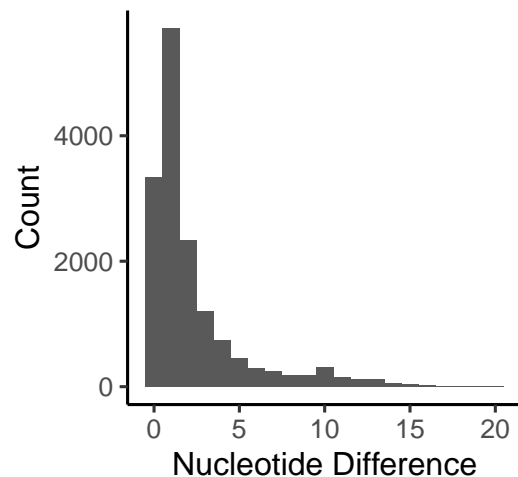


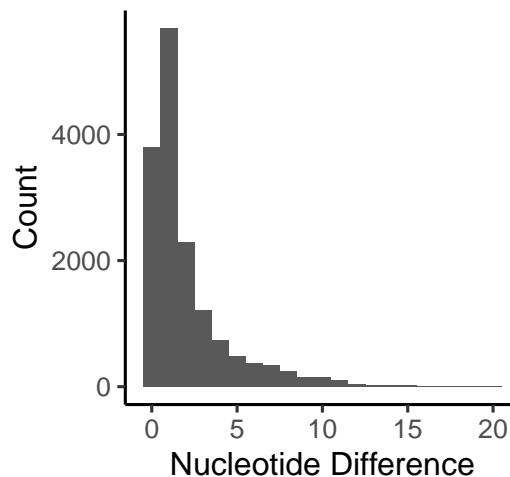
IGHV1-2*02

15574 sequences assigned
3340 (21.4%) exact matches, in which:
2491 unique CDR3
6 unique J



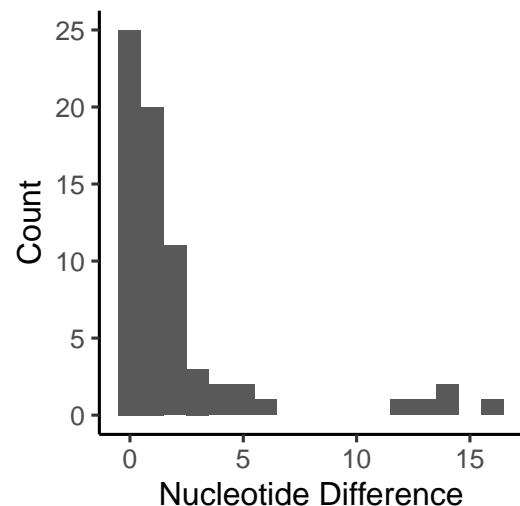
IGHV1-8*01

15731 sequences assigned
3793 (24.1%) exact matches, in which:
2952 unique CDR3
6 unique J



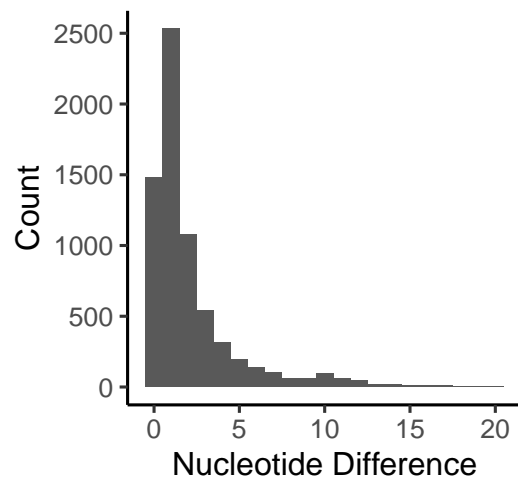
IGHV1-38-4*01

69 sequences assigned
25 (36.2%) exact matches, in which:
21 unique CDR3
4 unique J



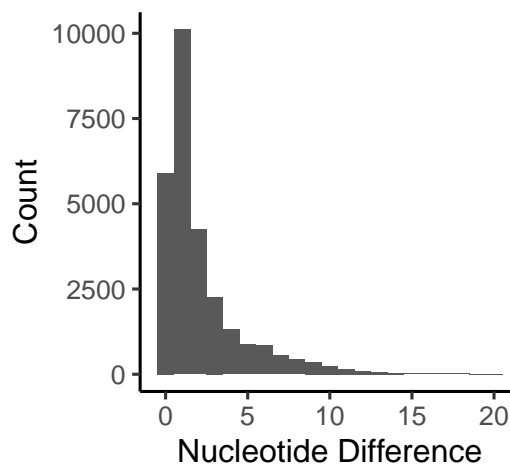
IGHV1-2*04

6806 sequences assigned
1479 (21.7%) exact matches, in which:
1125 unique CDR3
6 unique J



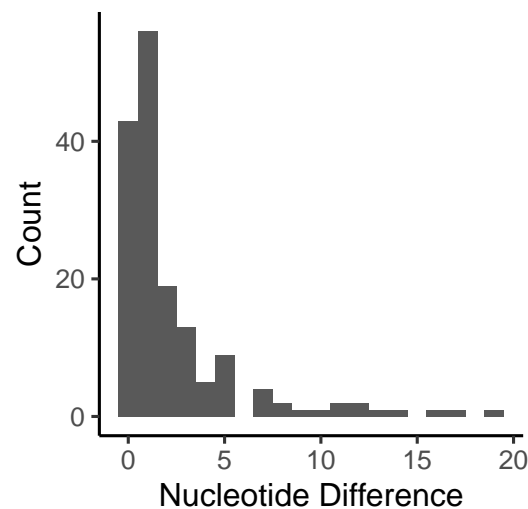
IGHV1-18*01

27636 sequences assigned
5902 (21.4%) exact matches, in which:
4428 unique CDR3
6 unique J



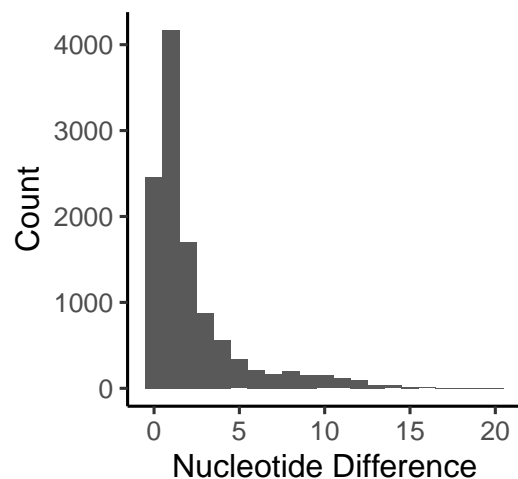
IGHV1-45*02

163 sequences assigned
43 (26.4%) exact matches, in which:
31 unique CDR3
6 unique J



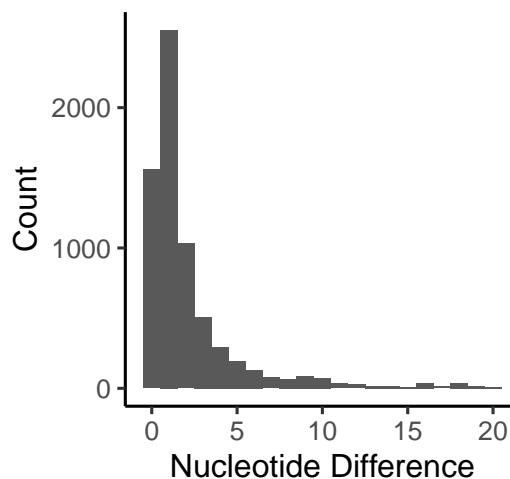
IGHV1-3*01_05

11346 sequences assigned
2456 (21.6%) exact matches, in which:
1850 unique CDR3
6 unique J



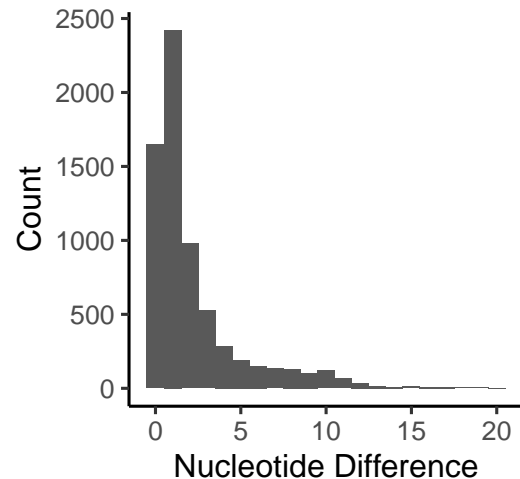
IGHV1-24*01

6819 sequences assigned
1559 (22.9%) exact matches, in which:
1162 unique CDR3
6 unique J



