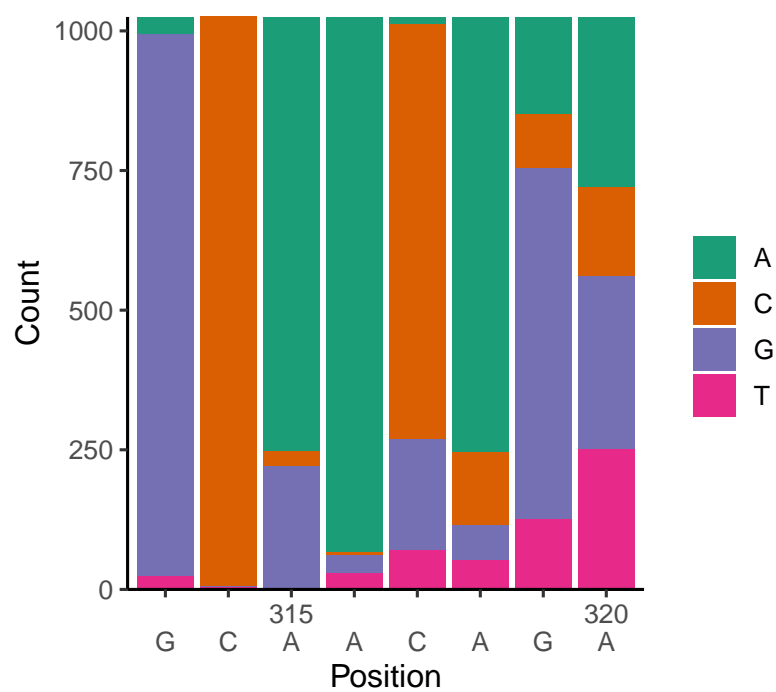
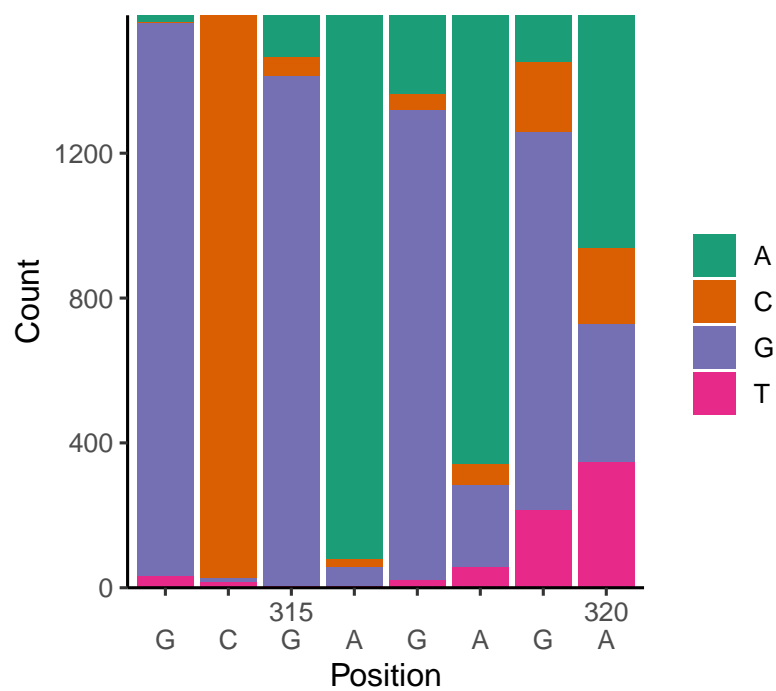


