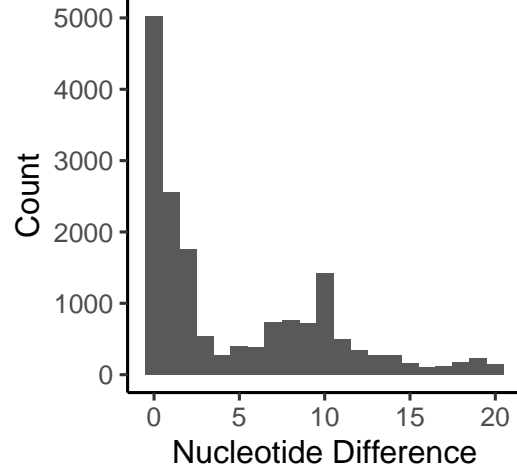


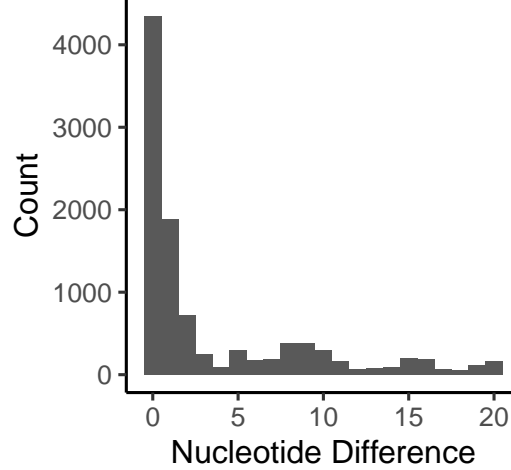
IGHV1-2*02

19294 sequences assigned
5021 (26%) exact matches, in which:
4714 unique CDR3
6 unique J



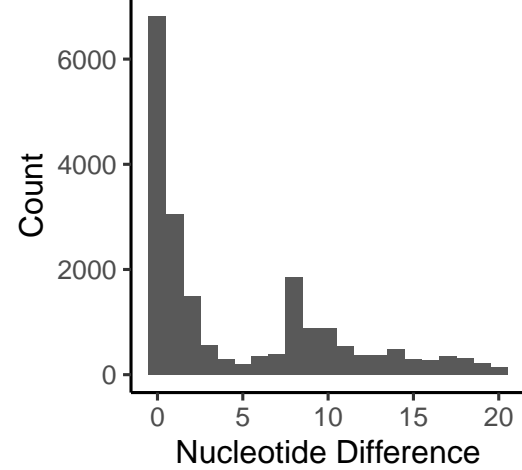
IGHV1-8*01

10510 sequences assigned
4344 (41.3%) exact matches, in which:
4083 unique CDR3
6 unique J



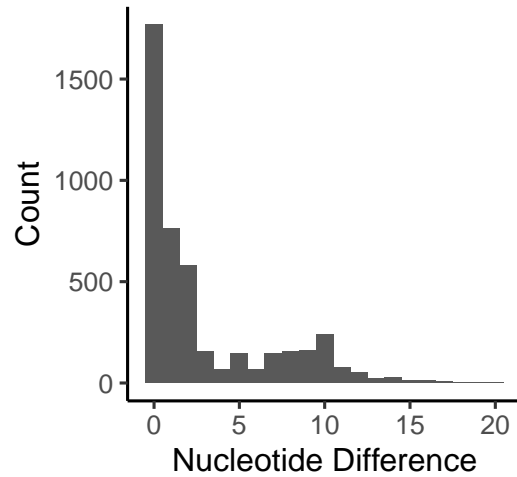
IGHV1-18*04

21130 sequences assigned
6812 (32.2%) exact matches, in which:
6407 unique CDR3
6 unique J



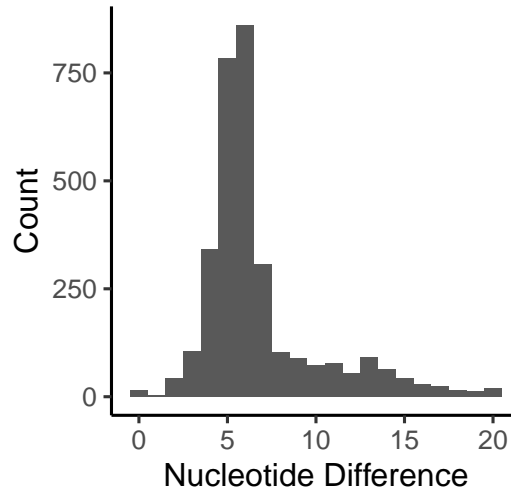
IGHV1-2*04

4502 sequences assigned
1768 (39.3%) exact matches, in which:
1663 unique CDR3
6 unique J



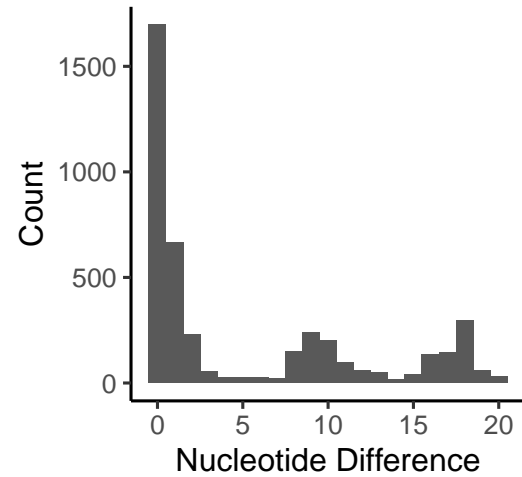
IGHV1-8*02

3260 sequences assigned
16 (0.5%) exact matches, in which:
16 unique CDR3
4 unique J



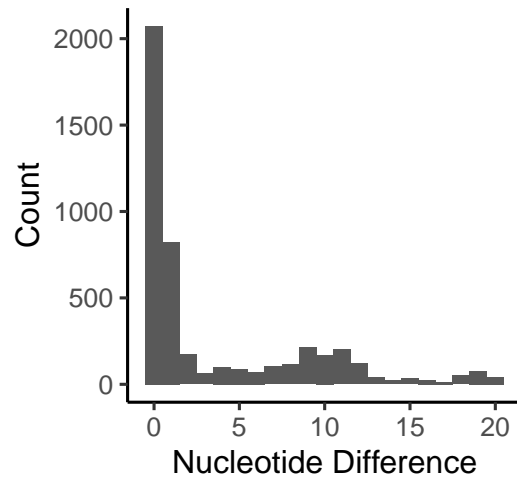
IGHV1-24*01

4685 sequences assigned
1697 (36.2%) exact matches, in which:
1594 unique CDR3
6 unique J



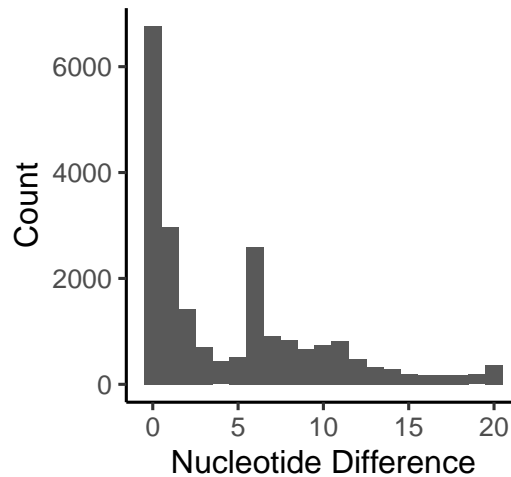
IGHV1-3*01_05

5883 sequences assigned
2073 (35.2%) exact matches, in which:
1893 unique CDR3
6 unique J



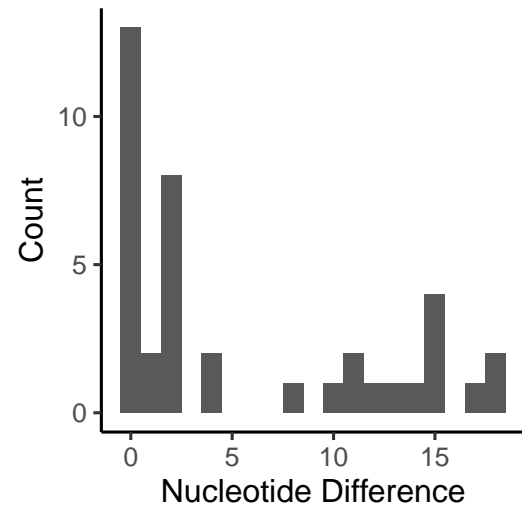
IGHV1-18*01

23742 sequences assigned
6767 (28.5%) exact matches, in which:
6382 unique CDR3
6 unique J



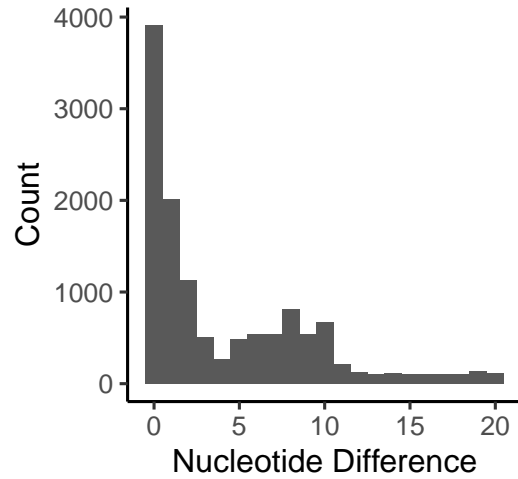
IGHV1-45*02

39 sequences assigned
13 (33.3%) exact matches, in which:
12 unique CDR3
3 unique J



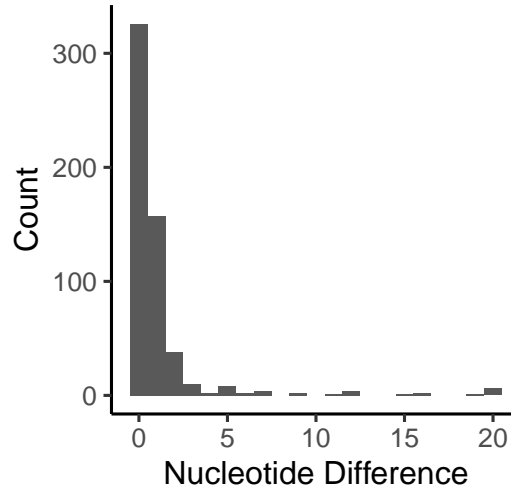
IGHV1-46*01

13769 sequences assigned
3909 (28.4%) exact matches, in which:
3694 unique CDR3
6 unique J



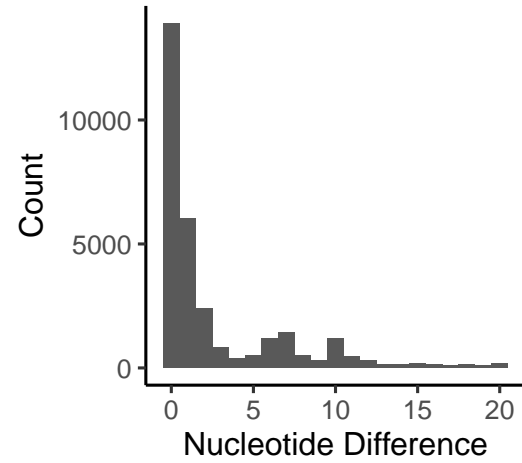
IGHV1-58*01_03

573 sequences assigned
326 (56.9%) exact matches, in which:
311 unique CDR3
6 unique J



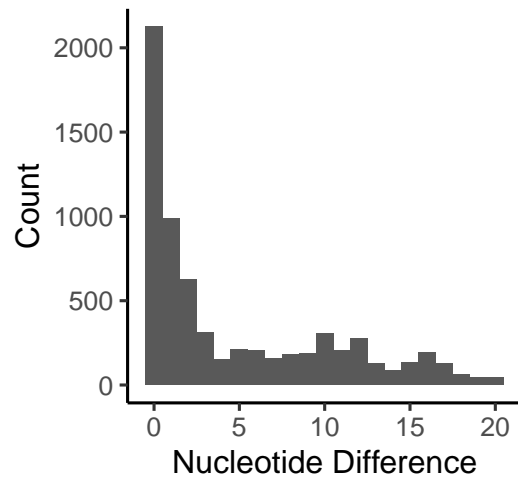
IGHV1-69*01_12_13

32195 sequences assigned
13906 (43.2%) exact matches, in which:
13046 unique CDR3
6 unique J



