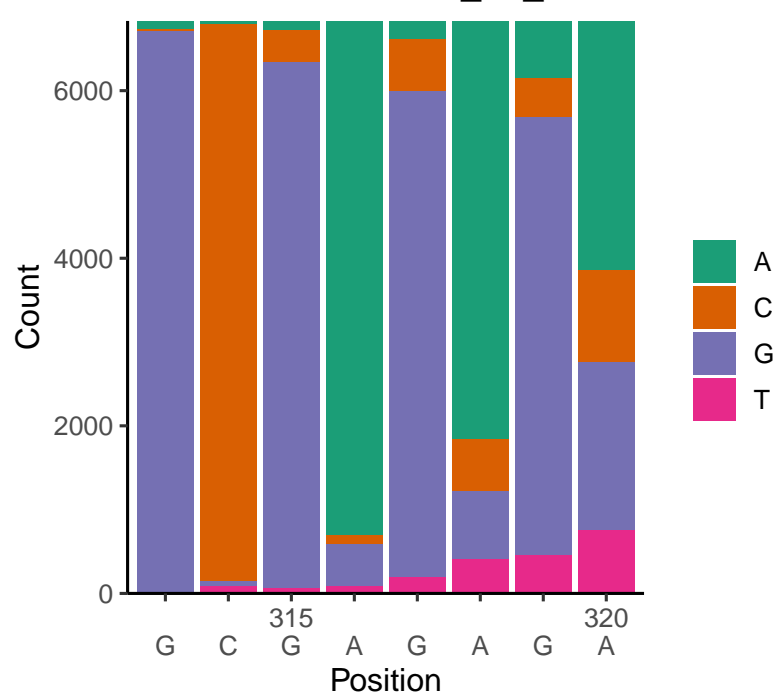
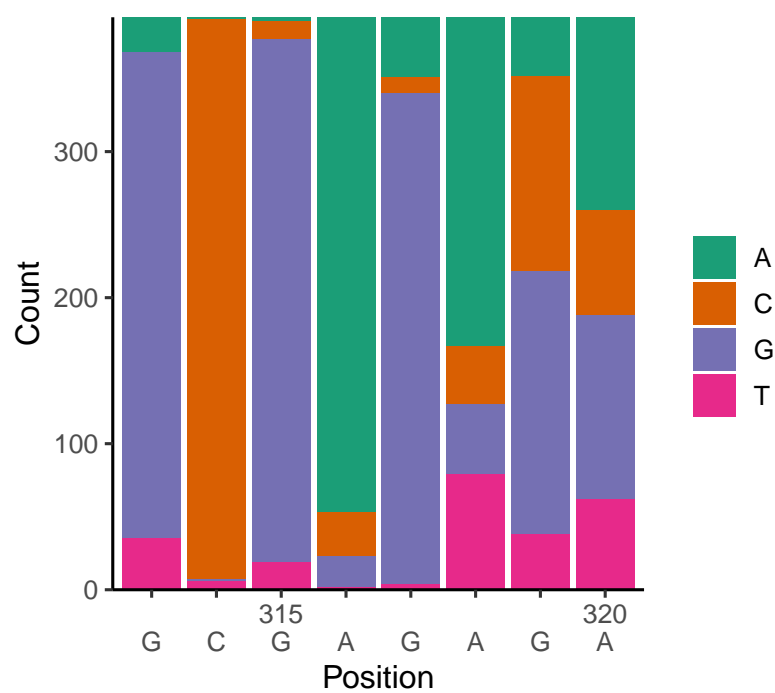