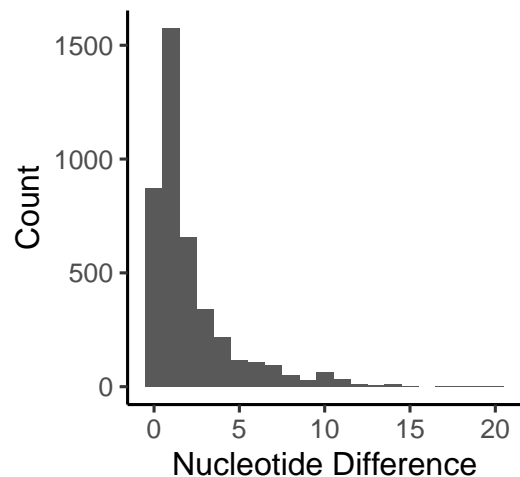
IGHV1-46*01

6880 sequences assigned
1648 (24%) exact matches, in which:
1283 unique CDR3
6 unique J



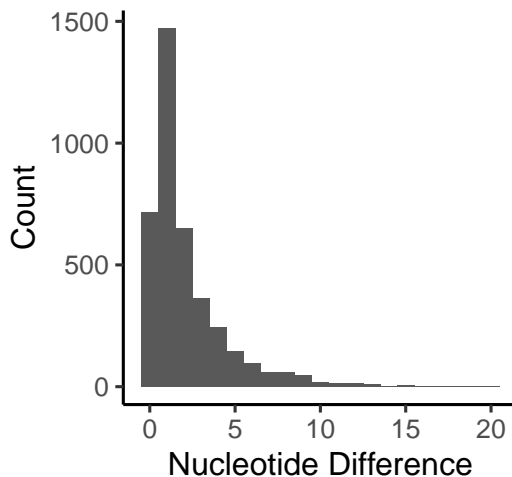
IGHV1-46*03

4207 sequences assigned
872 (20.7%) exact matches, in which:
627 unique CDR3
6 unique J



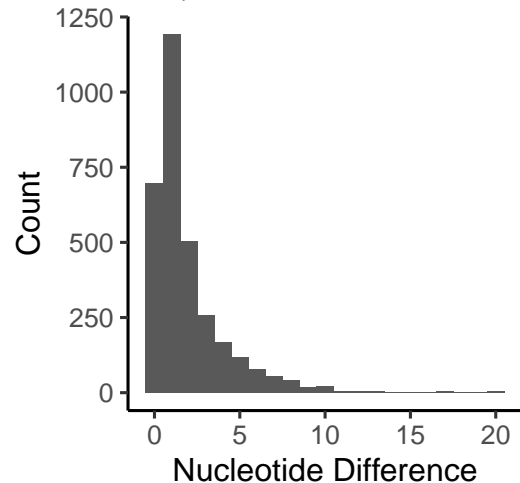
IGHV2-5*01

3954 sequences assigned
716 (18.1%) exact matches, in which:
533 unique CDR3
6 unique J



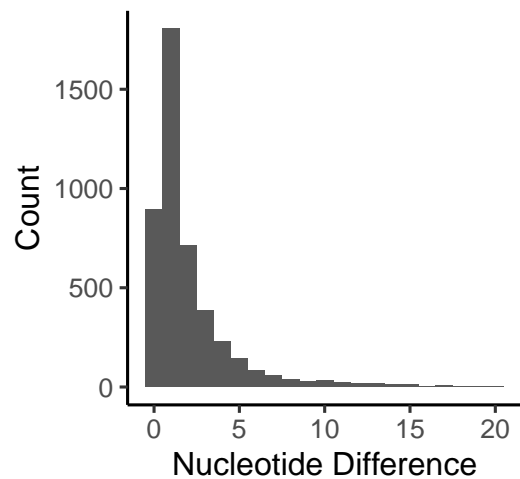
IGHV2-70*01

3208 sequences assigned
696 (21.7%) exact matches, in which:
495 unique CDR3
5 unique J



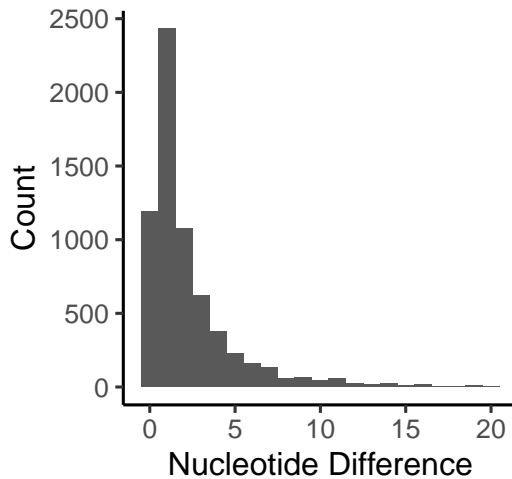
IGHV1-58*01_03

4527 sequences assigned
893 (19.7%) exact matches, in which:
642 unique CDR3
6 unique J



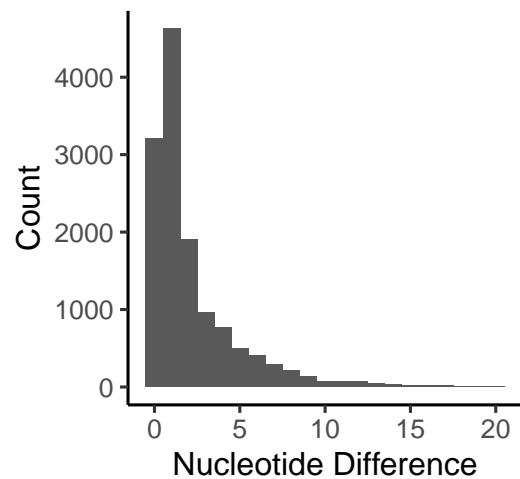
IGHV2-5*02

6601 sequences assigned
1188 (18%) exact matches, in which:
853 unique CDR3
6 unique J



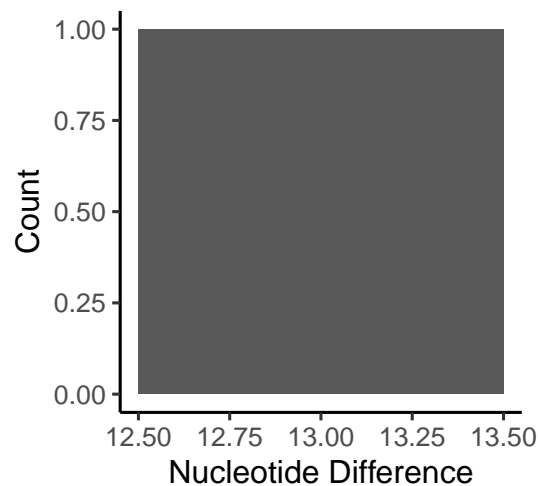
IGHV3-7*01

13375 sequences assigned
3204 (24%) exact matches, in which:
2565 unique CDR3
6 unique J



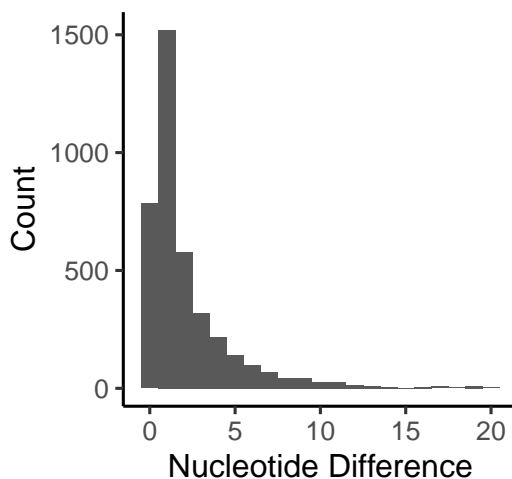
IGHV1-69-2*01

1 sequences assigned
No exact matches.



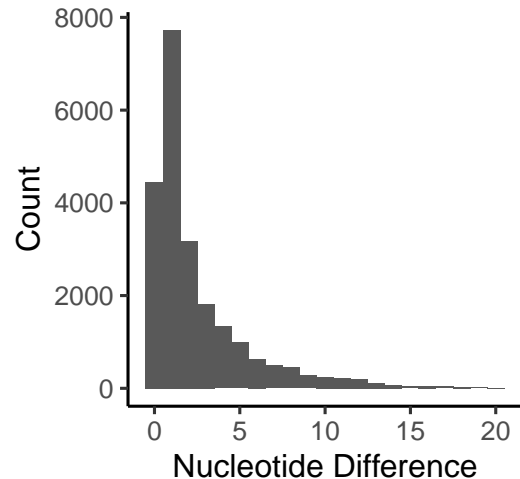
IGHV2-26*01

3984 sequences assigned
784 (19.7%) exact matches, in which:
583 unique CDR3
5 unique J



