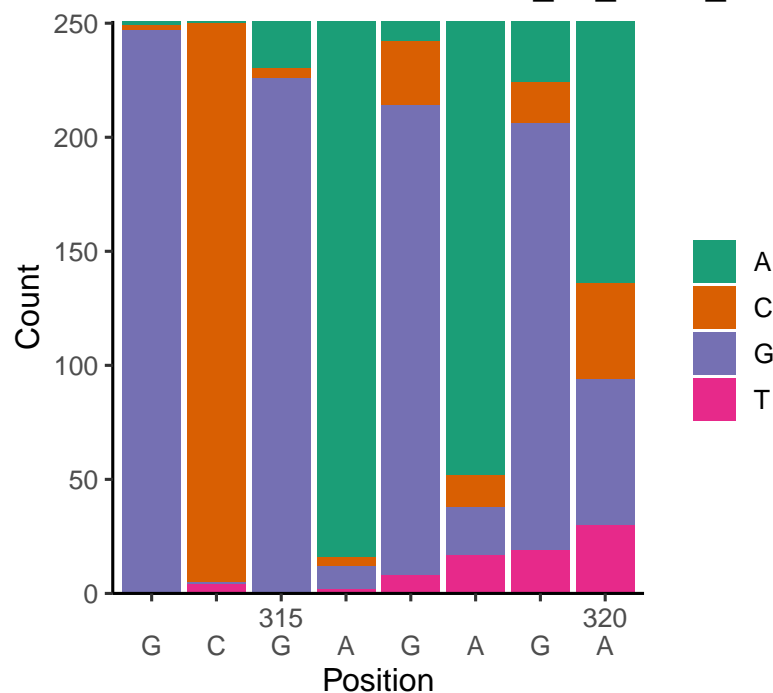
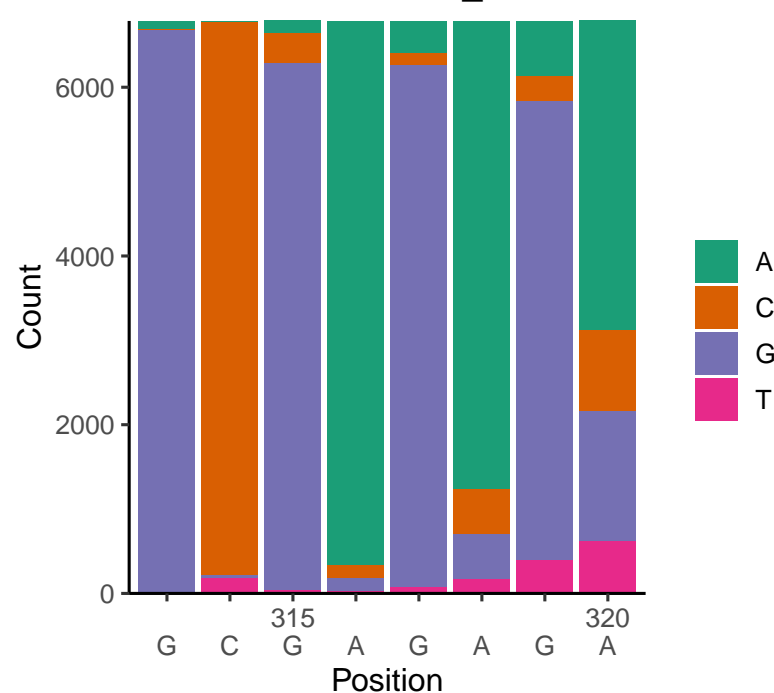


