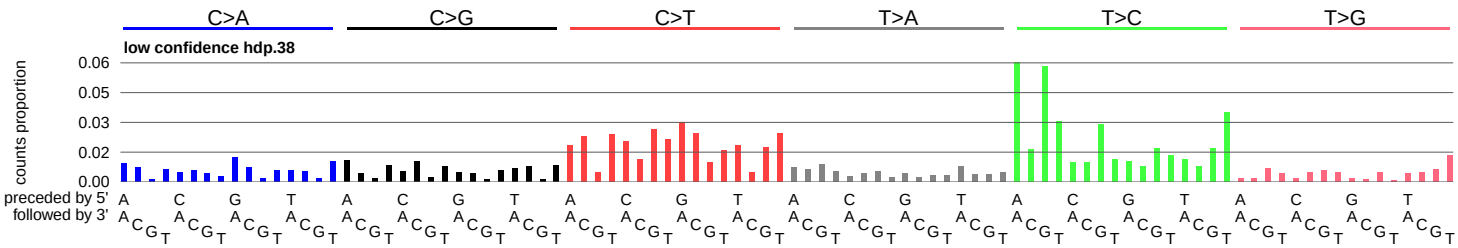
C>G
C>T
T>A
T>C
T>G
low confidence hdp.33
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

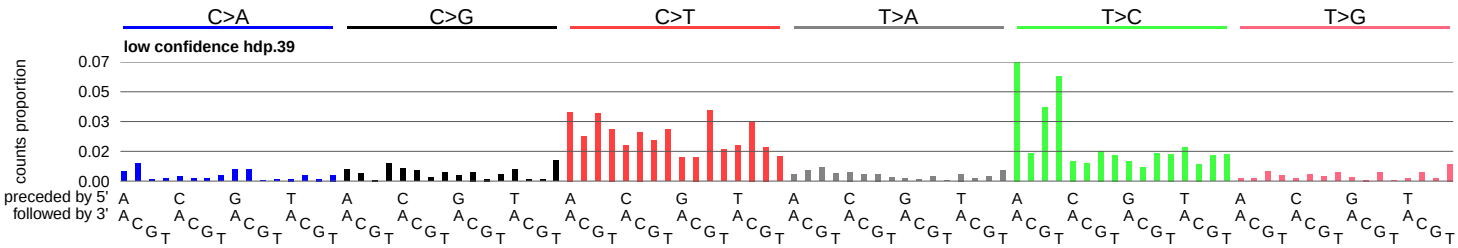

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.34
counts proportion
0.17
0.13
0.09
0.04
0.00
preceded by 5'
followed by 3'

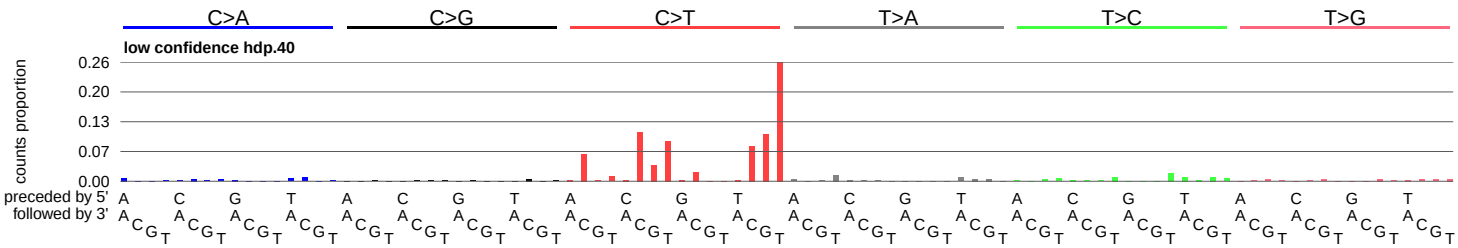

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.35
counts proportion
0.14
0.11
0.07
0.04
0.00
preceded by 5'
followed by 3'

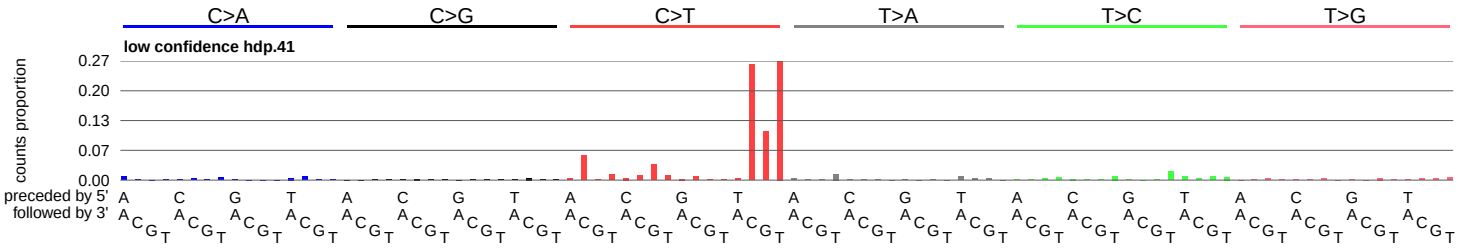

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.36
counts proportion
0.28
0.21
0.14
0.07
0.00
preceded by 5'
followed by 3'

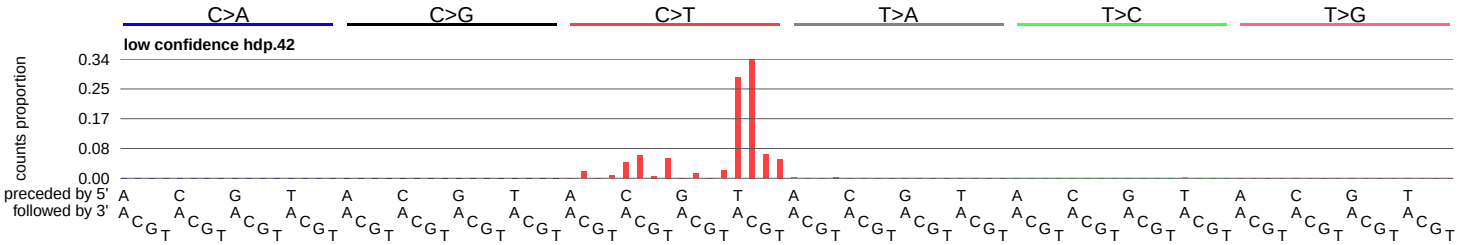

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.37
counts proportion
0.38
0.28
0.19
0.09
0.00
preceded by 5'
followed by 3'

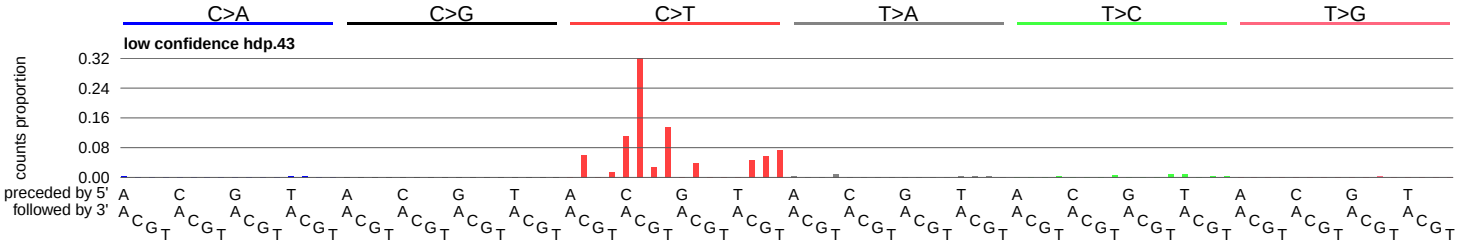

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.38
counts proportion
0.06
0.05
0.03
0.02
0.00
preceded by 5'
followed by 3'

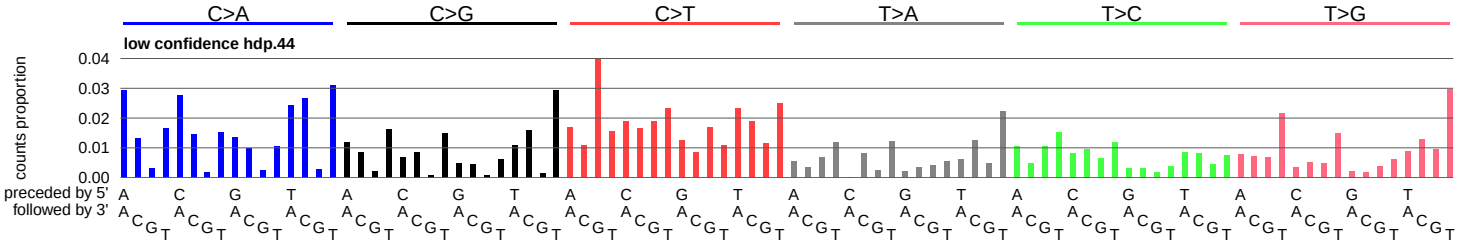

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.39
counts proportion
0.07
0.05
0.03
0.02
0.00
preceded by 5'
followed by 3'

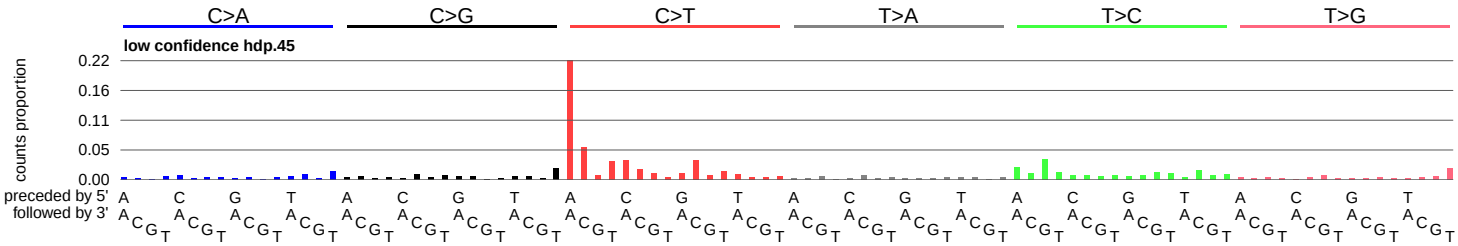

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.40
counts proportion
0.26
0.20
0.13
0.07
0.00
preceded by 5'
followed by 3'

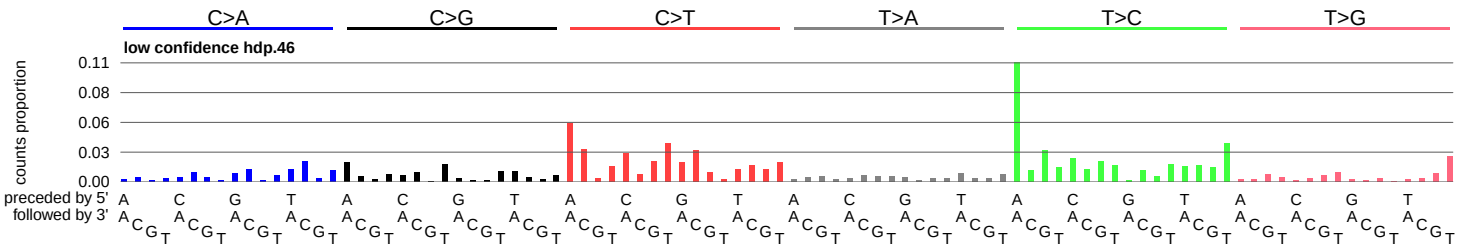

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.41
counts proportion
0.27
0.20
0.13
0.07
0.00
preceded by 5'
followed by 3'

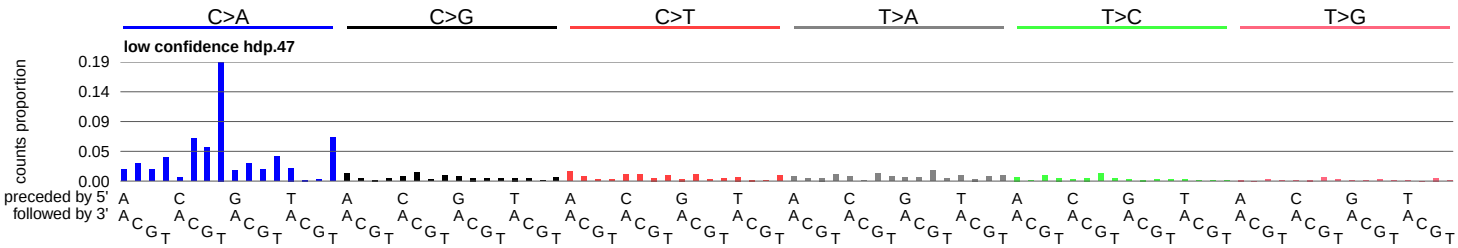

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.42
counts proportion
0.34
0.25
0.17
0.08
0.00
preceded by 5'
followed by 3'