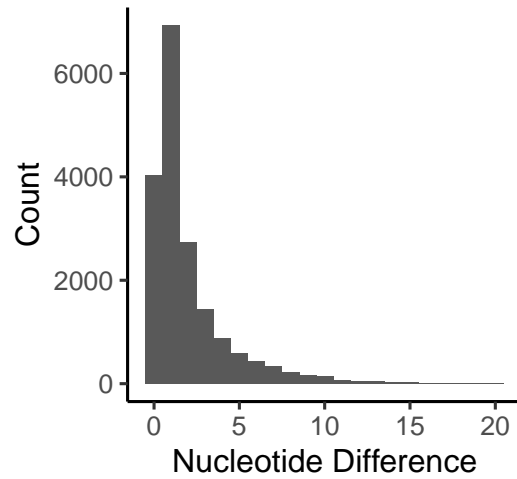
IGHV3-9*01

22441 sequences assigned
4452 (19.8%) exact matches, in which:
3313 unique CDR3
6 unique J



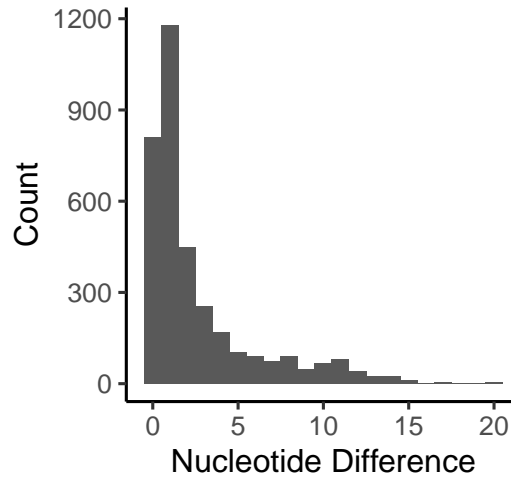
IGHV3-11*01

18183 sequences assigned
4031 (22.2%) exact matches, in which:
3130 unique CDR3
6 unique J



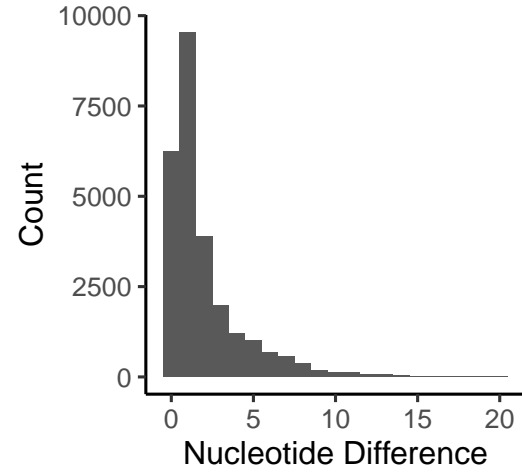
IGHV3-15*01_02

3545 sequences assigned
811 (22.9%) exact matches, in which:
640 unique CDR3
6 unique J



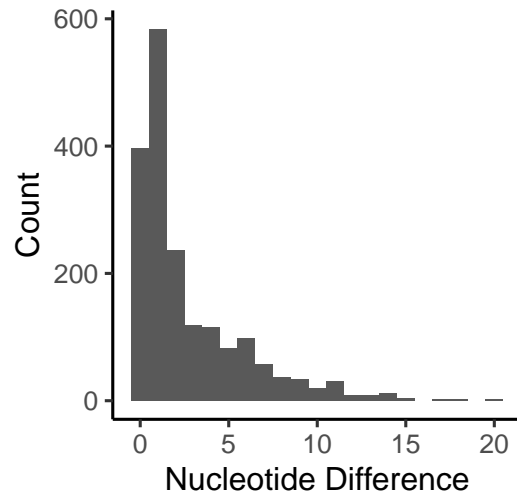
IGHV3-21*01_02

26211 sequences assigned
6240 (23.8%) exact matches, in which:
4761 unique CDR3
6 unique J



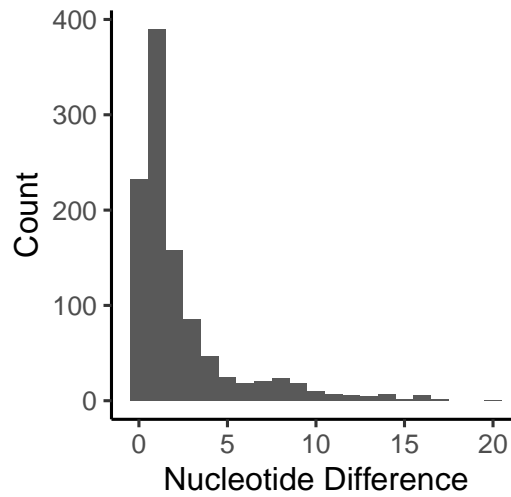
IGHV3-13*01

1852 sequences assigned
396 (21.4%) exact matches, in which:
295 unique CDR3
6 unique J



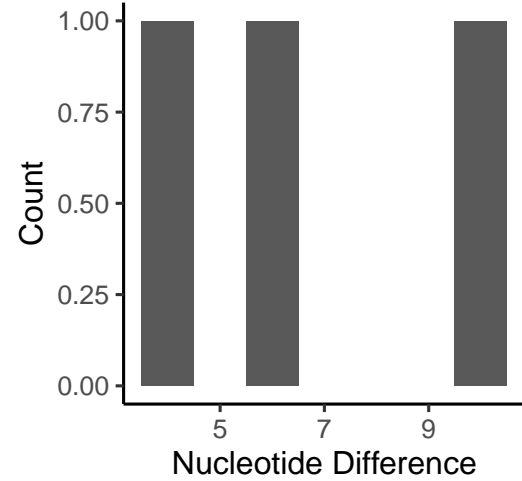
IGHV3-20*01_02

1064 sequences assigned
232 (21.8%) exact matches, in which:
176 unique CDR3
5 unique J



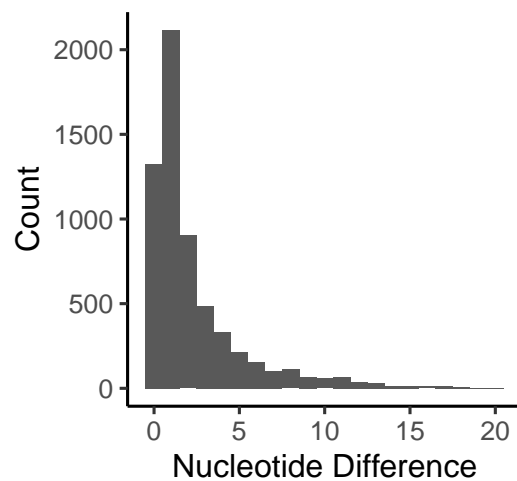
IGHV3-22*01_02

3 sequences assigned
No exact matches.



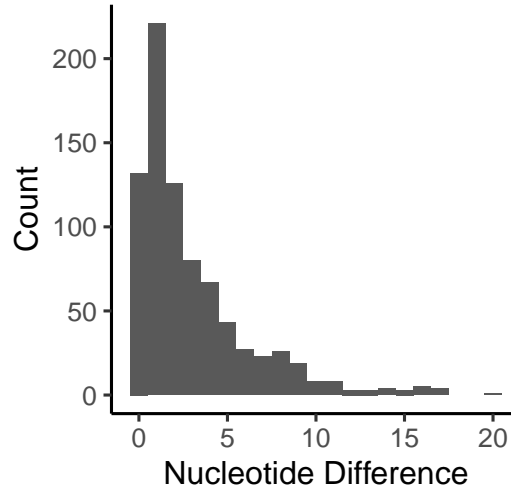
IGHV3-15*07

6083 sequences assigned
1323 (21.7%) exact matches, in which:
1072 unique CDR3
6 unique J



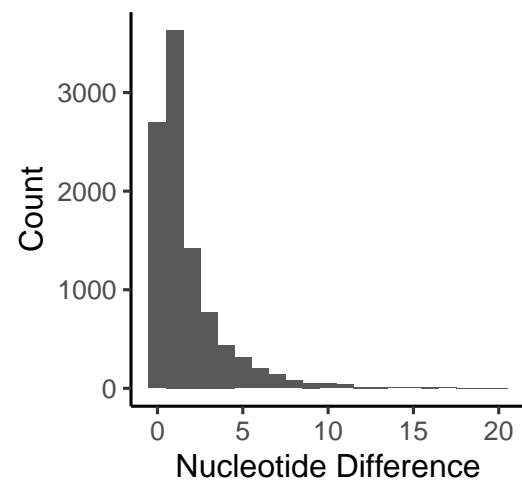
IGHV3-20*03_04

806 sequences assigned
132 (16.4%) exact matches, in which:
103 unique CDR3
5 unique J



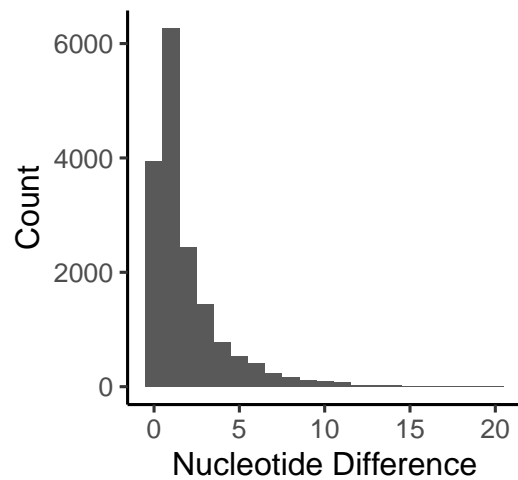
IGHV3-30*01

9936 sequences assigned
2695 (27.1%) exact matches, in which:
2145 unique CDR3
6 unique J