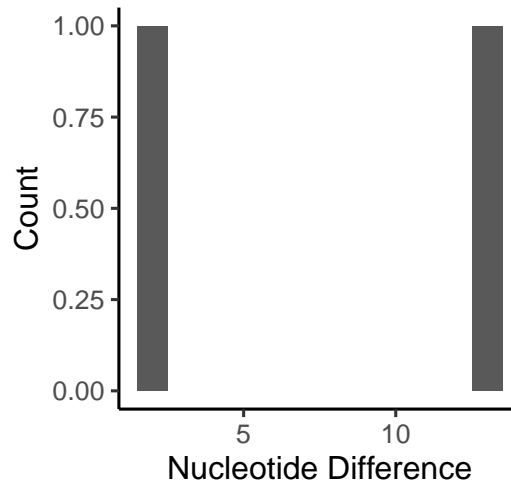
IGHV1-46*04

7446 sequences assigned
2125 (28.5%) exact matches, in which:
2015 unique CDR3
6 unique J



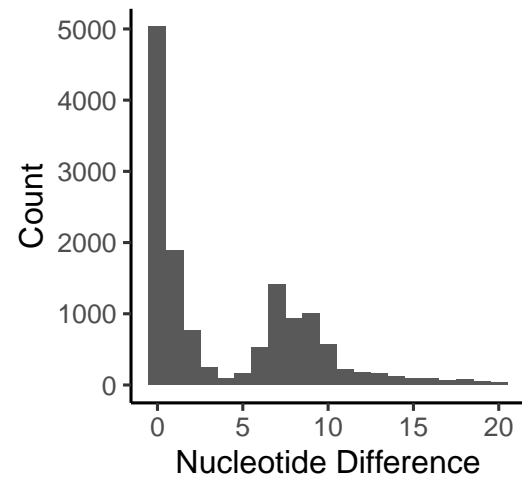
IGHV1-68*01

2 sequences assigned
No exact matches.



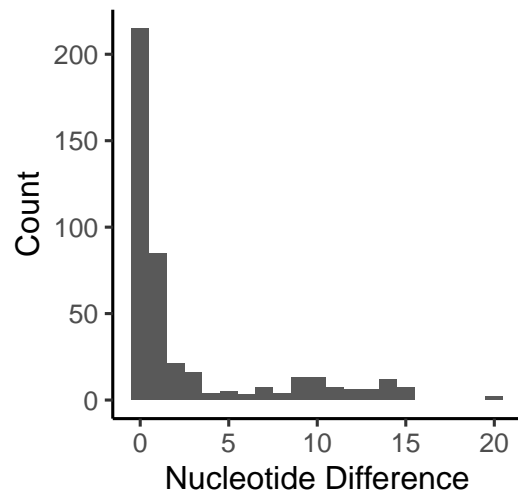
IGHV1-69*06_14

14336 sequences assigned
5031 (35.1%) exact matches, in which:
4790 unique CDR3
6 unique J



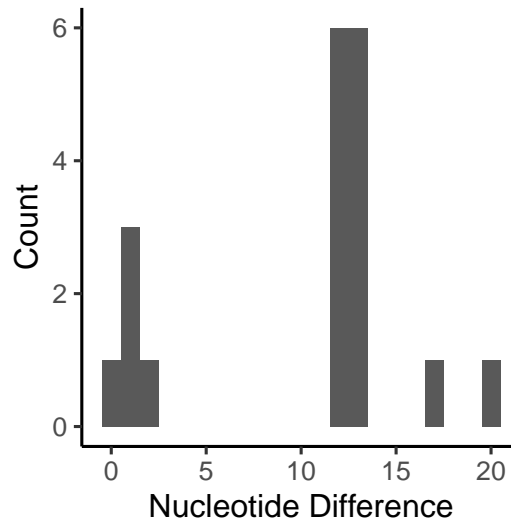
IGHV1-58*02

434 sequences assigned
215 (49.5%) exact matches, in which:
207 unique CDR3
6 unique J



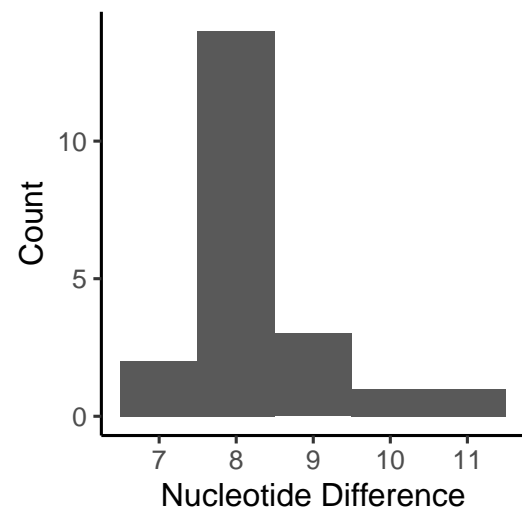
IGHV1-69-2*01

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



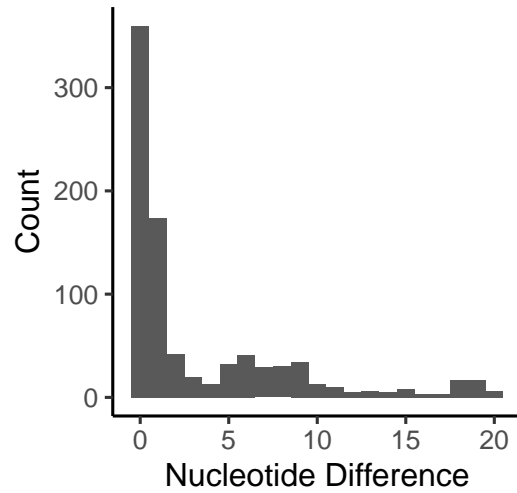
IGHV1-NL1*01

21 sequences assigned
No exact matches.



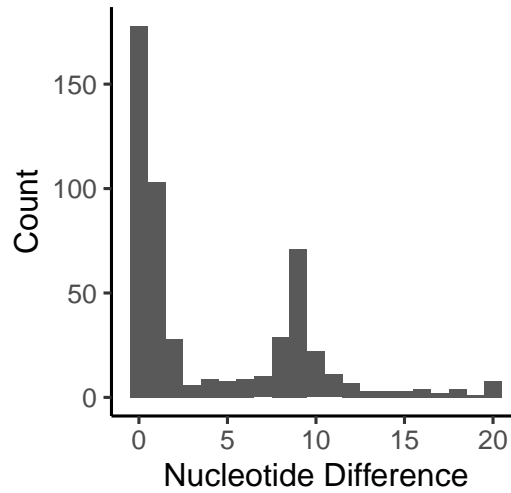
IGHV2-5*01

1034 sequences assigned
360 (34.8%) exact matches, in which:
336 unique CDR3
6 unique J



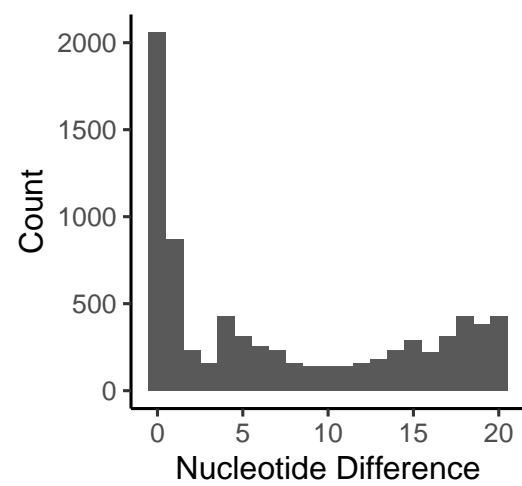
IGHV2-70*01

642 sequences assigned
178 (27.7%) exact matches, in which:
165 unique CDR3
6 unique J



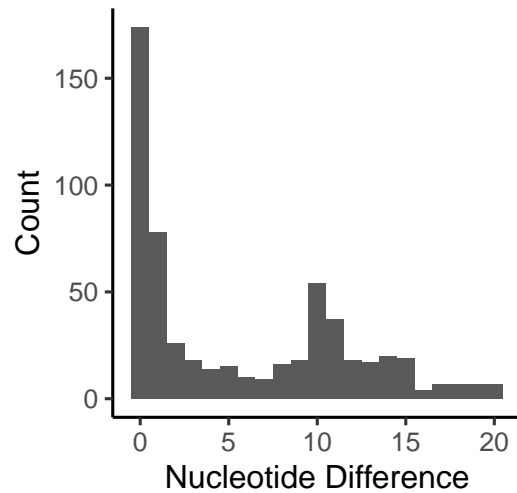
IGHV3-7*03

10361 sequences assigned
2059 (19.9%) exact matches, in which:
1603 unique CDR3
6 unique J



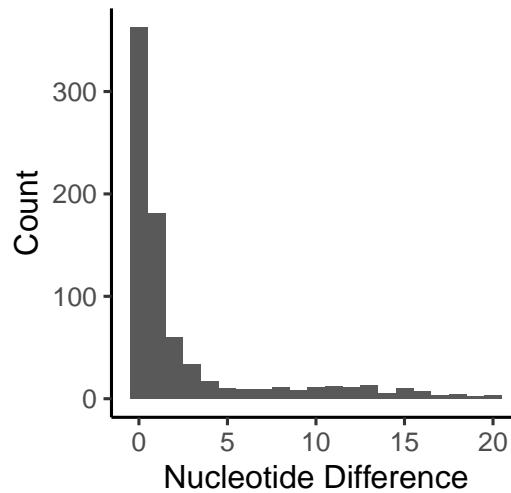
IGHV2-5*02

748 sequences assigned
174 (23.3%) exact matches, in which:
166 unique CDR3
6 unique J



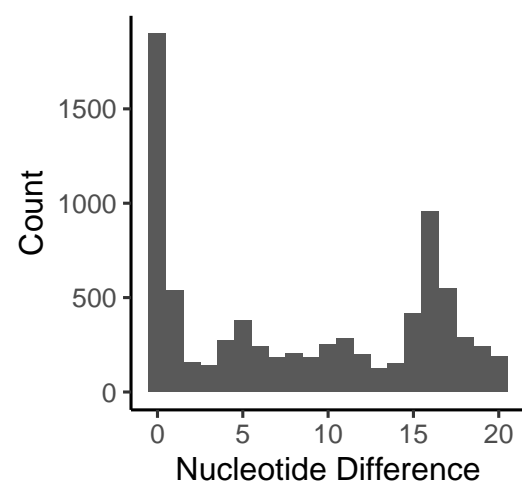
IGHV2-70*11_15

808 sequences assigned
363 (44.9%) exact matches, in which:
338 unique CDR3
5 unique J



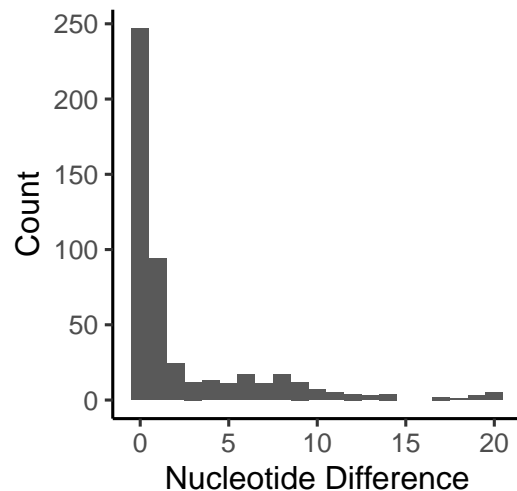
IGHV3-9*01

9417 sequences assigned
1898 (20.2%) exact matches, in which:
1429 unique CDR3
6 unique J