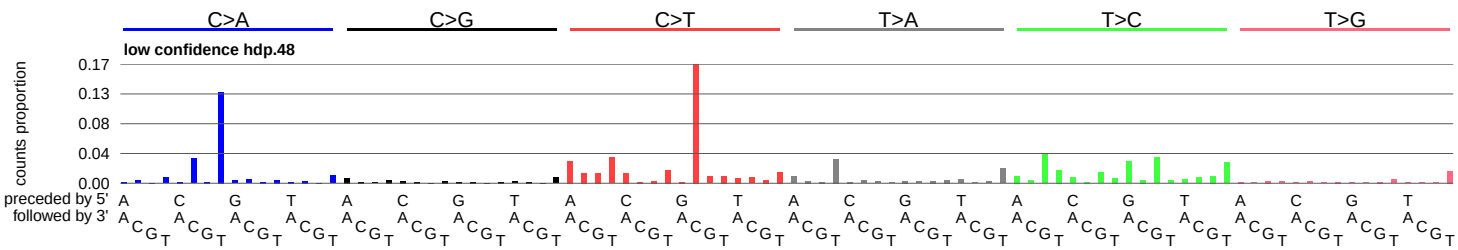

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.43
counts proportion
0.32
0.24
0.16
0.08
0.00
preceded by 5'
followed by 3'

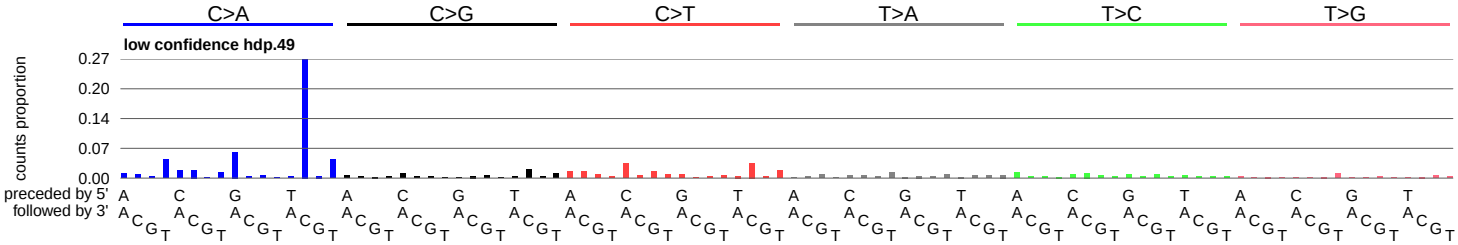

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.44
counts proportion
0.04
0.03
0.02
0.01
0.00
preceded by 5'
followed by 3'

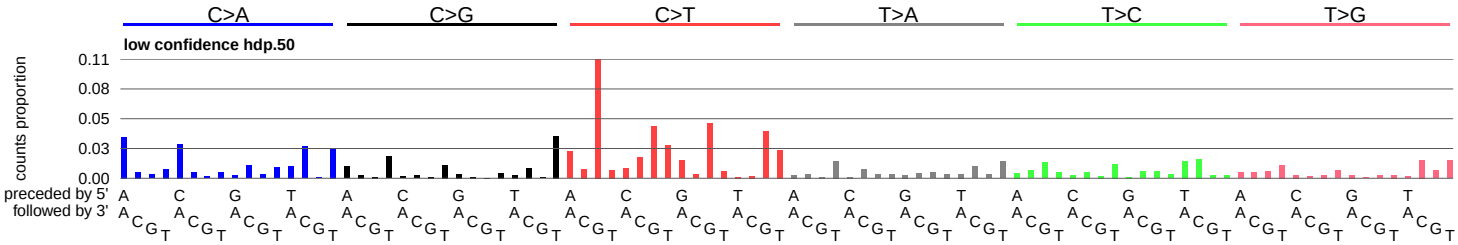

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.45
counts proportion
0.22
0.16
0.11
0.05
0.00
preceded by 5'
followed by 3'

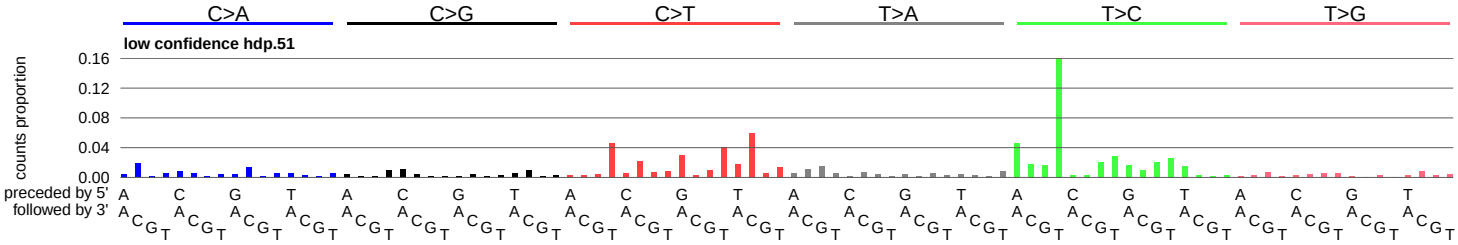

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.46
counts proportion
0.11
0.08
0.06
0.03
0.00
preceded by 5'
followed by 3'

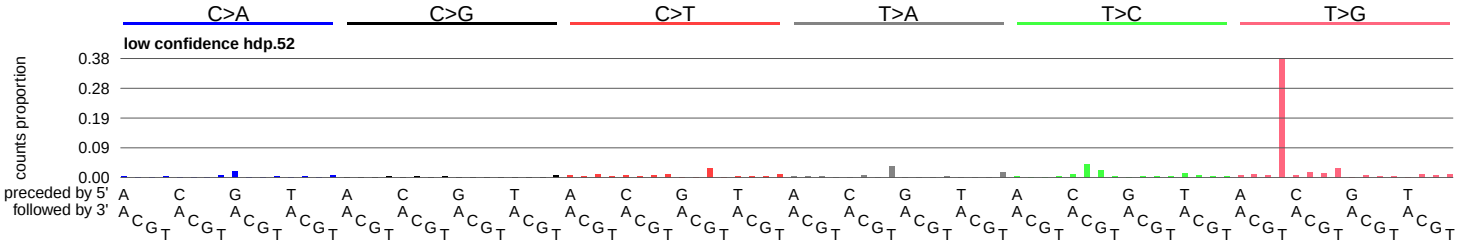

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.47
counts proportion
0.19
0.14
0.09
0.05
0.00
preceded by 5'
followed by 3'

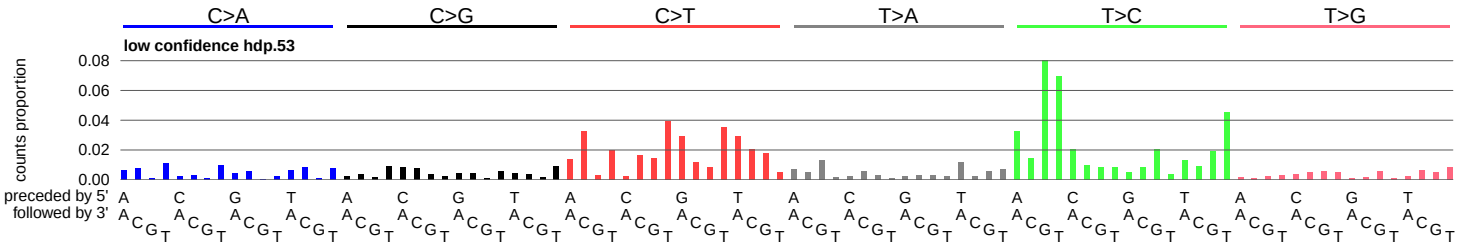

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.48
counts proportion
0.17
0.13
0.08
0.04
0.00
preceded by 5'
followed by 3'

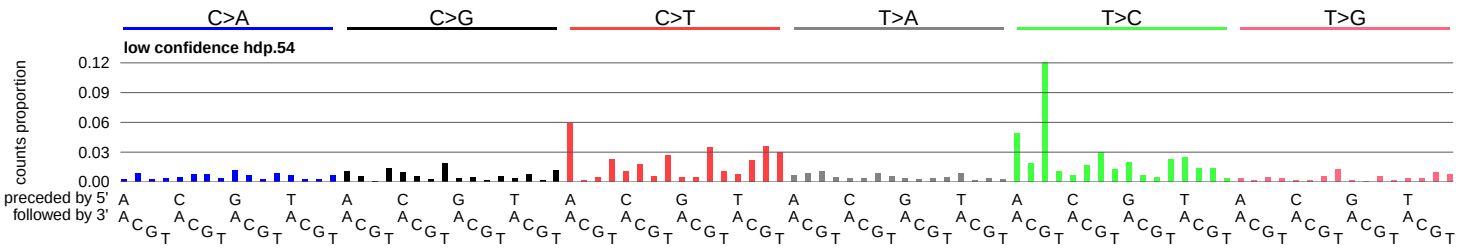

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.49
counts proportion
0.27
0.20
0.14
0.07
0.00
preceded by 5'
followed by 3'

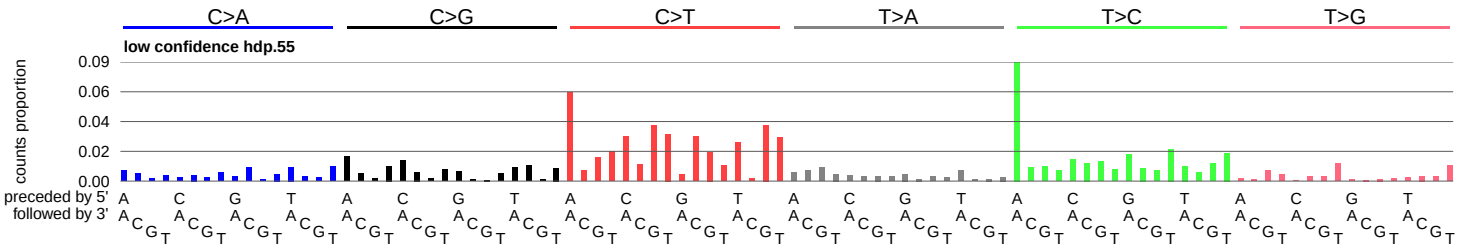

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.50
counts proportion
0.11
0.08
0.05
0.03
0.00
preceded by 5'
followed by 3'

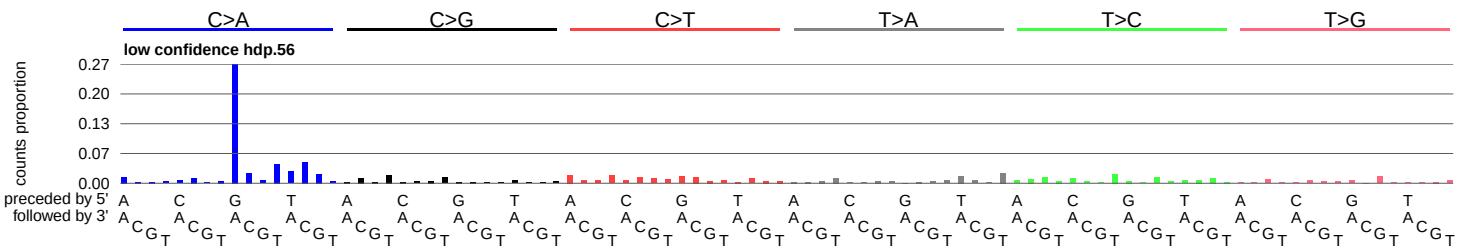

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.51
counts proportion
0.16
0.12
0.08
0.04
0.00
preceded by 5'
followed by 3'

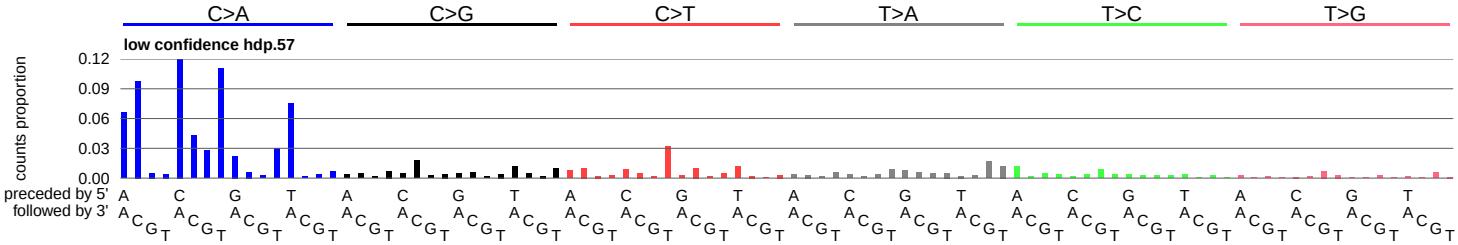

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.52
counts proportion
0.38
0.28
0.19
0.09
0.00
preceded by 5'
followed by 3'

