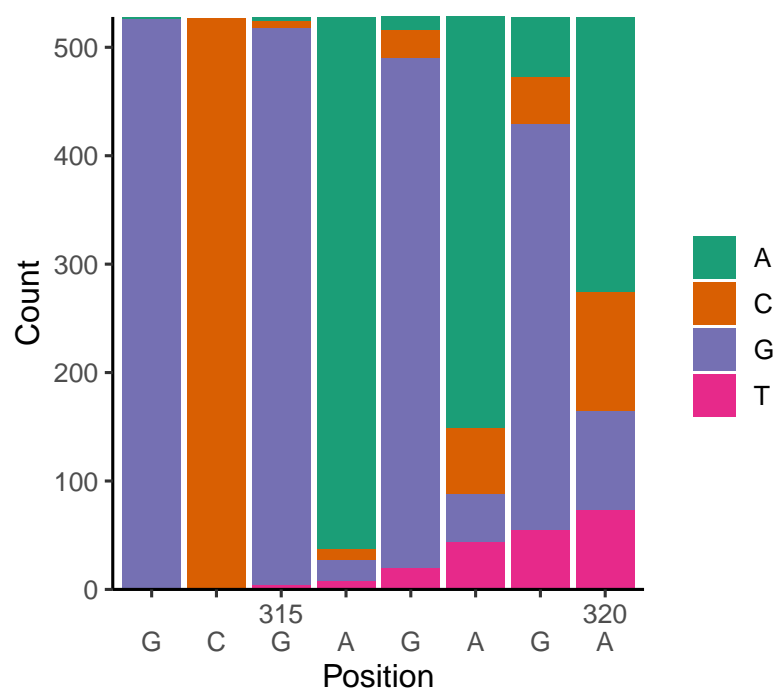
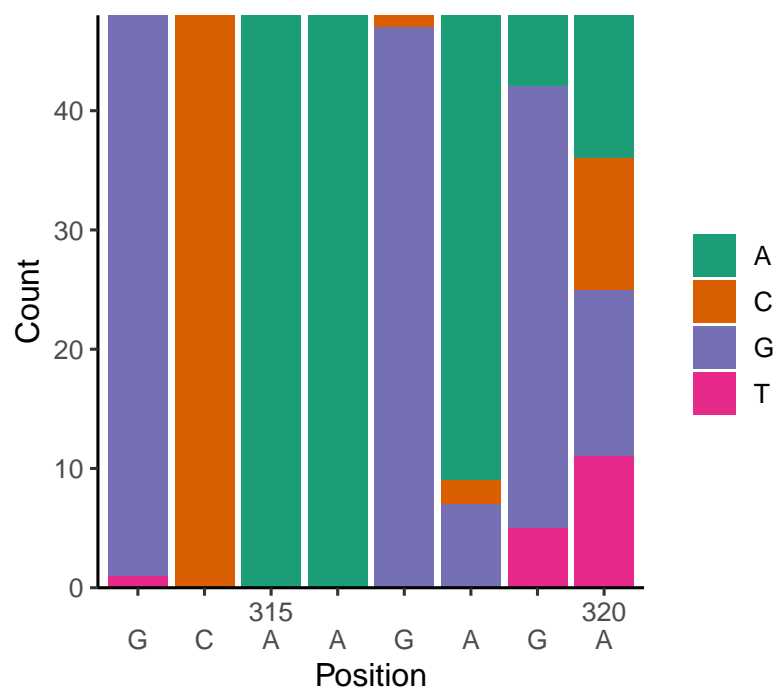


