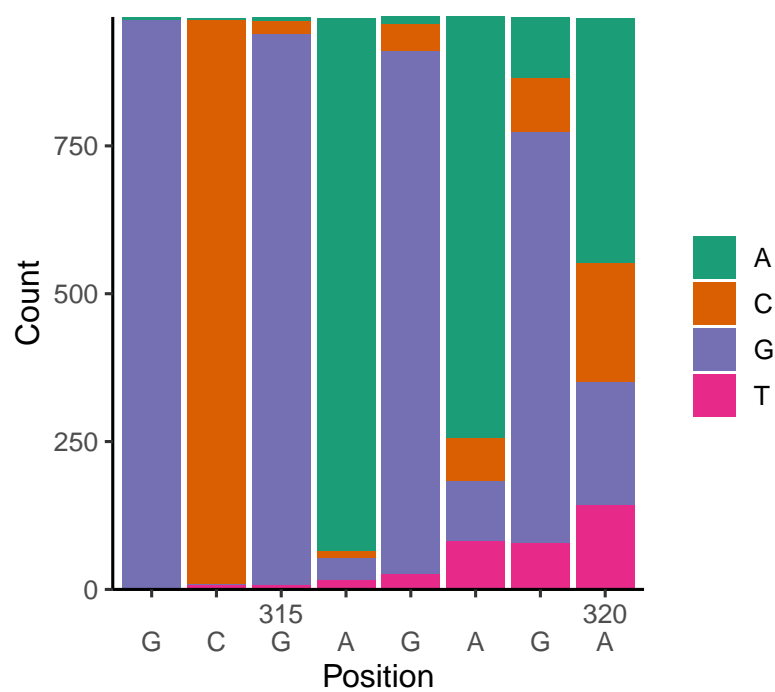
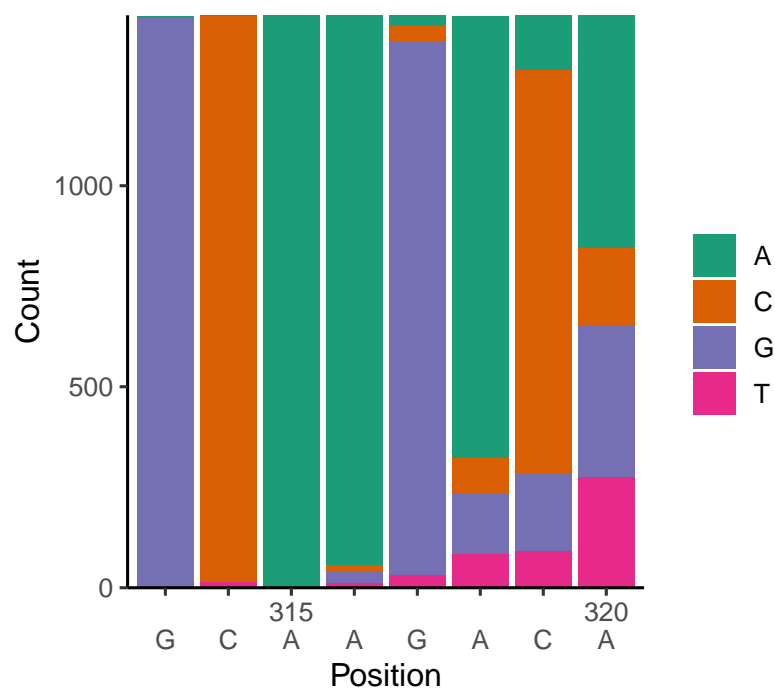


