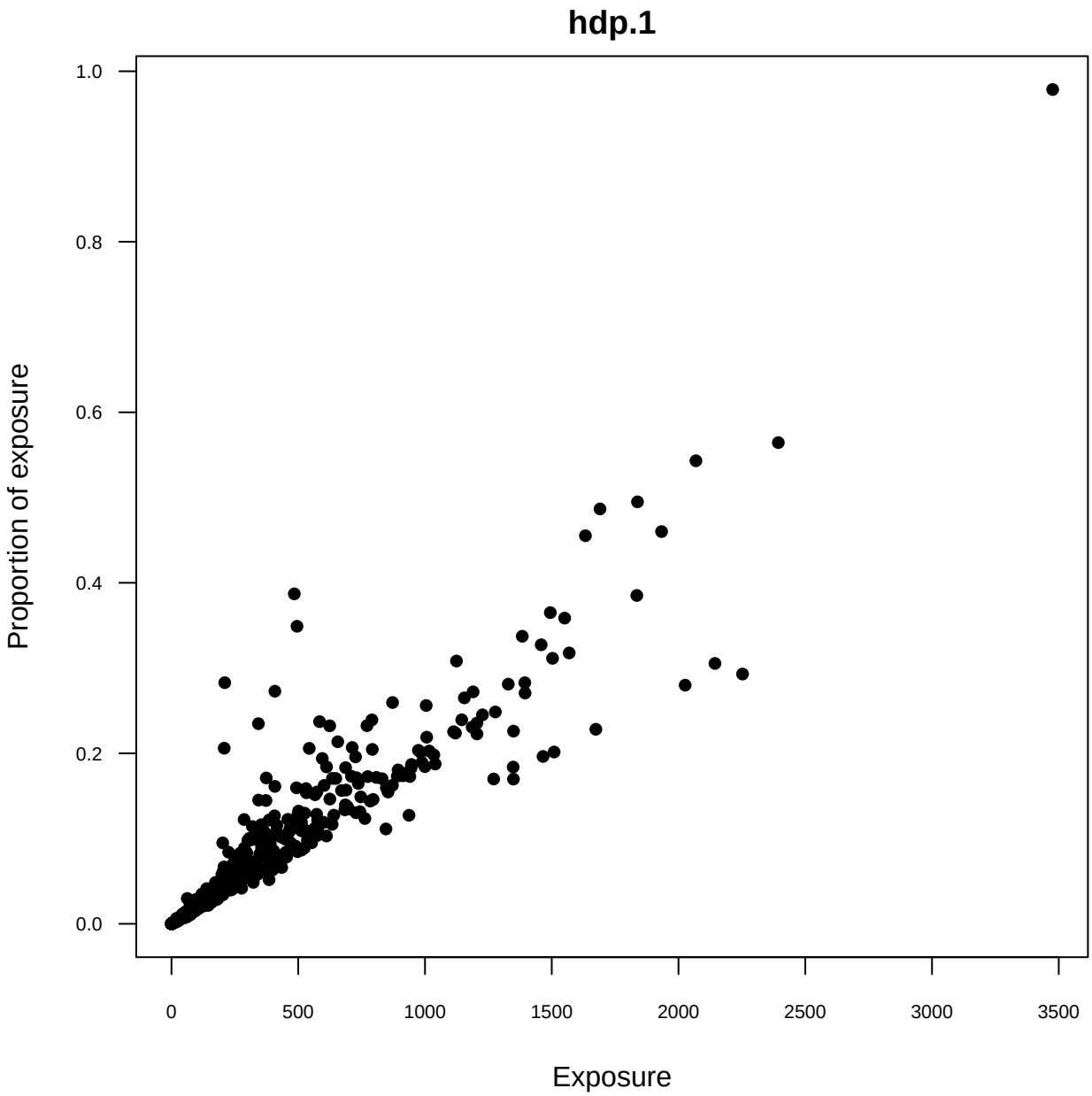
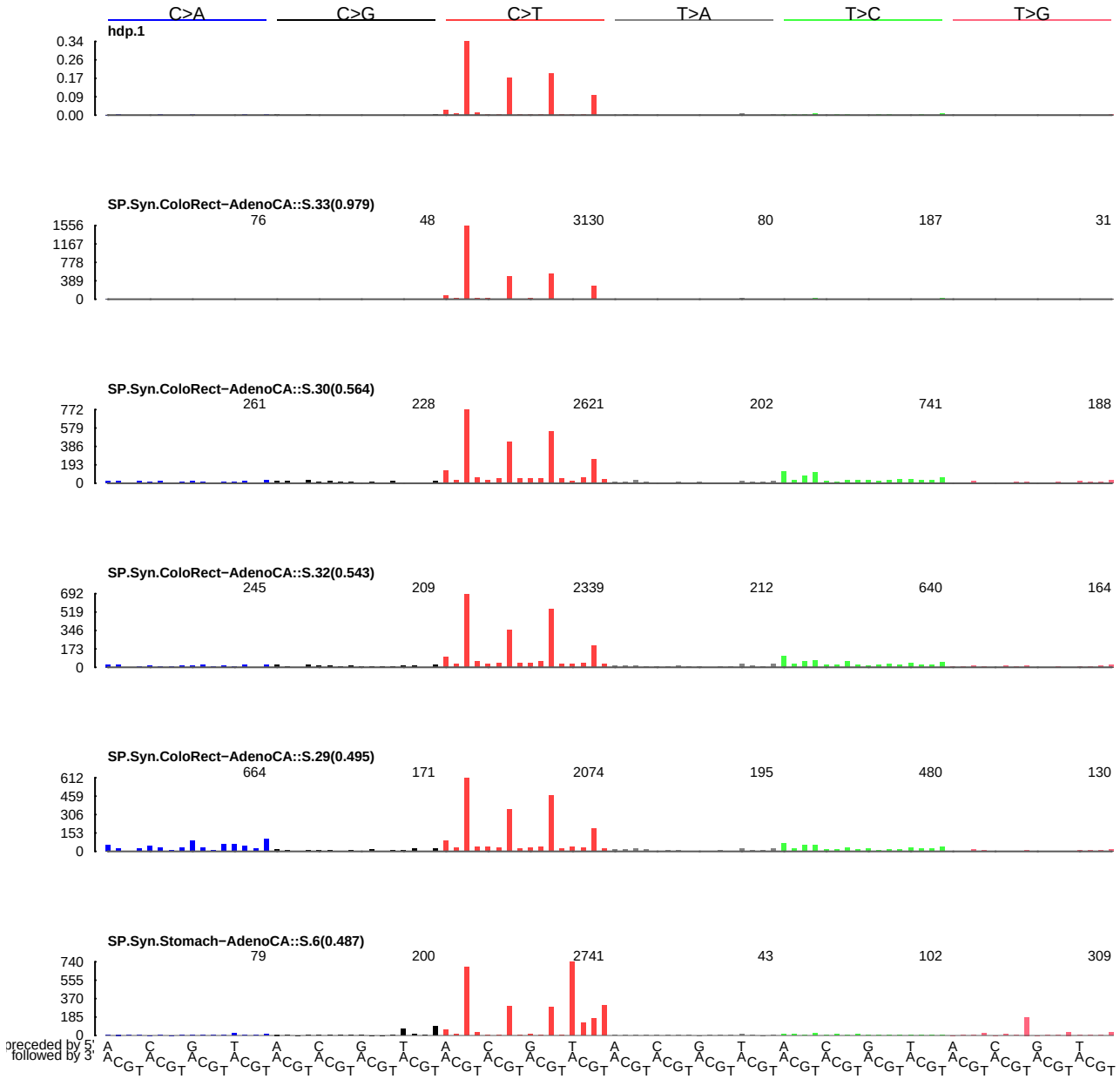
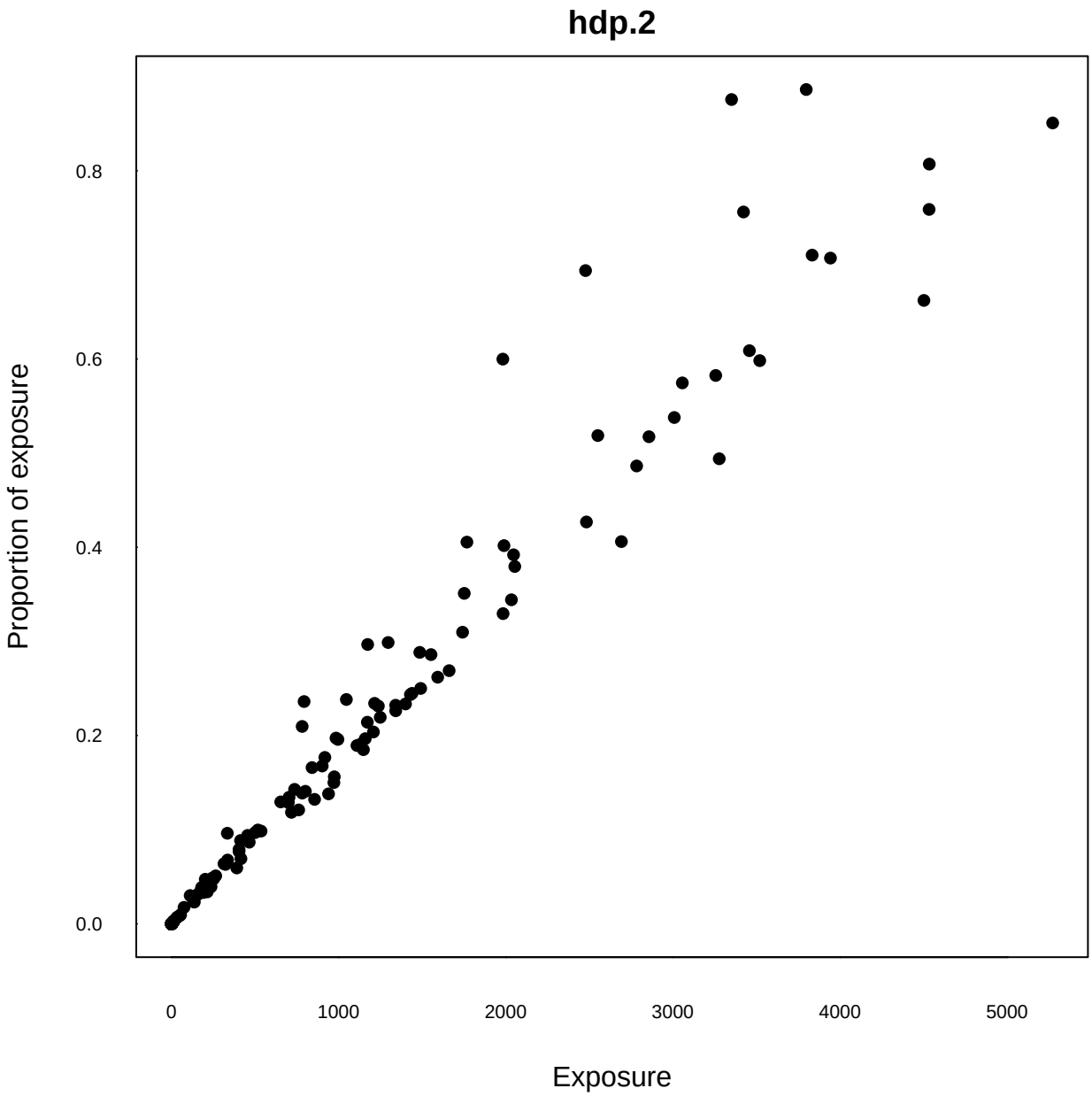
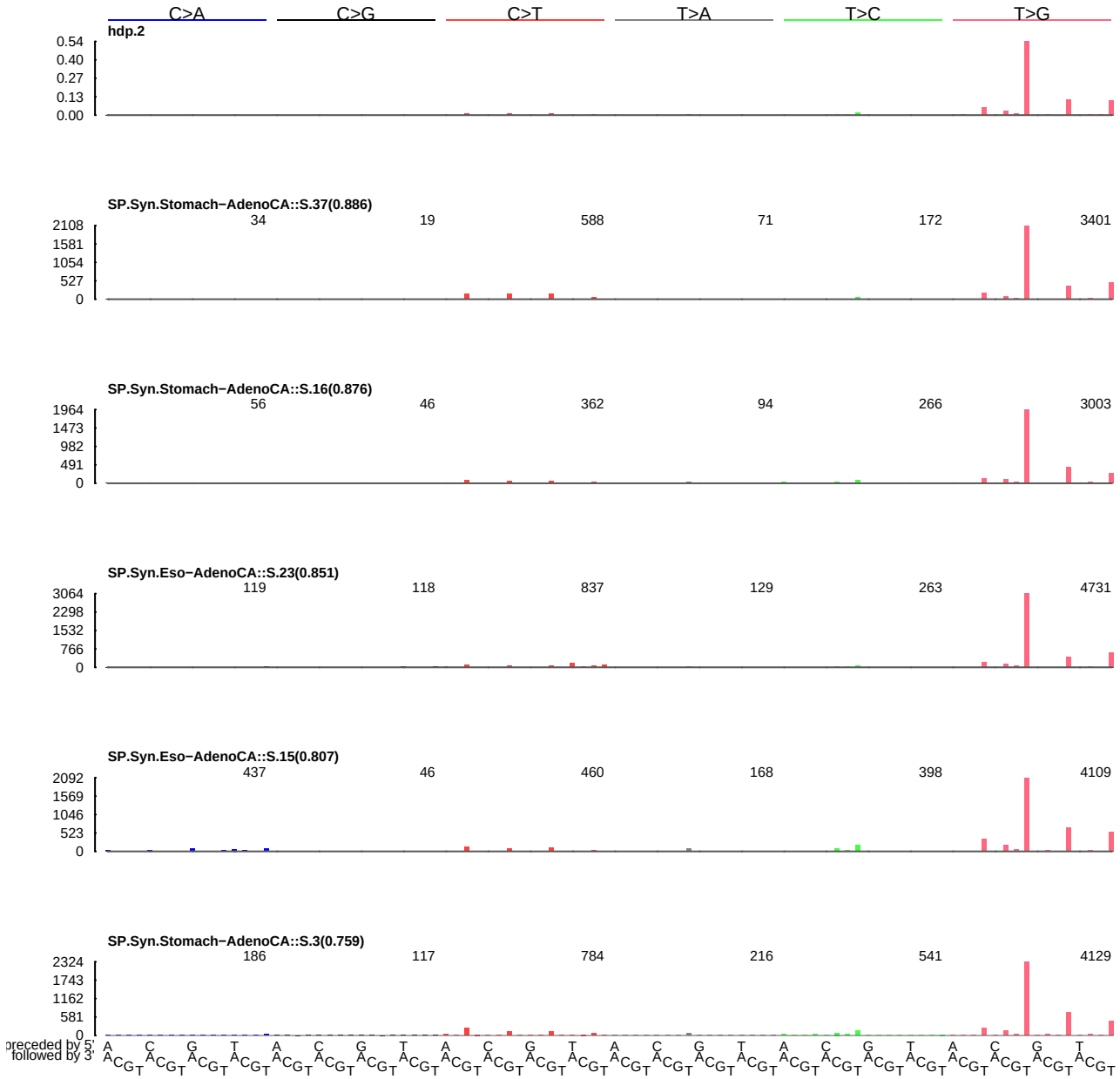
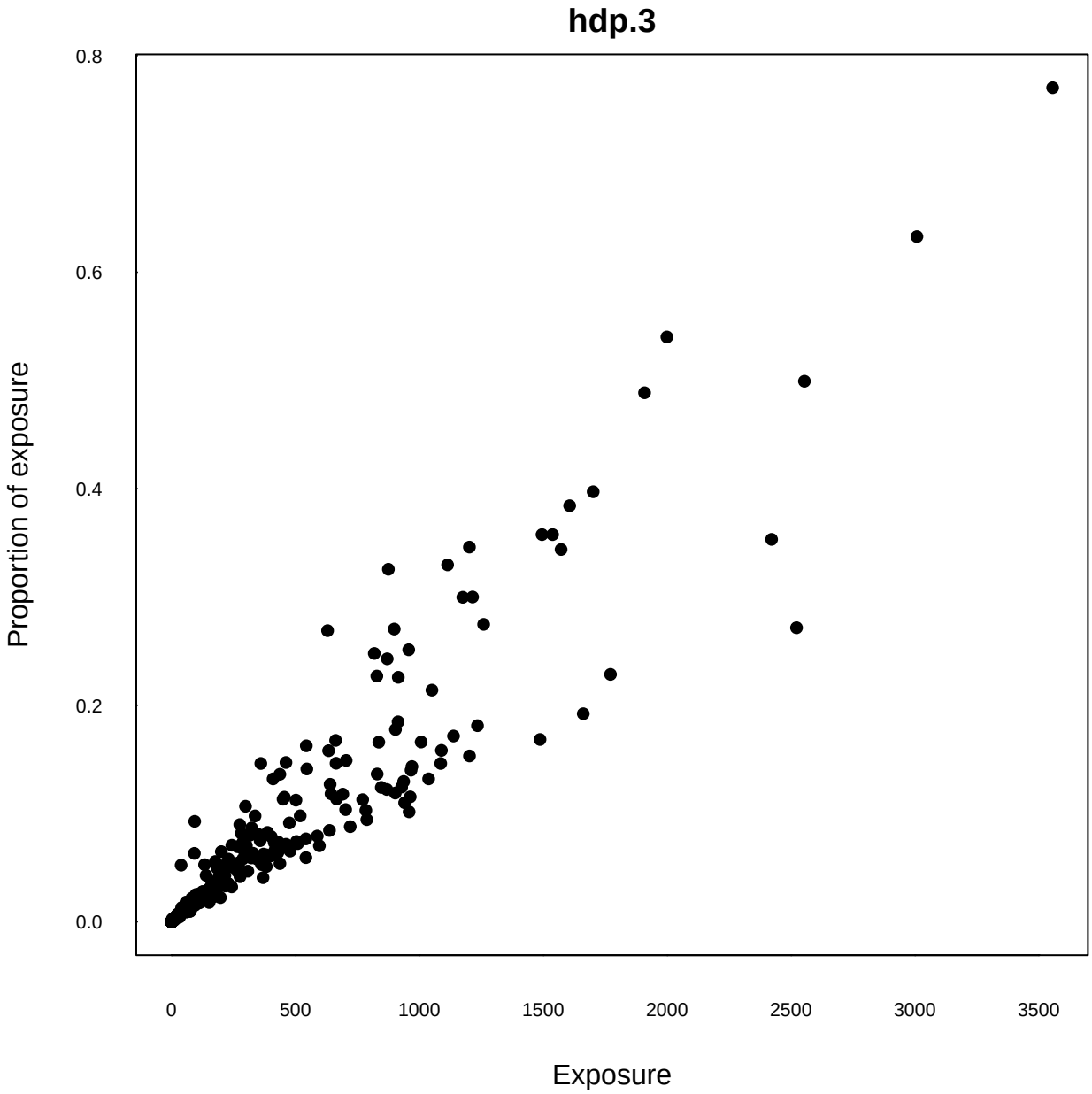
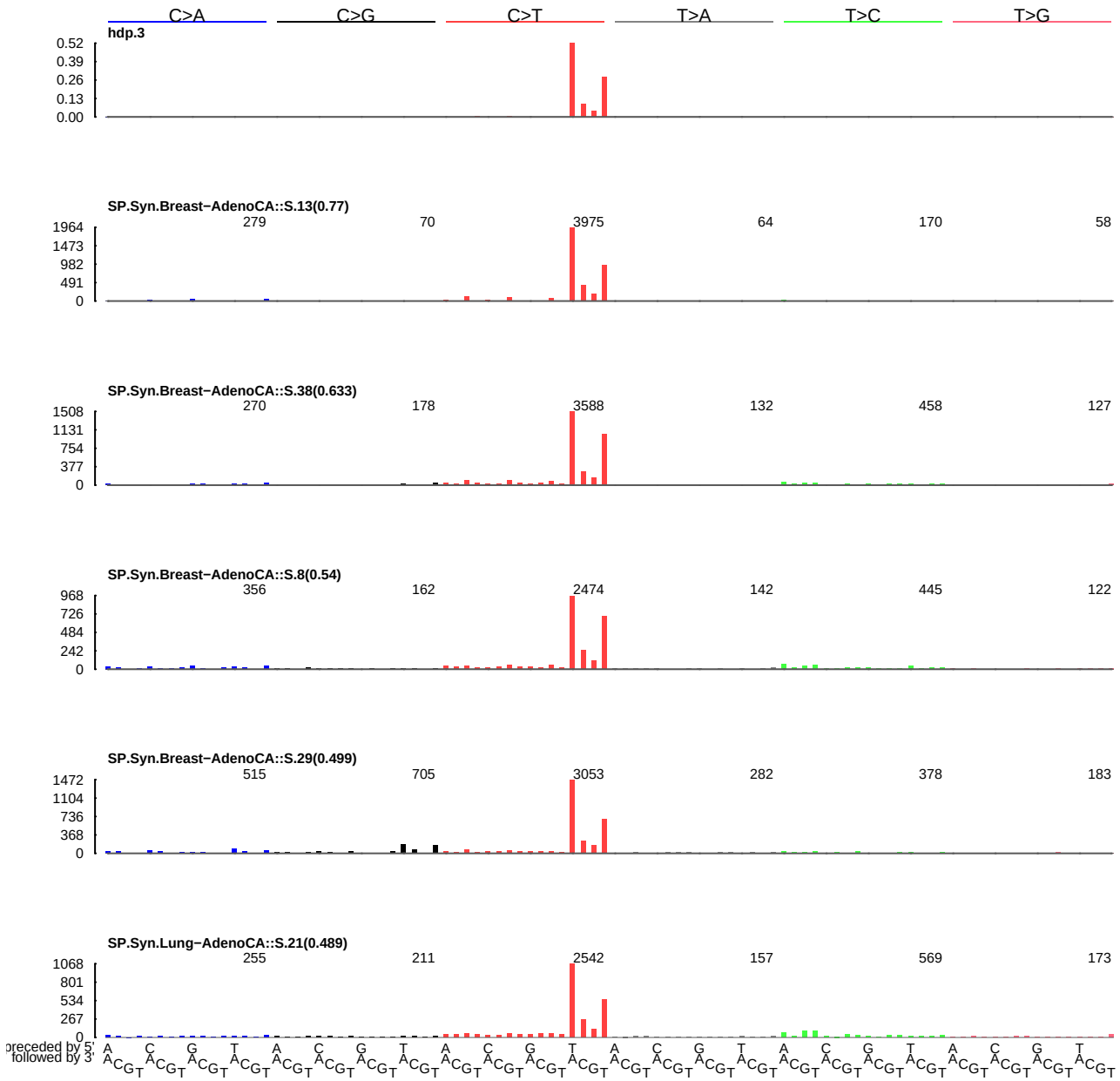

hdp.1
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
500
1000
1500
2000
2500
3000
3500
Exposure

