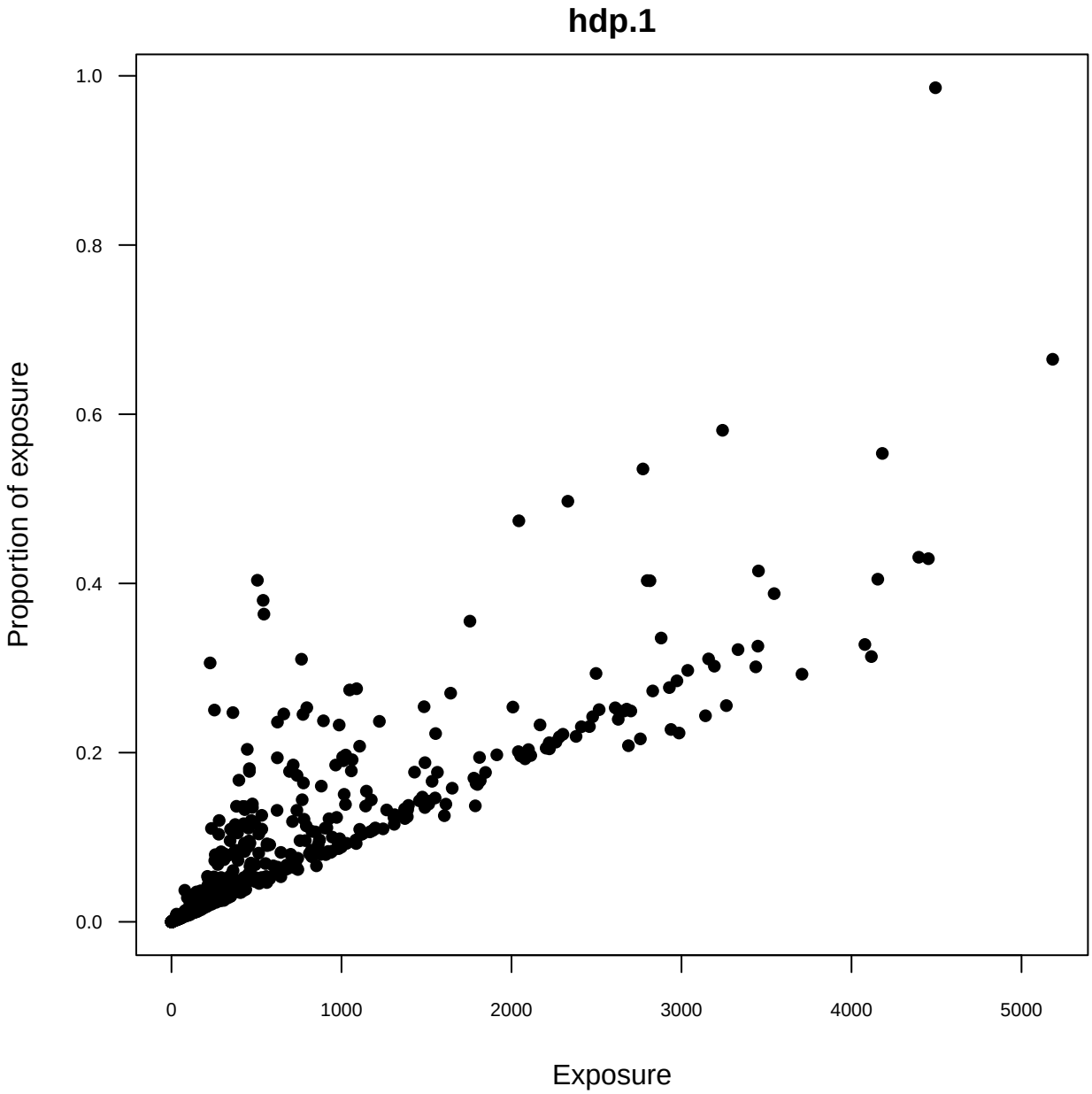
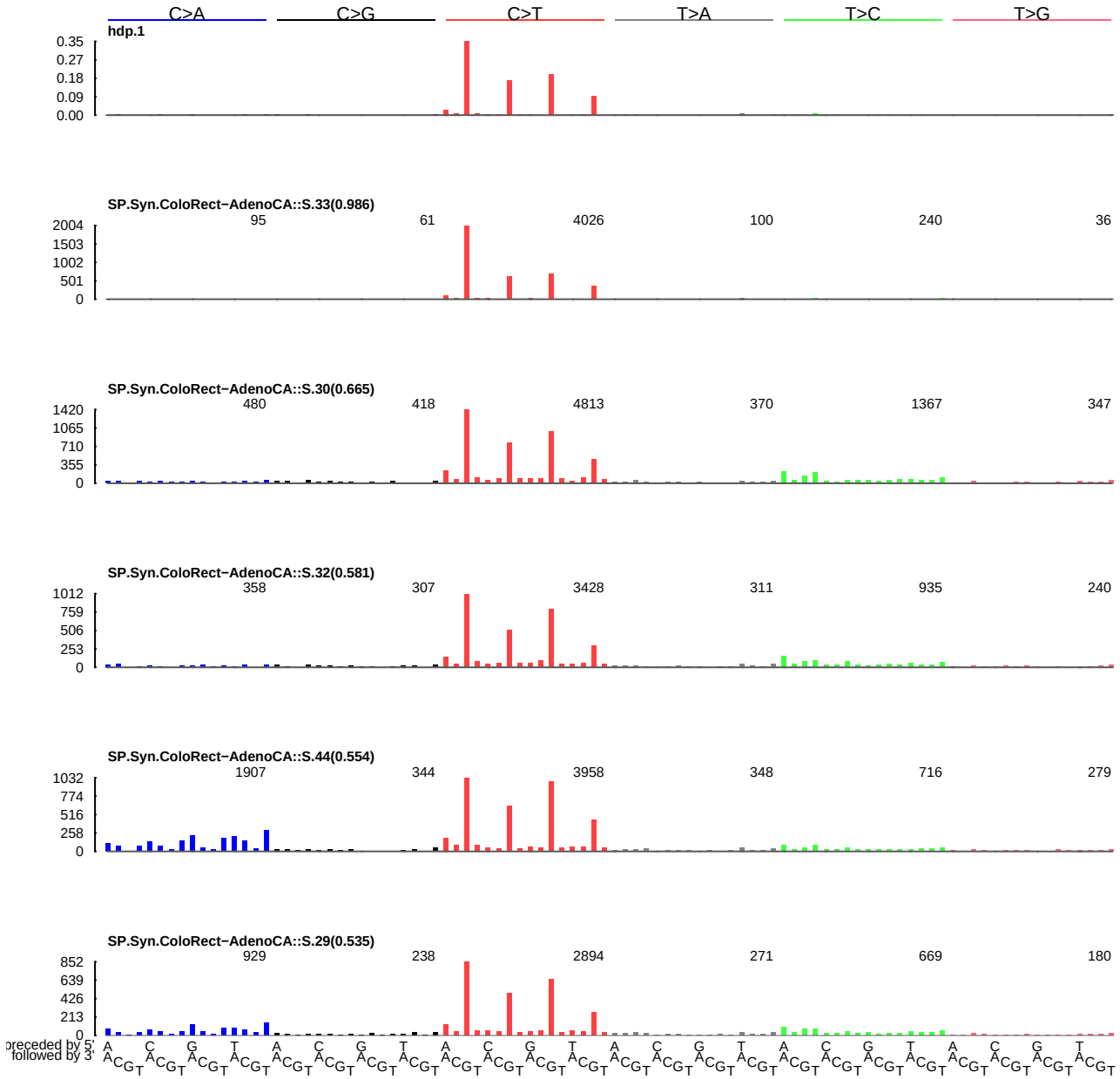
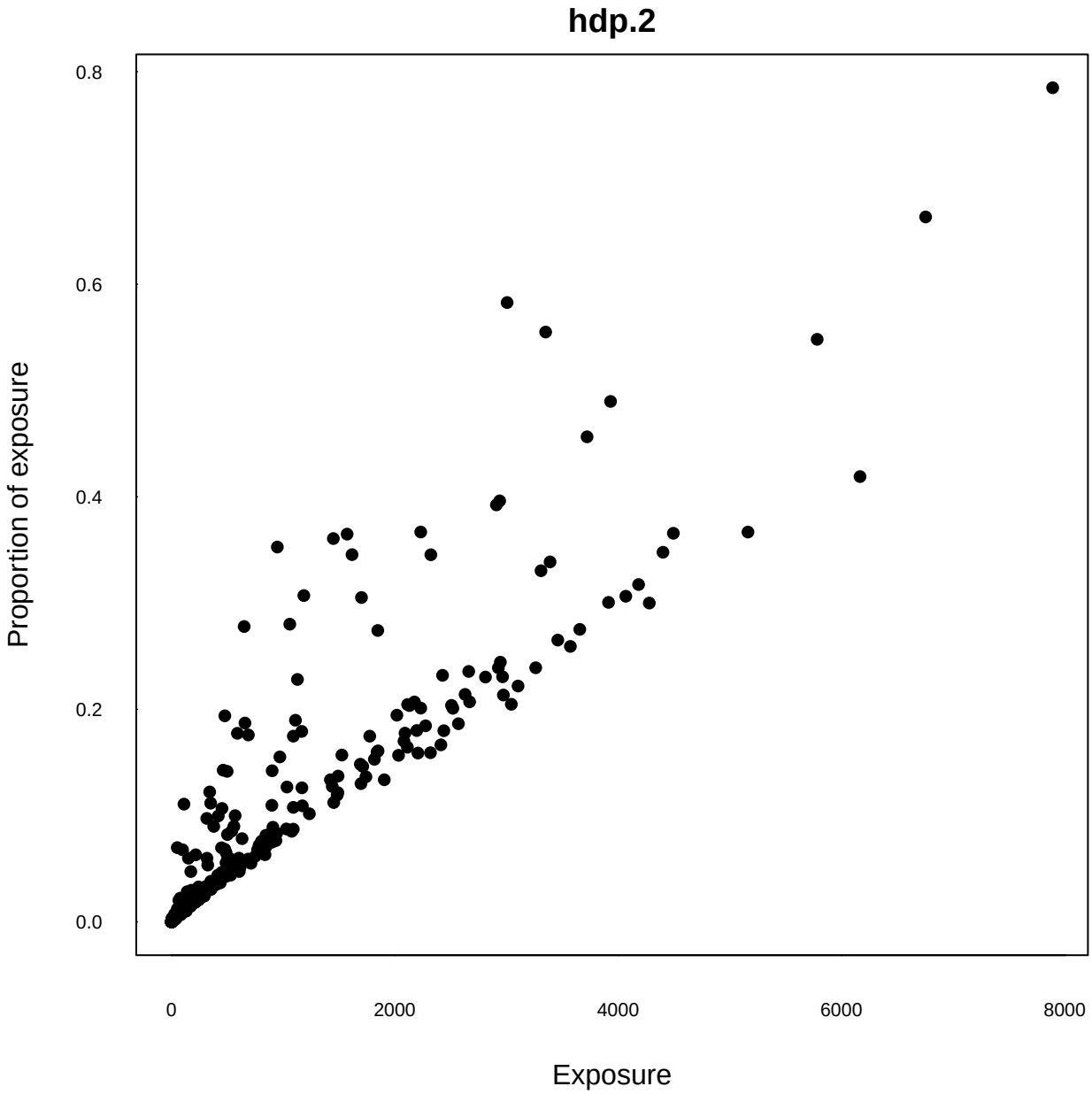
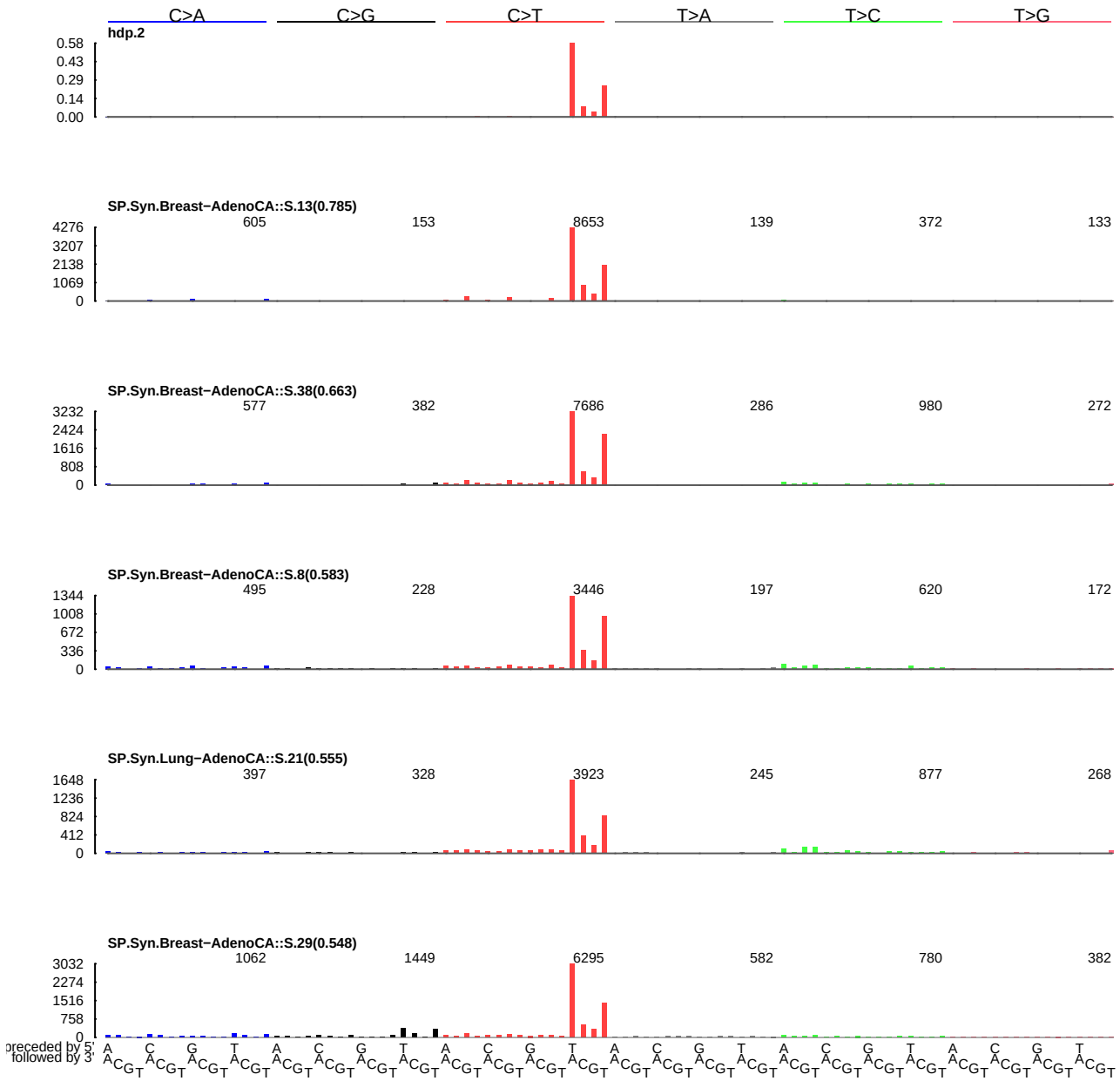
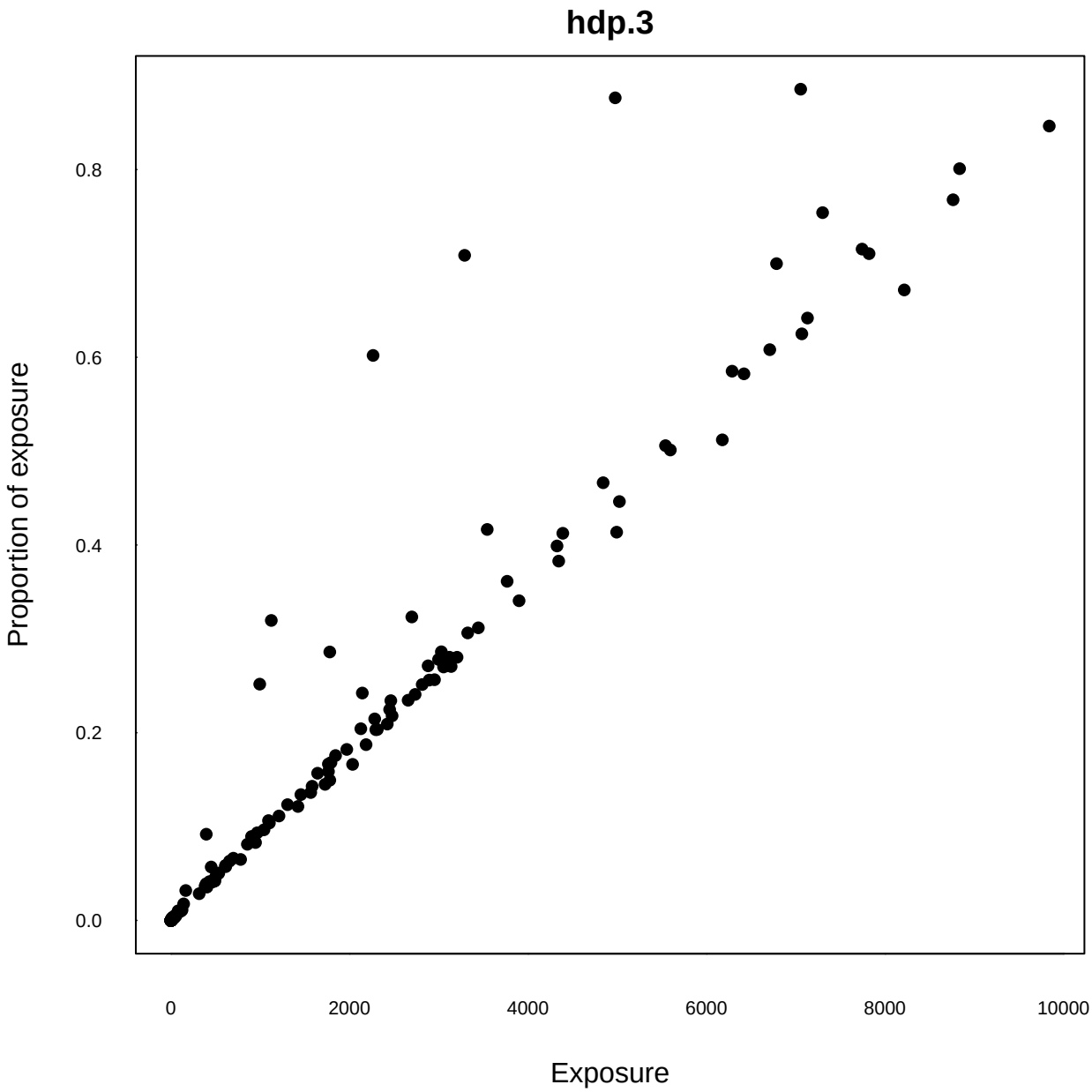
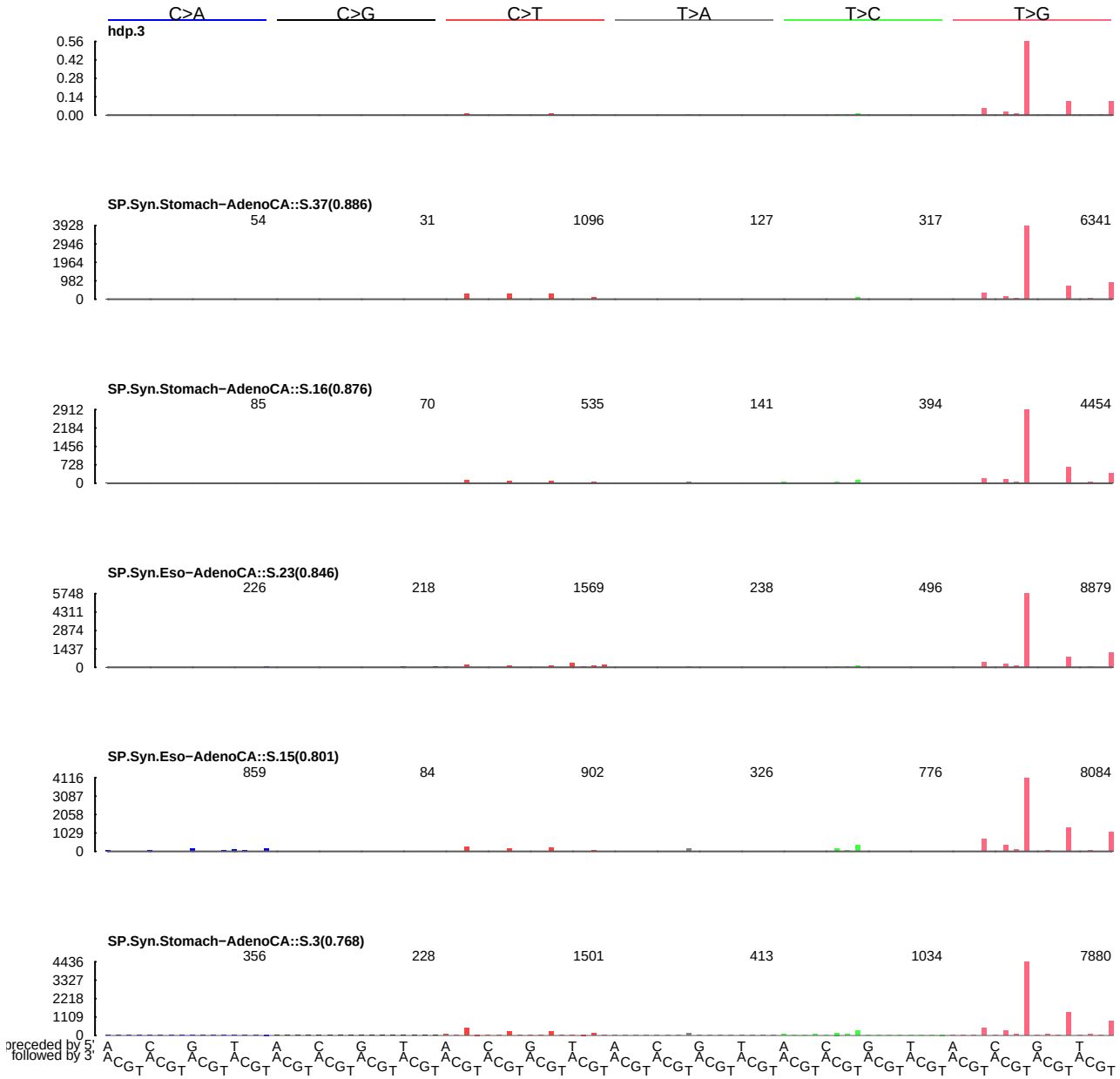