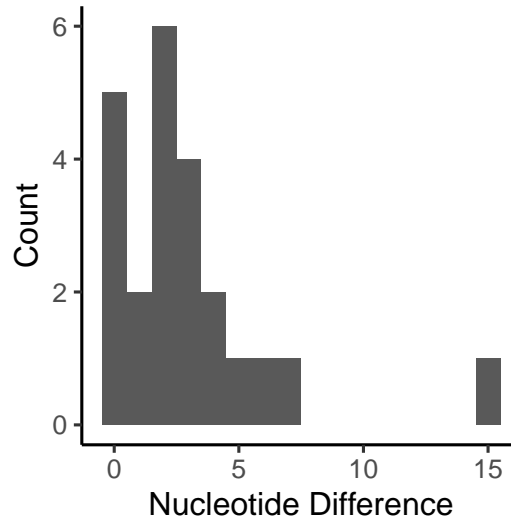
IGHV3-30-3*01

16657 sequences assigned
3951 (23.7%) exact matches, in which:
3098 unique CDR3
6 unique J



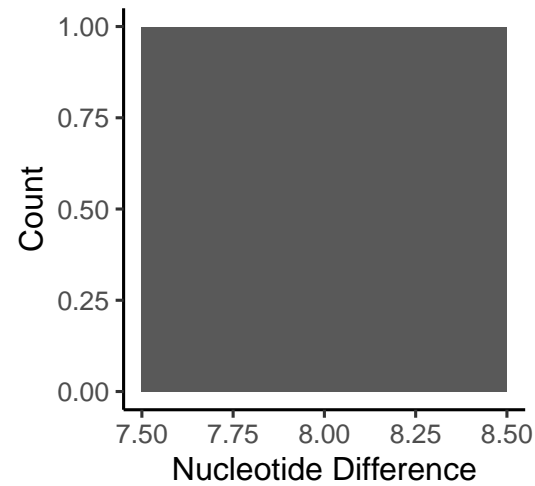
IGHV3-33*05

23 sequences assigned
5 (21.7%) exact matches, in which:
5 unique CDR3
3 unique J



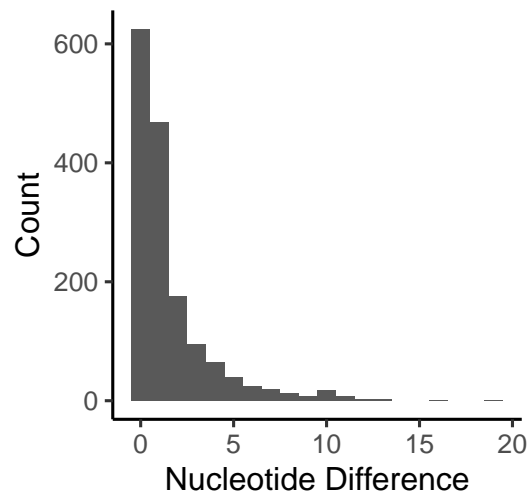
IGHV3-38*02

1 sequences assigned
No exact matches.



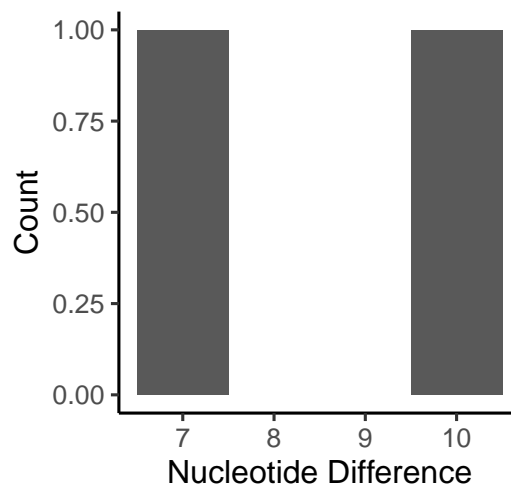
IGHV3-30*03

1569 sequences assigned
625 (39.8%) exact matches, in which:
590 unique CDR3
6 unique J



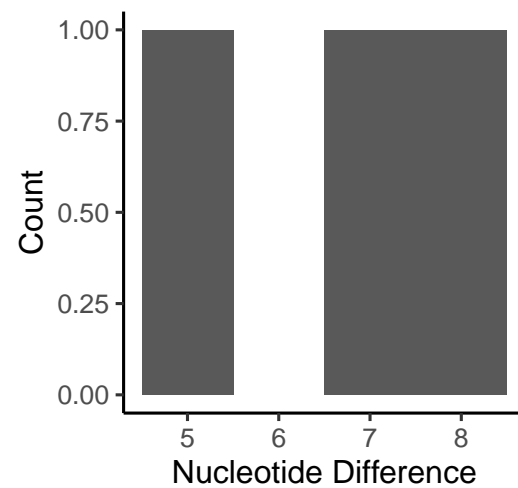
IGHV3-35*01

2 sequences assigned
No exact matches.



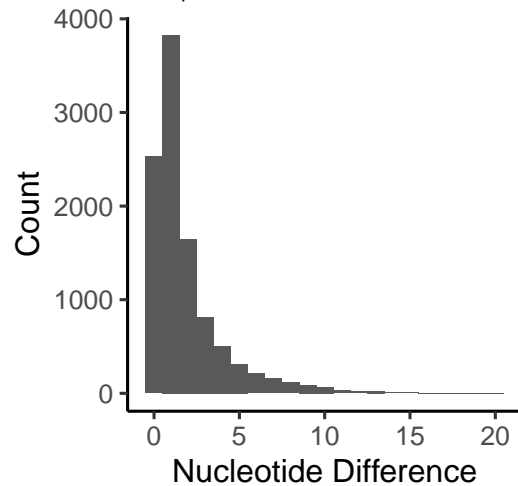
IGHV3-38*03

3 sequences assigned
No exact matches.



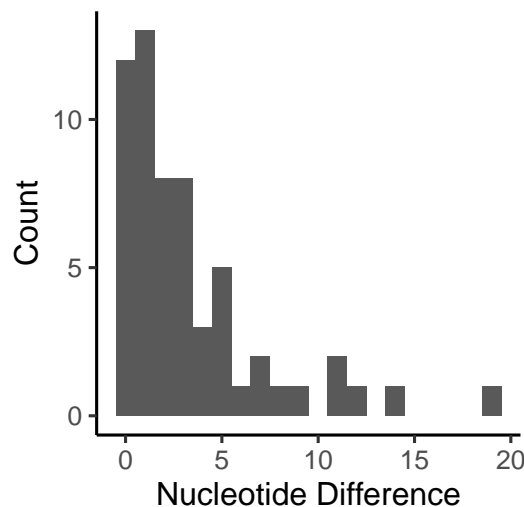
IGHV3-33*01

10401 sequences assigned
2530 (24.3%) exact matches, in which:
1998 unique CDR3
6 unique J



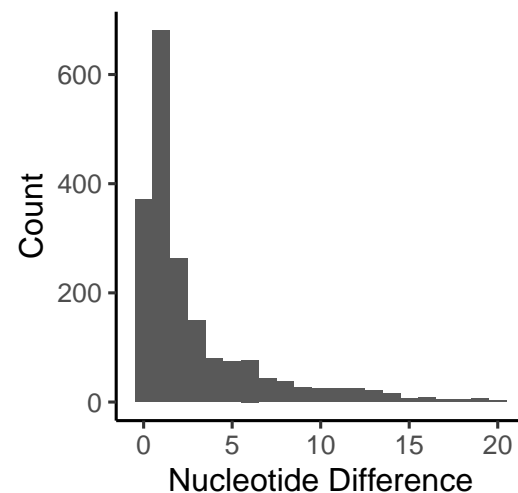
IGHV3-38-3*01

59 sequences assigned
12 (20.3%) exact matches, in which:
12 unique CDR3
5 unique J



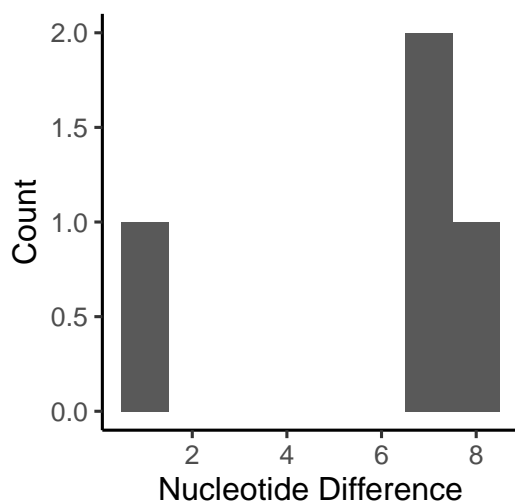
IGHV3-43*01

1991 sequences assigned
371 (18.6%) exact matches, in which:
280 unique CDR3
6 unique J



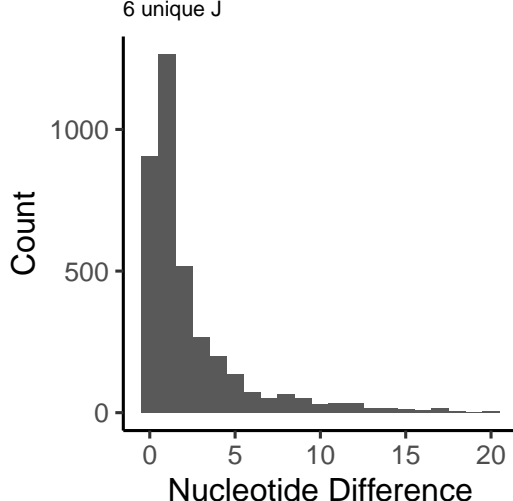
IGHV3-47*02

4 sequences assigned
No exact matches.