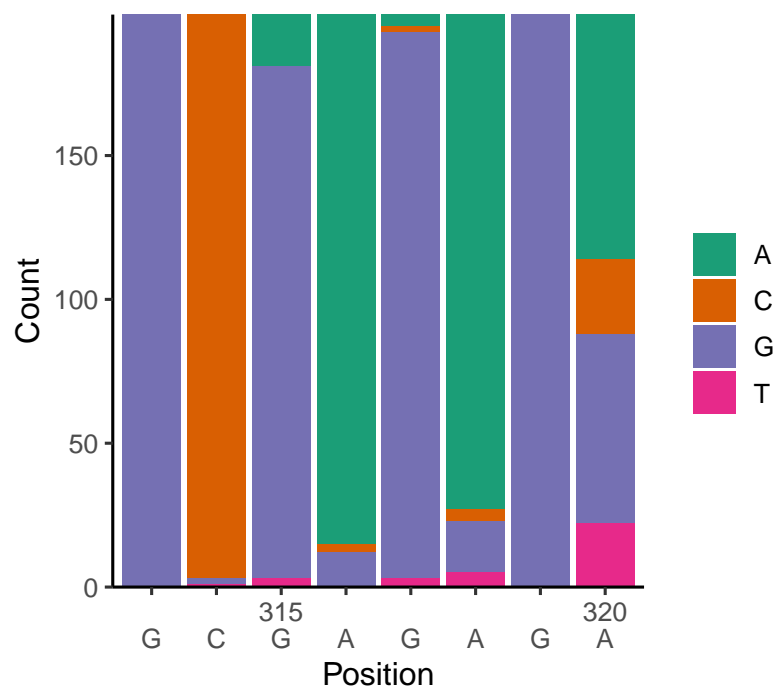
Gene IGHV1-69*08_C191T



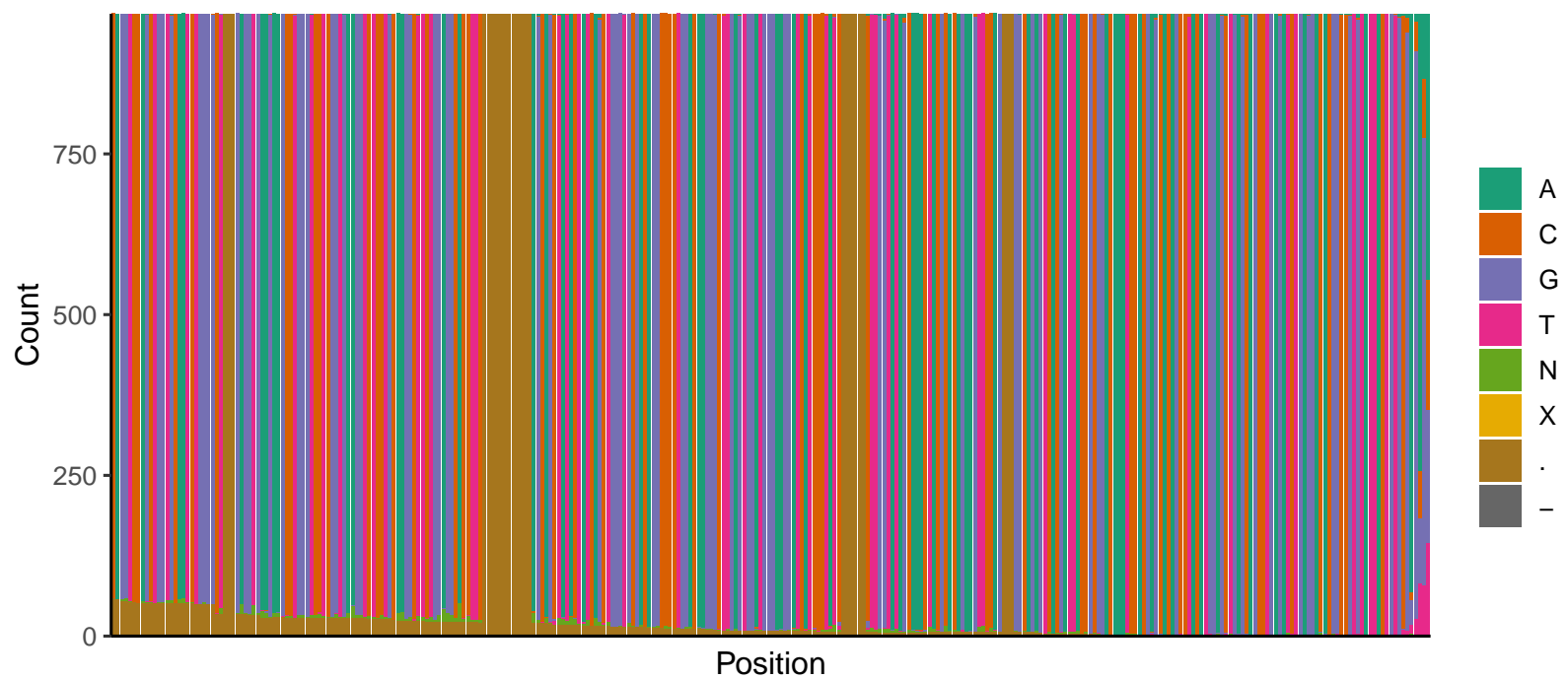
Gene IGHV4-39*01_G315A



Gene IGHV4-39*02_C258G



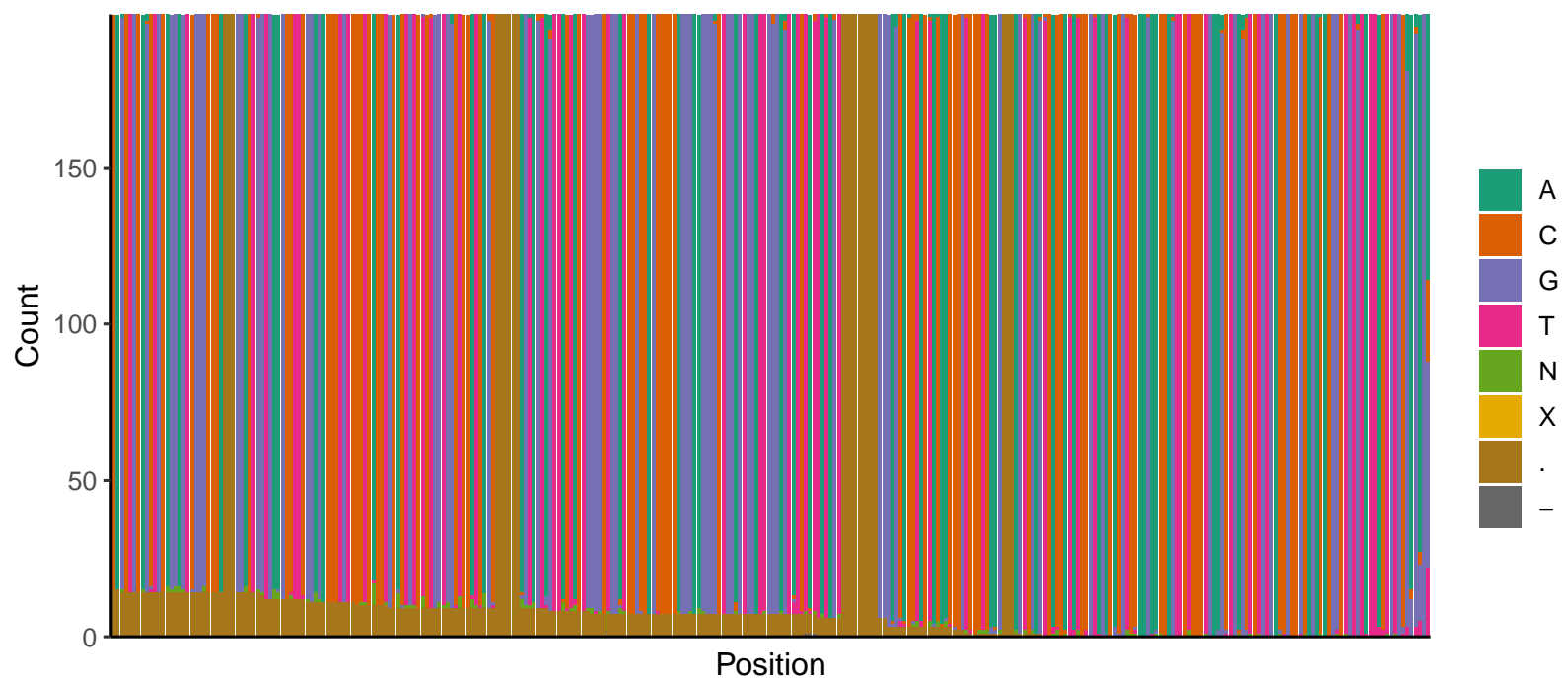
Gene IGHV1-69*08_C191T



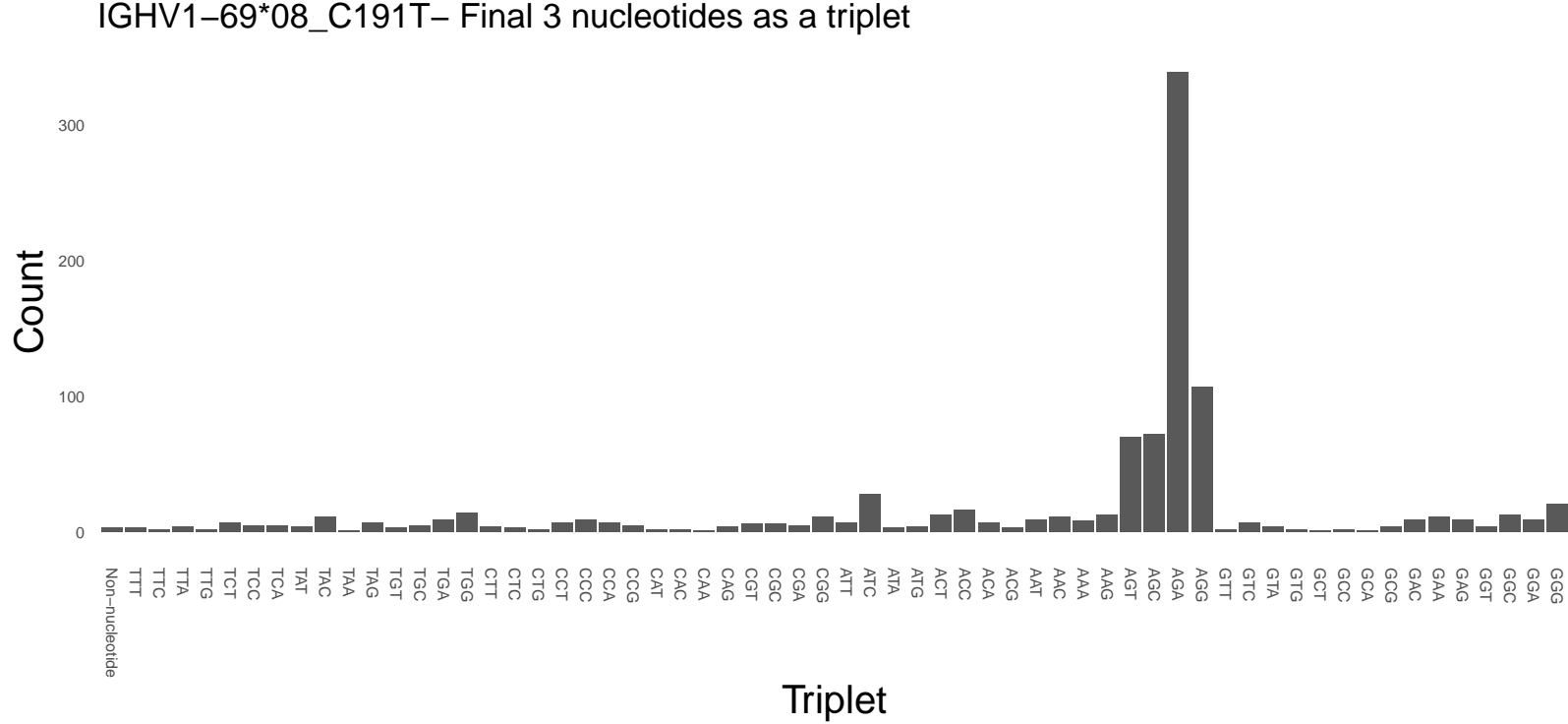
Gene IGHV4-39*01_G315A



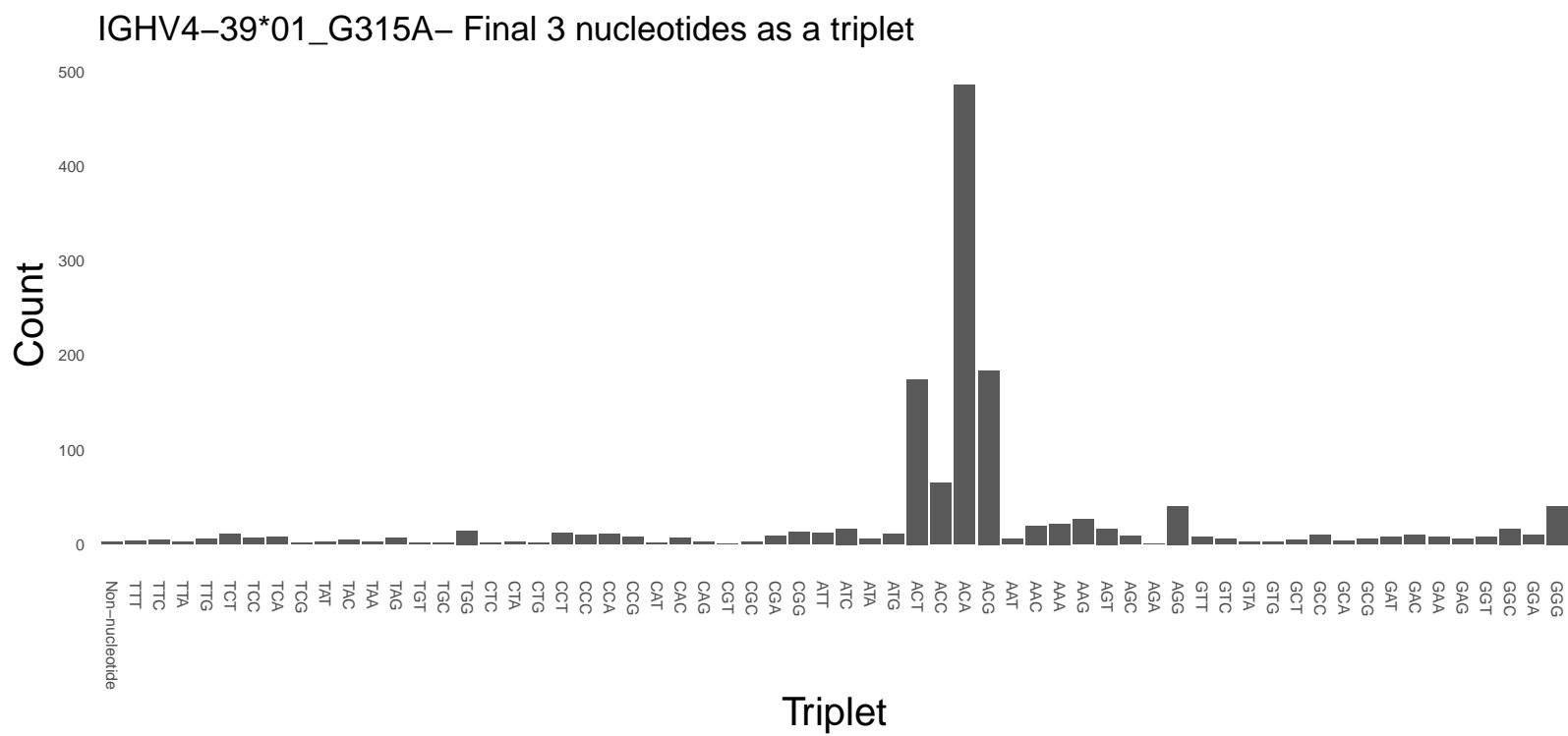
Gene IGHV4-39*02_C258G



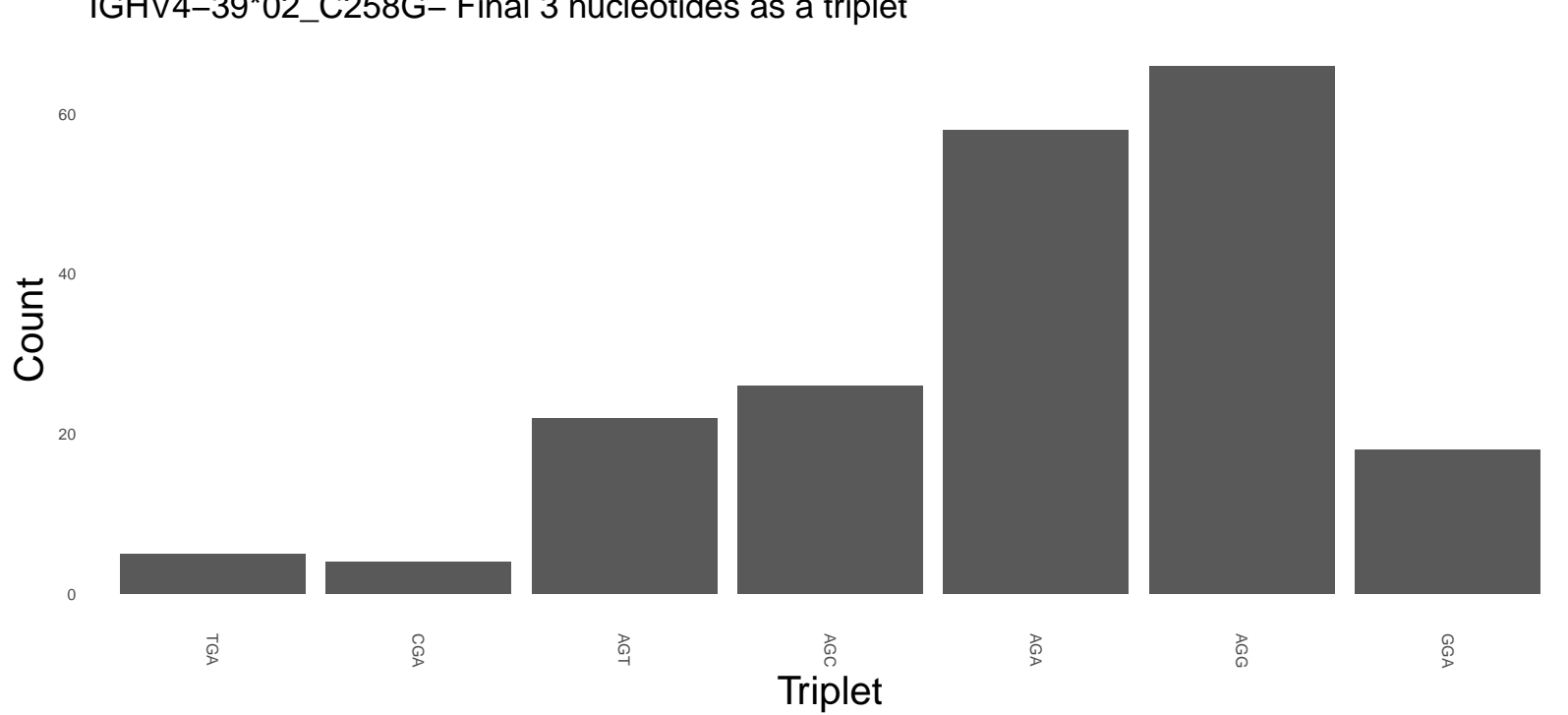
IGHV1–69*08_C191T– Final 3 nucleotides as a triplet



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

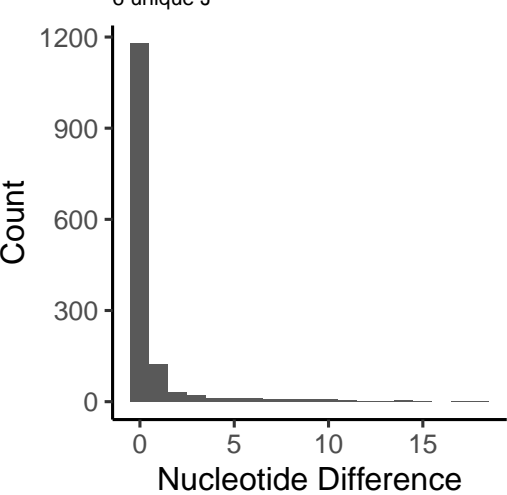


IGHV4–39*02_C258G– Final 3 nucleotides as a triplet



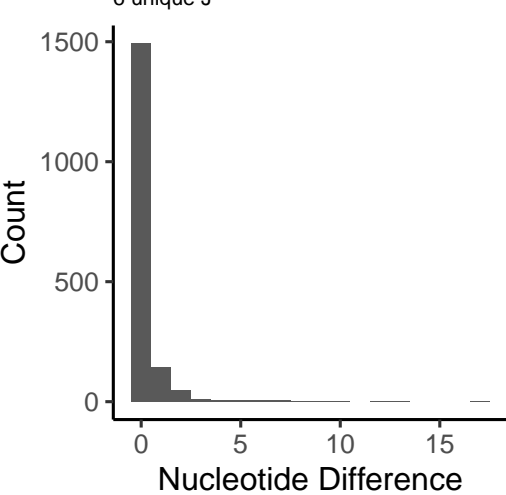
IGHV1-2*02

1438 sequences assigned
1179 (82%) exact matches, in which:
1091 unique CDR3
6 unique J



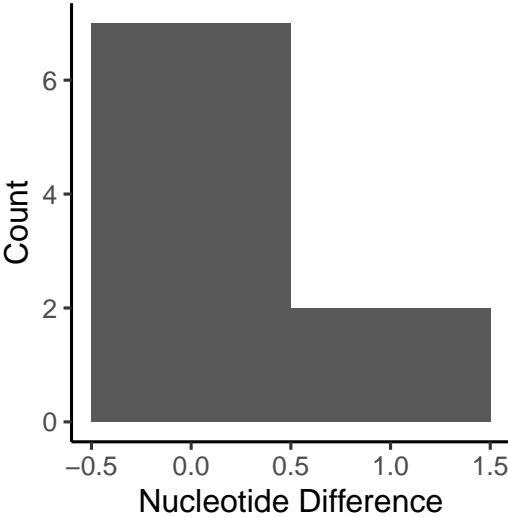
IGHV1-8*01

