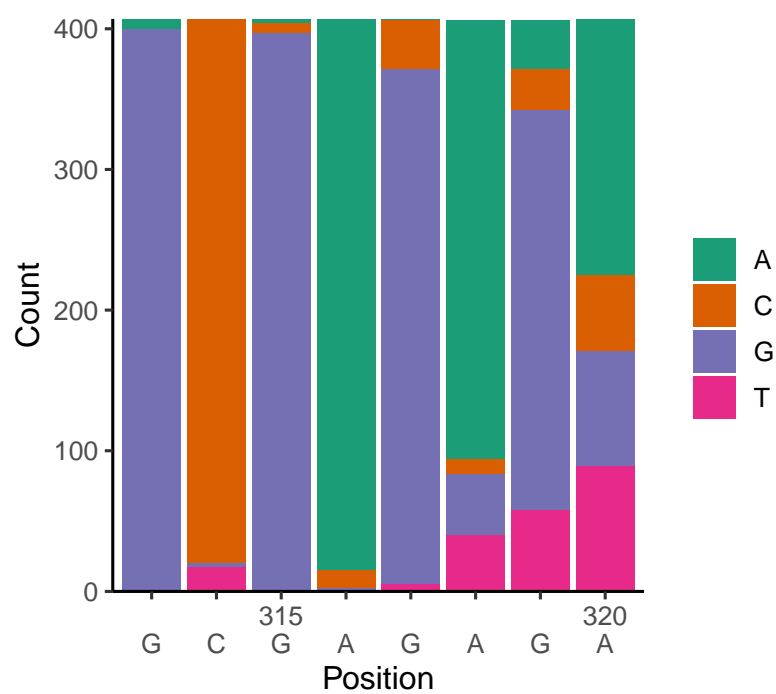
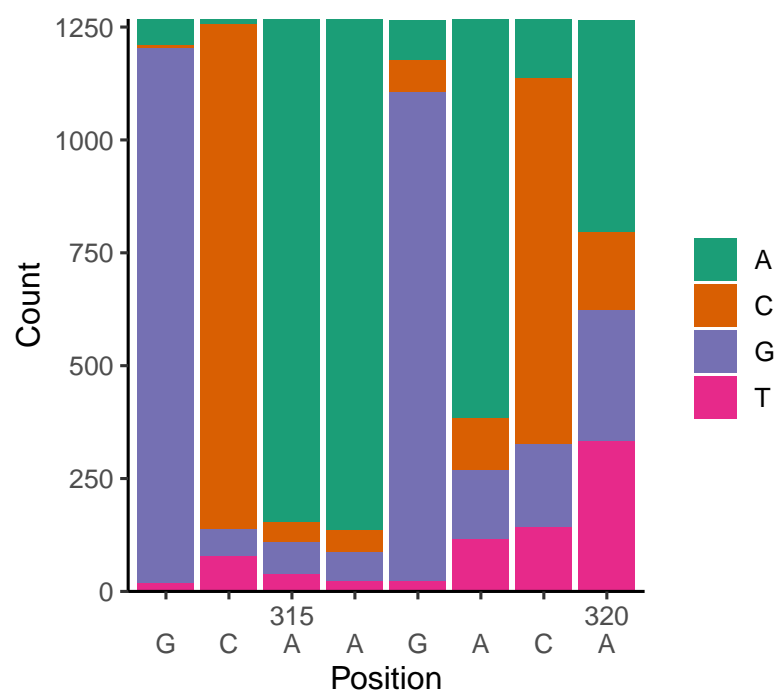