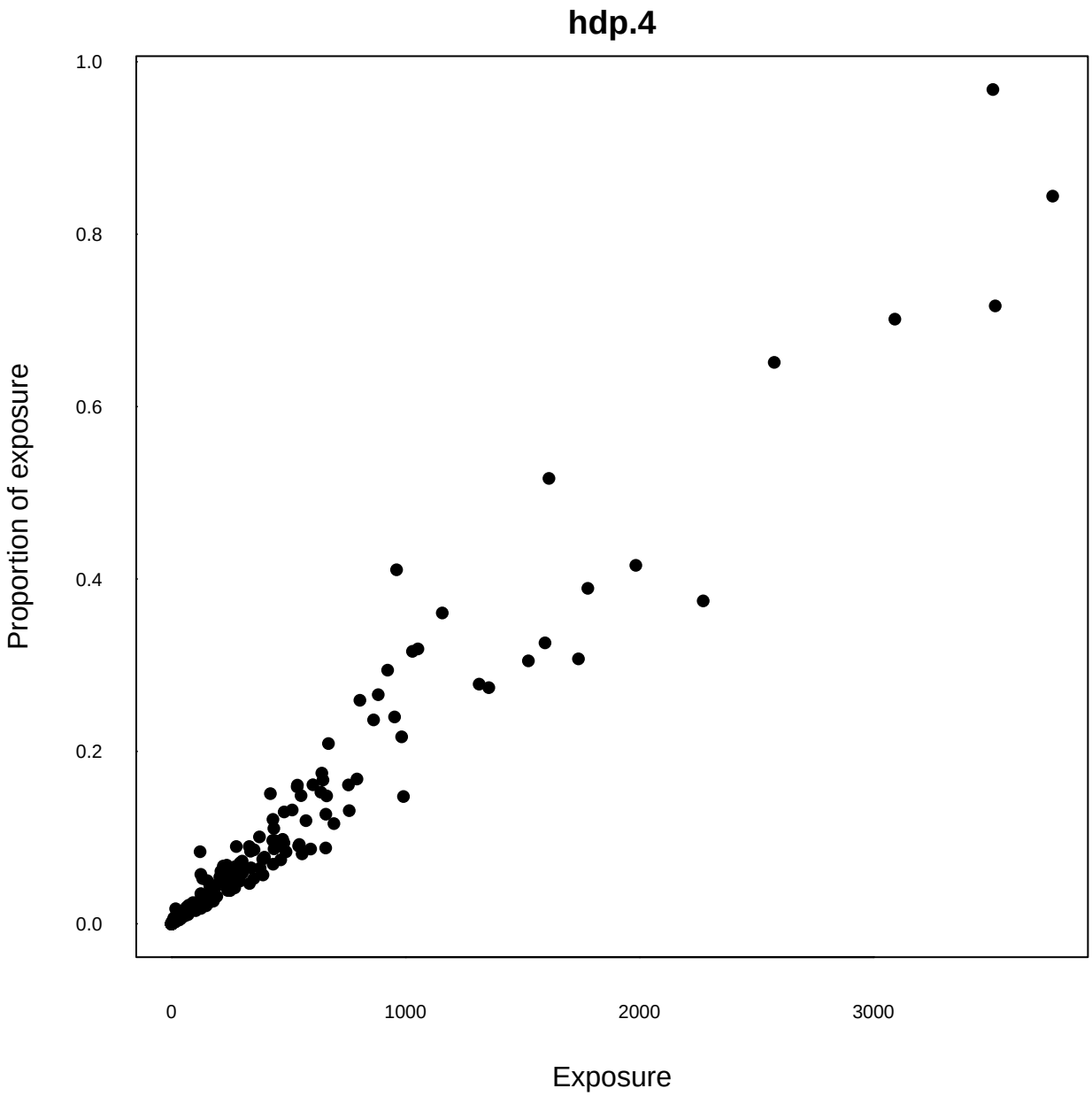

C>A
C>G
C>T
T>A
T>C
T>G
hdp.1
0.34
0.26
0.17
0.09
0.00
SP.Syn.ColoRect−AdenoCA::S.33(0.979)
76
48
3130
80
187
31
1556
1167
778
389
0
SP.Syn.ColoRect−AdenoCA::S.30(0.564)
261
228
2621
202
741
188
772
579
386
193
0
SP.Syn.ColoRect−AdenoCA::S.32(0.543)
245
209
2339
212
640
164
692
519
346
173
0
SP.Syn.ColoRect−AdenoCA::S.29(0.495)
664
171
2074
195
480
130
612
459
306
153
0
SP.Syn.Stomach−AdenoCA::S.6(0.487)
79
200
2741
43
102
309
740
555
370
185
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

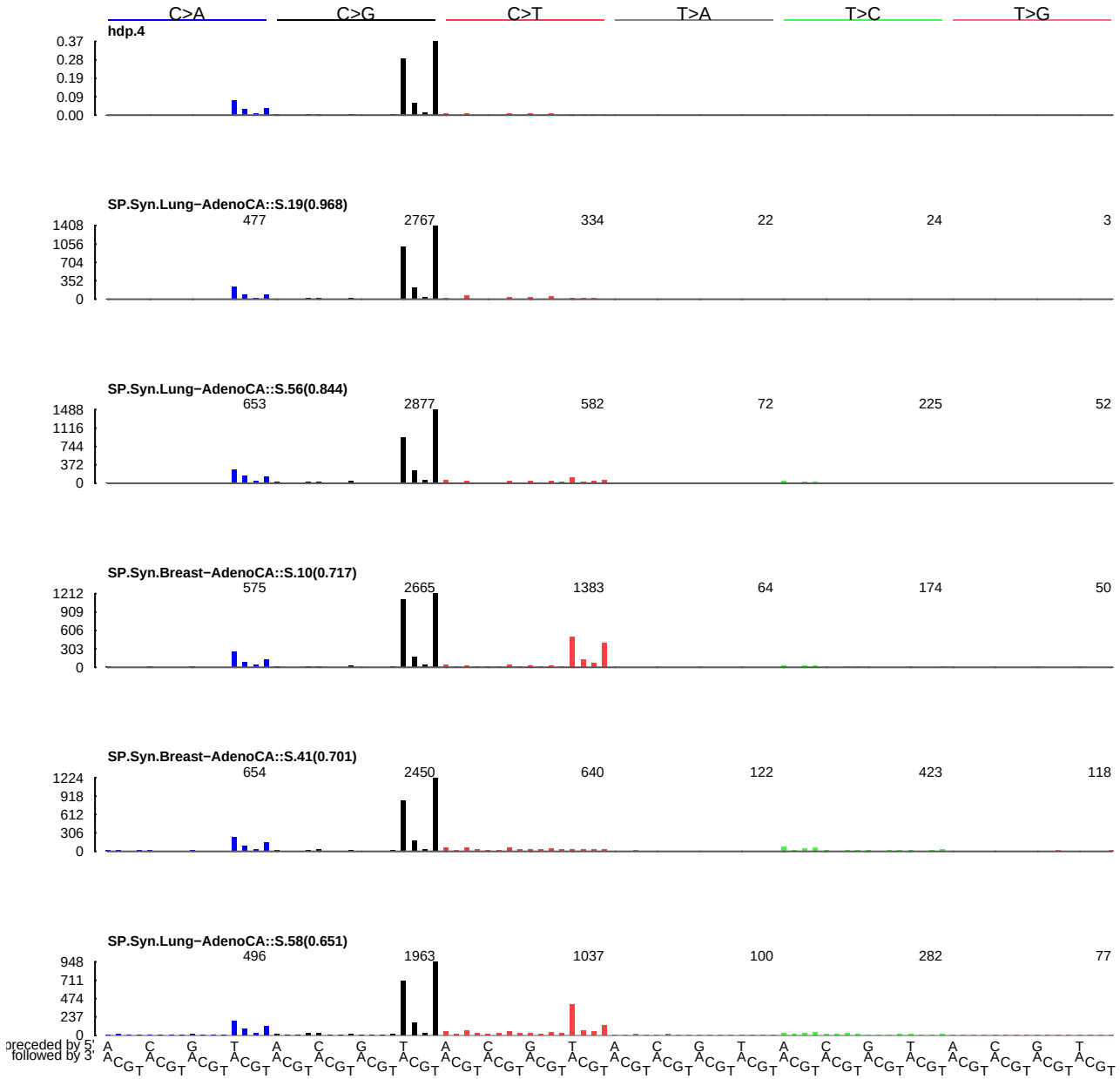

hdp.2
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure

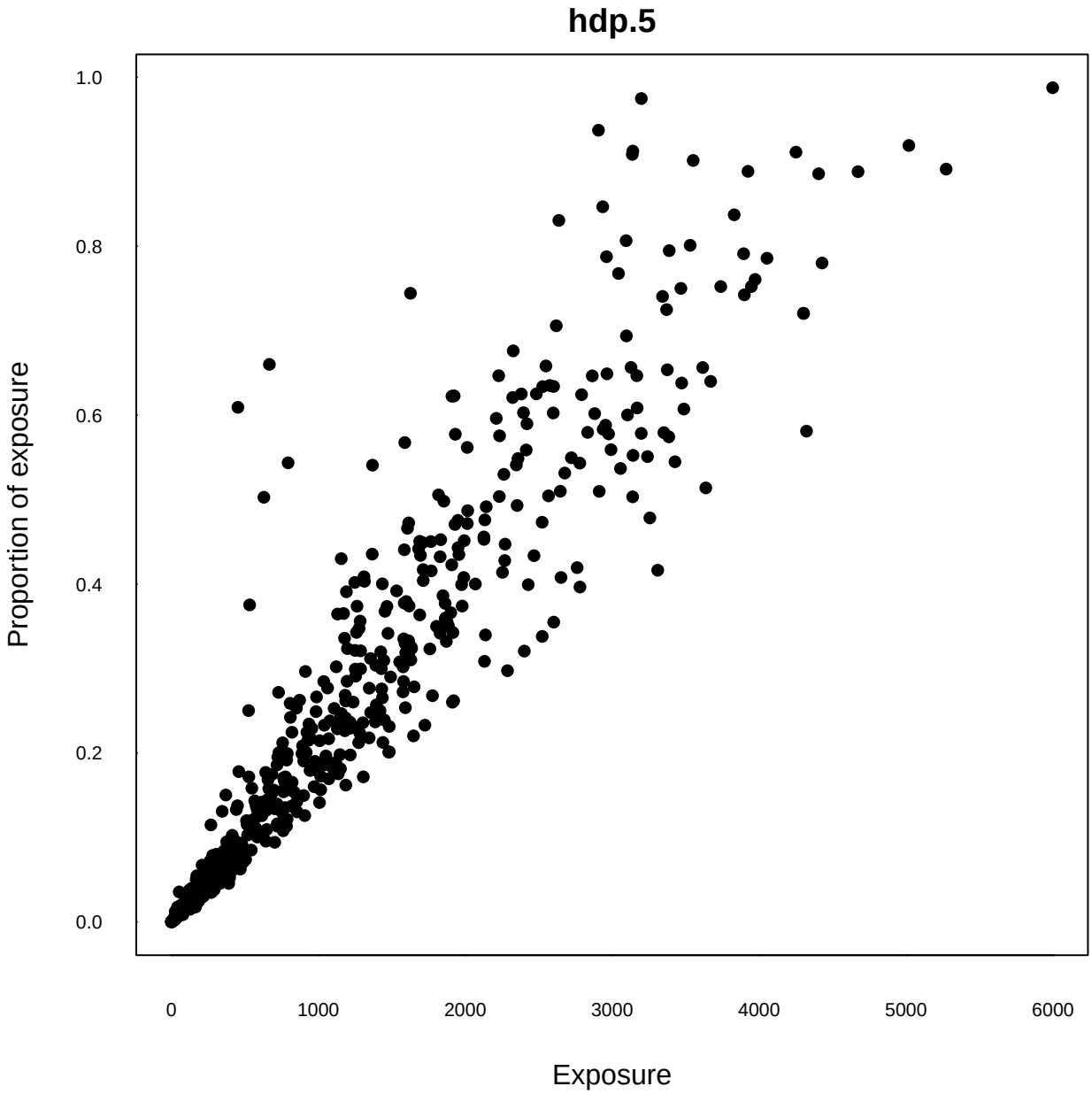

C>A
C>G
C>T
T>A
T>C
T>G
hdp.2
0.54
0.40
0.27
0.13
0.00
SP.Syn.Stomach−AdenoCA::S.37(0.886)
34
19
588
71
172
3401
2108
1581
1054
527
0
SP.Syn.Stomach−AdenoCA::S.16(0.876)
56
46
362
94
266
3003
1964
1473
982
491
0
SP.Syn.Eso−AdenoCA::S.23(0.851)
119
118
837
129
263
4731
3064
2298
1532
766
0
SP.Syn.Eso−AdenoCA::S.15(0.807)
437
46
460
168
398
4109
2092
1569
1046
523
0
SP.Syn.Stomach−AdenoCA::S.3(0.759)
186
117
784
216
541
4129
2324
1743
1162
581
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

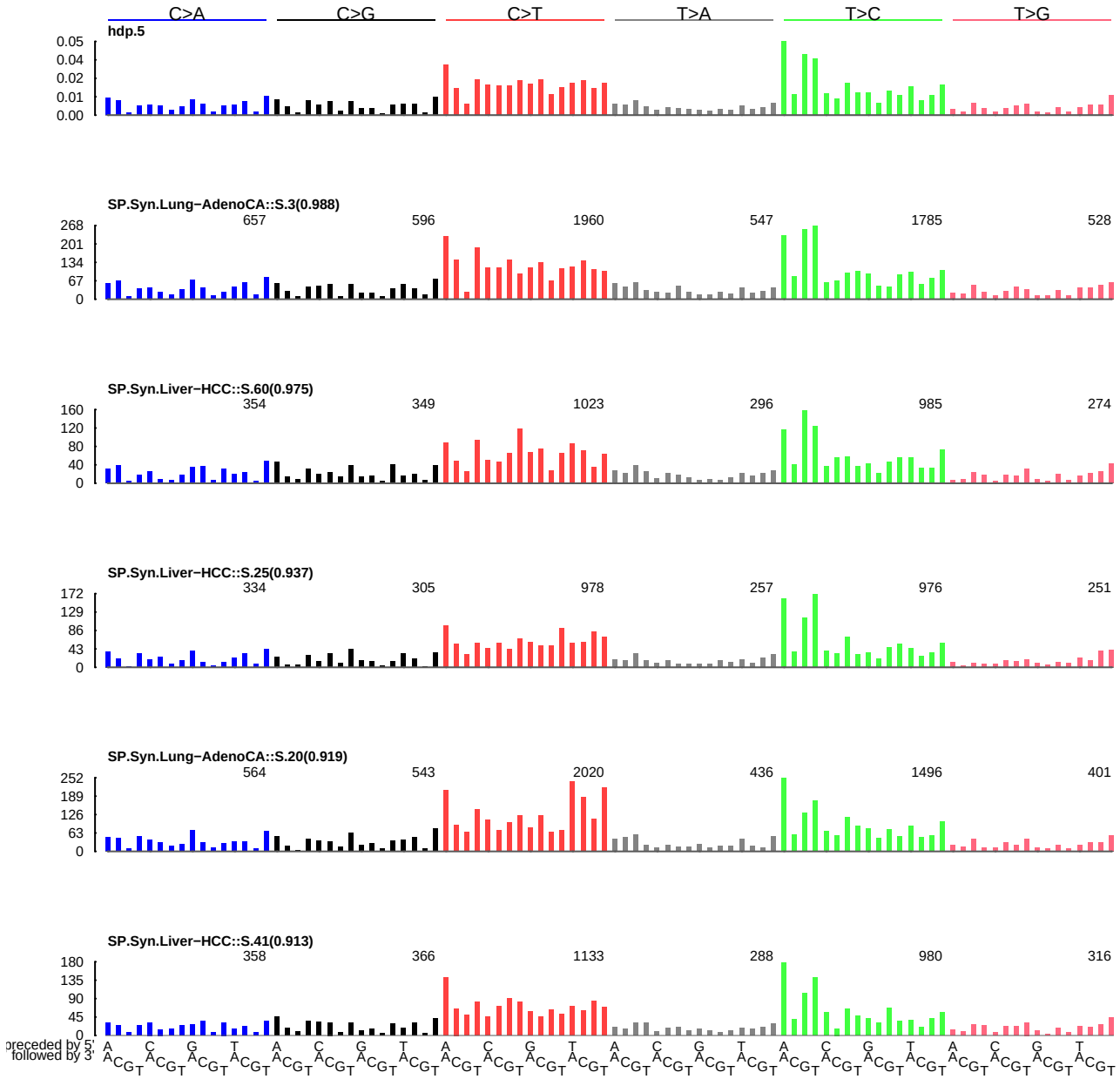

hdp.3
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
500
1000
1500
2000
2500
3000
3500
Exposure

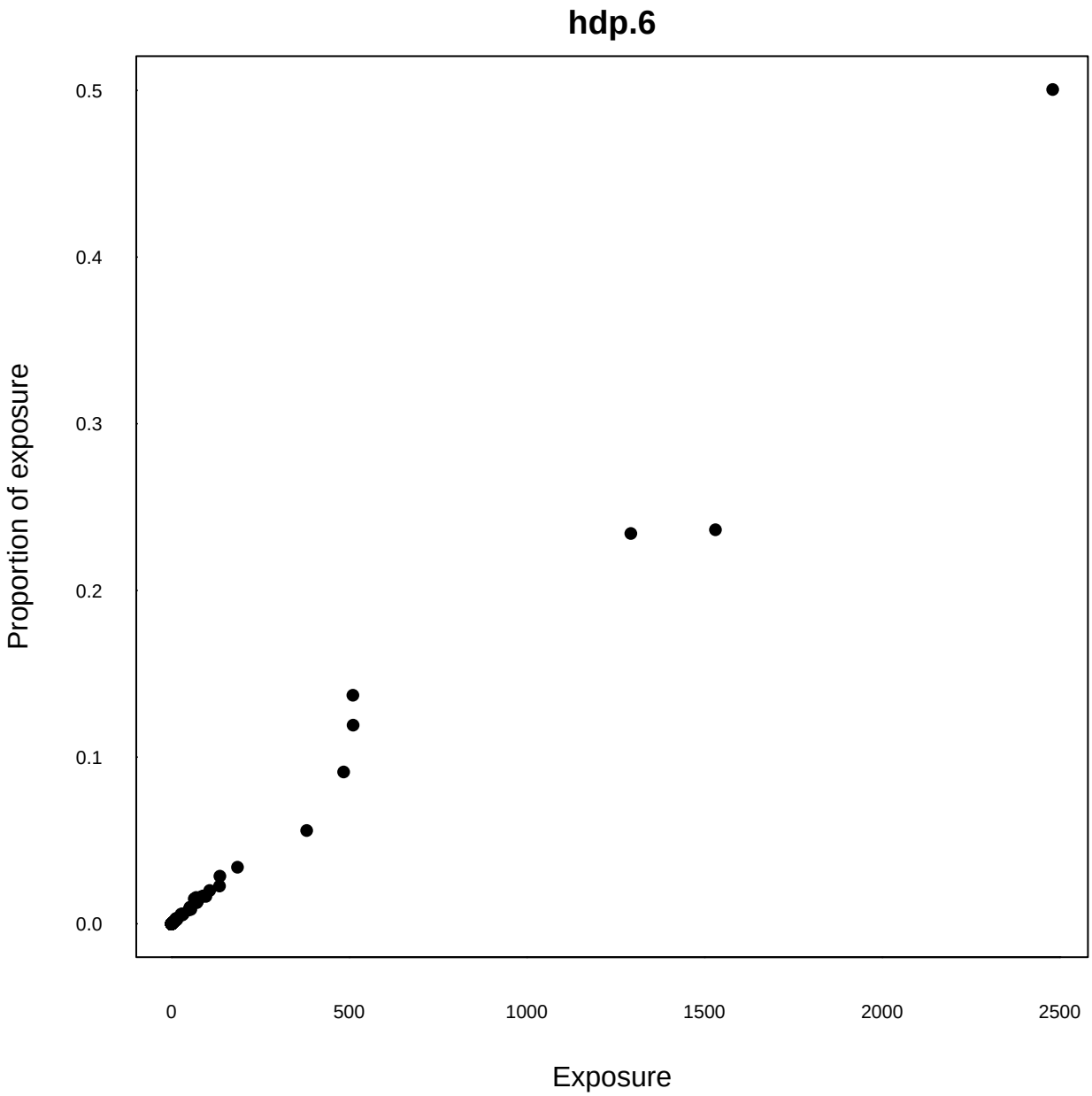

C>A
C>G
C>T
T>A
T>C
T>G
hdp.3
0.52
0.39
0.26
0.13
0.00
SP.Syn.Breast−AdenoCA::S.13(0.77)
279
70
3975
64
170
58
1964
1473
982
491
0
SP.Syn.Breast−AdenoCA::S.38(0.633)
270
178
3588
132
458
127
1508
1131
754
377
0
SP.Syn.Breast−AdenoCA::S.8(0.54)
356
162
2474
142
445
122
968
726
484
242
0
SP.Syn.Breast−AdenoCA::S.29(0.499)
515
705
3053
282
378
183
1472
1104
736
368
0
SP.Syn.Lung−AdenoCA::S.21(0.489)
255
211
2542
157
569
173
1068
801
534
267
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