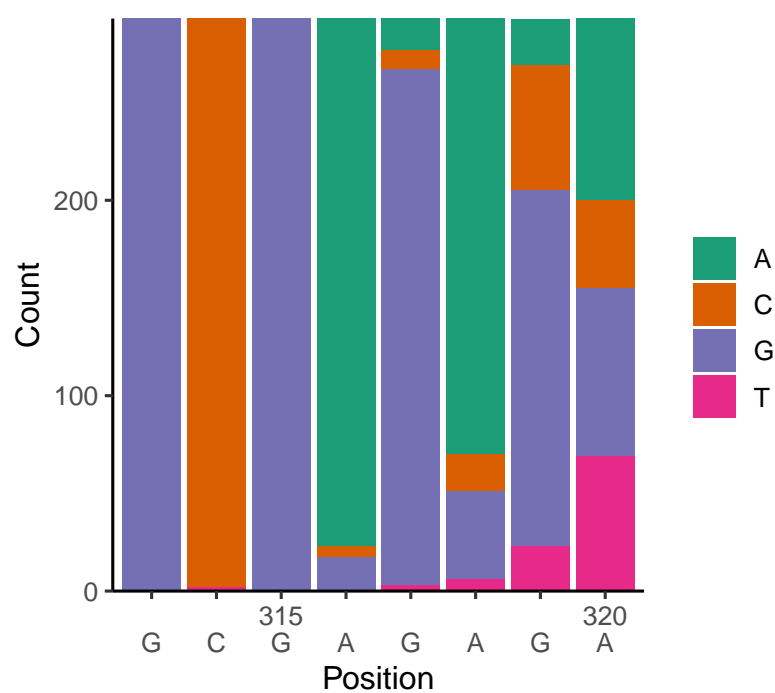
Gene IGHV1-69*04_09_A244G



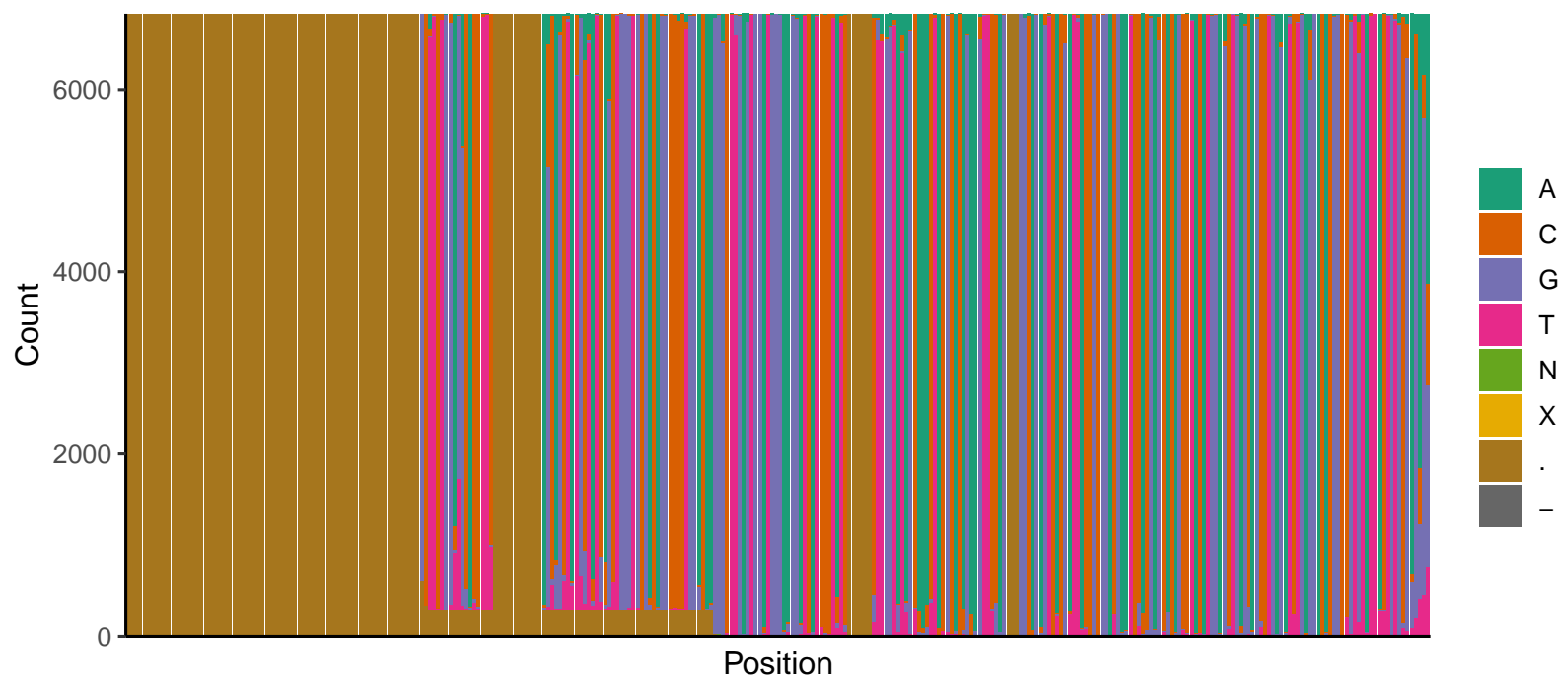
Gene IGHV4/OR15-8*01_C193A



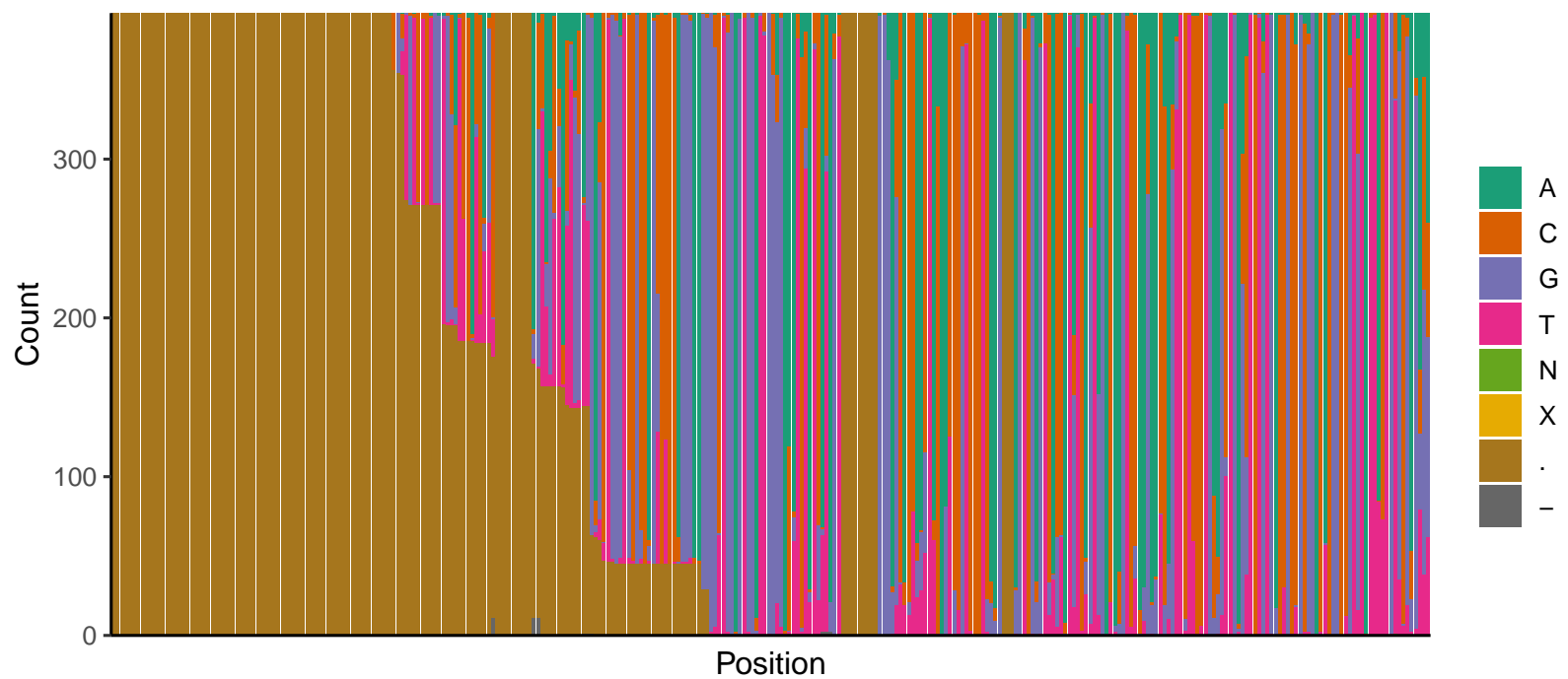
Gene IGHV6-1*01_02_A315G



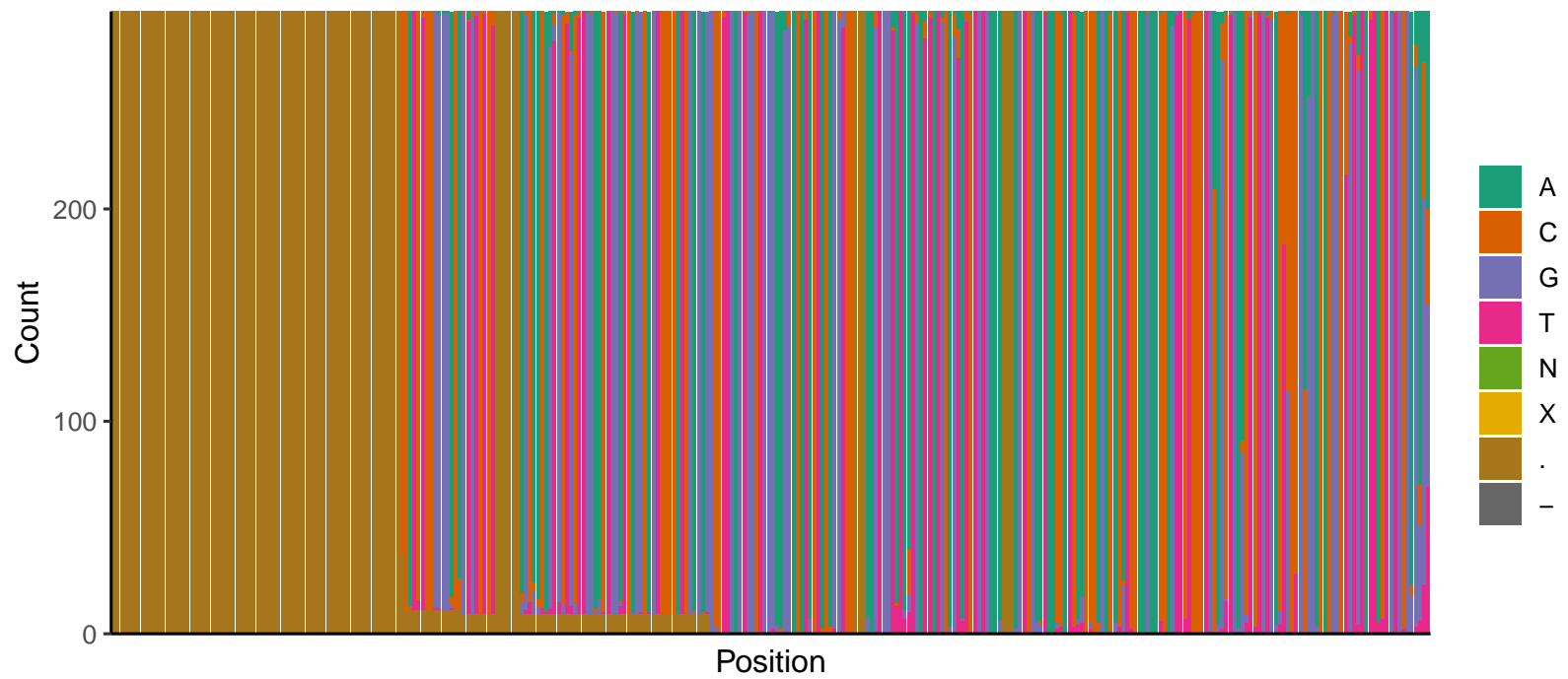
Gene IGHV1-69*04_09_A244G



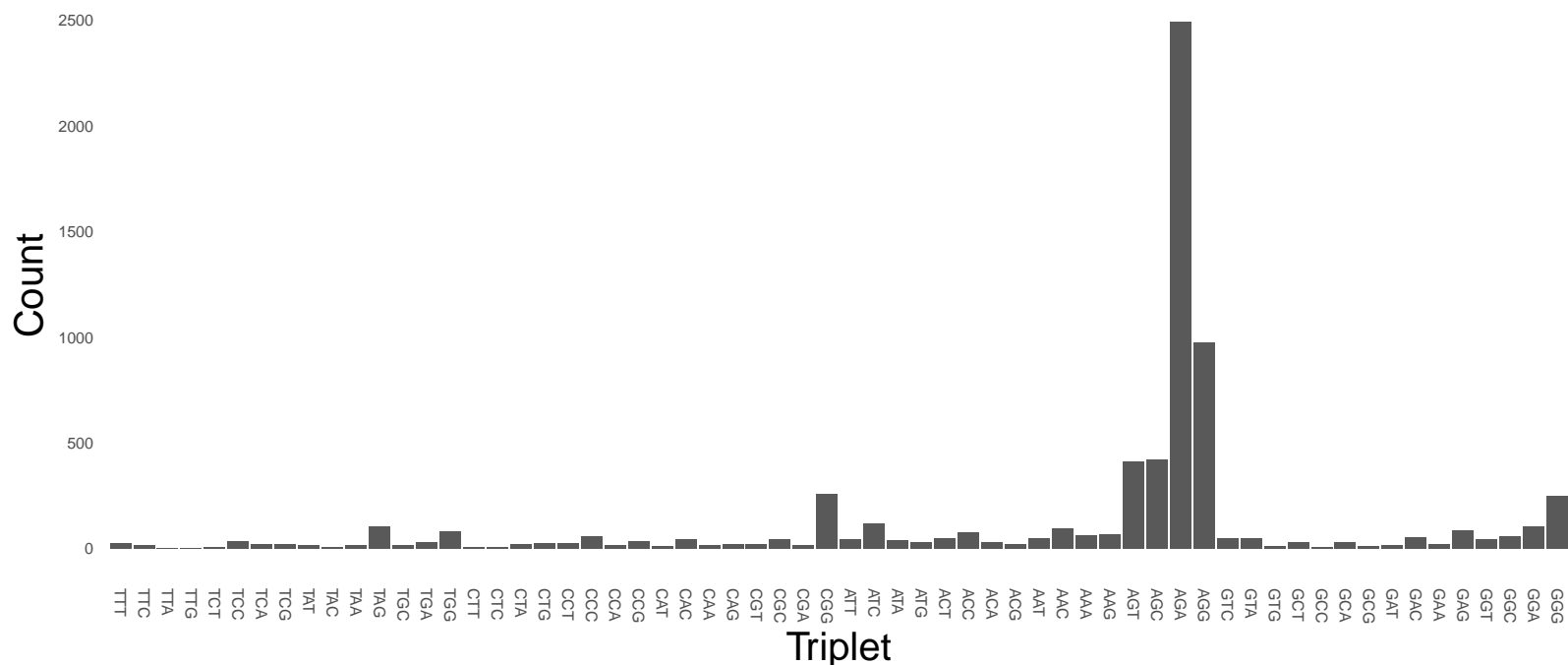
Gene IGHV4/OR15-8*01_C193A



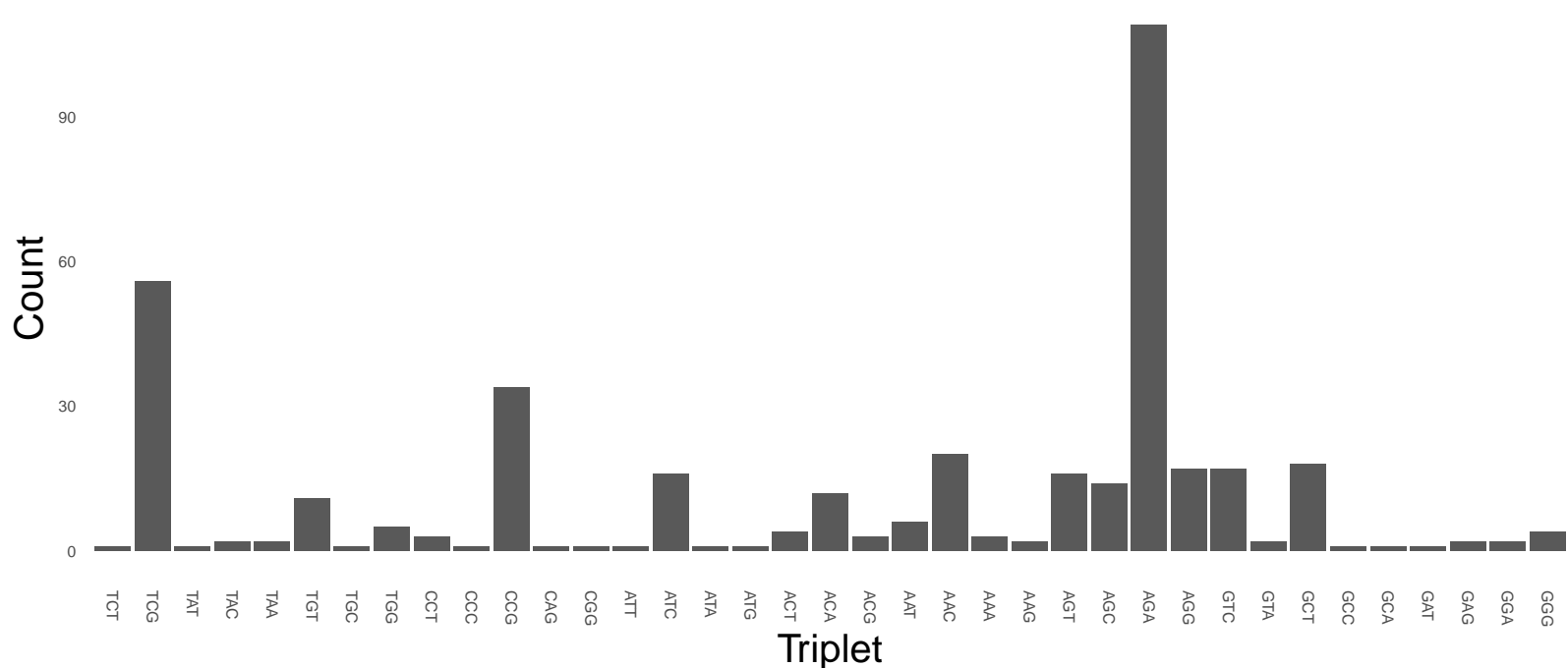
Gene IGHV6-1*01_02_A315G



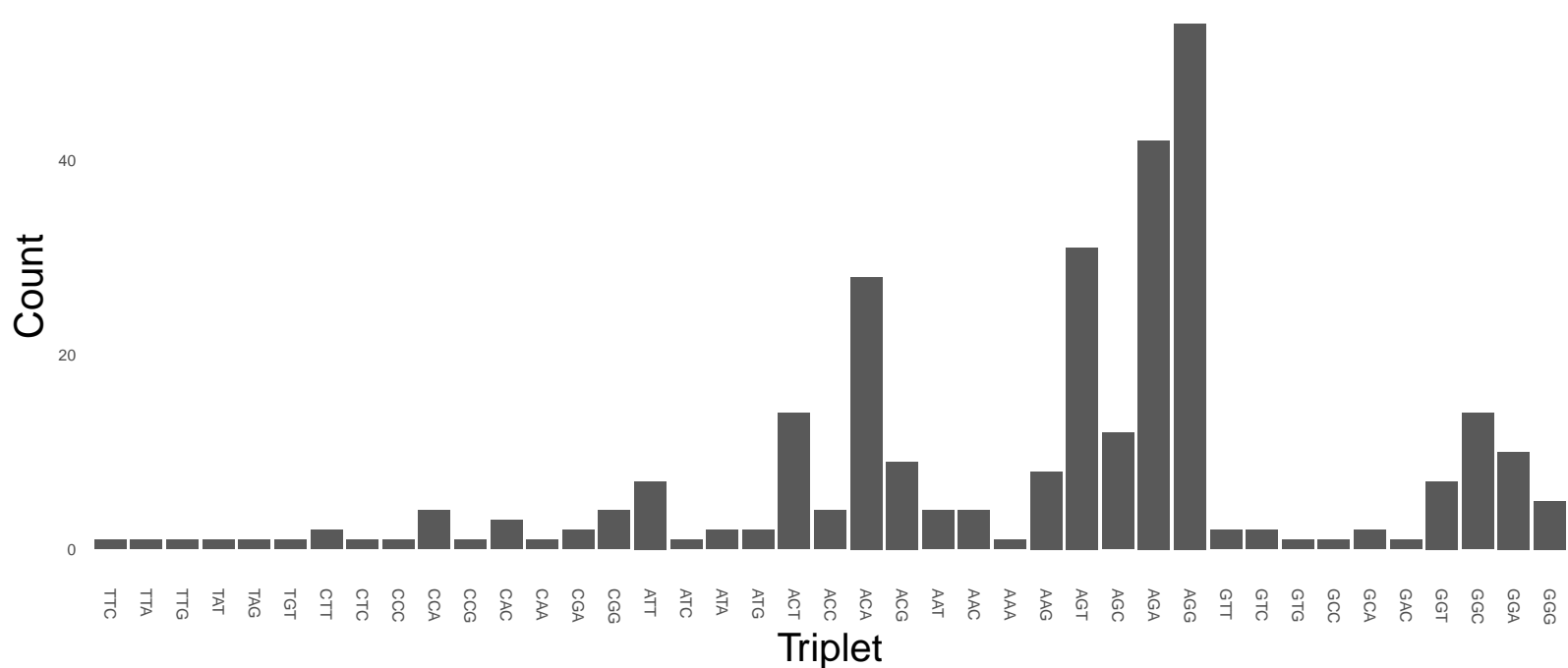
IGHV1-69*04_09_A244G- Final 3 nucleotides as a triplet



IGHV4/OR15-8*01_C193A- Final 3 nucleotides as a triplet

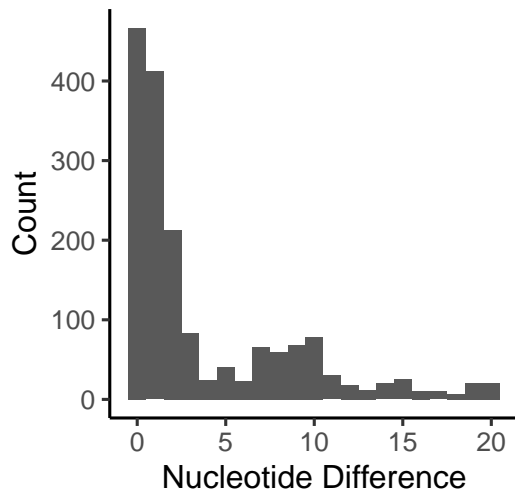


IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet



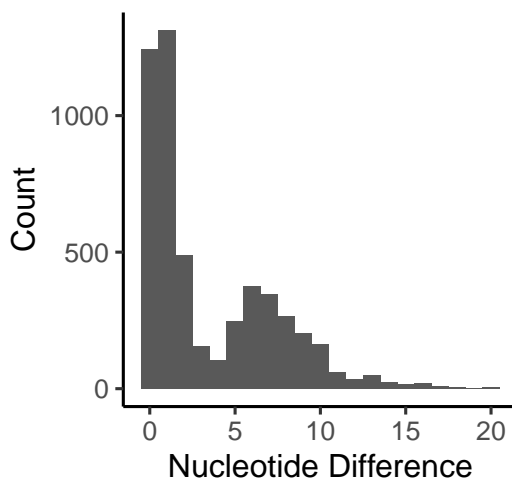
IGHV1-2*04

1732 sequences assigned
467 (27%) exact matches, in which:
407 unique CDR3
6 unique J



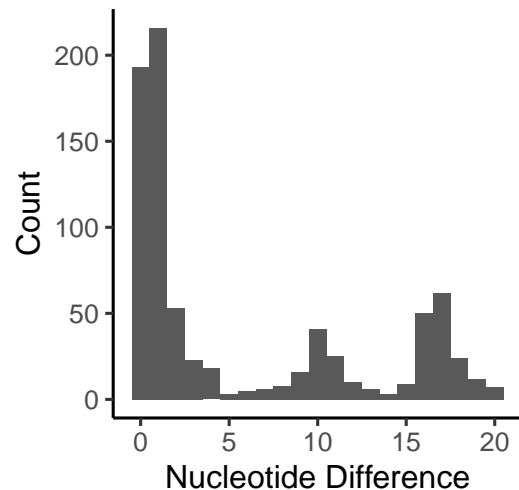
IGHV1-8*01

5207 sequences assigned
1245 (23.9%) exact matches, in which:
1031 unique CDR3
6 unique J



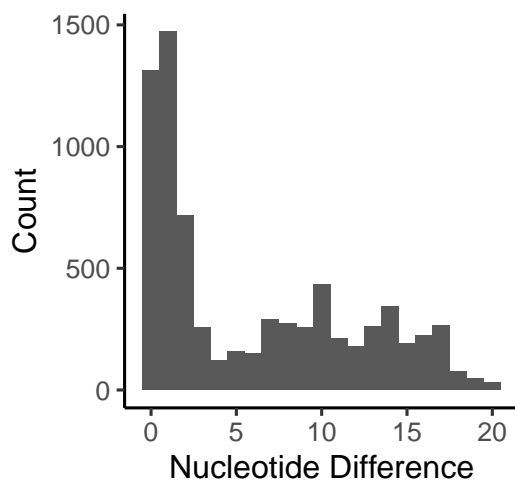
IGHV1-24*01

839 sequences assigned
193 (23%) exact matches, in which:
130 unique CDR3
6 unique J