1738 sequences assigned
1493 (85.9%) exact matches, in which:
1377 unique CDR3
6 unique J



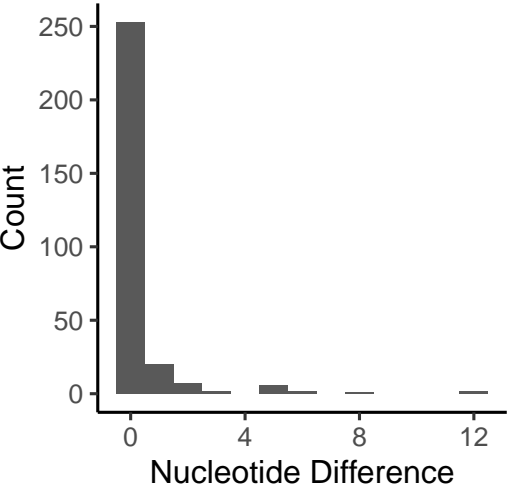
IGHV1-45*02

10 sequences assigned
7 (70%) exact matches, in which:
7 unique CDR3
4 unique J



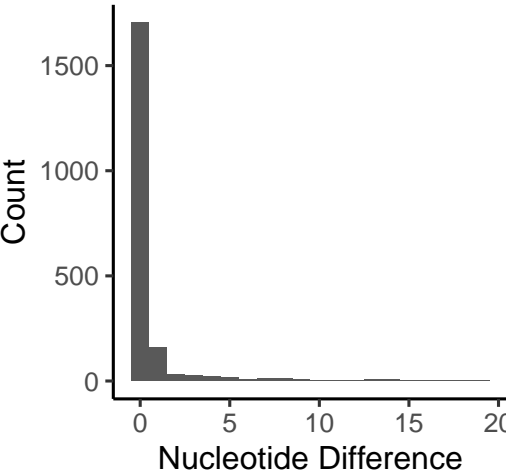
IGHV1-2*04

293 sequences assigned
253 (86.3%) exact matches, in which:
235 unique CDR3
6 unique J



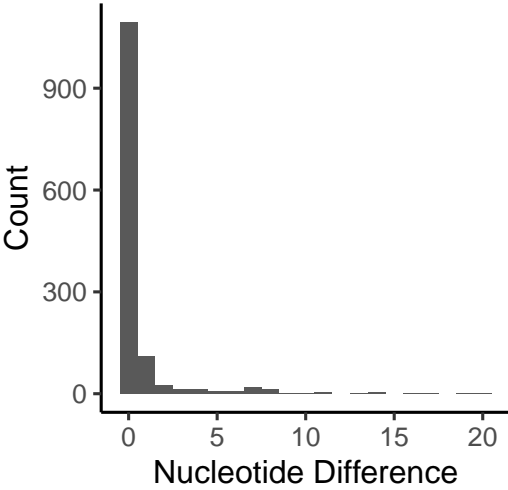
IGHV1-18*01

2023 sequences assigned
1704 (84.2%) exact matches, in which:
1597 unique CDR3
6 unique J



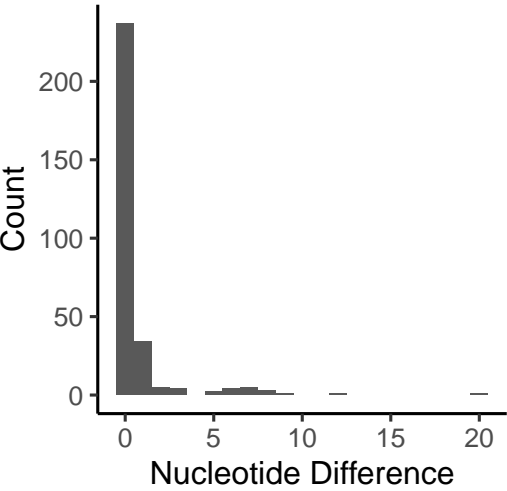
IGHV1-46*01

1325 sequences assigned
1095 (82.6%) exact matches, in which:
1033 unique CDR3
6 unique J



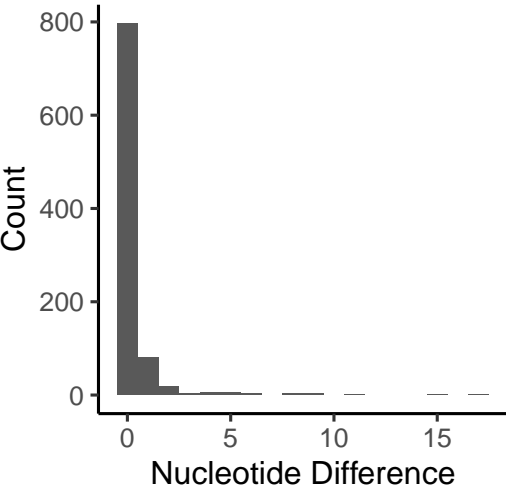
IGHV1-3*05

298 sequences assigned
237 (79.5%) exact matches, in which:
222 unique CDR3
6 unique J