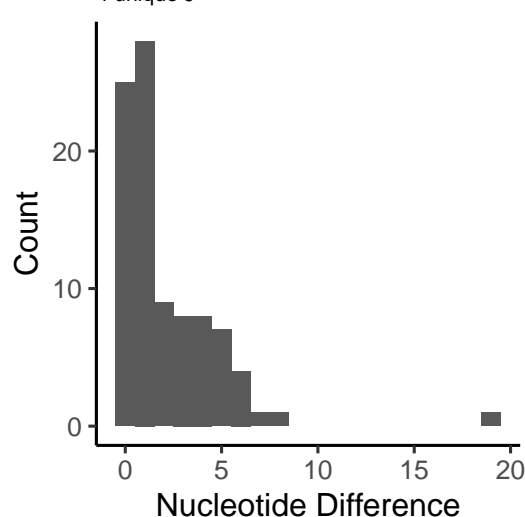
IGHV3-49*03_05

3729 sequences assigned
906 (24.3%) exact matches, in which:
723 unique CDR3
6 unique J



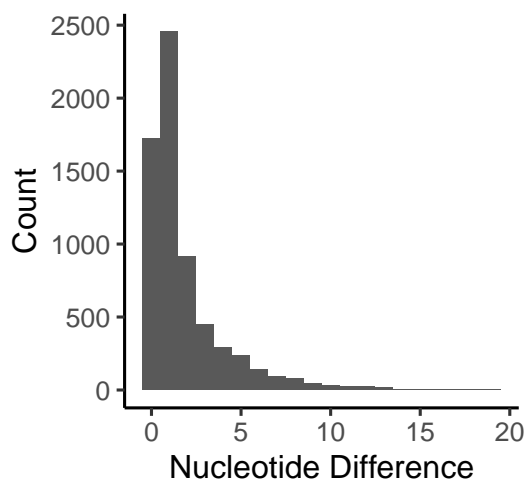
IGHV3-64*02_07

92 sequences assigned
25 (27.2%) exact matches, in which:
19 unique CDR3
4 unique J



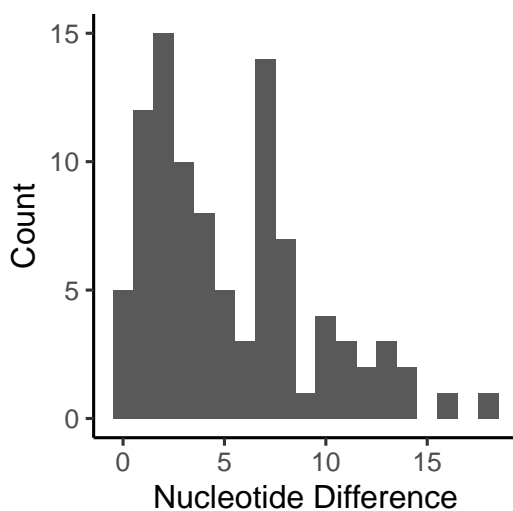
IGHV3-48*02

6546 sequences assigned
1723 (26.3%) exact matches, in which:
1375 unique CDR3
6 unique J



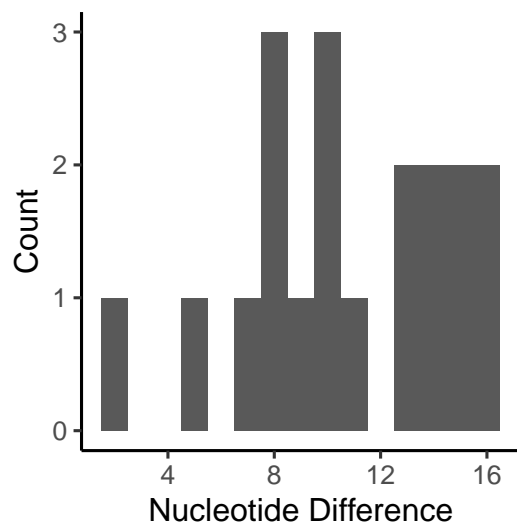
IGHV3-53*05

96 sequences assigned
5 (5.2%) exact matches, in which:
5 unique CDR3
2 unique J



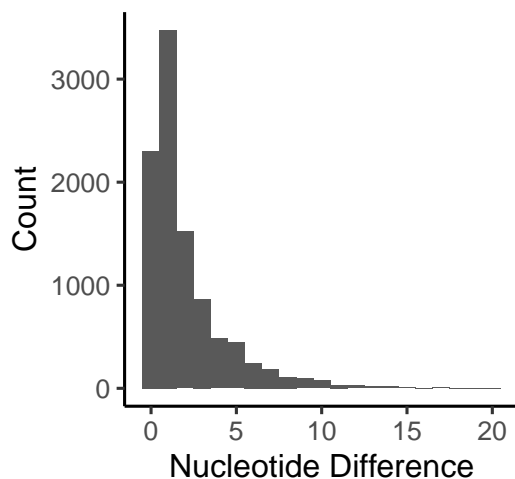
IGHV3-66*01

19 sequences assigned
No exact matches.



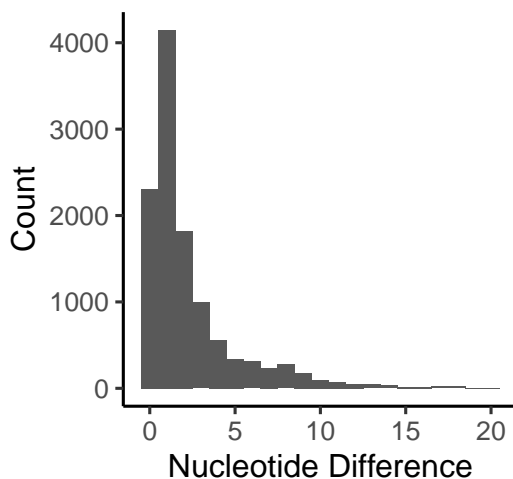
IGHV3-48*04

9953 sequences assigned
2304 (23.1%) exact matches, in which:
1755 unique CDR3
6 unique J



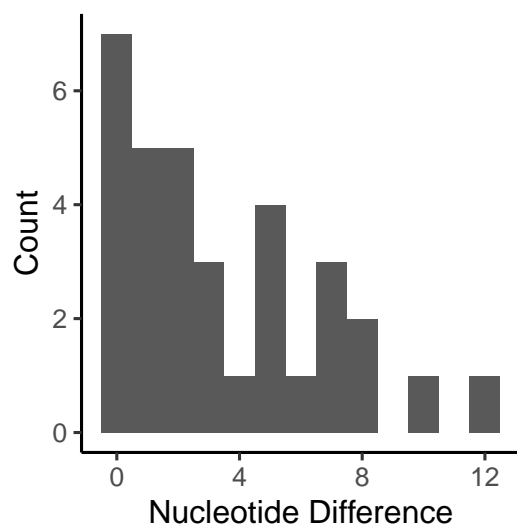
IGHV3-53*01_02

11563 sequences assigned
2309 (20%) exact matches, in which:
1707 unique CDR3
6 unique J



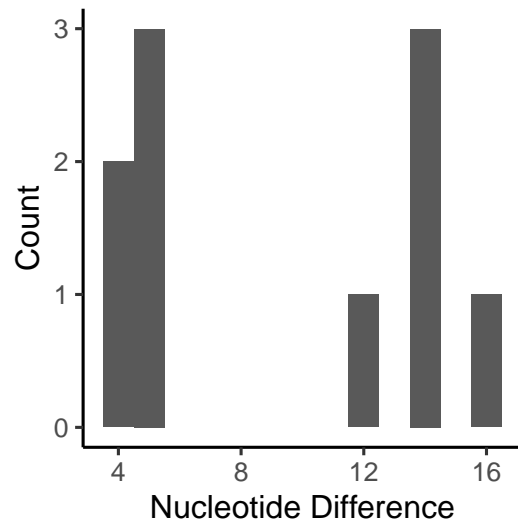
IGHV3-66*03

33 sequences assigned
7 (21.2%) exact matches, in which:
7 unique CDR3
2 unique J



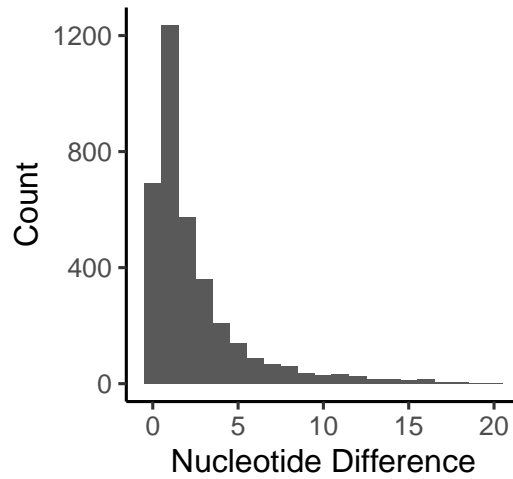
IGHV3-69-1*01

10 sequences assigned
No exact matches.



