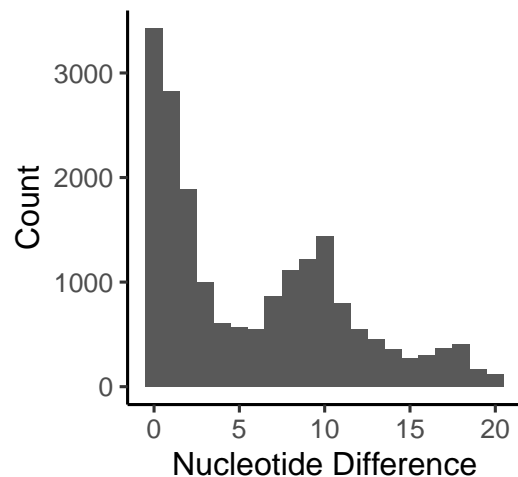


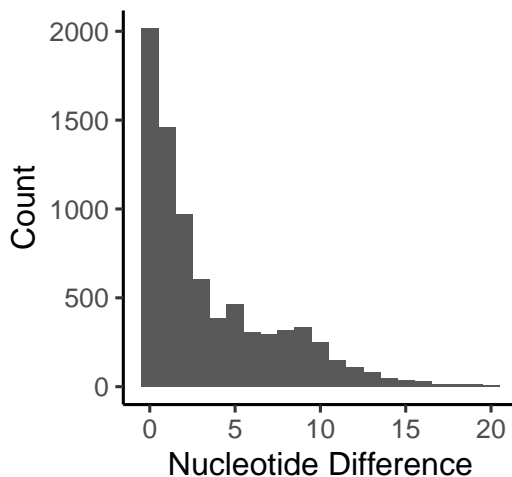
IGHV1-2*02

19950 sequences assigned
3426 (17.2%) exact matches, in which:
3100 unique CDR3
6 unique J



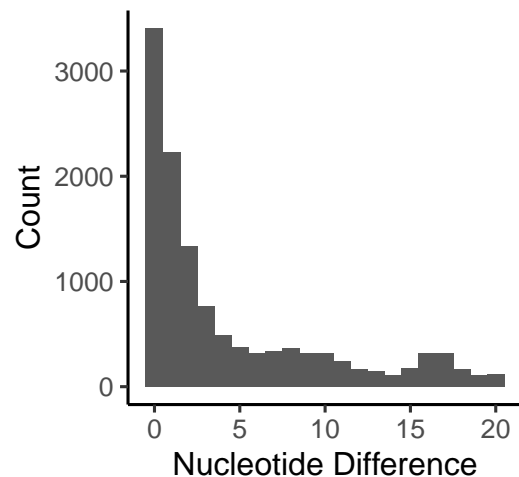
IGHV1-8*01

8005 sequences assigned
2016 (25.2%) exact matches, in which:
1866 unique CDR3
6 unique J



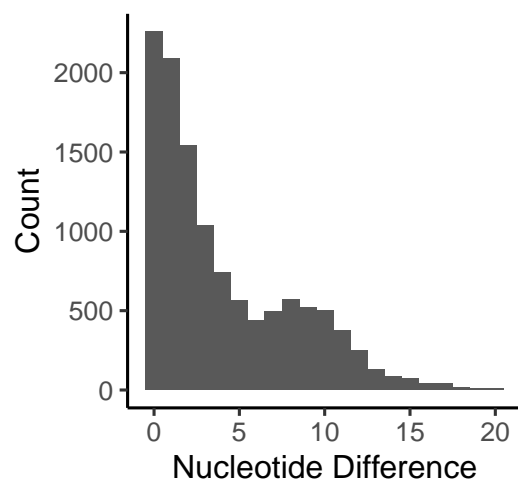
IGHV1-18*04

12866 sequences assigned
3405 (26.5%) exact matches, in which:
3133 unique CDR3
6 unique J



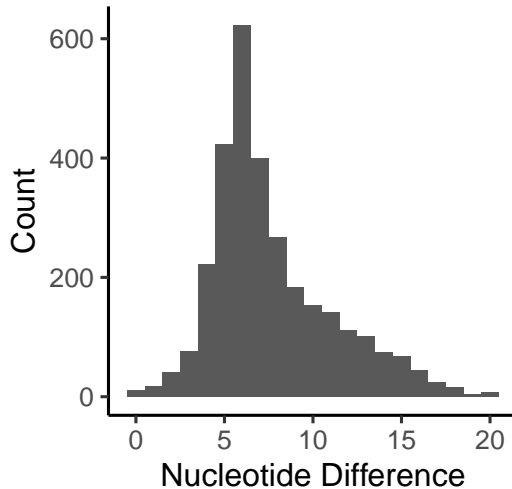
IGHV1-2*04

11794 sequences assigned
2258 (19.1%) exact matches, in which:
2013 unique CDR3
6 unique J



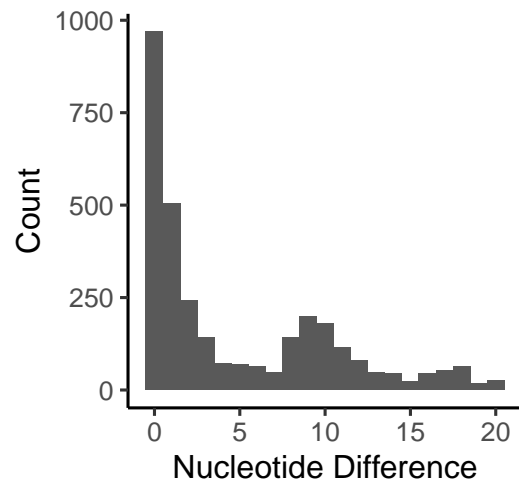
IGHV1-8*02

3036 sequences assigned
11 (0.4%) exact matches, in which:
11 unique CDR3
4 unique J



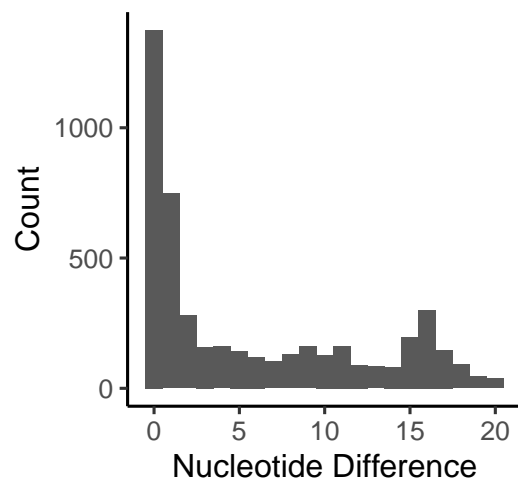
IGHV1-24*01

3254 sequences assigned
969 (29.8%) exact matches, in which:
906 unique CDR3
6 unique J



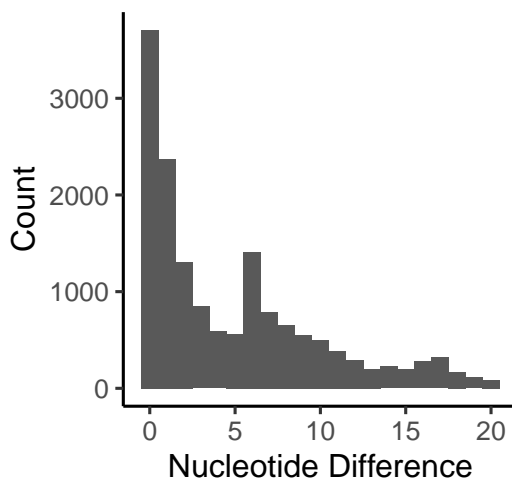
IGHV1-3*01_05

4910 sequences assigned
1375 (28%) exact matches, in which:
1237 unique CDR3
6 unique J



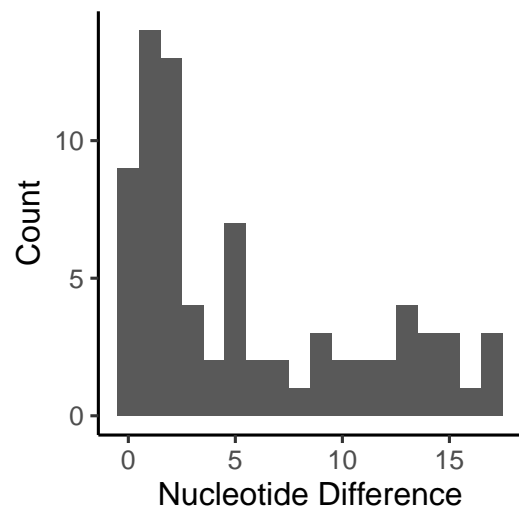
IGHV1-18*01

16548 sequences assigned
3706 (22.4%) exact matches, in which:
3379 unique CDR3
6 unique J



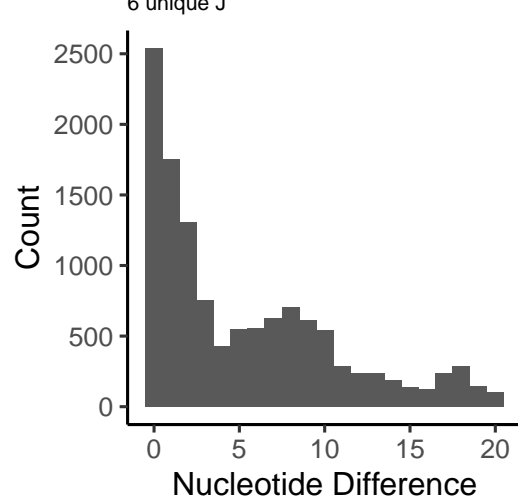
IGHV1-45*02

77 sequences assigned
9 (11.7%) exact matches, in which:
8 unique CDR3
3 unique J



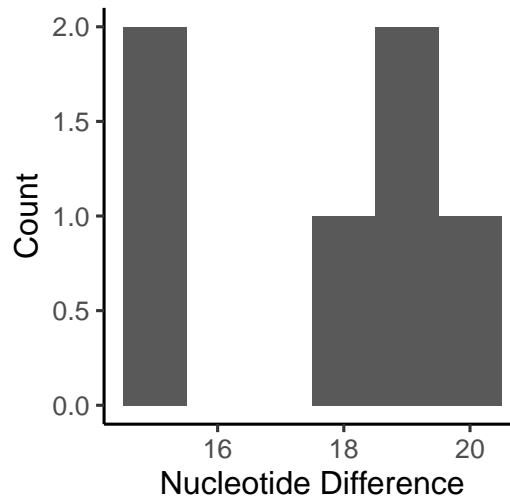
IGHV1-46*01

13819 sequences assigned
2538 (18.4%) exact matches, in which:
2349 unique CDR3
6 unique J



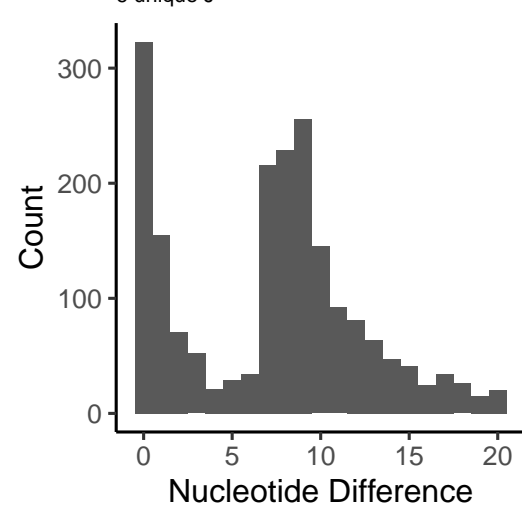
IGHV1-69-2*01

9 sequences assigned
No exact matches.