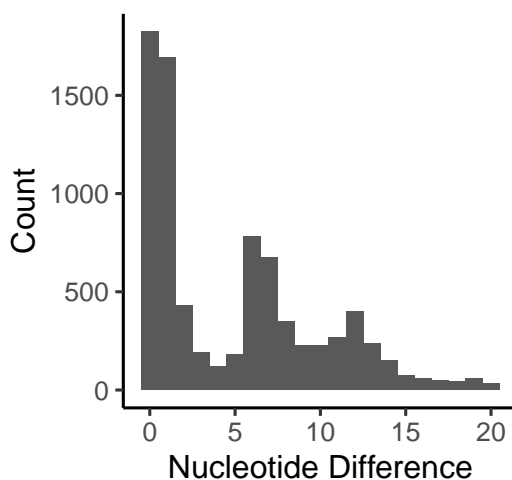
IGHV1-2*06

8197 sequences assigned
1314 (16%) exact matches, in which:
1059 unique CDR3
6 unique J



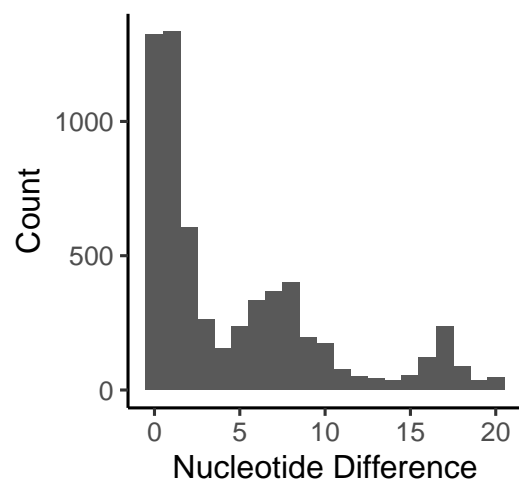
IGHV1-18*01

8333 sequences assigned
1824 (21.9%) exact matches, in which:
1511 unique CDR3
6 unique J



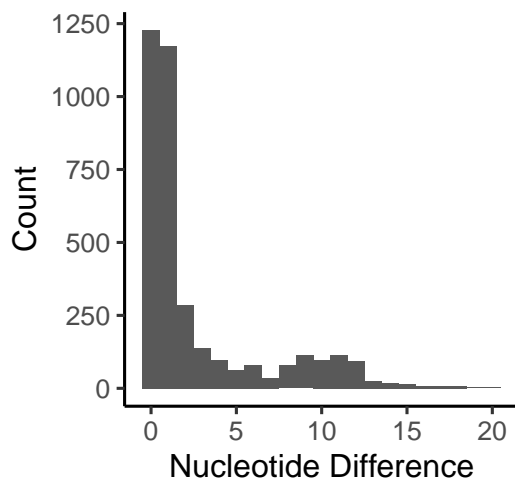
IGHV1-46*01

6386 sequences assigned
1325 (20.7%) exact matches, in which:
1135 unique CDR3
6 unique J



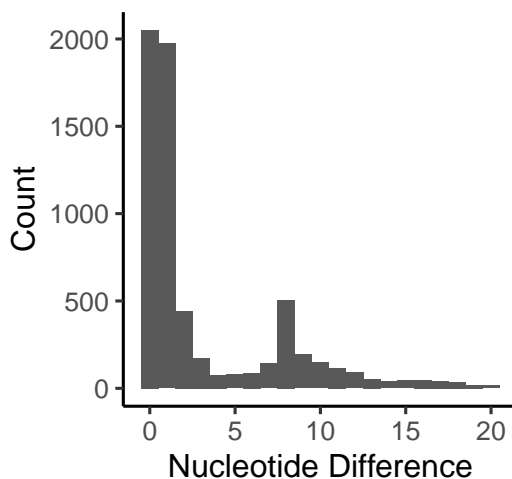
IGHV1-3*01_05

3764 sequences assigned
1228 (32.6%) exact matches, in which:
974 unique CDR3
6 unique J



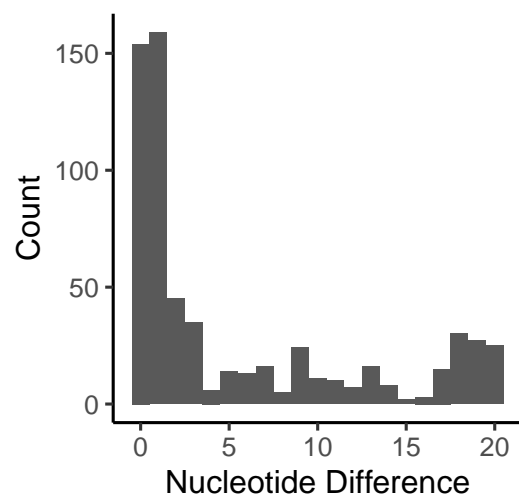
IGHV1-18*04

6962 sequences assigned
2051 (29.5%) exact matches, in which:
1690 unique CDR3
6 unique J



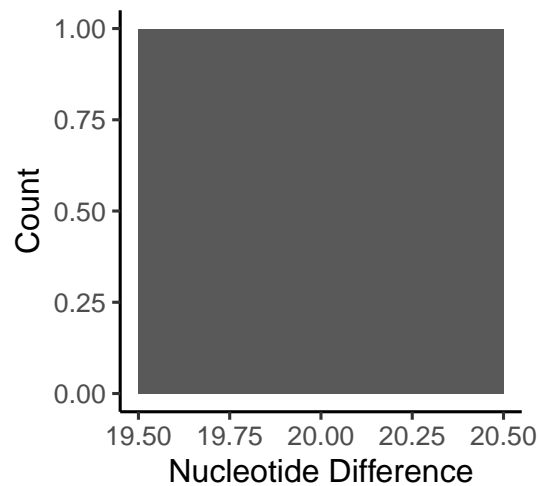
IGHV1-58*02

645 sequences assigned
154 (23.9%) exact matches, in which:
130 unique CDR3
5 unique J



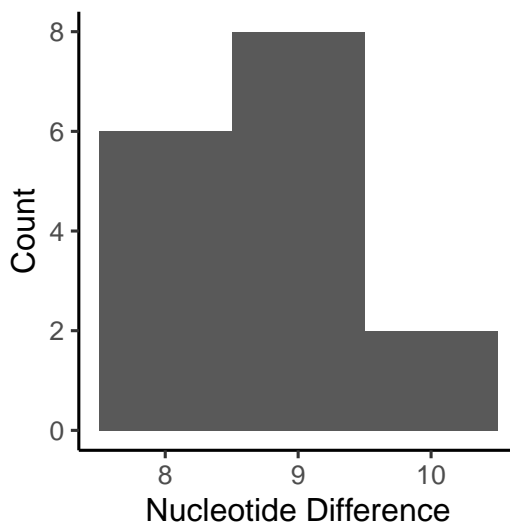
IGHV1-69-2*01

1 sequences assigned
No exact matches.



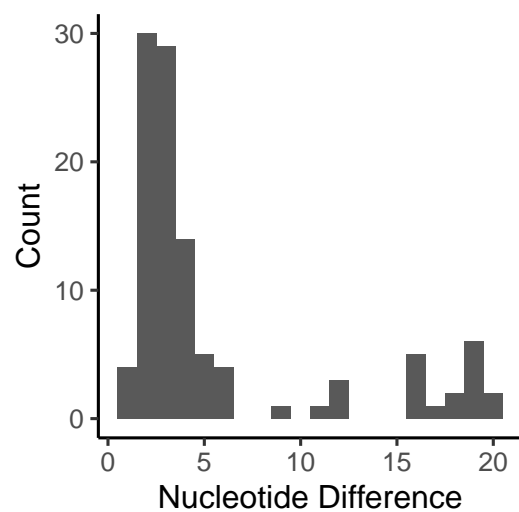
IGHV1-NL1*01

16 sequences assigned
No exact matches.



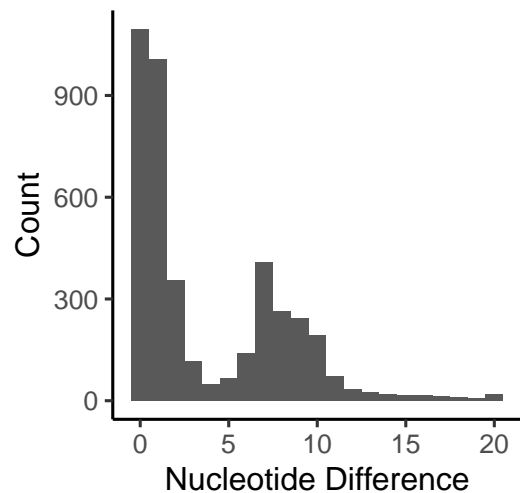
IGHV2-70*12

120 sequences assigned
No exact matches.



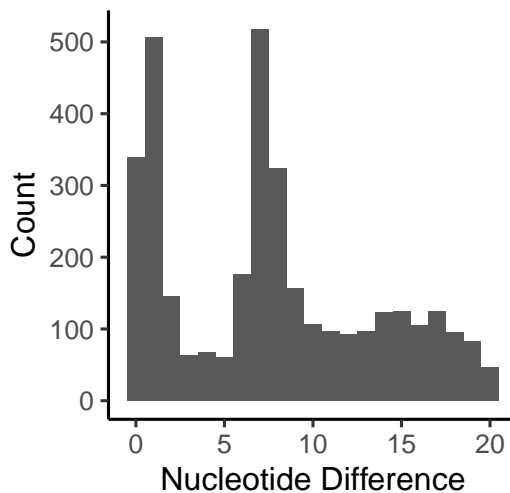
IGHV1-69*04_09

5097 sequences assigned
1096 (21.5%) exact matches, in which:
944 unique CDR3
6 unique J



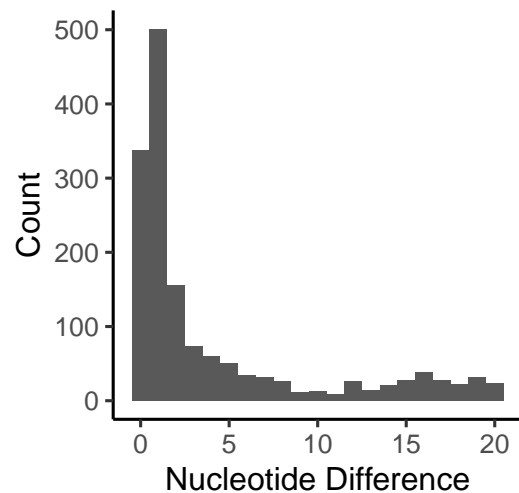
IGHV2-5*02

3758 sequences assigned
339 (9%) exact matches, in which:
252 unique CDR3
6 unique J



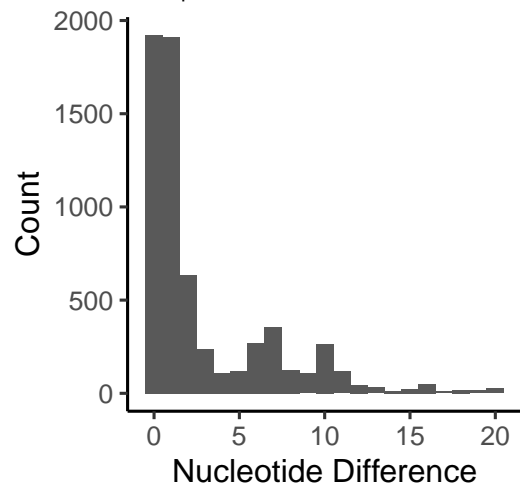
IGHV2-70*11_15

2004 sequences assigned
337 (16.8%) exact matches, in which:
223 unique CDR3
6 unique J



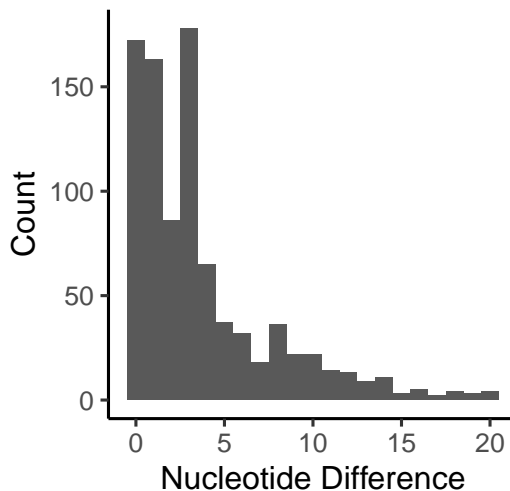
IGHV1-69*04_09_A244I

6832 sequences assigned
1922 (28.1%) exact matches, in which:
1613 unique CDR3
6 unique J



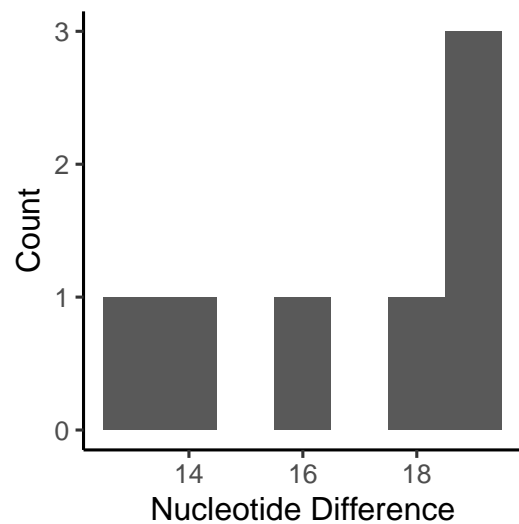
IGHV2-26*01

952 sequences assigned
172 (18.1%) exact matches, in which:
147 unique CDR3
5 unique J



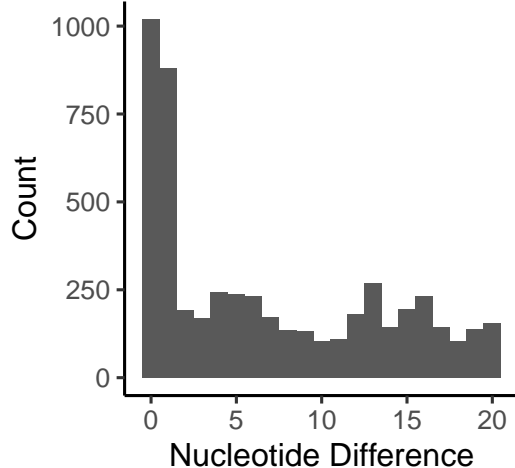
IGHV2-70D*14

10 sequences assigned
No exact matches.



