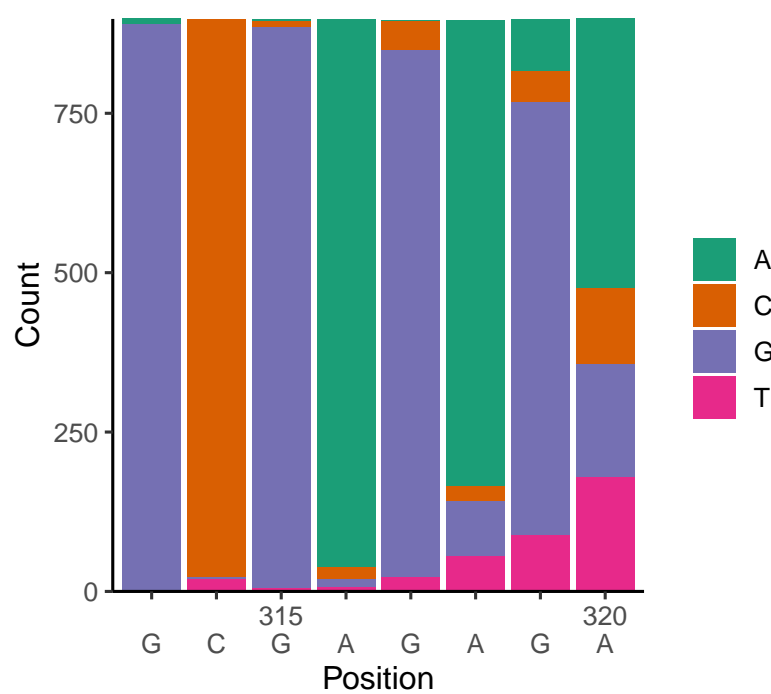
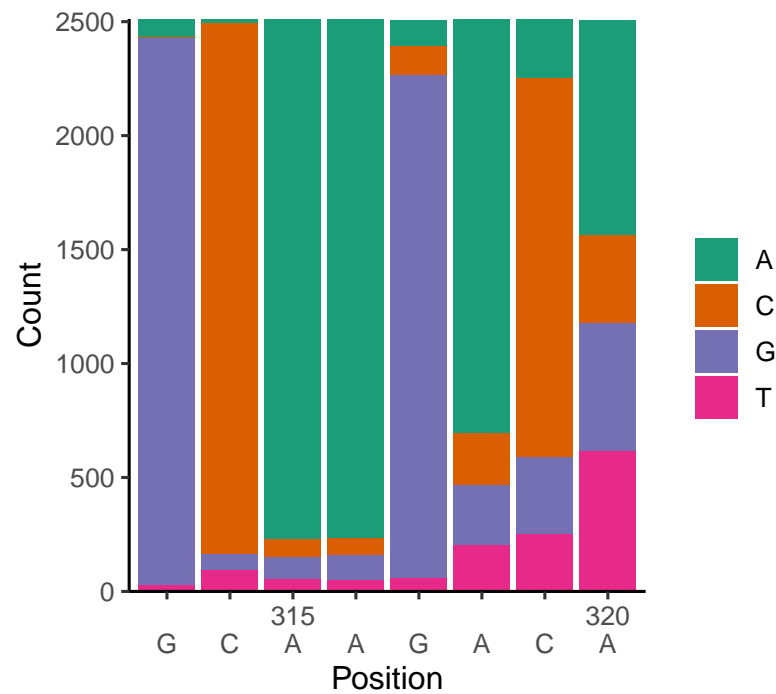