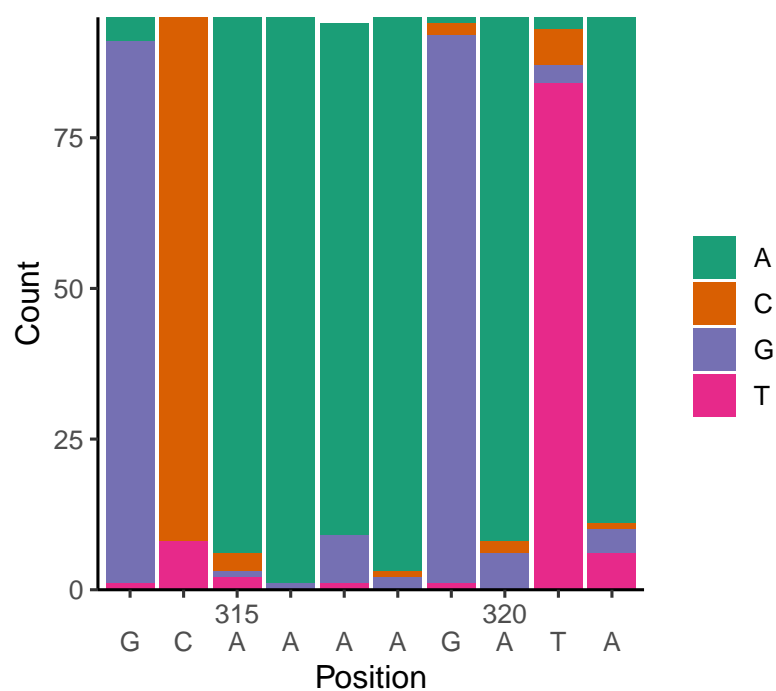
Gene IGHV1-18*01_A196G



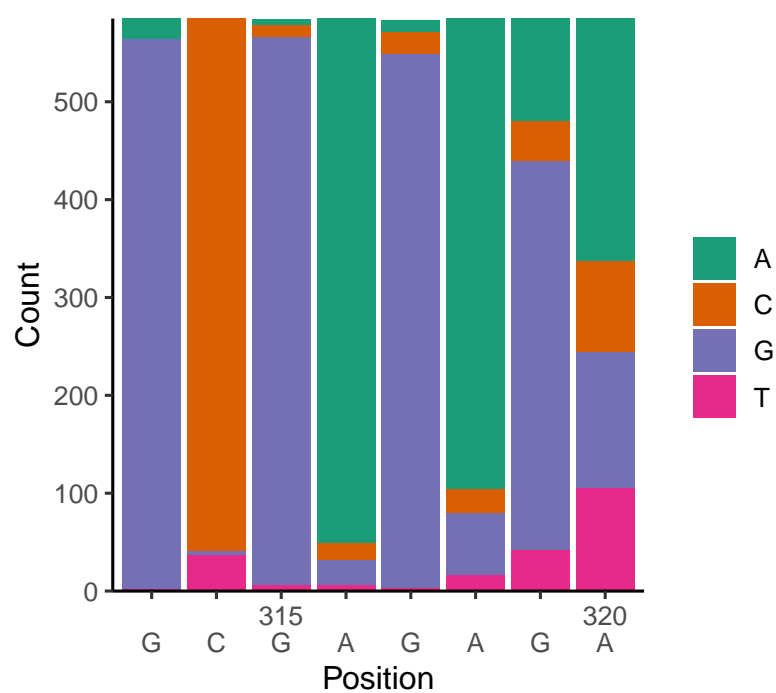
Gene IGHV4-39*01_G315A



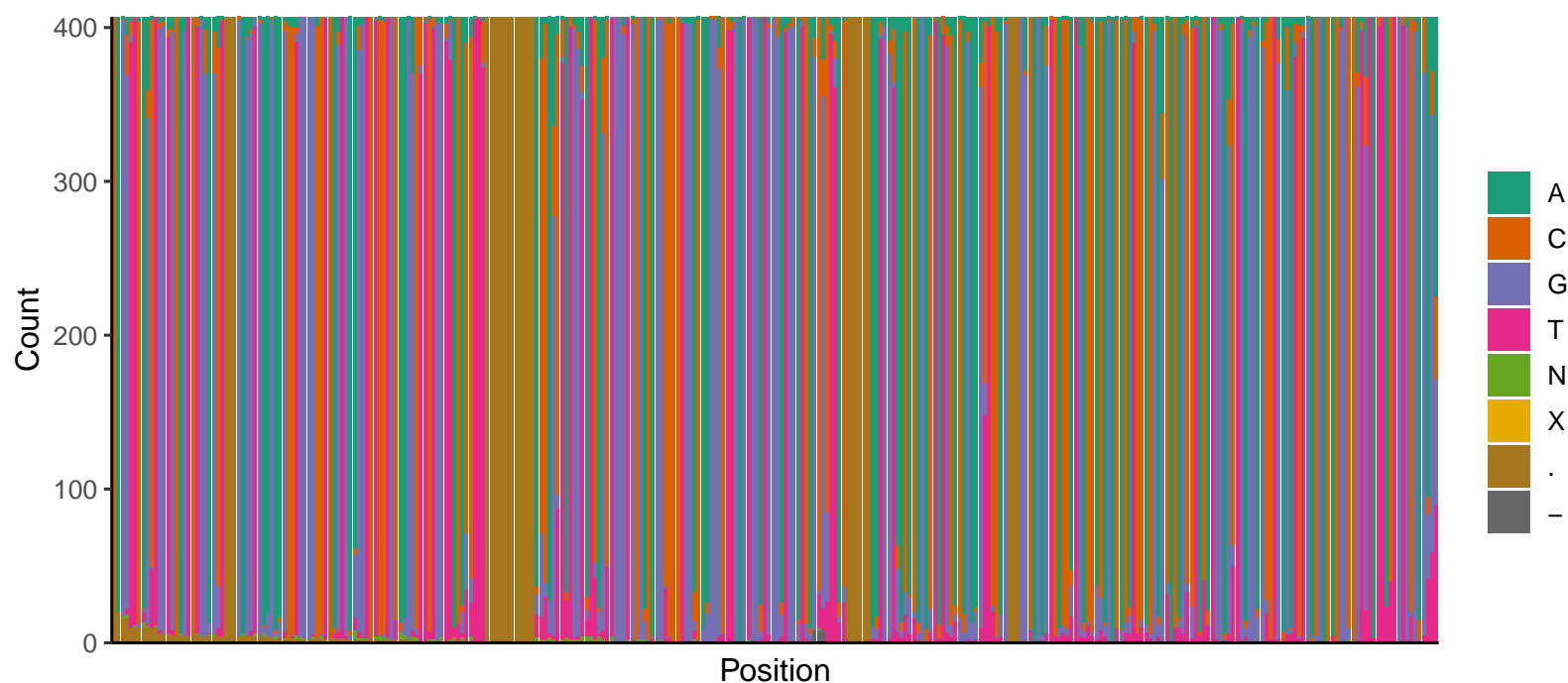
Gene IGHV3-43*01_T177A



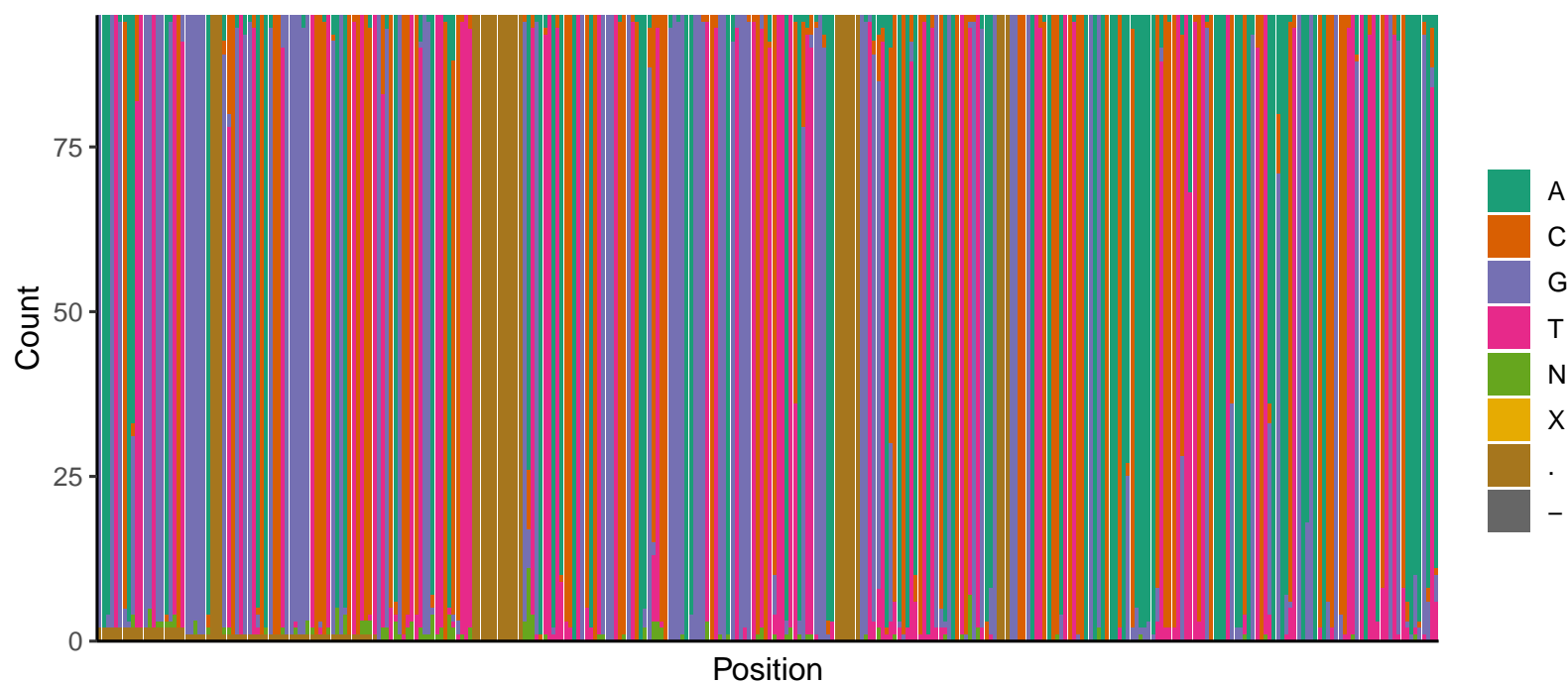
Gene IGHV4-38-2*02_A70G



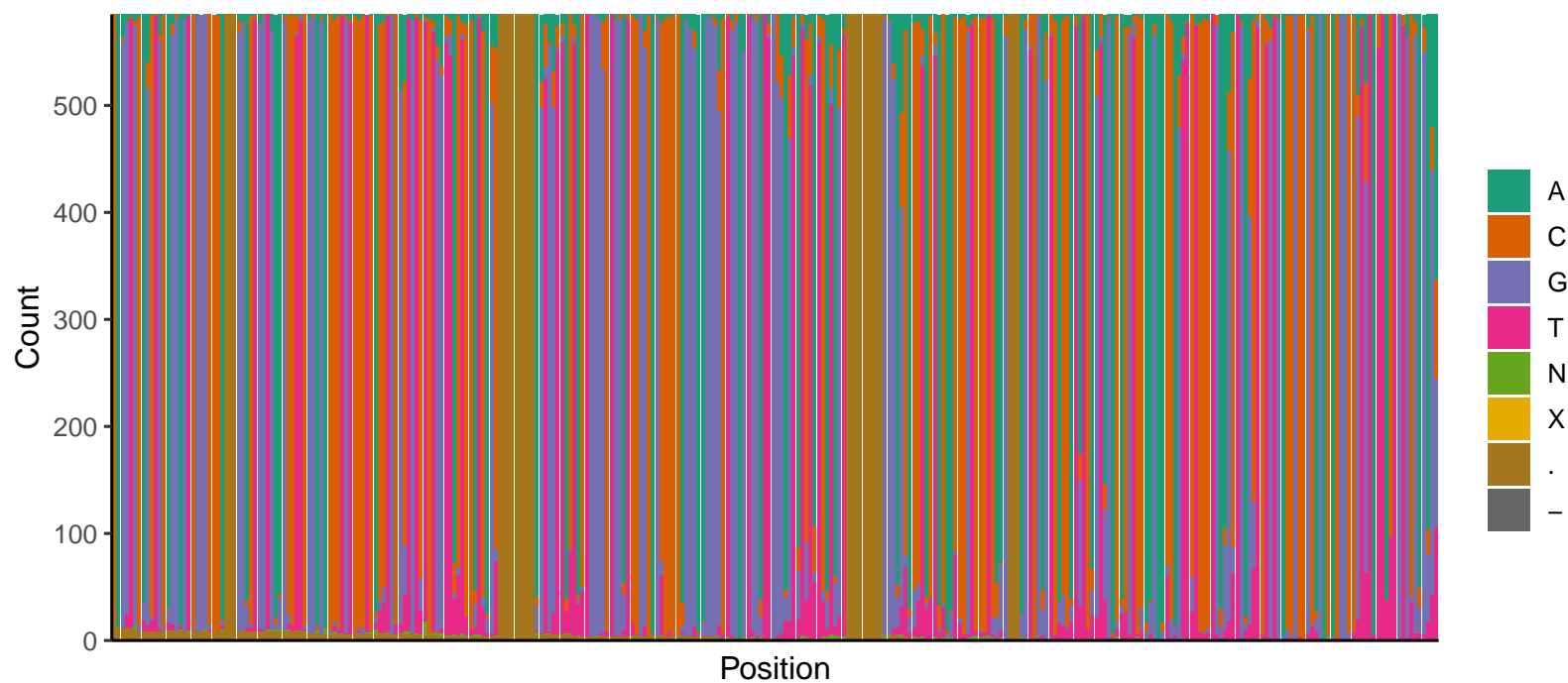
Gene IGHV1-18*01_A196G



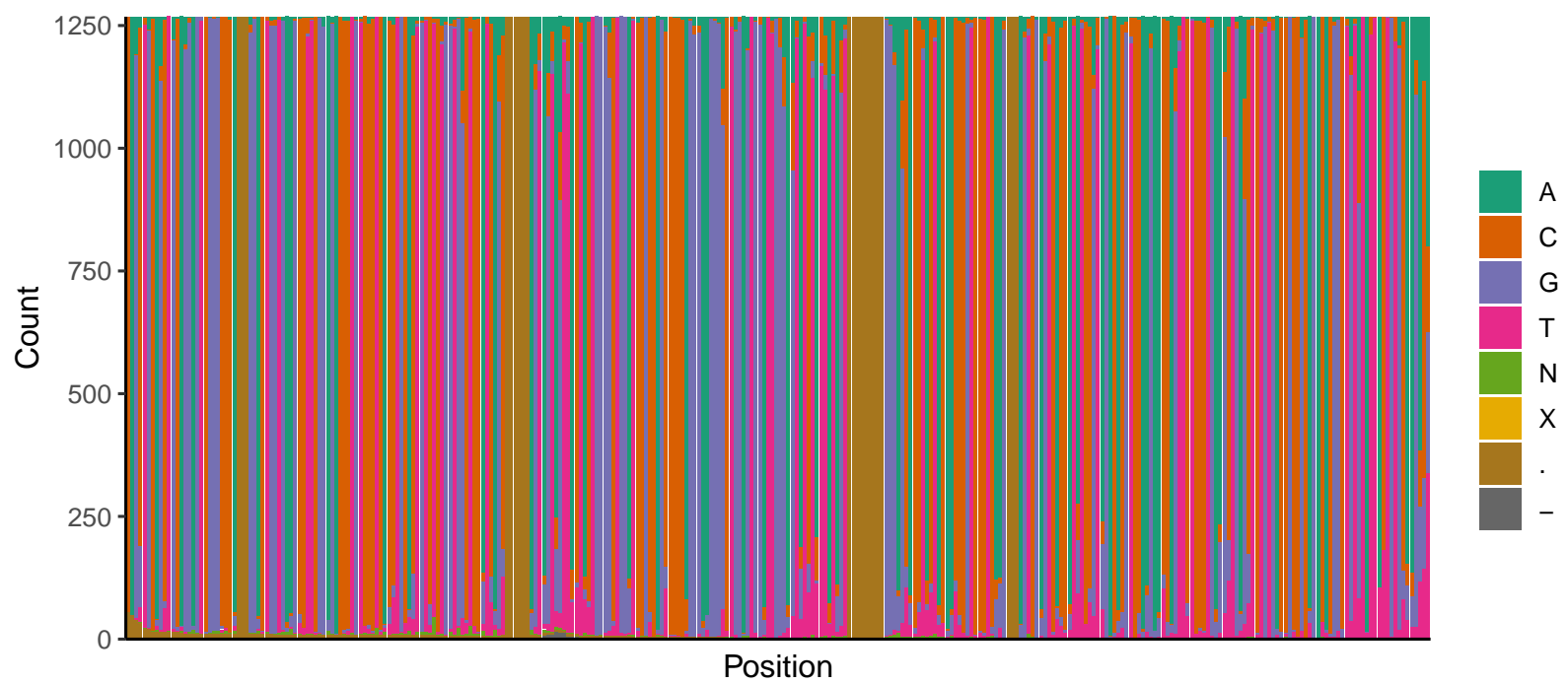
Gene IGHV3-43*01_T177A



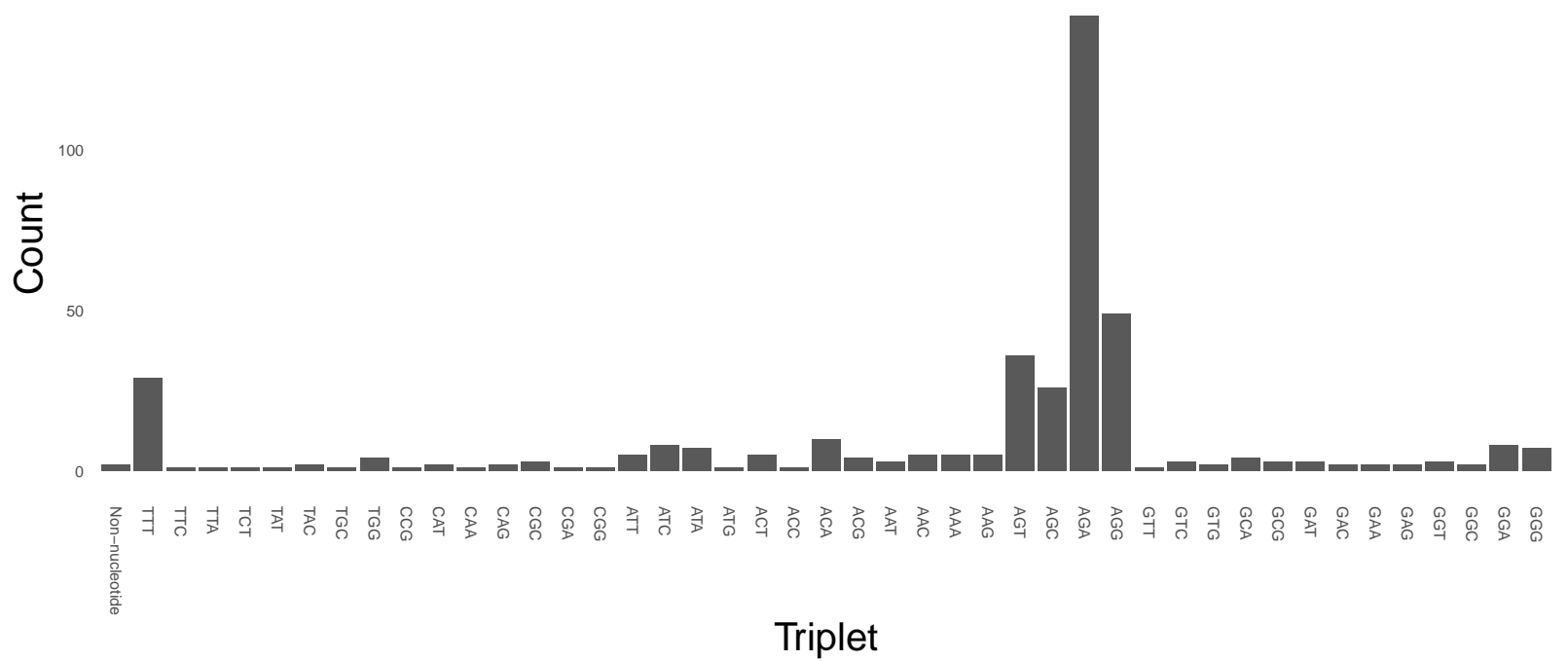
Gene IGHV4-38-2*02_A70G



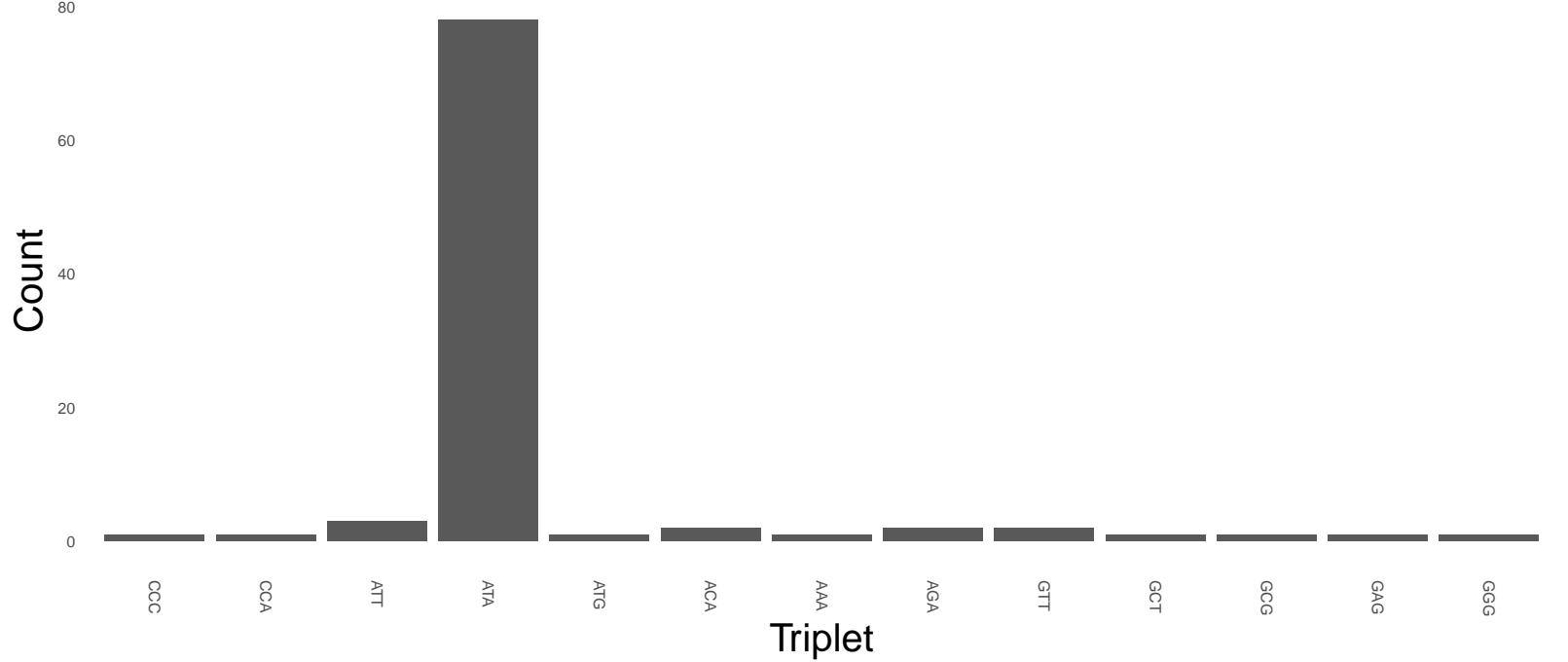