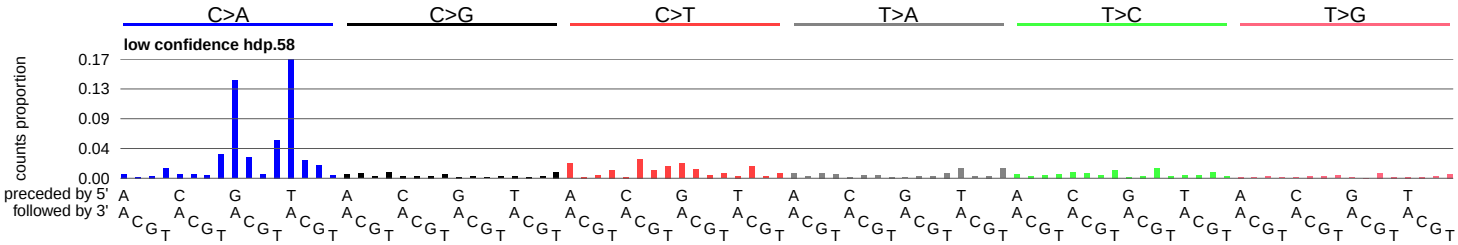

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.53
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

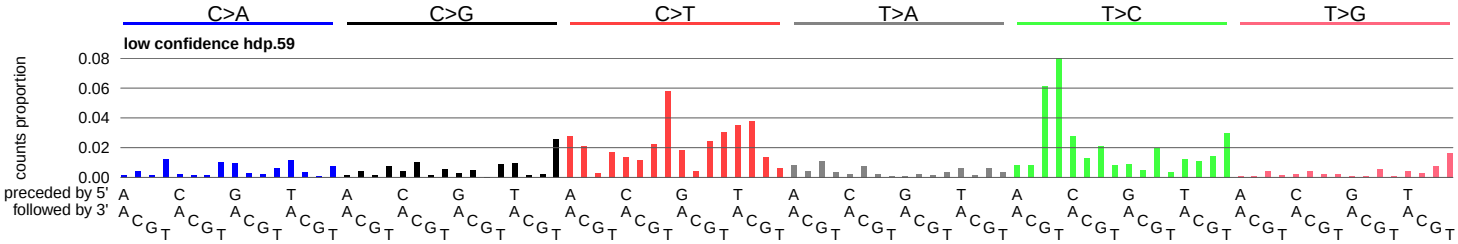

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.54
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'

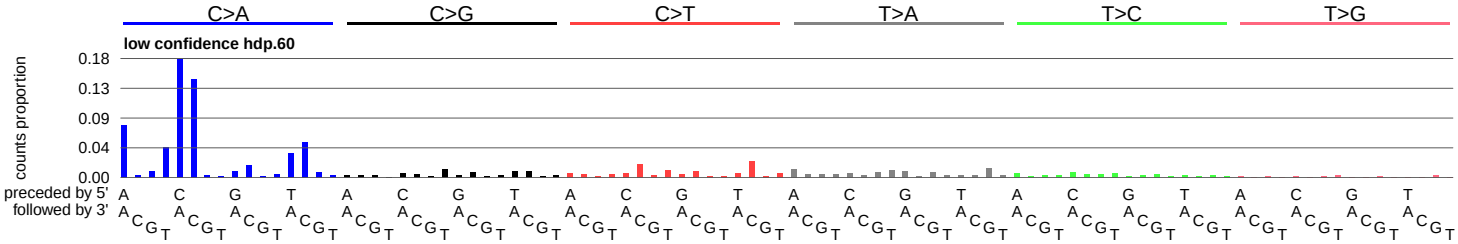

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.55
counts proportion
0.09
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

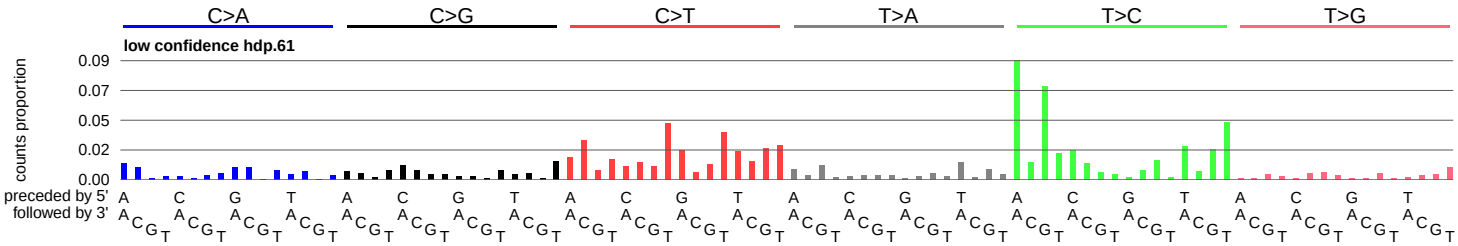

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.56
counts proportion
0.27
0.20
0.13
0.07
0.00
preceded by 5'
followed by 3'

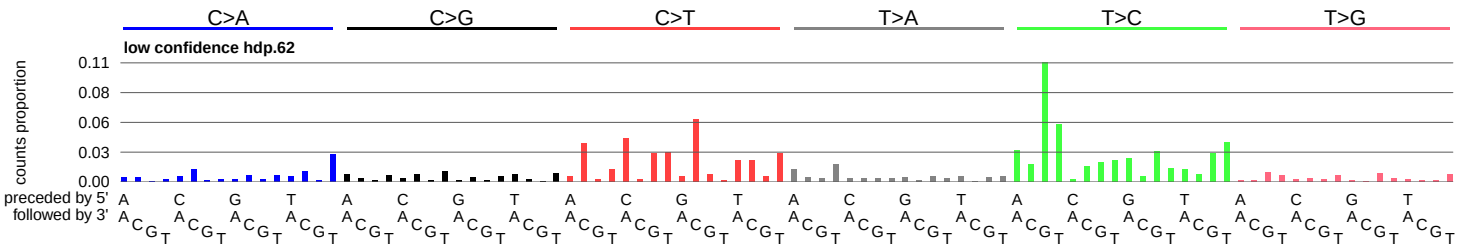

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.57
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'

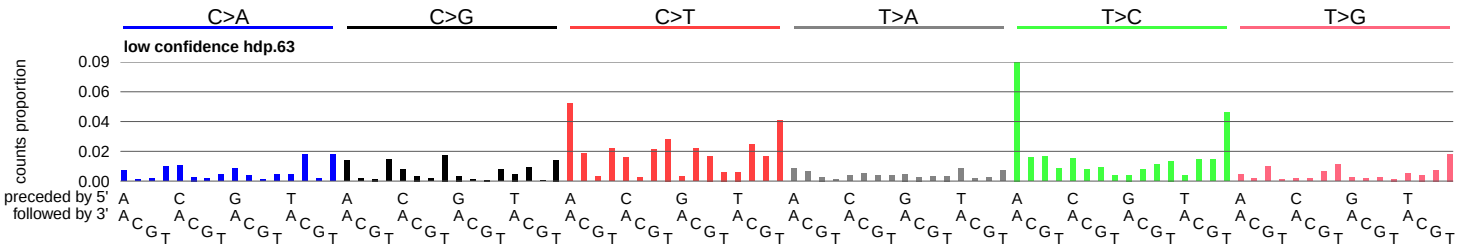

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.58
counts proportion
0.17
0.13
0.09
0.04
0.00
preceded by 5'
followed by 3'

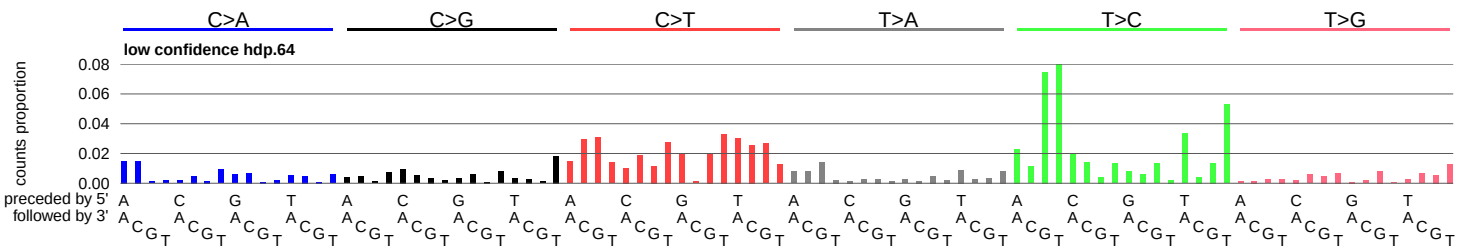

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.59
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

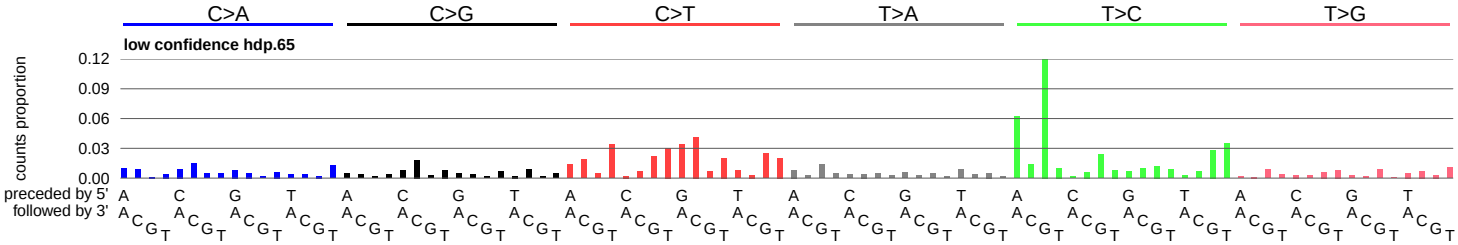

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.60
counts proportion
0.18
0.13
0.09
0.04
0.00
preceded by 5'
followed by 3'

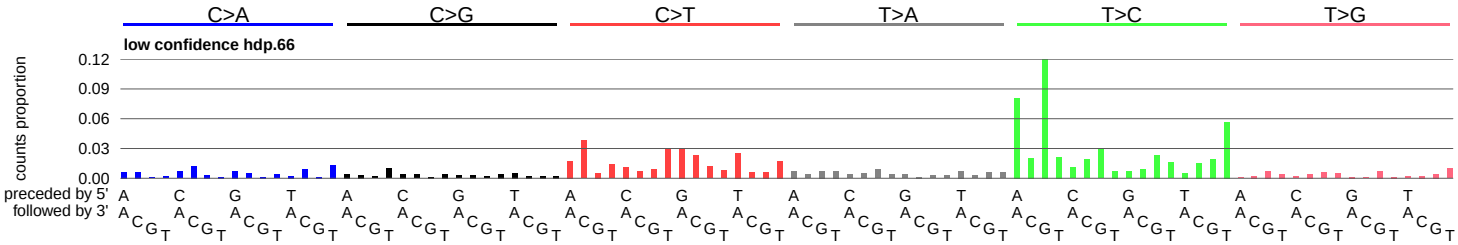

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.61
counts proportion
0.09
0.07
0.05
0.02
0.00
preceded by 5'
followed by 3'

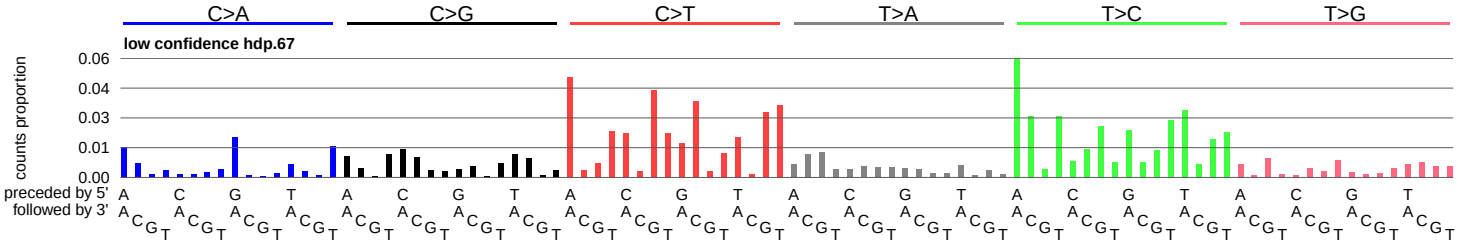

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.62
counts proportion
0.11
0.08
0.06
0.03
0.00
preceded by 5'
followed by 3'