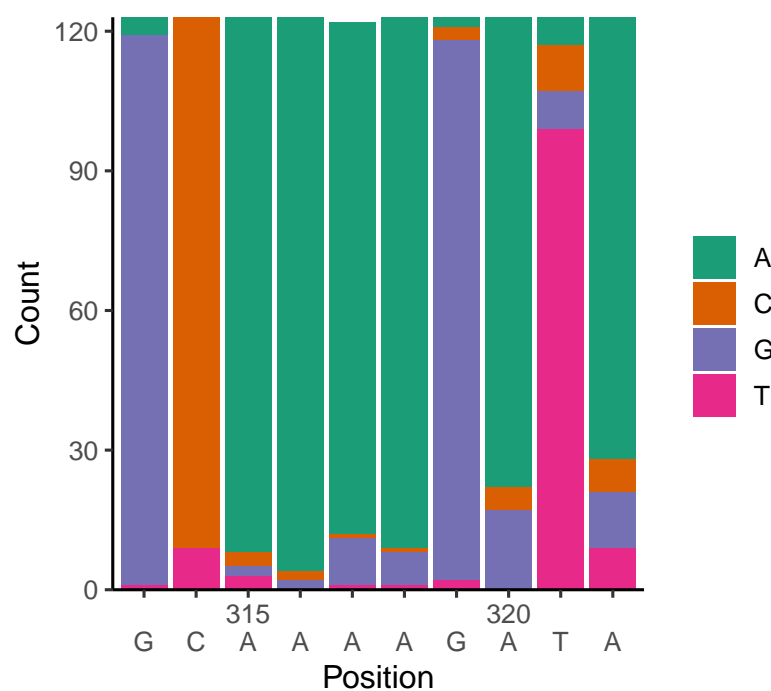
Gene IGHV1-18*01_A196G



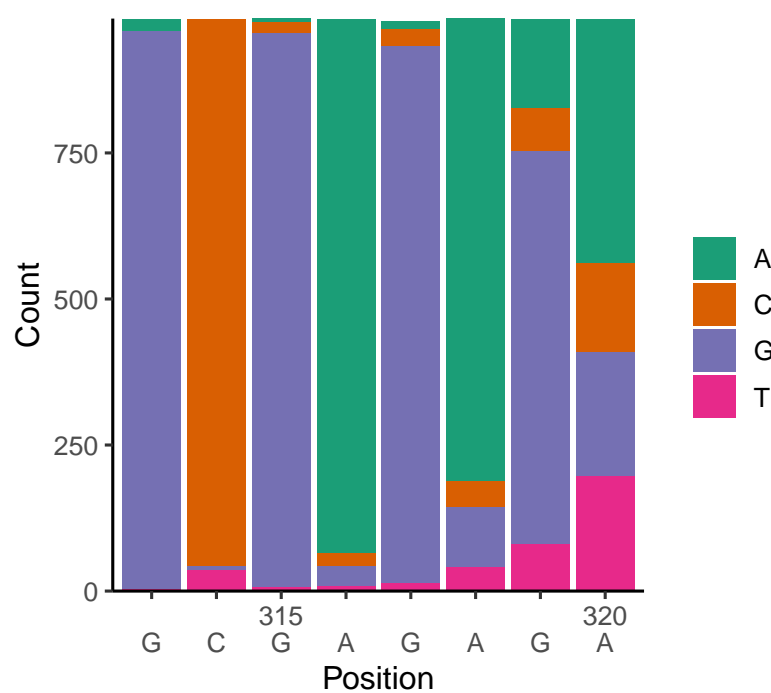
Gene IGHV4-39*01_G315A



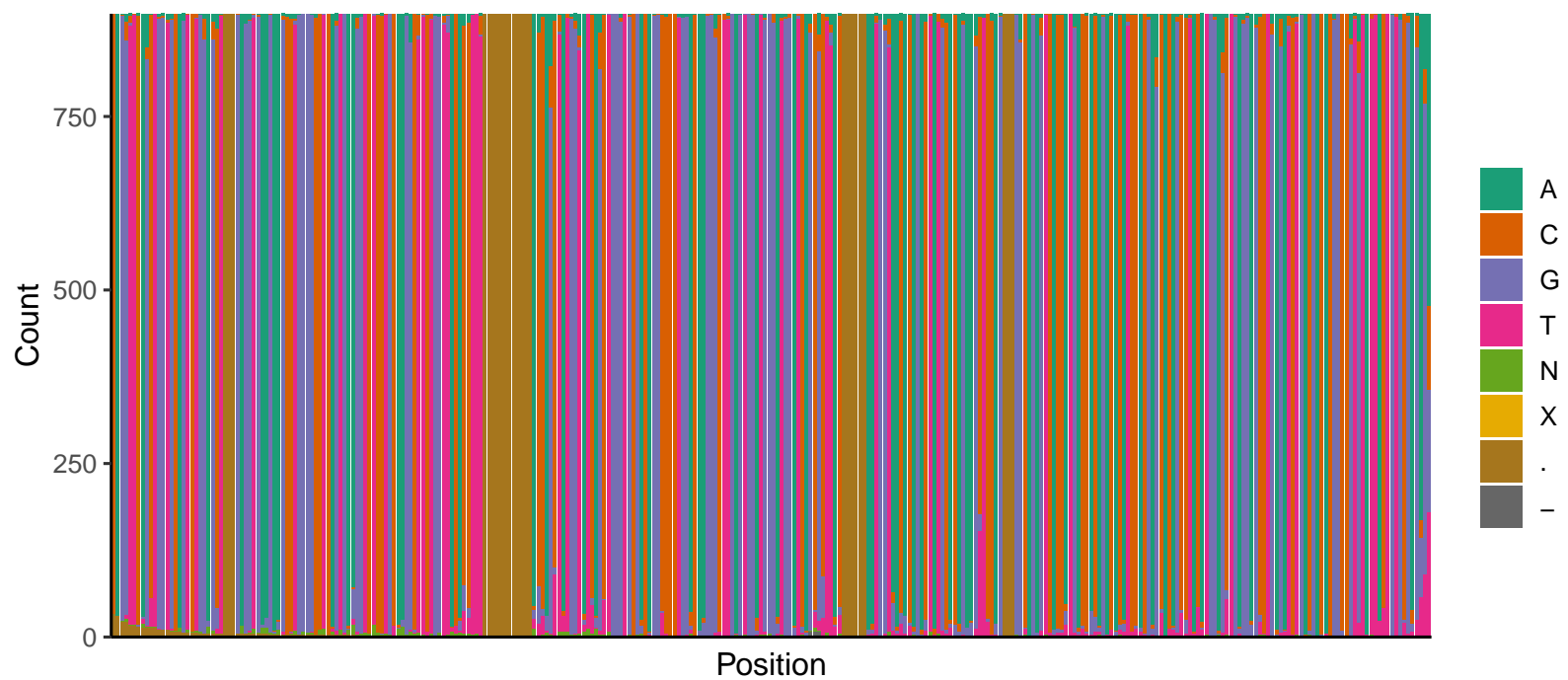
Gene IGHV3-43*01_T177A



Gene IGHV4-38-2*02_A70G



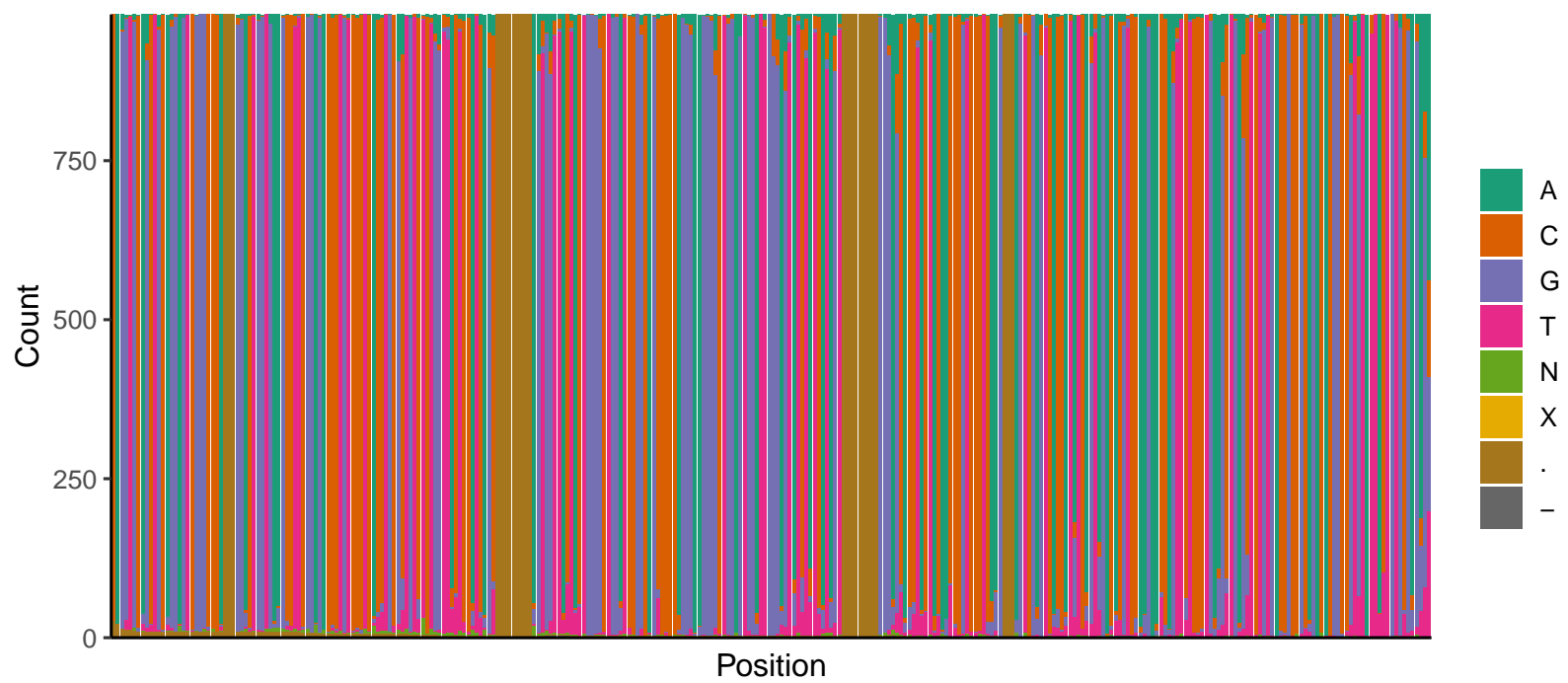
Gene IGHV1-18*01_A196G



Gene IGHV3-43*01_T177A



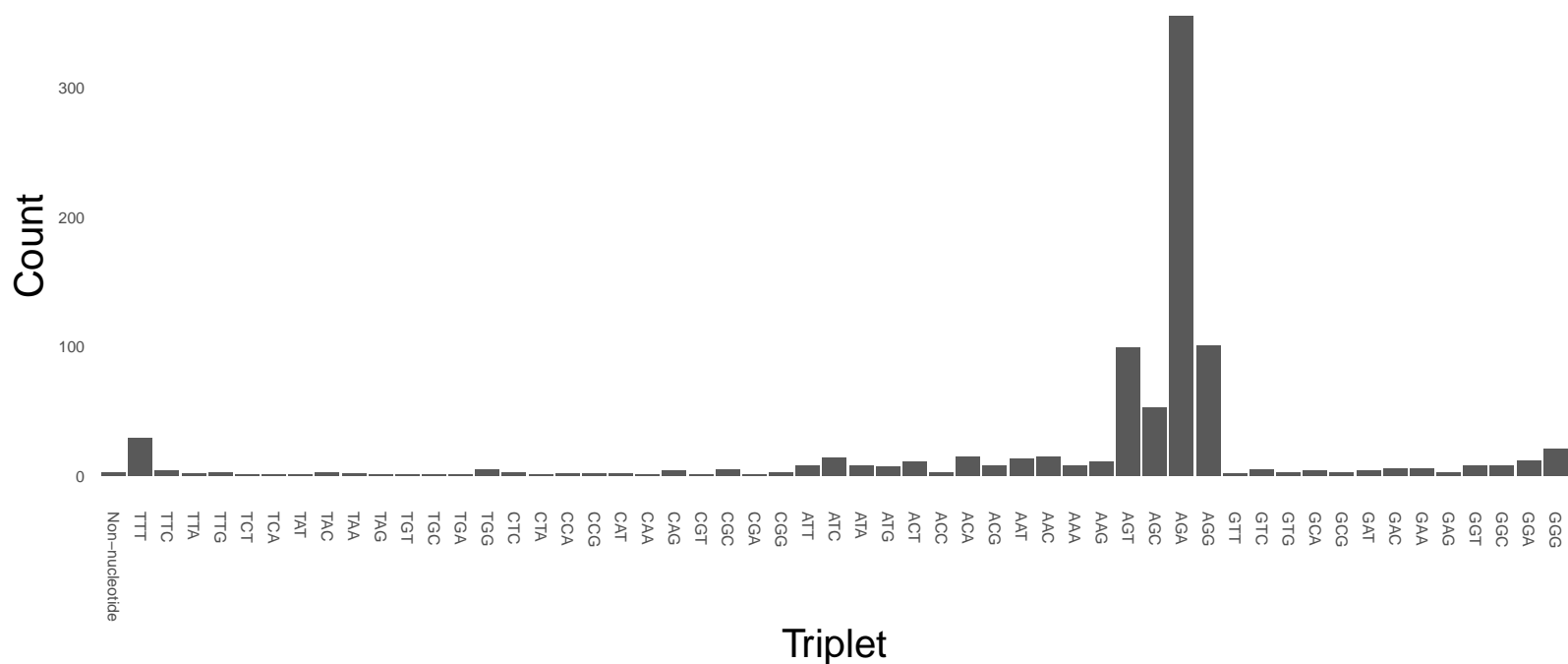
Gene IGHV4-38-2*02_A70G



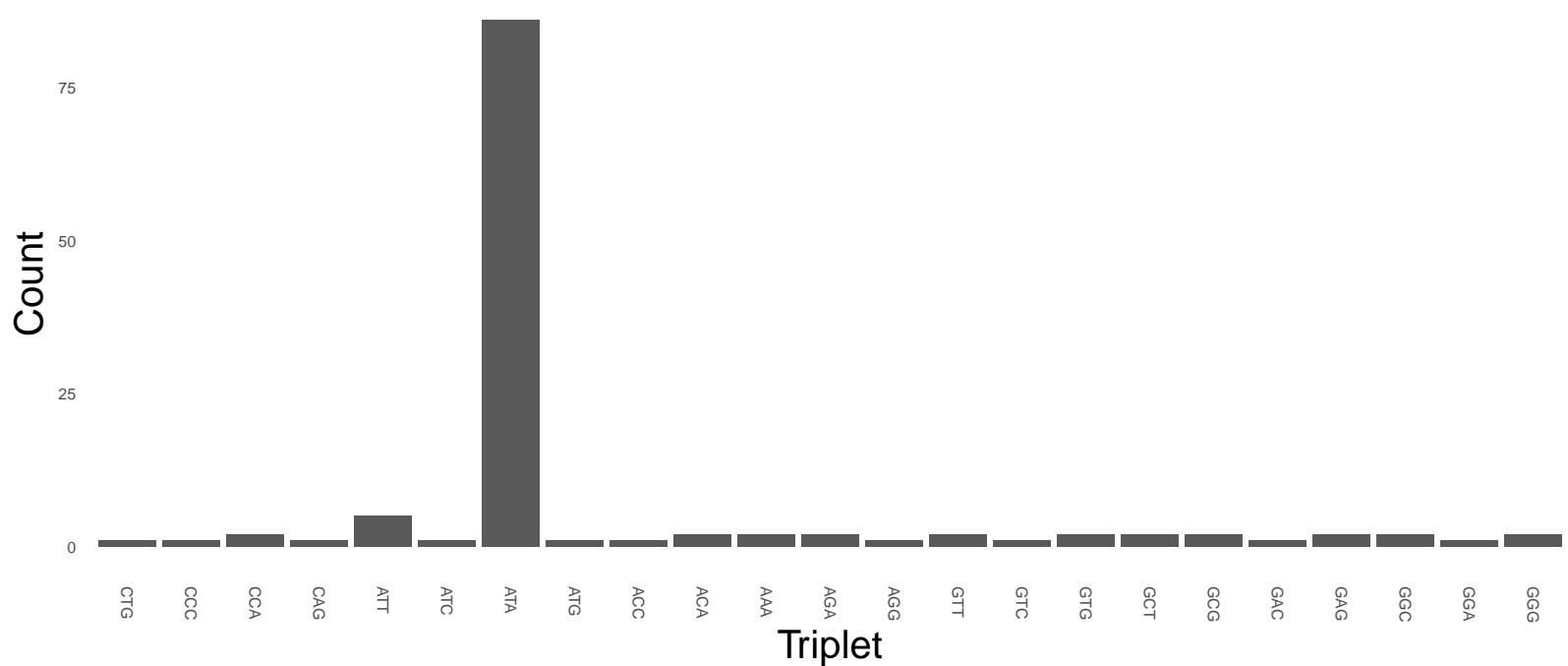
Gene IGHV4-39*01_G315A



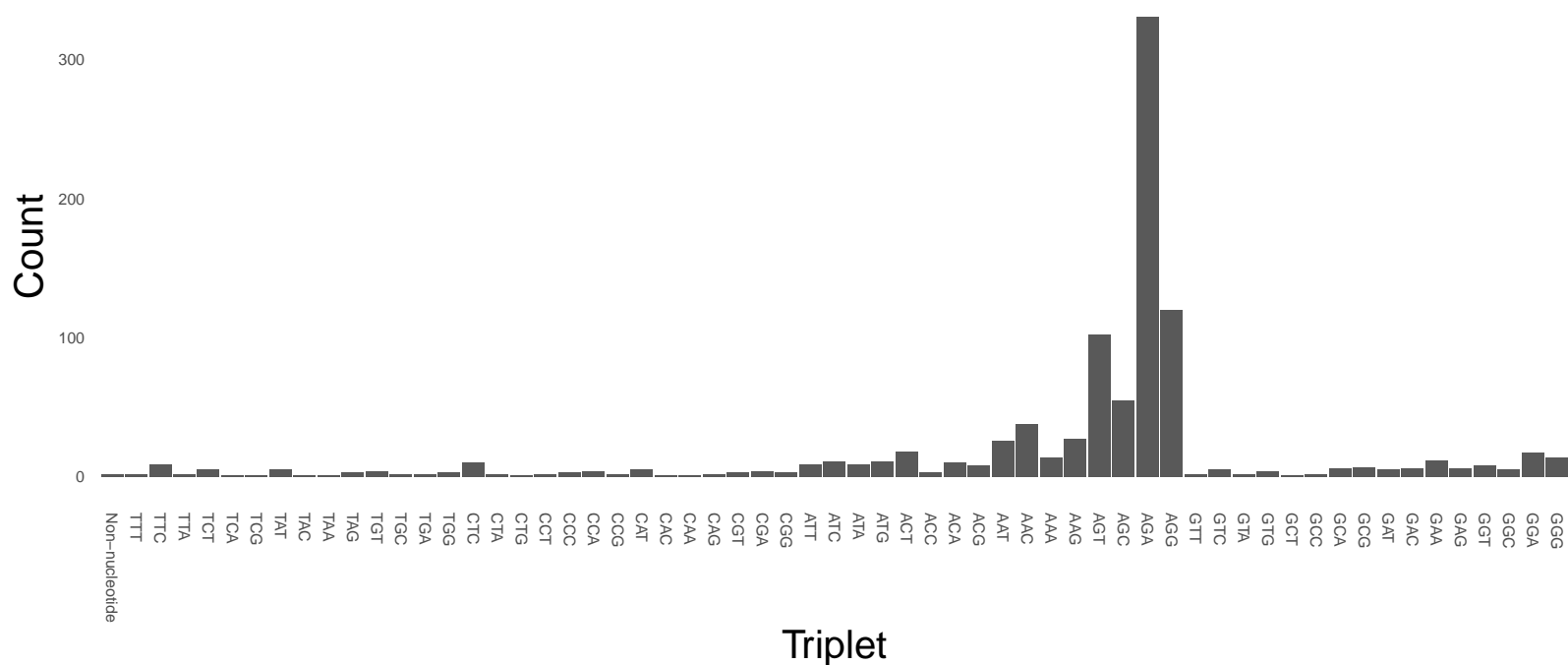
IGHV1–18*01_A196G– Final 3 nucleotides as a triplet



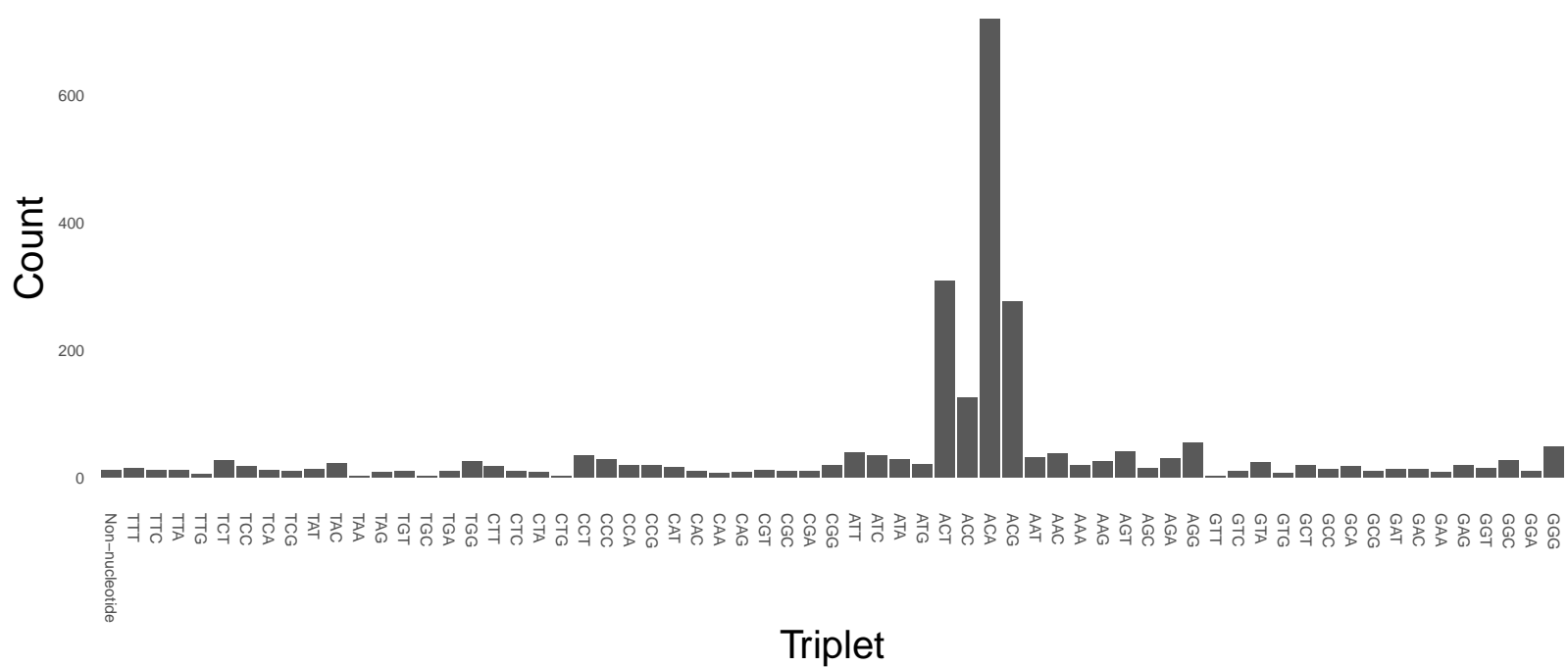
IGHV3–43*01_T177A– Final 3 nucleotides as a triplet



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

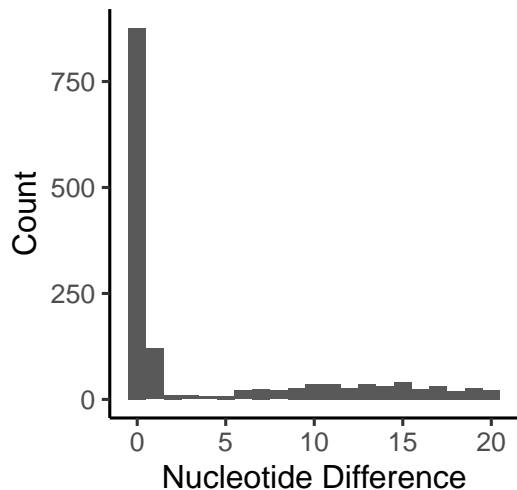