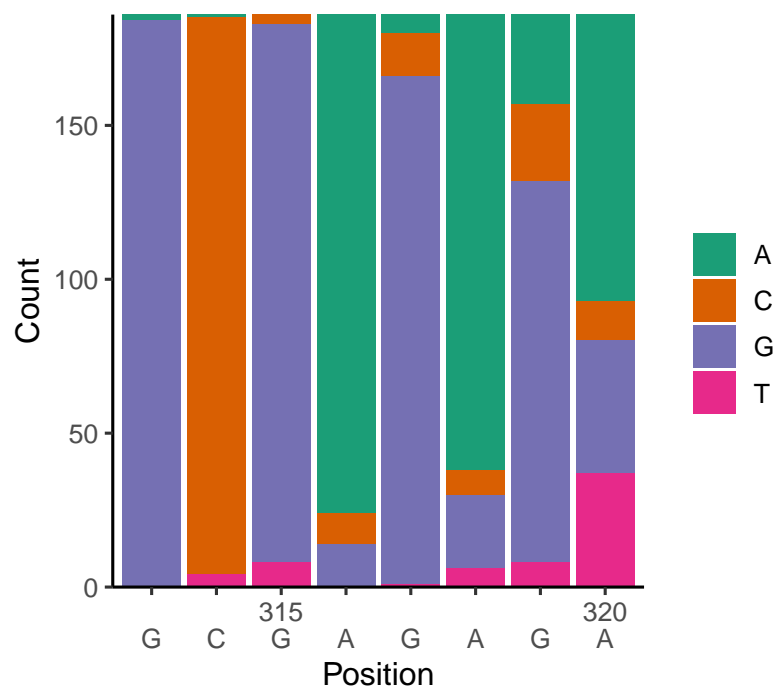
Gene IGHV1-24*01_G278T



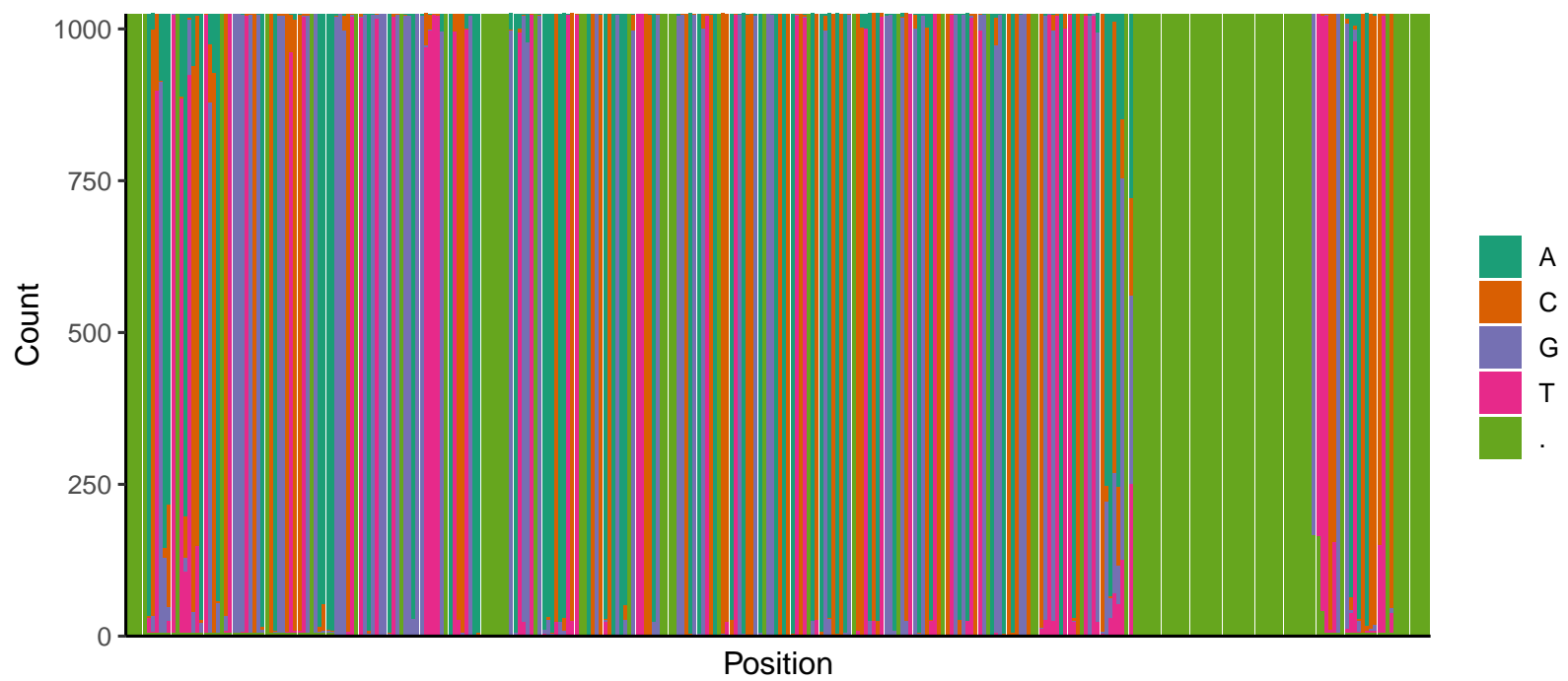
Gene IGHV3-20*03_04_A104G



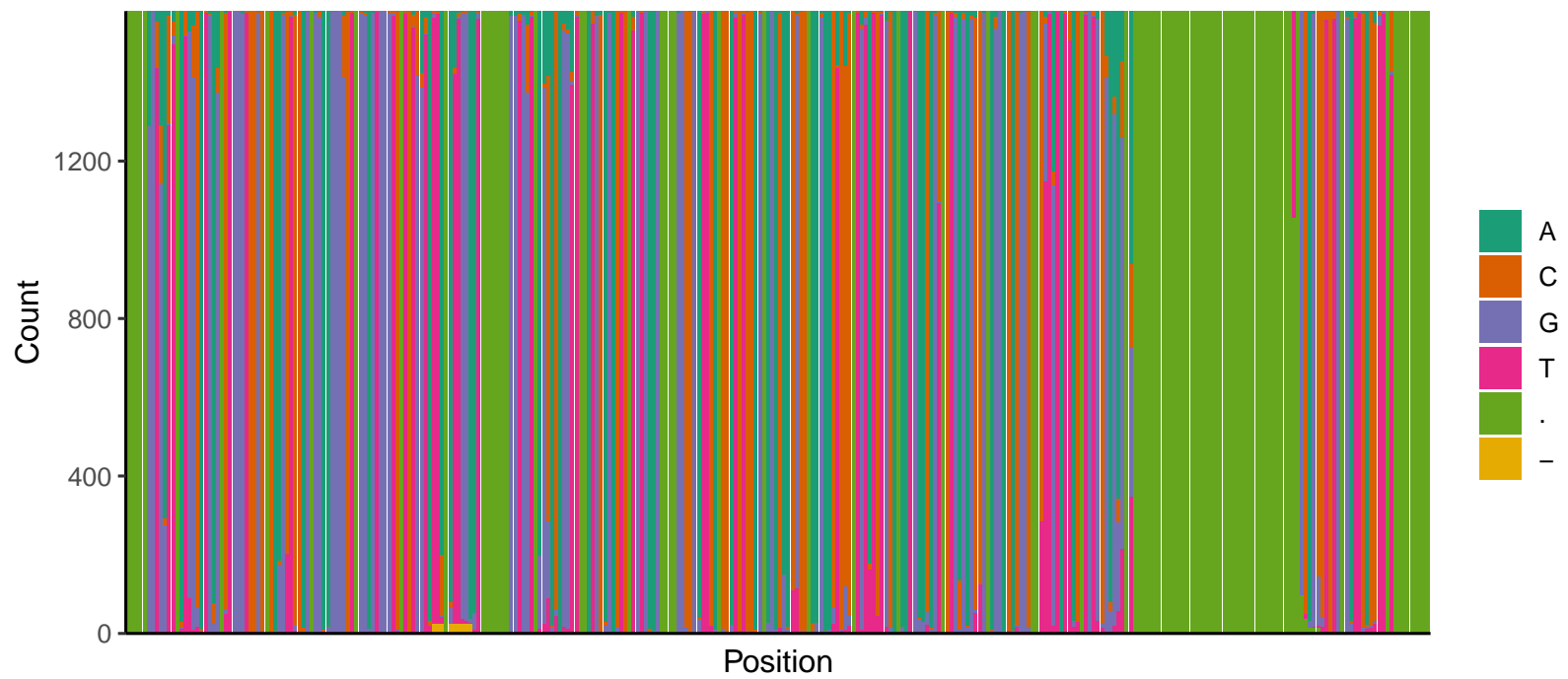
Gene IGHV4/OR15-8*01_C193A



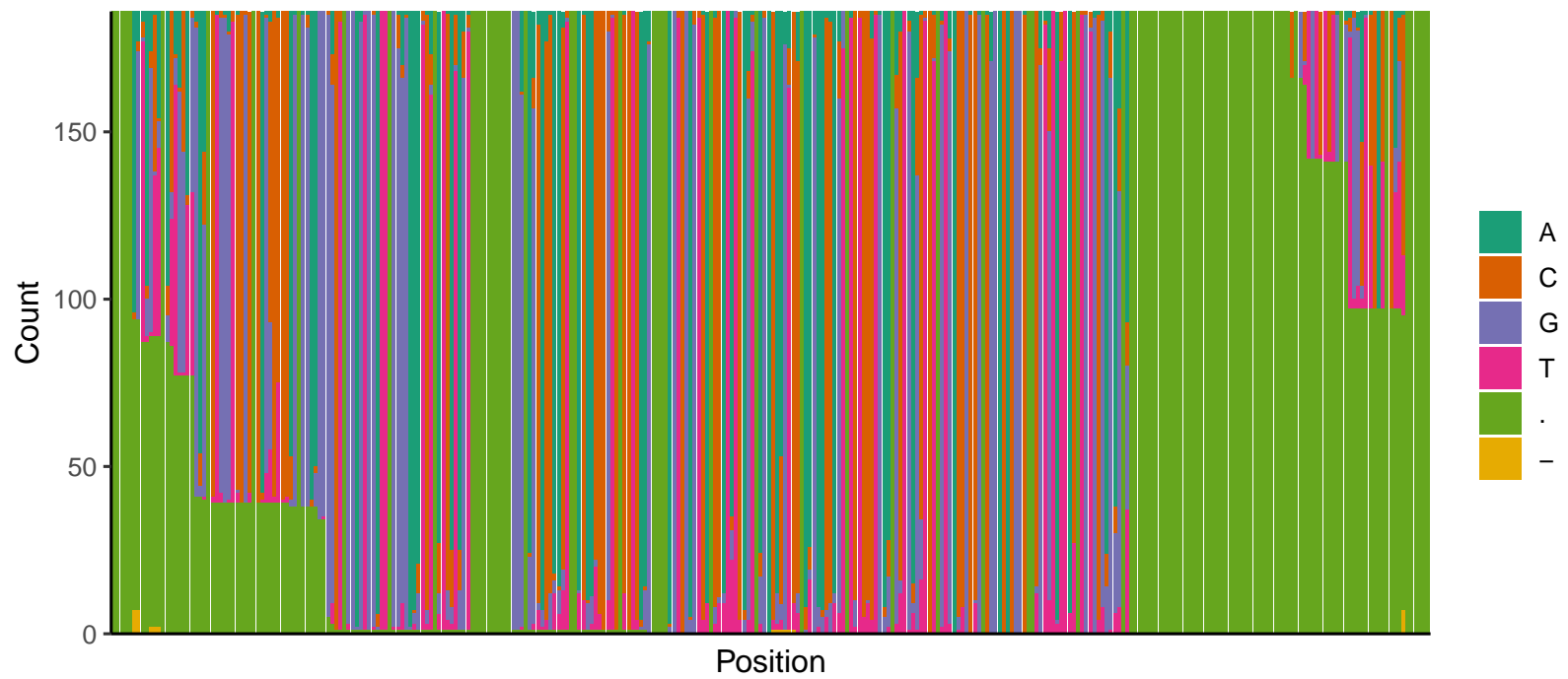
Gene IGHV1-24*01_G278T



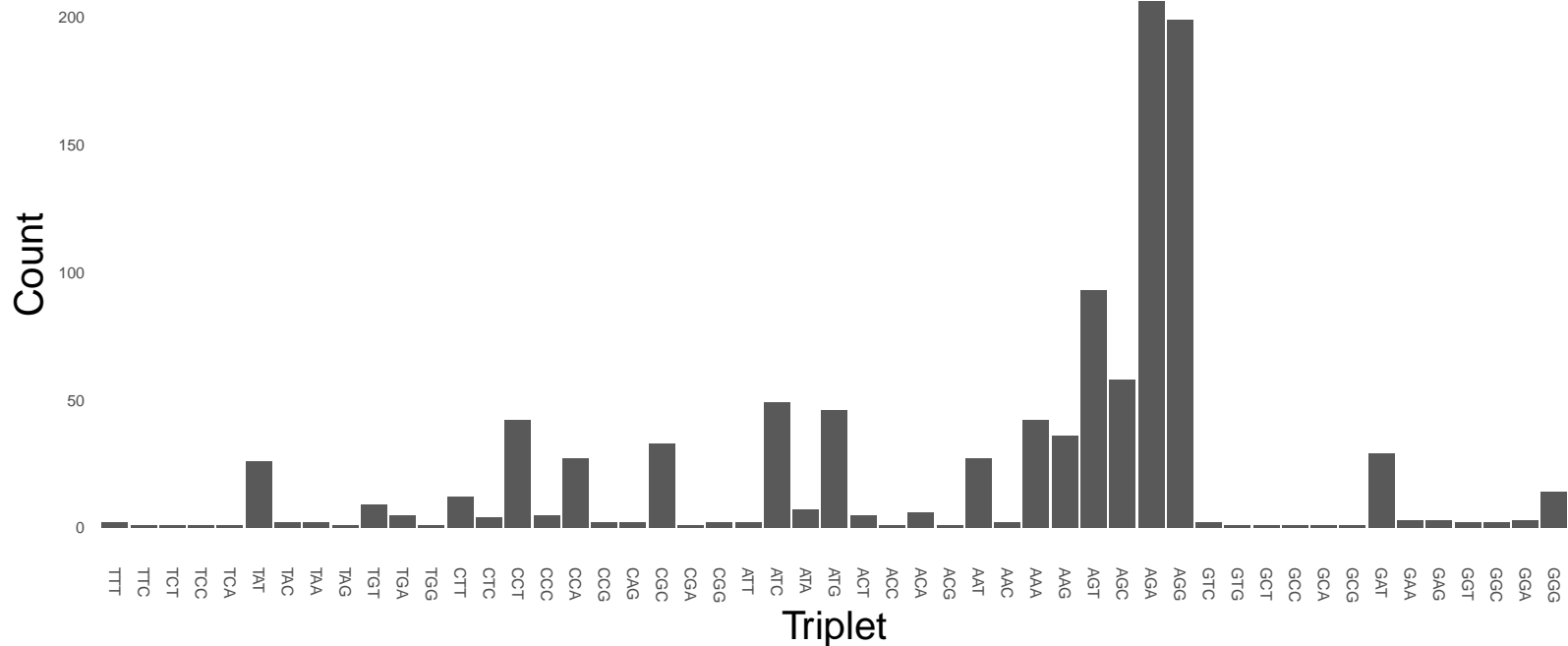
Gene IGHV3-20*03_04_A104G



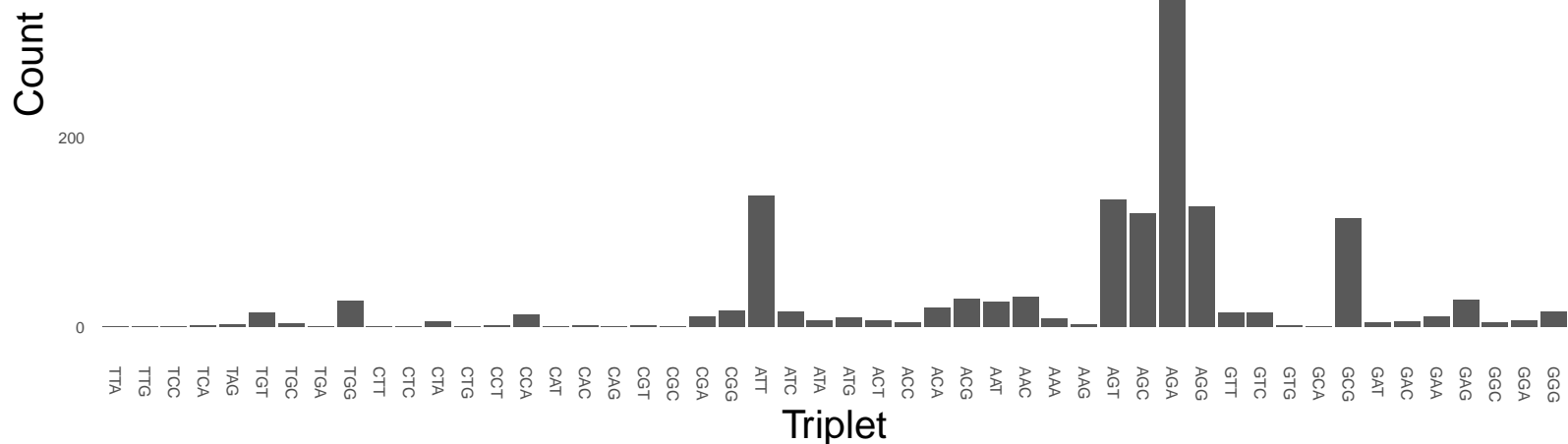
Gene IGHV4/OR15-8*01_C193A



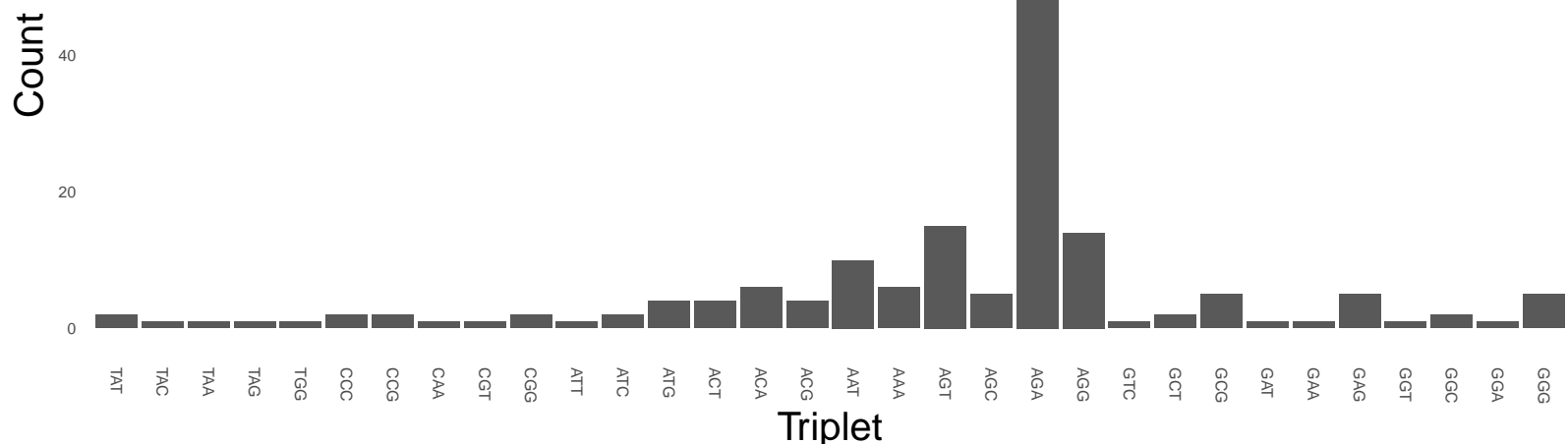
IGHV1-24*01_G278T- Final 3 nucleotides as a triplet



IGHV3-20*03_04_A104G- Final 3 nucleotides as a triplet

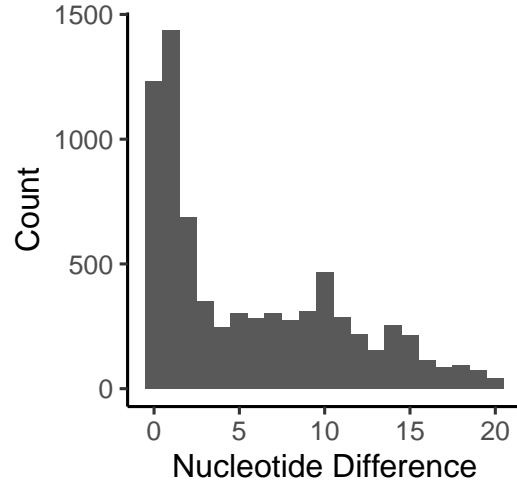


IGHV4/OR15-8*01_C193A- Final 3 nucleotides as a triplet



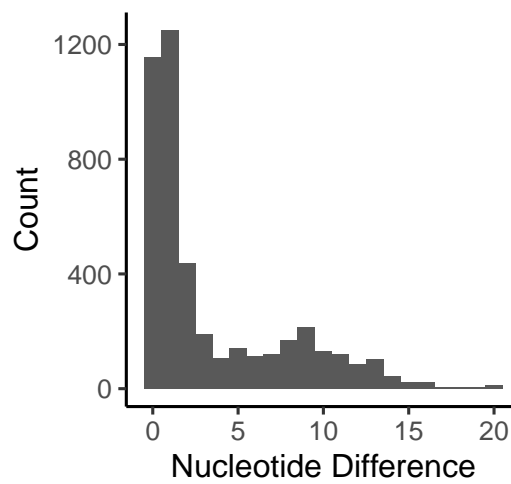
IGHV1-2*02

8875 sequences assigned
1234 (13.9%) exact matches, in which:
1030 unique CDR3
6 unique J



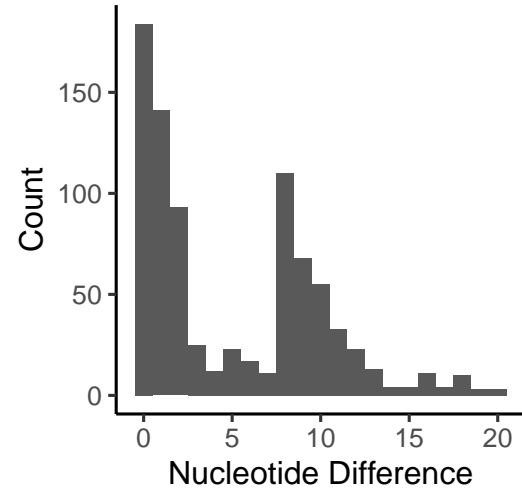
IGHV1-8*01

6901 sequences assigned
1157 (16.8%) exact matches, in which:
962 unique CDR3
6 unique J



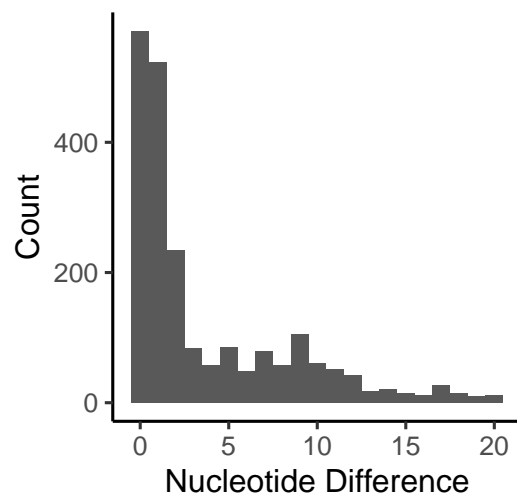
IGHV1-24*01

849 sequences assigned
184 (21.7%) exact matches, in which:
156 unique CDR3
6 unique J



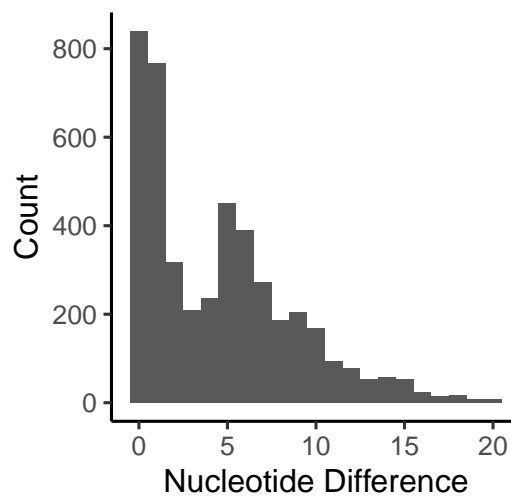
IGHV1-2*04

2146 sequences assigned
571 (26.6%) exact matches, in which:
500 unique CDR3
6 unique J



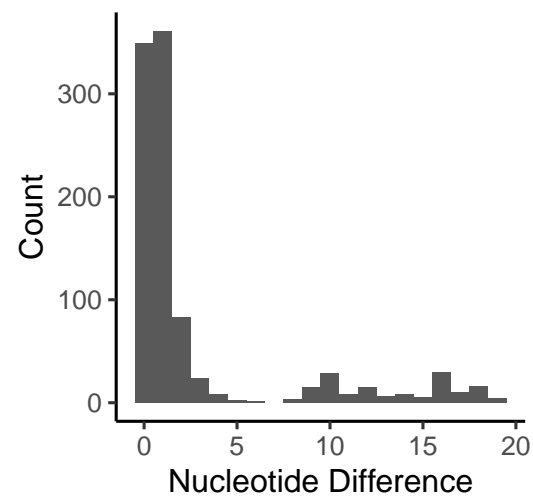
IGHV1-8*02

4594 sequences assigned
840 (18.3%) exact matches, in which:
730 unique CDR3
6 unique J