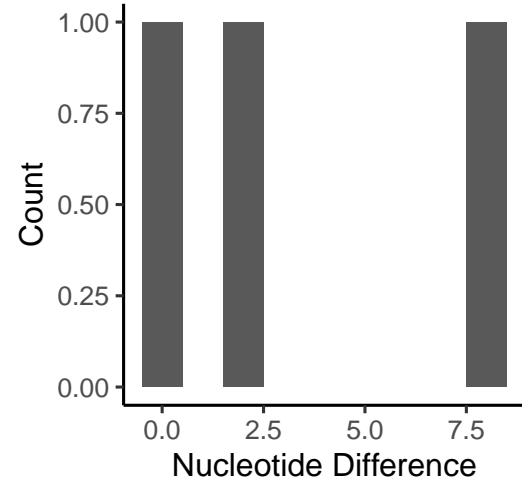
IGHV3-73*01_02

3624 sequences assigned
690 (19%) exact matches, in which:
515 unique CDR3
6 unique J



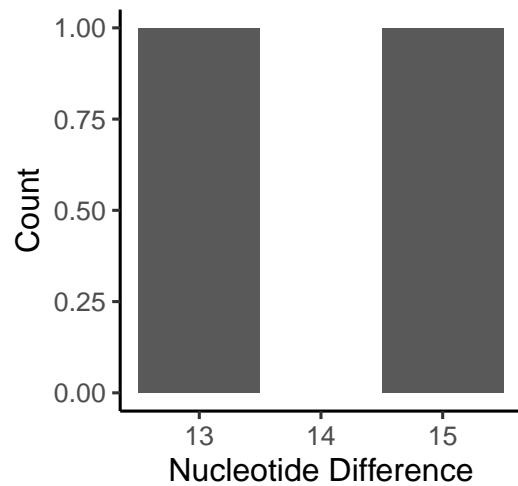
IGHV3-64D*06

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



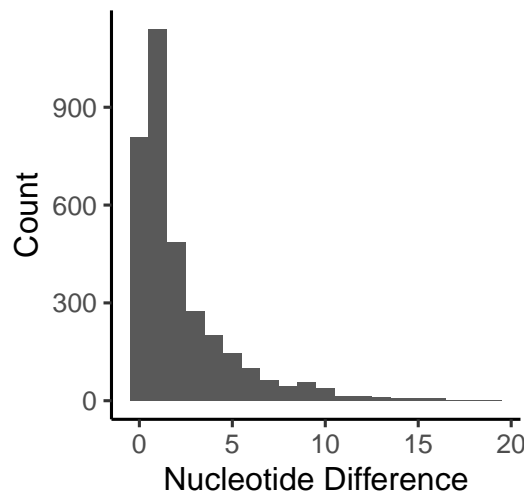
IGHV3-71*01_04

2 sequences assigned
No exact matches.



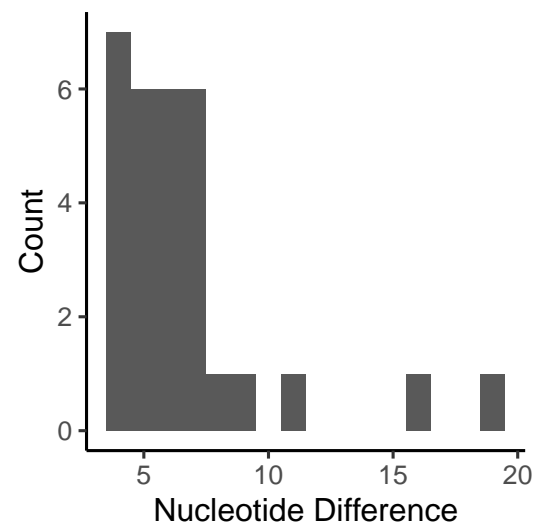
IGHV3-74*01_02

3432 sequences assigned
807 (23.5%) exact matches, in which:
643 unique CDR3
6 unique J



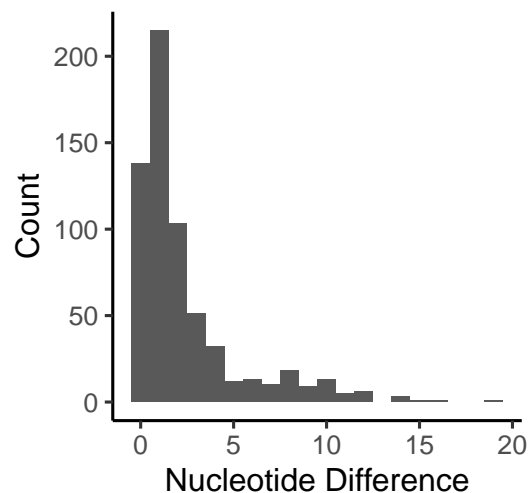
IGHV3-NL1*01

31 sequences assigned
No exact matches.



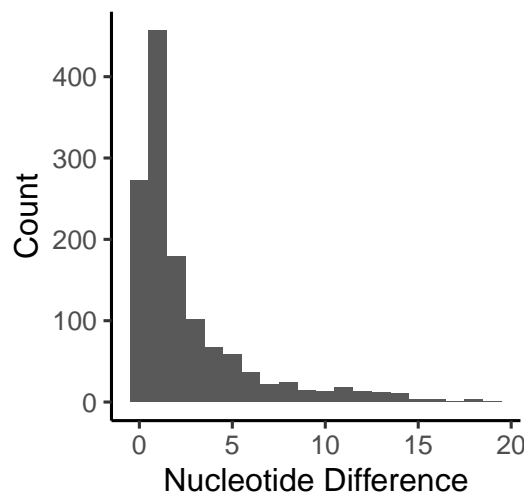
IGHV3-72*01

632 sequences assigned
138 (21.8%) exact matches, in which:
101 unique CDR3
5 unique J



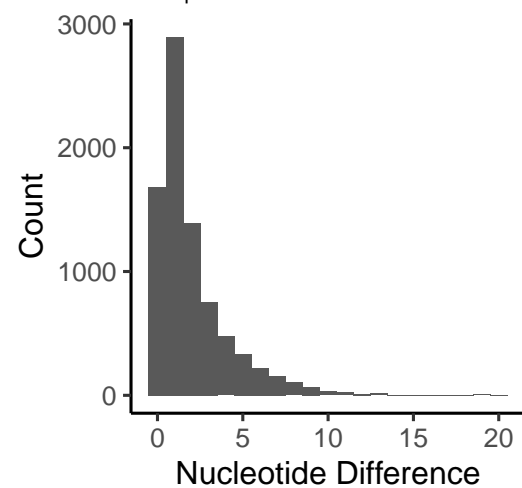
IGHV3-43D*03

1313 sequences assigned
272 (20.7%) exact matches, in which:
201 unique CDR3
6 unique J



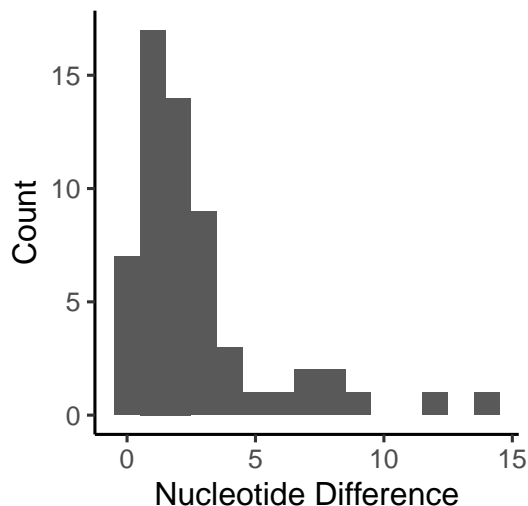
IGHV4-4*07

8208 sequences assigned
1682 (20.5%) exact matches, in which:
1289 unique CDR3
6 unique J



