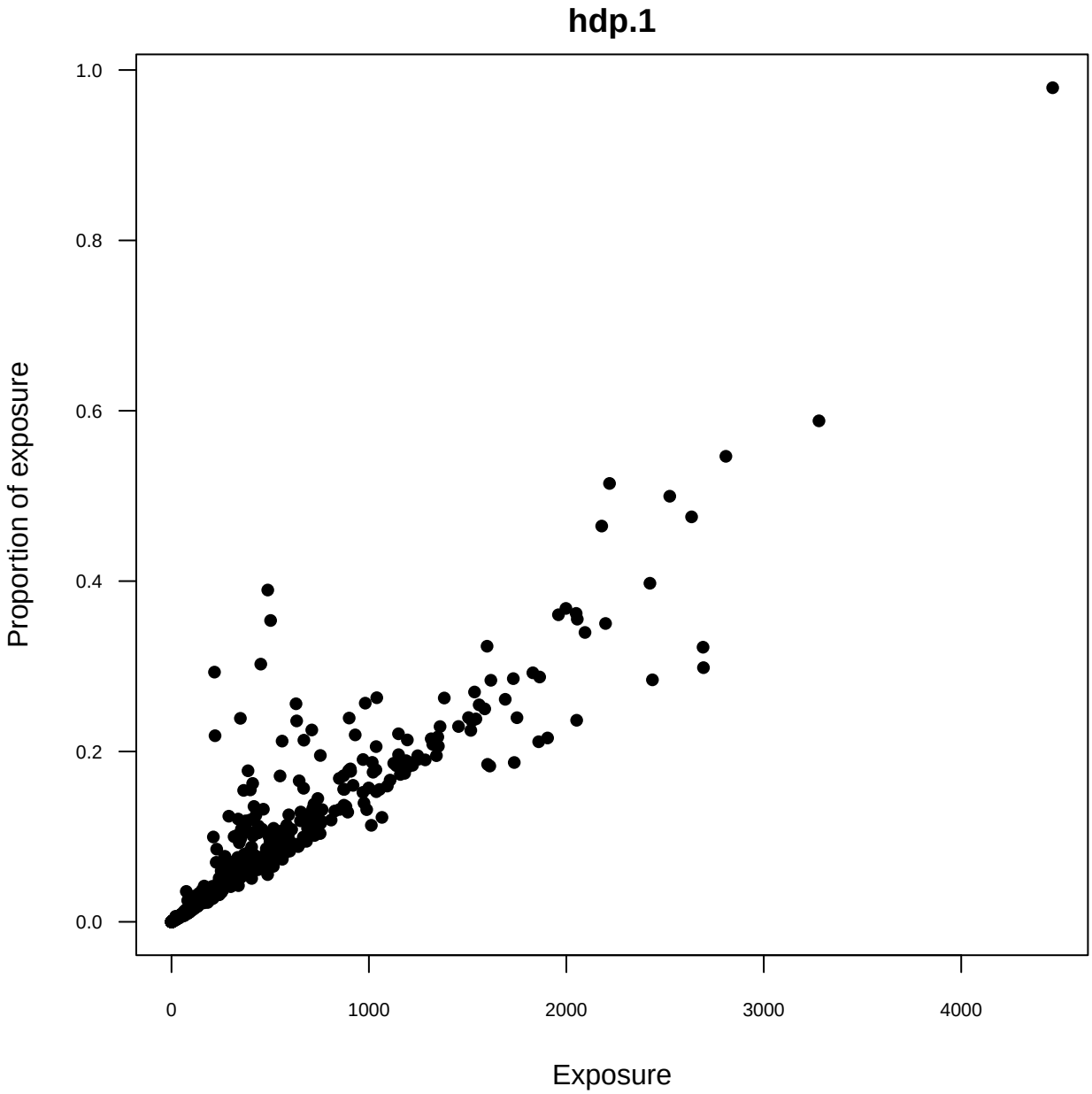
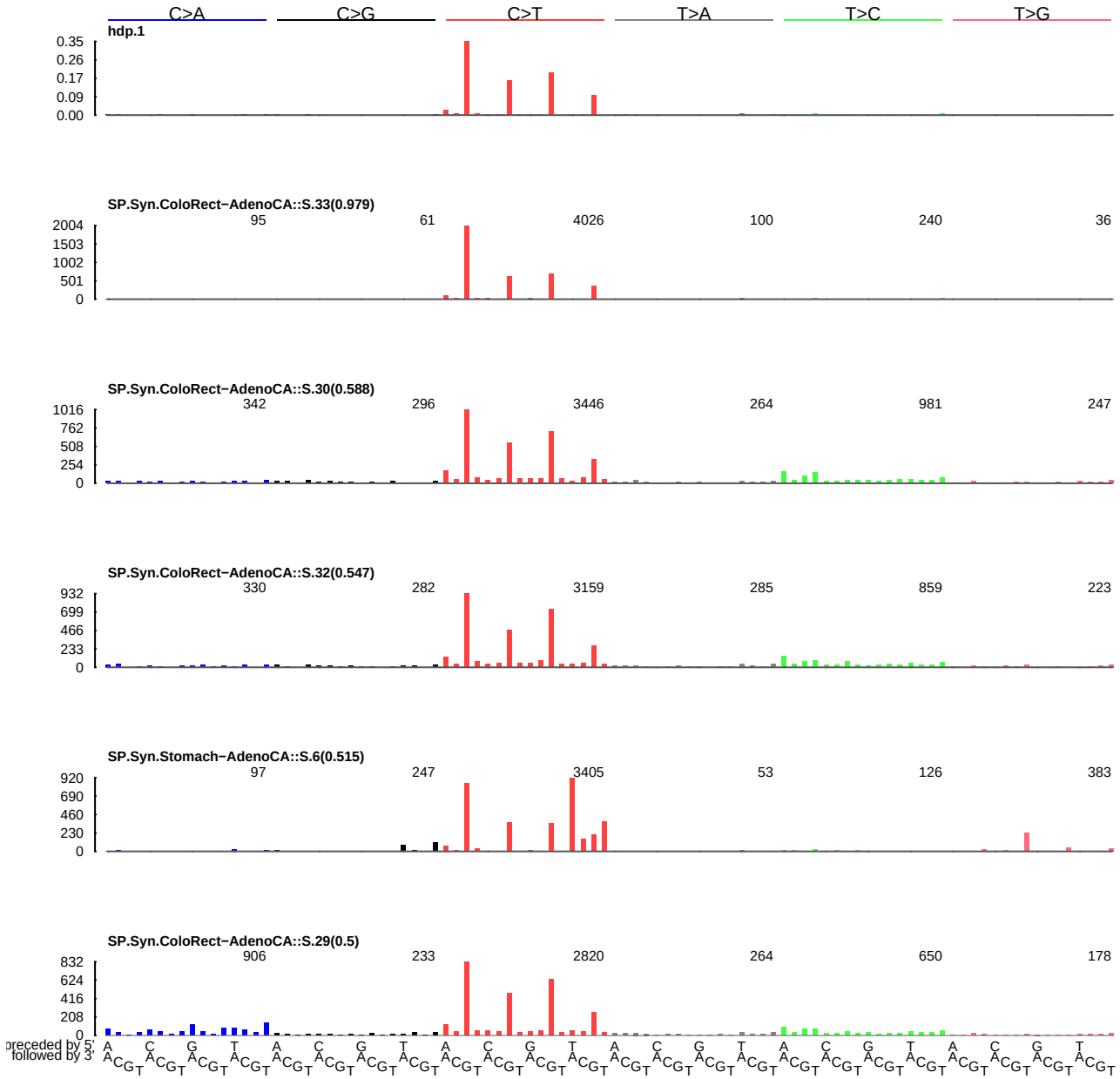
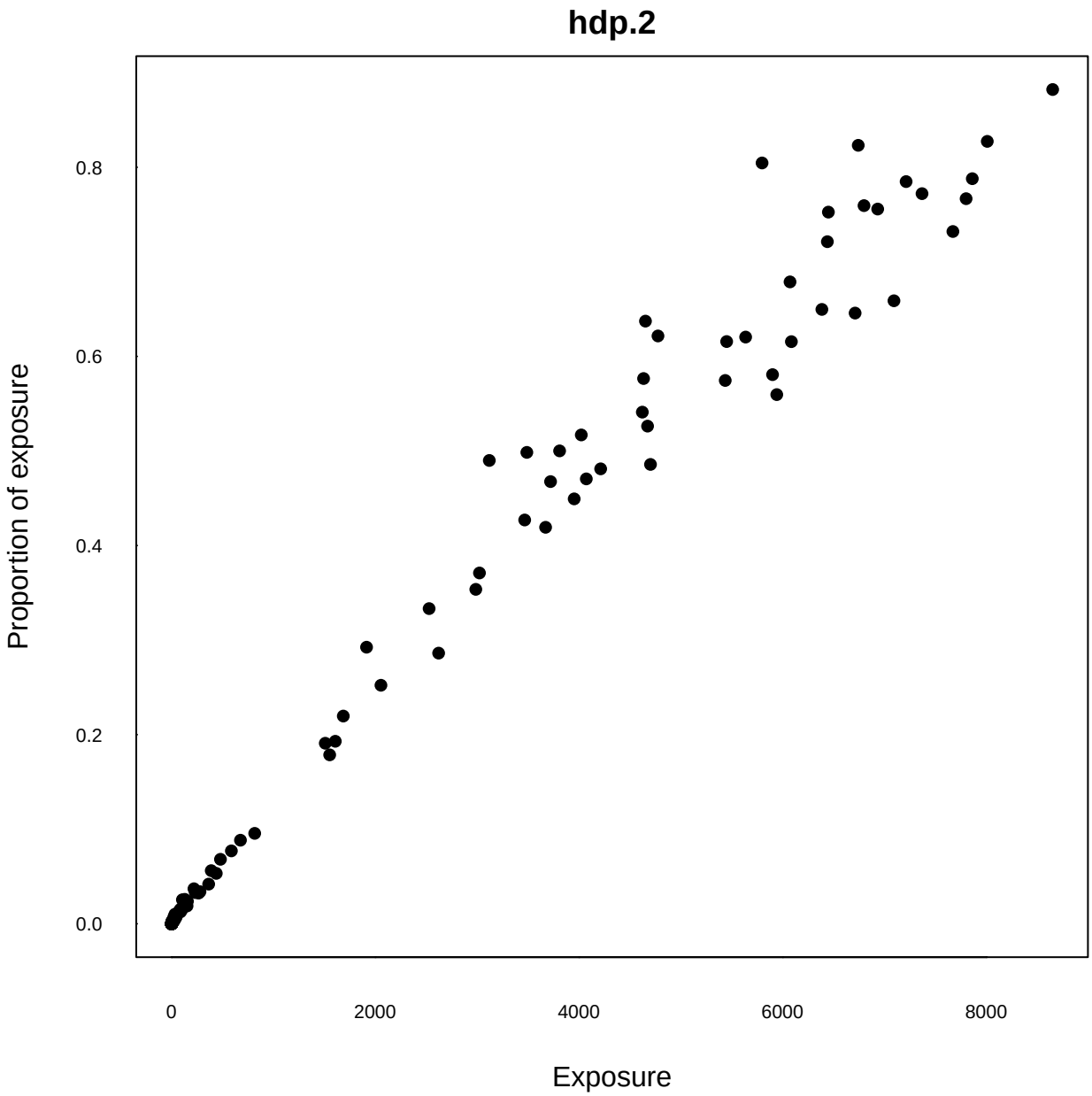
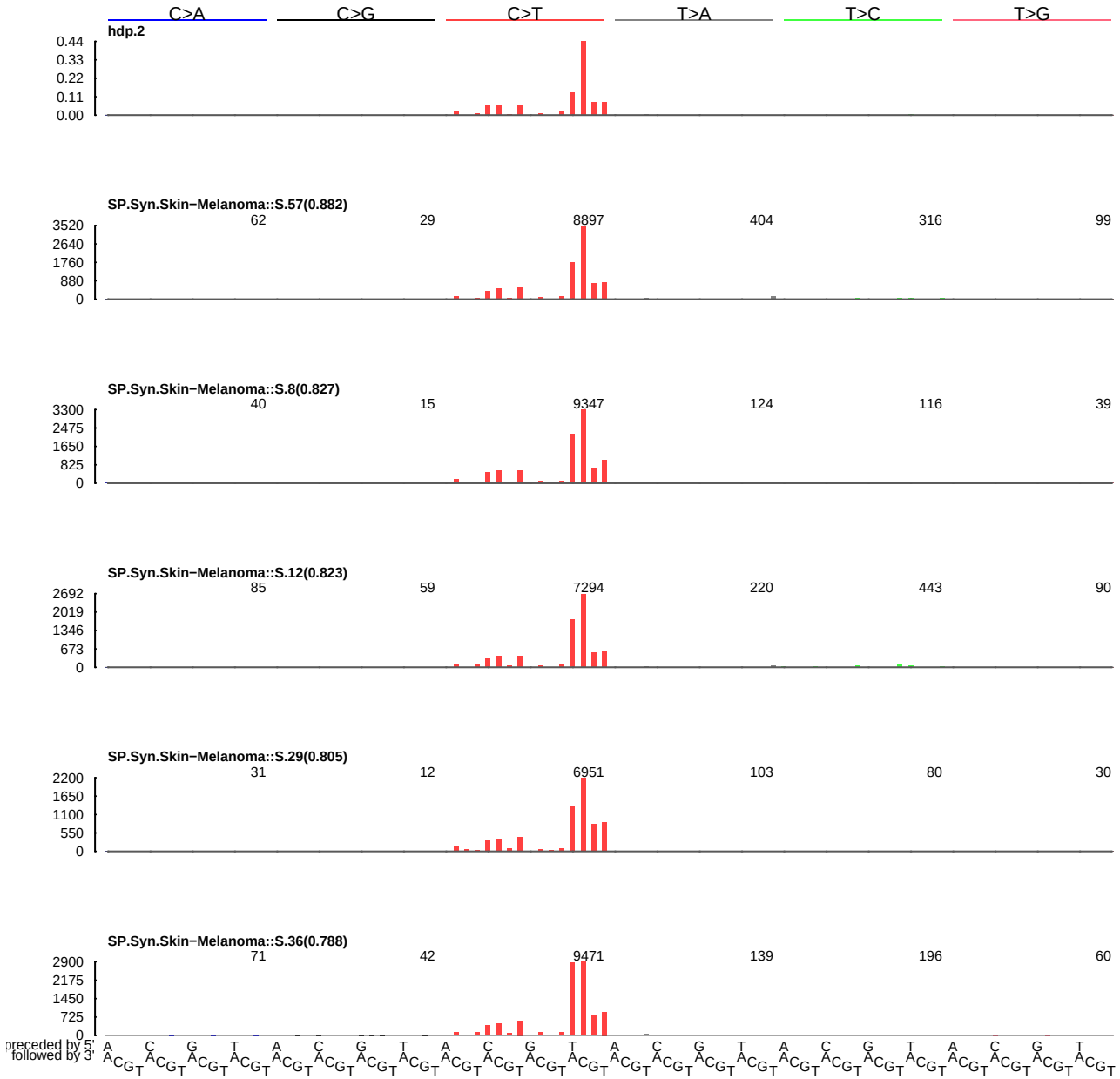
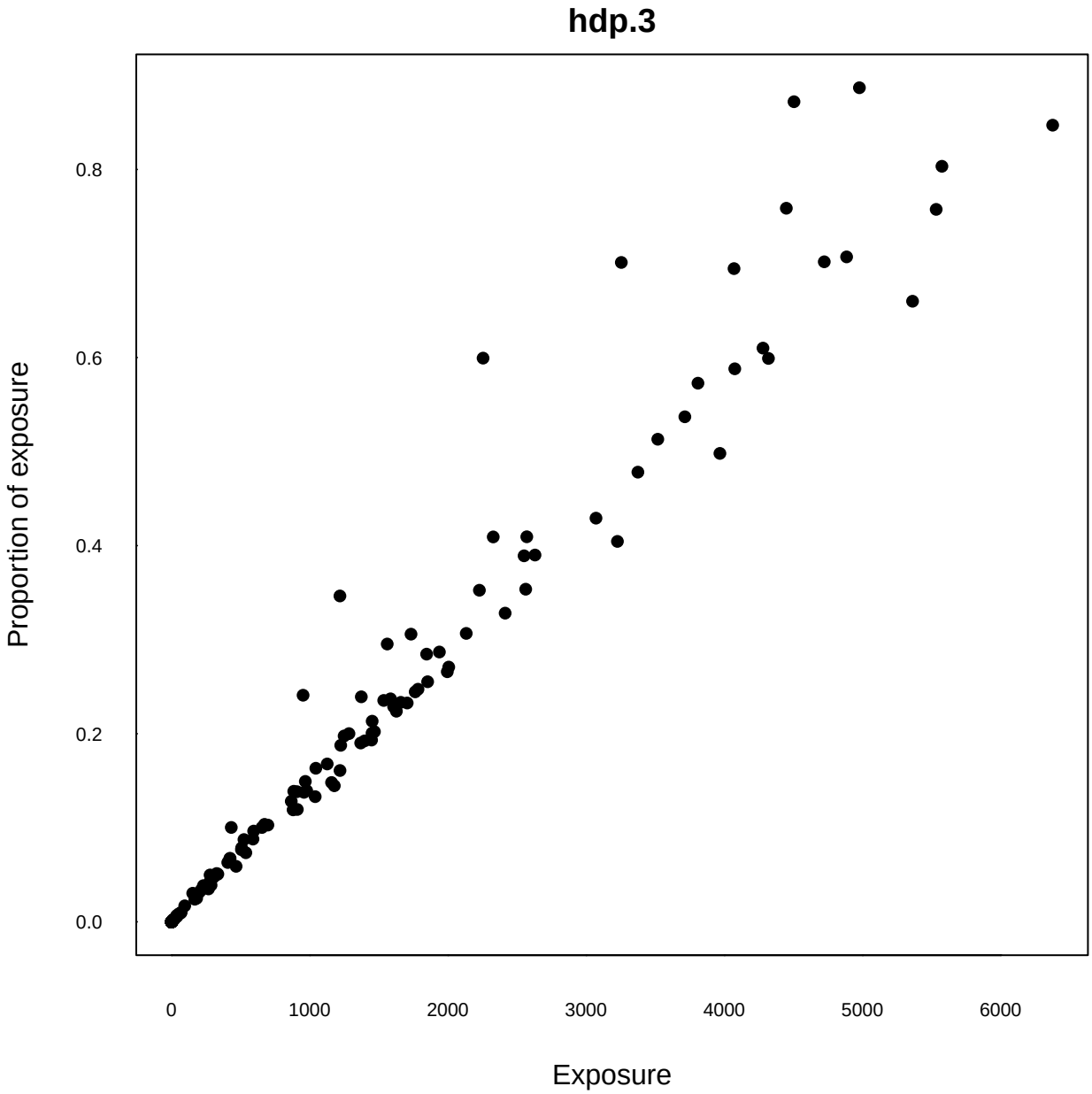
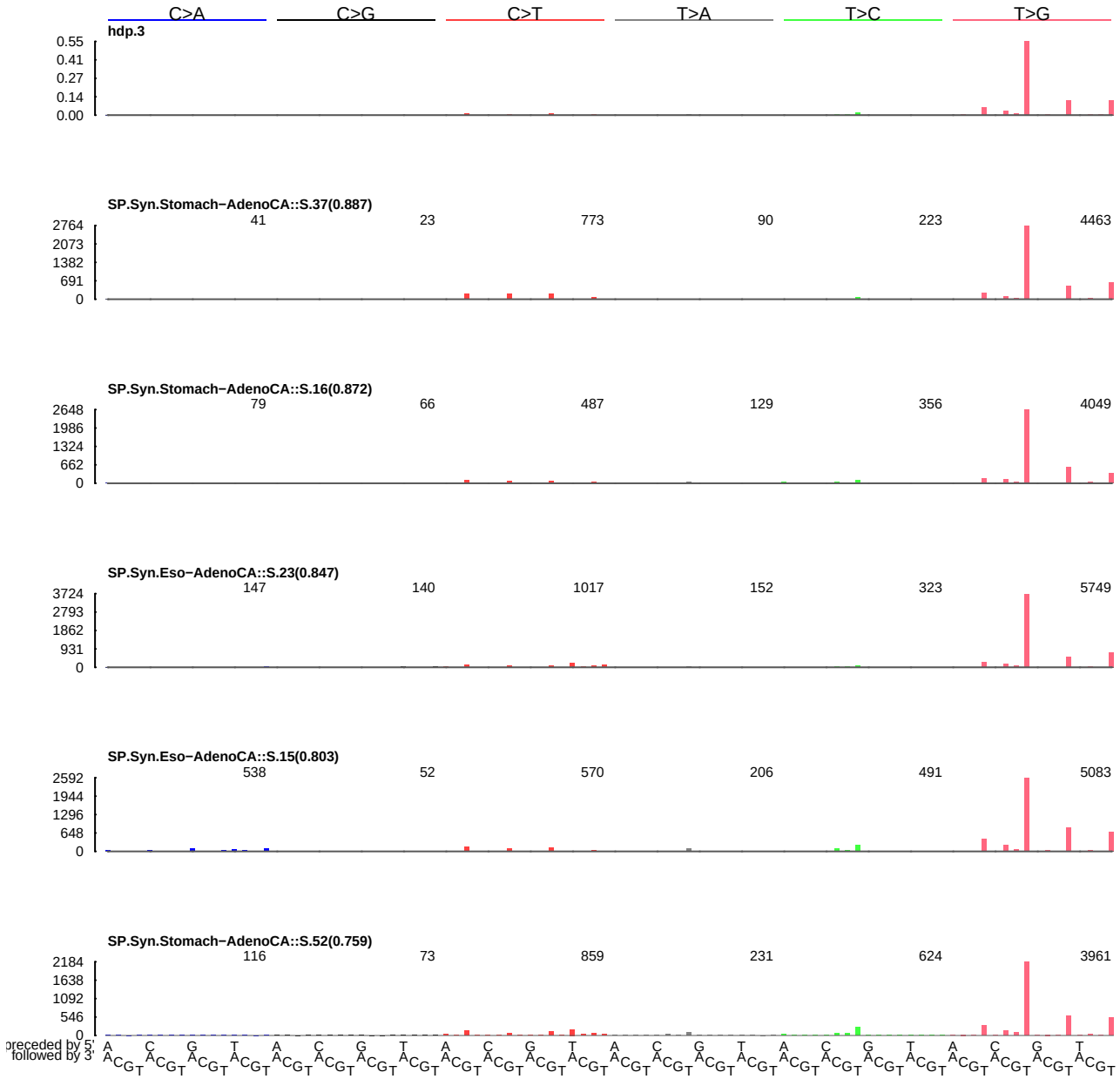