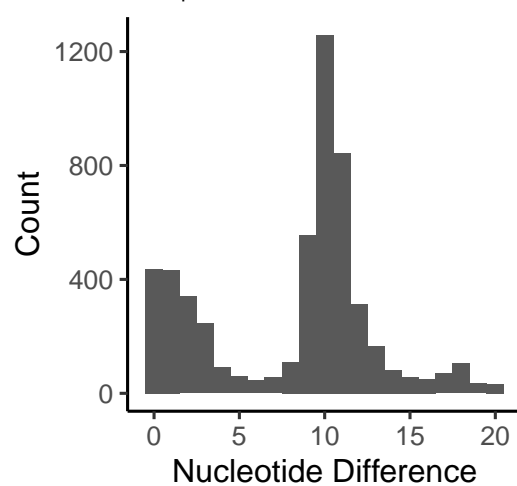
IGHV1-24*01_G278T

1025 sequences assigned
349 (34%) exact matches, in which:
281 unique CDR3
6 unique J



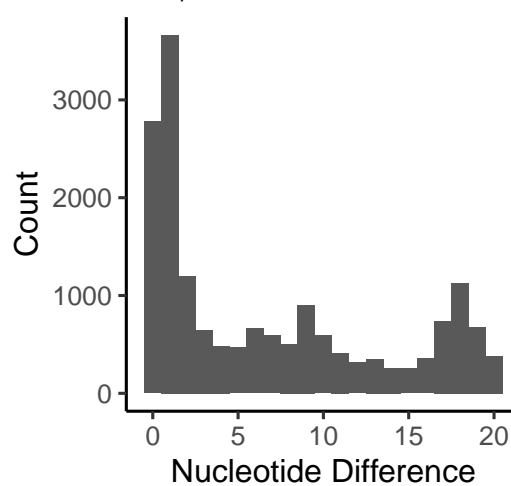
IGHV1-3*01_05

5784 sequences assigned
436 (7.5%) exact matches, in which:
353 unique CDR3
6 unique J



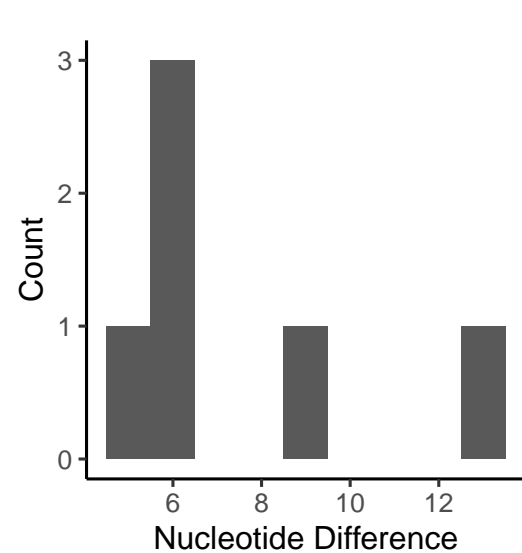
IGHV1-18*01

18682 sequences assigned
2780 (14.9%) exact matches, in which:
2160 unique CDR3
6 unique J



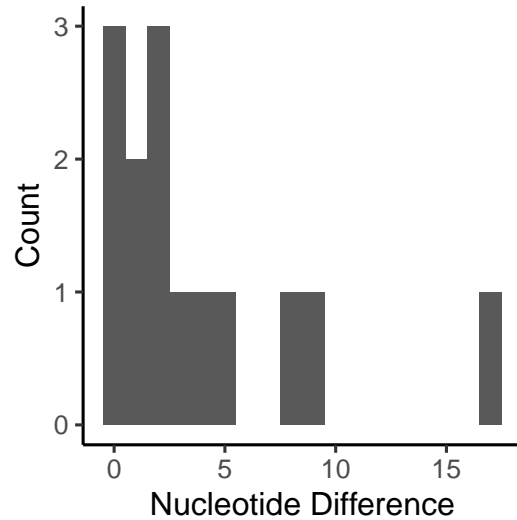
IGHV1-38-4*01

6 sequences assigned
No exact matches.



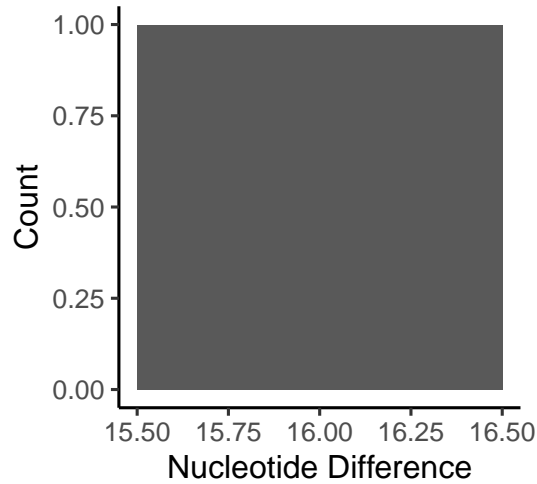
IGHV1-45*02

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



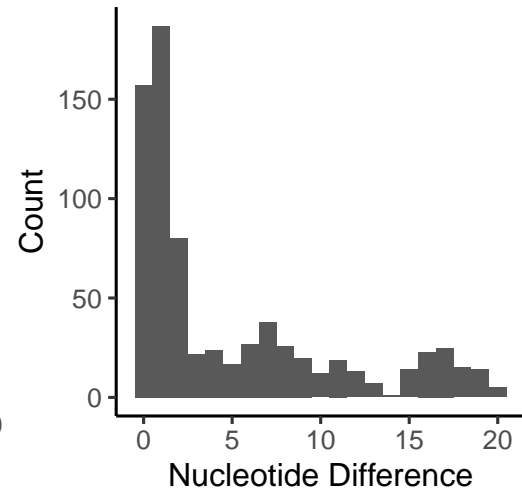
IGHV1-69-2*01

1 sequences assigned
No exact matches.



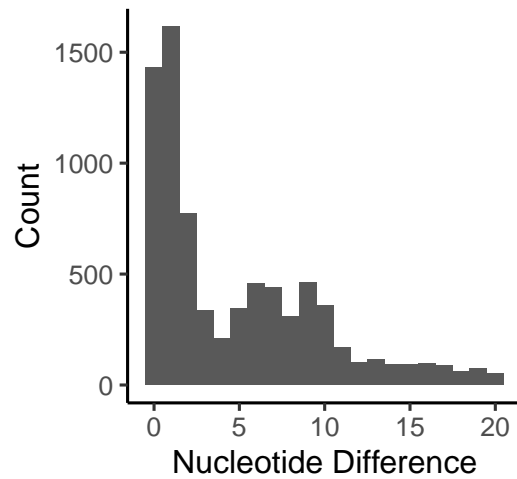
IGHV2-5*01

768 sequences assigned
157 (20.4%) exact matches, in which:
127 unique CDR3
5 unique J



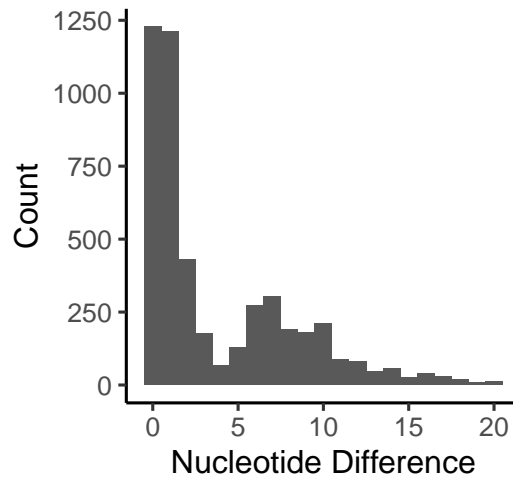
IGHV1-46*01

8317 sequences assigned
1432 (17.2%) exact matches, in which:
1182 unique CDR3
6 unique J



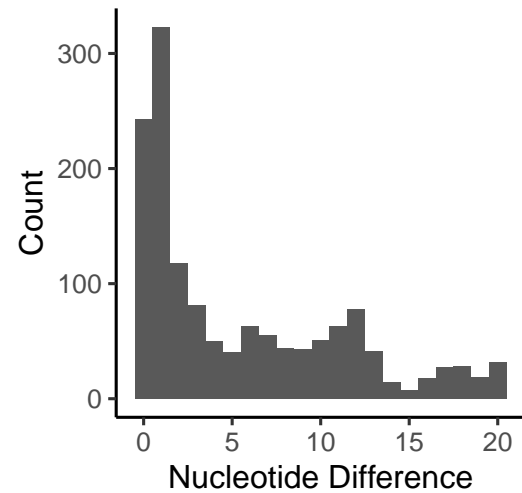
IGHV1-69*10

4930 sequences assigned
1228 (24.9%) exact matches, in which:
1063 unique CDR3
6 unique J



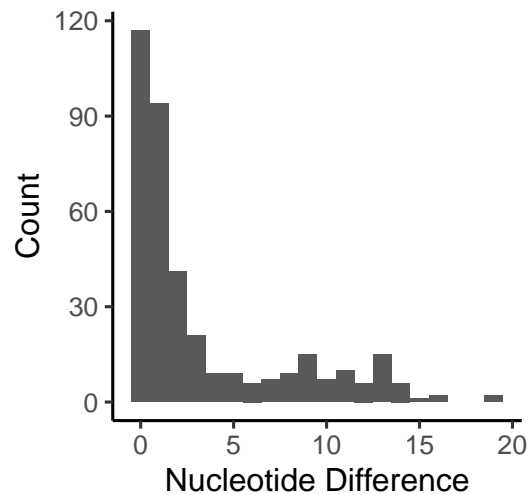
IGHV2-5*02

1617 sequences assigned
243 (15%) exact matches, in which:
179 unique CDR3
6 unique J



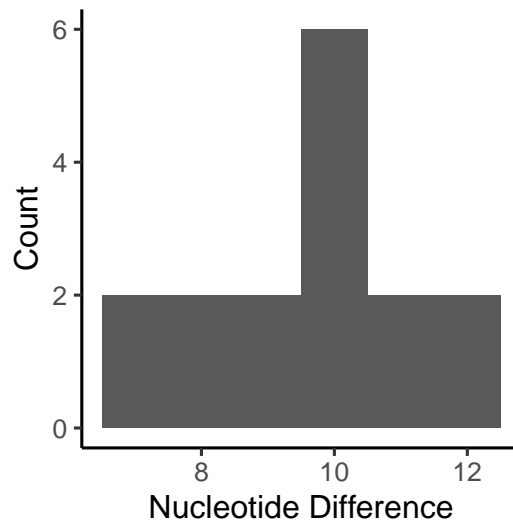
IGHV1-58*02

377 sequences assigned
117 (31%) exact matches, in which:
102 unique CDR3
5 unique J



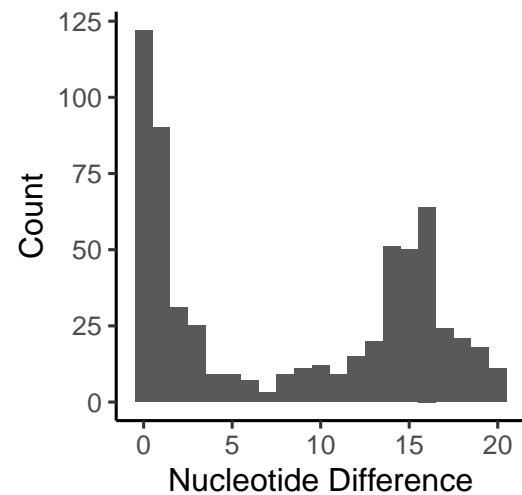
IGHV1-NL1*01

16 sequences assigned
No exact matches.



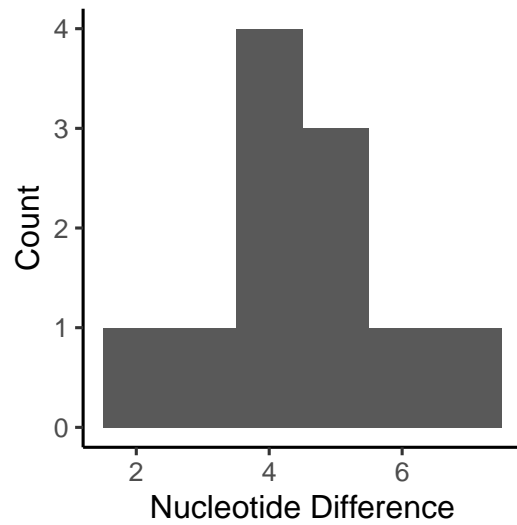
IGHV2-26*01

3210 sequences assigned
122 (3.8%) exact matches, in which:
92 unique CDR3
5 unique J



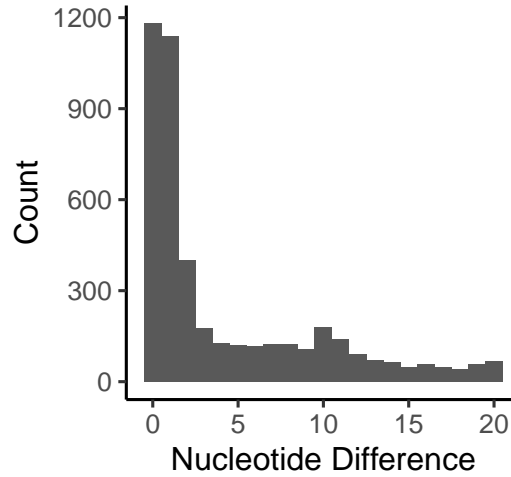
IGHV2-70*12

11 sequences assigned
No exact matches.