hdp.1
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
5000
Exposure

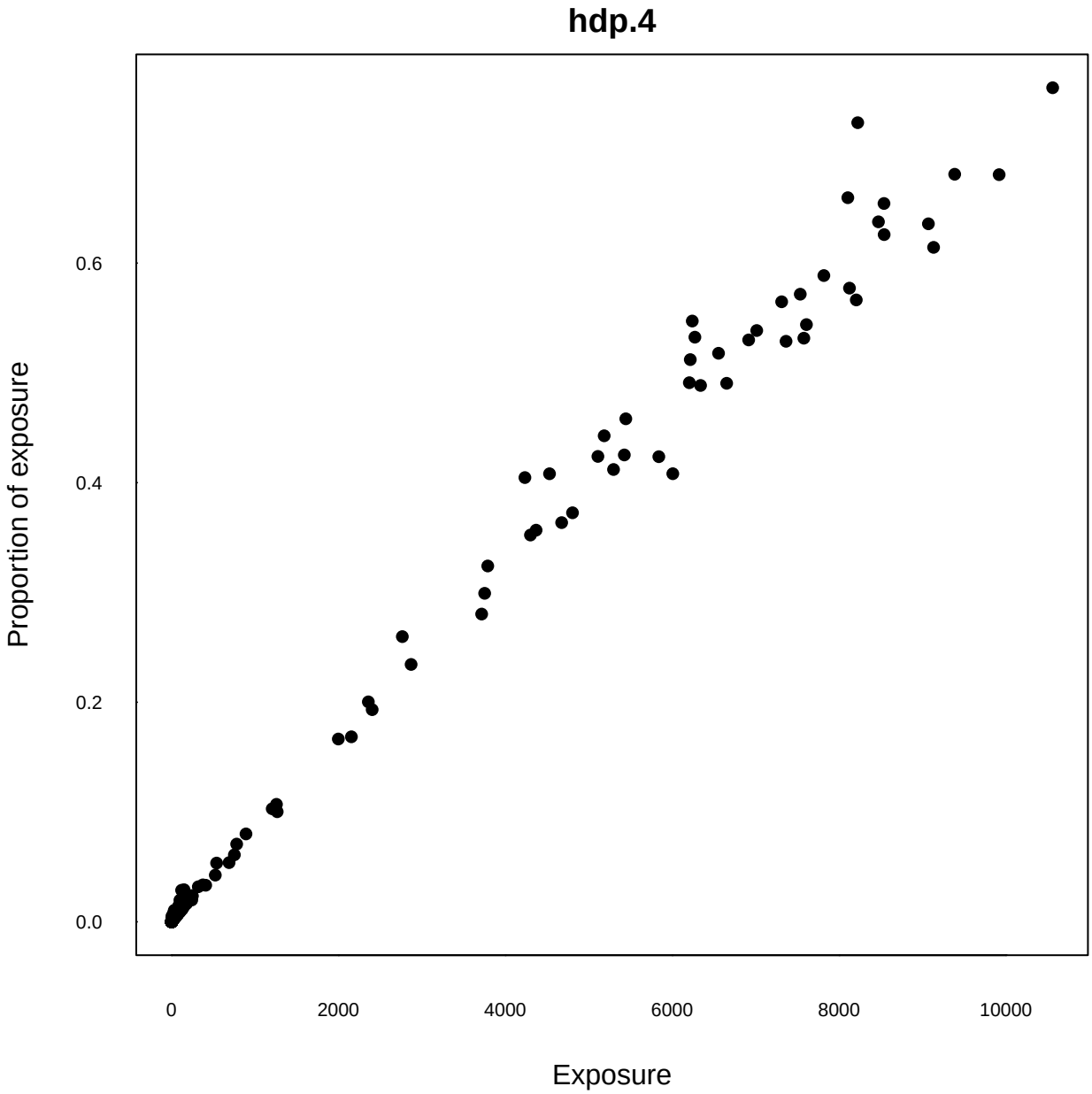

C>A
C>G
C>T
T>A
T>C
T>G
hdp.1
0.35
0.27
0.18
0.09
0.00
SP.Syn.ColoRect−AdenoCA::S.33(0.986)
95
61
4026
100
240
36
2004
1503
1002
501
0
SP.Syn.ColoRect−AdenoCA::S.30(0.665)
480
418
4813
370
1367
347
1420
1065
710
355
0
SP.Syn.ColoRect−AdenoCA::S.32(0.581)
358
307
3428
311
935
240
1012
759
506
253
0
SP.Syn.ColoRect−AdenoCA::S.44(0.554)
1907
344
3958
348
716
279
1032
774
516
258
0
SP.Syn.ColoRect−AdenoCA::S.29(0.535)
929
238
2894
271
669
180
852
639
426
213
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

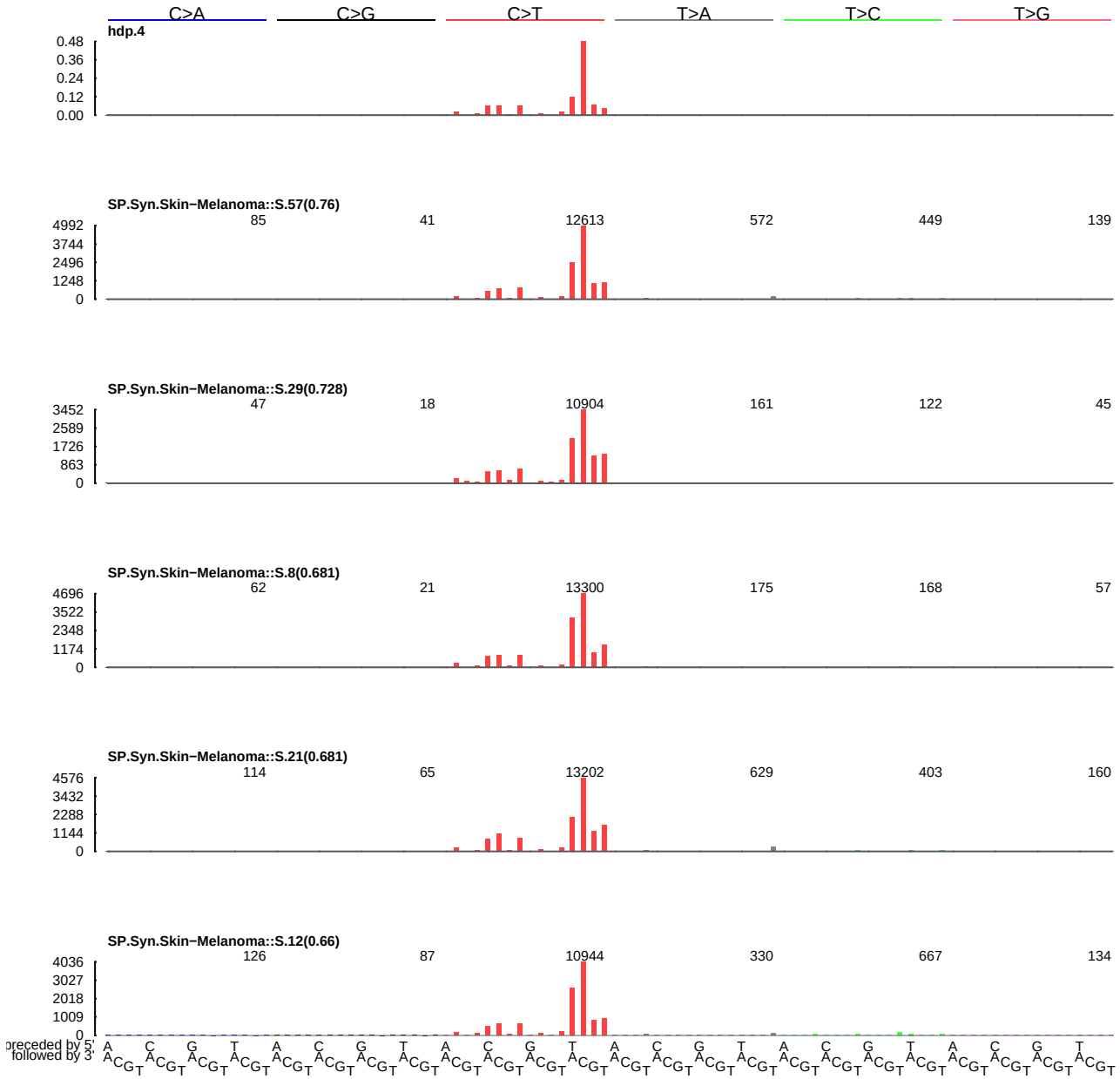

hdp.2
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

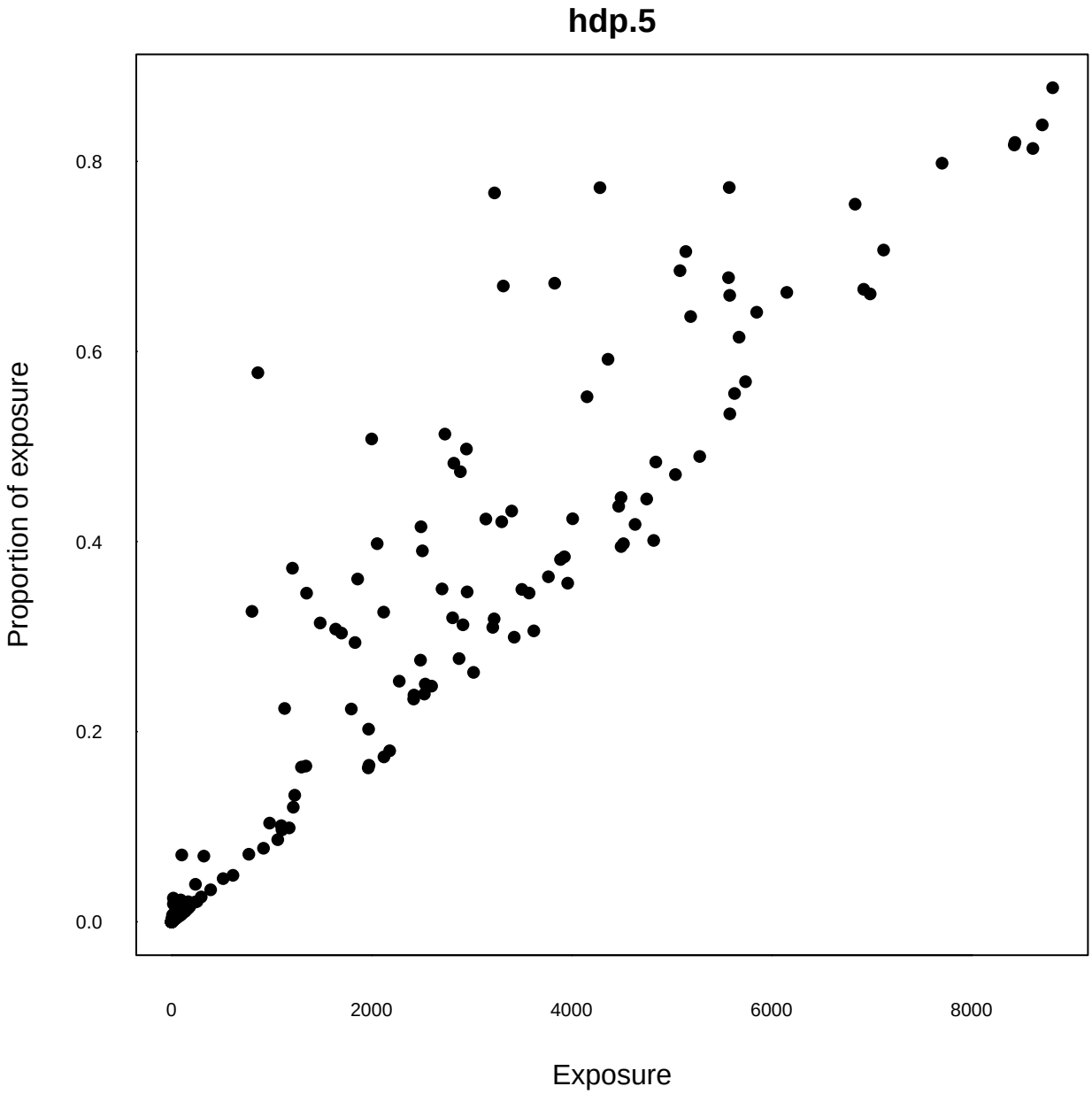

C>A
C>G
C>T
T>A
T>C
T>G
hdp.2
0.58
0.43
0.29
0.14
0.00
SP.Syn.Breast−AdenoCA::S.13(0.785)
605
153
8653
139
372
133
4276
3207
2138
1069
0
SP.Syn.Breast−AdenoCA::S.38(0.663)
577
382
7686
286
980
272
3232
2424
1616
808
0
SP.Syn.Breast−AdenoCA::S.8(0.583)
495
228
3446
197
620
172
1344
1008
672
336
0
SP.Syn.Lung−AdenoCA::S.21(0.555)
397
328
3923
245
877
268
1648
1236
824
412
0
SP.Syn.Breast−AdenoCA::S.29(0.548)
1062
1449
6295
582
780
382
3032
2274
1516
758
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

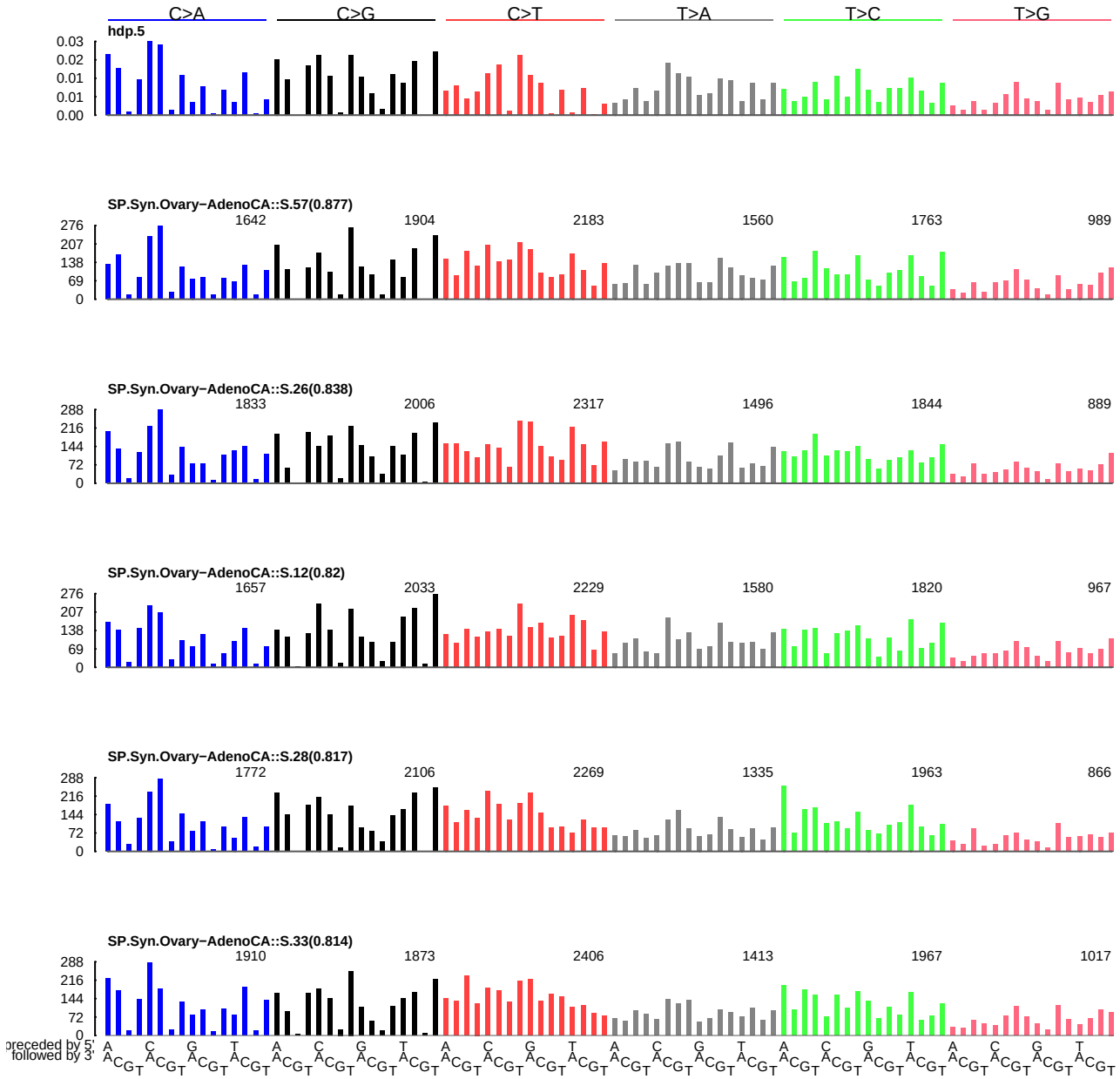

hdp.3
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
10000
Exposure

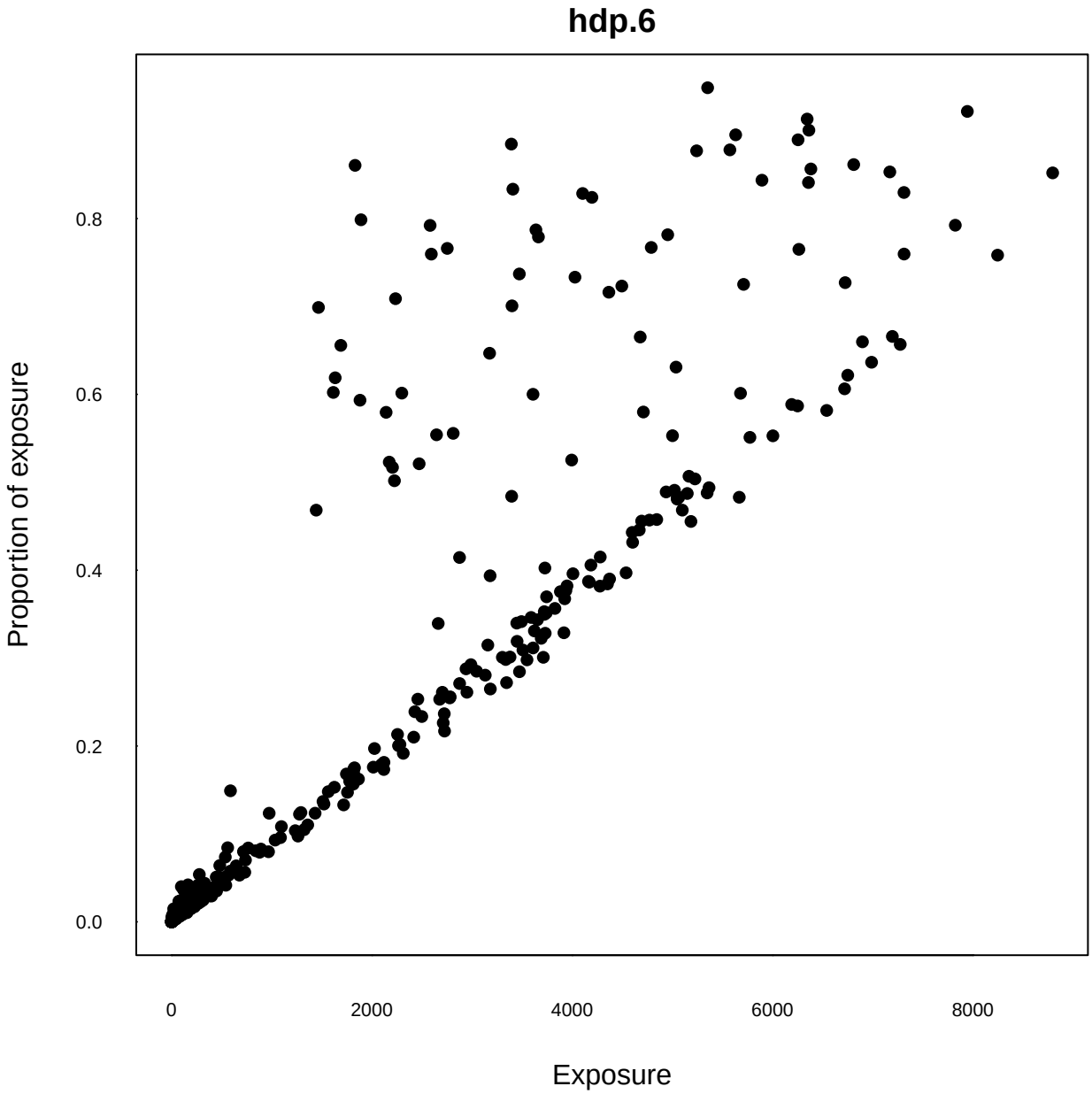

C>A
C>G
C>T
T>A
T>C
T>G
hdp.3
0.56
0.42
0.28
0.14
0.00
SP.Syn.Stomach−AdenoCA::S.37(0.886)
54
31
1096
127
317
6341
3928
2946
1964
982
0
SP.Syn.Stomach−AdenoCA::S.16(0.876)
85
70
535
141
394
4454
2912
2184
1456
728
0
SP.Syn.Eso−AdenoCA::S.23(0.846)
226
218
1569
238
496
8879
5748
4311
2874
1437
0
SP.Syn.Eso−AdenoCA::S.15(0.801)
859
84
902
326
776
8084
4116
3087
2058
1029
0
SP.Syn.Stomach−AdenoCA::S.3(0.768)
356
228
1501
413
1034
7880
4436
3327
2218
1109
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

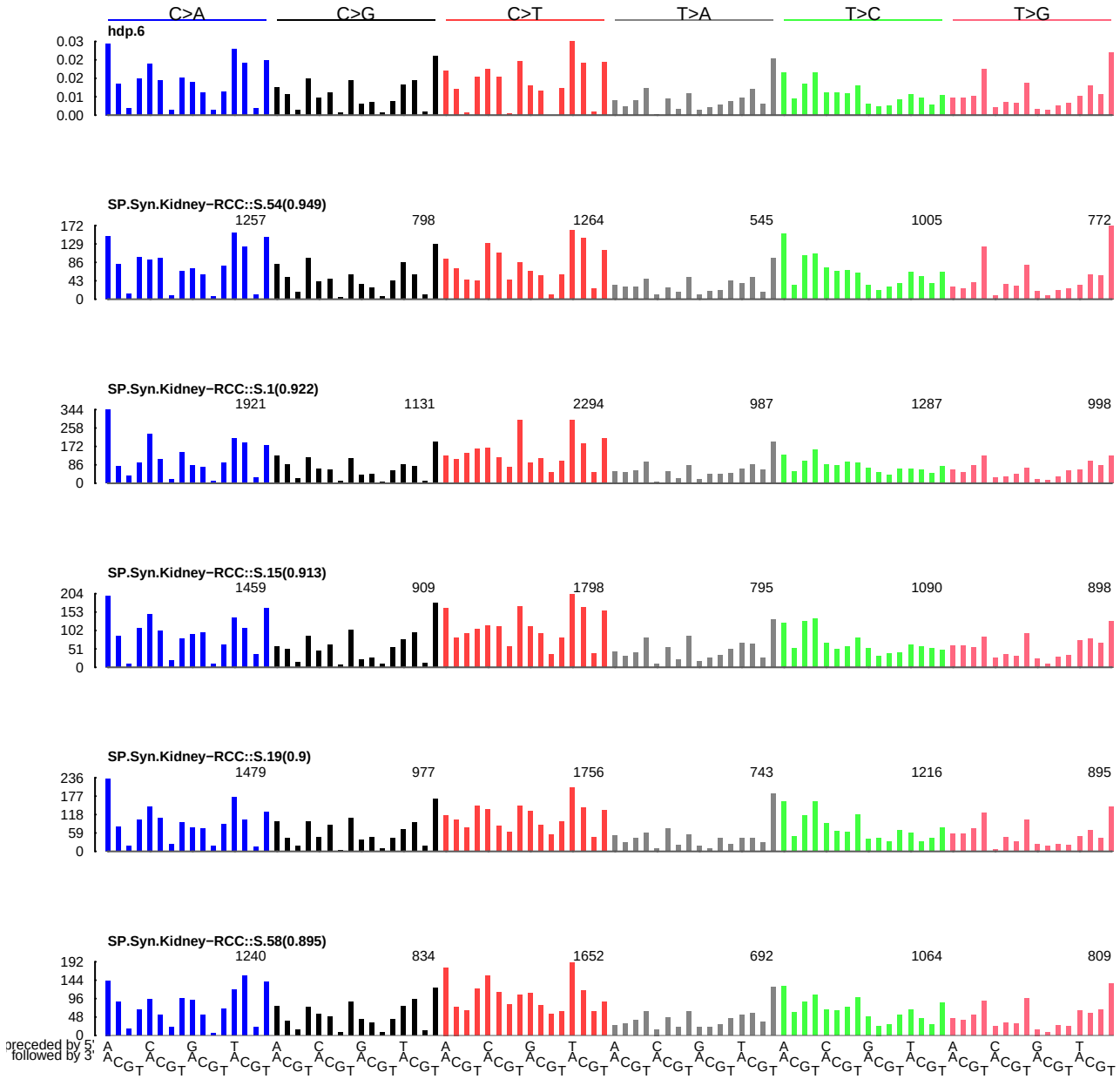

hdp.4
Proportion of exposure
0.0
0.2
0.4
0.6
0
2000
4000
6000
8000
10000
Exposure