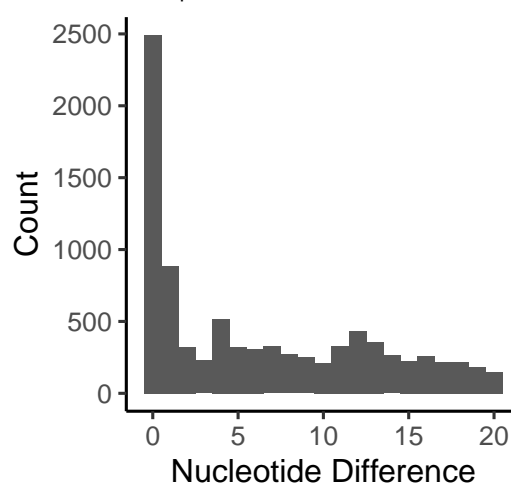
IGHV2-26*01

522 sequences assigned
247 (47.3%) exact matches, in which:
236 unique CDR3
5 unique J



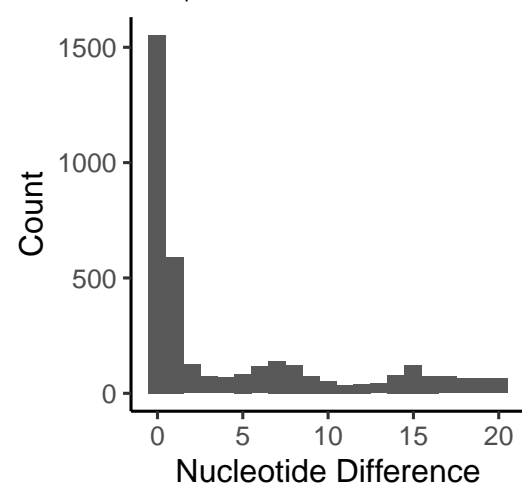
IGHV3-7*01

10604 sequences assigned
2492 (23.5%) exact matches, in which:
2037 unique CDR3
6 unique J



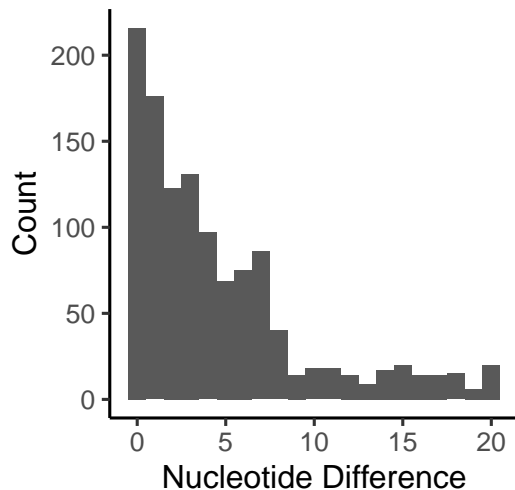
IGHV3-11*01

5995 sequences assigned
1553 (25.9%) exact matches, in which:
1236 unique CDR3
6 unique J



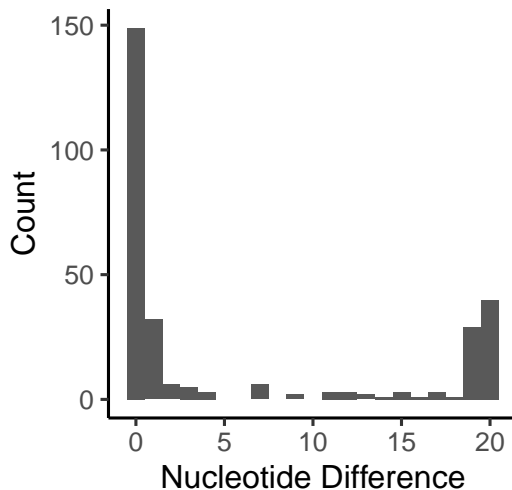
IGHV3-11*04

1319 sequences assigned
216 (16.4%) exact matches, in which:
214 unique CDR3
6 unique J



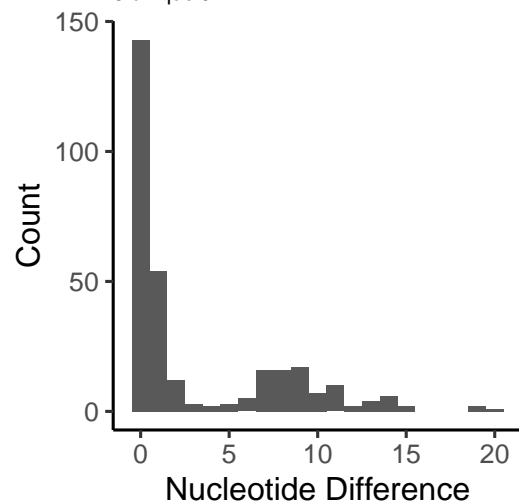
IGHV3-13*05

311 sequences assigned
149 (47.9%) exact matches, in which:
111 unique CDR3
5 unique J



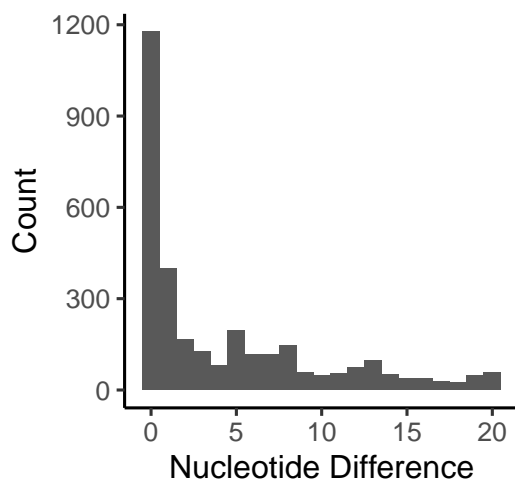
IGHV3-20*01_02

362 sequences assigned
143 (39.5%) exact matches, in which:
110 unique CDR3
5 unique J



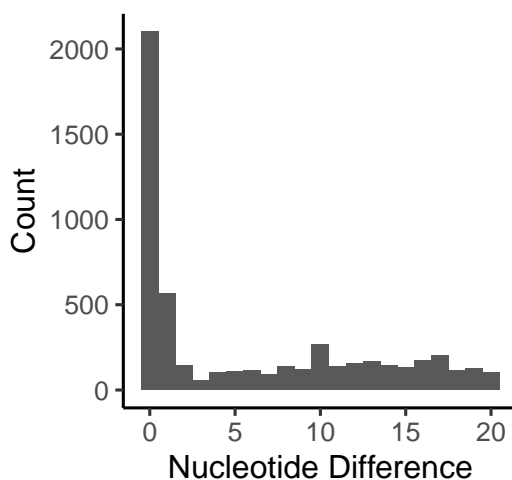
IGHV3-11*06

3763 sequences assigned
1177 (31.3%) exact matches, in which:
948 unique CDR3
6 unique J



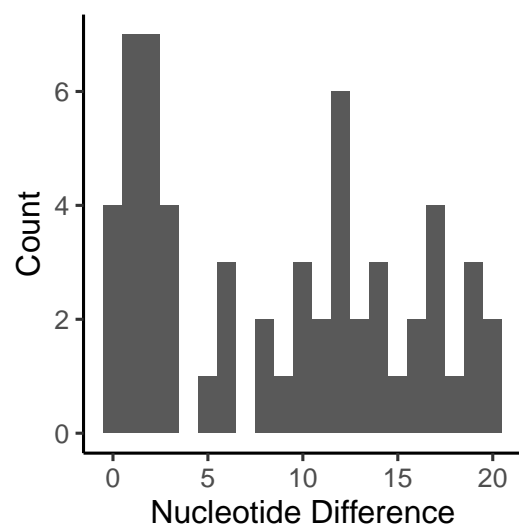
IGHV3-15*01_02

6369 sequences assigned
2101 (33%) exact matches, in which:
1700 unique CDR3
6 unique J



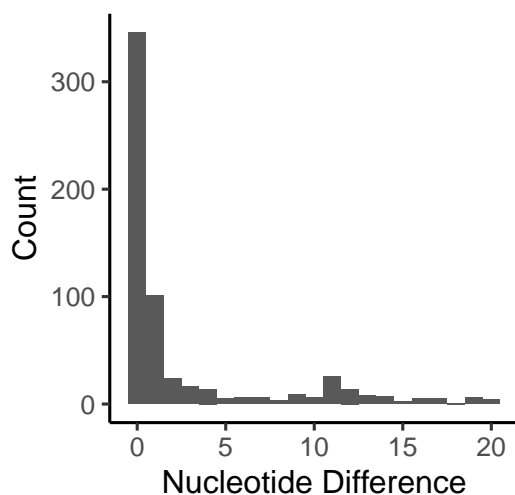
IGHV3-20*03_04

211 sequences assigned
4 (1.9%) exact matches, in which:
4 unique CDR3
3 unique J



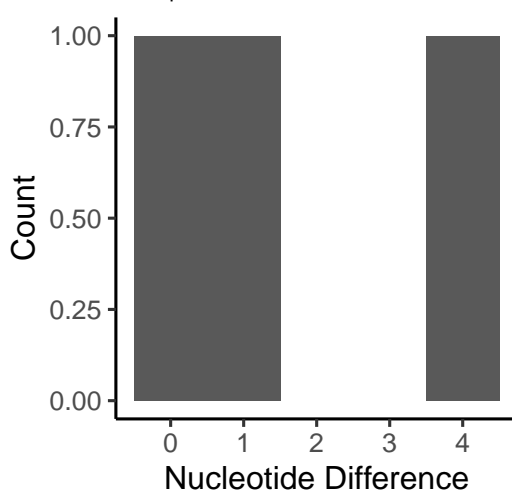
IGHV3-13*01

917 sequences assigned
346 (37.7%) exact matches, in which:
264 unique CDR3
5 unique J



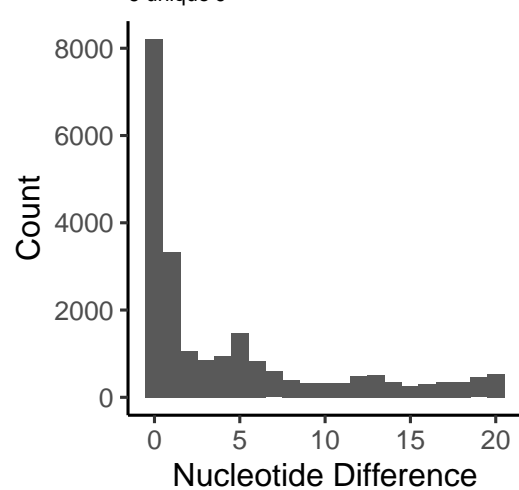
IGHV3-19*01

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



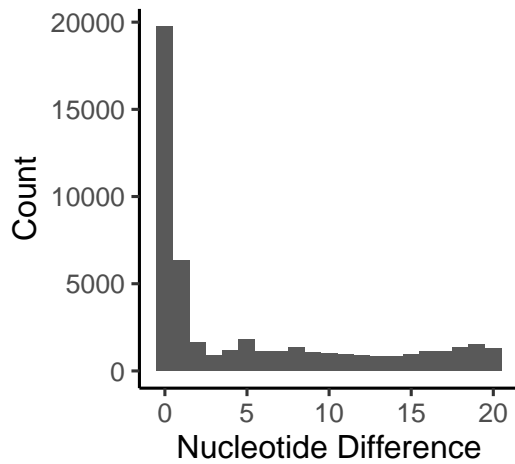
IGHV3-21*01_02

26155 sequences assigned
8211 (31.4%) exact matches, in which:
6184 unique CDR3
6 unique J



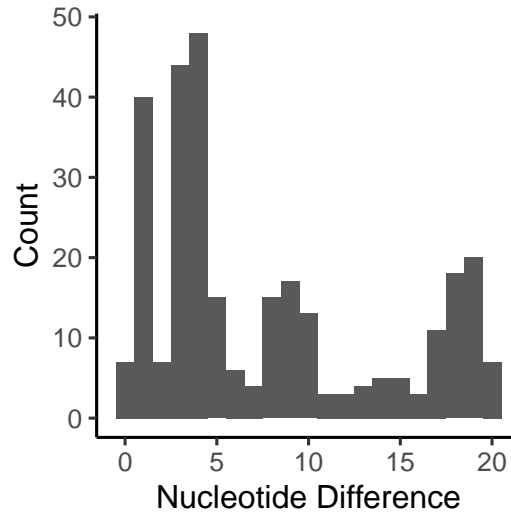
IGHV3-23*01_04

58346 sequences assigned
19771 (33.9%) exact matches, in which:
13715 unique CDR3
6 unique J