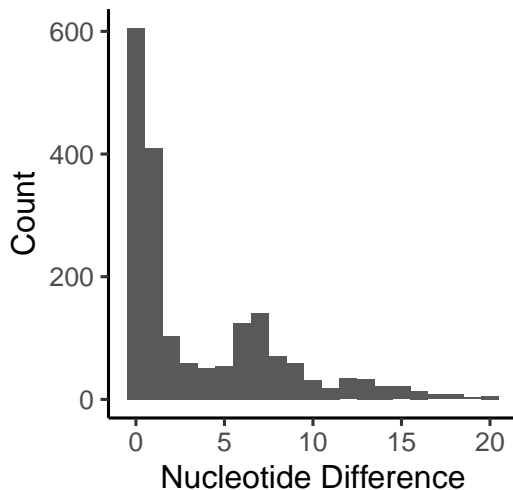
IGHV3-7*01

6749 sequences assigned
1019 (15.1%) exact matches, in which:
745 unique CDR3
6 unique J



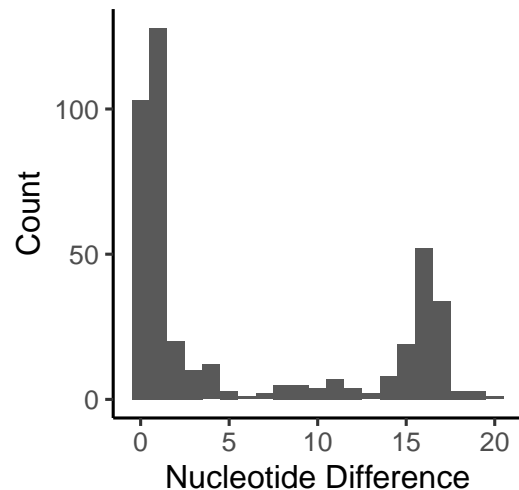
IGHV3-11*01

2304 sequences assigned
606 (26.3%) exact matches, in which:
404 unique CDR3
6 unique J



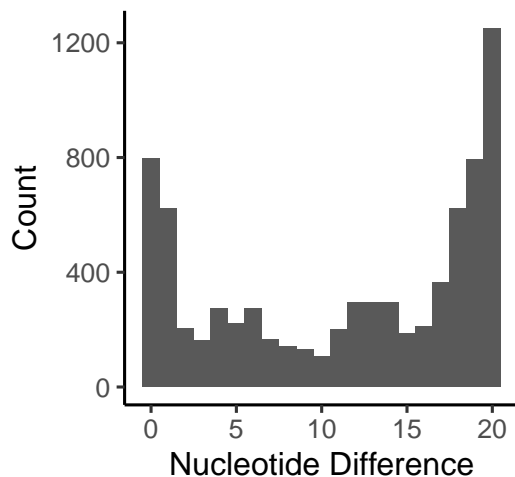
IGHV3-13*01

438 sequences assigned
103 (23.5%) exact matches, in which:
55 unique CDR3
5 unique J



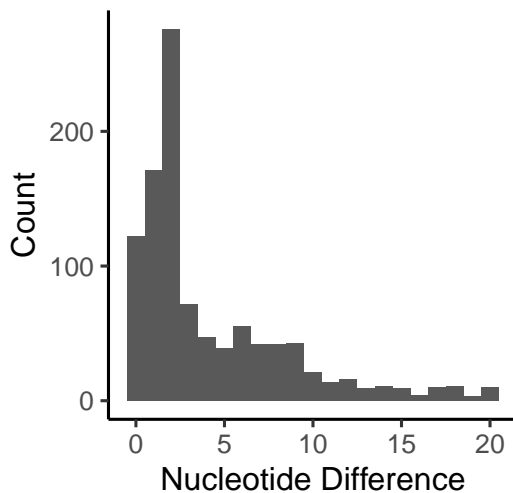
IGHV3-7*03

11303 sequences assigned
795 (7%) exact matches, in which:
546 unique CDR3
6 unique J



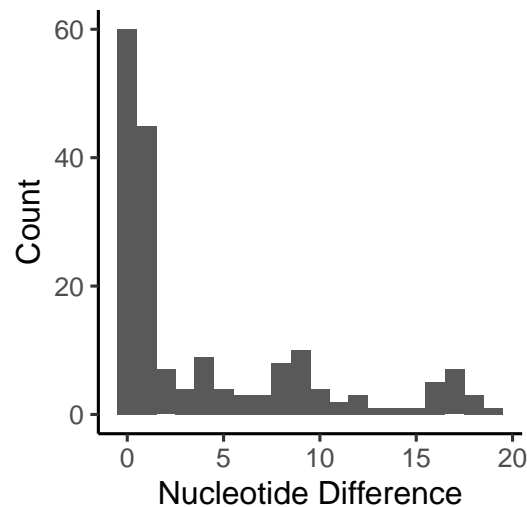
IGHV3-11*04

1118 sequences assigned
122 (10.9%) exact matches, in which:
119 unique CDR3
6 unique J



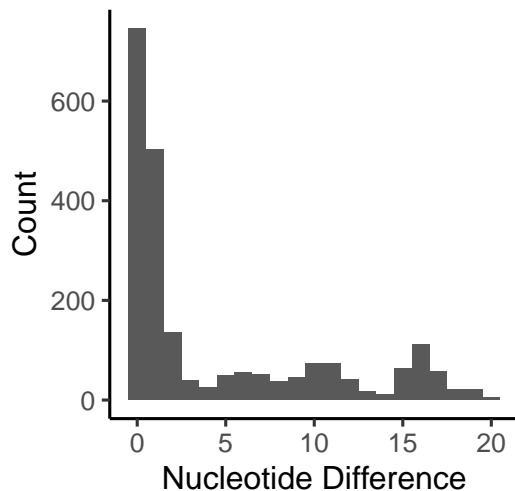
IGHV3-13*05

182 sequences assigned
60 (33%) exact matches, in which:
37 unique CDR3
5 unique J



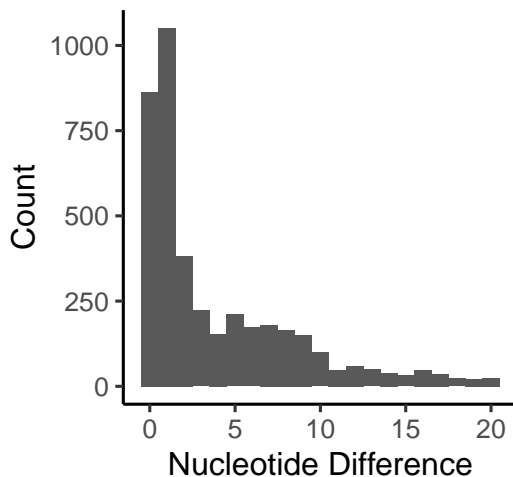
IGHV3-9*01

2651 sequences assigned
746 (28.1%) exact matches, in which:
420 unique CDR3
6 unique J



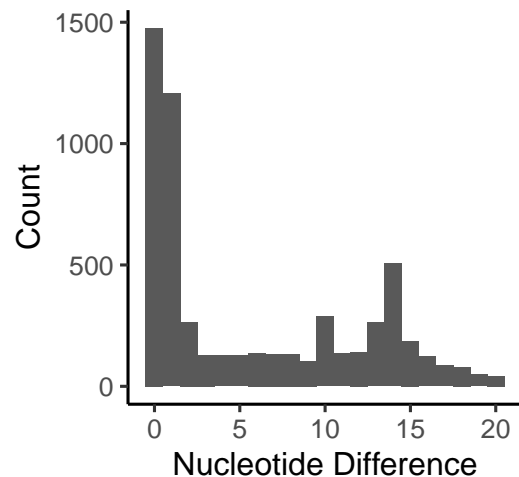
IGHV3-11*06

4555 sequences assigned
864 (19%) exact matches, in which:
542 unique CDR3
6 unique J



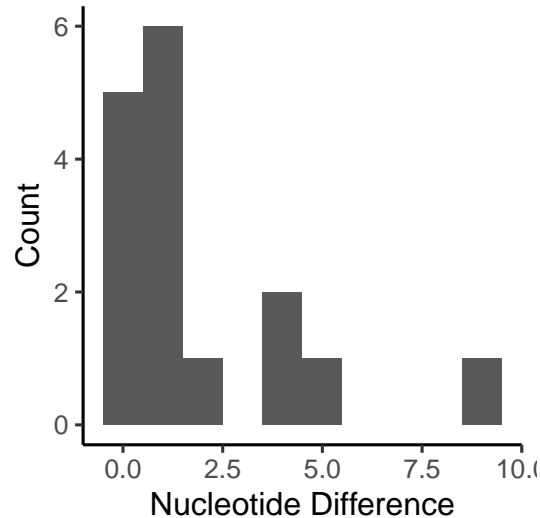
IGHV3-15*01_02

6396 sequences assigned
1476 (23.1%) exact matches, in which:
849 unique CDR3
6 unique J



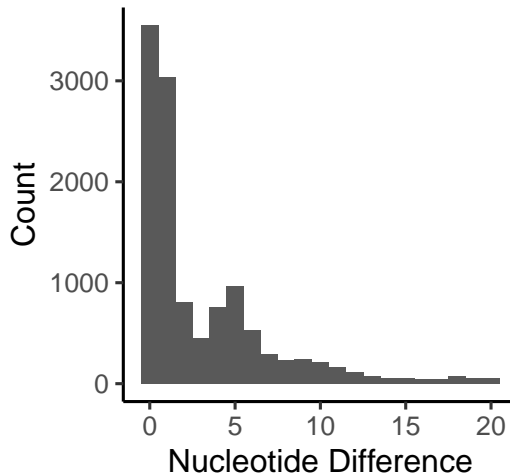
IGHV3-19*01

16 sequences assigned
5 (31.2%) exact matches, in which:
4 unique CDR3
4 unique J



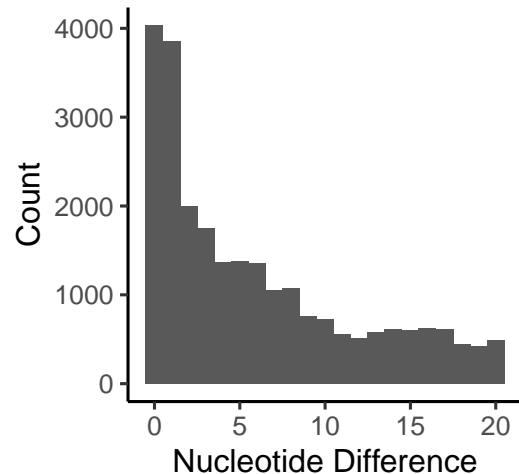
IGHV3-21*01_02

13741 sequences assigned
3549 (25.8%) exact matches, in which:
2189 unique CDR3
6 unique J



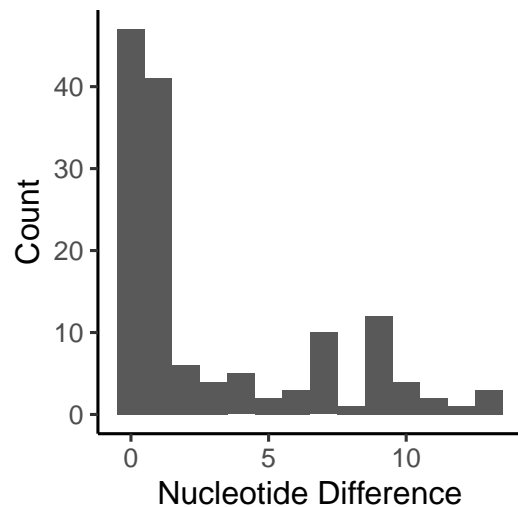
IGHV3-23*01_04

31085 sequences assigned
4033 (13%) exact matches, in which:
2286 unique CDR3
6 unique J



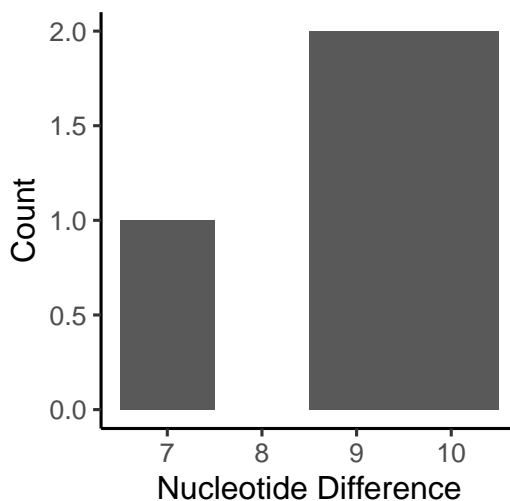
IGHV3-20*01_02

152 sequences assigned
47 (30.9%) exact matches, in which:
25 unique CDR3
5 unique J



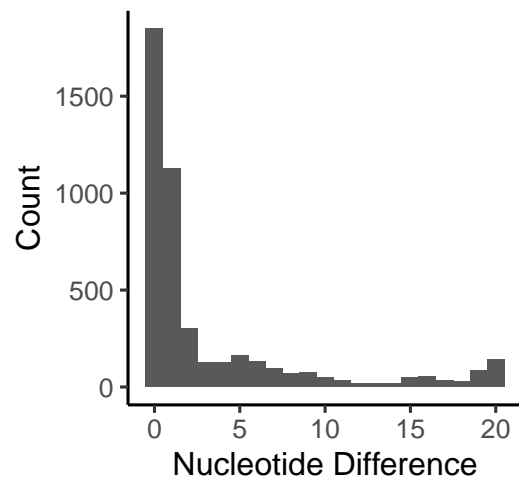
IGHV3-22*01_02

9 sequences assigned
No exact matches.