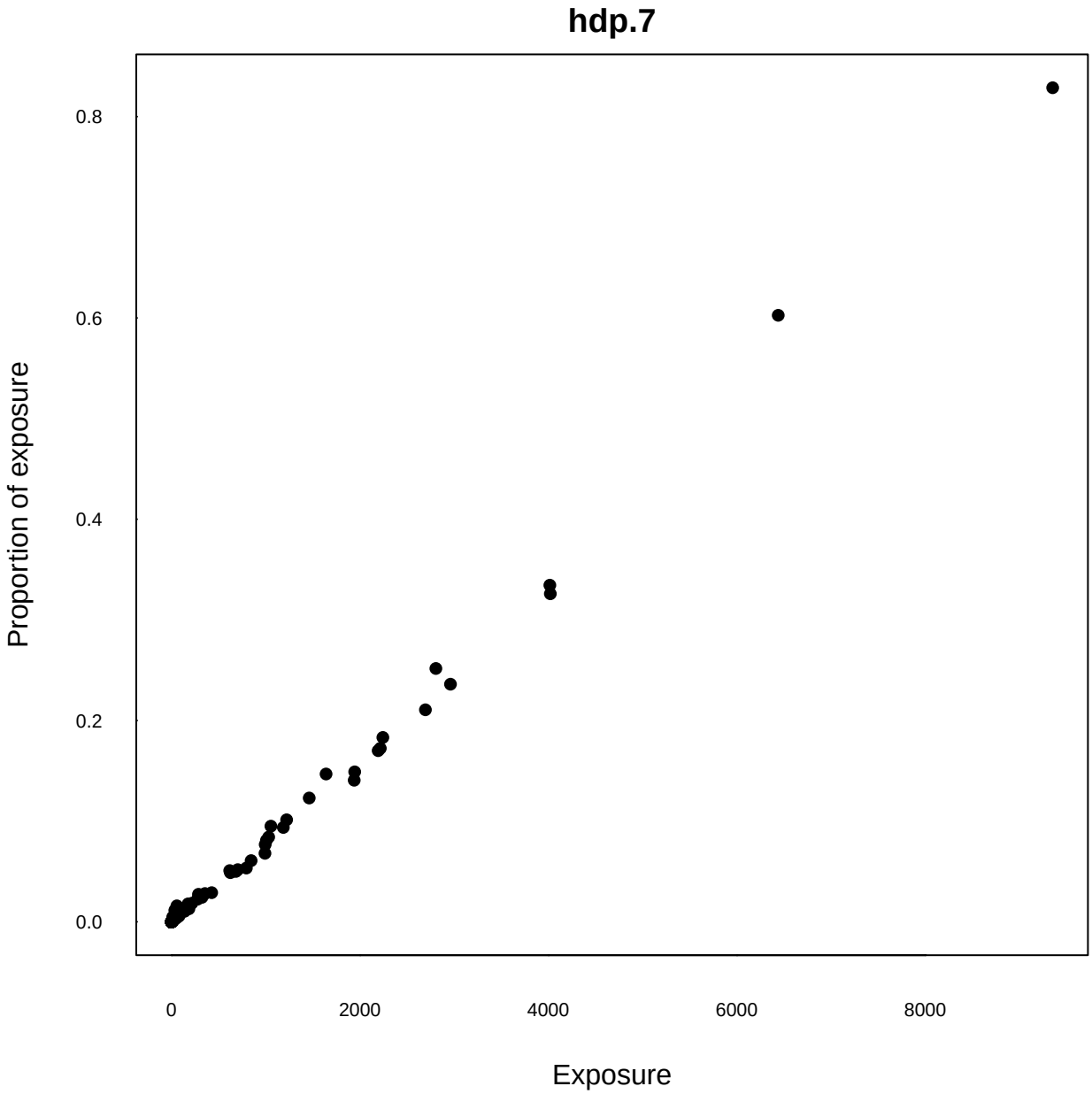

C>A
C>G
C>T
T>A
T>C
T>G
hdp.4
0.48
0.36
0.24
0.12
0.00
SP.Syn.Skin−Melanoma::S.57(0.76)
85
41
12613
572
449
139
4992
3744
2496
1248
0
SP.Syn.Skin−Melanoma::S.29(0.728)
47
18
10904
161
122
45
3452
2589
1726
863
0
SP.Syn.Skin−Melanoma::S.8(0.681)
62
21
13300
175
168
57
4696
3522
2348
1174
0
SP.Syn.Skin−Melanoma::S.21(0.681)
114
65
13202
629
403
160
4576
3432
2288
1144
0
SP.Syn.Skin−Melanoma::S.12(0.66)
126
87
10944
330
667
134
4036
3027
2018
1009
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

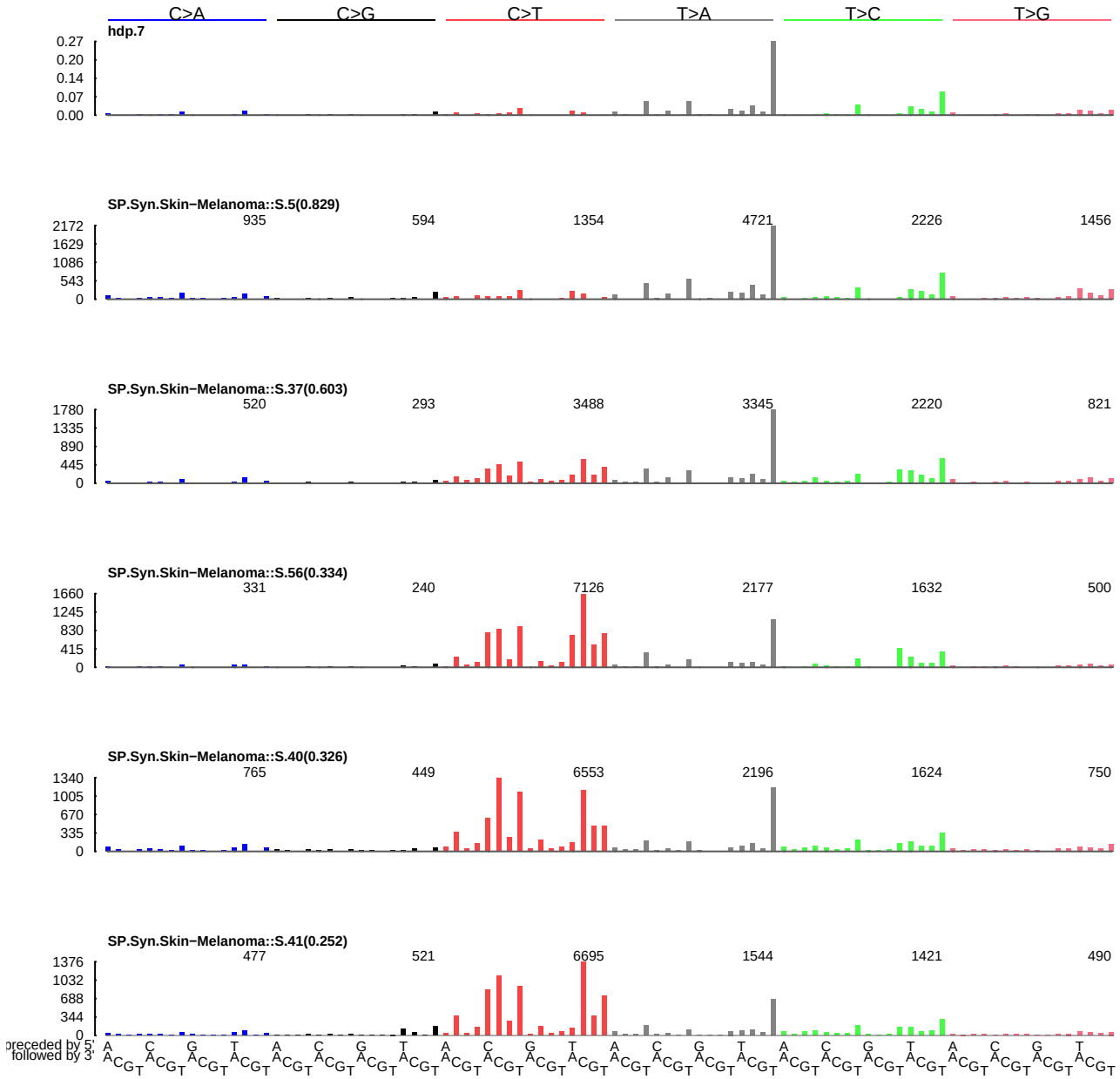

hdp.5
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

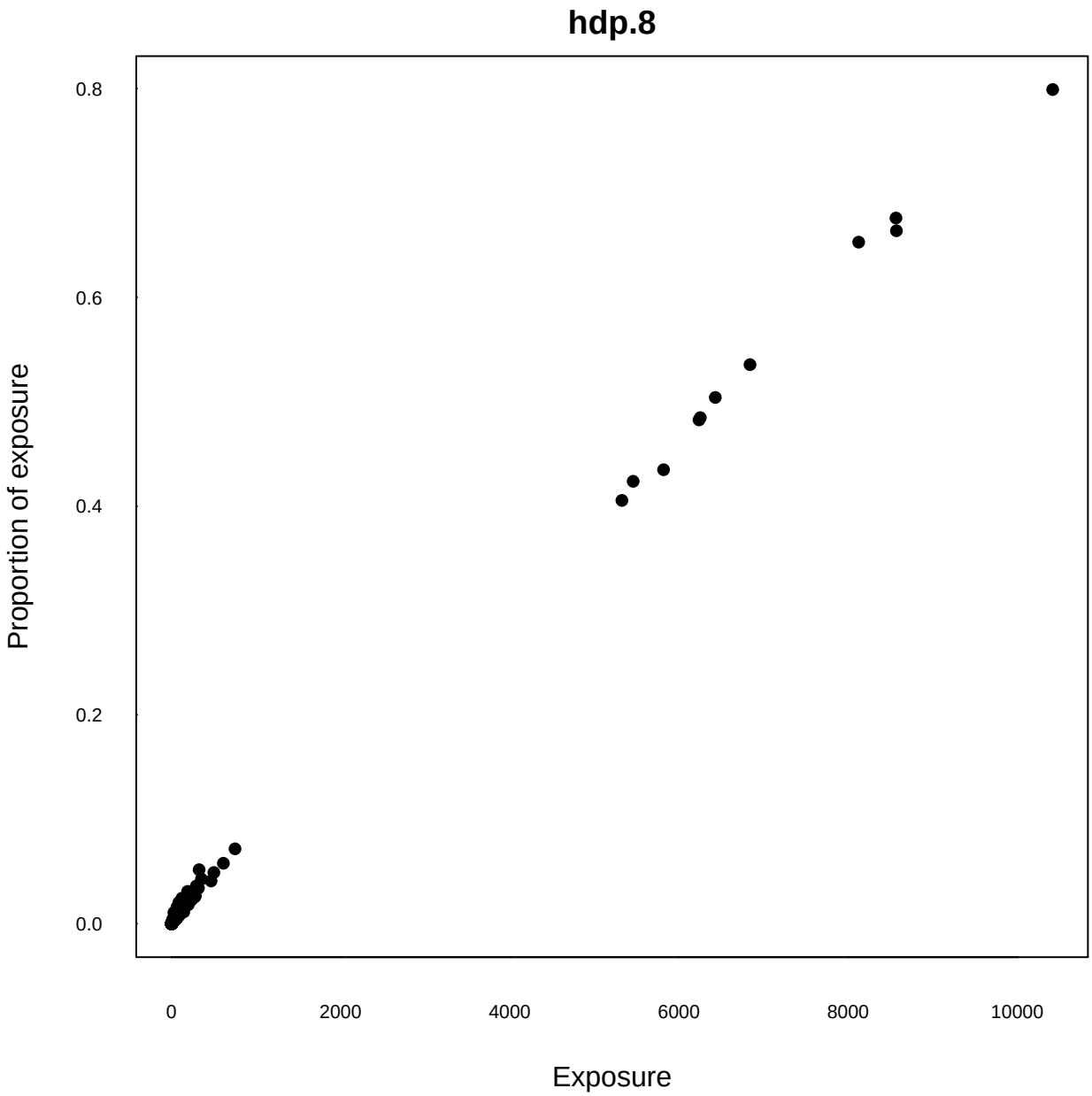

C>A
C>G
C>T
T>A
T>C
T>G
hdp.5
0.03
0.02
0.01
0.01
0.00
SP.Syn.Ovary−AdenoCA::S.57(0.877)
1642
1904
2183
1560
1763
989
276
207
138
69
0
SP.Syn.Ovary−AdenoCA::S.26(0.838)
1833
2006
2317
1496
1844
889
288
216
144
72
0
SP.Syn.Ovary−AdenoCA::S.12(0.82)
1657
2033
2229
1580
1820
967
276
207
138
69
0
SP.Syn.Ovary−AdenoCA::S.28(0.817)
1772
2106
2269
1335
1963
866
288
216
144
72
0
SP.Syn.Ovary−AdenoCA::S.33(0.814)
1910
1873
2406
1413
1967
1017
288
216
144
72
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

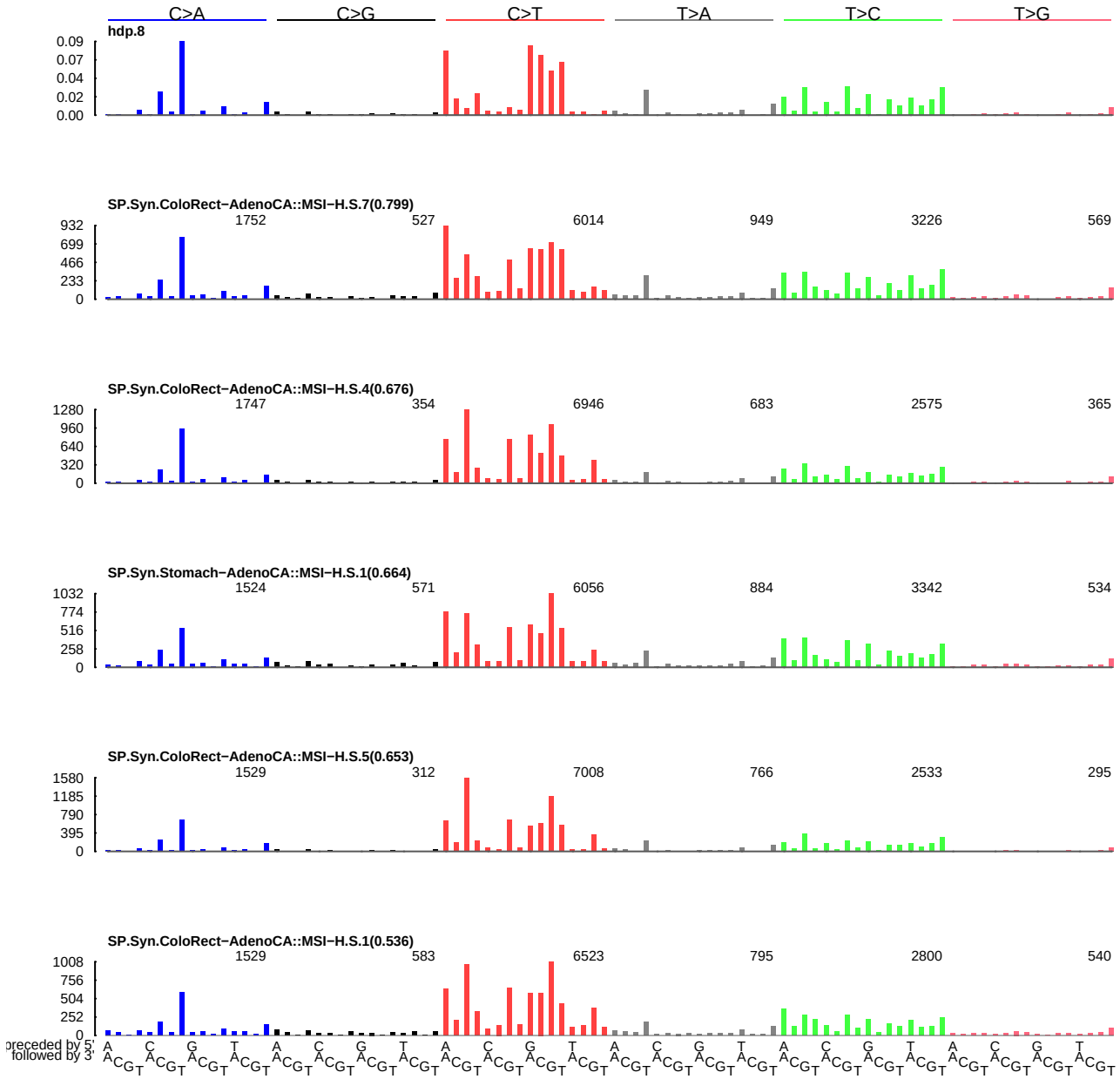

hdp.6
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

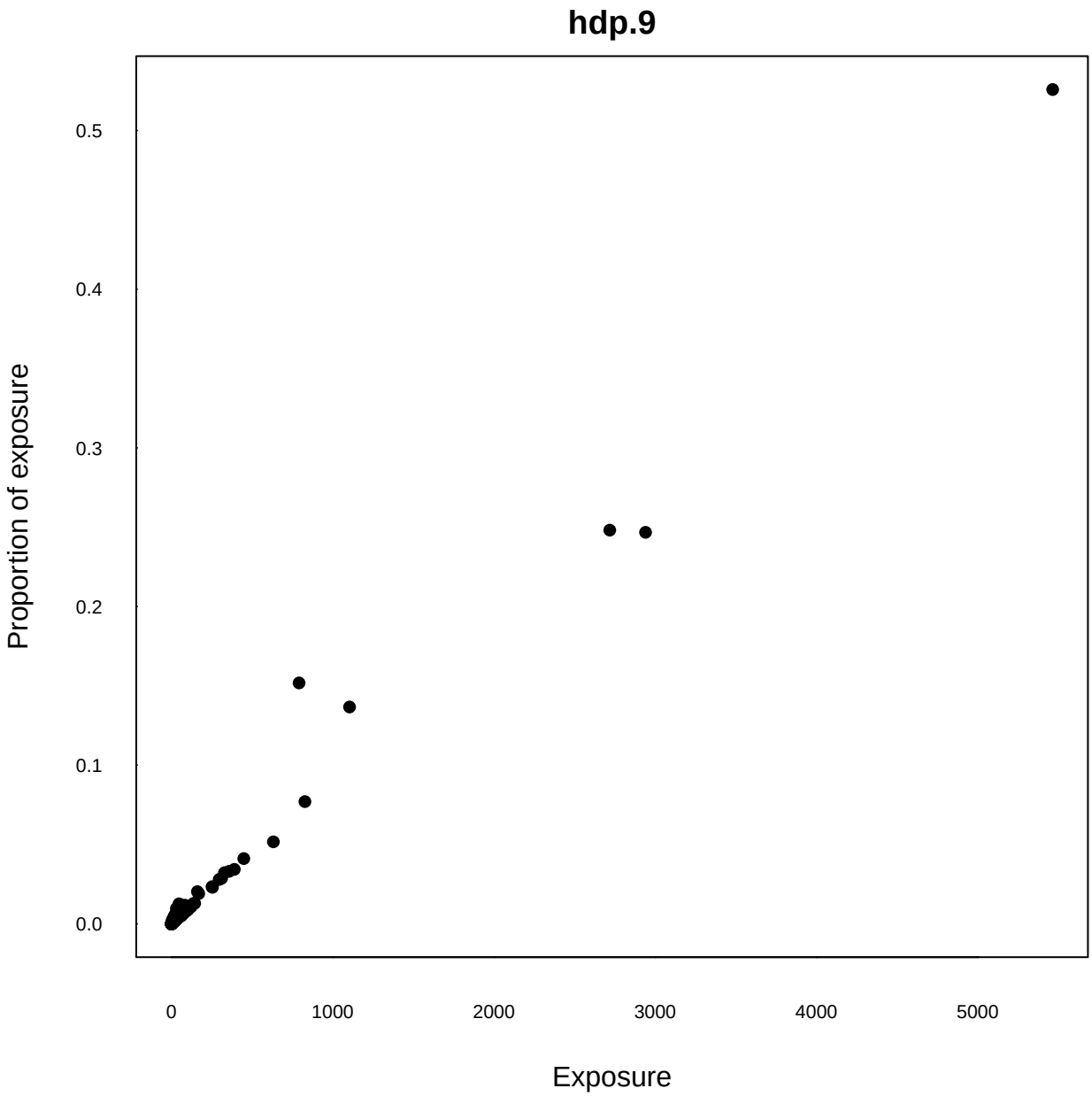

C>A
C>G
C>T
T>A
T>C
T>G
hdp.6
0.03
0.02
0.02
0.01
0.00
SP.Syn.Kidney−RCC::S.54(0.949)
1257
798
1264
545
1005
772
172
129
86
43
0
SP.Syn.Kidney−RCC::S.1(0.922)
1921
1131
2294
987
1287
998
344
258
172
86
0
SP.Syn.Kidney−RCC::S.15(0.913)
1459
909
1798
795
1090
898
204
153
102
51
0
SP.Syn.Kidney−RCC::S.19(0.9)
1479
977
1756
743
1216
895
236
177
118
59
0
SP.Syn.Kidney−RCC::S.58(0.895)
1240
834
1652
692
1064
809
192
144
96
48
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