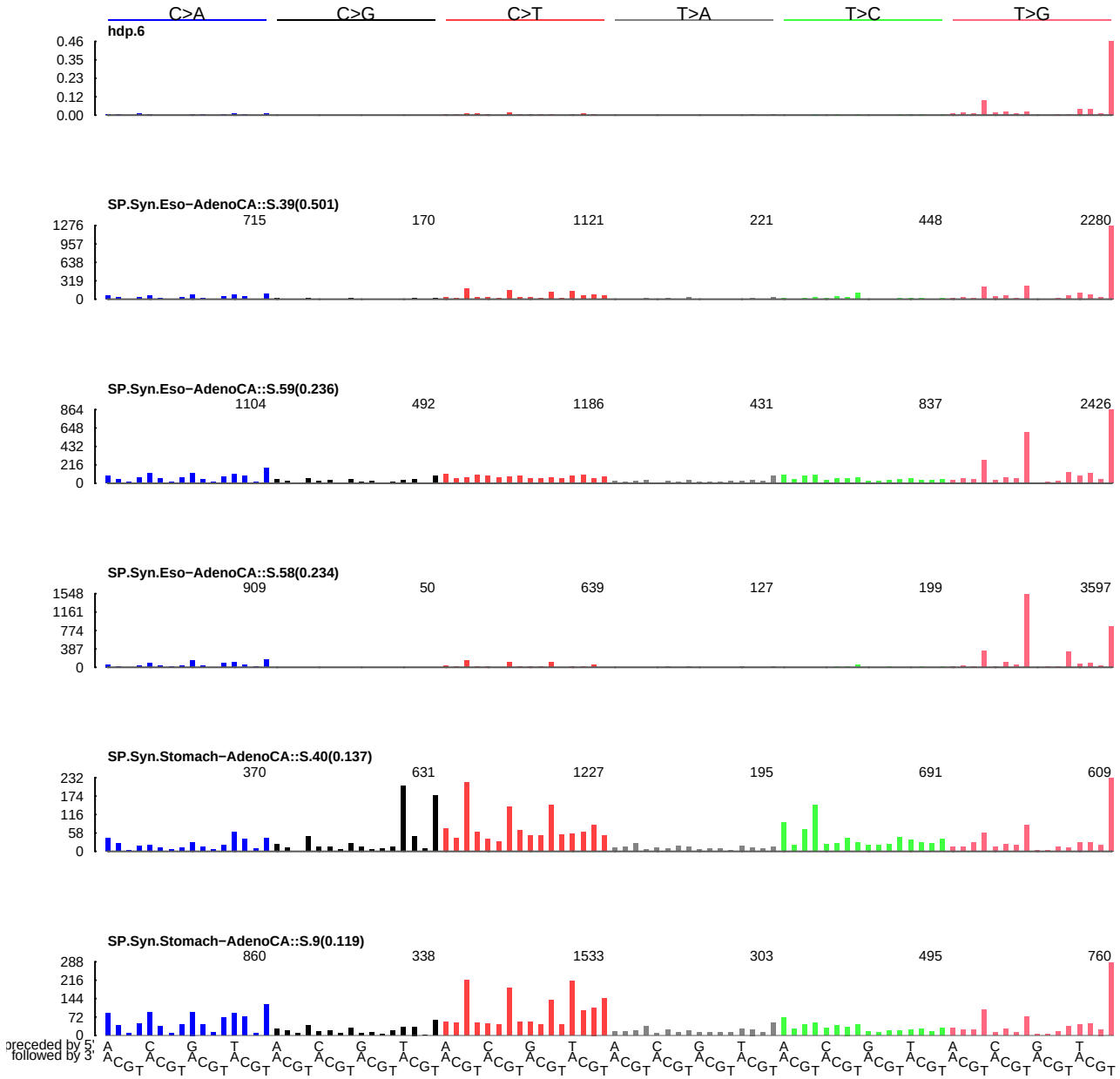

hdp.4
1.0
0.8
0.6
0.4
0.2
0.0
Proportion of exposure
0
1000
2000
3000
Exposure

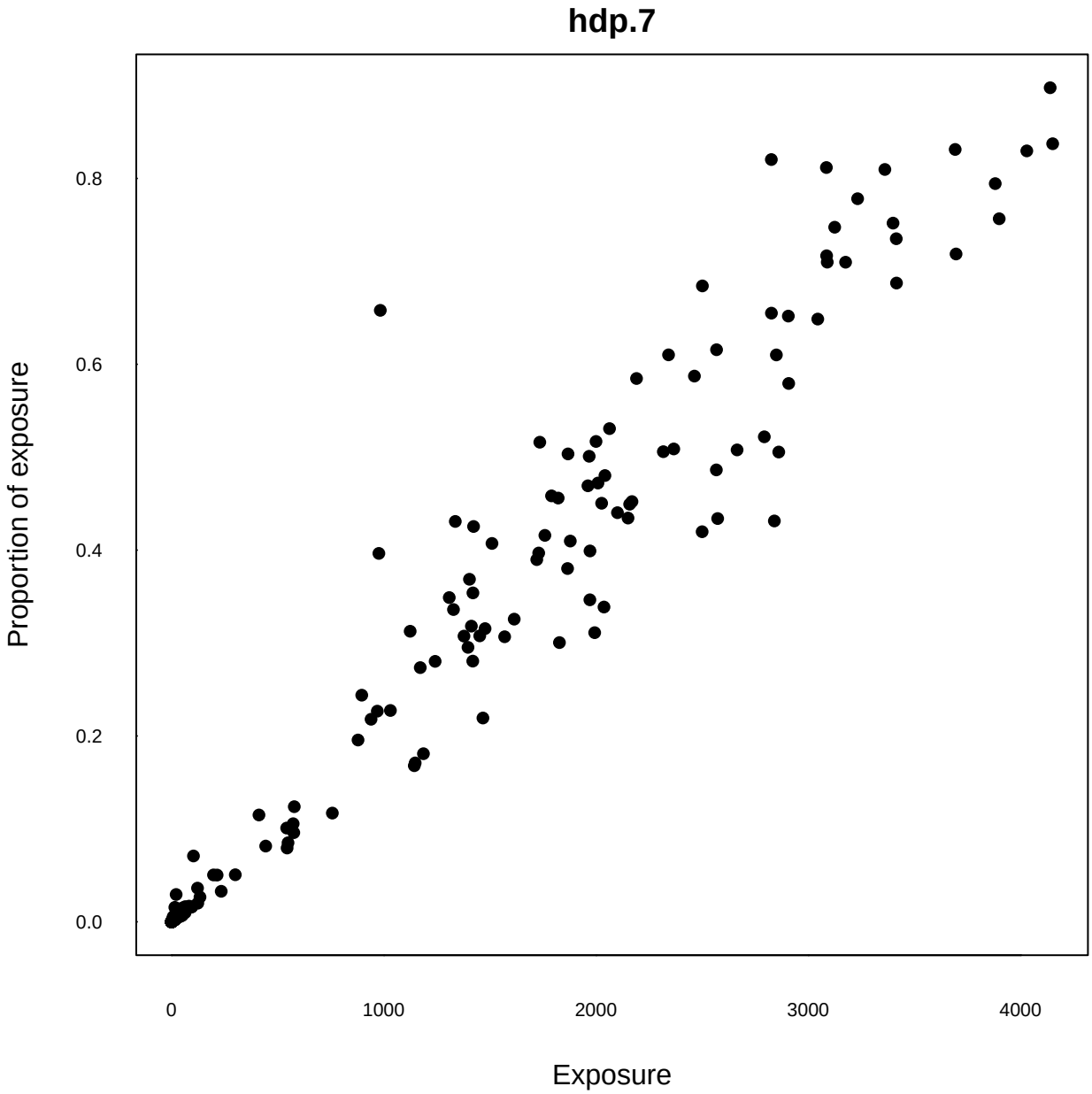

C>A
C>G
C>T
T>A
T>C
T>G
hdp.4
0.37
0.28
0.19
0.09
0.00
SP.Syn.Lung−AdenoCA::S.19(0.968)
1408
1056
704
352
0
477
2767
334
22
24
3
SP.Syn.Lung−AdenoCA::S.56(0.844)
1488
1116
744
372
0
653
2877
582
72
225
52
SP.Syn.Breast−AdenoCA::S.10(0.717)
1212
909
606
303
0
575
2665
1383
64
174
50
SP.Syn.Breast−AdenoCA::S.41(0.701)
1224
918
612
306
0
654
2450
640
122
423
118
SP.Syn.Lung−AdenoCA::S.58(0.651)
948
711
474
237
0
496
1963
1037
100
282
77
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

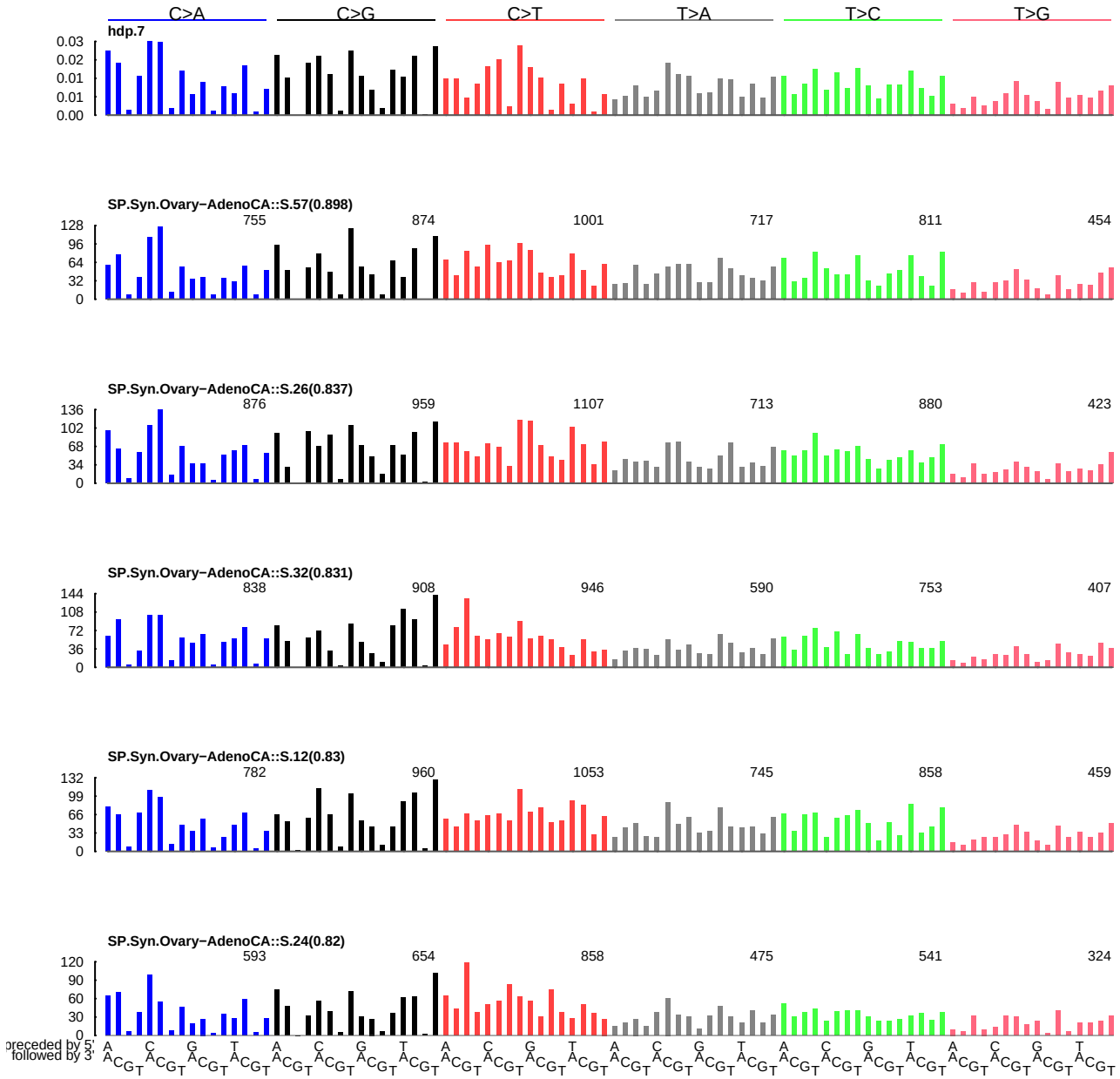

hdp.5
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
5000
6000
Exposure

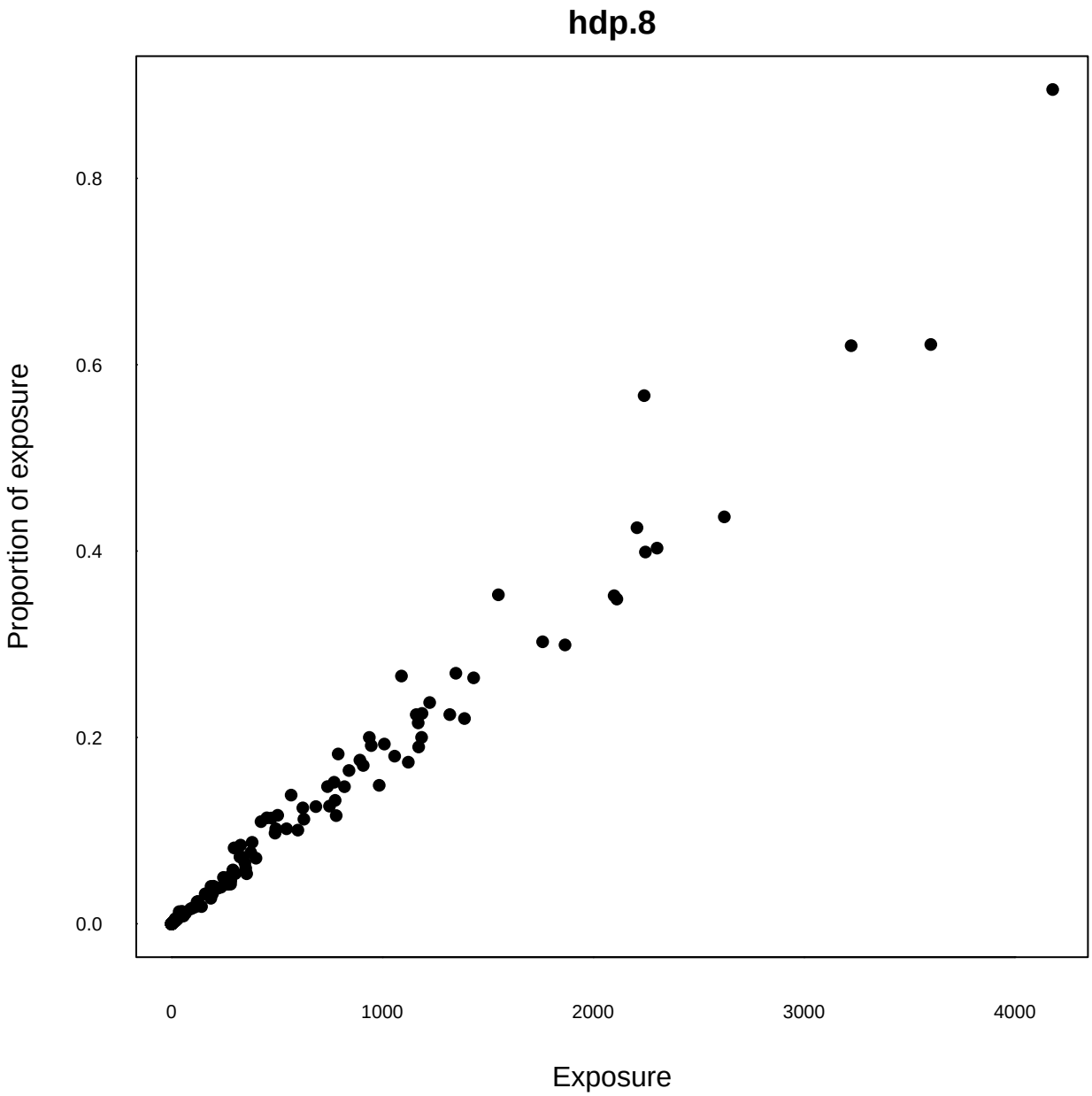

C>A
C>G
C>T
T>A
T>C
T>G
hdp.5
0.05
0.04
0.02
0.01
0.00
SP.Syn.Lung−AdenoCA::S.3(0.988)
657
596
1960
547
1785
528
268
201
134
67
0
SP.Syn.Liver−HCC::S.60(0.975)
354
349
1023
296
985
274
160
120
80
40
0
SP.Syn.Liver−HCC::S.25(0.937)
334
305
978
257
976
251
172
129
86
43
0
SP.Syn.Lung−AdenoCA::S.20(0.919)
564
543
2020
436
1496
401
252
189
126
63
0
SP.Syn.Liver−HCC::S.41(0.913)
358
366
1133
288
980
316
180
135
90
45
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

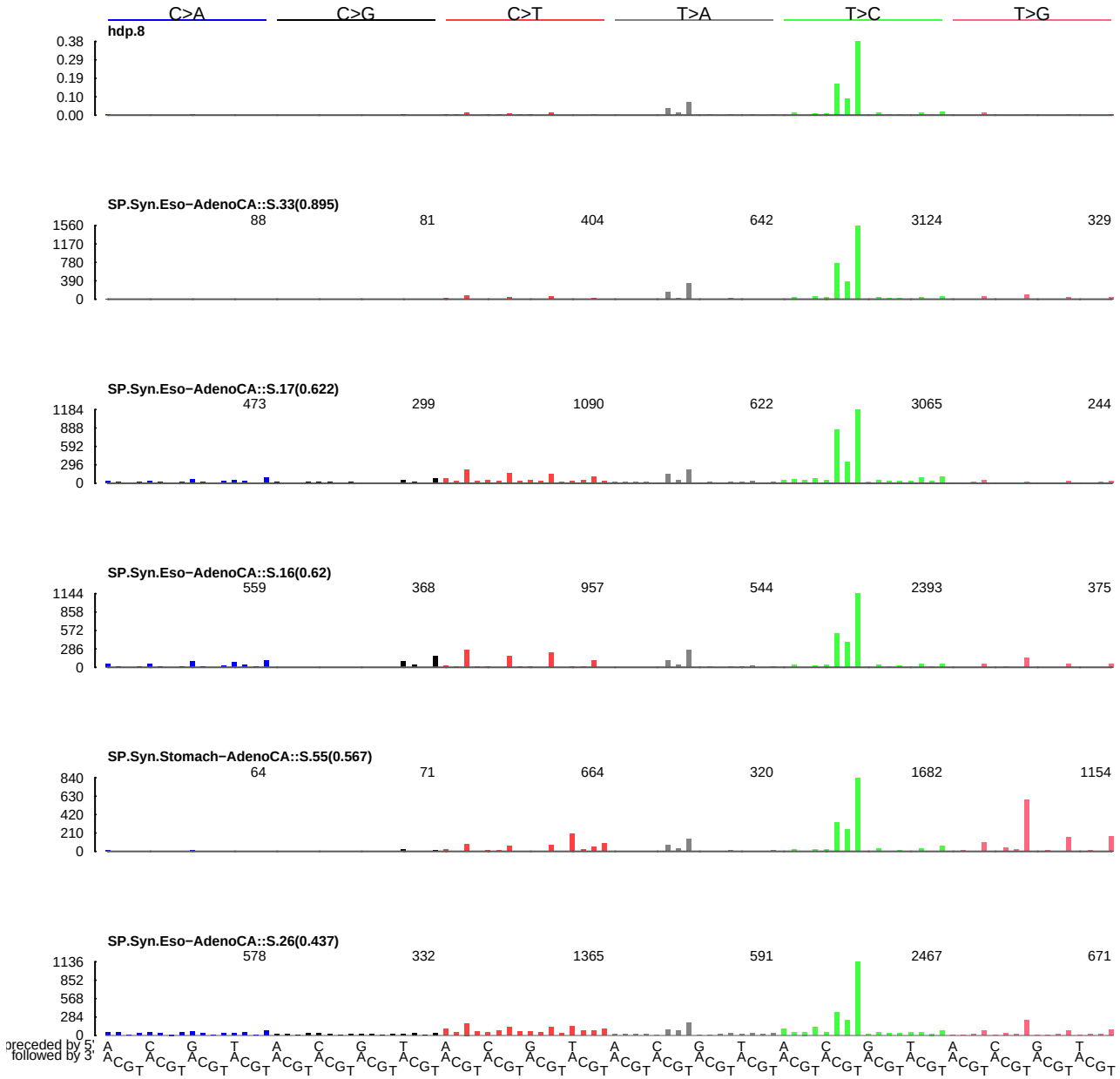

hdp.6
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
500
1000
1500
2000
2500
Exposure

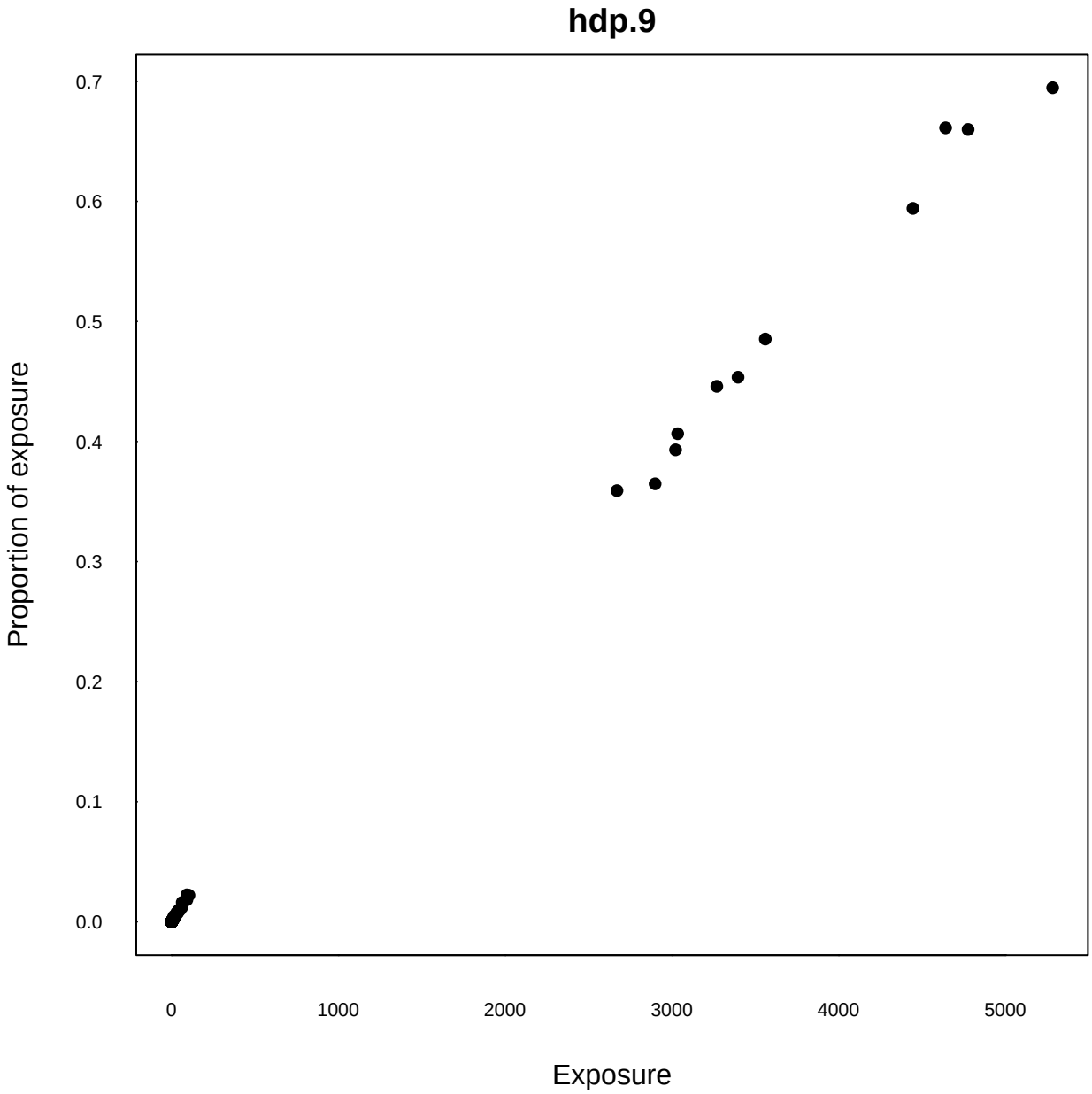

C>A
C>G
C>T
T>A
T>C
T>G
hdp.6
0.46
0.35
0.23
0.12
0.00
SP.Syn.Eso−AdenoCA::S.39(0.501)
715
170
1121
221
448
2280
1276
957
638
319
0
SP.Syn.Eso−AdenoCA::S.59(0.236)
1104
492
1186
431
837
2426
864
648
432
216
0
SP.Syn.Eso−AdenoCA::S.58(0.234)
909
50
639
127
199
3597
1548
1161
774
387
0
SP.Syn.Stomach−AdenoCA::S.40(0.137)
370
631
1227
195
691
609
232
174
116
58
0
SP.Syn.Stomach−AdenoCA::S.9(0.119)
860
338
1533
303
495
760
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