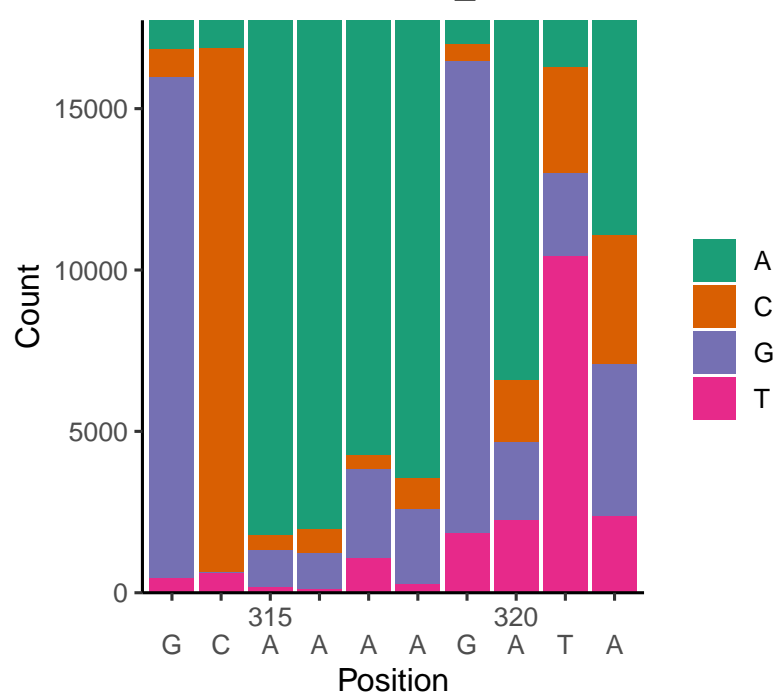
Gene IGHV1/OR15-2*02_03_T81A_T90C



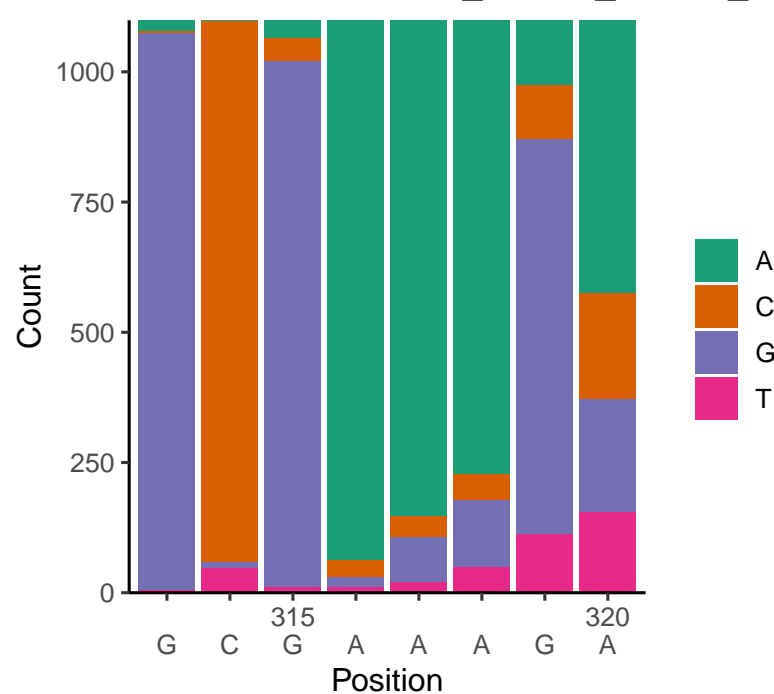
Gene IGHV3-30*04_C203T



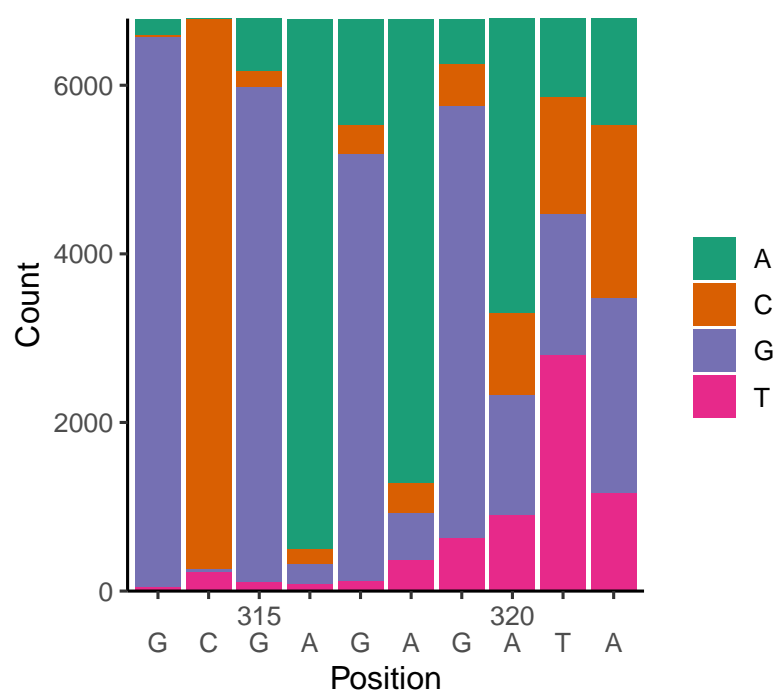
Gene IGHV3-9*01_A104G



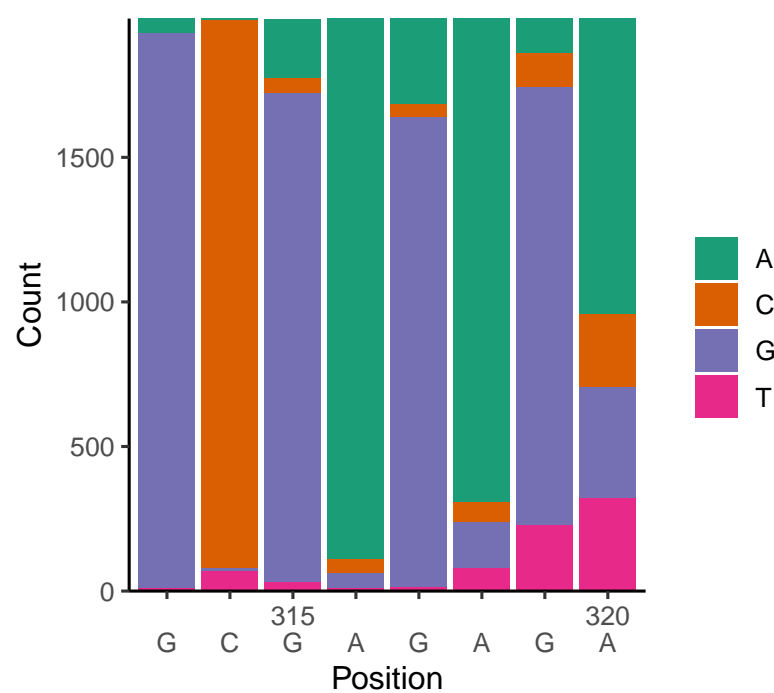
Gene IGHV3-30*04_C203T_T288C_T30



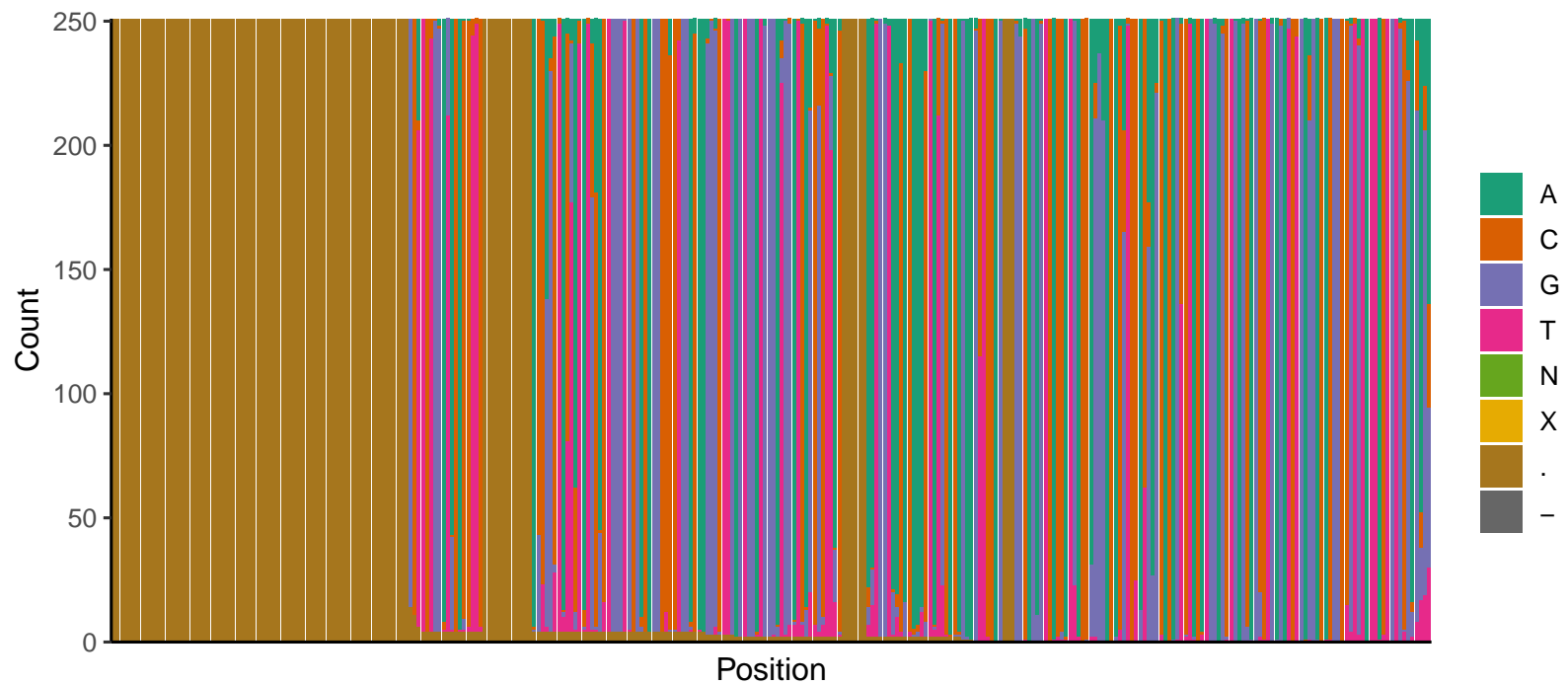
Gene IGHV3-9*01_A104G_C258A_T279



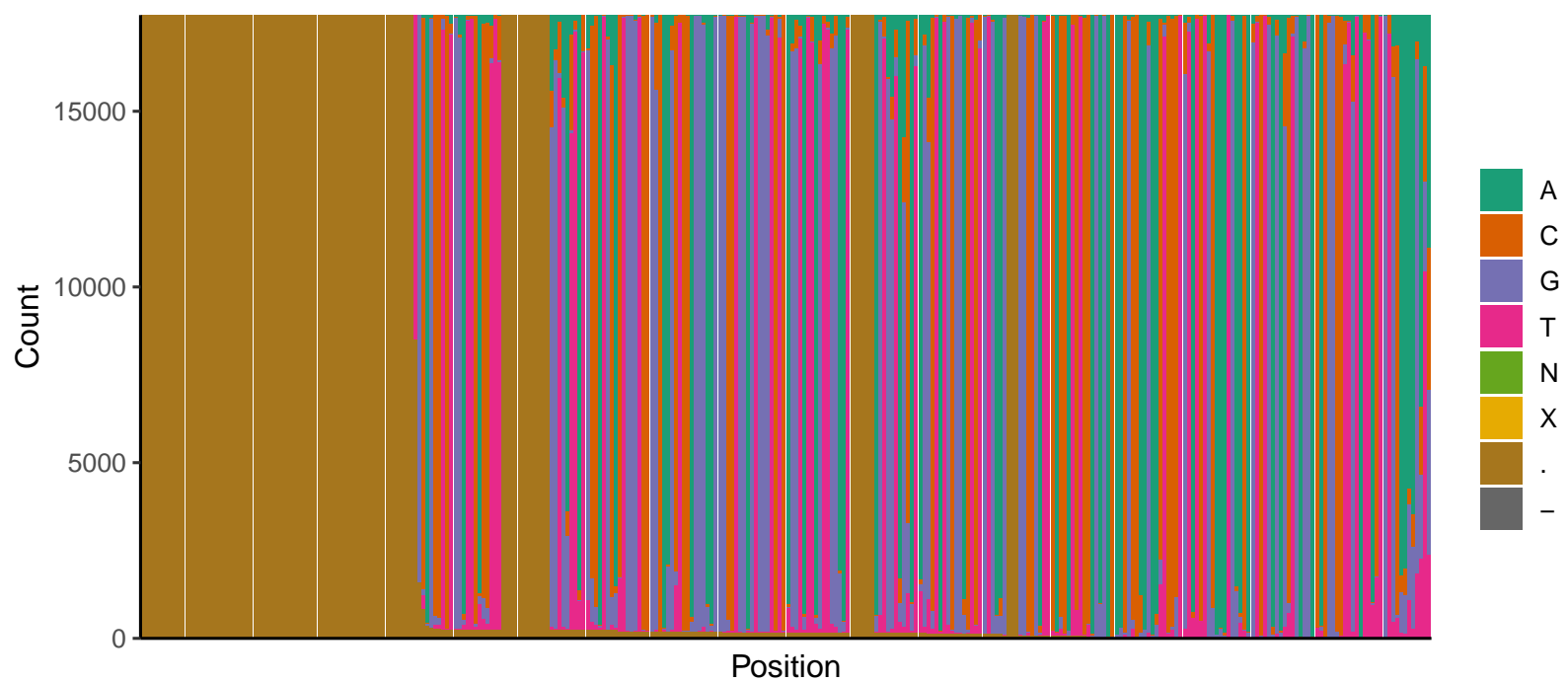
Gene IGHV3-30*07_A150G_C203T



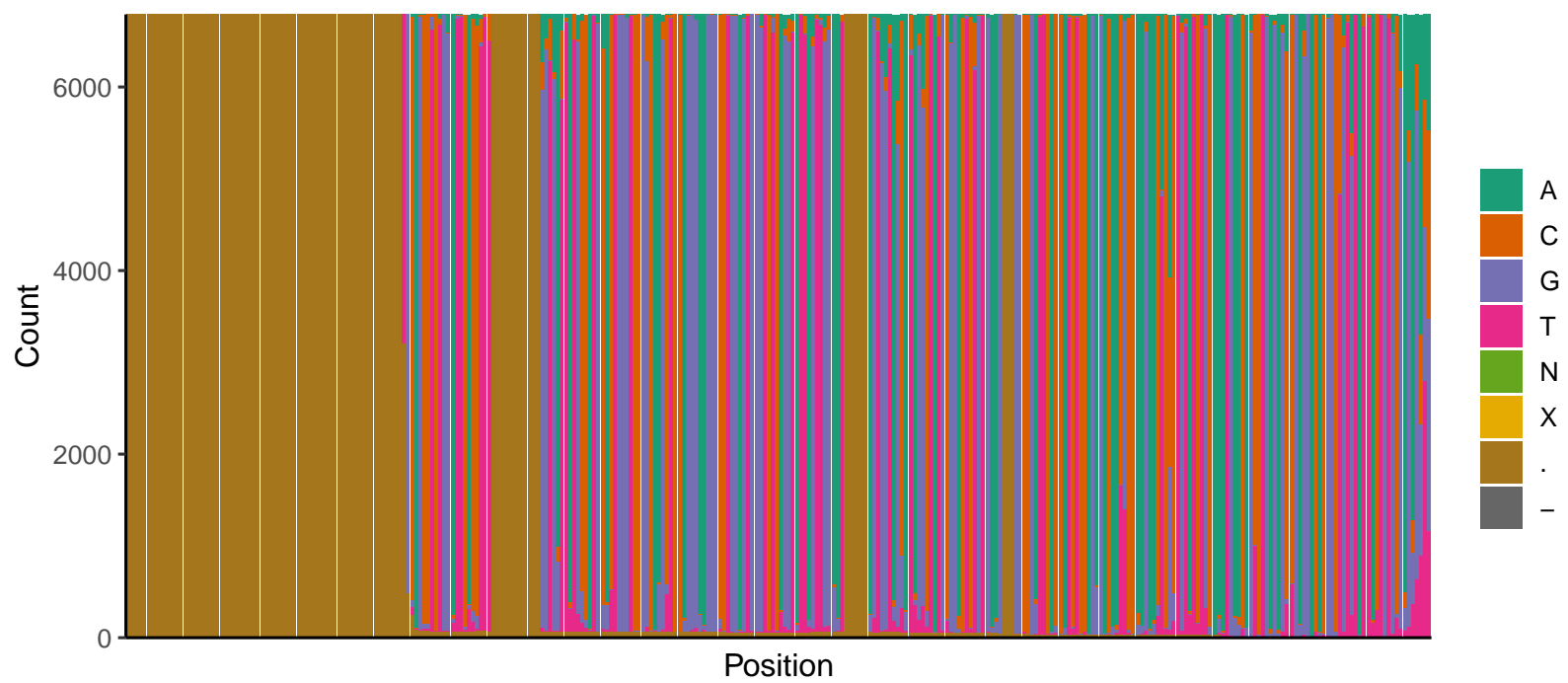
Gene IGHV1/OR15-2*02_03_T81A_T90C_A106G_T127C_A140G_A170G_A172G_C201



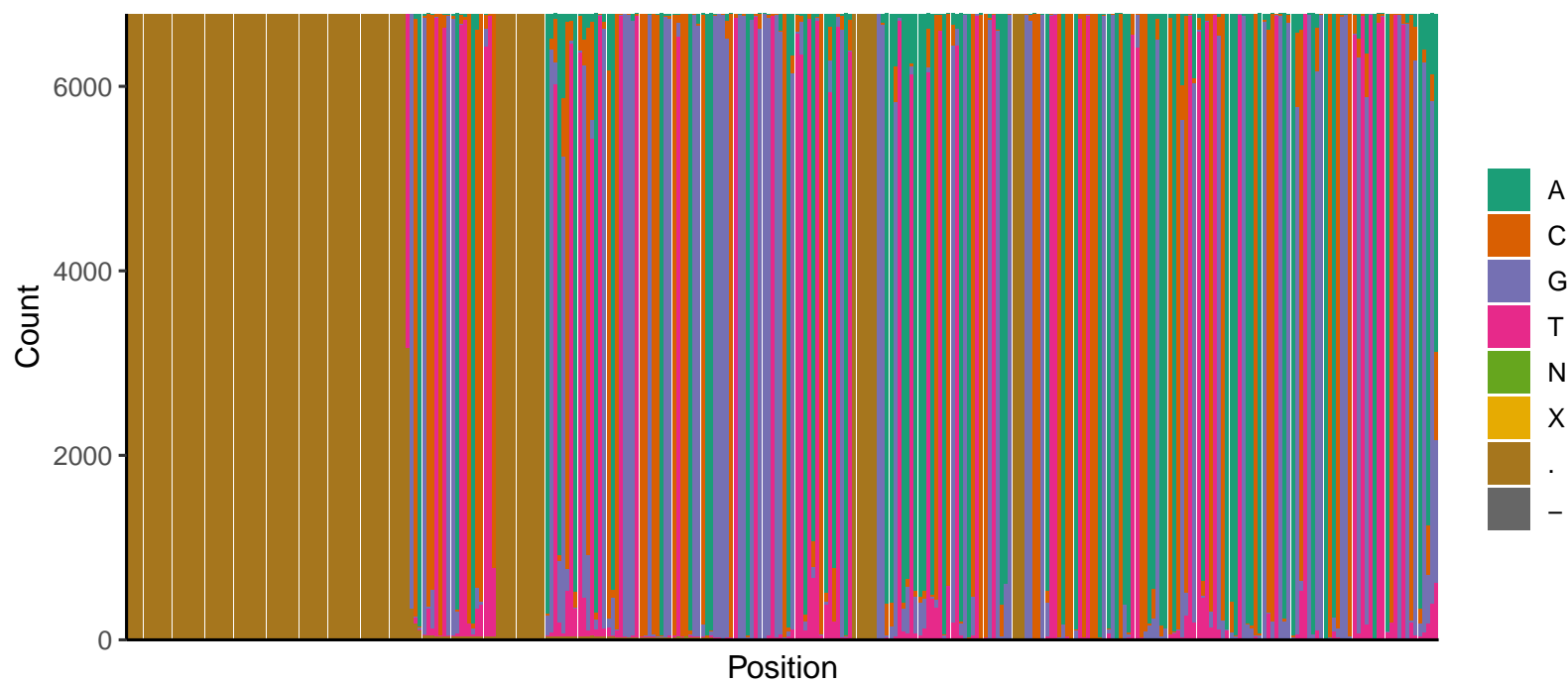
Gene IGHV3-9*01_A104G



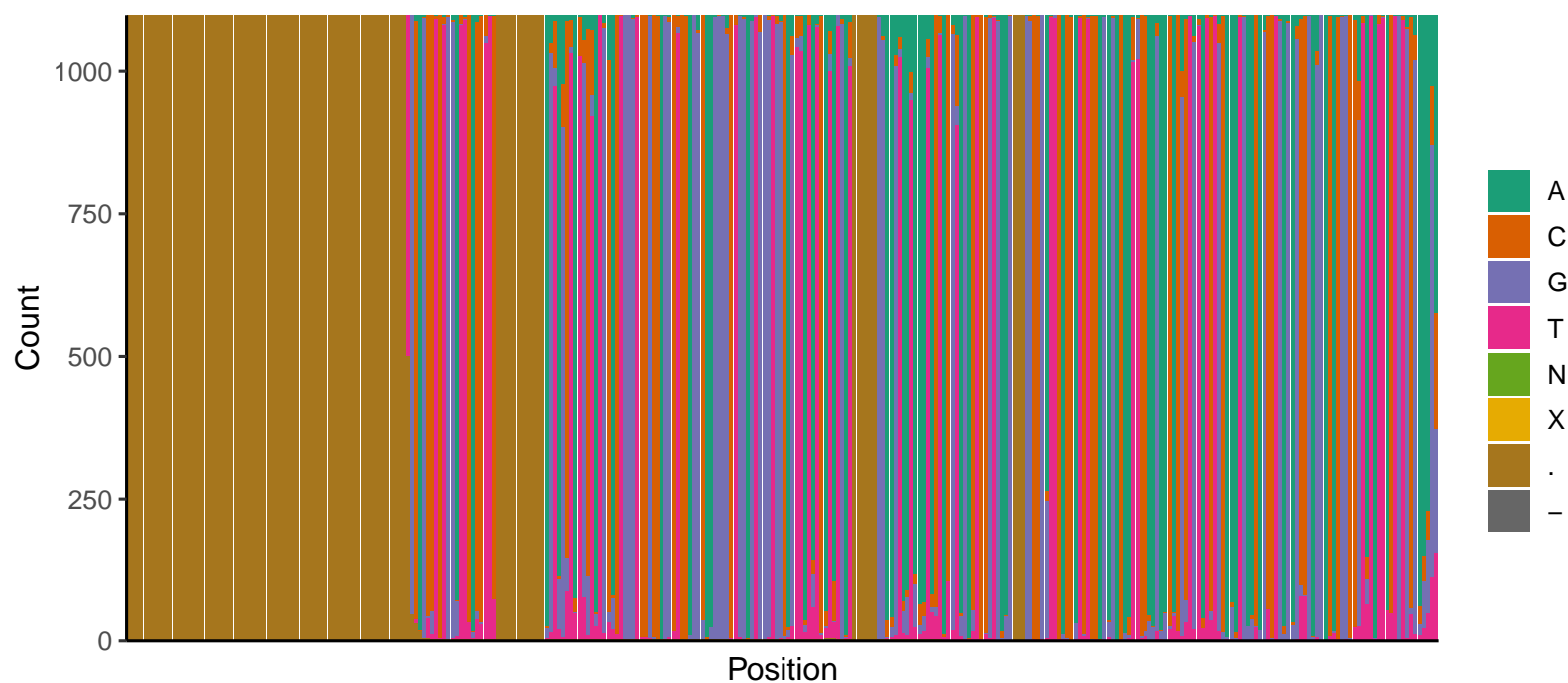
Gene IGHV3-9*01_A104G_C258A_T279C_T288C_C300T_T301G_A315G_A317G



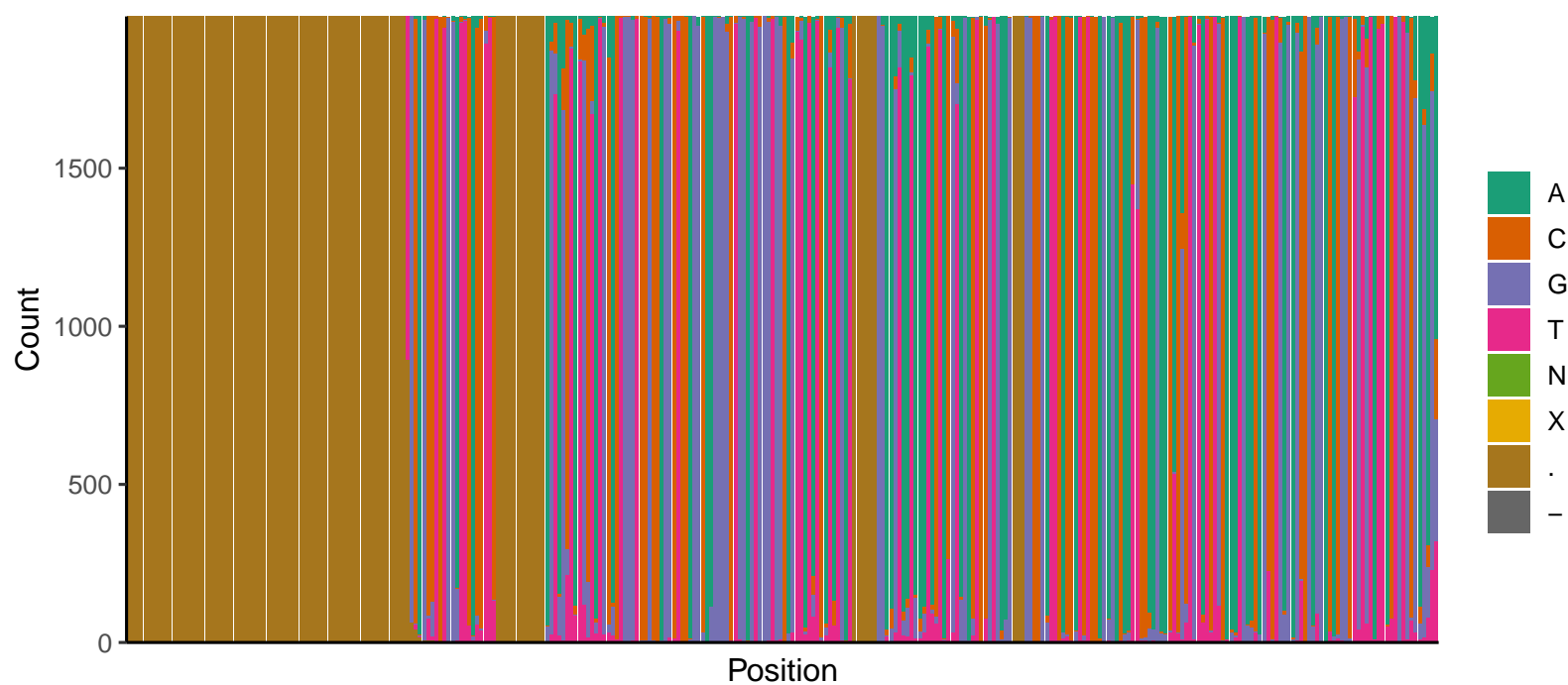
Gene IGHV3-30*04_C203T



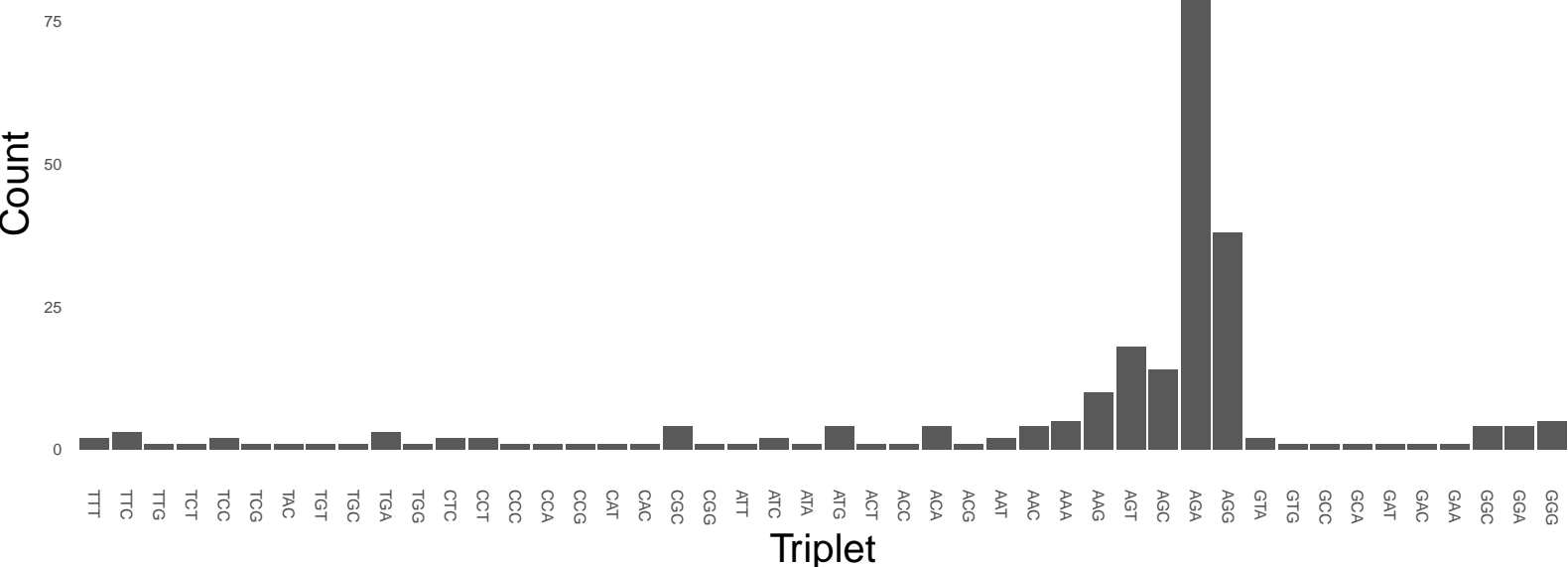
Gene IGHV3-30*04_C203T_T288C_T300C_G303A_G317A