Gene IGHV4-39*01_G315A



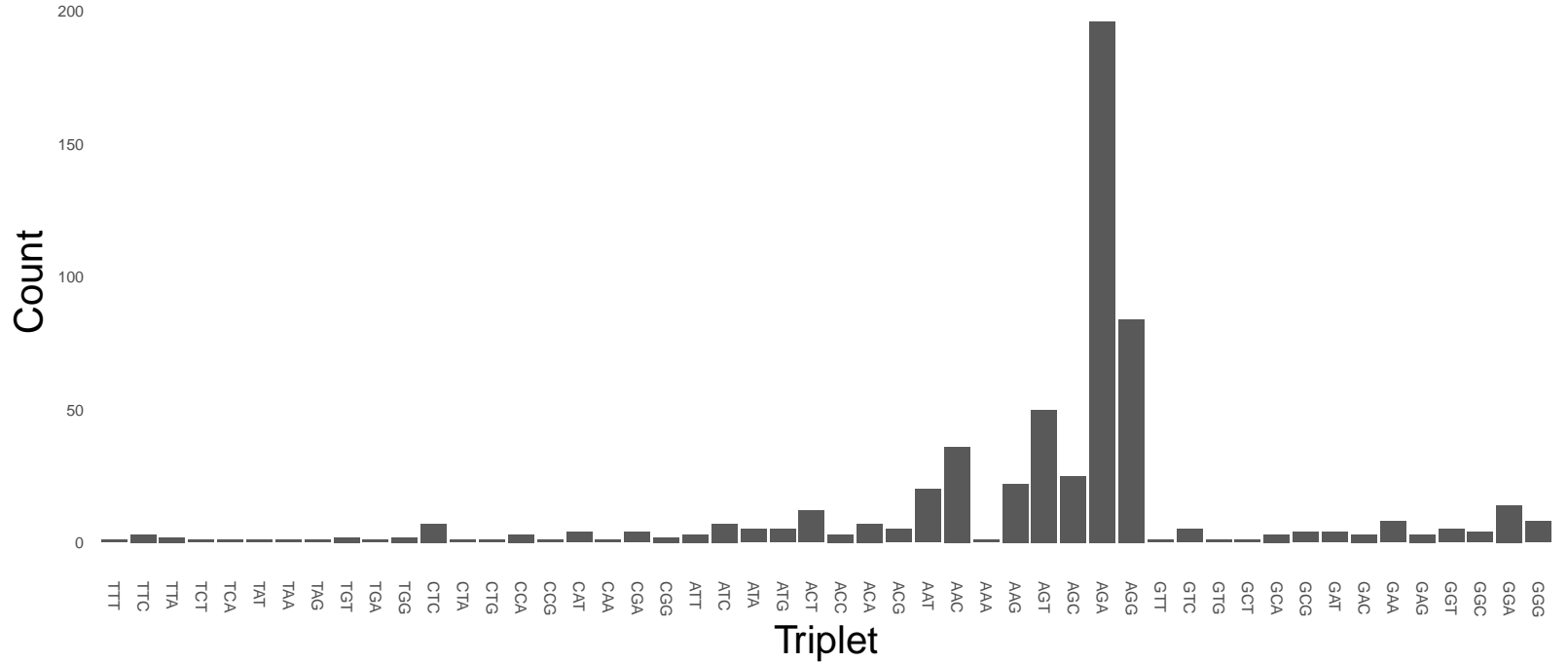
IGHV1-18*01_A196G- Final 3 nucleotides as a triplet



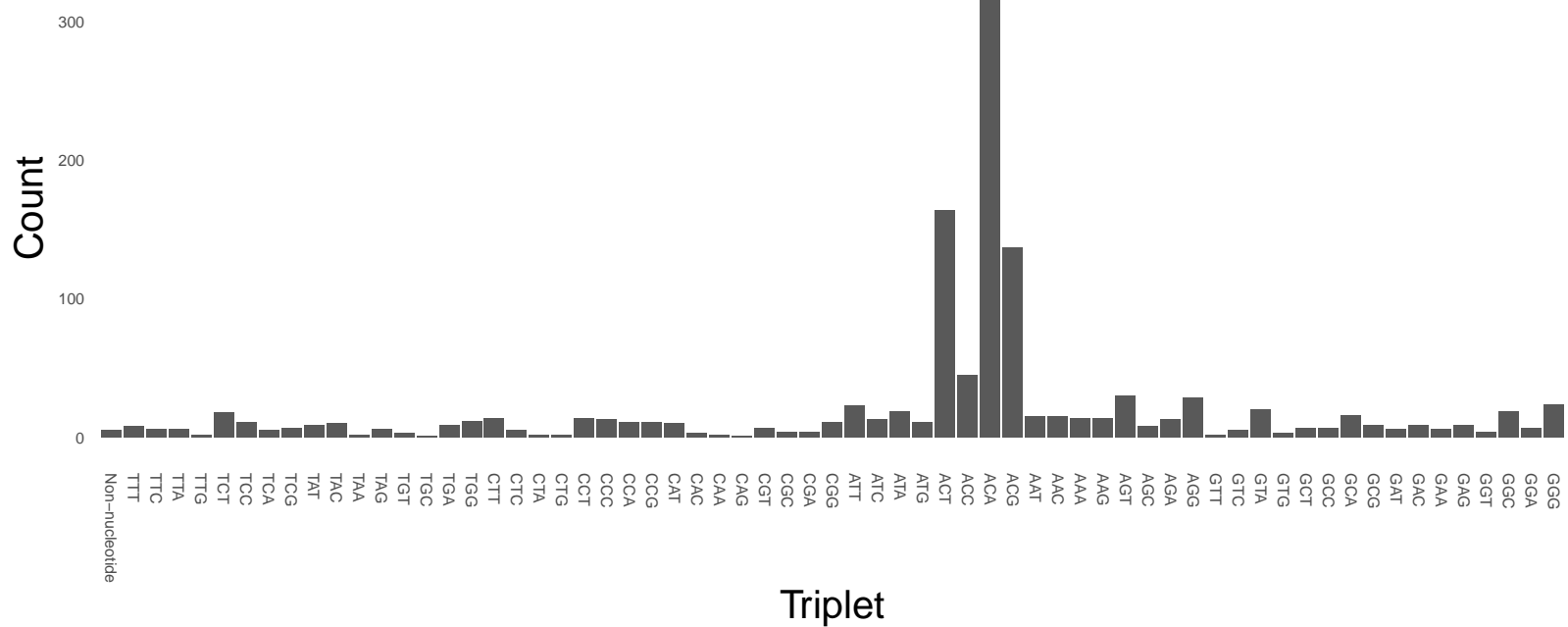
IGHV3-43*01_T177A- Final 3 nucleotides as a triplet



IGHV4-38-2*02_A70G- Final 3 nucleotides as a triplet

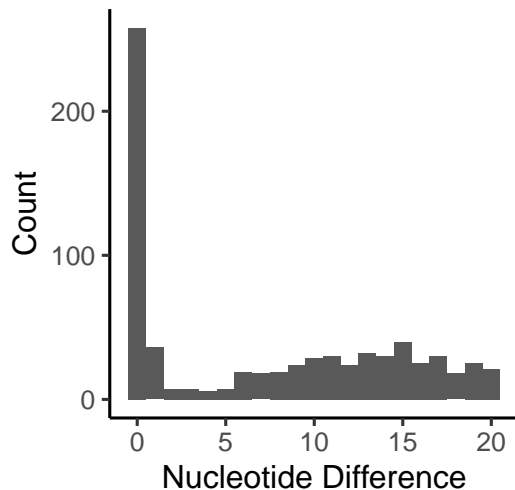


IGHV4-39*01_G315A- Final 3 nucleotides as a triplet



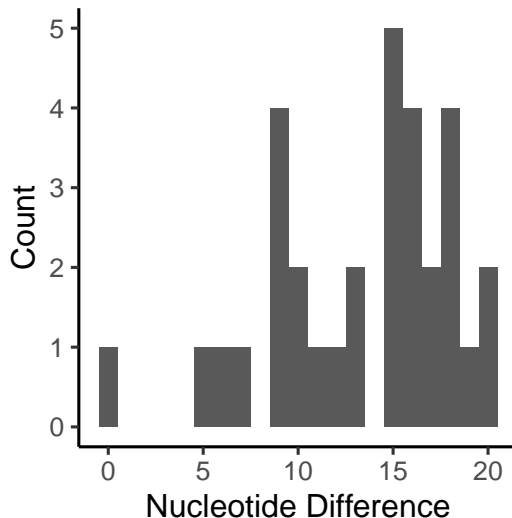
IGHV1-2*02

954 sequences assigned
258 (27%) exact matches, in which:
257 unique CDR3
6 unique J