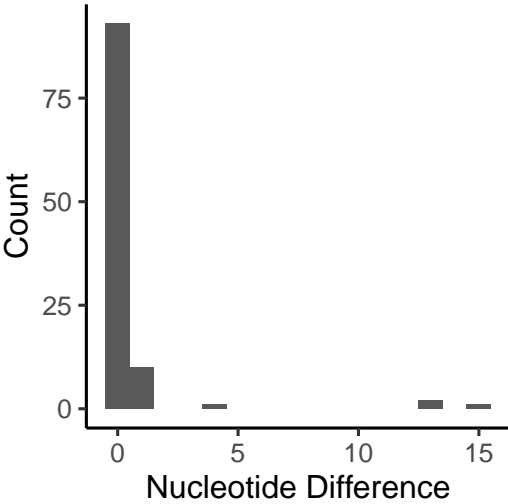
IGHV1-24*01

923 sequences assigned
797 (86.3%) exact matches, in which:
755 unique CDR3
6 unique J



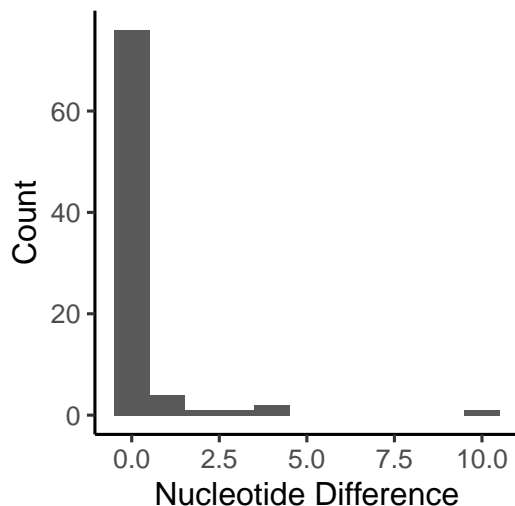
IGHV1-58*01

107 sequences assigned
93 (86.9%) exact matches, in which:
88 unique CDR3
6 unique J



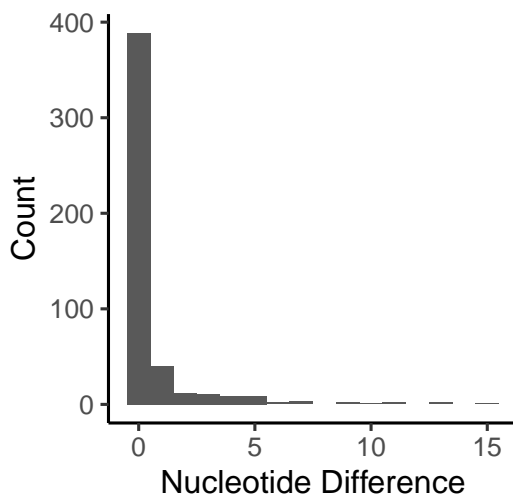
IGHV1-58*02

85 sequences assigned
76 (89.4%) exact matches, in which:
74 unique CDR3
6 unique J



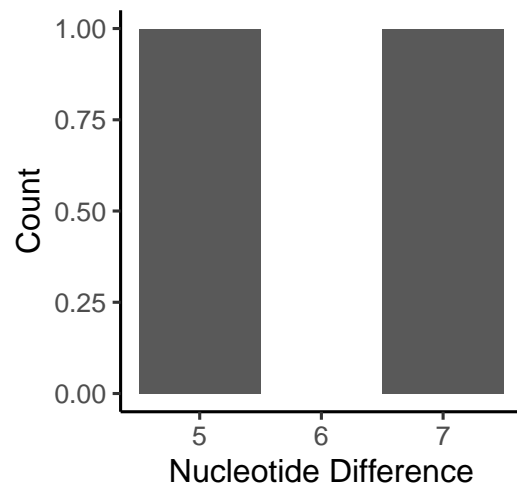
IGHV2-5*01

483 sequences assigned
389 (80.5%) exact matches, in which:
367 unique CDR3
6 unique J



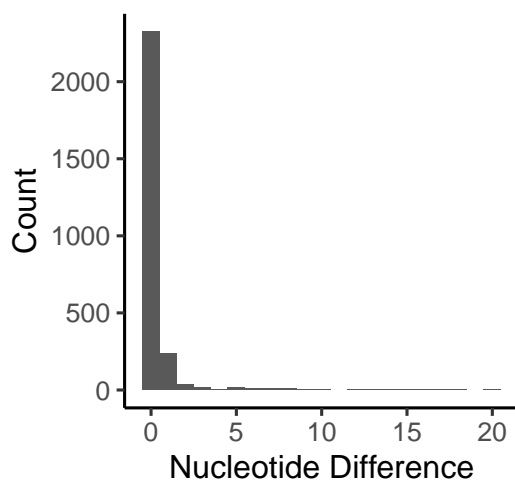
IGHV2-70D*14

2 sequences assigned
No exact matches.



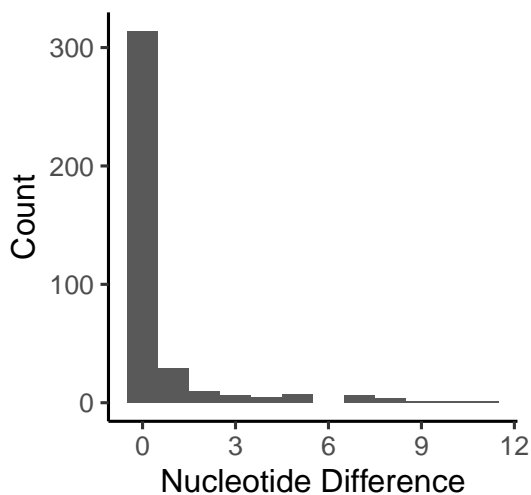
IGHV1-69*01

2691 sequences assigned
2324 (86.4%) exact matches, in which:
2137 unique CDR3
6 unique J



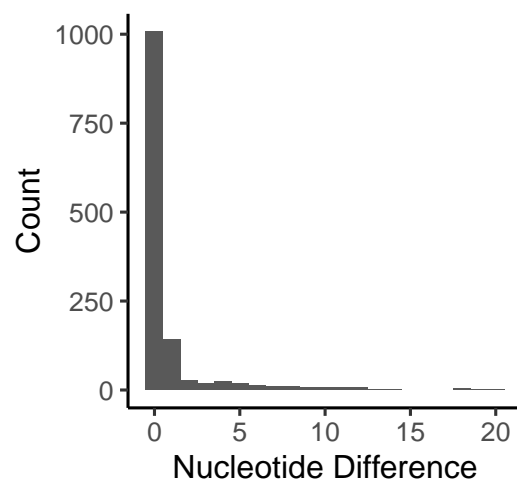
IGHV2-26*01

384 sequences assigned
314 (81.8%) exact matches, in which:
301 unique CDR3
5 unique J



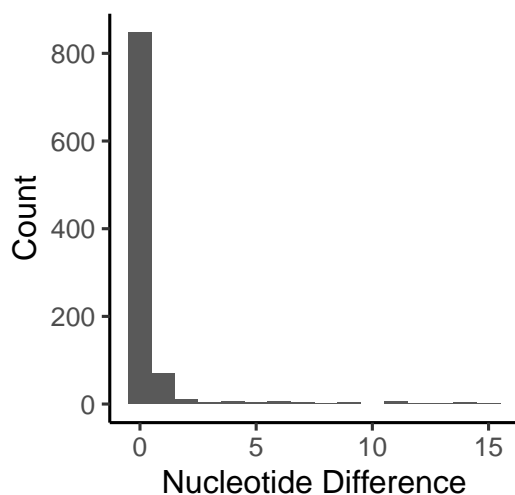
IGHV3-7*01

1309 sequences assigned
1007 (76.9%) exact matches, in which:
949 unique CDR3
6 unique J



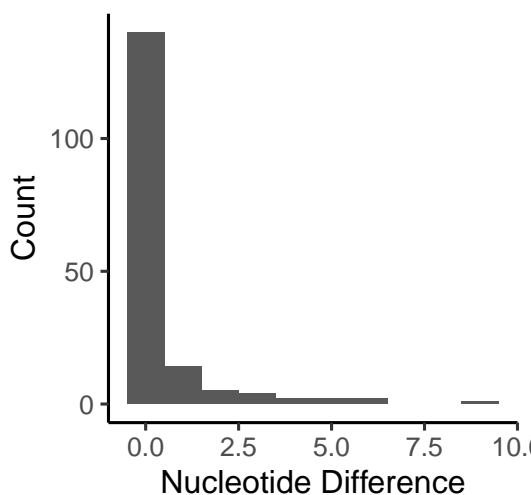
IGHV1-69*08_C191T

968 sequences assigned
848 (87.6%) exact matches, in which:
779 unique CDR3
6 unique J



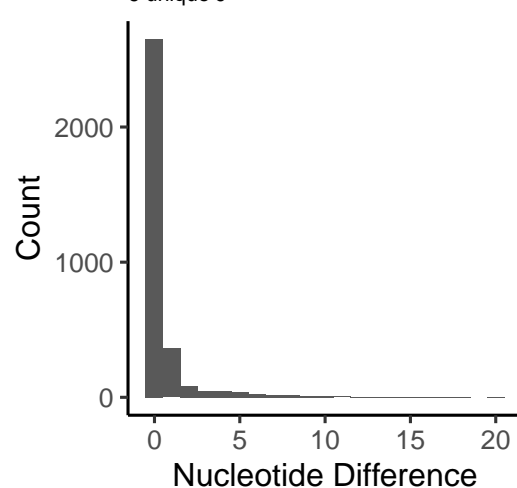
IGHV2-70*01

170 sequences assigned
140 (82.4%) exact matches, in which:
135 unique CDR3
5 unique J