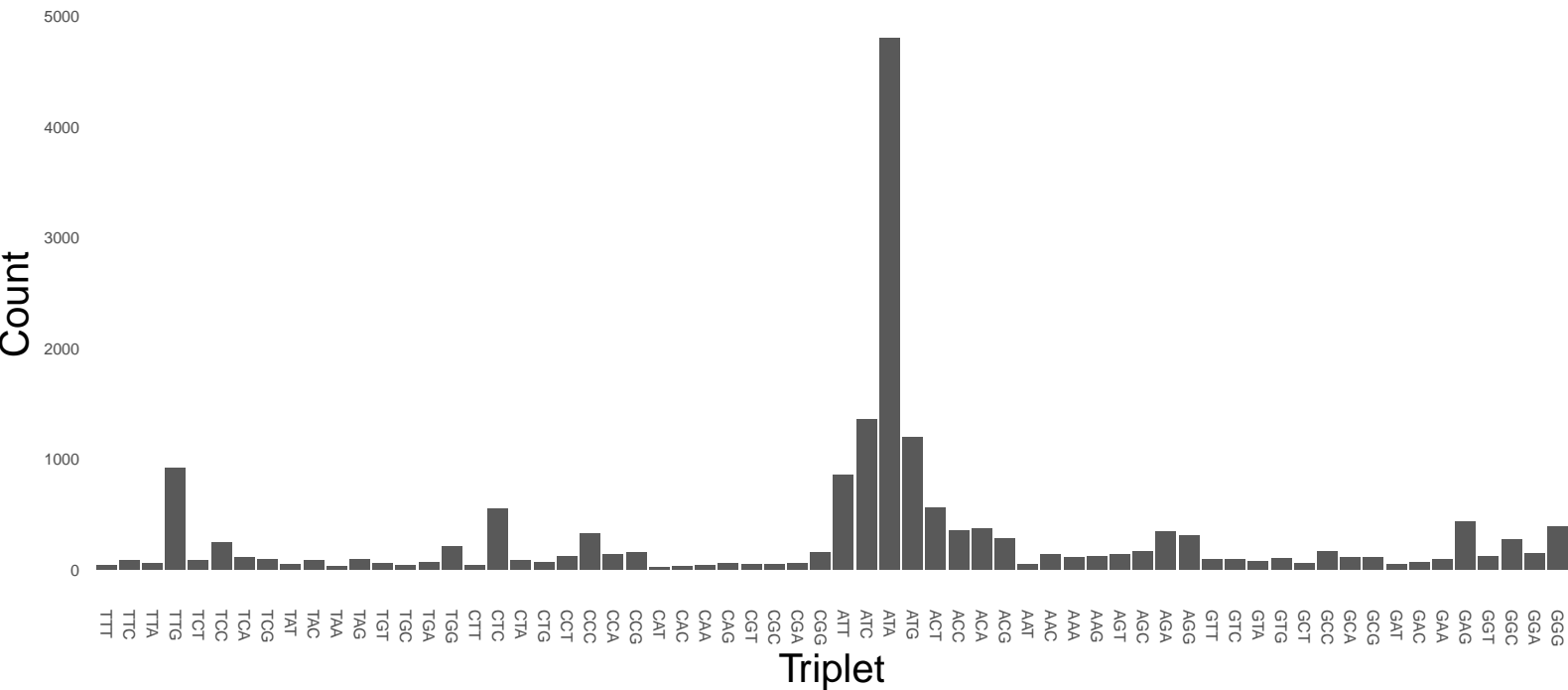
Gene IGHV3-30*07_A150G_C203T



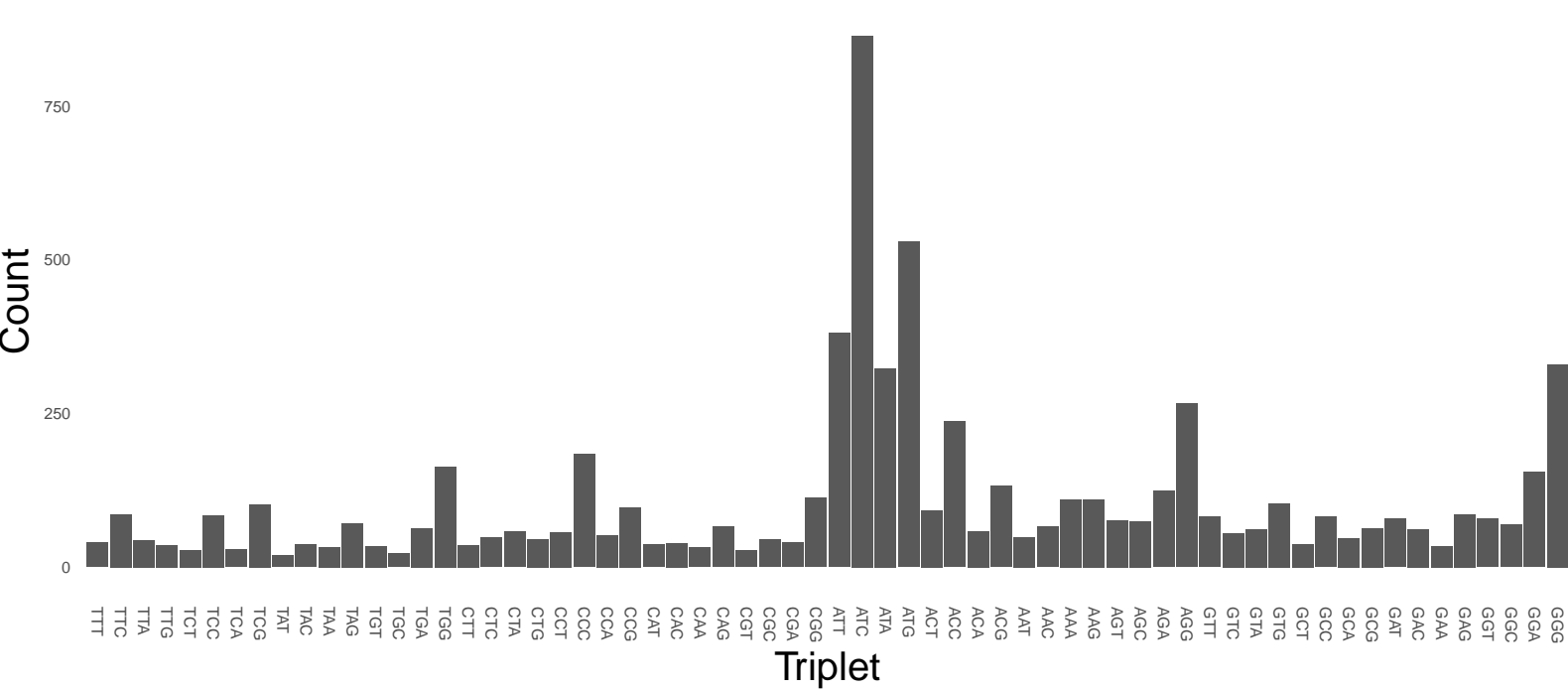
IGHV1/OR15-2*02_03_T81A_T90C_A106G_T127C_A140G_A170G_A172G_C201T_C202G_A24



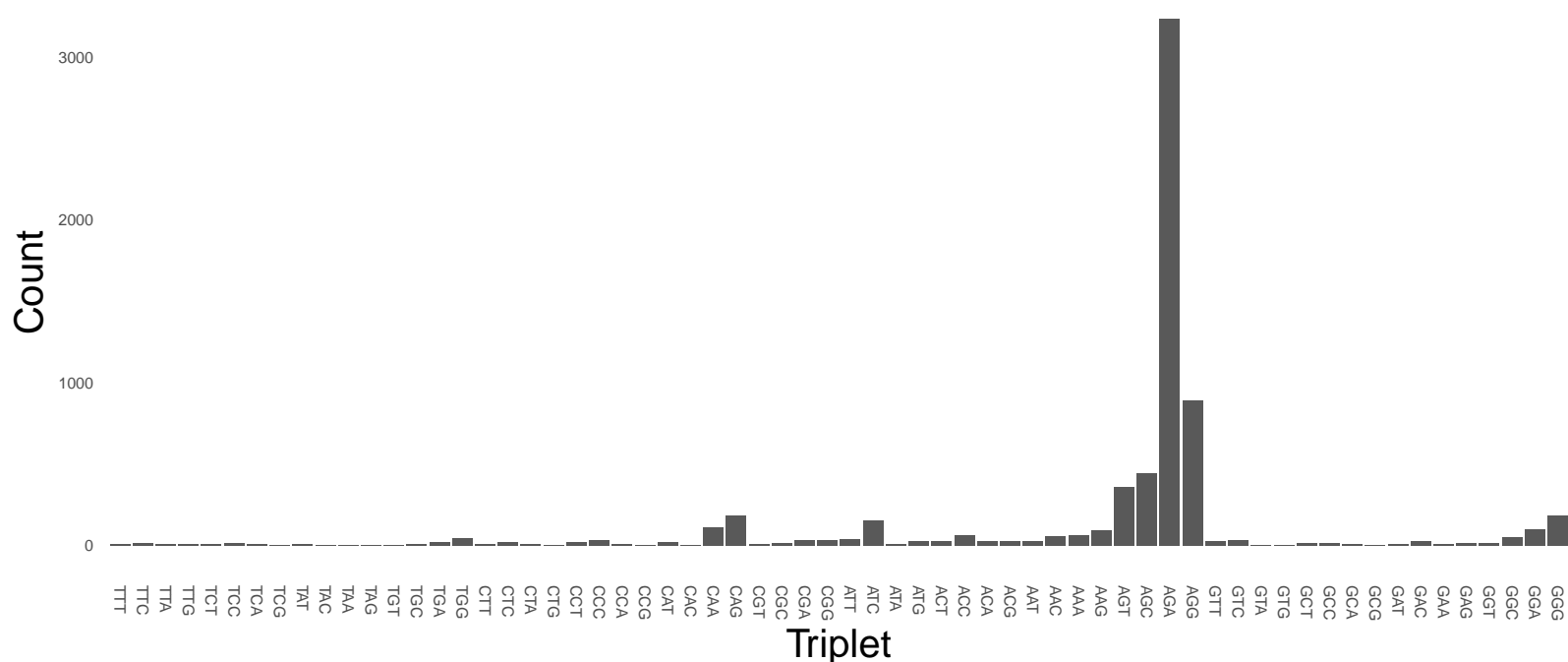
IGHV3-9*01_A104G- Final 3 nucleotides as a triplet



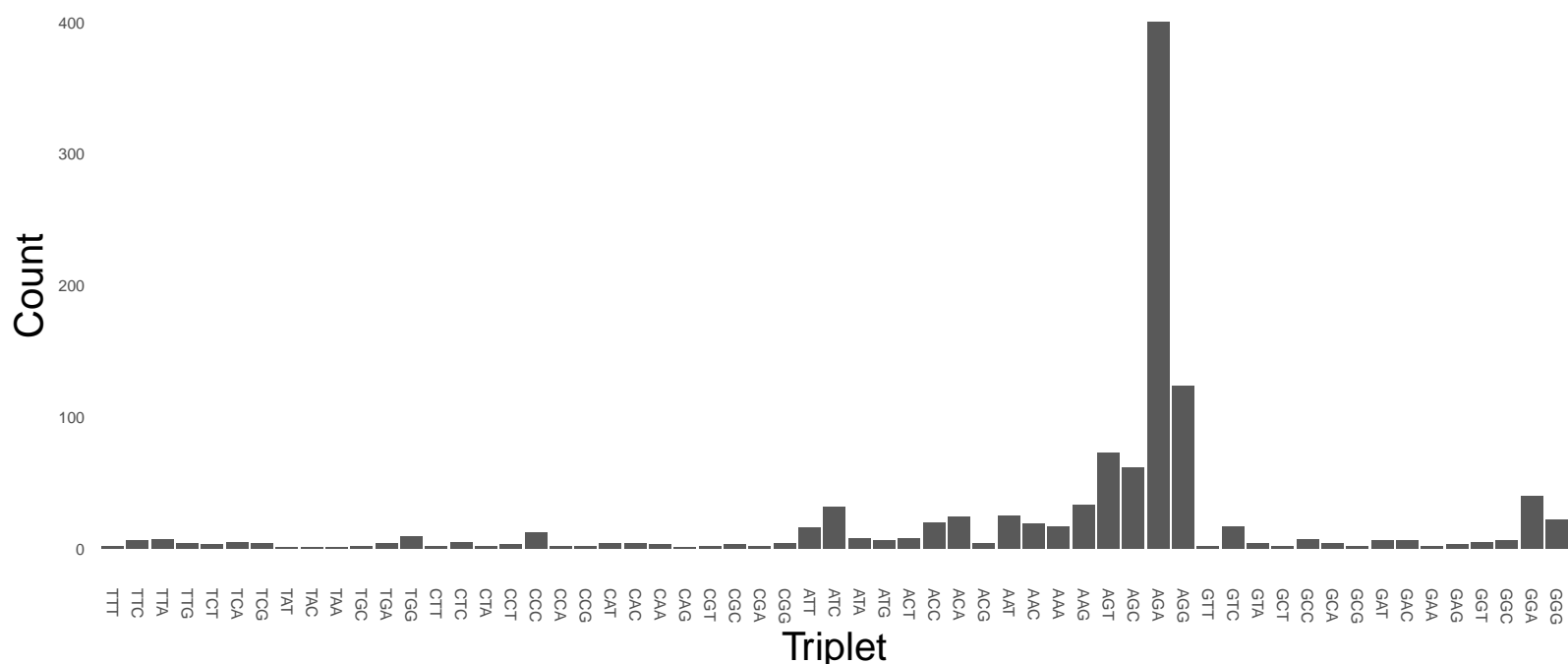
IGHV3-9*01_A104G_C258A_T279C_T288C_C300T_T301G_A315G_A317G- Final 3 nucleotides



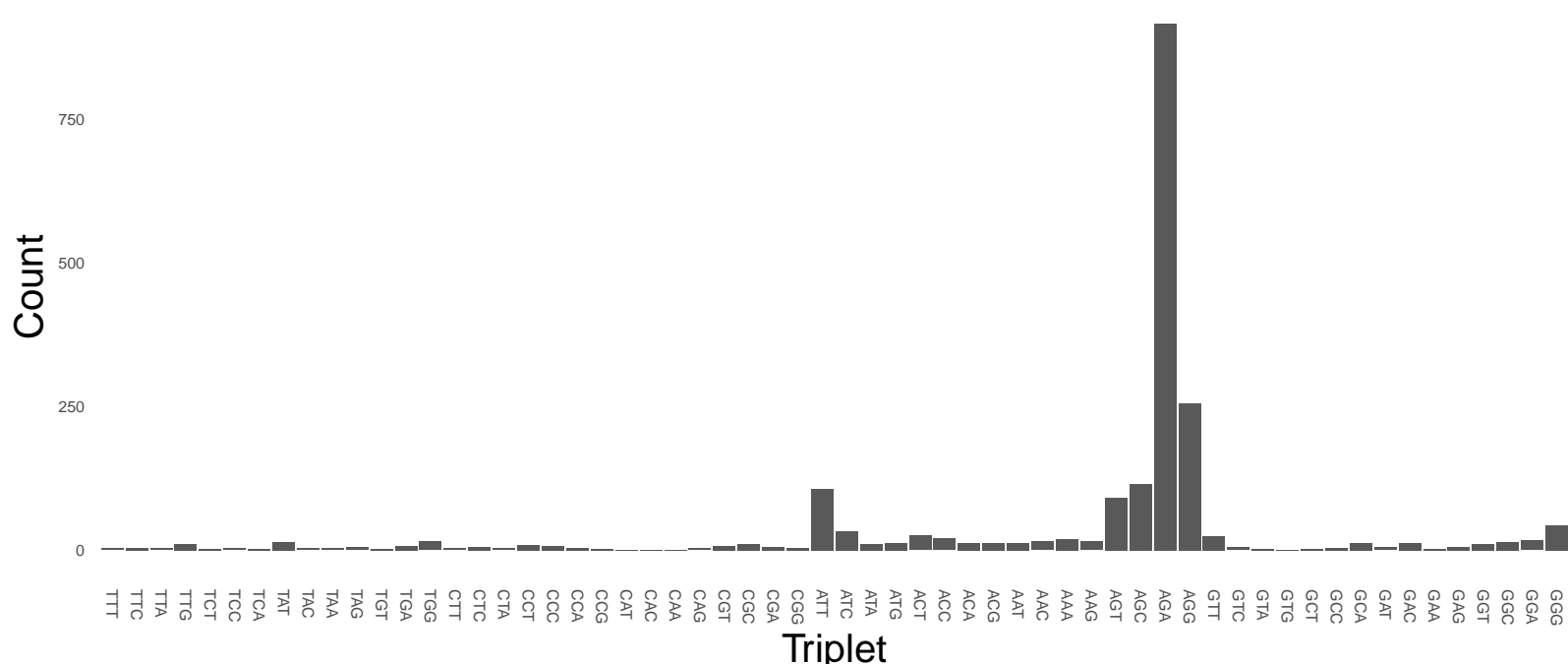
IGHV3-30*04_C203T- Final 3 nucleotides as a triplet



IGHV3-30*04_C203T_T288C_T300C_G303A_G317A- Final 3 nucleotides as a triplet

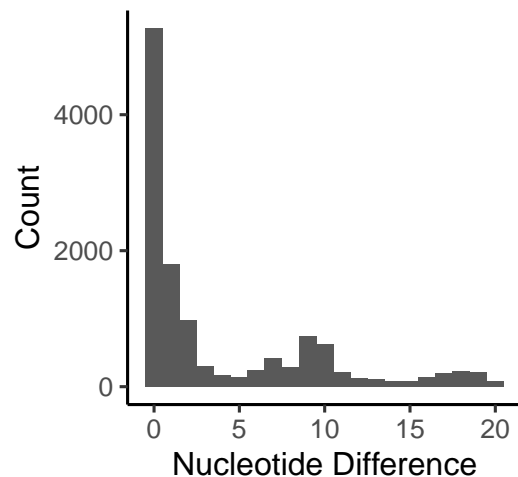


IGHV3-30*07_A150G_C203T- Final 3 nucleotides as a triplet



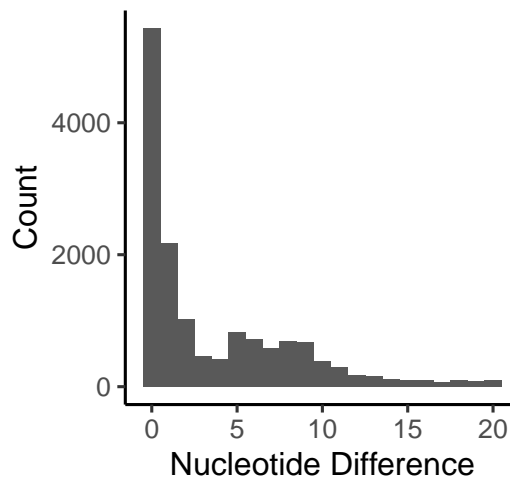
IGHV1-2*02

13493 sequences assigned
5269 (39%) exact matches, in which:
5050 unique CDR3
6 unique J



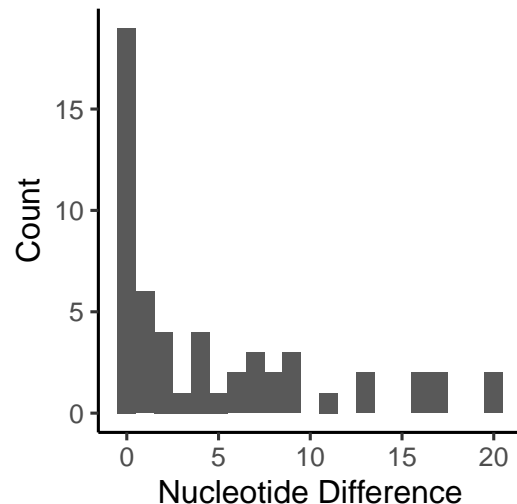
IGHV1-8*01

15919 sequences assigned
5430 (34.1%) exact matches, in which:
5219 unique CDR3
6 unique J