Gene IGHV1-69*08_C191T



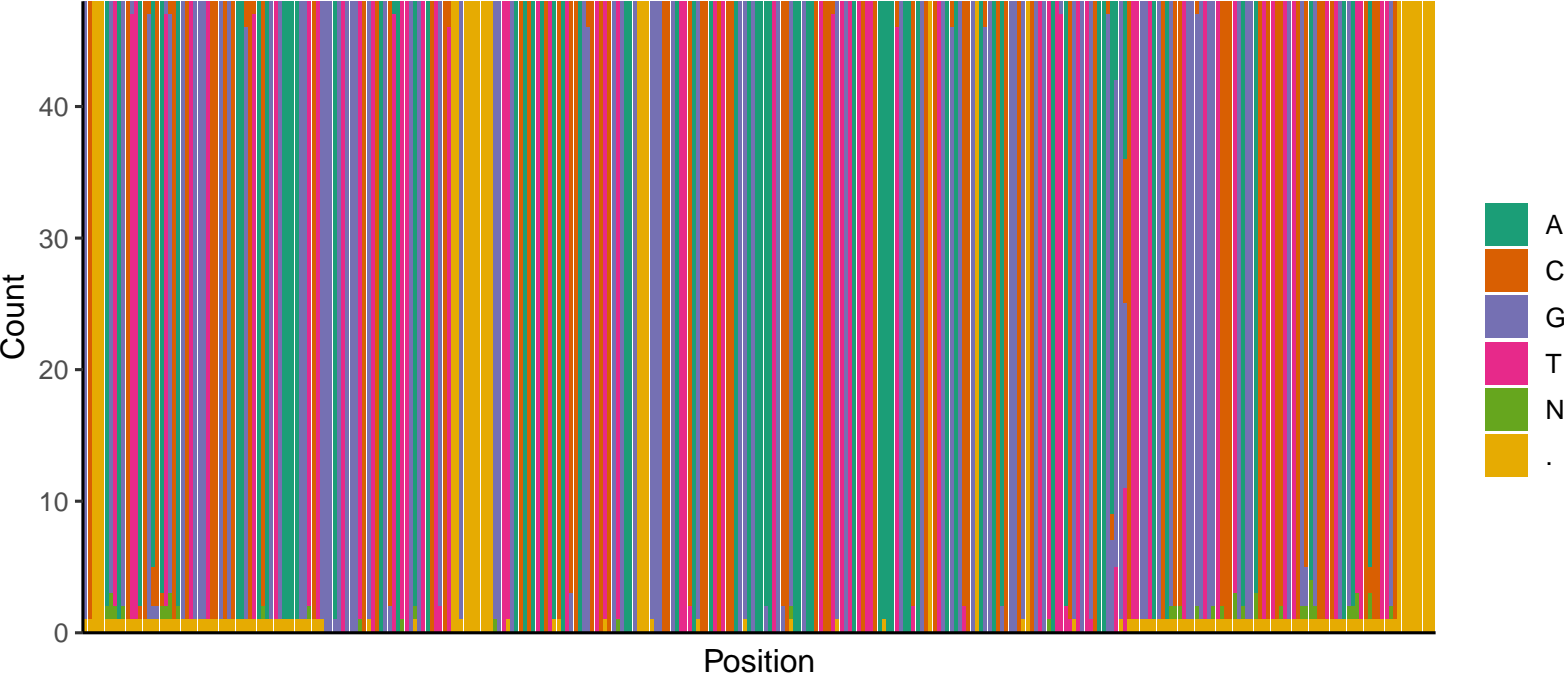
Gene IGHV3-13*01_G290A_T300C



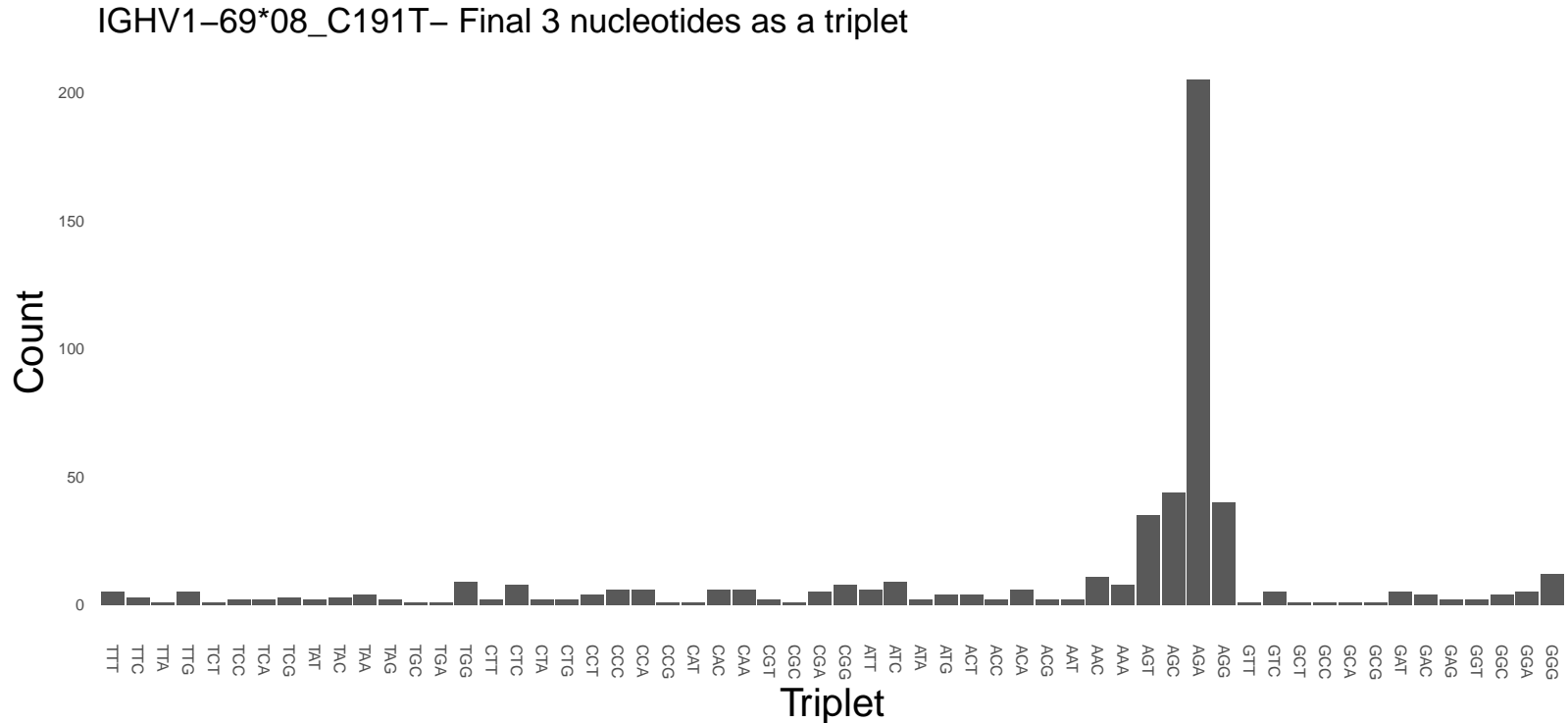
Gene IGHV1-69*08_C191T



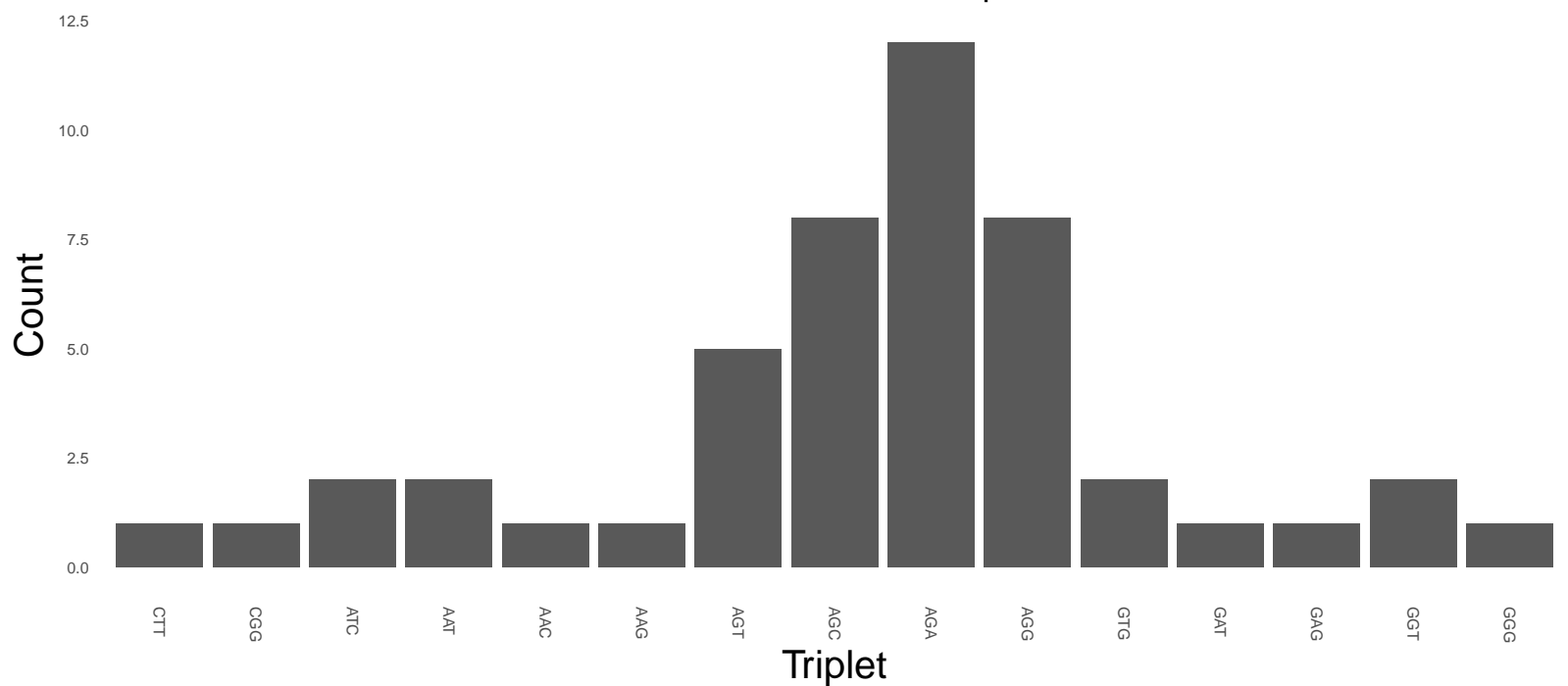
Gene IGHV3-13*01_G290A_T300C



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

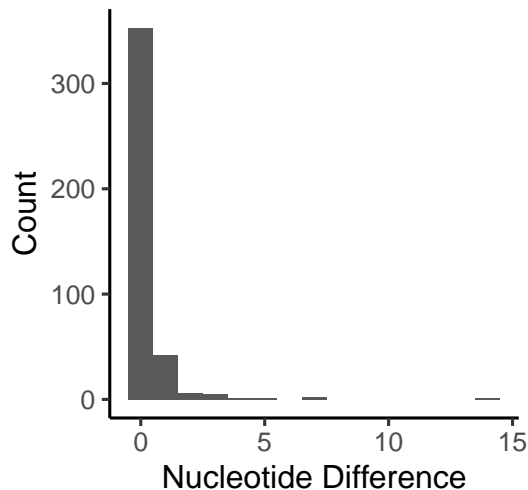


IGHV3-13*01_G290A_T300C- Final 3 nucleotides as a triplet



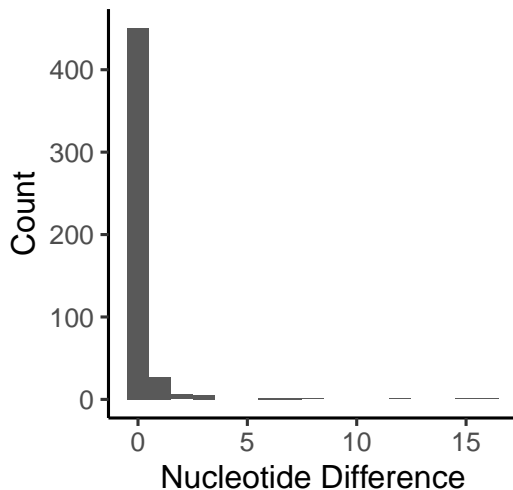
IGHV1-2*04

412 sequences assigned
353 (85.7%) exact matches, in which:
337 unique CDR3
6 unique J



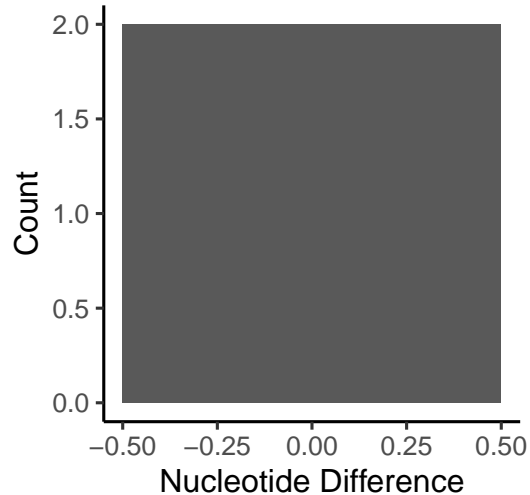
IGHV1-18*01

499 sequences assigned
451 (90.4%) exact matches, in which:
439 unique CDR3
6 unique J



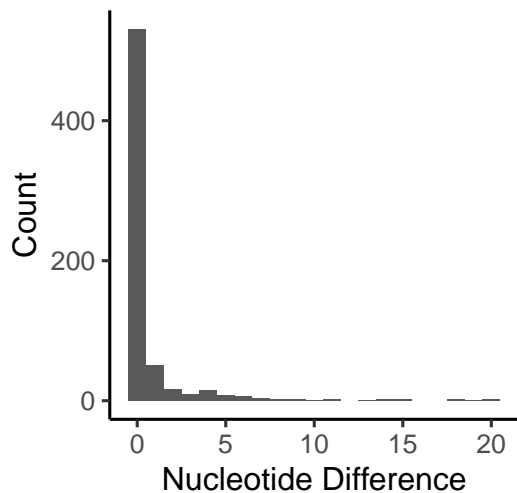
IGHV1-45*02

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
1 unique J



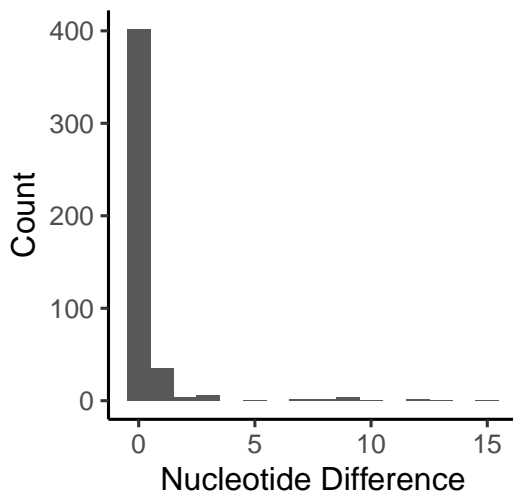
IGHV1-3*01

661 sequences assigned
531 (80.3%) exact matches, in which:
526 unique CDR3
6 unique J



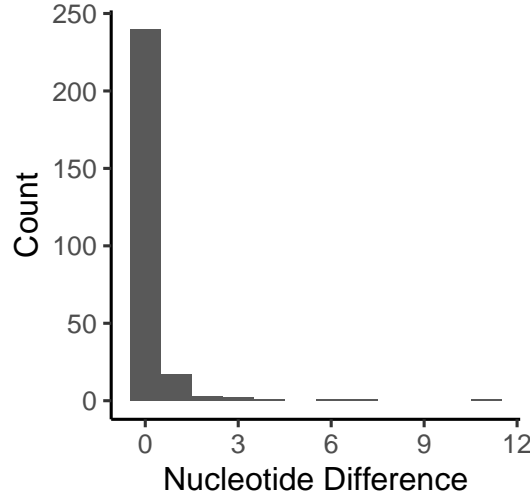
IGHV1-18*04

461 sequences assigned
402 (87.2%) exact matches, in which:
393 unique CDR3
6 unique J



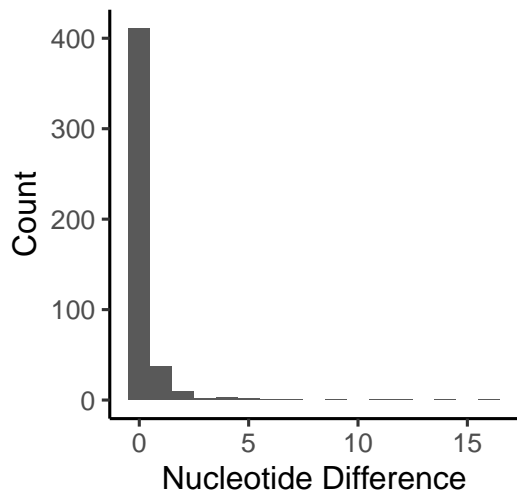
IGHV1-46*01

266 sequences assigned
240 (90.2%) exact matches, in which:
233 unique CDR3
6 unique J