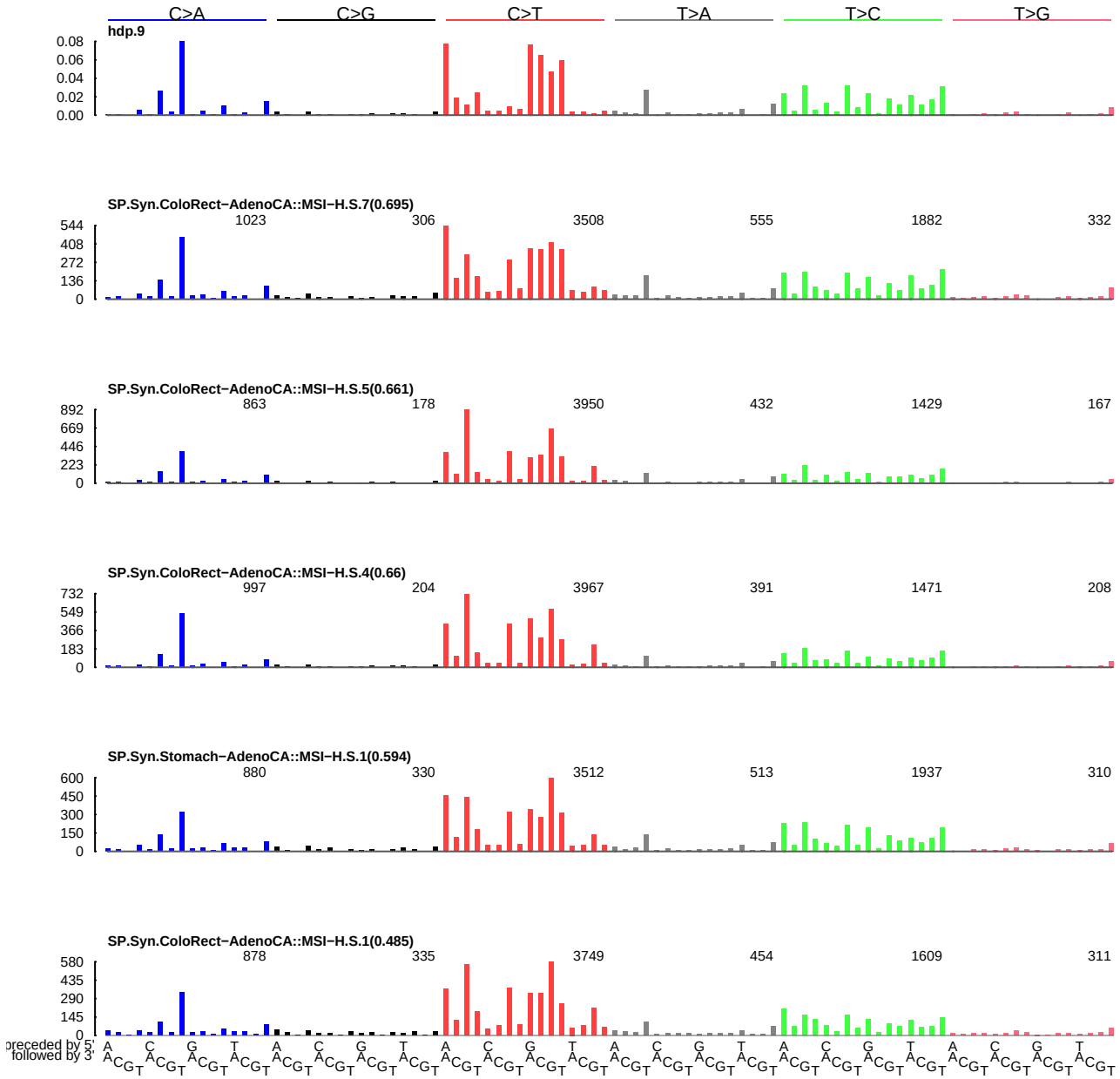

hdp.7
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
Exposure

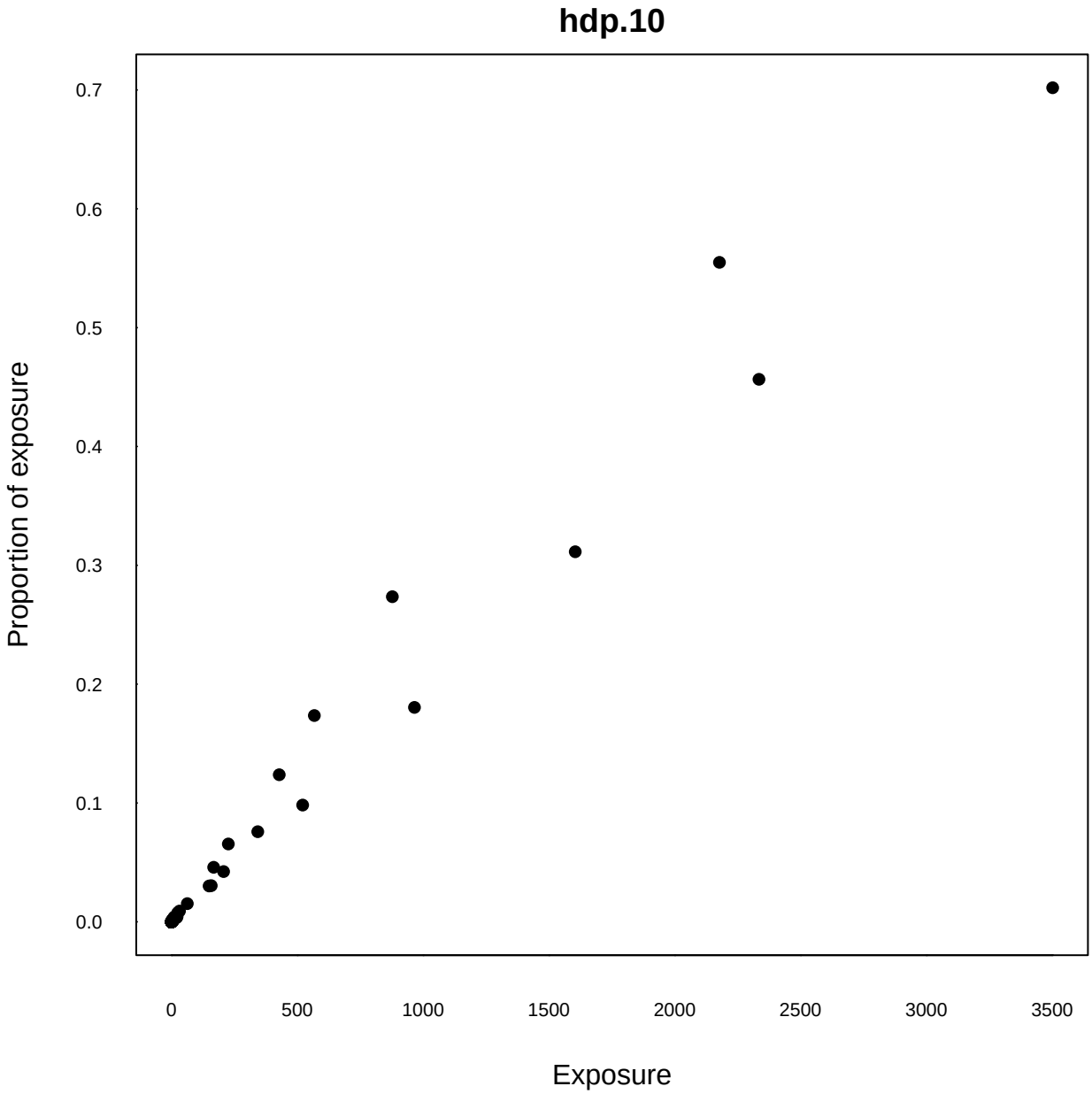

C>A
C>G
C>T
T>A
T>C
T>G
hdp.7
0.03
0.02
0.01
0.01
0.00
SP.Syn.Ovary−AdenoCA::S.57(0.898)
755
874
1001
717
811
454
128
96
64
32
0
SP.Syn.Ovary−AdenoCA::S.26(0.837)
876
959
1107
713
880
423
136
102
68
34
0
SP.Syn.Ovary−AdenoCA::S.32(0.831)
838
908
946
590
753
407
144
108
72
36
0
SP.Syn.Ovary−AdenoCA::S.12(0.83)
782
960
1053
745
858
459
132
99
66
33
0
SP.Syn.Ovary−AdenoCA::S.24(0.82)
593
654
858
475
541
324
120
90
60
30
0
preceded by 5'
followed by 3'

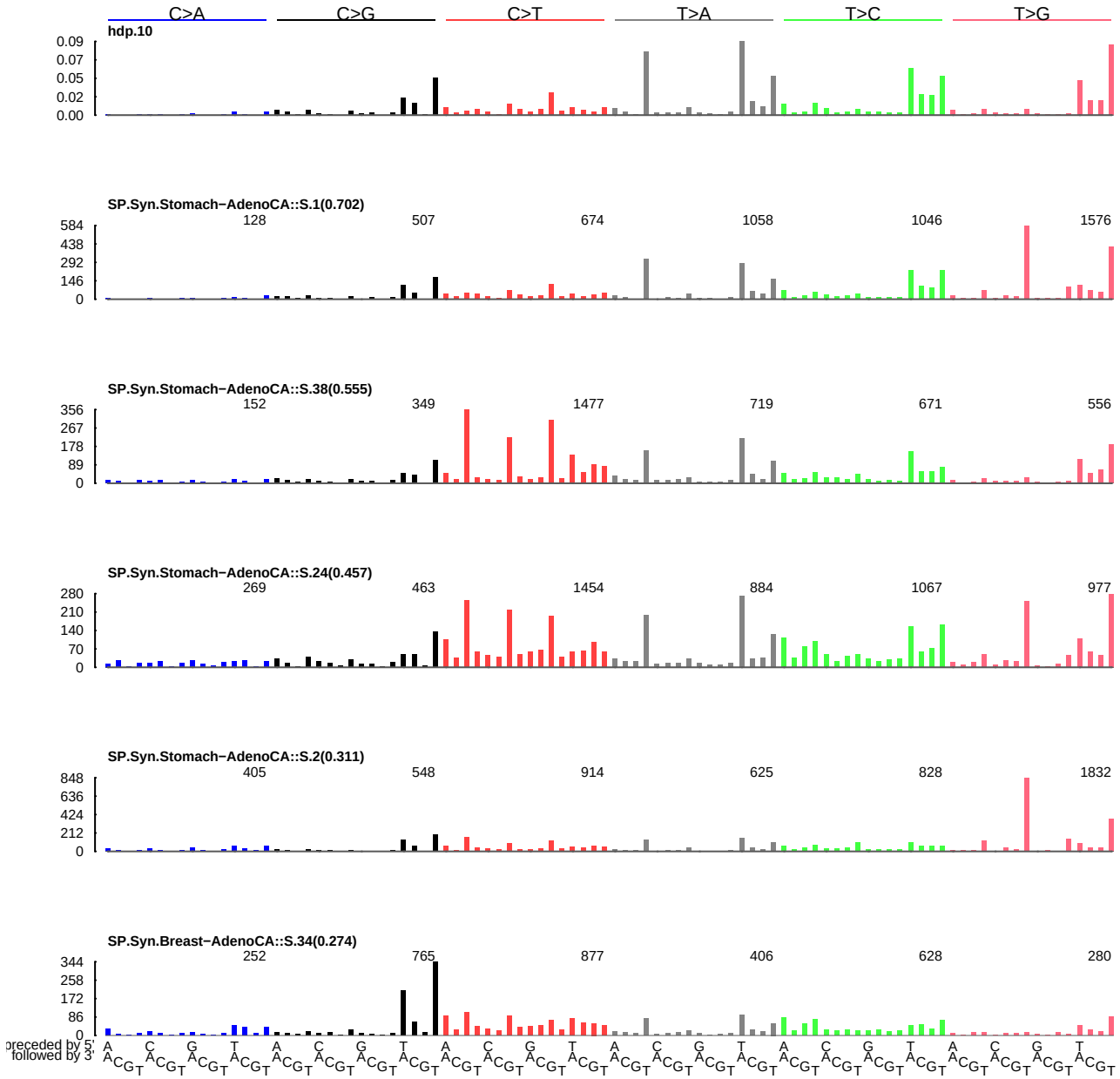

hdp.8
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
Exposure

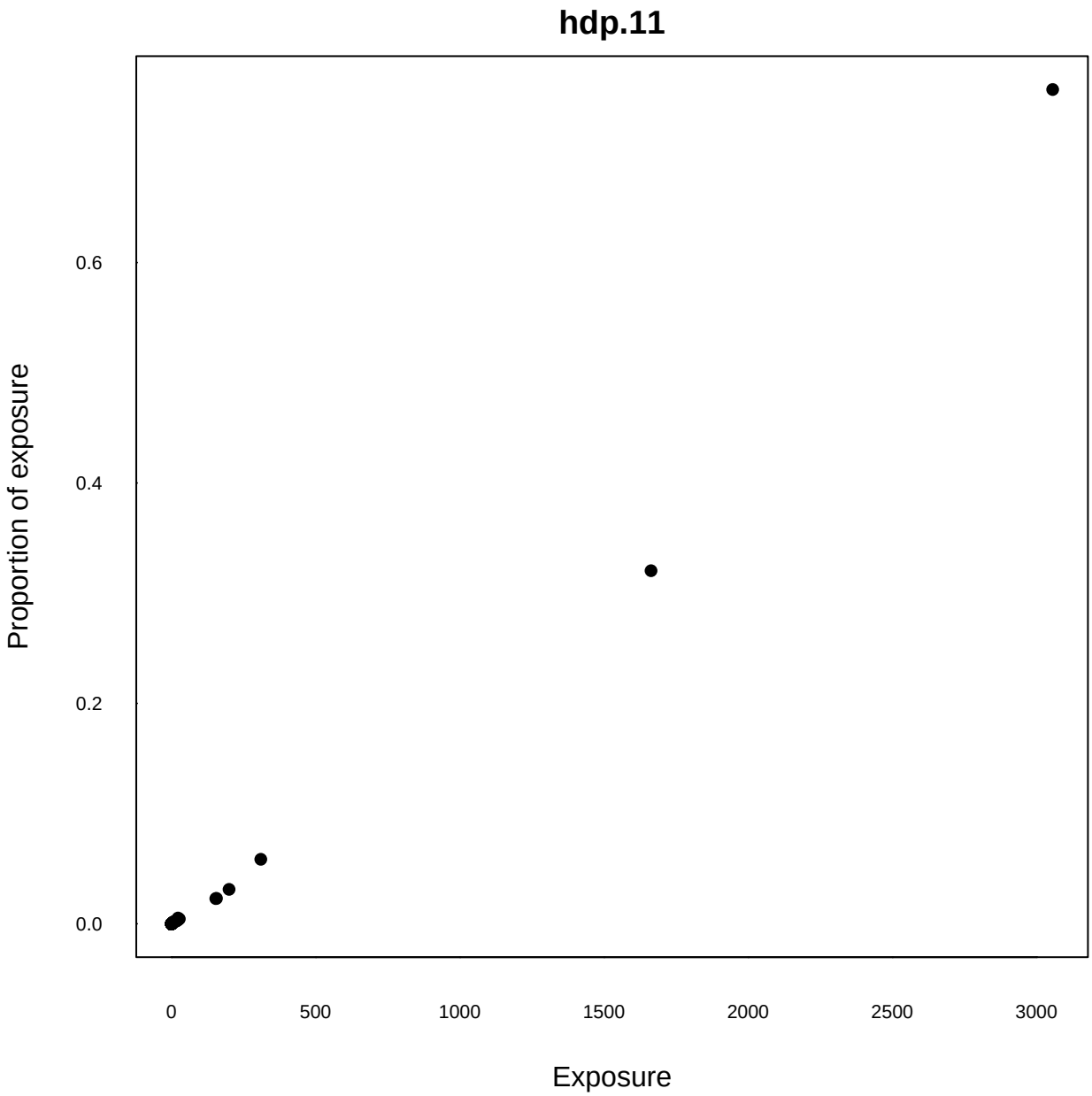

C>A
C>G
C>T
T>A
T>C
T>G
hdp.8
0.38
0.29
0.19
0.10
0.00
SP.Syn.Eso−AdenoCA::S.33(0.895)
88
81
404
642
3124
329
1560
1170
780
390
0
SP.Syn.Eso−AdenoCA::S.17(0.622)
473
299
1090
622
3065
244
1184
888
592
296
0
SP.Syn.Eso−AdenoCA::S.16(0.62)
559
368
957
544
2393
375
1144
858
572
286
0
SP.Syn.Stomach−AdenoCA::S.55(0.567)
64
71
664
320
1682
1154
840
630
420
210
0
SP.Syn.Eso−AdenoCA::S.26(0.437)
578
332
1365
591
2467
671
1136
852
568
284
0
preceded by 5'
followed by 3'

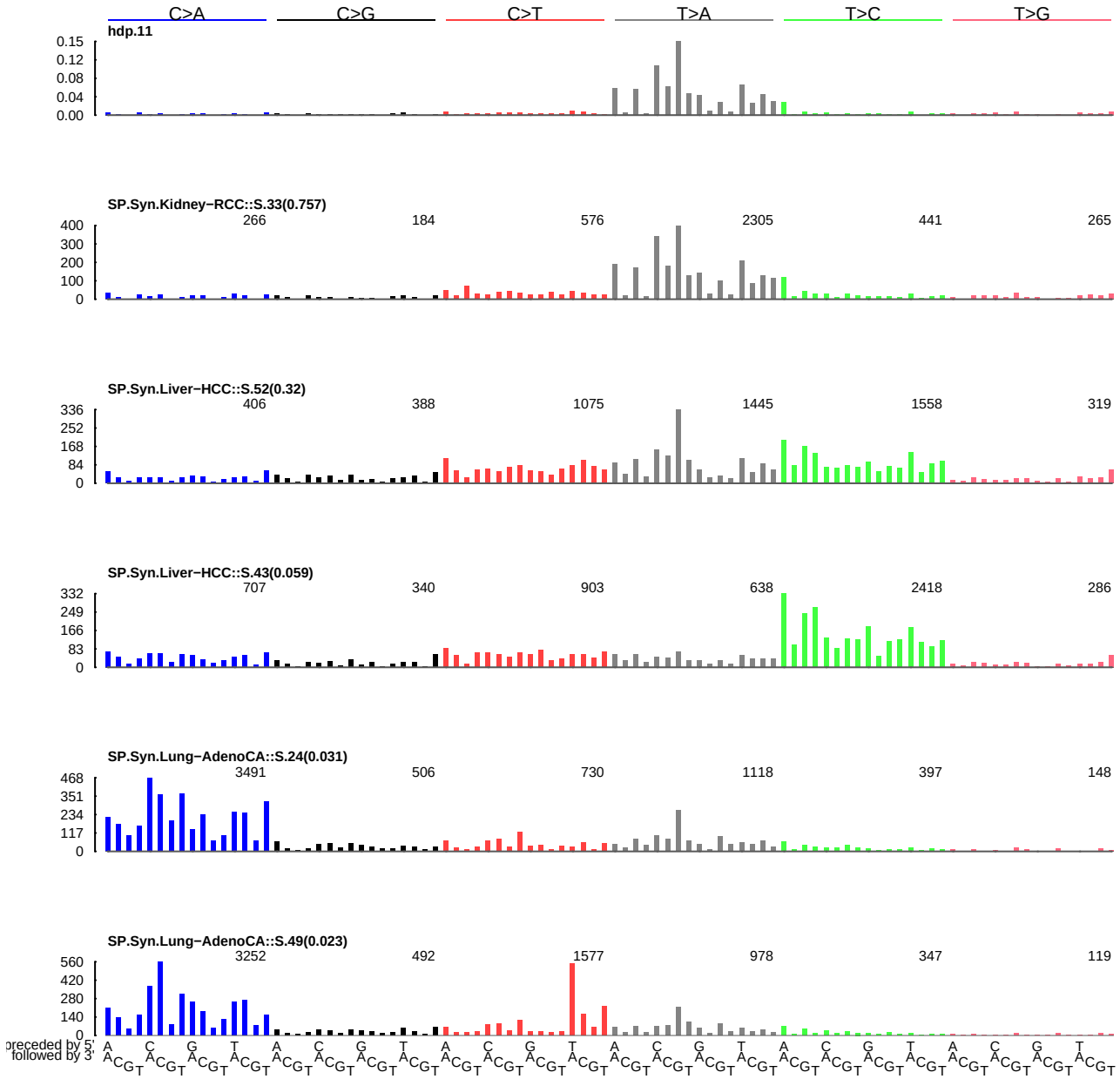

hdp.9
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
1000
2000
3000
4000
5000
Exposure

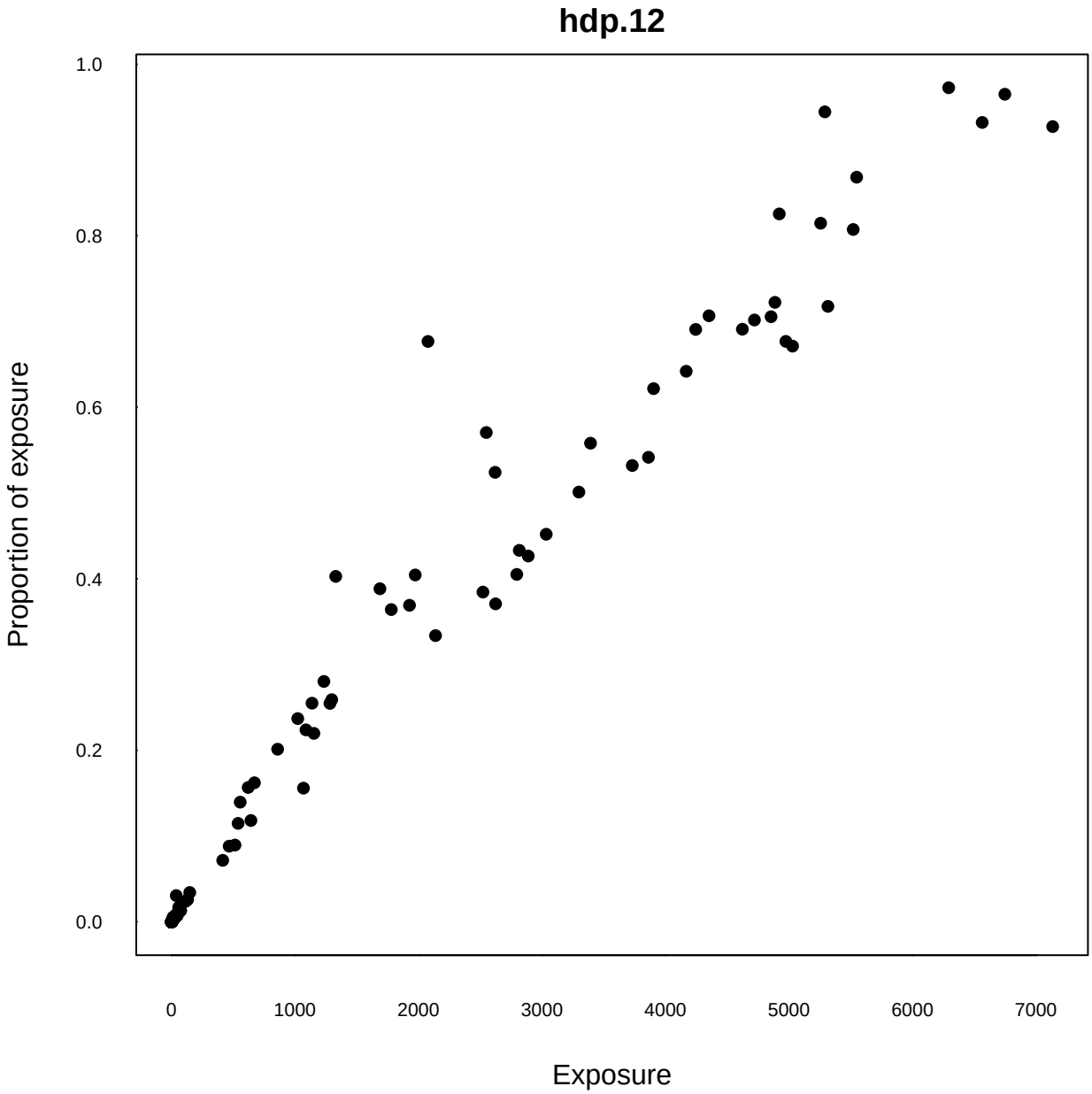

C>A
C>G
C>T
T>A
T>C
T>G
hdp.9
0.08
0.06
0.04
0.02
0.00
SP.Syn.ColoRect−AdenoCA::MSI−H.S.7(0.695)
1023
306
3508
555
1882
332
544
408
272
136
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.5(0.661)
863
178
3950
432
1429
167
892
669
446
223
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.4(0.66)
997
204
3967
391
1471
208
732
549
366
183
0
SP.Syn.Stomach−AdenoCA::MSI−H.S.1(0.594)
880
330
3512
513
1937
310
600
450
300
150
0
SP.Syn.ColoRect−AdenoCA::MSI−H.S.1(0.485)
878
335
3749
454
1609
311
580
435
290
145
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