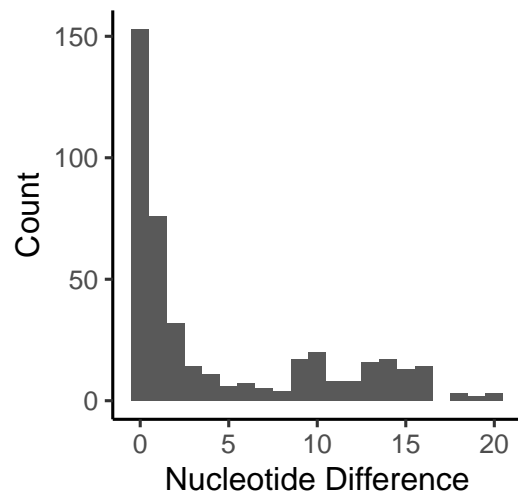
IGHV1-69*06_14

2544 sequences assigned
323 (12.7%) exact matches, in which:
316 unique CDR3
6 unique J



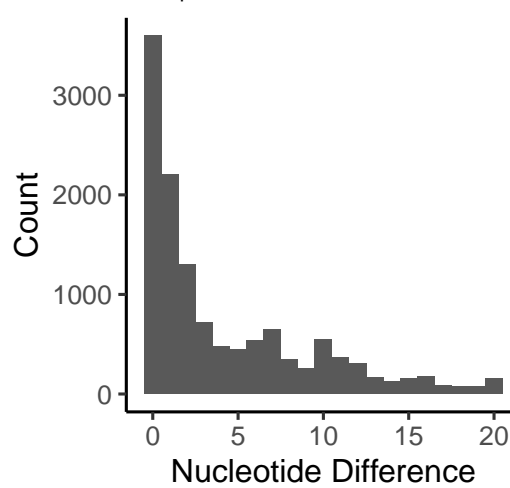
IGHV1-58*02

433 sequences assigned
153 (35.3%) exact matches, in which:
141 unique CDR3
5 unique J



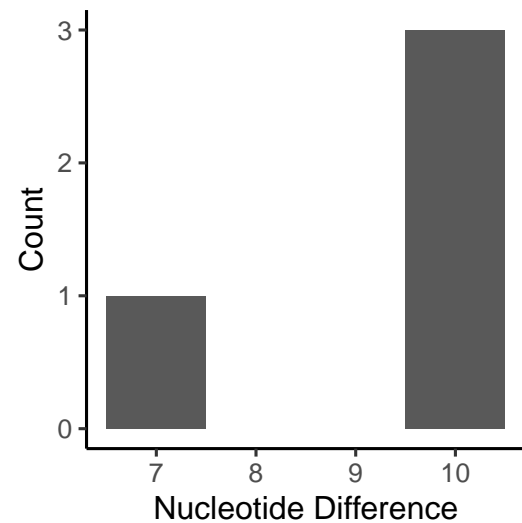
IGHV1-69*01_12_13

14163 sequences assigned
3598 (25.4%) exact matches, in which:
3366 unique CDR3
6 unique J



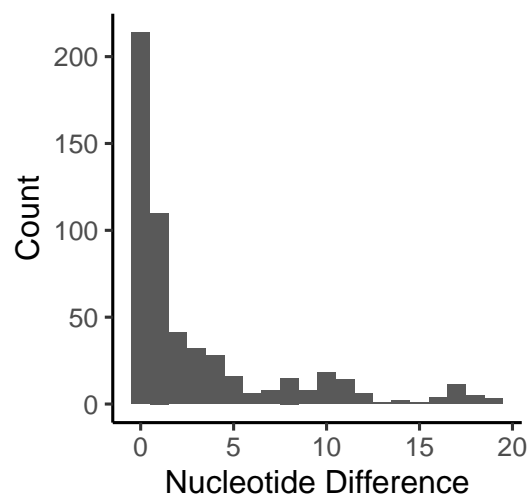
IGHV1-NL1*01

4 sequences assigned
No exact matches.



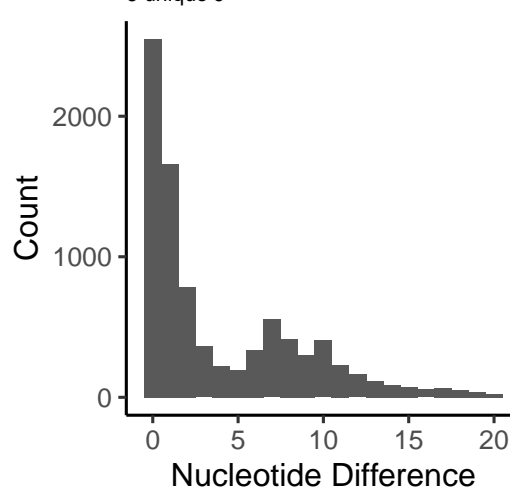
IGHV1-58*01_03

544 sequences assigned
214 (39.3%) exact matches, in which:
202 unique CDR3
6 unique J



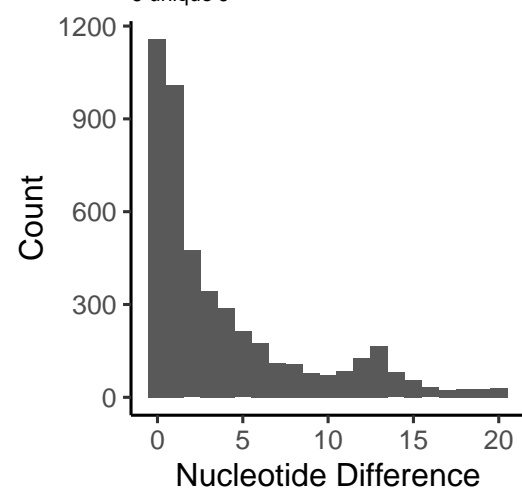
IGHV1-69*04_09

9693 sequences assigned
2549 (26.3%) exact matches, in which:
2418 unique CDR3
6 unique J



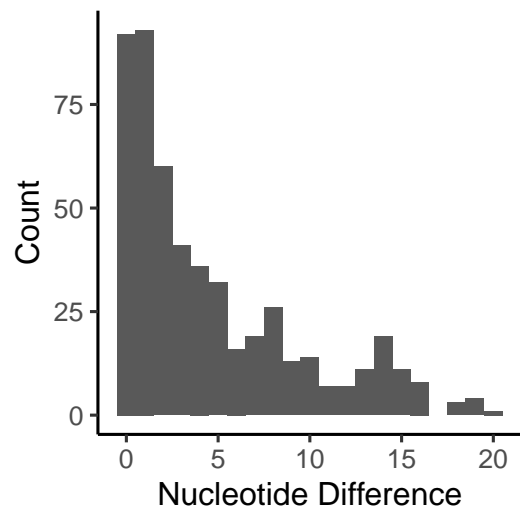
IGHV2-5*02

4940 sequences assigned
1158 (23.4%) exact matches, in which:
1034 unique CDR3
6 unique J



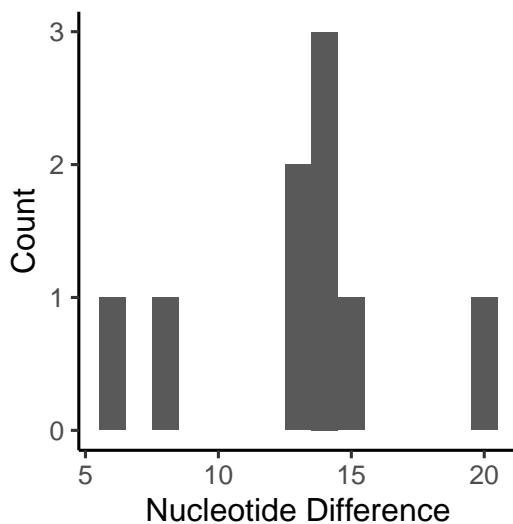
IGHV2-26*01

1099 sequences assigned
92 (8.4%) exact matches, in which:
86 unique CDR3
6 unique J



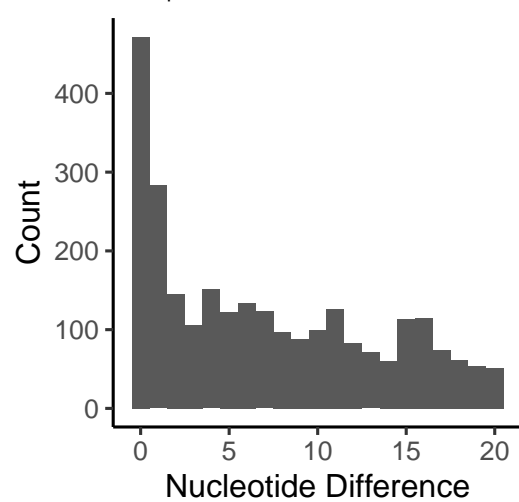
IGHV2-70D*04

9 sequences assigned
No exact matches.



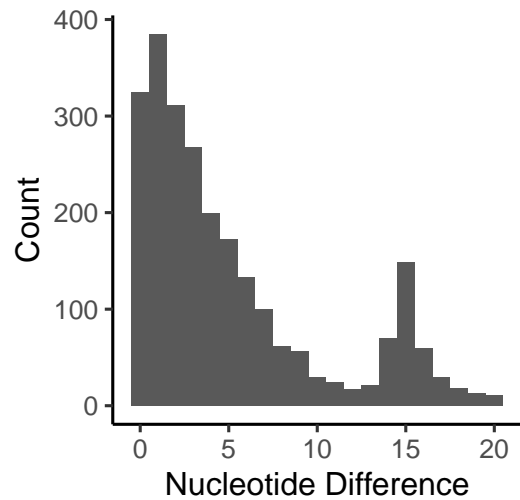
IGHV3-7*04

3459 sequences assigned
472 (13.6%) exact matches, in which:
354 unique CDR3
6 unique J



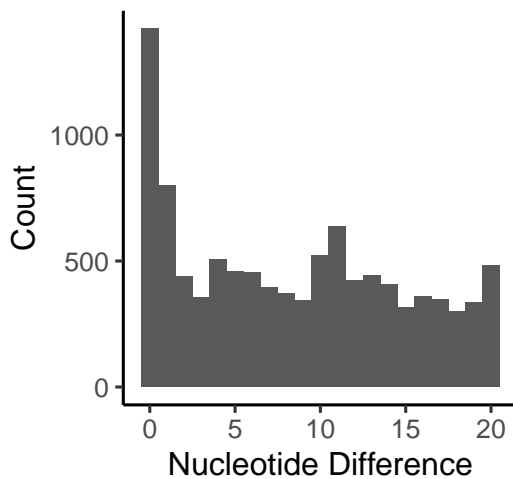
IGHV2-70*01

2481 sequences assigned
325 (13.1%) exact matches, in which:
293 unique CDR3
5 unique J



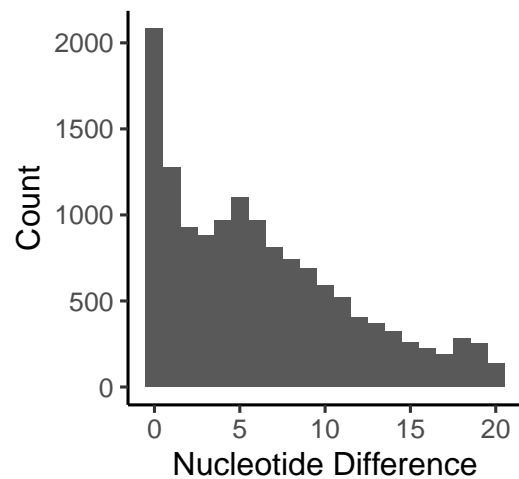
IGHV3-7*01

11382 sequences assigned
1422 (12.5%) exact matches, in which:
1121 unique CDR3
6 unique J



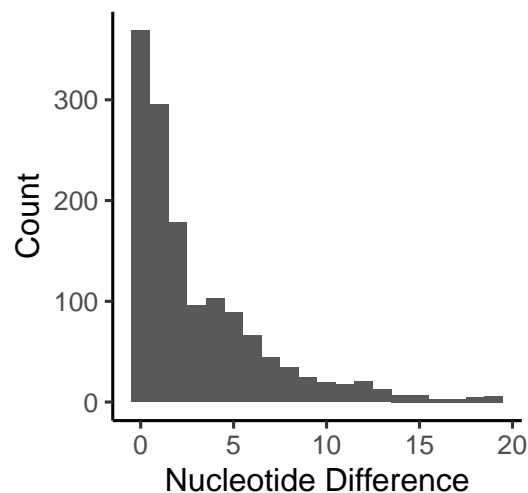
IGHV3-9*01

14533 sequences assigned
2082 (14.3%) exact matches, in which:
1502 unique CDR3
6 unique J



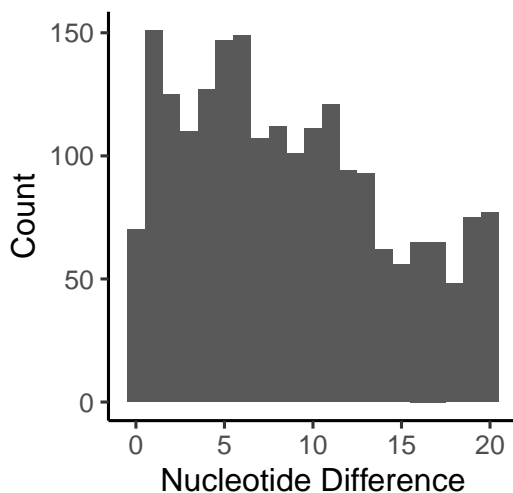
IGHV2-70*11_15

1418 sequences assigned
369 (26%) exact matches, in which:
318 unique CDR3
6 unique J