IGHV4-39*01_G315A- Final 3 nucleotides as a triplet



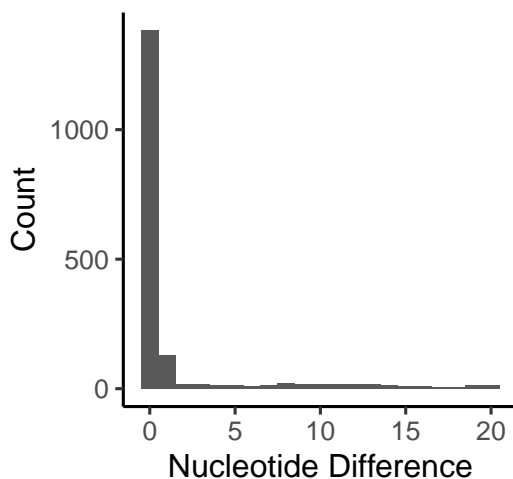
IGHV1-2*02

1713 sequences assigned
877 (51.2%) exact matches, in which:
846 unique CDR3
6 unique J



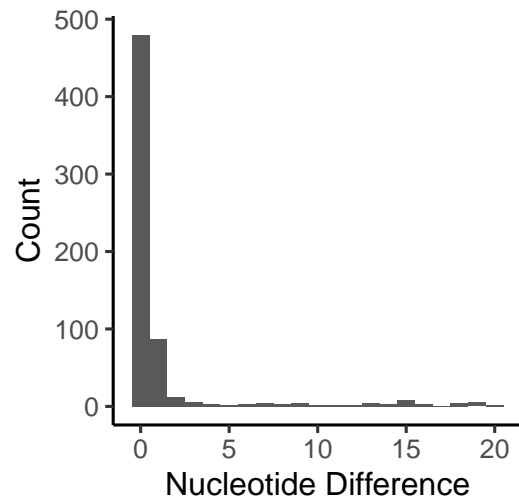
IGHV1-8*01

1879 sequences assigned
1383 (73.6%) exact matches, in which:
1346 unique CDR3
7 unique J



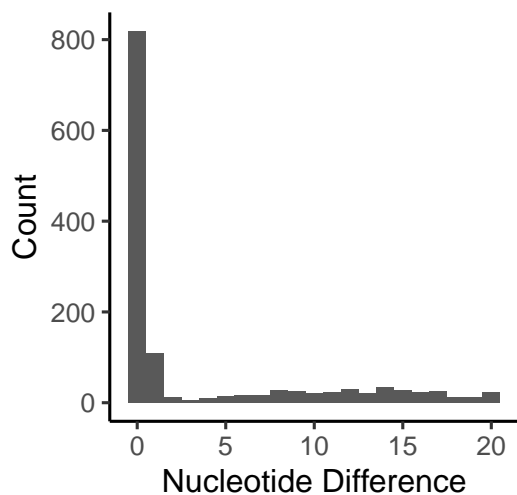
IGHV1-24*01

687 sequences assigned
480 (69.9%) exact matches, in which:
462 unique CDR3
7 unique J



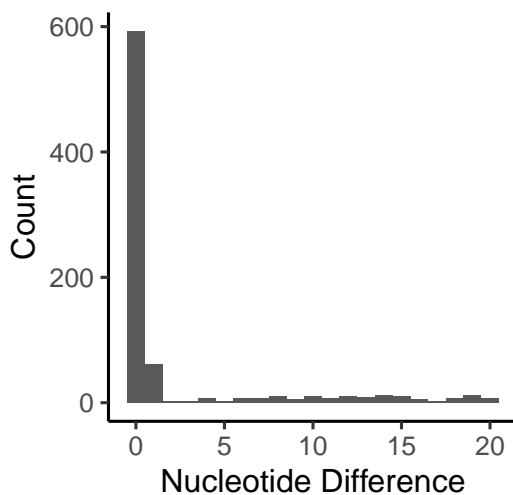
IGHV1-2*06

1553 sequences assigned
819 (52.7%) exact matches, in which:
788 unique CDR3
6 unique J



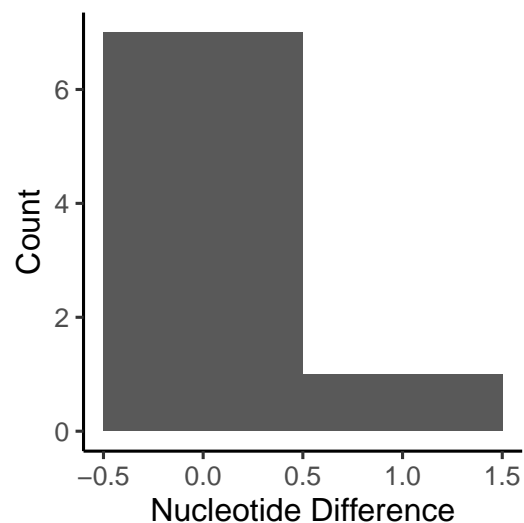
IGHV1-18*01

893 sequences assigned
593 (66.4%) exact matches, in which:
580 unique CDR3
7 unique J