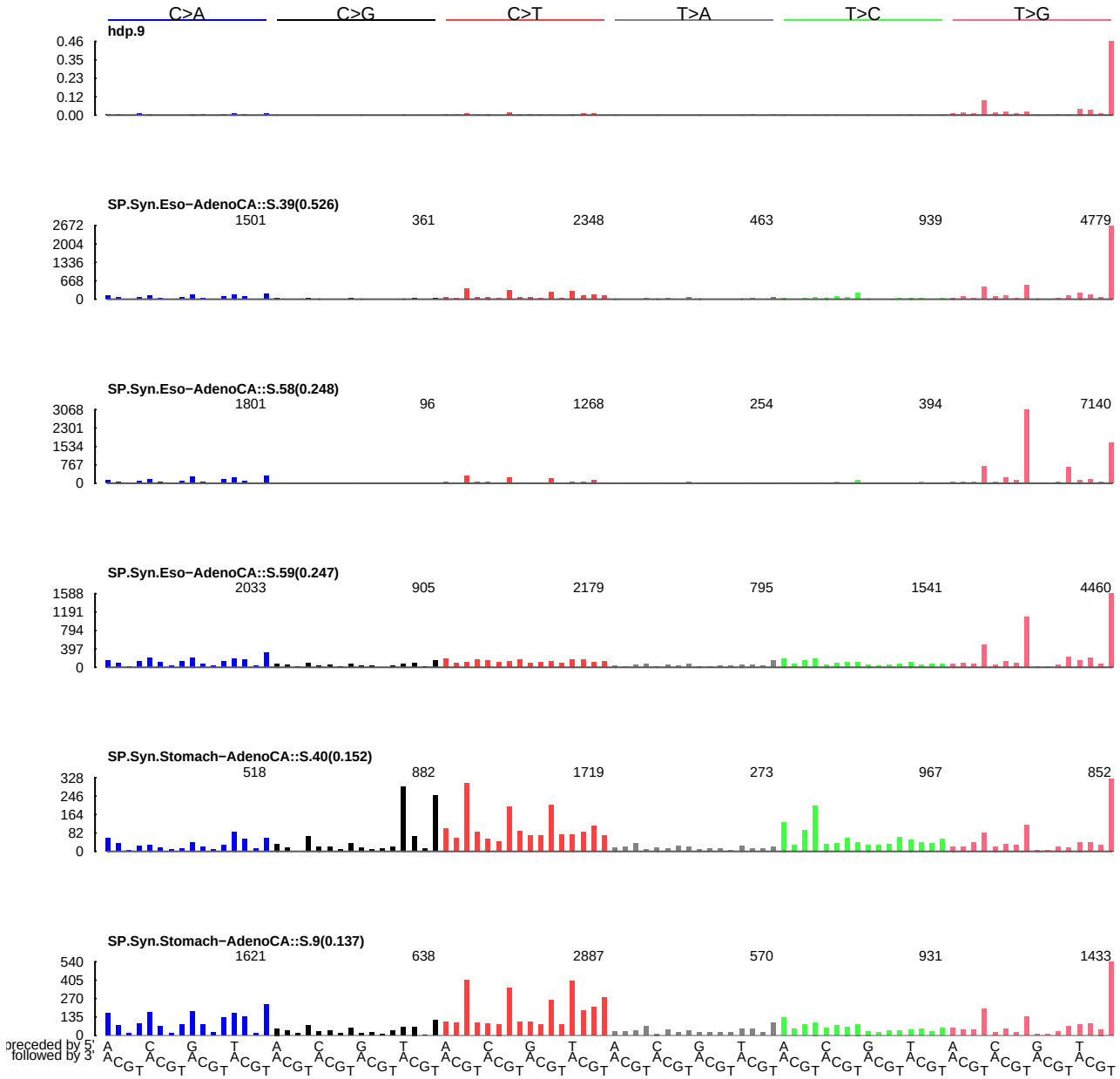

hdp.7
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

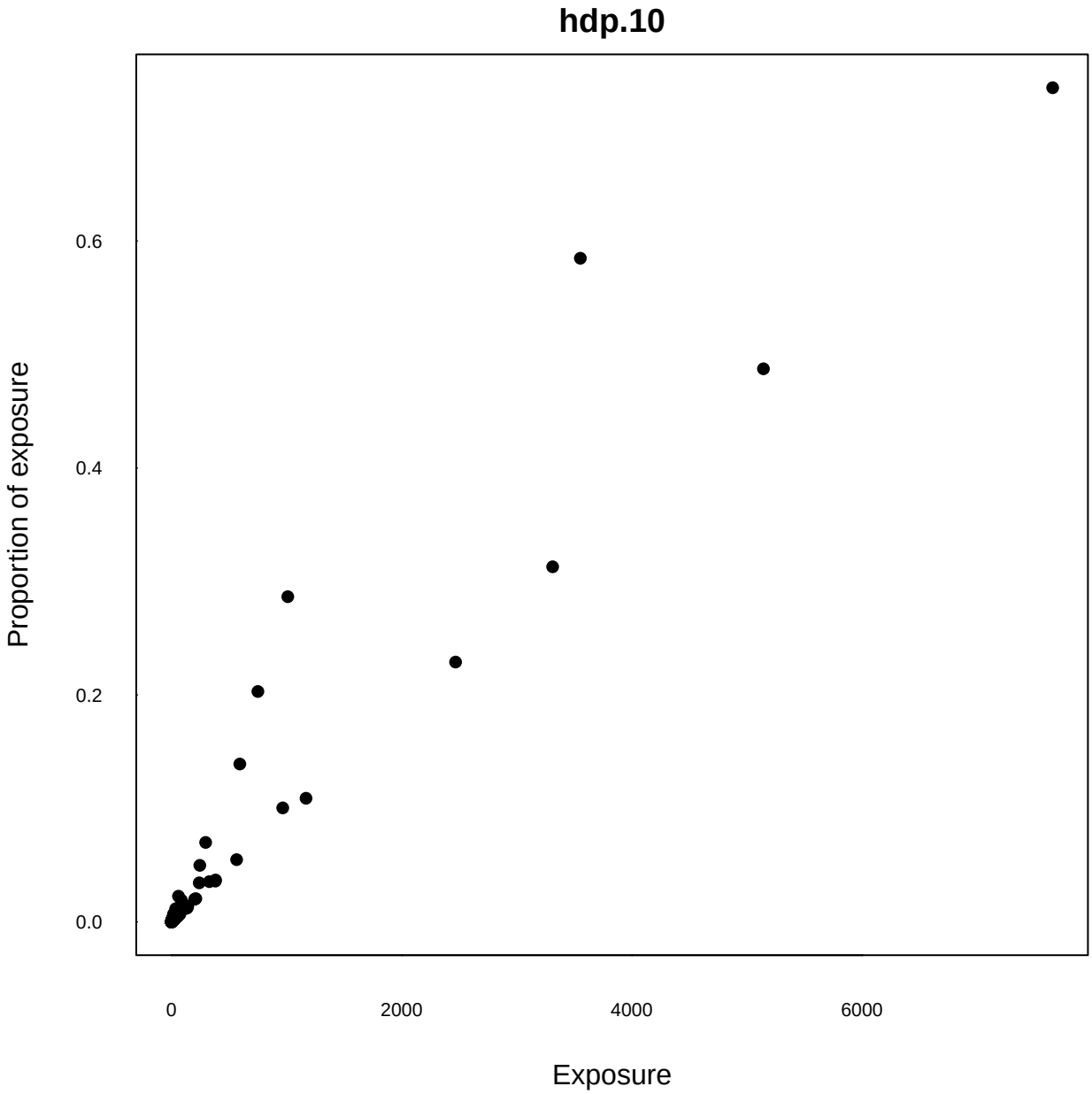

C>A
C>G
C>T
T>A
T>C
T>G
hdp.7
0.27
0.20
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.5(0.829)
935
594
1354
4721
2226
1456
2172
1629
1086
543
0
SP.Syn.Skin−Melanoma::S.37(0.603)
520
293
3488
3345
2220
821
1780
1335
890
445
0
SP.Syn.Skin−Melanoma::S.56(0.334)
331
240
7126
2177
1632
500
1660
1245
830
415
0
SP.Syn.Skin−Melanoma::S.40(0.326)
765
449
6553
2196
1624
750
1340
1005
670
335
0
SP.Syn.Skin−Melanoma::S.41(0.252)
477
521
6695
1544
1421
490
1376
1032
688
344
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

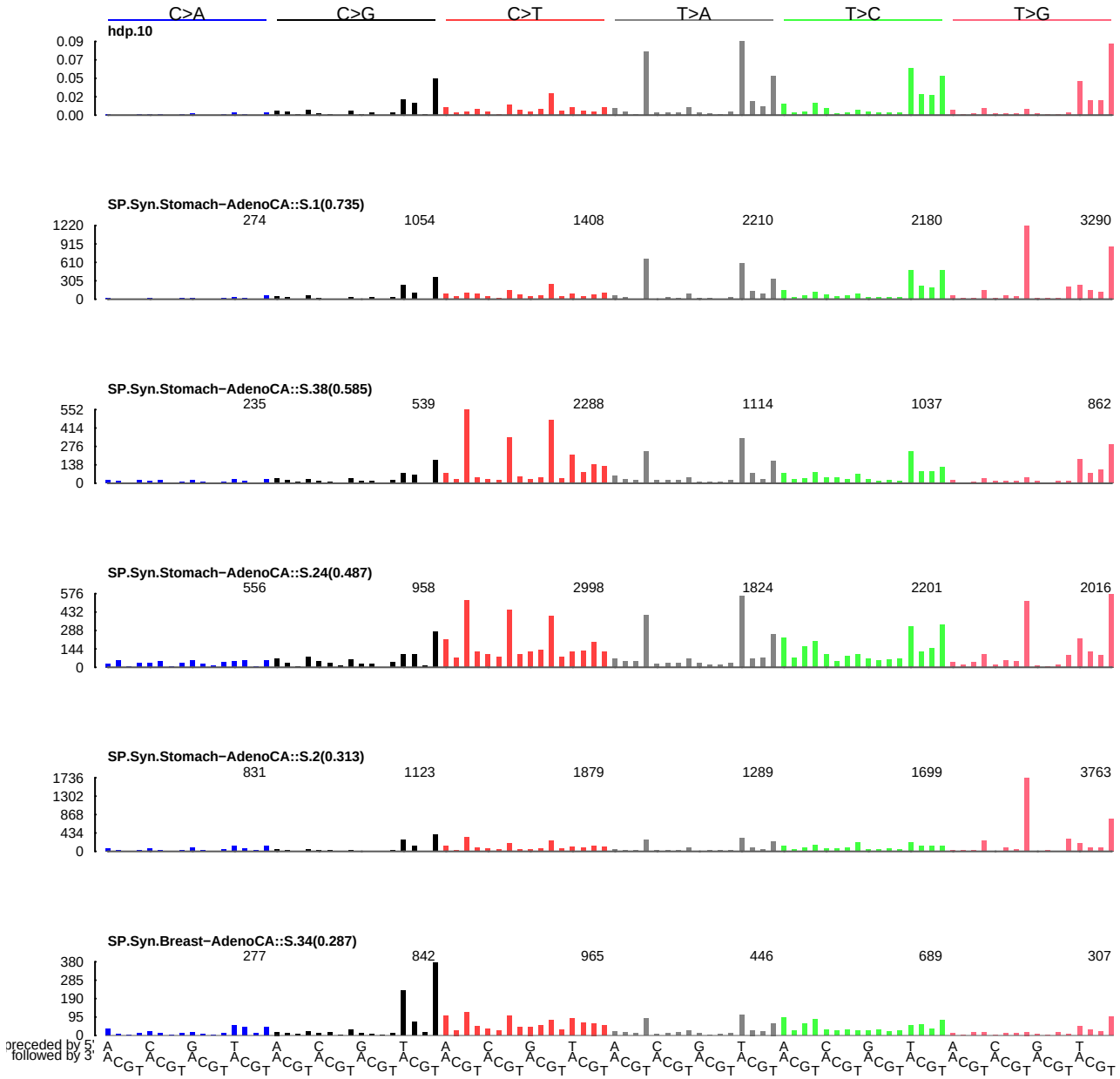

hdp.8
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
10000
Exposure

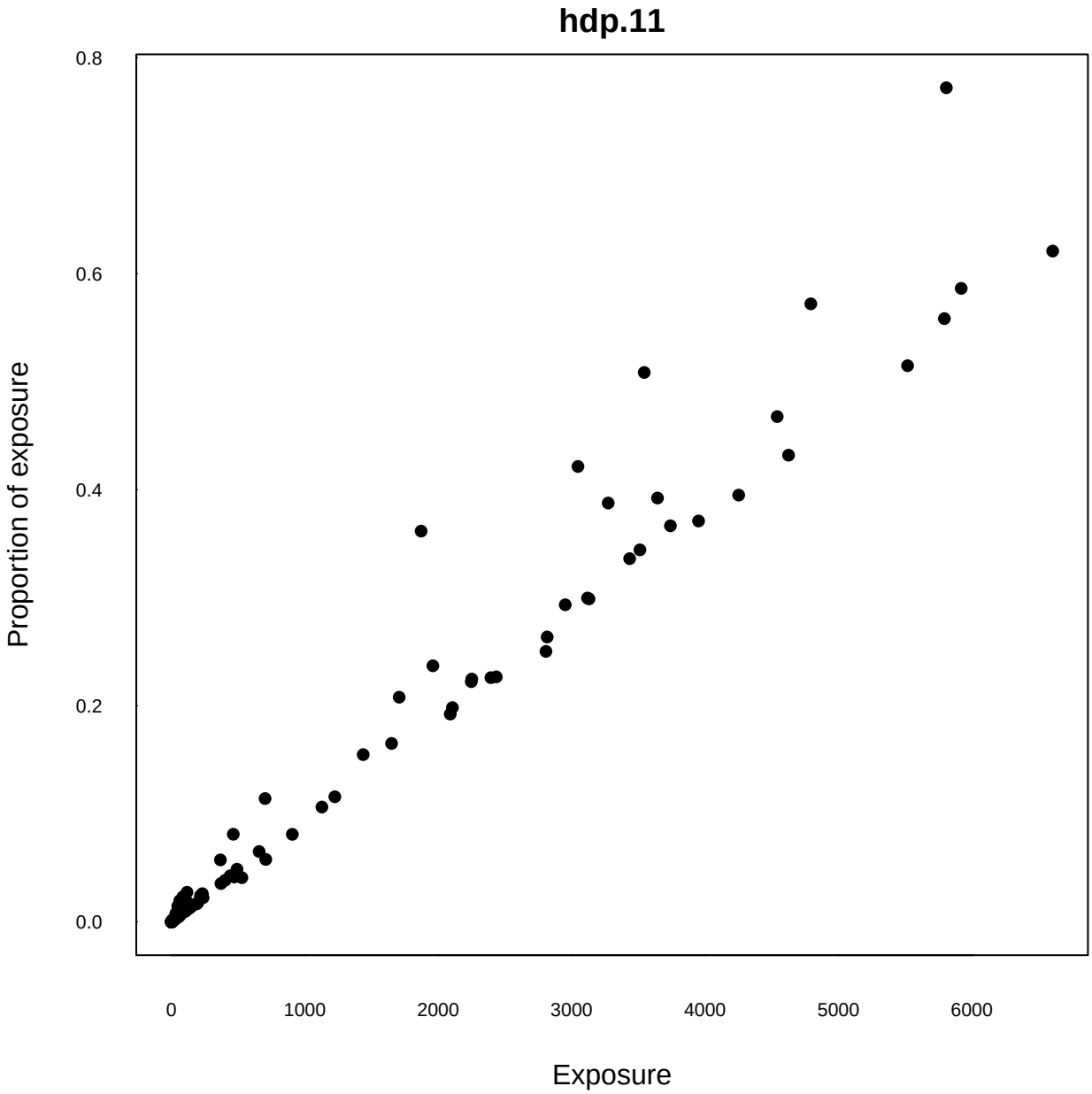

C>A
C>G
C>T
T>A
T>C
T>G
hdp.8
0.09
0.07
0.04
0.02
0.00
SP.Syn.ColoRect−AdenoCA::MSI−H.S.7(0.799)
1752
527
6014
949
3226
569
932
699
466
233
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.4(0.676)
1747
354
6946
683
2575
365
1280
960
640
320
0
SP.Syn.Stomach−AdenoCA::MSI−H.S.1(0.664)
1524
571
6056
884
3342
534
1032
774
516
258
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.5(0.653)
1529
312
7008
766
2533
295
1580
1185
790
395
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.1(0.536)
1529
583
6523
795
2800
540
1008
756
504
252
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

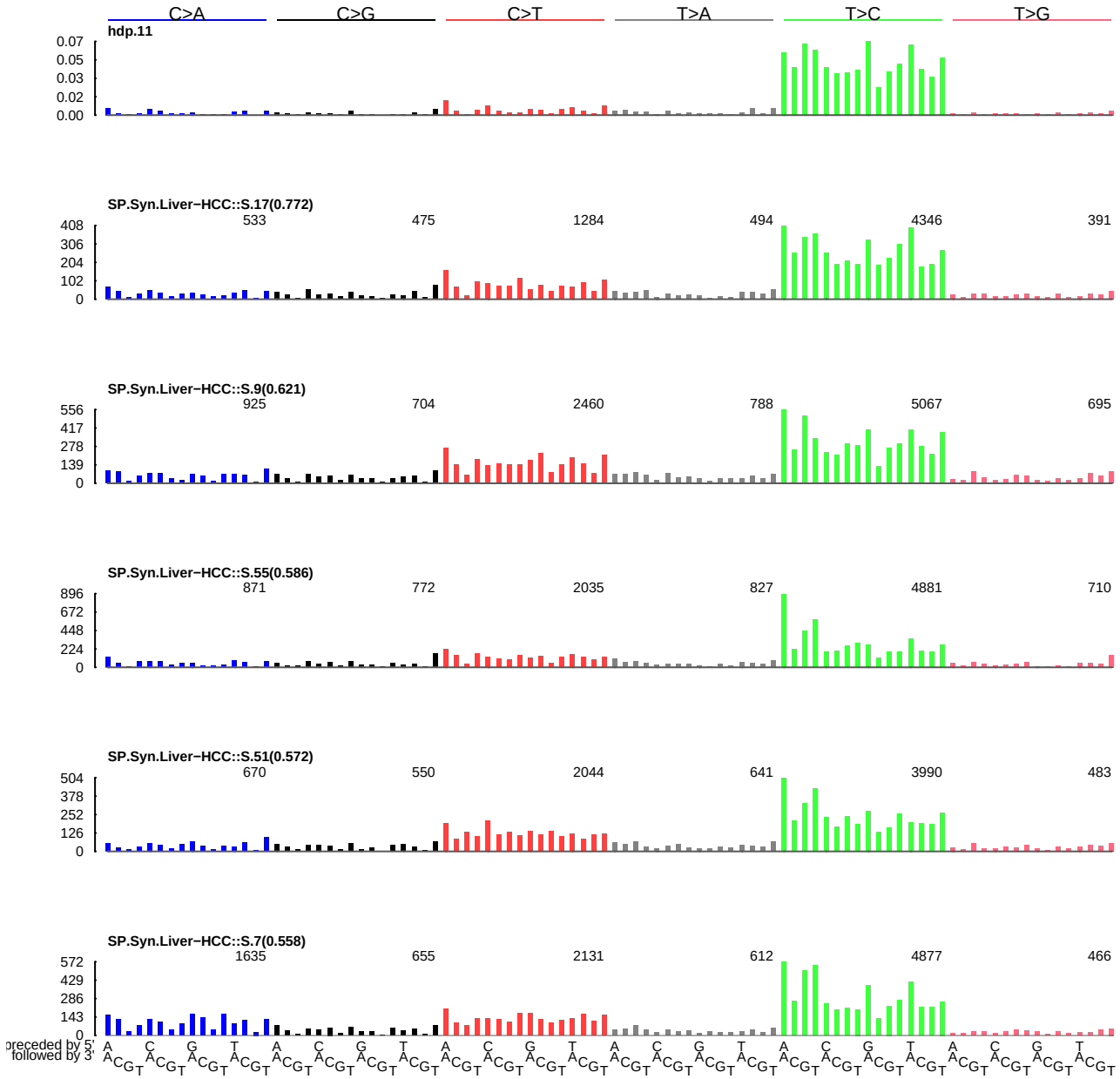

hdp.9
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
1000
2000
3000
4000
5000
Exposure

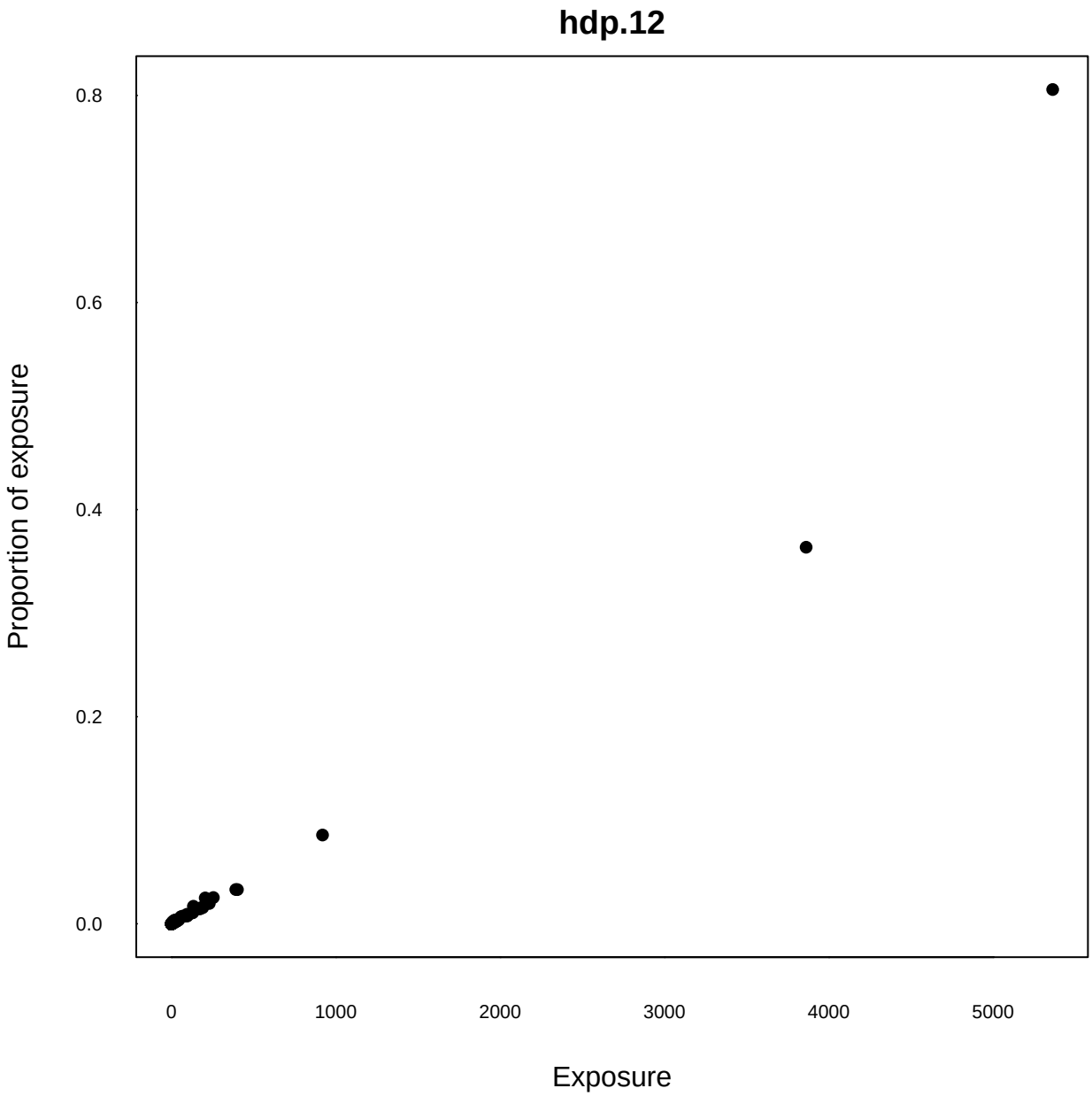

C>A
C>G
C>T
T>A
T>C
T>G
hdp.9
0.46
0.35
0.23
0.12
0.00
SP.Syn.Eso−AdenoCA::S.39(0.526)
1501
361
2348
463
939
4779
2672
2004
1336
668
0
SP.Syn.Eso−AdenoCA::S.58(0.248)
1801
96
1268
254
394
7140
3068
2301
1534
767
0
SP.Syn.Eso−AdenoCA::S.59(0.247)
2033
905
2179
795
1541
4460
1588
1191
794
397
0
SP.Syn.Stomach−AdenoCA::S.40(0.152)
518
882
1719
273
967
852
328
246
164
82
0
SP.Syn.Stomach−AdenoCA::S.9(0.137)
1621
638
2887
570
931
1433
540
405
270
135
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