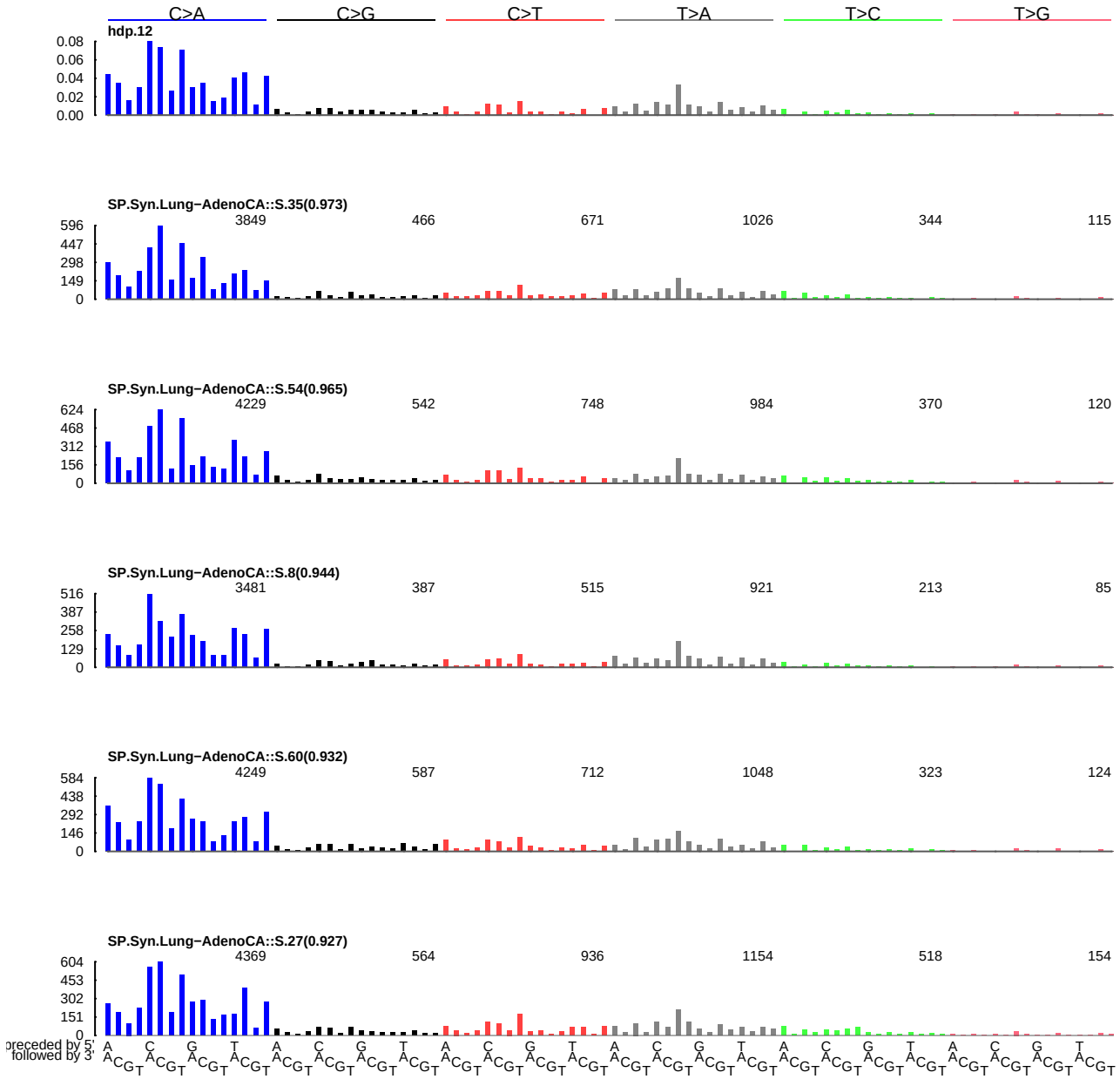

hdp.10
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
500
1000
1500
2000
2500
3000
3500
Exposure

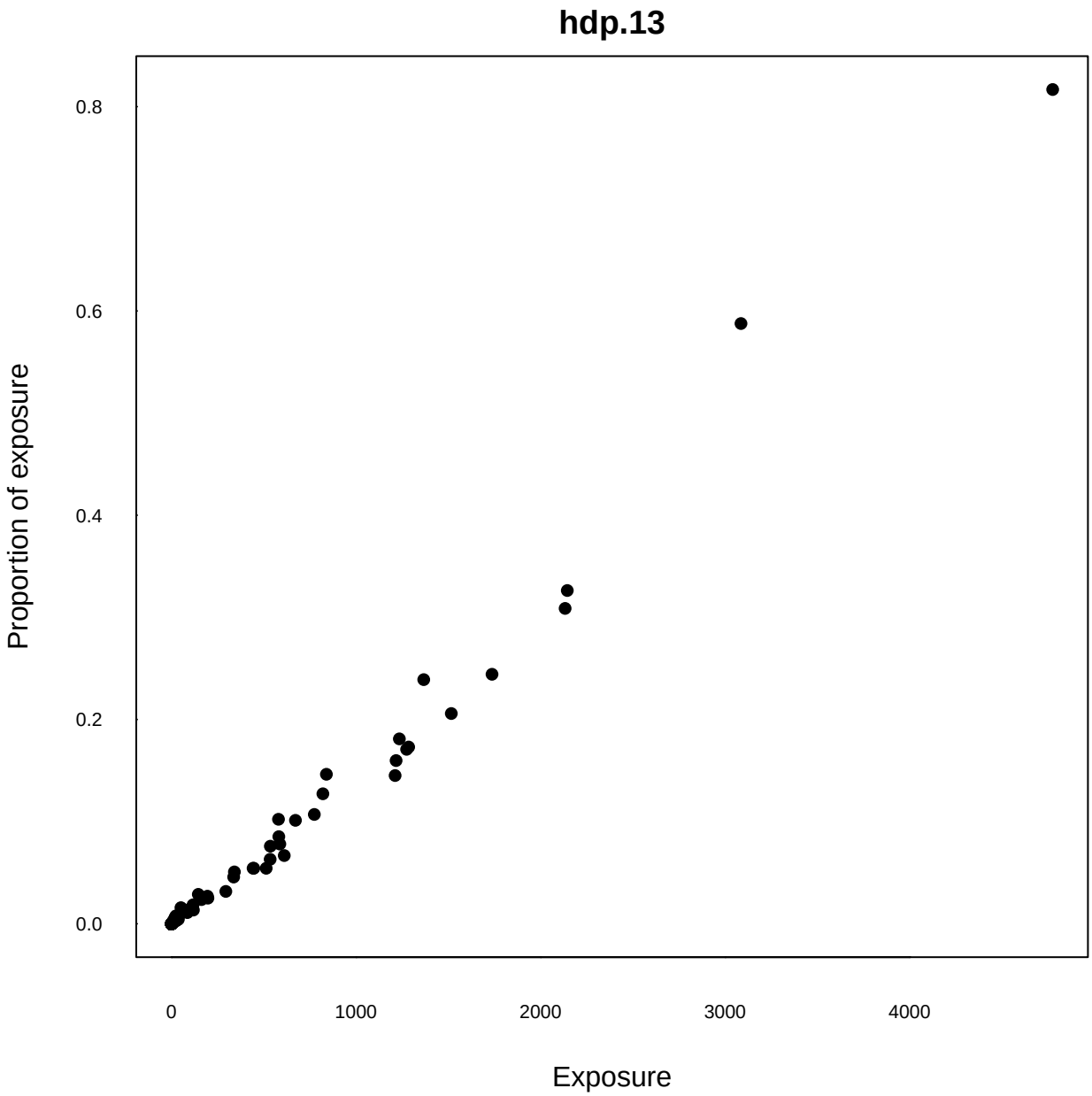

C>A
C>G
C>T
T>A
T>C
T>G
hdp.10
0.09
0.07
0.05
0.02
0.00
SP.Syn.Stomach−AdenoCA::S.1(0.702)
128
507
674
1058
1046
1576
584
438
292
146
0
SP.Syn.Stomach−AdenoCA::S.38(0.555)
152
349
1477
719
671
556
356
267
178
89
0
SP.Syn.Stomach−AdenoCA::S.24(0.457)
269
463
1454
884
1067
977
280
210
140
70
0
SP.Syn.Stomach−AdenoCA::S.2(0.311)
405
548
914
625
828
1832
848
636
424
212
0
SP.Syn.Breast−AdenoCA::S.34(0.274)
252
765
877
406
628
280
344
258
172
86
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

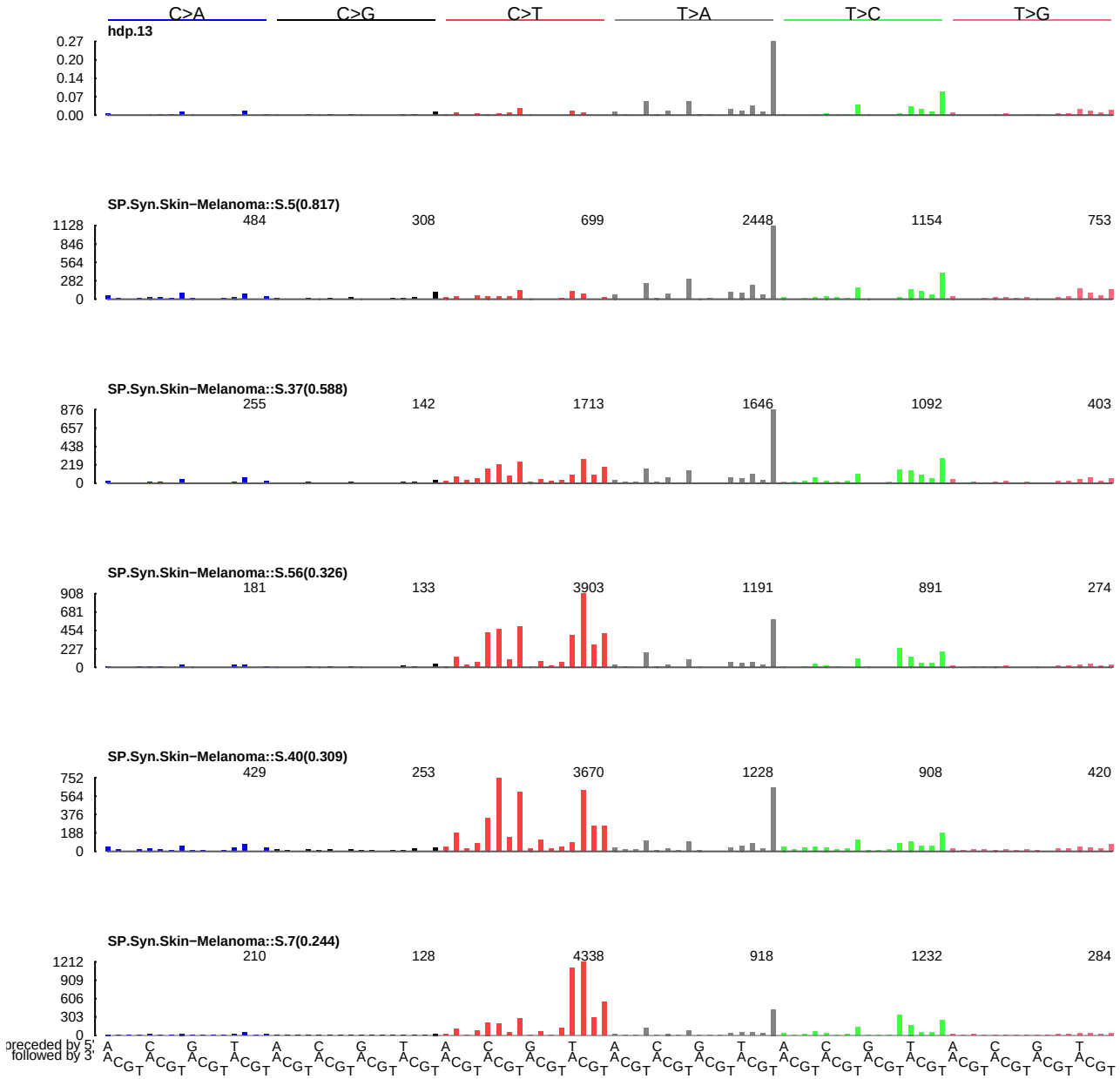

hdp.11
Proportion of exposure
0.0
0.2
0.4
0.6
0
500
1000
1500
2000
2500
3000
Exposure

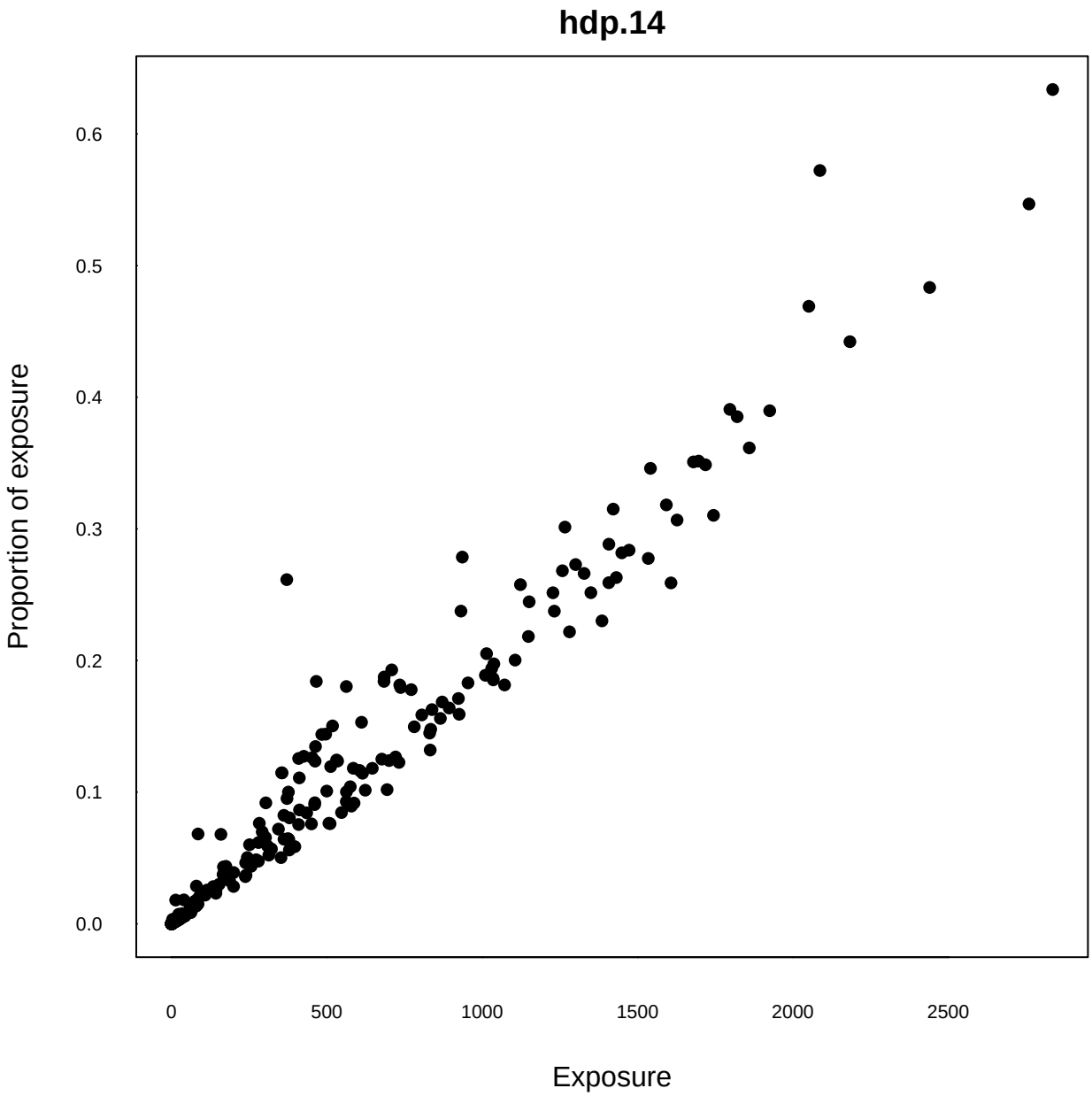

C>A
C>G
C>T
T>A
T>C
T>G
hdp.11
0.15
0.12
0.08
0.04
0.00
SP.Syn.Kidney−RCC::S.33(0.757)
266
184
576
2305
441
265
400
300
200
100
0
SP.Syn.Liver−HCC::S.52(0.32)
406
388
1075
1445
1558
319
336
252
168
84
0
SP.Syn.Liver−HCC::S.43(0.059)
707
340
903
638
2418
286
332
249
166
83
0
SP.Syn.Lung−AdenoCA::S.24(0.031)
3491
506
730
1118
397
148
468
351
234
117
0
SP.Syn.Lung−AdenoCA::S.49(0.023)
3252
492
1577
978
347
119
560
420
280
140
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

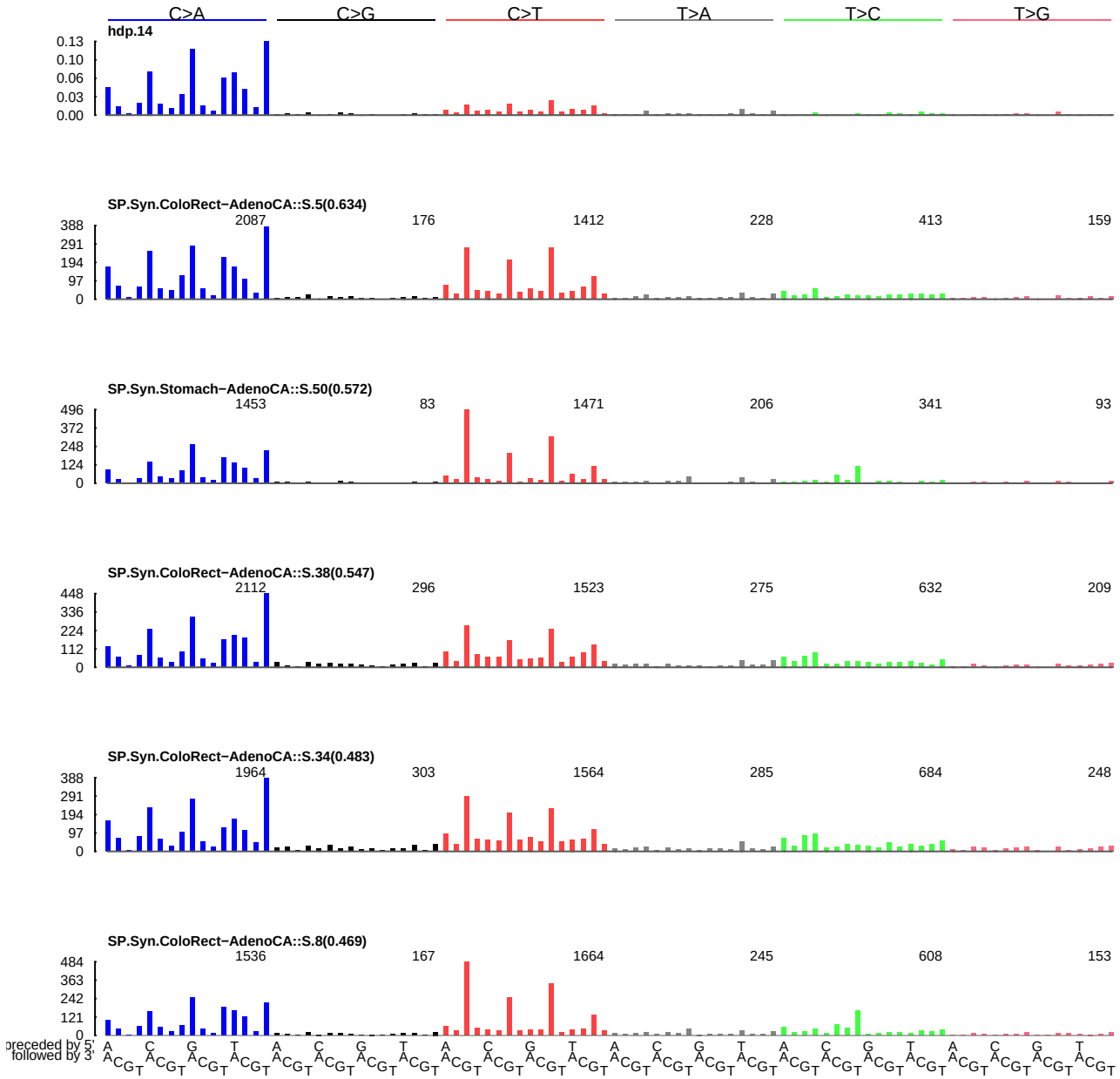

hdp.12
Proportion of exposure
1.0
0.8
0.6
0.4
0.2
0.0
0
1000
2000
3000
4000
5000
6000
7000
Exposure