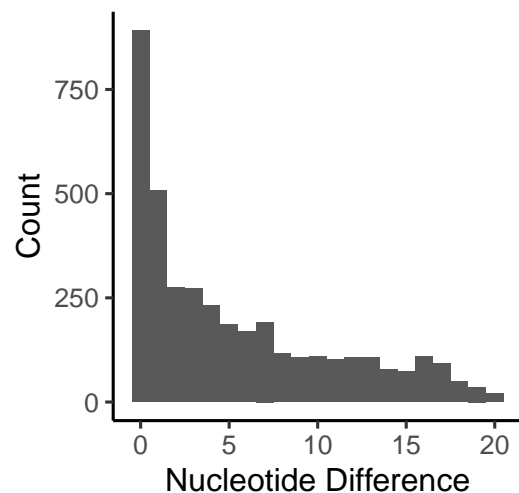
IGHV3-7*03

2897 sequences assigned
70 (2.4%) exact matches, in which:
67 unique CDR3
6 unique J



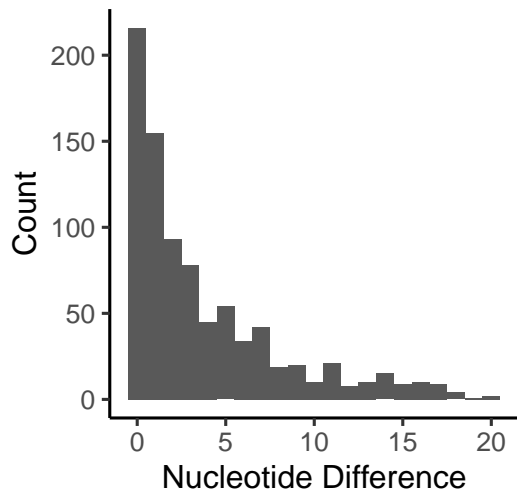
IGHV3-11*01

4038 sequences assigned
892 (22.1%) exact matches, in which:
707 unique CDR3
6 unique J



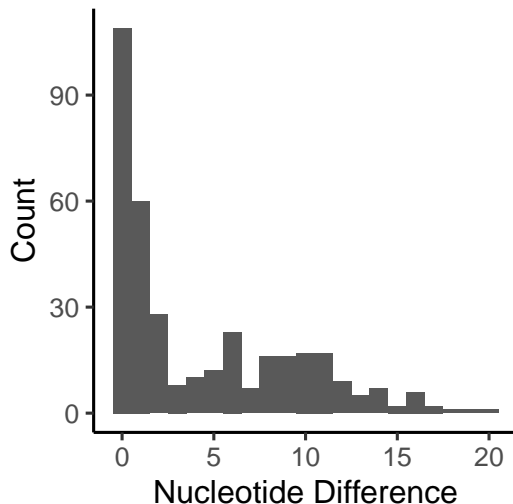
IGHV3-11*04

861 sequences assigned
216 (25.1%) exact matches, in which:
213 unique CDR3
6 unique J



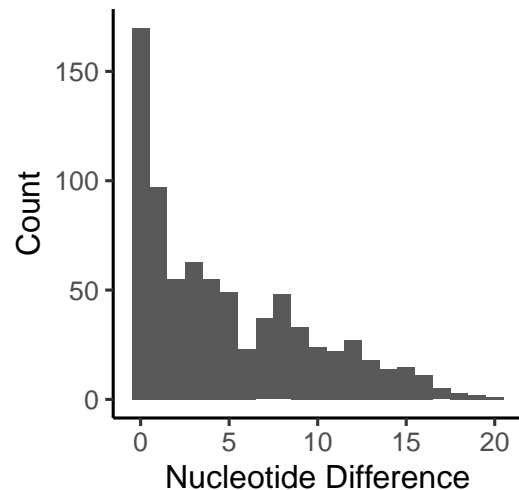
IGHV3-13*05

359 sequences assigned
109 (30.4%) exact matches, in which:
80 unique CDR3
5 unique J



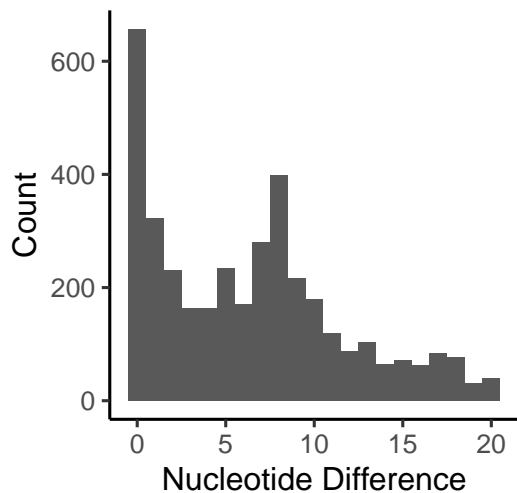
IGHV3-20*01_02

781 sequences assigned
170 (21.8%) exact matches, in which:
130 unique CDR3
6 unique J



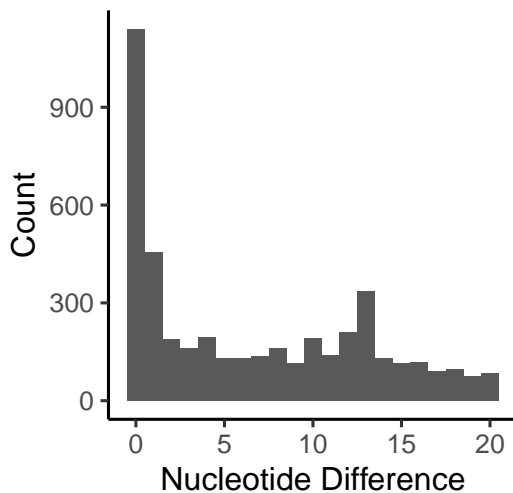
IGHV3-11*06

4056 sequences assigned
657 (16.2%) exact matches, in which:
537 unique CDR3
6 unique J



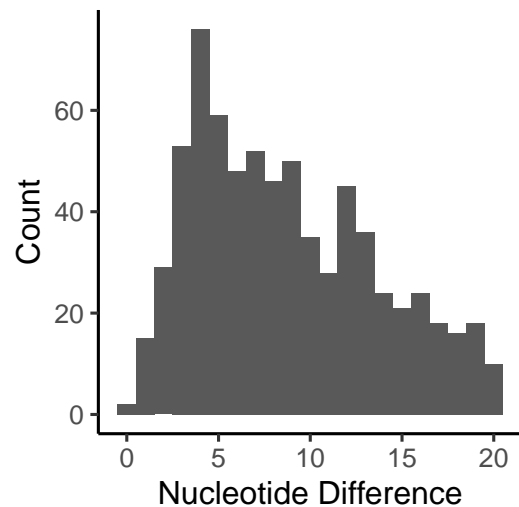
IGHV3-15*01_02

6110 sequences assigned
1140 (18.7%) exact matches, in which:
876 unique CDR3
6 unique J



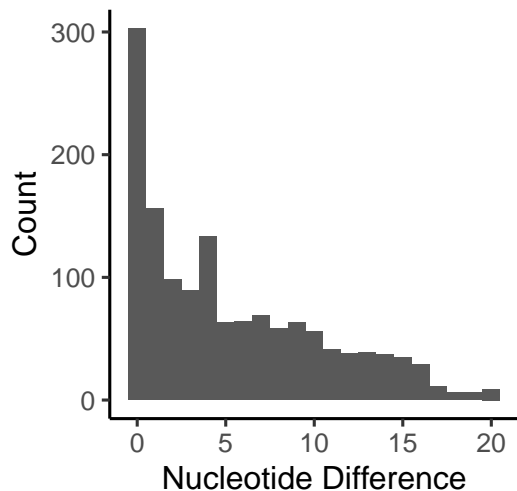
IGHV3-20*03_04

744 sequences assigned
2 (0.3%) exact matches, in which:
2 unique CDR3
2 unique J



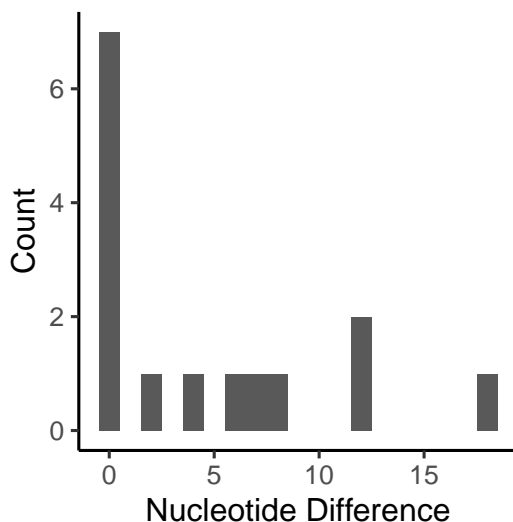
IGHV3-13*01

1437 sequences assigned
303 (21.1%) exact matches, in which:
222 unique CDR3
6 unique J



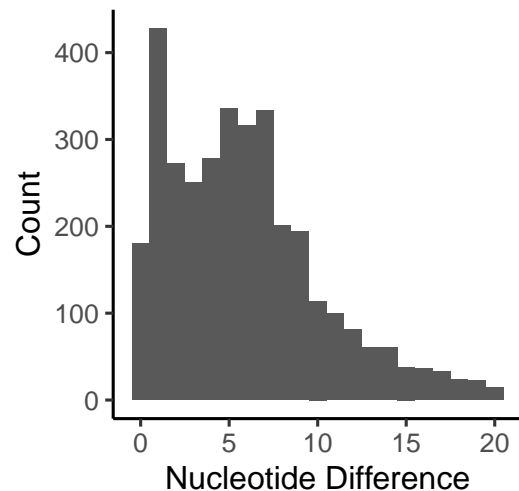
IGHV3-19*01

15 sequences assigned
7 (46.7%) exact matches, in which:
5 unique CDR3
3 unique J



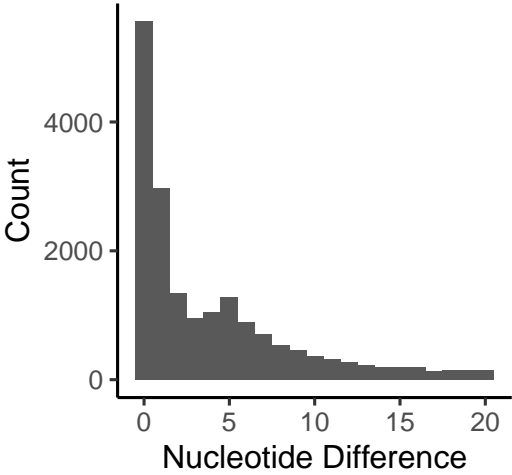
IGHV3-21*04

3550 sequences assigned
180 (5.1%) exact matches, in which:
177 unique CDR3
6 unique J



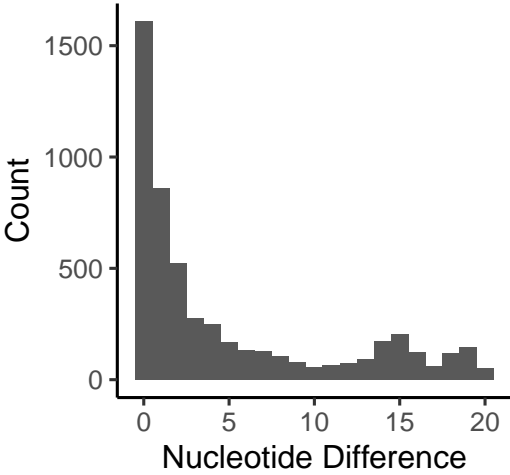
IGHV3-21*01_02

20119 sequences assigned
5561 (27.6%) exact matches, in which:
4129 unique CDR3
6 unique J



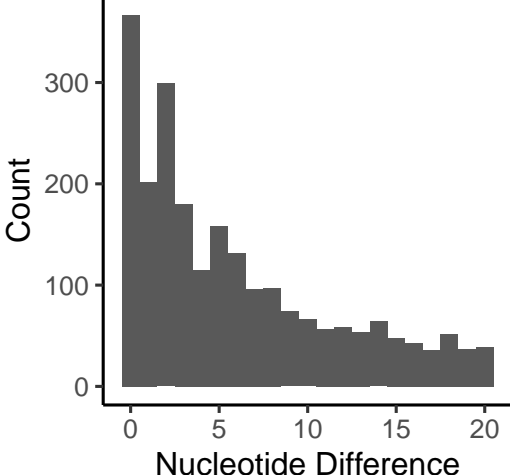
IGHV3-33*01

5596 sequences assigned
1609 (28.8%) exact matches, in which:
1314 unique CDR3
6 unique J



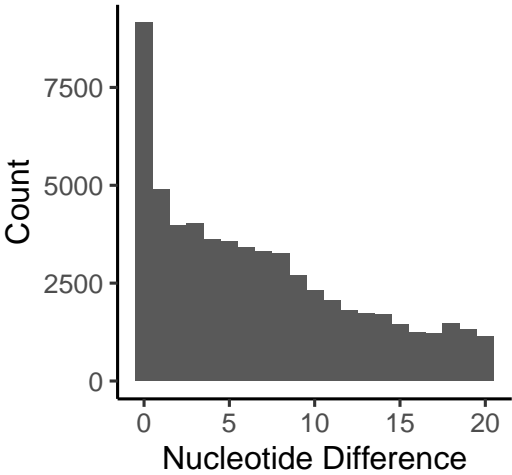
IGHV3-33*08

2543 sequences assigned
367 (14.4%) exact matches, in which:
345 unique CDR3
6 unique J



