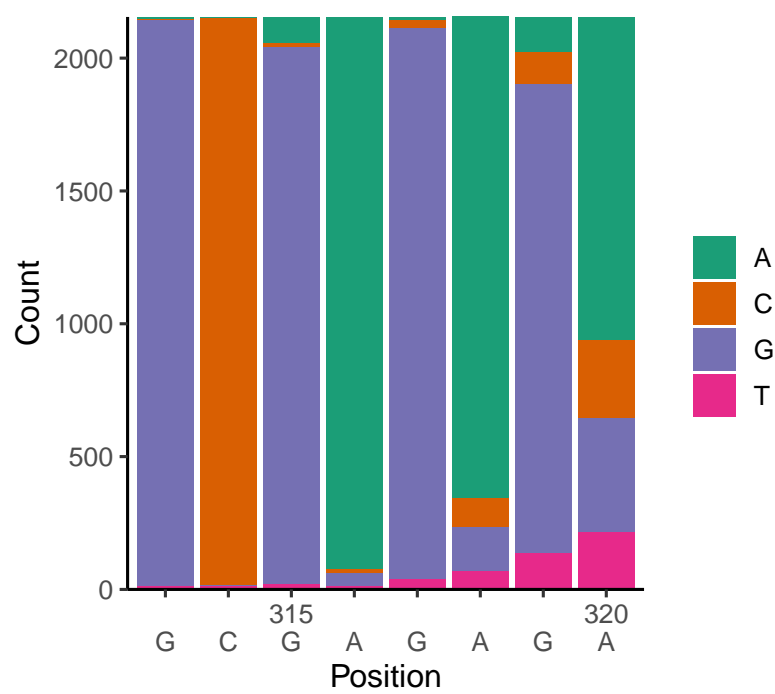
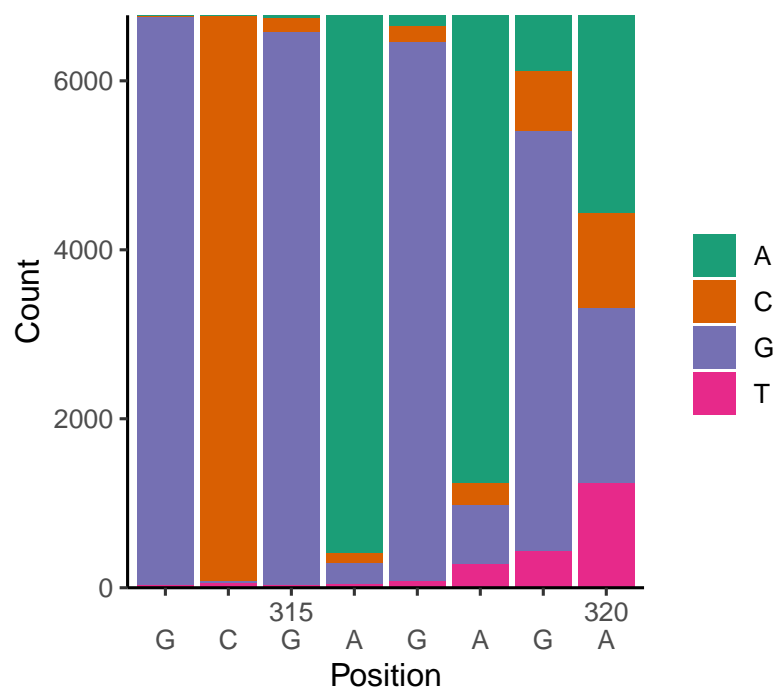