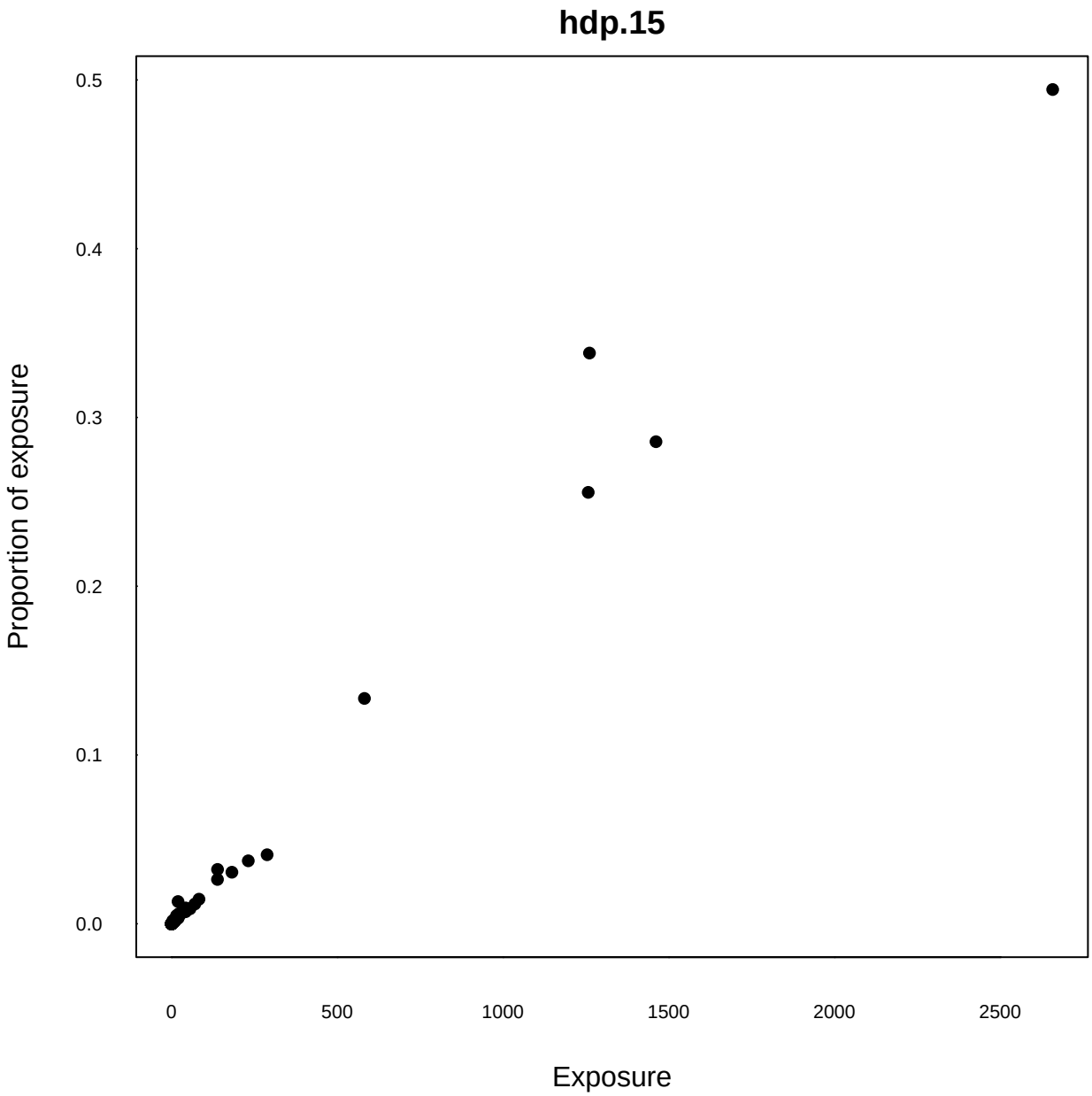

C>A
C>G
C>T
T>A
T>C
T>G
hdp.12
0.08
0.06
0.04
0.02
0.00
SP.Syn.Lung−AdenoCA::S.35(0.973)
3849
466
671
1026
344
115
596
447
298
149
0
SP.Syn.Lung−AdenoCA::S.54(0.965)
4229
542
748
984
370
120
624
468
312
156
0
SP.Syn.Lung−AdenoCA::S.8(0.944)
3481
387
515
921
213
85
516
387
258
129
0
SP.Syn.Lung−AdenoCA::S.60(0.932)
4249
587
712
1048
323
124
584
438
292
146
0
SP.Syn.Lung−AdenoCA::S.27(0.927)
4369
564
936
1154
518
154
604
453
302
151
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

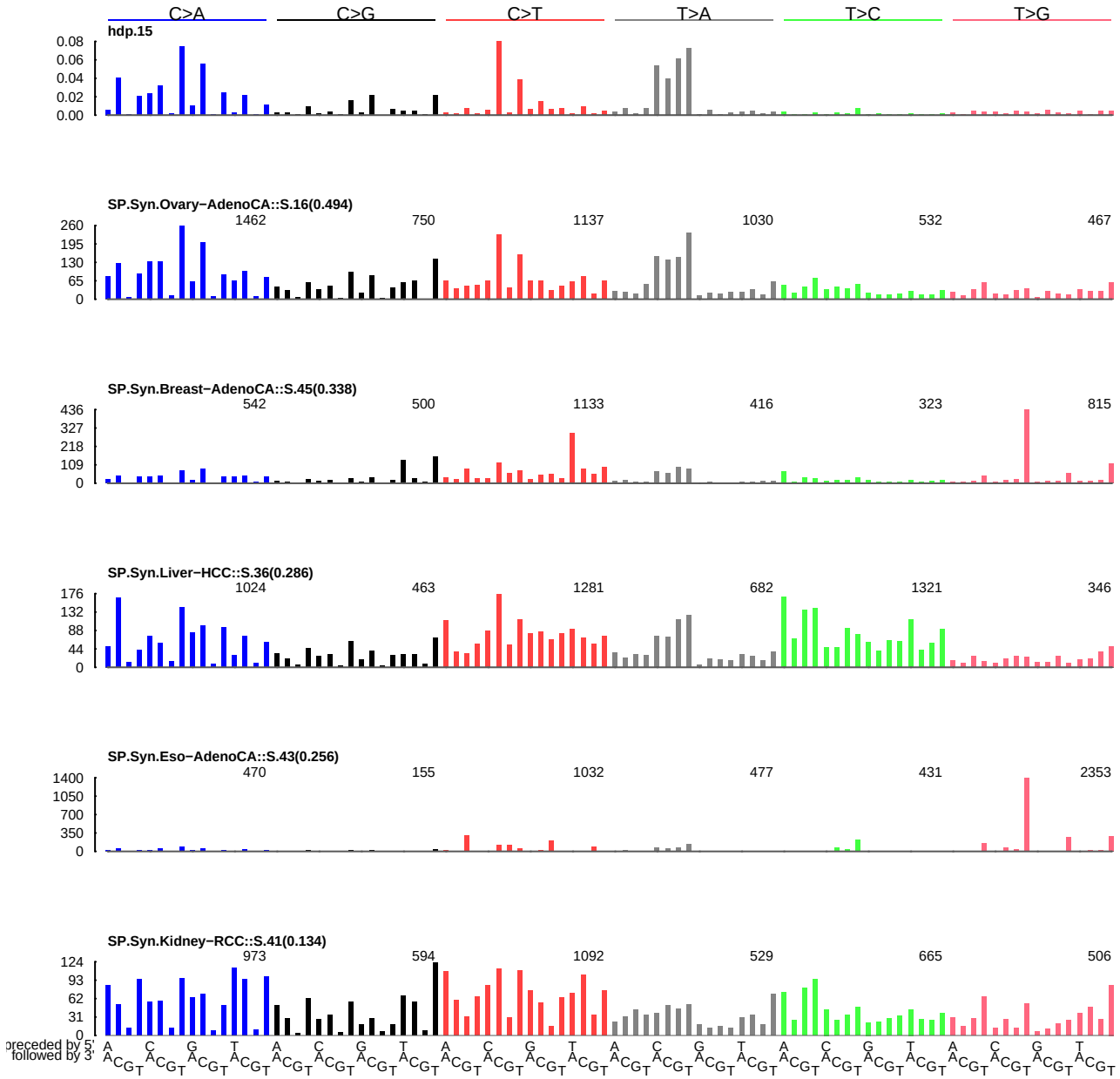

hdp.13
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
Exposure

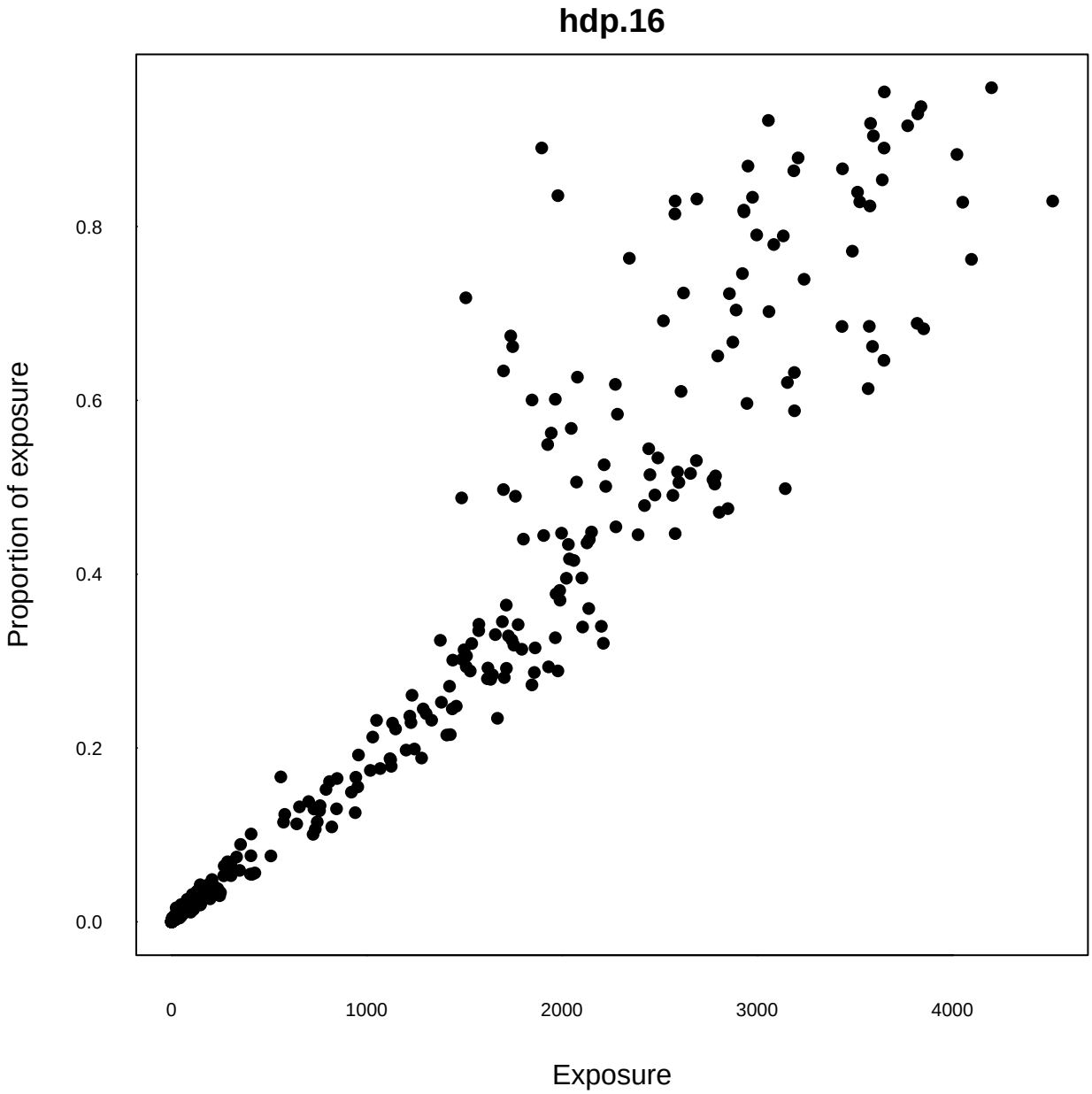

C>A
C>G
C>T
T>A
T>C
T>G
hdp.13
0.27
0.20
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.5(0.817)
484
308
699
2448
1154
753
1128
846
564
282
0
SP.Syn.Skin−Melanoma::S.37(0.588)
255
142
1713
1646
1092
403
876
657
438
219
0
SP.Syn.Skin−Melanoma::S.56(0.326)
181
133
3903
1191
891
274
908
681
454
227
0
SP.Syn.Skin−Melanoma::S.40(0.309)
429
253
3670
1228
908
420
752
564
376
188
0
SP.Syn.Skin−Melanoma::S.7(0.244)
210
128
4338
918
1232
284
1212
909
606
303
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

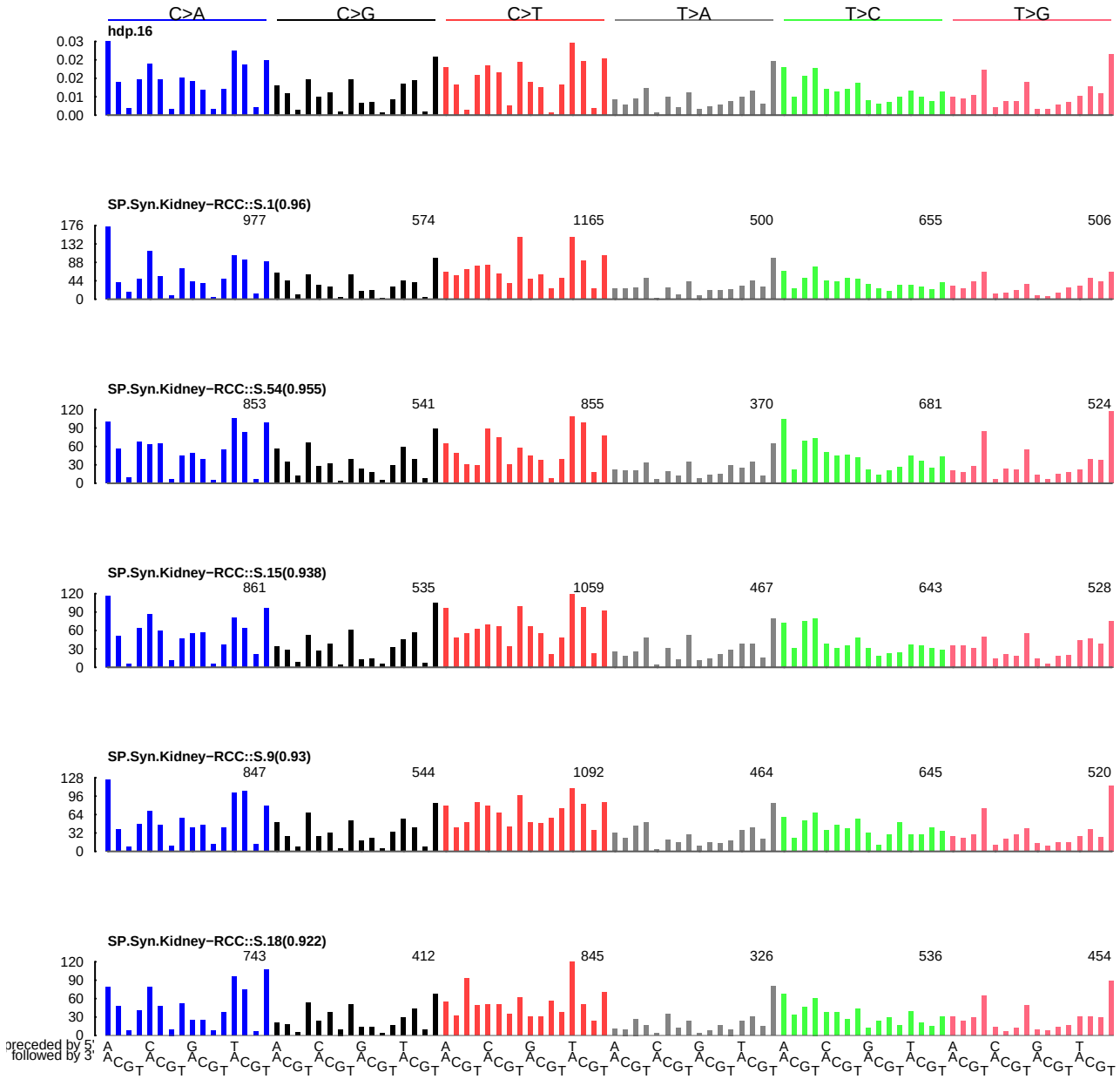

hdp.14
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
500
1000
1500
2000
2500
Exposure

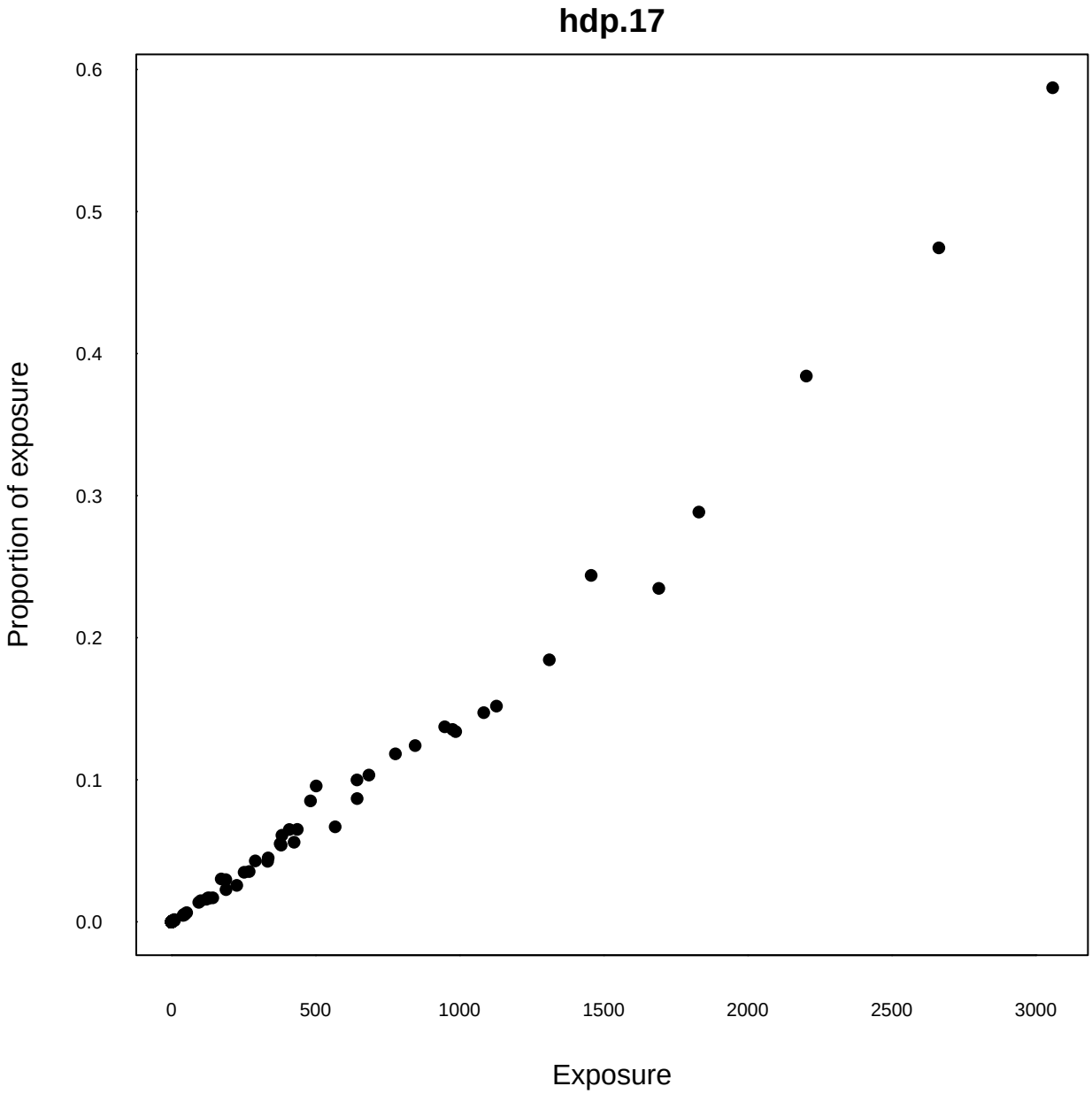

C>A
C>G
C>T
T>A
T>C
T>G
hdp.14
0.13
0.10
0.06
0.03
0.00
SP.Syn.ColoRect−AdenoCA::S.5(0.634)
2087
176
1412
228
413
159
388
291
194
97
0
SP.Syn.Stomach−AdenoCA::S.50(0.572)
1453
83
1471
206
341
93
496
372
248
124
0
SP.Syn.ColoRect−AdenoCA::S.38(0.547)
2112
296
1523
275
632
209
448
336
224
112
0
SP.Syn.ColoRect−AdenoCA::S.34(0.483)
1964
303
1564
285
684
248
388
291
194
97
0
SP.Syn.ColoRect−AdenoCA::S.8(0.469)
1536
167
1664
245
608
153
484
363
242
121
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