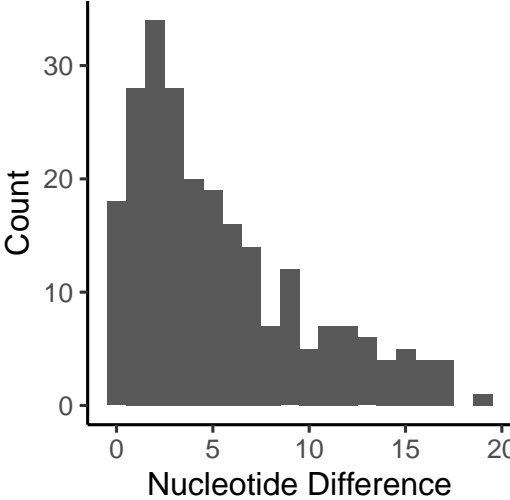
IGHV3-23*01_04

70596 sequences assigned
9153 (13%) exact matches, in which:
6345 unique CDR3
6 unique J



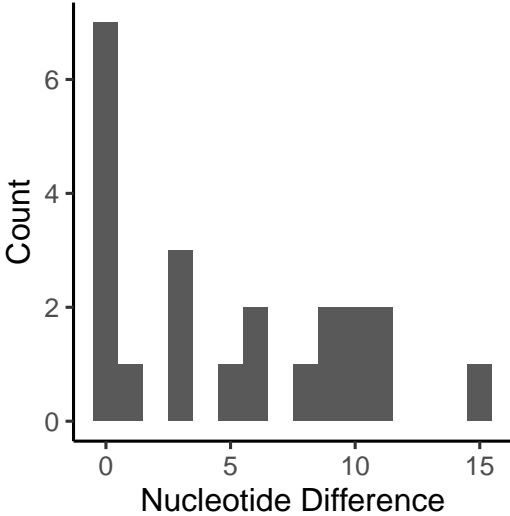
IGHV3-33*05

248 sequences assigned
18 (7.3%) exact matches, in which:
18 unique CDR3
4 unique J



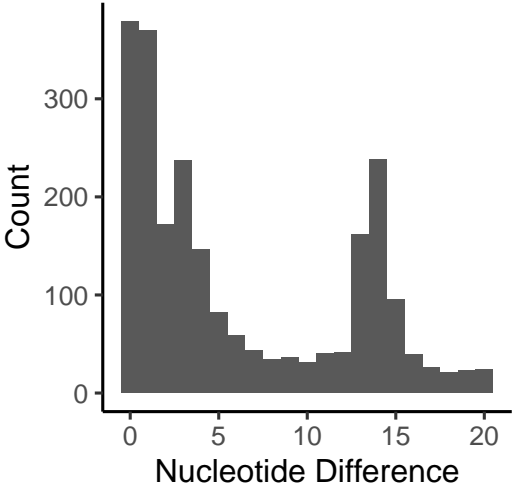
IGHV3-35*01

22 sequences assigned
7 (31.8%) exact matches, in which:
6 unique CDR3
3 unique J



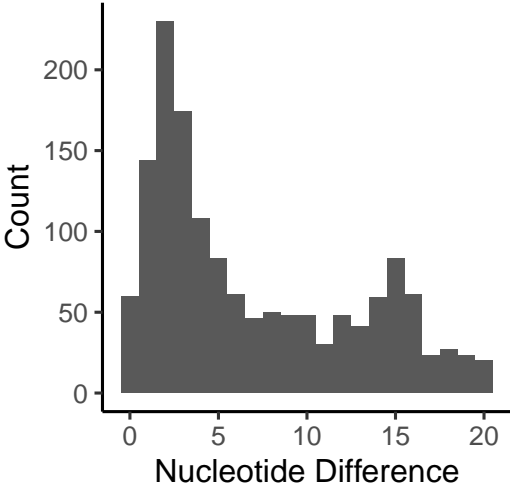
IGHV3-30*03

2492 sequences assigned
379 (15.2%) exact matches, in which:
361 unique CDR3
6 unique J



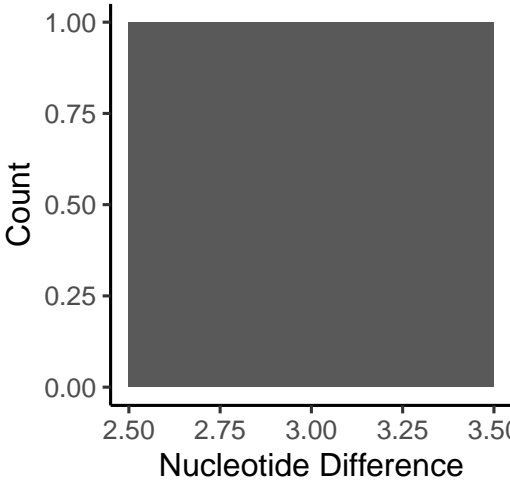
IGHV3-33*06

1547 sequences assigned
60 (3.9%) exact matches, in which:
58 unique CDR3
6 unique J



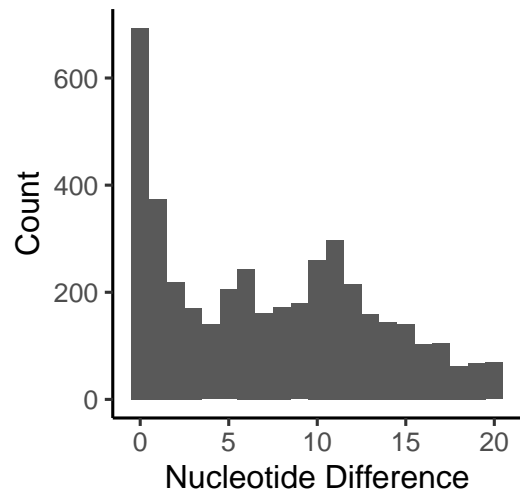
IGHV3-38-3*01

1 sequences assigned
No exact matches.



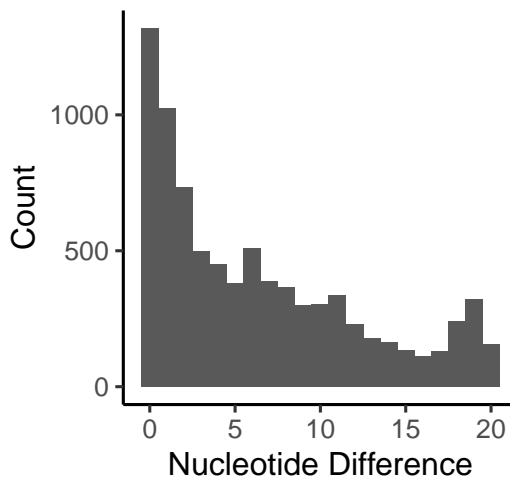
IGHV3-43*02

4832 sequences assigned
694 (14.4%) exact matches, in which:
513 unique CDR3
6 unique J



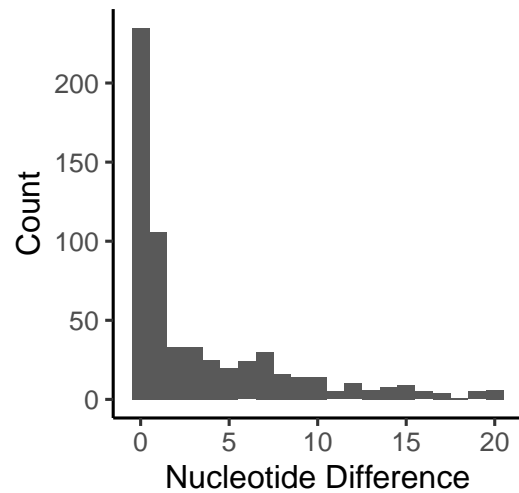
IGHV3-48*03

9413 sequences assigned
1318 (14%) exact matches, in which:
991 unique CDR3
6 unique J



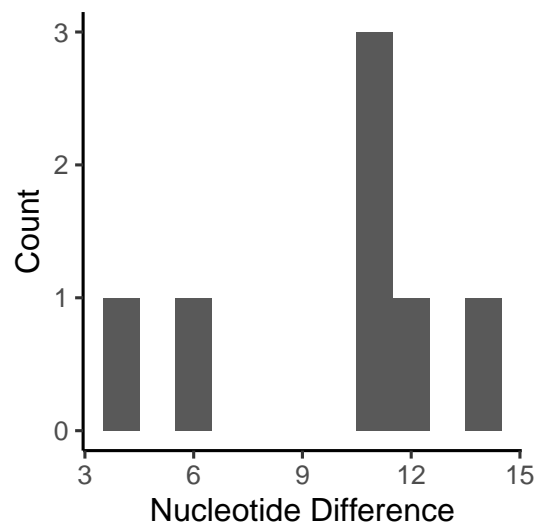
IGHV3-49*03_05

632 sequences assigned
235 (37.2%) exact matches, in which:
182 unique CDR3
6 unique J



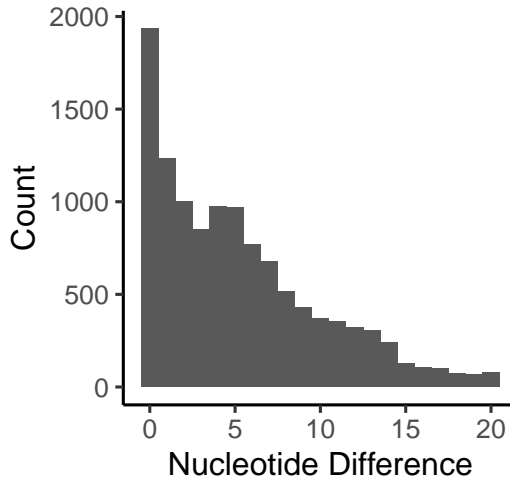
IGHV3-47*01

7 sequences assigned
No exact matches.



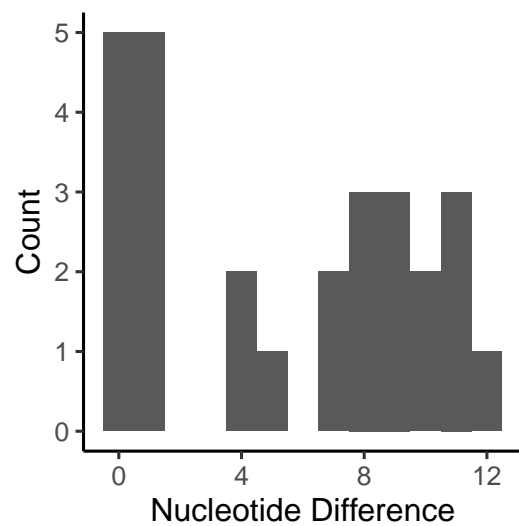
IGHV3-48*04

11948 sequences assigned
1934 (16.2%) exact matches, in which:
1529 unique CDR3
6 unique J



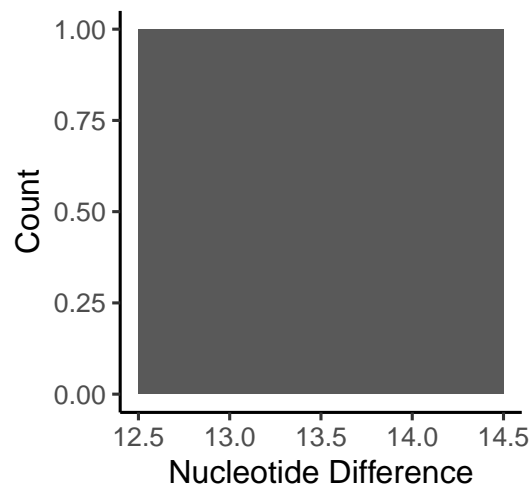
IGHV3-52*01_03

27 sequences assigned
5 (18.5%) exact matches, in which:
4 unique CDR3
2 unique J



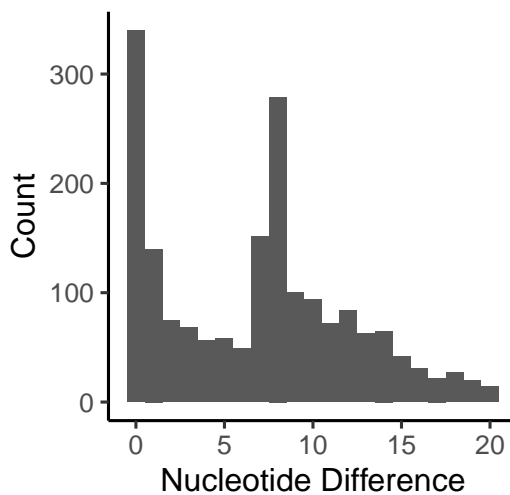
IGHV3-47*02

2 sequences assigned
No exact matches.