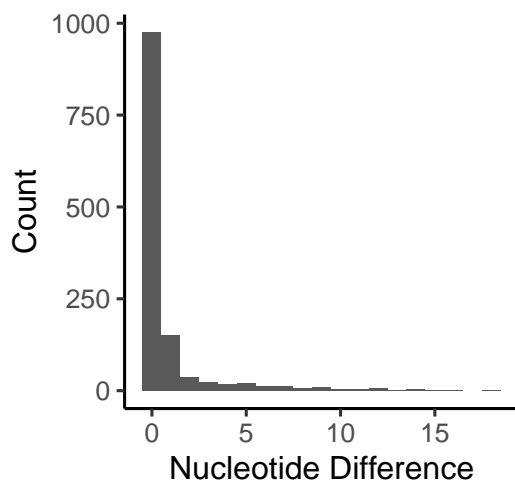
IGHV3-9*01

3331 sequences assigned
2651 (79.6%) exact matches, in which:
2415 unique CDR3
6 unique J



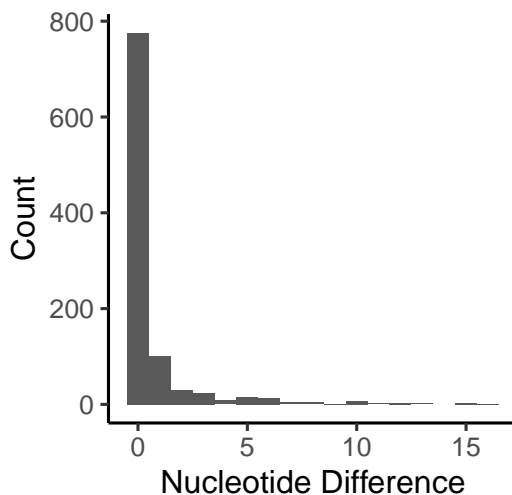
IGHV3-11*01

1287 sequences assigned
975 (75.8%) exact matches, in which:
919 unique CDR3
6 unique J



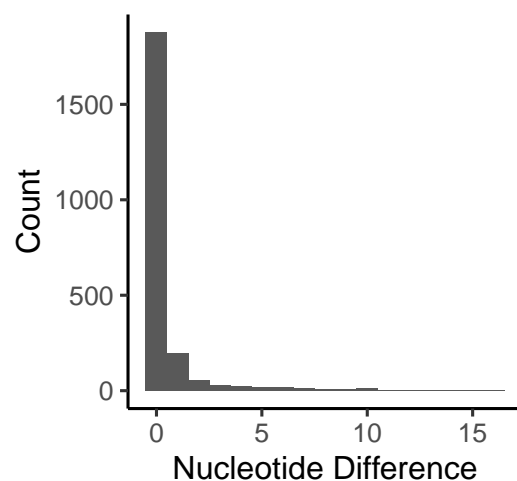
IGHV3-15*07

994 sequences assigned
776 (78.1%) exact matches, in which:
739 unique CDR3
6 unique J



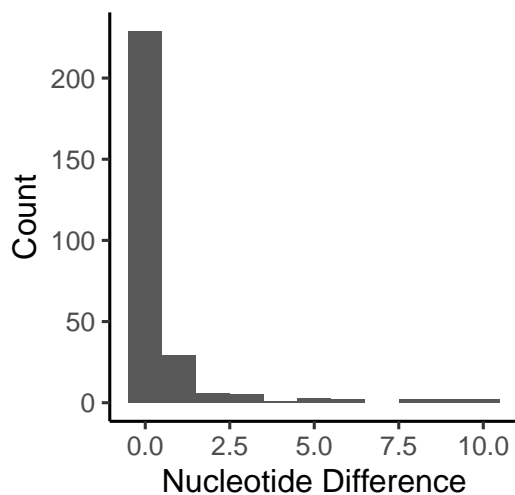
IGHV3-21*01

2271 sequences assigned
1877 (82.7%) exact matches, in which:
1717 unique CDR3
6 unique J



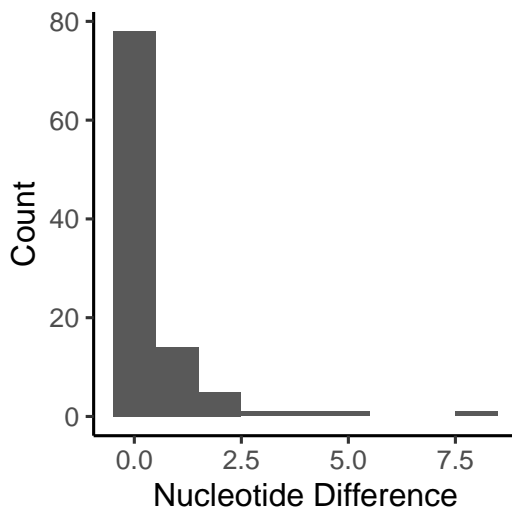
IGHV3-13*01

281 sequences assigned
229 (81.5%) exact matches, in which:
214 unique CDR3
5 unique J



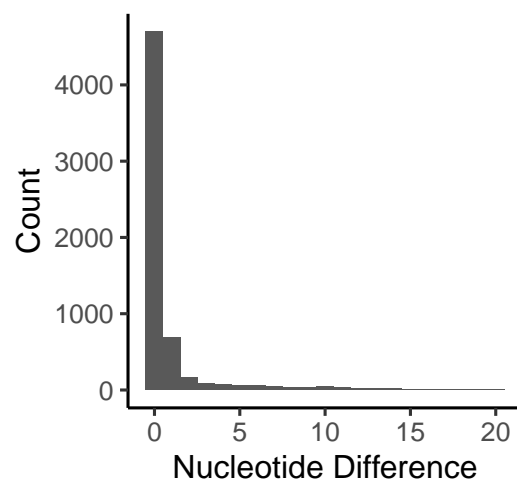
IGHV3-20*01

101 sequences assigned
78 (77.2%) exact matches, in which:
68 unique CDR3
6 unique J



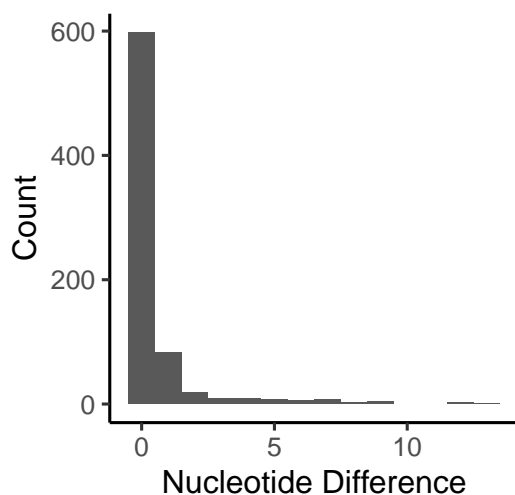
IGHV3-23*01

6105 sequences assigned
4697 (76.9%) exact matches, in which:
4306 unique CDR3
6 unique J



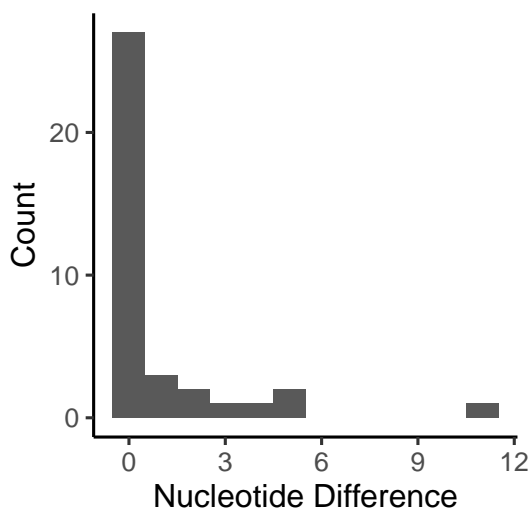
IGHV3-15*01

748 sequences assigned
598 (79.9%) exact matches, in which:
548 unique CDR3
6 unique J



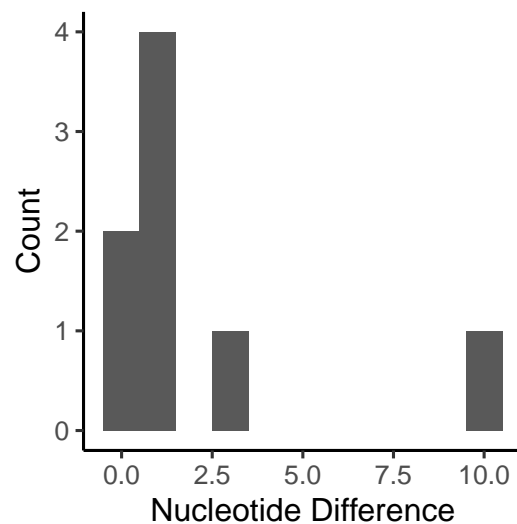
IGHV3-20*04

38 sequences assigned
27 (71.1%) exact matches, in which:
25 unique CDR3
5 unique J



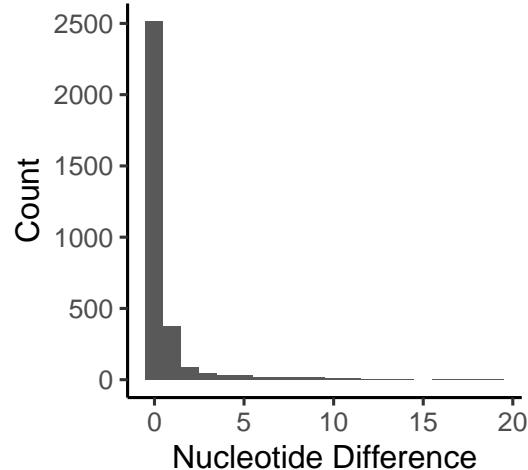
IGHV3-30-3*01

8 sequences assigned
2 (25%) exact matches, in which:
2 unique CDR3
1 unique J



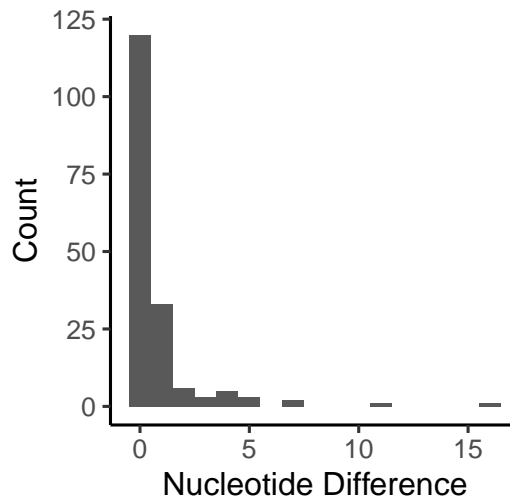
IGHV3–30*18

3205 sequences assigned
2514 (78.4%) exact matches, in which:
2340 unique CDR3
6 unique J