hdp.1
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
Exposure

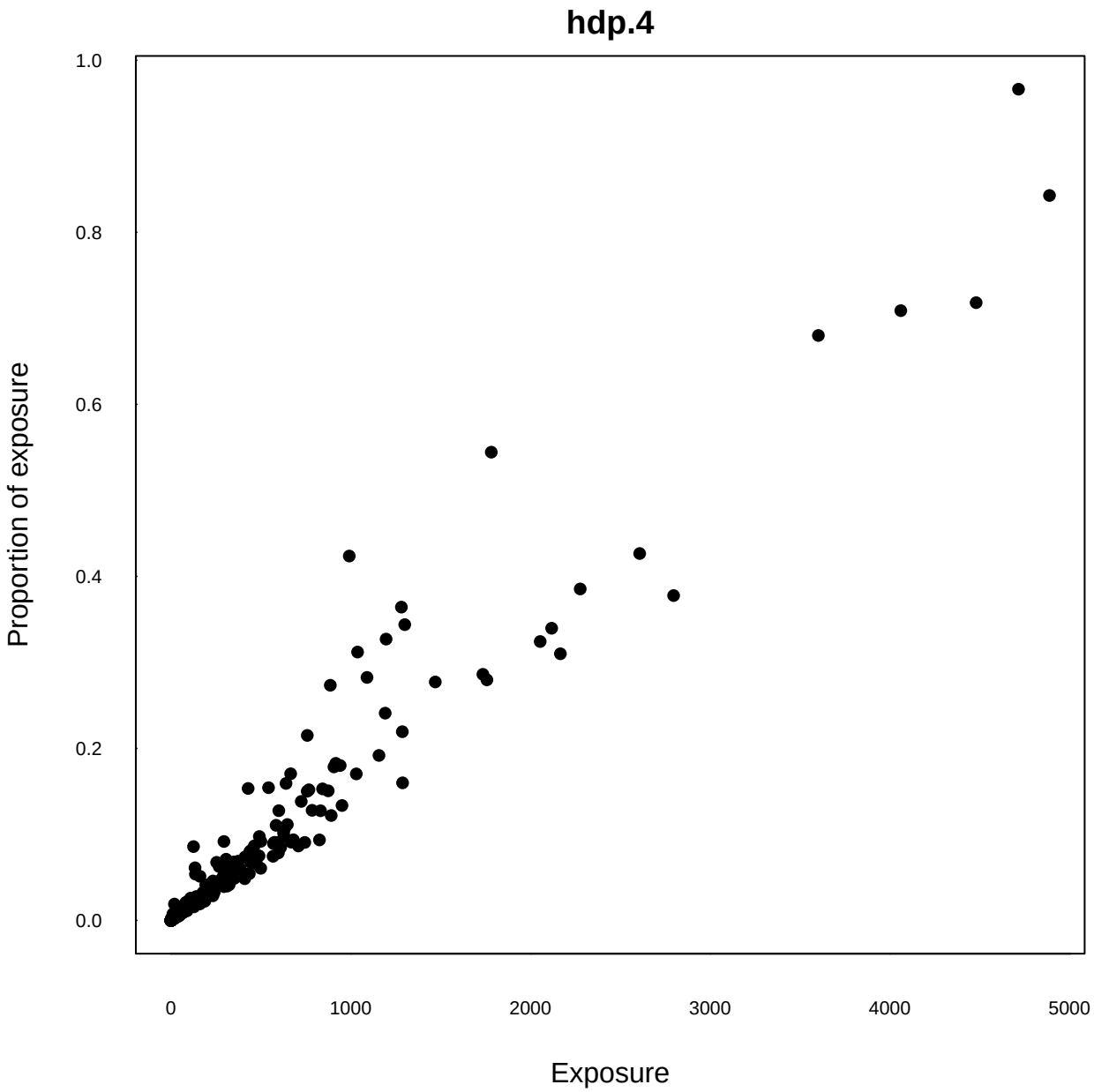

C>A
C>G
C>T
T>A
T>C
T>G
hdp.1
0.35
0.26
0.17
0.09
0.00
SP.Syn.ColoRect−AdenoCA::S.33(0.979)
95
61
4026
100
240
36
2004
1503
1002
501
0
SP.Syn.ColoRect−AdenoCA::S.30(0.588)
342
296
3446
264
981
247
1016
762
508
254
0
SP.Syn.ColoRect−AdenoCA::S.32(0.547)
330
282
3159
285
859
223
932
699
466
233
0
SP.Syn.Stomach−AdenoCA::S.6(0.515)
97
247
3405
53
126
383
920
690
460
230
0
SP.Syn.ColoRect−AdenoCA::S.29(0.5)
906
233
2820
264
650
178
832
624
416
208
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

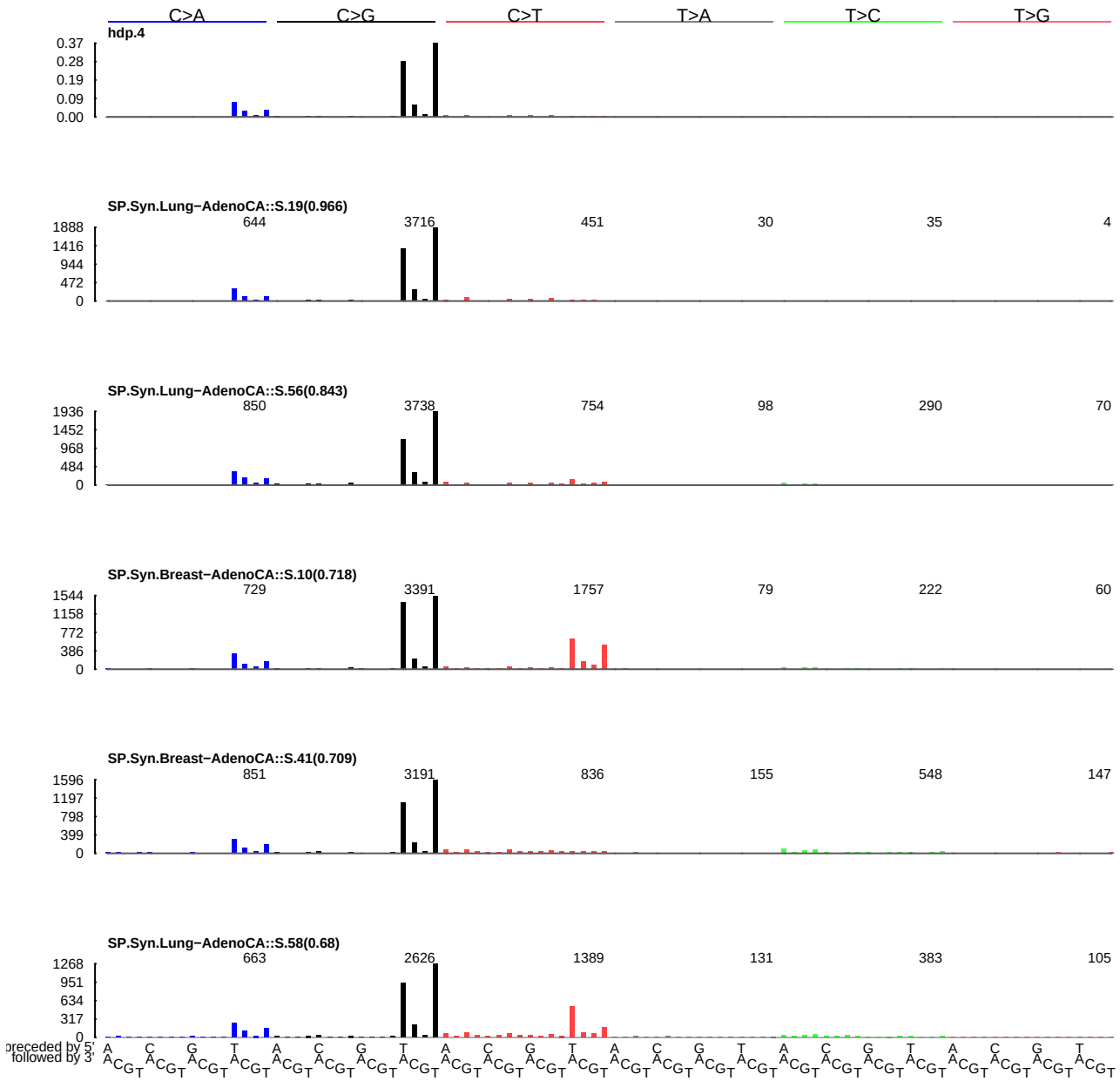

hdp.2
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

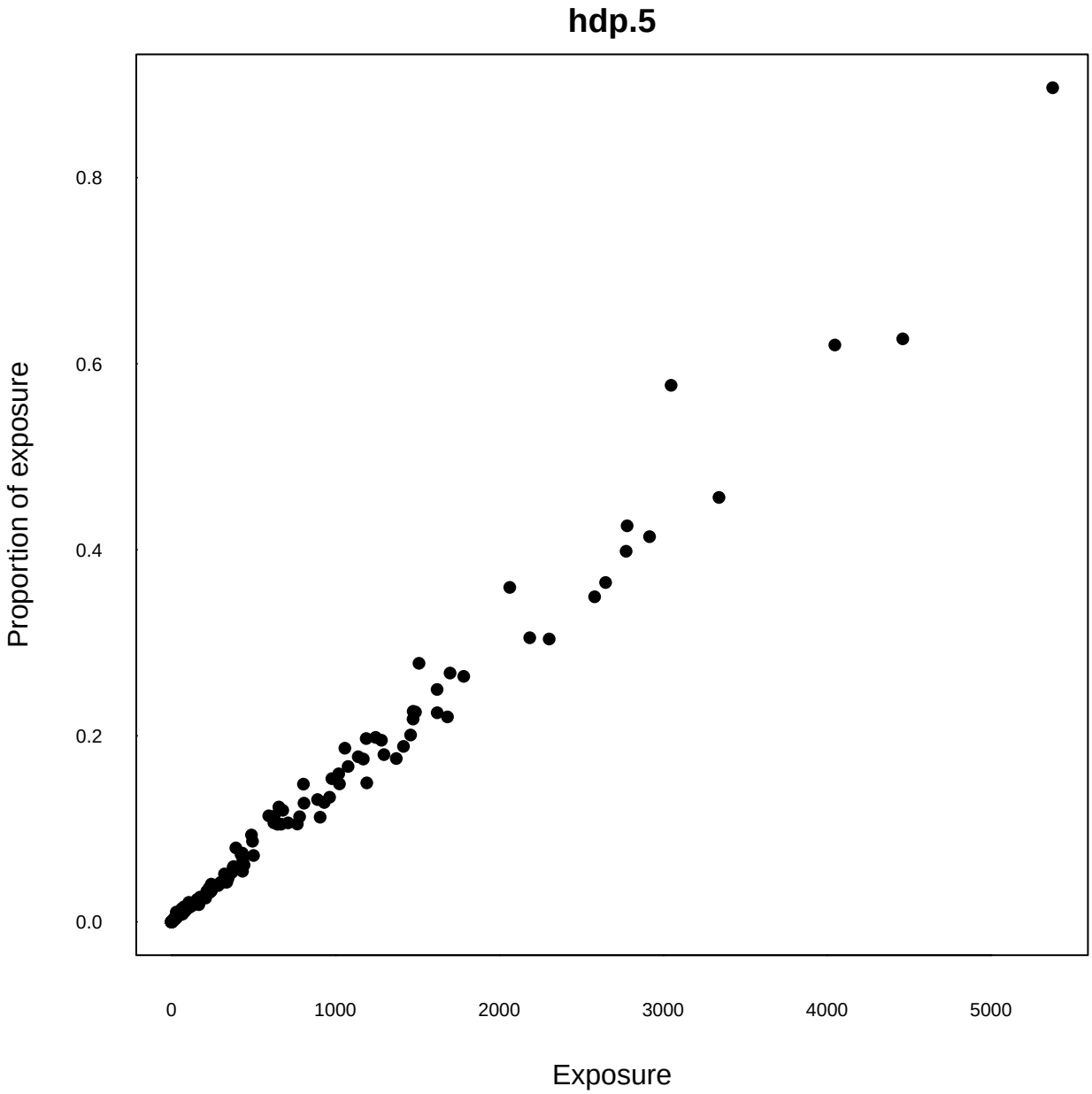

C>A
C>G
C>T
T>A
T>C
T>G
hdp.2
0.44
0.33
0.22
0.11
0.00
SP.Syn.Skin−Melanoma::S.57(0.882)
62
29
8897
404
316
99
3520
2640
1760
880
0
SP.Syn.Skin−Melanoma::S.8(0.827)
40
15
9347
124
116
39
3300
2475
1650
825
0
SP.Syn.Skin−Melanoma::S.12(0.823)
85
59
7294
220
443
90
2692
2019
1346
673
0
SP.Syn.Skin−Melanoma::S.29(0.805)
31
12
6951
103
80
30
2200
1650
1100
550
0
SP.Syn.Skin−Melanoma::S.36(0.788)
71
42
9471
139
196
60
2900
2175
1450
725
0
preceded by 5'
followed by 3'

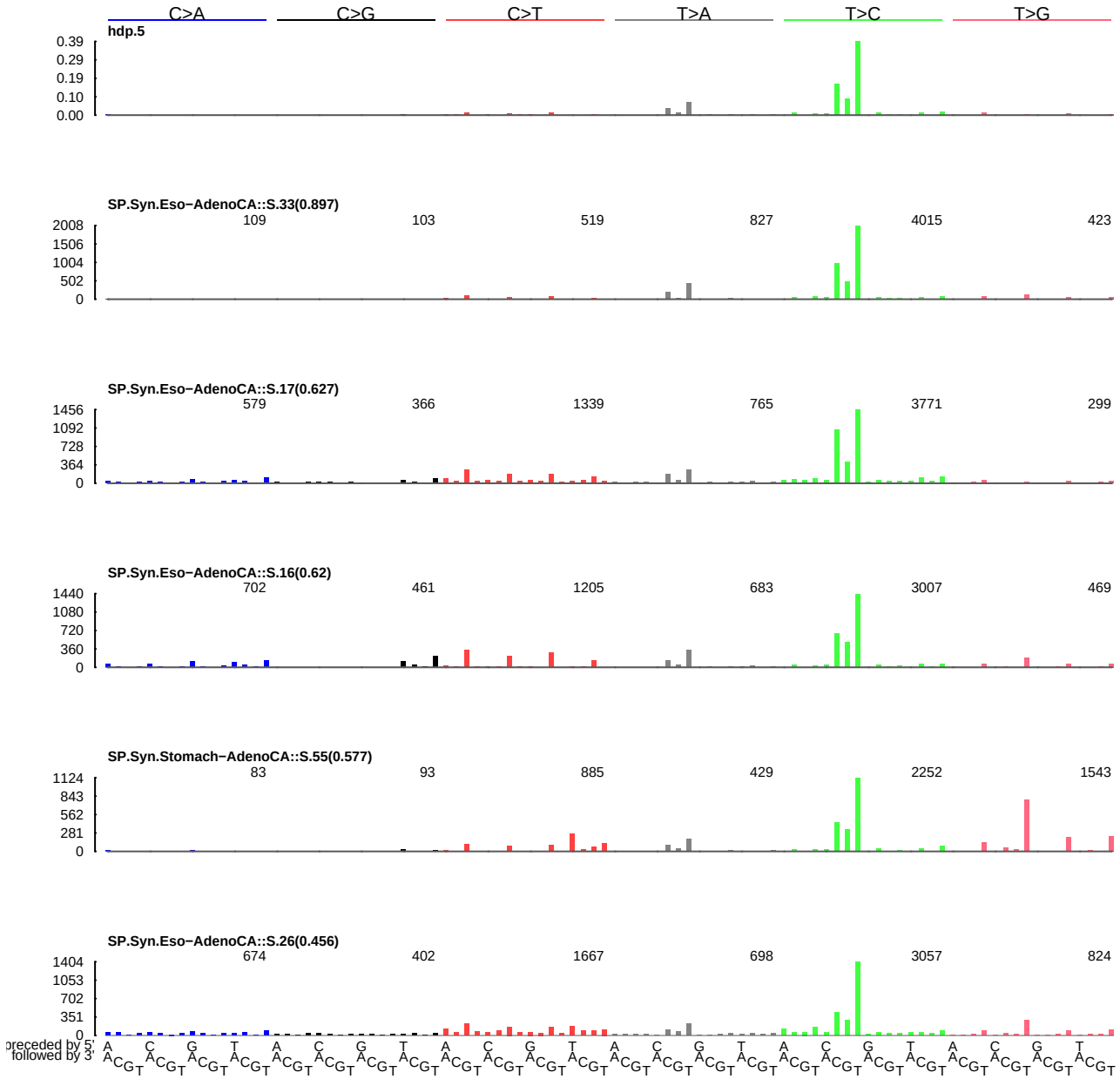

hdp.3
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
6000
Exposure

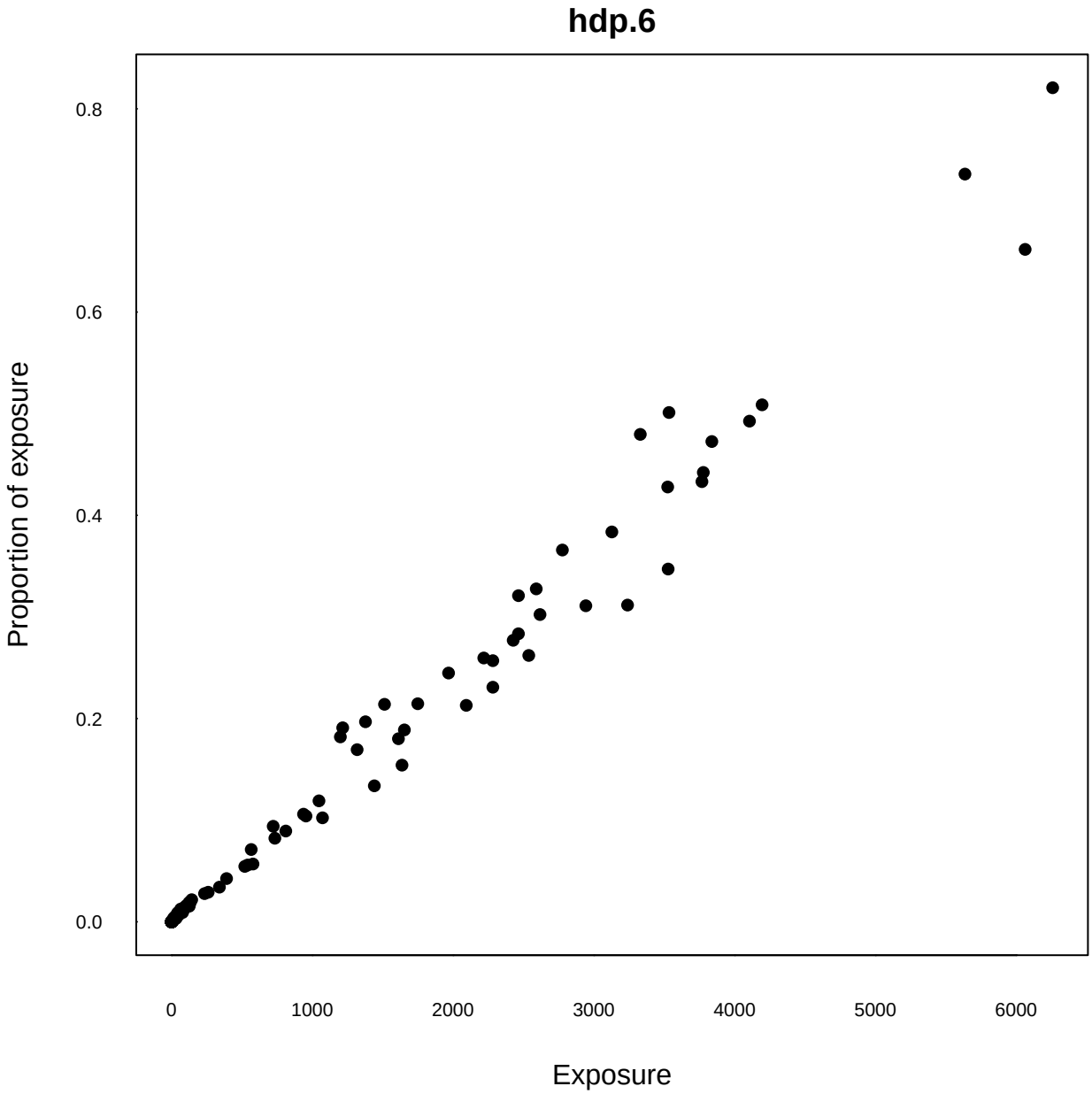

C>A
C>G
C>T
T>A
T>C
T>G
hdp.3
0.55
0.41
0.27
0.14
0.00
SP.Syn.Stomach−AdenoCA::S.37(0.887)
41
23
773
90
223
4463
2764
2073
1382
691
0
SP.Syn.Stomach−AdenoCA::S.16(0.872)
79
66
487
129
356
4049
2648
1986
1324
662
0
SP.Syn.Eso−AdenoCA::S.23(0.847)
147
140
1017
152
323
5749
3724
2793
1862
931
0
SP.Syn.Eso−AdenoCA::S.15(0.803)
538
52
570
206
491
5083
2592
1944
1296
648
0
SP.Syn.Stomach−AdenoCA::S.52(0.759)
116
73
859
231
624
3961
2184
1638
1092
546
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