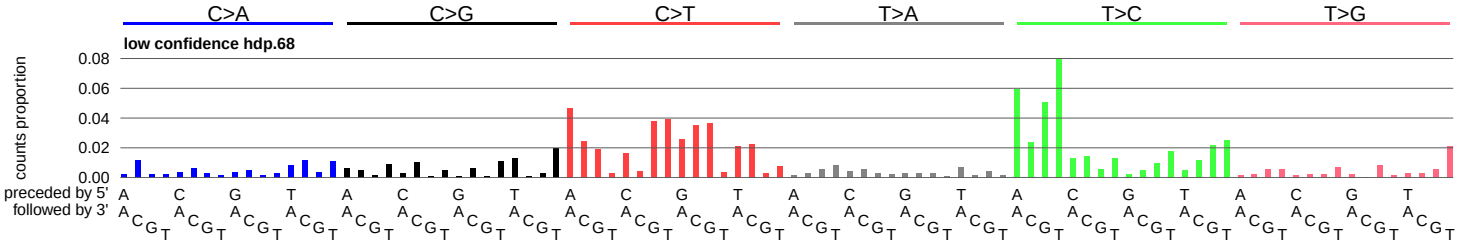

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.63
counts proportion
0.09
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

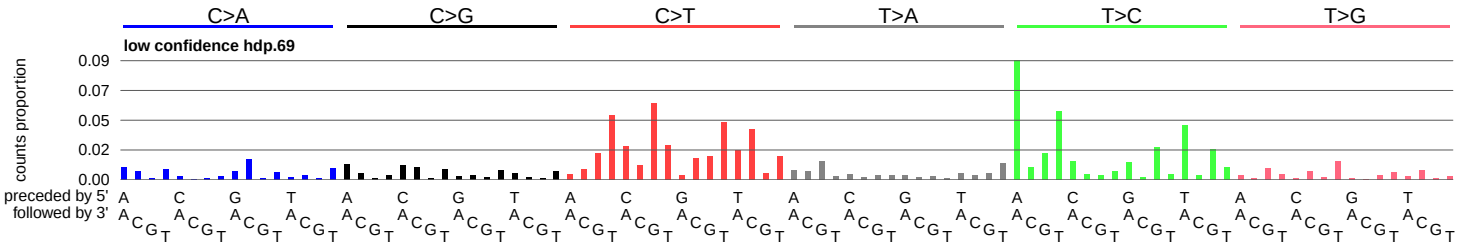

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.64
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

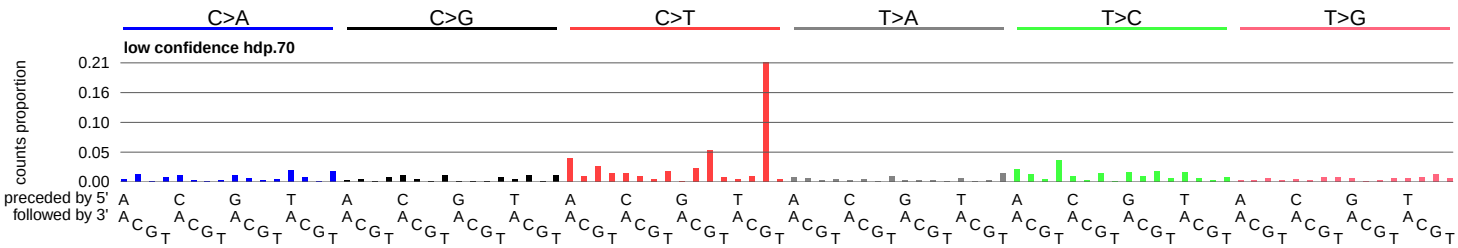

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.65
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'

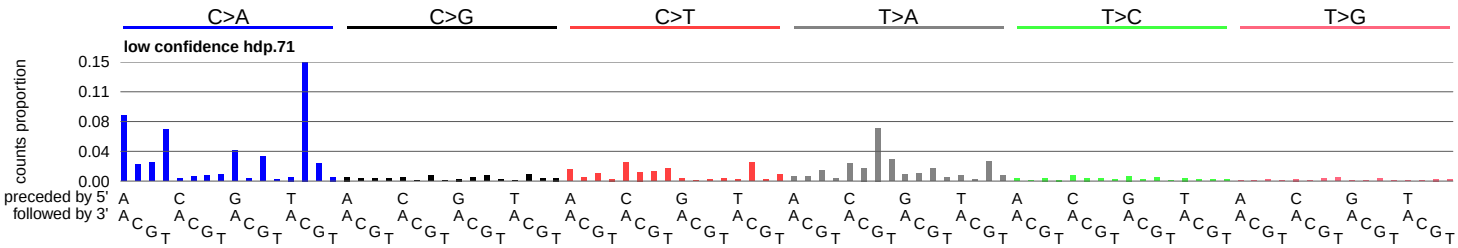

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.66
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'

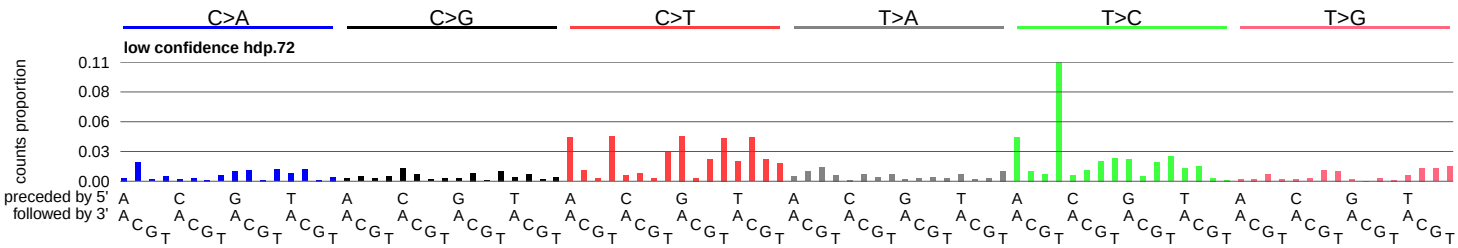

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.67
counts proportion
0.06
0.04
0.03
0.01
0.00
preceded by 5'
followed by 3'

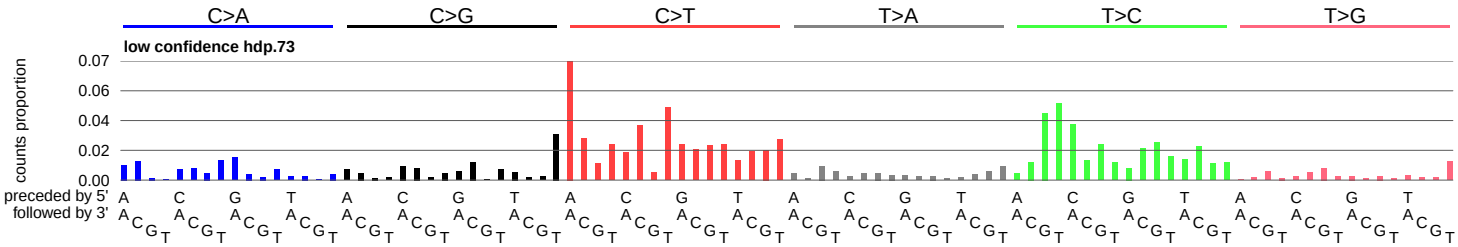

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.68
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

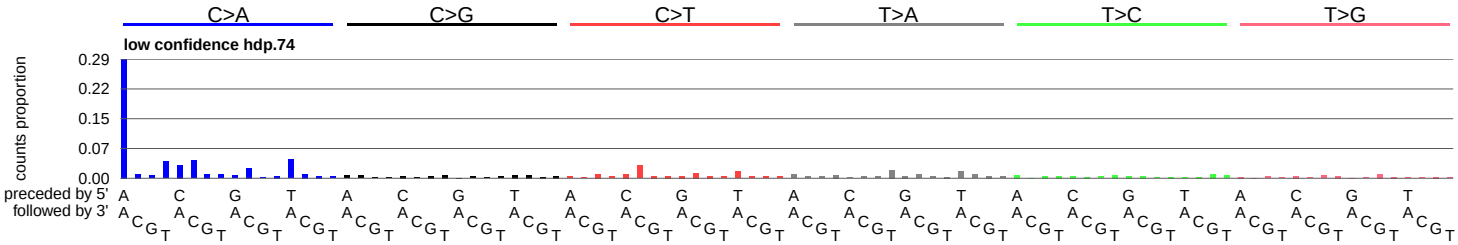

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.69
counts proportion
0.09
0.07
0.05
0.02
0.00
preceded by 5'
followed by 3'

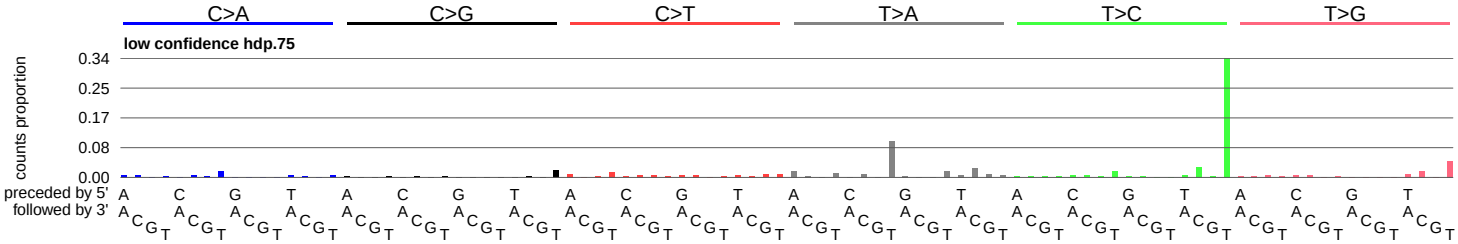

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.70
counts proportion
0.21
0.16
0.10
0.05
0.00
preceded by 5'
followed by 3'

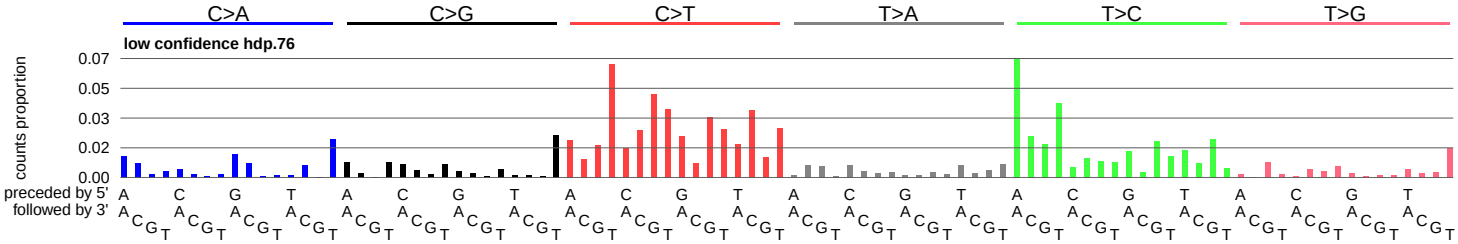

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.71
counts proportion
0.15
0.11
0.08
0.04
0.00
preceded by 5'
followed by 3'

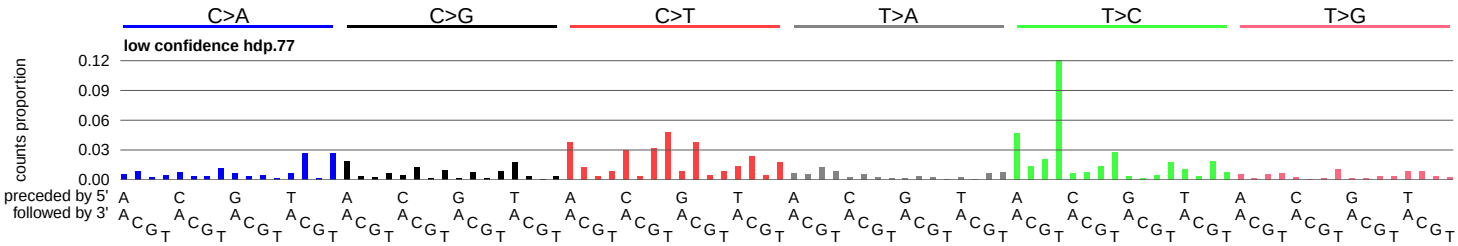

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.72
counts proportion
0.11
0.08
0.06
0.03
0.00
preceded by 5'
followed by 3'

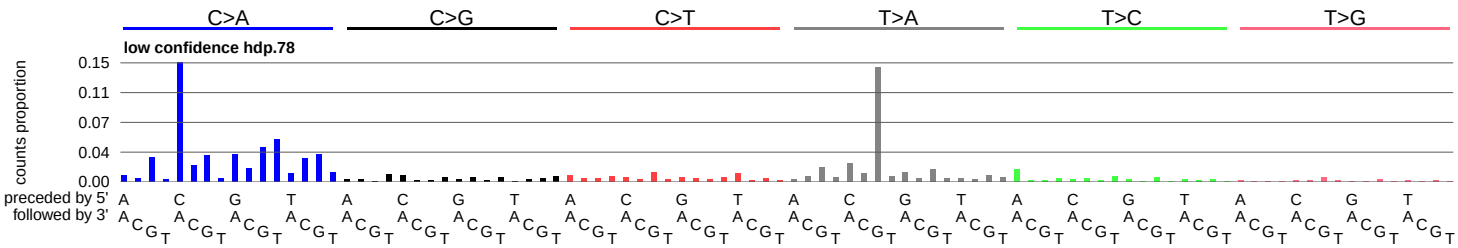

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.73
counts proportion
0.07
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