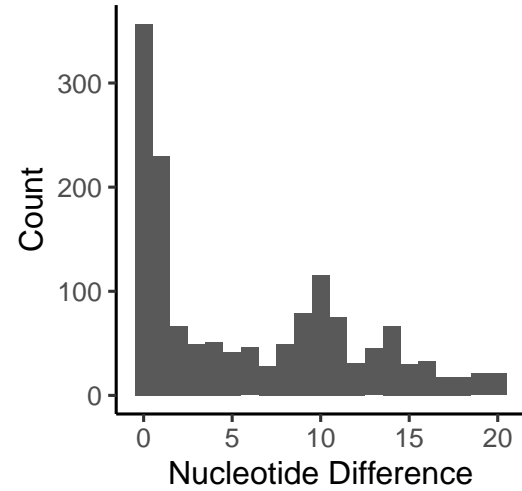
IGHV3-9*01

6715 sequences assigned
1181 (17.6%) exact matches, in which:
708 unique CDR3
6 unique J



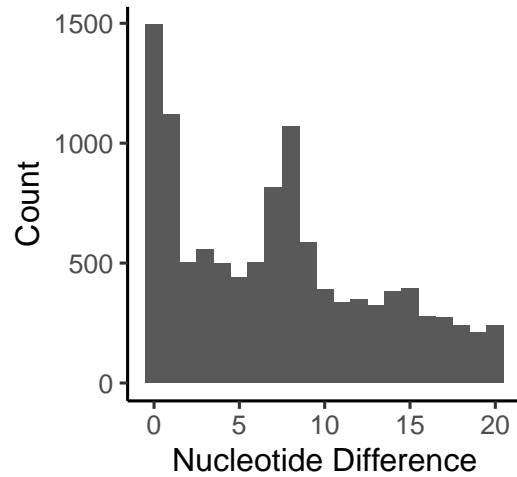
IGHV3-13*01

1559 sequences assigned
357 (22.9%) exact matches, in which:
242 unique CDR3
6 unique J



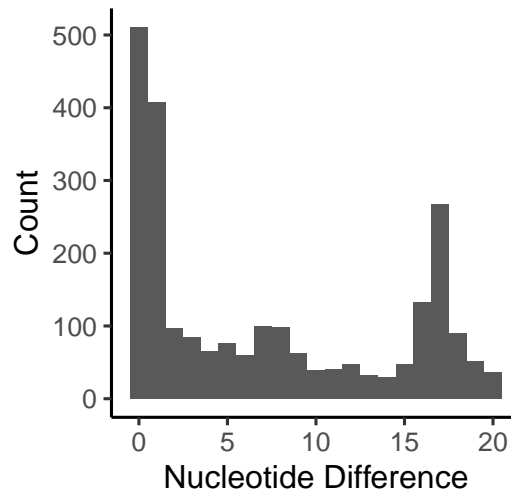
IGHV3-7*01

17396 sequences assigned
1494 (8.6%) exact matches, in which:
1024 unique CDR3
6 unique J



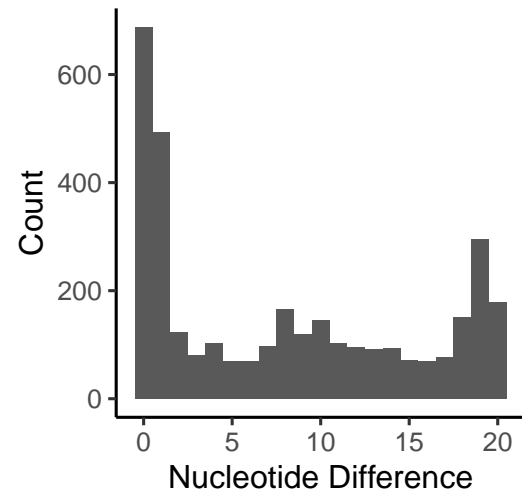
IGHV3-11*01

3768 sequences assigned
511 (13.6%) exact matches, in which:
342 unique CDR3
6 unique J



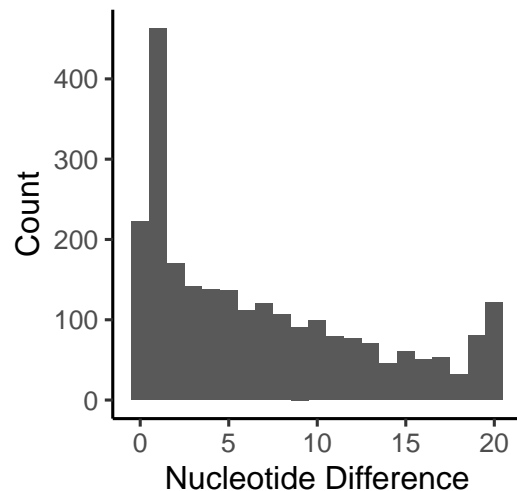
IGHV3-15*01_02

3883 sequences assigned
688 (17.7%) exact matches, in which:
419 unique CDR3
6 unique J



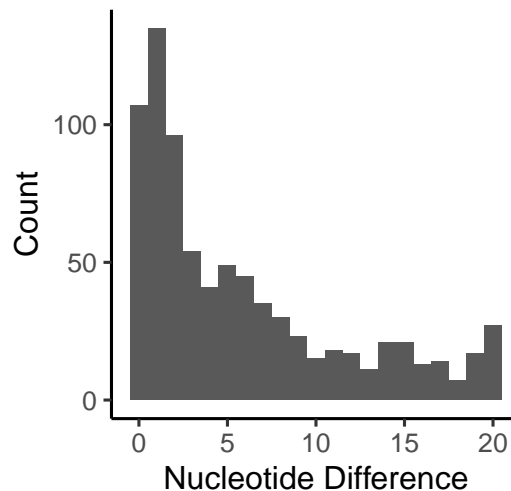
IGHV3-7*03

3173 sequences assigned
222 (7%) exact matches, in which:
138 unique CDR3
5 unique J



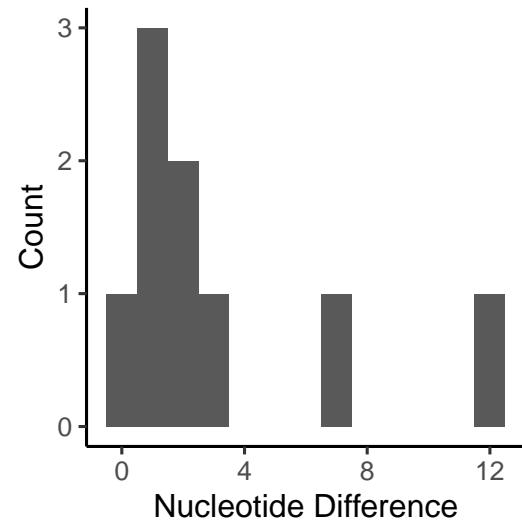
IGHV3-11*04

954 sequences assigned
107 (11.2%) exact matches, in which:
105 unique CDR3
5 unique J



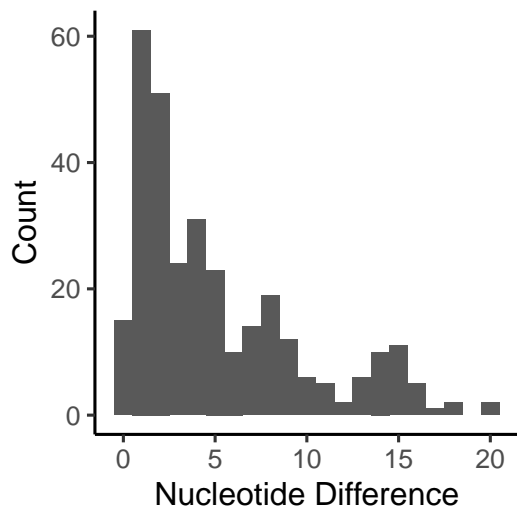
IGHV3-19*01

9 sequences assigned
1 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



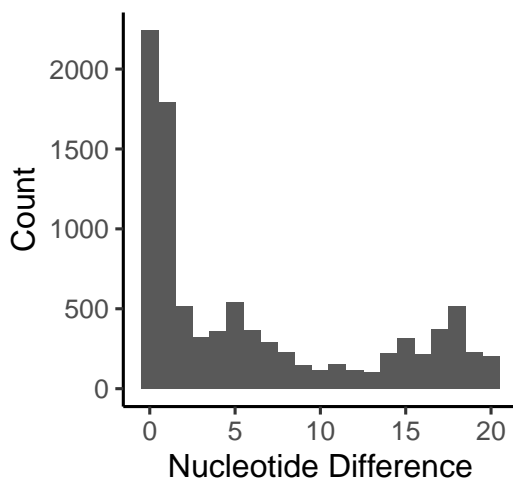
IGHV3-20*03_04

413 sequences assigned
15 (3.6%) exact matches, in which:
14 unique CDR3
4 unique J



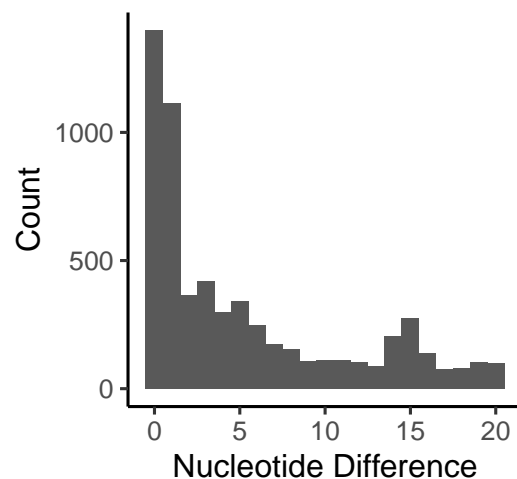
IGHV3-21*01_02

10442 sequences assigned
2242 (21.5%) exact matches, in which:
1432 unique CDR3
6 unique J



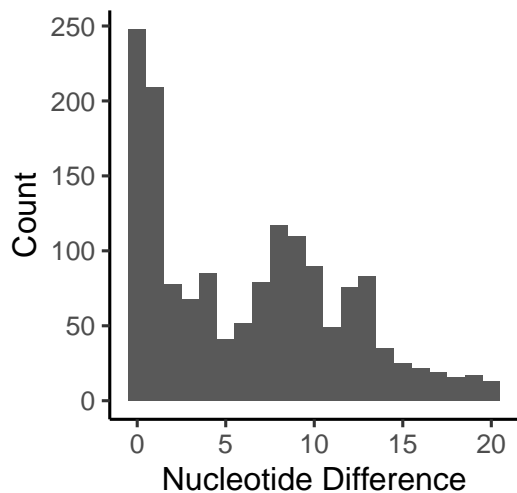
IGHV3-30-3*01

6496 sequences assigned
1398 (21.5%) exact matches, in which:
947 unique CDR3
6 unique J



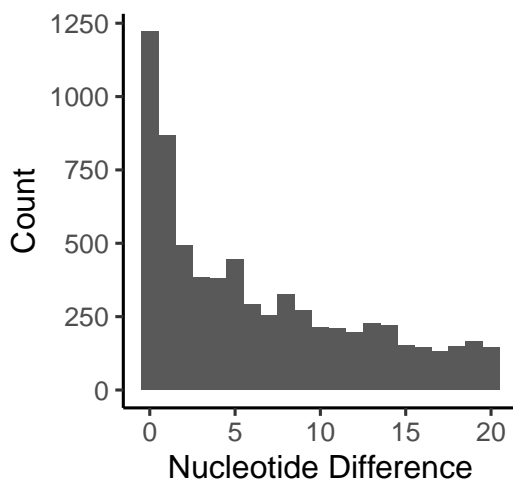
IGHV3-20*03_04_A104G

1581 sequences assigned
248 (15.7%) exact matches, in which:
157 unique CDR3
6 unique J



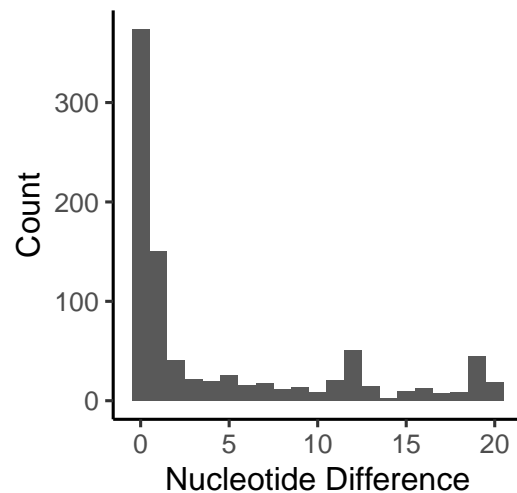
IGHV3-23*03

8125 sequences assigned
1221 (15%) exact matches, in which:
821 unique CDR3
6 unique J



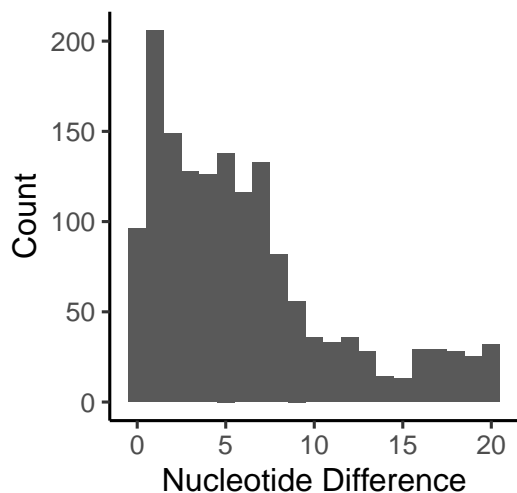
IGHV3-30*03

1184 sequences assigned
374 (31.6%) exact matches, in which:
338 unique CDR3
6 unique J



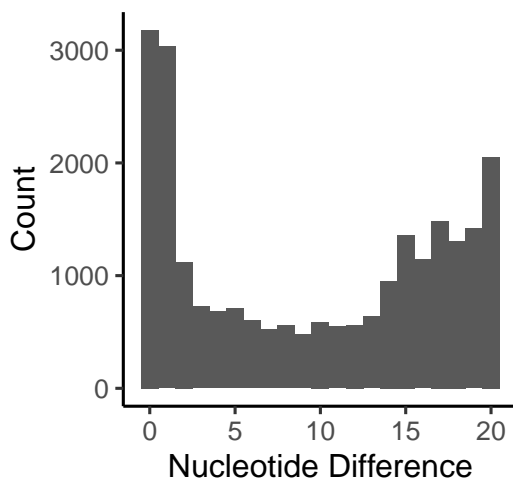
IGHV3-21*04

1692 sequences assigned
96 (5.7%) exact matches, in which:
94 unique CDR3
5 unique J



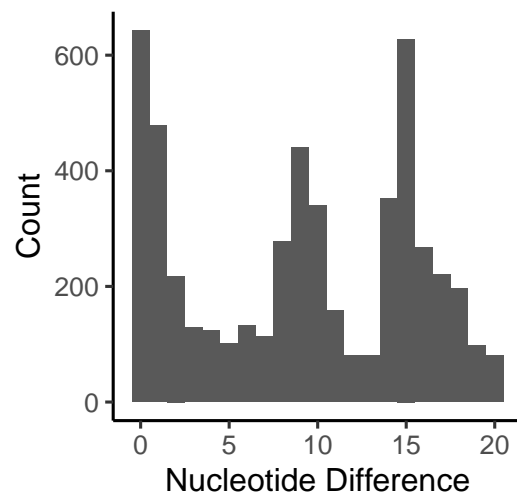
IGHV3-23*01_04

37162 sequences assigned
3179 (8.6%) exact matches, in which:
1861 unique CDR3
6 unique J