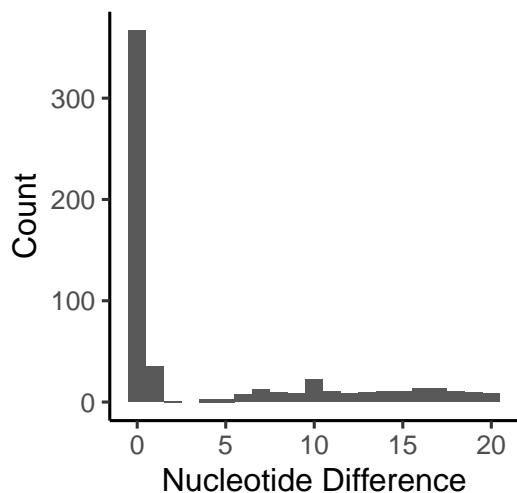
IGHV1-45*02

11 sequences assigned
7 (63.6%) exact matches, in which:
7 unique CDR3
3 unique J



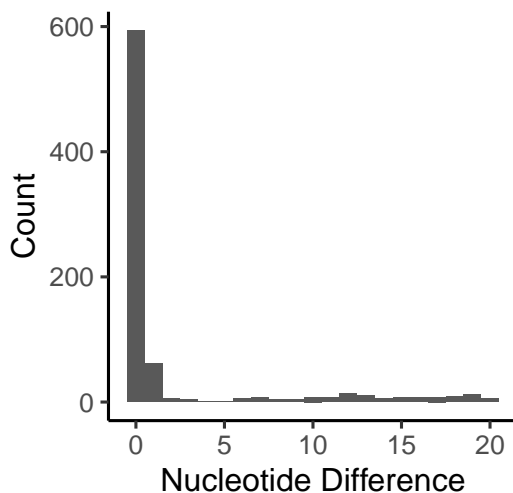
IGHV1-3*01

644 sequences assigned
367 (57%) exact matches, in which:
362 unique CDR3
6 unique J



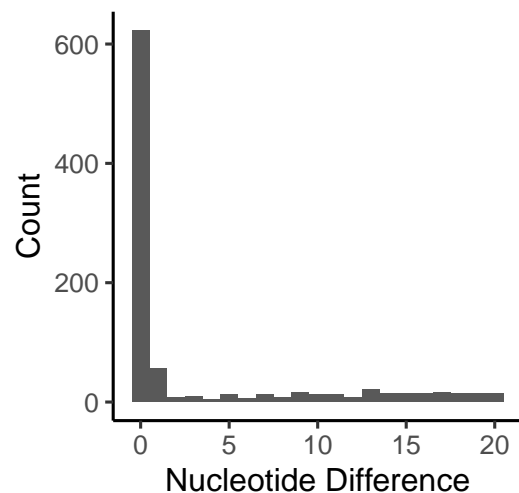
IGHV1-18*01_A196G

898 sequences assigned
594 (66.1%) exact matches, in which:
579 unique CDR3
6 unique J



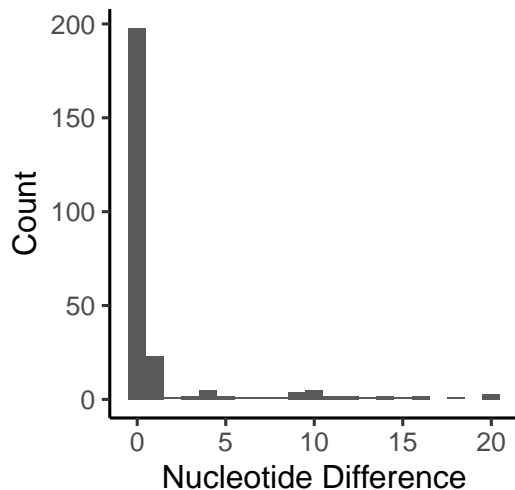
IGHV1-46*01

1019 sequences assigned
623 (61.1%) exact matches, in which:
591 unique CDR3
7 unique J



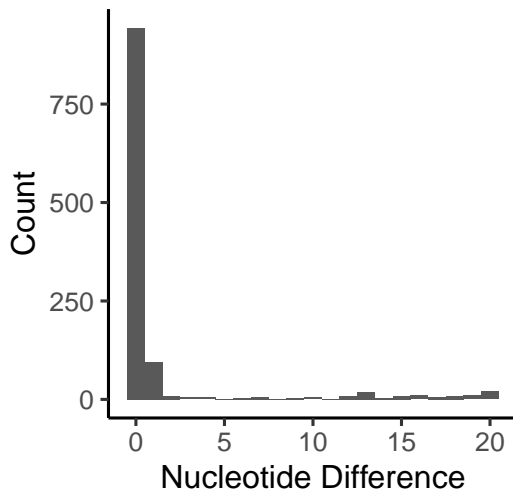
IGHV1–58*01

298 sequences assigned
198 (66.4%) exact matches, in which:
190 unique CDR3
7 unique J



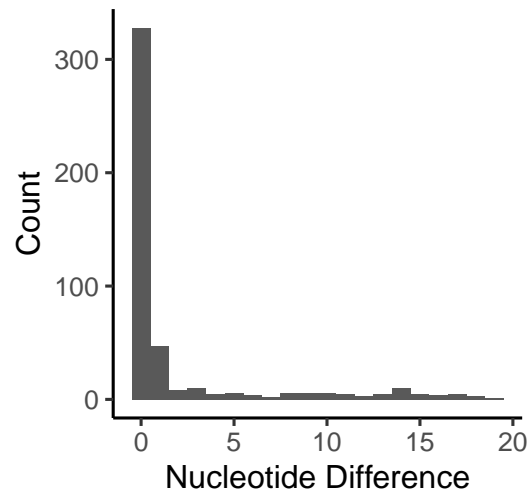
IGHV1–69*06

1373 sequences assigned
944 (68.8%) exact matches, in which:
906 unique CDR3
7 unique J



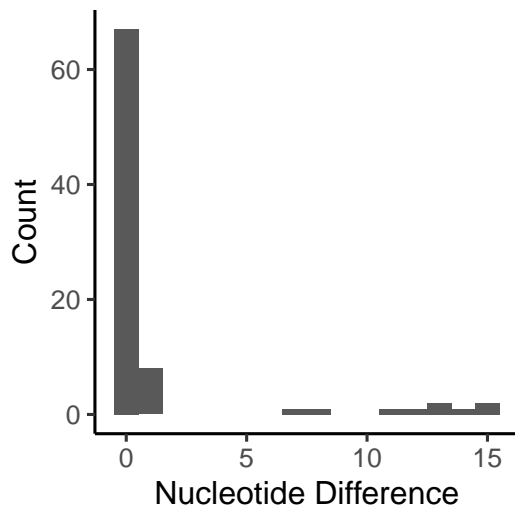
IGHV2–26*01

490 sequences assigned
328 (66.9%) exact matches, in which:
318 unique CDR3
7 unique J



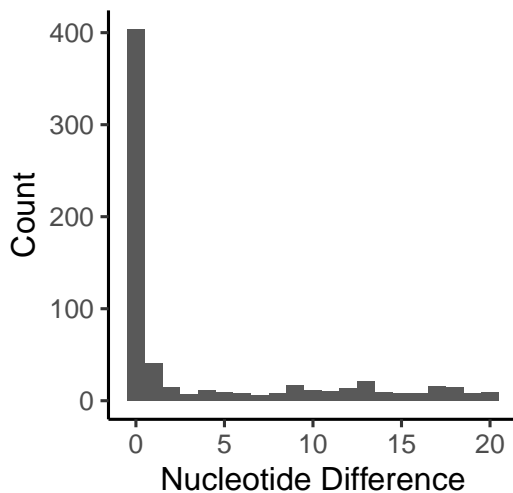
IGHV1–69–2*01

91 sequences assigned
67 (73.6%) exact matches, in which:
65 unique CDR3
6 unique J



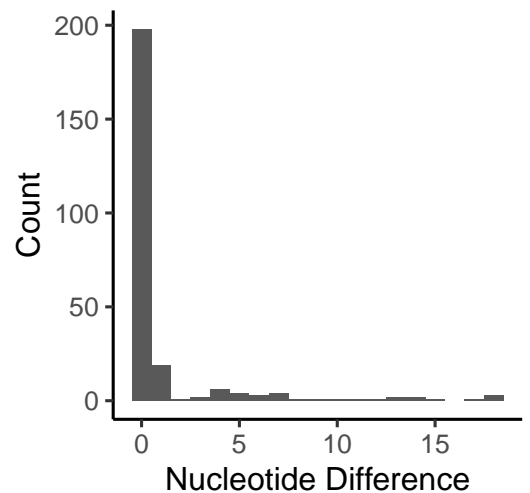
IGHV2–5*01

694 sequences assigned
404 (58.2%) exact matches, in which:
392 unique CDR3
6 unique J



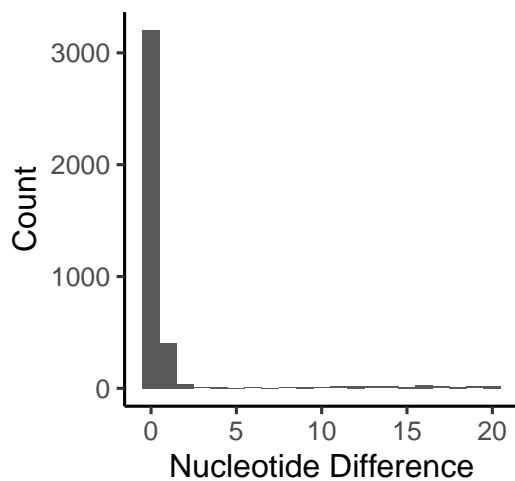
IGHV2–70*01

269 sequences assigned
198 (73.6%) exact matches, in which:
197 unique CDR3
6 unique J



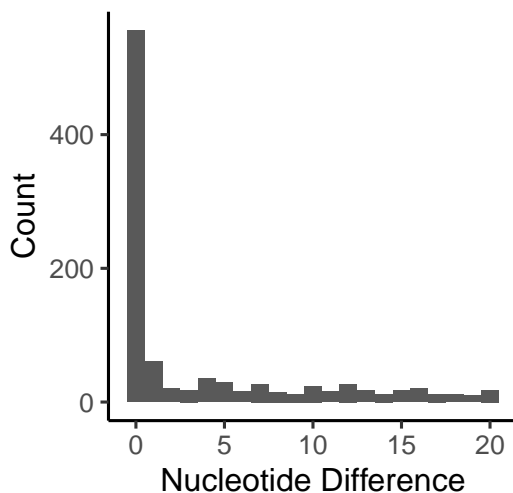
IGHV1–69*01

4196 sequences assigned
3204 (76.4%) exact matches, in which:
3105 unique CDR3
7 unique J



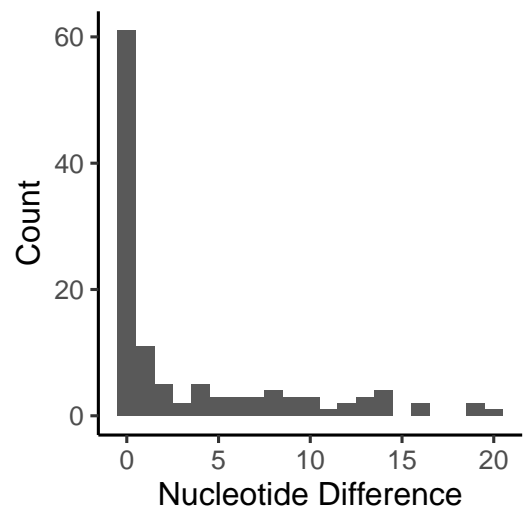
IGHV2–5*02

1127 sequences assigned
556 (49.3%) exact matches, in which:
534 unique CDR3
6 unique J