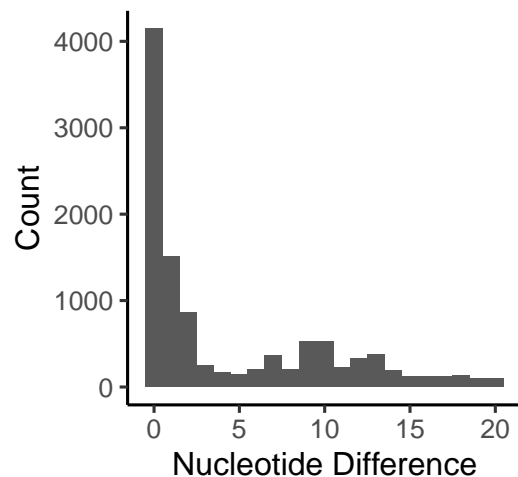
IGHV1-45*02

56 sequences assigned
19 (33.9%) exact matches, in which:
17 unique CDR3
5 unique J



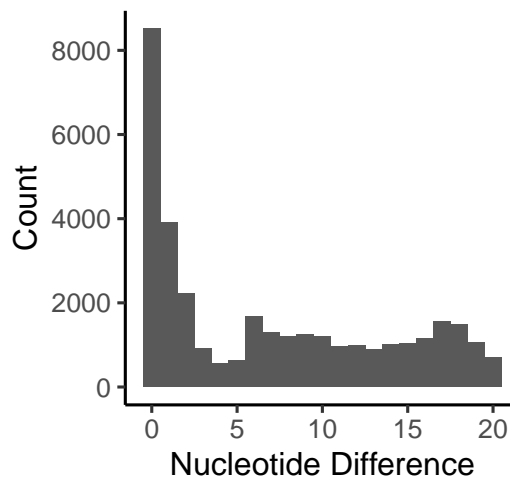
IGHV1-2*06

11798 sequences assigned
4146 (35.1%) exact matches, in which:
3944 unique CDR3
6 unique J



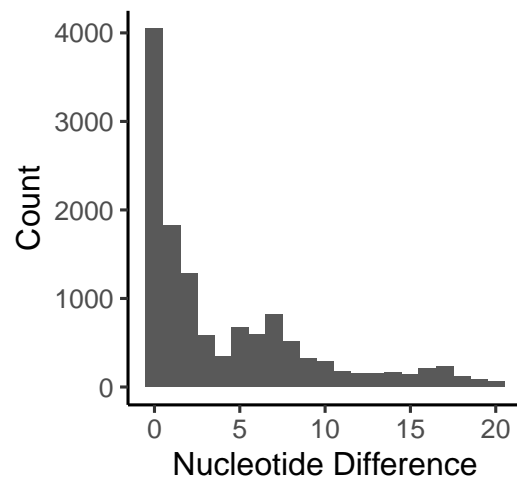
IGHV1-18*01

37339 sequences assigned
8514 (22.8%) exact matches, in which:
8071 unique CDR3
6 unique J



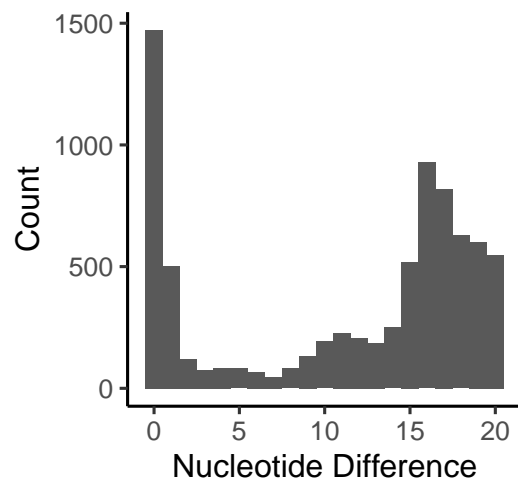
IGHV1-46*01

13448 sequences assigned
4047 (30.1%) exact matches, in which:
3898 unique CDR3
6 unique J



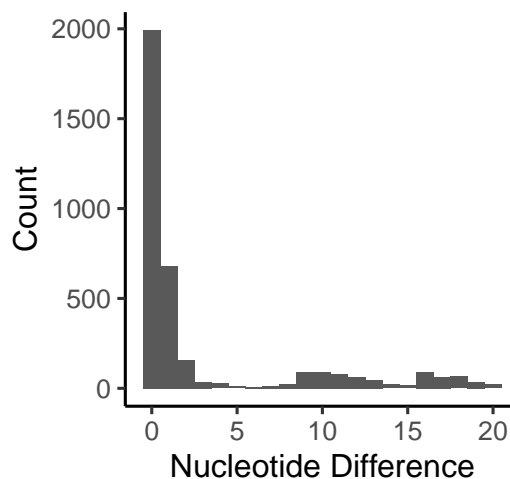
IGHV1-3*01_05

14306 sequences assigned
1472 (10.3%) exact matches, in which:
1374 unique CDR3
6 unique J



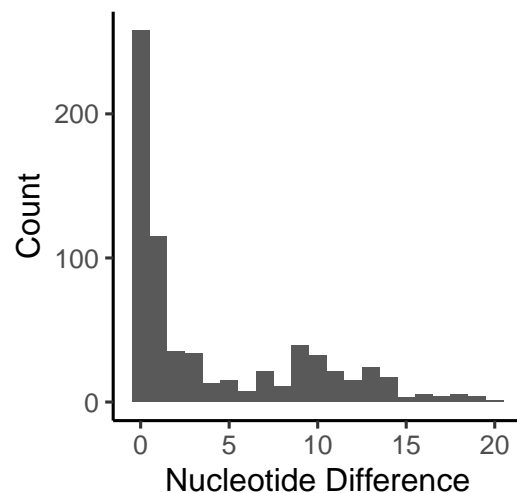
IGHV1-24*01

3668 sequences assigned
1993 (54.3%) exact matches, in which:
1845 unique CDR3
6 unique J



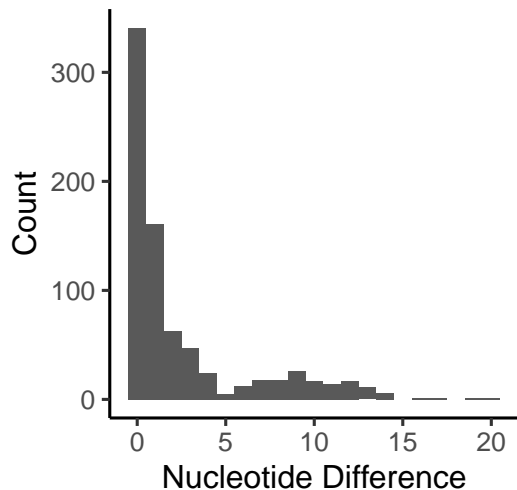
IGHV1-58*02

686 sequences assigned
258 (37.6%) exact matches, in which:
249 unique CDR3
6 unique J



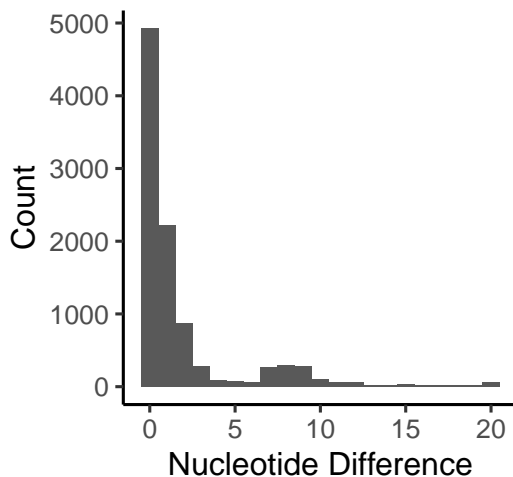
IGHV1-58*01_03

948 sequences assigned
341 (36%) exact matches, in which:
323 unique CDR3
6 unique J



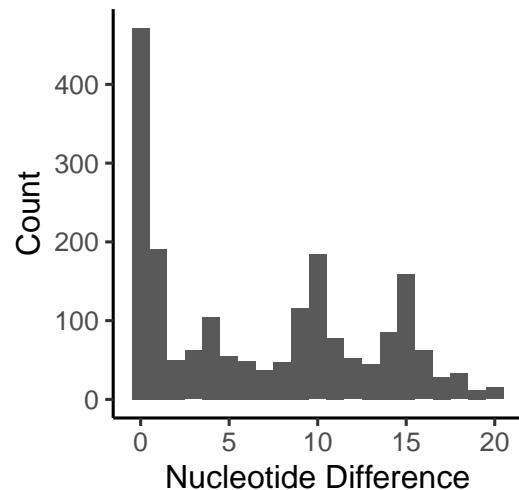
IGHV1-69*04_09

10075 sequences assigned
4926 (48.9%) exact matches, in which:
4768 unique CDR3
6 unique J



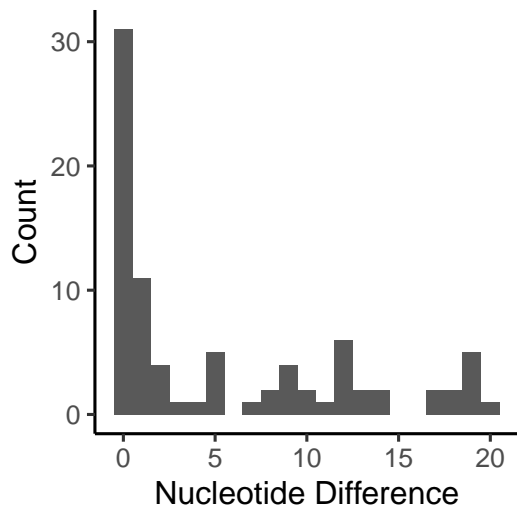
IGHV2-5*01

2009 sequences assigned
472 (23.5%) exact matches, in which:
453 unique CDR3
6 unique J



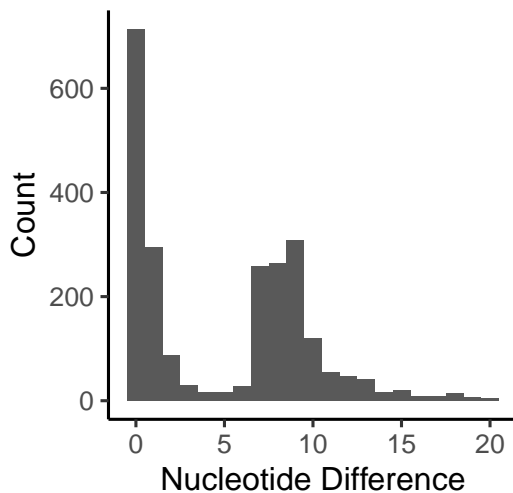
IGHV1-69-2*01

93 sequences assigned
31 (33.3%) exact matches, in which:
30 unique CDR3
4 unique J



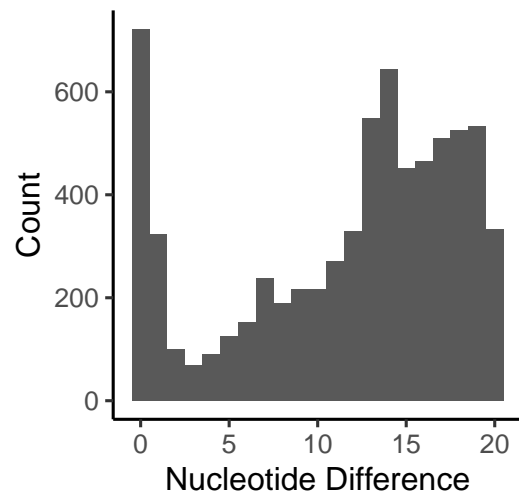
IGHV1-69*06_14

2425 sequences assigned
714 (29.4%) exact matches, in which:
710 unique CDR3
6 unique J



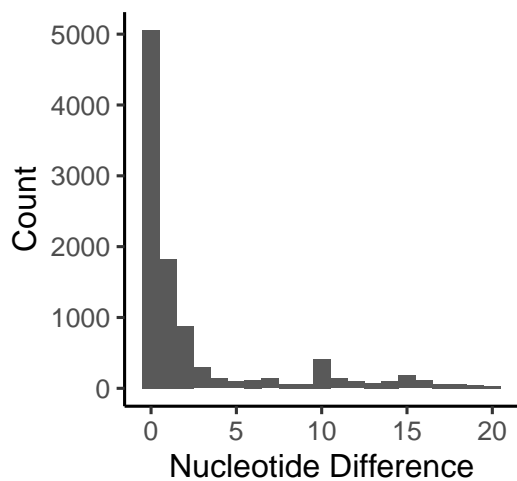
IGHV2-5*02

7932 sequences assigned
722 (9.1%) exact matches, in which:
693 unique CDR3
6 unique J



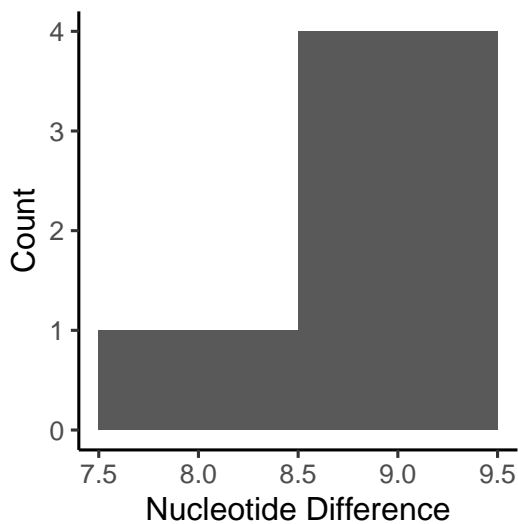
IGHV1-69*01_12_13

10467 sequences assigned
5058 (48.3%) exact matches, in which:
4945 unique CDR3
6 unique J



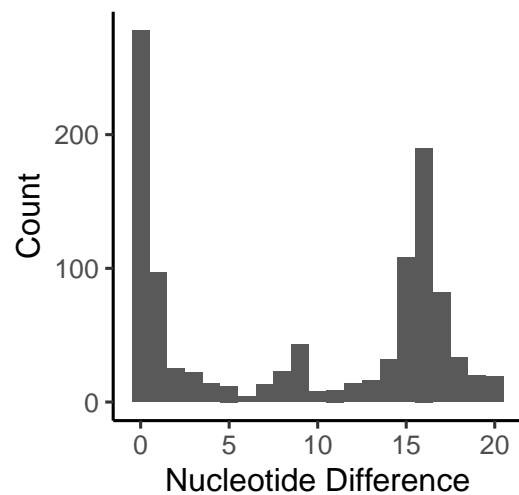
IGHV1-NL1*01

5 sequences assigned
No exact matches.



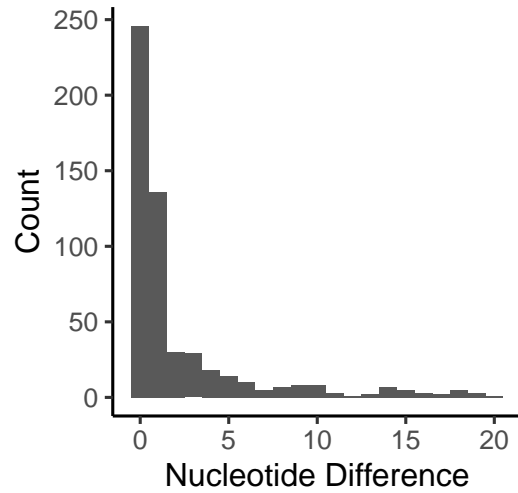
IGHV2-26*01

1108 sequences assigned
278 (25.1%) exact matches, in which:
266 unique CDR3
5 unique J



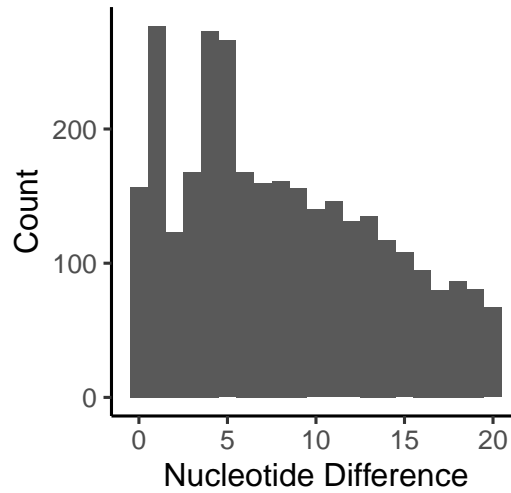
IGHV2-70*01

578 sequences assigned
246 (42.6%) exact matches, in which:
232 unique CDR3
6 unique J



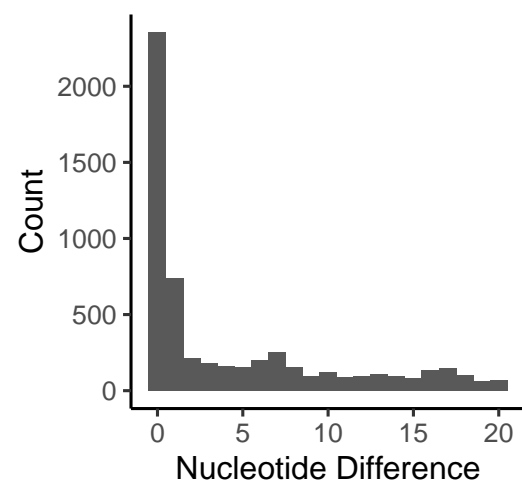
IGHV3-7*03

3530 sequences assigned
157 (4.4%) exact matches, in which:
155 unique CDR3
5 unique J



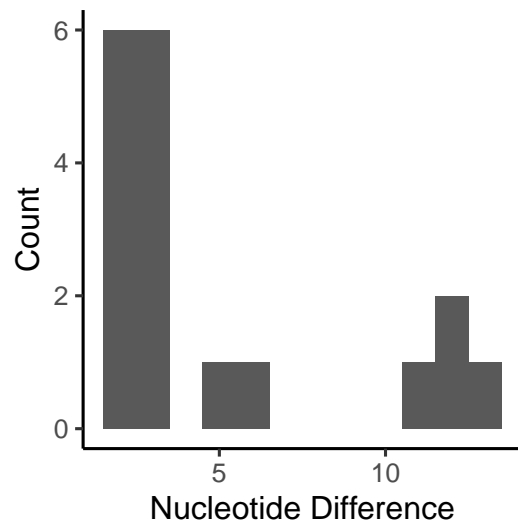
IGHV3-11*01

7833 sequences assigned
2354 (30.1%) exact matches, in which:
2046 unique CDR3
6 unique J



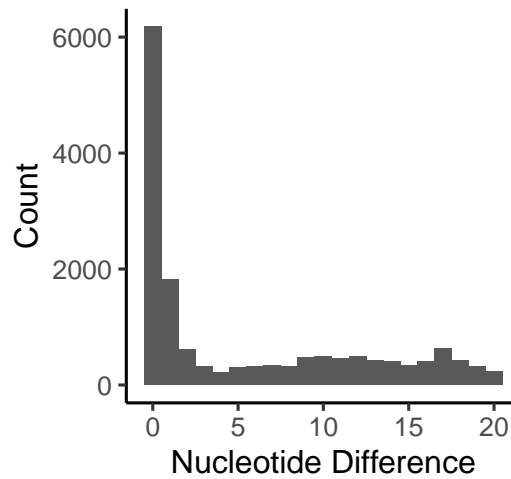
IGHV2-70D*14

18 sequences assigned
No exact matches.