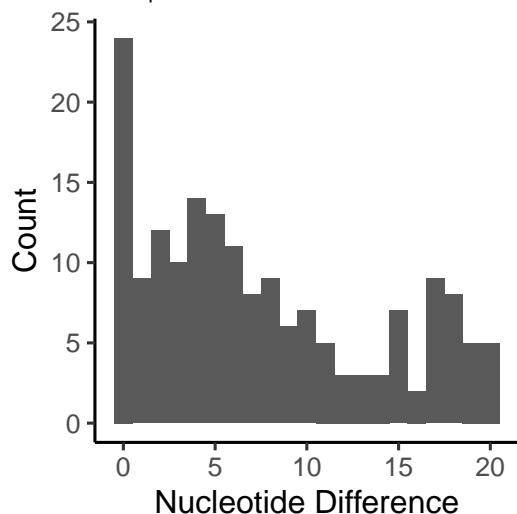
IGHV3-33*01

5677 sequences assigned
643 (11.3%) exact matches, in which:
452 unique CDR3
6 unique J



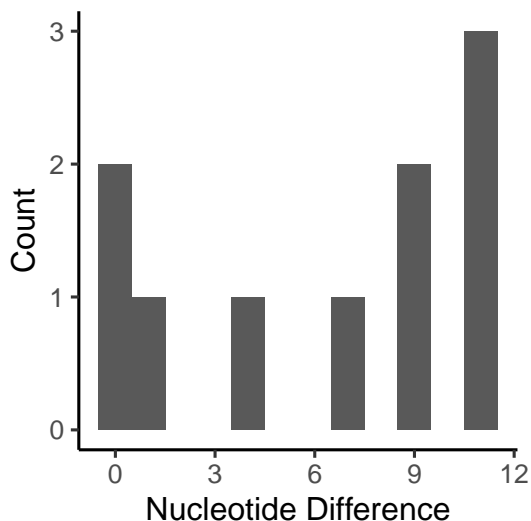
IGHV3-33*05

263 sequences assigned
24 (9.1%) exact matches, in which:
24 unique CDR3
2 unique J



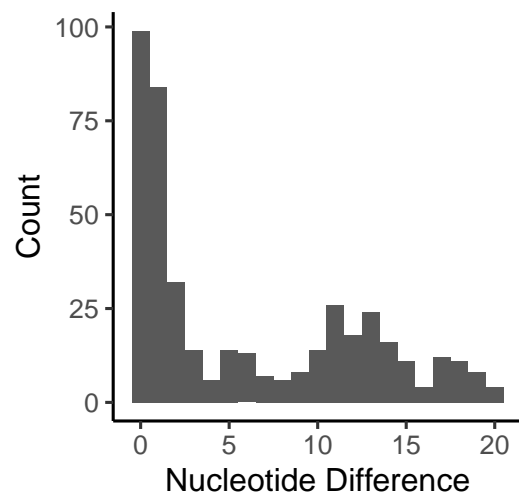
IGHV3-35*01

10 sequences assigned
2 (20%) exact matches, in which:
2 unique CDR3
2 unique J



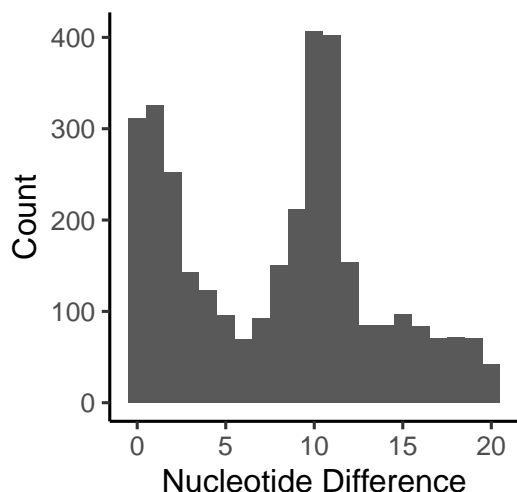
IGHV3-43*01

525 sequences assigned
99 (18.9%) exact matches, in which:
57 unique CDR3
5 unique J



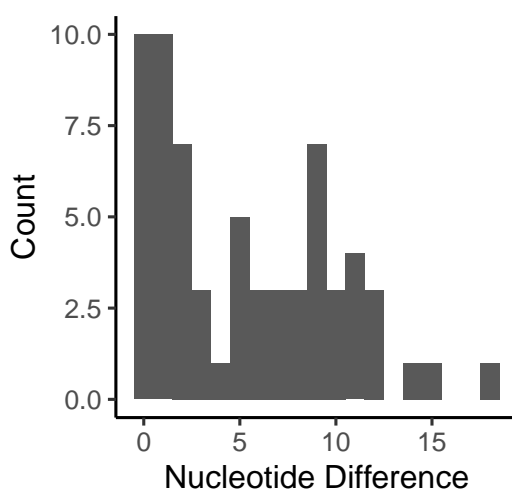
IGHV3-33*06

3529 sequences assigned
312 (8.8%) exact matches, in which:
206 unique CDR3
5 unique J



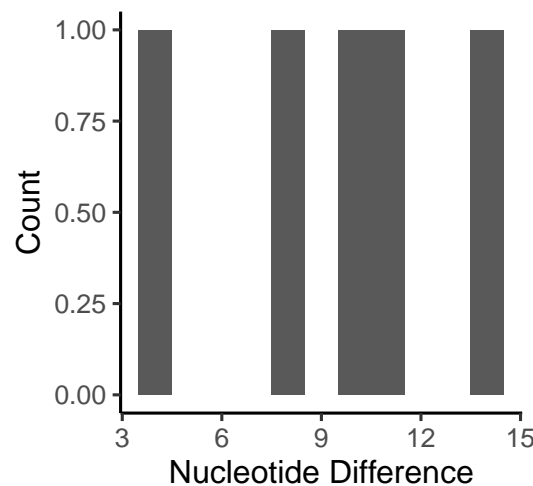
IGHV3-38-3*01

65 sequences assigned
10 (15.4%) exact matches, in which:
10 unique CDR3
4 unique J



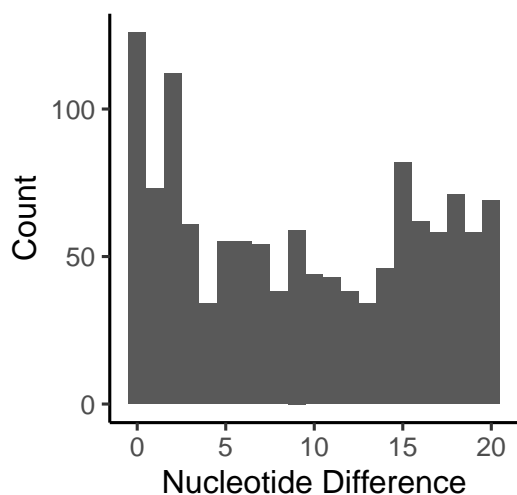
IGHV3-47*02

5 sequences assigned
No exact matches.



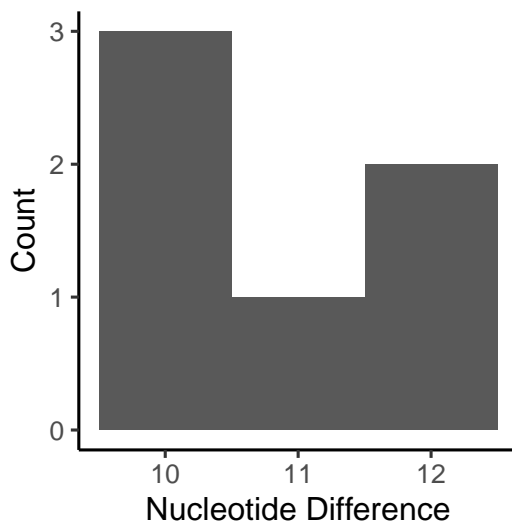
IGHV3-33*08

1571 sequences assigned
126 (8%) exact matches, in which:
99 unique CDR3
4 unique J



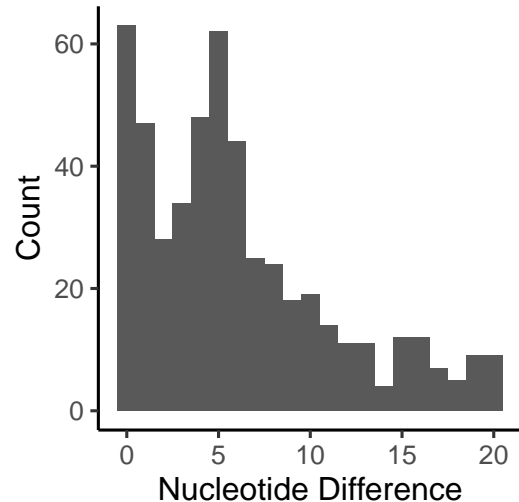
IGHV3-38*03

7 sequences assigned
No exact matches.



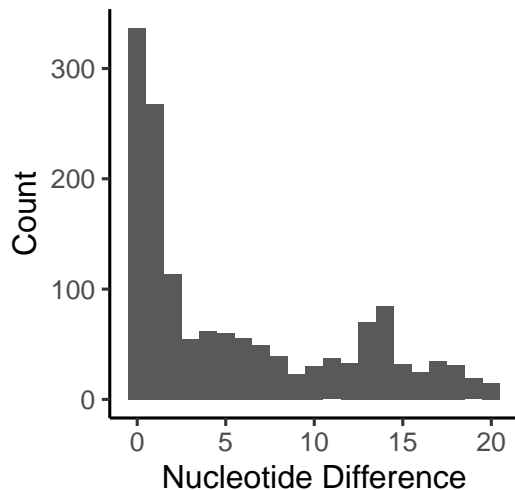
IGHV3-48*01

608 sequences assigned
63 (10.4%) exact matches, in which:
62 unique CDR3
6 unique J



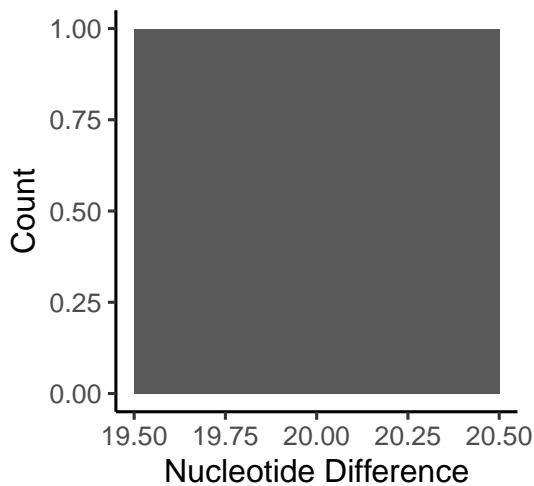
IGHV3-48*02

2747 sequences assigned
337 (12.3%) exact matches, in which:
227 unique CDR3
6 unique J



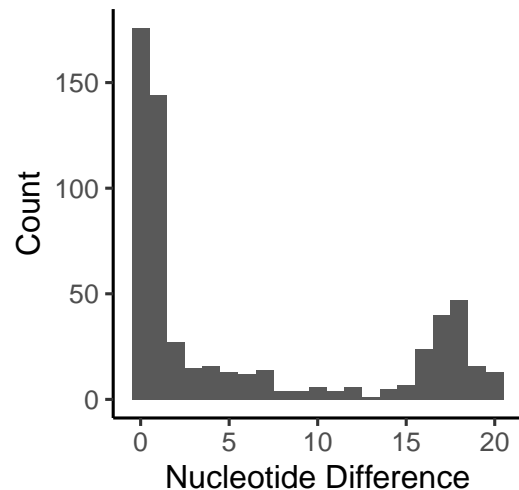
IGHV3-52*01_03

2 sequences assigned
No exact matches.



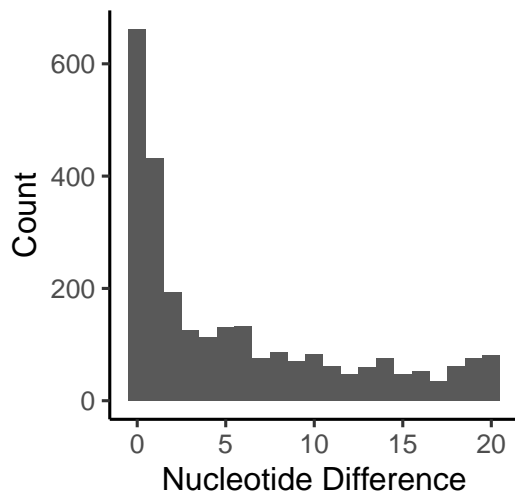
IGHV3-64*01

926 sequences assigned
176 (19%) exact matches, in which:
119 unique CDR3
6 unique J



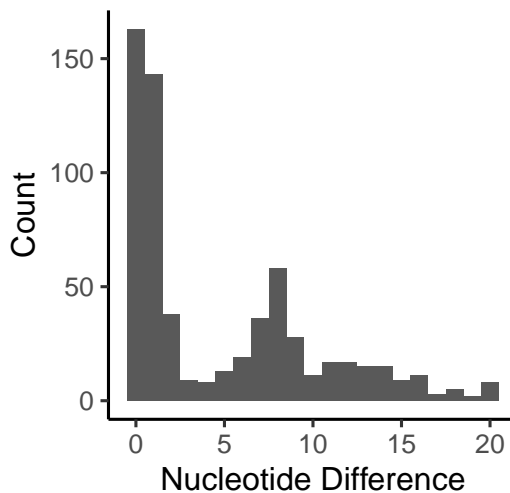
IGHV3-48*04

3485 sequences assigned
662 (19%) exact matches, in which:
465 unique CDR3
6 unique J



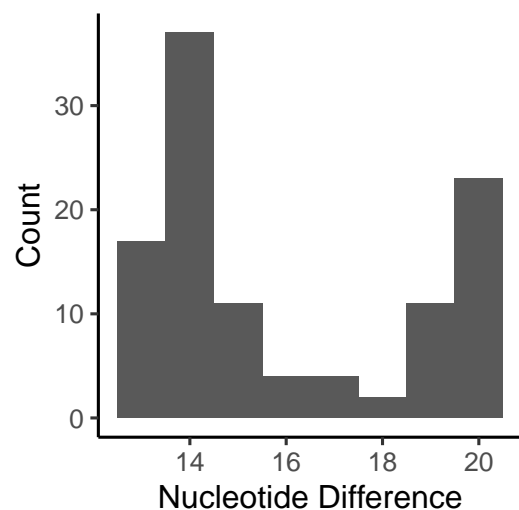
IGHV3-53*04

812 sequences assigned
163 (20.1%) exact matches, in which:
117 unique CDR3
6 unique J



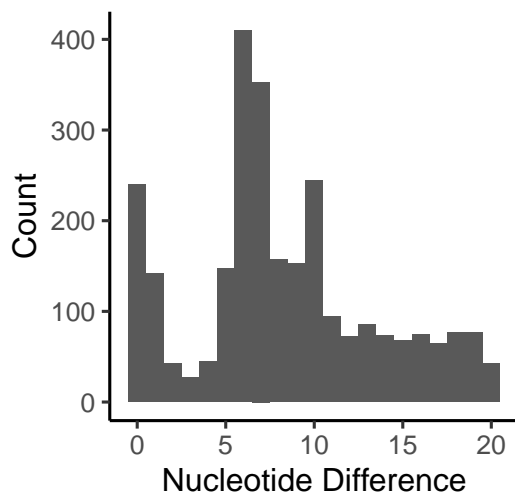
IGHV3-64*02_07

329 sequences assigned
No exact matches.