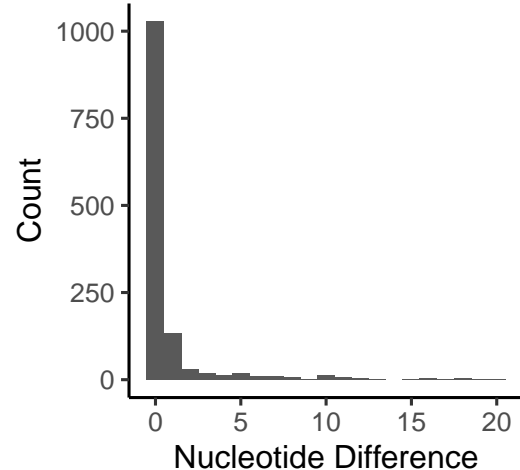
IGHV3–43*01

174 sequences assigned
120 (69%) exact matches, in which:
110 unique CDR3
6 unique J



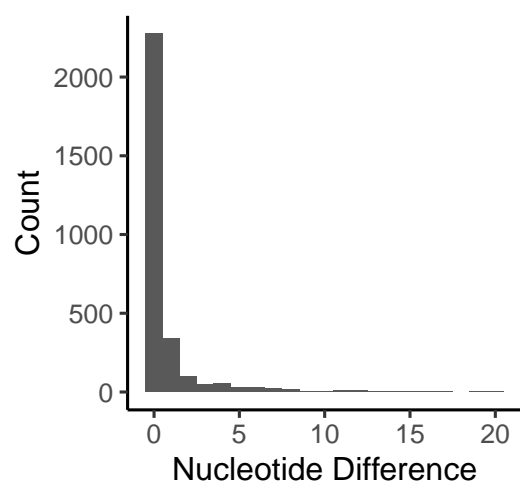
IGHV3–53*01

1313 sequences assigned
1028 (78.3%) exact matches, in which:
940 unique CDR3
6 unique J



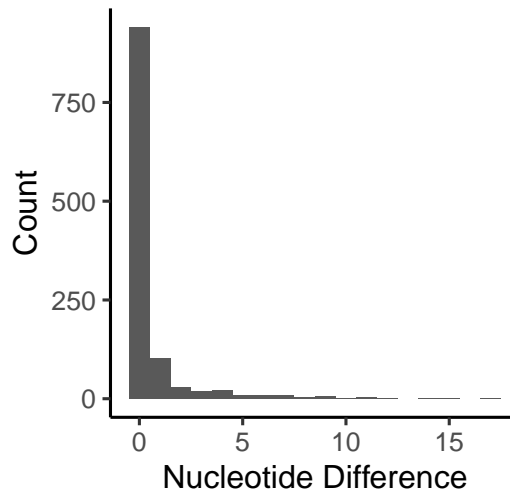
IGHV3–33*01

2957 sequences assigned
2275 (76.9%) exact matches, in which:
2091 unique CDR3
6 unique J



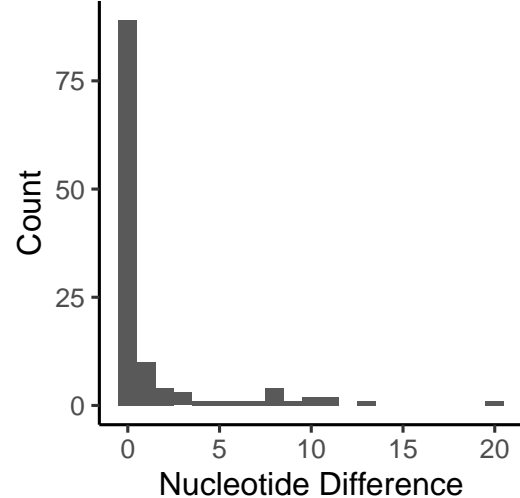
IGHV3–48*02

1163 sequences assigned
941 (80.9%) exact matches, in which:
881 unique CDR3
6 unique J



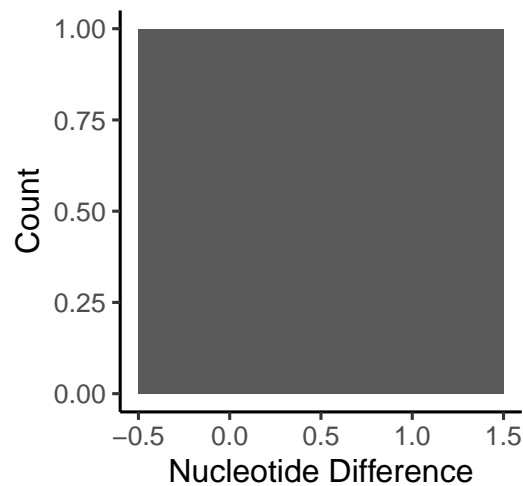
IGHV3–64*01

121 sequences assigned
89 (73.6%) exact matches, in which:
83 unique CDR3
6 unique J



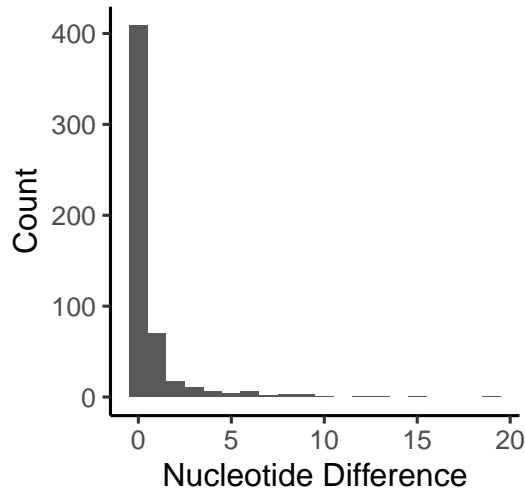
IGHV3–35*01

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



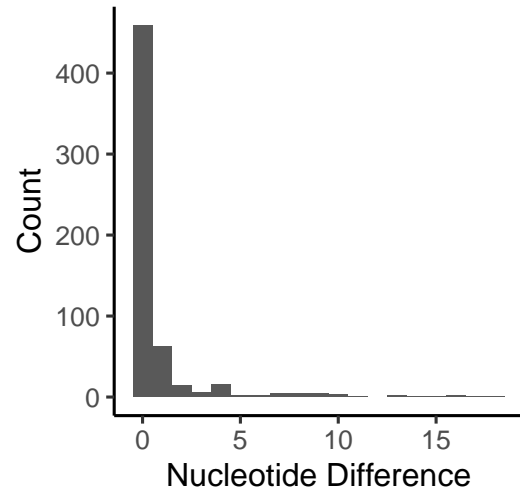
IGHV3–49*05

536 sequences assigned
409 (76.3%) exact matches, in which:
381 unique CDR3
6 unique J



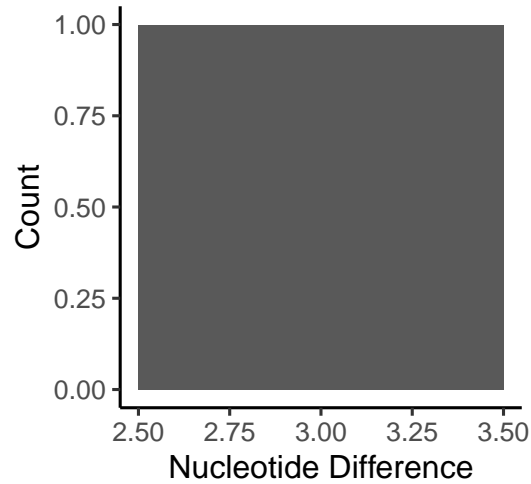
IGHV3–66*02

585 sequences assigned
459 (78.5%) exact matches, in which:
423 unique CDR3
6 unique J



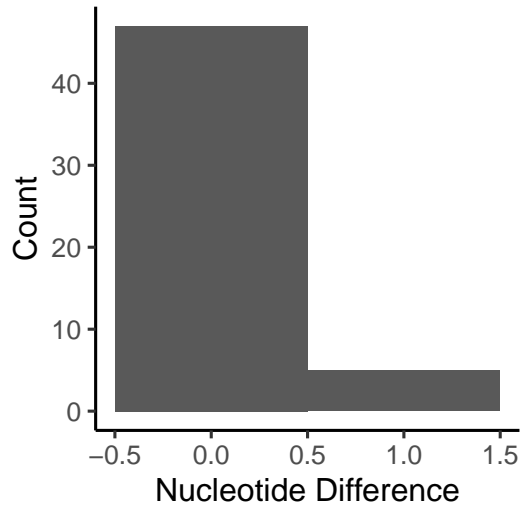
IGHV3-69-1*01

1 sequences assigned
No exact matches.