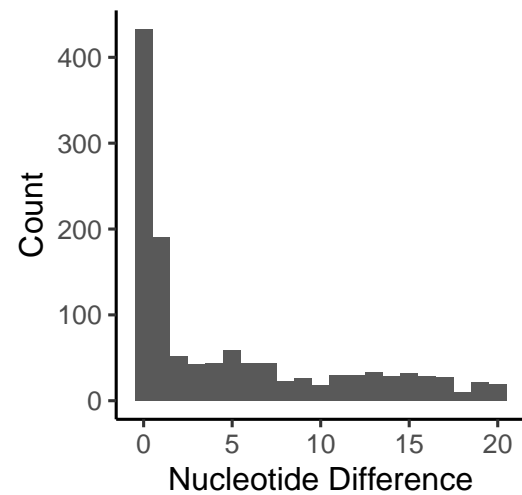
IGHV3-9*01_A104G

17738 sequences assigned
6179 (34.8%) exact matches, in which:
4834 unique CDR3
6 unique J



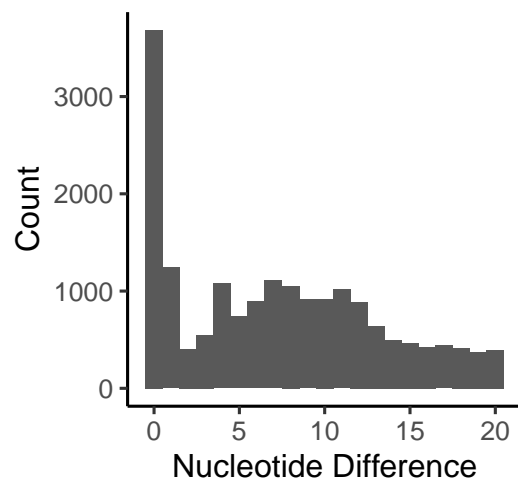
IGHV3-11*04

1418 sequences assigned
433 (30.5%) exact matches, in which:
425 unique CDR3
6 unique J



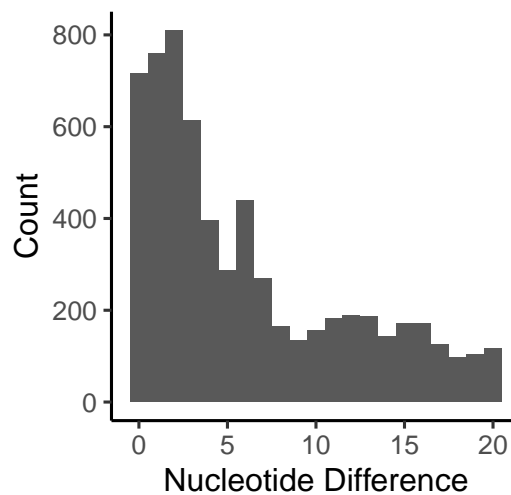
IGHV3-7*01

20842 sequences assigned
3684 (17.7%) exact matches, in which:
3102 unique CDR3
6 unique J



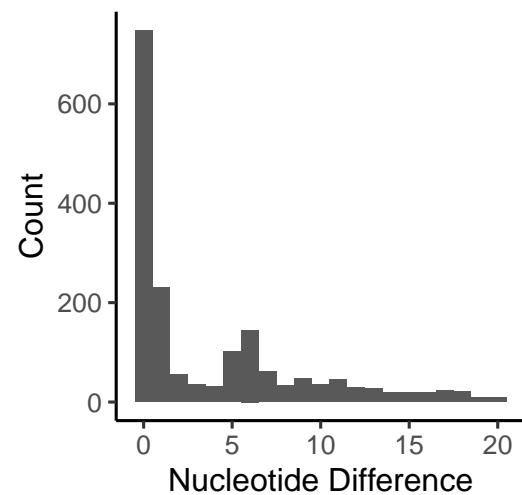
IGHV3-9*01_A104G_C25

6791 sequences assigned
716 (10.5%) exact matches, in which:
691 unique CDR3
6 unique J



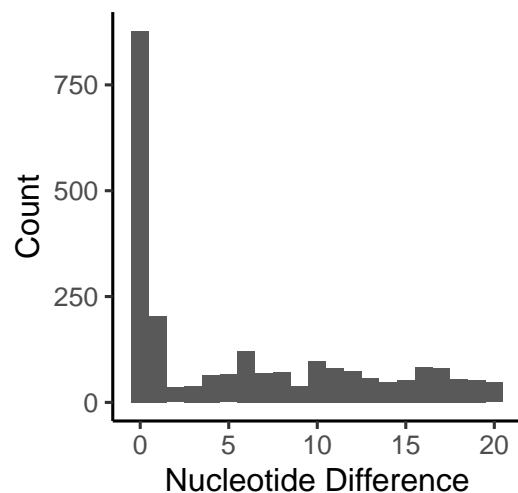
IGHV3-13*01

1855 sequences assigned
748 (40.3%) exact matches, in which:
600 unique CDR3
5 unique J



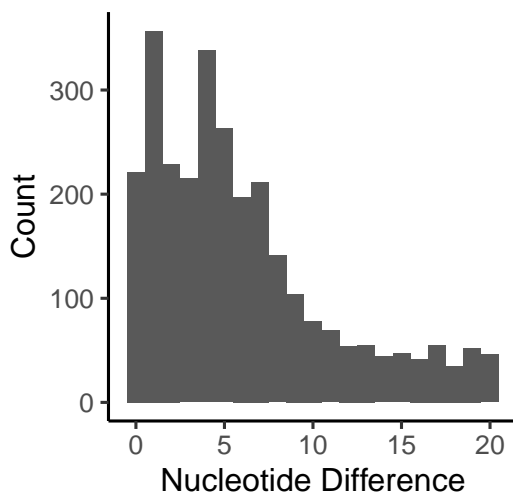
IGHV3-15*01_02

3225 sequences assigned
878 (27.2%) exact matches, in which:
749 unique CDR3
6 unique J



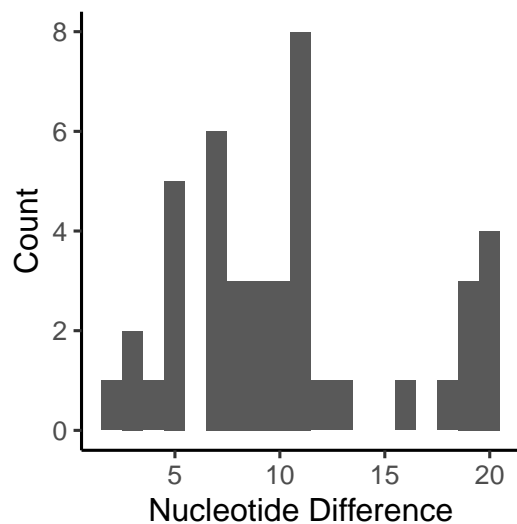
IGHV3-21*04

3100 sequences assigned
221 (7.1%) exact matches, in which:
221 unique CDR3
6 unique J



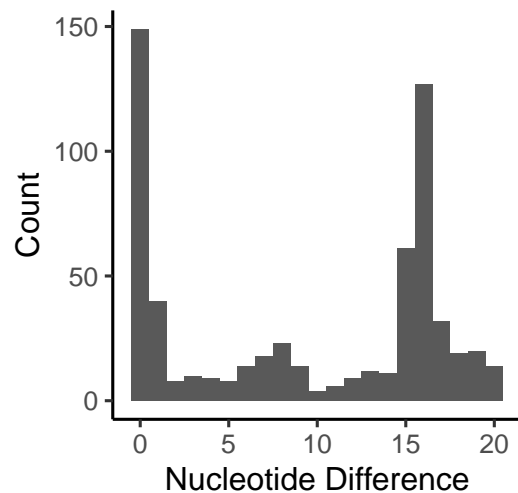
IGHV3-30-3*01

150 sequences assigned
No exact matches.



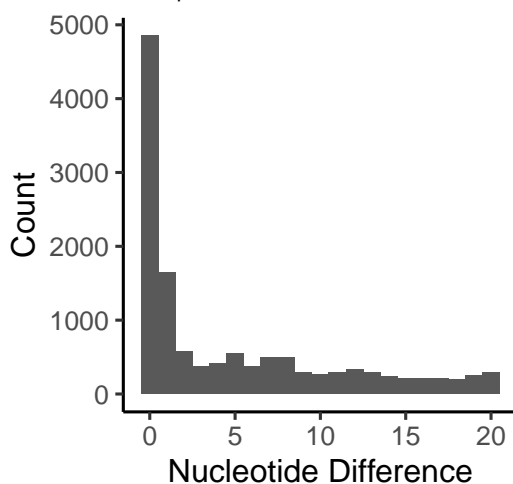
IGHV3-20*01_02

642 sequences assigned
149 (23.2%) exact matches, in which:
124 unique CDR3
5 unique J



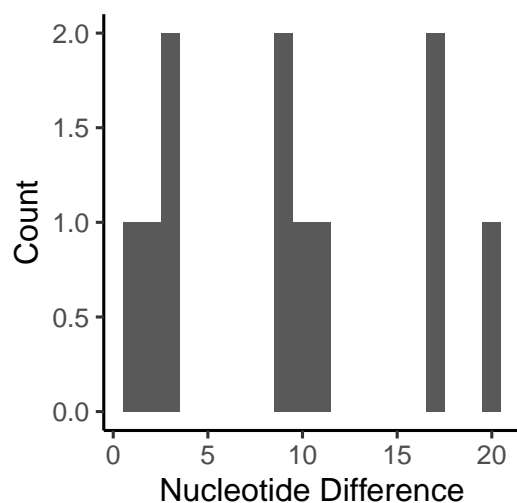
IGHV3-21*01_02

14178 sequences assigned
4852 (34.2%) exact matches, in which:
4028 unique CDR3
6 unique J



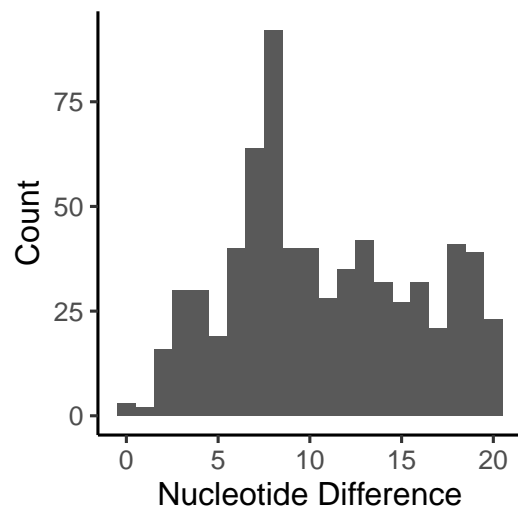
IGHV3-30-3*02

22 sequences assigned
No exact matches.



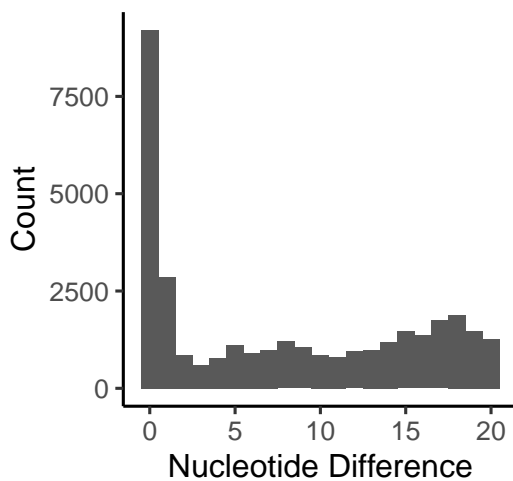
IGHV3-20*03_04

788 sequences assigned
3 (0.4%) exact matches, in which:
2 unique CDR3
2 unique J



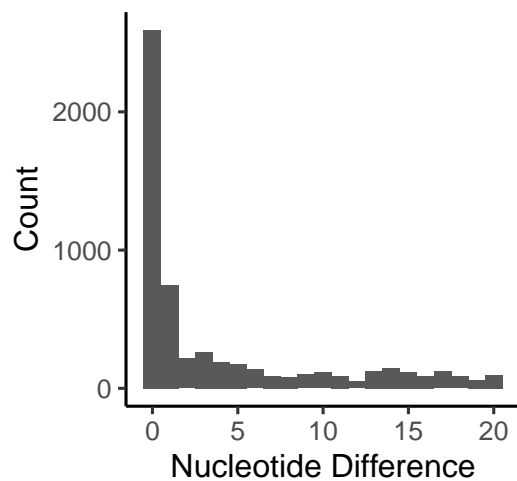
IGHV3-23*01_04

42110 sequences assigned
9205 (21.9%) exact matches, in which:
7120 unique CDR3
6 unique J



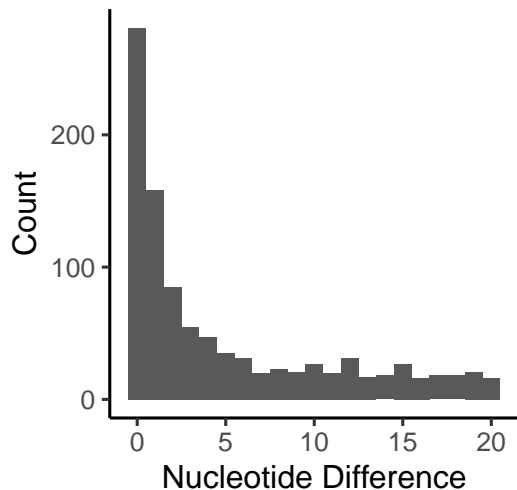
IGHV3-30*04_C203T

6786 sequences assigned
2592 (38.2%) exact matches, in which:
2208 unique CDR3
6 unique J



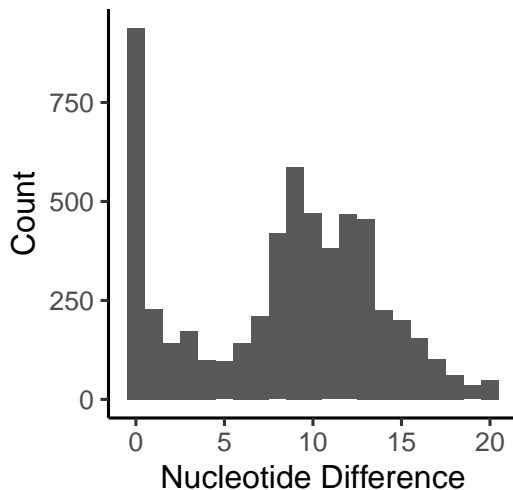
IGHV3-30*04_C203T_T2

1099 sequences assigned
281 (25.6%) exact matches, in which:
279 unique CDR3
6 unique J



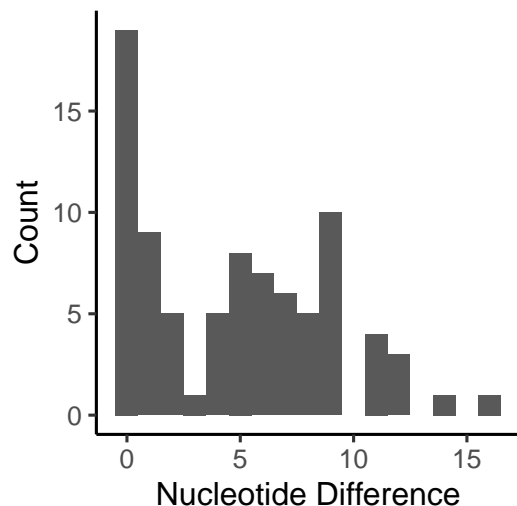
IGHV3-33*06

5952 sequences assigned
939 (15.8%) exact matches, in which:
784 unique CDR3
6 unique J



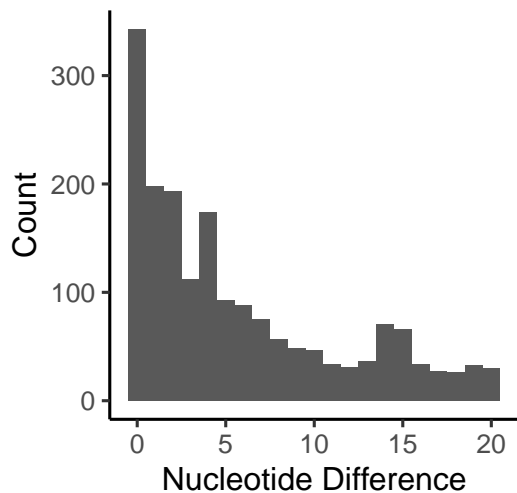
IGHV3-38-3*01

84 sequences assigned
19 (22.6%) exact matches, in which:
19 unique CDR3
4 unique J