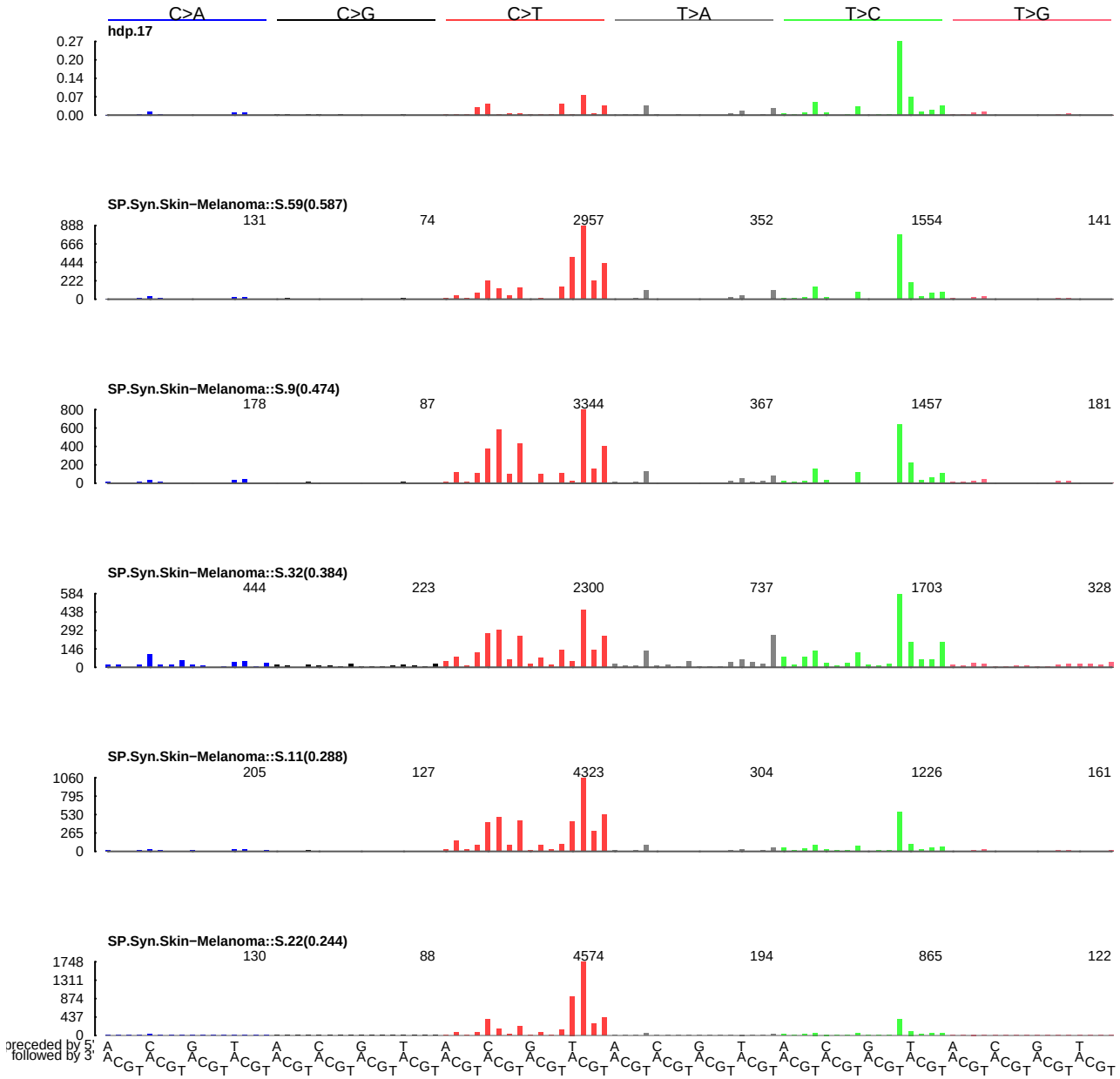

hdp.15
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0
500
1000
1500
2000
2500
Exposure

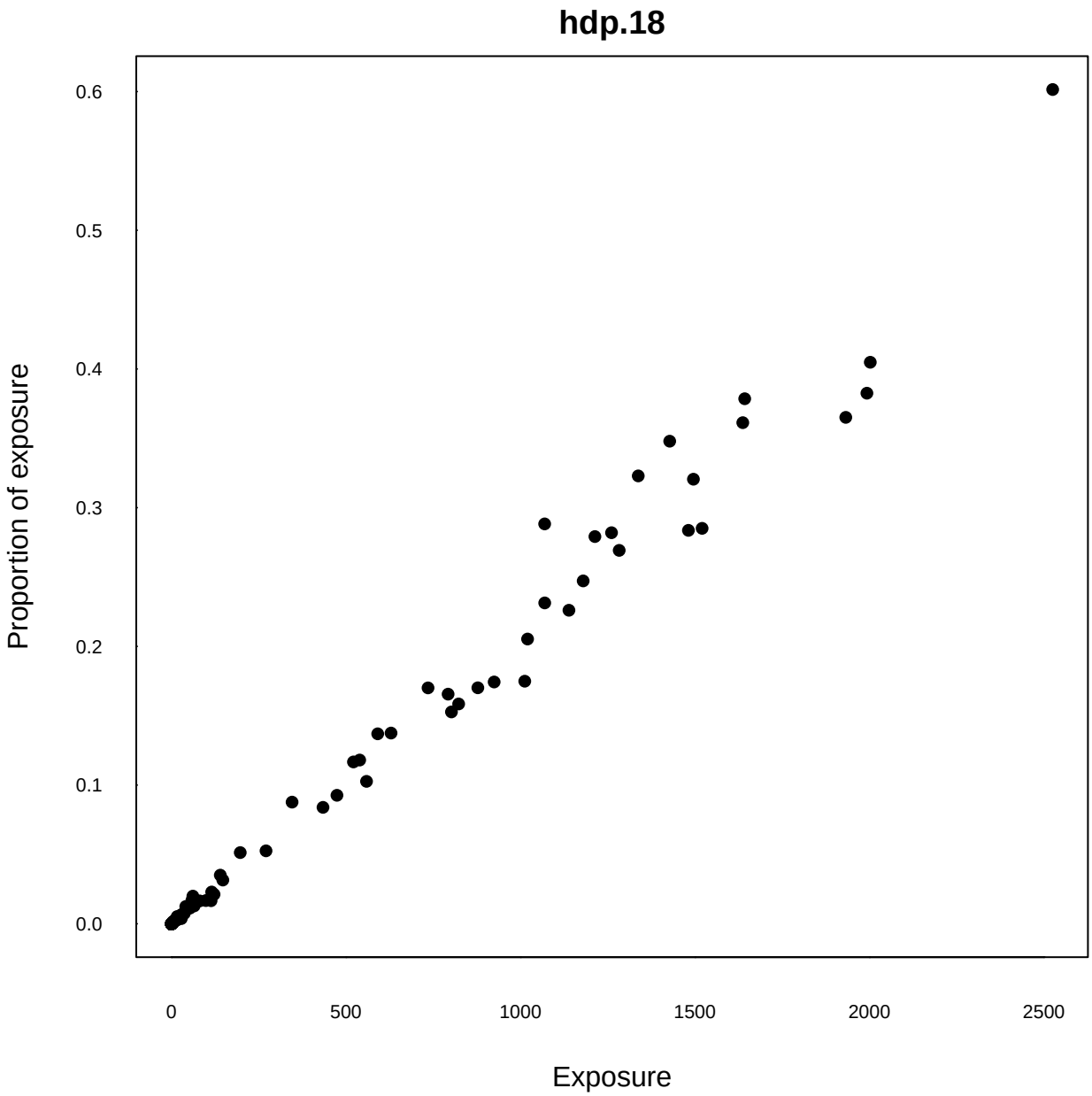

C>A
C>G
C>T
T>A
T>C
T>G
hdp.15
0.08
0.06
0.04
0.02
0.00
SP.Syn.Ovary−AdenoCA::S.16(0.494)
1462
750
1137
1030
532
467
260
195
130
65
0
SP.Syn.Breast−AdenoCA::S.45(0.338)
542
500
1133
416
323
815
436
327
218
109
0
SP.Syn.Liver−HCC::S.36(0.286)
1024
463
1281
682
1321
346
176
132
88
44
0
SP.Syn.Eso−AdenoCA::S.43(0.256)
470
155
1032
477
431
2353
1400
1050
700
350
0
SP.Syn.Kidney−RCC::S.41(0.134)
973
594
1092
529
665
506
124
93
62
31
0
preceded by 5'
followed by 3'

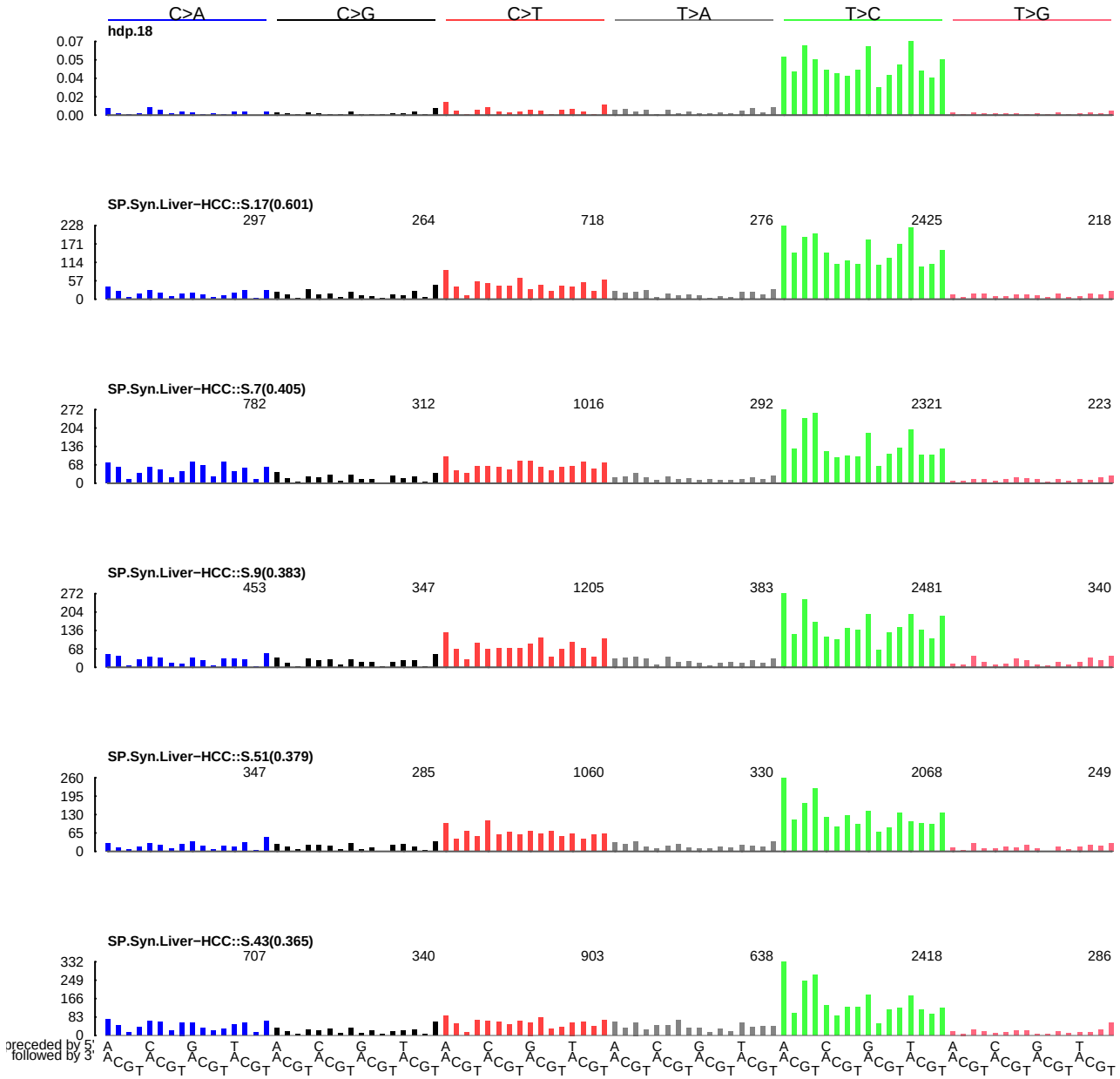

hdp.16
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
Exposure

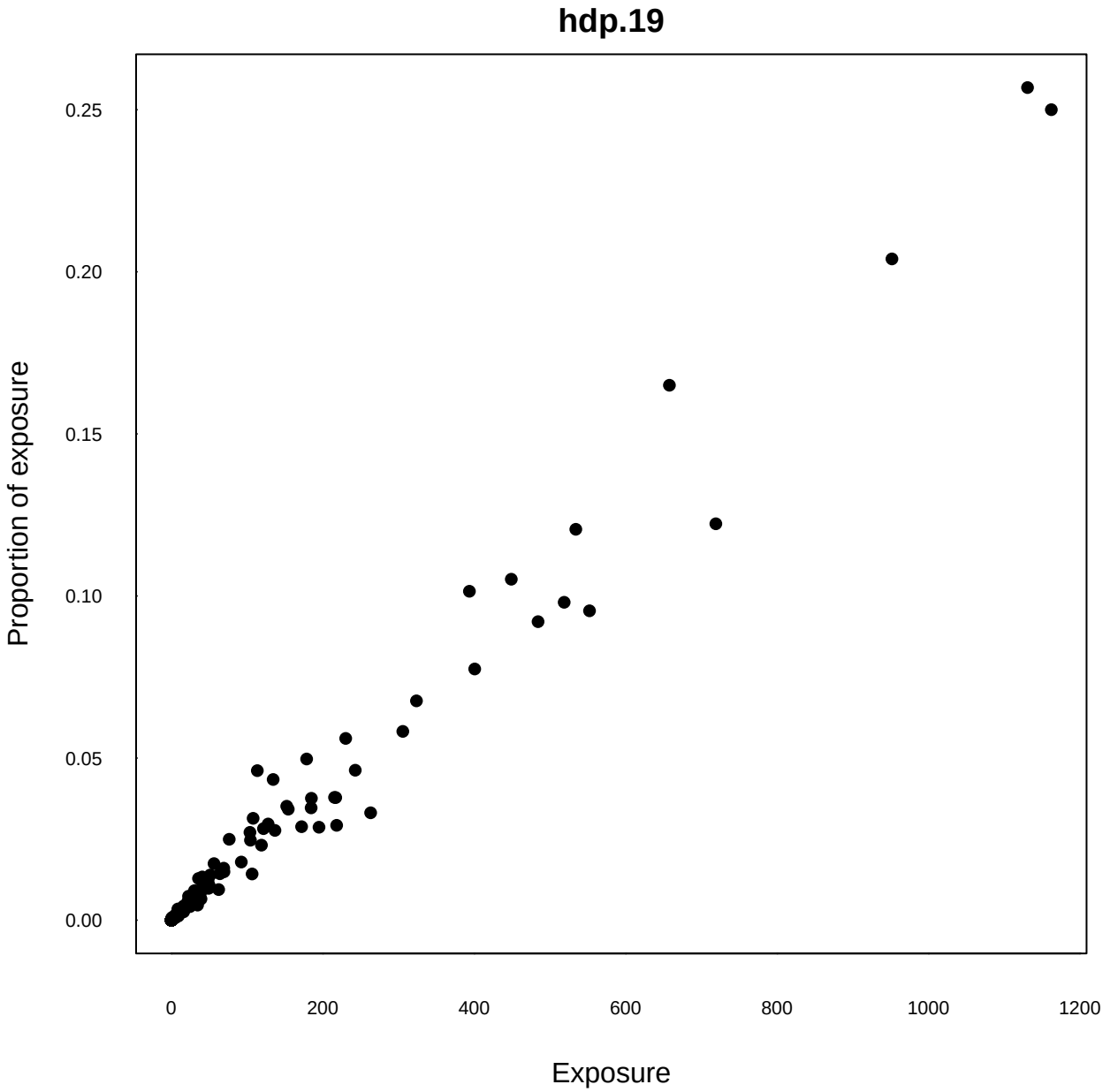

C>A
C>G
C>T
T>A
T>C
T>G
hdp.16
0.03
0.02
0.02
0.01
0.00
SP.Syn.Kidney−RCC::S.1(0.96)
977
574
1165
500
655
506
176
132
88
44
0
SP.Syn.Kidney−RCC::S.54(0.955)
853
541
855
370
681
524
120
90
60
30
0
SP.Syn.Kidney−RCC::S.15(0.938)
861
535
1059
467
643
528
120
90
60
30
0
SP.Syn.Kidney−RCC::S.9(0.93)
847
544
1092
464
645
520
128
96
64
32
0
SP.Syn.Kidney−RCC::S.18(0.922)
743
412
845
326
536
454
120
90
60
30
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

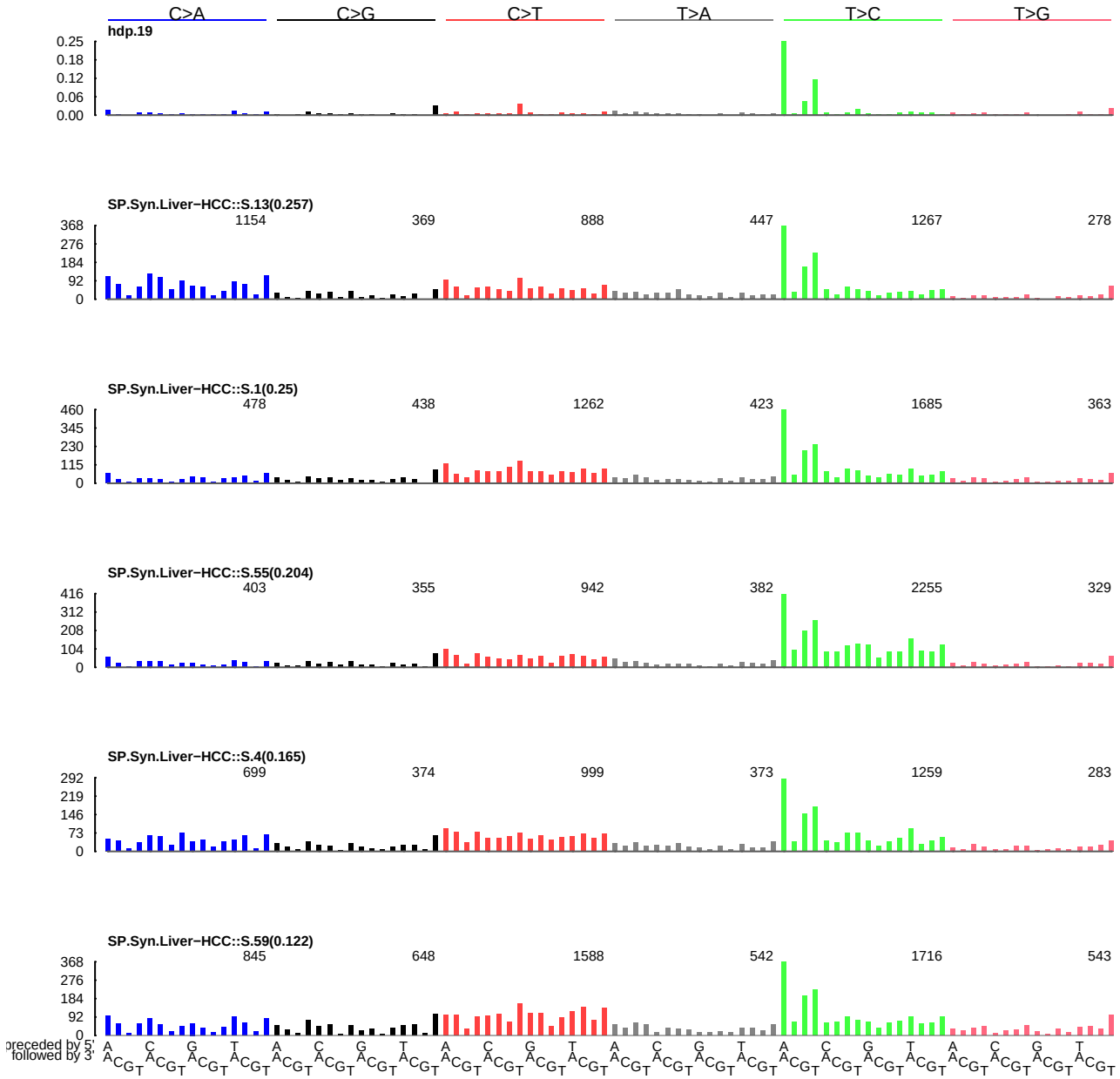

hdp.17
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
500
1000
1500
2000
2500
3000
Exposure

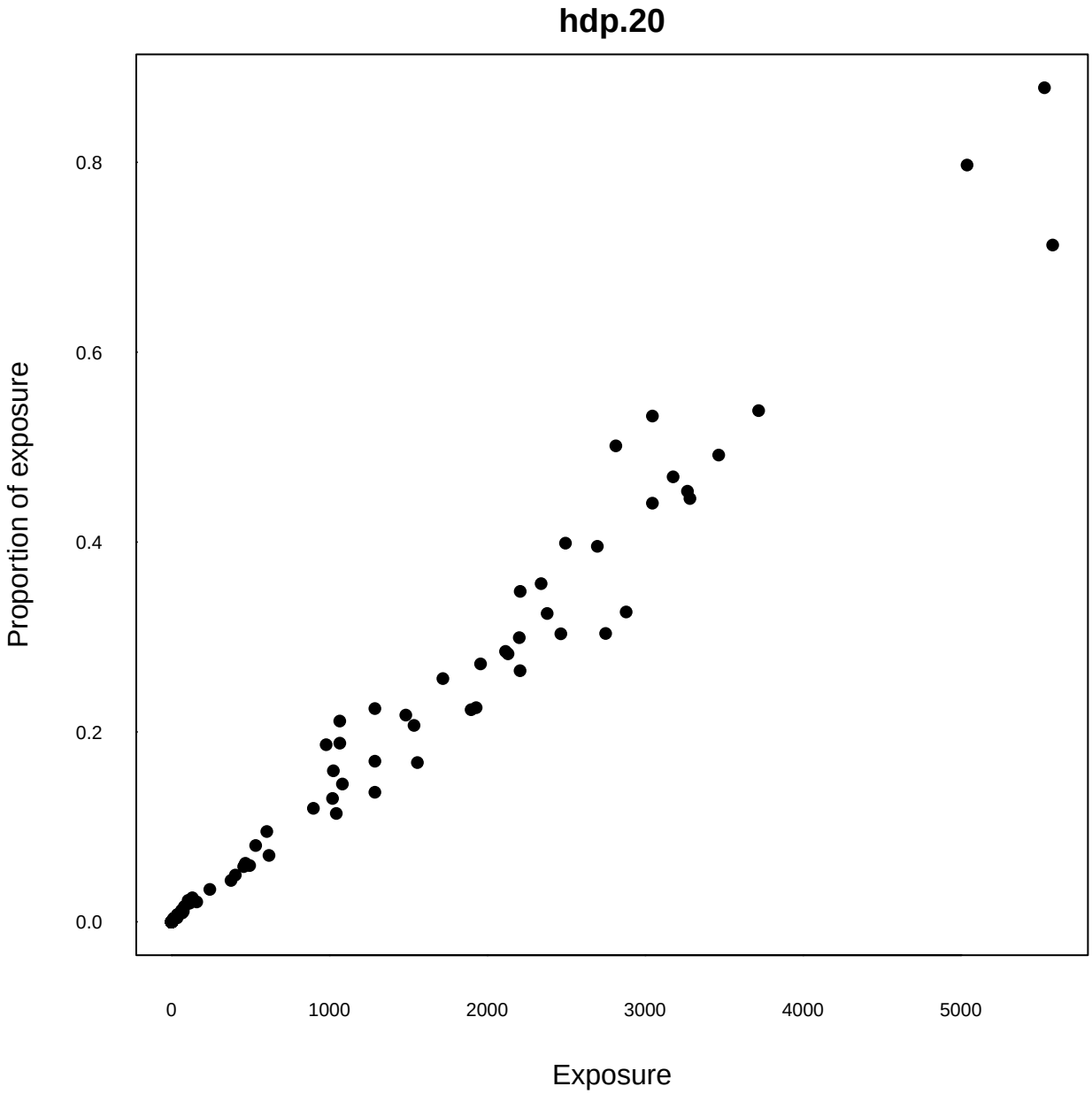

C>A
C>G
C>T
T>A
T>C
T>G
hdp.17
0.27
0.20
0.14
0.07
0.00
SP.Syn.Skin−Melanoma::S.59(0.587)
131
74
2957
352
1554
141
888
666
444
222
0
SP.Syn.Skin−Melanoma::S.9(0.474)
178
87
3344
367
1457
181
800
600
400
200
0
SP.Syn.Skin−Melanoma::S.32(0.384)
444
223
2300
737
1703
328
584
438
292
146
0
SP.Syn.Skin−Melanoma::S.11(0.288)
205
127
4323
304
1226
161
1060
795
530
265
0
SP.Syn.Skin−Melanoma::S.22(0.244)
130
88
4574
194
865
122
1748
1311
874
437
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