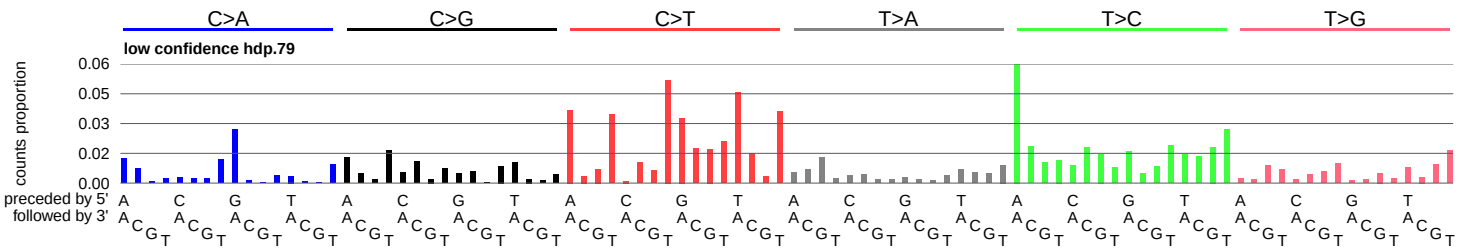

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.74
counts proportion
0.29
0.22
0.15
0.07
0.00
preceded by 5'
followed by 3'

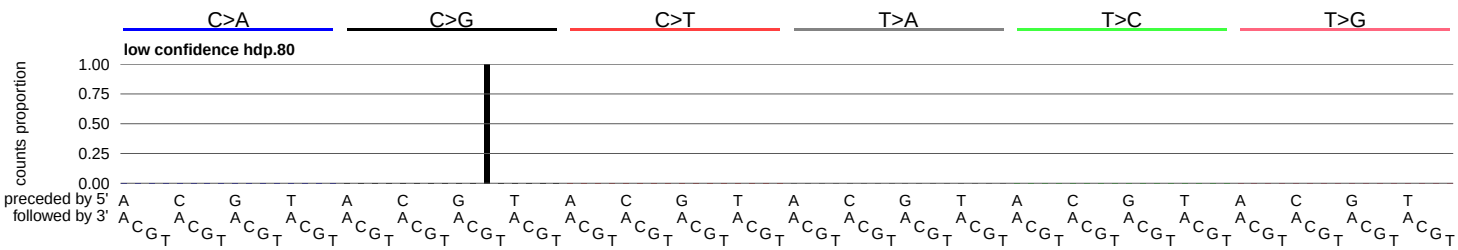

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.75
counts proportion
0.34
0.25
0.17
0.08
0.00
preceded by 5'
followed by 3'

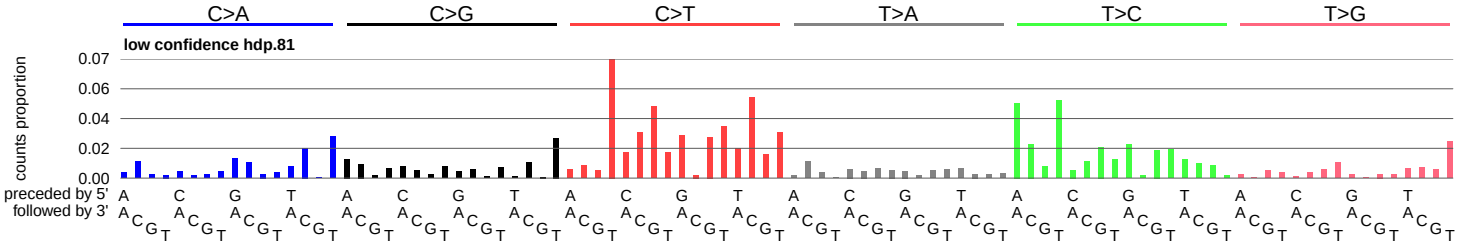

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.76
counts proportion
0.07
0.05
0.03
0.02
0.00
preceded by 5'
followed by 3'

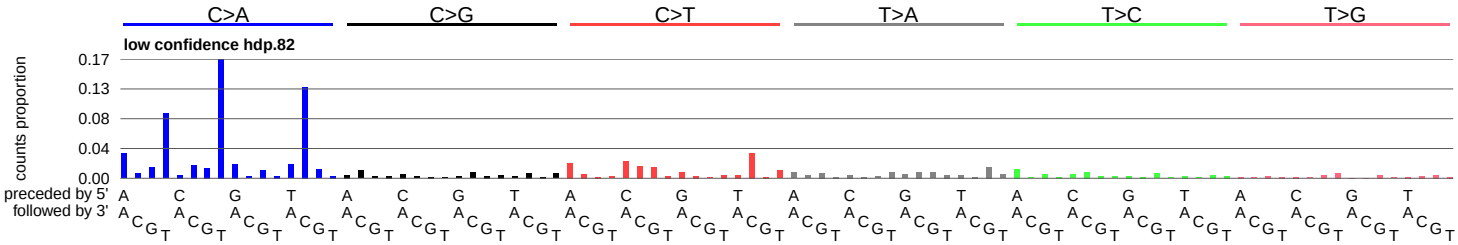

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.77
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'

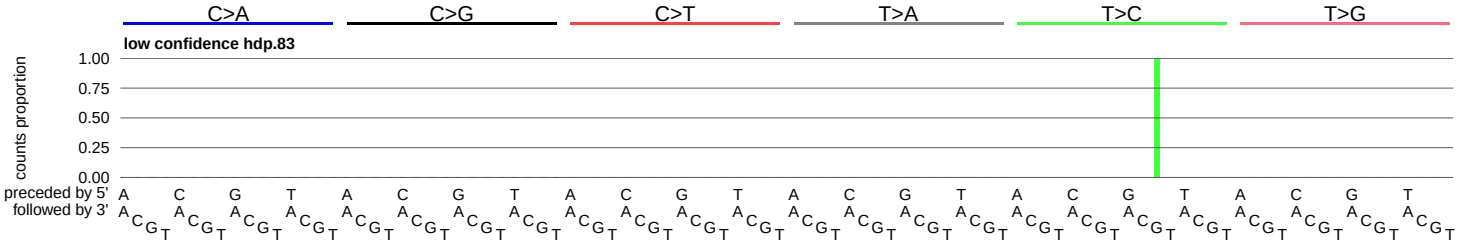

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.78
counts proportion
0.15
0.11
0.07
0.04
0.00
preceded by 5'
followed by 3'

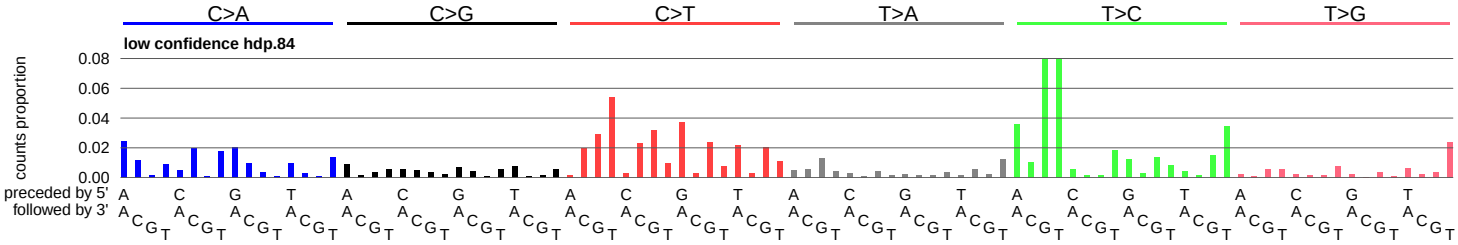

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.79
counts proportion
0.06
0.05
0.03
0.02
0.00
preceded by 5'
followed by 3'

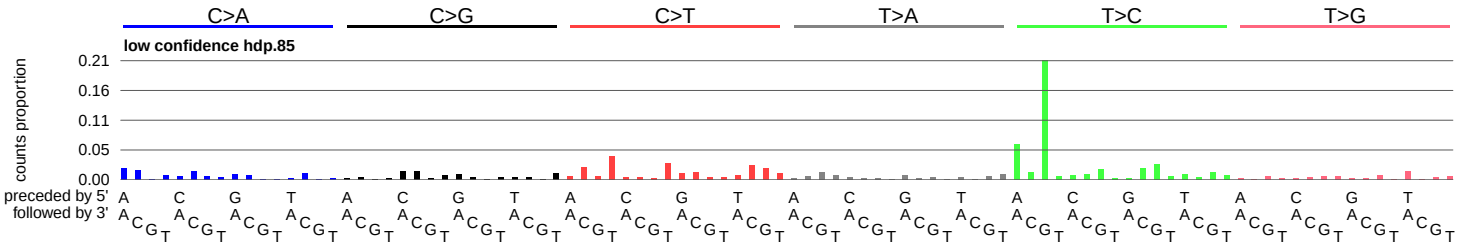

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.80
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

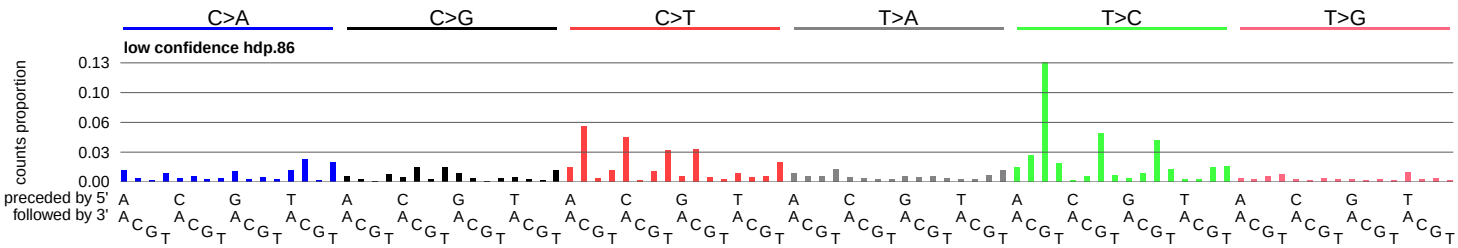

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.81
counts proportion
0.07
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

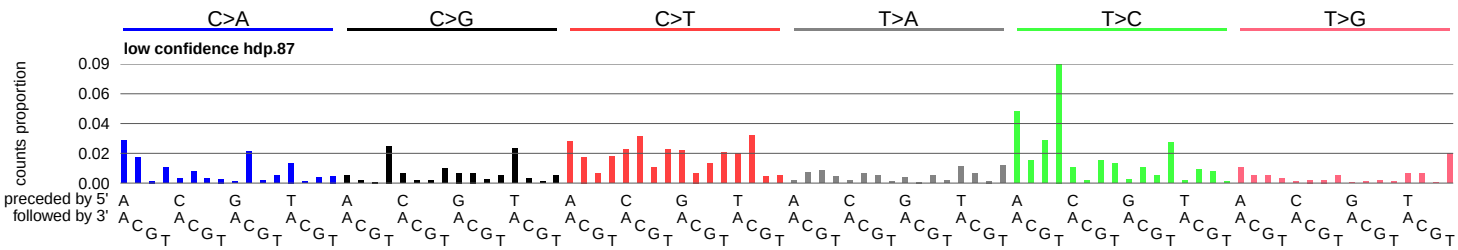

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.82
counts proportion
0.17
0.13
0.08
0.04
0.00
preceded by 5'
followed by 3'

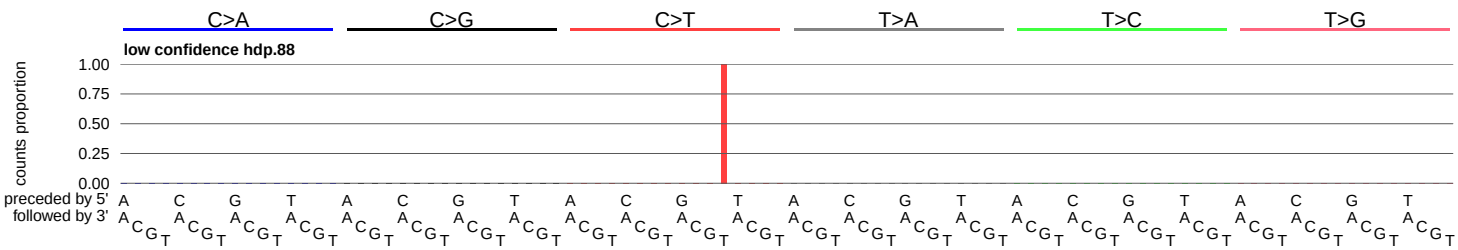

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.83
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