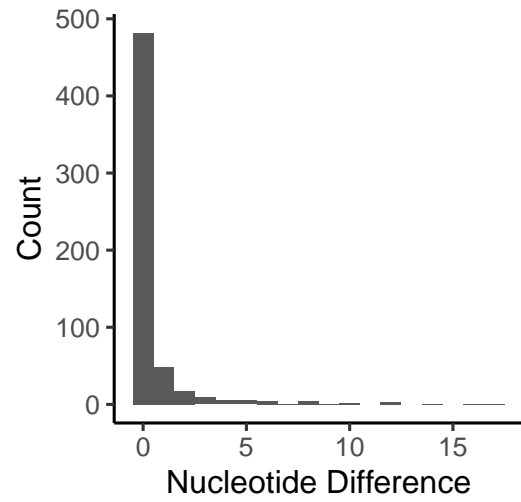
IGHV3-73*02

52 sequences assigned
47 (90.4%) exact matches, in which:
45 unique CDR3
4 unique J



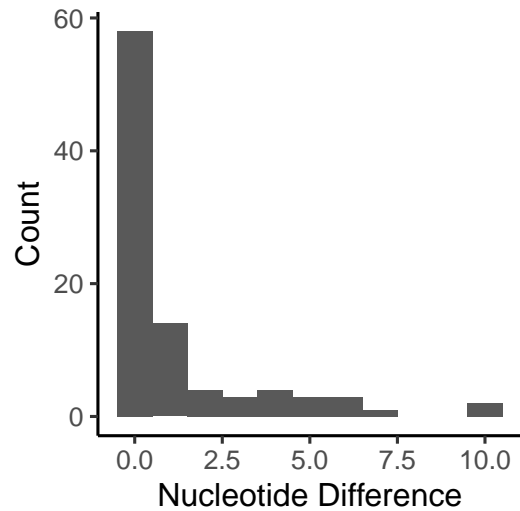
IGHV4-4*07

585 sequences assigned
482 (82.4%) exact matches, in which:
448 unique CDR3
6 unique J



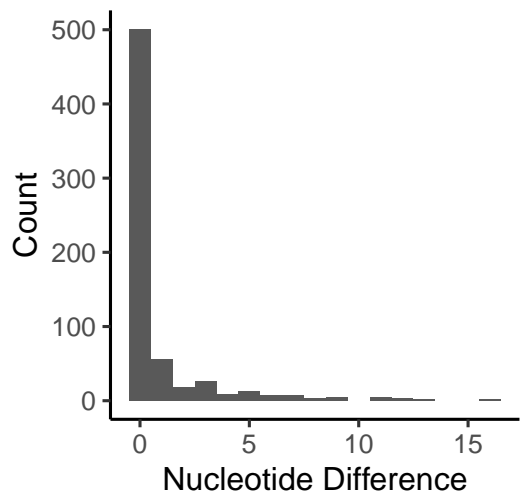
IGHV3-72*01

92 sequences assigned
58 (63%) exact matches, in which:
55 unique CDR3
5 unique J



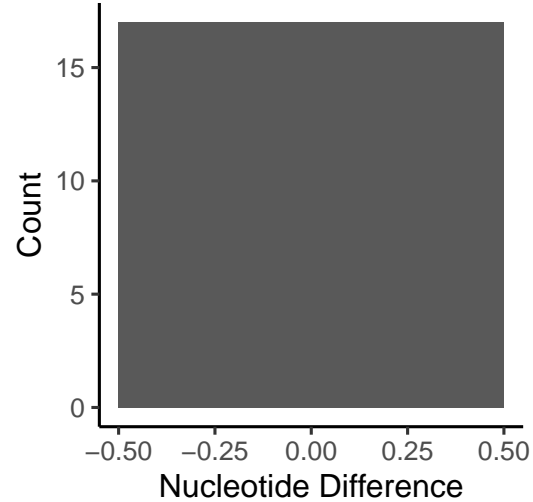
IGHV3-74*01

660 sequences assigned
501 (75.9%) exact matches, in which:
479 unique CDR3
6 unique J



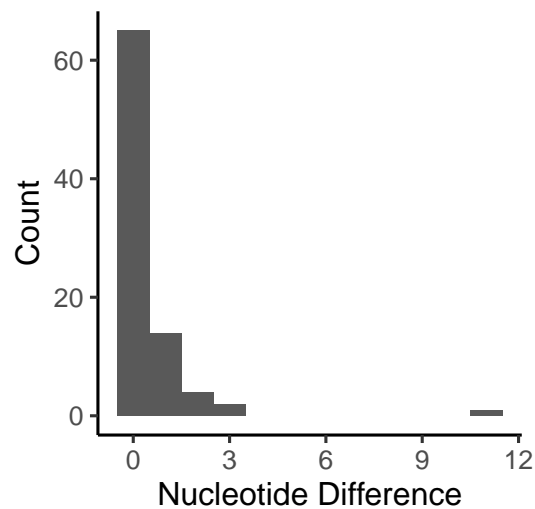
IGHV4-28*01

17 sequences assigned
17 (100%) exact matches, in which:
16 unique CDR3
6 unique J



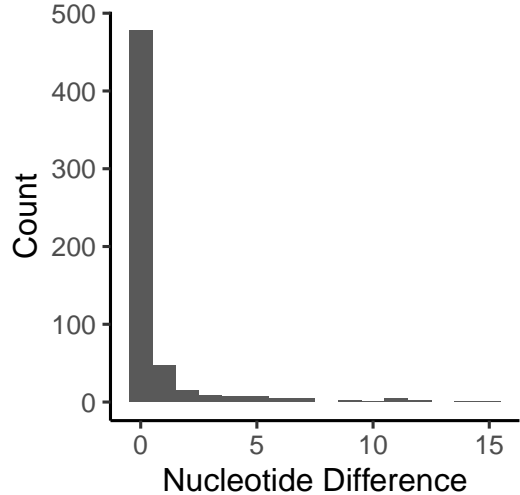
IGHV3-73*01

86 sequences assigned
65 (75.6%) exact matches, in which:
61 unique CDR3
5 unique J



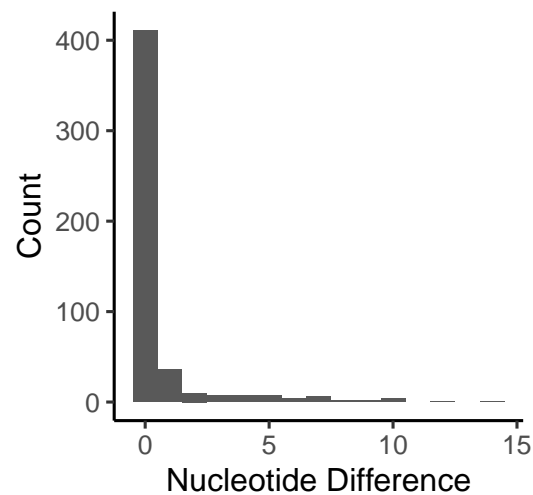
IGHV4-4*02

583 sequences assigned
478 (82%) exact matches, in which:
453 unique CDR3
6 unique J



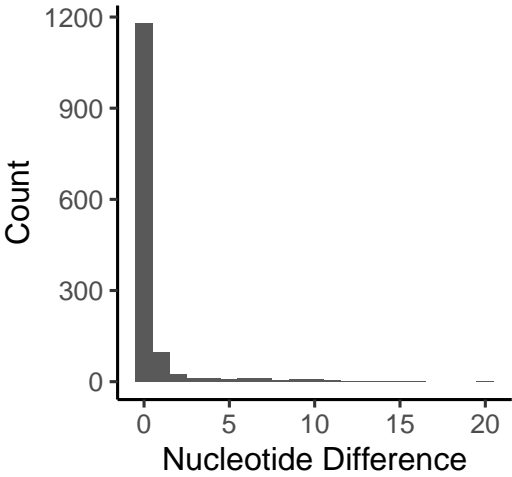
IGHV4-30-2*01

499 sequences assigned
411 (82.4%) exact matches, in which:
390 unique CDR3
6 unique J



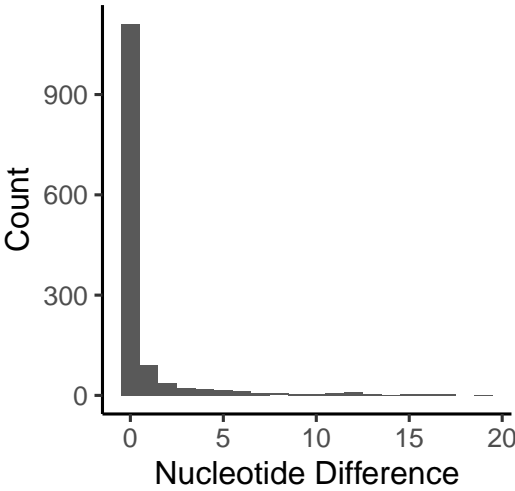
IGHV4-31*03

1396 sequences assigned
1179 (84.5%) exact matches, in which:
1118 unique CDR3
6 unique J



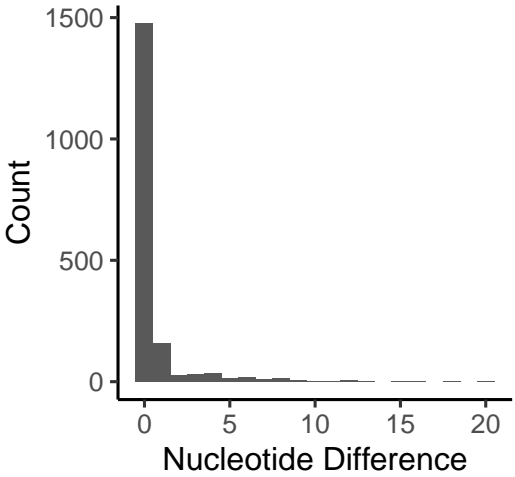
IGHV4-39*01

1373 sequences assigned
1112 (81%) exact matches, in which:
994 unique CDR3
6 unique J



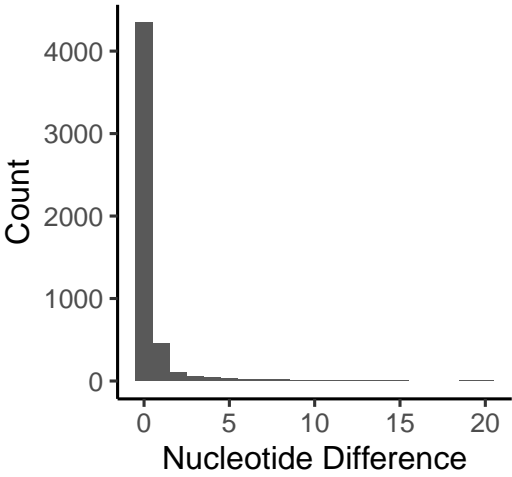
IGHV4-59*01

1811 sequences assigned
1476 (81.5%) exact matches, in which:
1407 unique CDR3
6 unique J