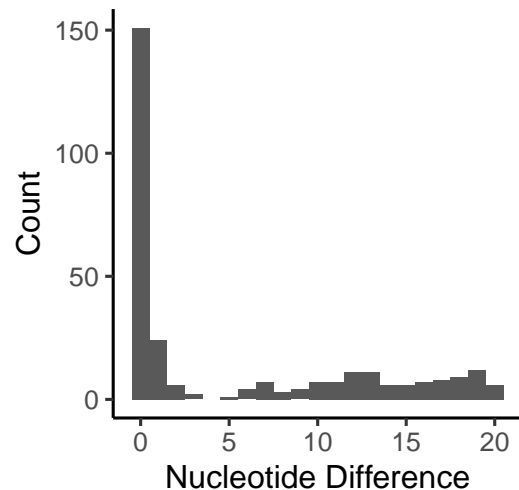
IGHV1-3*04

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



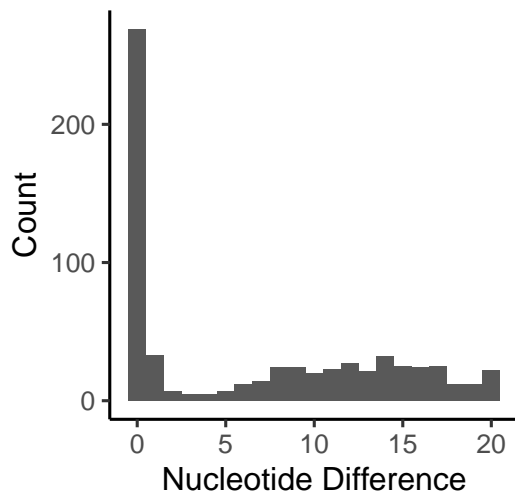
IGHV1-18*01_A196G

407 sequences assigned
151 (37.1%) exact matches, in which:
150 unique CDR3
6 unique J



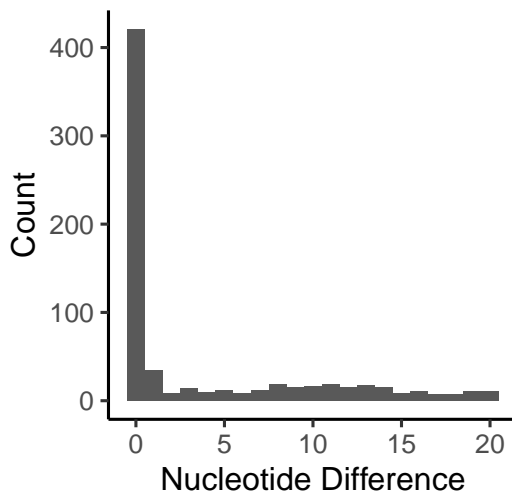
IGHV1-2*06

883 sequences assigned
269 (30.5%) exact matches, in which:
269 unique CDR3
6 unique J



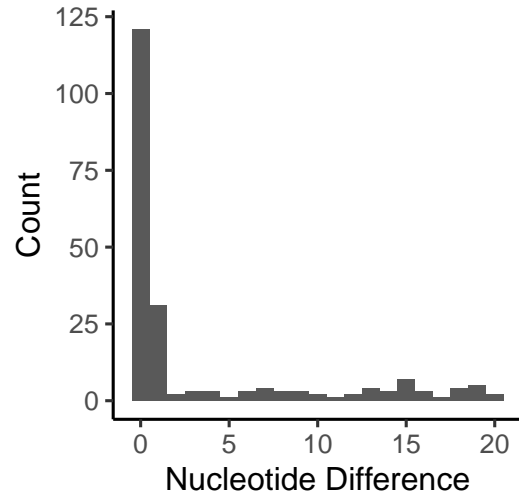
IGHV1-8*01

793 sequences assigned
421 (53.1%) exact matches, in which:
419 unique CDR3
7 unique J



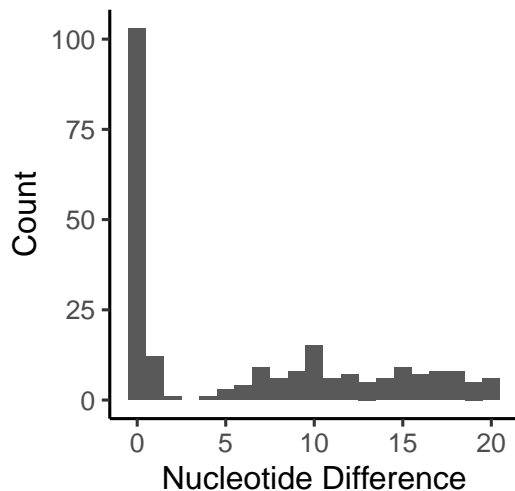
IGHV1-24*01

255 sequences assigned
121 (47.5%) exact matches, in which:
119 unique CDR3
7 unique J



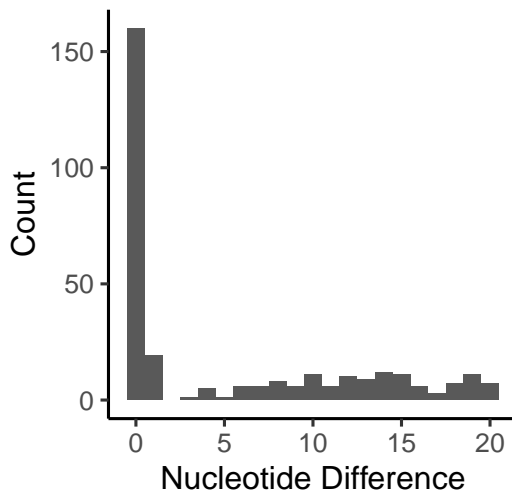
IGHV1-3*01

275 sequences assigned
103 (37.5%) exact matches, in which:
102 unique CDR3
6 unique J



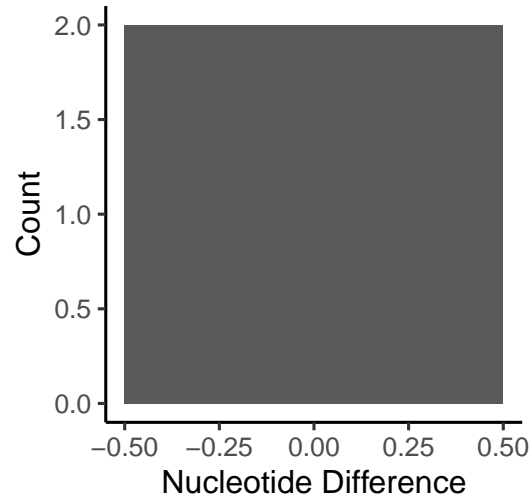
IGHV1-18*01

403 sequences assigned
160 (39.7%) exact matches, in which:
159 unique CDR3
7 unique J



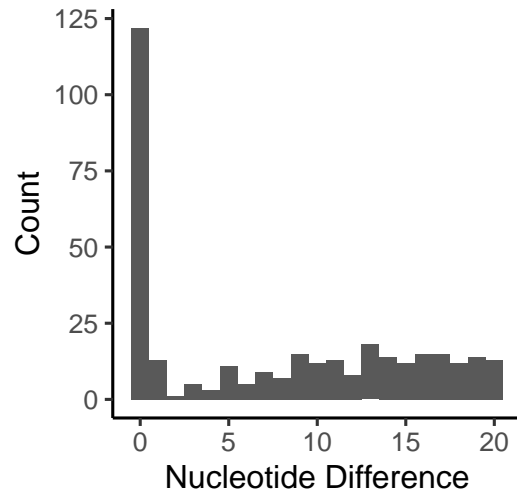
IGHV1-45*02

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



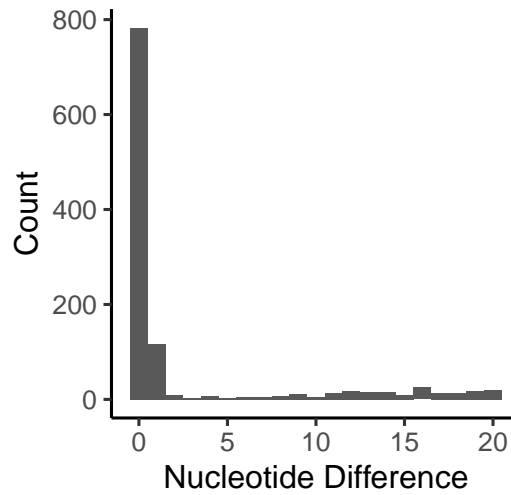
IGHV1-46*01

444 sequences assigned
122 (27.5%) exact matches, in which:
120 unique CDR3
7 unique J



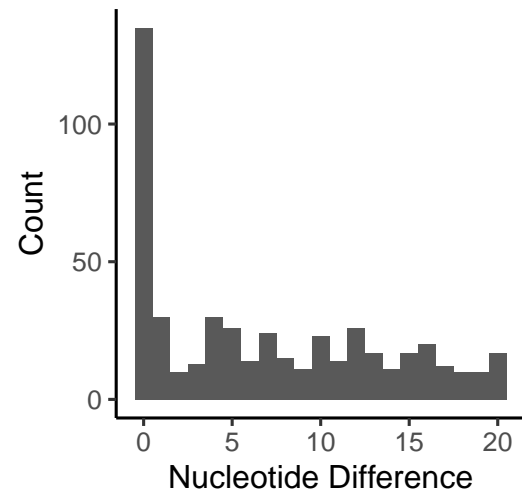
IGHV1-69*01

1445 sequences assigned
783 (54.2%) exact matches, in which:
781 unique CDR3
7 unique J



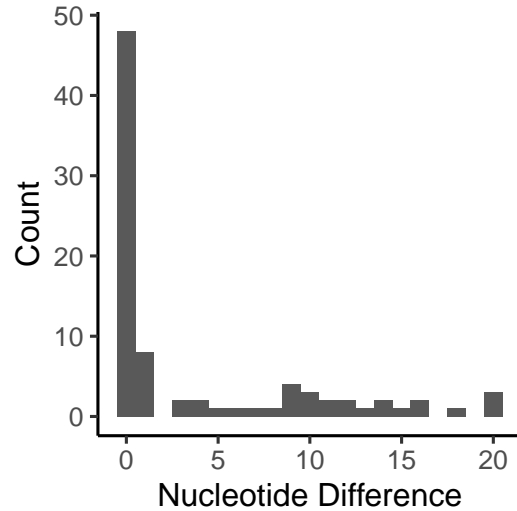
IGHV2-5*02

638 sequences assigned
135 (21.2%) exact matches, in which:
135 unique CDR3
6 unique J



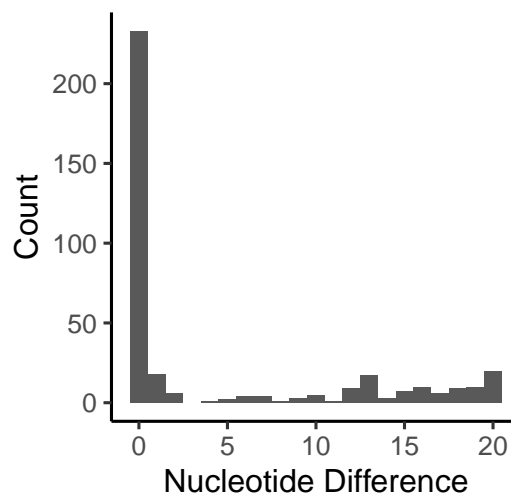
IGHV1-58*01

124 sequences assigned
48 (38.7%) exact matches, in which:
48 unique CDR3
7 unique J



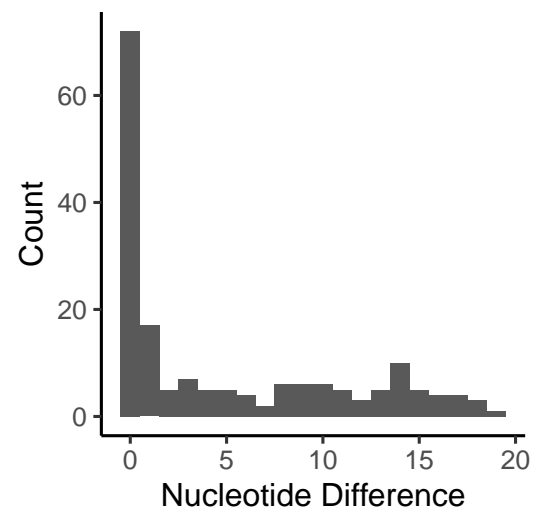
IGHV1-69*06

565 sequences assigned
233 (41.2%) exact matches, in which:
232 unique CDR3
6 unique J