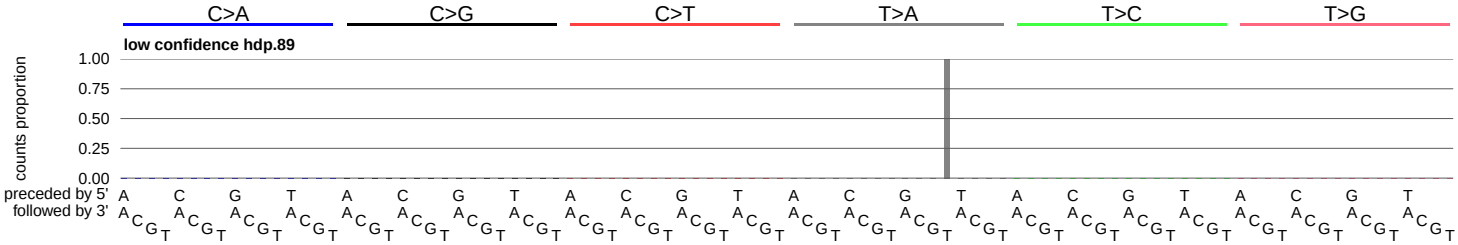

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.84
counts proportion
0.08
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

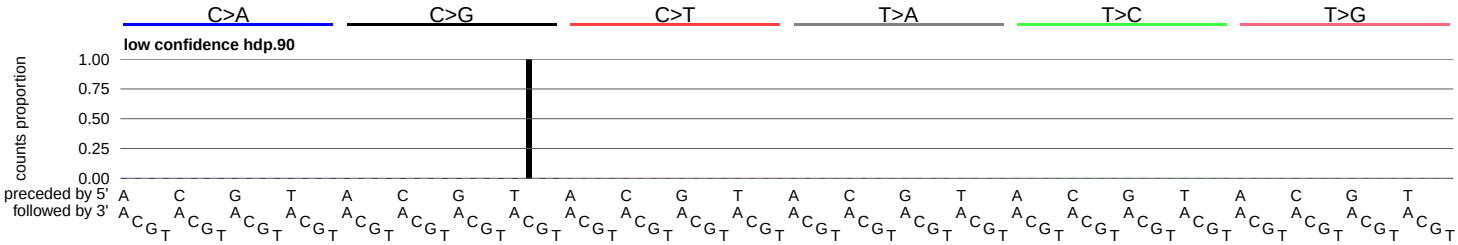

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.85
counts proportion
0.21
0.16
0.11
0.05
0.00
preceded by 5'
followed by 3'

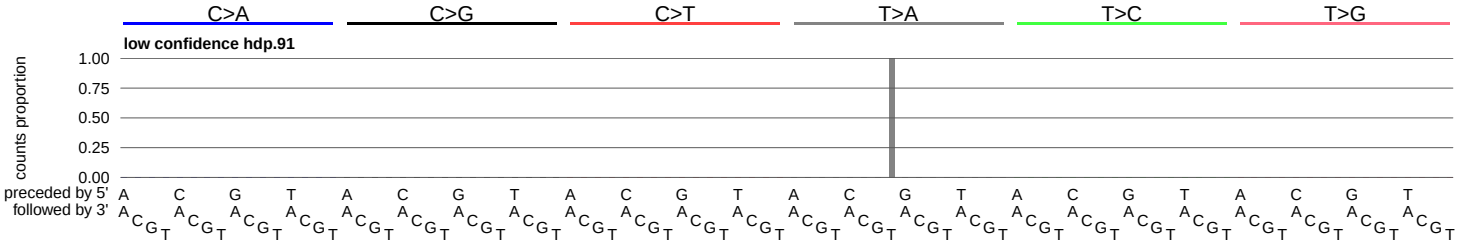

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.86
counts proportion
0.13
0.10
0.06
0.03
0.00
preceded by 5'
followed by 3'

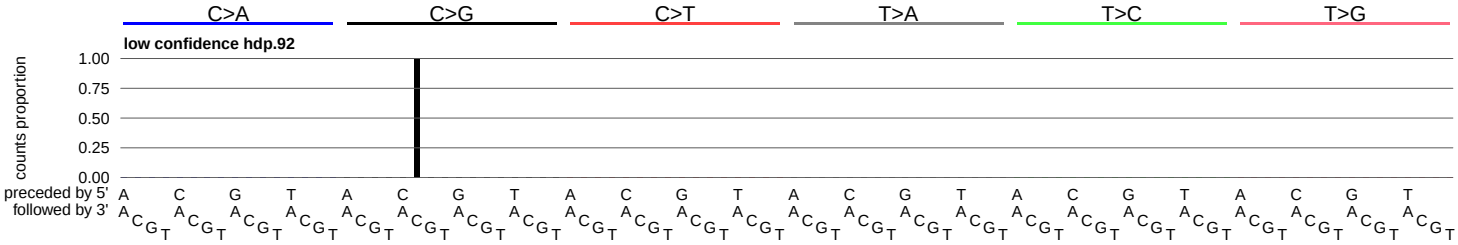

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.87
counts proportion
0.09
0.06
0.04
0.02
0.00
preceded by 5'
followed by 3'

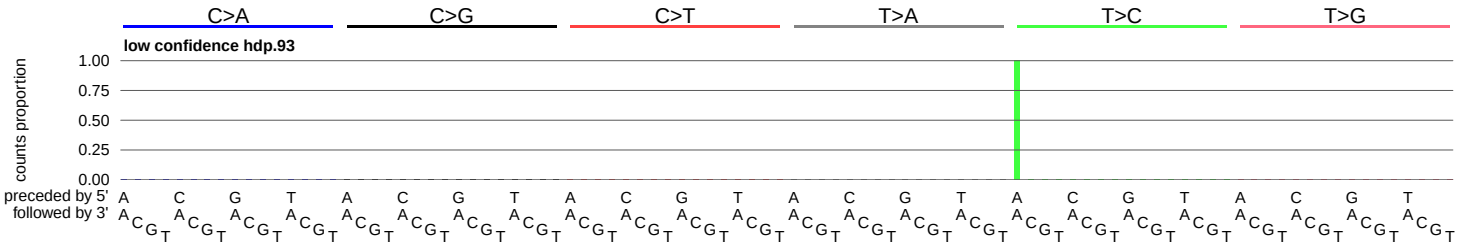

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.88
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

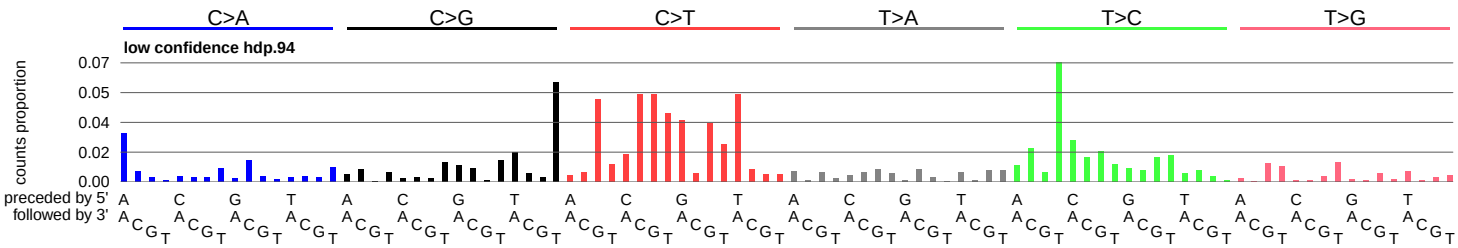

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.89
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

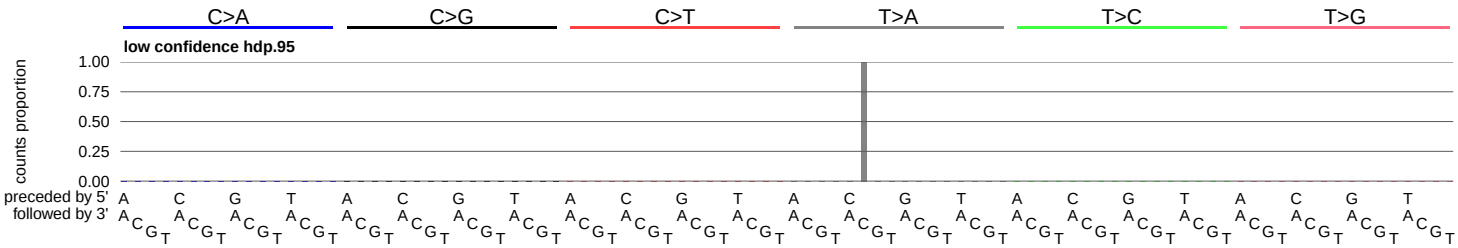

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.90
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

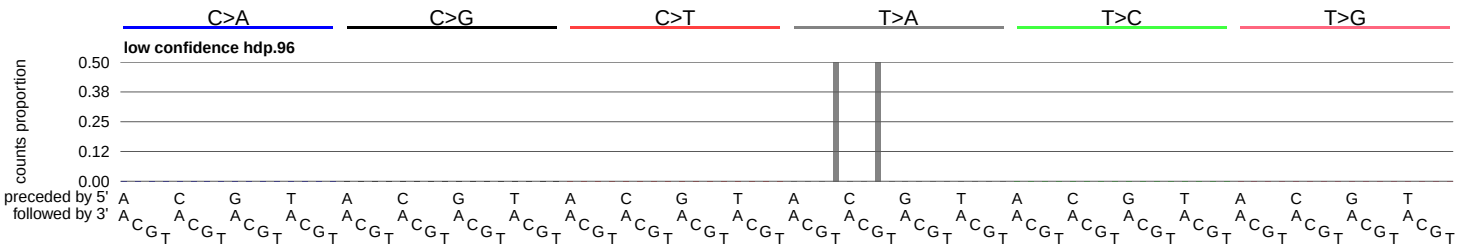

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.91
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

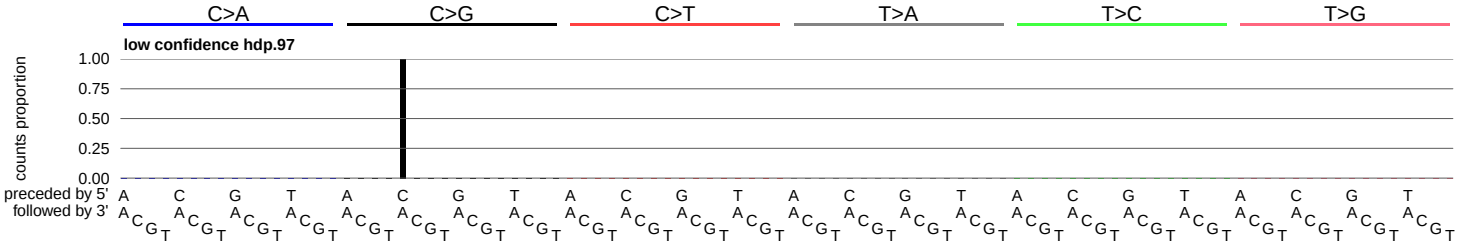

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.92
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

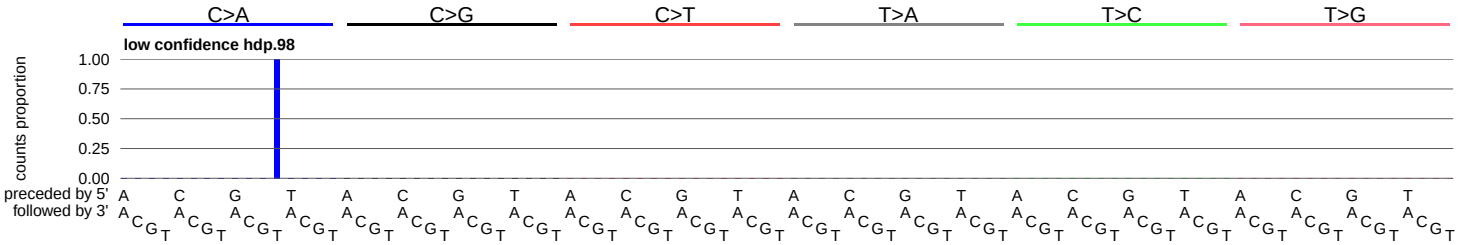

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.93
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