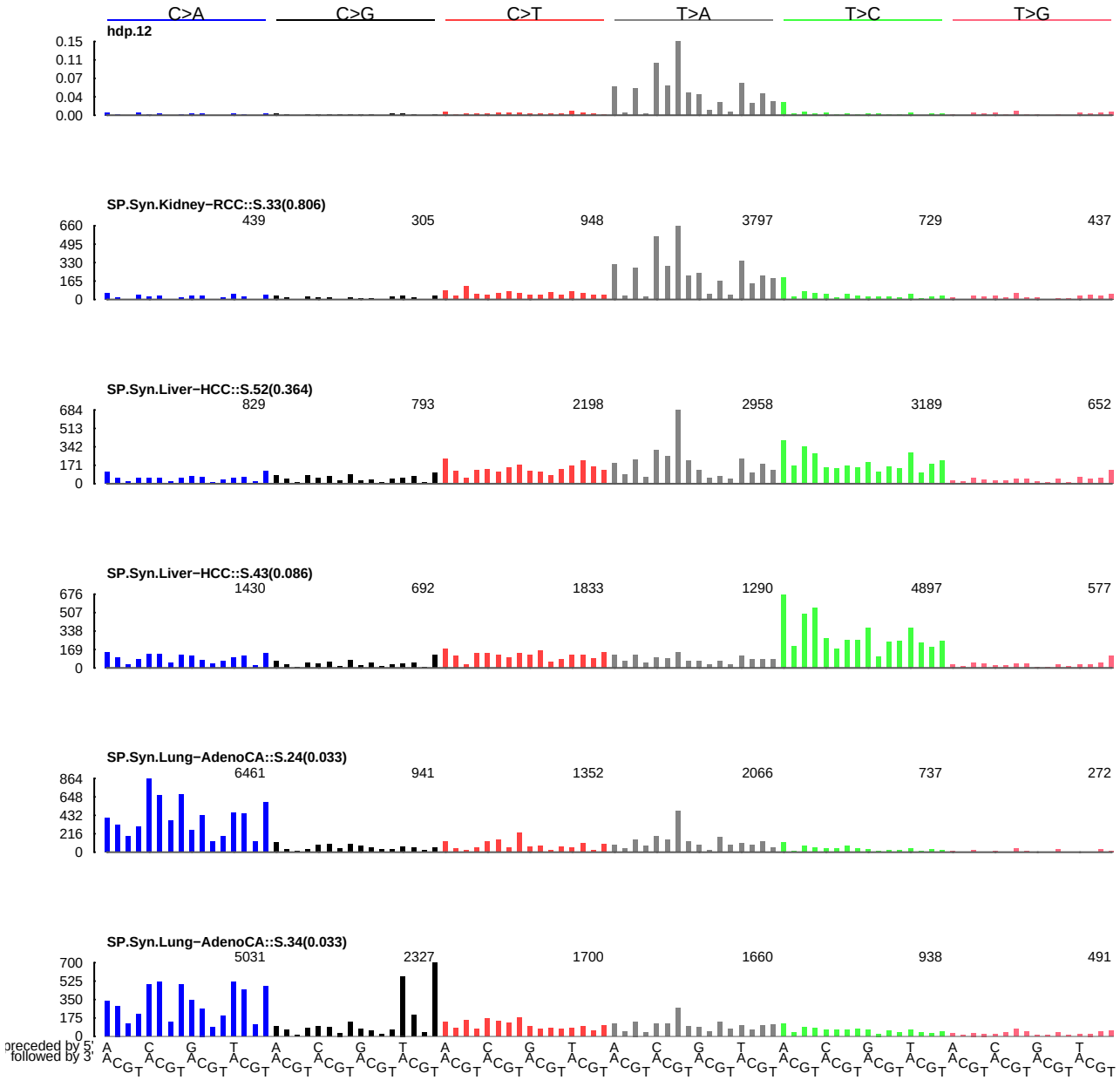

hdp.10
Proportion of exposure
0.0
0.2
0.4
0.6
0
2000
4000
6000
Exposure

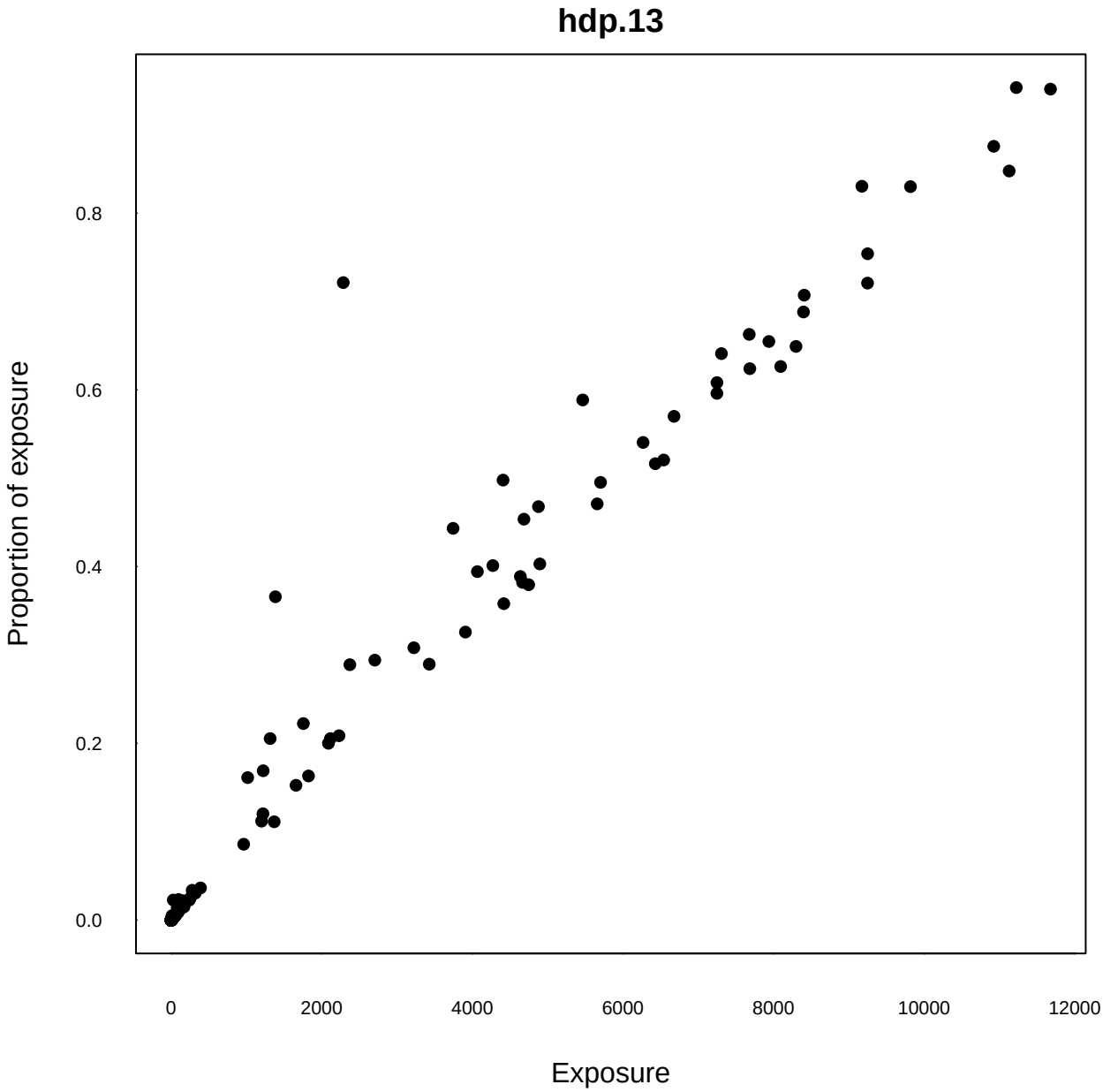

C>A
C>G
C>T
T>A
T>C
T>G
hdp.10
0.09
0.07
0.05
0.02
0.00
SP.Syn.Stomach−AdenoCA::S.1(0.735)
274
1054
1408
2210
2180
3290
1220
915
610
305
0
SP.Syn.Stomach−AdenoCA::S.38(0.585)
235
539
2288
1114
1037
862
552
414
276
138
0
SP.Syn.Stomach−AdenoCA::S.24(0.487)
556
958
2998
1824
2201
2016
576
432
288
144
0
SP.Syn.Stomach−AdenoCA::S.2(0.313)
831
1123
1879
1289
1699
3763
1736
1302
868
434
0
SP.Syn.Breast−AdenoCA::S.34(0.287)
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 A C G T

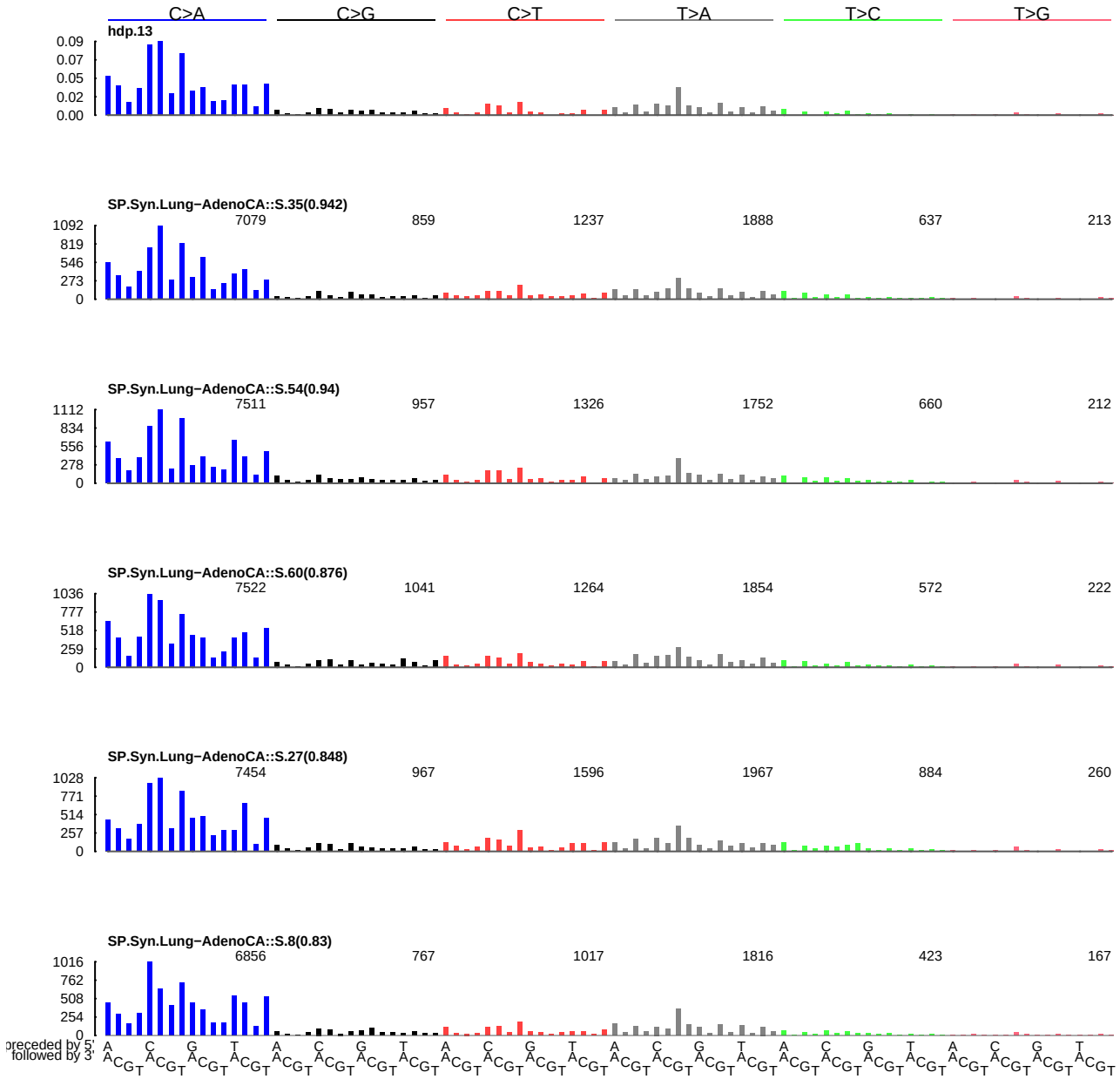

hdp.11
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
6000
Exposure

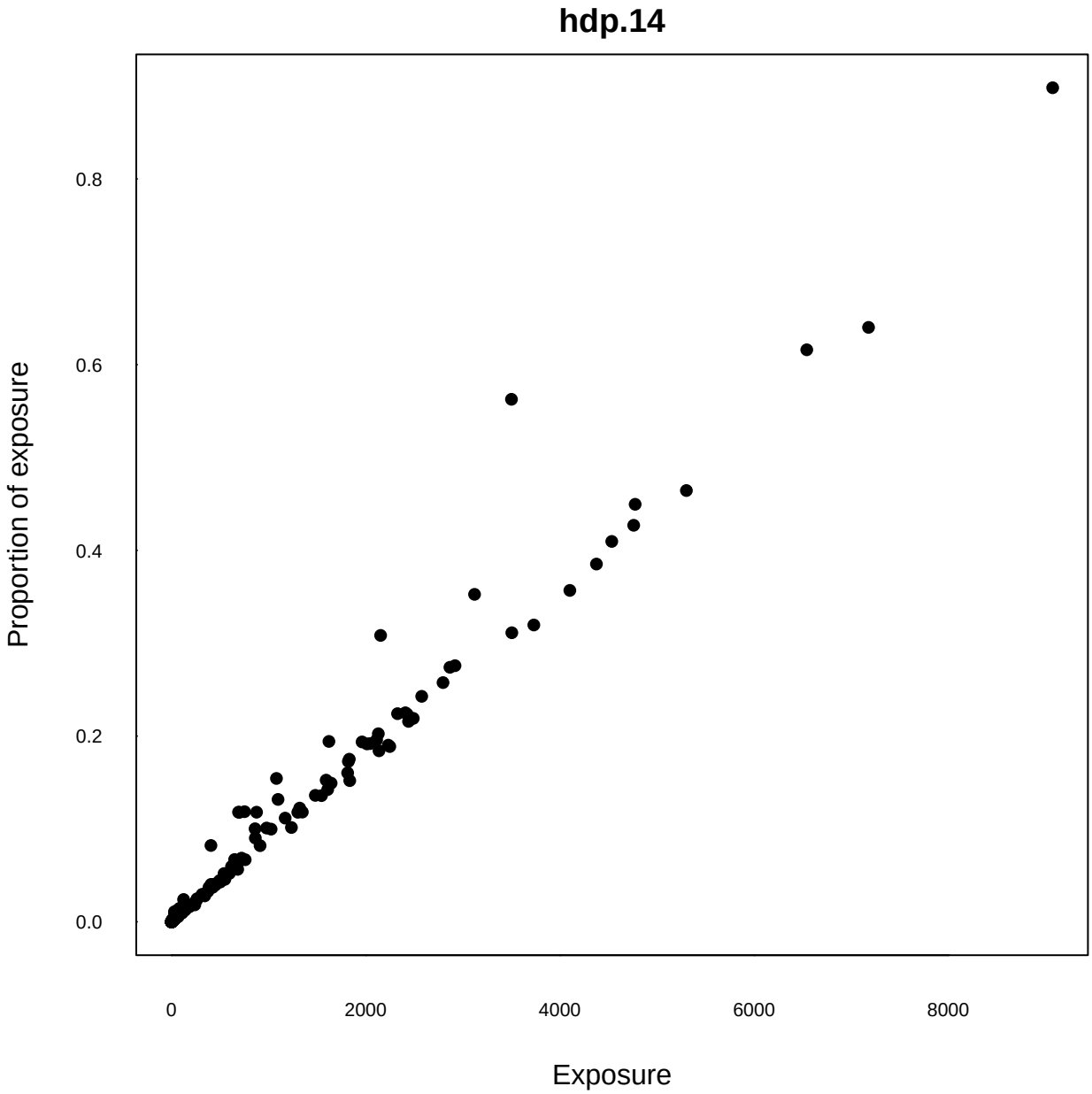

C>A
C>G
C>T
T>A
T>C
T>G
hdp.11
0.07
0.05
0.03
0.02
0.00
SP.Syn.Liver−HCC::S.17(0.772)
533
475
1284
494
4346
391
408
306
204
102
0
SP.Syn.Liver−HCC::S.9(0.621)
925
704
2460
788
5067
695
556
417
278
139
0
SP.Syn.Liver−HCC::S.55(0.586)
871
772
2035
827
4881
710
896
672
448
224
0
SP.Syn.Liver−HCC::S.51(0.572)
670
550
2044
641
3990
483
504
378
252
126
0
SP.Syn.Liver−HCC::S.7(0.558)
1635
655
2131
612
4877
466
572
429
286
143
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