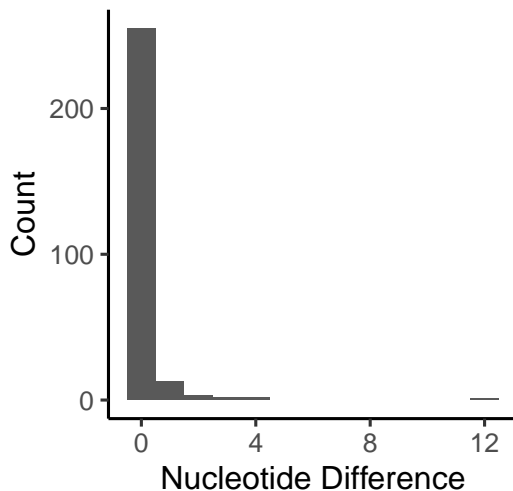
IGHV1-8*01

471 sequences assigned
411 (87.3%) exact matches, in which:
402 unique CDR3
6 unique J



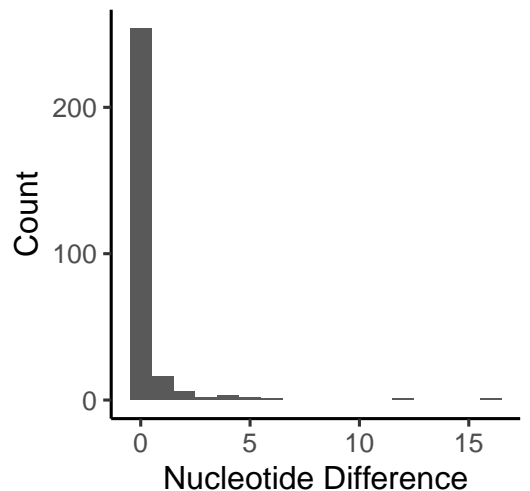
IGHV1-24*01

276 sequences assigned
255 (92.4%) exact matches, in which:
247 unique CDR3
6 unique J



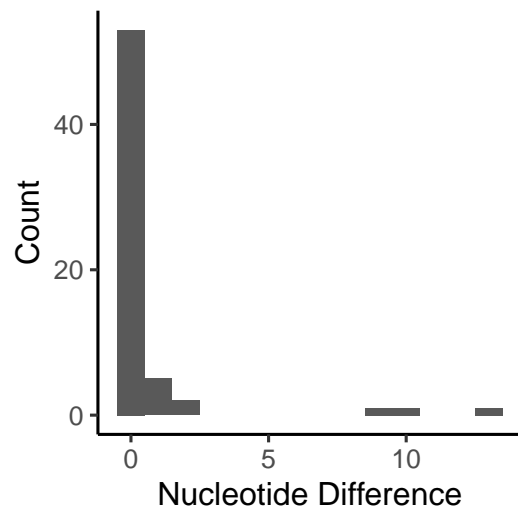
IGHV1-46*03

286 sequences assigned
254 (88.8%) exact matches, in which:
248 unique CDR3
6 unique J



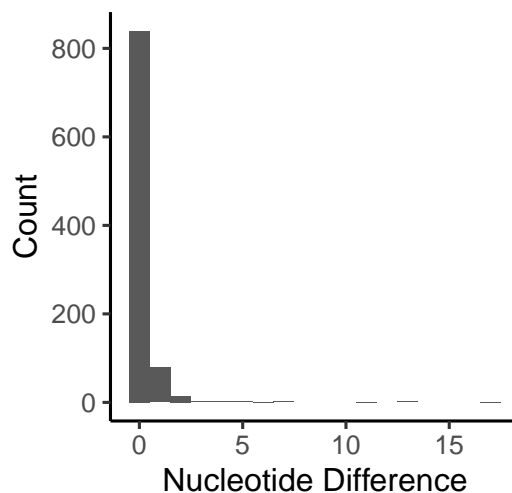
IGHV1-58*01

64 sequences assigned
53 (82.8%) exact matches, in which:
52 unique CDR3
5 unique J



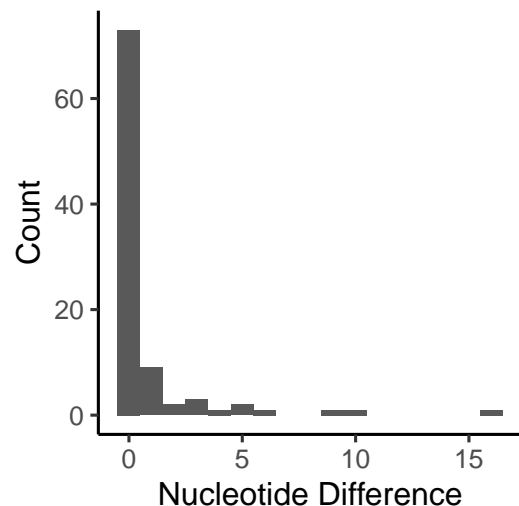
IGHV1-69*06

946 sequences assigned
840 (88.8%) exact matches, in which:
810 unique CDR3
6 unique J



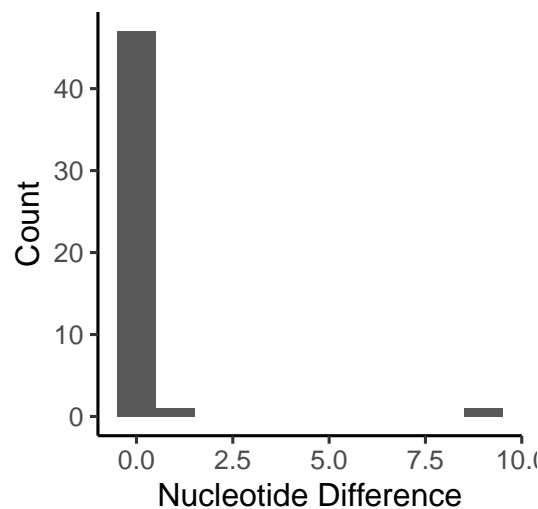
IGHV2-5*02

94 sequences assigned
73 (77.7%) exact matches, in which:
71 unique CDR3
5 unique J



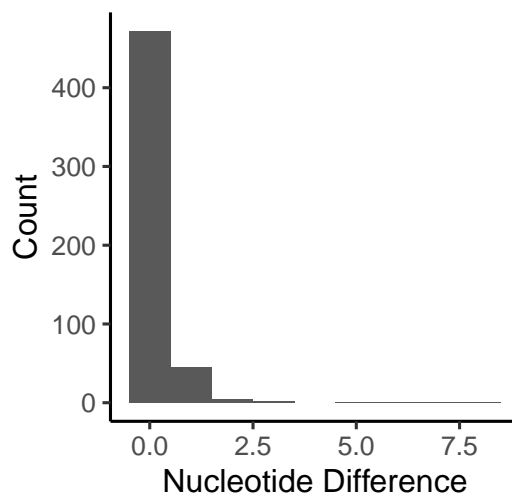
IGHV1-58*02

49 sequences assigned
47 (95.9%) exact matches, in which:
46 unique CDR3
5 unique J



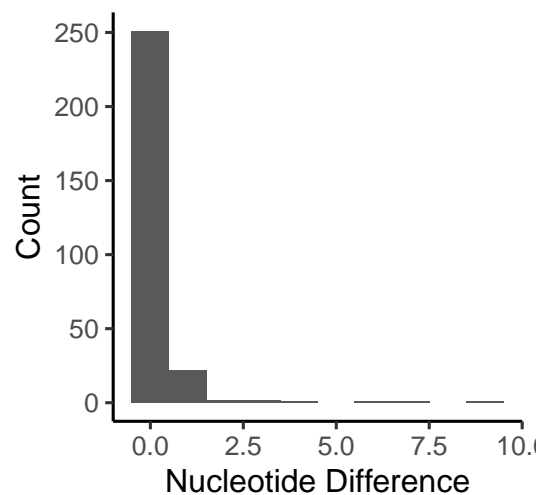
IGHV1-69*08_C191T

528 sequences assigned
472 (89.4%) exact matches, in which:
455 unique CDR3
6 unique J



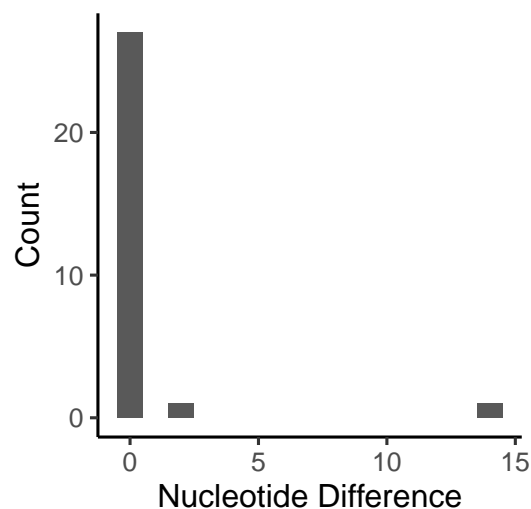
IGHV2-26*01

281 sequences assigned
251 (89.3%) exact matches, in which:
247 unique CDR3
5 unique J



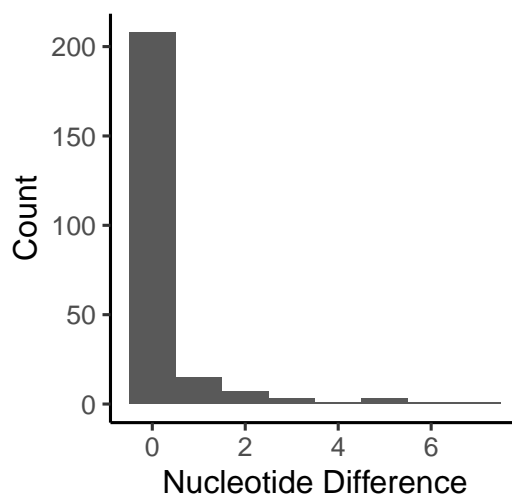
IGHV1-69-2*01

29 sequences assigned
27 (93.1%) exact matches, in which:
27 unique CDR3
5 unique J