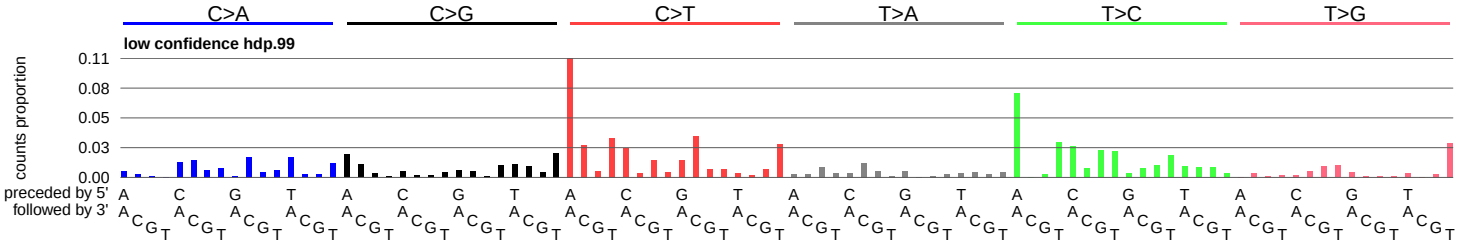

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.94
counts proportion
0.07
0.05
0.04
0.02
0.00
preceded by 5'
followed by 3'

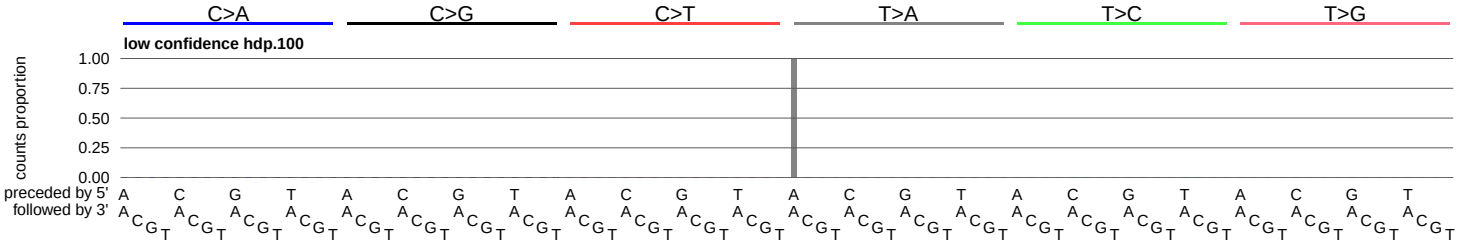

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.95
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

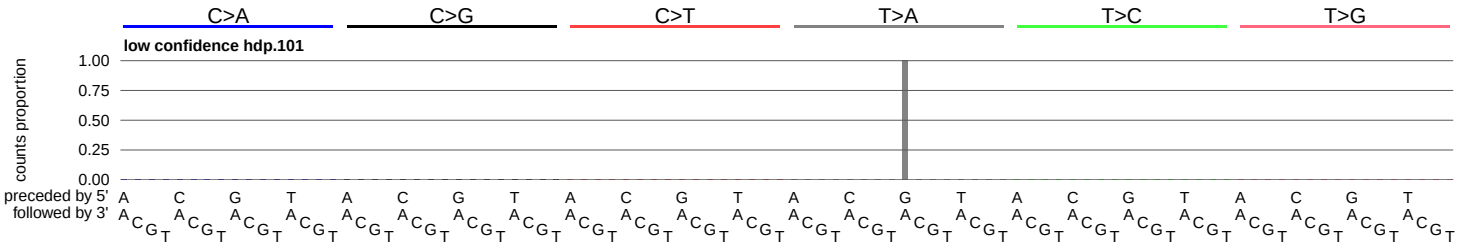

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.96
counts proportion
0.50
0.38
0.25
0.12
0.00
preceded by 5'
followed by 3'

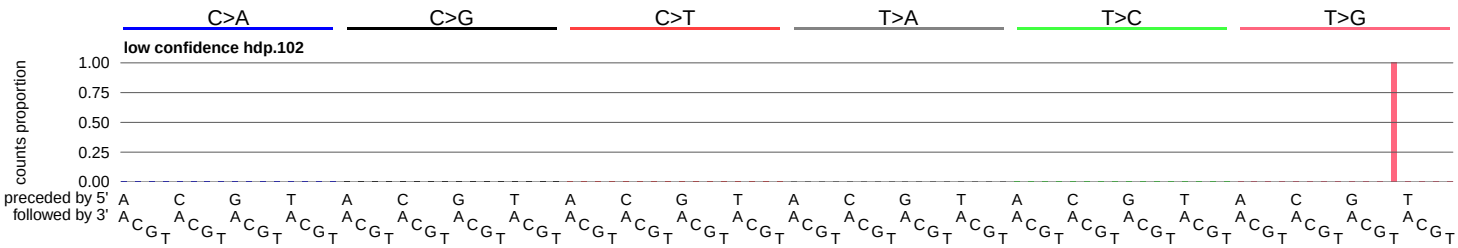

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.97
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

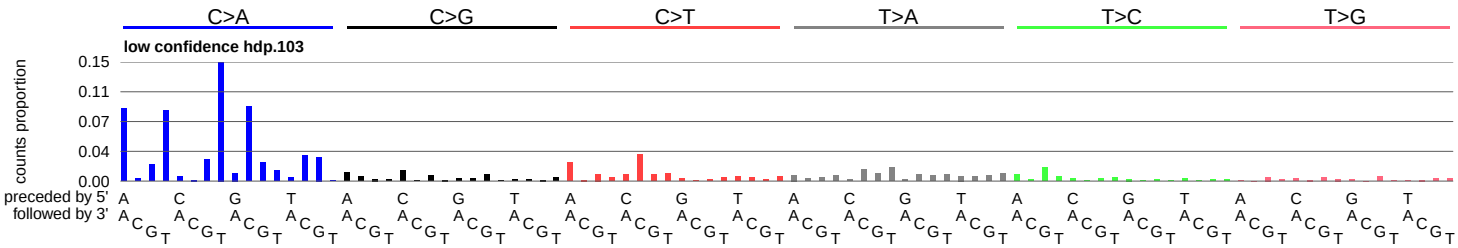

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.98
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

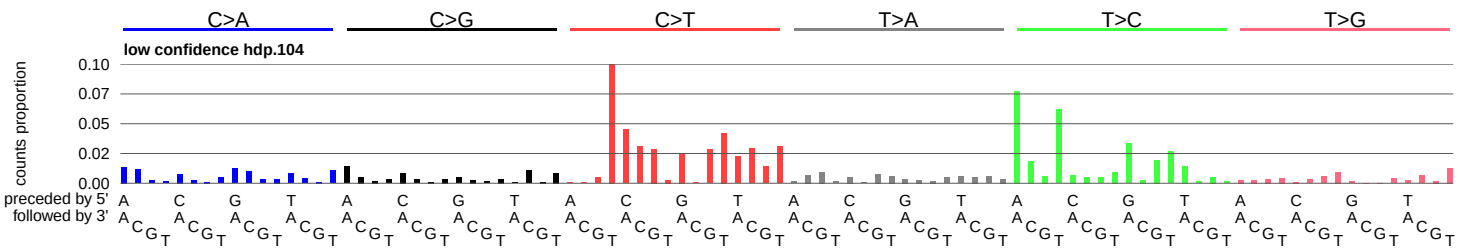

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.99
counts proportion
0.11
0.08
0.05
0.03
0.00
preceded by 5'
followed by 3'

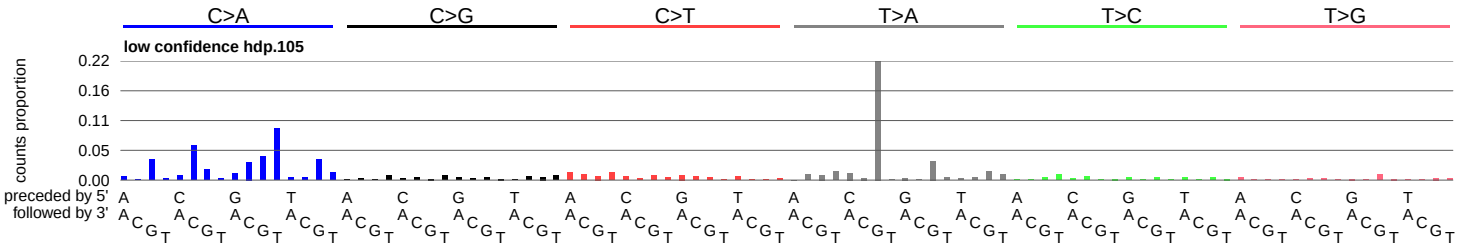

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.100
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

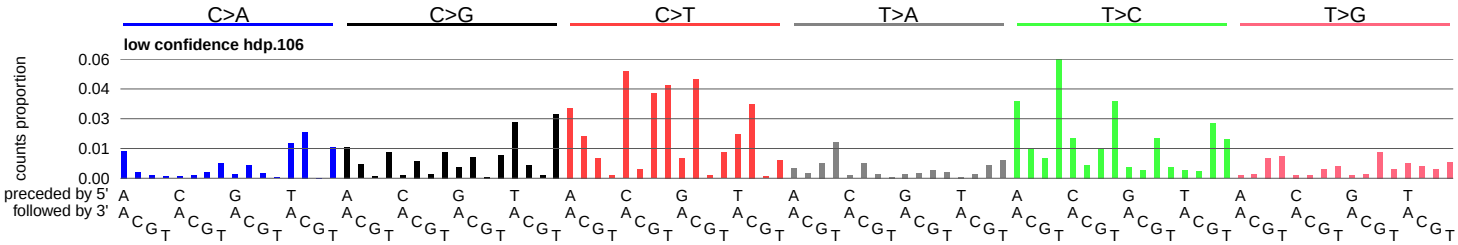

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.101
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

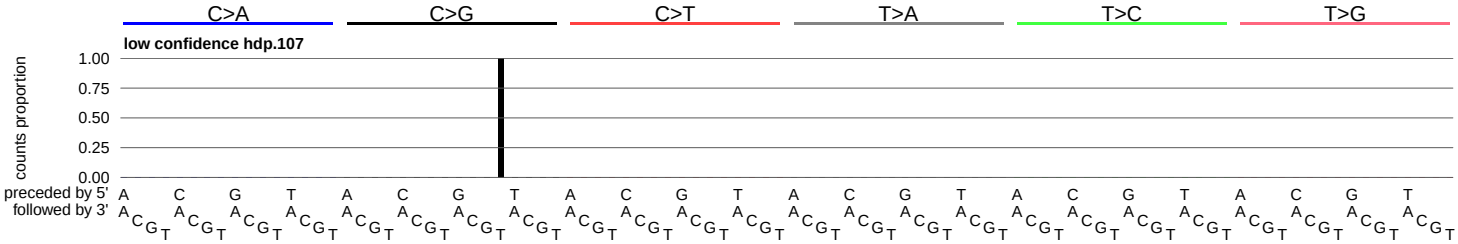

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.102
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

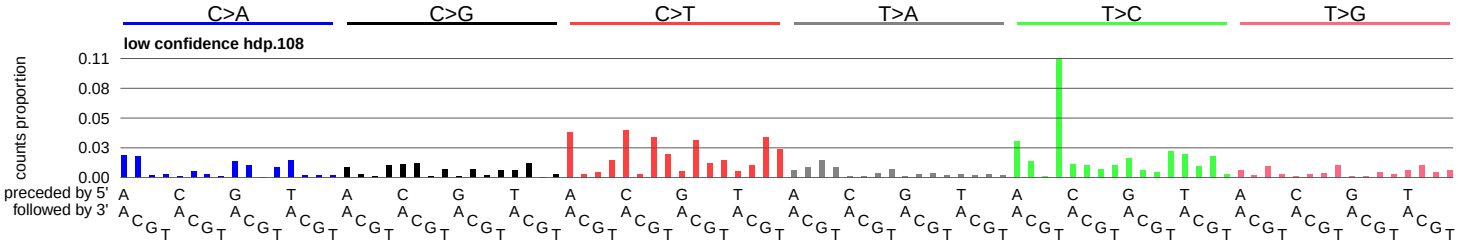

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.103
counts proportion
0.15
0.11
0.07
0.04
0.00
preceded by 5'
followed by 3'

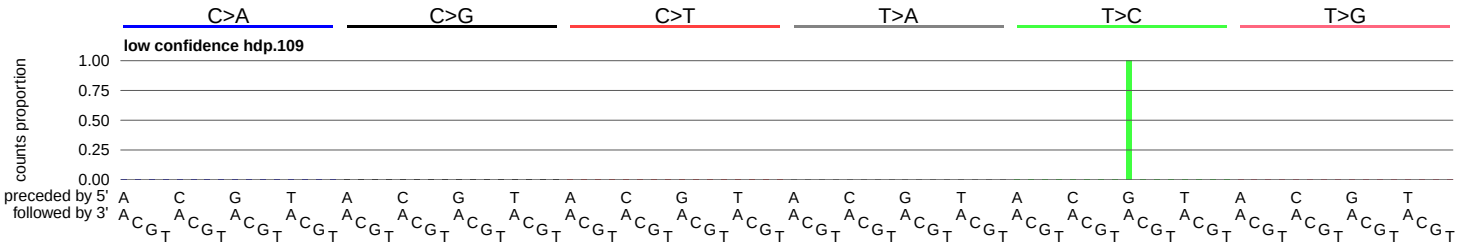

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.104
counts proportion
0.10
0.07
0.05
0.02
0.00
preceded by 5'
followed by 3'