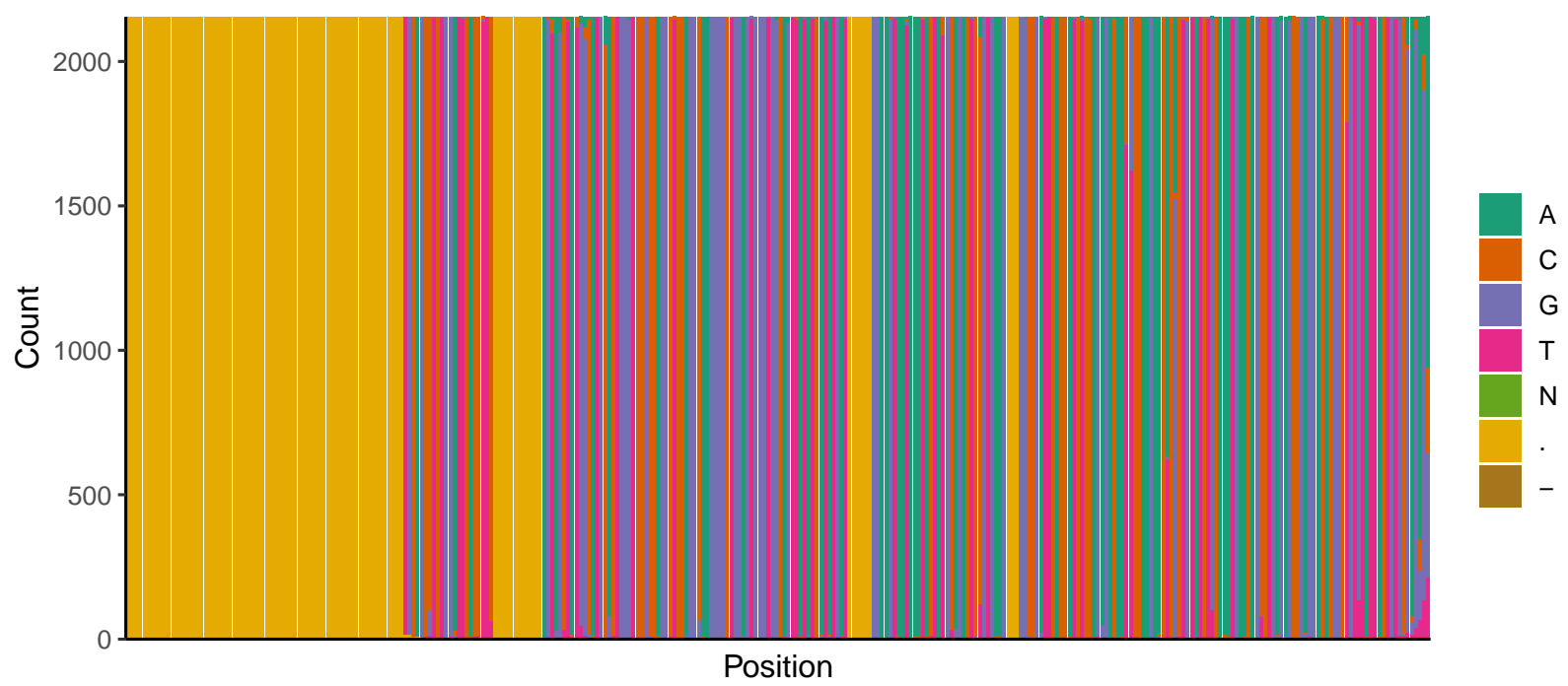
Gene IGHV3-30*03_T288C



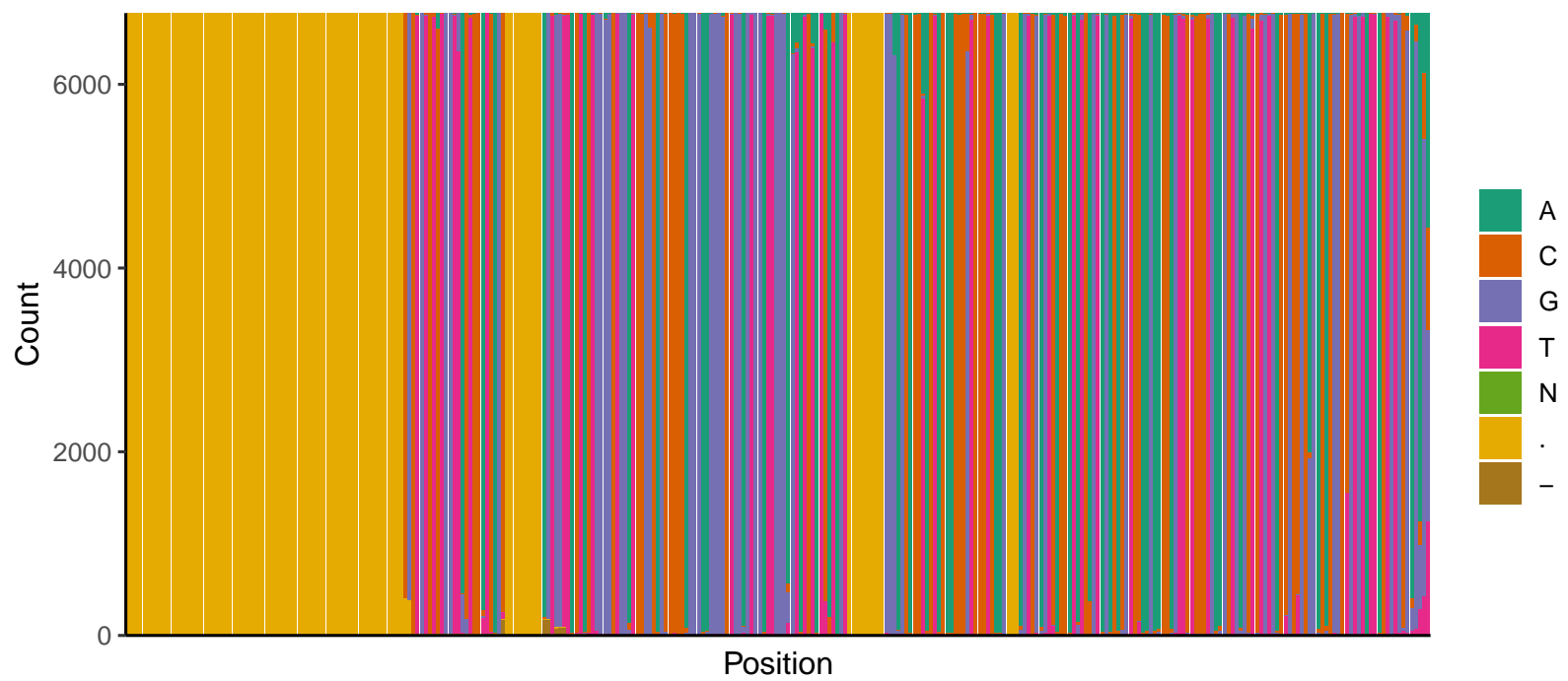
Gene IGHV4-38-2*02_A70G



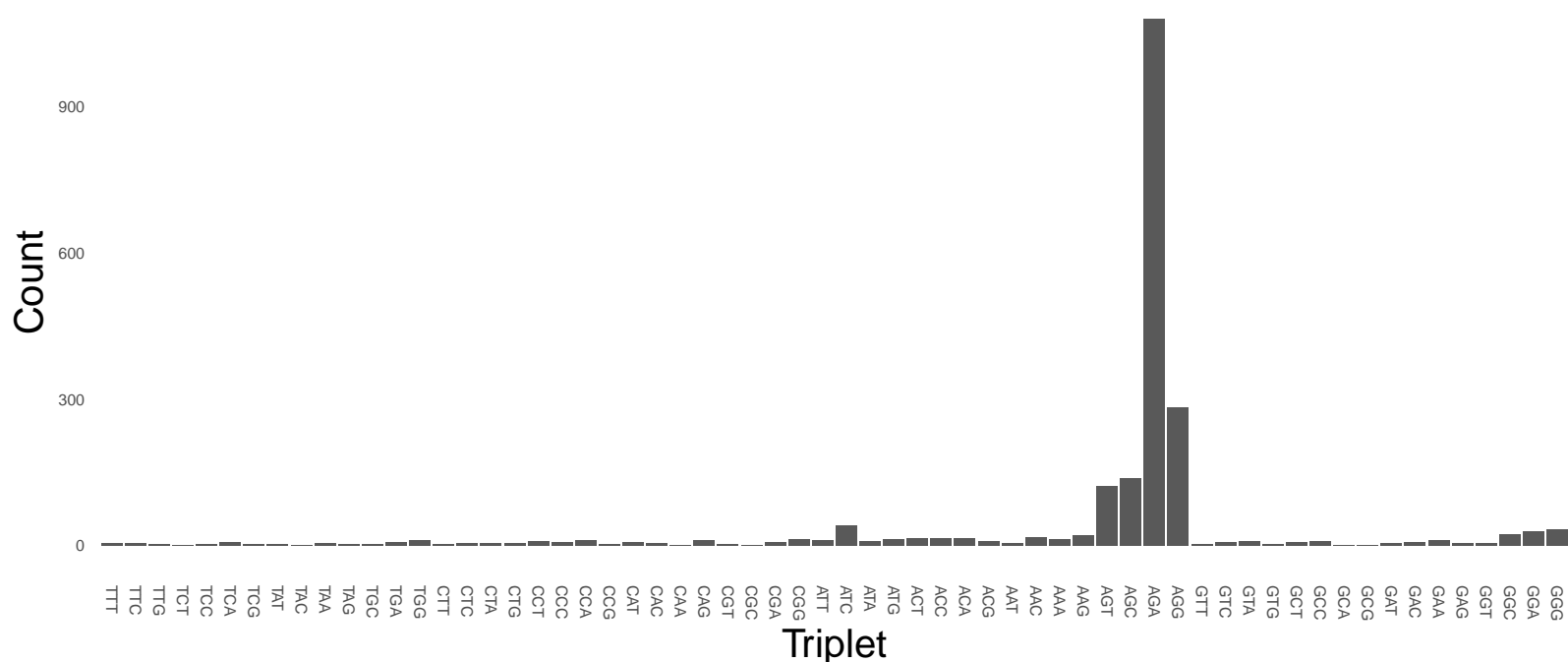
Gene IGHV3-30*03_T288C



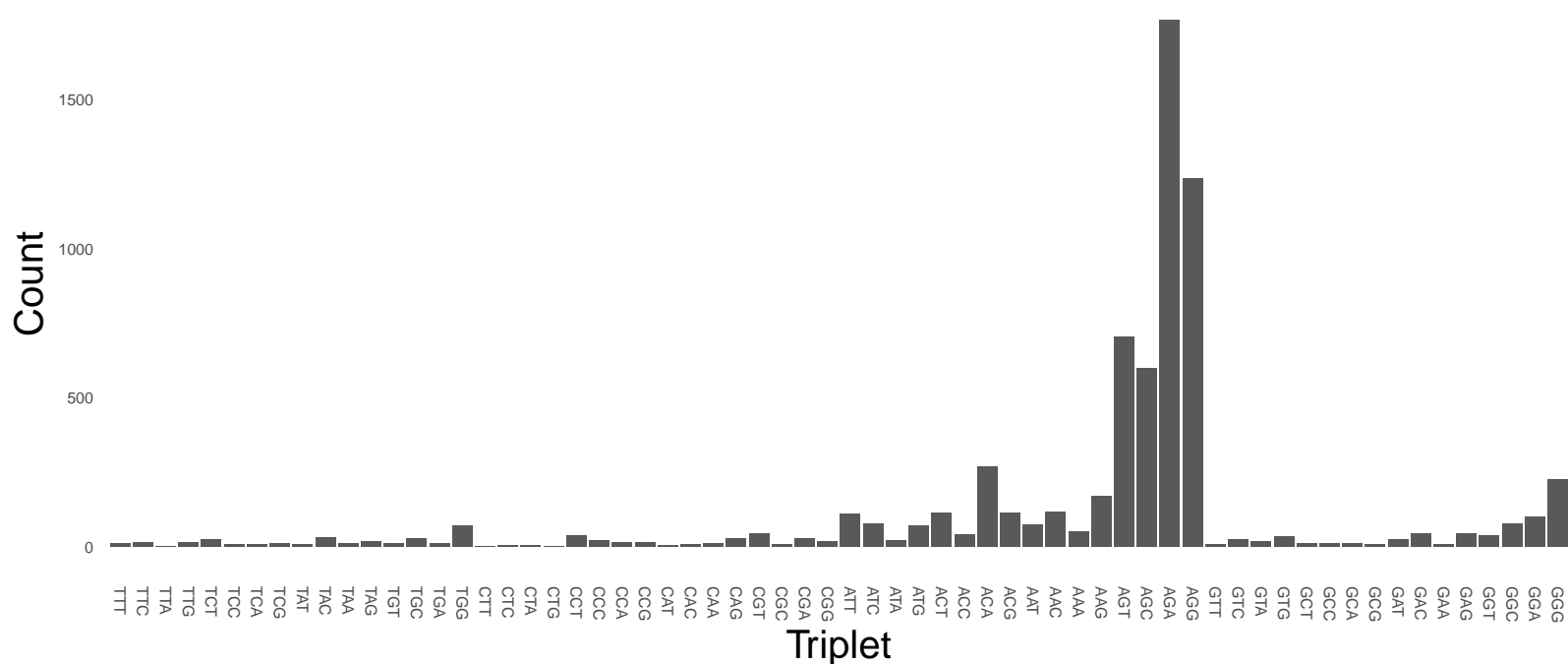
Gene IGHV4-38-2*02_A70G



IGHV3–30*03_T288C– Final 3 nucleotides as a triplet

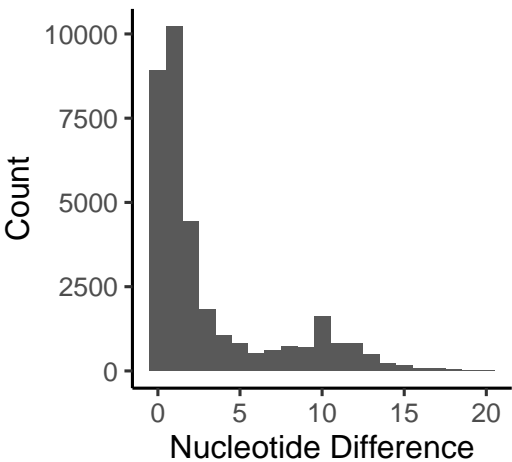


IGHV4–38–2*02_A70G– Final 3 nucleotides as a triplet



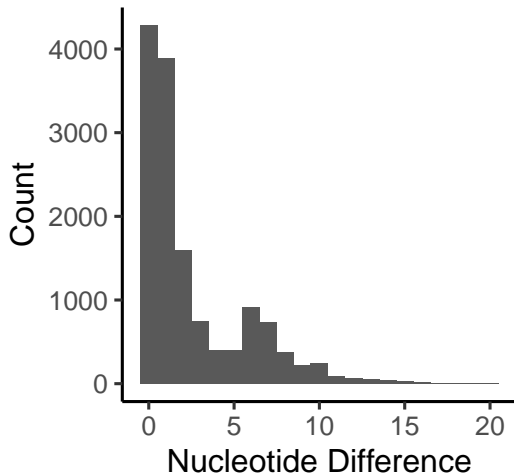
IGHV1-2*02

34268 sequences assigned
8916 (26%) exact matches, in which:
7382 unique CDR3
7 unique J



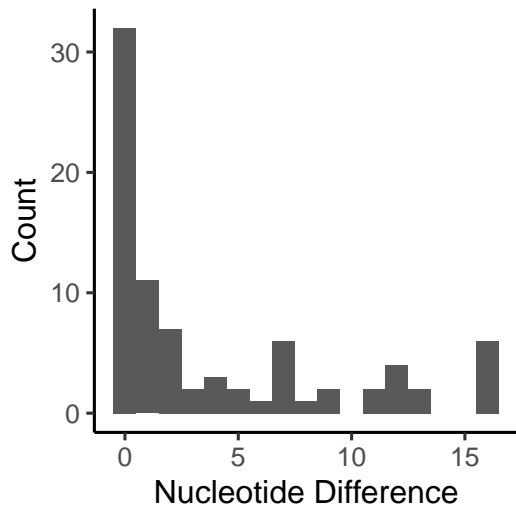
IGHV1-18*01

14149 sequences assigned
4282 (30.3%) exact matches, in which:
3707 unique CDR3
7 unique J



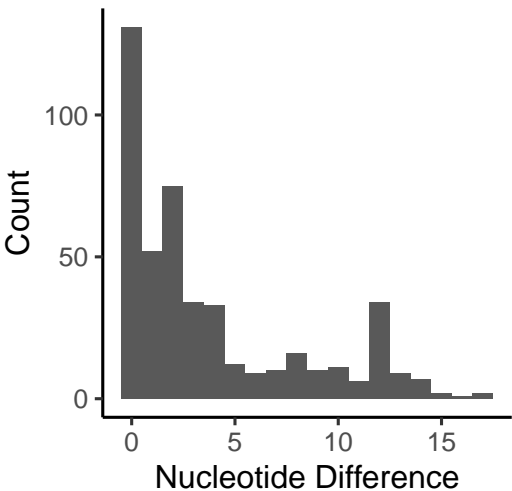
IGHV1-45*02

81 sequences assigned
32 (39.5%) exact matches, in which:
30 unique CDR3
6 unique J



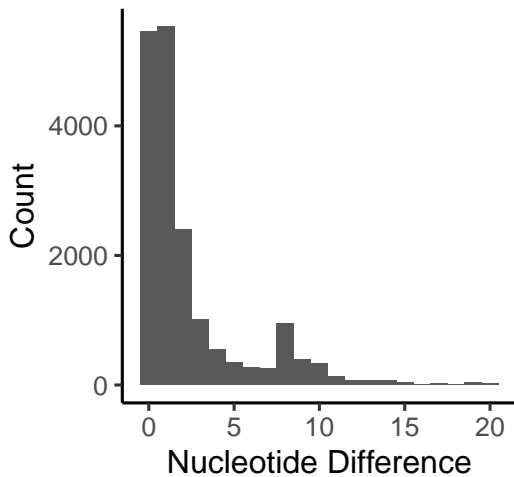
IGHV1-3*02

454 sequences assigned
131 (28.9%) exact matches, in which:
130 unique CDR3
6 unique J



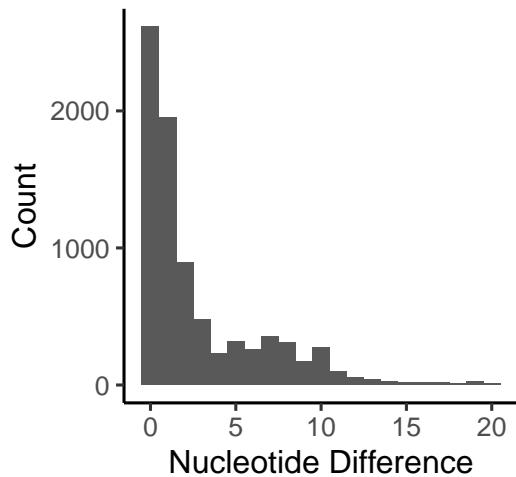
IGHV1-18*04

17987 sequences assigned
5456 (30.3%) exact matches, in which:
4673 unique CDR3
7 unique J



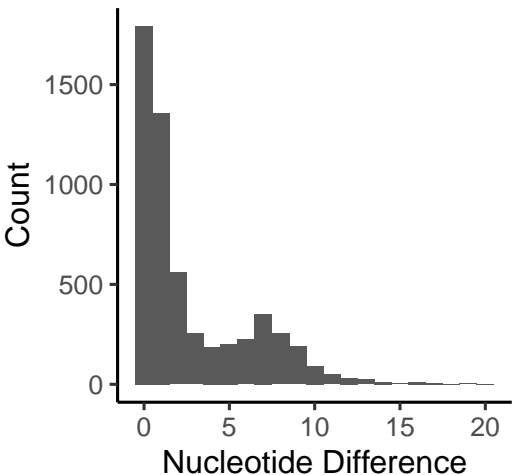
IGHV1-46*01

8220 sequences assigned
2614 (31.8%) exact matches, in which:
2403 unique CDR3
7 unique J



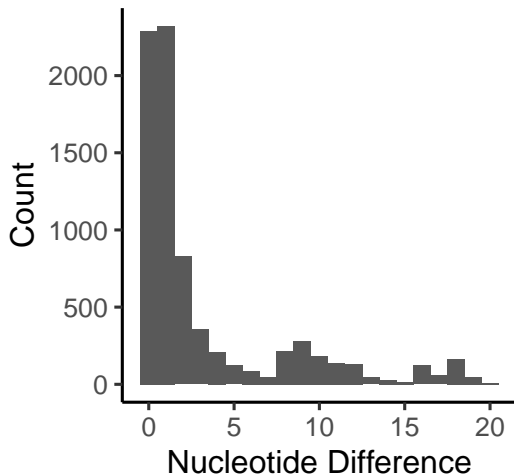
IGHV1-8*01

5625 sequences assigned
1793 (31.9%) exact matches, in which:
1604 unique CDR3
7 unique J



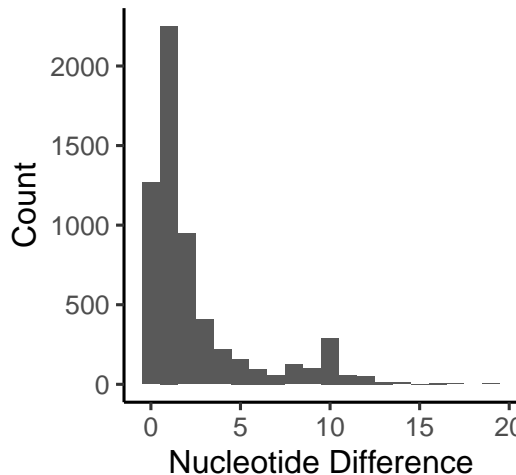
IGHV1-24*01

7735 sequences assigned
2287 (29.6%) exact matches, in which:
1945 unique CDR3
7 unique J



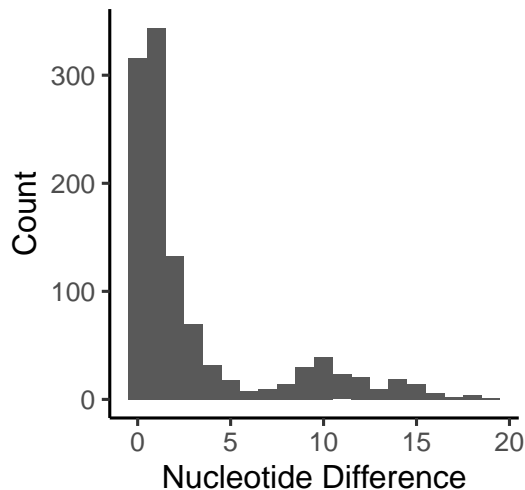
IGHV1-46*03

6095 sequences assigned
1268 (20.8%) exact matches, in which:
955 unique CDR3
7 unique J