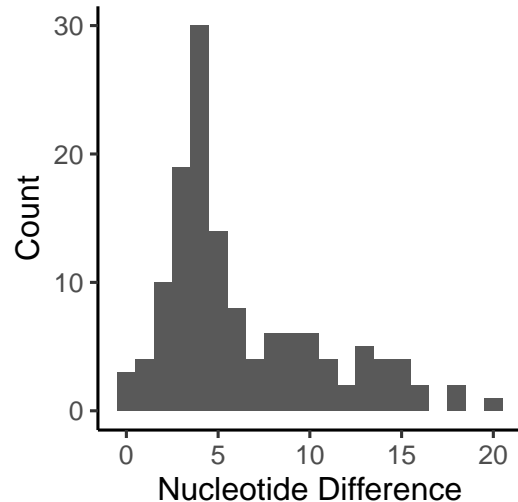
IGHV3-30-3*01

5820 sequences assigned
1848 (31.8%) exact matches, in which:
1169 unique CDR3
6 unique J



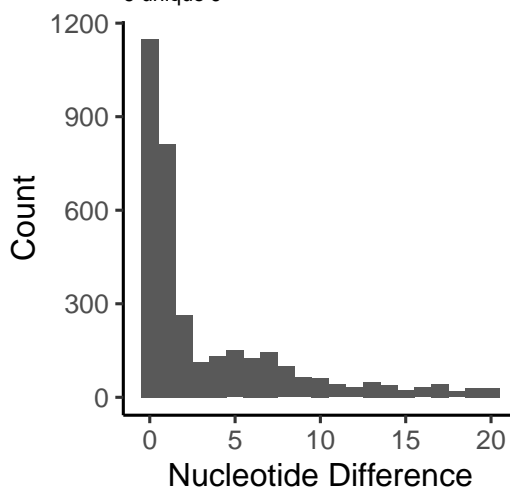
IGHV3-20*03_04

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



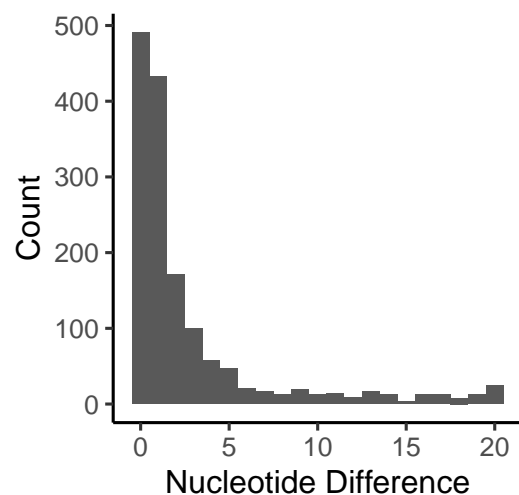
IGHV3-23*03

3955 sequences assigned
1149 (29.1%) exact matches, in which:
739 unique CDR3
6 unique J



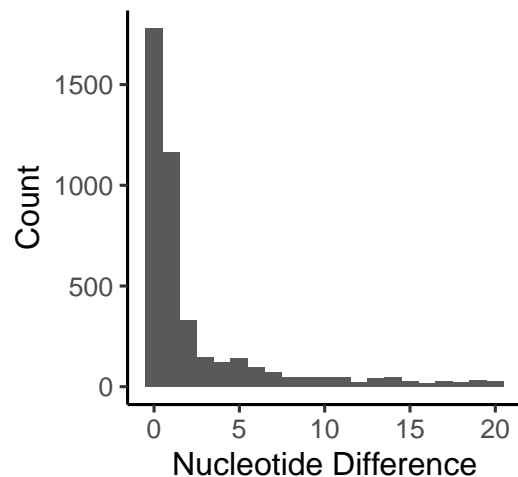
IGHV3-30*03

3180 sequences assigned
491 (15.4%) exact matches, in which:
446 unique CDR3
6 unique J



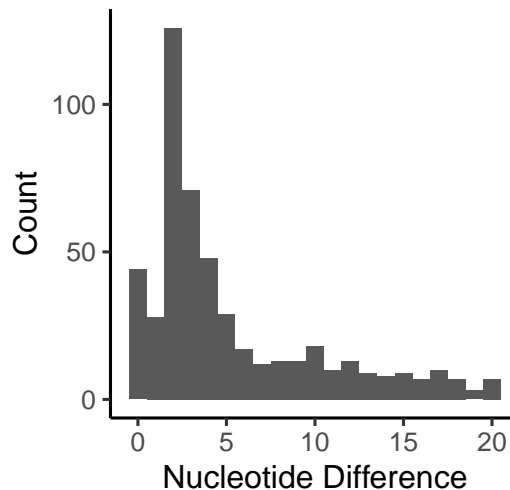
IGHV3-30*04

4706 sequences assigned
1779 (37.8%) exact matches, in which:
1160 unique CDR3
6 unique J



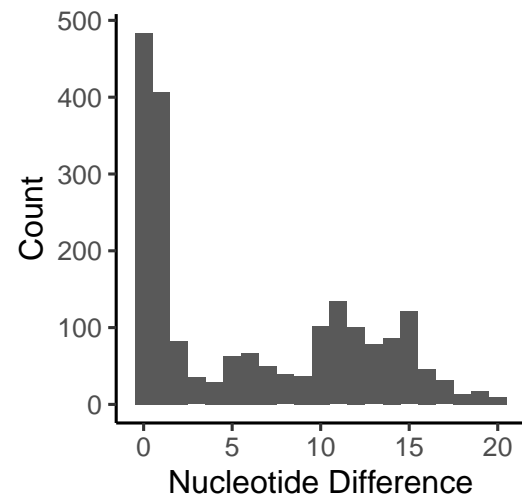
IGHV3-33*06

526 sequences assigned
44 (8.4%) exact matches, in which:
43 unique CDR3
4 unique J



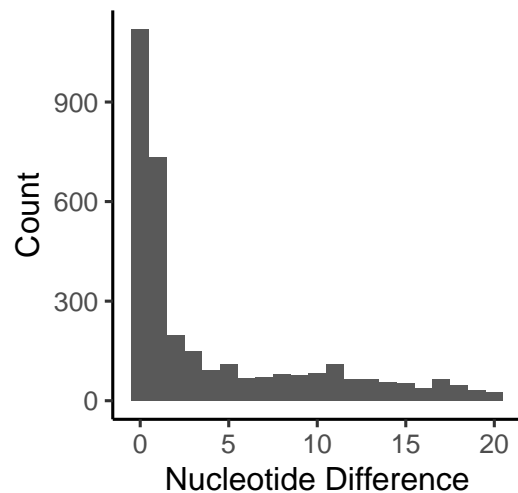
IGHV3-43*02

2237 sequences assigned
484 (21.6%) exact matches, in which:
272 unique CDR3
6 unique J



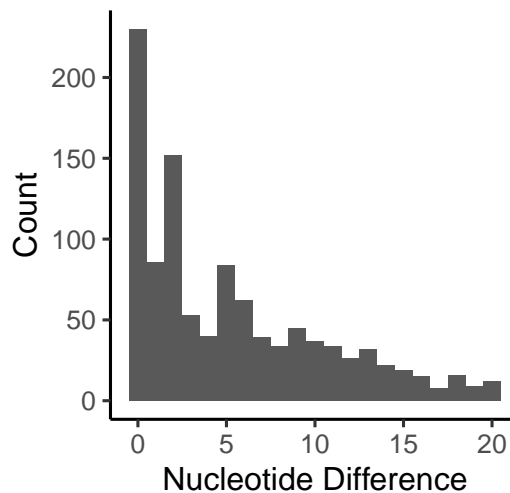
IGHV3-30*18

4373 sequences assigned
1120 (25.6%) exact matches, in which:
648 unique CDR3
6 unique J



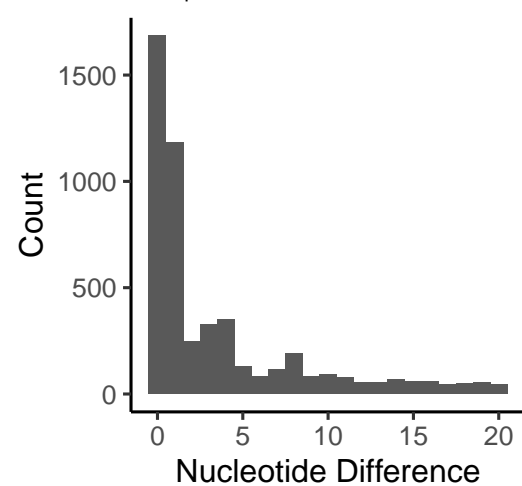
IGHV3-33*08

1117 sequences assigned
230 (20.6%) exact matches, in which:
186 unique CDR3
6 unique J



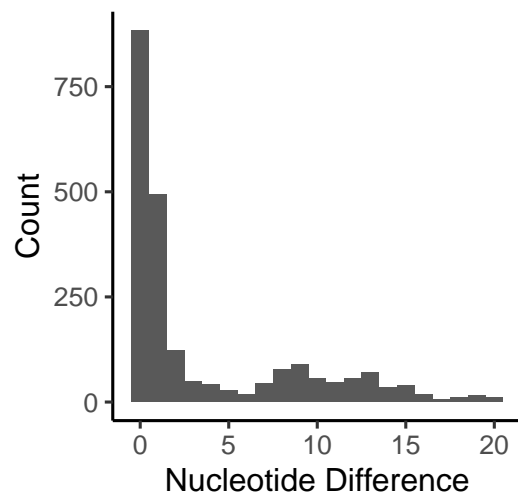
IGHV3-48*03

5615 sequences assigned
1685 (30%) exact matches, in which:
976 unique CDR3
6 unique J



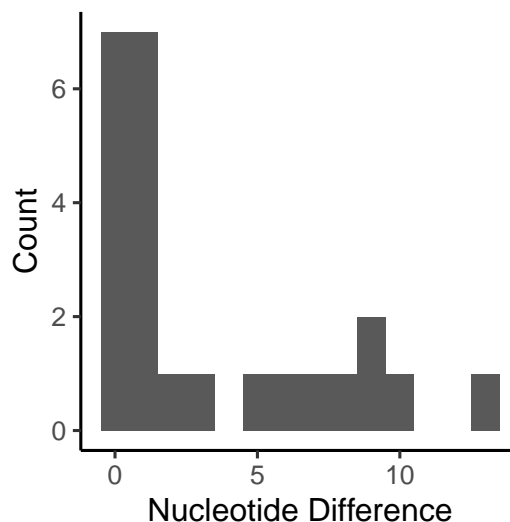
IGHV3-33*01

2606 sequences assigned
884 (33.9%) exact matches, in which:
583 unique CDR3
6 unique J



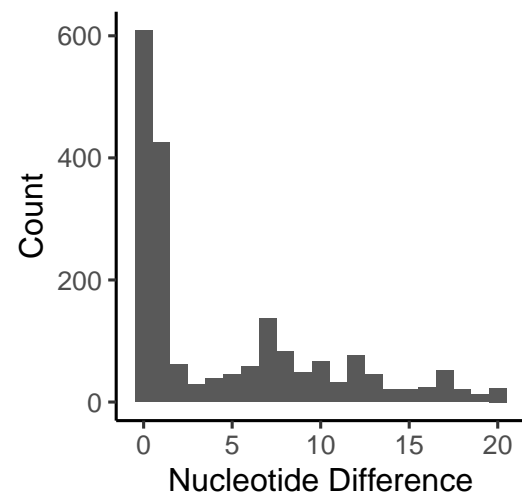
IGHV3-35*01

24 sequences assigned
7 (29.2%) exact matches, in which:
5 unique CDR3
3 unique J



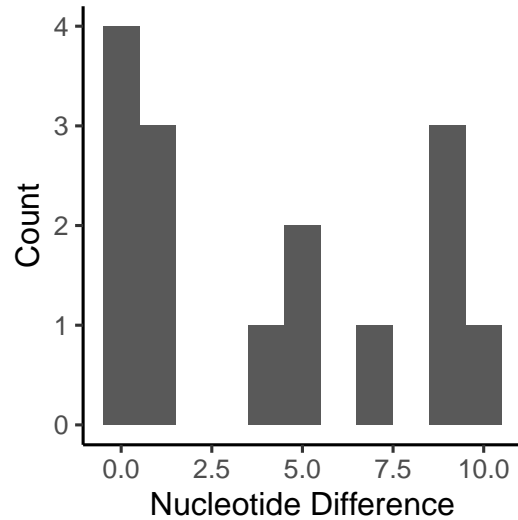
IGHV3-49*04

2485 sequences assigned
609 (24.5%) exact matches, in which:
373 unique CDR3
6 unique J



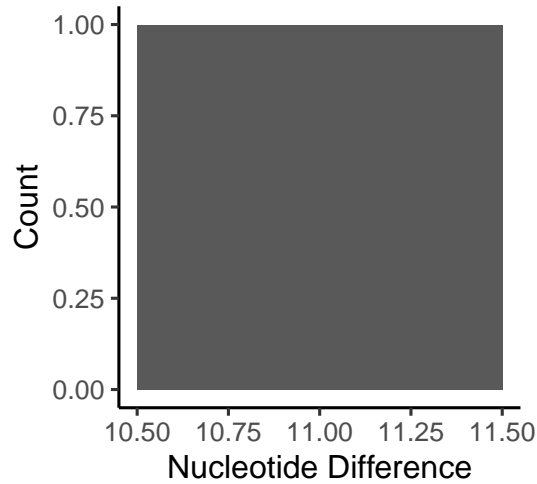
IGHV3-52*01_03

15 sequences assigned
4 (26.7%) exact matches, in which:
3 unique CDR3
2 unique J



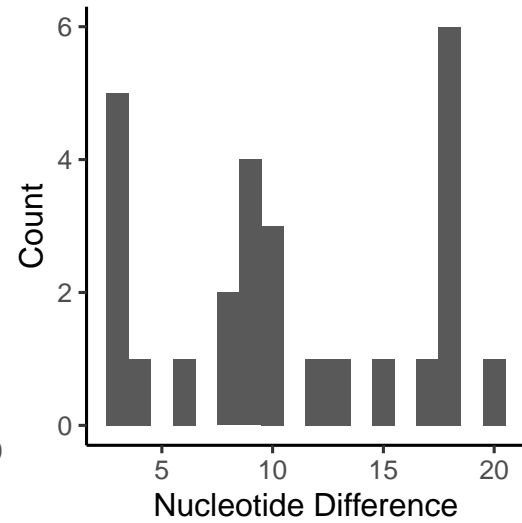
IGHV3-62*03

1 sequences assigned
No exact matches.



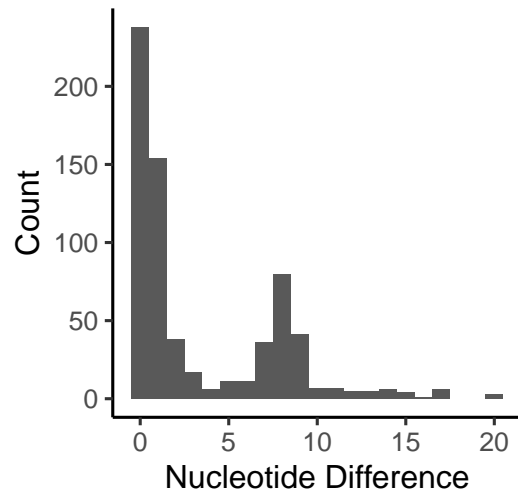
IGHV3-69-1*01

31 sequences assigned
No exact matches.