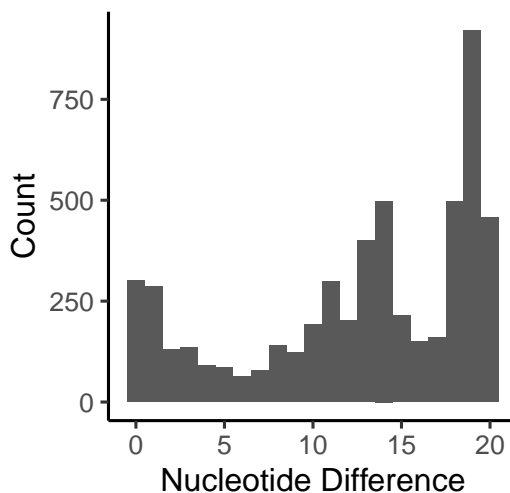
IGHV3-49*03_05

2898 sequences assigned
240 (8.3%) exact matches, in which:
150 unique CDR3
6 unique J



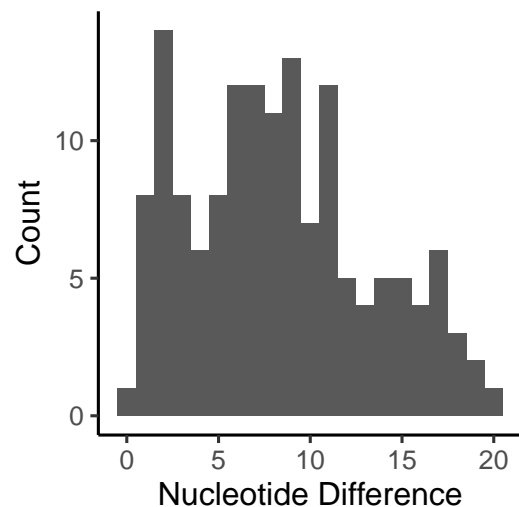
IGHV3-53*01_02

6592 sequences assigned
300 (4.6%) exact matches, in which:
218 unique CDR3
6 unique J



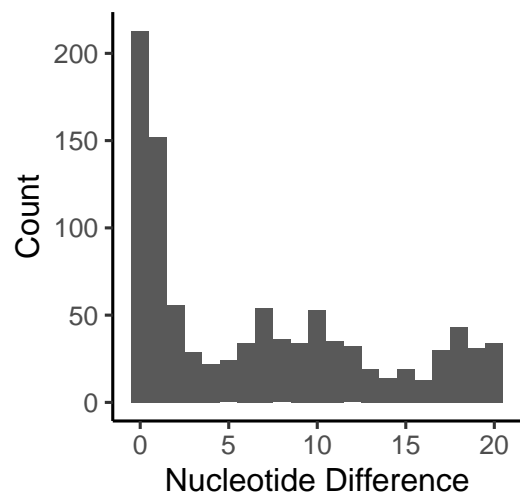
IGHV3-66*01

167 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



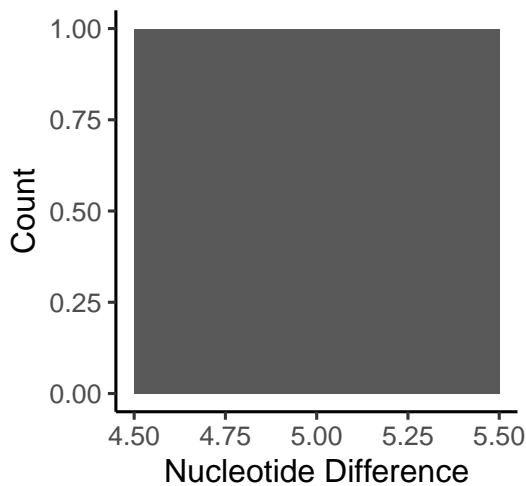
IGHV3-66*02

1103 sequences assigned
213 (19.3%) exact matches, in which:
149 unique CDR3
5 unique J



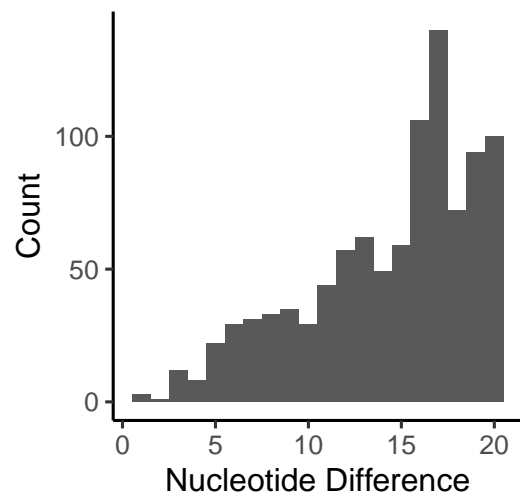
IGHV3-71*01_04

1 sequences assigned
No exact matches.



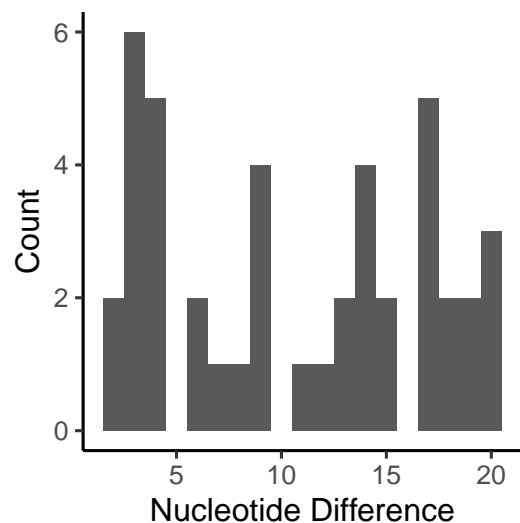
IGHV3-74*03

1269 sequences assigned
No exact matches.



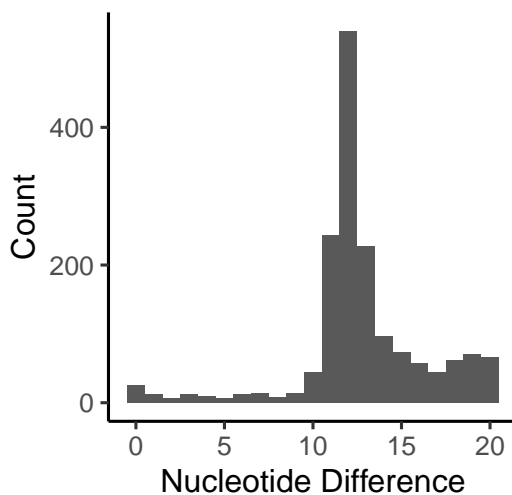
IGHV3-69-1*01

232 sequences assigned
No exact matches.



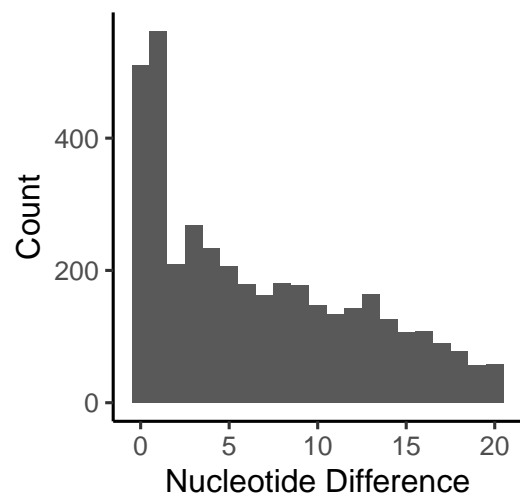
IGHV3-72*01

1993 sequences assigned
25 (1.3%) exact matches, in which:
18 unique CDR3
5 unique J



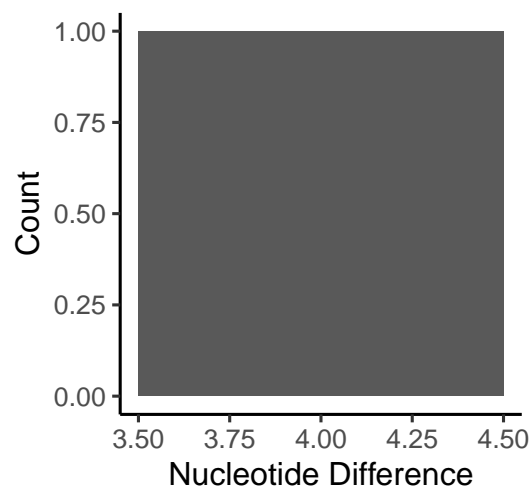
IGHV3-74*01_02

4194 sequences assigned
511 (12.2%) exact matches, in which:
346 unique CDR3
6 unique J



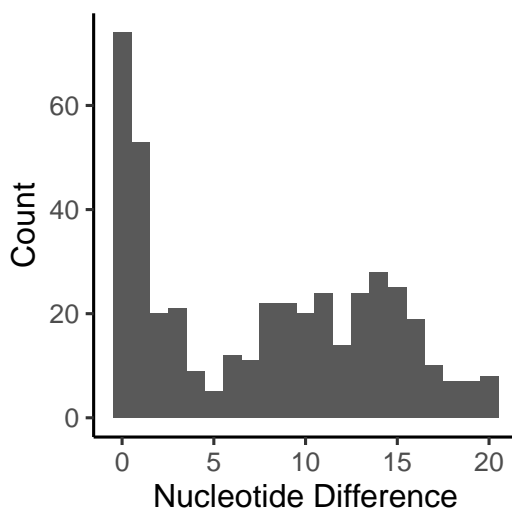
IGHV3-71*03

1 sequences assigned
No exact matches.



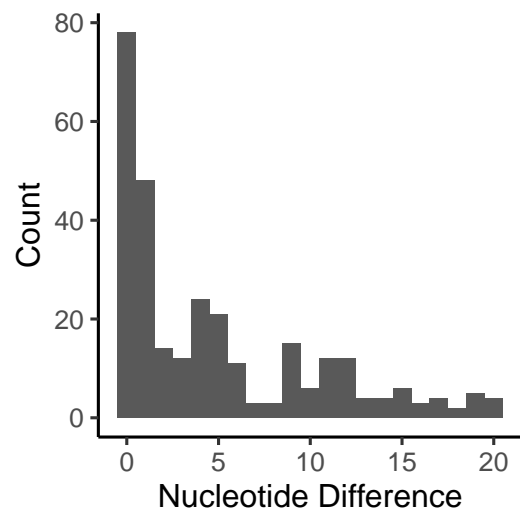
IGHV3-73*01_02

468 sequences assigned
74 (15.8%) exact matches, in which:
49 unique CDR3
4 unique J



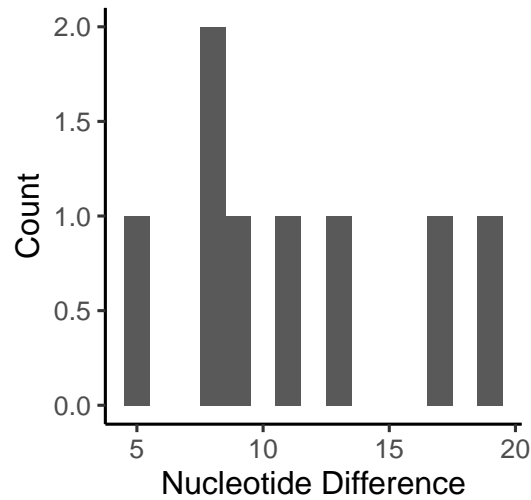
IGHV3-43D*03

295 sequences assigned
78 (26.4%) exact matches, in which:
47 unique CDR3
6 unique J



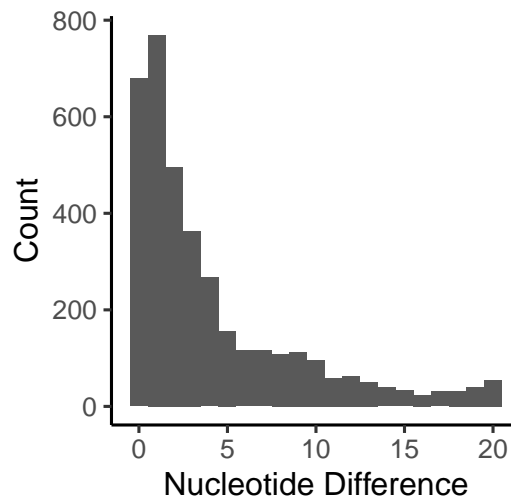
IGHV3-64D*06

37 sequences assigned
No exact matches.