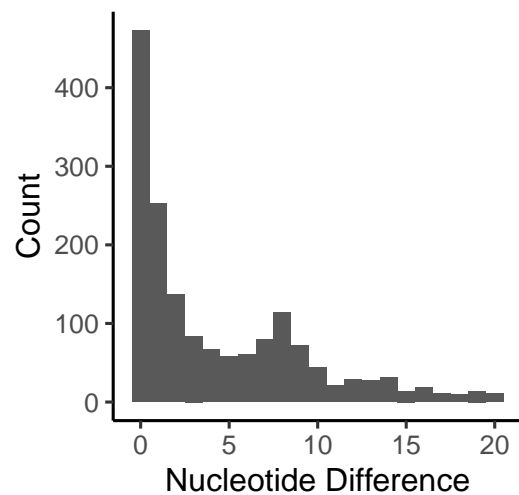
IGHV3-49*04

1947 sequences assigned
340 (17.5%) exact matches, in which:
263 unique CDR3
6 unique J



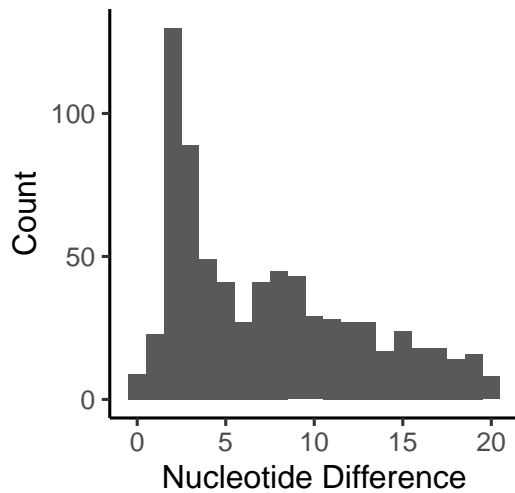
IGHV3-53*04

1684 sequences assigned
473 (28.1%) exact matches, in which:
361 unique CDR3
6 unique J



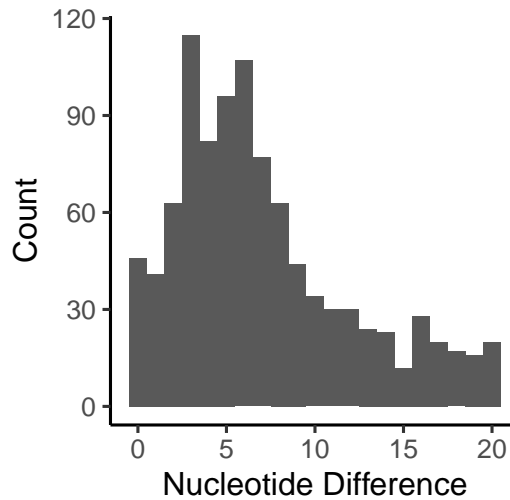
IGHV3–53*05

810 sequences assigned
9 (1.1%) exact matches, in which:
9 unique CDR3
4 unique J



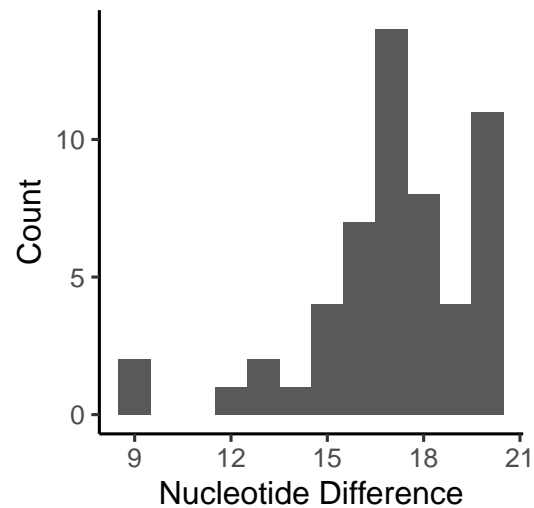
IGHV3–64*04

1071 sequences assigned
46 (4.3%) exact matches, in which:
46 unique CDR3
5 unique J



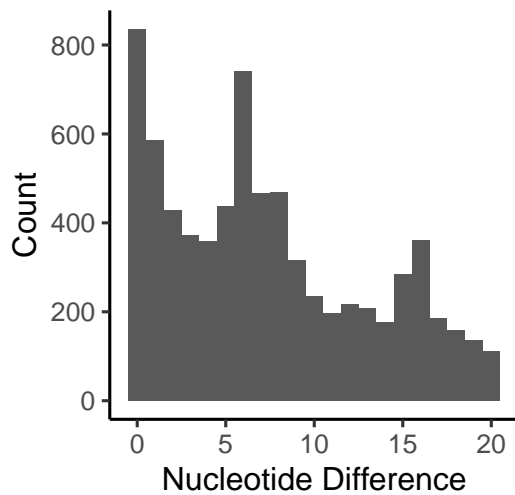
IGHV3–69–1*02

94 sequences assigned
No exact matches.



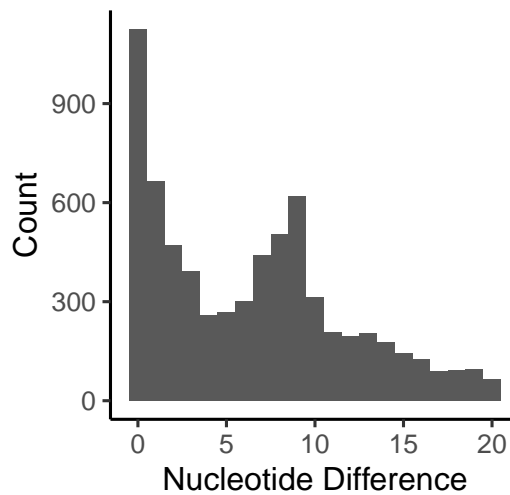
IGHV3–53*01_02

9299 sequences assigned
836 (9%) exact matches, in which:
649 unique CDR3
6 unique J



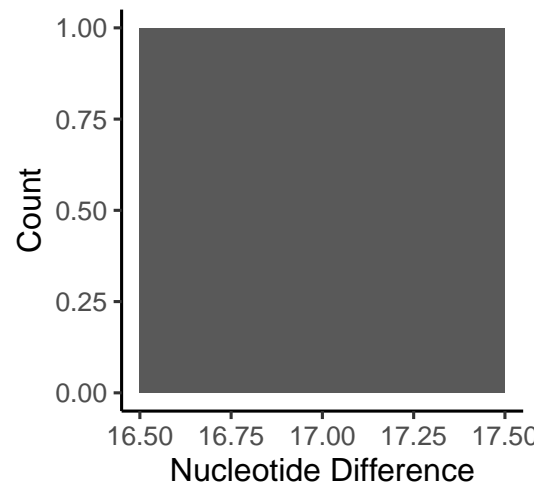
IGHV3–66*01

7763 sequences assigned
1126 (14.5%) exact matches, in which:
857 unique CDR3
6 unique J



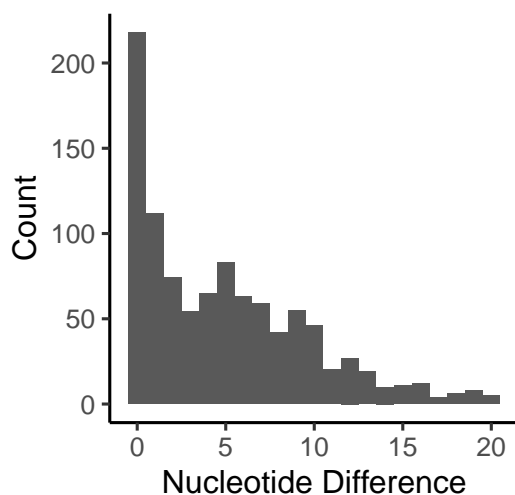
IGHV3–71*01_04

3 sequences assigned
No exact matches.



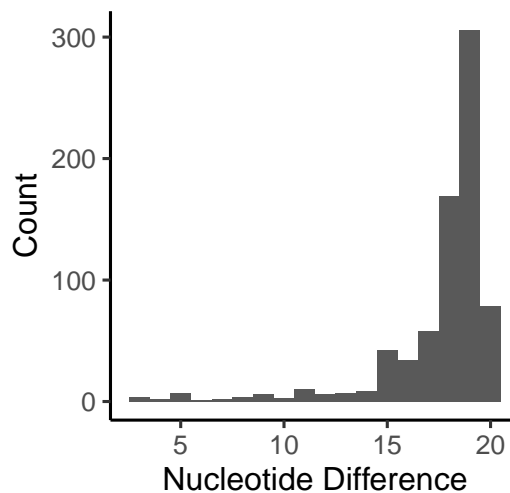
IGHV3–64*01

1662 sequences assigned
218 (13.1%) exact matches, in which:
155 unique CDR3
6 unique J



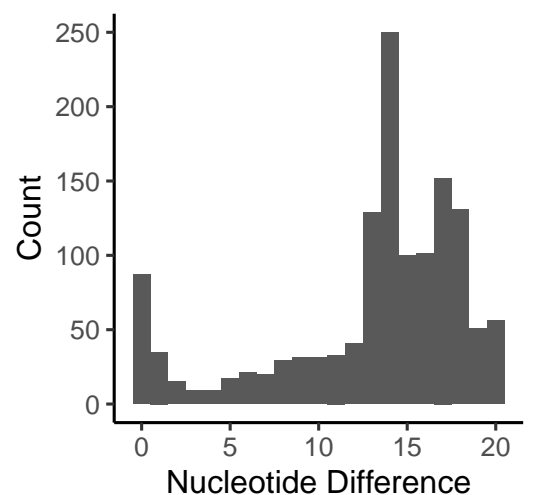
IGHV3–69–1*01

897 sequences assigned
No exact matches.



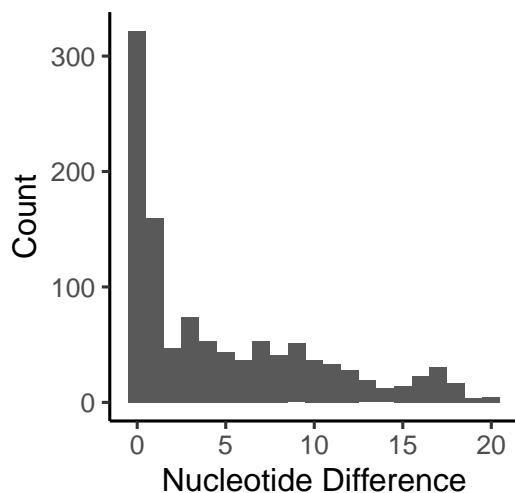
IGHV3–72*01

1962 sequences assigned
87 (4.4%) exact matches, in which:
65 unique CDR3
6 unique J



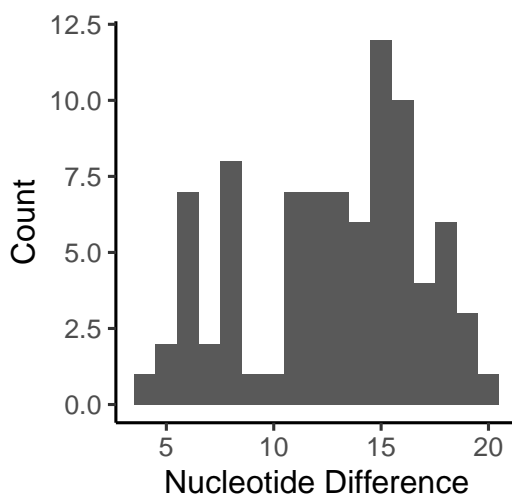
IGHV3-73*01_02

1169 sequences assigned
322 (27.5%) exact matches, in which:
253 unique CDR3
6 unique J



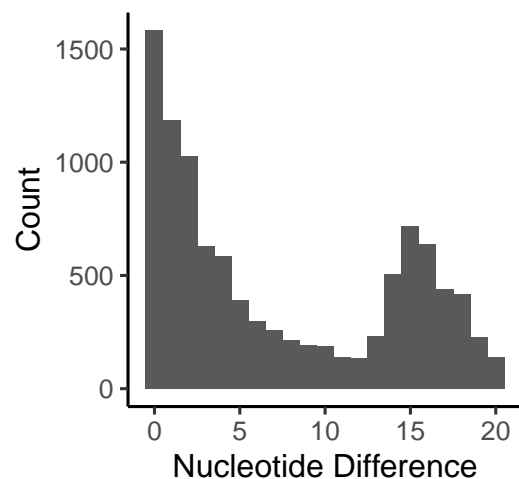
IGHV3-43D*04

93 sequences assigned
No exact matches.