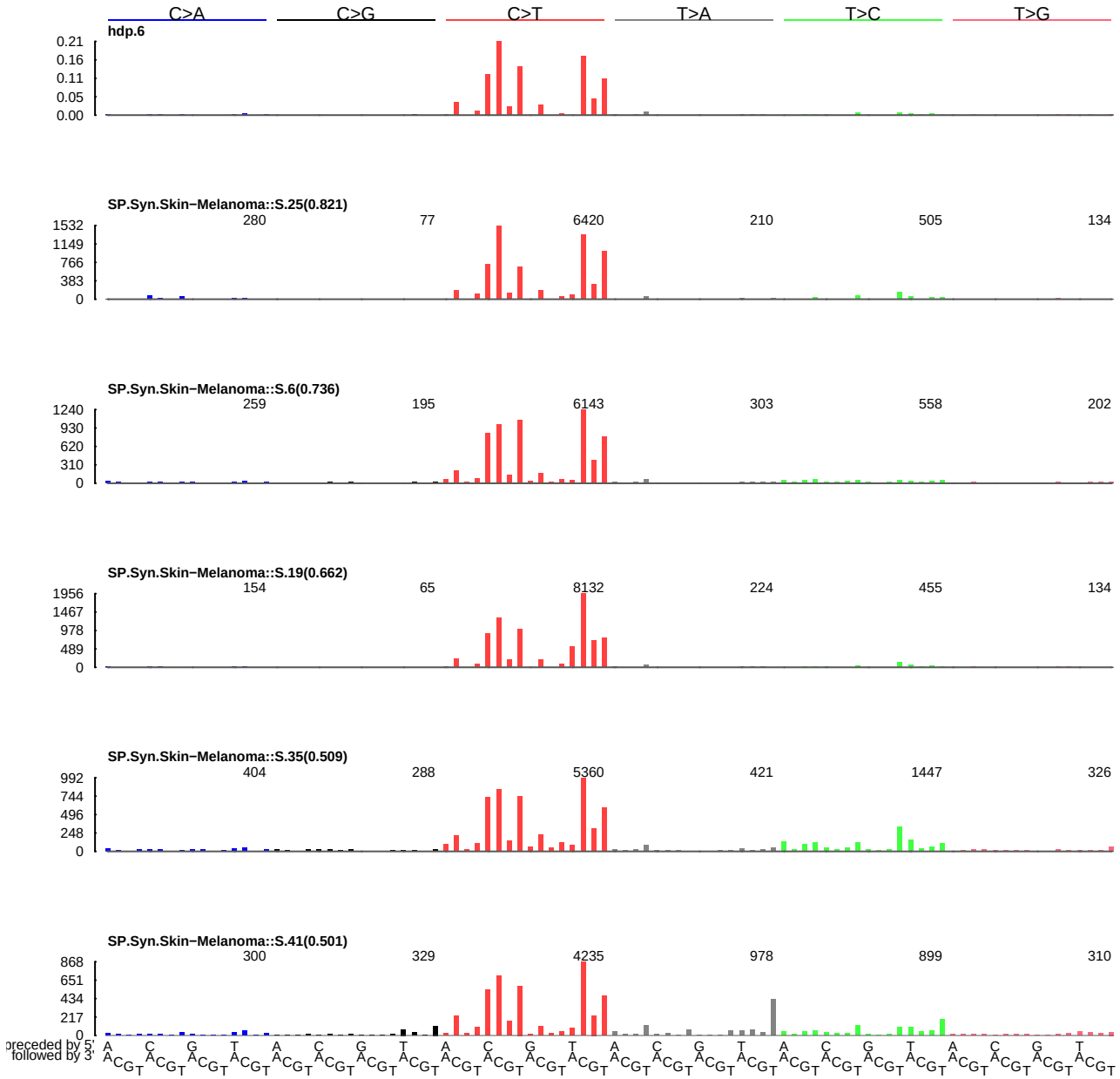

hdp.4
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
5000
Exposure

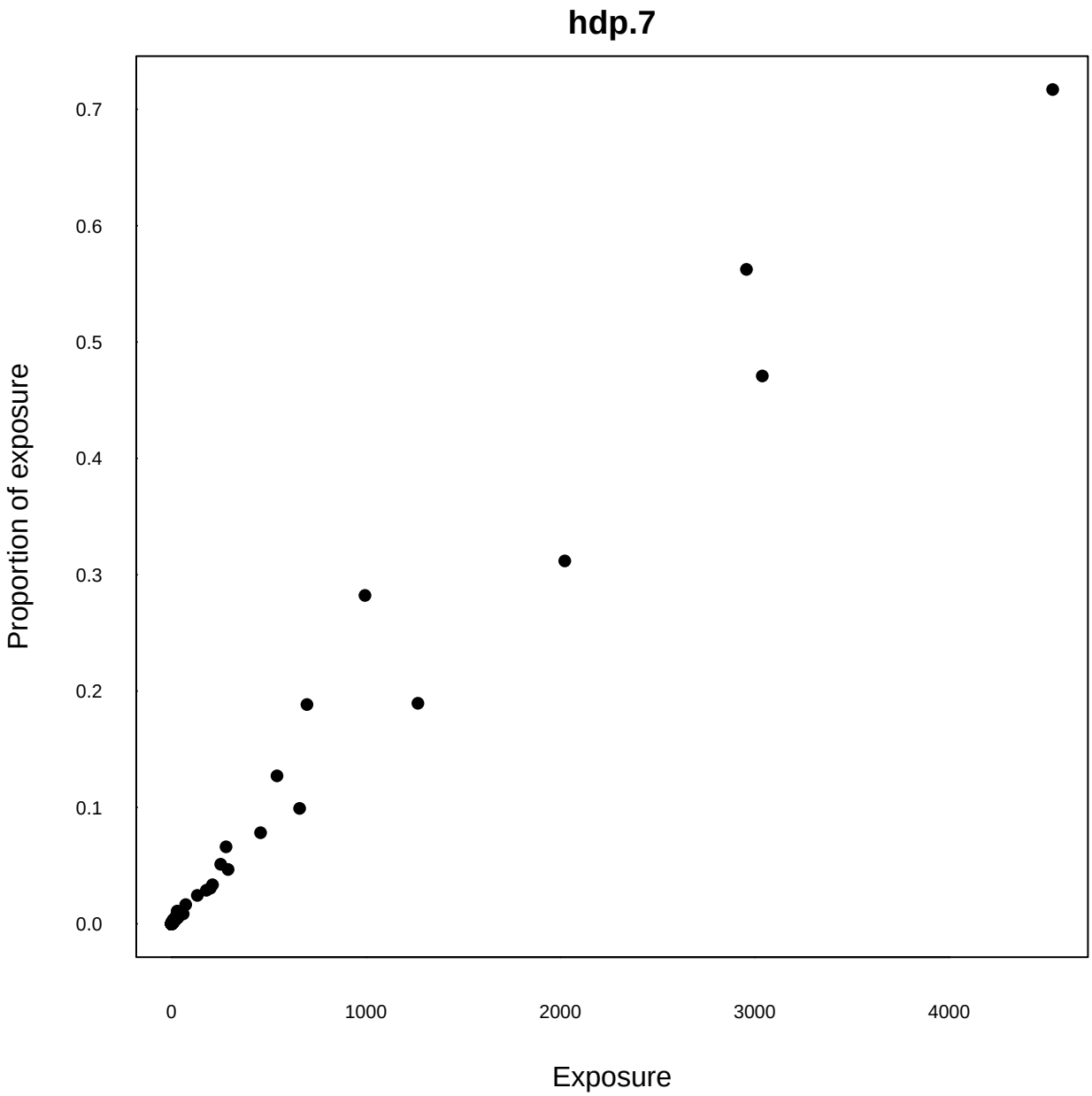

C>A
C>G
C>T
T>A
T>C
T>G
hdp.4
0.37
0.28
0.19
0.09
0.00
SP.Syn.Lung−AdenoCA::S.19(0.966)
644
3716
451
30
35
4
1888
1416
944
472
0
SP.Syn.Lung−AdenoCA::S.56(0.843)
850
3738
754
98
290
70
1936
1452
968
484
0
SP.Syn.Breast−AdenoCA::S.10(0.718)
729
3391
1757
79
222
60
1544
1158
772
386
0
SP.Syn.Breast−AdenoCA::S.41(0.709)
851
3191
836
155
548
147
1596
1197
798
399
0
SP.Syn.Lung−AdenoCA::S.58(0.68)
663
2626
1389
131
383
105
1268
951
634
317
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

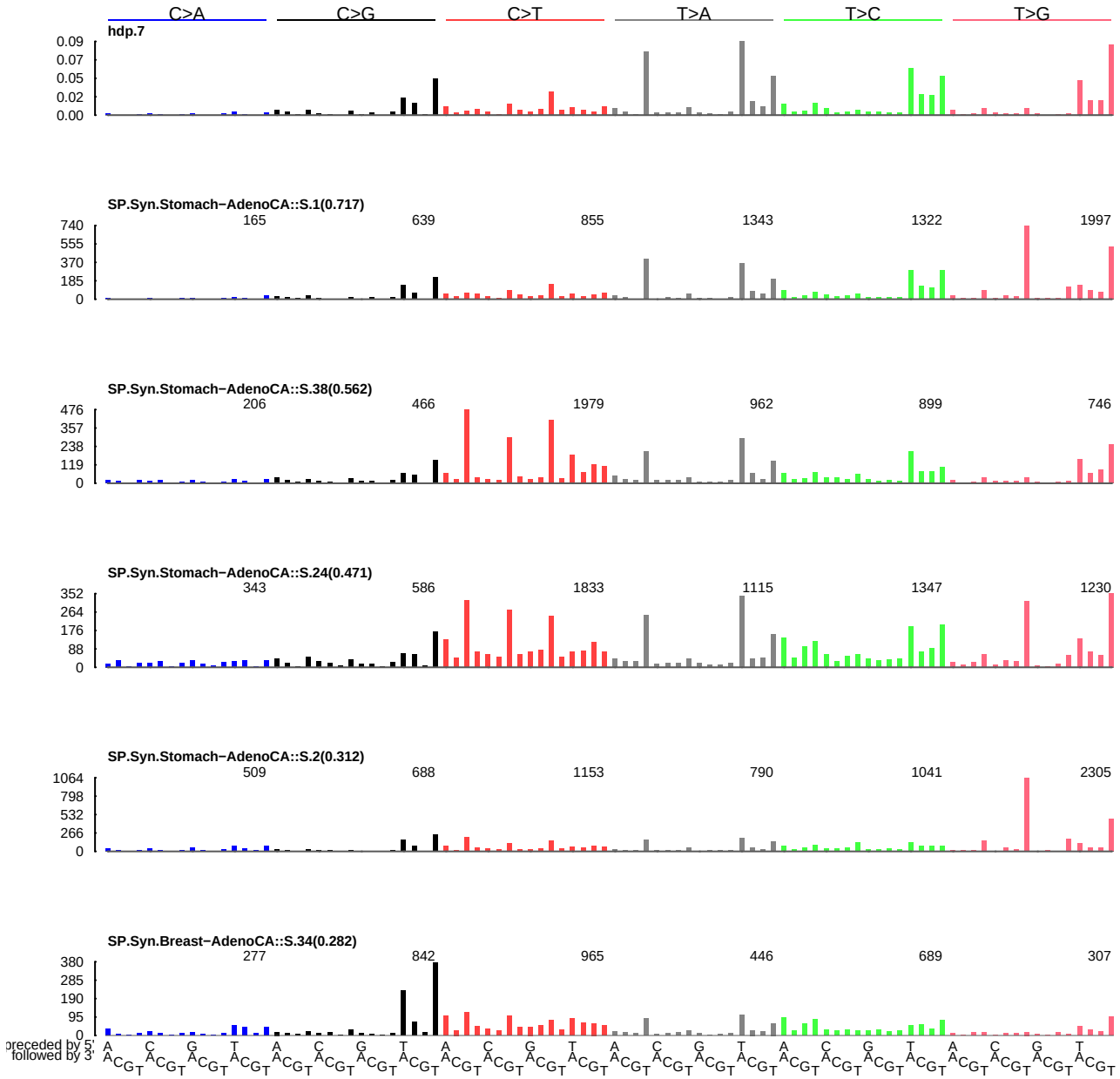

hdp.5
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure

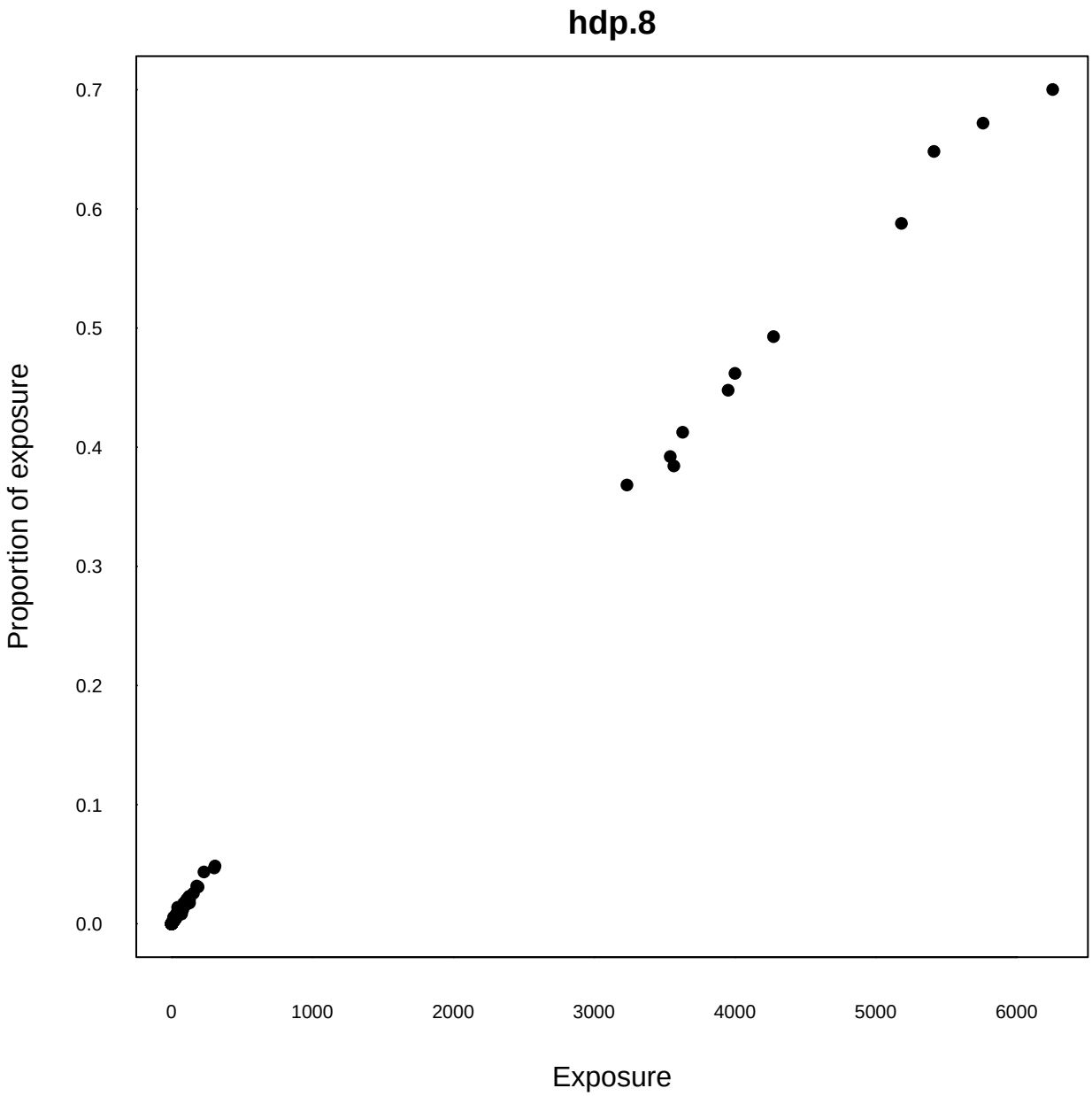

C>A
C>G
C>T
T>A
T>C
T>G
hdp.5
0.39
0.29
0.19
0.10
0.00
SP.Syn.Eso−AdenoCA::S.33(0.897)
109
103
519
827
4015
423
2008
1506
1004
502
0
SP.Syn.Eso−AdenoCA::S.17(0.627)
579
366
1339
765
3771
299
1456
1092
728
364
0
SP.Syn.Eso−AdenoCA::S.16(0.62)
702
461
1205
683
3007
469
1440
1080
720
360
0
SP.Syn.Stomach−AdenoCA::S.55(0.577)
83
93
885
429
2252
1543
1124
843
562
281
0
SP.Syn.Eso−AdenoCA::S.26(0.456)
674
402
1667
698
3057
824
1404
1053
702
351
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

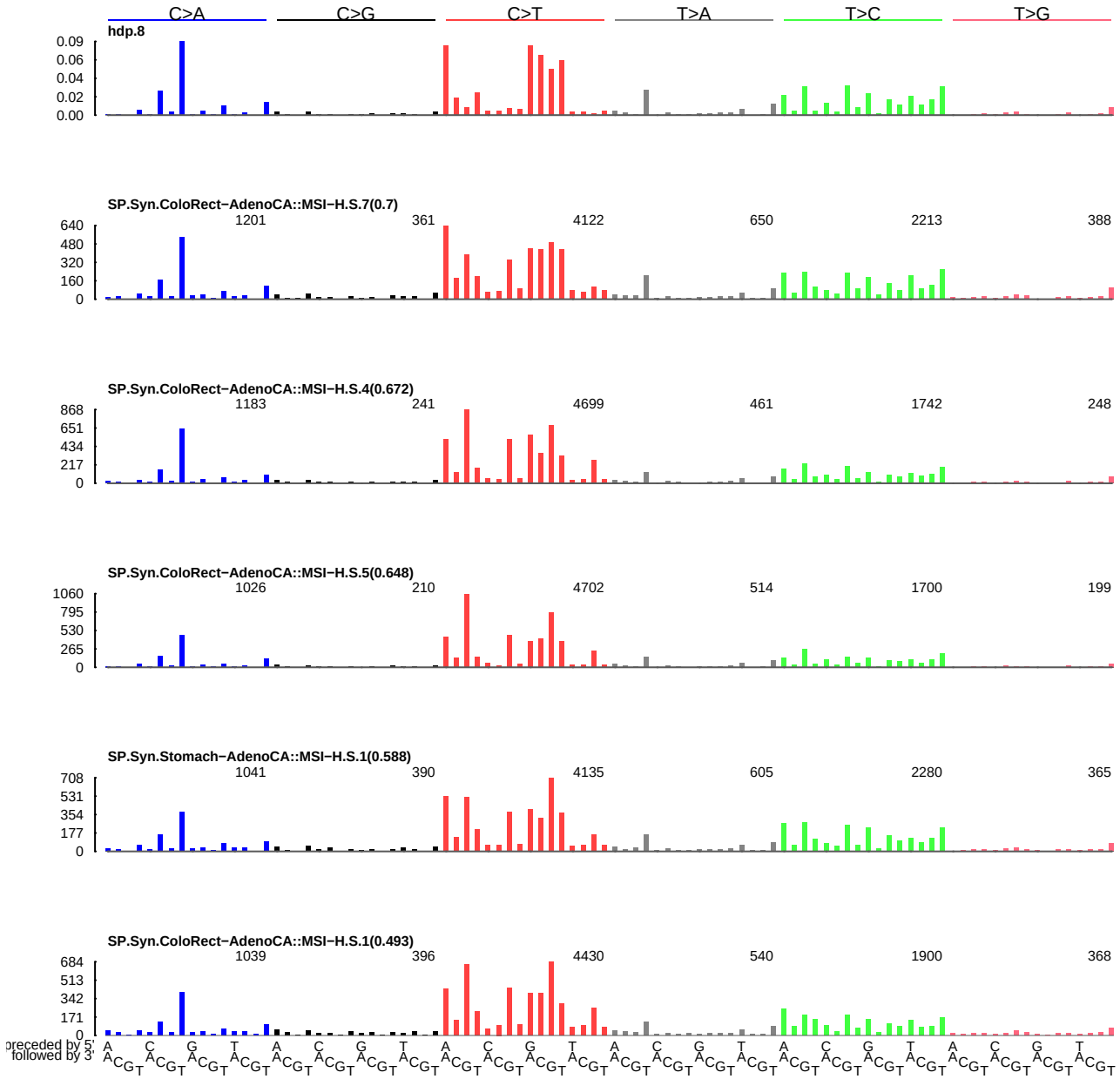

hdp.6
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
6000
Exposure

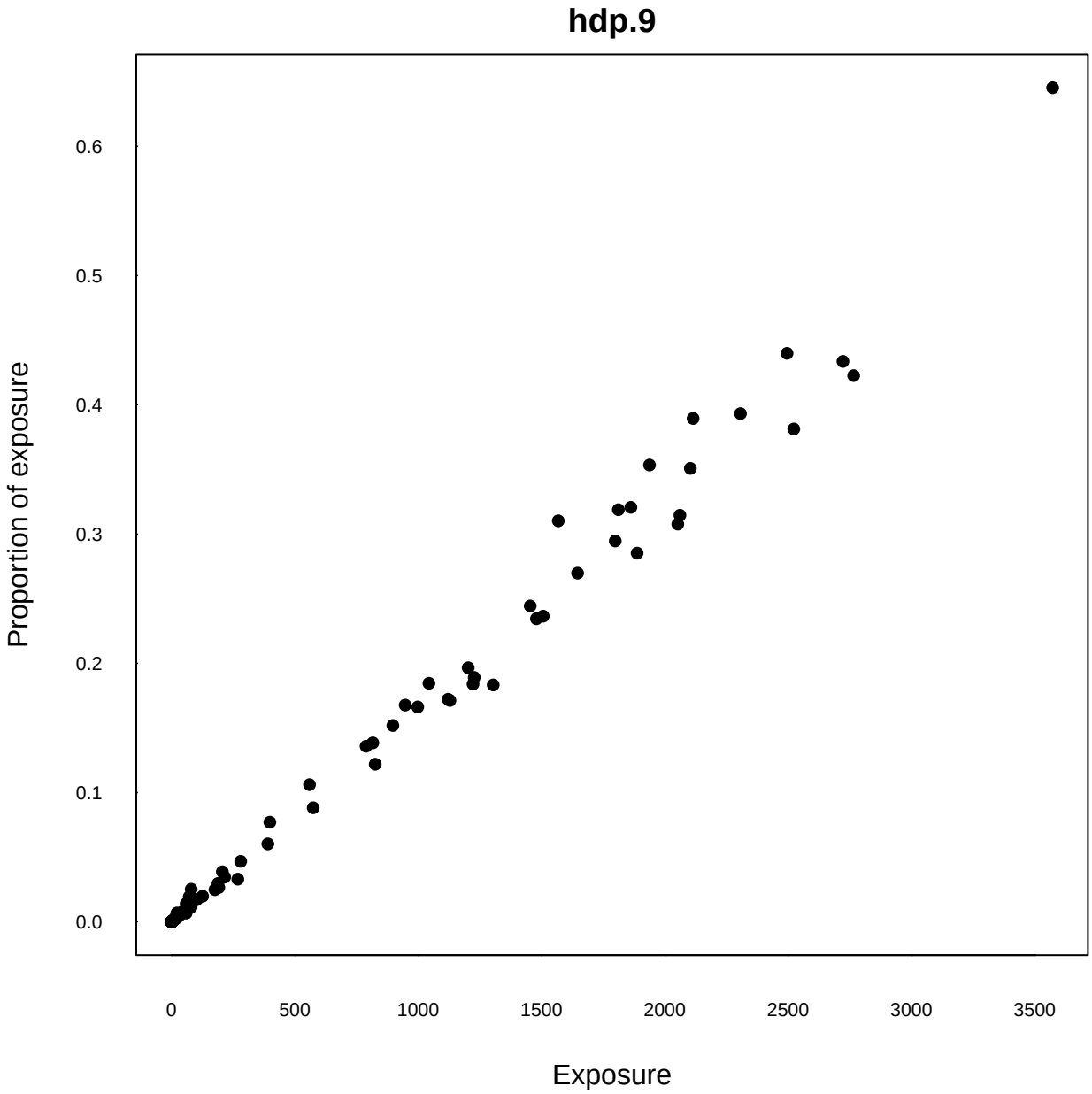

C>A
C>G
C>T
T>A
T>C
T>G
hdp.6
0.21
0.16
0.11
0.05
0.00
SP.Syn.Skin−Melanoma::S.25(0.821)
280
77
6420
210
505
134
1532
1149
766
383
0
SP.Syn.Skin−Melanoma::S.6(0.736)
259
195
6143
303
558
202
1240
930
620
310
0
SP.Syn.Skin−Melanoma::S.19(0.662)
154
65
8132
224
455
134
1956
1467
978
489
0
SP.Syn.Skin−Melanoma::S.35(0.509)
404
288
5360
421
1447
326
992
744
496
248
0
SP.Syn.Skin−Melanoma::S.41(0.501)
300
329
4235
978
899
310
868
651
434
217
0
preceded by 5'
followed by 3'