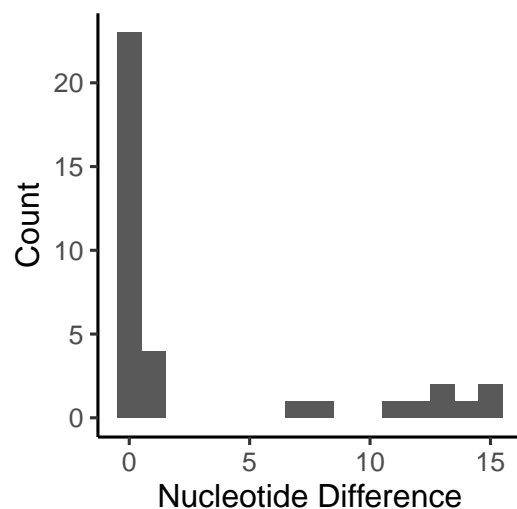
IGHV2-26*01

196 sequences assigned
72 (36.7%) exact matches, in which:
71 unique CDR3
5 unique J



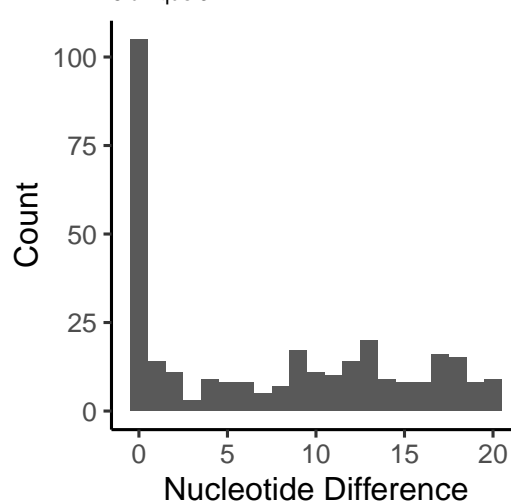
IGHV1-69-2*01

43 sequences assigned
23 (53.5%) exact matches, in which:
23 unique CDR3
5 unique J



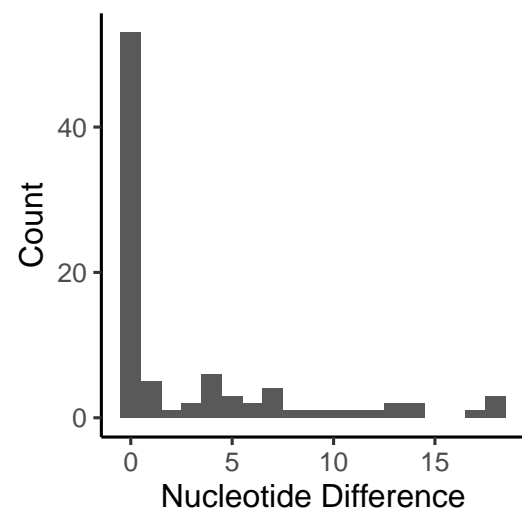
IGHV2-5*01

354 sequences assigned
105 (29.7%) exact matches, in which:
105 unique CDR3
6 unique J



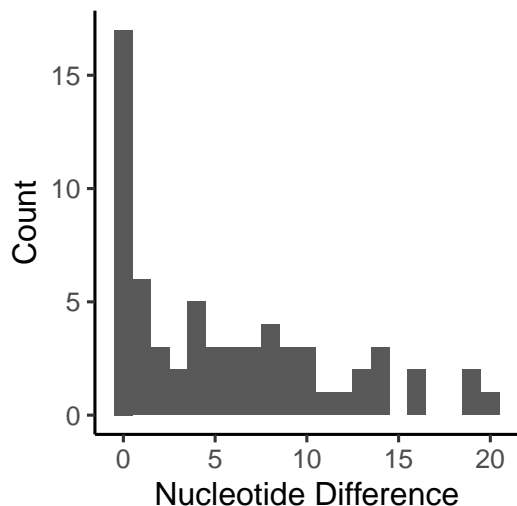
IGHV2-70*01

107 sequences assigned
53 (49.5%) exact matches, in which:
53 unique CDR3
5 unique J



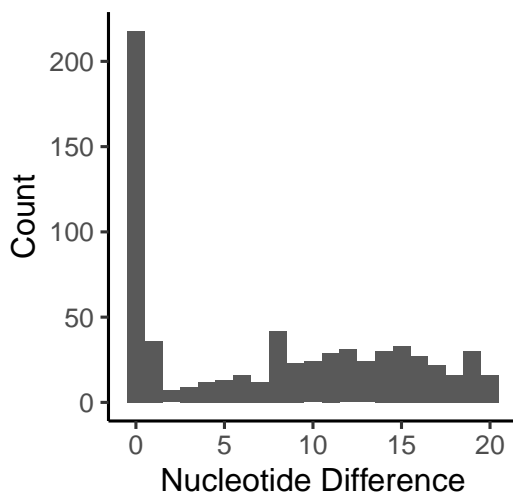
IGHV2-70*04

72 sequences assigned
17 (23.6%) exact matches, in which:
17 unique CDR3
5 unique J



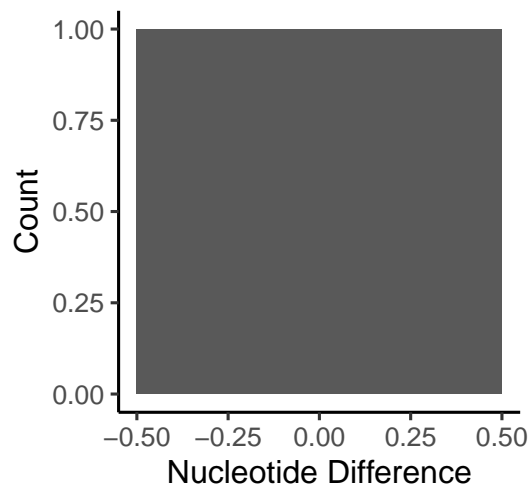
IGHV3-11*01

778 sequences assigned
218 (28%) exact matches, in which:
217 unique CDR3
7 unique J



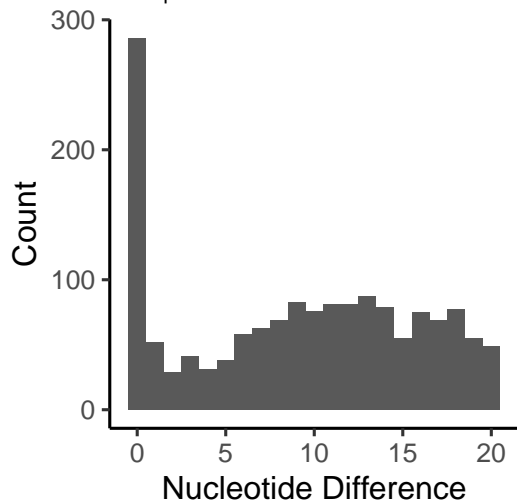
IGHV3-19*01

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



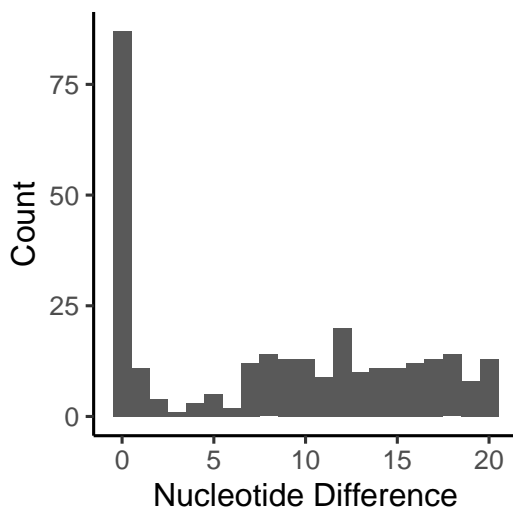
IGHV3-7*01

1839 sequences assigned
286 (15.6%) exact matches, in which:
286 unique CDR3
7 unique J



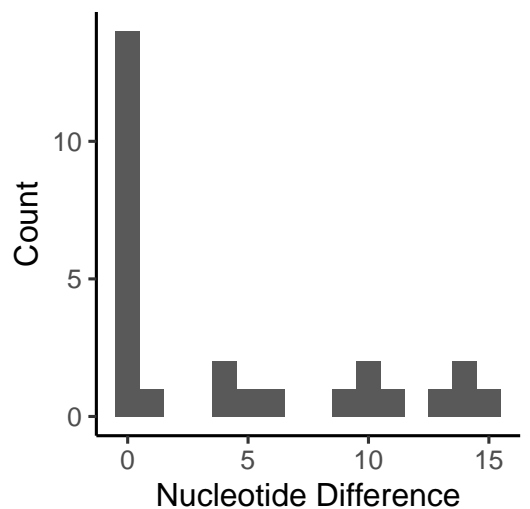
IGHV3-13*01

352 sequences assigned
87 (24.7%) exact matches, in which:
87 unique CDR3
6 unique J



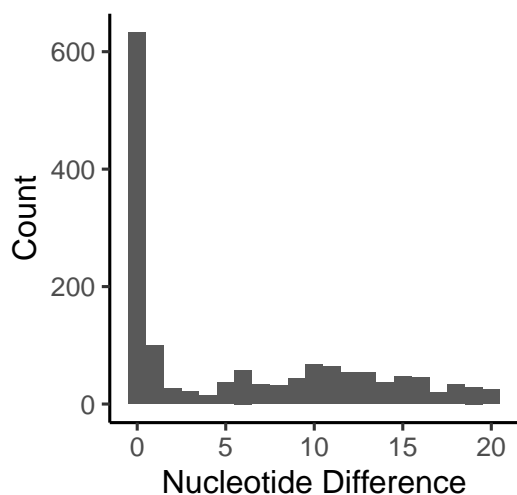
IGHV3-20*01

31 sequences assigned
14 (45.2%) exact matches, in which:
13 unique CDR3
5 unique J



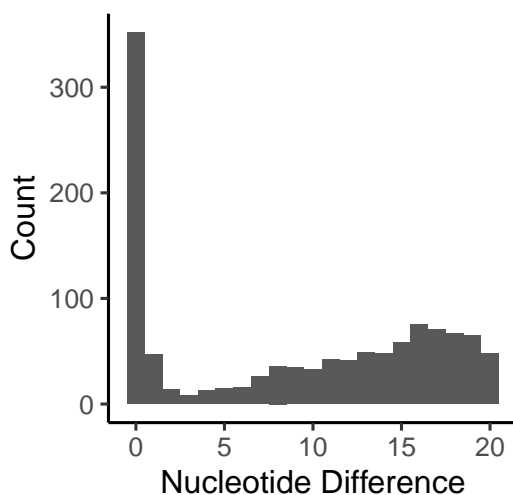
IGHV3-9*01

1697 sequences assigned
633 (37.3%) exact matches, in which:
628 unique CDR3
7 unique J



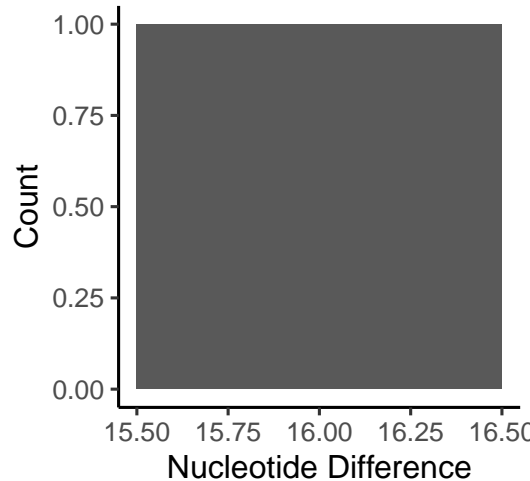
IGHV3-15*01

1516 sequences assigned
352 (23.2%) exact matches, in which:
352 unique CDR3
7 unique J



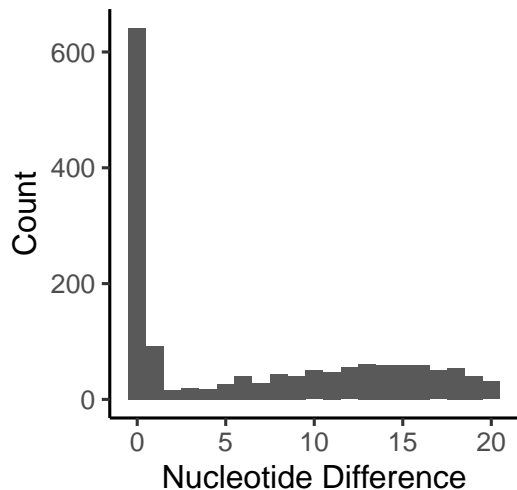
IGHV3-20*04

5 sequences assigned
No exact matches.