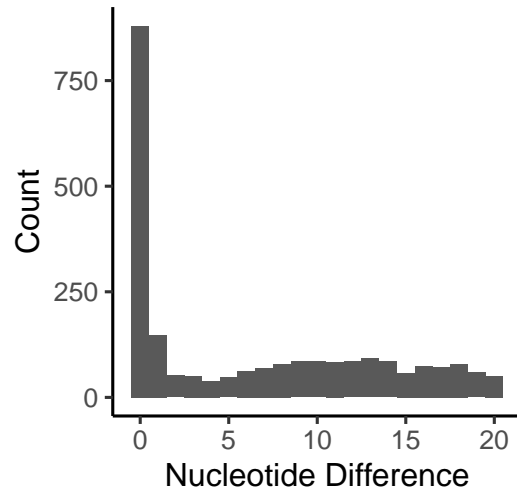
IGHV2–70*04

126 sequences assigned
61 (48.4%) exact matches, in which:
60 unique CDR3
5 unique J



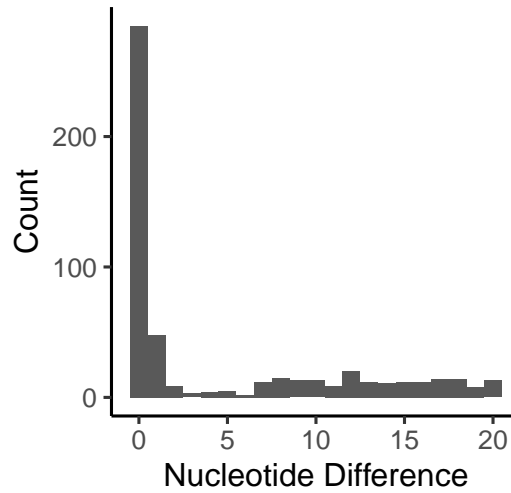
IGHV3-7*01

2647 sequences assigned
880 (33.2%) exact matches, in which:
855 unique CDR3
7 unique J



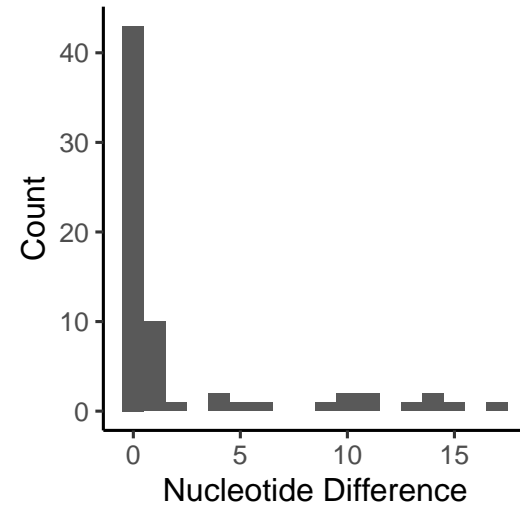
IGHV3-13*01

600 sequences assigned
285 (47.5%) exact matches, in which:
278 unique CDR3
7 unique J



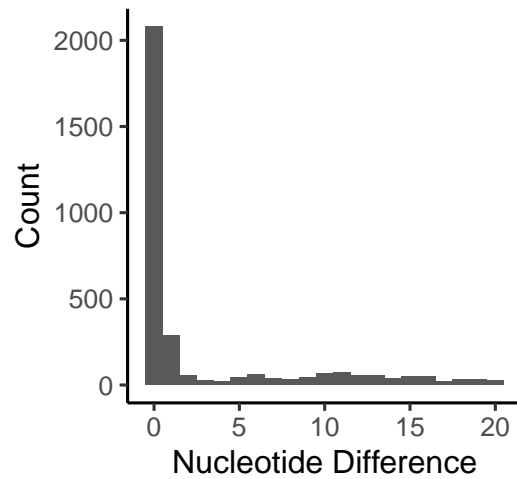
IGHV3-20*01

76 sequences assigned
43 (56.6%) exact matches, in which:
40 unique CDR3
5 unique J



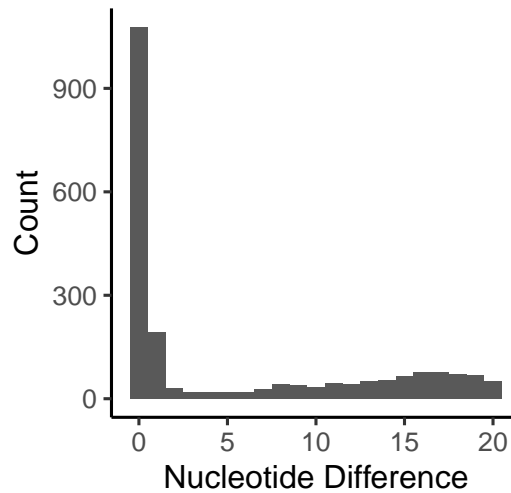
IGHV3-9*01

3410 sequences assigned
2079 (61%) exact matches, in which:
1988 unique CDR3
7 unique J



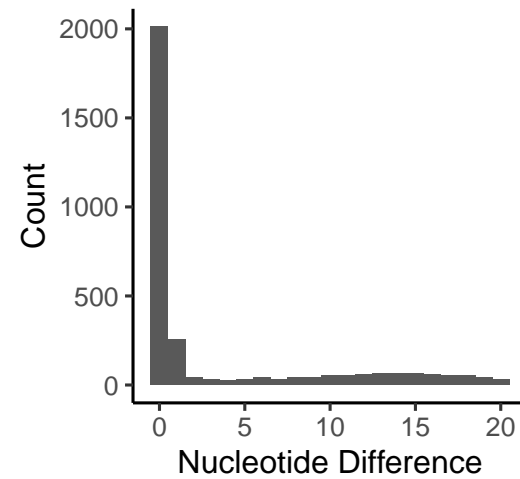
IGHV3-15*01

2499 sequences assigned
1078 (43.1%) exact matches, in which:
1049 unique CDR3
7 unique J



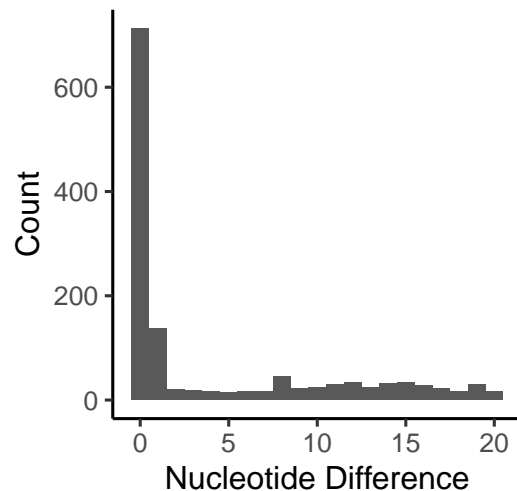
IGHV3-21*01

3474 sequences assigned
2012 (57.9%) exact matches, in which:
1946 unique CDR3
7 unique J



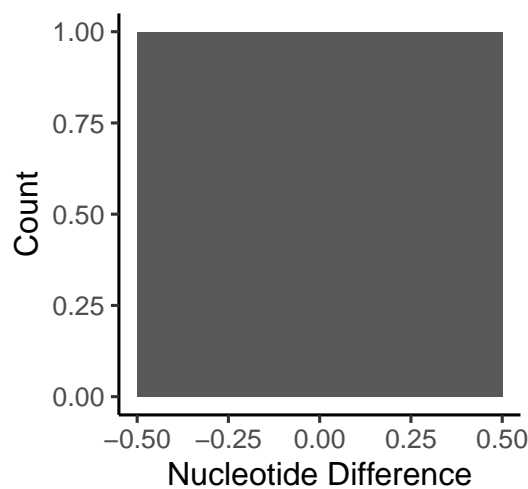
IGHV3-11*01

1418 sequences assigned
713 (50.3%) exact matches, in which:
696 unique CDR3
7 unique J



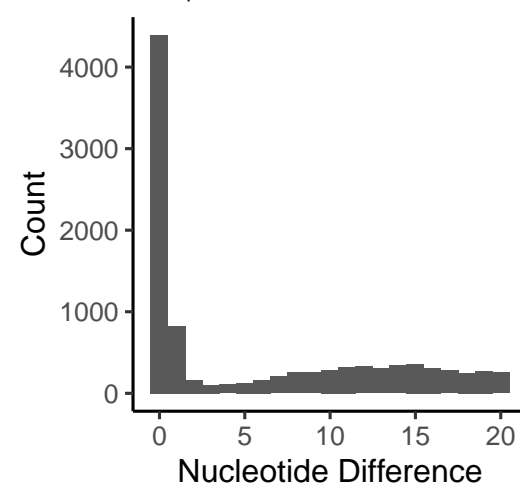
IGHV3-19*01

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



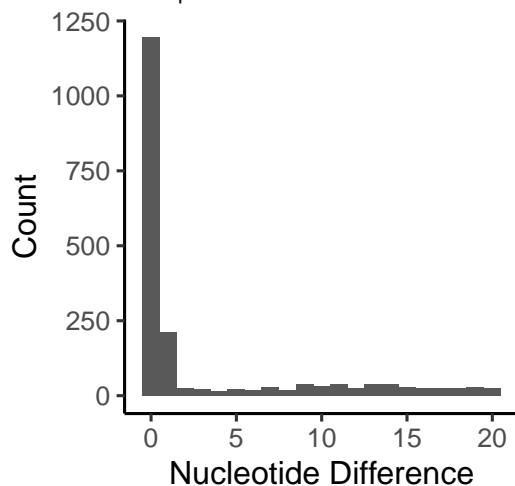
IGHV3-23*01

11606 sequences assigned
4393 (37.9%) exact matches, in which:
4261 unique CDR3
7 unique J



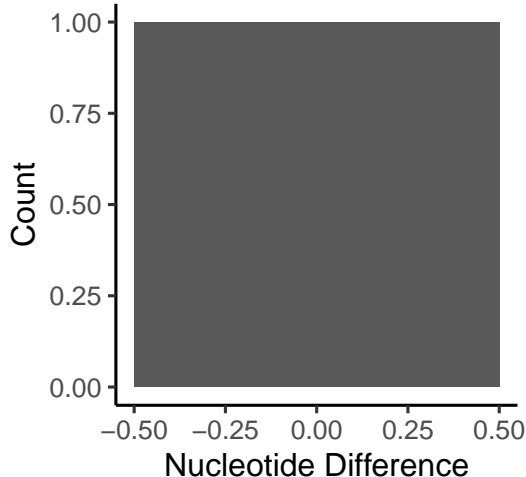
IGHV3-30-3*01

2178 sequences assigned
1195 (54.9%) exact matches, in which:
1153 unique CDR3
7 unique J