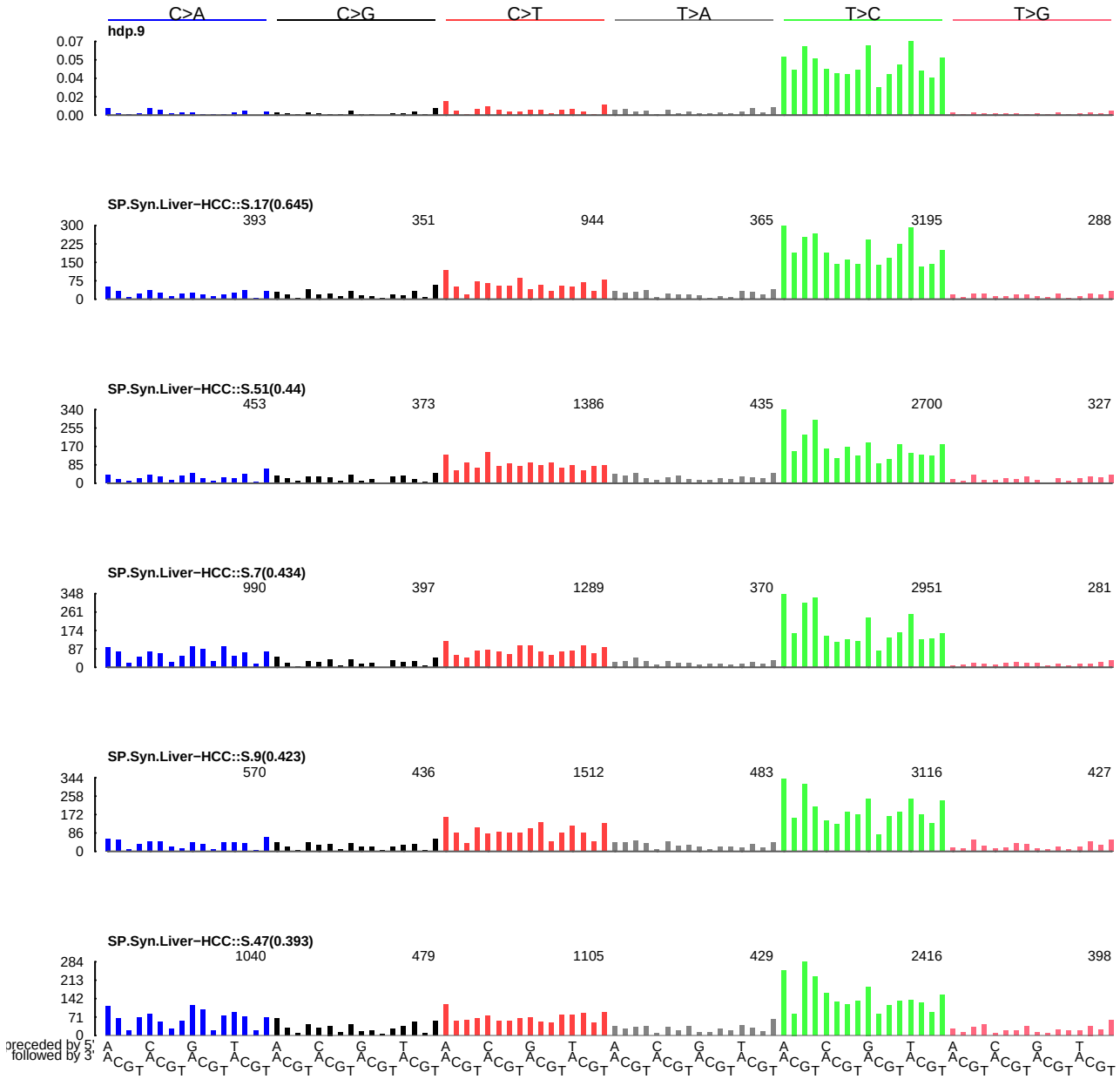

hdp.7
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
1000
2000
3000
4000
Exposure

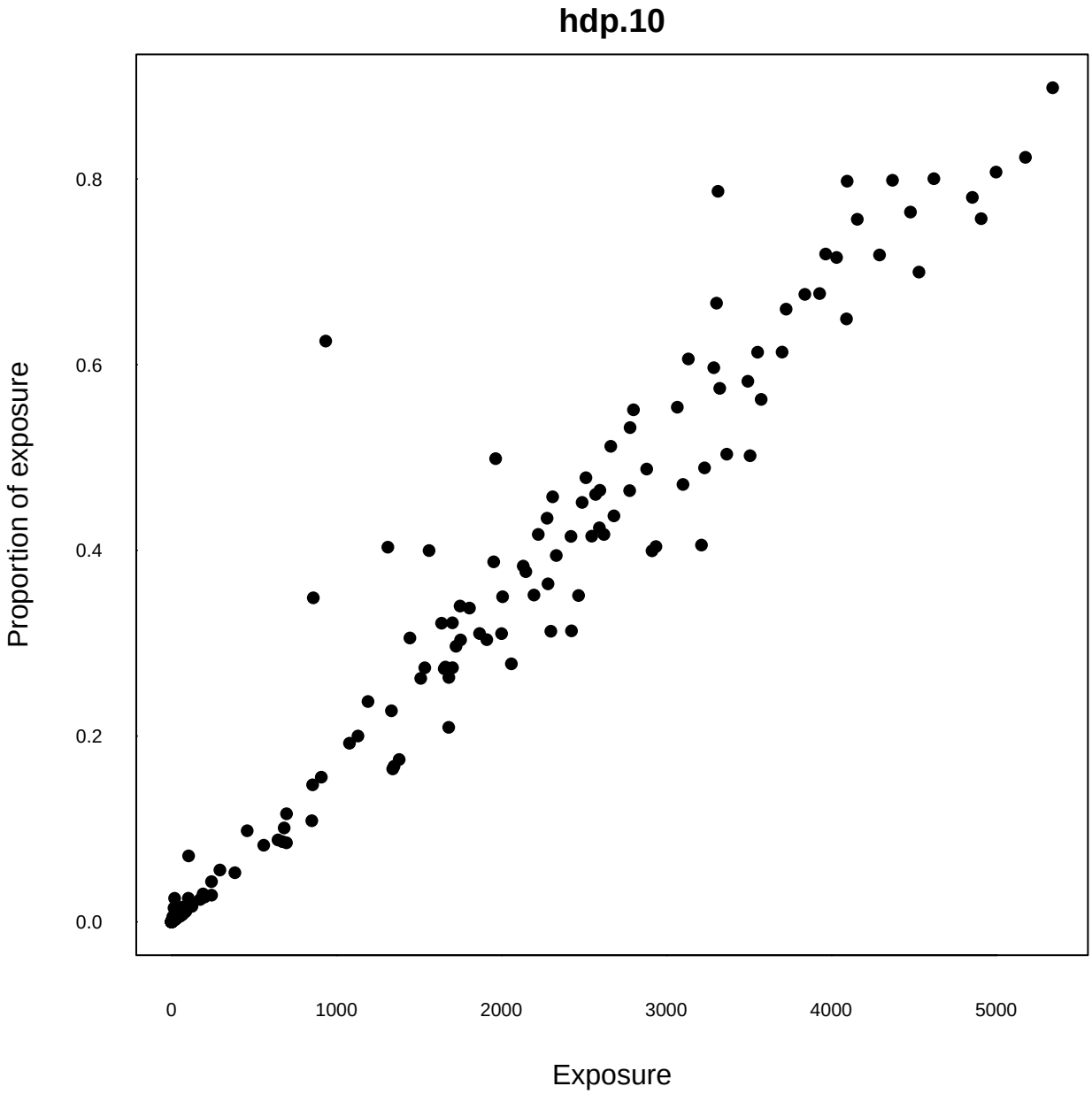

C>A
C>G
C>T
T>A
T>C
T>G
hdp.7
0.09
0.07
0.05
0.02
0.00
SP.Syn.Stomach−AdenoCA::S.1(0.717)
165
639
855
1343
1322
1997
740
555
370
185
0
SP.Syn.Stomach−AdenoCA::S.38(0.562)
206
466
1979
962
899
746
476
357
238
119
0
SP.Syn.Stomach−AdenoCA::S.24(0.471)
343
586
1833
1115
1347
1230
352
264
176
88
0
SP.Syn.Stomach−AdenoCA::S.2(0.312)
509
688
1153
790
1041
2305
1064
798
532
266
0
SP.Syn.Breast−AdenoCA::S.34(0.282)
277
842
965
446
689
307
380
285
190
95
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

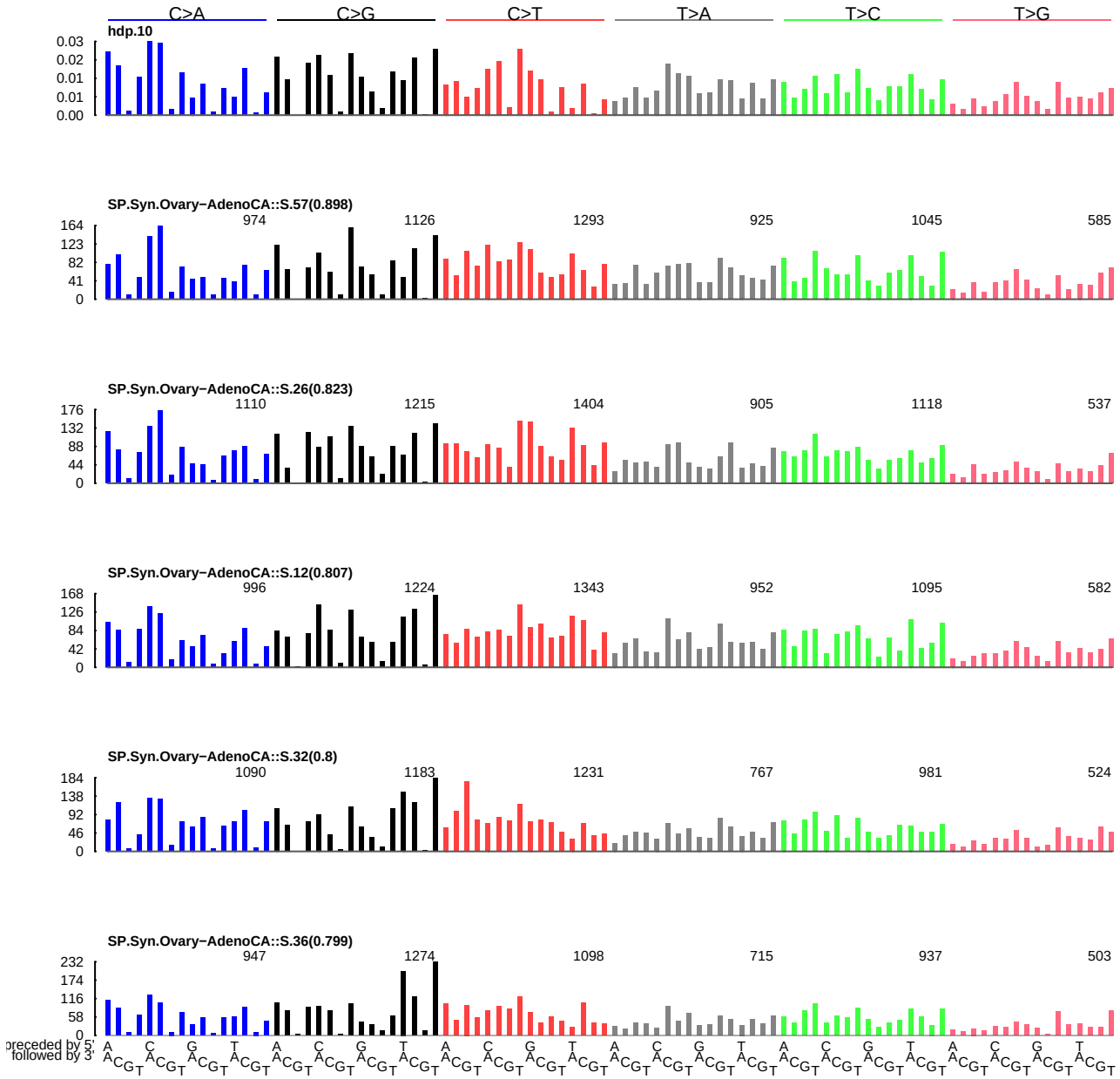

hdp.8
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
1000
2000
3000
4000
5000
6000
Exposure

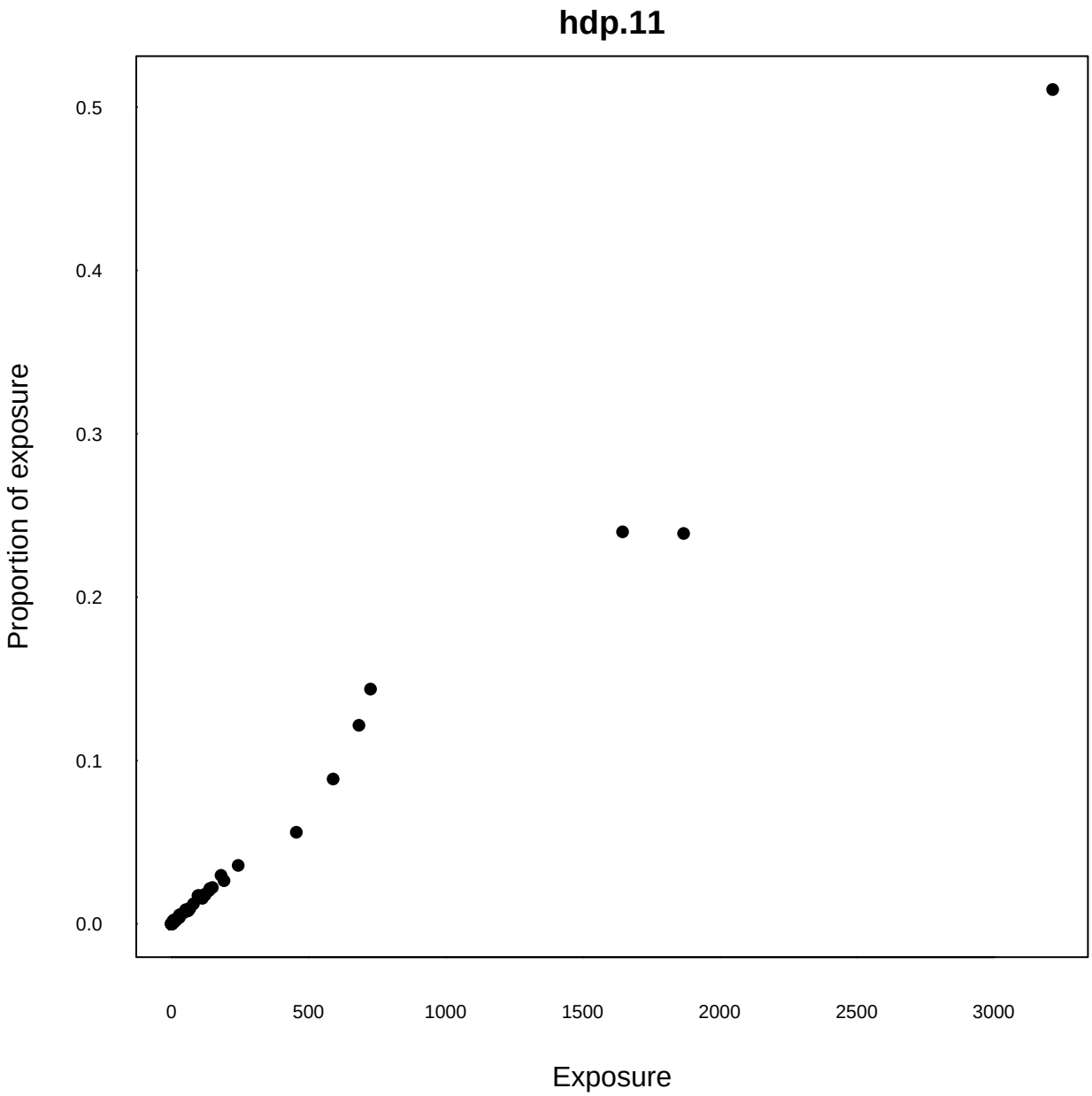

C>A
C>G
C>T
T>A
T>C
T>G
hdp.8
0.09
0.06
0.04
0.02
0.00
SP.Syn.ColoRect−AdenoCA::MSI−H.S.7(0.7)
1201
361
4122
650
2213
388
640
480
320
160
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.4(0.672)
1183
241
4699
461
1742
248
868
651
434
217
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.5(0.648)
1026
210
4702
514
1700
199
1060
795
530
265
0
SP.Syn.Stomach−AdenoCA::MSI−H.S.1(0.588)
1041
390
4135
605
2280
365
708
531
354
177
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.1(0.493)
1039
396
4430
540
1900
368
684
513
342
171
0
preceded by 5'
followed by 3'

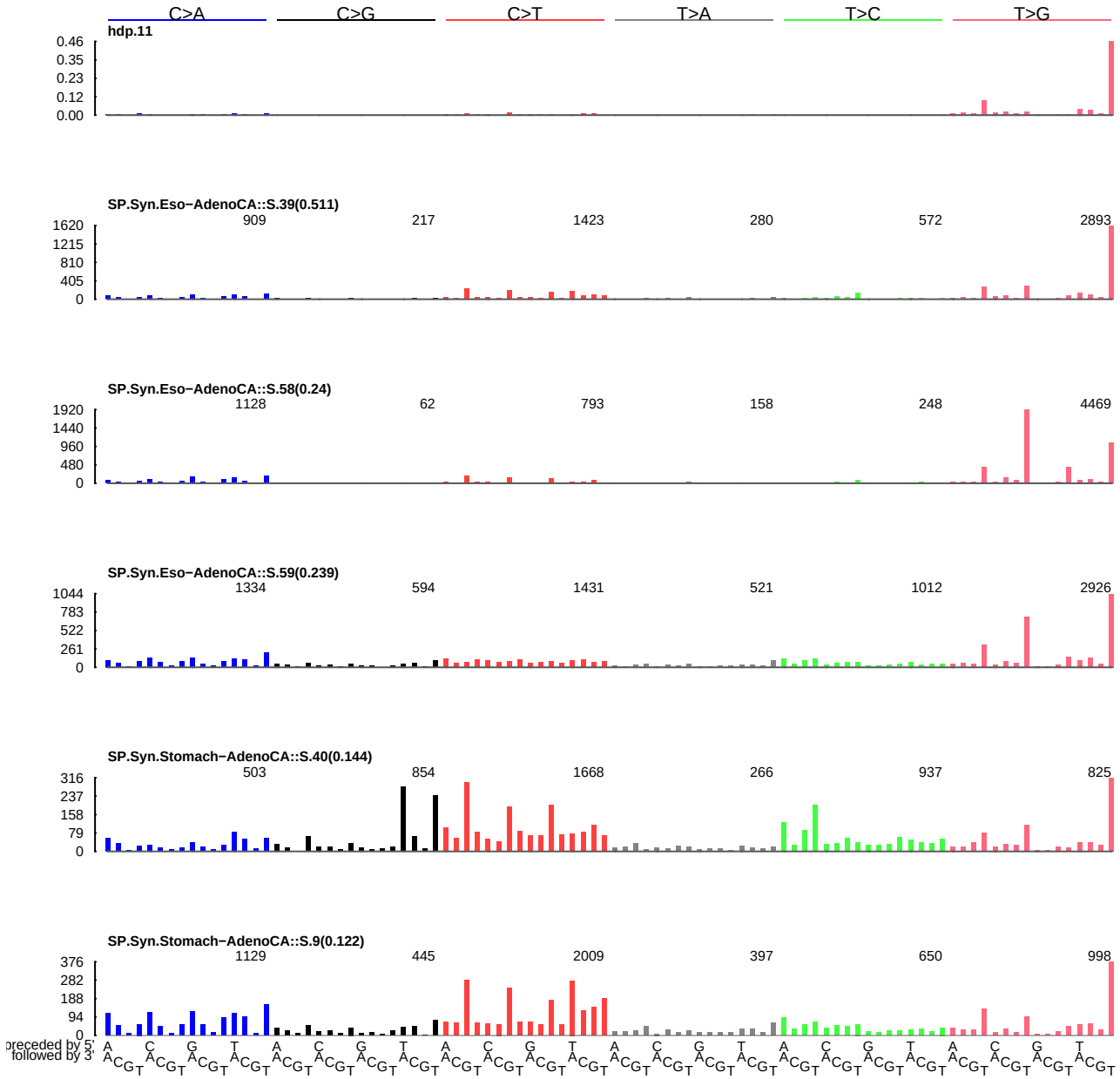

hdp.9
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
500
1000
1500
2000
2500
3000
3500
Exposure