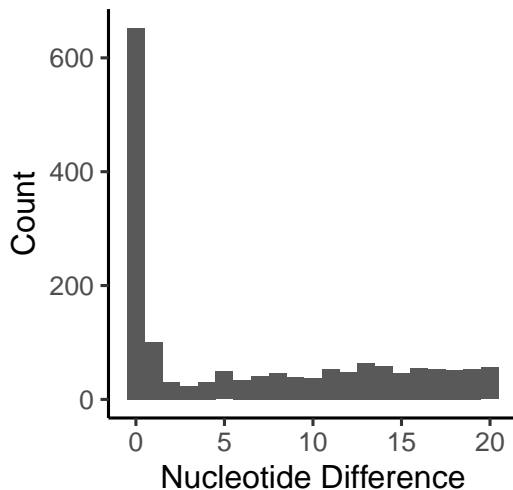
IGHV3–21*01

1840 sequences assigned
642 (34.9%) exact matches, in which:
636 unique CDR3
7 unique J



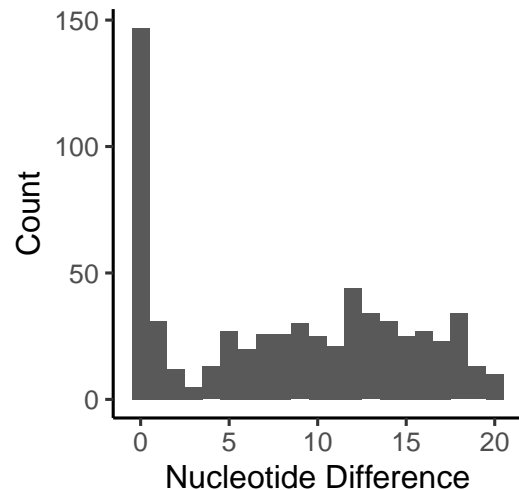
IGHV3–30*18

1982 sequences assigned
653 (32.9%) exact matches, in which:
648 unique CDR3
7 unique J



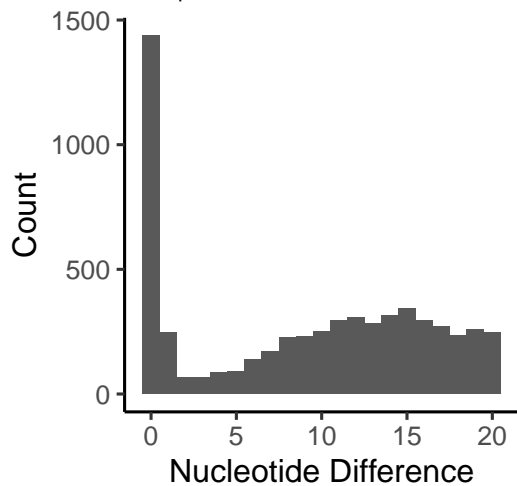
IGHV3–48*02

729 sequences assigned
147 (20.2%) exact matches, in which:
147 unique CDR3
6 unique J



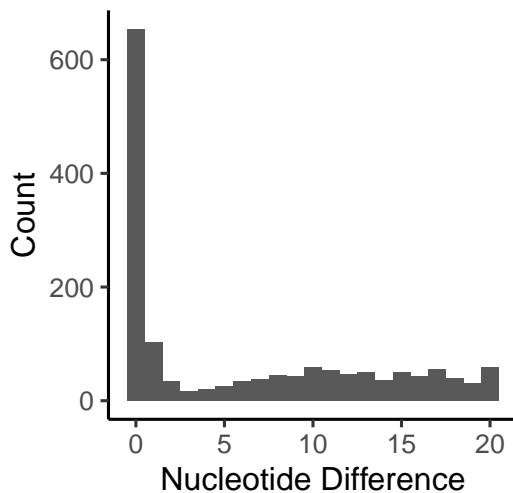
IGHV3–23*01

7532 sequences assigned
1437 (19.1%) exact matches, in which:
1427 unique CDR3
7 unique J



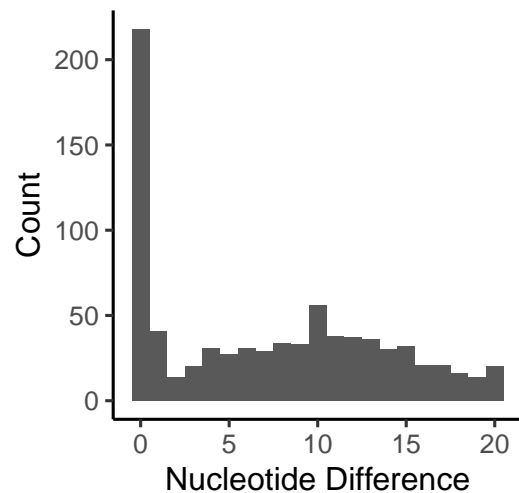
IGHV3–33*01

1837 sequences assigned
654 (35.6%) exact matches, in which:
651 unique CDR3
7 unique J



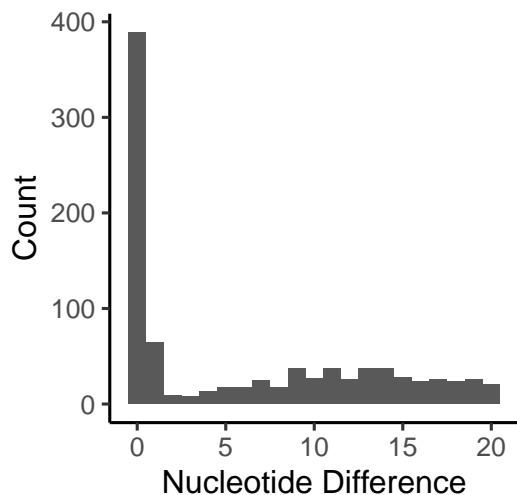
IGHV3–48*03

944 sequences assigned
218 (23.1%) exact matches, in which:
216 unique CDR3
6 unique J



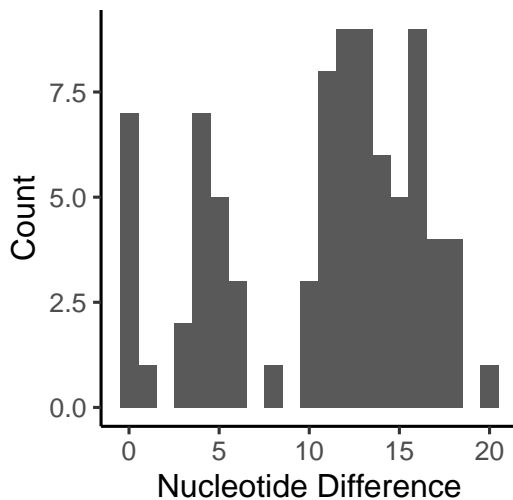
IGHV3–30–3*01

1157 sequences assigned
389 (33.6%) exact matches, in which:
384 unique CDR3
6 unique J



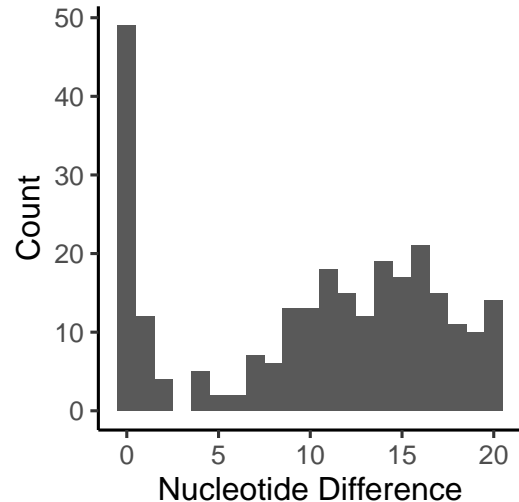
IGHV3–43*01_T177A

95 sequences assigned
7 (7.4%) exact matches, in which:
7 unique CDR3
3 unique J



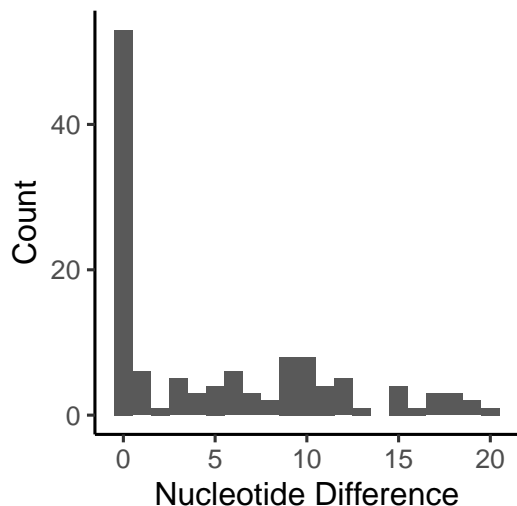
IGHV3–49*04

343 sequences assigned
49 (14.3%) exact matches, in which:
49 unique CDR3
4 unique J



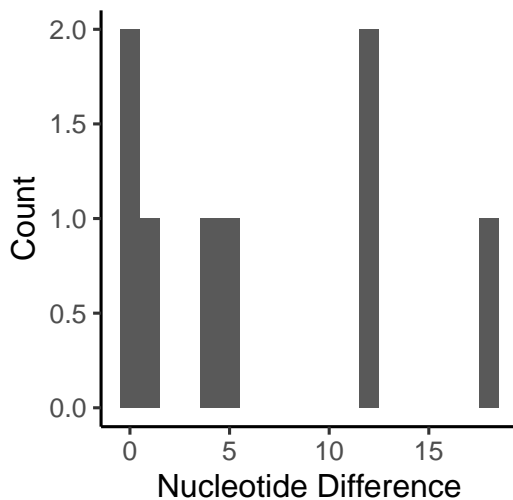
IGHV3-49*05

162 sequences assigned
53 (32.7%) exact matches, in which:
53 unique CDR3
5 unique J



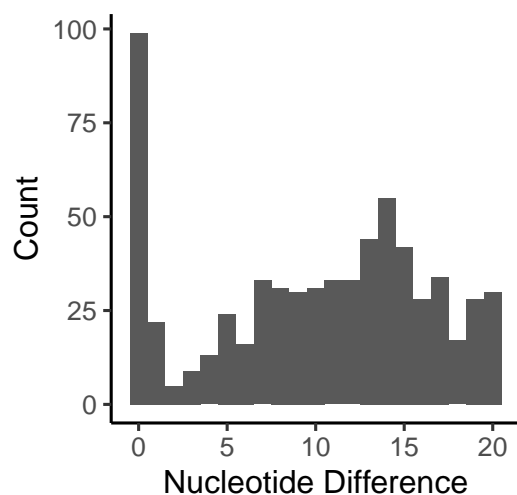
IGHV3-64*02

13 sequences assigned
2 (15.4%) exact matches, in which:
2 unique CDR3
1 unique J



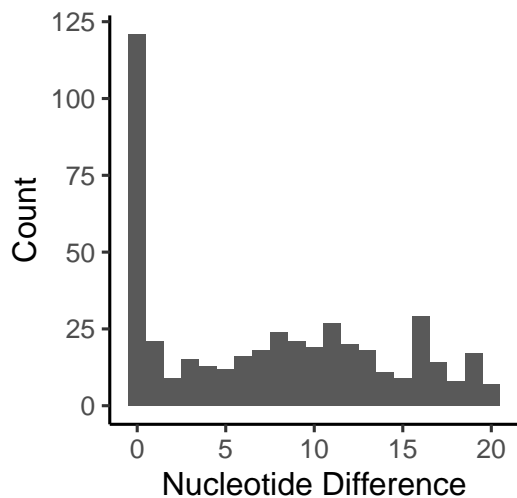
IGHV3-74*01

814 sequences assigned
99 (12.2%) exact matches, in which:
99 unique CDR3
7 unique J