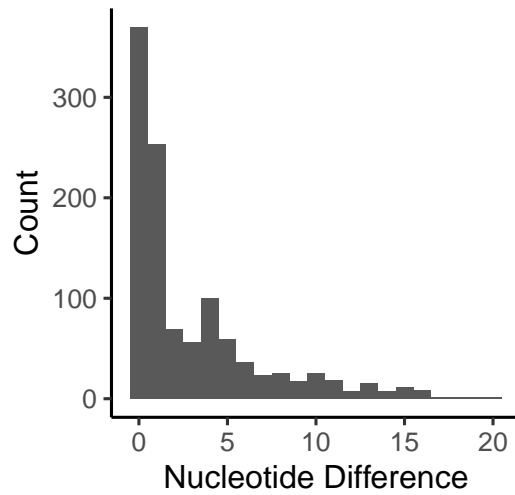
IGHV3-53*04

780 sequences assigned
238 (30.5%) exact matches, in which:
168 unique CDR3
6 unique J



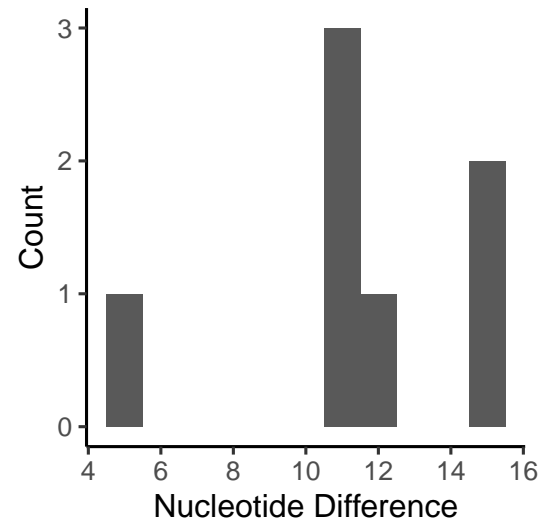
IGHV3-64*01

1171 sequences assigned
370 (31.6%) exact matches, in which:
240 unique CDR3
5 unique J



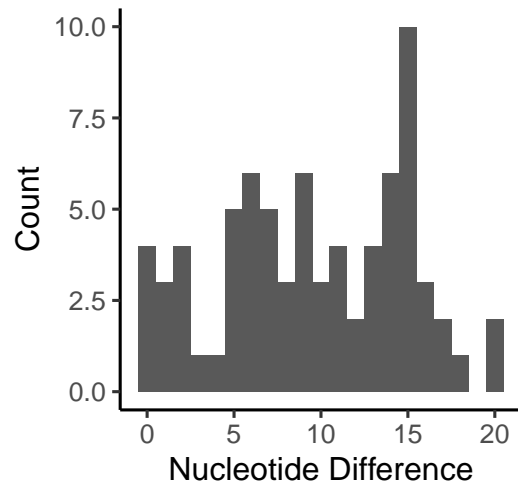
IGHV3-69-1*02

36 sequences assigned
No exact matches.



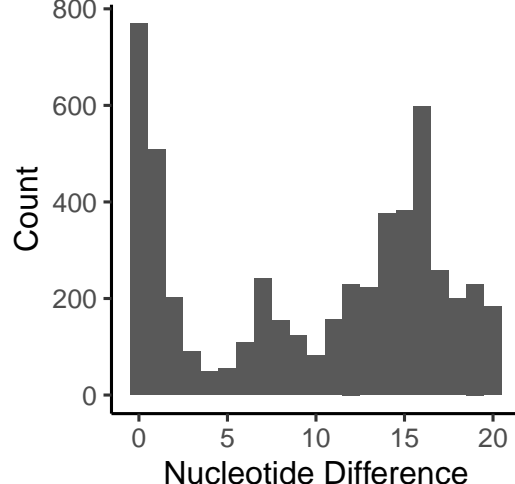
IGHV3-53*01_02

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



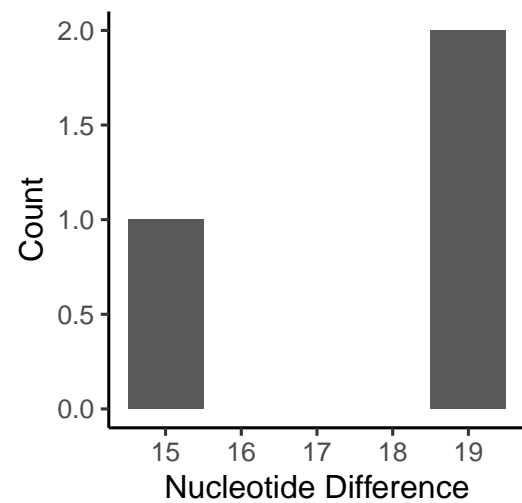
IGHV3-66*01

6580 sequences assigned
770 (11.7%) exact matches, in which:
530 unique CDR3
6 unique J



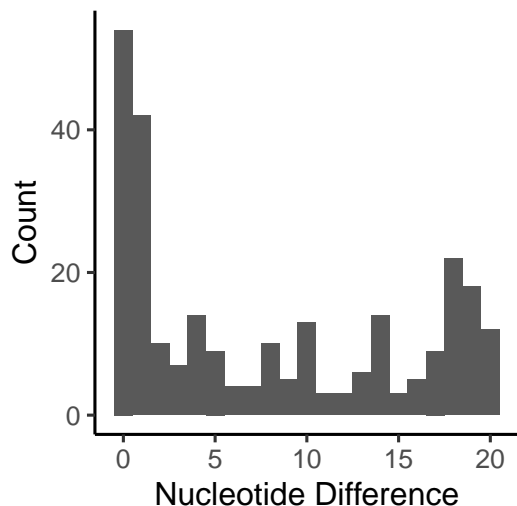
IGHV3-71*01_04

10 sequences assigned
No exact matches.



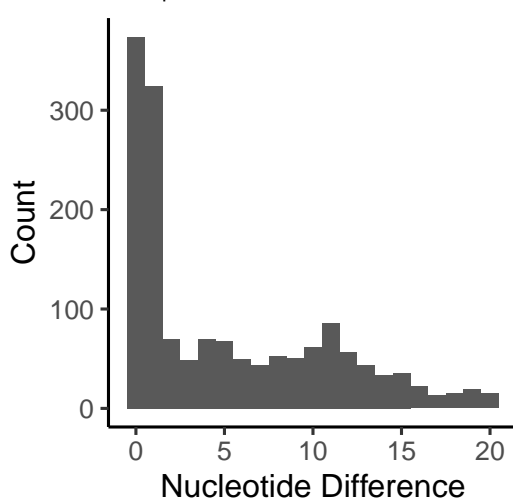
IGHV3-72*01

465 sequences assigned
54 (11.6%) exact matches, in which:
40 unique CDR3
5 unique J



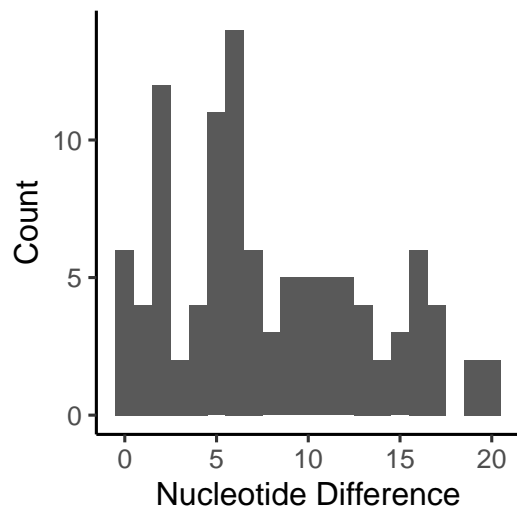
IGHV3-74*01_02

1748 sequences assigned
374 (21.4%) exact matches, in which:
217 unique CDR3
6 unique J



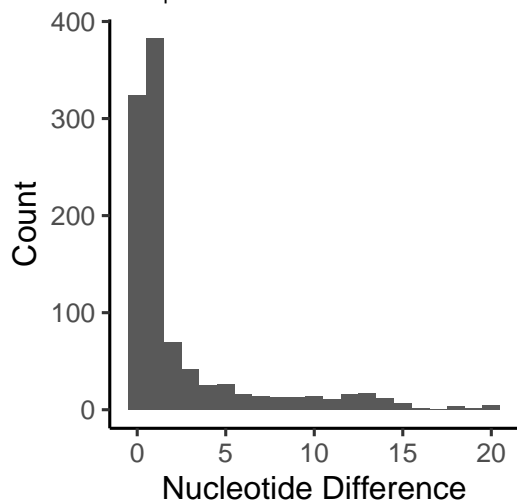
IGHV3-NL1*01

142 sequences assigned
6 (4.2%) exact matches, in which:
6 unique CDR3
2 unique J



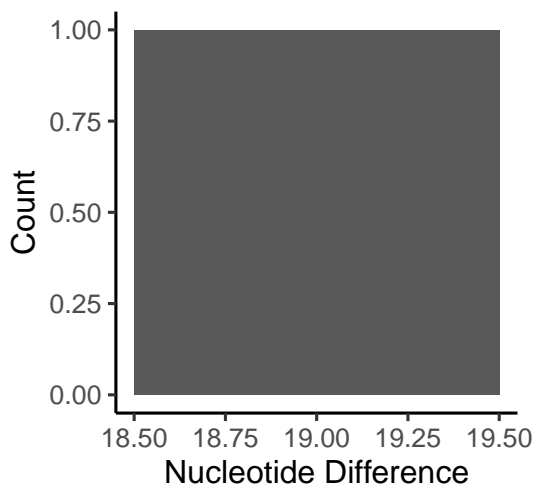
IGHV3-73*01_02

1228 sequences assigned
324 (26.4%) exact matches, in which:
178 unique CDR3
5 unique J



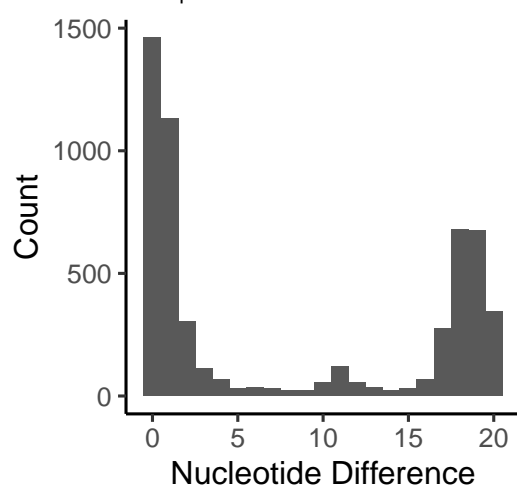
IGHV3-43D*04

1 sequences assigned
No exact matches.



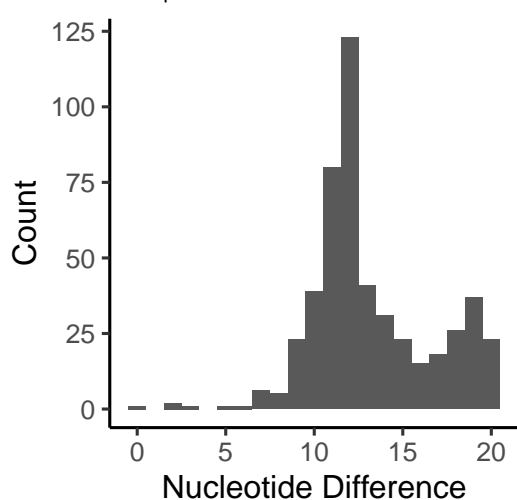
IGHV4-4*02_03

7300 sequences assigned
1461 (20%) exact matches, in which:
1079 unique CDR3
6 unique J



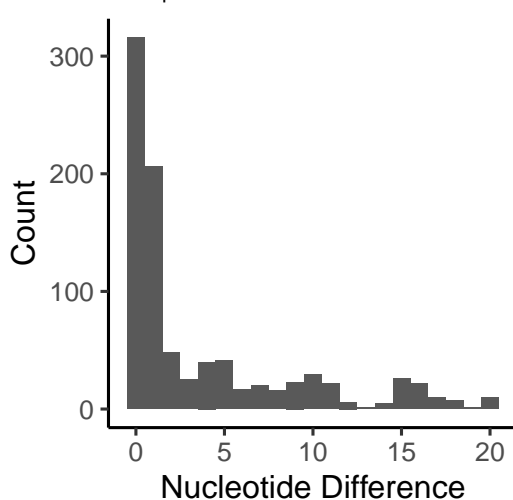
IGHV3-74*03

755 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



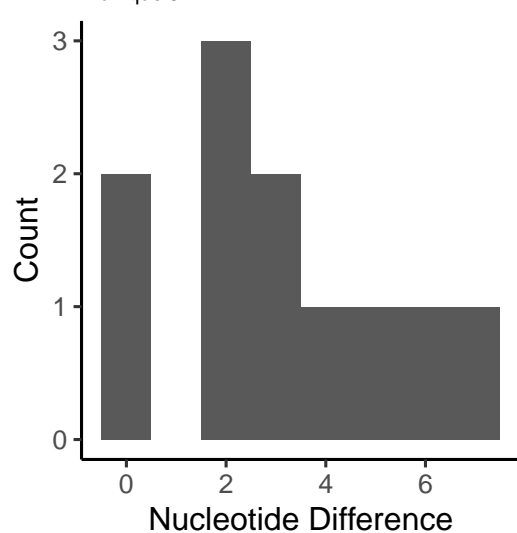
IGHV3-64D*06

1081 sequences assigned
316 (29.2%) exact matches, in which:
140 unique CDR3
5 unique J



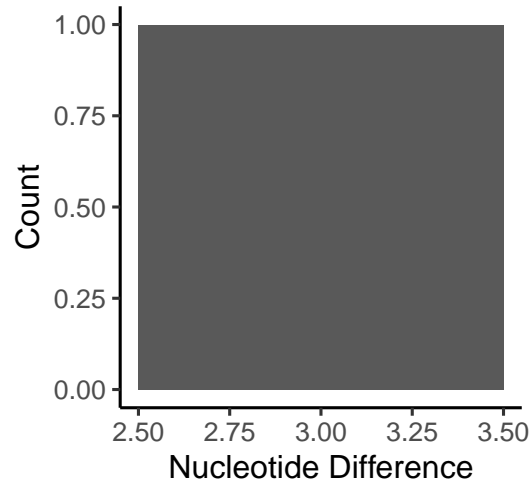
IGHV4-28*03

11 sequences assigned
2 (18.2%) exact matches, in which:
2 unique CDR3
2 unique J



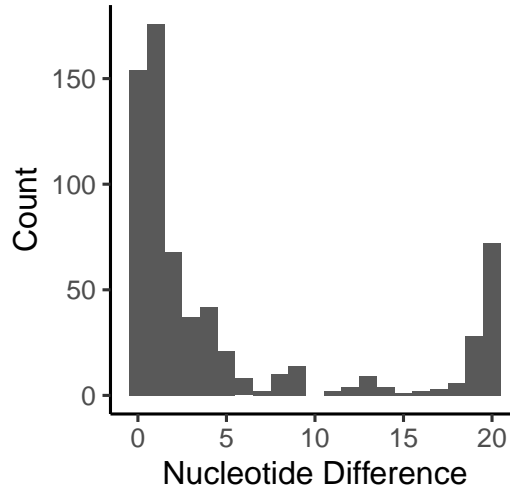
IGHV4-28*01_07

2 sequences assigned
No exact matches.