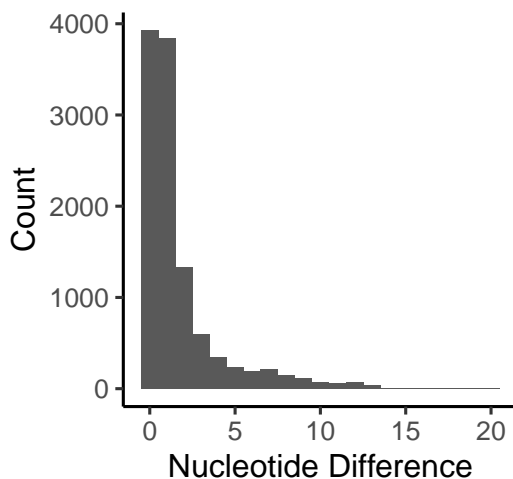
IGHV1-58*02

1119 sequences assigned
316 (28.2%) exact matches, in which:
271 unique CDR3
7 unique J



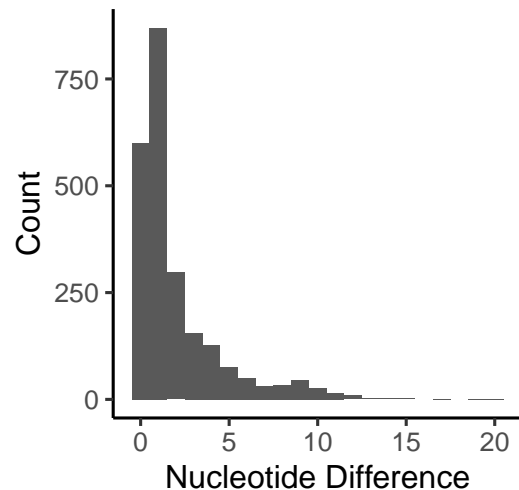
IGHV1-69*02

11245 sequences assigned
3927 (34.9%) exact matches, in which:
3376 unique CDR3
7 unique J



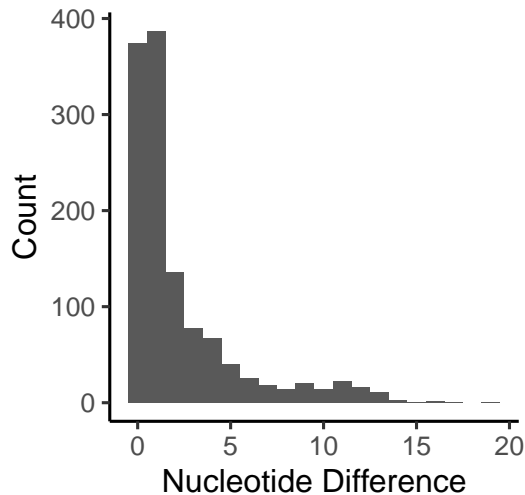
IGHV2-5*01

2368 sequences assigned
600 (25.3%) exact matches, in which:
491 unique CDR3
7 unique J



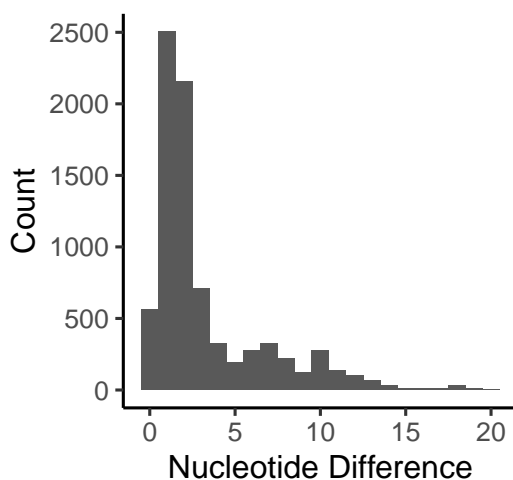
IGHV1-58*01_03

1231 sequences assigned
374 (30.4%) exact matches, in which:
318 unique CDR3
7 unique J



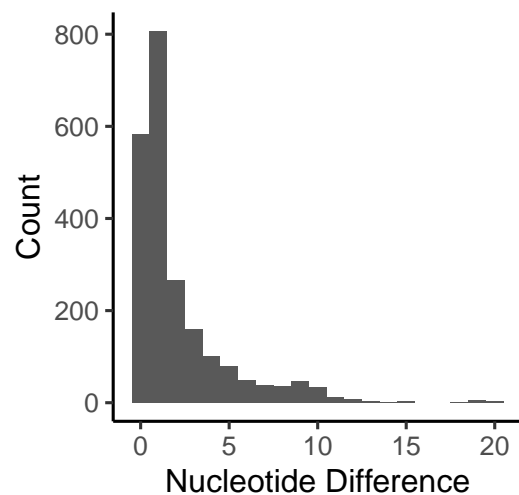
IGHV1-69*04_09

8093 sequences assigned
563 (7%) exact matches, in which:
534 unique CDR3
7 unique J



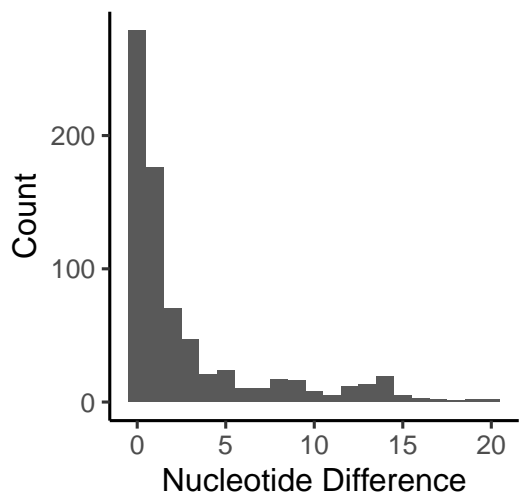
IGHV2-5*02

2268 sequences assigned
582 (25.7%) exact matches, in which:
466 unique CDR3
7 unique J



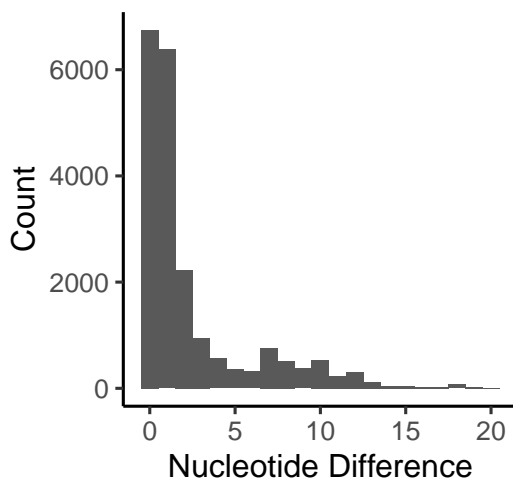
IGHV1-69-2*01

743 sequences assigned
279 (37.6%) exact matches, in which:
231 unique CDR3
7 unique J



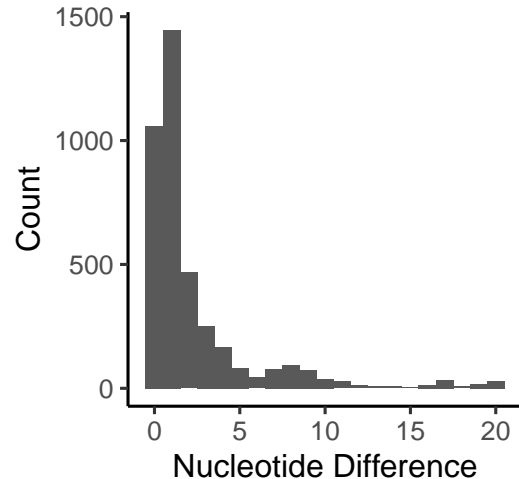
IGHV1-69*06_14

20629 sequences assigned
6747 (32.7%) exact matches, in which:
5693 unique CDR3
7 unique J



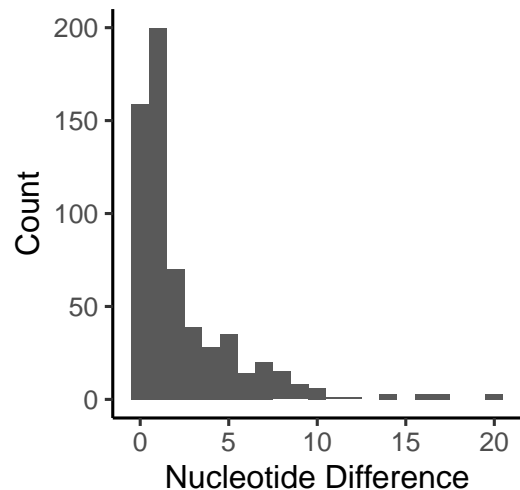
IGHV2-26*01

4122 sequences assigned
1058 (25.7%) exact matches, in which:
858 unique CDR3
7 unique J



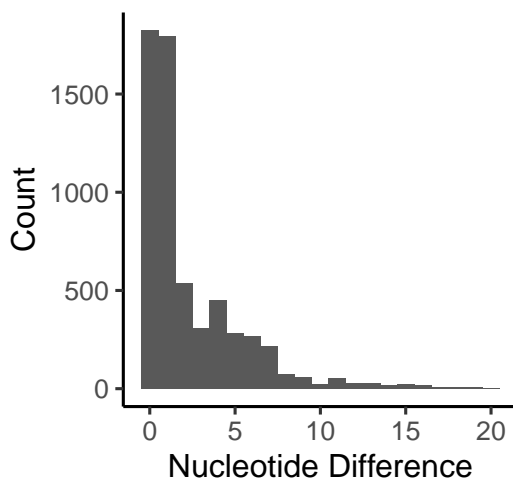
IGHV2-70*01

633 sequences assigned
159 (25.1%) exact matches, in which:
122 unique CDR3
5 unique J



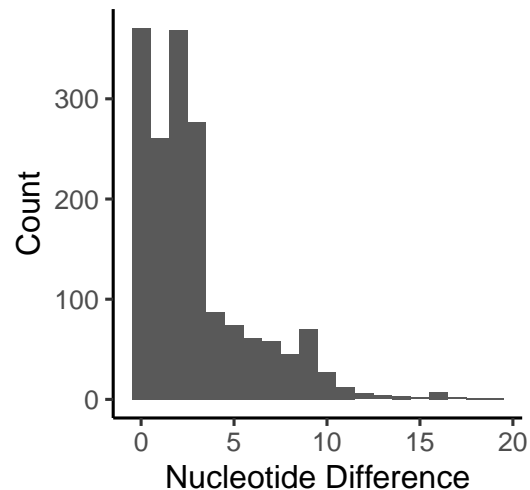
IGHV3-7*03

6037 sequences assigned
1824 (30.2%) exact matches, in which:
1601 unique CDR3
7 unique J



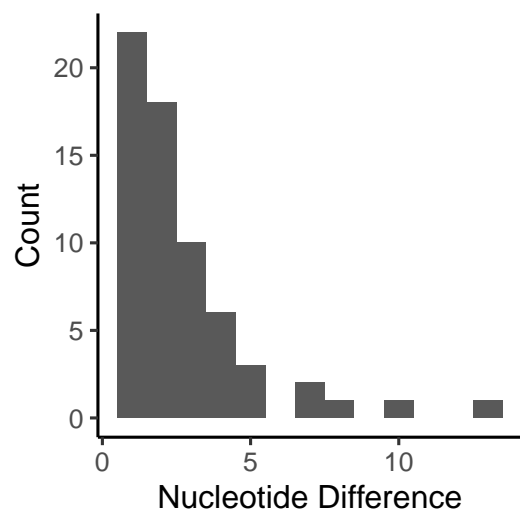
IGHV3-11*04

1739 sequences assigned
371 (21.3%) exact matches, in which:
370 unique CDR3
7 unique J



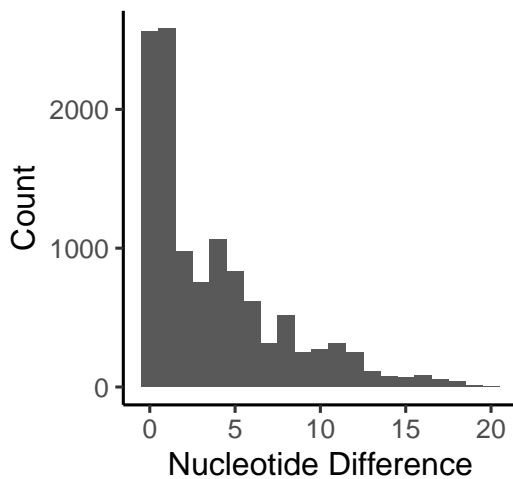
IGHV2-70*12

64 sequences assigned
No exact matches.