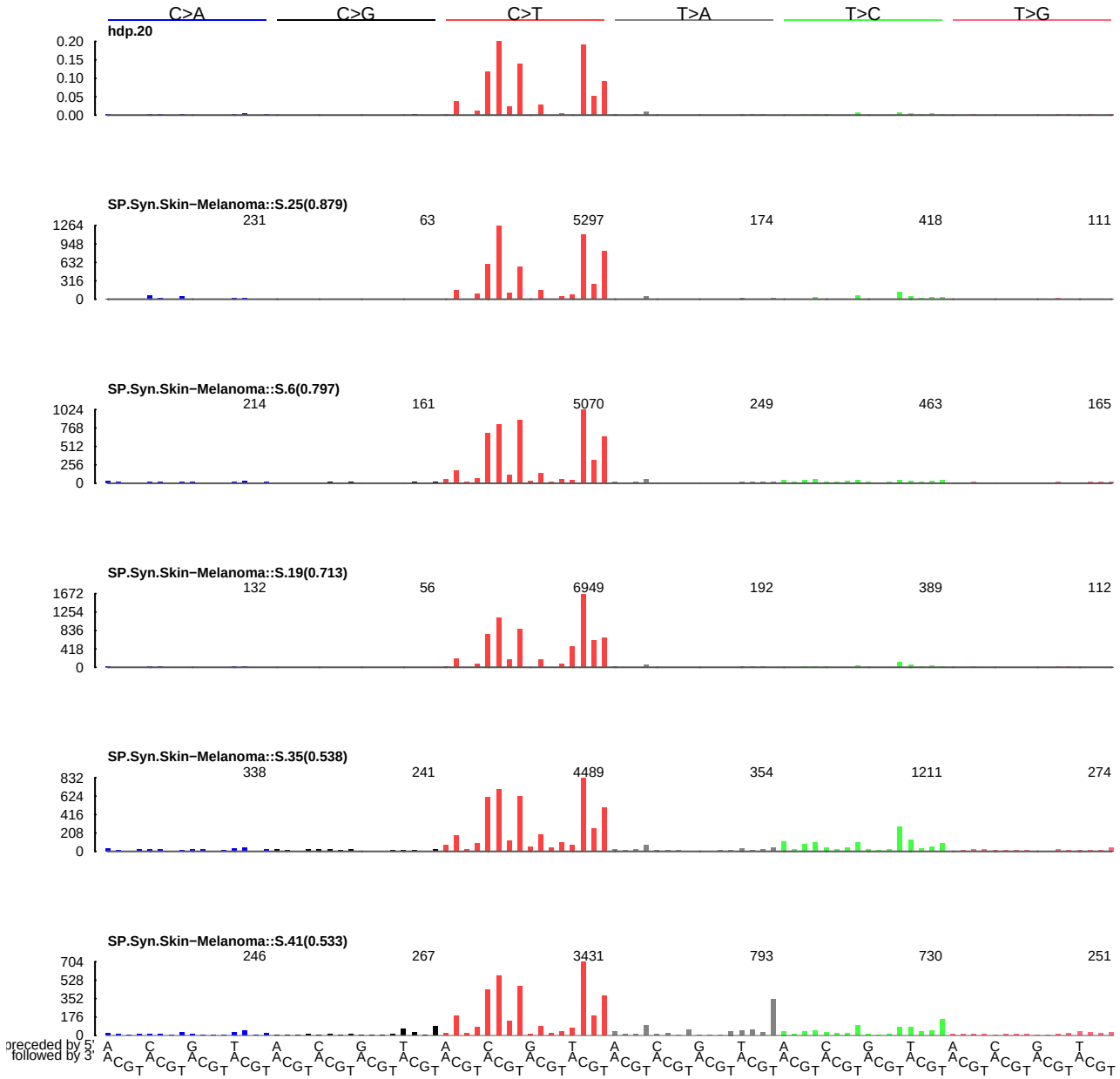

hdp.18
Proportion of exposure
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0
500
1000
1500
2000
2500
Exposure

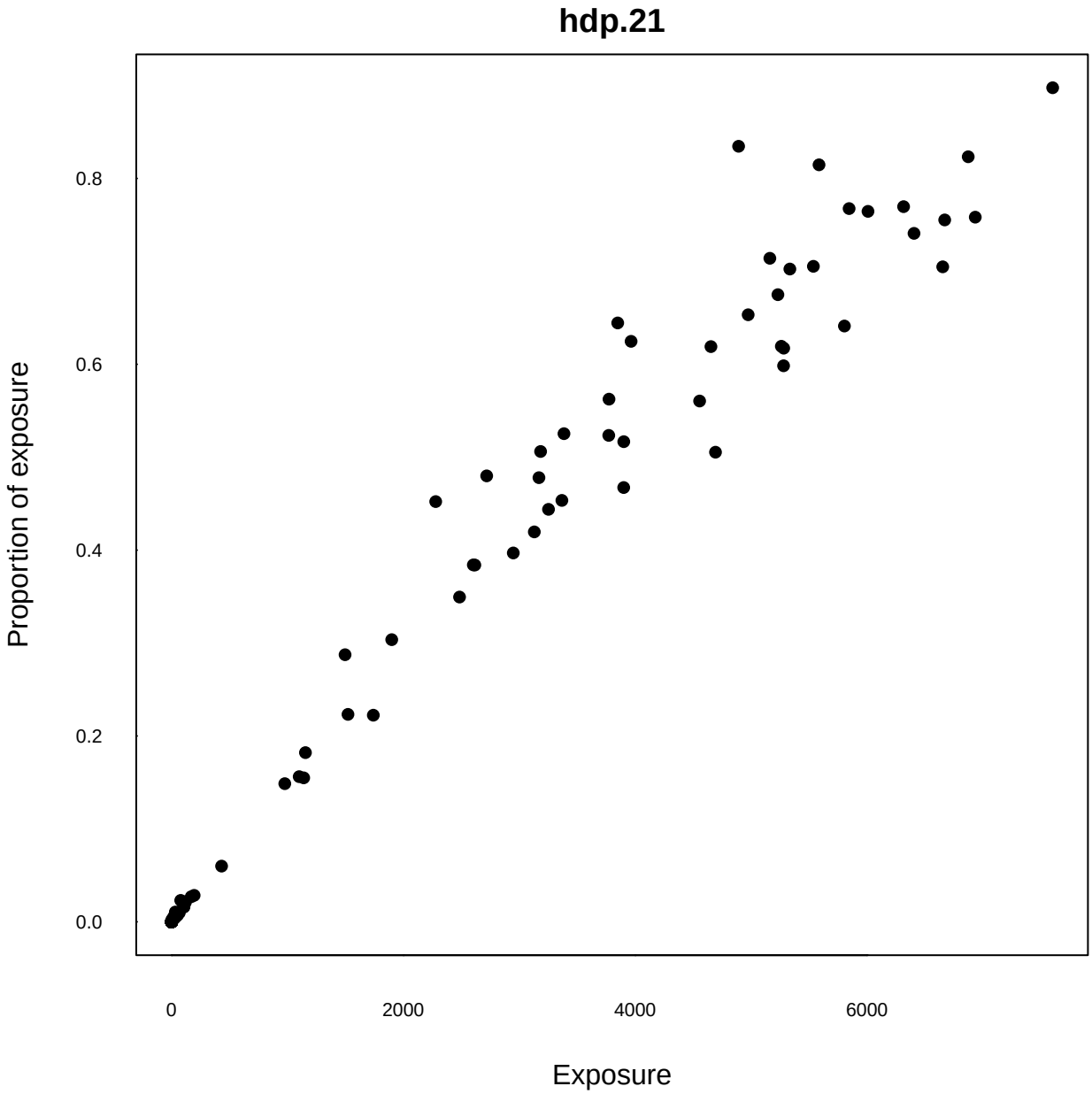

C>A
C>G
C>T
T>A
T>C
T>G
hdp.18
0.07
0.05
0.04
0.02
0.00
SP.Syn.Liver−HCC::S.17(0.601)
297
264
718
276
2425
218
228
171
114
57
0
SP.Syn.Liver−HCC::S.7(0.405)
782
312
1016
292
2321
223
272
204
136
68
0
SP.Syn.Liver−HCC::S.9(0.383)
453
347
1205
383
2481
340
272
204
136
68
0
SP.Syn.Liver−HCC::S.51(0.379)
347
285
1060
330
2068
249
260
195
130
65
0
SP.Syn.Liver−HCC::S.43(0.365)
707
340
903
638
2418
286
332
249
166
83
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

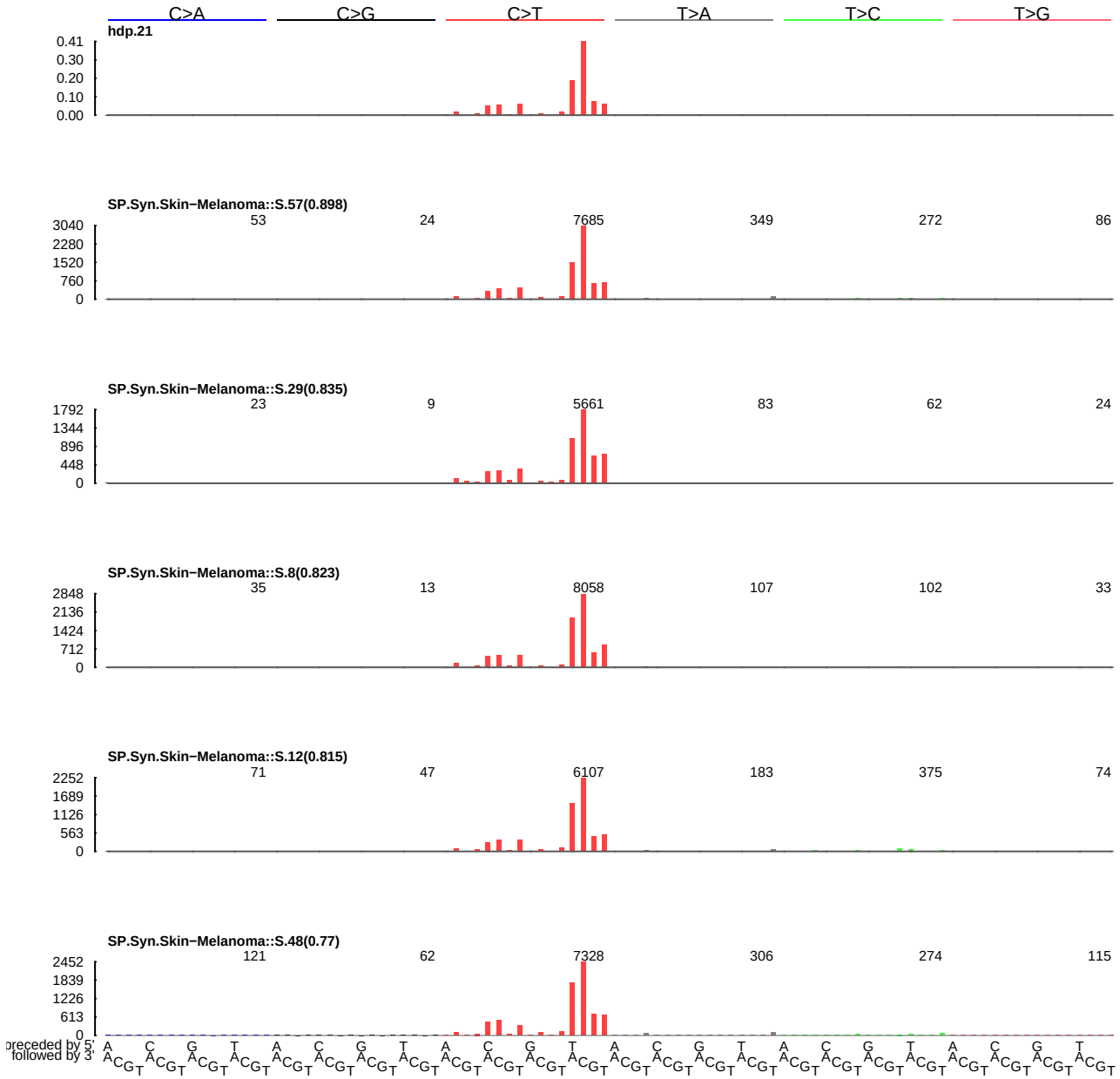

hdp.19
Proportion of exposure
0.25
0.20
0.15
0.10
0.05
0.00
0
200
400
600
800
1000
1200
Exposure

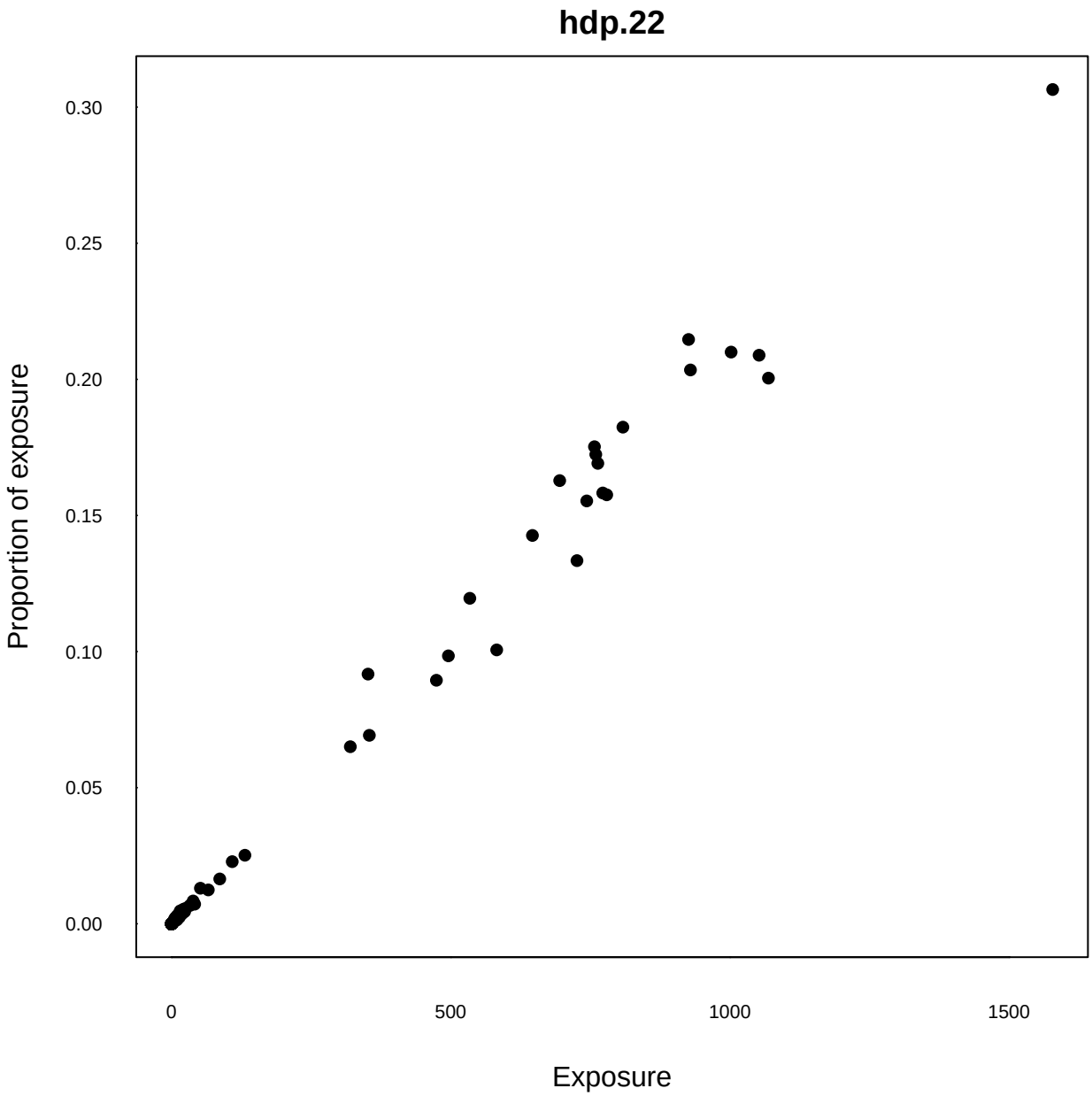

C>A
C>G
C>T
T>A
T>C
T>G
hdp.19
0.25
0.18
0.12
0.06
0.00
SP.Syn.Liver−HCC::S.13(0.257)
1154
369
888
447
1267
278
368
276
184
92
0
SP.Syn.Liver−HCC::S.1(0.25)
478
438
1262
423
1685
363
460
345
230
115
0
SP.Syn.Liver−HCC::S.55(0.204)
403
355
942
382
2255
329
416
312
208
104
0
SP.Syn.Liver−HCC::S.4(0.165)
699
374
999
373
1259
283
292
219
146
73
0
SP.Syn.Liver−HCC::S.59(0.122)
845
648
1588
542
1716
543
368
276
184
92
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

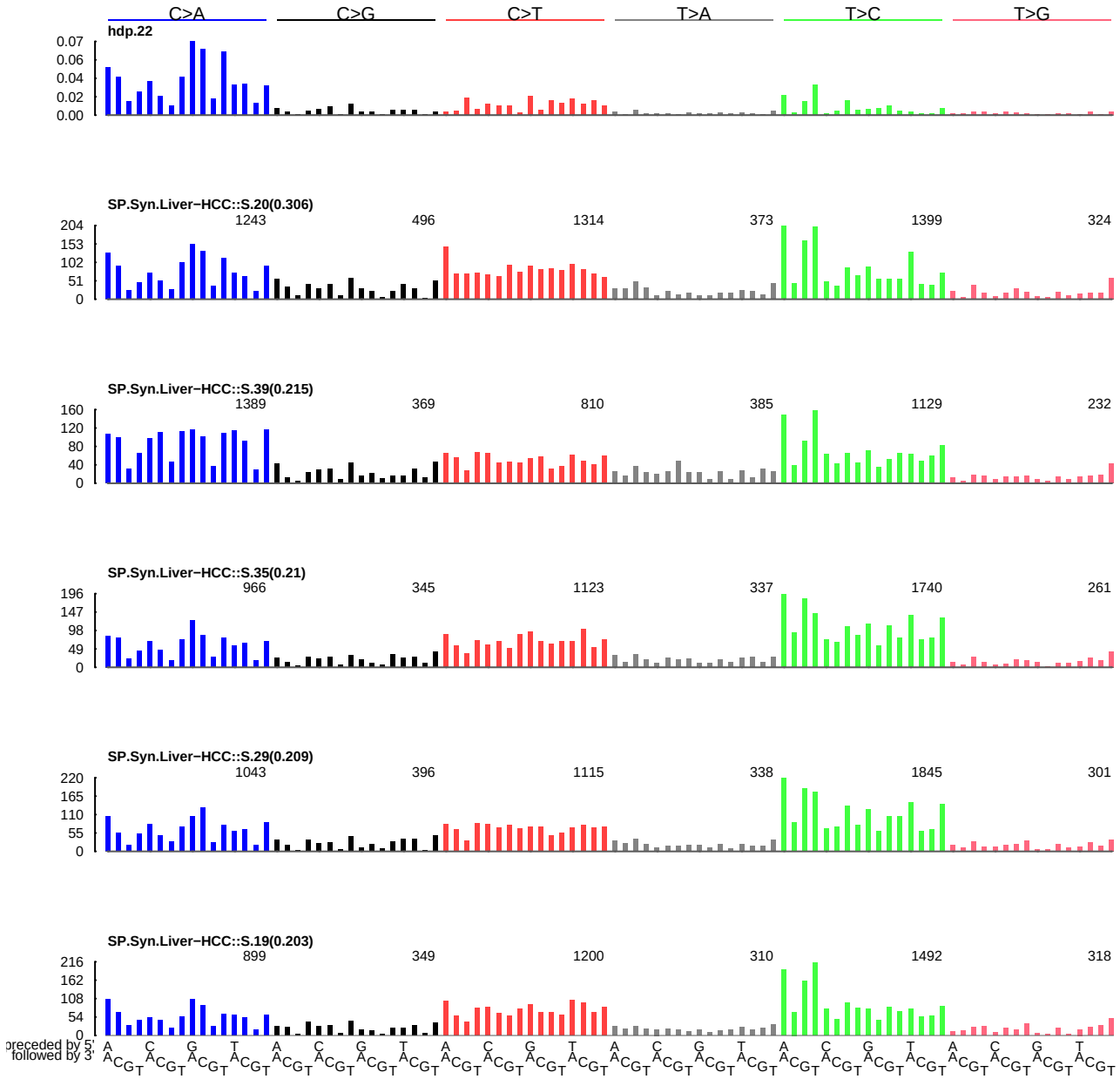

hdp.20
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
1000
2000
3000
4000
5000
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.20
0.20
0.15
0.10
0.05
0.00
SP.Syn.Skin−Melanoma::S.25(0.879)
231
63
5297
174
418
111
1264
948
632
316
0
SP.Syn.Skin−Melanoma::S.6(0.797)
214
161
5070
249
463
165
1024
768
512
256
0
SP.Syn.Skin−Melanoma::S.19(0.713)
132
56
6949
192
389
112
1672
1254
836
418
0
SP.Syn.Skin−Melanoma::S.35(0.538)
338
241
4489
354
1211
274
832
624
416
208
0
SP.Syn.Skin−Melanoma::S.41(0.533)
246
267
3431
793
730
251
704
528
352
176
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.21
Proportion of exposure
0.0
0.2
0.4
0.6
0.8
0
2000
4000
6000
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.21
0.41
0.30
0.20
0.10
0.00
SP.Syn.Skin−Melanoma::S.57(0.898)
53
24
7685
349
272
86
3040
2280
1520
760
0
SP.Syn.Skin−Melanoma::S.29(0.835)
23
9
5661
83
62
24
1792
1344
896
448
0
SP.Syn.Skin−Melanoma::S.8(0.823)
35
13
8058
107
102
33
2848
2136
1424
712
0
SP.Syn.Skin−Melanoma::S.12(0.815)
71
47
6107
183
375
74
2252
1689
1126
563
0
SP.Syn.Skin−Melanoma::S.48(0.77)
121
62
7328
306
274
115
2452
1839
1226
613
0
preceded by 5'
followed by 3'


hdp.22
Proportion of exposure
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0
500
1000
1500
Exposure


C>A
C>G
C>T
T>A
T>C
T>G
hdp.22
0.07
0.06
0.04
0.02
0.00
SP.Syn.Liver−HCC::S.20(0.306)
1243
496
1314
373
1399
324
204
153
102
51
0
SP.Syn.Liver−HCC::S.39(0.215)
1389
369
810
385
1129
232
160
120
80
40
0
SP.Syn.Liver−HCC::S.35(0.21)
966
345
1123
337
1740
261
196
147
98
49
0
SP.Syn.Liver−HCC::S.29(0.209)
1043
396
1115
338
1845
301
220
165
110
55
0
SP.Syn.Liver−HCC::S.19(0.203)
899
349
1200
310
1492
318
216
162
108
54
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