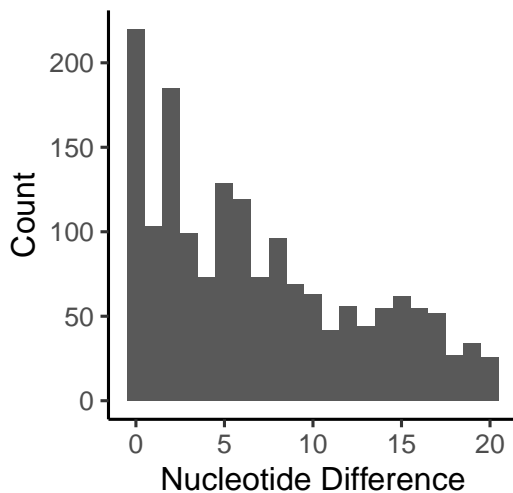
IGHV3-30*07_A150G_C2

1980 sequences assigned
343 (17.3%) exact matches, in which:
338 unique CDR3
6 unique J



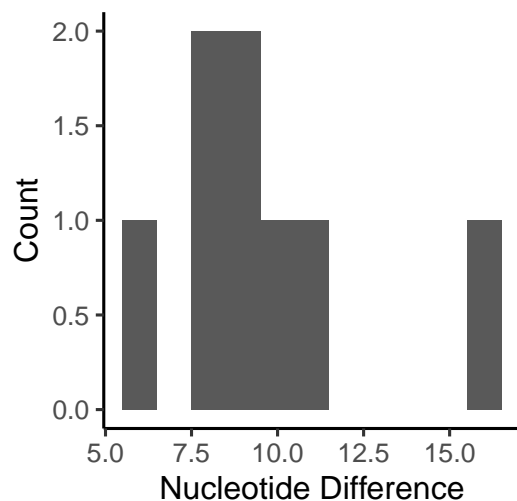
IGHV3-33*08

1960 sequences assigned
220 (11.2%) exact matches, in which:
215 unique CDR3
6 unique J



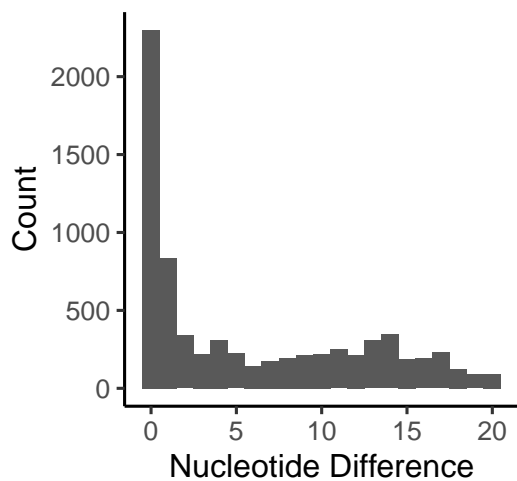
IGHV3-38*03

8 sequences assigned
No exact matches.



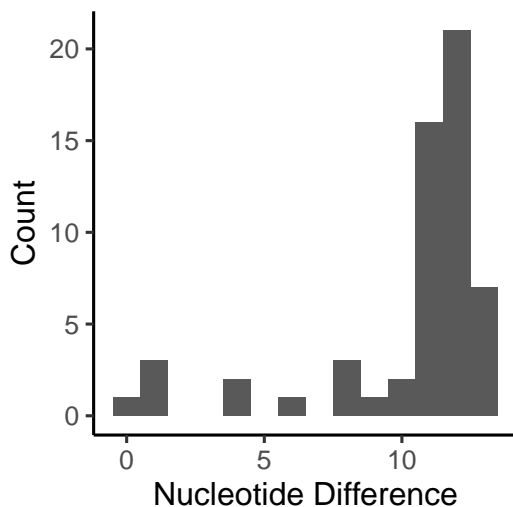
IGHV3-33*01

7822 sequences assigned
2299 (29.4%) exact matches, in which:
2033 unique CDR3
6 unique J



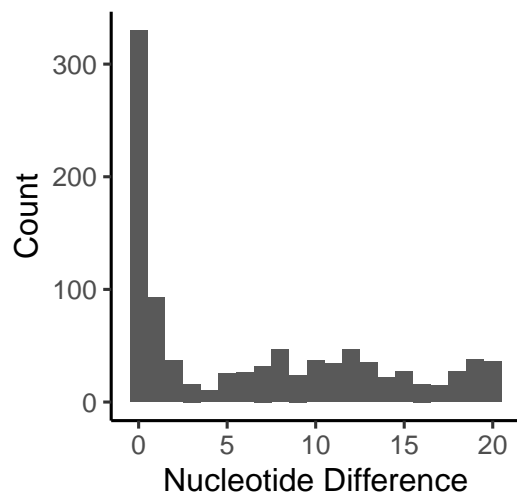
IGHV3-35*01

57 sequences assigned
1 (1.8%) exact matches, in which:
1 unique CDR3
1 unique J



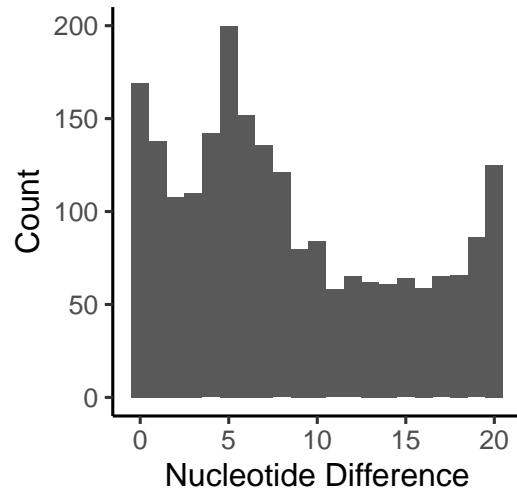
IGHV3-43*01

1162 sequences assigned
330 (28.4%) exact matches, in which:
283 unique CDR3
6 unique J



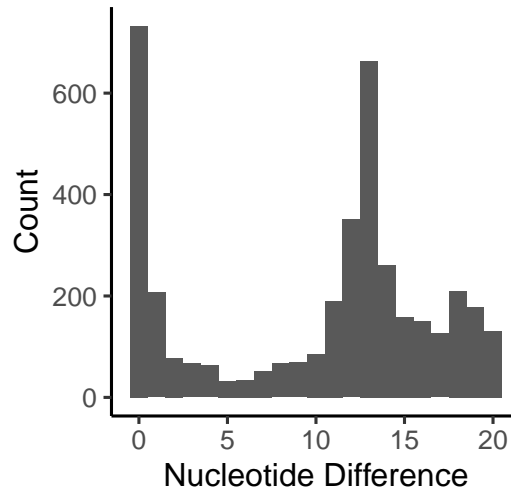
IGHV3-48*01

2593 sequences assigned
169 (6.5%) exact matches, in which:
169 unique CDR3
6 unique J



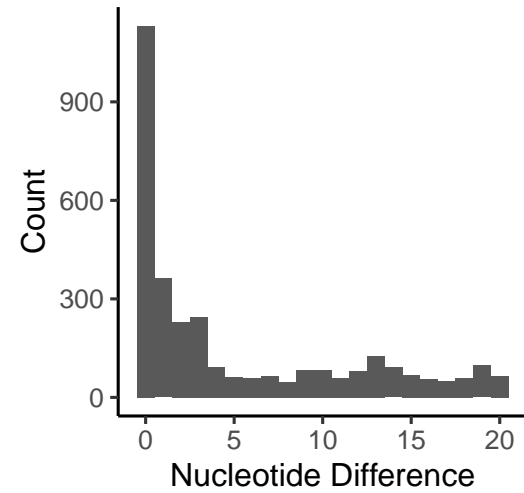
IGHV3-49*03_05

4539 sequences assigned
733 (16.1%) exact matches, in which:
627 unique CDR3
6 unique J



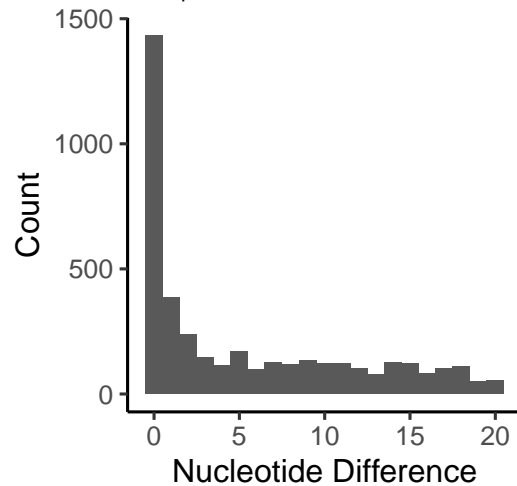
IGHV3-53*01_02

3805 sequences assigned
1132 (29.8%) exact matches, in which:
973 unique CDR3
6 unique J



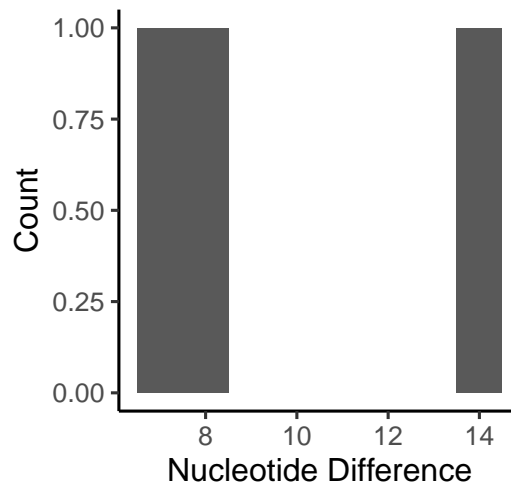
IGHV3-48*02

4475 sequences assigned
1432 (32%) exact matches, in which:
1178 unique CDR3
6 unique J



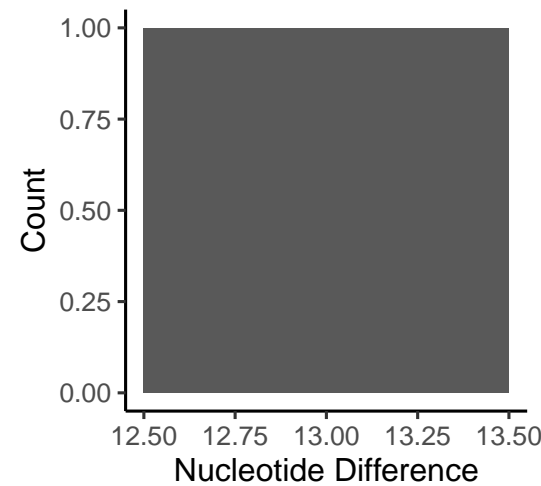
IGHV3-52*01_03

3 sequences assigned
No exact matches.



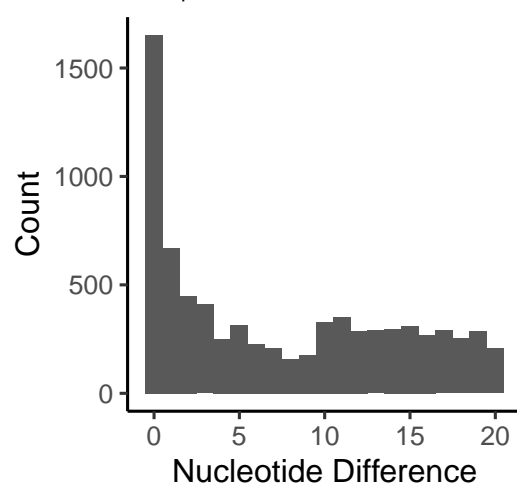
IGHV3-62*03

1 sequences assigned
No exact matches.



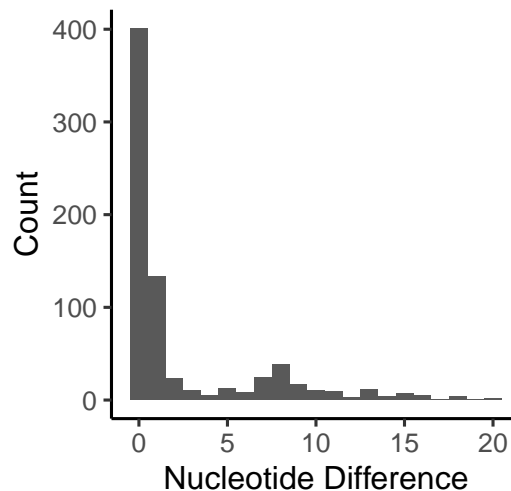
IGHV3-48*04

9614 sequences assigned
1652 (17.2%) exact matches, in which:
1443 unique CDR3
6 unique J



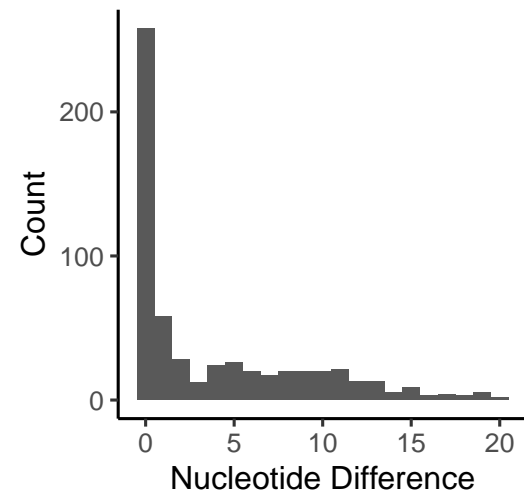
IGHV3-53*04

741 sequences assigned
401 (54.1%) exact matches, in which:
347 unique CDR3
6 unique J



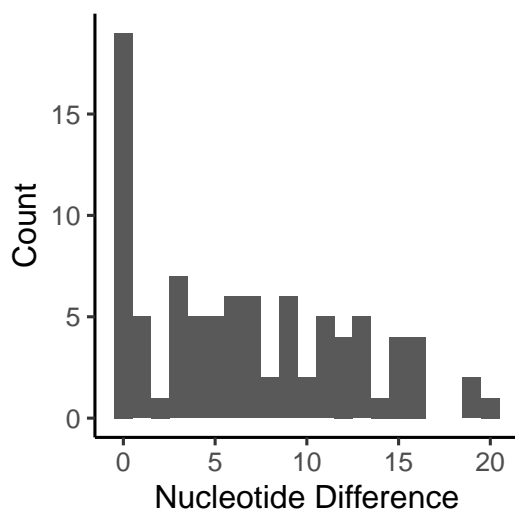
IGHV3-64*01

601 sequences assigned
258 (42.9%) exact matches, in which:
198 unique CDR3
6 unique J



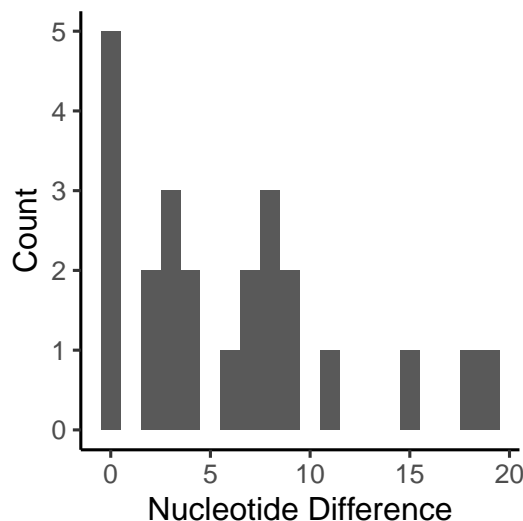
IGHV3-64*02_07

97 sequences assigned
19 (19.6%) exact matches, in which:
15 unique CDR3
3 unique J



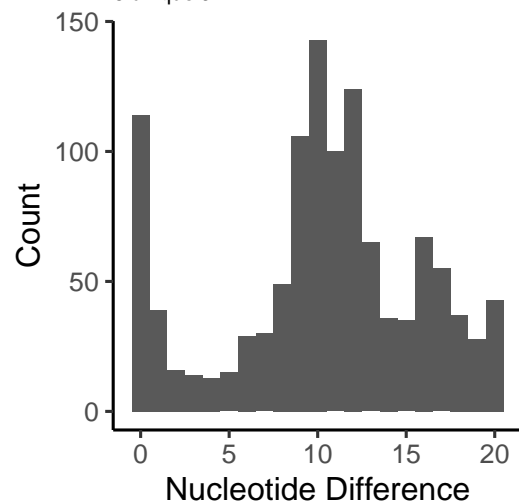
IGHV3-69-1*02

38 sequences assigned
5 (13.2%) exact matches, in which:
5 unique CDR3
3 unique J



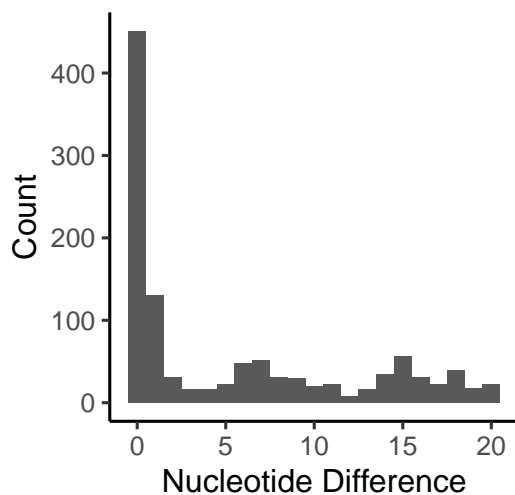
IGHV3-72*01

1725 sequences assigned
114 (6.6%) exact matches, in which:
105 unique CDR3
6 unique J



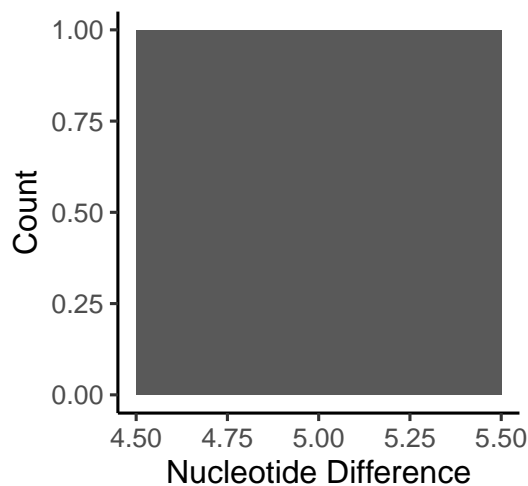
IGHV3-66*02

1388 sequences assigned
451 (32.5%) exact matches, in which:
387 unique CDR3
6 unique J



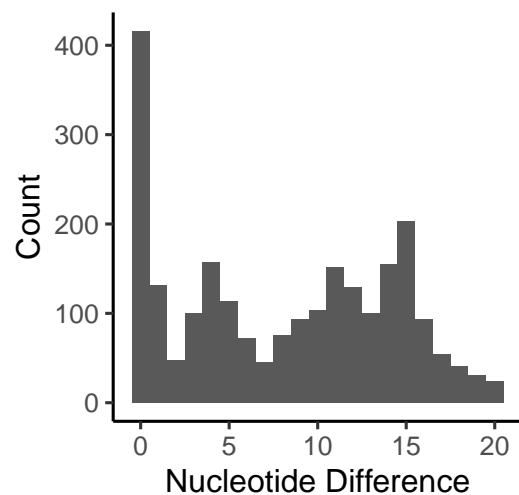
IGHV3-71*02

1 sequences assigned
No exact matches.