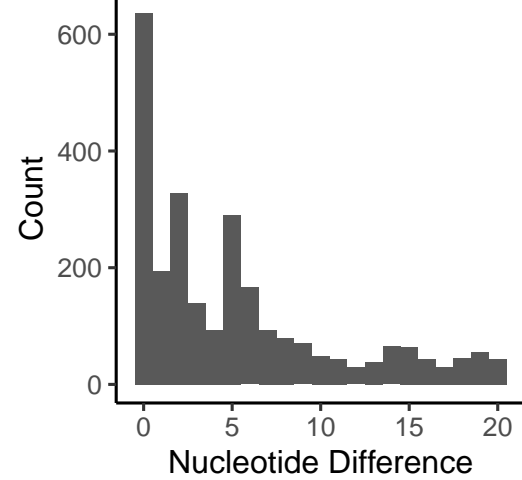
IGHV3-30*04

985 sequences assigned
7 (0.7%) exact matches, in which:
7 unique CDR3
4 unique J



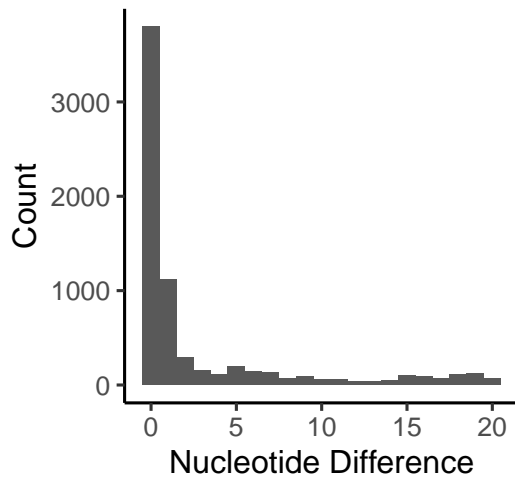
IGHV3-33*08

3161 sequences assigned
637 (20.2%) exact matches, in which:
603 unique CDR3
6 unique J



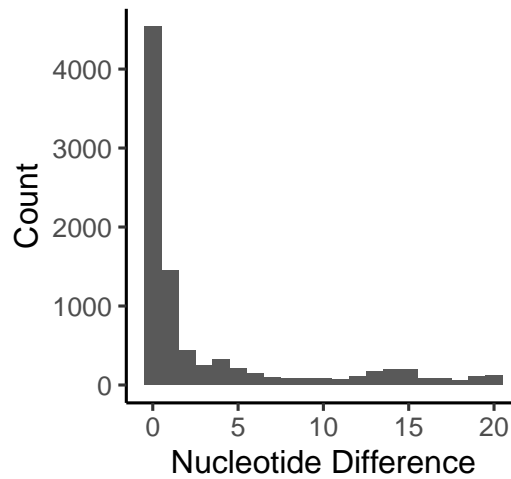
IGHV3-30-3*01

8530 sequences assigned
3797 (44.5%) exact matches, in which:
2980 unique CDR3
6 unique J



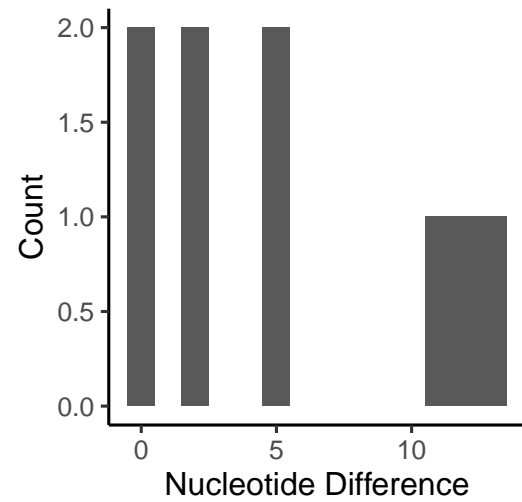
IGHV3-33*01

10391 sequences assigned
4536 (43.7%) exact matches, in which:
3685 unique CDR3
6 unique J



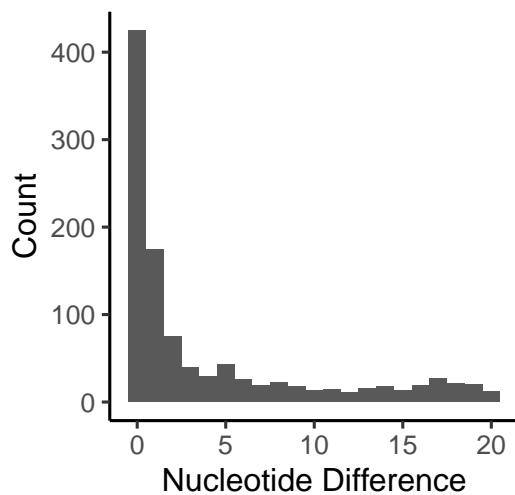
IGHV3-35*01

9 sequences assigned
2 (22.2%) exact matches, in which:
2 unique CDR3
2 unique J



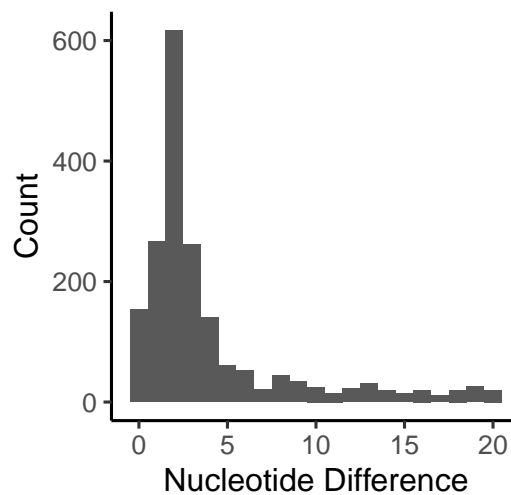
IGHV3-30*03

1481 sequences assigned
425 (28.7%) exact matches, in which:
410 unique CDR3
6 unique J



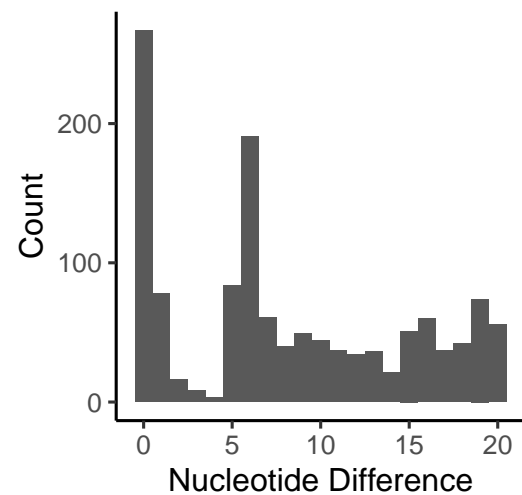
IGHV3-33*06

2044 sequences assigned
154 (7.5%) exact matches, in which:
146 unique CDR3
5 unique J



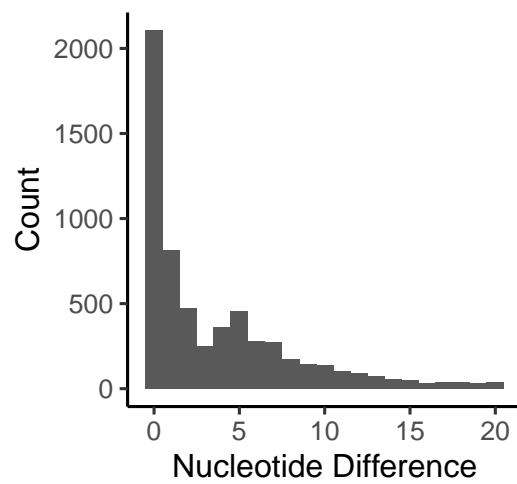
IGHV3-43*01

1859 sequences assigned
267 (14.4%) exact matches, in which:
204 unique CDR3
6 unique J



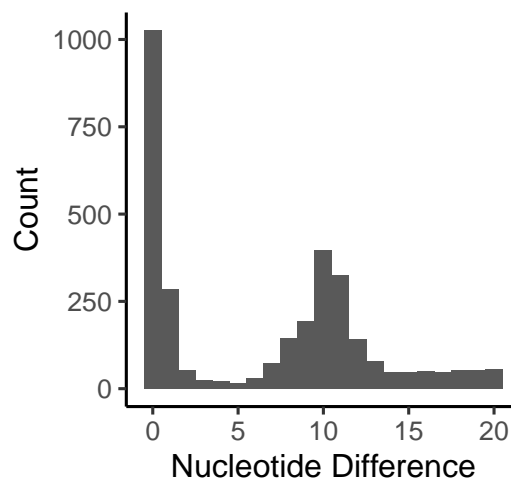
IGHV3-48*01

6726 sequences assigned
2106 (31.3%) exact matches, in which:
1679 unique CDR3
6 unique J



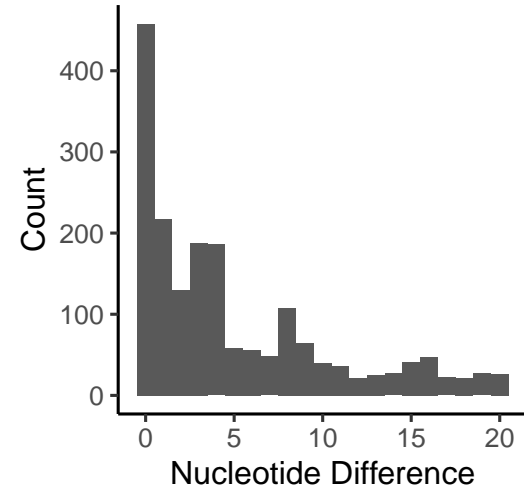
IGHV3-49*03_05

3506 sequences assigned
1026 (29.3%) exact matches, in which:
818 unique CDR3
6 unique J



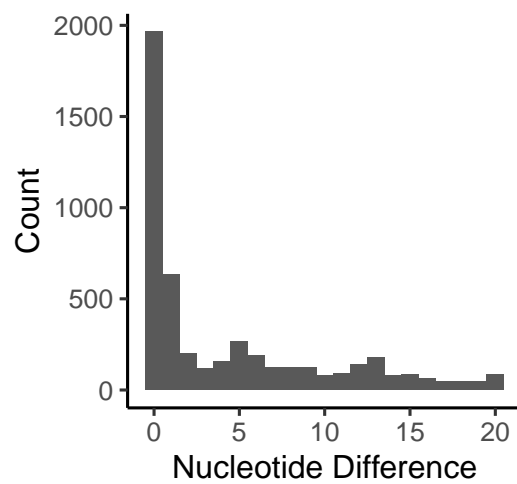
IGHV3-53*01_02

2142 sequences assigned
458 (21.4%) exact matches, in which:
364 unique CDR3
6 unique J



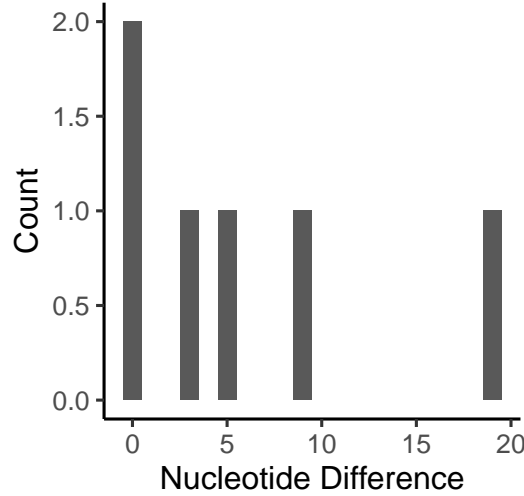
IGHV3-48*02

5997 sequences assigned
1965 (32.8%) exact matches, in which:
1460 unique CDR3
6 unique J