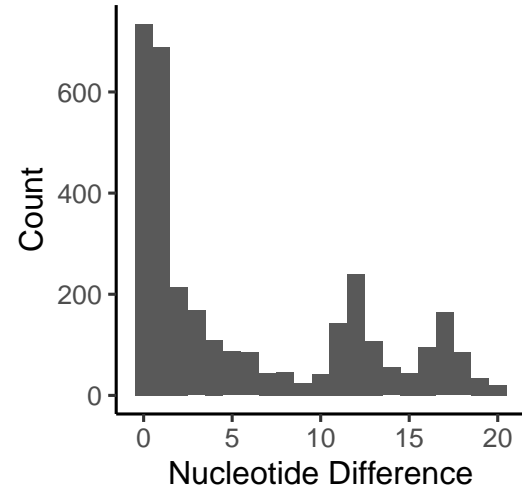
IGHV4-30-2*01

1105 sequences assigned
154 (13.9%) exact matches, in which:
87 unique CDR3
5 unique J



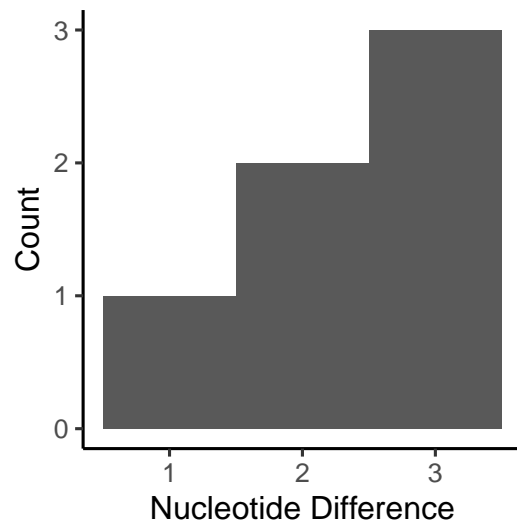
IGHV4-31*02

4402 sequences assigned
735 (16.7%) exact matches, in which:
614 unique CDR3
6 unique J



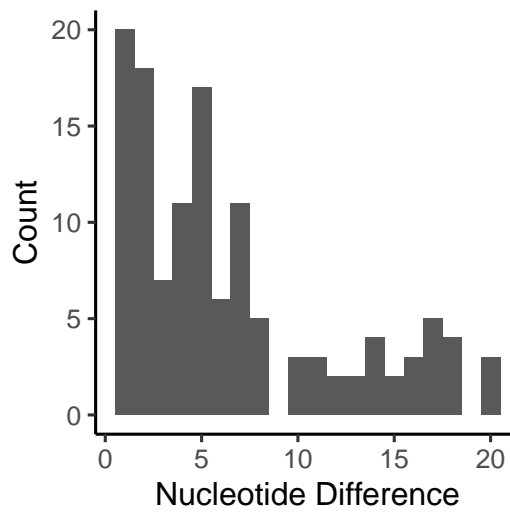
IGHV4-28*02_05

6 sequences assigned
No exact matches.



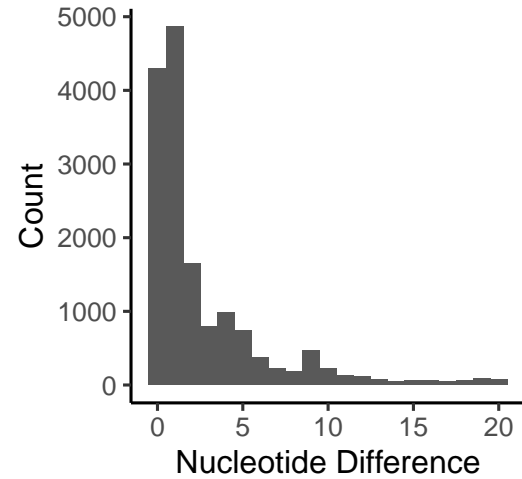
IGHV4-30-2*03

233 sequences assigned
No exact matches.



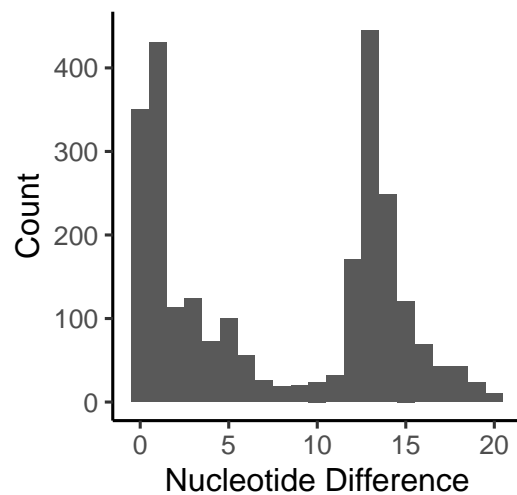
IGHV4-34*01_02

19259 sequences assigned
4300 (22.3%) exact matches, in which:
2890 unique CDR3
6 unique J



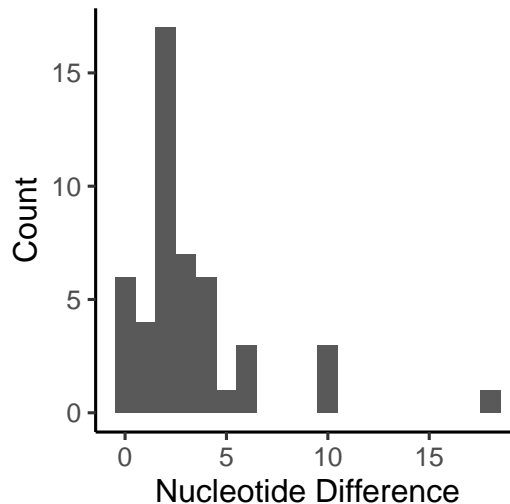
IGHV4-30-4*01

3476 sequences assigned
350 (10.1%) exact matches, in which:
237 unique CDR3
6 unique J



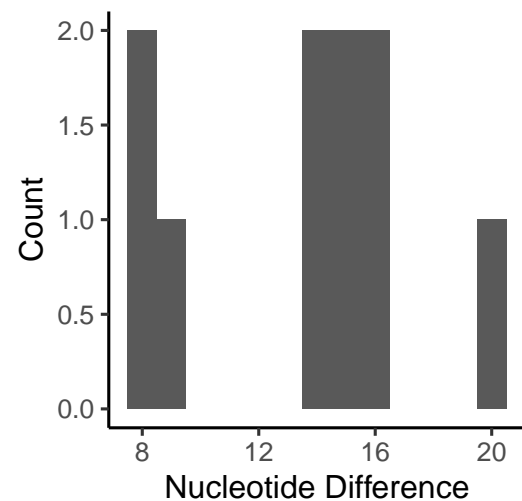
IGHV4-30-2*05

51 sequences assigned
6 (11.8%) exact matches, in which:
6 unique CDR3
4 unique J



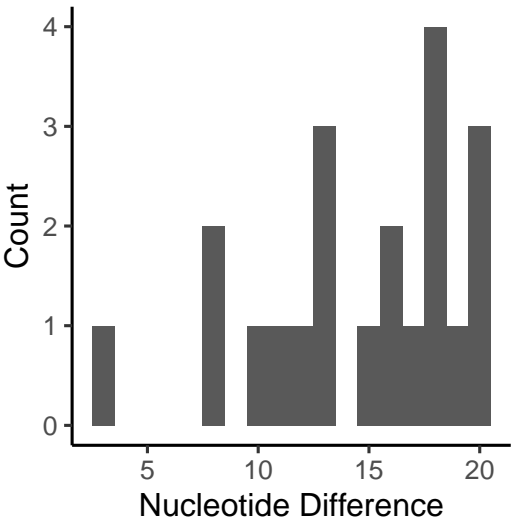
IGHV4-38-2*01

36 sequences assigned
No exact matches.



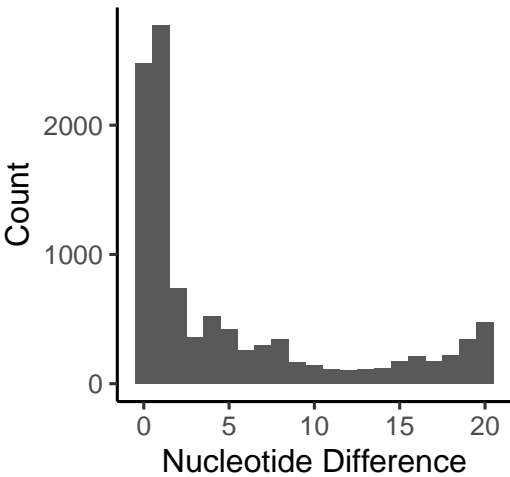
IGHV4-38-2*02

37 sequences assigned
No exact matches.



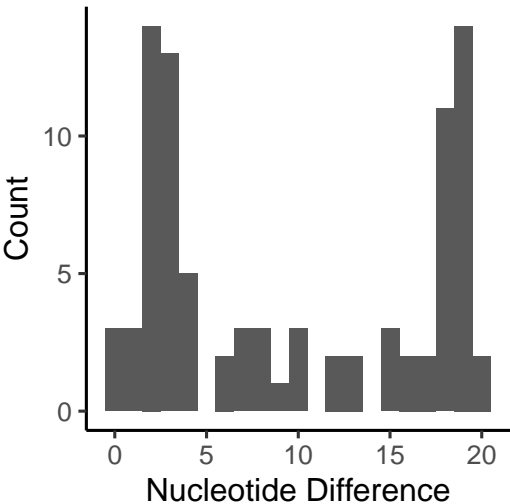
IGHV4-59*08

16037 sequences assigned
2483 (15.5%) exact matches, in which:
1893 unique CDR3
6 unique J



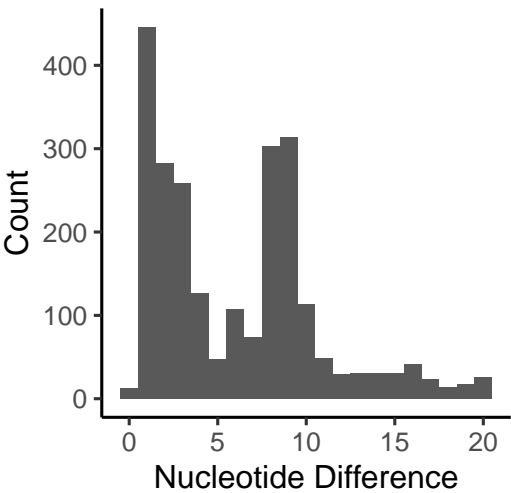
IGHV4-61*02

104 sequences assigned
3 (2.9%) exact matches, in which:
3 unique CDR3
2 unique J



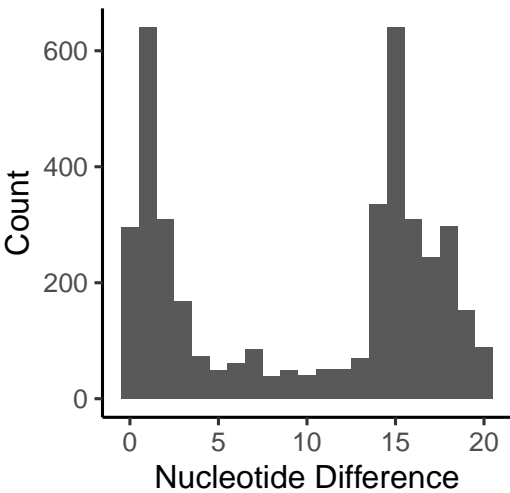
IGHV4-39*07

2849 sequences assigned
13 (0.5%) exact matches, in which:
13 unique CDR3
4 unique J



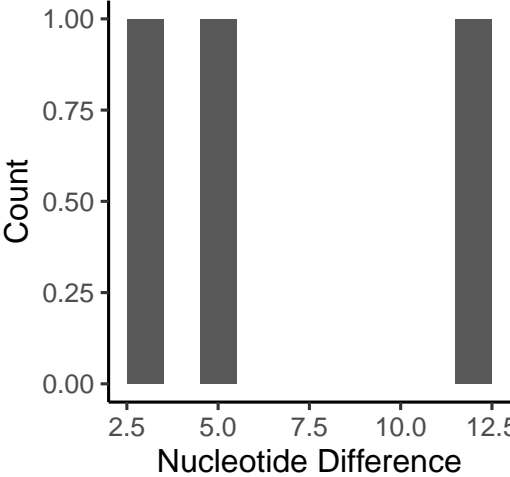
IGHV4-59*12

4858 sequences assigned
296 (6.1%) exact matches, in which:
279 unique CDR3
6 unique J



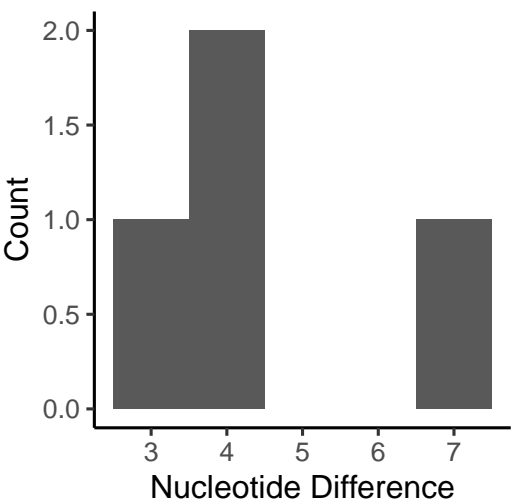
IGHV4-61*03

16 sequences assigned
No exact matches.