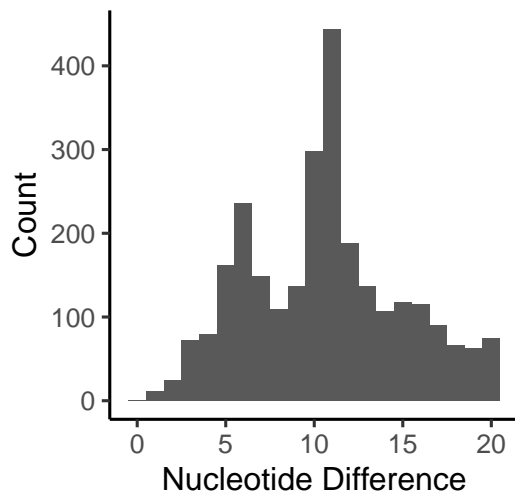
IGHV4-4*07

15020 sequences assigned
1582 (10.5%) exact matches, in which:
1473 unique CDR3
6 unique J



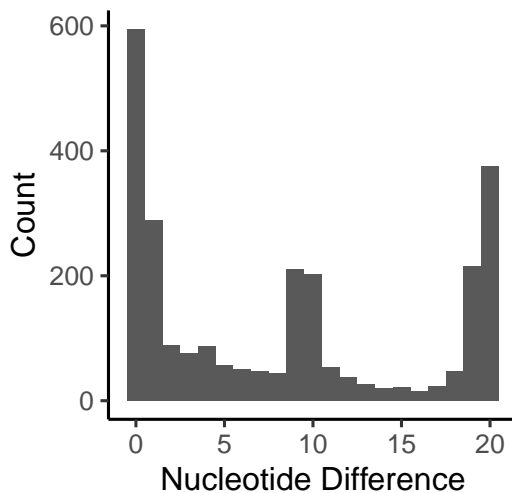
IGHV3-74*03

3081 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
1 unique J



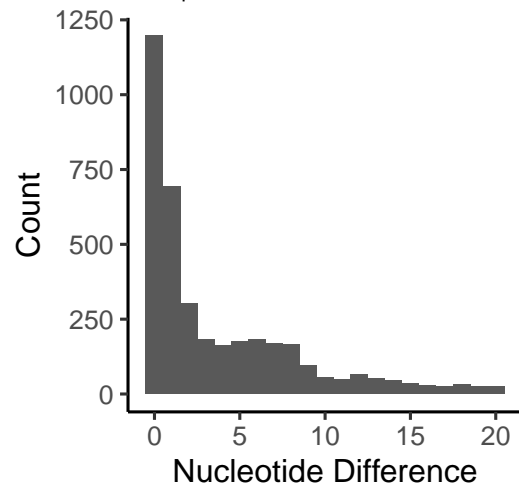
IGHV3-64D*09

3107 sequences assigned
595 (19.2%) exact matches, in which:
419 unique CDR3
6 unique J



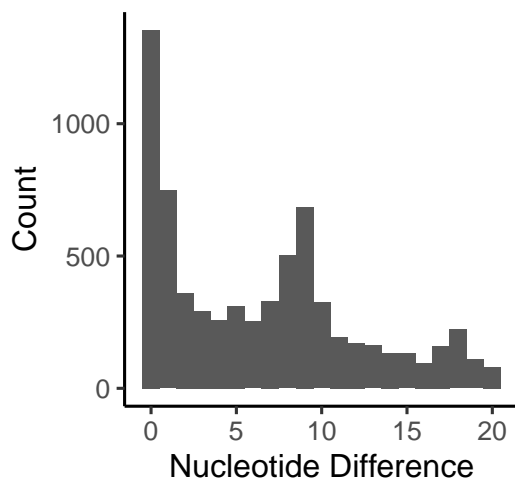
IGHV4-4*02_03

5285 sequences assigned
1197 (22.6%) exact matches, in which:
1072 unique CDR3
6 unique J



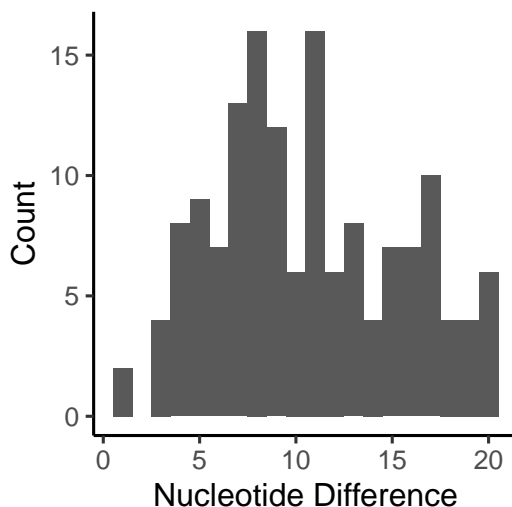
IGHV3-74*01_02

7536 sequences assigned
1354 (18%) exact matches, in which:
1013 unique CDR3
6 unique J



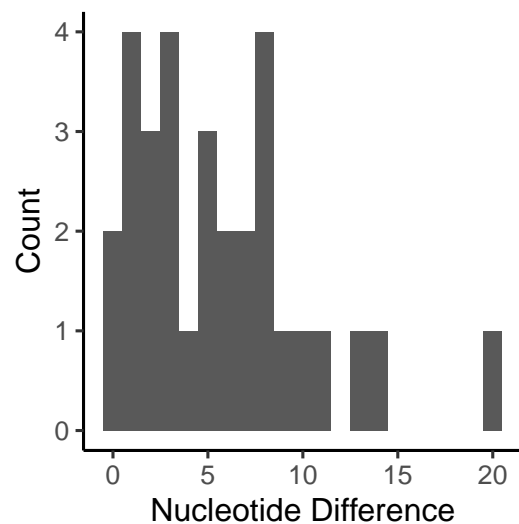
IGHV3-NL1*01

176 sequences assigned
No exact matches.



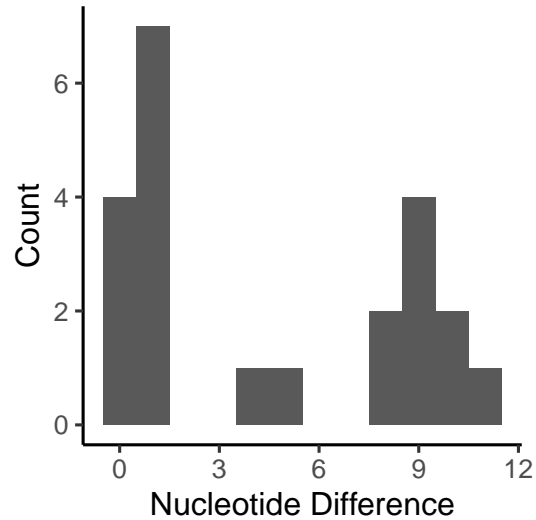
IGHV4-28*03

34 sequences assigned
2 (5.9%) exact matches, in which:
2 unique CDR3
1 unique J



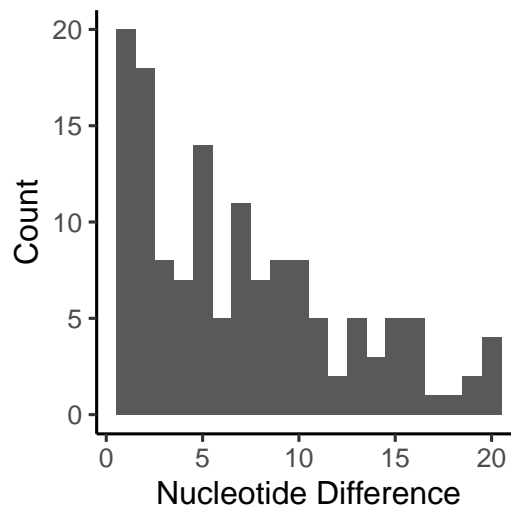
IGHV4-28*01_07

23 sequences assigned
4 (17.4%) exact matches, in which:
3 unique CDR3
2 unique J



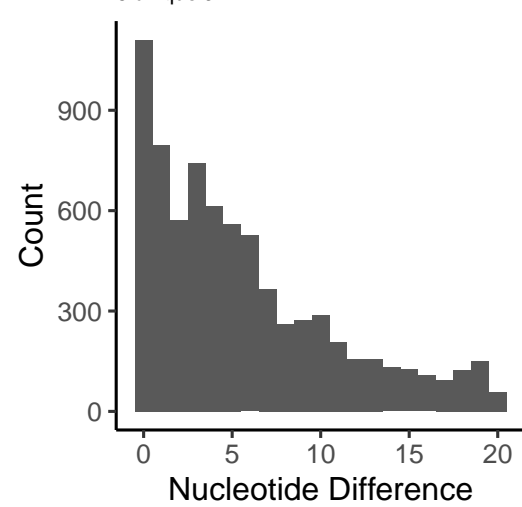
IGHV4-30-2*03

185 sequences assigned
No exact matches.



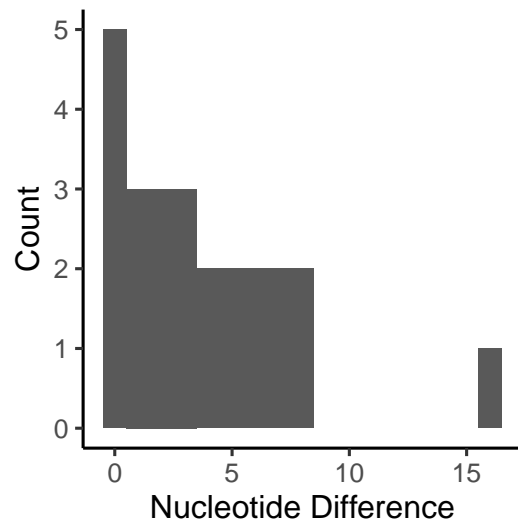
IGHV4-31*02

8419 sequences assigned
1111 (13.2%) exact matches, in which:
1032 unique CDR3
6 unique J



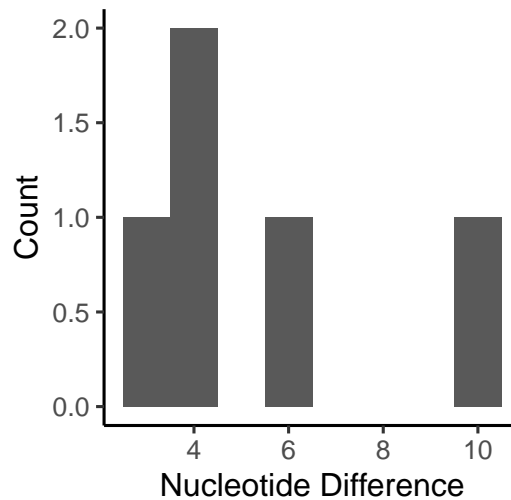
IGHV4-28*02_05

27 sequences assigned
5 (18.5%) exact matches, in which:
4 unique CDR3
4 unique J



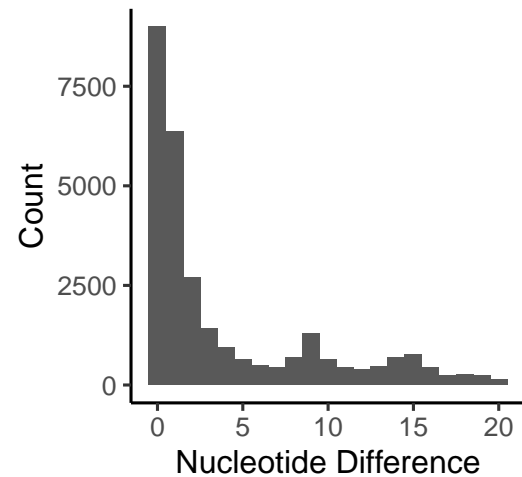
IGHV4-30-2*04

5 sequences assigned
No exact matches.