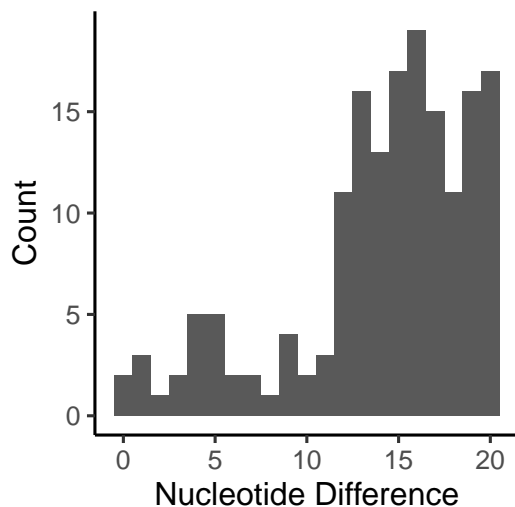
IGHV3-73*01_02

2582 sequences assigned
416 (16.1%) exact matches, in which:
348 unique CDR3
6 unique J



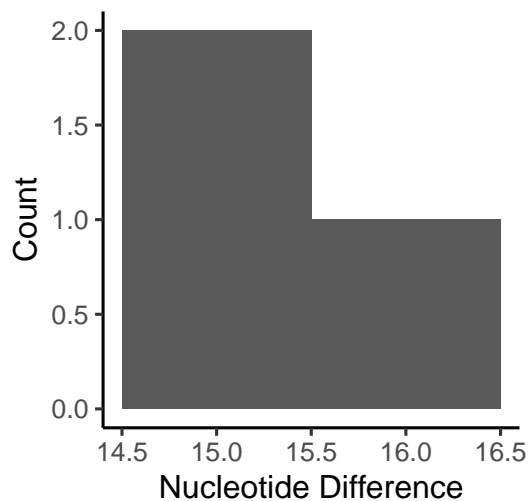
IGHV3-69-1*01

251 sequences assigned
2 (0.8%) exact matches, in which:
2 unique CDR3
1 unique J



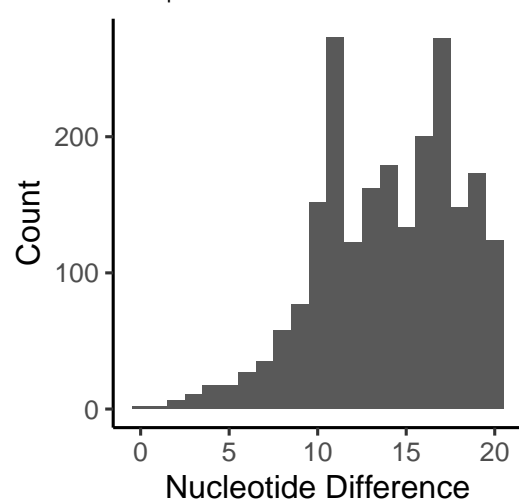
IGHV3-71*01_04

5 sequences assigned
No exact matches.



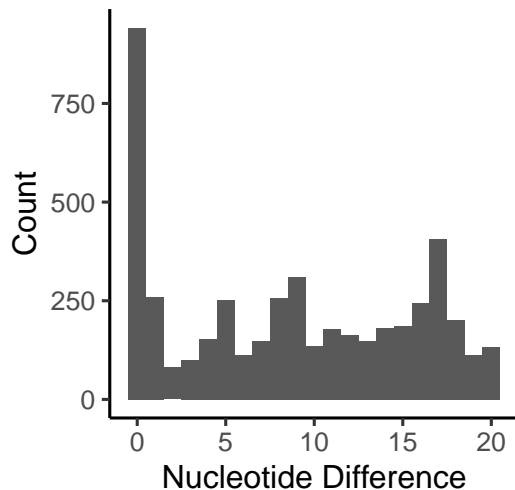
IGHV3-74*03

4225 sequences assigned
2 (0%) exact matches, in which:
1 unique CDR3
1 unique J



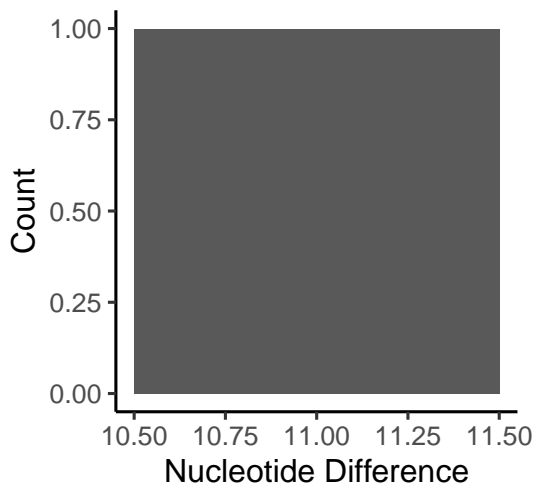
IGHV3-74*01_02

5414 sequences assigned
942 (17.4%) exact matches, in which:
746 unique CDR3
6 unique J



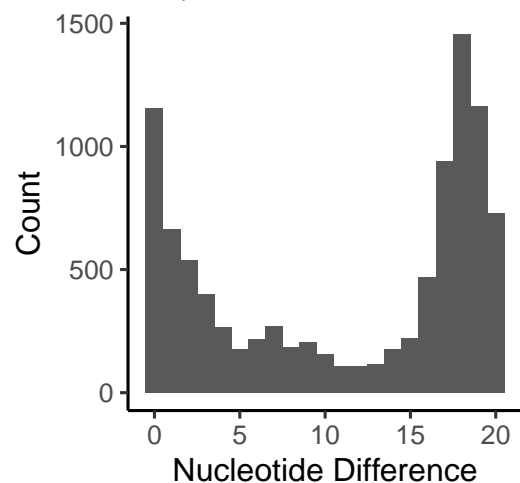
IGHV3-64D*08

1 sequences assigned
No exact matches.



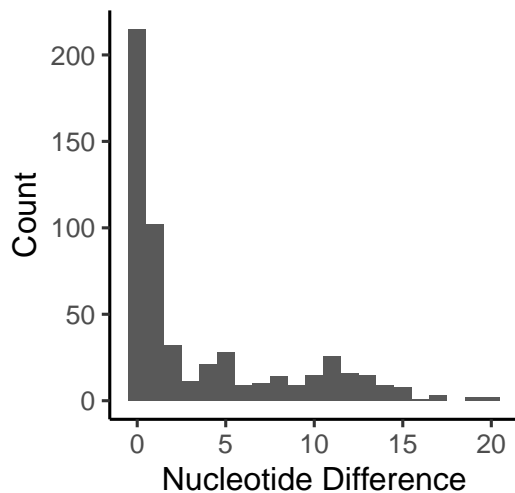
IGHV4-4*02_03

12171 sequences assigned
1157 (9.5%) exact matches, in which:
1114 unique CDR3
6 unique J



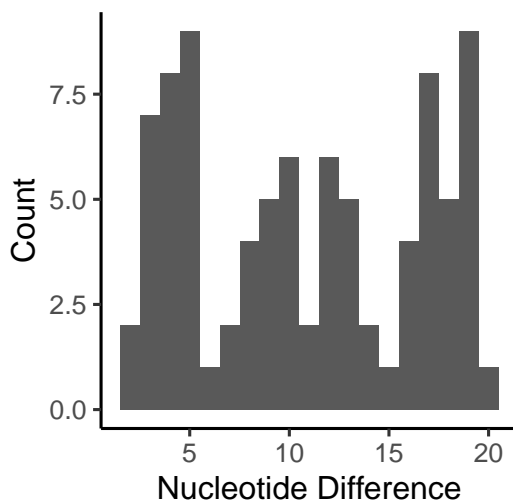
IGHV3-43D*03

754 sequences assigned
215 (28.5%) exact matches, in which:
187 unique CDR3
6 unique J



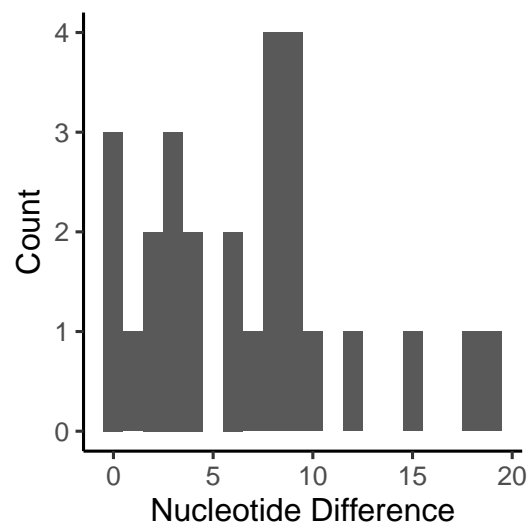
IGHV3-NL1*01

137 sequences assigned
No exact matches.



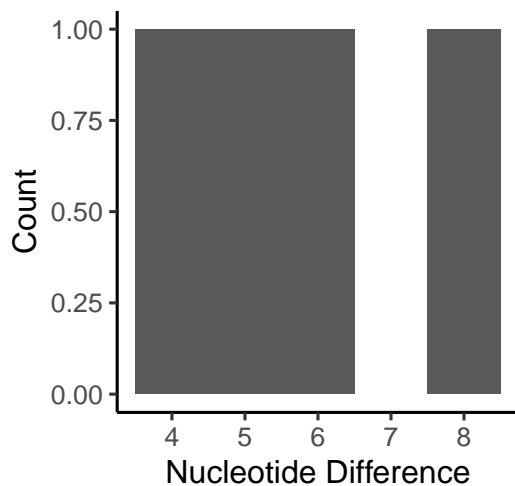
IGHV4-28*03

29 sequences assigned
3 (10.3%) exact matches, in which:
3 unique CDR3
2 unique J



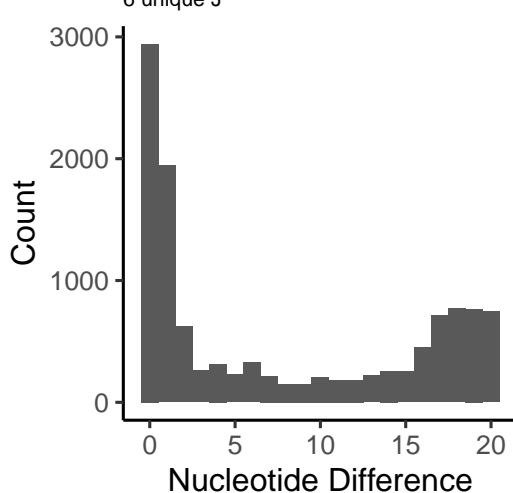
IGHV3-64D*06

6 sequences assigned
No exact matches.



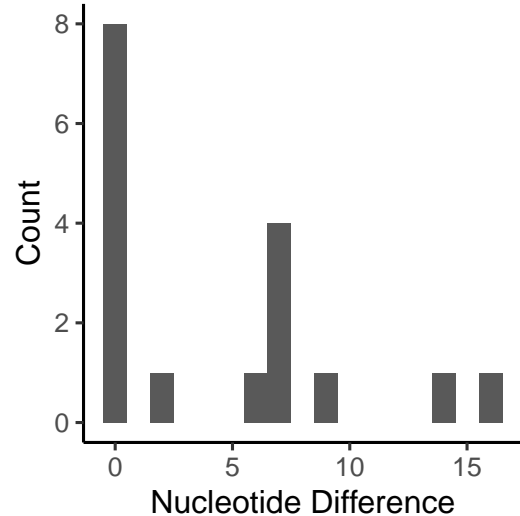
IGHV4-4*07

20717 sequences assigned
2941 (14.2%) exact matches, in which:
2801 unique CDR3
6 unique J



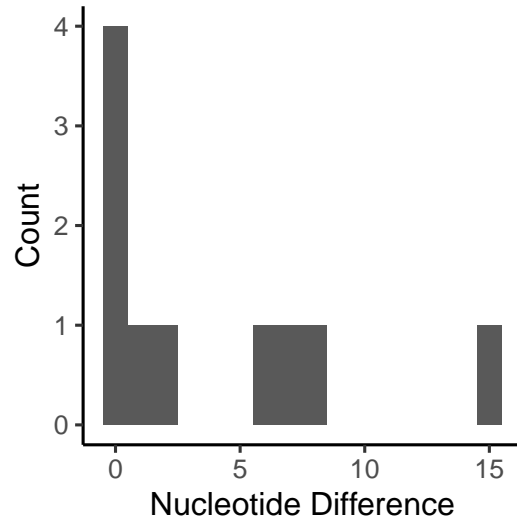
IGHV4-28*01_07

18 sequences assigned
8 (44.4%) exact matches, in which:
8 unique CDR3
2 unique J



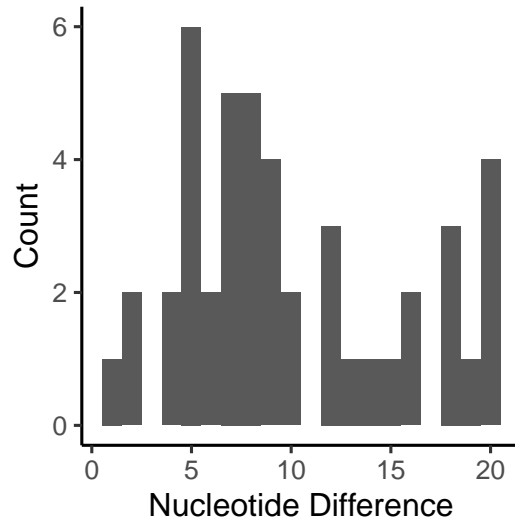
IGHV4-28*02_05

12 sequences assigned
4 (33.3%) exact matches, in which:
4 unique CDR3
3 unique J



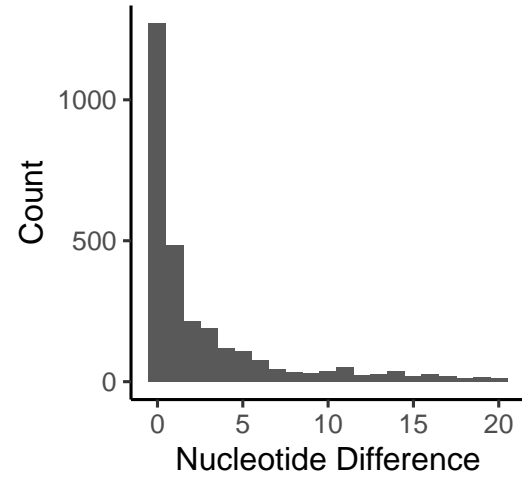
IGHV4-30-2*03

78 sequences assigned
No exact matches.



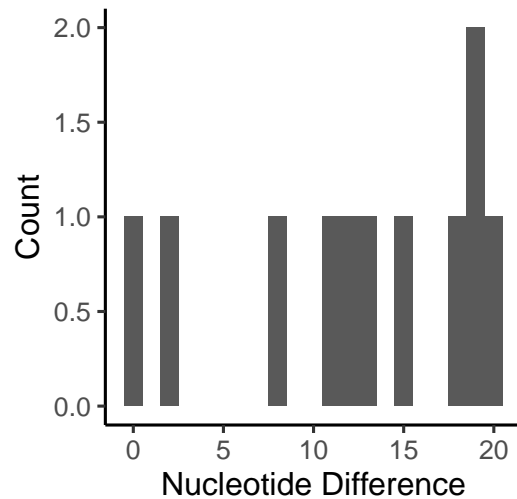
IGHV4-31*02

2949 sequences assigned
1271 (43.1%) exact matches, in which:
1243 unique CDR3
6 unique J



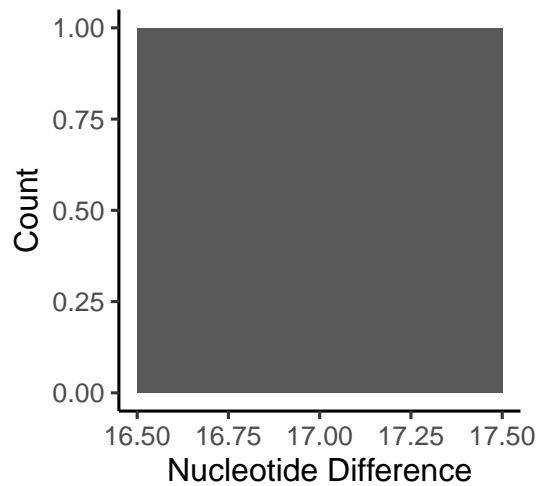
IGHV4-30-4*01

16 sequences assigned
1 (6.2%) exact matches, in which:
1 unique CDR3
1 unique J



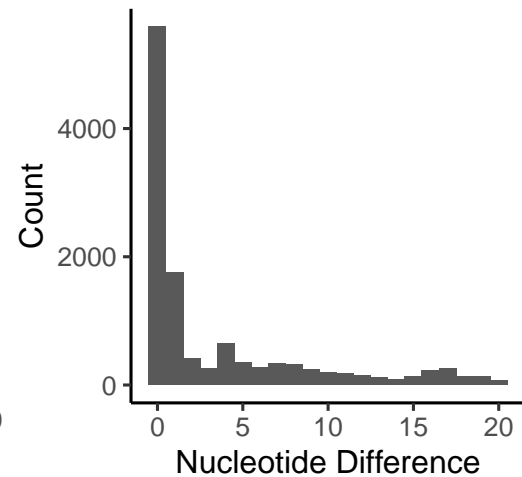
IGHV4-30-4*07

4 sequences assigned
No exact matches.