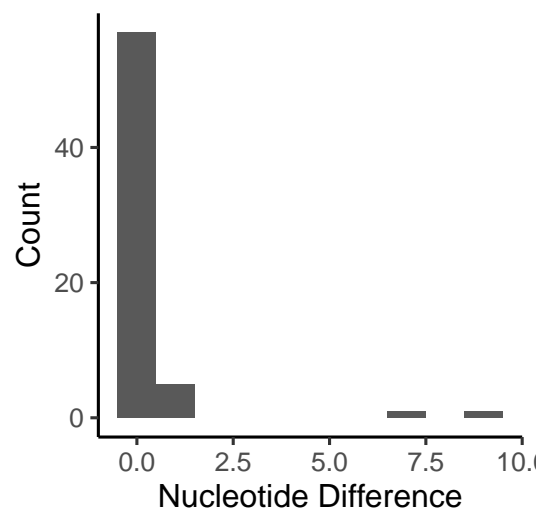
IGHV2-5*01

239 sequences assigned
208 (87%) exact matches, in which:
206 unique CDR3
6 unique J



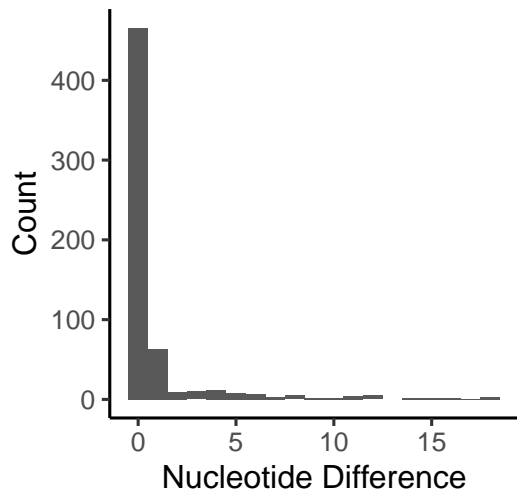
IGHV2-70*01

64 sequences assigned
57 (89.1%) exact matches, in which:
57 unique CDR3
4 unique J



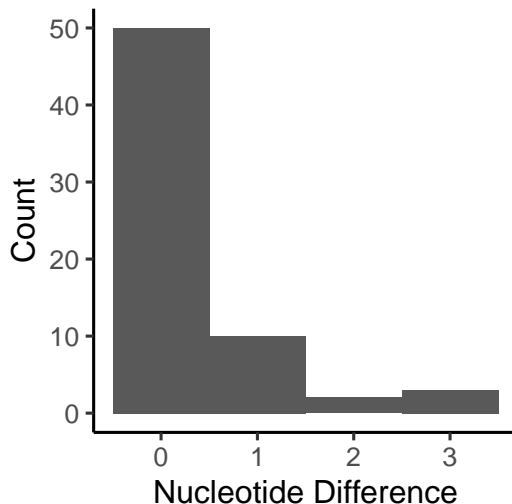
IGHV3-7*03

608 sequences assigned
466 (76.6%) exact matches, in which:
453 unique CDR3
6 unique J



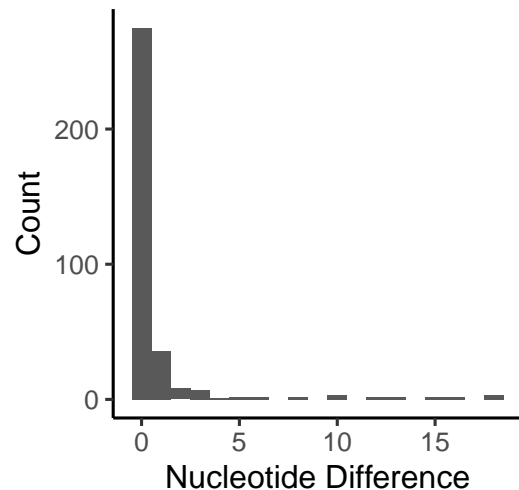
IGHV3-11*06

65 sequences assigned
50 (76.9%) exact matches, in which:
50 unique CDR3
4 unique J



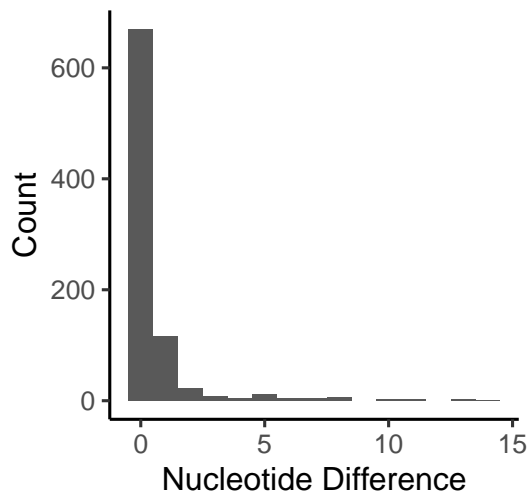
IGHV3-15*01

347 sequences assigned
275 (79.3%) exact matches, in which:
266 unique CDR3
6 unique J



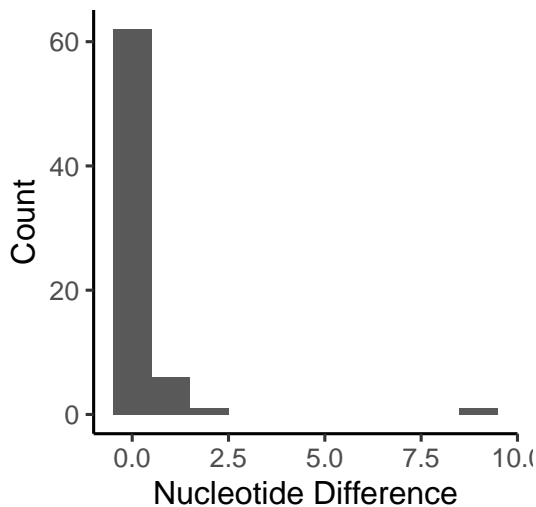
IGHV3-9*01

857 sequences assigned
670 (78.2%) exact matches, in which:
631 unique CDR3
6 unique J



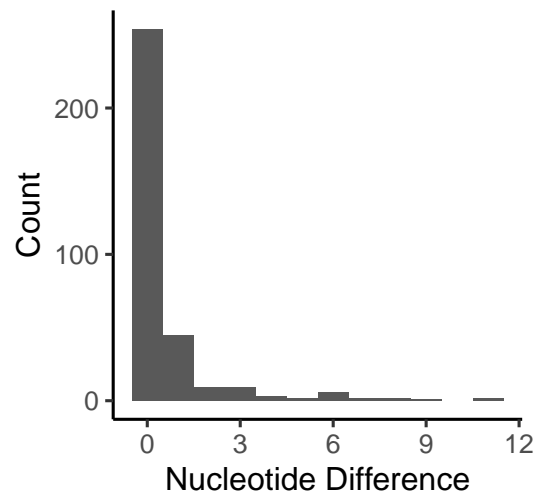
IGHV3-13*01

70 sequences assigned
62 (88.6%) exact matches, in which:
60 unique CDR3
5 unique J



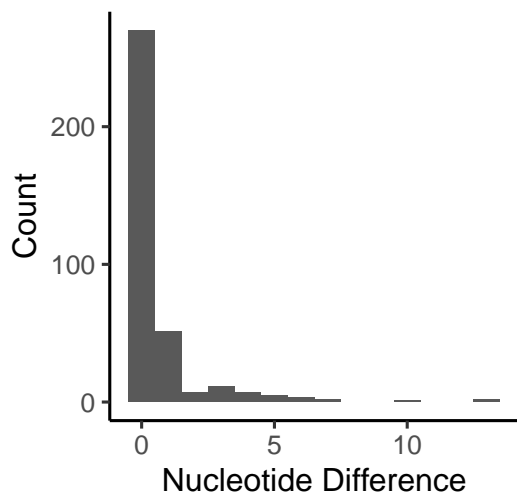
IGHV3-15*07

335 sequences assigned
254 (75.8%) exact matches, in which:
245 unique CDR3
6 unique J



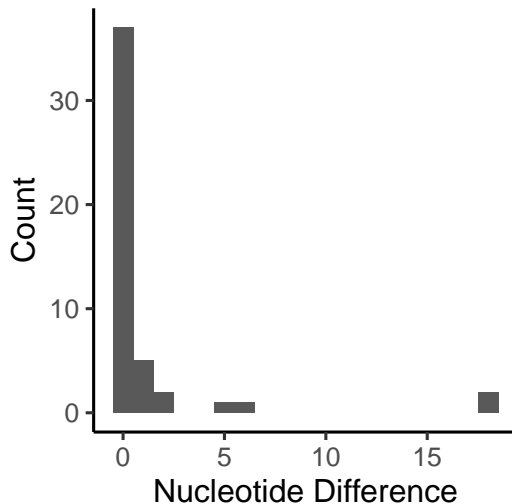
IGHV3-11*01

360 sequences assigned
270 (75%) exact matches, in which:
259 unique CDR3
6 unique J



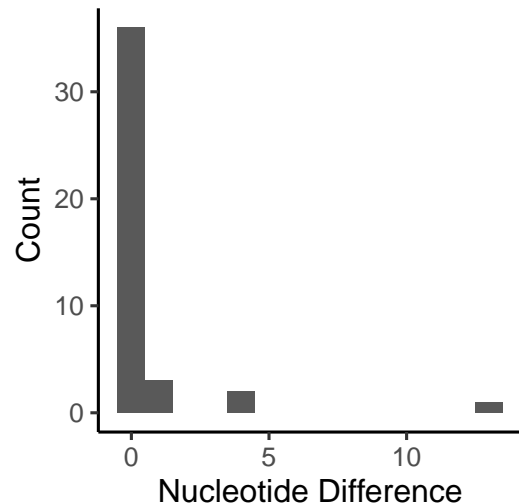
IGHV3-13*01_G290A_T30I

48 sequences assigned
37 (77.1%) exact matches, in which:
34 unique CDR3
5 unique J