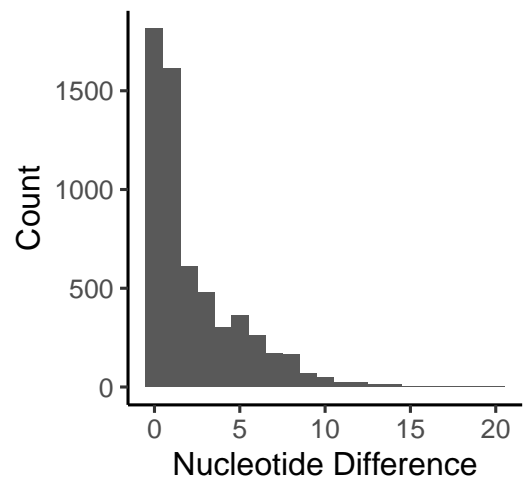
IGHV3-9*01

11760 sequences assigned
2562 (21.8%) exact matches, in which:
2082 unique CDR3
7 unique J



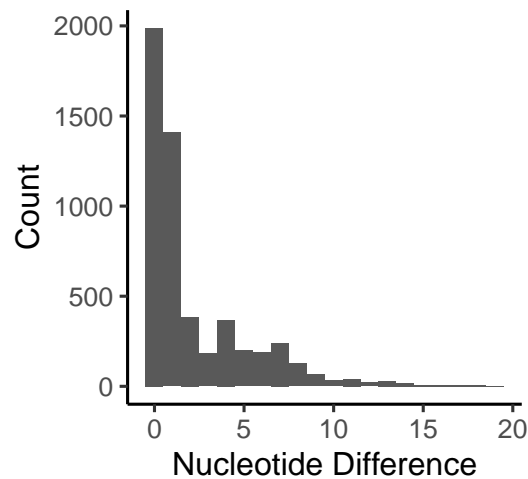
IGHV3-11*06

5982 sequences assigned
1814 (30.3%) exact matches, in which:
1563 unique CDR3
7 unique J



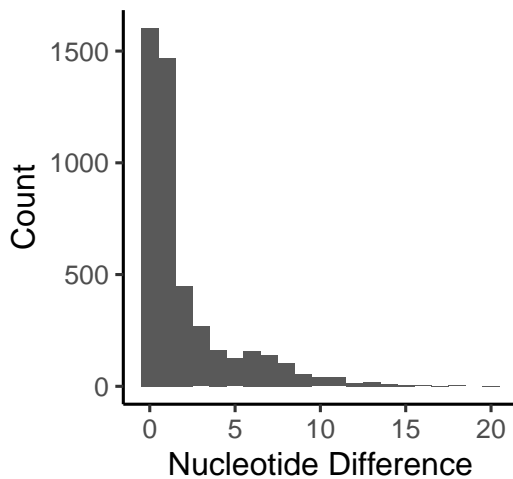
IGHV3-7*01

5326 sequences assigned
1988 (37.3%) exact matches, in which:
1796 unique CDR3
7 unique J



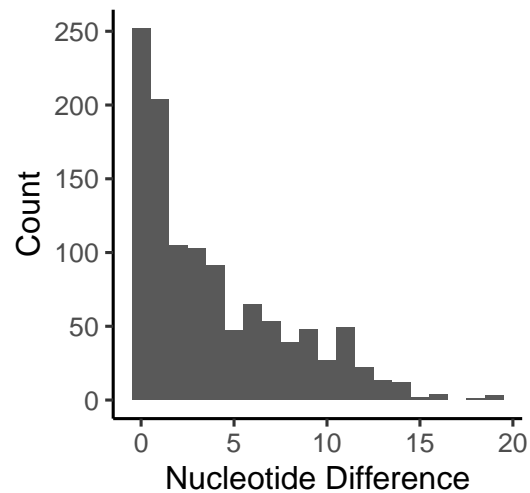
IGHV3-11*01

4673 sequences assigned
1603 (34.3%) exact matches, in which:
1387 unique CDR3
7 unique J



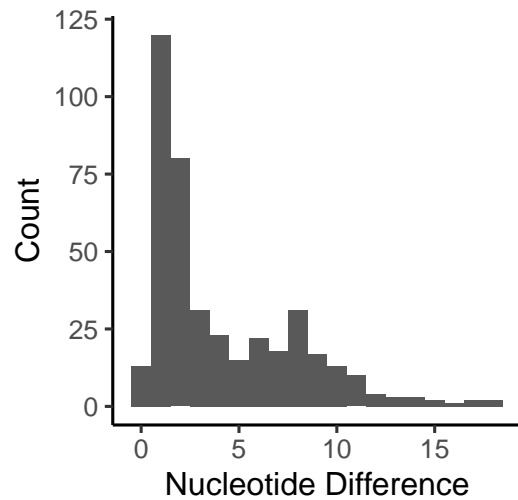
IGHV3-13*01

1143 sequences assigned
252 (22%) exact matches, in which:
202 unique CDR3
7 unique J



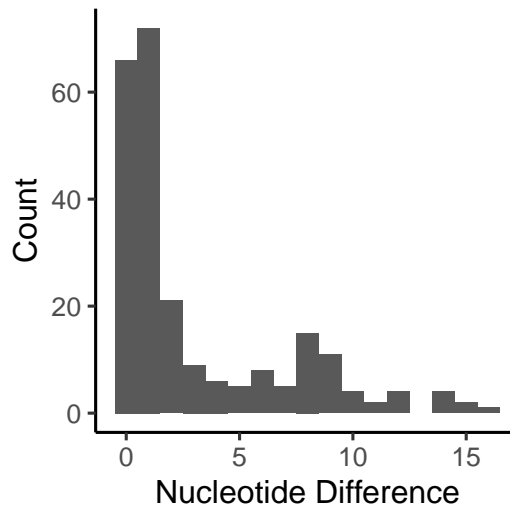
IGHV3-13*05

410 sequences assigned
13 (3.2%) exact matches, in which:
13 unique CDR3
4 unique J



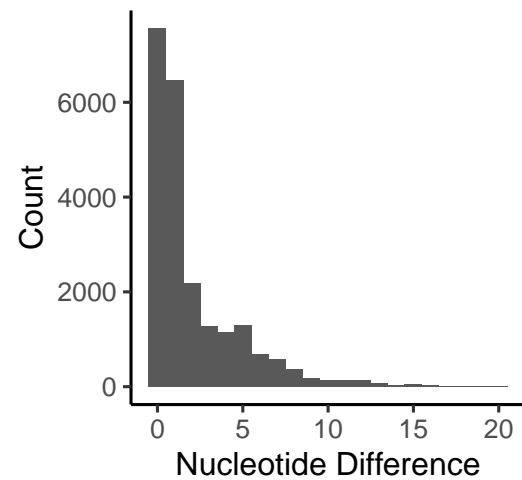
IGHV3-20*01_02

235 sequences assigned
66 (28.1%) exact matches, in which:
56 unique CDR3
6 unique J



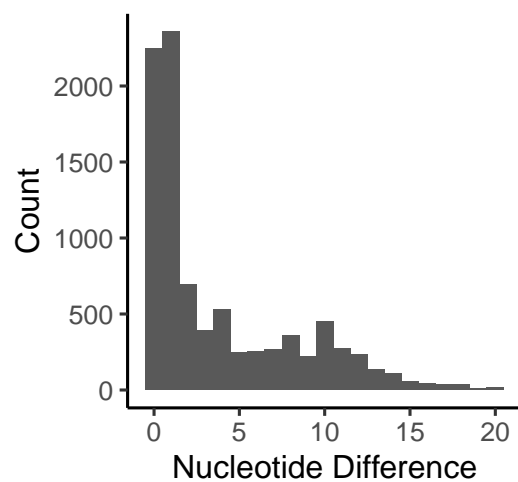
IGHV3-21*01_02

22351 sequences assigned
7559 (33.8%) exact matches, in which:
6345 unique CDR3
7 unique J



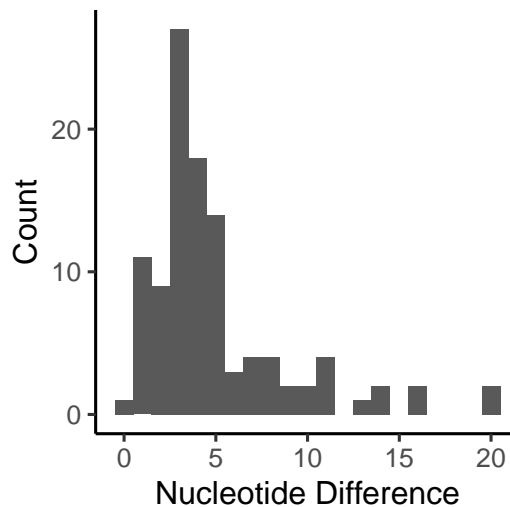
IGHV3-15*01_02

9007 sequences assigned
2248 (25%) exact matches, in which:
1823 unique CDR3
7 unique J



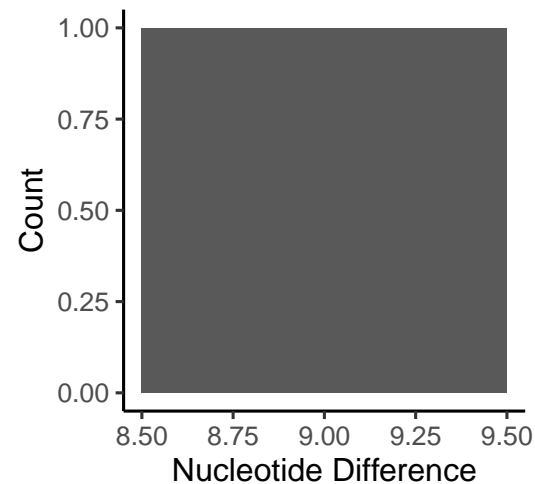
IGHV3-20*03_04

106 sequences assigned
1 (0.9%) exact matches, in which:
1 unique CDR3
1 unique J



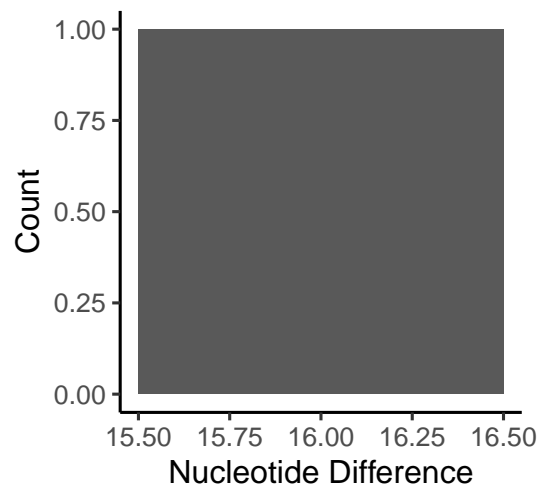
IGHV3-22*01_02

1 sequences assigned
No exact matches.



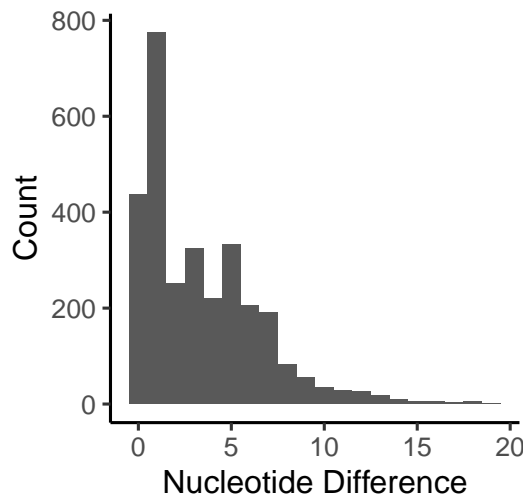
IGHV3-19*01

1 sequences assigned
No exact matches.



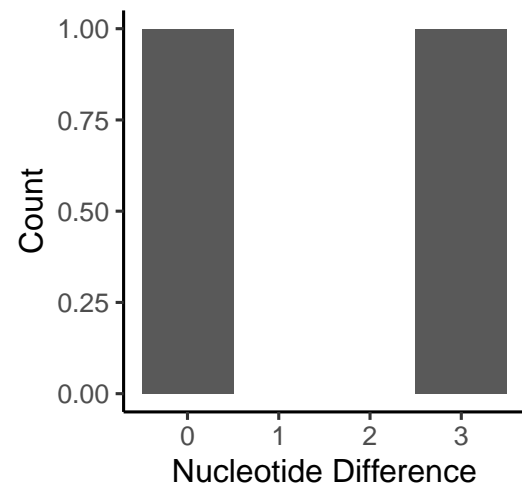
IGHV3-21*04

3027 sequences assigned
437 (14.4%) exact matches, in which:
433 unique CDR3
7 unique J