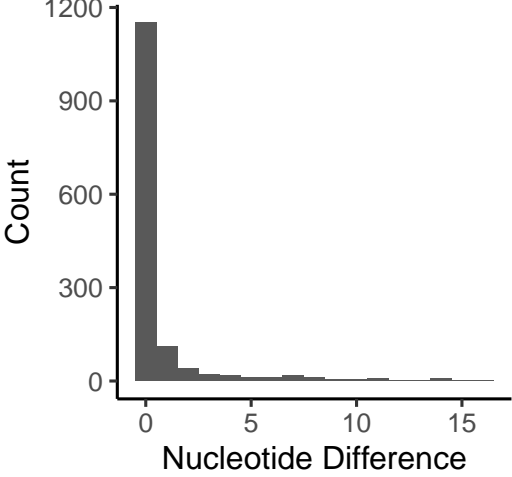
IGHV4-34*01

5133 sequences assigned
4344 (84.6%) exact matches, in which:
3947 unique CDR3
6 unique J



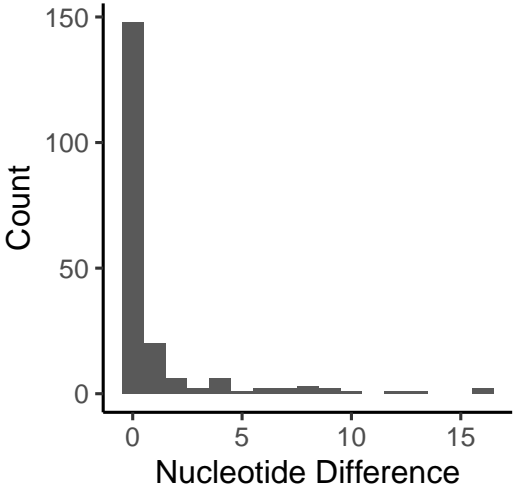
IGHV4-39*01_G315A

1424 sequences assigned
1151 (80.8%) exact matches, in which:
1048 unique CDR3
6 unique J



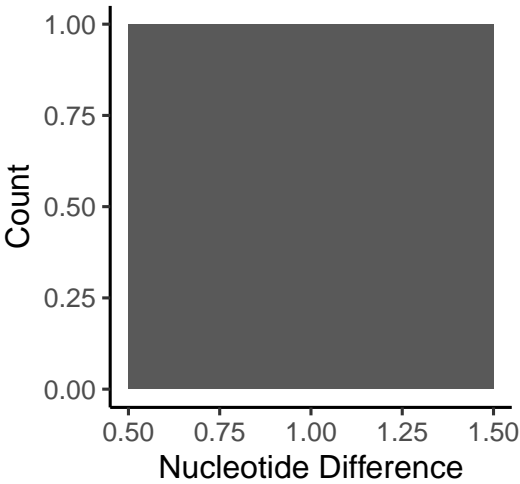
IGHV4-61*01

197 sequences assigned
148 (75.1%) exact matches, in which:
143 unique CDR3
5 unique J



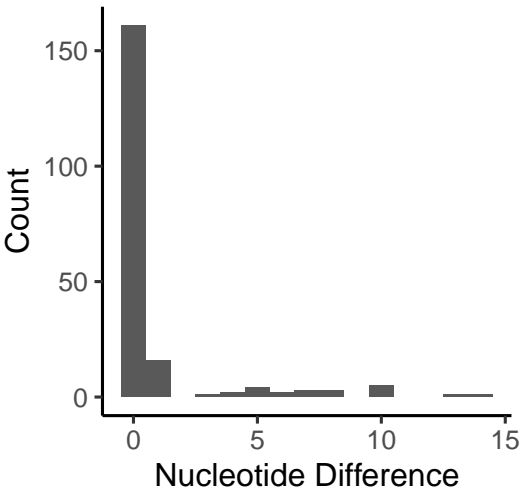
IGHV4-38-2*02

1 sequences assigned
No exact matches.



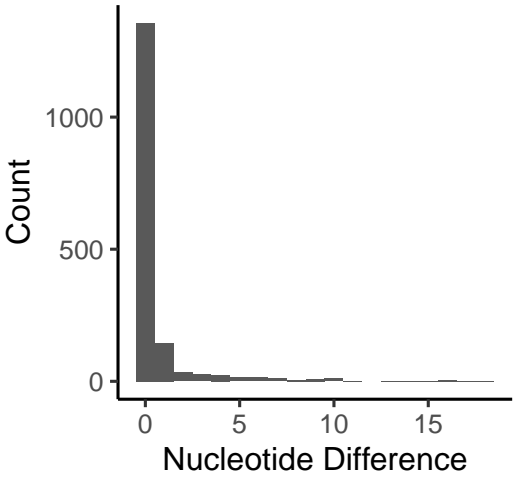
IGHV4-39*02_C258G

199 sequences assigned
161 (80.9%) exact matches, in which:
144 unique CDR3
5 unique J



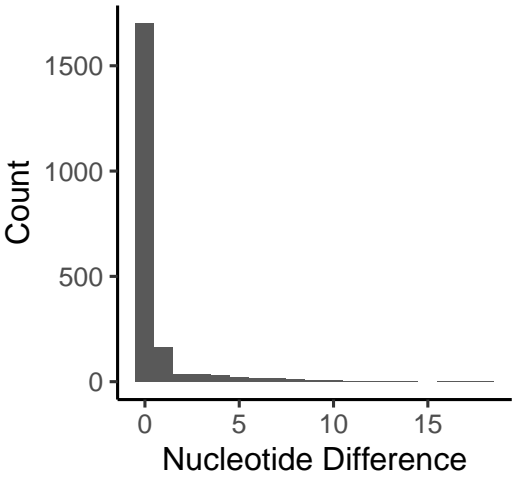
IGHV4-61*02

1664 sequences assigned
1356 (81.5%) exact matches, in which:
1293 unique CDR3
6 unique J



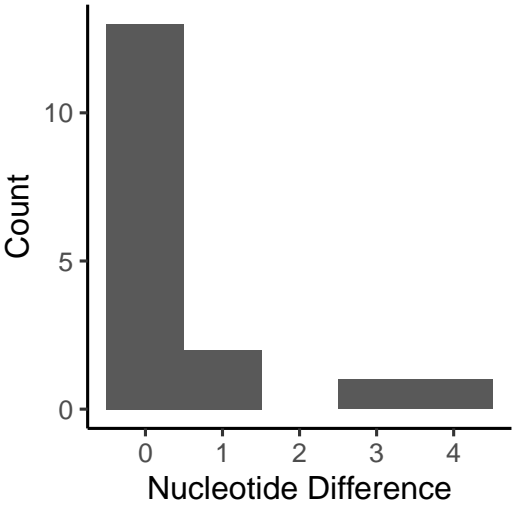
IGHV5-51*01

2069 sequences assigned
1701 (82.2%) exact matches, in which:
1578 unique CDR3
6 unique J



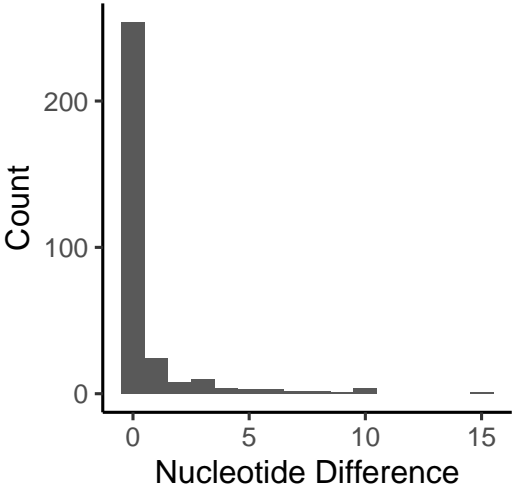
IGHV7-4-1*01

17 sequences assigned
13 (76.5%) exact matches, in which:
13 unique CDR3
4 unique J



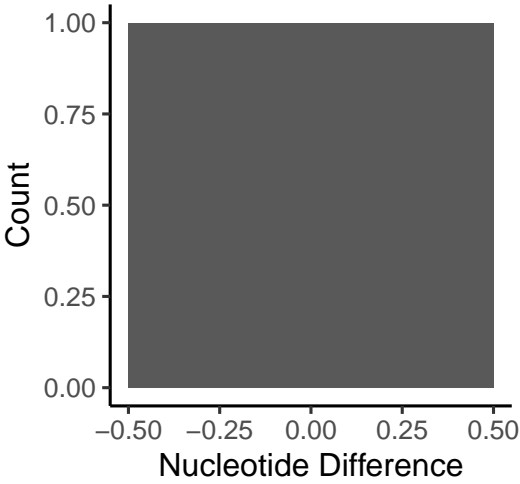
IGHV6-1*01

316 sequences assigned
254 (80.4%) exact matches, in which:
232 unique CDR3
6 unique J

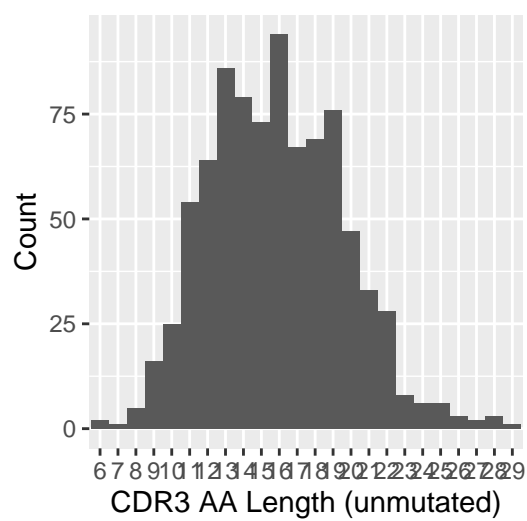


IGHV3/OR16-8*01

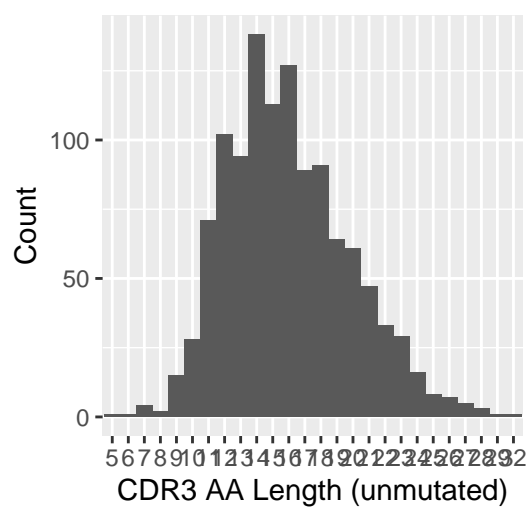
1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV1-69*08_C191T



IGHV4-39*01_G315A



IGHV4-39*02_C258G