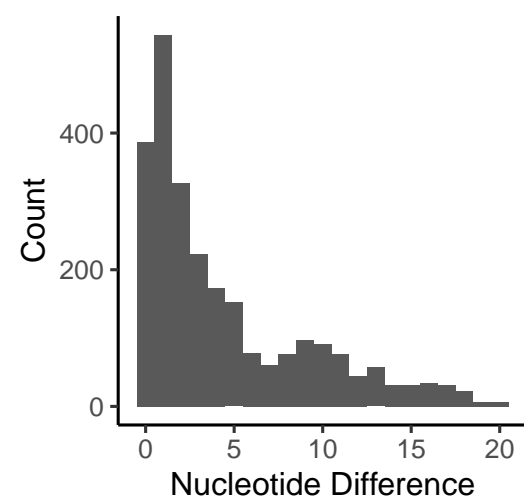
IGHV4-4*02_03

3970 sequences assigned
679 (17.1%) exact matches, in which:
520 unique CDR3
6 unique J



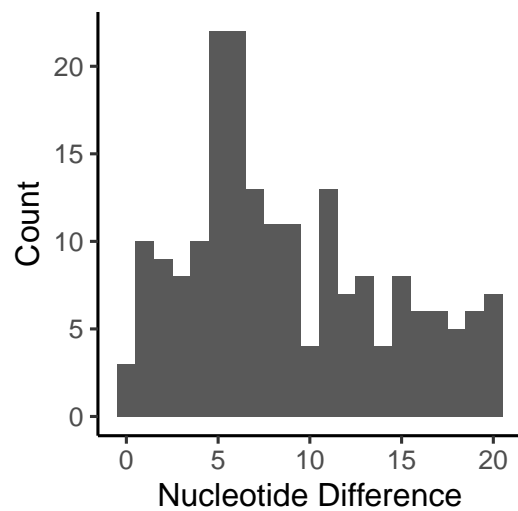
IGHV4-30-4*01

2748 sequences assigned
387 (14.1%) exact matches, in which:
321 unique CDR3
6 unique J



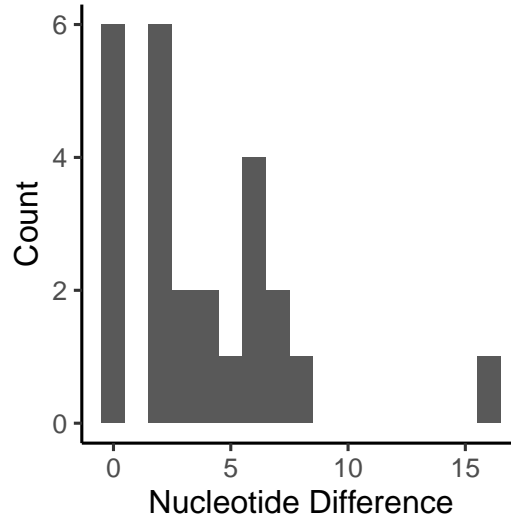
IGHV3-NL1*01

230 sequences assigned
3 (1.3%) exact matches, in which:
3 unique CDR3
2 unique J



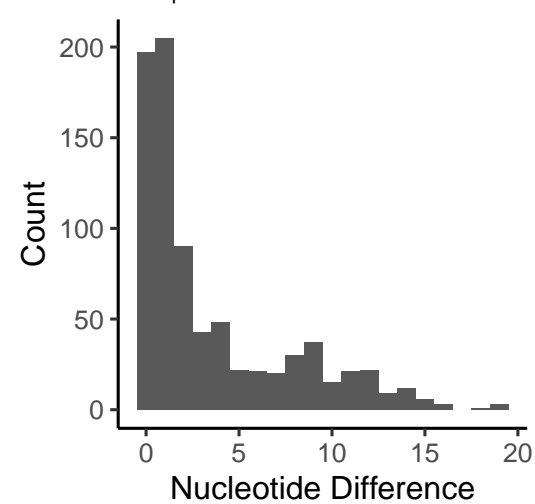
IGHV4-28*03

25 sequences assigned
6 (24%) exact matches, in which:
6 unique CDR3
4 unique J



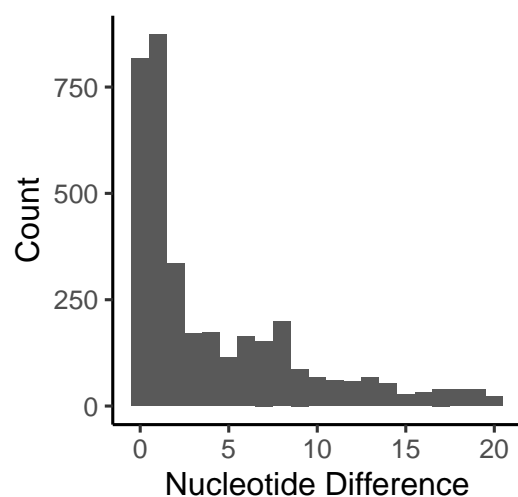
IGHV4-30-2*01

815 sequences assigned
197 (24.2%) exact matches, in which:
145 unique CDR3
6 unique J



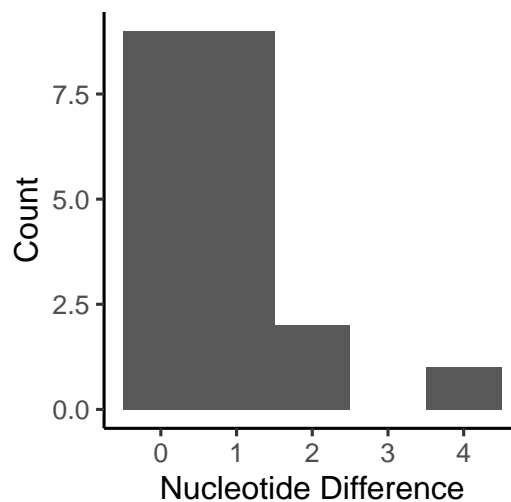
IGHV4-4*07

4134 sequences assigned
818 (19.8%) exact matches, in which:
686 unique CDR3
6 unique J



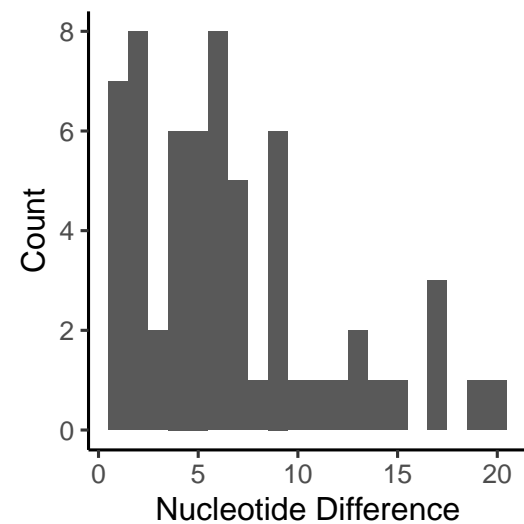
IGHV4-28*01_07

21 sequences assigned
9 (42.9%) exact matches, in which:
5 unique CDR3
3 unique J



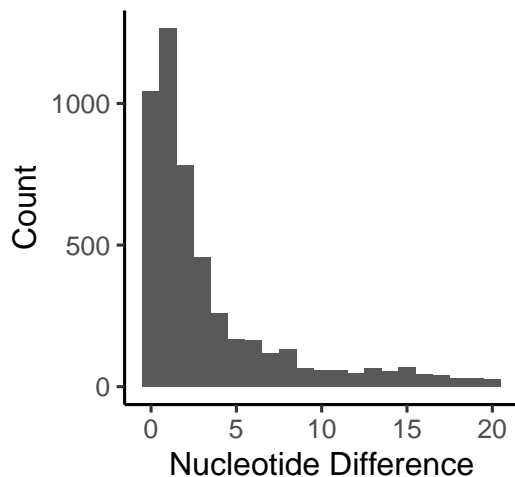
IGHV4-30-2*03

69 sequences assigned
No exact matches.



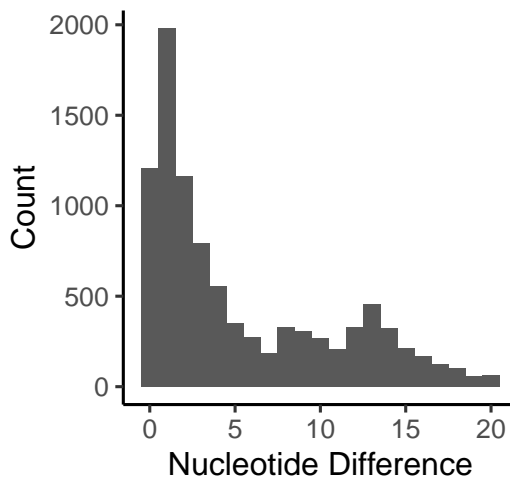
IGHV4-31*02

6033 sequences assigned
1044 (17.3%) exact matches, in which:
853 unique CDR3
6 unique J



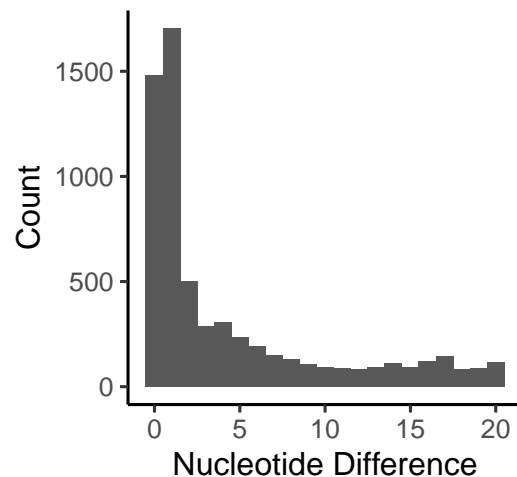
IGHV4-39*07

11390 sequences assigned
1210 (10.6%) exact matches, in which:
946 unique CDR3
6 unique J



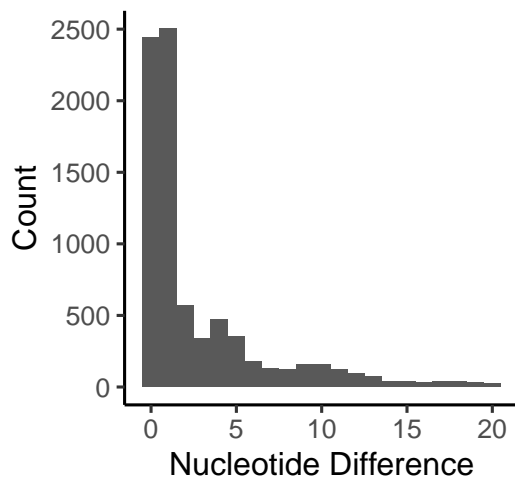
IGHV4-59*01_07

8235 sequences assigned
1480 (18%) exact matches, in which:
1188 unique CDR3
6 unique J



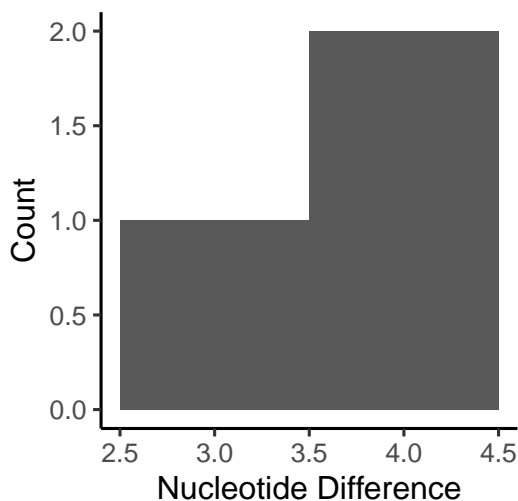
IGHV4-34*01_02

8864 sequences assigned
2442 (27.5%) exact matches, in which:
1645 unique CDR3
6 unique J



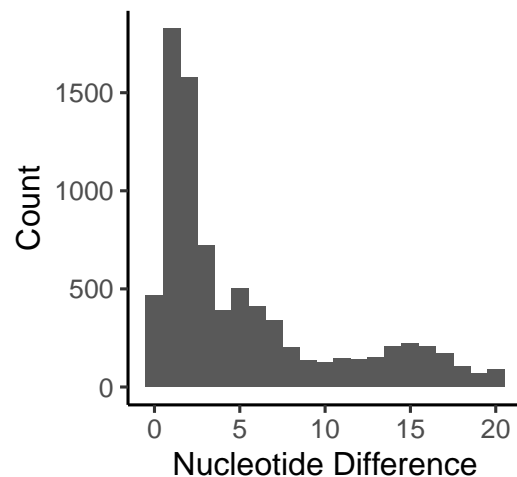
IGHV4-55*09

3 sequences assigned
No exact matches.



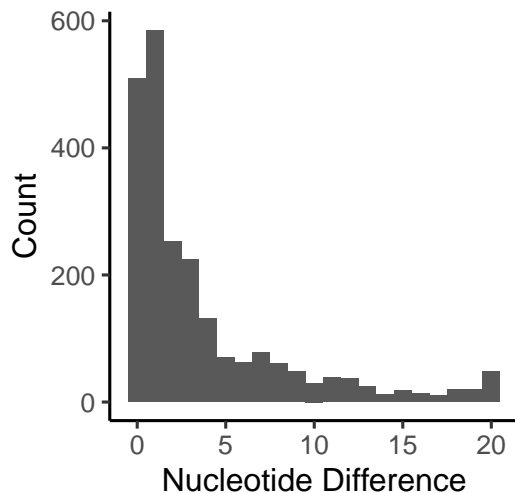
IGHV4-59*12

9045 sequences assigned
466 (5.2%) exact matches, in which:
443 unique CDR3
6 unique J



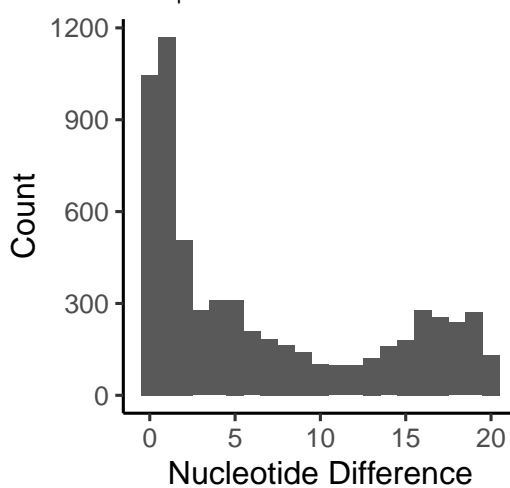
IGHV4-38-2*02

2691 sequences assigned
509 (18.9%) exact matches, in which:
445 unique CDR3
6 unique J



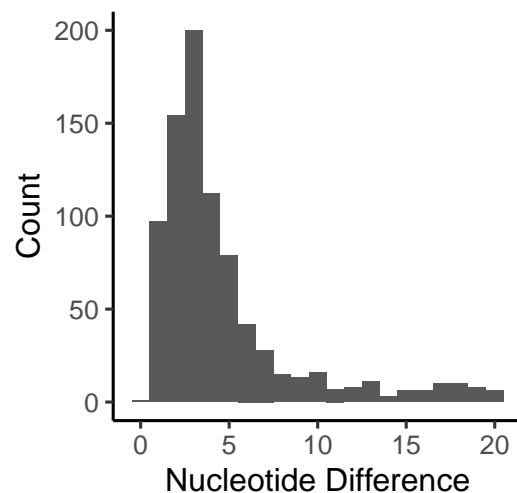
IGHV4-59*08

7663 sequences assigned
1046 (13.7%) exact matches, in which:
827 unique CDR3
6 unique J