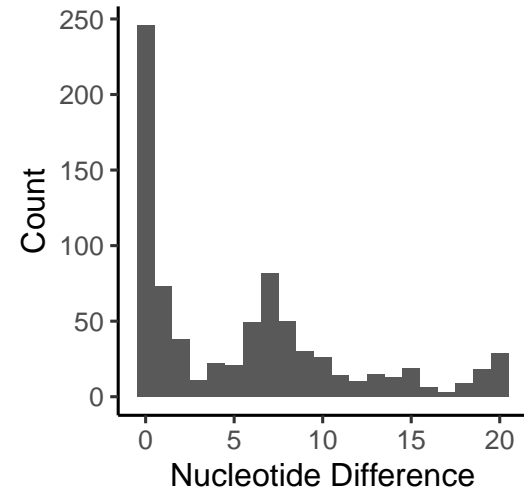
IGHV3-52*01_03

6 sequences assigned
2 (33.3%) exact matches, in which:
2 unique CDR3
2 unique J



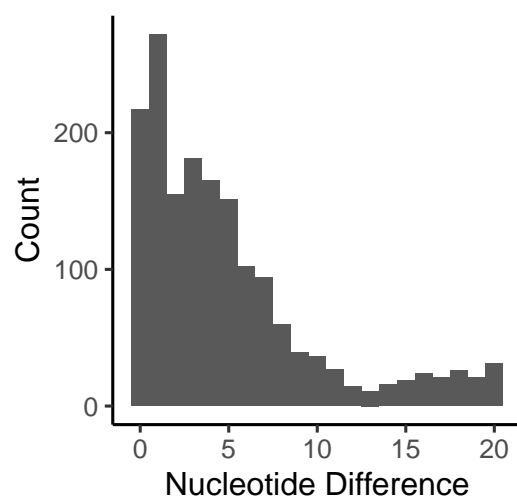
IGHV3-64*01

832 sequences assigned
246 (29.6%) exact matches, in which:
184 unique CDR3
6 unique J



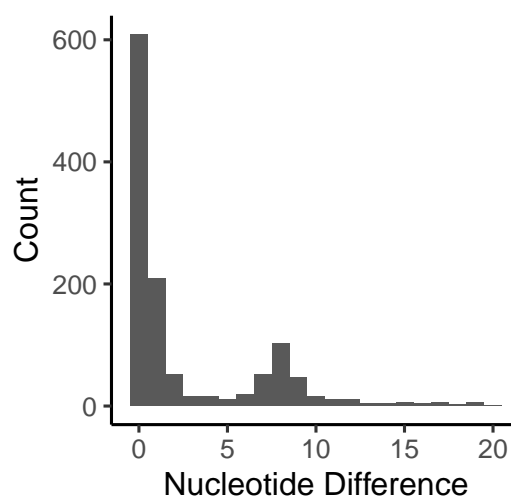
IGHV3-48*04

2118 sequences assigned
217 (10.2%) exact matches, in which:
217 unique CDR3
6 unique J



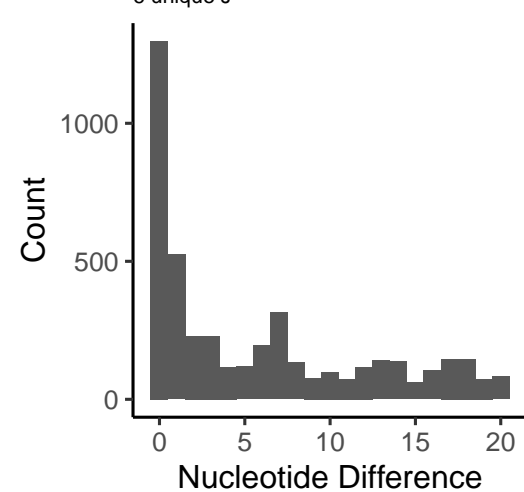
IGHV3-53*04

1229 sequences assigned
609 (49.6%) exact matches, in which:
493 unique CDR3
6 unique J



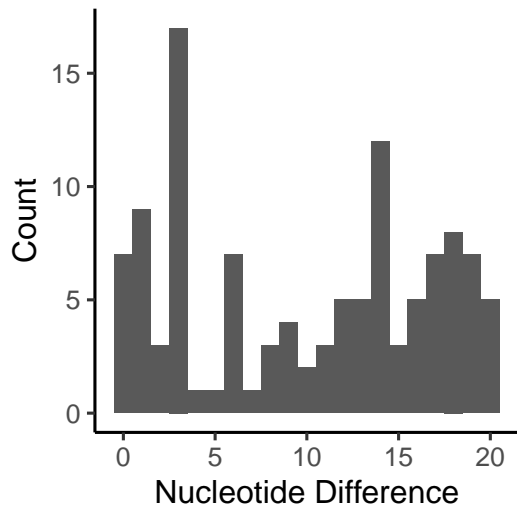
IGHV3-66*01

7015 sequences assigned
1298 (18.5%) exact matches, in which:
1028 unique CDR3
6 unique J



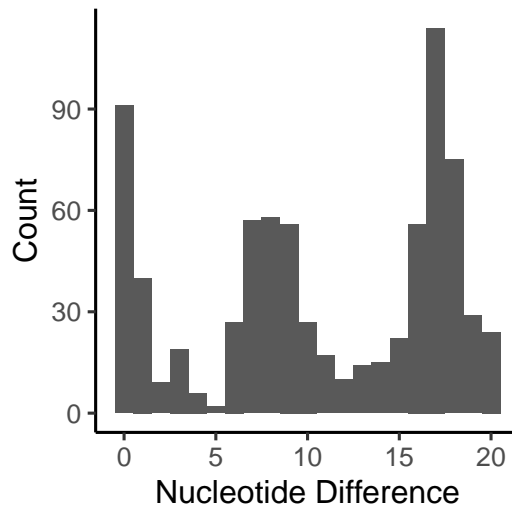
IGHV3-69-1*01

399 sequences assigned
7 (1.8%) exact matches, in which:
7 unique CDR3
3 unique J



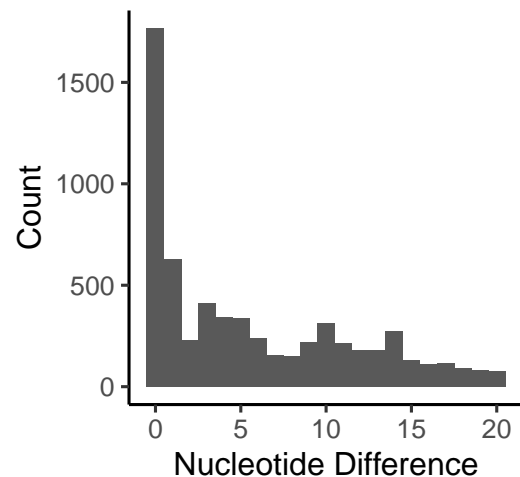
IGHV3-72*01

1035 sequences assigned
91 (8.8%) exact matches, in which:
71 unique CDR3
5 unique J



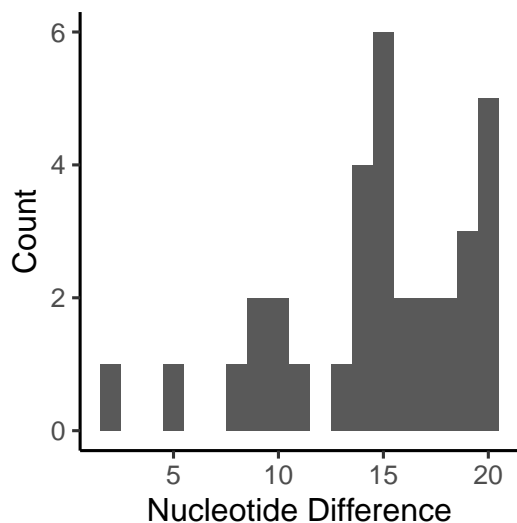
IGHV3-74*01_02

7650 sequences assigned
1766 (23.1%) exact matches, in which:
1325 unique CDR3
6 unique J



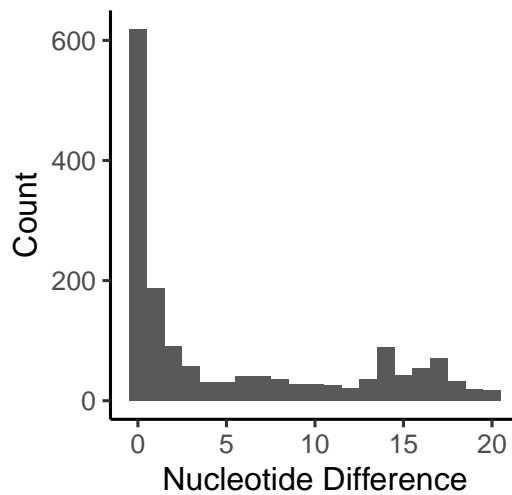
IGHV3-69-1*02

47 sequences assigned
No exact matches.



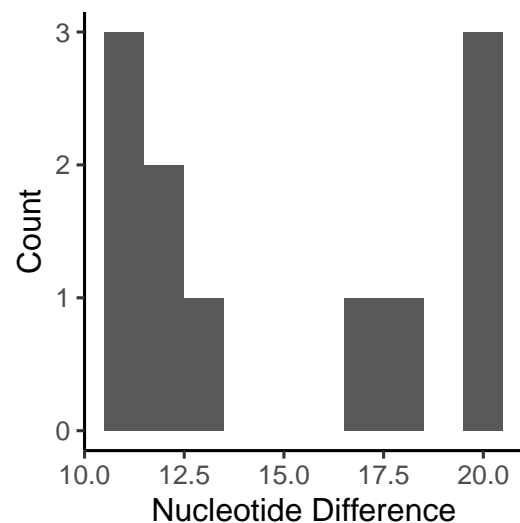
IGHV3-73*01_02

1683 sequences assigned
619 (36.8%) exact matches, in which:
486 unique CDR3
5 unique J



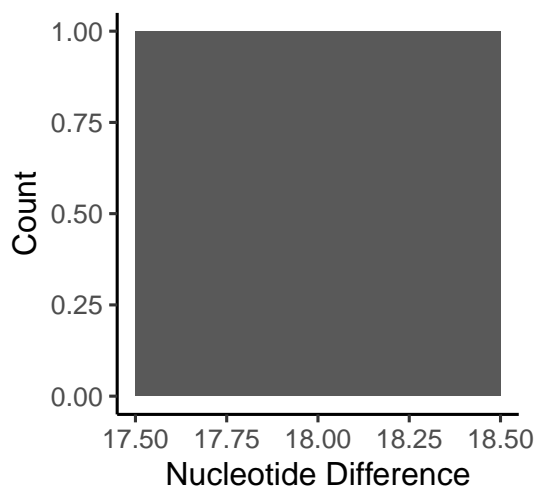
IGHV3-43D*04

18 sequences assigned
No exact matches.



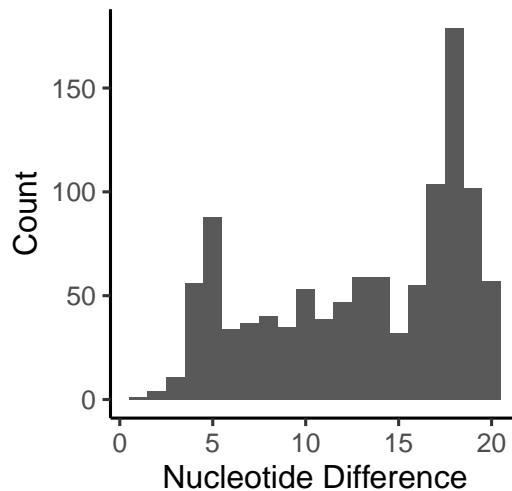
IGHV3-71*01_04

2 sequences assigned
No exact matches.