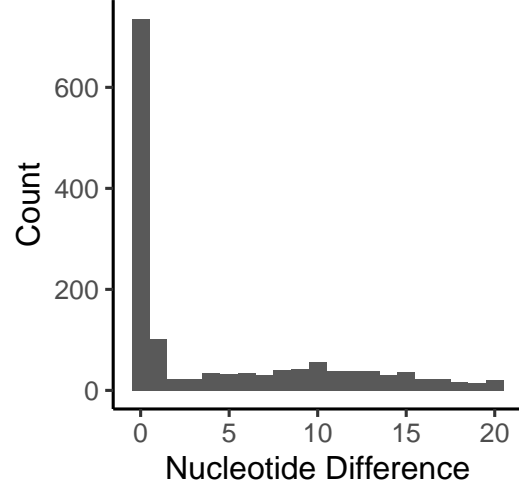
IGHV3-35*01

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



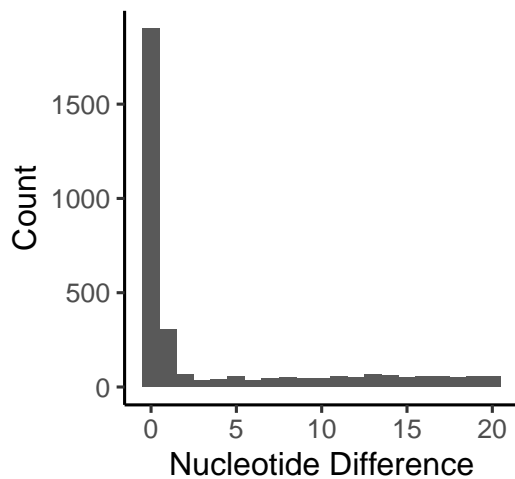
IGHV3-48*03

1580 sequences assigned
736 (46.6%) exact matches, in which:
714 unique CDR3
6 unique J



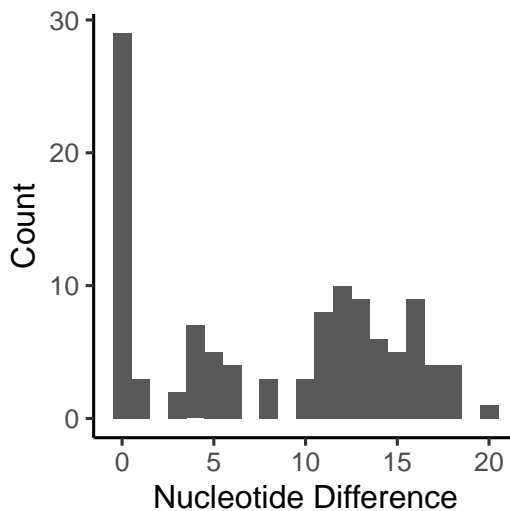
IGHV3-30*18

3541 sequences assigned
1900 (53.7%) exact matches, in which:
1842 unique CDR3
7 unique J



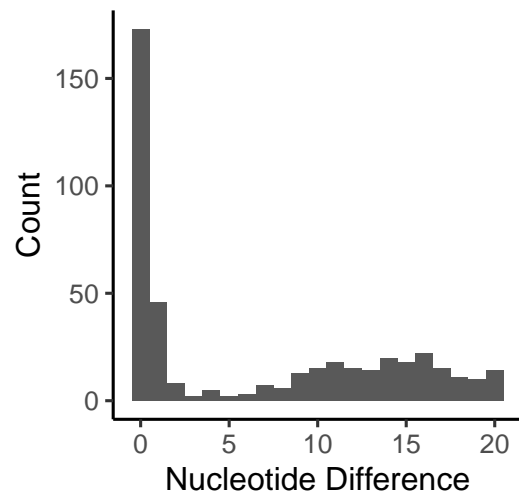
IGHV3-43*01_T177A

123 sequences assigned
29 (23.6%) exact matches, in which:
28 unique CDR3
4 unique J



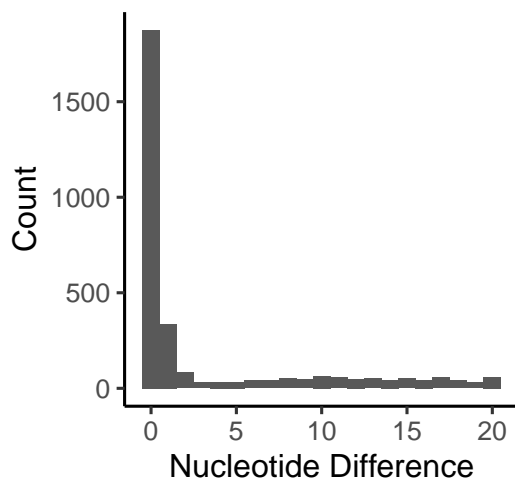
IGHV3-49*04

516 sequences assigned
173 (33.5%) exact matches, in which:
172 unique CDR3
6 unique J



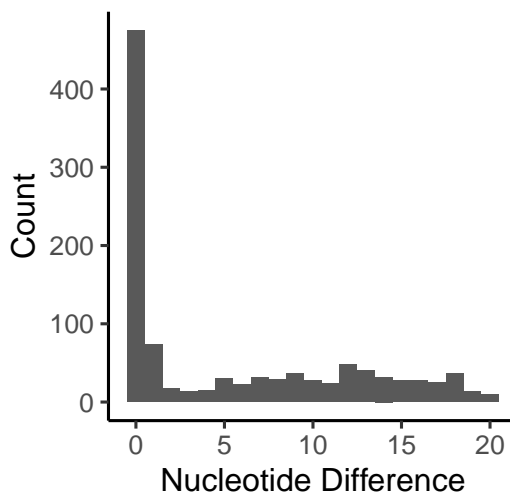
IGHV3-33*01

3422 sequences assigned
1875 (54.8%) exact matches, in which:
1827 unique CDR3
7 unique J



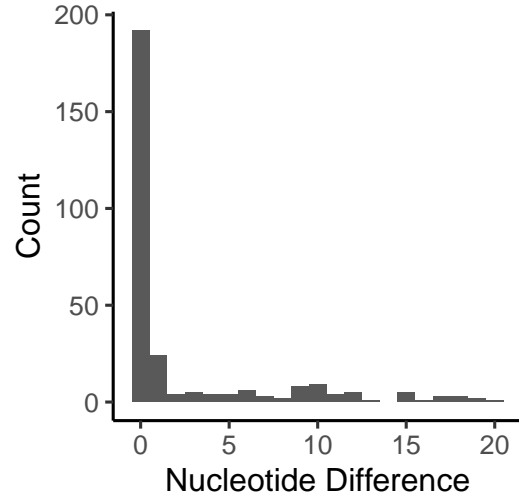
IGHV3-48*02

1161 sequences assigned
475 (40.9%) exact matches, in which:
466 unique CDR3
6 unique J



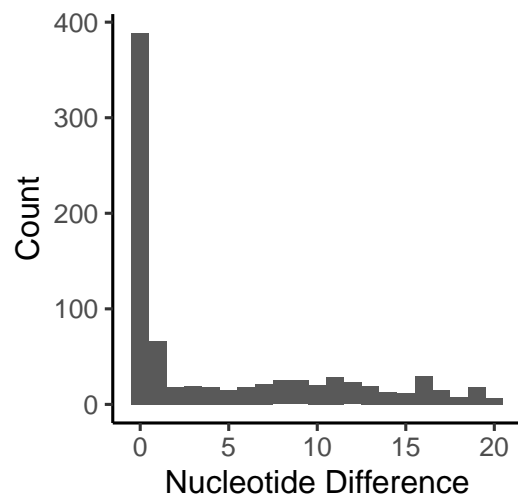
IGHV3-49*05

327 sequences assigned
192 (58.7%) exact matches, in which:
188 unique CDR3
6 unique J



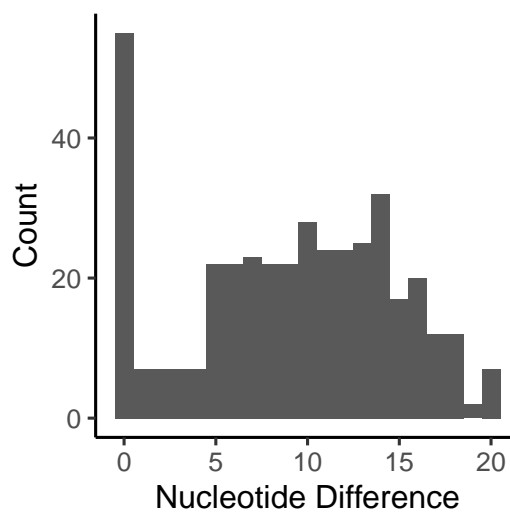
IGHV3-53*01

926 sequences assigned
389 (42%) exact matches, in which:
378 unique CDR3
7 unique J



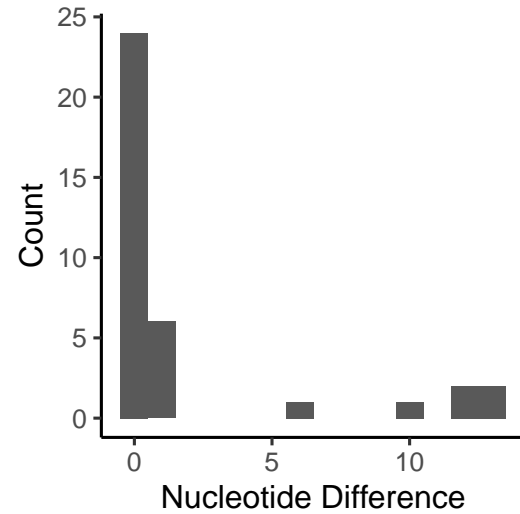
IGHV3-72*01

424 sequences assigned
55 (13%) exact matches, in which:
54 unique CDR3
7 unique J



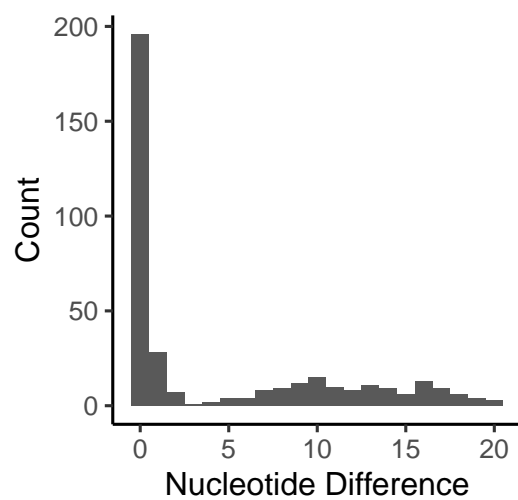
IGHV3-43D*04

48 sequences assigned
24 (50%) exact matches, in which:
24 unique CDR3
6 unique J