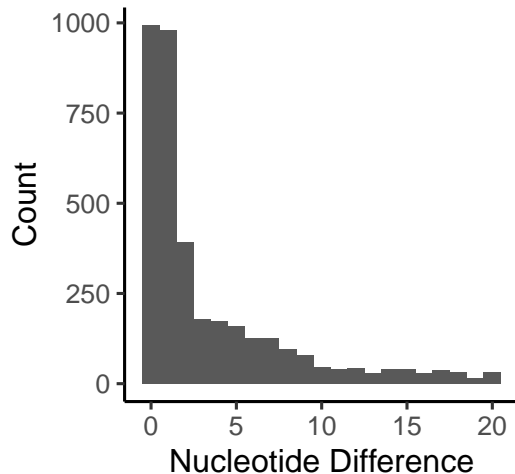
IGHV4-61*01

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



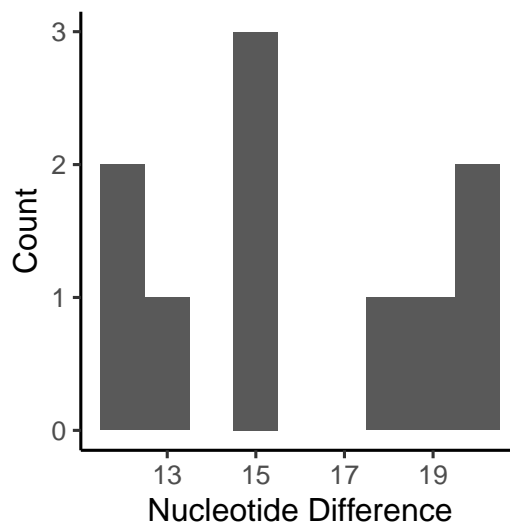
IGHV4-61*02

4137 sequences assigned
993 (24%) exact matches, in which:
833 unique CDR3
6 unique J



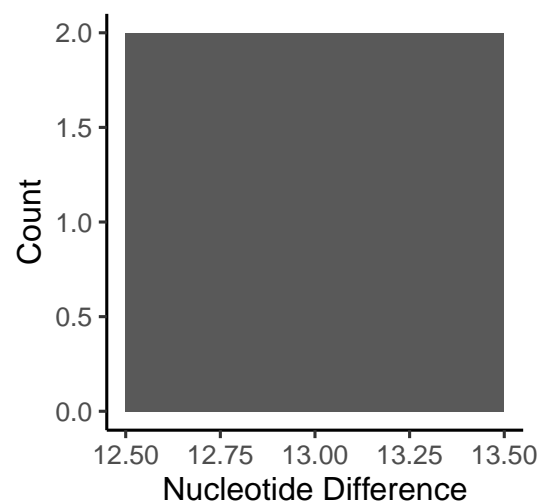
IGHV1/OR15-2*02_03

12 sequences assigned
No exact matches.



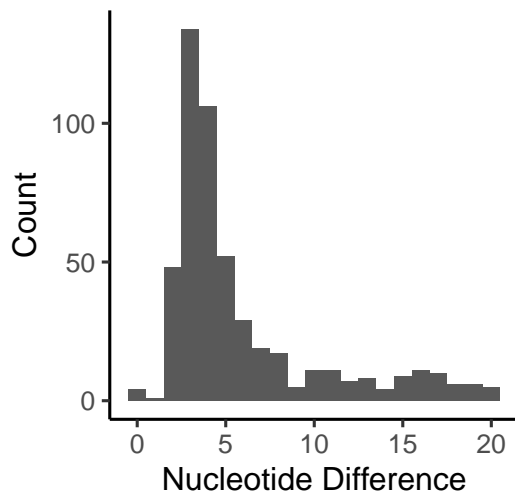
IGHV1/OR15-9*01

2 sequences assigned
No exact matches.



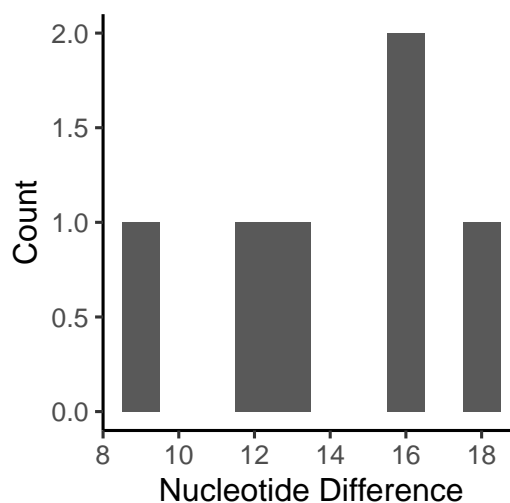
IGHV4-61*05

545 sequences assigned
4 (0.7%) exact matches, in which:
4 unique CDR3
2 unique J



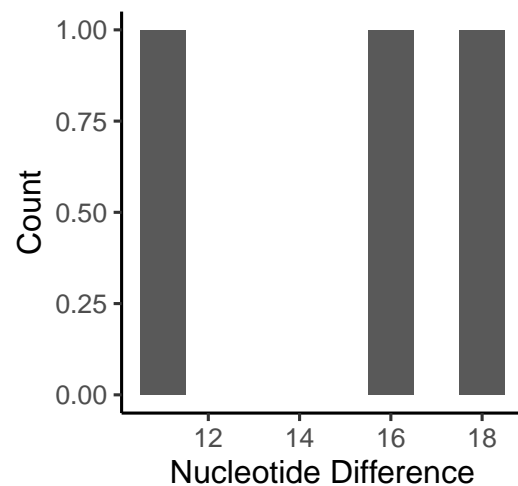
IGHV1/OR15-3*02

6 sequences assigned
No exact matches.



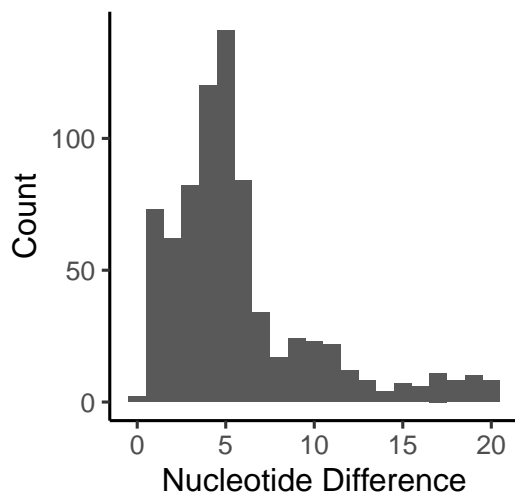
IGHV5-10-1*01_03

3 sequences assigned
No exact matches.



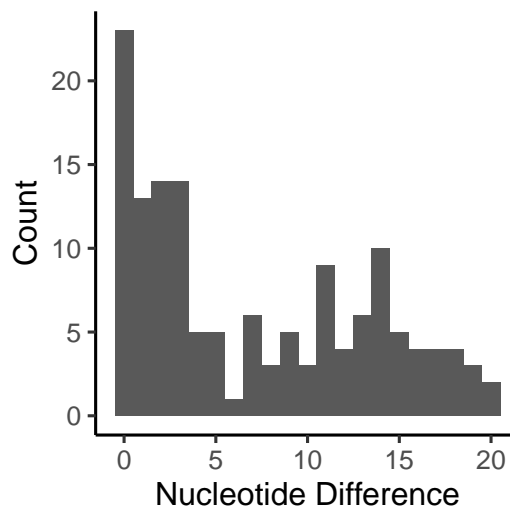
IGHV4-61*08

787 sequences assigned
2 (0.3%) exact matches, in which:
2 unique CDR3
1 unique J



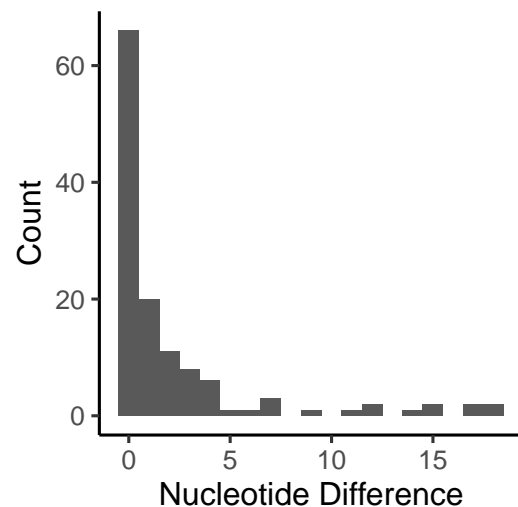
IGHV4/OR15-8*01_C193/

186 sequences assigned
23 (12.4%) exact matches, in which:
20 unique CDR3
5 unique J



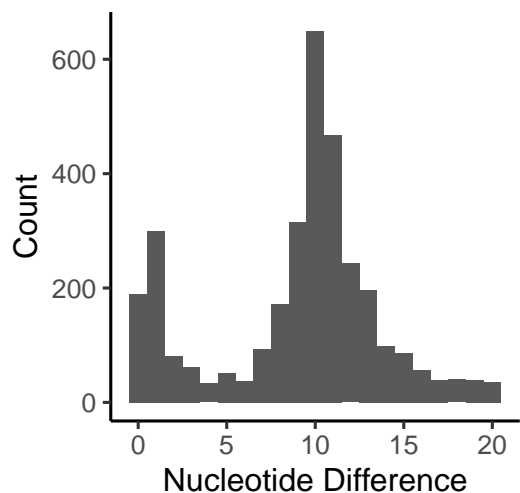
IGHV5-51*07

132 sequences assigned
66 (50%) exact matches, in which:
56 unique CDR3
5 unique J



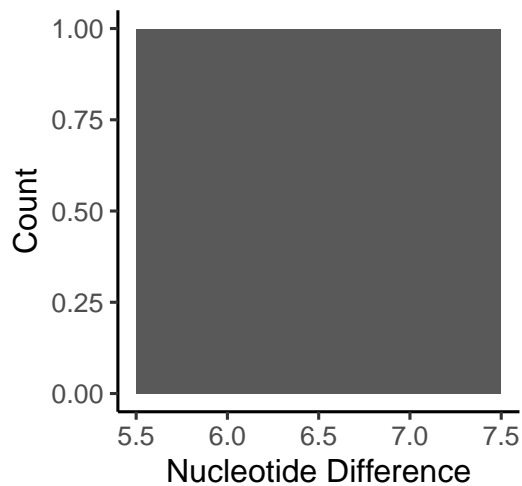
IGHV6-1*01_02

3470 sequences assigned
189 (5.4%) exact matches, in which:
153 unique CDR3
6 unique J



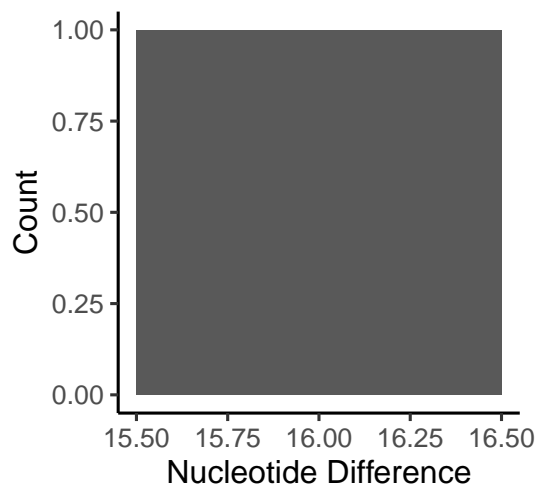
IGHV7-40*03

2 sequences assigned
No exact matches.



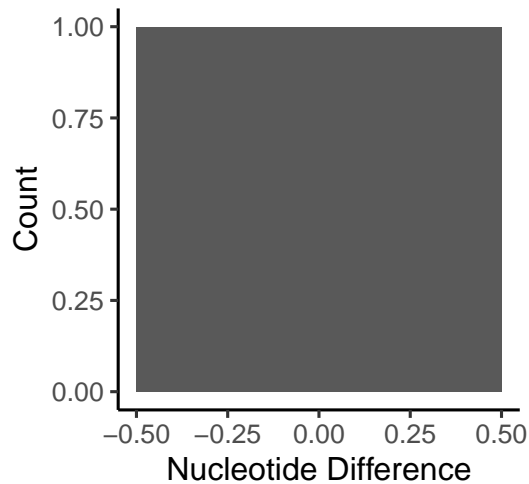
IGHV3/OR16-6*02

1 sequences assigned
No exact matches.

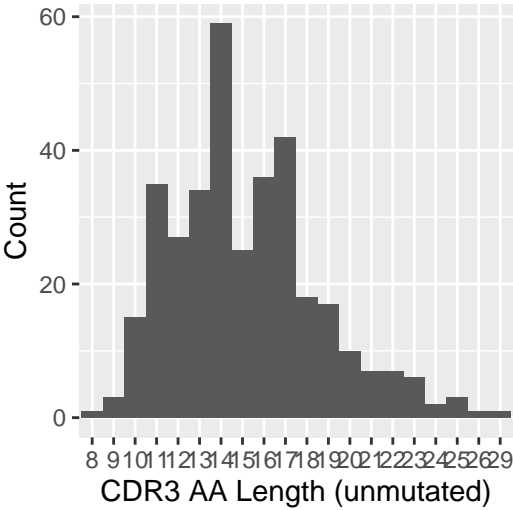


IGHV7-4-1*02

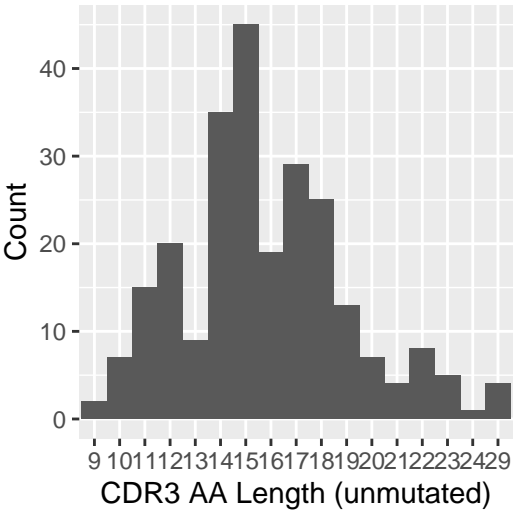
1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



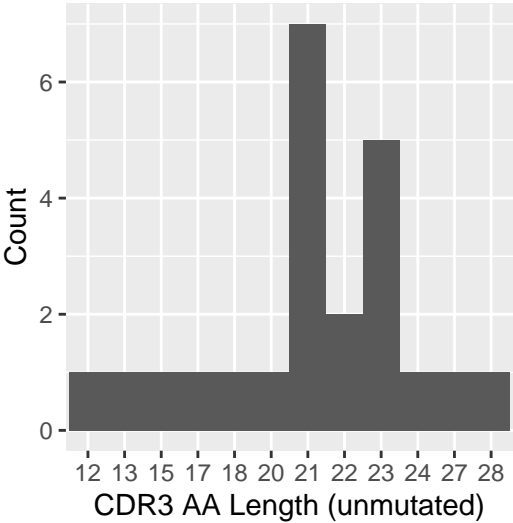
IGHV1-24*01_G278T



IGHV3-20*03_04_A104G



IGHV4/OR15-8*01_C193A





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