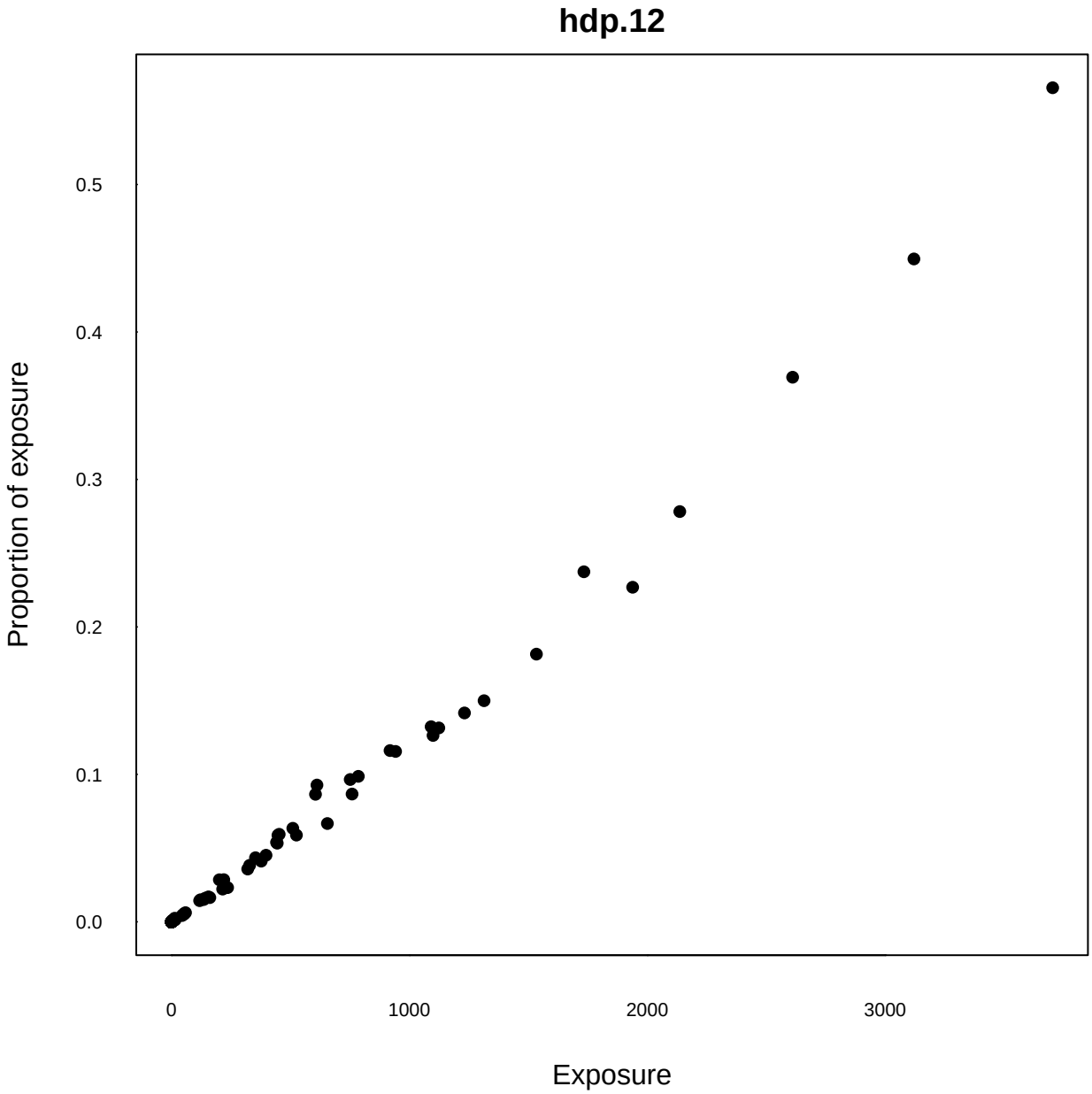

C>A
C>G
C>T
T>A
T>C
T>G
hdp.9
0.07
0.05
0.04
0.02
0.00
SP.Syn.Liver−HCC::S.17(0.645)
393
351
944
365
3195
288
300
225
150
75
0
SP.Syn.Liver−HCC::S.51(0.44)
453
373
1386
435
2700
327
340
255
170
85
0
SP.Syn.Liver−HCC::S.7(0.434)
990
397
1289
370
2951
281
348
261
174
87
0
SP.Syn.Liver−HCC::S.9(0.423)
570
436
1512
483
3116
427
344
258
172
86
0
SP.Syn.Liver−HCC::S.47(0.393)
1040
479
1105
429
2416
398
284
213
142
71
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

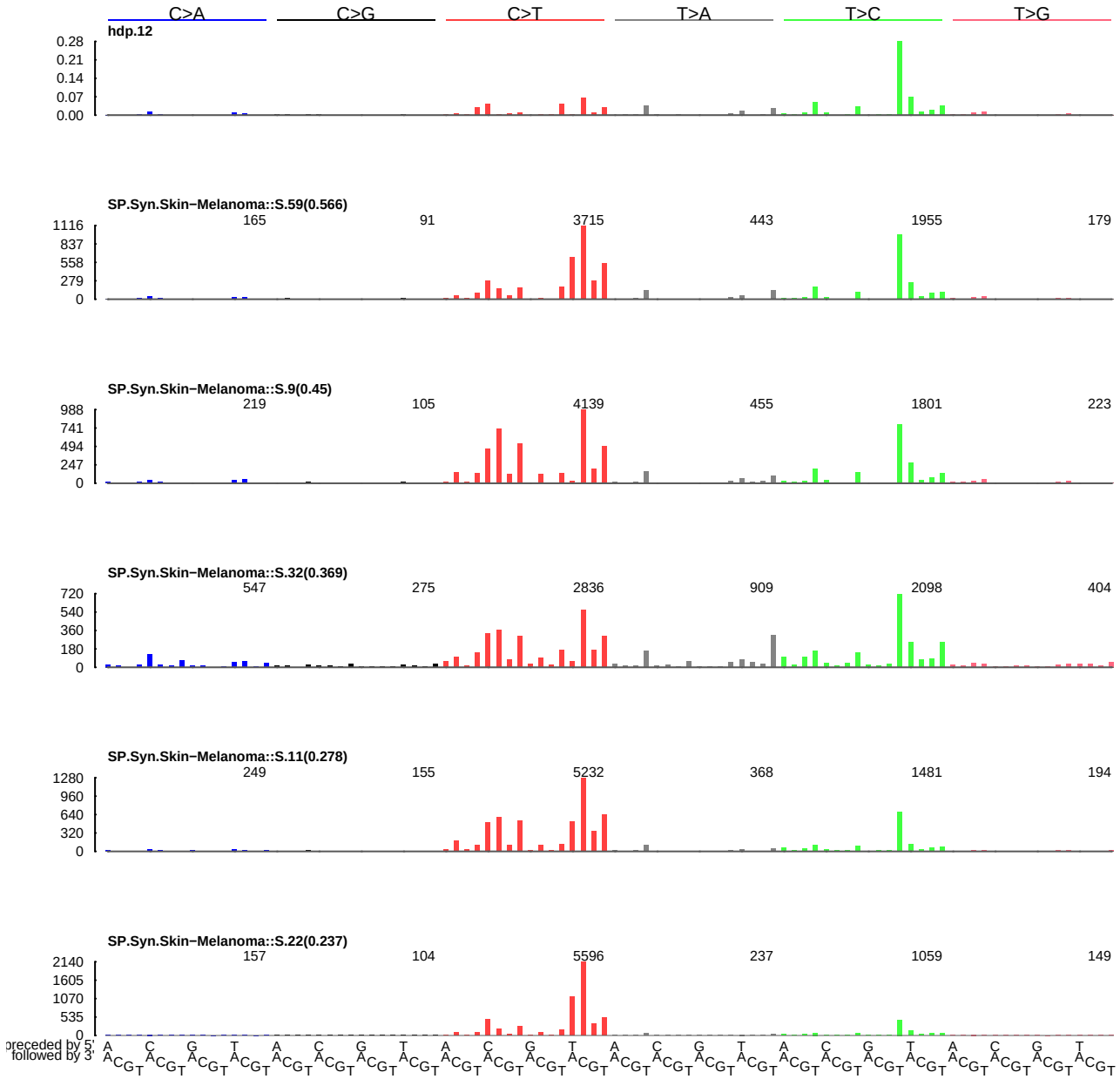

hdp.10
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure

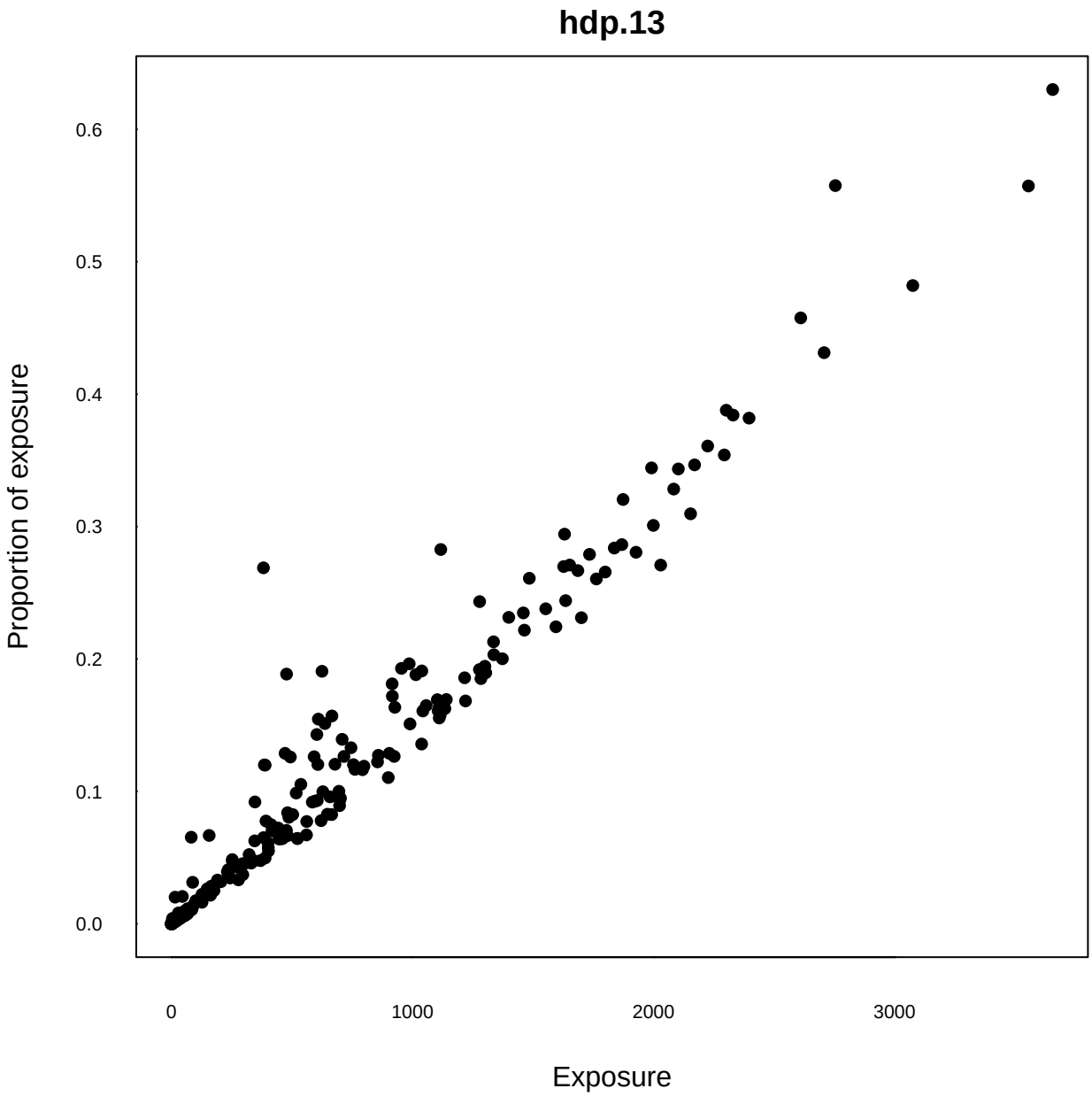

C>A
C>G
C>T
T>A
T>C
T>G
hdp.10
0.03
0.02
0.01
0.01
0.00
SP.Syn.Ovary−AdenoCA::S.57(0.898)
974
1126
1293
925
1045
585
164
123
82
41
0
SP.Syn.Ovary−AdenoCA::S.26(0.823)
1110
1215
1404
905
1118
537
176
132
88
44
0
SP.Syn.Ovary−AdenoCA::S.12(0.807)
996
1224
1343
952
1095
582
168
126
84
42
0
SP.Syn.Ovary−AdenoCA::S.32(0.8)
1090
1183
1231
767
981
524
184
138
92
46
0
SP.Syn.Ovary−AdenoCA::S.36(0.799)
947
1274
1098
715
937
503
232
174
116
58
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

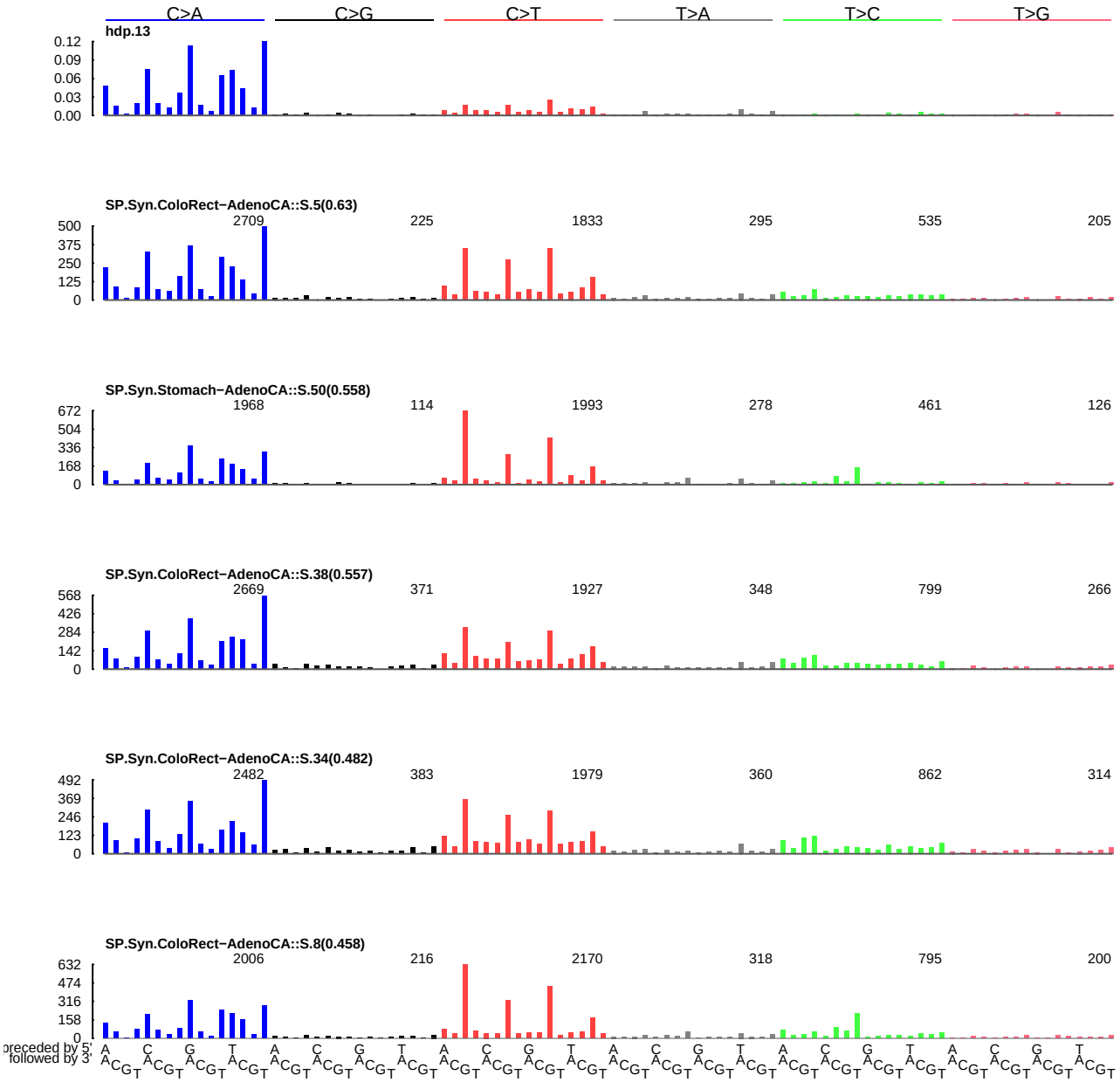

hdp.11
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
500
1000
1500
2000
2500
3000
Exposure

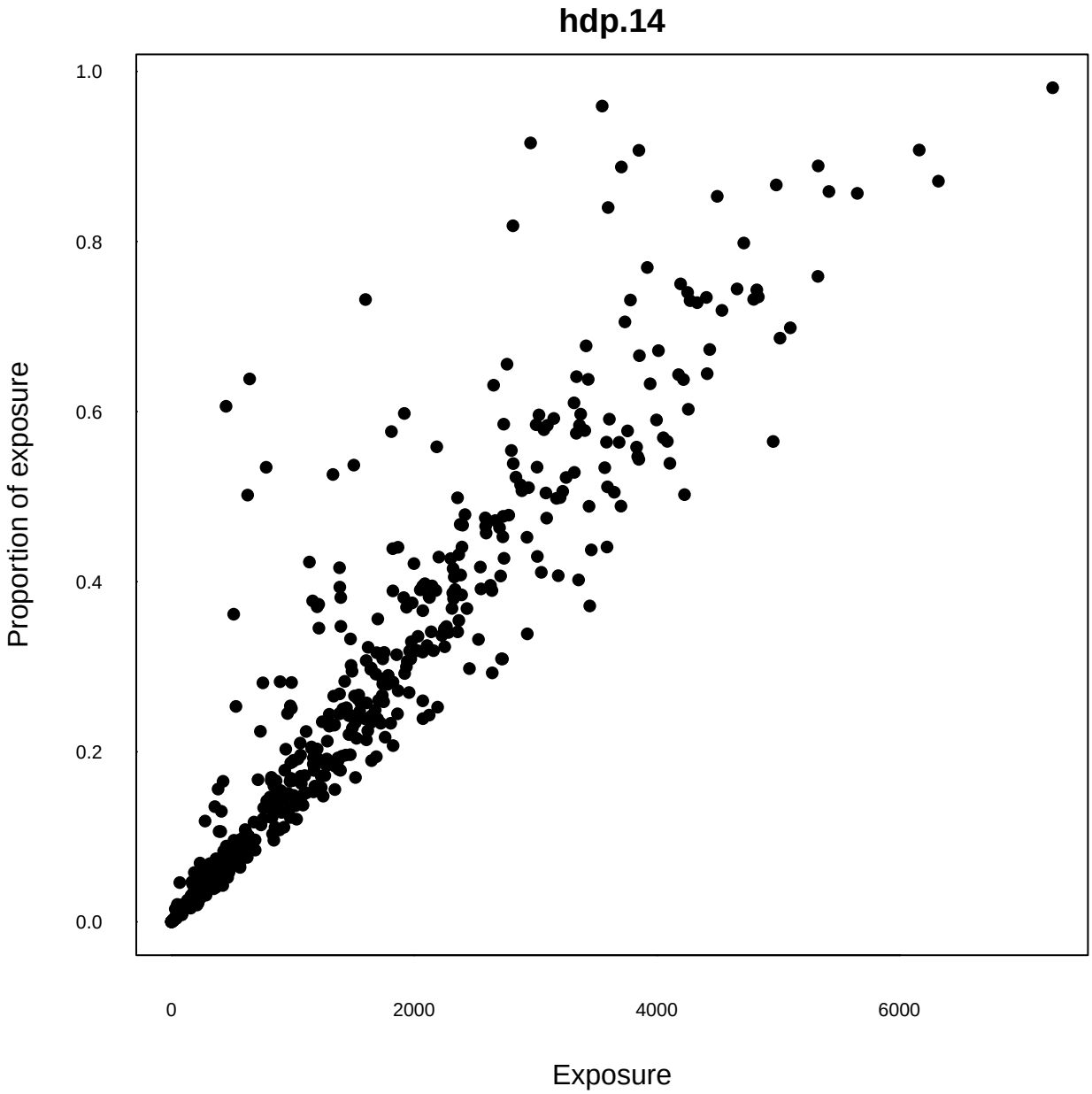

C>A
C>G
C>T
T>A
T>C
T>G
hdp.11
0.46
0.35
0.23
0.12
0.00
SP.Syn.Eso−AdenoCA::S.39(0.511)
909
217
1423
280
572
2893
1620
1215
810
405
0
SP.Syn.Eso−AdenoCA::S.58(0.24)
1128
62
793
158
248
4469
1920
1440
960
480
0
SP.Syn.Eso−AdenoCA::S.59(0.239)
1334
594
1431
521
1012
2926
1044
783
522
261
0
SP.Syn.Stomach−AdenoCA::S.40(0.144)
503
854
1668
266
937
825
316
237
158
79
0
SP.Syn.Stomach−AdenoCA::S.9(0.122)
1129
445
2009
397
650
998
376
282
188
94
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