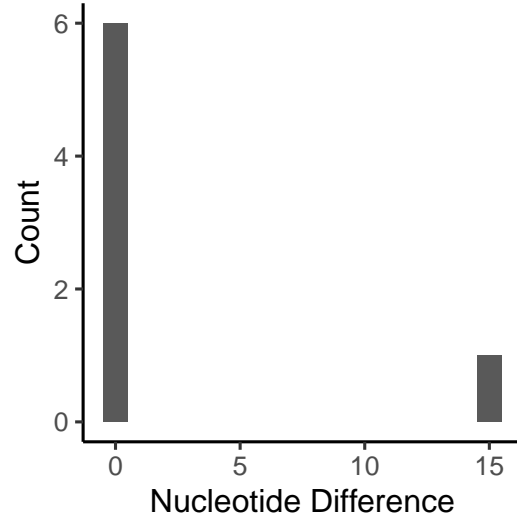
IGHV3-25*04

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



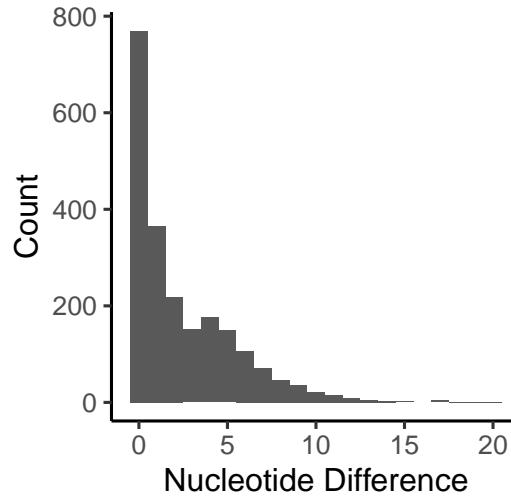
IGHV3-30-3*01

7 sequences assigned
6 (85.7%) exact matches, in which:
6 unique CDR3
3 unique J



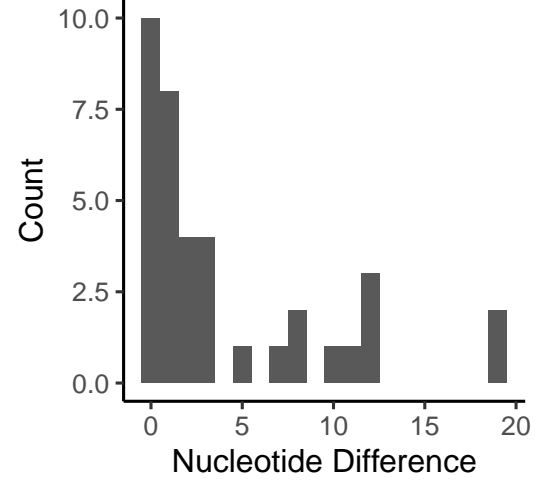
IGHV3-30*03_T288C

2155 sequences assigned
770 (35.7%) exact matches, in which:
763 unique CDR3
7 unique J



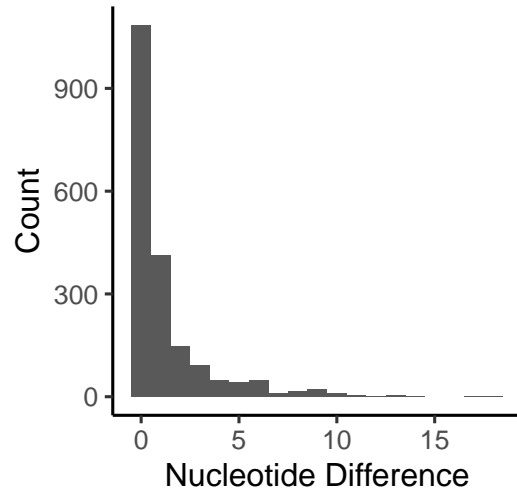
IGHV3-35*01

37 sequences assigned
10 (27%) exact matches, in which:
8 unique CDR3
5 unique J



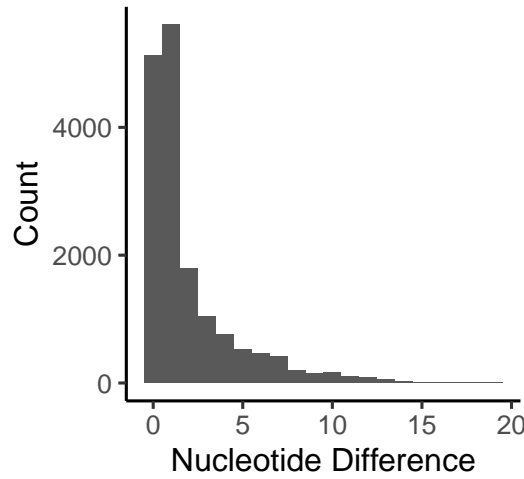
IGHV3-30*03

1953 sequences assigned
1085 (55.6%) exact matches, in which:
1069 unique CDR3
7 unique J



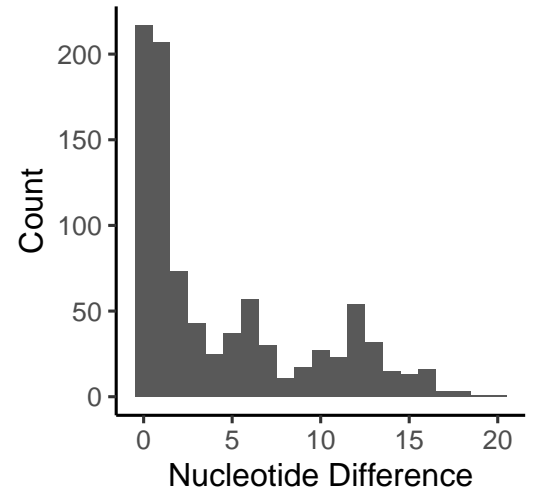
IGHV3-33*01

16549 sequences assigned
5118 (30.9%) exact matches, in which:
4310 unique CDR3
7 unique J



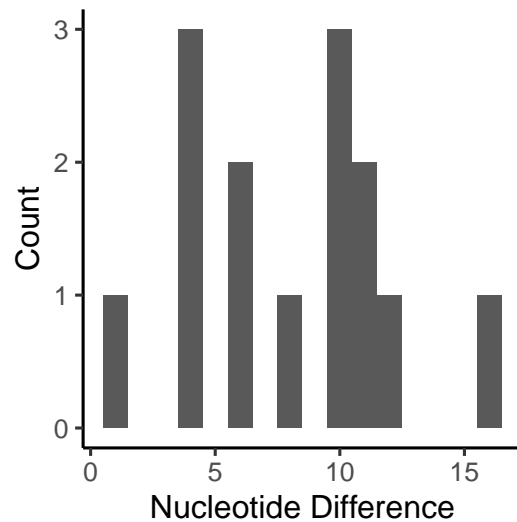
IGHV3-43*01

906 sequences assigned
217 (24%) exact matches, in which:
182 unique CDR3
7 unique J



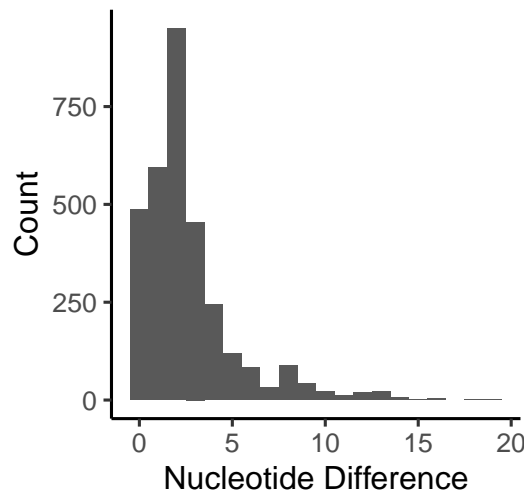
IGHV3-30-3*03

14 sequences assigned
No exact matches.



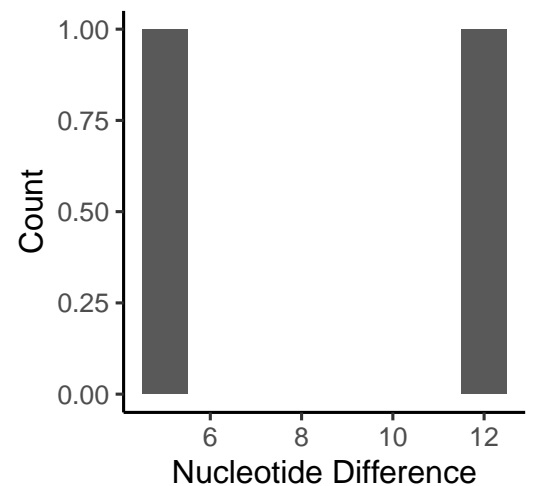
IGHV3-33*06

3187 sequences assigned
488 (15.3%) exact matches, in which:
485 unique CDR3
7 unique J



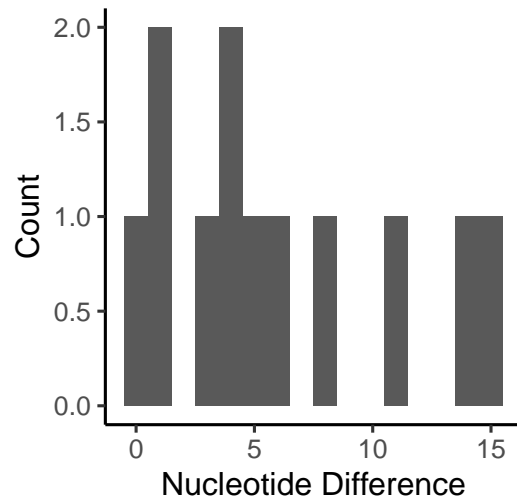
IGHV3-47*01

2 sequences assigned
No exact matches.



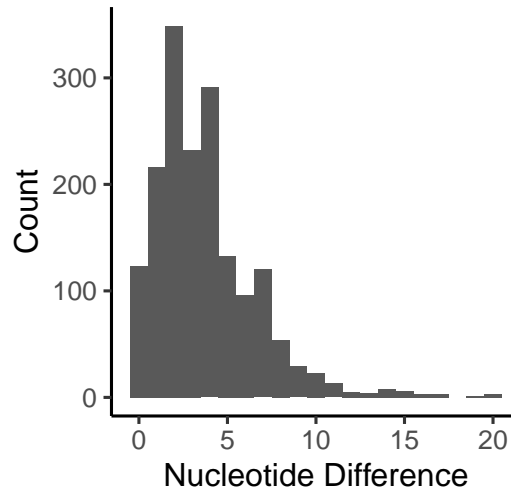
IGHV3-47*02

12 sequences assigned
1 (8.3%) exact matches, in which:
1 unique CDR3
0 unique J



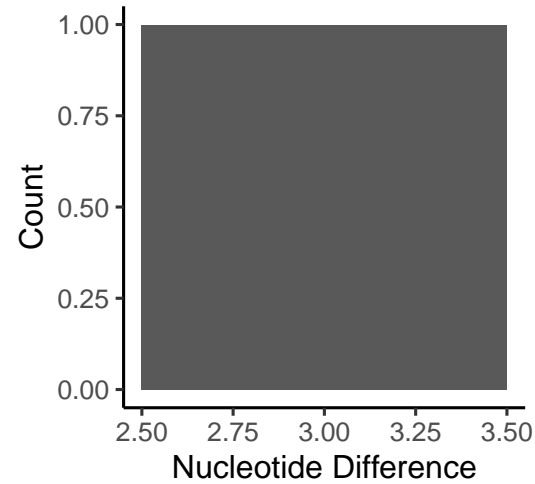
IGHV3-48*04

1719 sequences assigned
123 (7.2%) exact matches, in which:
123 unique CDR3
7 unique J



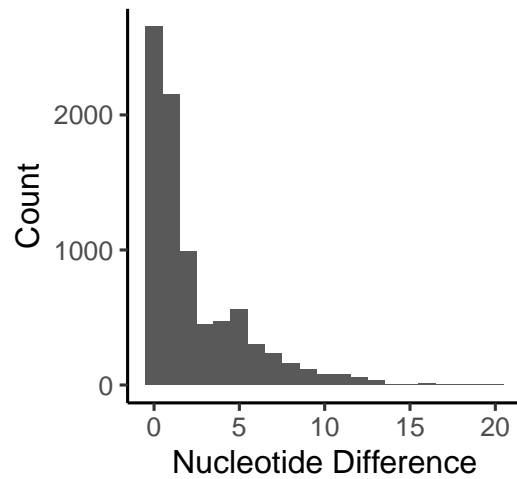
IGHV3-52*01_03

1 sequences assigned
No exact matches.



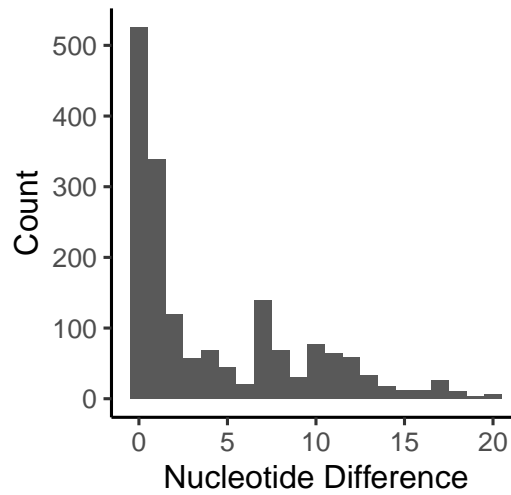
IGHV3-48*01

8356 sequences assigned
2653 (31.7%) exact matches, in which:
2276 unique CDR3
7 unique J



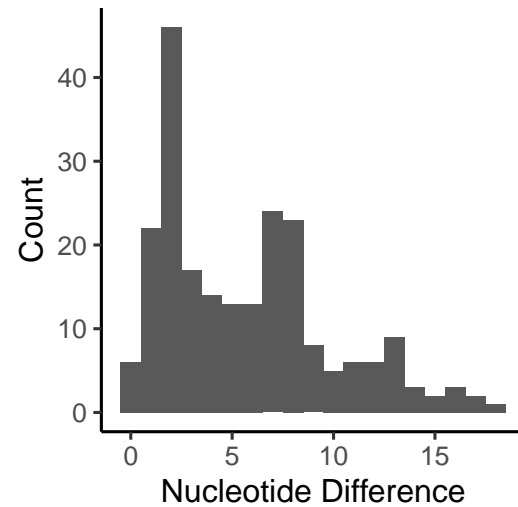
IGHV3-49*04

1741 sequences assigned
526 (30.2%) exact matches, in which:
447 unique CDR3
7 unique J