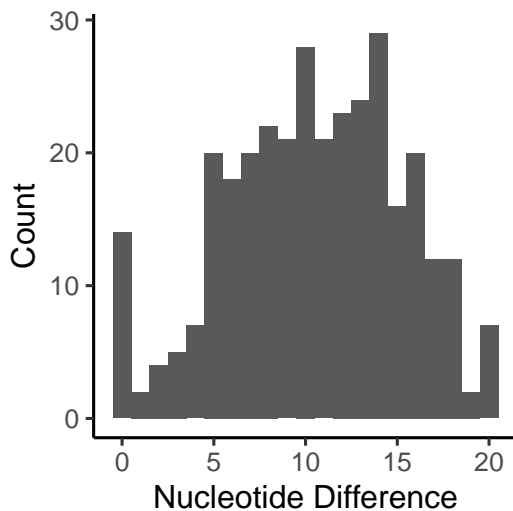
IGHV3-53*01

564 sequences assigned
121 (21.5%) exact matches, in which:
121 unique CDR3
7 unique J



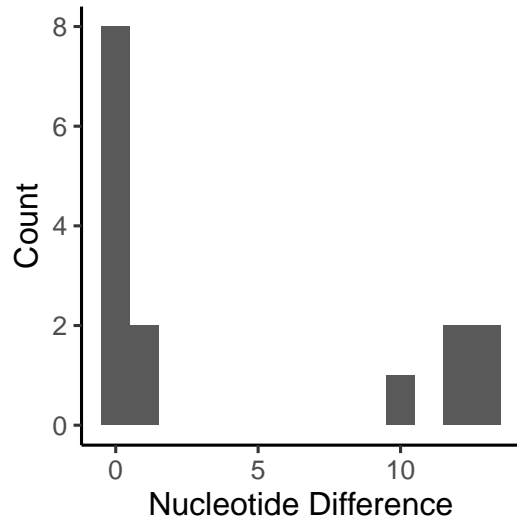
IGHV3-72*01

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



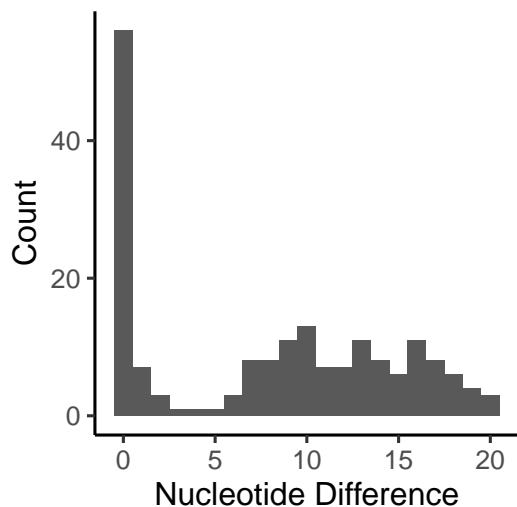
IGHV3-43D*04

27 sequences assigned
8 (29.6%) exact matches, in which:
8 unique CDR3
3 unique J



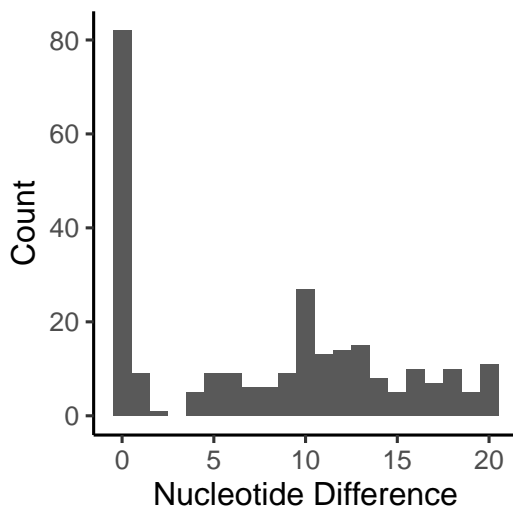
IGHV3-53*02

239 sequences assigned
56 (23.4%) exact matches, in which:
54 unique CDR3
6 unique J



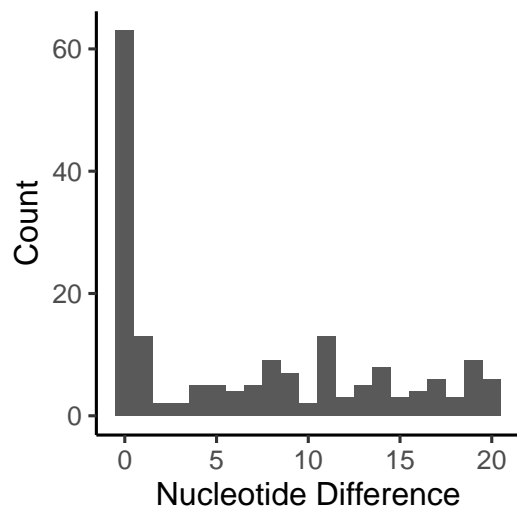
IGHV3-73*02

300 sequences assigned
82 (27.3%) exact matches, in which:
82 unique CDR3
6 unique J



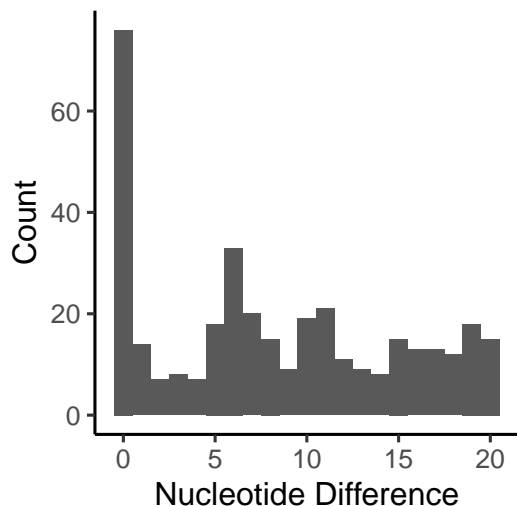
IGHV4-4*02

246 sequences assigned
63 (25.6%) exact matches, in which:
63 unique CDR3
6 unique J



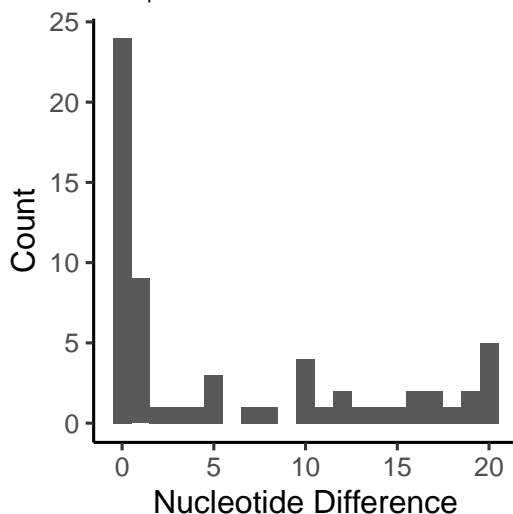
IGHV4-4*07

444 sequences assigned
76 (17.1%) exact matches, in which:
76 unique CDR3
5 unique J



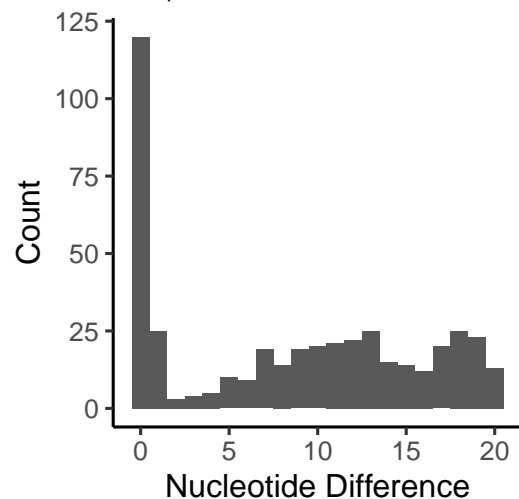
IGHV4-30-2*01

90 sequences assigned
24 (26.7%) exact matches, in which:
24 unique CDR3
5 unique J



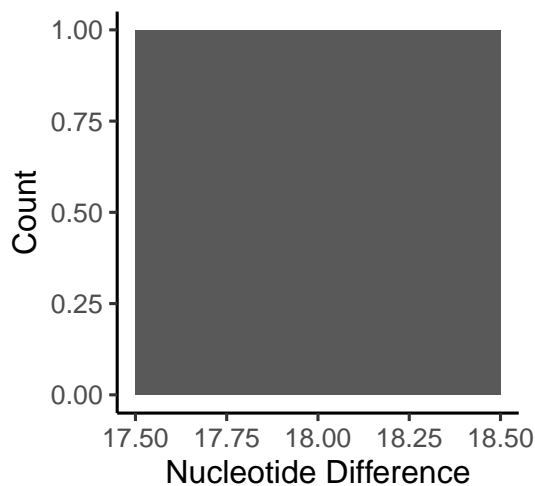
IGHV4-38-2*02_A70G

585 sequences assigned
120 (20.5%) exact matches, in which:
120 unique CDR3
6 unique J



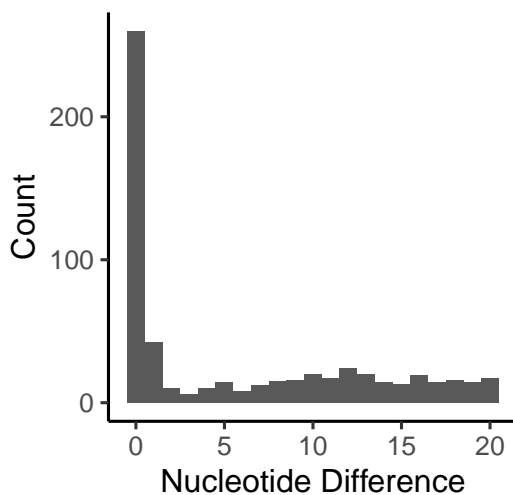
IGHV4-28*01

1 sequences assigned
No exact matches.



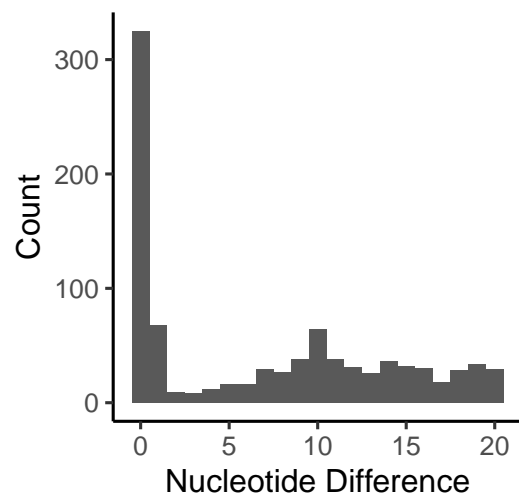
IGHV4-31*03

828 sequences assigned
260 (31.4%) exact matches, in which:
259 unique CDR3
7 unique J



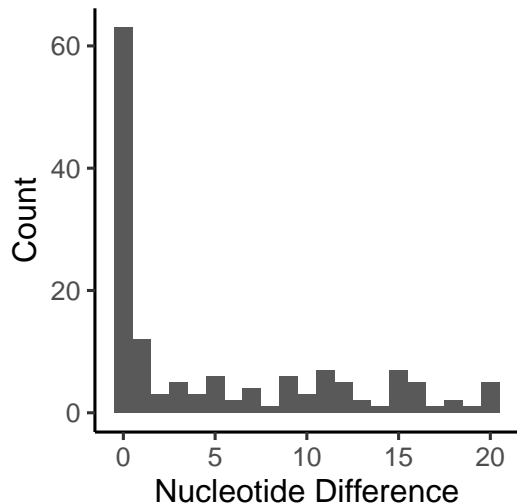
IGHV4-39*01_G315A

1268 sequences assigned
325 (25.6%) exact matches, in which:
322 unique CDR3
6 unique J



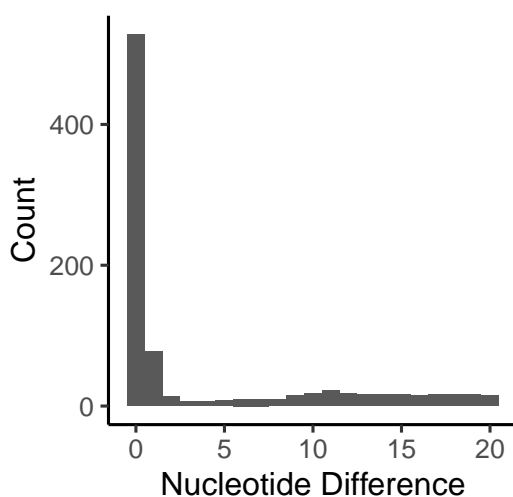
IGHV4-30-4*01

188 sequences assigned
63 (33.5%) exact matches, in which:
63 unique CDR3
6 unique J