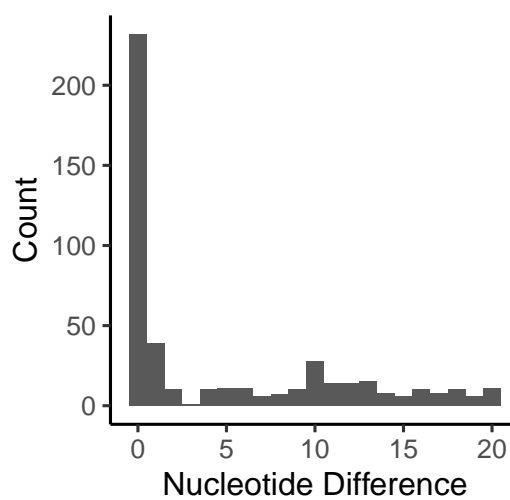
IGHV3-53*02

421 sequences assigned
196 (46.6%) exact matches, in which:
189 unique CDR3
6 unique J



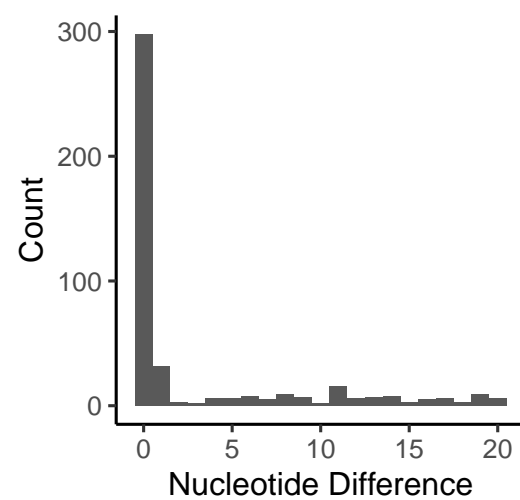
IGHV3-73*02

506 sequences assigned
232 (45.8%) exact matches, in which:
225 unique CDR3
7 unique J



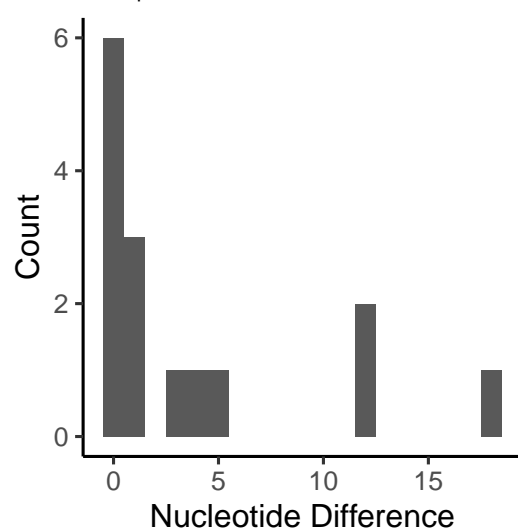
IGHV4-4*02

518 sequences assigned
298 (57.5%) exact matches, in which:
285 unique CDR3
6 unique J



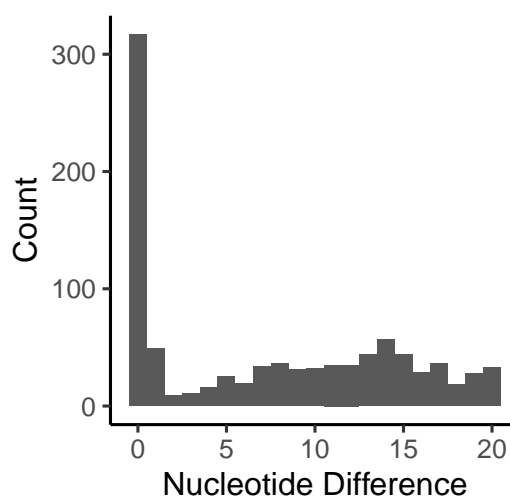
IGHV3-64*02

20 sequences assigned
6 (30%) exact matches, in which:
6 unique CDR3
3 unique J



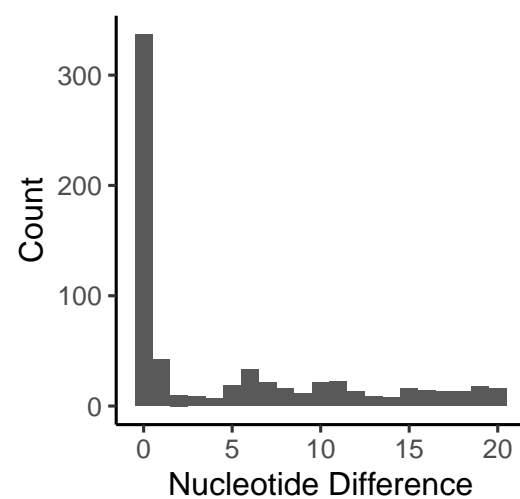
IGHV3-74*01

1101 sequences assigned
317 (28.8%) exact matches, in which:
312 unique CDR3
7 unique J



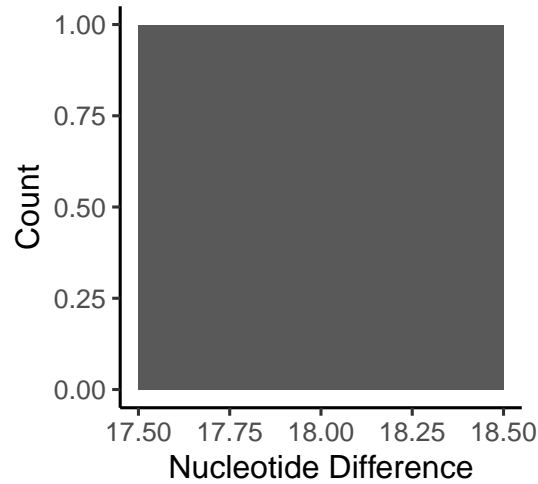
IGHV4-4*07

754 sequences assigned
337 (44.7%) exact matches, in which:
328 unique CDR3
6 unique J



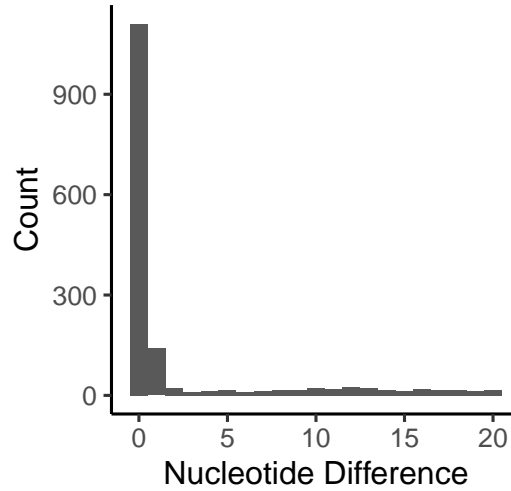
IGHV4-28*01

1 sequences assigned
No exact matches.



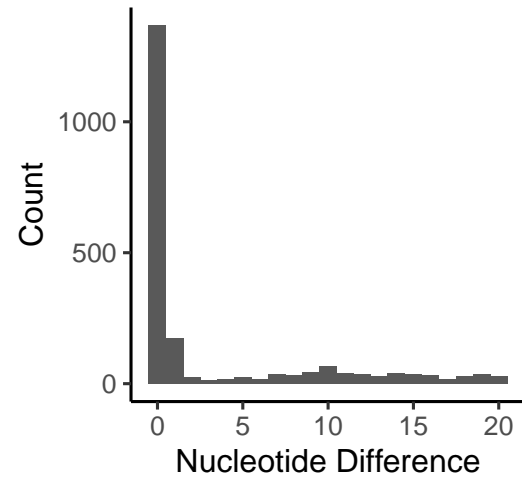
IGHV4-31*03

1818 sequences assigned
1111 (61.1%) exact matches, in which:
1079 unique CDR3
7 unique J



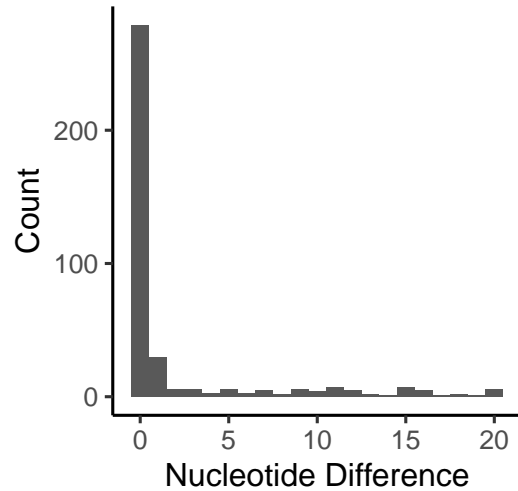
IGHV4-39*01_G315A

2512 sequences assigned
1368 (54.5%) exact matches, in which:
1320 unique CDR3
7 unique J



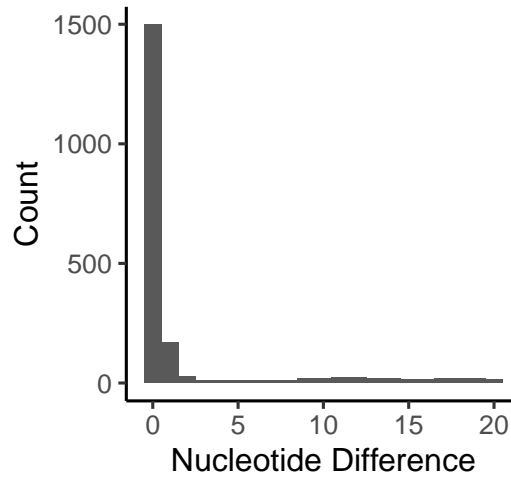
IGHV4-30-4*01

431 sequences assigned
279 (64.7%) exact matches, in which:
271 unique CDR3
7 unique J



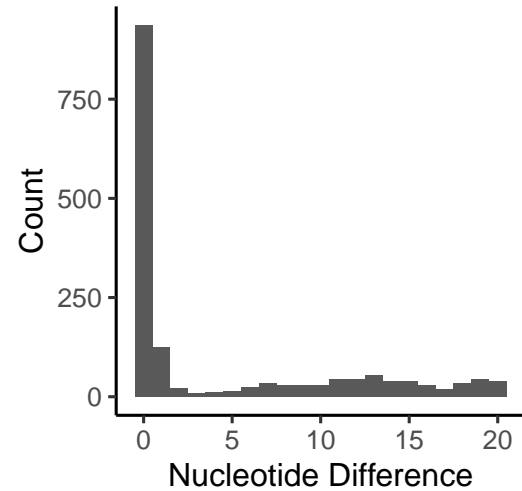
IGHV4-34*01

2141 sequences assigned
1498 (70%) exact matches, in which:
1436 unique CDR3
7 unique J



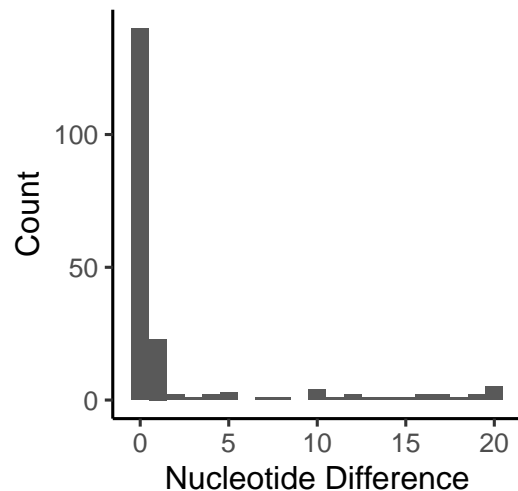
IGHV4-59*01

1970 sequences assigned
937 (47.6%) exact matches, in which:
920 unique CDR3
7 unique J