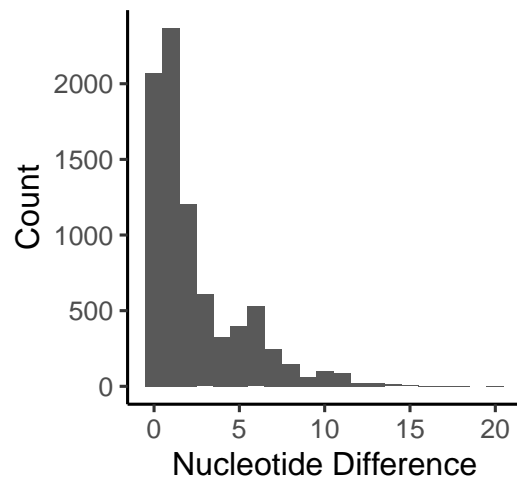
IGHV3-53*05

224 sequences assigned
6 (2.7%) exact matches, in which:
6 unique CDR3
4 unique J



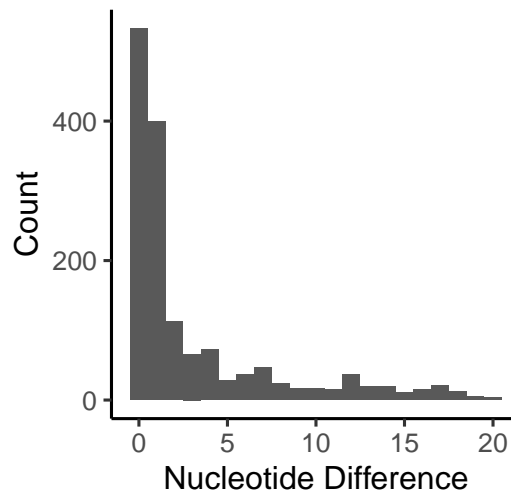
IGHV3-48*03

8227 sequences assigned
2072 (25.2%) exact matches, in which:
1746 unique CDR3
7 unique J



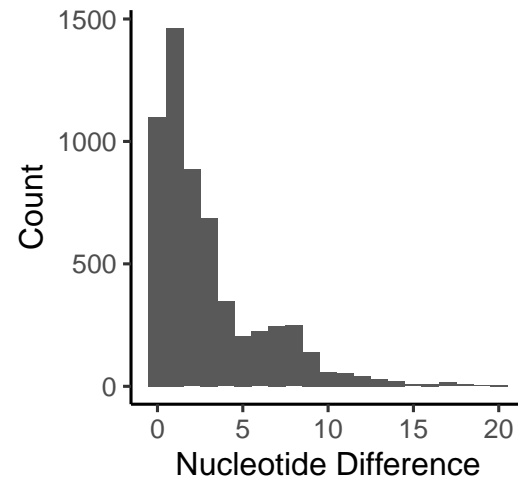
IGHV3-49*03_05

1514 sequences assigned
533 (35.2%) exact matches, in which:
457 unique CDR3
7 unique J



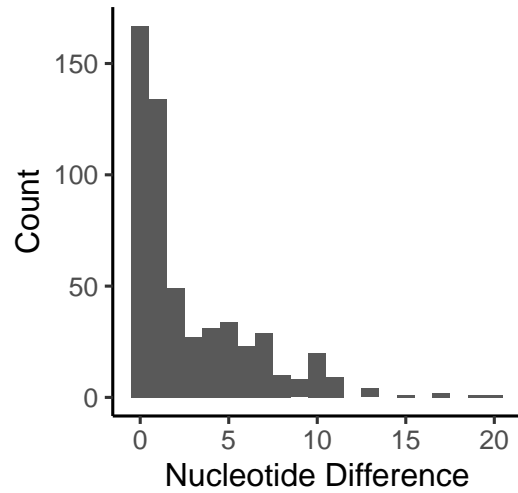
IGHV3-53*01_02

5815 sequences assigned
1101 (18.9%) exact matches, in which:
918 unique CDR3
7 unique J



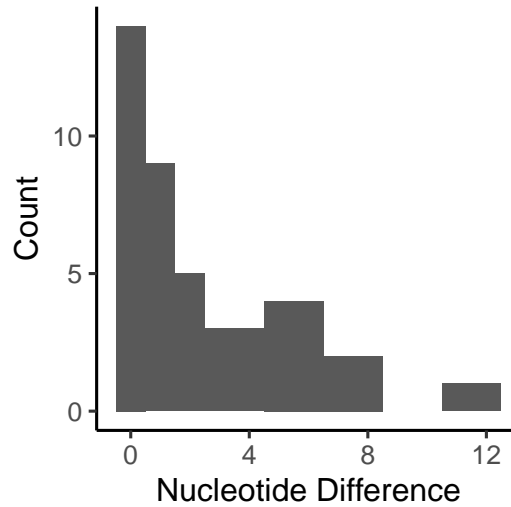
IGHV3-64*01

551 sequences assigned
167 (30.3%) exact matches, in which:
147 unique CDR3
7 unique J



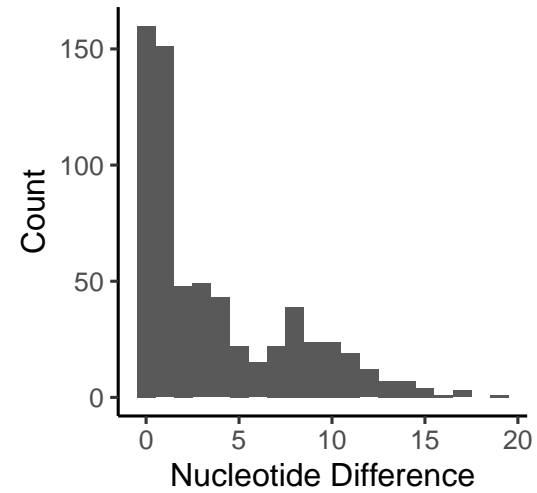
IGHV3-66*03

48 sequences assigned
14 (29.2%) exact matches, in which:
14 unique CDR3
4 unique J



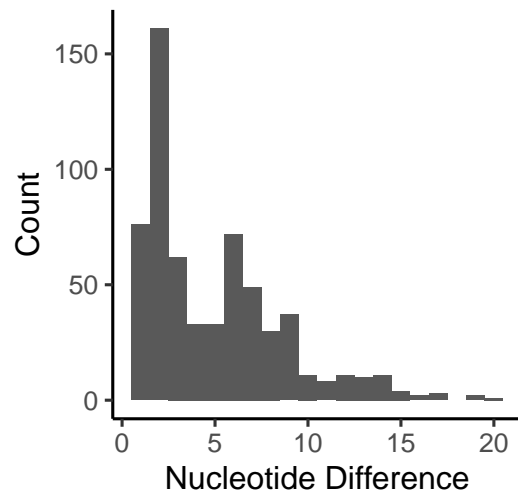
IGHV3-72*01

653 sequences assigned
160 (24.5%) exact matches, in which:
133 unique CDR3
7 unique J



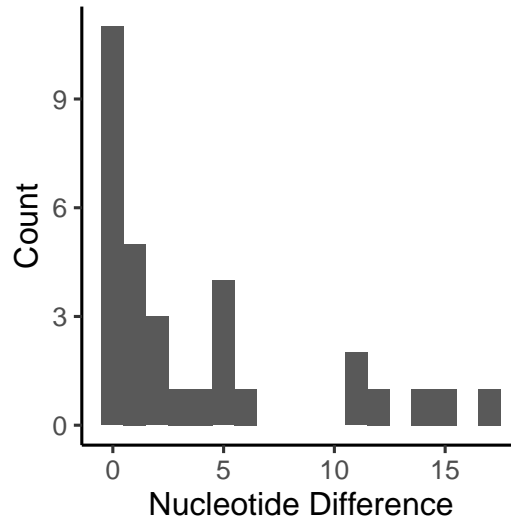
IGHV3-66*01

617 sequences assigned
No exact matches.



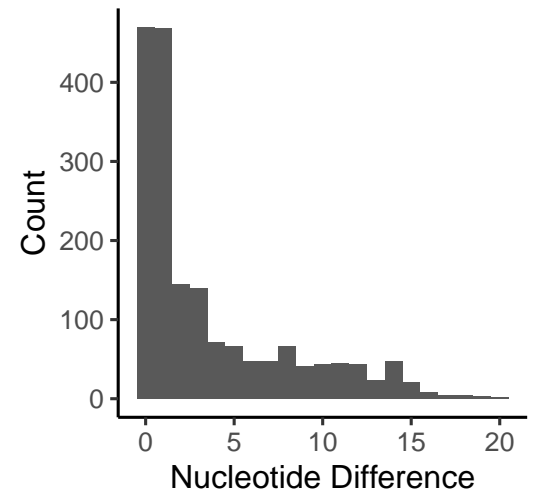
IGHV3-69-1*01

33 sequences assigned
11 (33.3%) exact matches, in which:
10 unique CDR3
3 unique J



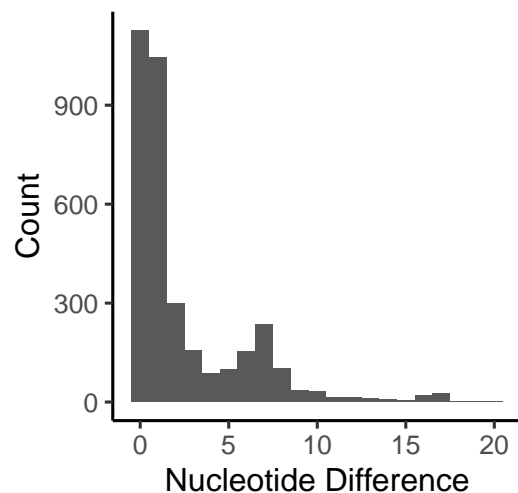
IGHV3-73*01_02

1817 sequences assigned
470 (25.9%) exact matches, in which:
400 unique CDR3
7 unique J



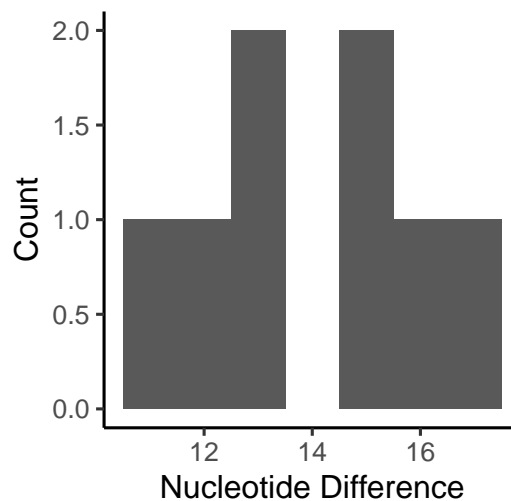
IGHV3-66*02

3474 sequences assigned
1127 (32.4%) exact matches, in which:
935 unique CDR3
7 unique J



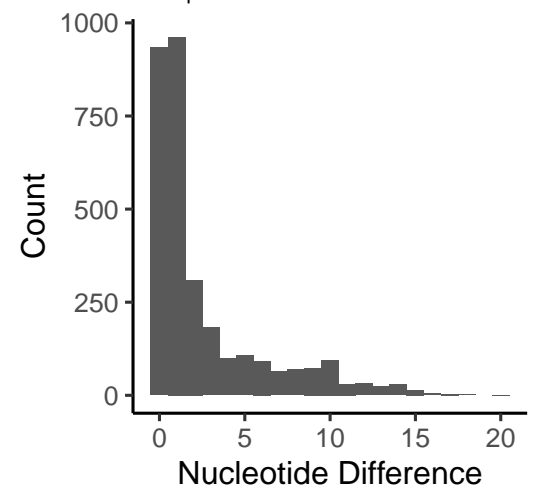
IGHV3-71*01_04

9 sequences assigned
No exact matches.