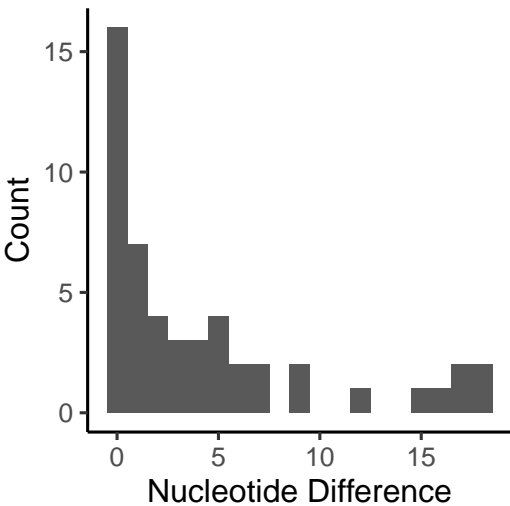
IGHV4-55*09

13 sequences assigned
No exact matches.



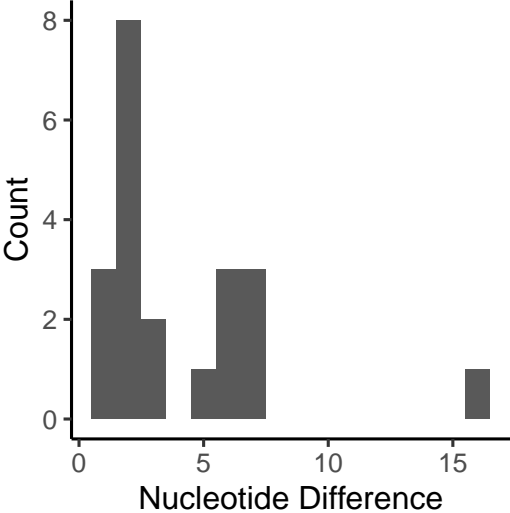
IGHV4-61*01

60 sequences assigned
16 (26.7%) exact matches, in which:
12 unique CDR3
3 unique J



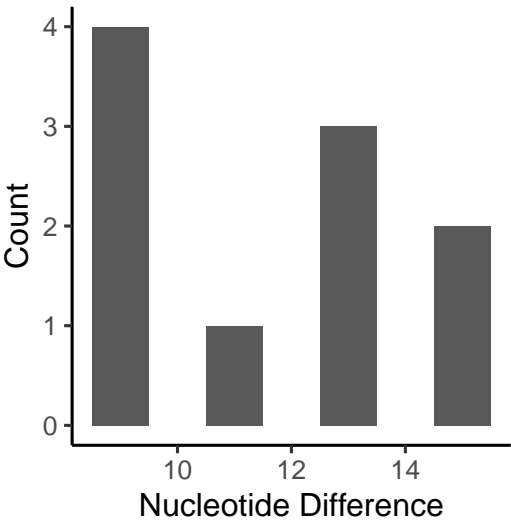
IGHV4-61*05

28 sequences assigned
No exact matches.



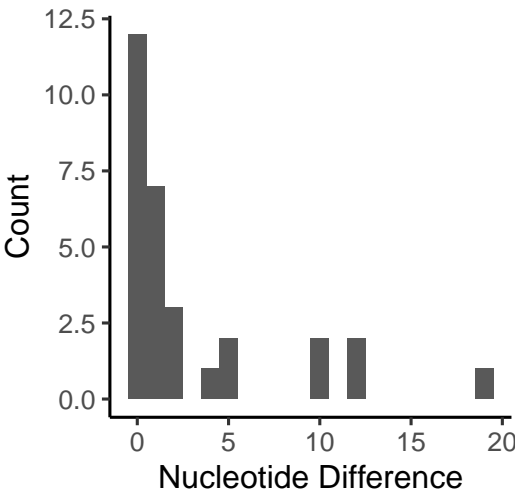
IGHV1/OR15-3*02

10 sequences assigned
No exact matches.



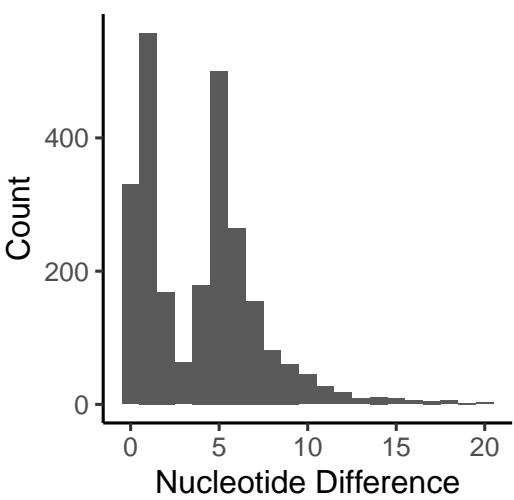
IGHV5-51*04

45 sequences assigned
12 (26.7%) exact matches, in which:
12 unique CDR3
5 unique J



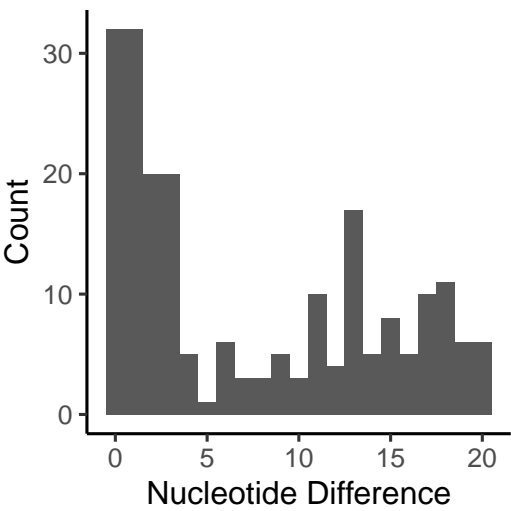
IGHV6-1*01_02

2611 sequences assigned
330 (12.6%) exact matches, in which:
234 unique CDR3
6 unique J



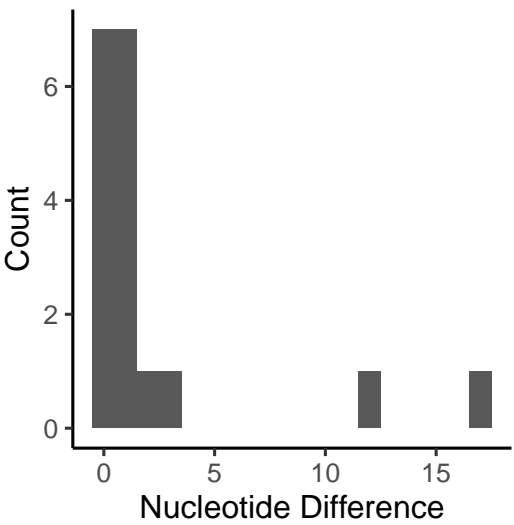
IGHV4/OR15-8*01_C193/

392 sequences assigned
32 (8.2%) exact matches, in which:
24 unique CDR3
5 unique J



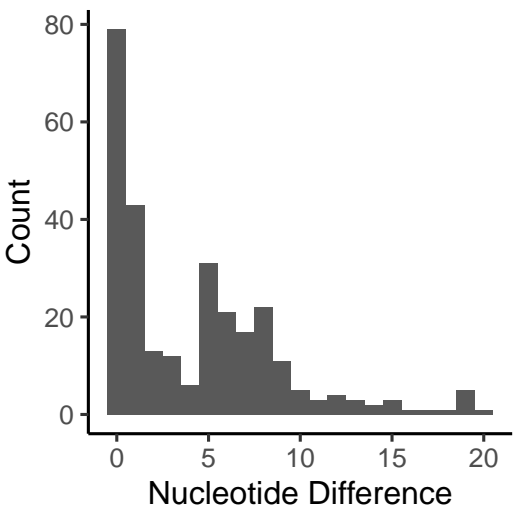
IGHV5-51*06

19 sequences assigned
7 (36.8%) exact matches, in which:
7 unique CDR3
4 unique J



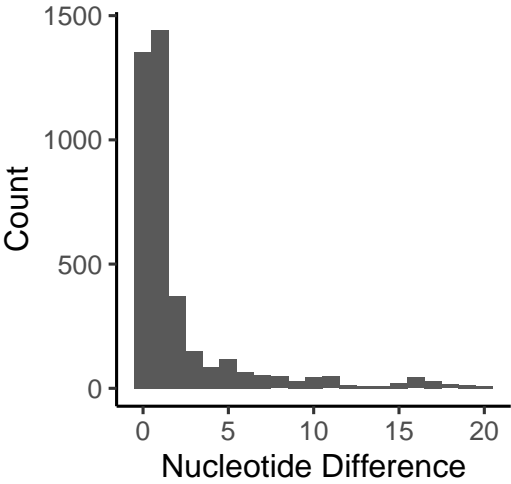
IGHV6-1*01_02_A315G

293 sequences assigned
79 (27%) exact matches, in which:
78 unique CDR3
6 unique J



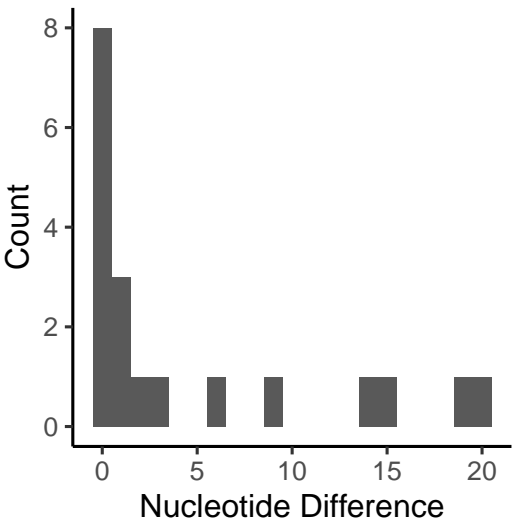
IGHV5-10-1*01_03

4361 sequences assigned
1354 (31%) exact matches, in which:
851 unique CDR3
6 unique J



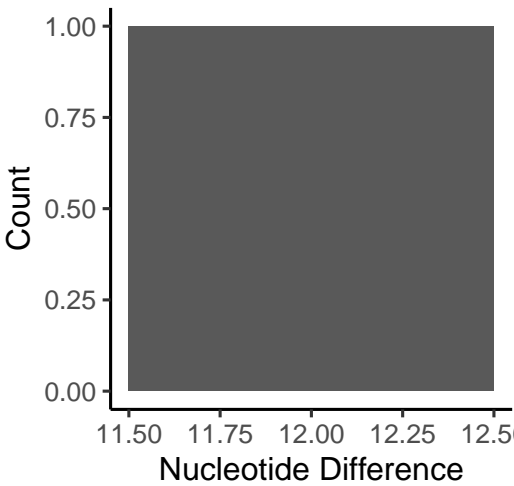
IGHV5-51*07

29 sequences assigned
8 (27.6%) exact matches, in which:
8 unique CDR3
4 unique J



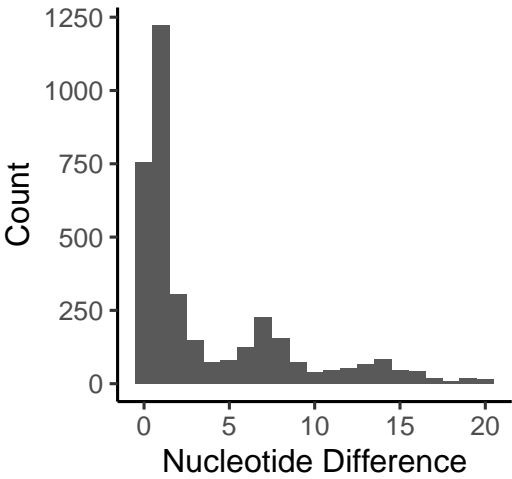
IGHV3/OR16-10*01_03

1 sequences assigned
No exact matches.



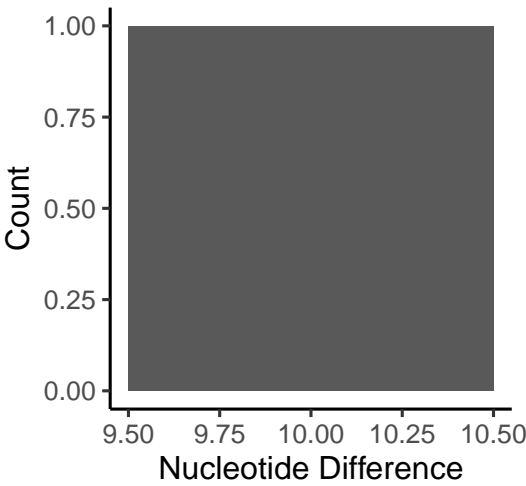
IGHV7-4-1*02

3671 sequences assigned
756 (20.6%) exact matches, in which:
578 unique CDR3
6 unique J

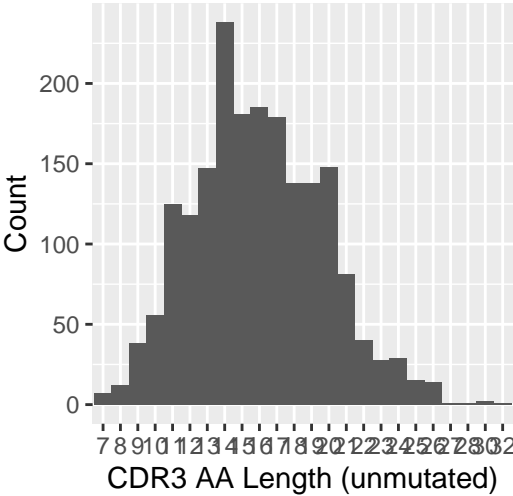


IGHV7-81*01

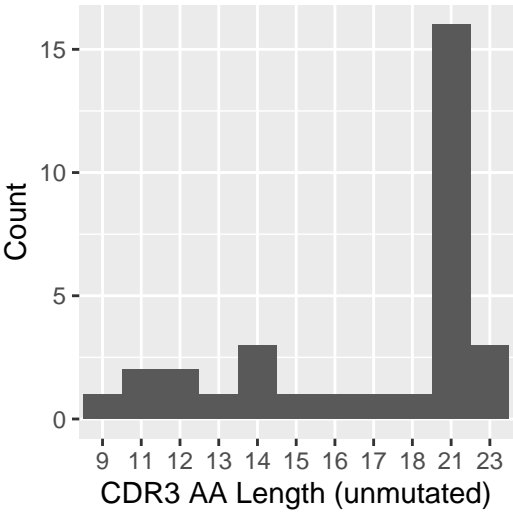
1 sequences assigned
No exact matches.



IGHV1-69*04_09_A244G



IGHV4/OR15-8*01_C193A



IGHV6-1*01_02_A315G