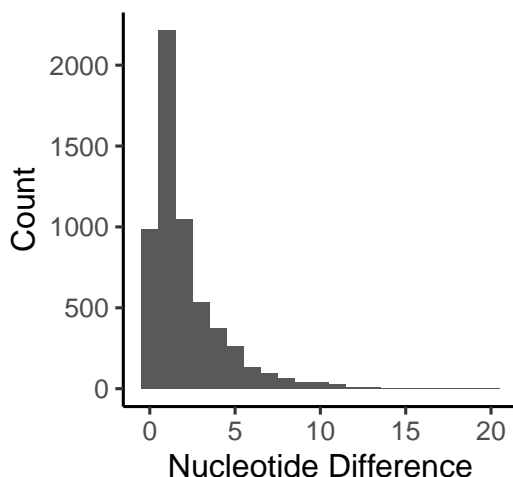
IGHV4-28*03

60 sequences assigned
7 (11.7%) exact matches, in which:
4 unique CDR3
3 unique J



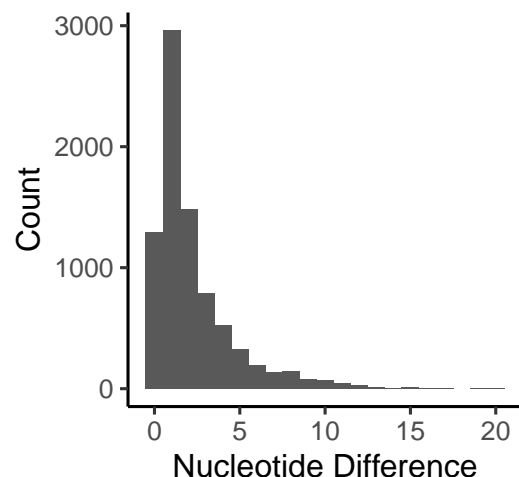
IGHV4-30-2*01

5880 sequences assigned
987 (16.8%) exact matches, in which:
712 unique CDR3
6 unique J



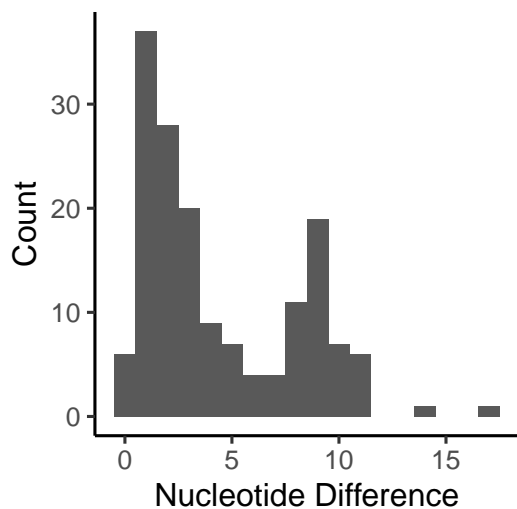
IGHV4-38-2*02

8145 sequences assigned
1296 (15.9%) exact matches, in which:
975 unique CDR3
6 unique J



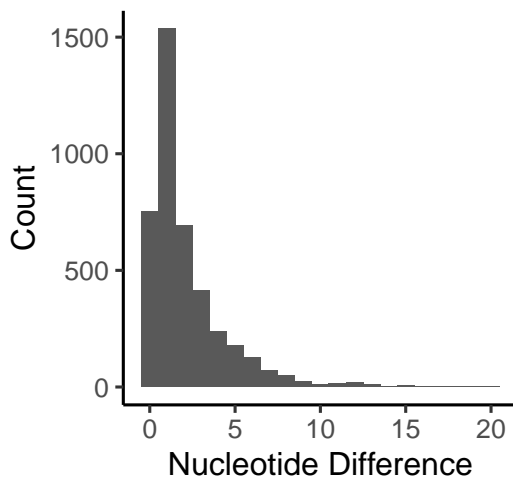
IGHV4-28*02_05

161 sequences assigned
6 (3.7%) exact matches, in which:
5 unique CDR3
3 unique J



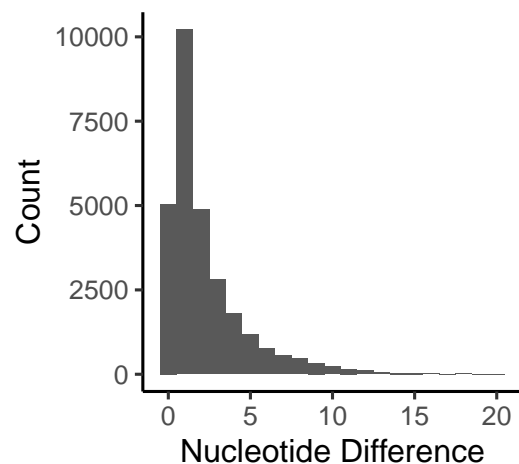
IGHV4-31*01

4165 sequences assigned
754 (18.1%) exact matches, in which:
573 unique CDR3
6 unique J



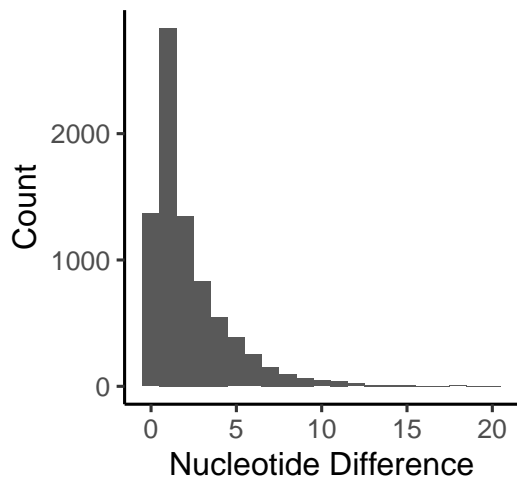
IGHV4-39*07

28791 sequences assigned
5043 (17.5%) exact matches, in which:
3713 unique CDR3
6 unique J



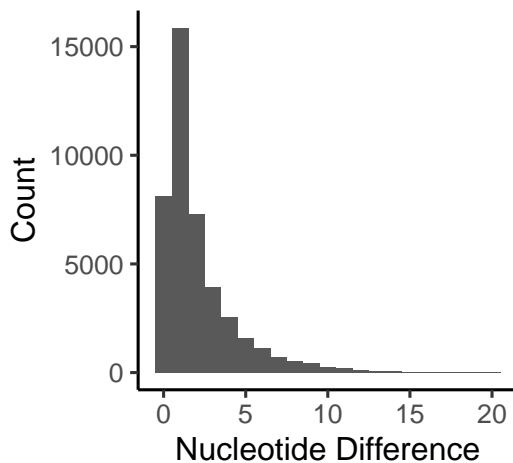
IGHV4-30-4*01

8061 sequences assigned
1368 (17%) exact matches, in which:
990 unique CDR3
6 unique J



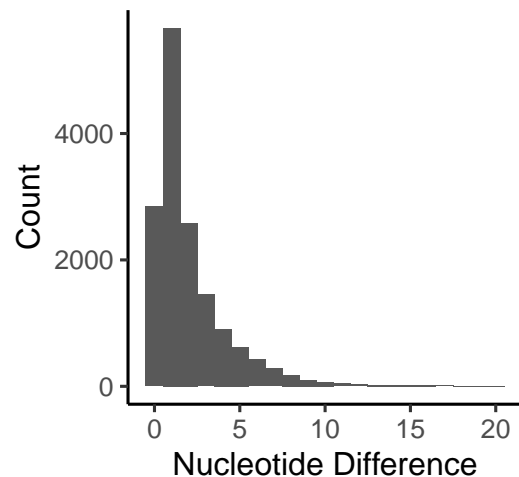
IGHV4-34*01_02

42990 sequences assigned
8113 (18.9%) exact matches, in which:
5985 unique CDR3
6 unique J



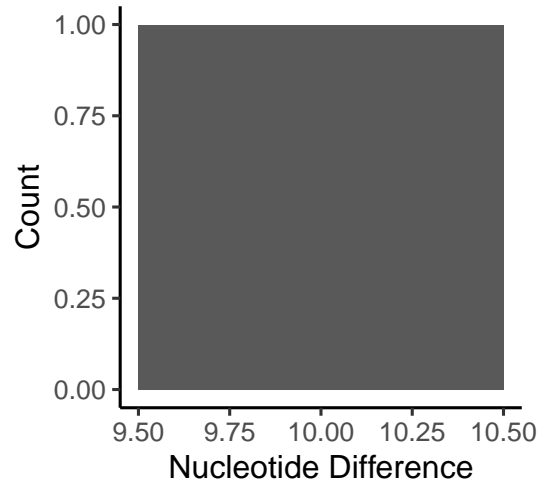
IGHV4-39*01_05

15355 sequences assigned
2847 (18.5%) exact matches, in which:
2143 unique CDR3
6 unique J



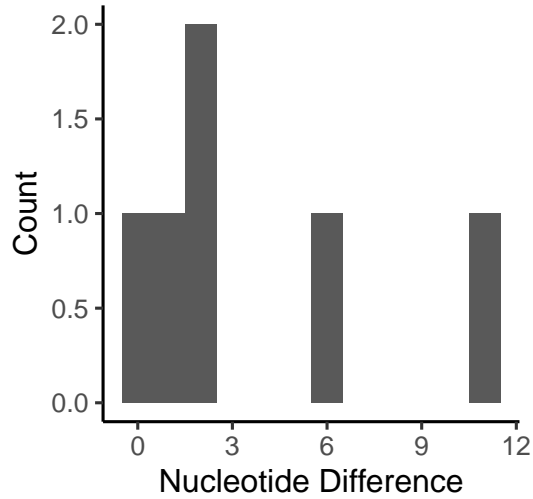
IGHV4-55*02_04_08

1 sequences assigned
No exact matches.