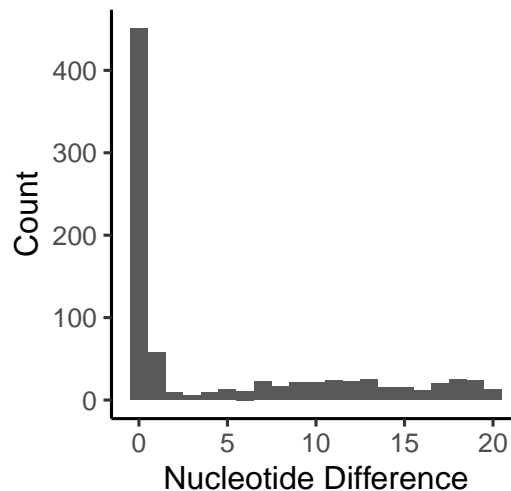
IGHV4-30-2*01

222 sequences assigned
140 (63.1%) exact matches, in which:
134 unique CDR3
5 unique J



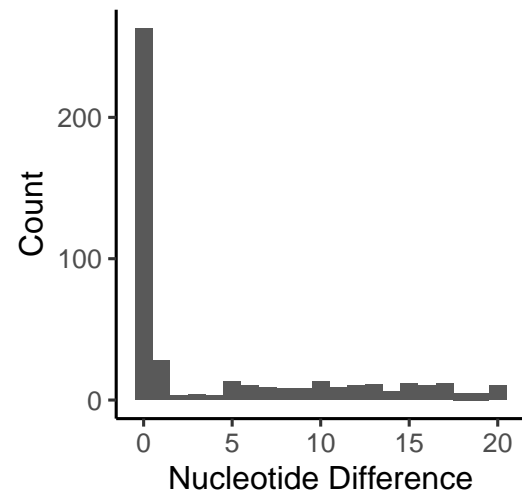
IGHV4-38-2*02_A70G

980 sequences assigned
451 (46%) exact matches, in which:
423 unique CDR3
6 unique J



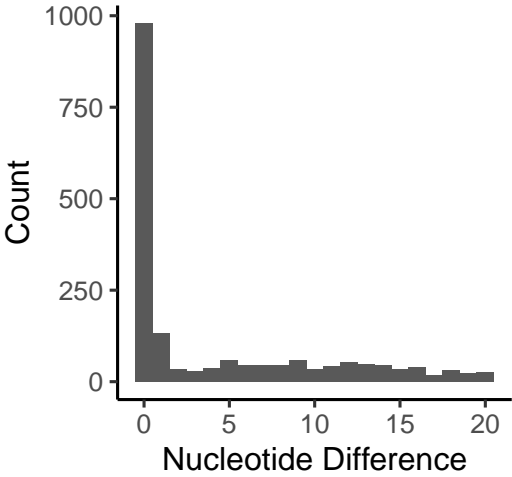
IGHV4-61*01

543 sequences assigned
263 (48.4%) exact matches, in which:
260 unique CDR3
7 unique J



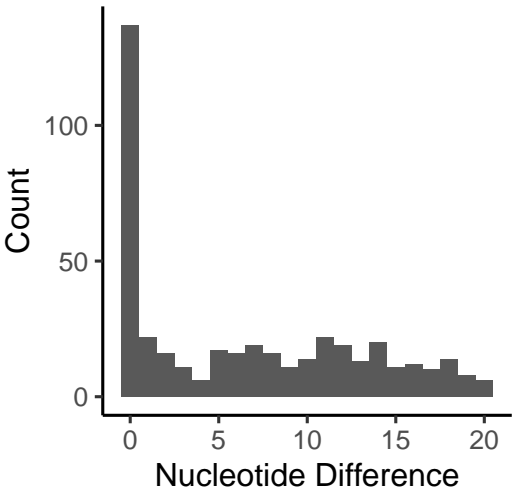
IGHV5-51*01

2040 sequences assigned
979 (48%) exact matches, in which:
949 unique CDR3
7 unique J



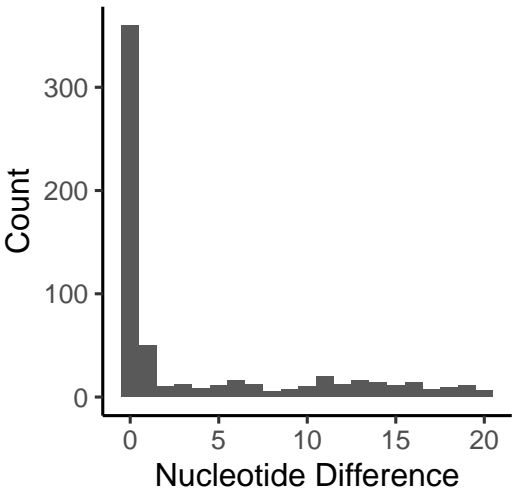
IGHV6-1*01

452 sequences assigned
137 (30.3%) exact matches, in which:
131 unique CDR3
6 unique J

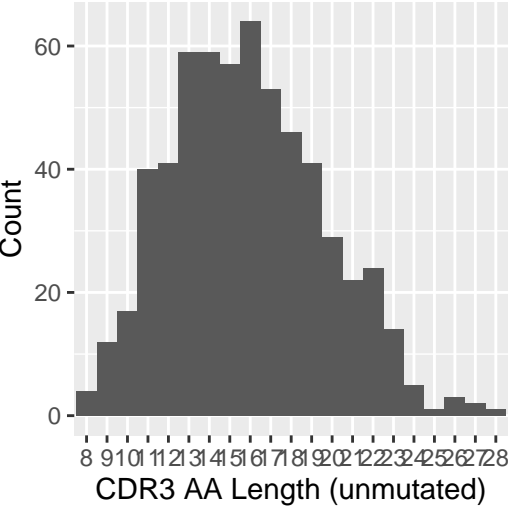


IGHV7-4-1*02

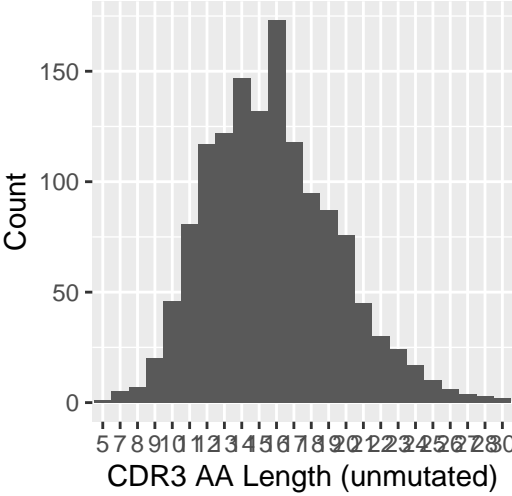
677 sequences assigned
360 (53.2%) exact matches, in which:
355 unique CDR3
7 unique J



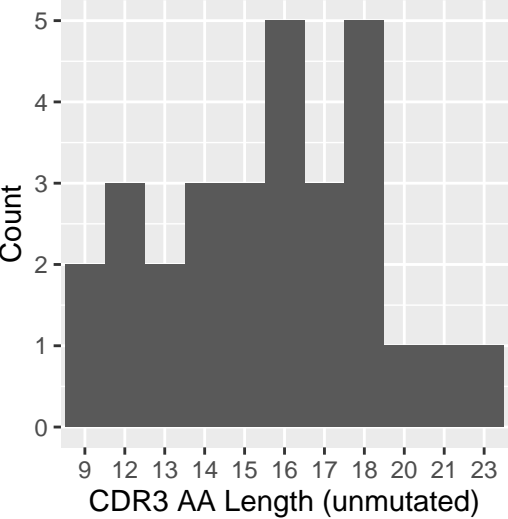
IGHV1-18*01_A196G



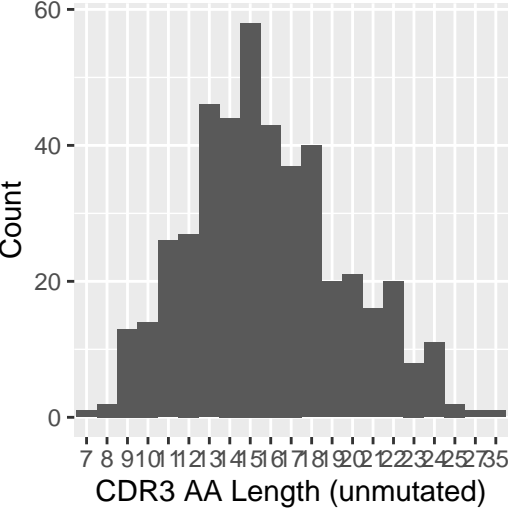
IGHV4-39*01_G315A



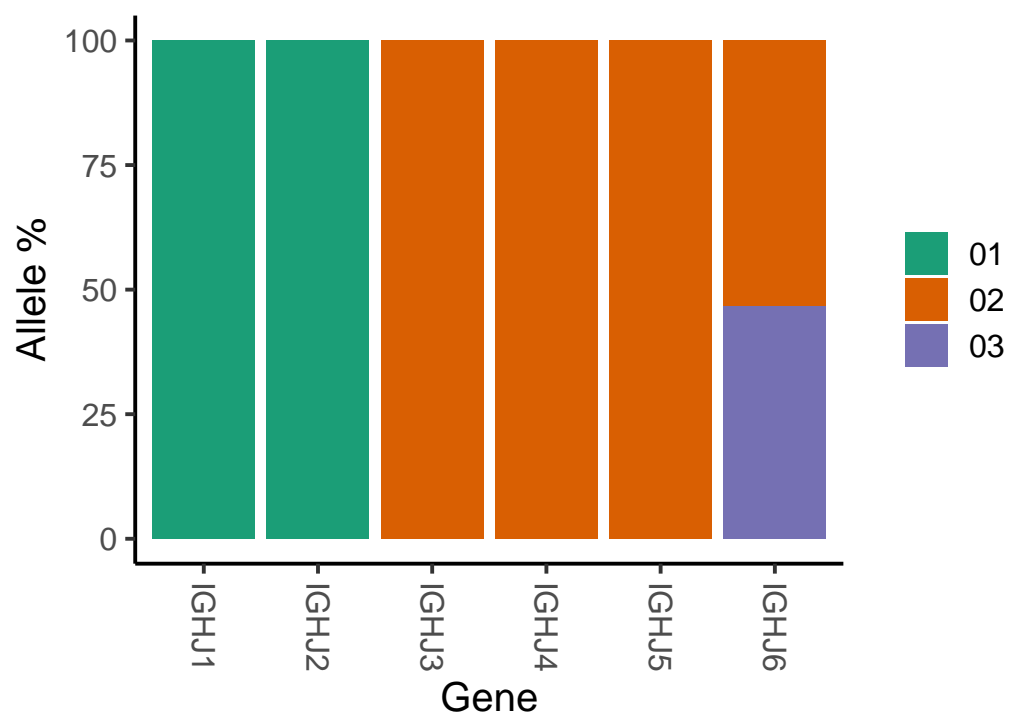
IGHV3-43*01_T177A



IGHV4-38-2*02_A70G



Allele Usage



Sequence Count by IGHJ6 allele usage