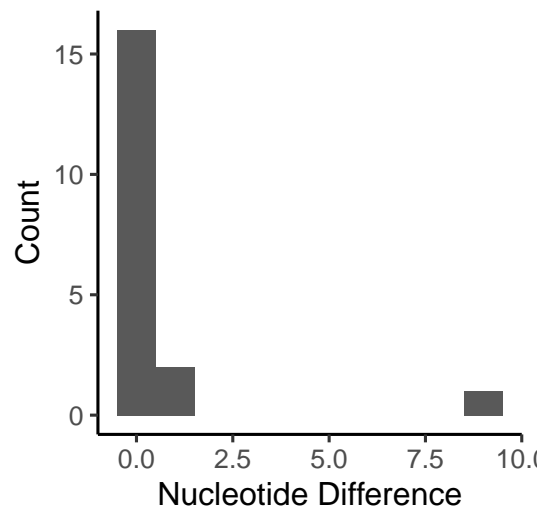
IGHV3-20*01

42 sequences assigned
36 (85.7%) exact matches, in which:
33 unique CDR3
4 unique J



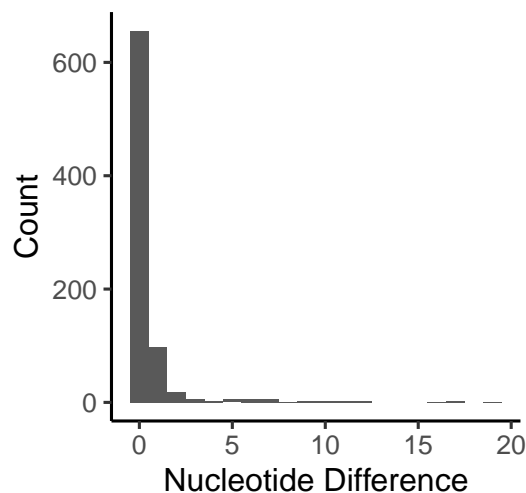
IGHV3-20*04

19 sequences assigned
16 (84.2%) exact matches, in which:
15 unique CDR3
3 unique J



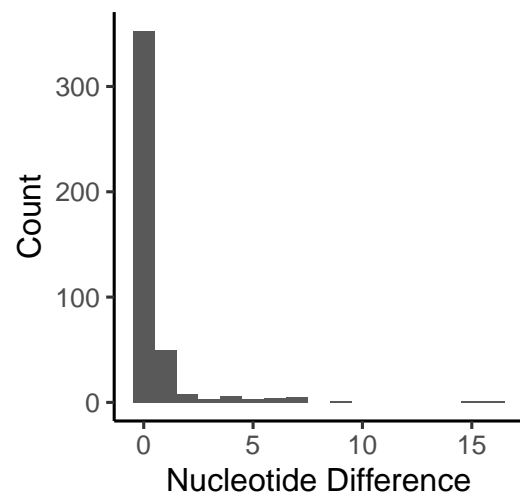
IGHV3-30-3*01

816 sequences assigned
656 (80.4%) exact matches, in which:
634 unique CDR3
6 unique J



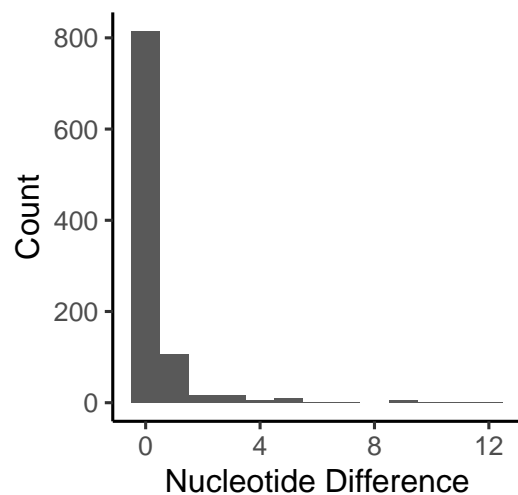
IGHV3-48*01

435 sequences assigned
353 (81.1%) exact matches, in which:
342 unique CDR3
6 unique J



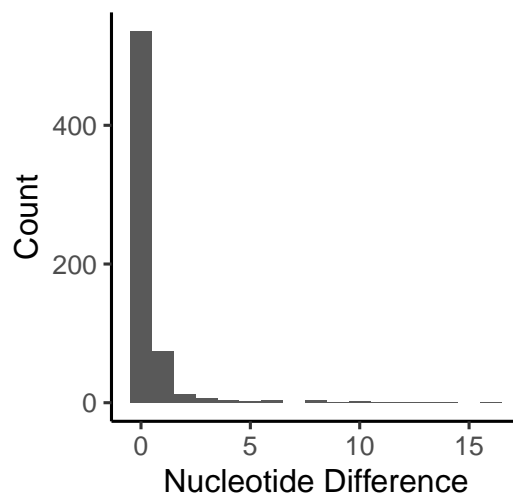
IGHV3-21*01

981 sequences assigned
815 (83.1%) exact matches, in which:
781 unique CDR3
6 unique J



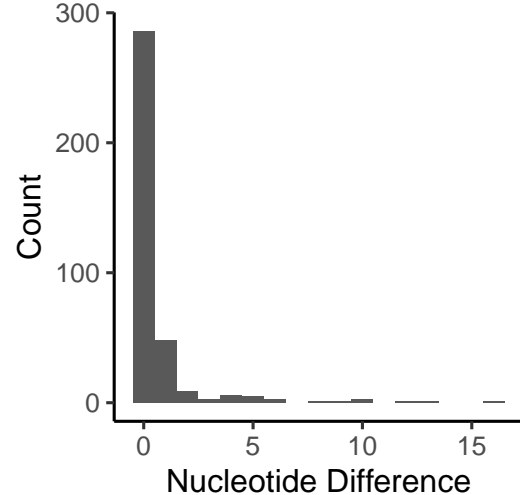
IGHV3-33*01

651 sequences assigned
536 (82.3%) exact matches, in which:
509 unique CDR3
6 unique J



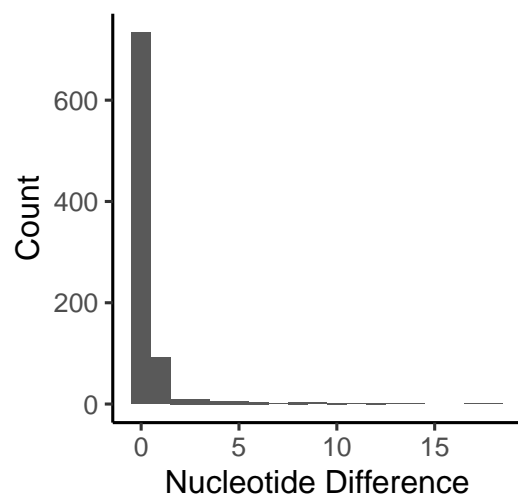
IGHV3-48*02

368 sequences assigned
286 (77.7%) exact matches, in which:
281 unique CDR3
6 unique J



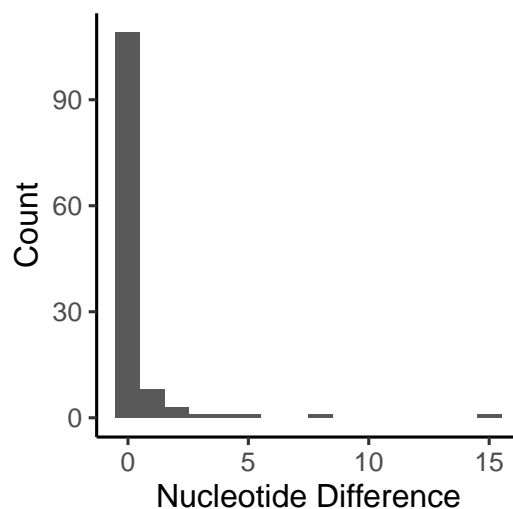
IGHV3-21*06

878 sequences assigned
734 (83.6%) exact matches, in which:
693 unique CDR3
6 unique J



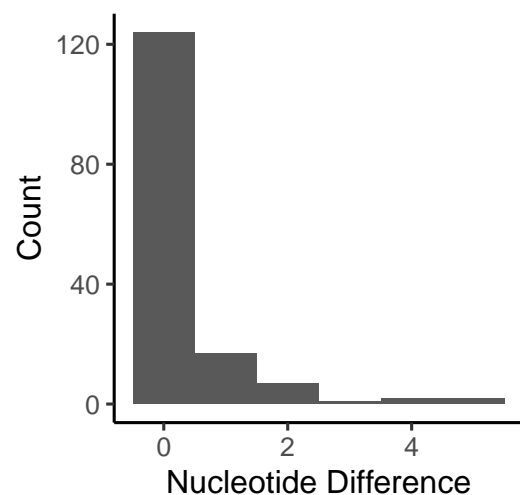
IGHV3-43*01

125 sequences assigned
109 (87.2%) exact matches, in which:
105 unique CDR3
6 unique J



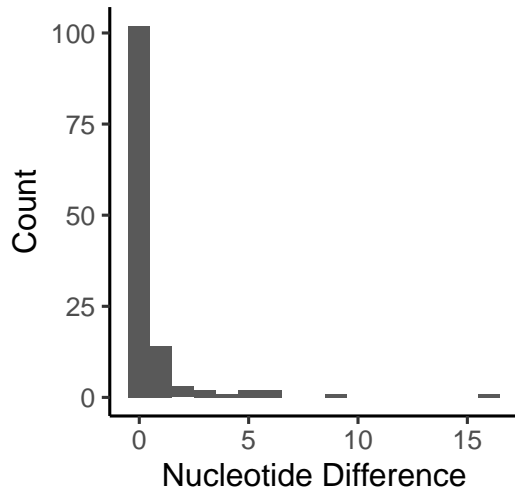
IGHV3-49*03

153 sequences assigned
124 (81%) exact matches, in which:
116 unique CDR3
5 unique J