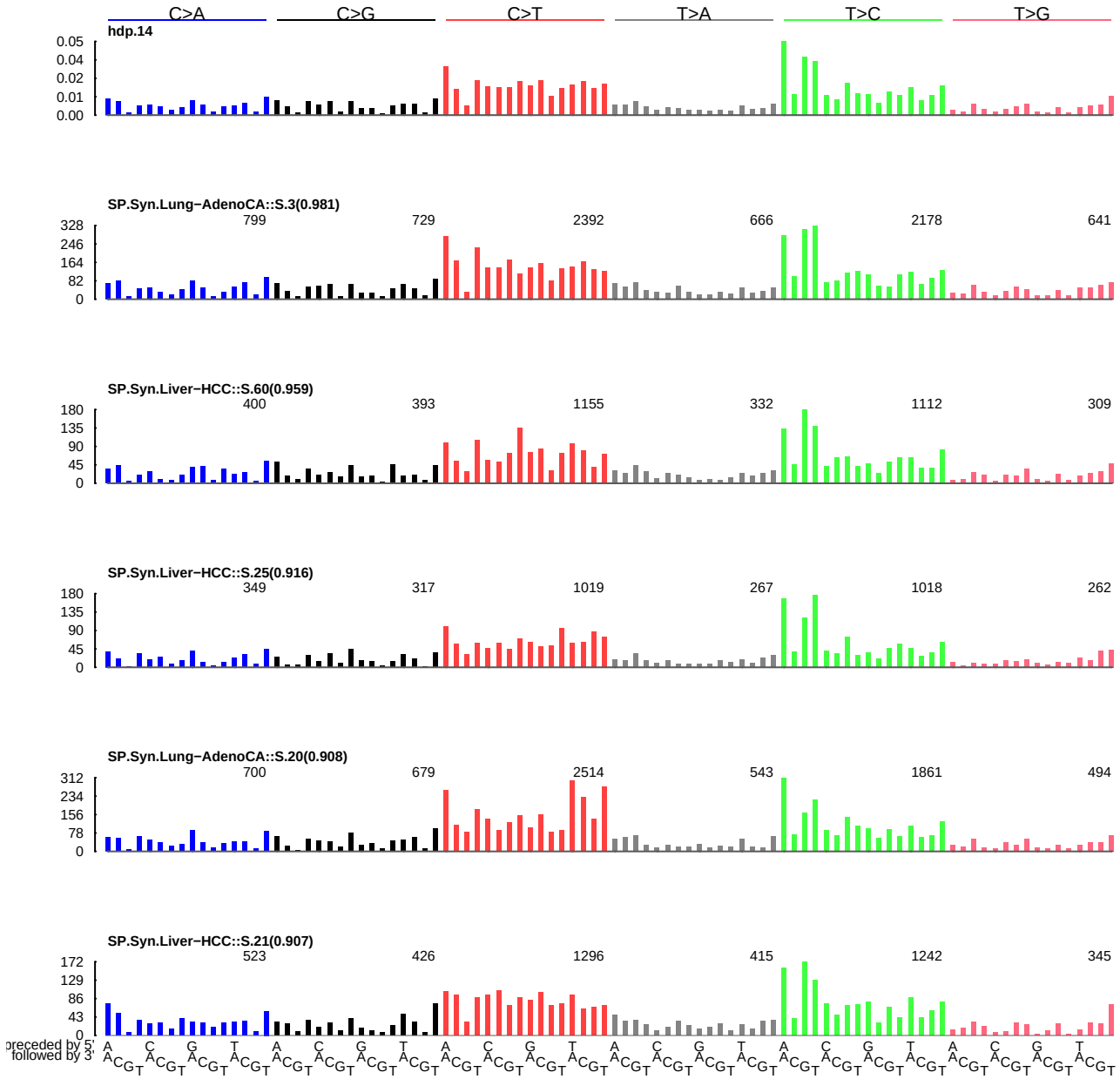

hdp.12
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
1000
2000
3000
Exposure

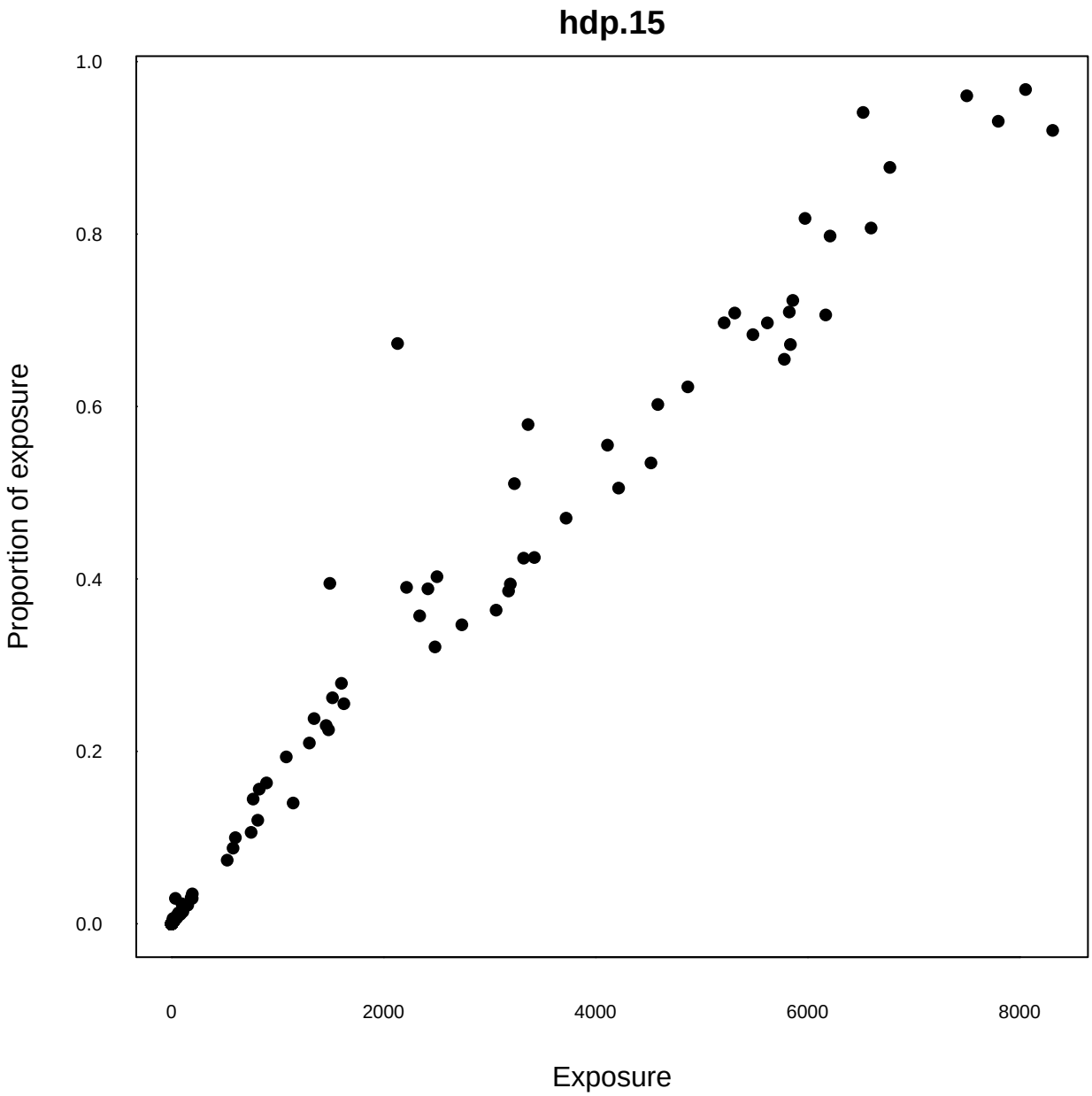

C>A
C>G
C>T
T>A
T>C
T>G
hdp.12
0.28
0.21
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.59(0.566)
165
91
3715
443
1955
179
1116
837
558
279
0
SP.Syn.Skin−Melanoma::S.9(0.45)
219
105
4139
455
1801
223
988
741
494
247
0
SP.Syn.Skin−Melanoma::S.32(0.369)
547
275
2836
909
2098
404
720
540
360
180
0
SP.Syn.Skin−Melanoma::S.11(0.278)
249
155
5232
368
1481
194
1280
960
640
320
0
SP.Syn.Skin−Melanoma::S.22(0.237)
157
104
5596
237
1059
149
2140
1605
1070
535
0
preceded by 5'
followed by 3'

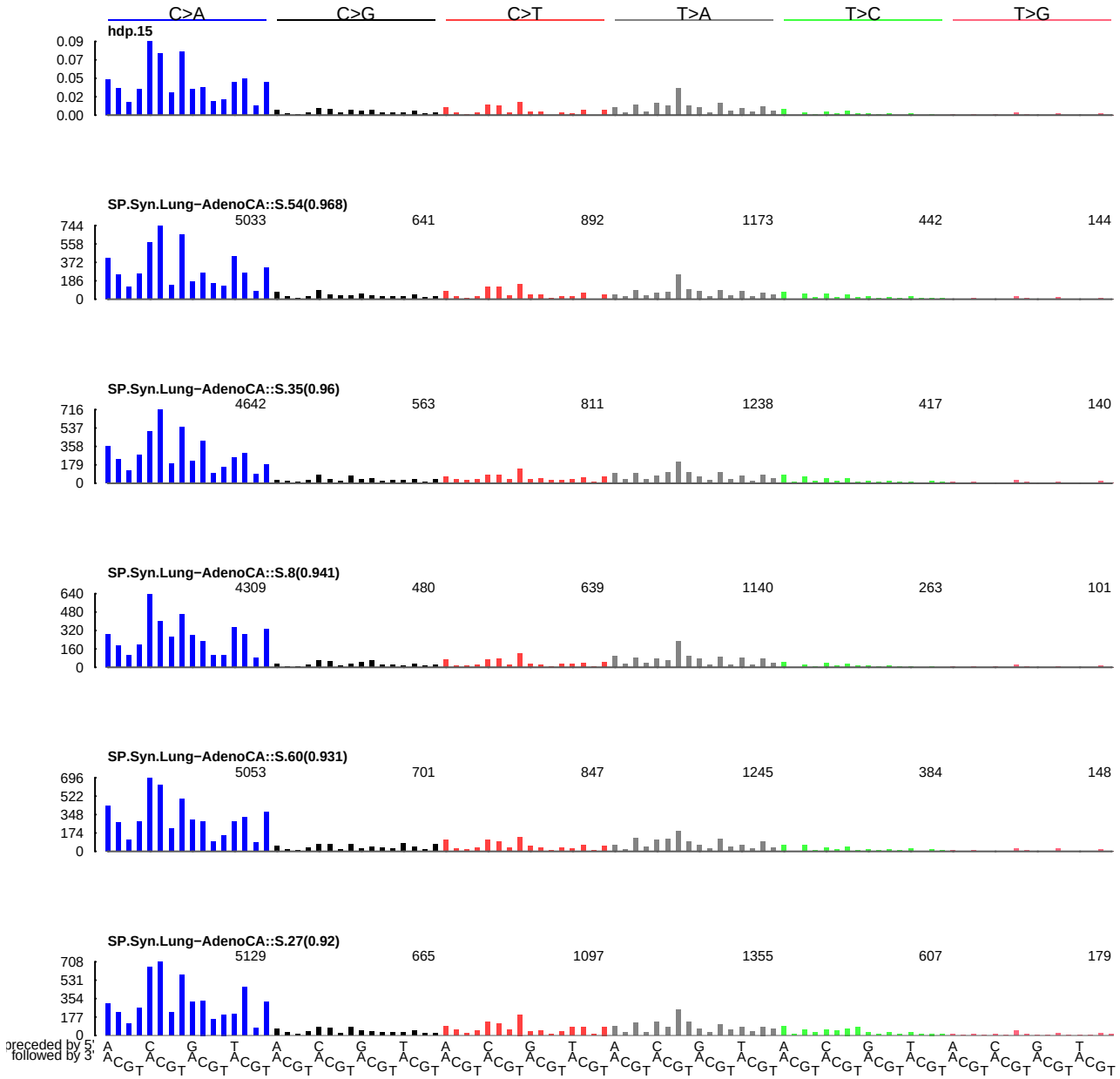

hdp.13
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
1000
2000
3000
Exposure

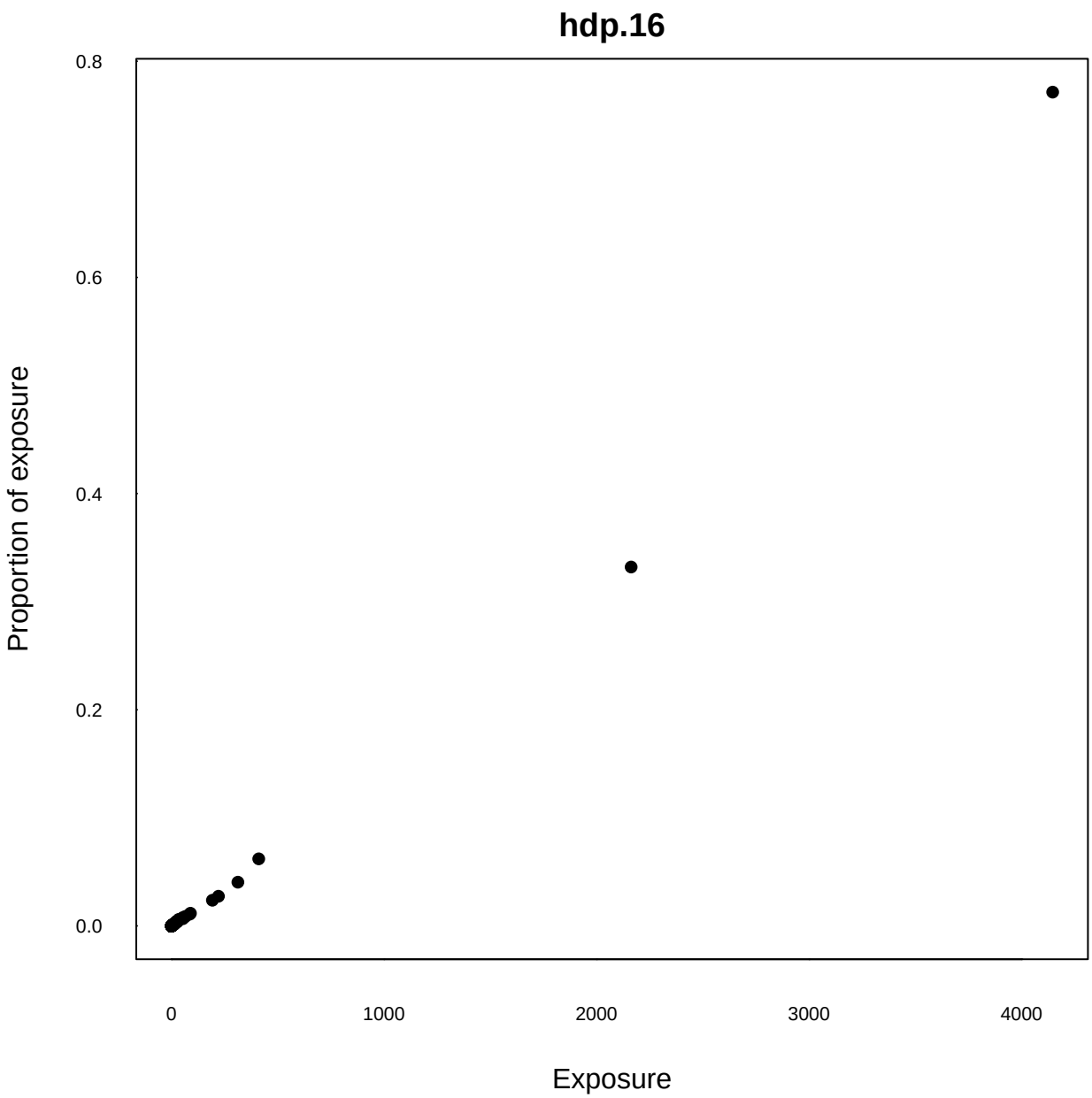

C>A
C>G
C>T
T>A
T>C
T>G
hdp.13
0.12
0.09
0.06
0.03
0.00
SP.Syn.ColoRect−AdenoCA::S.5(0.63)
2709
225
1833
295
535
205
500
375
250
125
0
SP.Syn.Stomach−AdenoCA::S.50(0.558)
1968
114
1993
278
461
126
672
504
336
168
0
SP.Syn.ColoRect−AdenoCA::S.38(0.557)
2669
371
1927
348
799
266
568
426
284
142
0
SP.Syn.ColoRect−AdenoCA::S.34(0.482)
2482
383
1979
360
862
314
492
369
246
123
0
SP.Syn.ColoRect−AdenoCA::S.8(0.458)
2006
216
2170
318
795
200
632
474
316
158
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

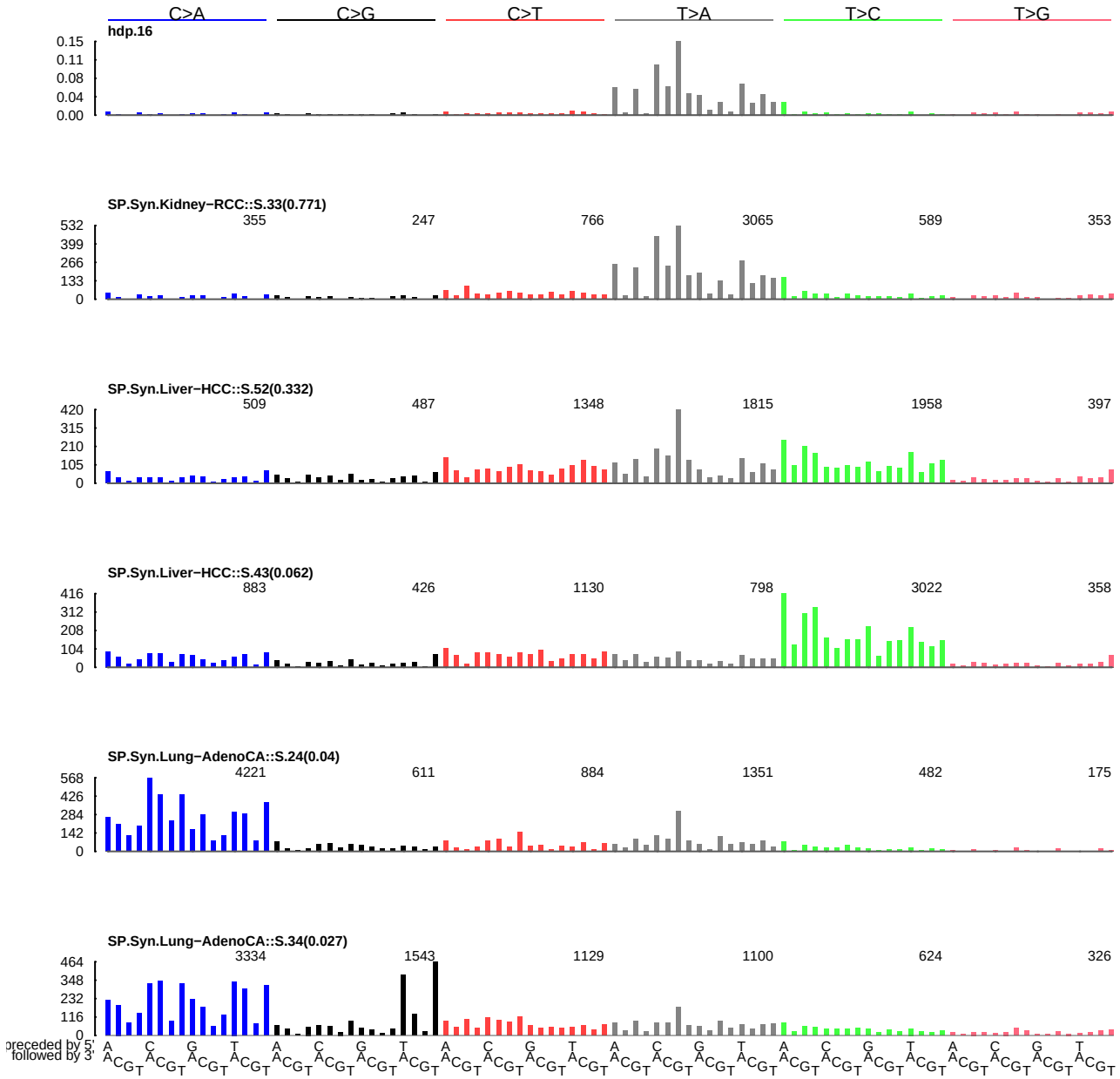

hdp.14
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
2000
4000
6000
Exposure