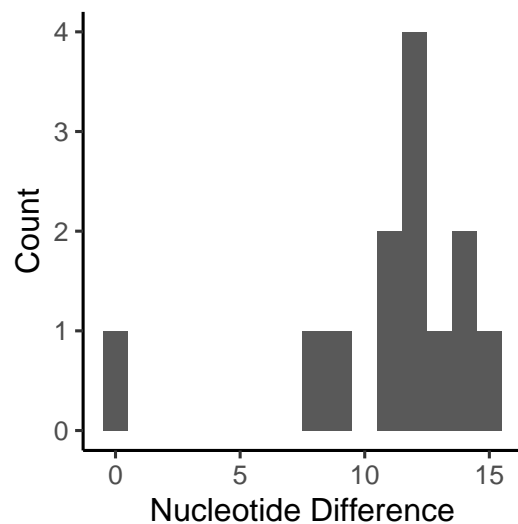
IGHV4-34*01_02

30124 sequences assigned
8994 (29.9%) exact matches, in which:
7596 unique CDR3
6 unique J



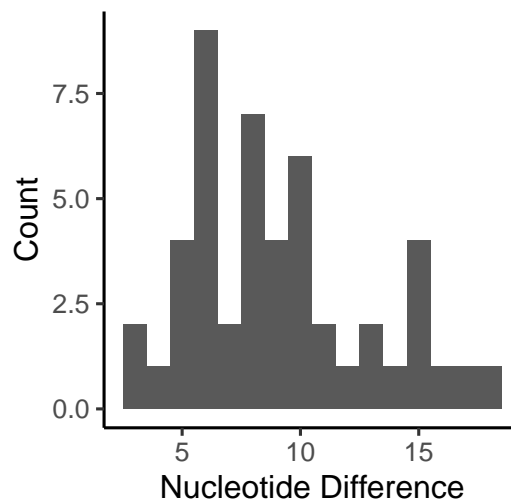
IGHV4-30-4*01

19 sequences assigned
1 (5.3%) exact matches, in which:
1 unique CDR3
1 unique J



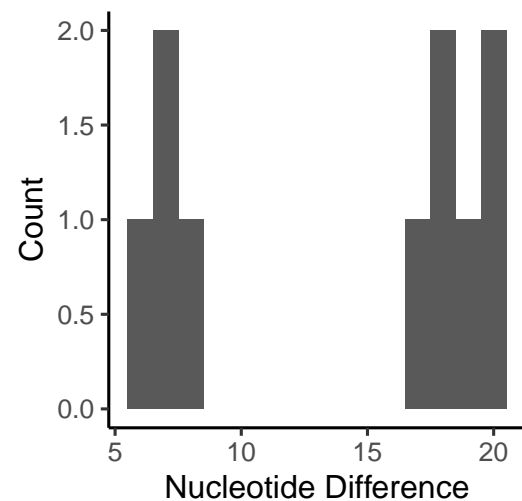
IGHV4-30-4*08

55 sequences assigned
No exact matches.



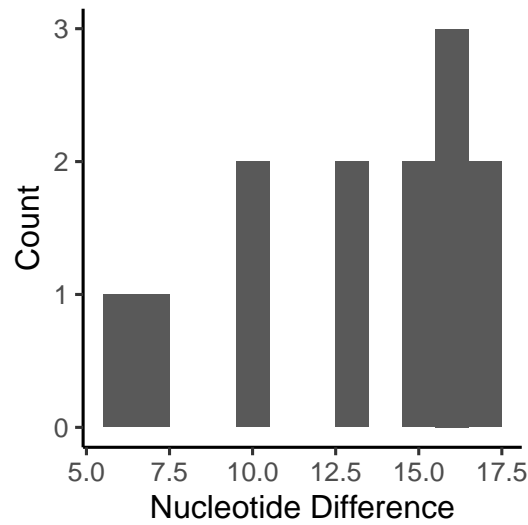
IGHV4-38-2*01

20 sequences assigned
No exact matches.



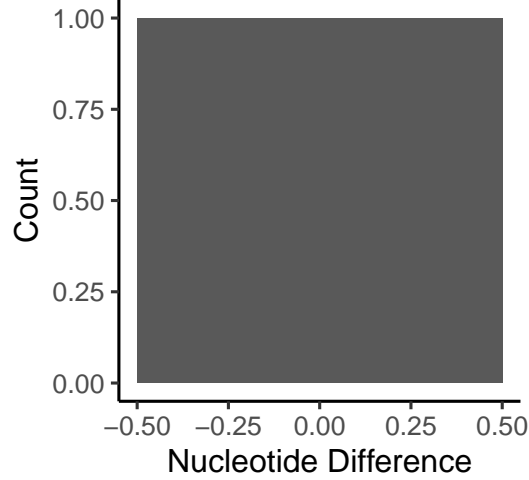
IGHV4-38-2*02

60 sequences assigned
No exact matches.



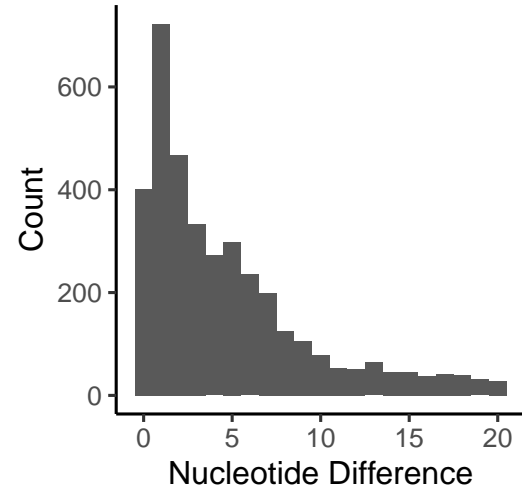
IGHV4-55*01_05

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



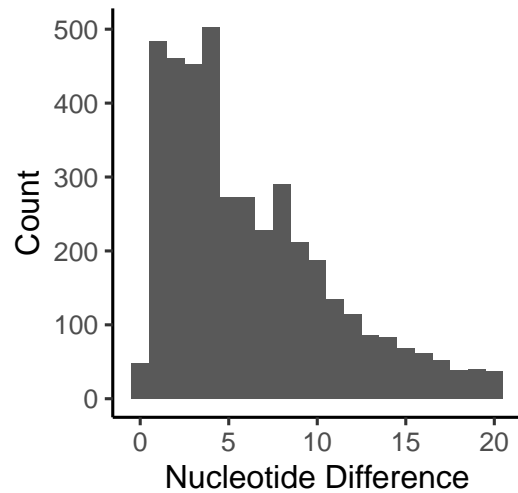
IGHV4-59*12

4323 sequences assigned
402 (9.3%) exact matches, in which:
395 unique CDR3
6 unique J



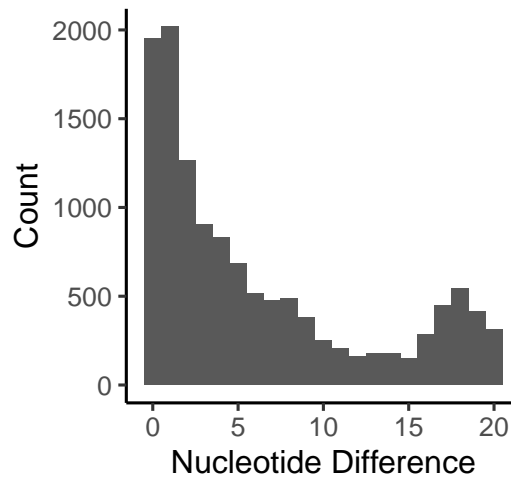
IGHV4-39*07

4468 sequences assigned
48 (1.1%) exact matches, in which:
47 unique CDR3
6 unique J



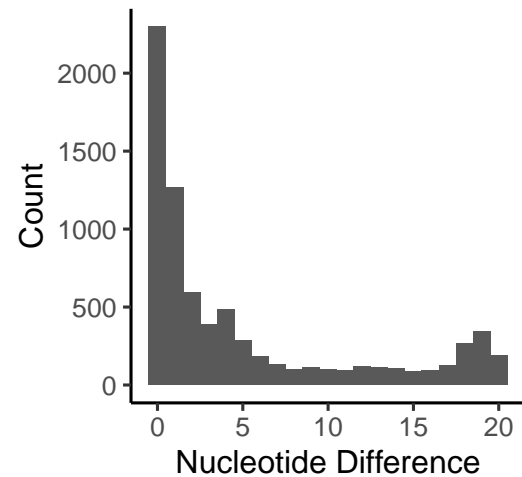
IGHV4-59*08

16078 sequences assigned
1950 (12.1%) exact matches, in which:
1770 unique CDR3
6 unique J



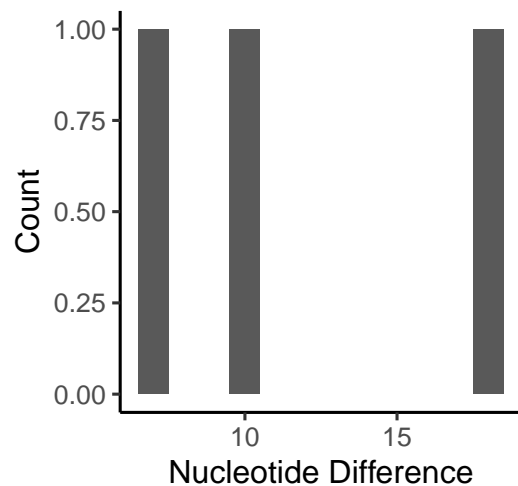
IGHV4-59*13

8191 sequences assigned
2298 (28.1%) exact matches, in which:
2126 unique CDR3
6 unique J



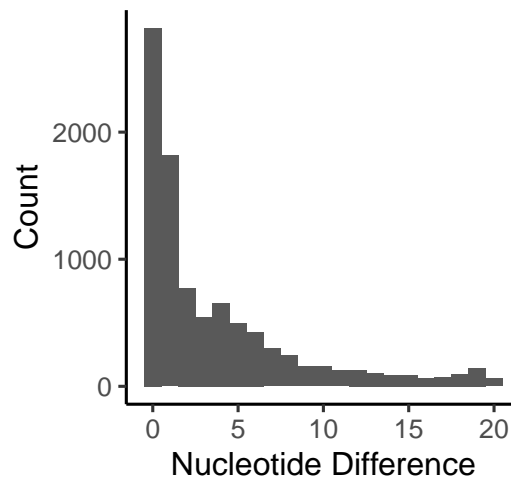
IGHV4-55*09

5 sequences assigned
No exact matches.



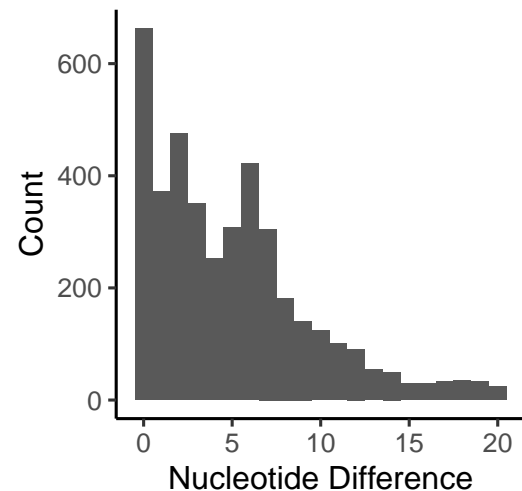
IGHV4-59*01_07

10340 sequences assigned
2819 (27.3%) exact matches, in which:
2570 unique CDR3
6 unique J



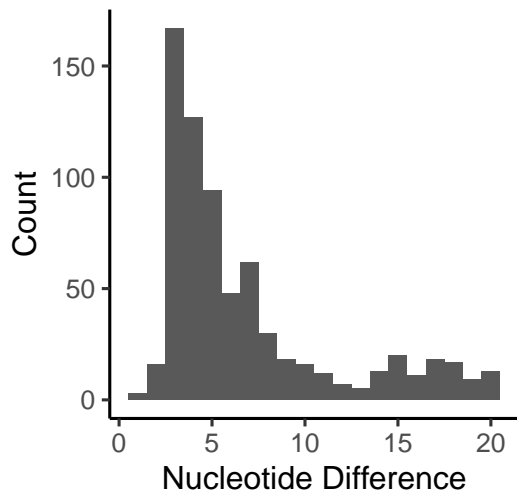
IGHV4-61*01

4225 sequences assigned
663 (15.7%) exact matches, in which:
646 unique CDR3
6 unique J



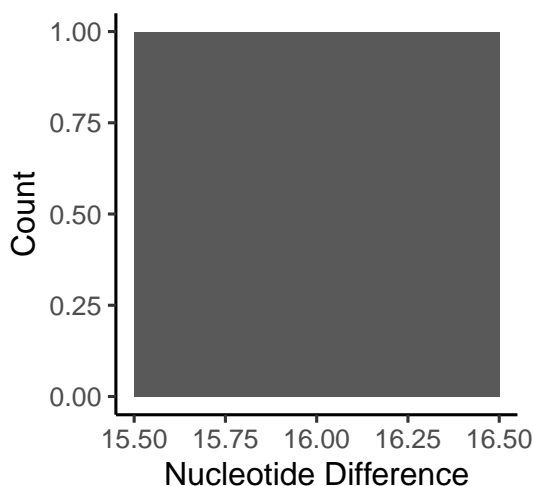
IGHV4-61*02

763 sequences assigned
No exact matches.



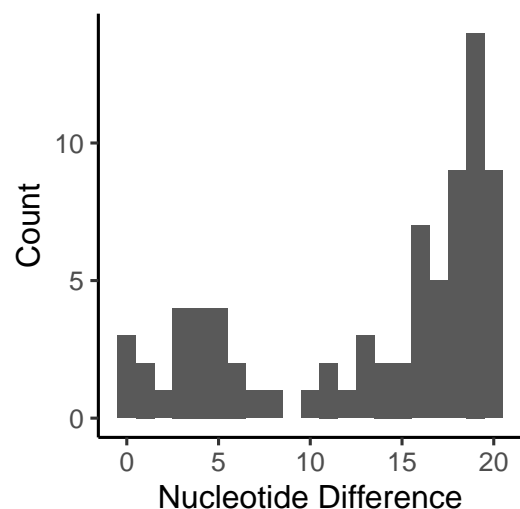
IGHV1/OR15-2*01

1 sequences assigned
No exact matches.