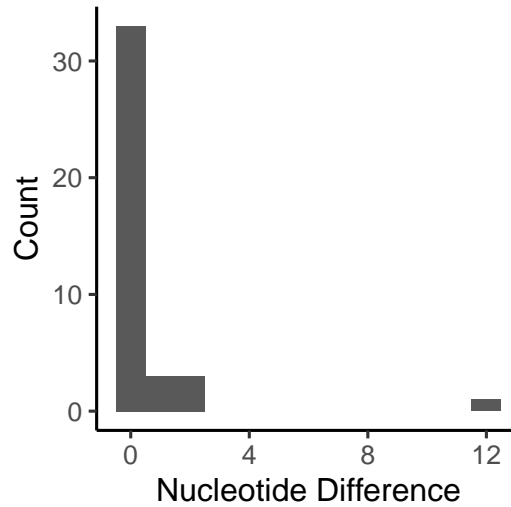
IGHV3-49*05

128 sequences assigned
102 (79.7%) exact matches, in which:
100 unique CDR3
6 unique J



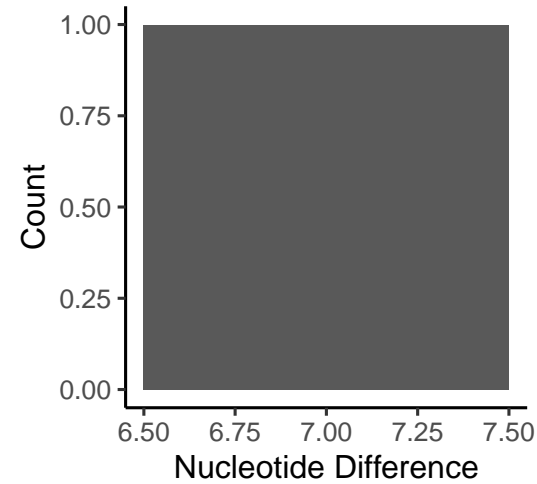
IGHV3-64*01

40 sequences assigned
33 (82.5%) exact matches, in which:
30 unique CDR3
5 unique J



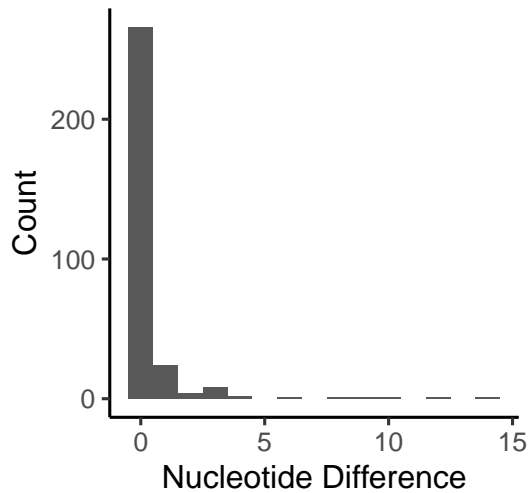
IGHV3-71*02

1 sequences assigned
No exact matches.



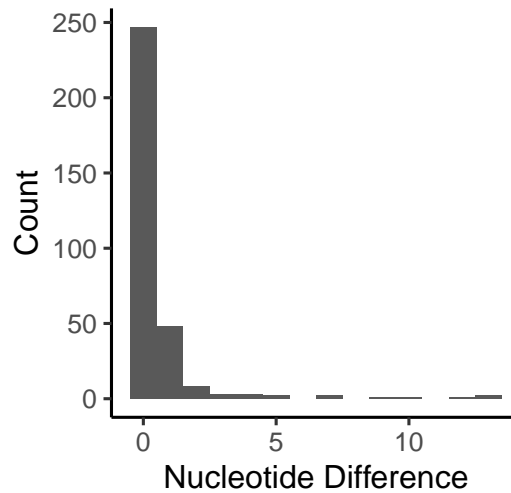
IGHV3-53*01

311 sequences assigned
266 (85.5%) exact matches, in which:
256 unique CDR3
6 unique J



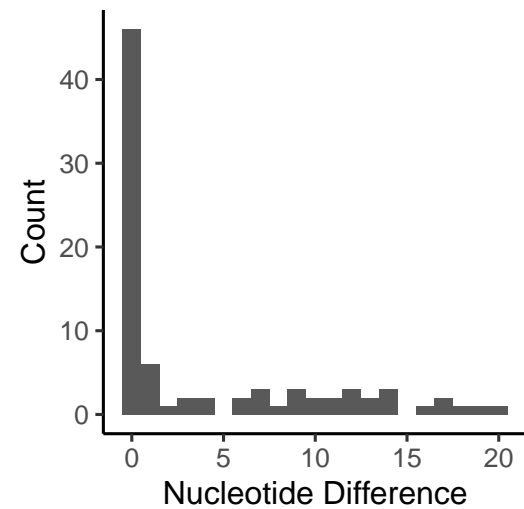
IGHV3-66*02

319 sequences assigned
247 (77.4%) exact matches, in which:
238 unique CDR3
6 unique J



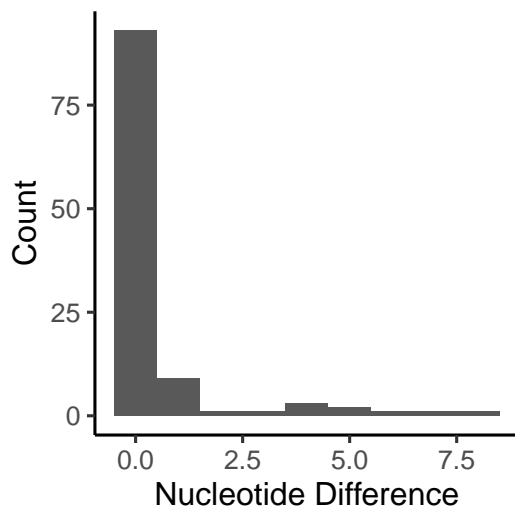
IGHV3-72*01

85 sequences assigned
46 (54.1%) exact matches, in which:
43 unique CDR3
5 unique J



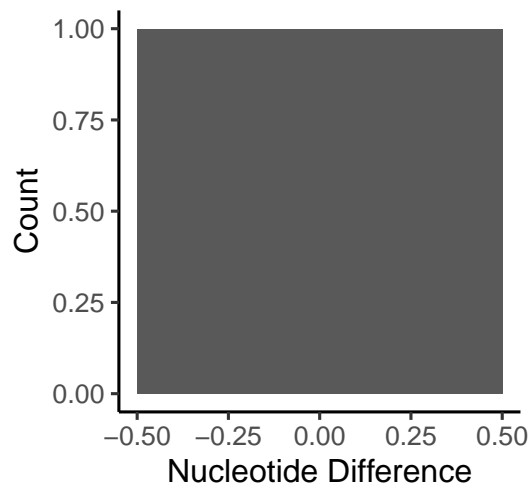
IGHV3-53*02

112 sequences assigned
93 (83%) exact matches, in which:
92 unique CDR3
6 unique J



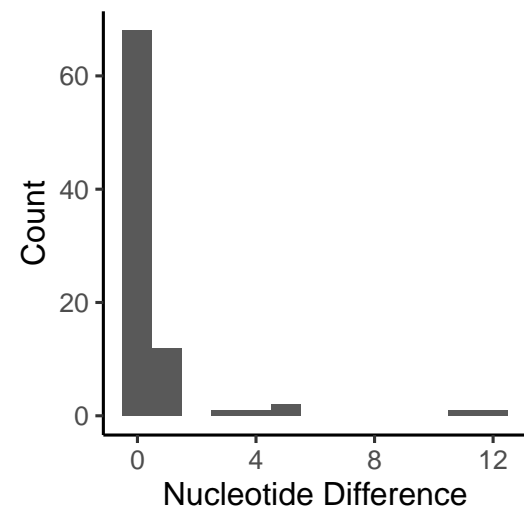
IGHV3-69-1*01

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



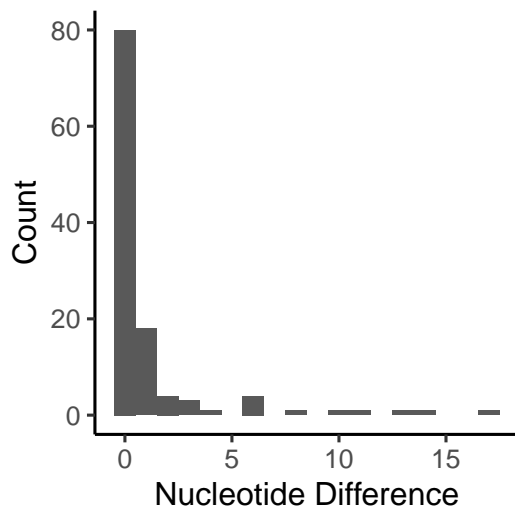
IGHV3-73*01

87 sequences assigned
68 (78.2%) exact matches, in which:
62 unique CDR3
5 unique J



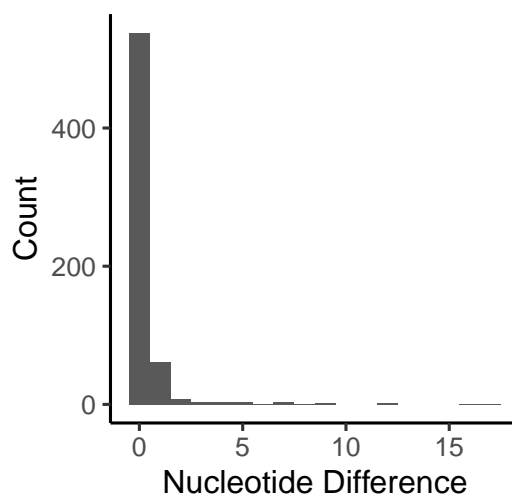
IGHV3-73*02

116 sequences assigned
80 (69%) exact matches, in which:
76 unique CDR3
6 unique J



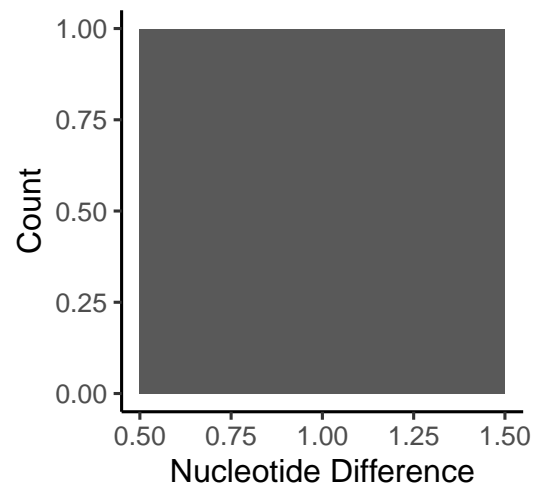
IGHV4-4*02

630 sequences assigned
538 (85.4%) exact matches, in which:
529 unique CDR3
6 unique J



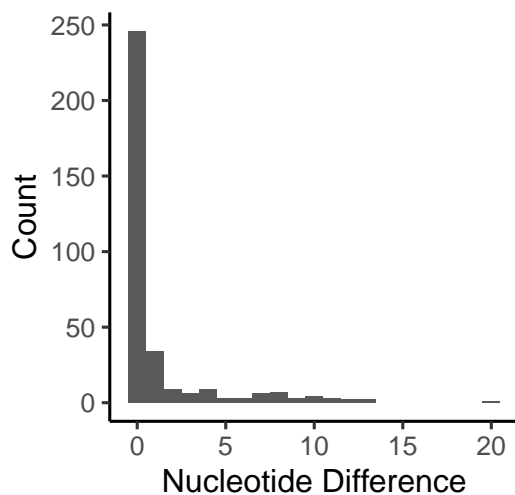
IGHV4-28*04

1 sequences assigned
No exact matches.