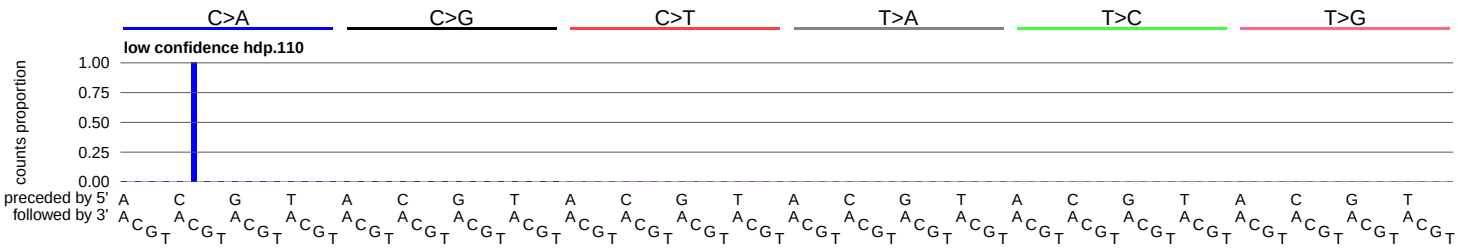

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.105
counts proportion
0.22
0.16
0.11
0.05
0.00
preceded by 5'
followed by 3'

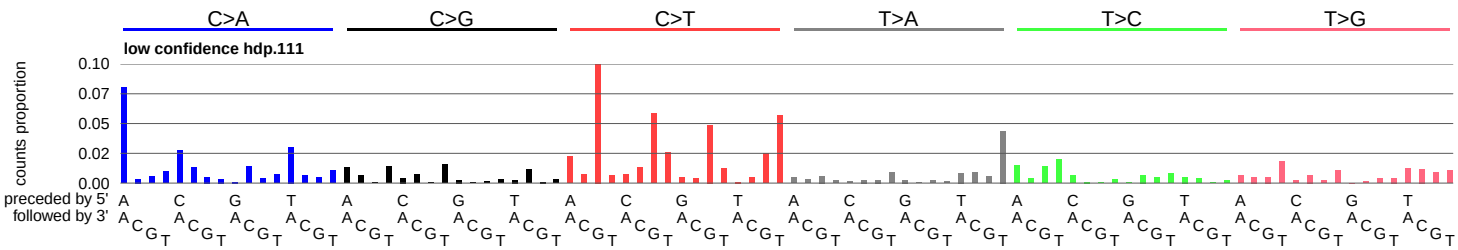

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.106
counts proportion
0.06
0.04
0.03
0.01
0.00
preceded by 5'
followed by 3'

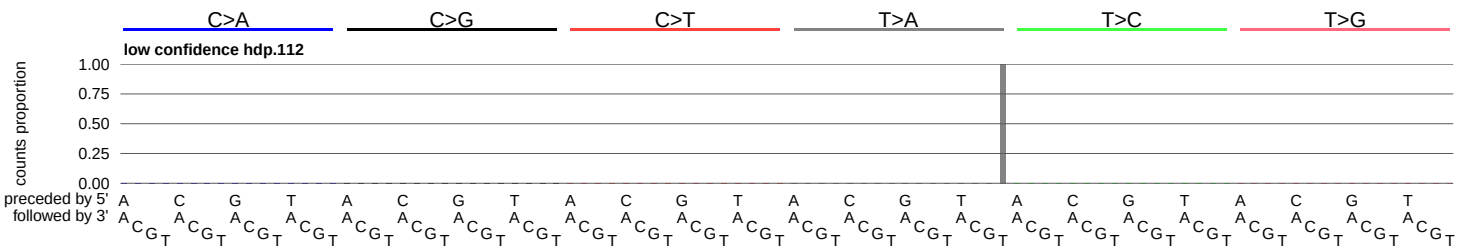

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.107
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

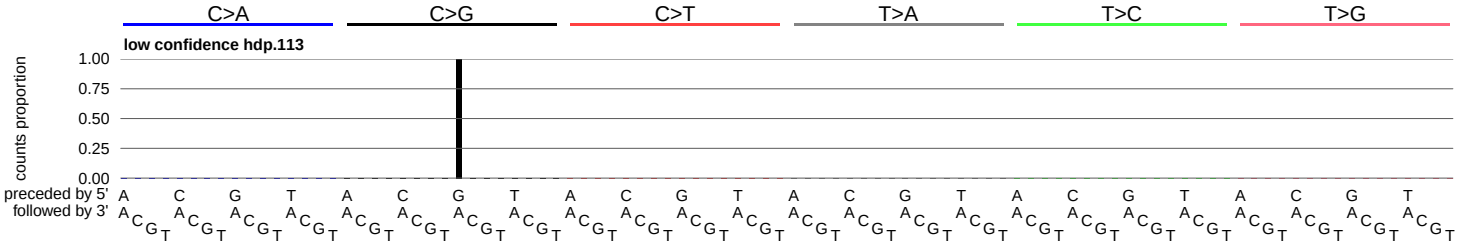

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.108
counts proportion
0.11
0.08
0.05
0.03
0.00
preceded by 5'
followed by 3'

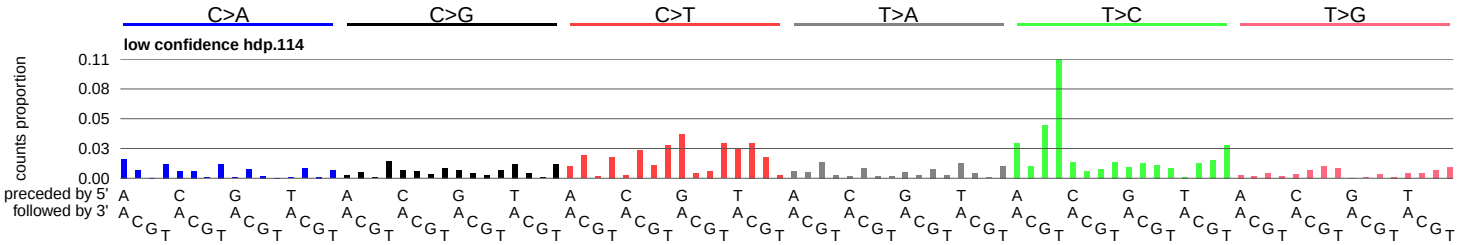

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.109
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

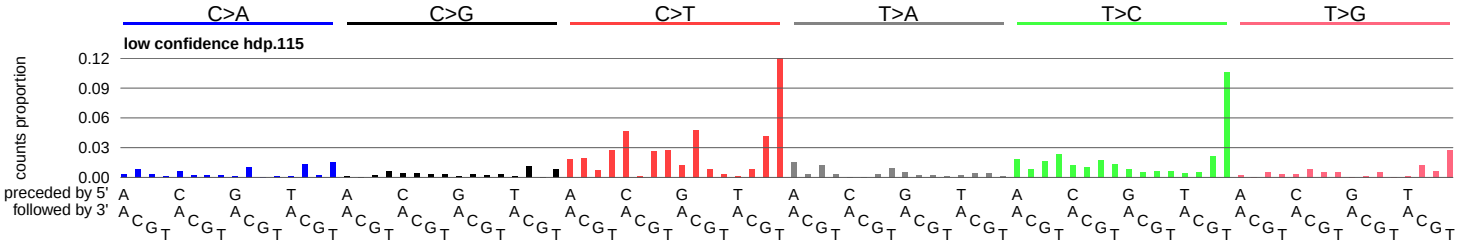

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.110
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

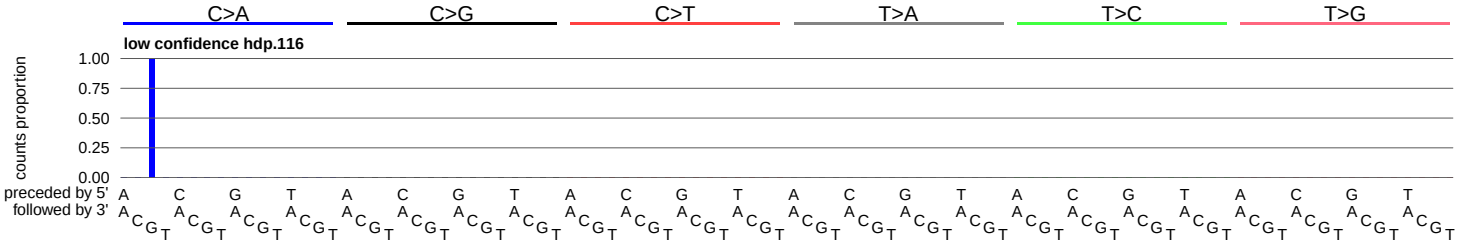

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.111
counts proportion
0.10
0.07
0.05
0.02
0.00
preceded by 5'
followed by 3'

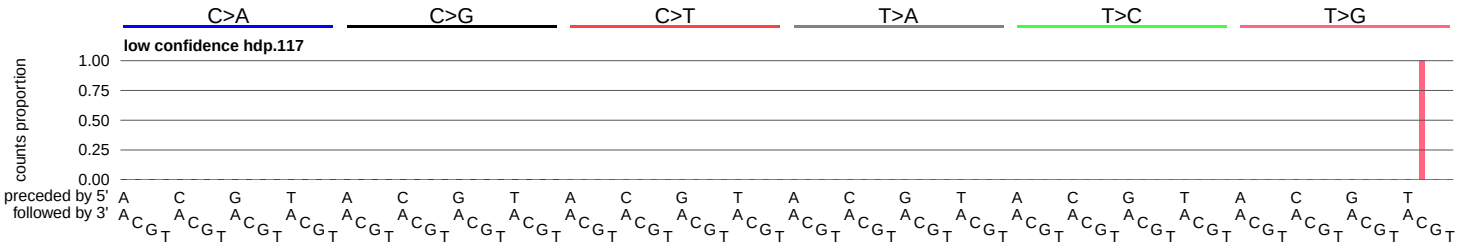

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.112
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

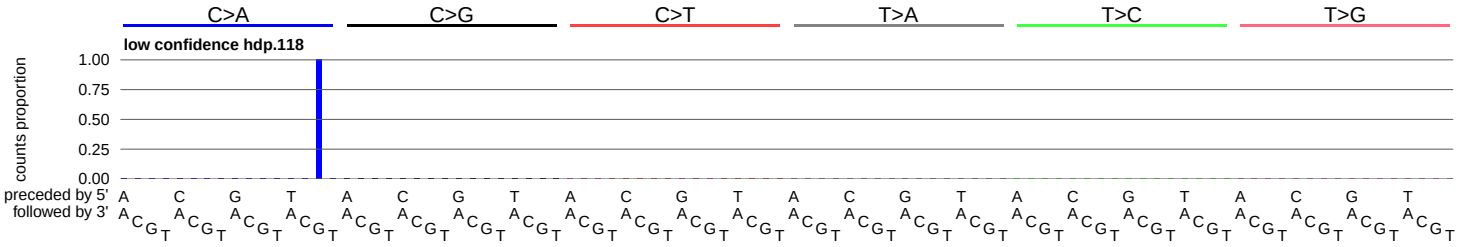

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.113
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'

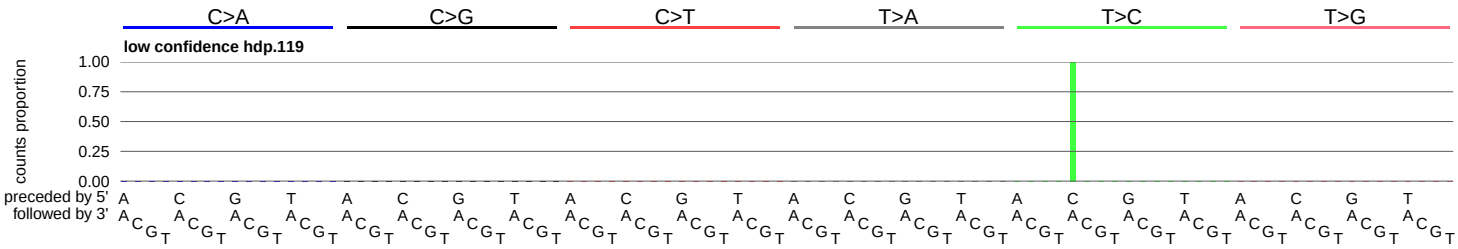

C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.114
counts proportion
0.11
0.08
0.05
0.03
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.115
counts proportion
0.12
0.09
0.06
0.03
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.116
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.117
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.118
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'


C>A
C>G
C>T
T>A
T>C
T>G
low confidence hdp.119
counts proportion
1.00
0.75
0.50
0.25
0.00
preceded by 5'
followed by 3'