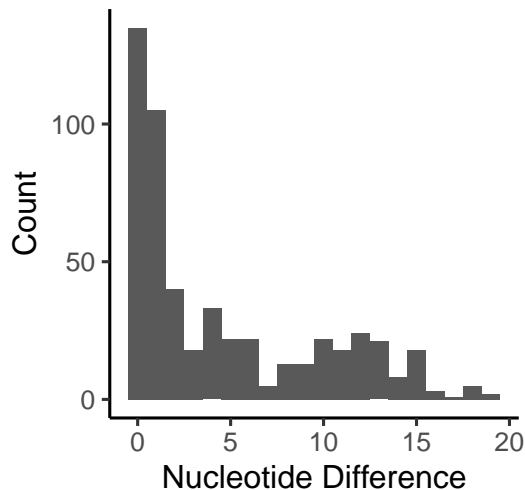
IGHV3-74*01_02

3132 sequences assigned
934 (29.8%) exact matches, in which:
741 unique CDR3
7 unique J



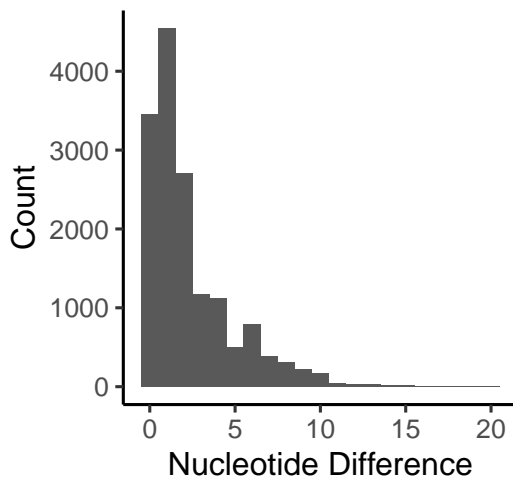
IGHV3-43D*04

529 sequences assigned
135 (25.5%) exact matches, in which:
118 unique CDR3
7 unique J



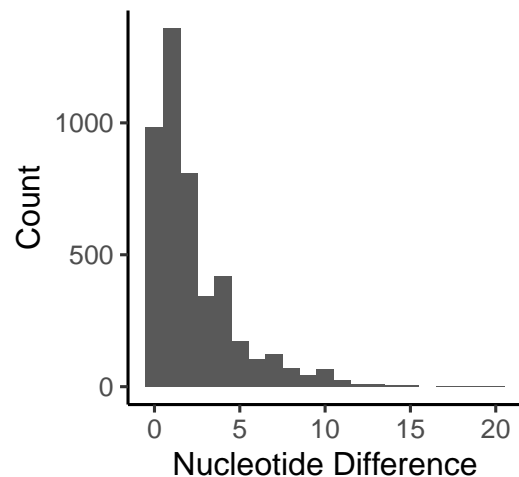
IGHV4-4*07

15609 sequences assigned
3457 (22.1%) exact matches, in which:
2945 unique CDR3
7 unique J



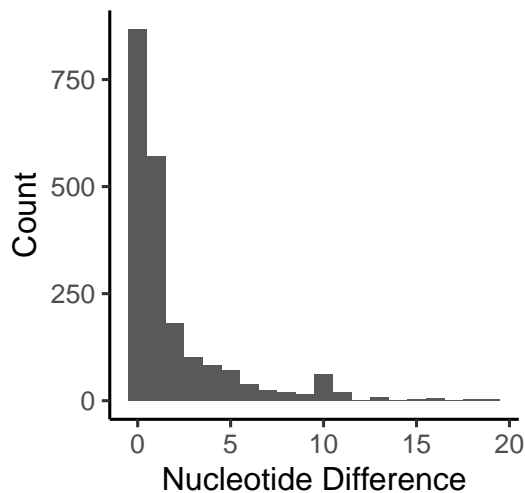
IGHV4-30-2*01

4565 sequences assigned
985 (21.6%) exact matches, in which:
763 unique CDR3
7 unique J



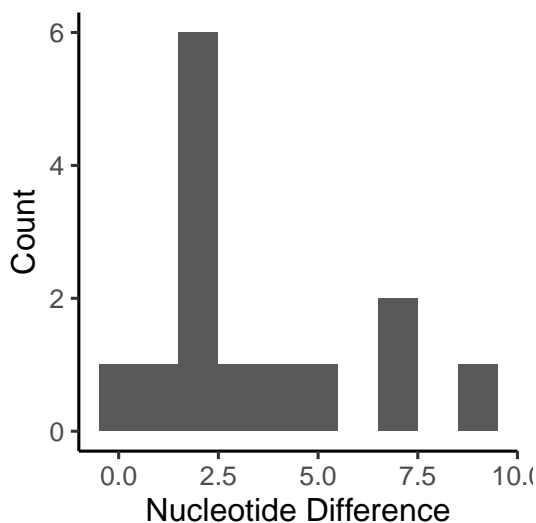
IGHV3-64D*06

2084 sequences assigned
868 (41.7%) exact matches, in which:
679 unique CDR3
7 unique J



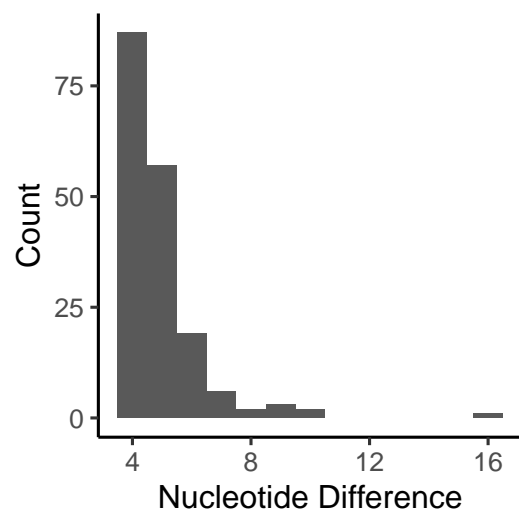
IGHV4-28*03

14 sequences assigned
1 (7.1%) exact matches, in which:
1 unique CDR3
1 unique J



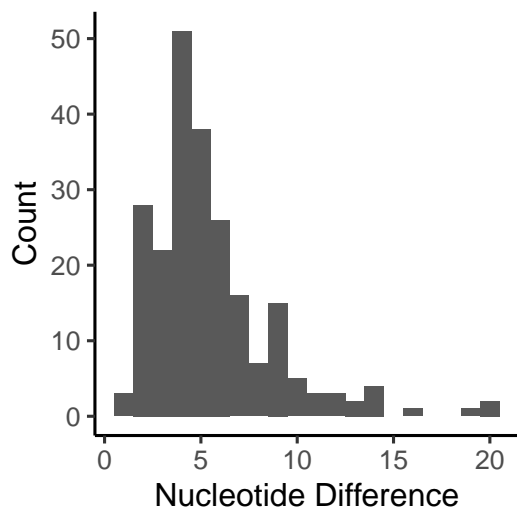
IGHV4-30-4*07

177 sequences assigned
No exact matches.



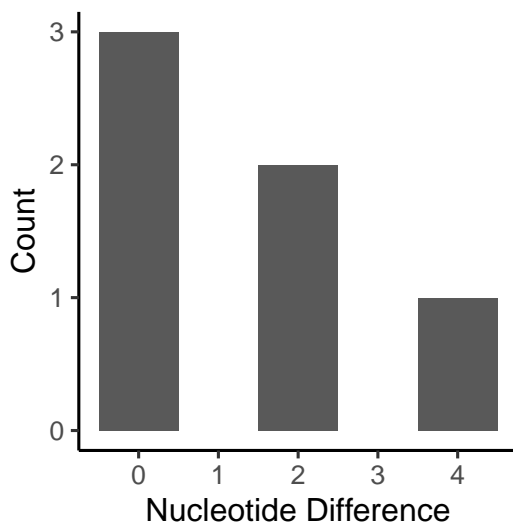
IGHV3-NL1*01

227 sequences assigned
No exact matches.



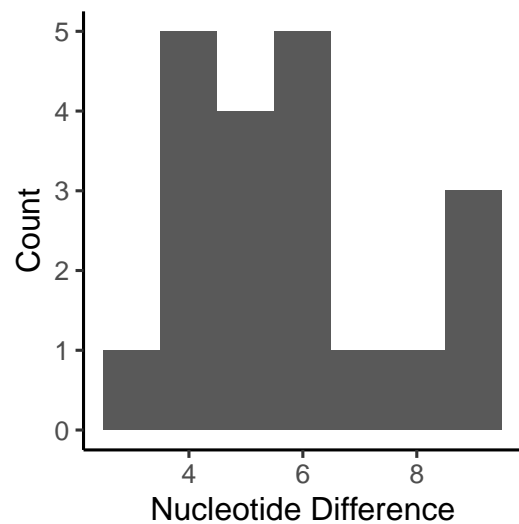
IGHV4-28*01_07

6 sequences assigned
3 (50%) exact matches, in which:
2 unique CDR3
2 unique J



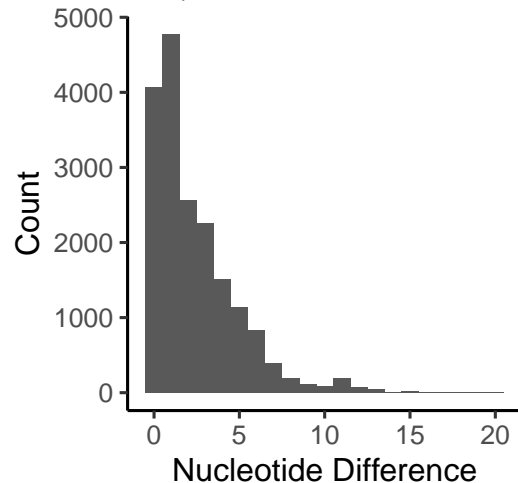
IGHV4-30-4*08

20 sequences assigned
No exact matches.



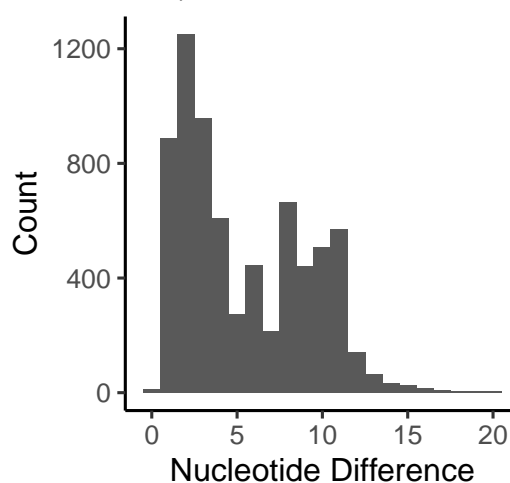
IGHV4-31*03_04

18292 sequences assigned
4073 (22.3%) exact matches, in which:
3394 unique CDR3
7 unique J



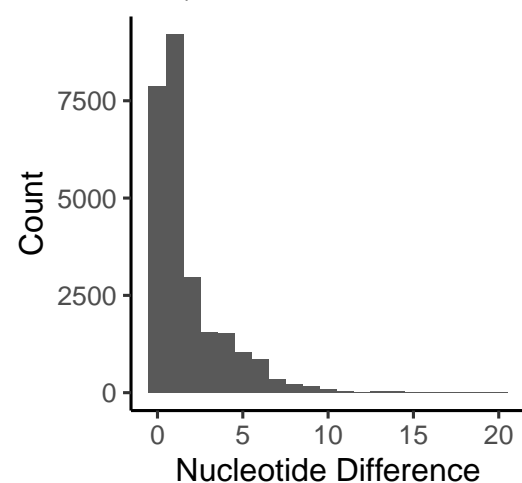
IGHV4-39*07

7167 sequences assigned
12 (0.2%) exact matches, in which:
12 unique CDR3
4 unique J



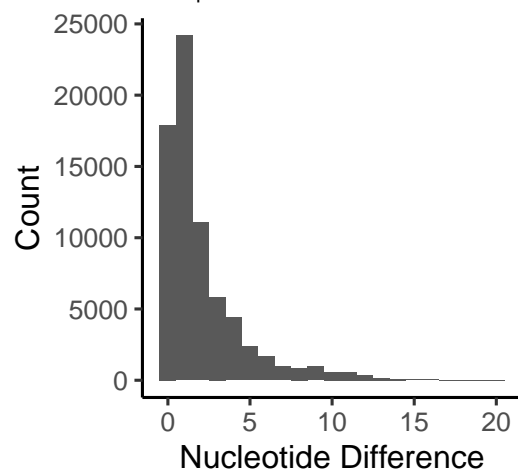
IGHV4-59*01_07

26098 sequences assigned
7876 (30.2%) exact matches, in which:
6439 unique CDR3
7 unique J



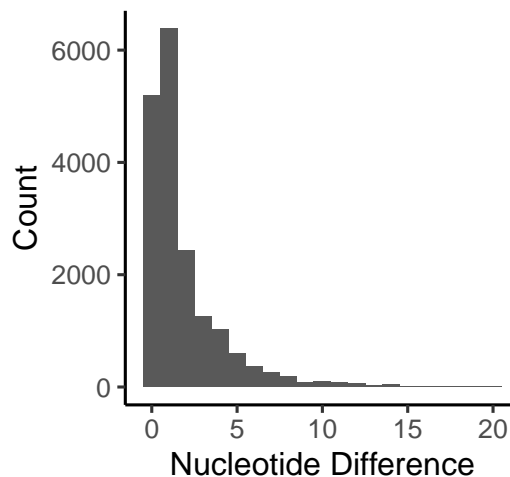
IGHV4-34*01_02

72387 sequences assigned
17925 (24.8%) exact matches, in which:
14134 unique CDR3
7 unique J



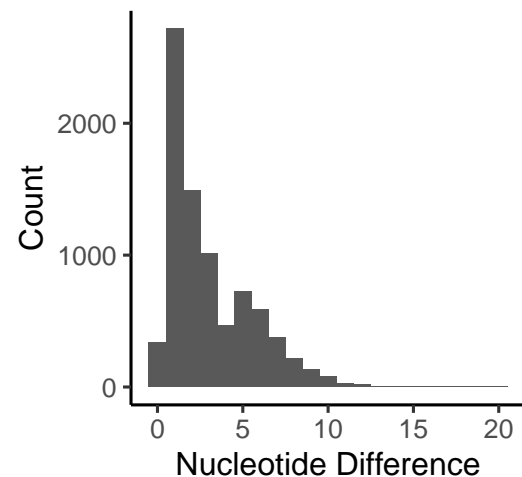
IGHV4-39*01_05

18140 sequences assigned
5187 (28.6%) exact matches, in which:
4100 unique CDR3
7 unique J