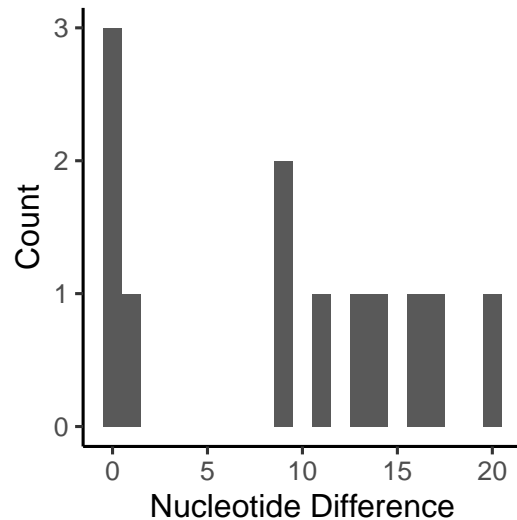
IGHV4-34*01_02

13789 sequences assigned
5588 (40.5%) exact matches, in which:
5280 unique CDR3
6 unique J



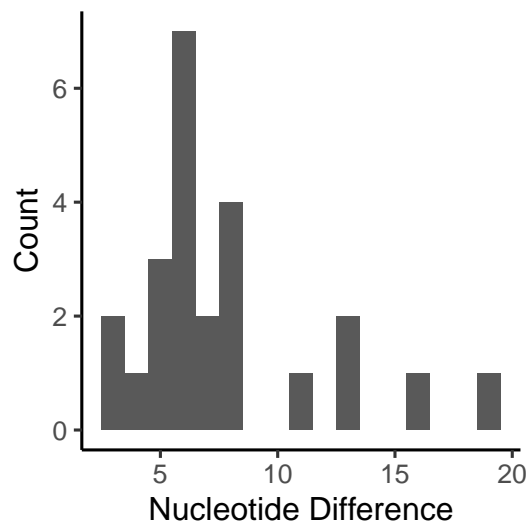
IGHV4-30-2*01

17 sequences assigned
3 (17.6%) exact matches, in which:
3 unique CDR3
2 unique J



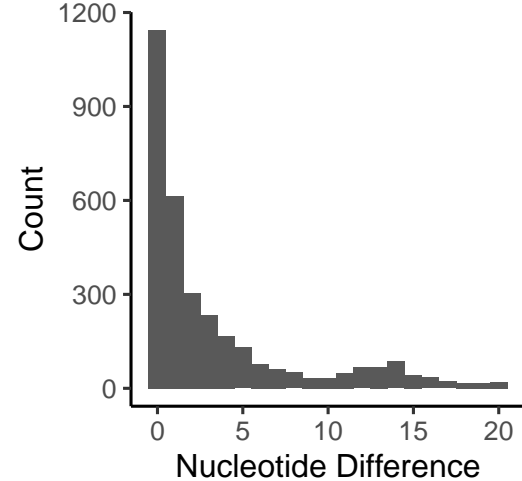
IGHV4-30-4*08

33 sequences assigned
No exact matches.



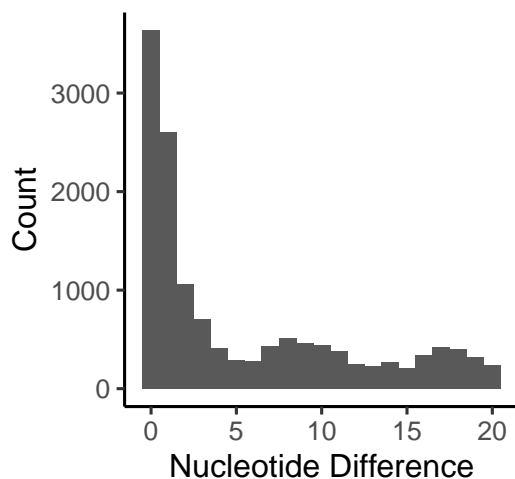
IGHV4-38-2*02

3495 sequences assigned
1144 (32.7%) exact matches, in which:
1091 unique CDR3
6 unique J



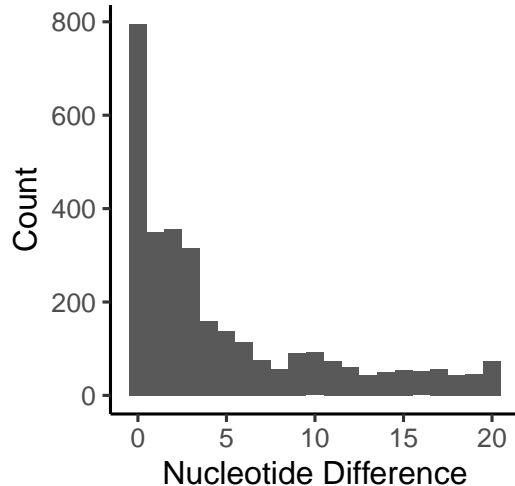
IGHV4-39*07

19642 sequences assigned
3636 (18.5%) exact matches, in which:
3451 unique CDR3
6 unique J



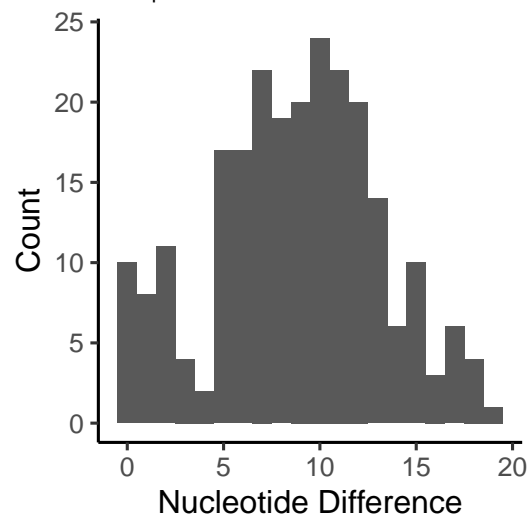
IGHV4-61*01

3981 sequences assigned
796 (20%) exact matches, in which:
784 unique CDR3
6 unique J



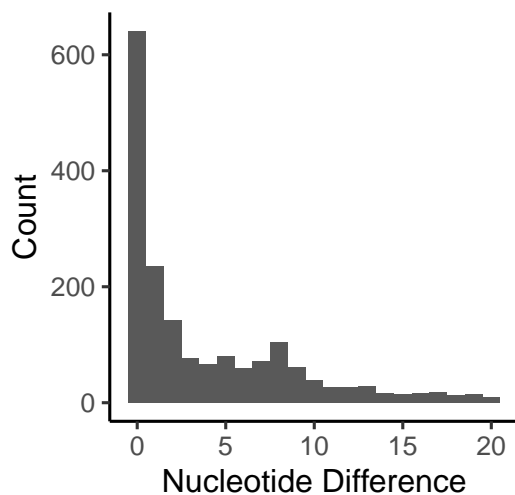
IGHV1/OR15-2*02_03_T8

251 sequences assigned
10 (4%) exact matches, in which:
10 unique CDR3
4 unique J



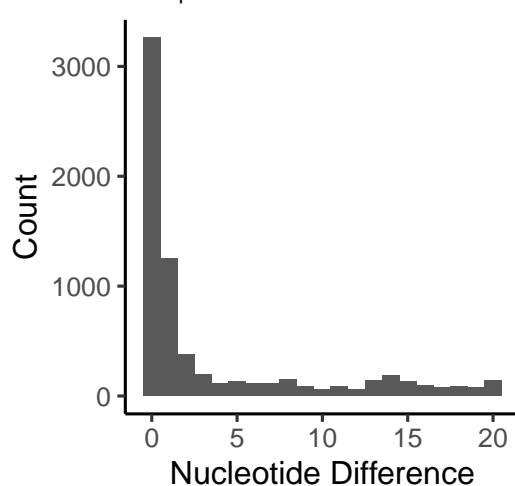
IGHV4-59*08

1936 sequences assigned
641 (33.1%) exact matches, in which:
634 unique CDR3
6 unique J



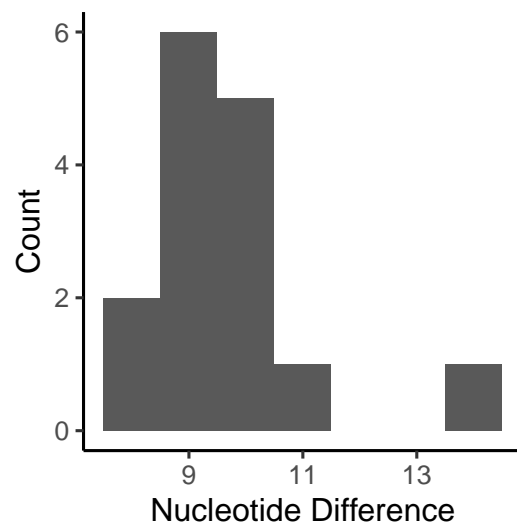
IGHV4-61*02

8190 sequences assigned
3261 (39.8%) exact matches, in which:
3152 unique CDR3
6 unique J



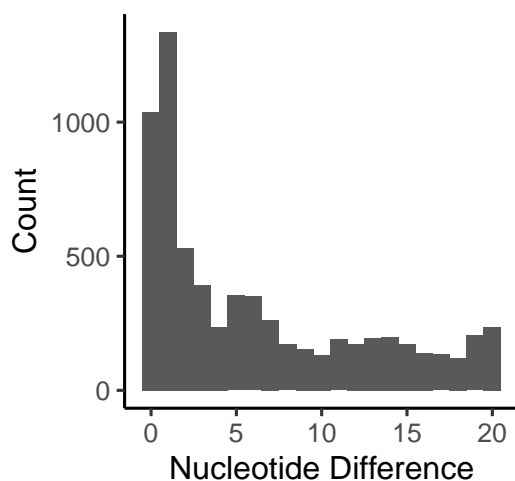
IGHV1/OR15-3*02

22 sequences assigned
No exact matches.



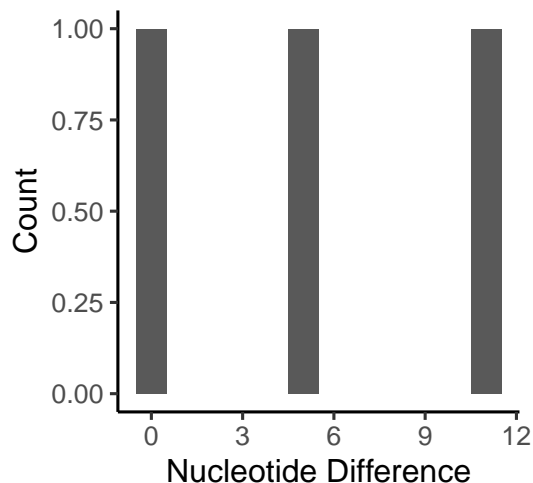
IGHV4-59*12

7366 sequences assigned
1039 (14.1%) exact matches, in which:
1034 unique CDR3
6 unique J



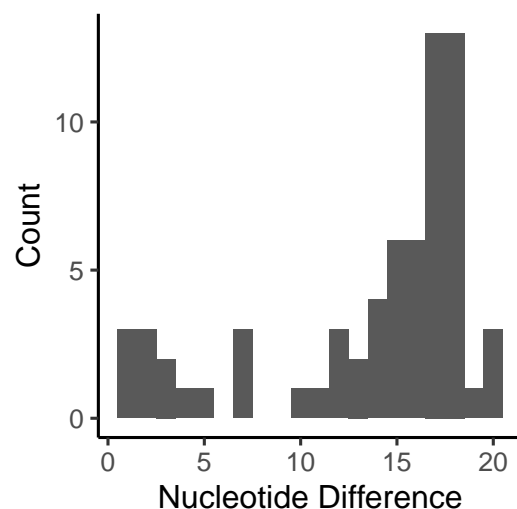
IGHV1/OR15-2*02_03

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



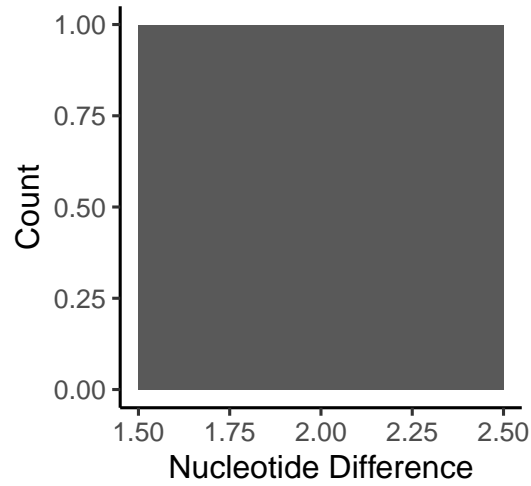
IGHV4/OR15-8*01

93 sequences assigned
No exact matches.



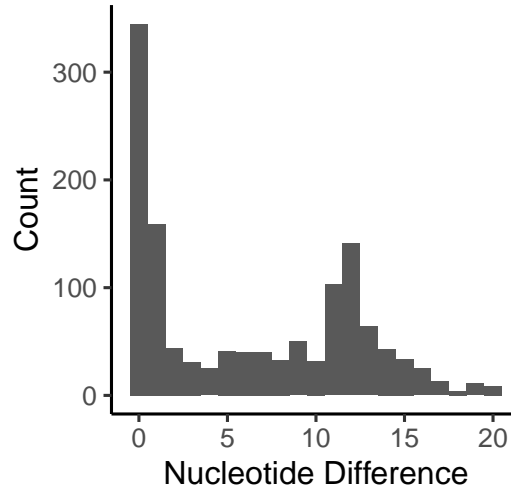
IGHV5-10-1*01_03

1 sequences assigned
No exact matches.



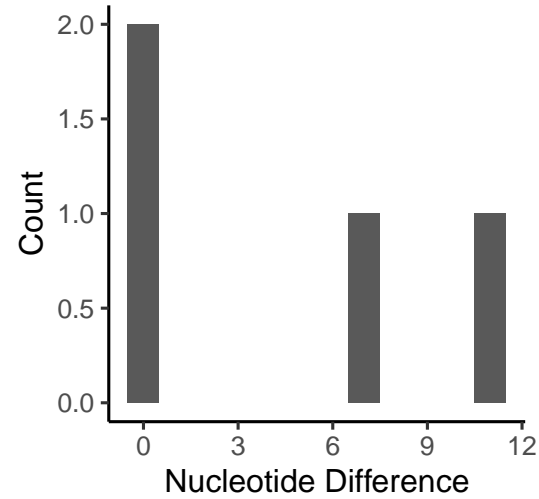
IGHV6-1*01_02

1536 sequences assigned
345 (22.5%) exact matches, in which:
337 unique CDR3
6 unique J



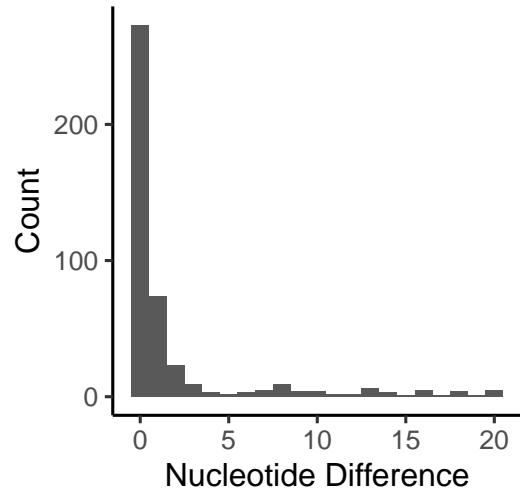
IGHV7-81*01

4 sequences assigned
2 (50%) exact matches, in which:
2 unique CDR3
2 unique J



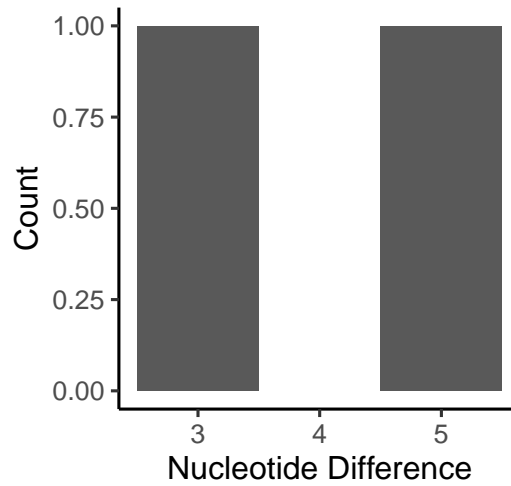
IGHV5-51*07

455 sequences assigned
273 (60%) exact matches, in which:
252 unique CDR3
6 unique J



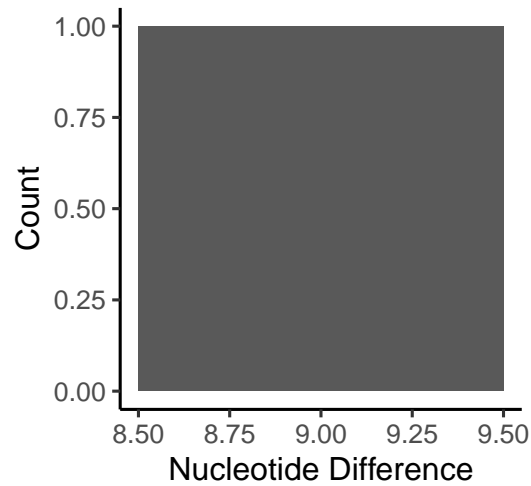
IGHV3/OR16-9*01

2 sequences assigned
No exact matches.



IGHV5-78*01

1 sequences assigned
No exact matches.



IGHV7-4-1*02

5398 sequences assigned
1853 (34.3%) exact matches, in which:
1748 unique CDR3
6 unique J