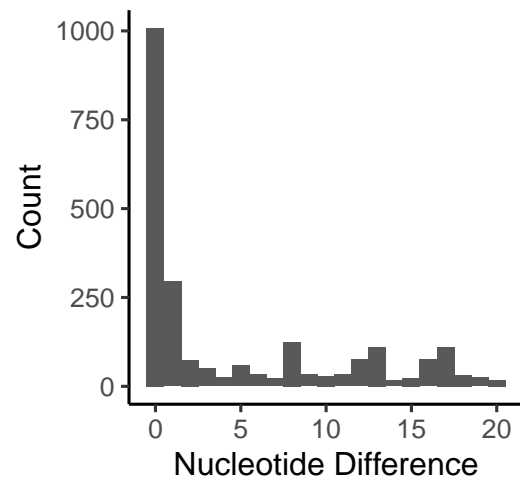
IGHV3-74*03

3008 sequences assigned
No exact matches.



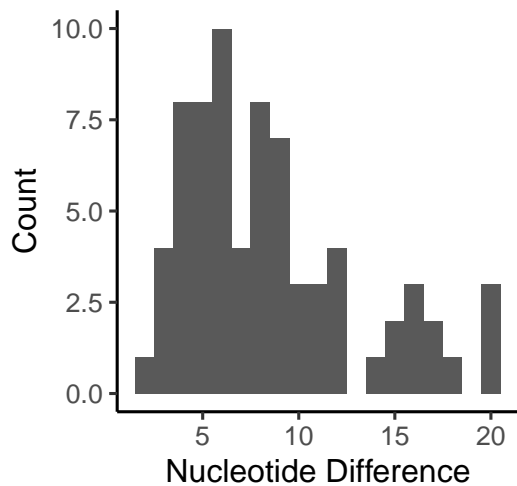
IGHV3-64D*06

2704 sequences assigned
1008 (37.3%) exact matches, in which:
698 unique CDR3
6 unique J



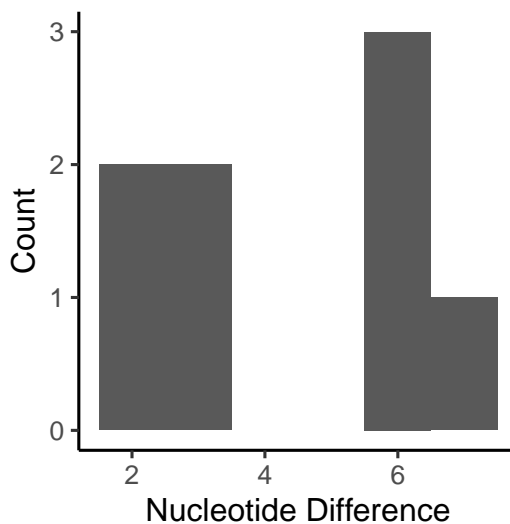
IGHV3-NL1*01

107 sequences assigned
No exact matches.



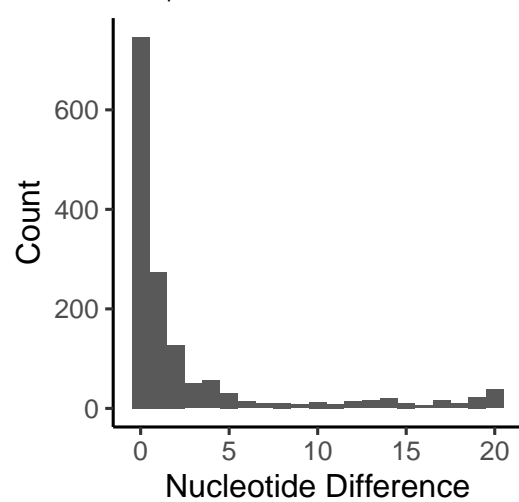
IGHV4-28*03

8 sequences assigned
No exact matches.



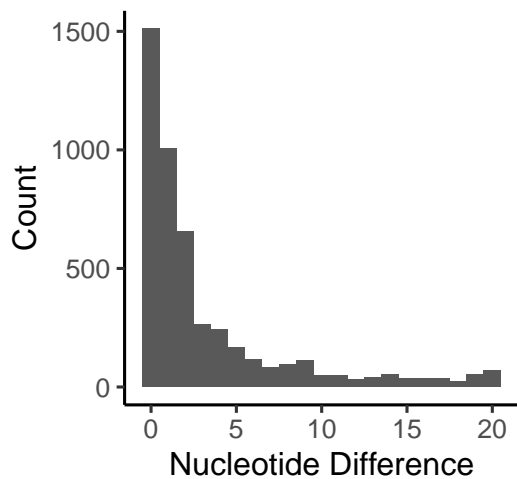
IGHV4-30-2*01

1663 sequences assigned
747 (44.9%) exact matches, in which:
680 unique CDR3
6 unique J



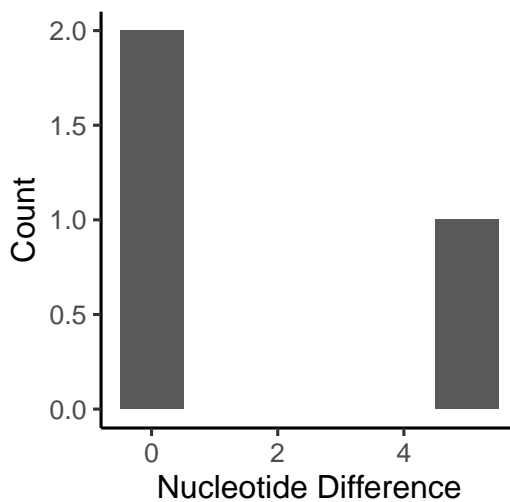
IGHV4-4*07

4952 sequences assigned
1511 (30.5%) exact matches, in which:
1404 unique CDR3
6 unique J



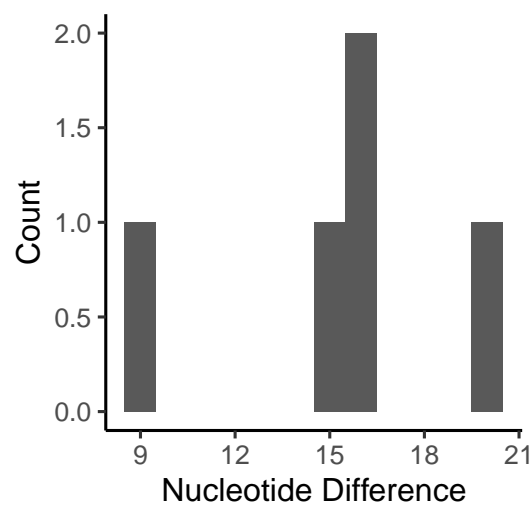
IGHV4-28*01_07

3 sequences assigned
2 (66.7%) exact matches, in which:
2 unique CDR3
2 unique J



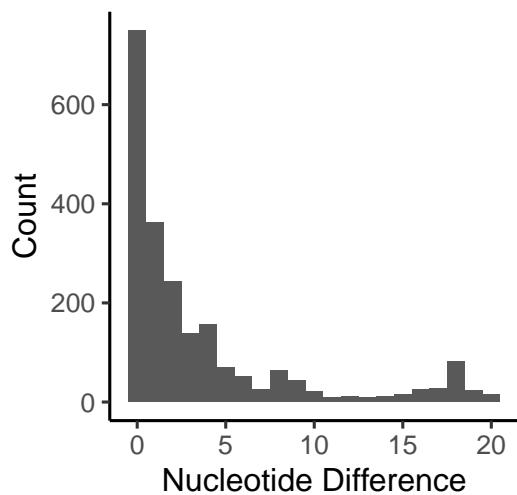
IGHV4-30-4*01

8 sequences assigned
No exact matches.



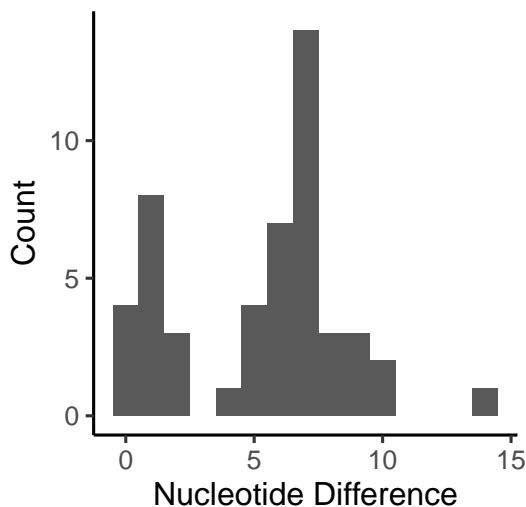
IGHV4-4*02_03

2438 sequences assigned
750 (30.8%) exact matches, in which:
714 unique CDR3
6 unique J



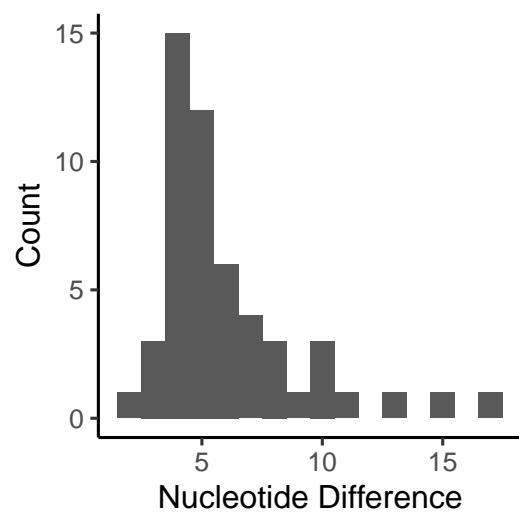
IGHV4-28*02_05

50 sequences assigned
4 (8%) exact matches, in which:
4 unique CDR3
3 unique J



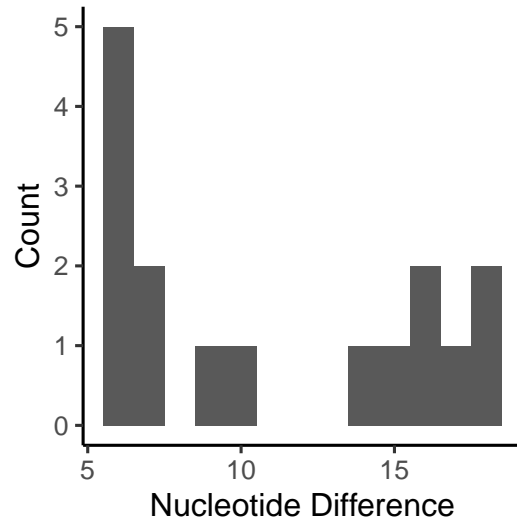
IGHV4-30-4*07

53 sequences assigned
No exact matches.



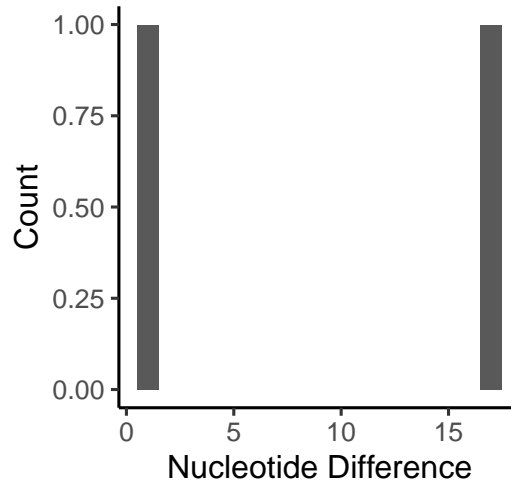
IGHV4-30-4*08

22 sequences assigned
No exact matches.



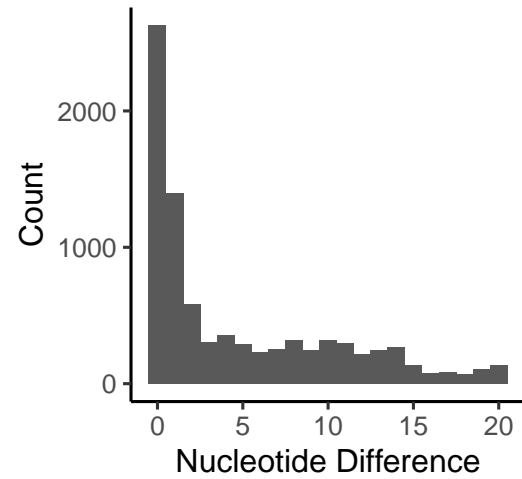
IGHV4-38-2*01

5 sequences assigned
No exact matches.