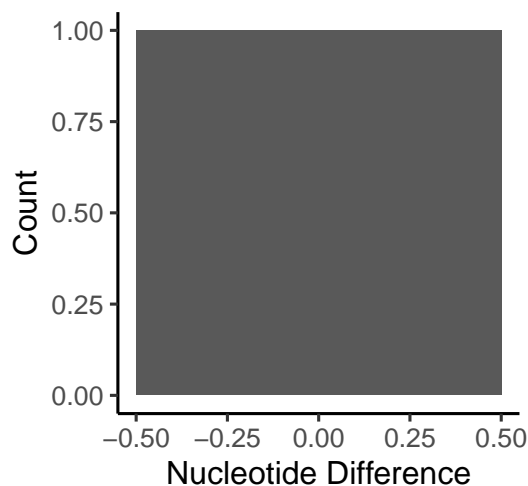
IGHV3-74*01

340 sequences assigned
246 (72.4%) exact matches, in which:
235 unique CDR3
6 unique J



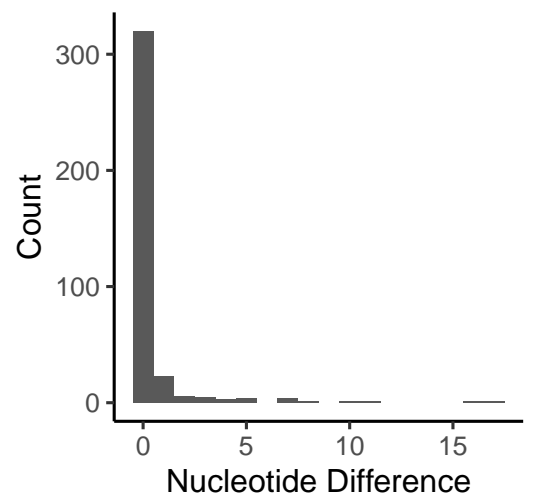
IGHV4-28*01

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



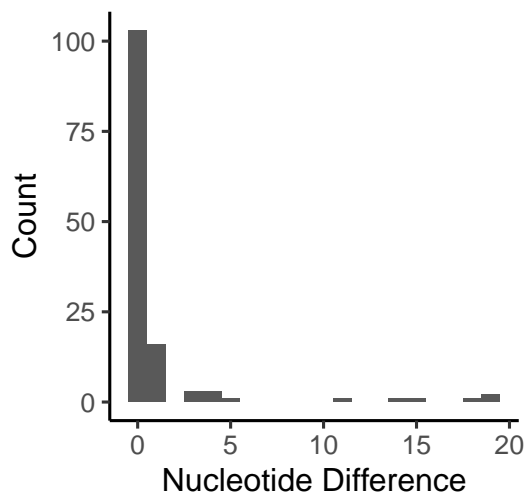
IGHV4-30-2*01

370 sequences assigned
320 (86.5%) exact matches, in which:
314 unique CDR3
6 unique J



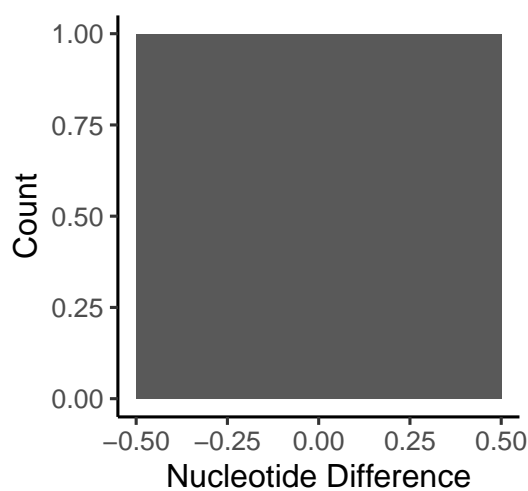
IGHV3-64D*06

132 sequences assigned
103 (78%) exact matches, in which:
98 unique CDR3
5 unique J



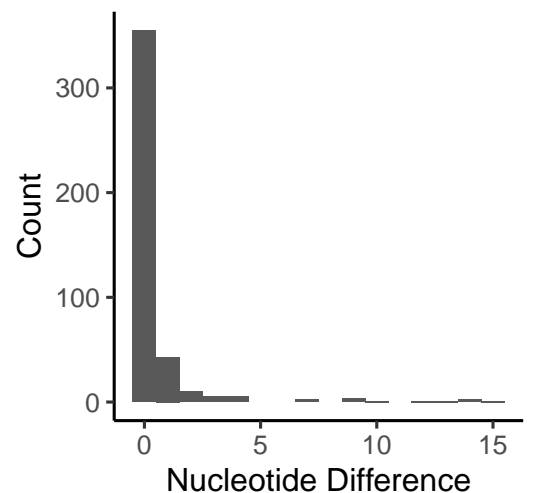
IGHV4-28*03

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



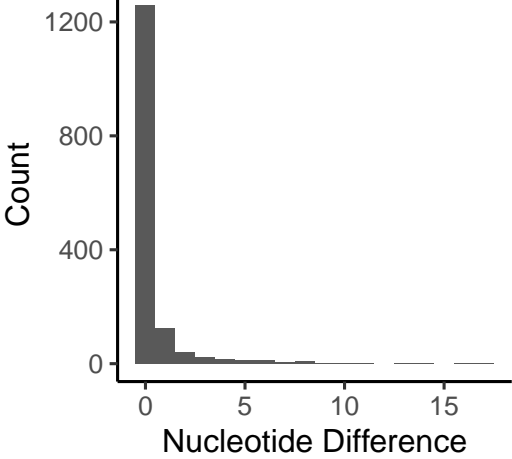
IGHV4-31*03

429 sequences assigned
355 (82.8%) exact matches, in which:
348 unique CDR3
6 unique J



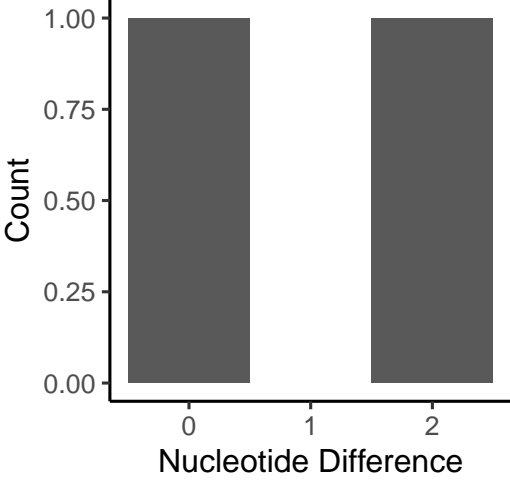
IGHV4-34*01

1508 sequences assigned
1258 (83.4%) exact matches, in which:
1212 unique CDR3
6 unique J



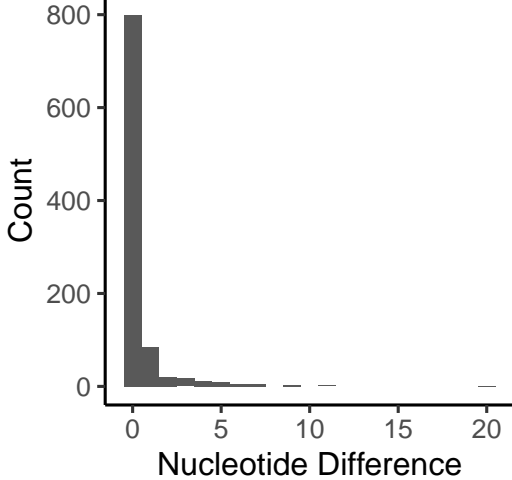
IGHV4-55*01

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



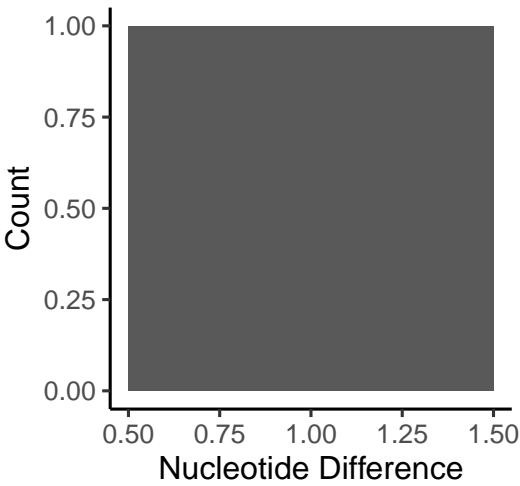
IGHV4-61*02

961 sequences assigned
800 (83.2%) exact matches, in which:
783 unique CDR3
6 unique J



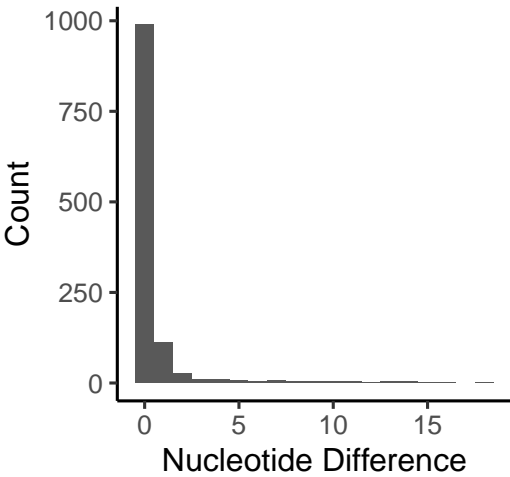
IGHV4-38-2*02

1 sequences assigned
No exact matches.