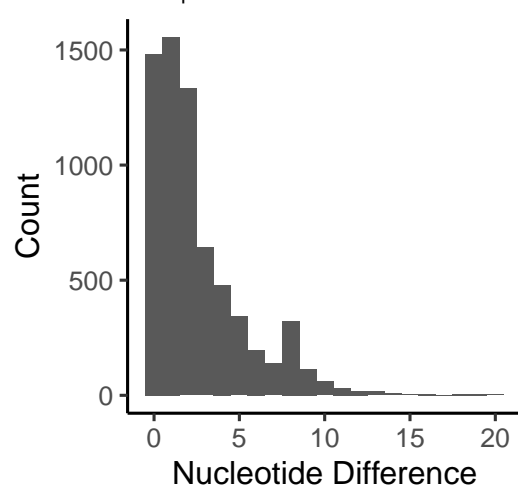
IGHV4-59*12

8274 sequences assigned
336 (4.1%) exact matches, in which:
329 unique CDR3
7 unique J



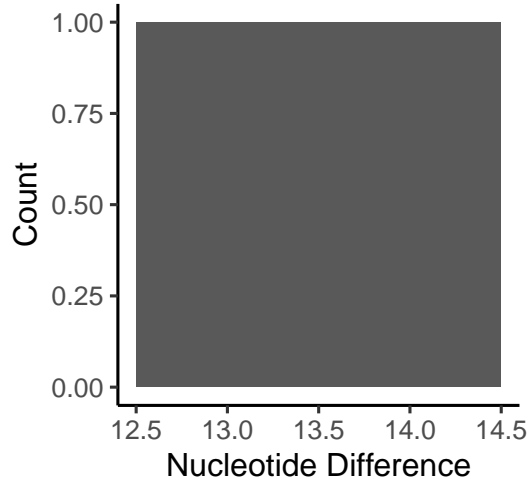
IGHV4-38-2*02_A70G

6776 sequences assigned
1483 (21.9%) exact matches, in which:
1234 unique CDR3
7 unique J



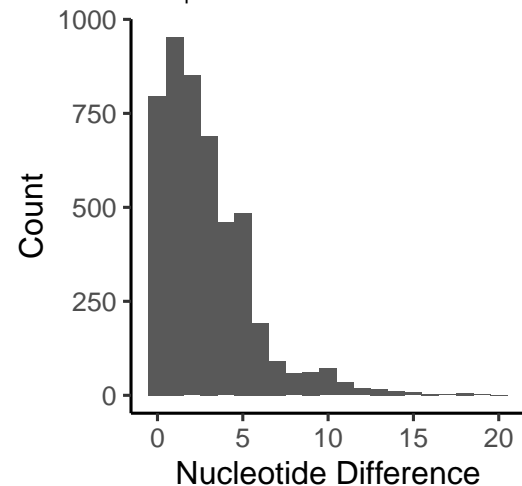
IGHV4-55*02_04_08

2 sequences assigned
No exact matches.



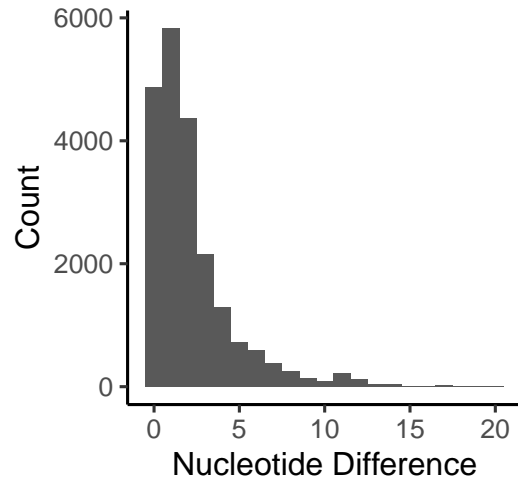
IGHV4-61*01

4817 sequences assigned
796 (16.5%) exact matches, in which:
707 unique CDR3
6 unique J



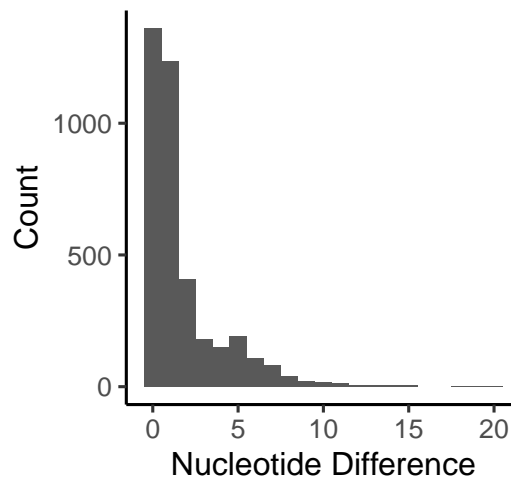
IGHV4-61*02

21235 sequences assigned
4870 (22.9%) exact matches, in which:
4085 unique CDR3
7 unique J



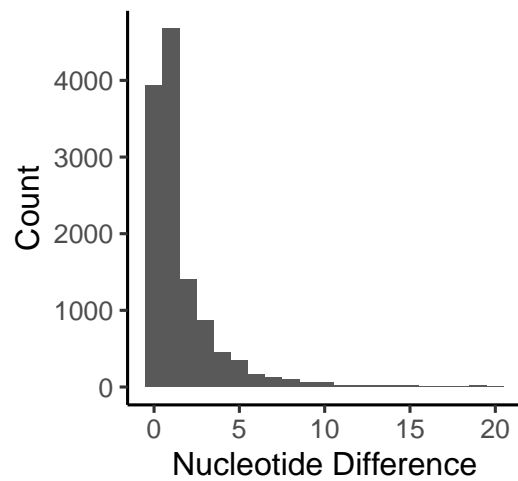
IGHV6-1*01_02

3834 sequences assigned
1360 (35.5%) exact matches, in which:
1111 unique CDR3
7 unique J



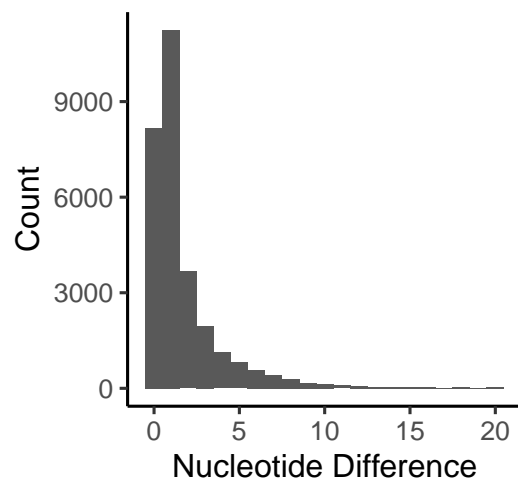
IGHV5-10-1*01_03

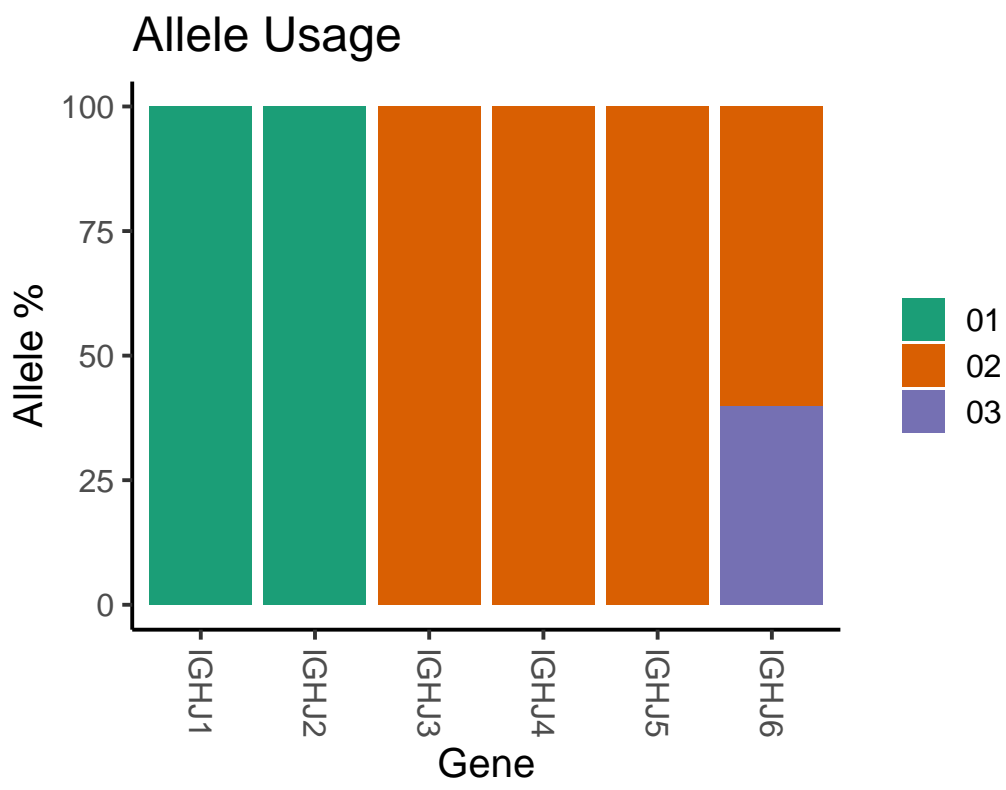
12358 sequences assigned
3933 (31.8%) exact matches, in which:
3129 unique CDR3
7 unique J



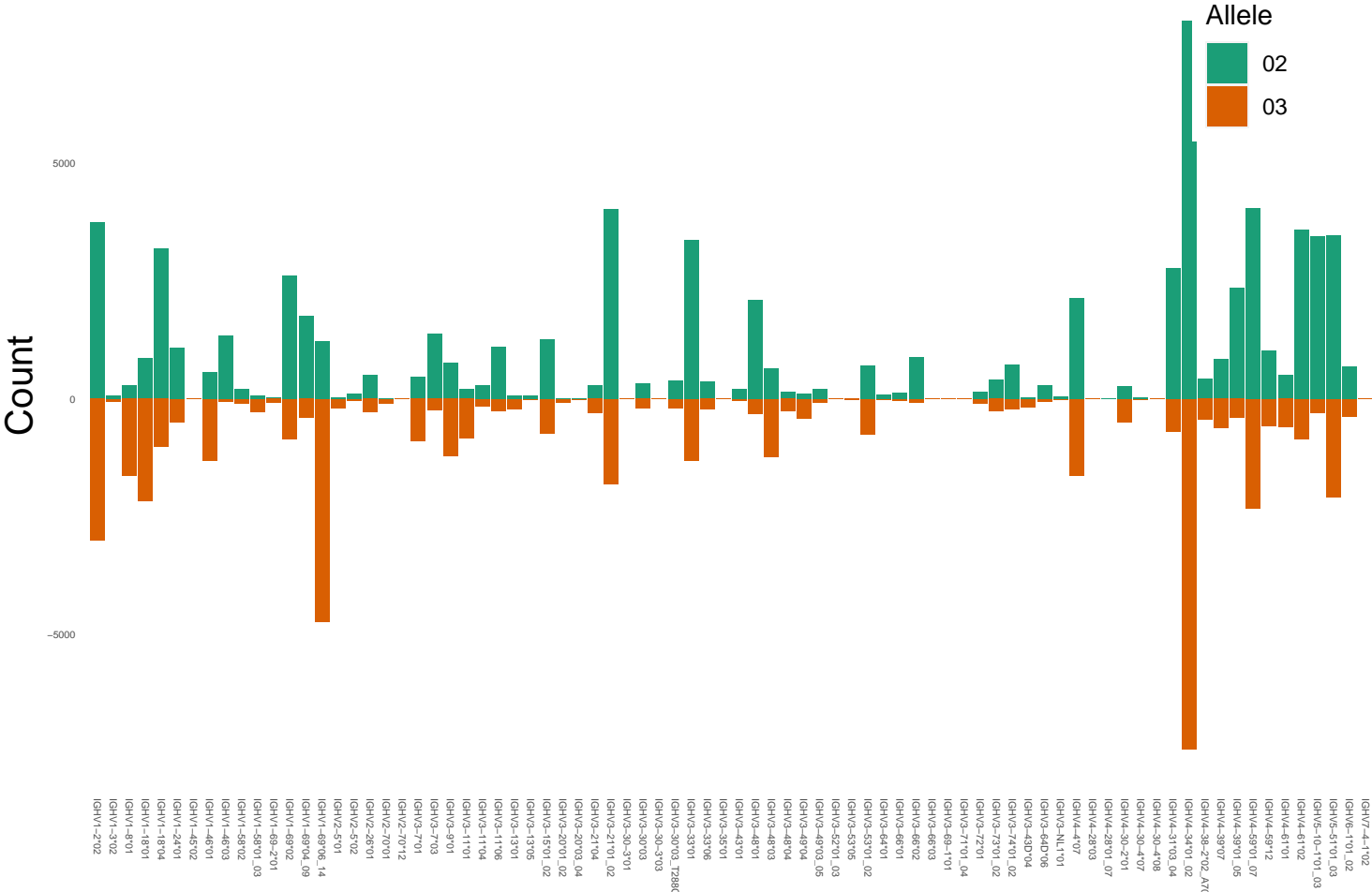
IGHV5-51*01_03

29087 sequences assigned
8170 (28.1%) exact matches, in which:
6144 unique CDR3
7 unique J





Sequence Count by IGHJ6 allele usage



Novel sequence(s)IGHV1-69*08_C191TIGHV3-11*06_T300CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-53*05_C300T are not listed in the genotype and will be ignored.