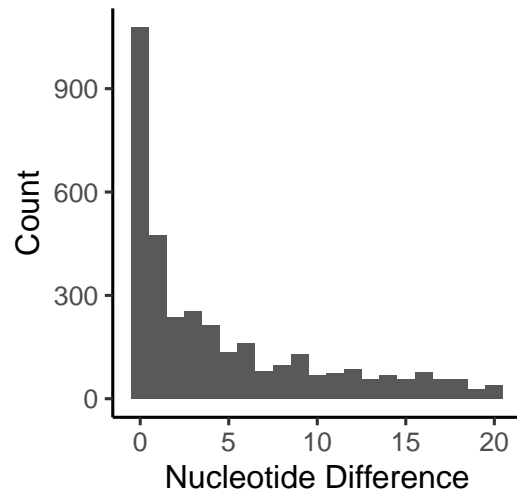
IGHV4-59*08

9904 sequences assigned
2627 (26.5%) exact matches, in which:
2457 unique CDR3
6 unique J



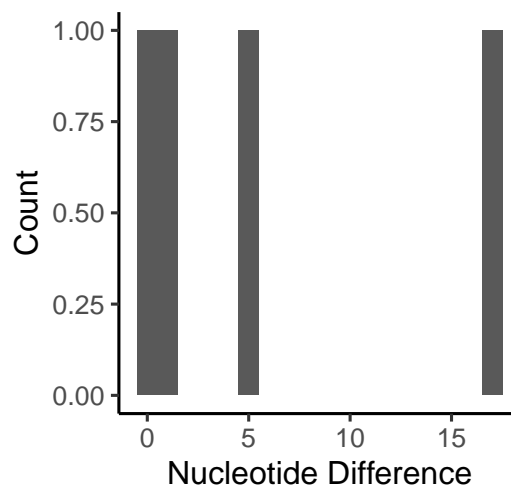
IGHV4-31*02

4408 sequences assigned
1079 (24.5%) exact matches, in which:
1029 unique CDR3
6 unique J



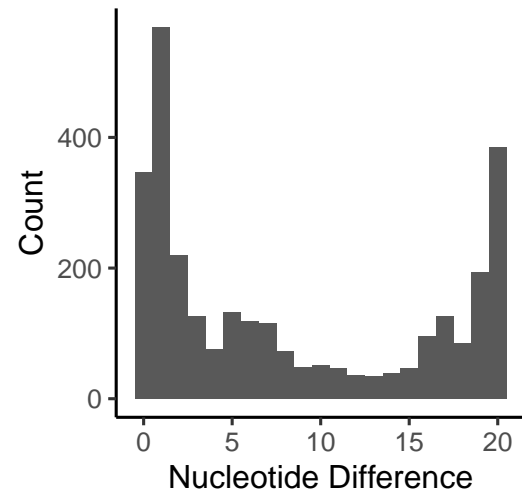
IGHV4-38-2*02

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



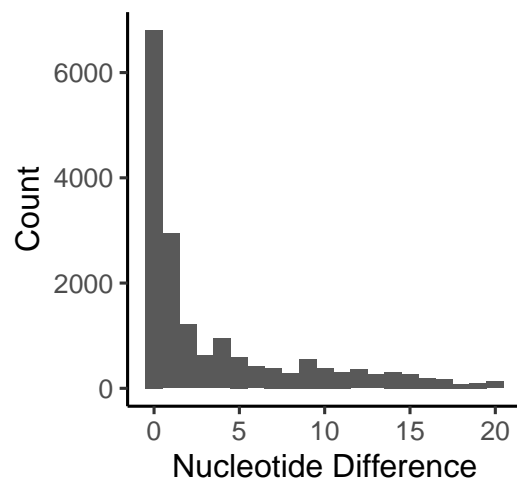
IGHV4-59*12

3816 sequences assigned
346 (9.1%) exact matches, in which:
344 unique CDR3
6 unique J



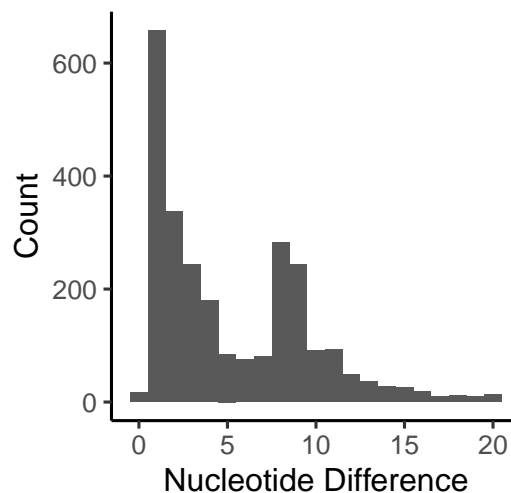
IGHV4-34*01_02

18079 sequences assigned
6808 (37.7%) exact matches, in which:
6357 unique CDR3
6 unique J



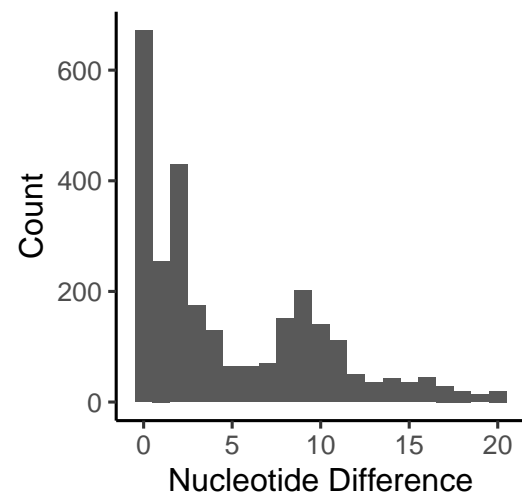
IGHV4-39*07

2723 sequences assigned
17 (0.6%) exact matches, in which:
17 unique CDR3
4 unique J



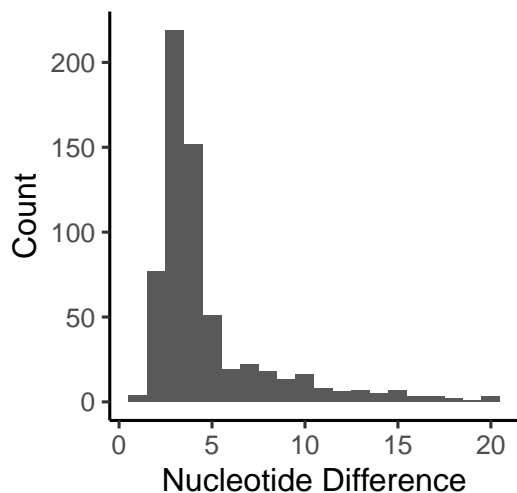
IGHV4-61*01

2865 sequences assigned
672 (23.5%) exact matches, in which:
653 unique CDR3
6 unique J



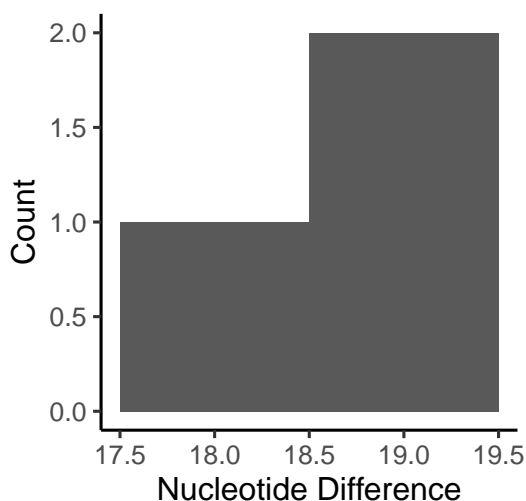
IGHV4-61*05

649 sequences assigned
No exact matches.



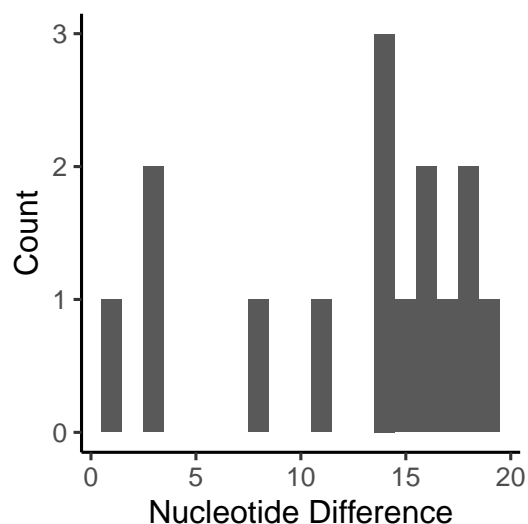
IGHV1/OR15-2*02_03

4 sequences assigned
No exact matches.



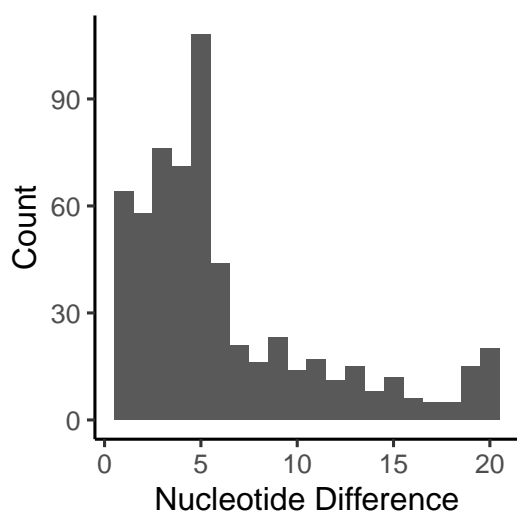
IGHV4/OR15-8*01

23 sequences assigned
No exact matches.



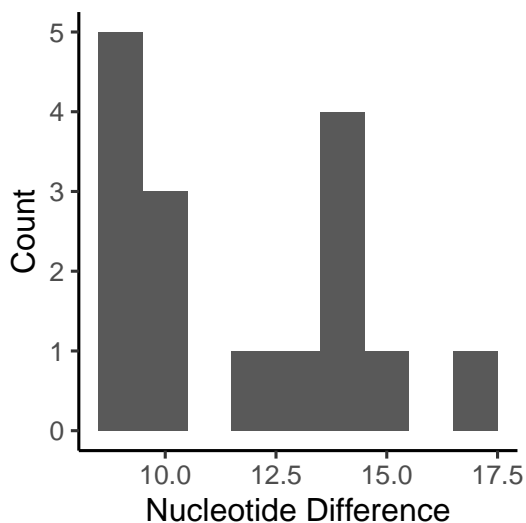
IGHV4-61*08

720 sequences assigned
No exact matches.



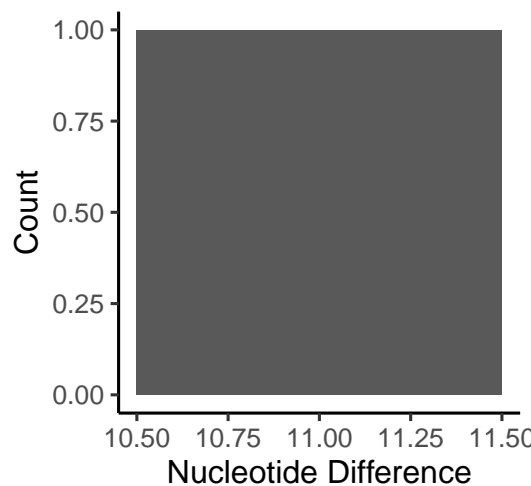
IGHV1/OR15-3*02

19 sequences assigned
No exact matches.