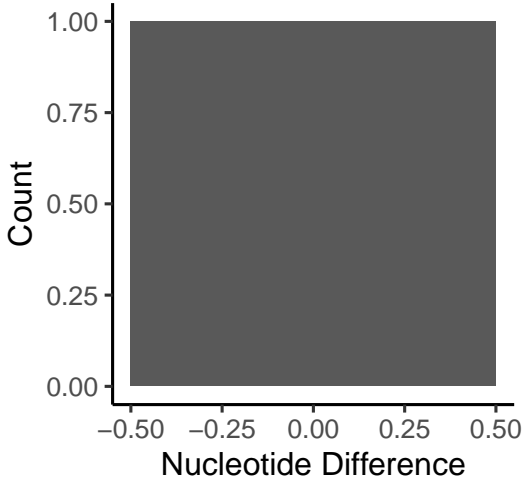
IGHV4-59*01

1191 sequences assigned
989 (83%) exact matches, in which:
974 unique CDR3
6 unique J



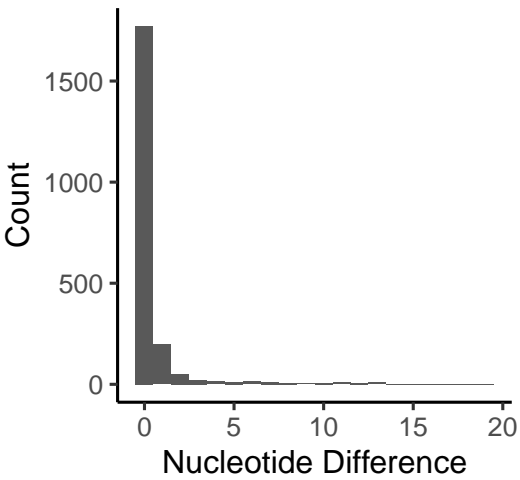
IGHV1/OR15-4*01

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



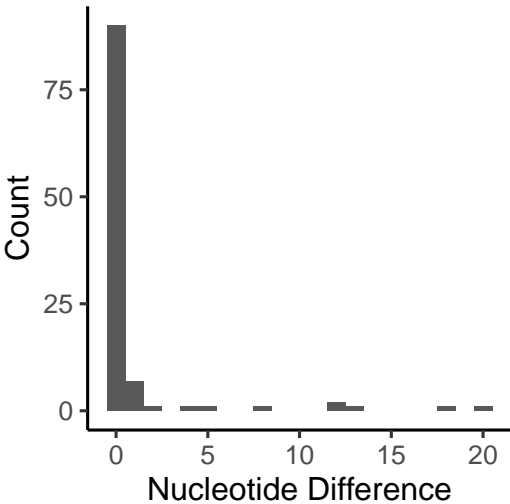
IGHV4-39*01

2148 sequences assigned
1772 (82.5%) exact matches, in which:
1708 unique CDR3
6 unique J



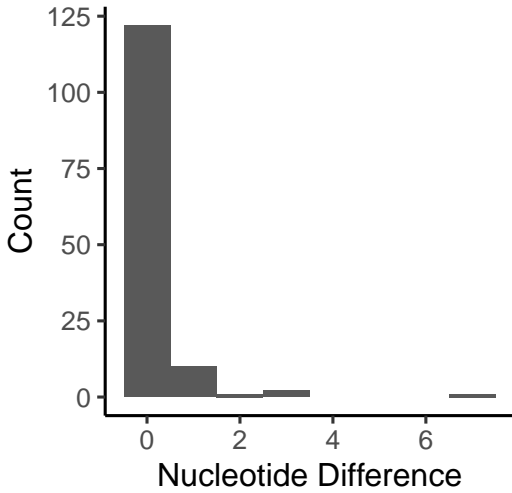
IGHV4-61*01

106 sequences assigned
90 (84.9%) exact matches, in which:
89 unique CDR3
6 unique J



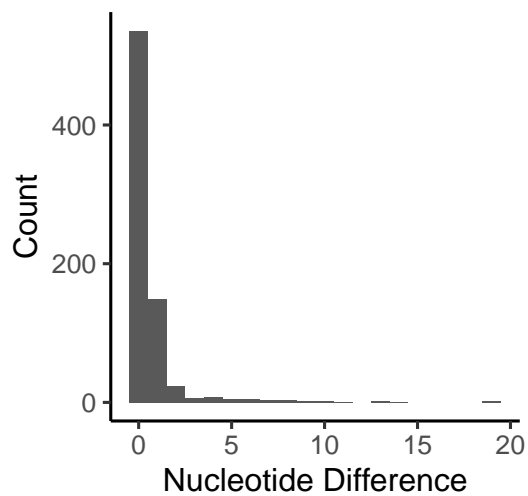
IGHV5-10-1*03

136 sequences assigned
122 (89.7%) exact matches, in which:
121 unique CDR3
4 unique J



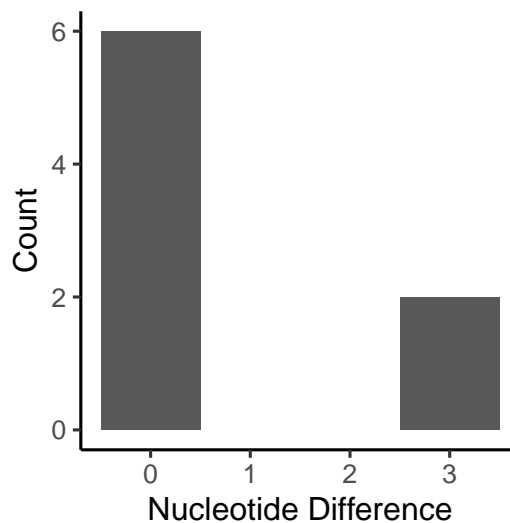
IGHV5-51*01

749 sequences assigned
536 (71.6%) exact matches, in which:
520 unique CDR3
6 unique J



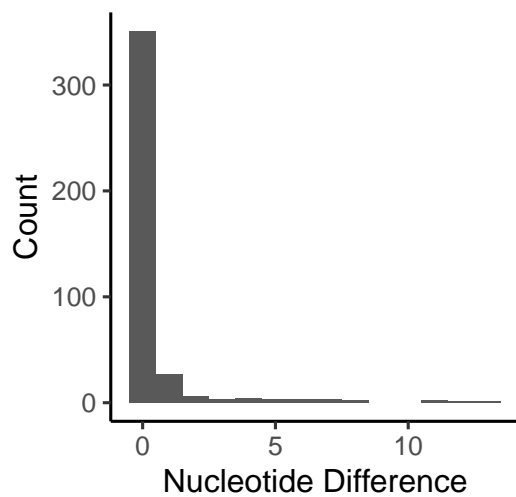
IGHV7-4-1*01

8 sequences assigned
6 (75%) exact matches, in which:
6 unique CDR3
3 unique J



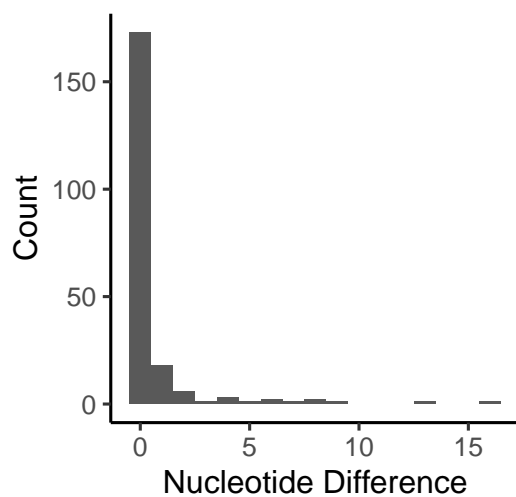
IGHV5-51*03

406 sequences assigned
351 (86.5%) exact matches, in which:
340 unique CDR3
6 unique J

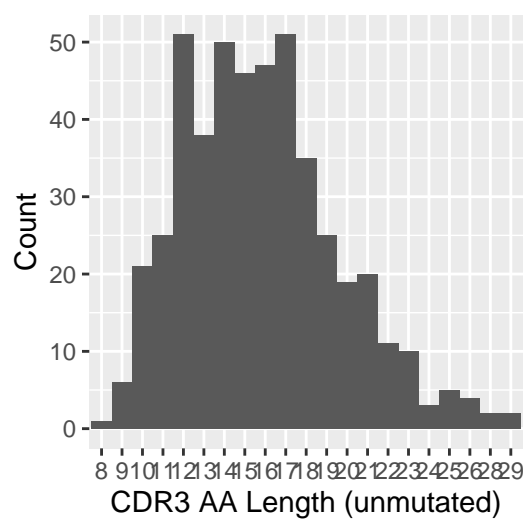


IGHV6-1*01

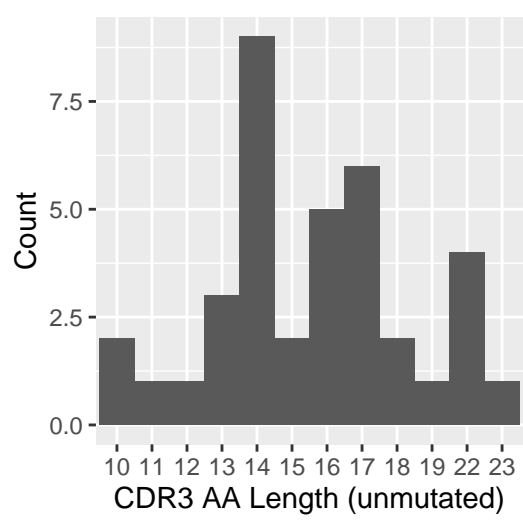
210 sequences assigned
173 (82.4%) exact matches, in which:
164 unique CDR3
6 unique J



IGHV1-69*08_C191T



IGHV3-13*01_G290A_T300C





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