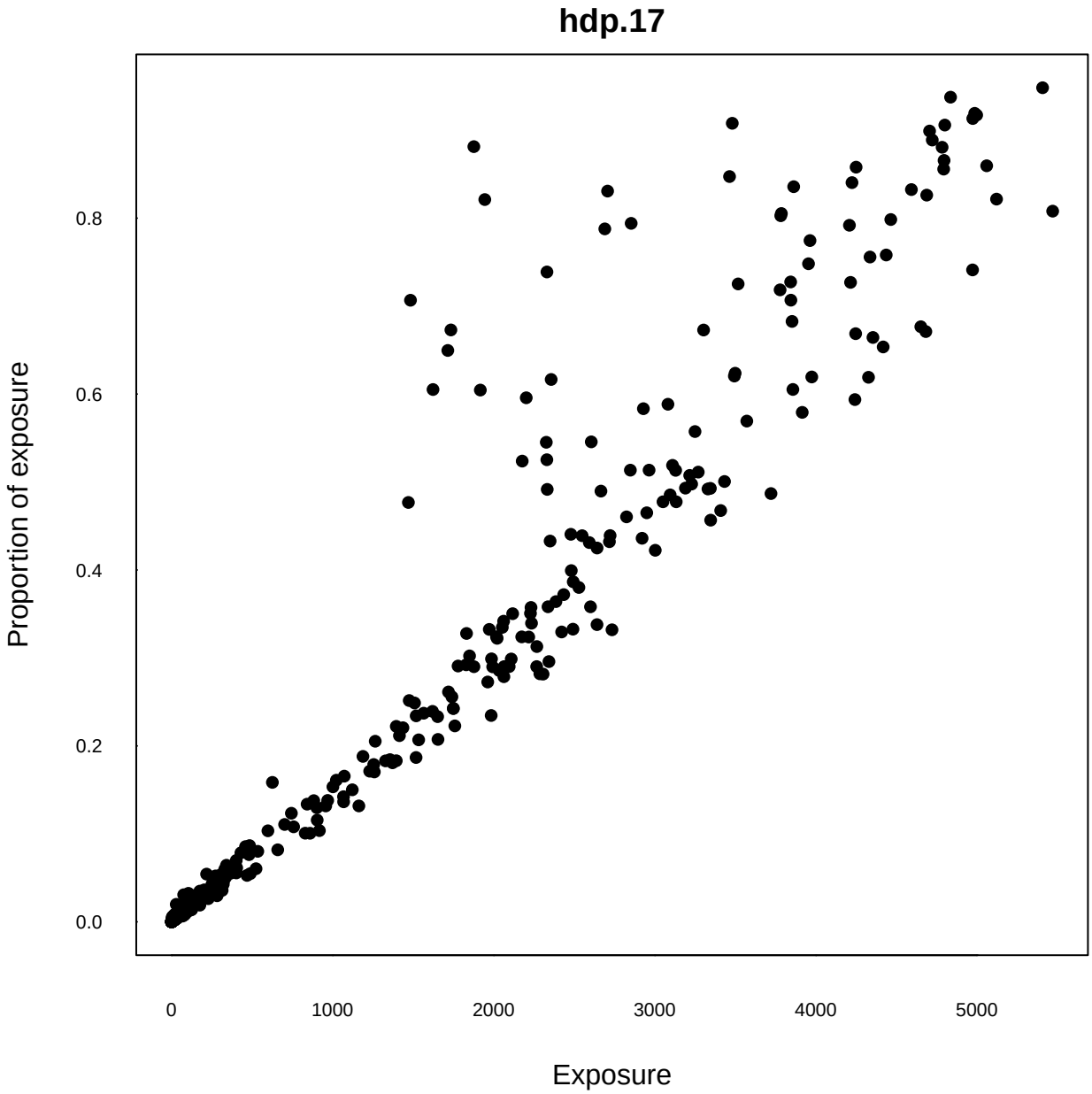

C>A
C>G
C>T
T>A
T>C
T>G
hdp.14
0.05
0.04
0.02
0.01
0.00
SP.Syn.Lung−AdenoCA::S.3(0.981)
799
729
2392
666
2178
641
328
246
164
82
0
SP.Syn.Liver−HCC::S.60(0.959)
400
393
1155
332
1112
309
180
135
90
45
0
SP.Syn.Liver−HCC::S.25(0.916)
349
317
1019
267
1018
262
180
135
90
45
0
SP.Syn.Lung−AdenoCA::S.20(0.908)
700
679
2514
543
1861
494
312
234
156
78
0
SP.Syn.Liver−HCC::S.21(0.907)
523
426
1296
415
1242
345
172
129
86
43
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

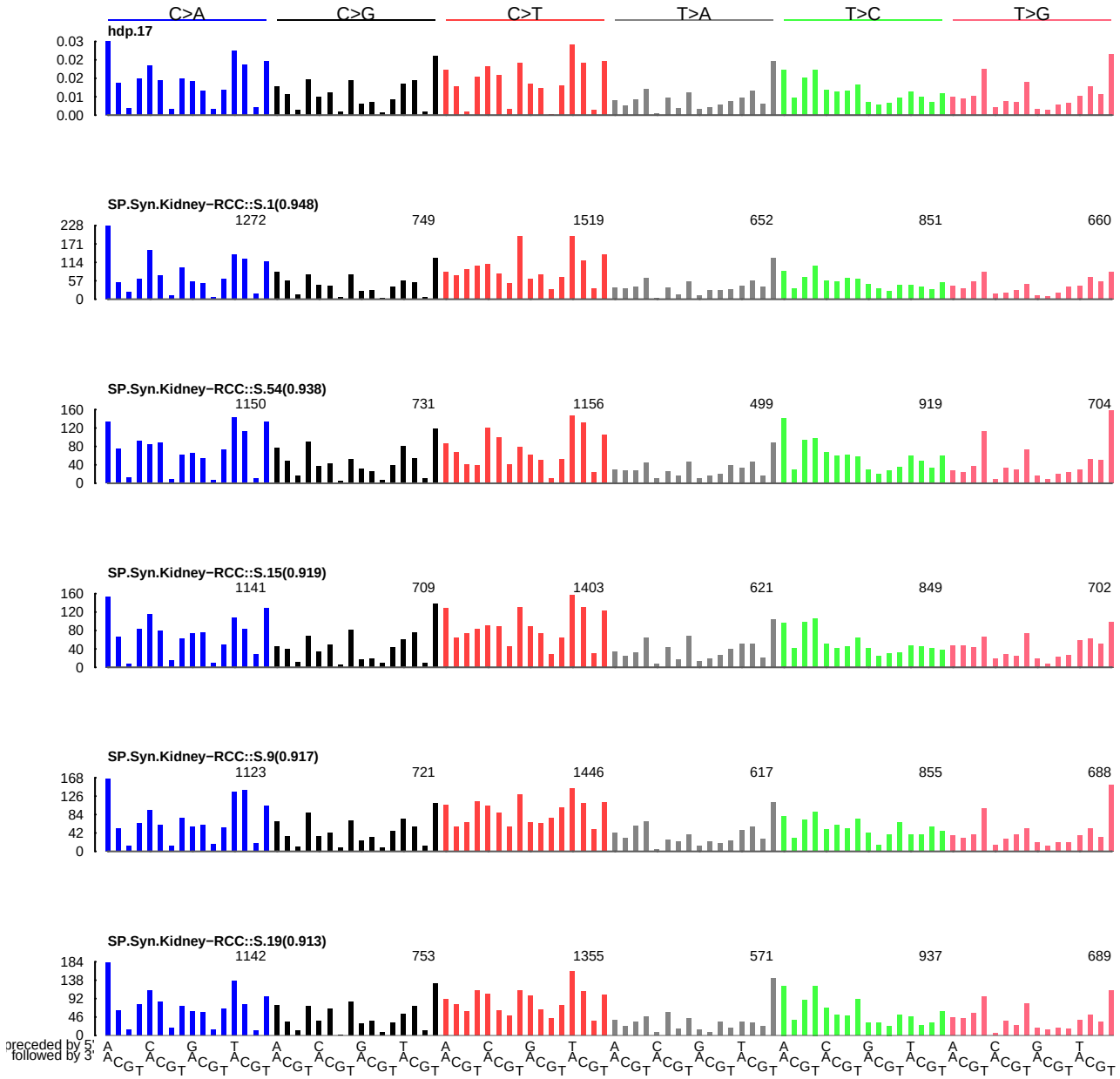

hdp.15
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
2000
4000
6000
8000
Exposure

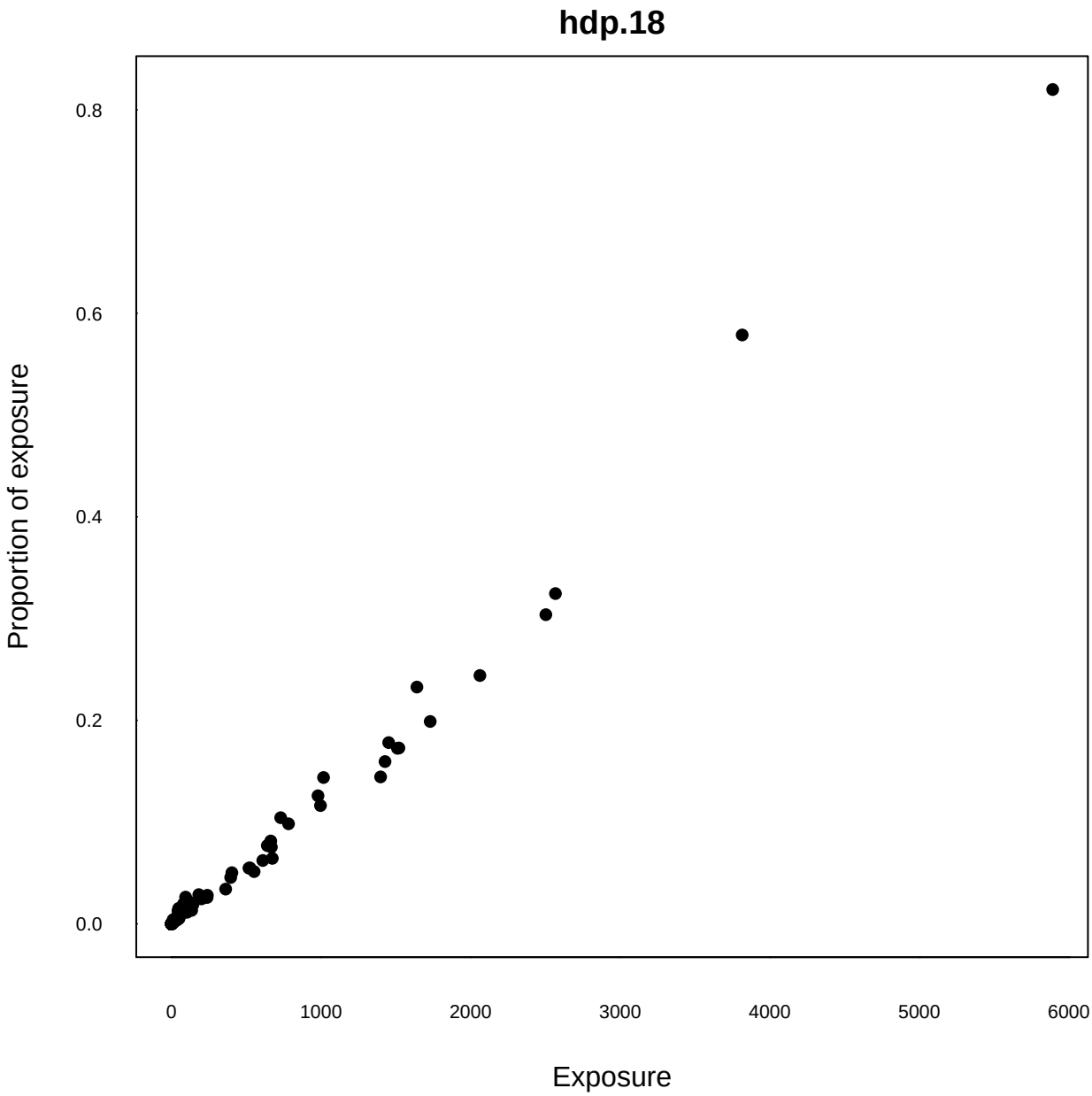

C>A
C>G
C>T
T>A
T>C
T>G
hdp.15
0.09
0.07
0.05
0.02
0.00
SP.Syn.Lung−AdenoCA::S.54(0.968)
5033
641
892
1173
442
144
744
558
372
186
0
SP.Syn.Lung−AdenoCA::S.35(0.96)
4642
563
811
1238
417
140
716
537
358
179
0
SP.Syn.Lung−AdenoCA::S.8(0.941)
4309
480
639
1140
263
101
640
480
320
160
0
SP.Syn.Lung−AdenoCA::S.60(0.931)
5053
701
847
1245
384
148
696
522
348
174
0
SP.Syn.Lung−AdenoCA::S.27(0.92)
5129
665
1097
1355
607
179
708
531
354
177
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

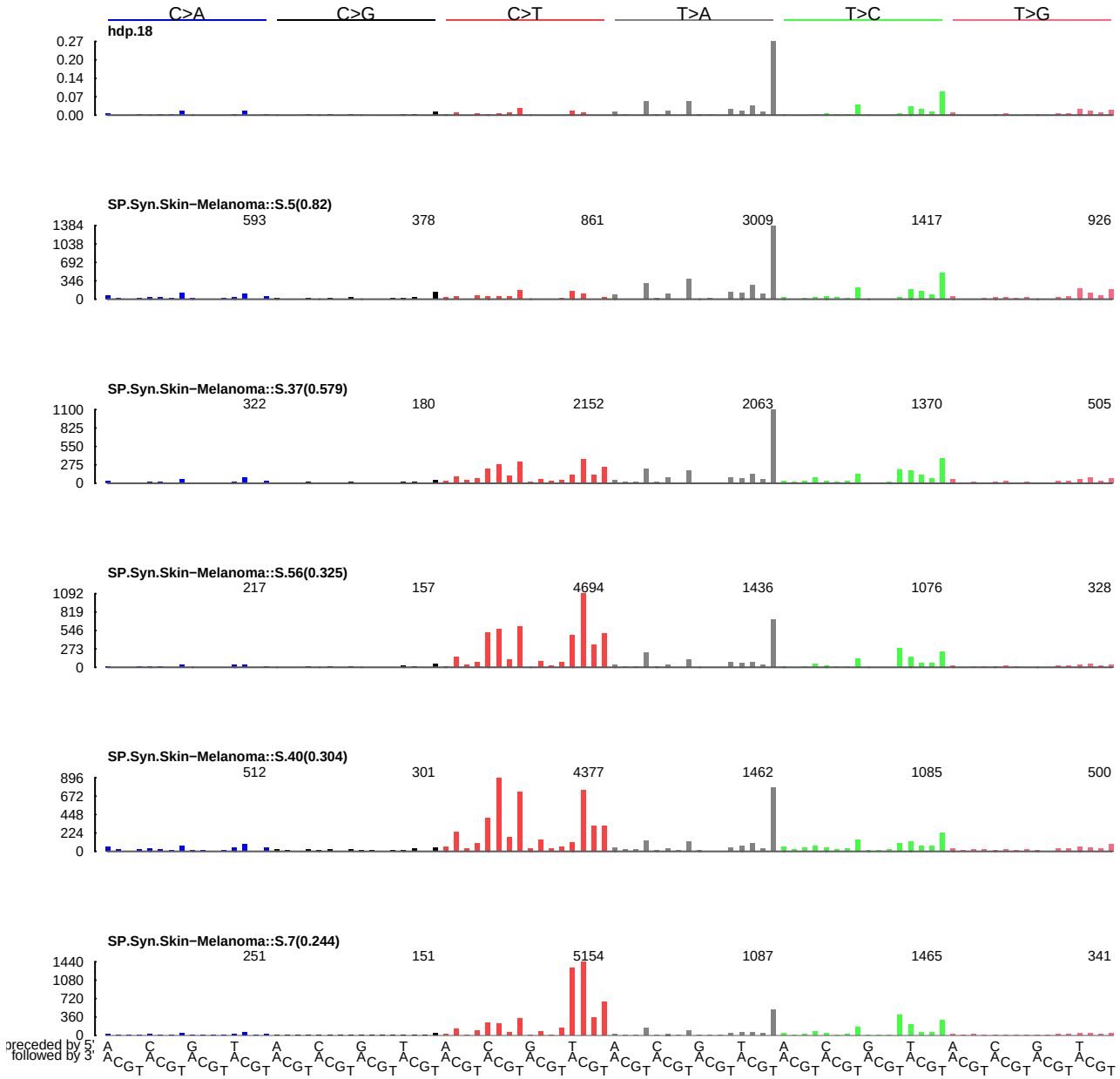

hdp.16
0.8
0.6
0.4
0.2
0.0
Proportion of exposure
0
1000
2000
3000
4000
Exposure

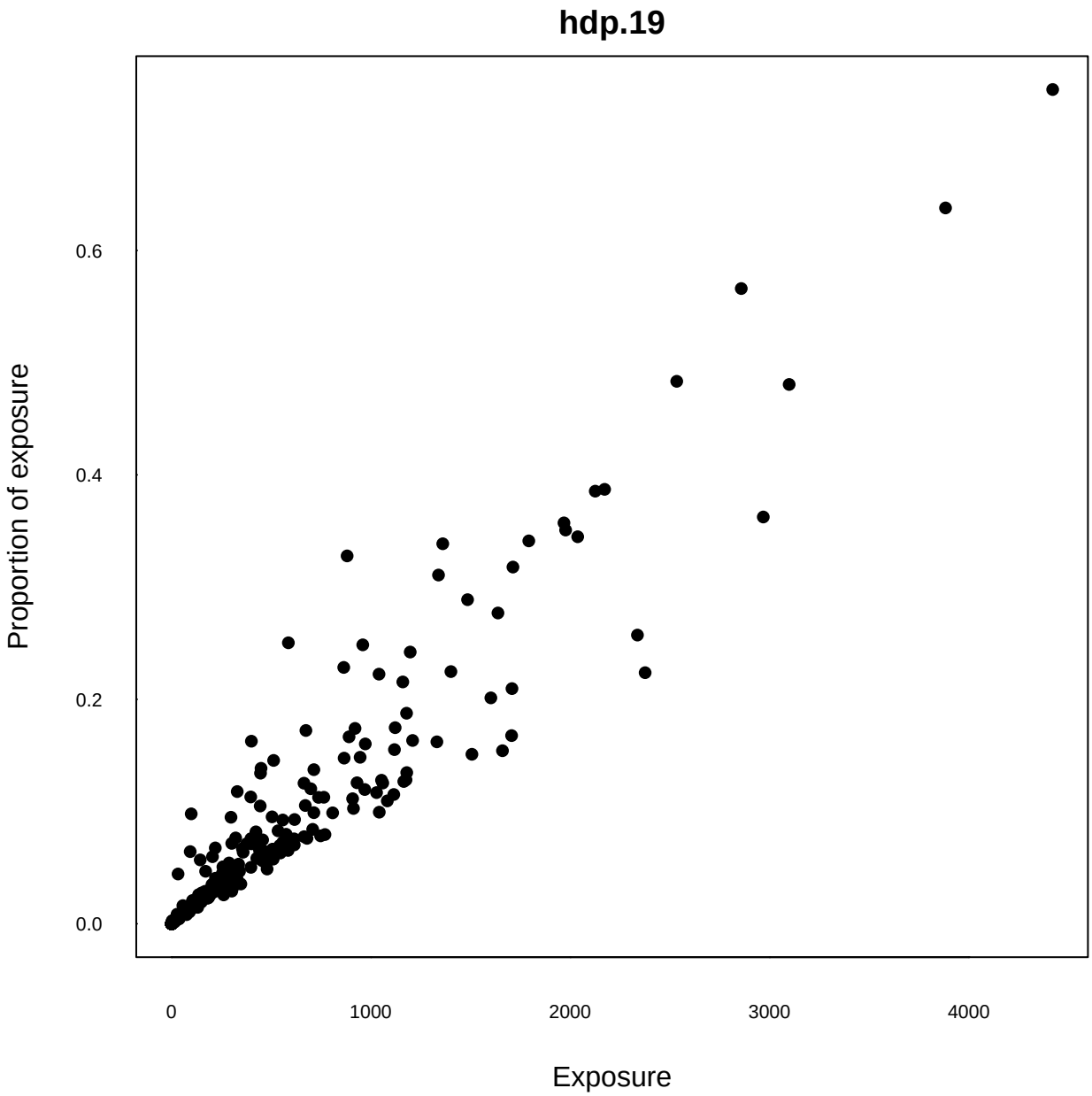

C>A
C>G
C>T
T>A
T>C
T>G
hdp.16
0.15
0.11
0.08
0.04
0.00
SP.Syn.Kidney−RCC::S.33(0.771)
355
247
766
3065
589
353
532
399
266
133
0
SP.Syn.Liver−HCC::S.52(0.332)
509
487
1348
1815
1958
397
420
315
210
105
0
SP.Syn.Liver−HCC::S.43(0.062)
883
426
1130
798
3022
358
416
312
208
104
0
SP.Syn.Lung−AdenoCA::S.24(0.04)
4221
611
884
1351
482
175
568
426
284
142
0
SP.Syn.Lung−AdenoCA::S.34(0.027)
3334
1543
1129
1100
624
326
464
348
232
116
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T