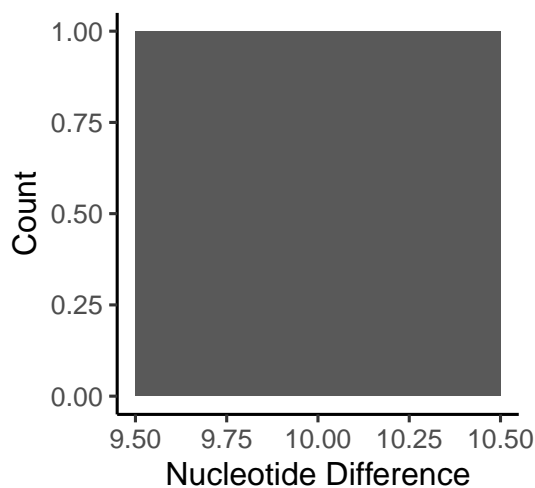
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



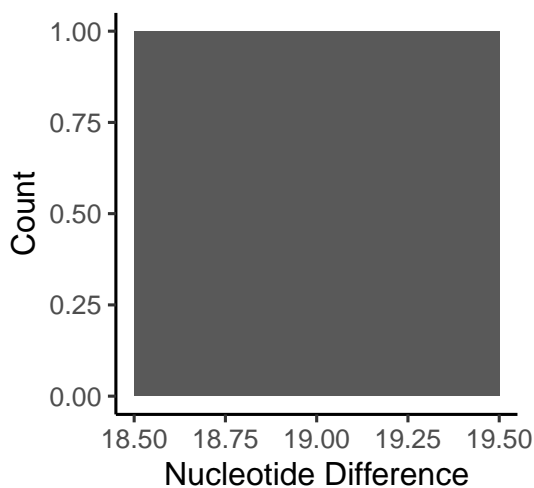
IGHV1/OR15-1*04

10 sequences assigned
No exact matches.



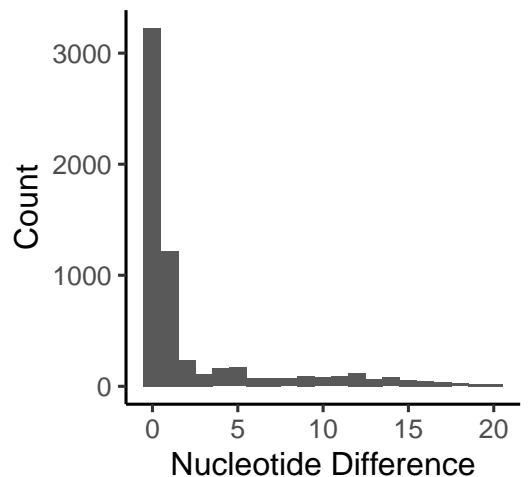
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



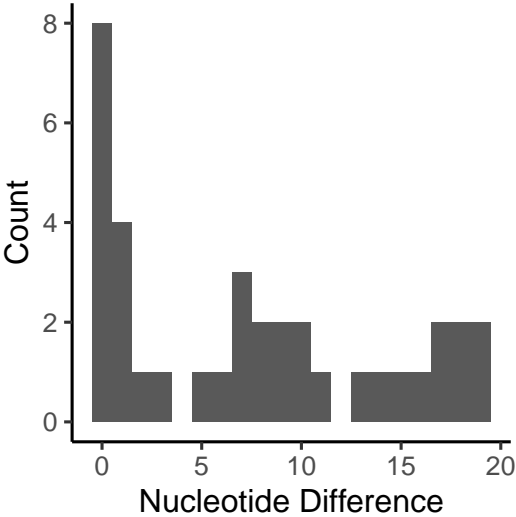
IGHV5-10-1*01_03

6260 sequences assigned
3226 (51.5%) exact matches, in which:
2562 unique CDR3
6 unique J



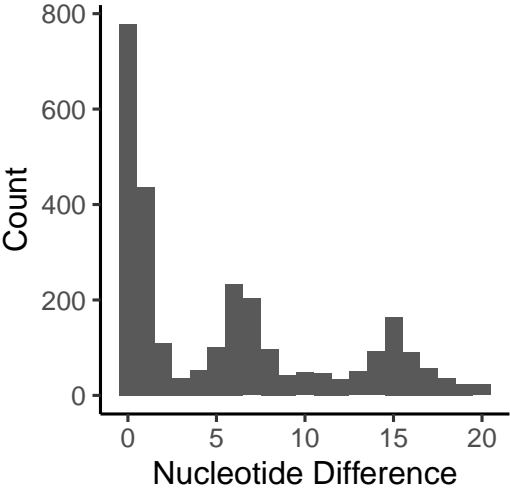
IGHV5–51*04

145 sequences assigned
8 (5.5%) exact matches, in which:
8 unique CDR3
3 unique J



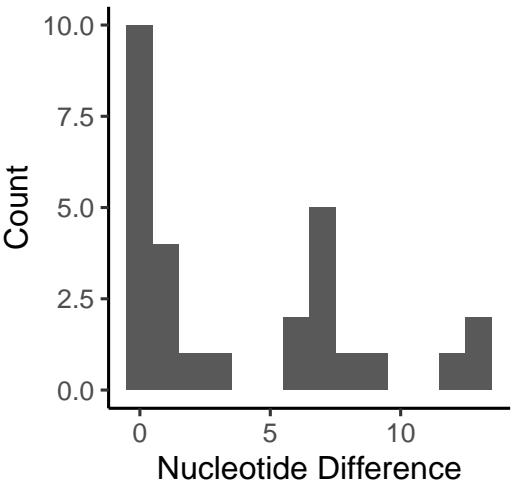
IGHV6–1*01_02

3093 sequences assigned
779 (25.2%) exact matches, in which:
741 unique CDR3
6 unique J



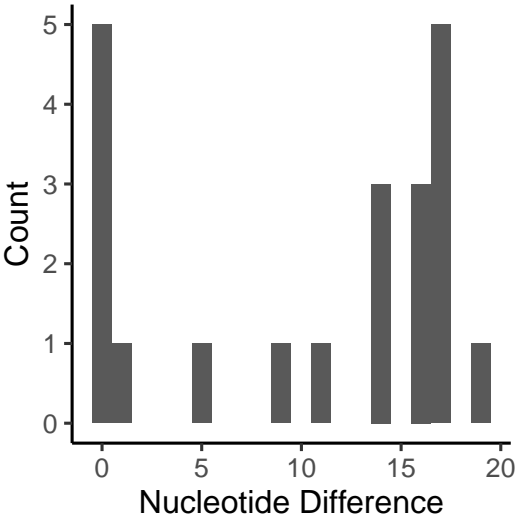
IGHV7–4–1*01

28 sequences assigned
10 (35.7%) exact matches, in which:
10 unique CDR3
4 unique J



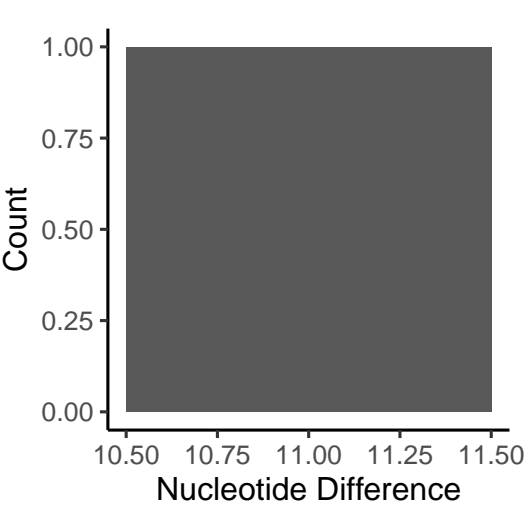
IGHV5–51*06

69 sequences assigned
5 (7.2%) exact matches, in which:
5 unique CDR3
3 unique J



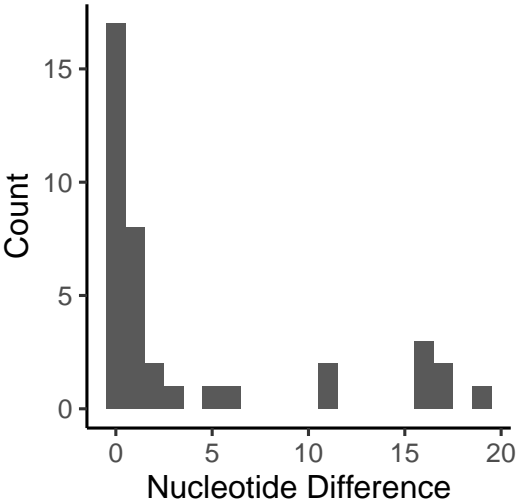
IGHV3/OR16–6*02

1 sequences assigned
No exact matches.



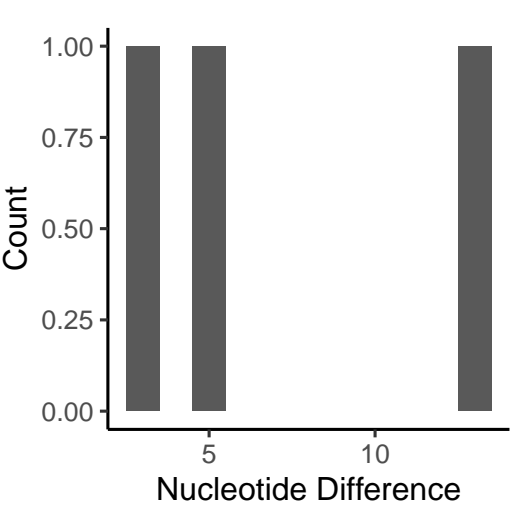
IGHV5–51*07

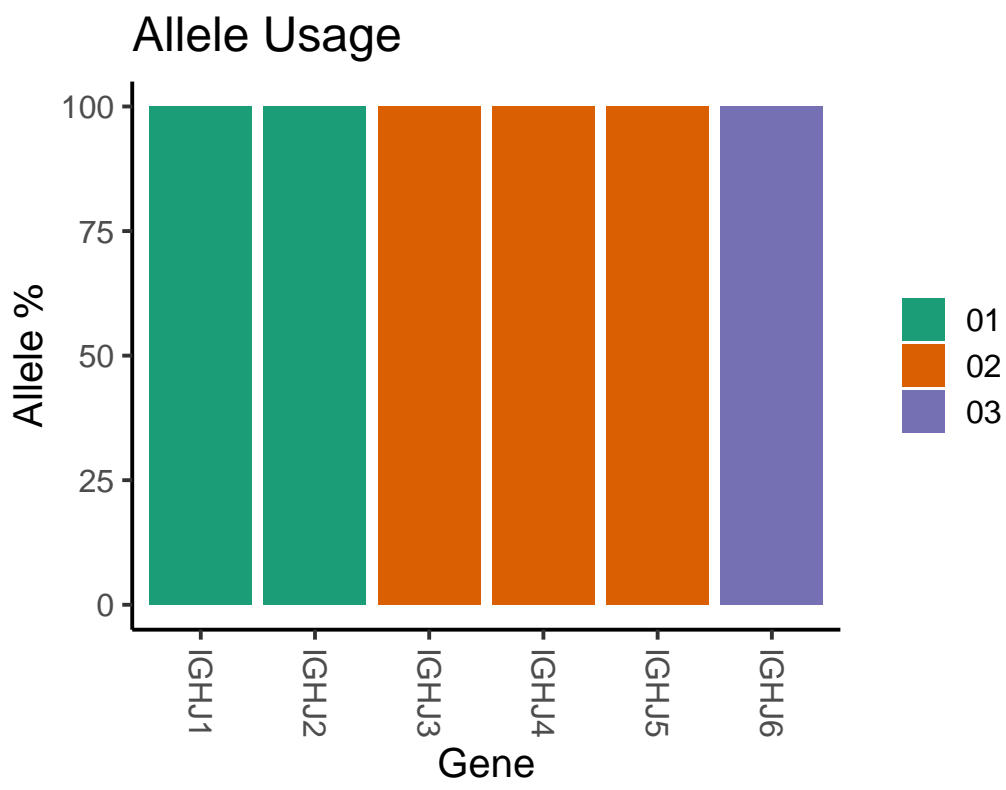
109 sequences assigned
17 (15.6%) exact matches, in which:
17 unique CDR3
3 unique J



IGHV3/OR16–9*01

3 sequences assigned
No exact matches.





[illegible]