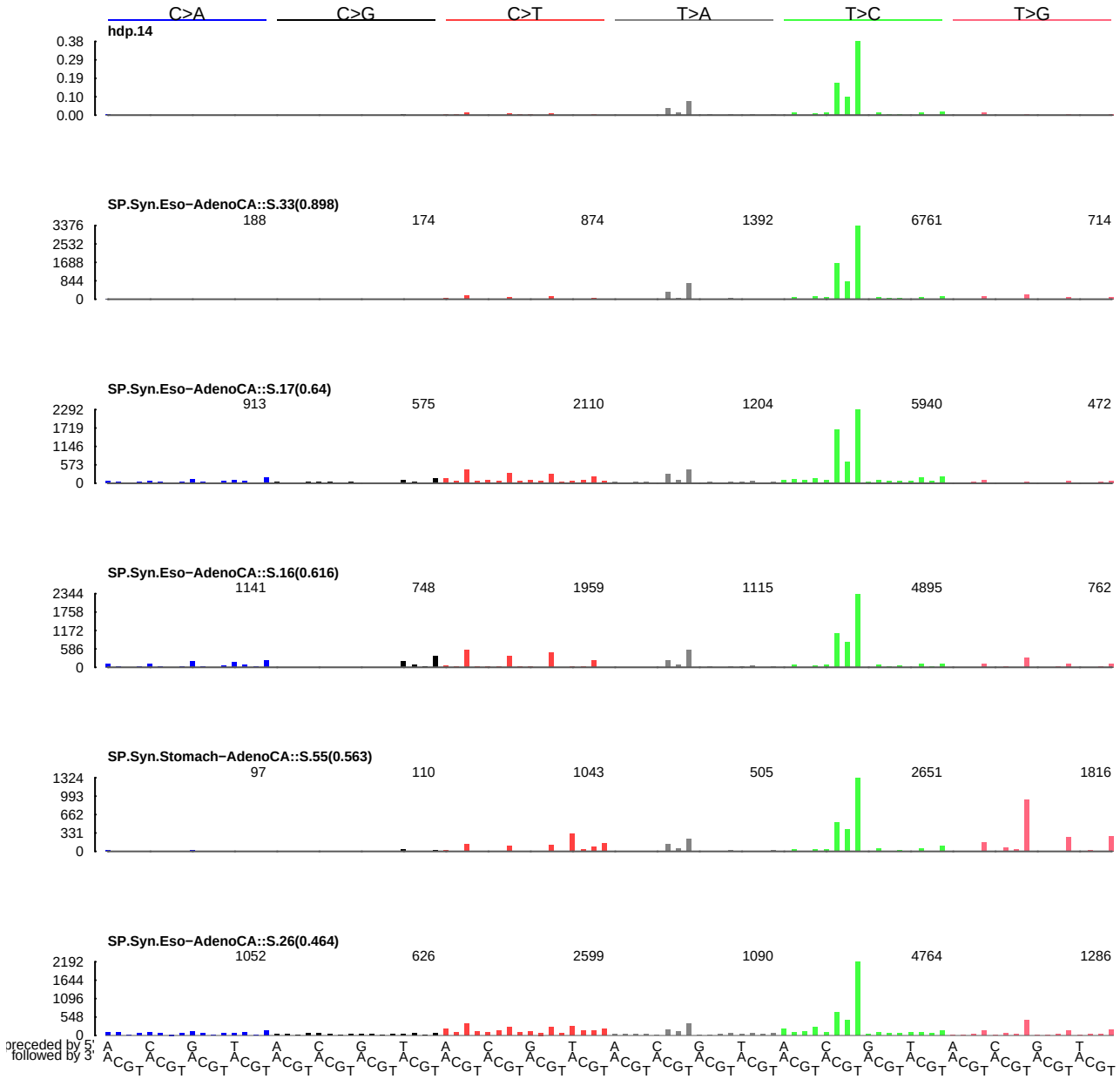

hdp.12
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure

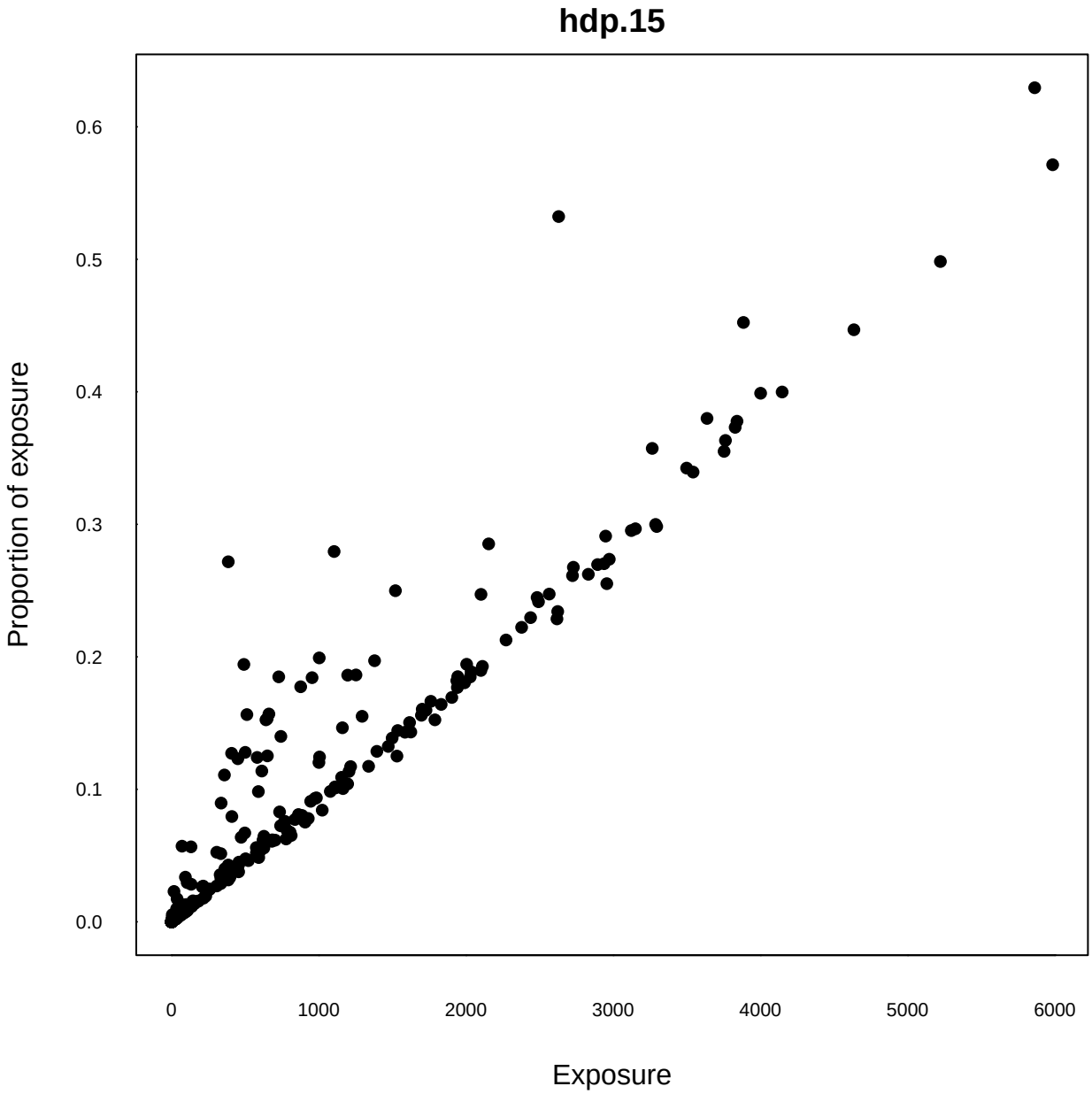

C>A
C>G
C>T
T>A
T>C
T>G
hdp.12
0.15
0.11
0.07
0.04
0.00
SP.Syn.Kidney−RCC::S.33(0.806)
439
305
948
3797
729
437
660
495
330
165
0
SP.Syn.Liver−HCC::S.52(0.364)
829
793
2198
2958
3189
652
684
513
342
171
0
SP.Syn.Liver−HCC::S.43(0.086)
1430
692
1833
1290
4897
577
676
507
338
169
0
SP.Syn.Lung−AdenoCA::S.24(0.033)
6461
941
1352
2066
737
272
864
648
432
216
0
SP.Syn.Lung−AdenoCA::S.34(0.033)
5031
2327
1700
1660
938
491
700
525
350
175
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

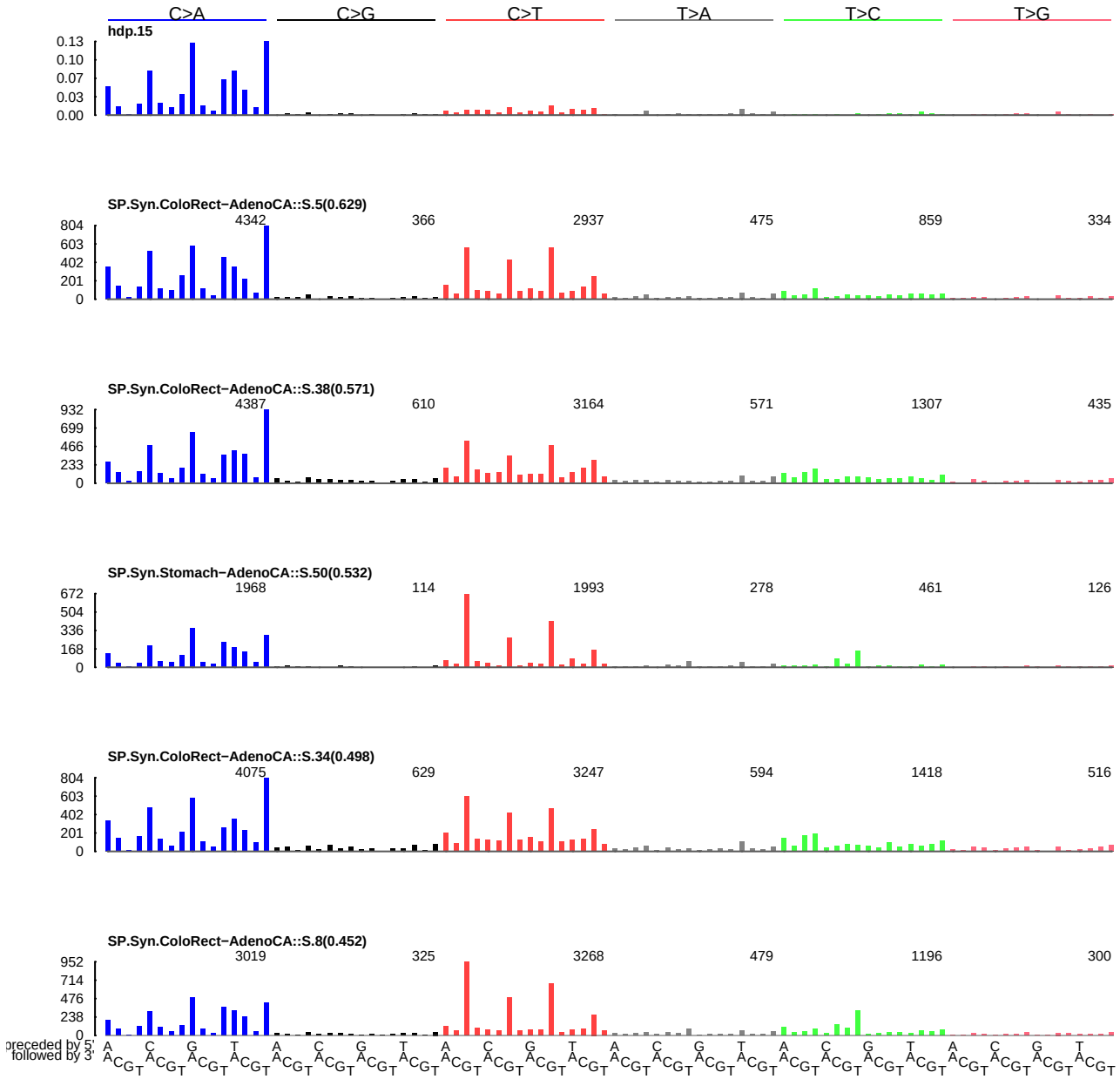

hdp.13
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
10000
12000
Exposure

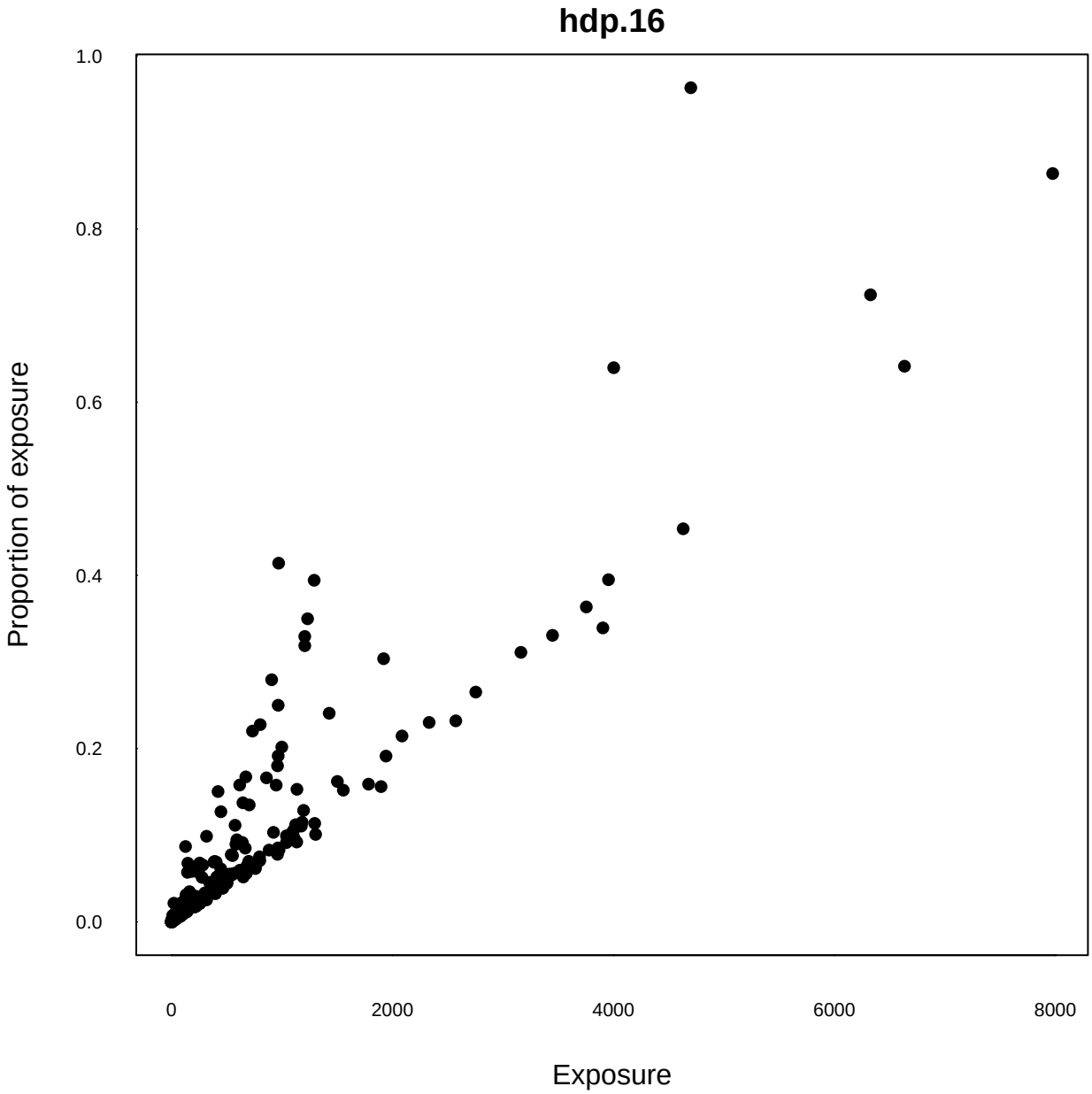

C>A
C>G
C>T
T>A
T>C
T>G
hdp.13
0.09
0.07
0.05
0.02
0.00
SP.Syn.Lung−AdenoCA::S.35(0.942)
7079
859
1237
1888
637
213
1092
819
546
273
0
SP.Syn.Lung−AdenoCA::S.54(0.94)
7511
957
1326
1752
660
212
1112
834
556
278
0
SP.Syn.Lung−AdenoCA::S.60(0.876)
7522
1041
1264
1854
572
222
1036
777
518
259
0
SP.Syn.Lung−AdenoCA::S.27(0.848)
7454
967
1596
1967
884
260
1028
771
514
257
0
SP.Syn.Lung−AdenoCA::S.8(0.83)
6856
767
1017
1816
423
167
1016
762
508
254
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

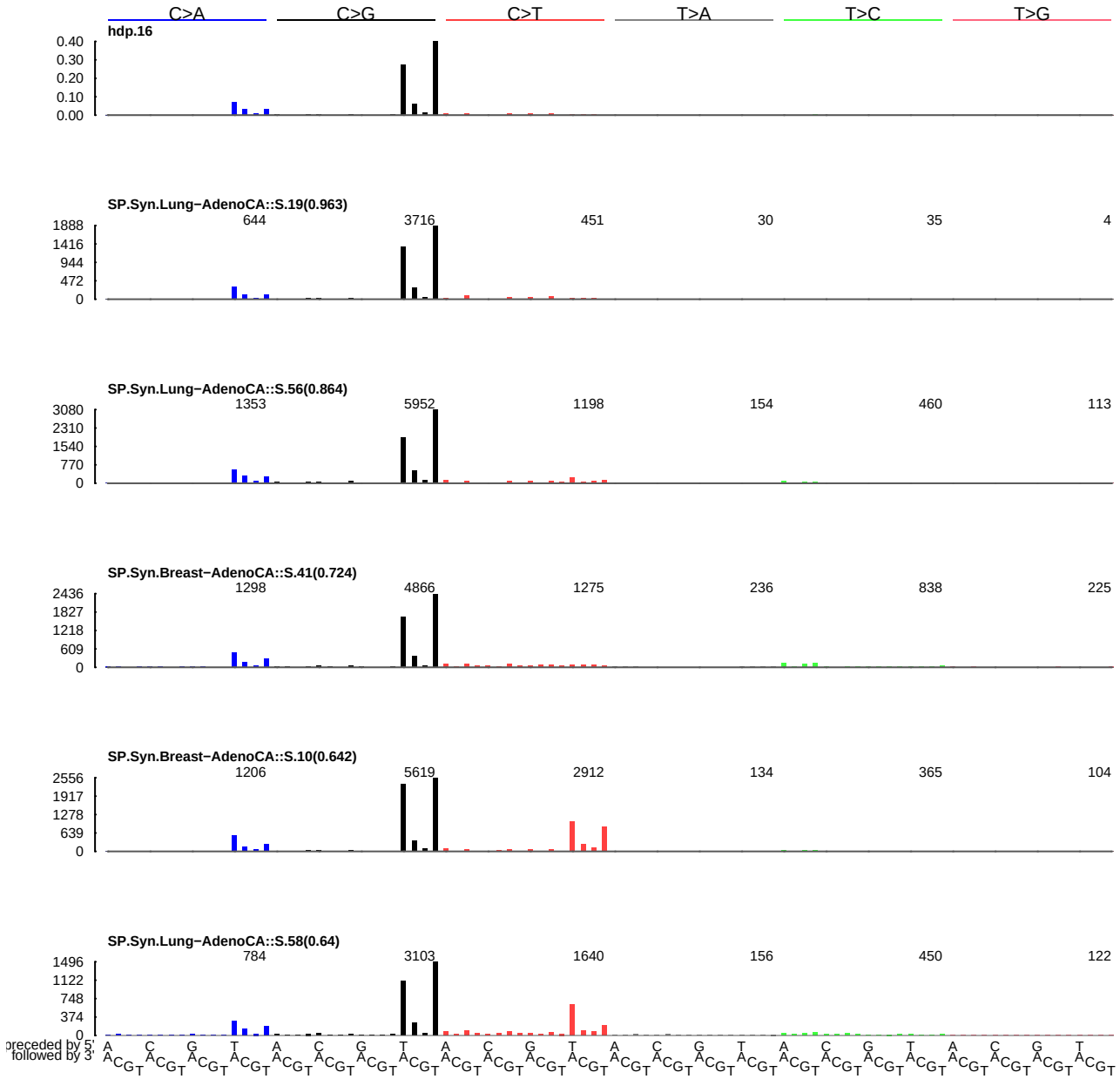

hdp.14
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
Exposure

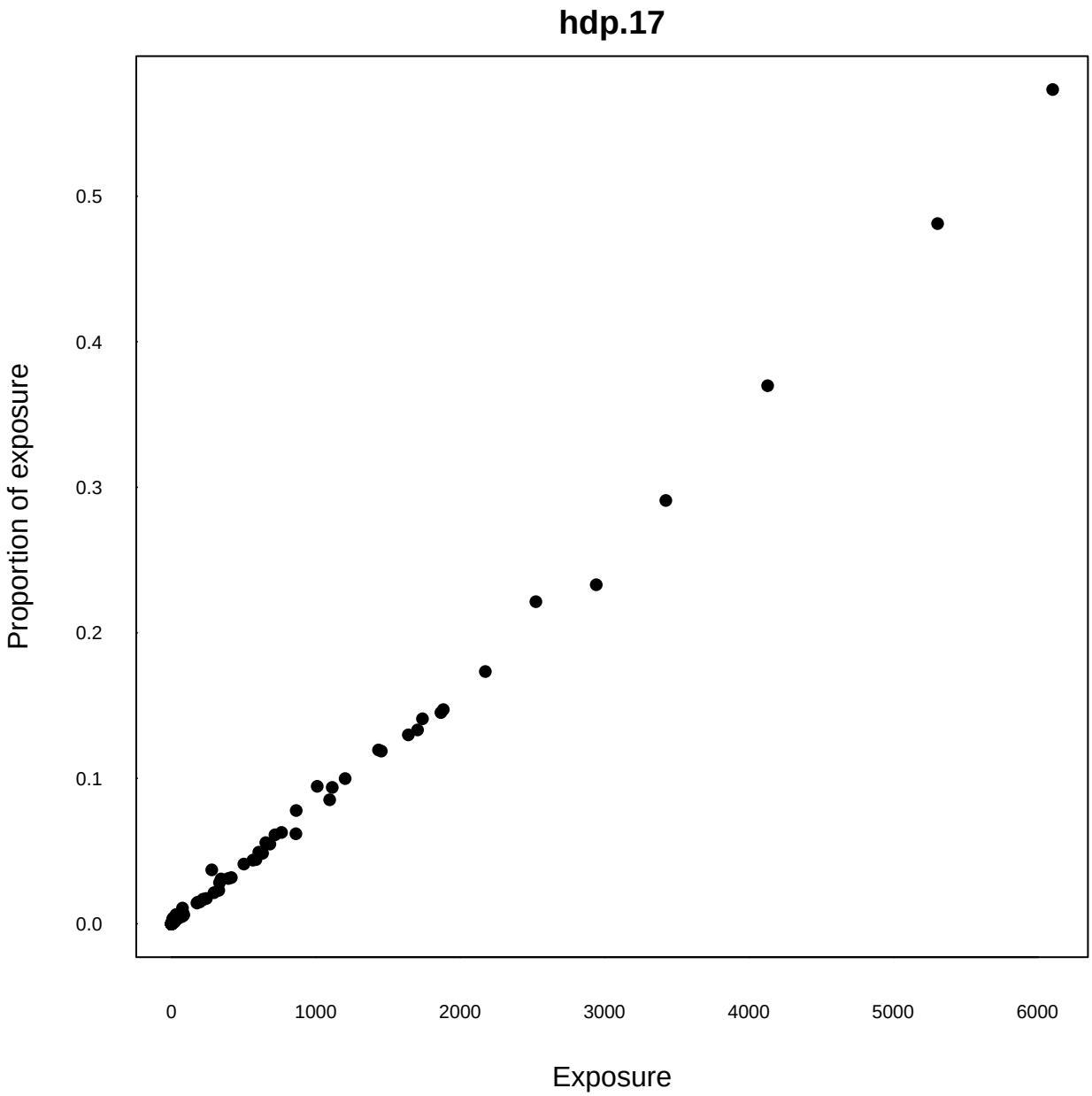

C>A
C>G
C>T
T>A
T>C
T>G
hdp.14
0.38
0.29
0.19
0.10
0.00
SP.Syn.Eso−AdenoCA::S.33(0.898)
188
174
874
1392
6761
714
3376
2532
1688
844
0
SP.Syn.Eso−AdenoCA::S.17(0.64)
913
575
2110
1204
5940
472
2292
1719
1146
573
0
SP.Syn.Eso−AdenoCA::S.16(0.616)
1141
748
1959
1115
4895
762
2344
1758
1172
586
0
SP.Syn.Stomach−AdenoCA::S.55(0.563)
97
110
1043
505
2651
1816
1324
993
662
331
0
SP.Syn.Eso−AdenoCA::S.26(0.464)
1052
626
2599
1090
4764
1286
2192
1644
1096
548
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

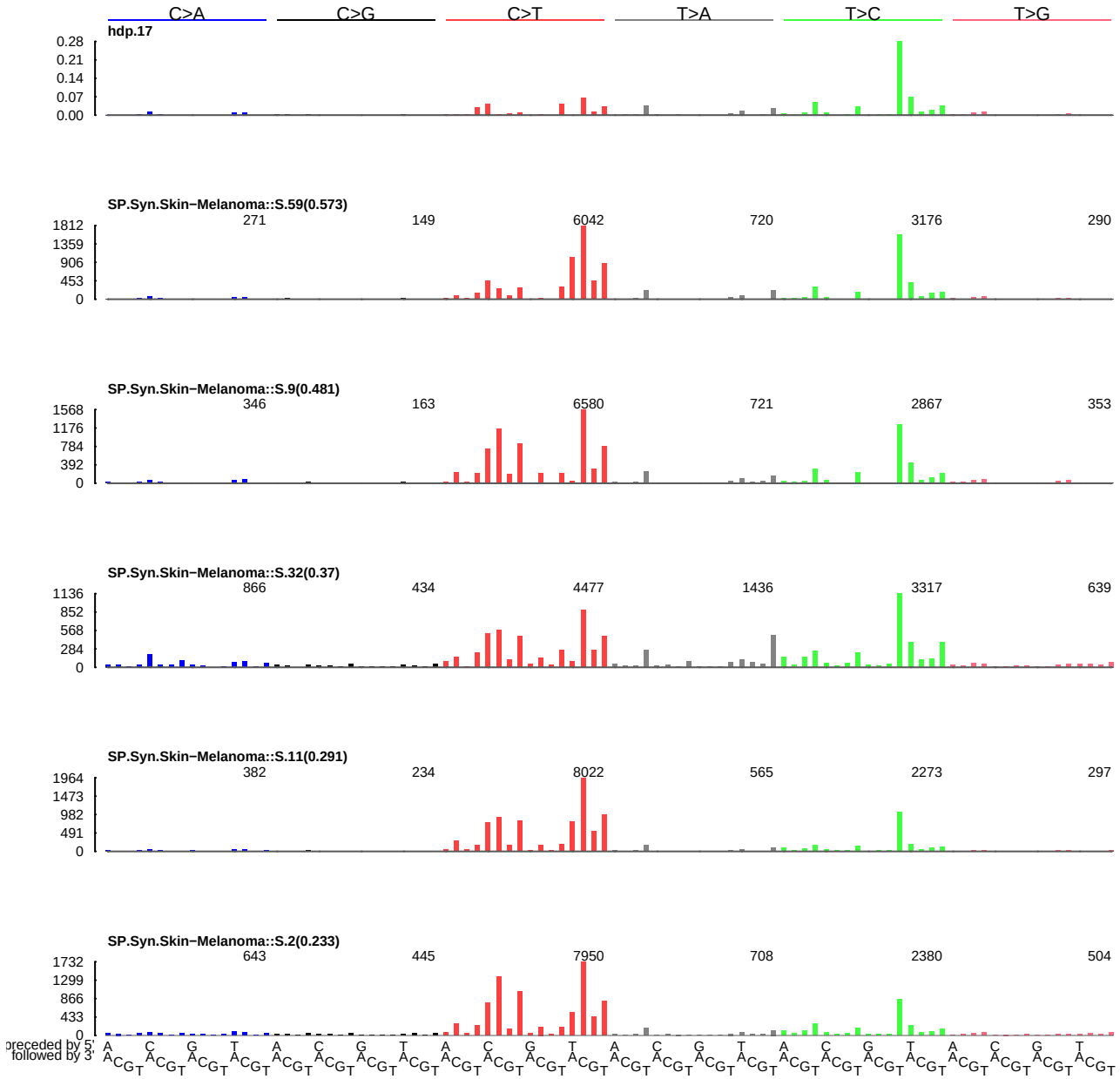

hdp.15
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
1000
2000
3000
4000
5000
6000
Exposure