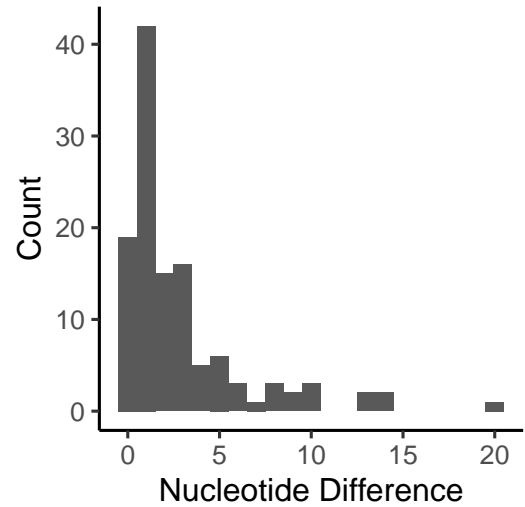
IGHV5-10-1*01_03

6 sequences assigned
1 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



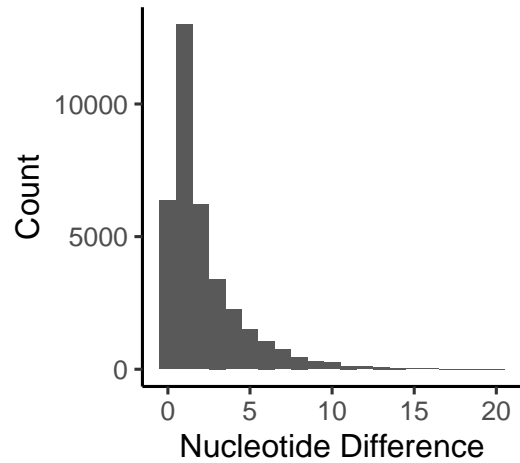
IGHV7-4-1*01

120 sequences assigned
19 (15.8%) exact matches, in which:
16 unique CDR3
4 unique J



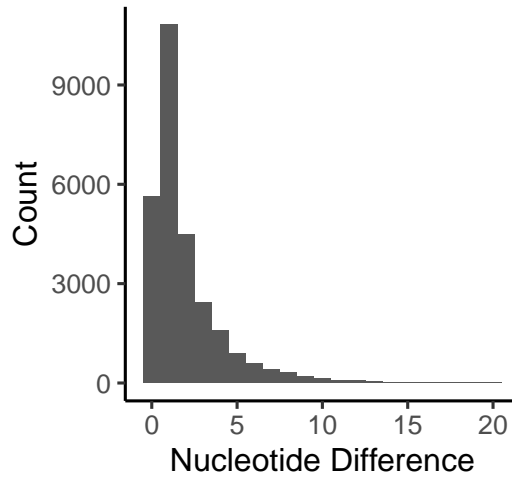
IGHV4-59*01_07

36080 sequences assigned
6364 (17.6%) exact matches, in which:
4571 unique CDR3
6 unique J



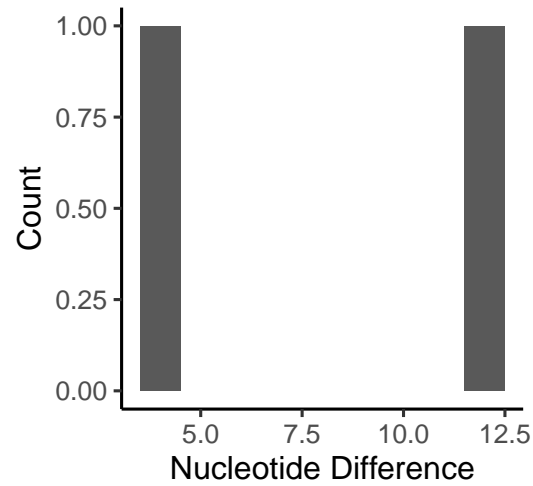
IGHV5-51*01_03

27952 sequences assigned
5640 (20.2%) exact matches, in which:
3989 unique CDR3
6 unique J



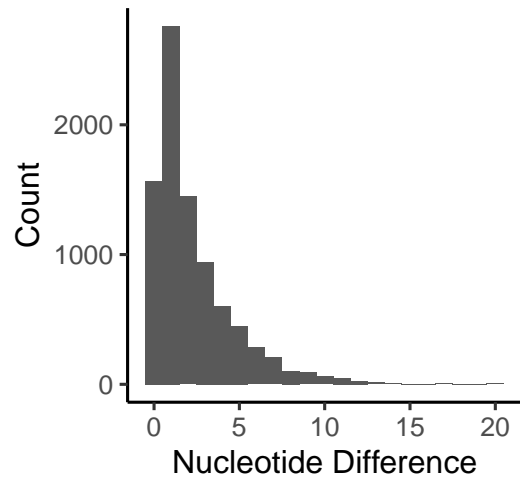
IGHV7-4-1*02

19 sequences assigned
No exact matches.



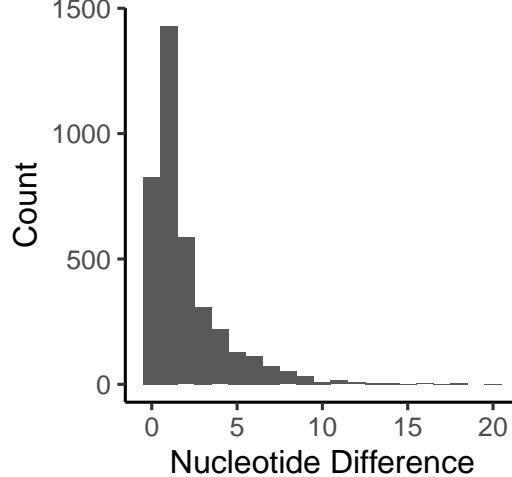
IGHV4-61*01

8649 sequences assigned
1566 (18.1%) exact matches, in which:
1237 unique CDR3
6 unique J

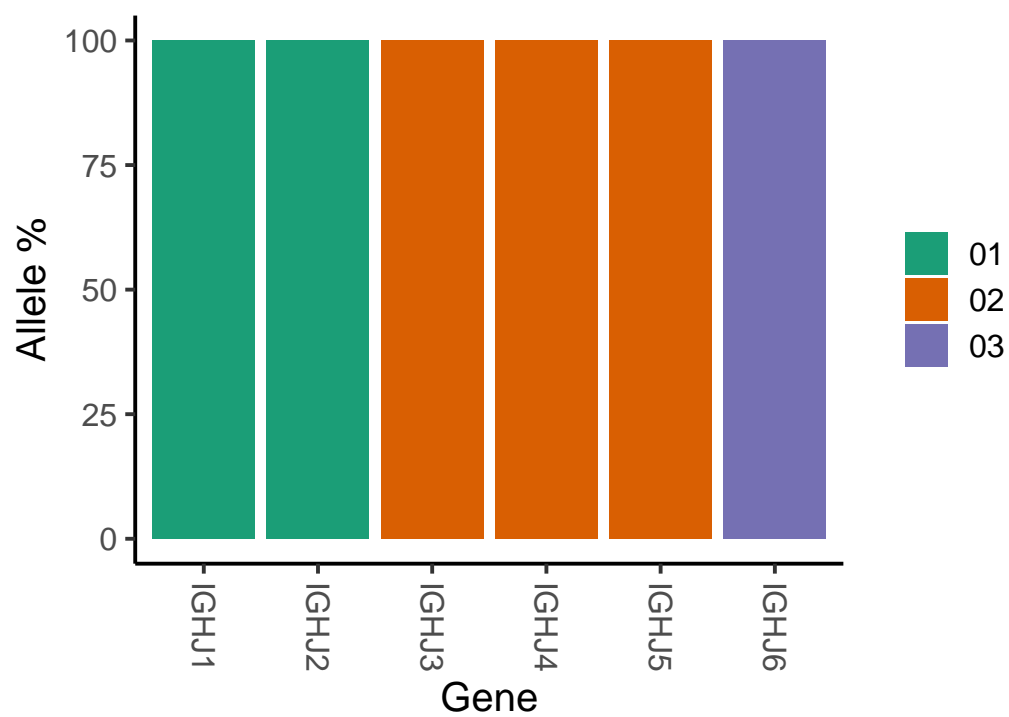


IGHV6-1*01_02

3833 sequences assigned
827 (21.6%) exact matches, in which:
610 unique CDR3
6 unique J



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.