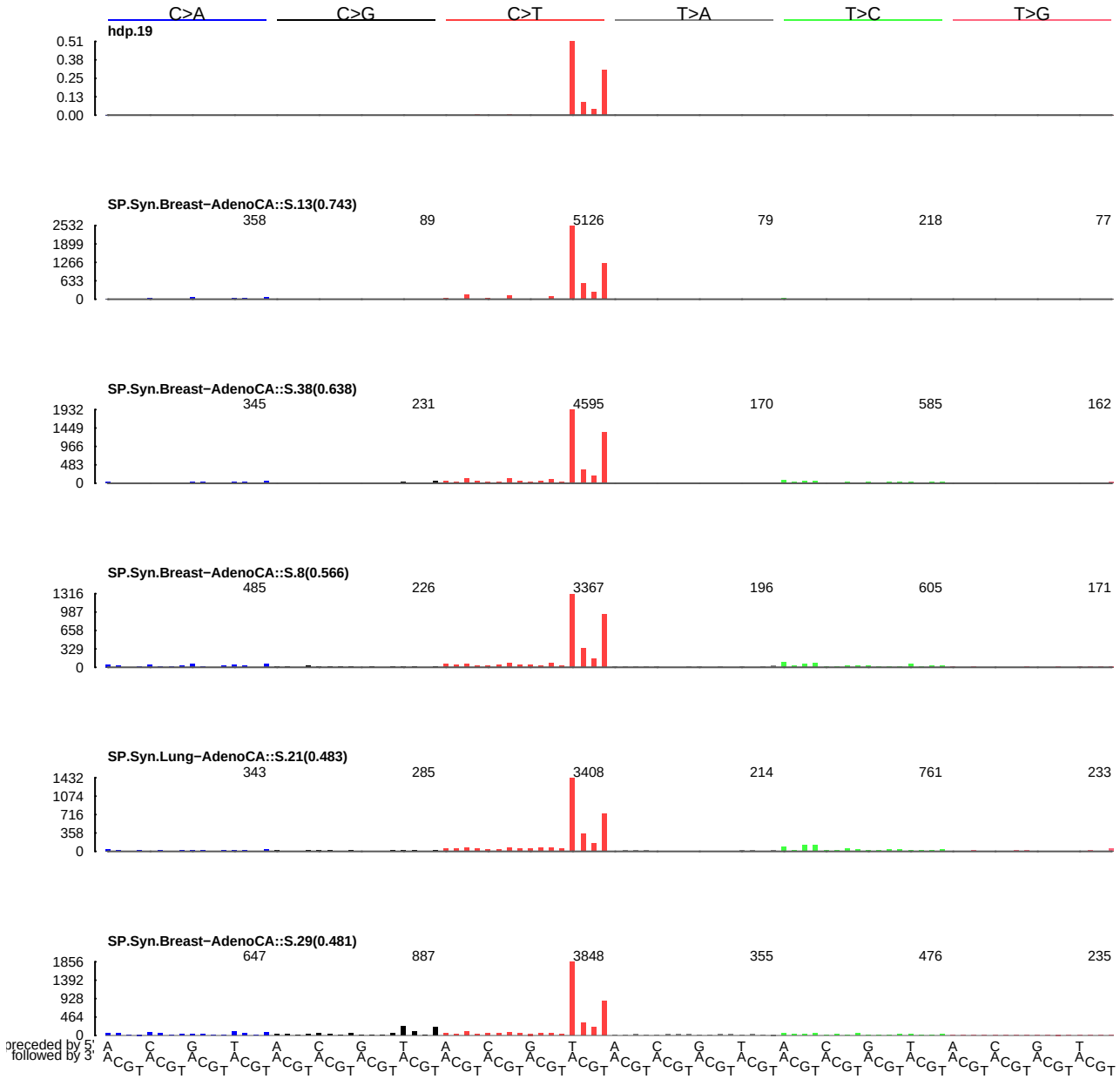

hdp.17
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure

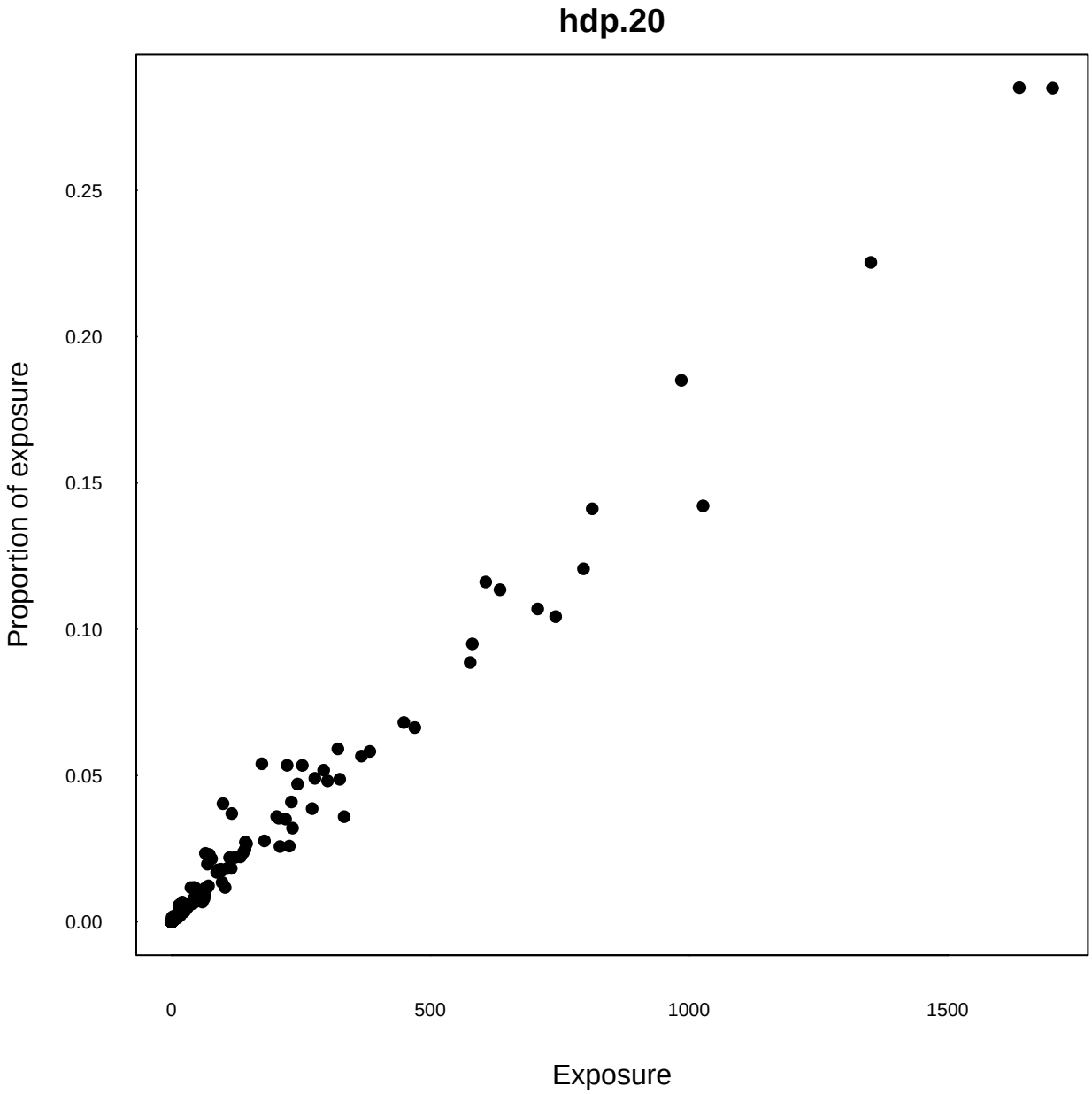

C>A
C>G
C>T
T>A
T>C
T>G
hdp.17
0.03
0.02
0.02
0.01
0.00
SP.Syn.Kidney−RCC::S.1(0.948)
1272
749
1519
652
851
660
228
171
114
57
0
SP.Syn.Kidney−RCC::S.54(0.938)
1150
731
1156
499
919
704
160
120
80
40
0
SP.Syn.Kidney−RCC::S.15(0.919)
1141
709
1403
621
849
702
160
120
80
40
0
SP.Syn.Kidney−RCC::S.9(0.917)
1123
721
1446
617
855
688
168
126
84
42
0
SP.Syn.Kidney−RCC::S.19(0.913)
1142
753
1355
571
937
689
184
138
92
46
0
preceded by 5'
followed by 3'

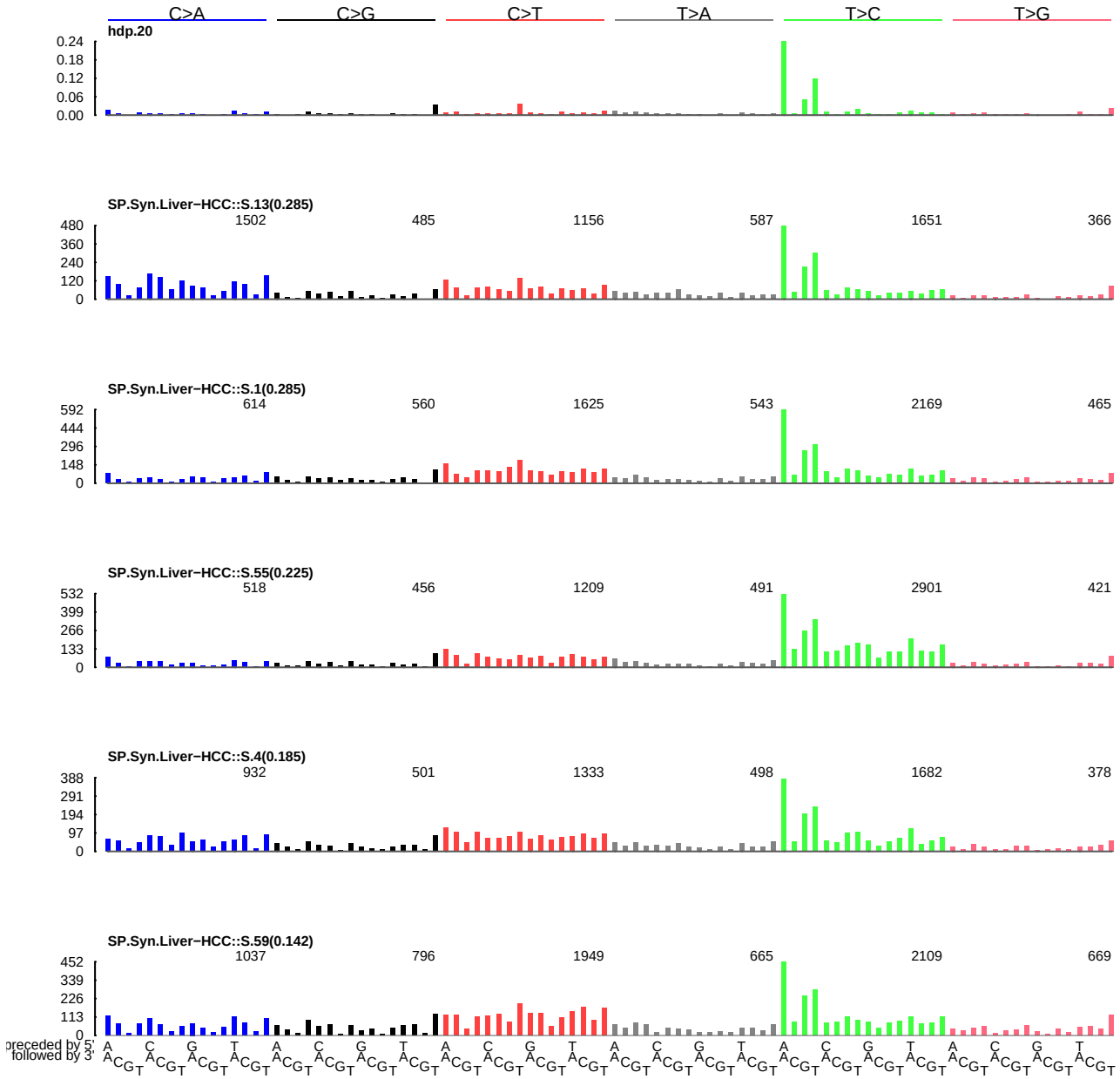

hdp.18
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
6000
Exposure

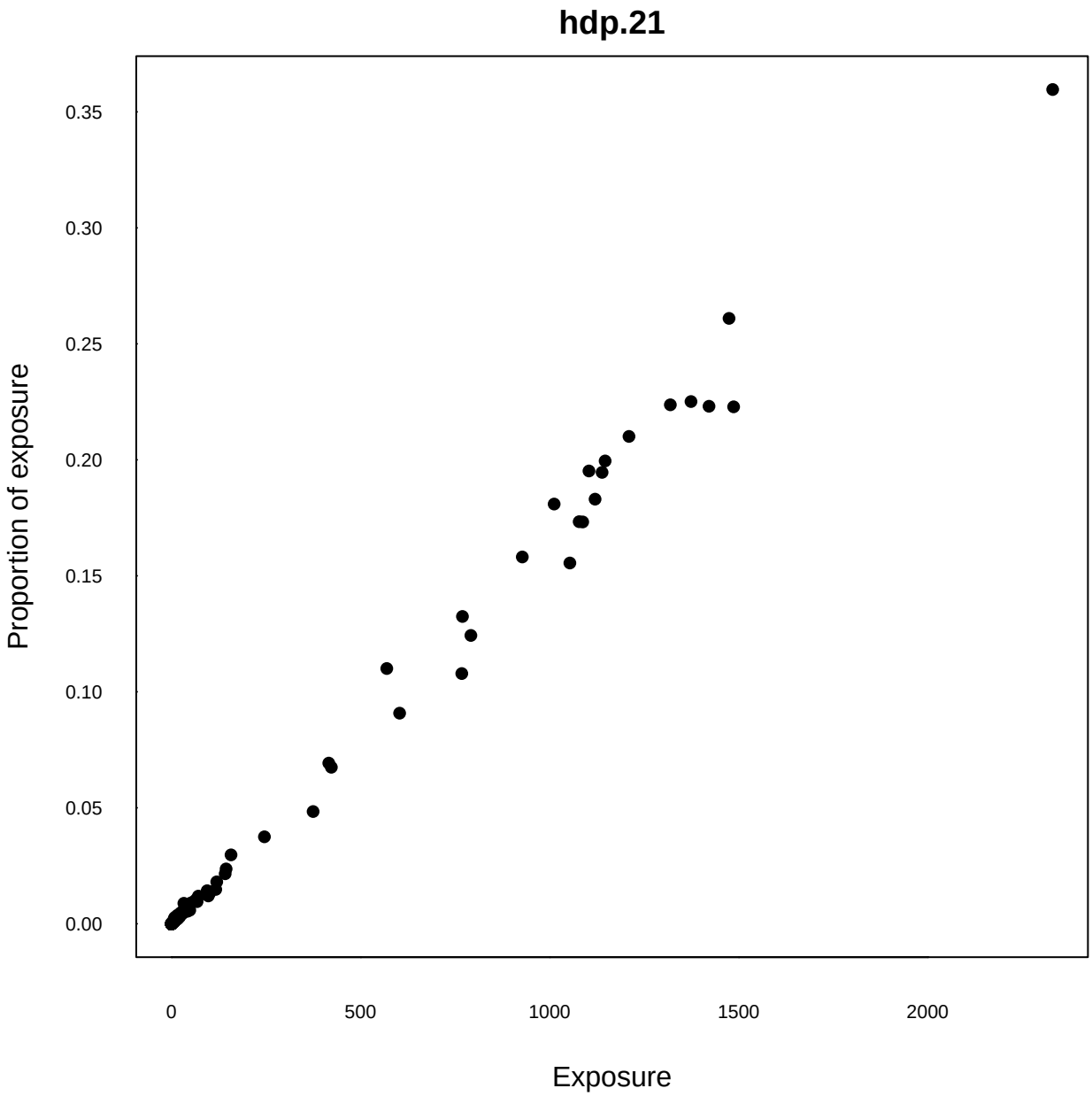

C>A
C>G
C>T
T>A
T>C
T>G
hdp.18
0.27
0.20
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.5(0.82)
593
378
861
3009
1417
926
1384
1038
692
346
0
SP.Syn.Skin−Melanoma::S.37(0.579)
322
180
2152
2063
1370
505
1100
825
550
275
0
SP.Syn.Skin−Melanoma::S.56(0.325)
217
157
4694
1436
1076
328
1092
819
546
273
0
SP.Syn.Skin−Melanoma::S.40(0.304)
512
301
4377
1462
1085
500
896
672
448
224
0
SP.Syn.Skin−Melanoma::S.7(0.244)
251
151
5154
1087
1465
341
1440
1080
720
360
0
preceded by 5'
followed by 3'

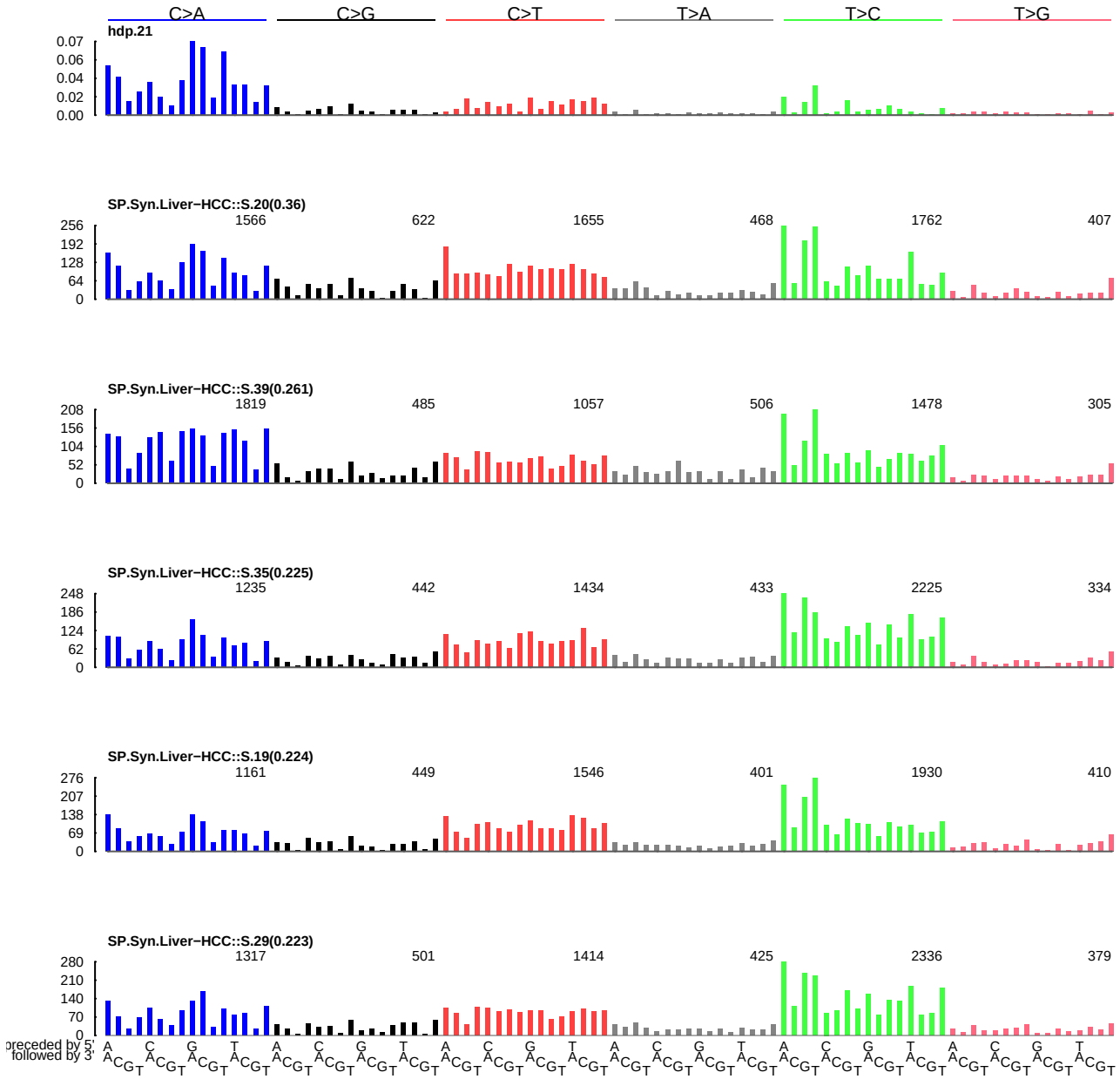

hdp.19
Proportion of exposure
0.0
0.2
0.4
0.6
0
1000
2000
3000
4000
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.19
0.51
0.38
0.25
0.13
0.00
SP.Syn.Breast−AdenoCA::S.13(0.743)
358
89
5126
79
218
77
2532
1899
1266
633
0
SP.Syn.Breast−AdenoCA::S.38(0.638)
345
231
4595
170
585
162
1932
1449
966
483
0
SP.Syn.Breast−AdenoCA::S.8(0.566)
485
226
3367
196
605
171
1316
987
658
329
0
SP.Syn.Lung−AdenoCA::S.21(0.483)
343
285
3408
214
761
233
1432
1074
716
358
0
SP.Syn.Breast−AdenoCA::S.29(0.481)
647
887
3848
355
476
235
1856
1392
928
464
0
preceded by 5'
followed by 3'


hdp.20
Proportion of exposure
0.00
0.05
0.10
0.15
0.20
0.25
0
500
1000
1500
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.20
0.24
0.18
0.12
0.06
0.00
SP.Syn.Liver−HCC::S.13(0.285)
1502
485
1156
587
1651
366
480
360
240
120
0
SP.Syn.Liver−HCC::S.1(0.285)
614
560
1625
543
2169
465
592
444
296
148
0
SP.Syn.Liver−HCC::S.55(0.225)
518
456
1209
491
2901
421
532
399
266
133
0
SP.Syn.Liver−HCC::S.4(0.185)
932
501
1333
498
1682
378
388
291
194
97
0
SP.Syn.Liver−HCC::S.59(0.142)
1037
796
1949
665
2109
669
452
339
226
113
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T


hdp.21
Proportion of exposure
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0
500
1000
1500
2000
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.21
0.07
0.06
0.04
0.02
0.00
SP.Syn.Liver−HCC::S.20(0.36)
1566
622
1655
468
1762
407
256
192
128
64
0
SP.Syn.Liver−HCC::S.39(0.261)
1819
485
1057
506
1478
305
208
156
104
52
0
SP.Syn.Liver−HCC::S.35(0.225)
1235
442
1434
433
2225
334
248
186
124
62
0
SP.Syn.Liver−HCC::S.19(0.224)
1161
449
1546
401
1930
410
276
207
138
69
0
SP.Syn.Liver−HCC::S.29(0.223)
1317
501
1414
425
2336
379
280
210
140
70
0
preceded by 5'
followed by 3'
A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T A C G T