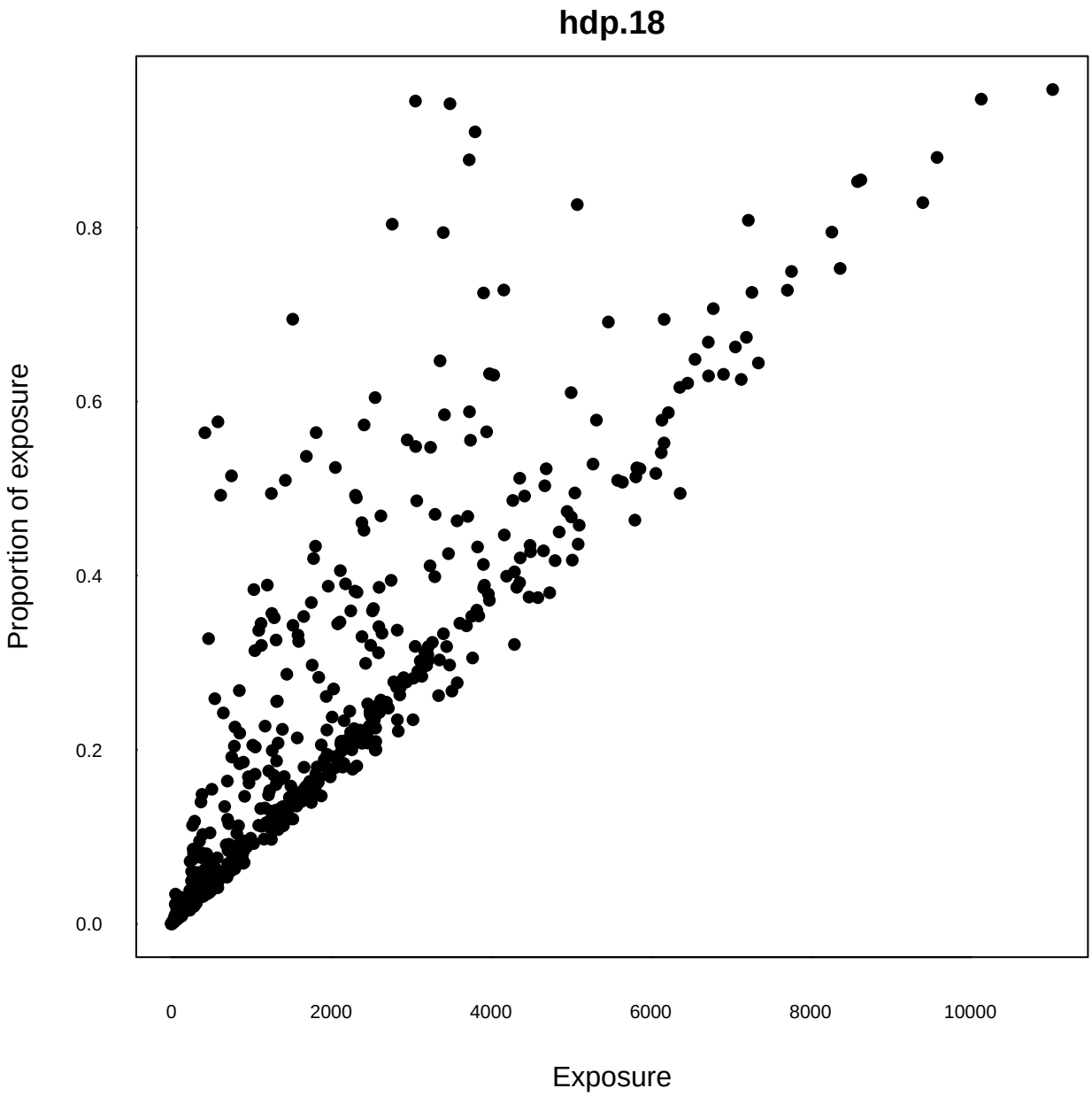

C>A
C>G
C>T
T>A
T>C
T>G
hdp.15
0.13
0.10
0.07
0.03
0.00
SP.Syn.ColoRect−AdenoCA::S.5(0.629)
4342
366
2937
475
859
334
804
603
402
201
0
SP.Syn.ColoRect−AdenoCA::S.38(0.571)
4387
610
3164
571
1307
435
932
699
466
233
0
SP.Syn.Stomach−AdenoCA::S.50(0.532)
1968
114
1993
278
461
126
672
504
336
168
0
SP.Syn.ColoRect−AdenoCA::S.34(0.498)
4075
629
3247
594
1418
516
804
603
402
201
0
SP.Syn.ColoRect−AdenoCA::S.8(0.452)
3019
325
3268
479
1196
300
952
714
476
238
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

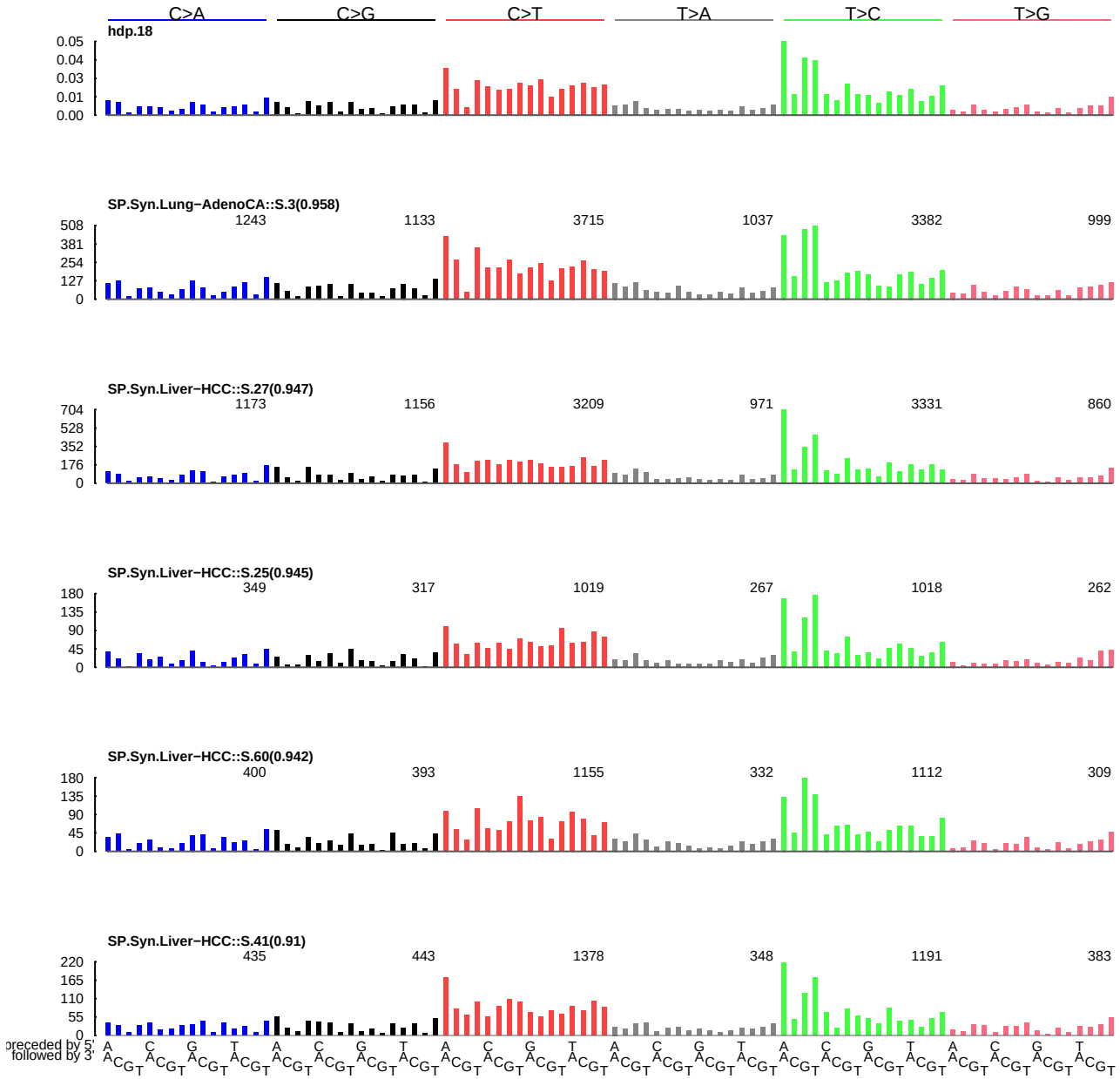

hdp.16
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
2000
4000
6000
8000
Exposure

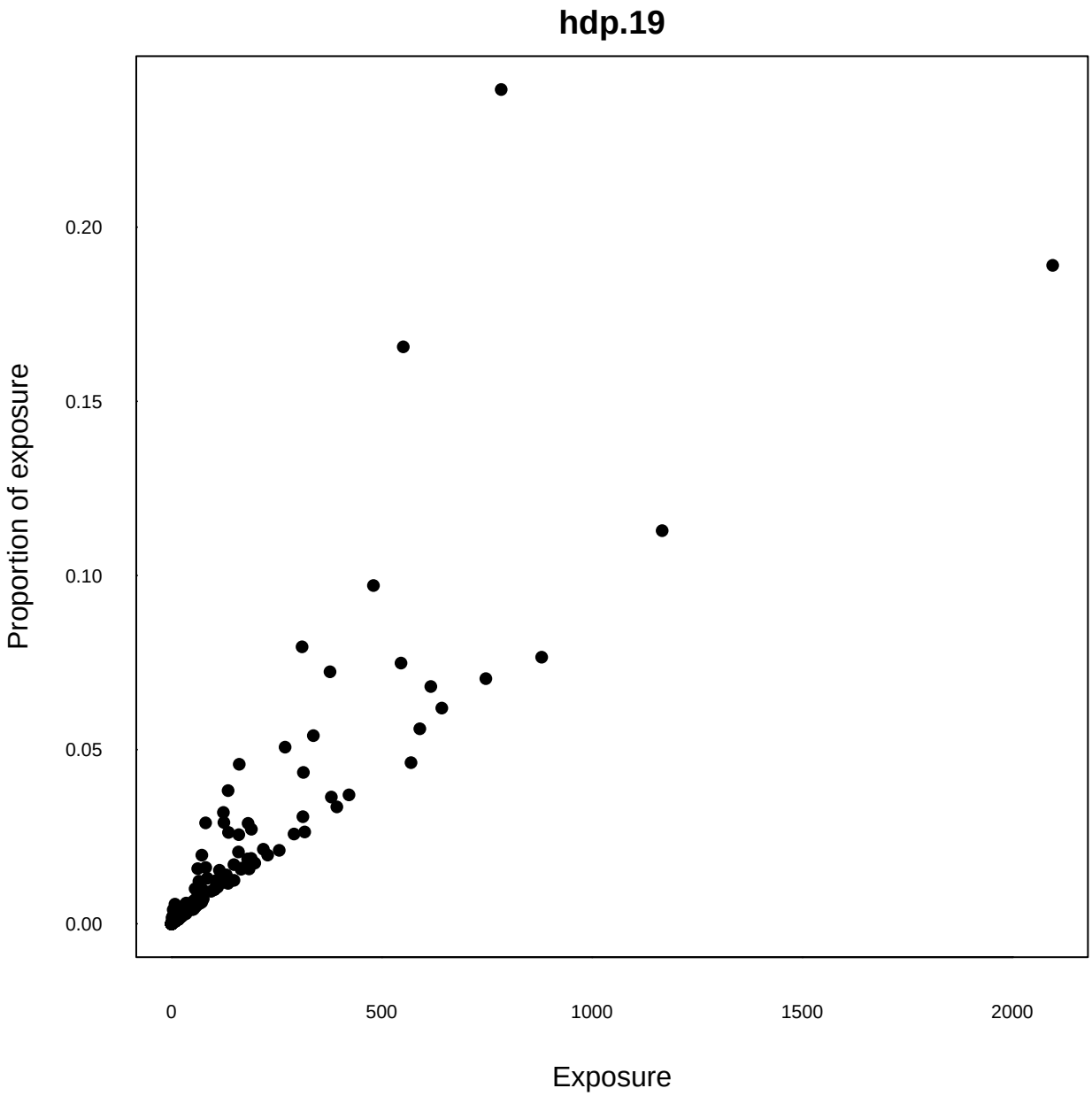

C>A
C>G
C>T
T>A
T>C
T>G
hdp.16
0.40
0.30
0.20
0.10
0.00
SP.Syn.Lung−AdenoCA::S.19(0.963)
644
3716
451
30
35
4
1888
1416
944
472
0
SP.Syn.Lung−AdenoCA::S.56(0.864)
1353
5952
1198
154
460
113
3080
2310
1540
770
0
SP.Syn.Breast−AdenoCA::S.41(0.724)
1298
4866
1275
236
838
225
2436
1827
1218
609
0
SP.Syn.Breast−AdenoCA::S.10(0.642)
1206
5619
2912
134
365
104
2556
1917
1278
639
0
SP.Syn.Lung−AdenoCA::S.58(0.64)
784
3103
1640
156
450
122
1496
1122
748
374
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

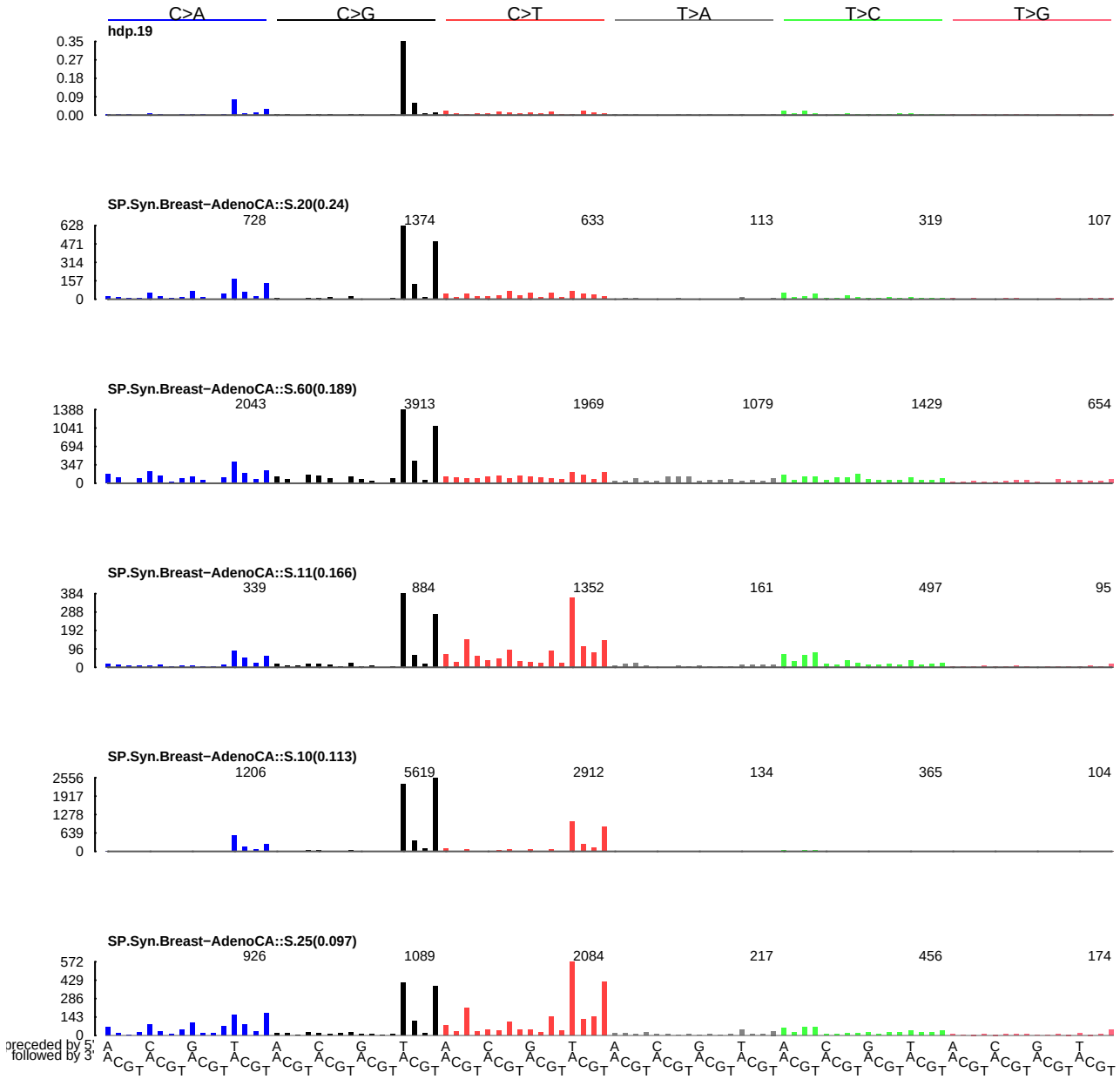

hdp.17
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
1000
2000
3000
4000
5000
6000
Exposure

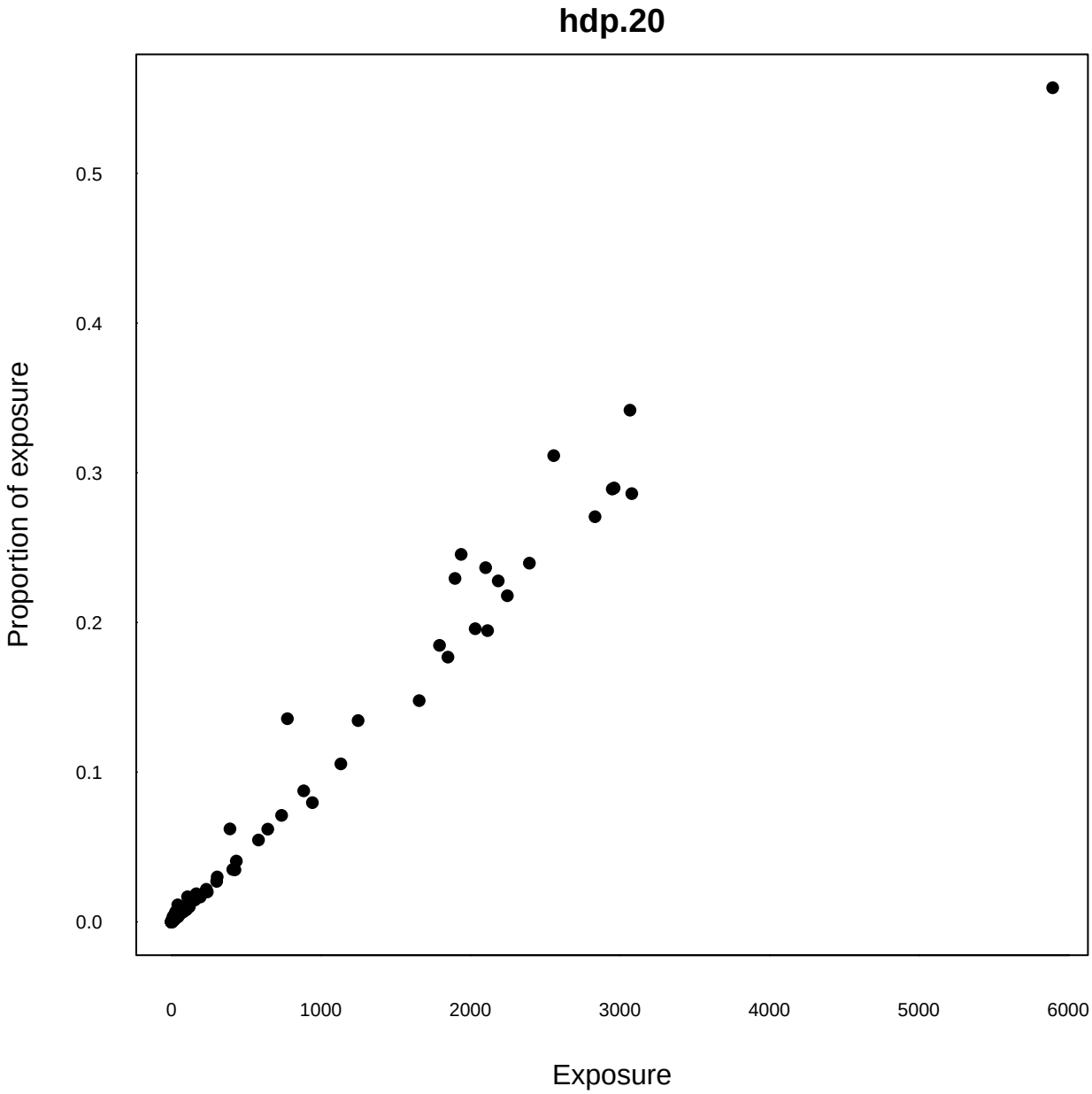

C>A
C>G
C>T
T>A
T>C
T>G
hdp.17
0.28
0.21
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.59(0.573)
271
149
6042
720
3176
290
1812
1359
906
453
0
SP.Syn.Skin−Melanoma::S.9(0.481)
346
163
6580
721
2867
353
1568
1176
784
392
0
SP.Syn.Skin−Melanoma::S.32(0.37)
866
434
4477
1436
3317
639
1136
852
568
284
0
SP.Syn.Skin−Melanoma::S.11(0.291)
382
234
8022
565
2273
297
1964
1473
982
491
0
SP.Syn.Skin−Melanoma::S.2(0.233)
643
445
7950
708
2380
504
1732
1299
866
433
0
preceded by 5'
followed by 3'