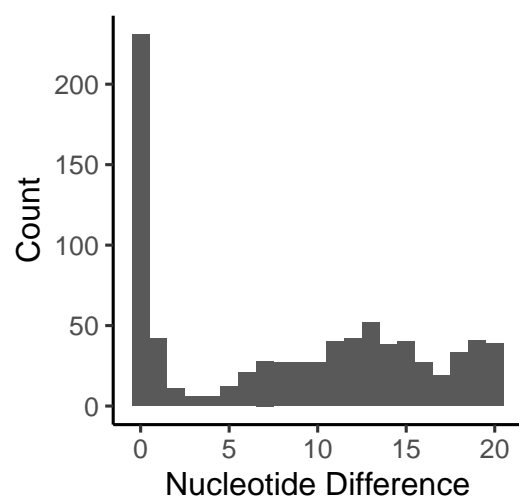
IGHV4-34*01

1038 sequences assigned
528 (50.9%) exact matches, in which:
522 unique CDR3
7 unique J



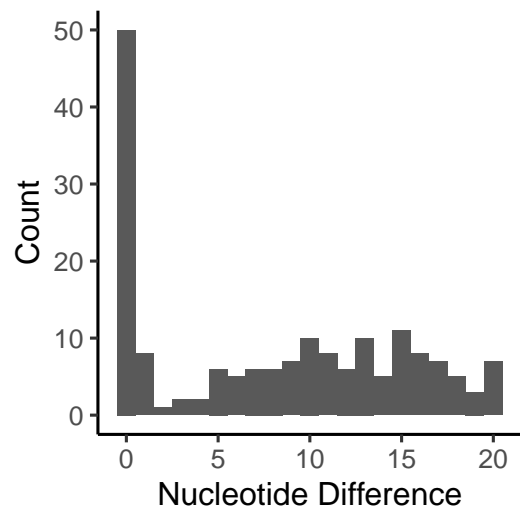
IGHV4-59*01

1124 sequences assigned
231 (20.6%) exact matches, in which:
230 unique CDR3
7 unique J



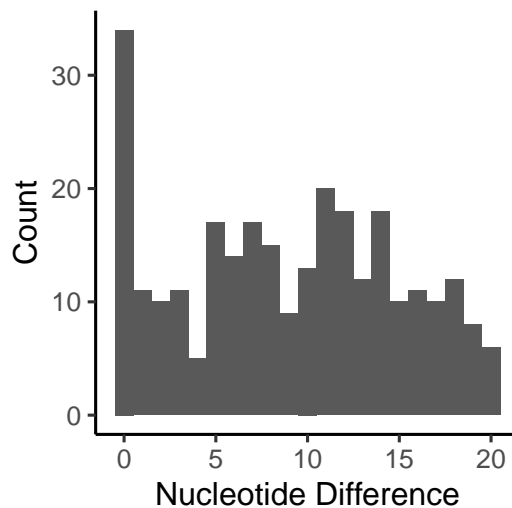
IGHV4-61*01

224 sequences assigned
50 (22.3%) exact matches, in which:
50 unique CDR3
6 unique J



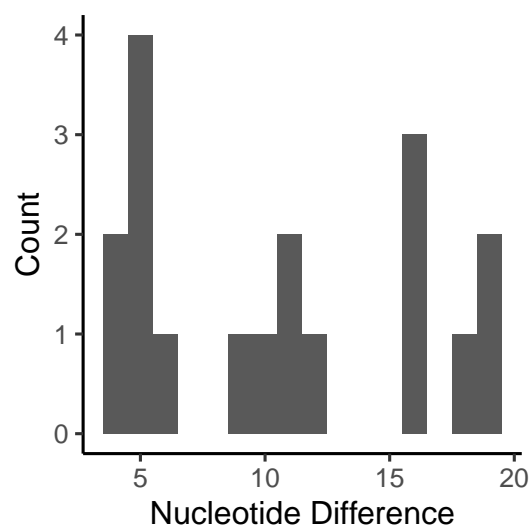
IGHV6-1*01

313 sequences assigned
34 (10.9%) exact matches, in which:
34 unique CDR3
6 unique J



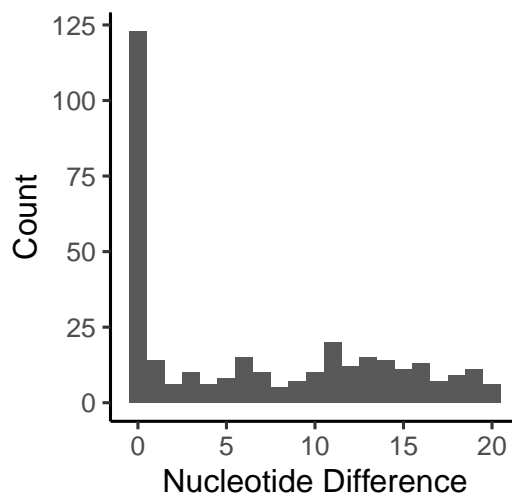
IGHV4-61*08

33 sequences assigned
No exact matches.



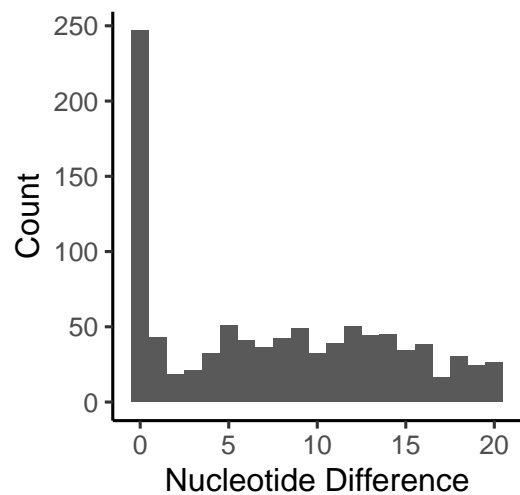
IGHV7-4-1*02

388 sequences assigned
123 (31.7%) exact matches, in which:
123 unique CDR3
7 unique J

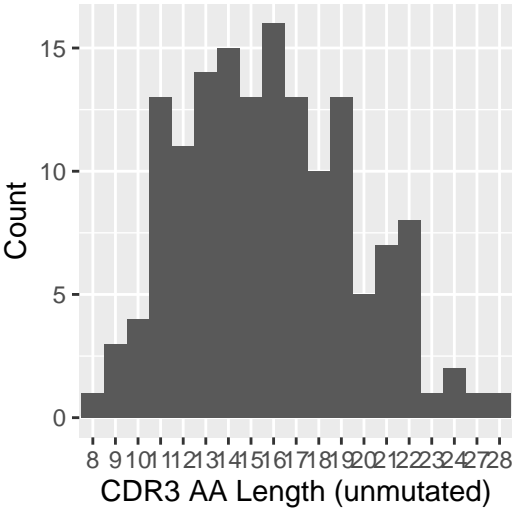


IGHV5-51*01

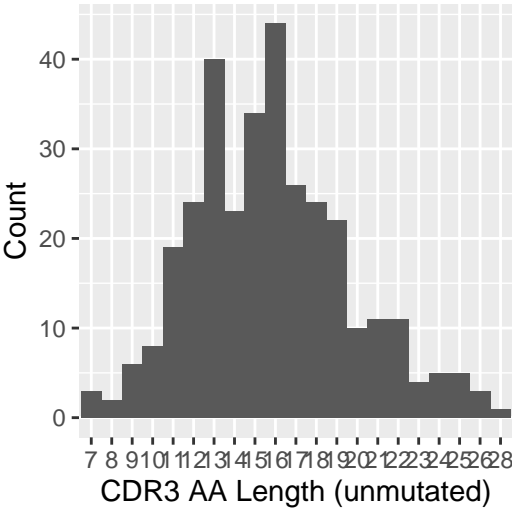
1137 sequences assigned
247 (21.7%) exact matches, in which:
243 unique CDR3
7 unique J



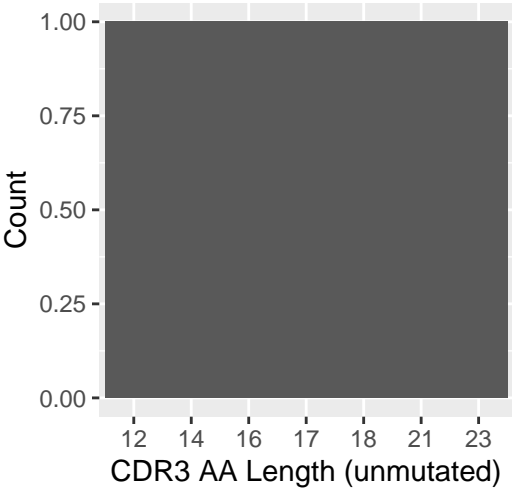
IGHV1-18*01_A196G



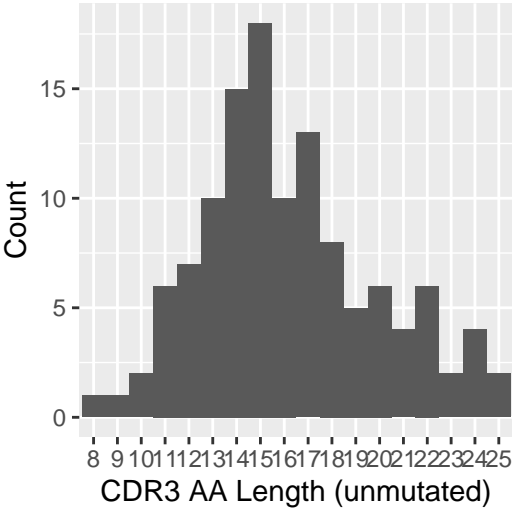
IGHV4-39*01_G315A



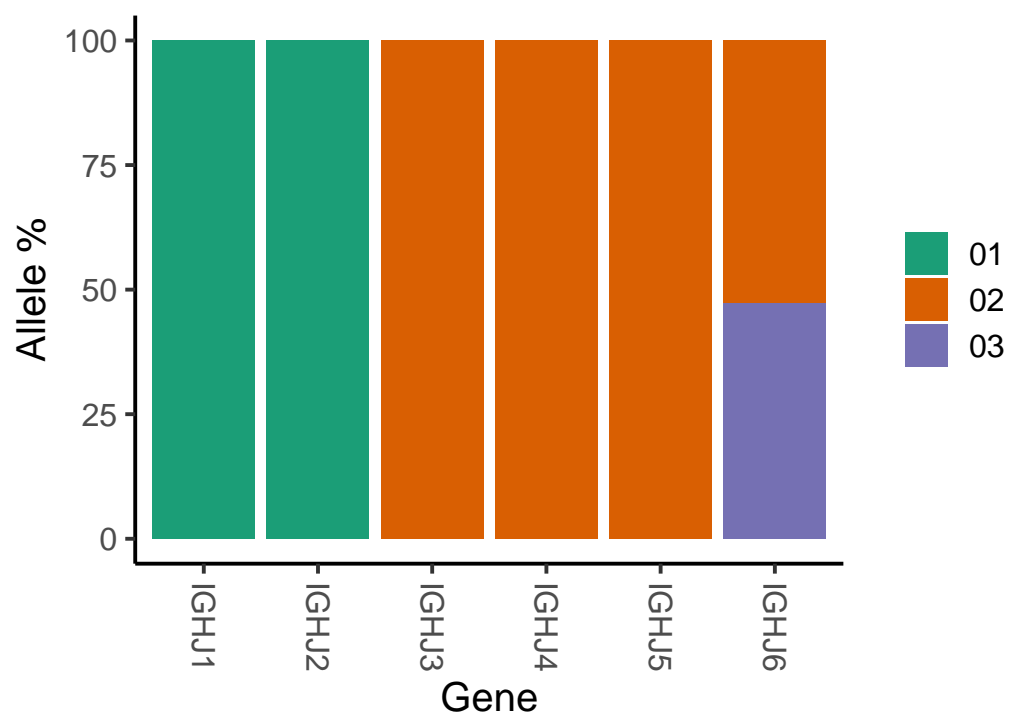
IGHV3-43*01_T177A



IGHV4-38-2*02_A70G



Allele Usage



Sequence Count by IGHJ6 allele usage