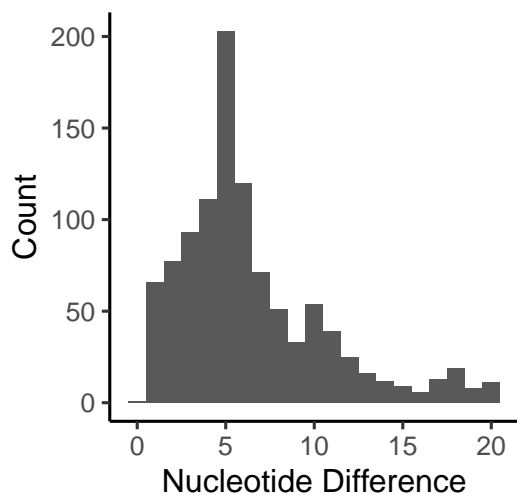
IGHV4/OR15-8*01

143 sequences assigned
3 (2.1%) exact matches, in which:
3 unique CDR3
2 unique J



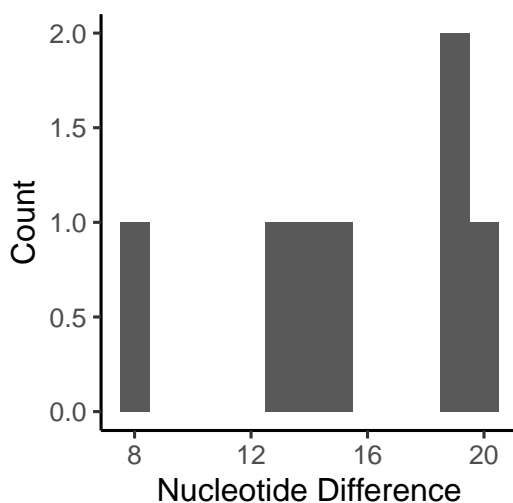
IGHV4-61*08

1089 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



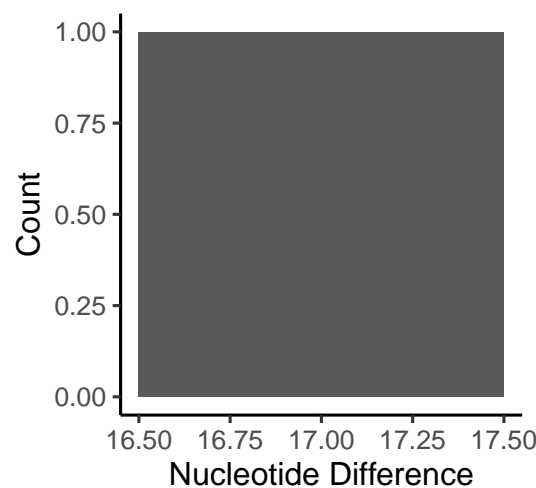
IGHV1/OR15-2*02_03

8 sequences assigned
No exact matches.



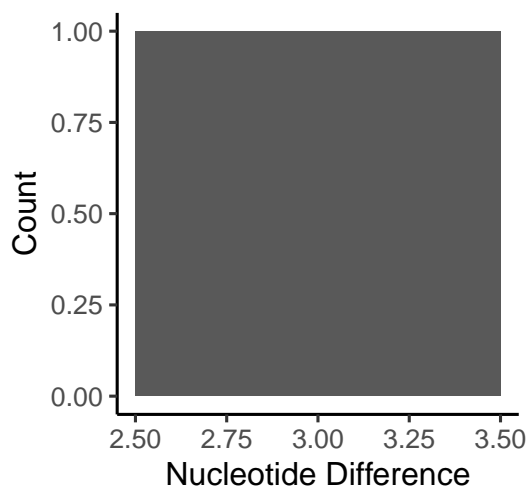
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



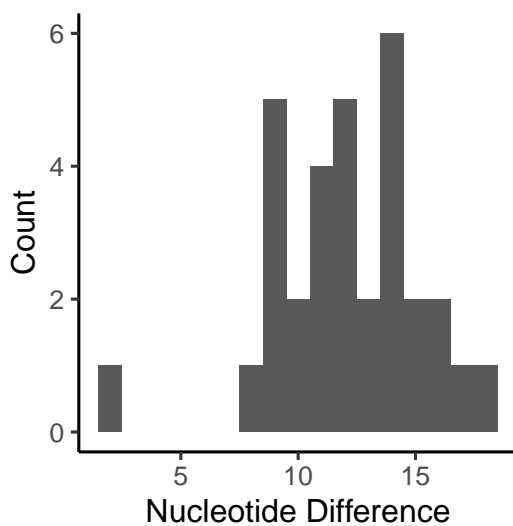
IGHV1/OR15-1*04

1 sequences assigned
No exact matches.



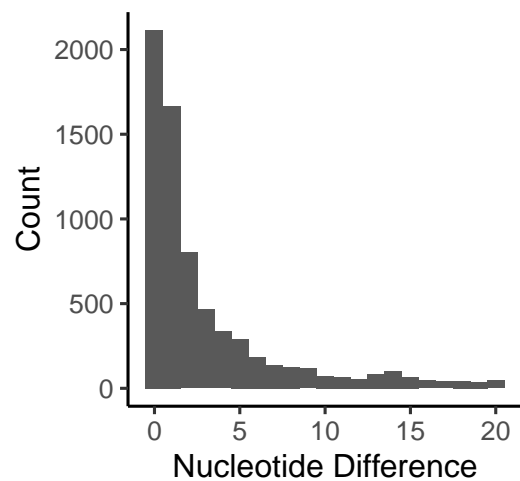
IGHV1/OR15-3*02

35 sequences assigned
No exact matches.



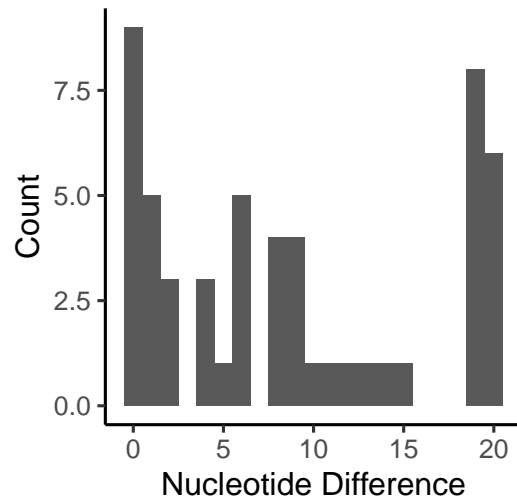
IGHV5-10-1*01_03

7534 sequences assigned
2115 (28.1%) exact matches, in which:
1613 unique CDR3
6 unique J



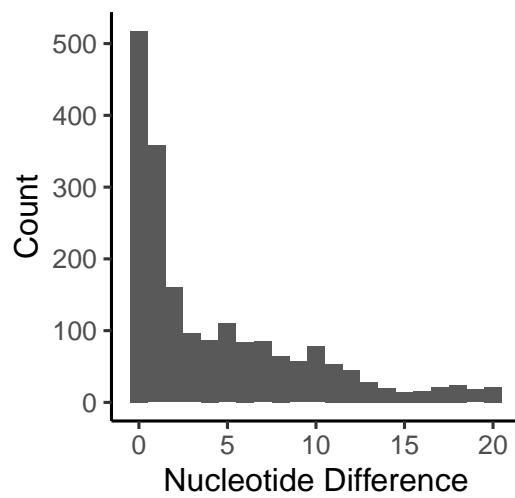
IGHV5–51*04

77 sequences assigned
9 (11.7%) exact matches, in which:
9 unique CDR3
4 unique J



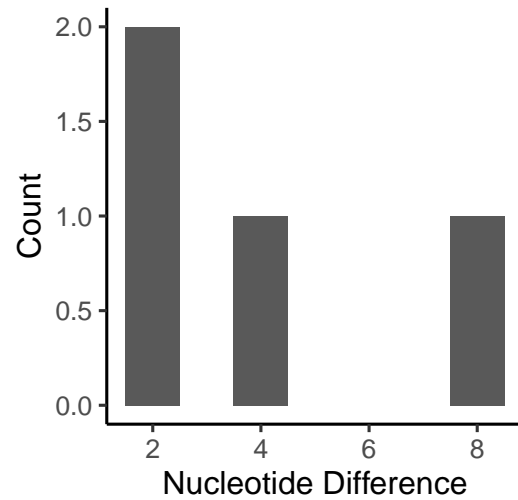
IGHV6–1*01_02

2006 sequences assigned
518 (25.8%) exact matches, in which:
477 unique CDR3
6 unique J



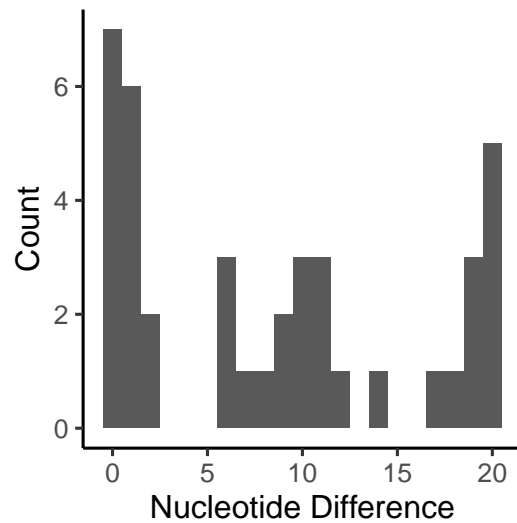
IGHV7–81*01

4 sequences assigned
No exact matches.



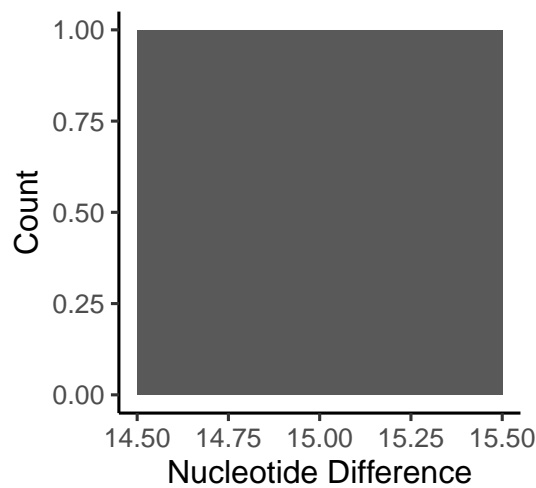
IGHV5–51*06

44 sequences assigned
7 (15.9%) exact matches, in which:
7 unique CDR3
4 unique J



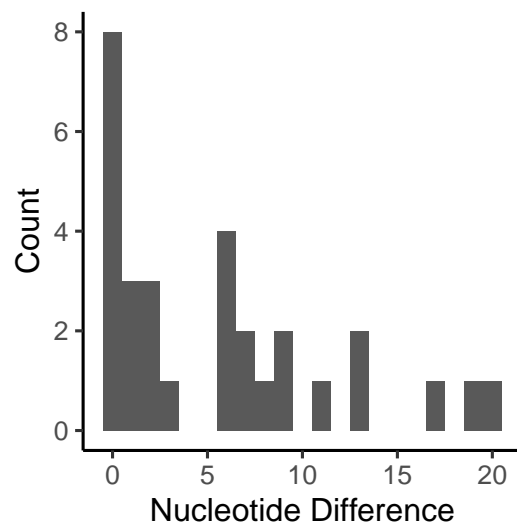
IGHV3/OR16–13*01

1 sequences assigned
No exact matches.



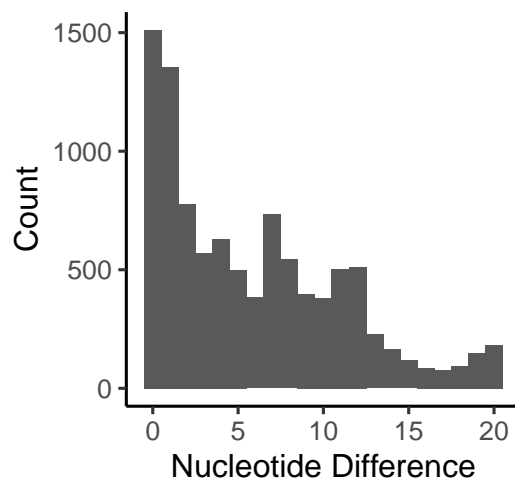
IGHV5–51*07

31 sequences assigned
8 (25.8%) exact matches, in which:
8 unique CDR3
3 unique J



IGHV7–4–1*02

11697 sequences assigned
1511 (12.9%) exact matches, in which:
1343 unique CDR3
6 unique J





Novel sequence(s)IGHV3-43*02_A247G_G248C_A252G_C258A_T279C_A286G_T288C_C297G_C300T_T301G are not listed in the genotype and will be ignored.