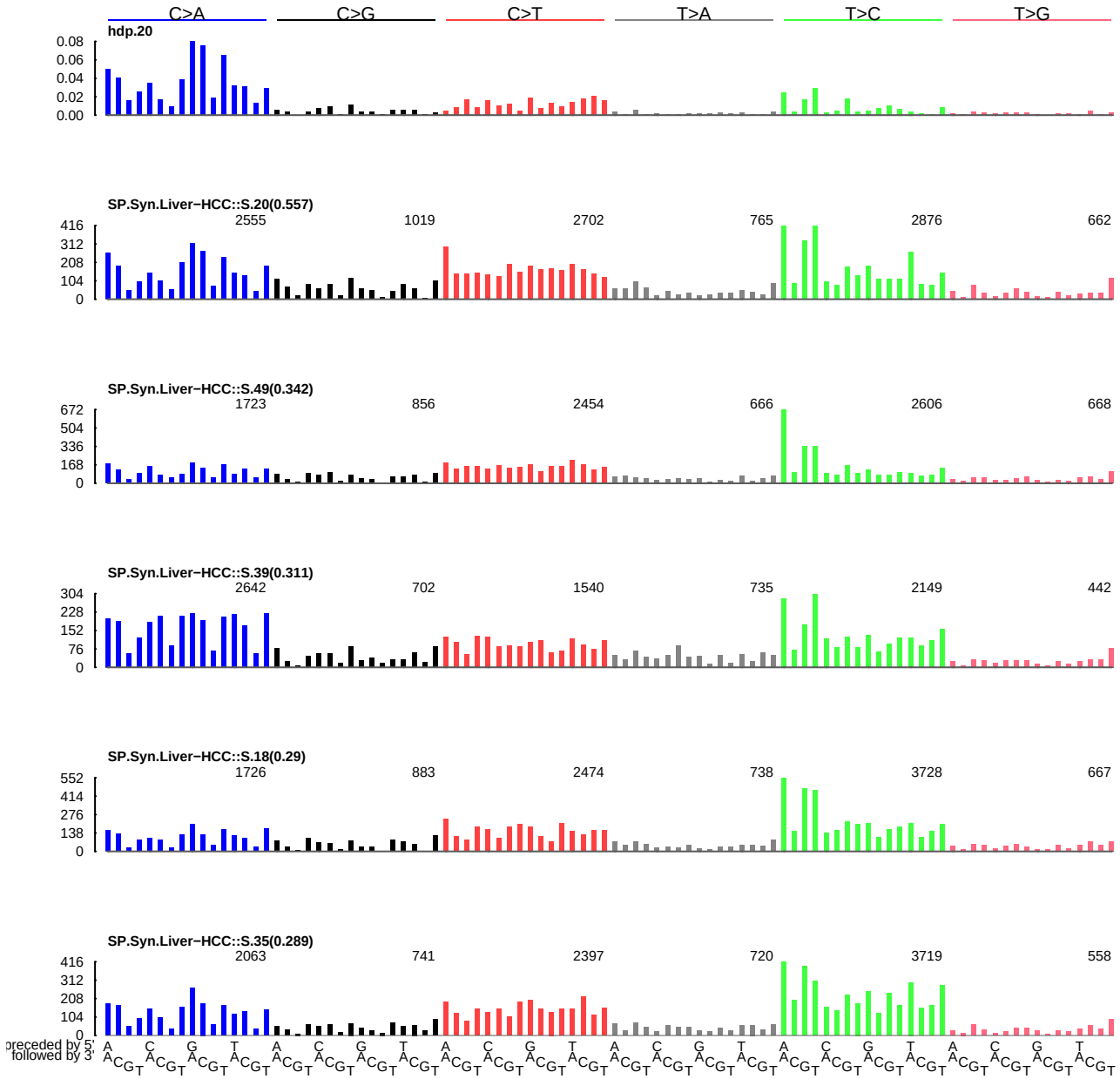

hdp.18
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
8000
10000
Exposure

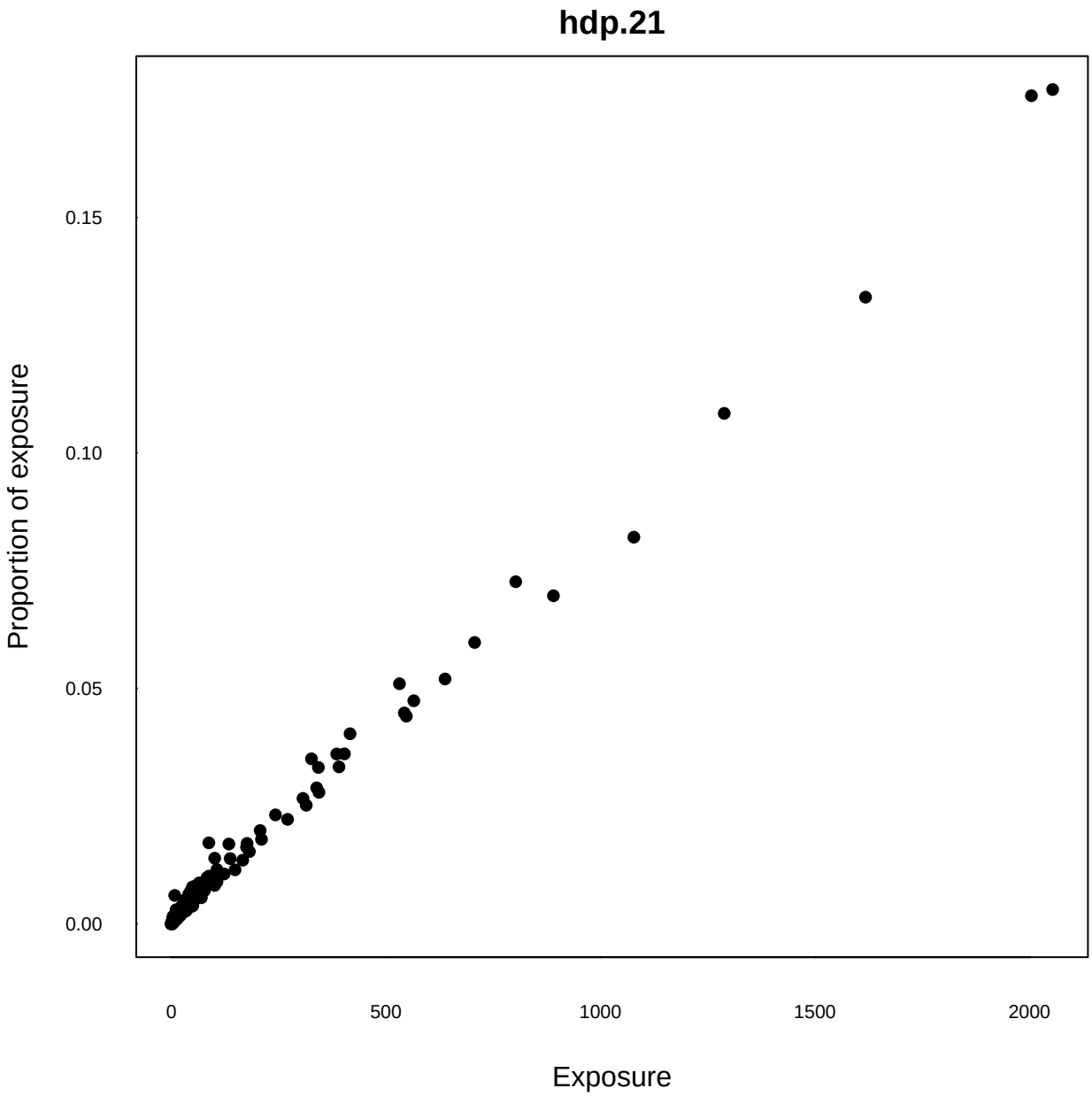

C>A
C>G
C>T
T>A
T>C
T>G
hdp.18
0.05
0.04
0.03
0.01
0.00
SP.Syn.Lung−AdenoCA::S.3(0.958)
1243
1133
3715
1037
3382
999
508
381
254
127
0
SP.Syn.Liver−HCC::S.27(0.947)
1173
1156
3209
971
3331
860
704
528
352
176
0
SP.Syn.Liver−HCC::S.25(0.945)
349
317
1019
267
1018
262
180
135
90
45
0
SP.Syn.Liver−HCC::S.60(0.942)
400
393
1155
332
1112
309
180
135
90
45
0
SP.Syn.Liver−HCC::S.41(0.91)
435
443
1378
348
1191
383
220
165
110
55
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

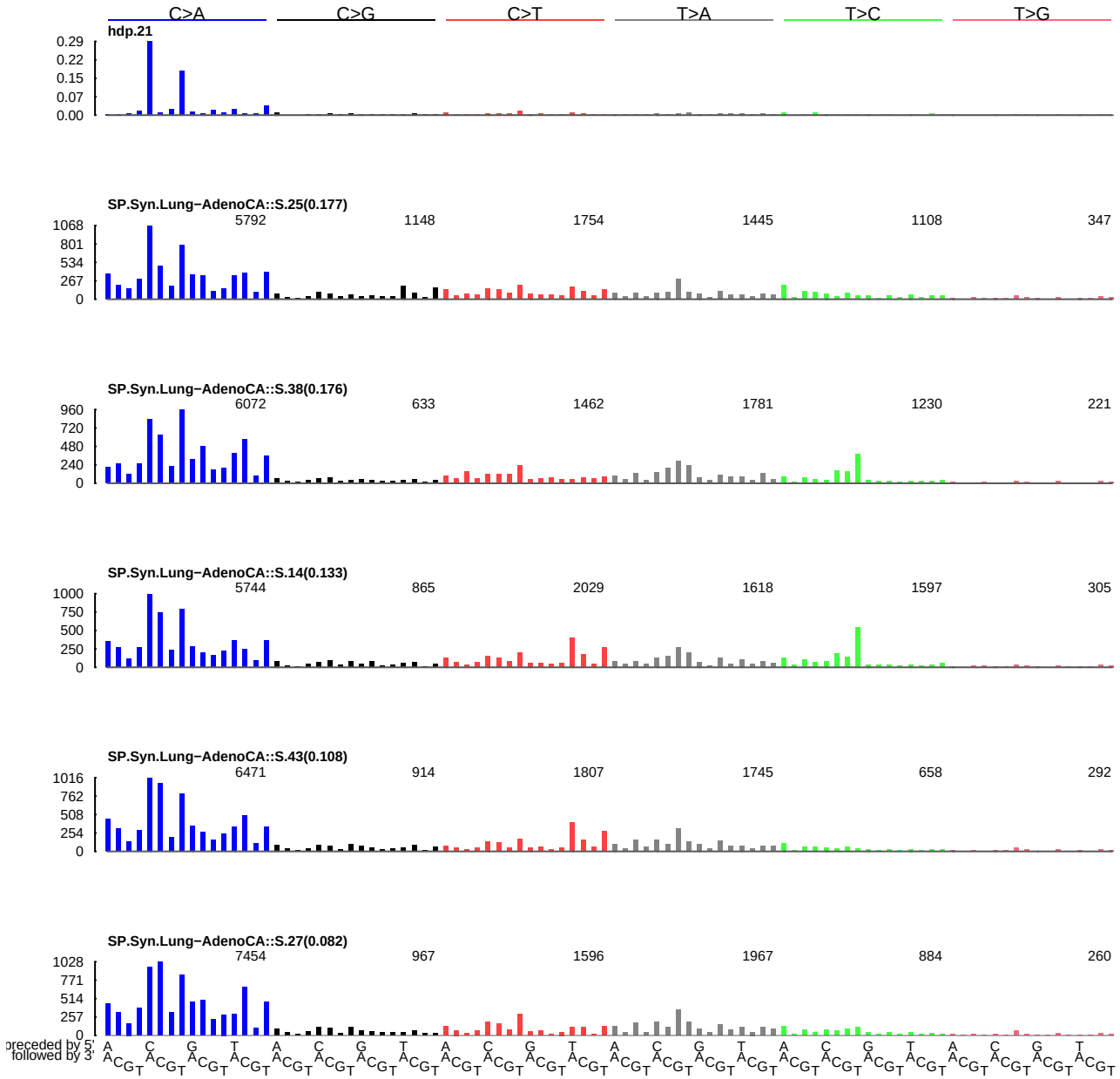

hdp.19
Proportion of exposure
0.00
0.05
0.10
0.15
0.20
0
500
1000
1500
2000
Exposure

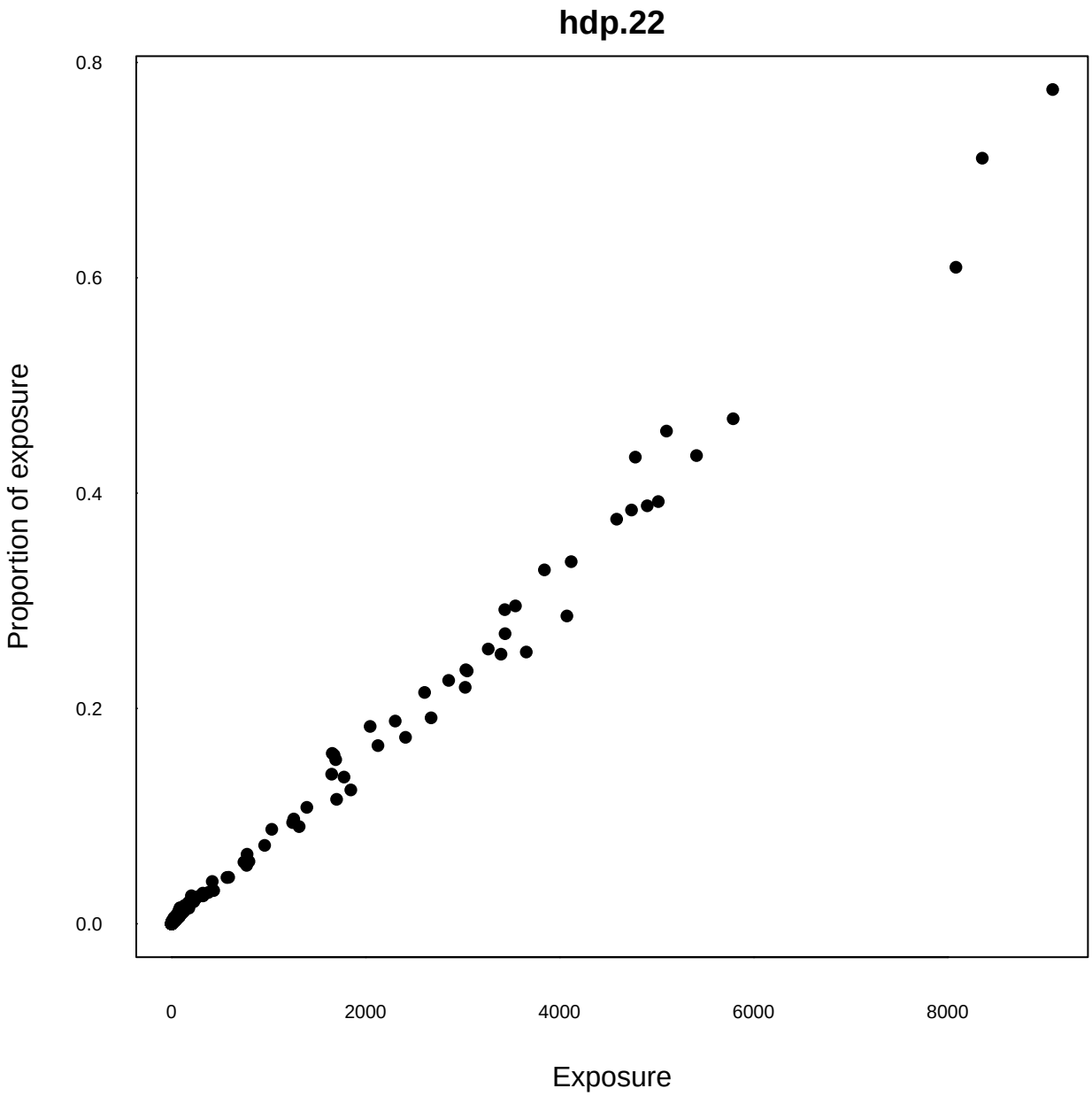

C>A
C>G
C>T
T>A
T>C
T>G
hdp.19
0.35
0.27
0.18
0.09
0.00
SP.Syn.Breast−AdenoCA::S.20(0.24)
728
1374
633
113
319
107
628
471
314
157
0
SP.Syn.Breast−AdenoCA::S.60(0.189)
2043
3913
1969
1079
1429
654
1388
1041
694
347
0
SP.Syn.Breast−AdenoCA::S.11(0.166)
339
884
1352
161
497
95
384
288
192
96
0
SP.Syn.Breast−AdenoCA::S.10(0.113)
1206
5619
2912
134
365
104
2556
1917
1278
639
0
SP.Syn.Breast−AdenoCA::S.25(0.097)
926
1089
2084
217
456
174
572
429
286
143
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

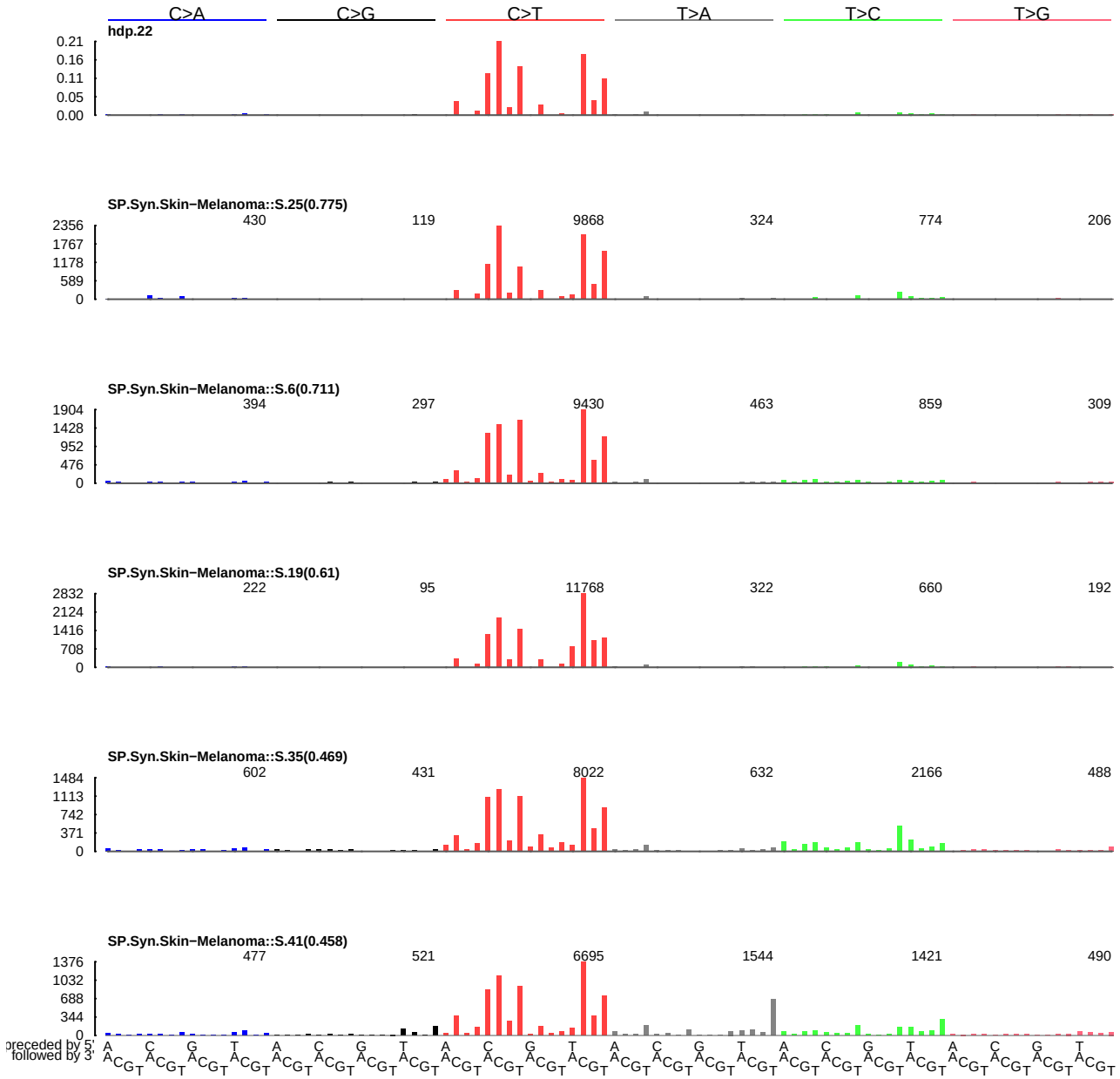

hdp.20
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
1000
2000
3000
4000
5000
6000
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.20
0.08
0.06
0.04
0.02
0.00
SP.Syn.Liver−HCC::S.20(0.557)
2555
1019
2702
765
2876
662
416
312
208
104
0
SP.Syn.Liver−HCC::S.49(0.342)
1723
856
2454
666
2606
668
672
504
336
168
0
SP.Syn.Liver−HCC::S.39(0.311)
2642
702
1540
735
2149
442
304
228
152
76
0
SP.Syn.Liver−HCC::S.18(0.29)
1726
883
2474
738
3728
667
552
414
276
138
0
SP.Syn.Liver−HCC::S.35(0.289)
2063
741
2397
720
3719
558
416
312
208
104
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
0.15
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
0.29
0.22
0.15
0.07
0.00
SP.Syn.Lung−AdenoCA::S.25(0.177)
5792
1148
1754
1445
1108
347
1068
801
534
267
0
SP.Syn.Lung−AdenoCA::S.38(0.176)
6072
633
1462
1781
1230
221
960
720
480
240
0
SP.Syn.Lung−AdenoCA::S.14(0.133)
5744
865
2029
1618
1597
305
1000
750
500
250
0
SP.Syn.Lung−AdenoCA::S.43(0.108)
6471
914
1807
1745
658
292
1016
762
508
254
0
SP.Syn.Lung−AdenoCA::S.27(0.082)
7454
967
1596
1967
884
260
1028
771
514
257
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.22
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.22
0.21
0.16
0.11
0.05
0.00
SP.Syn.Skin−Melanoma::S.25(0.775)
430
119
9868
324
774
206
2356
1767
1178
589
0
SP.Syn.Skin−Melanoma::S.6(0.711)
394
297
9430
463
859
309
1904
1428
952
476
0
SP.Syn.Skin−Melanoma::S.19(0.61)
222
95
11768
322
660
192
2832
2124
1416
708
0
SP.Syn.Skin−Melanoma::S.35(0.469)
602
431
8022
632
2166
488
1484
1113
742
371
0
SP.Syn.Skin−Melanoma::S.41(0.458)
477
521
6695
1544
1421
490
1376
1032
688
344
0
preceded by 5'
followed by 3'