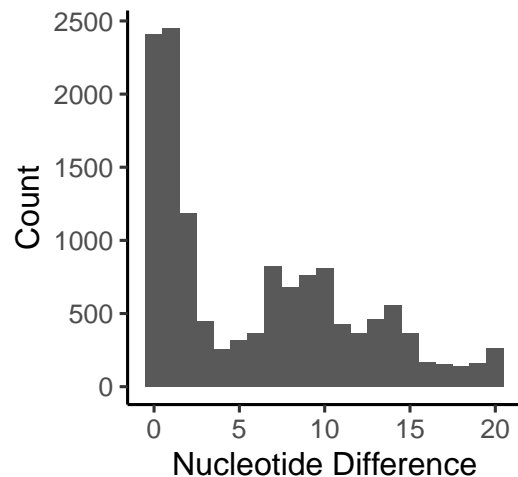


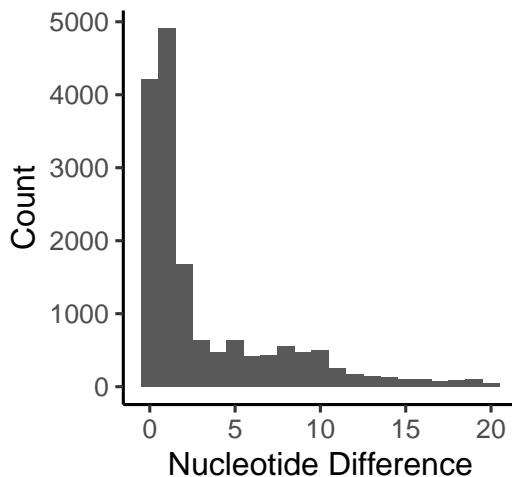
IGHV1-2*02

14718 sequences assigned
2410 (16.4%) exact matches, in which:
1982 unique CDR3
6 unique J



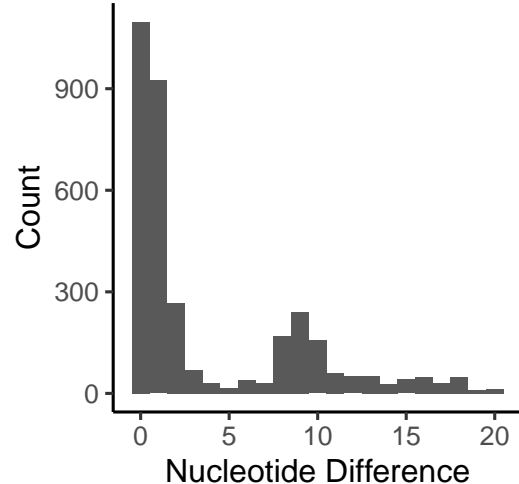
IGHV1-8*01

17284 sequences assigned
4215 (24.4%) exact matches, in which:
3386 unique CDR3
6 unique J



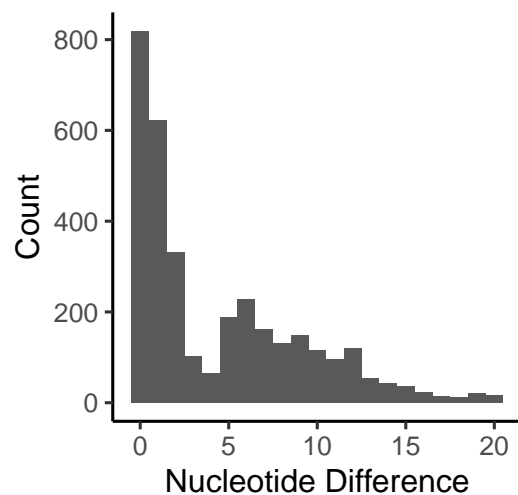
IGHV1-24*01

3513 sequences assigned
1098 (31.3%) exact matches, in which:
908 unique CDR3
6 unique J



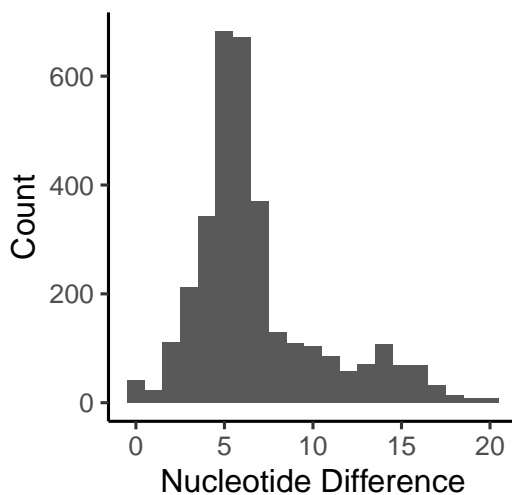
IGHV1-2*04

3438 sequences assigned
819 (23.8%) exact matches, in which:
696 unique CDR3
6 unique J



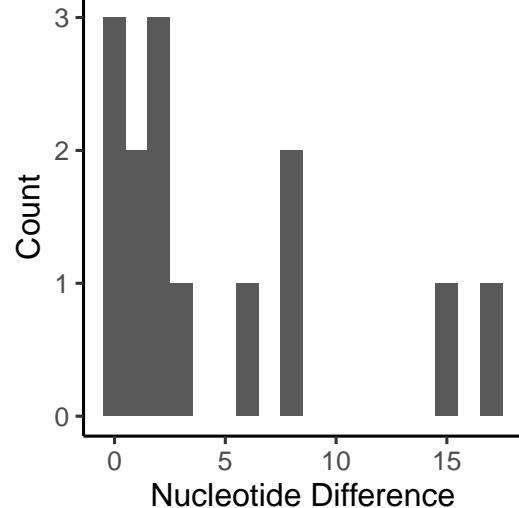
IGHV1-8*02

3412 sequences assigned
42 (1.2%) exact matches, in which:
42 unique CDR3
5 unique J



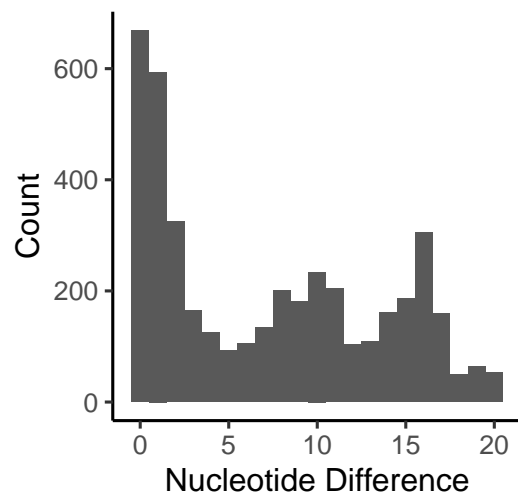
IGHV1-45*02

17 sequences assigned
3 (17.6%) exact matches, in which:
3 unique CDR3
3 unique J



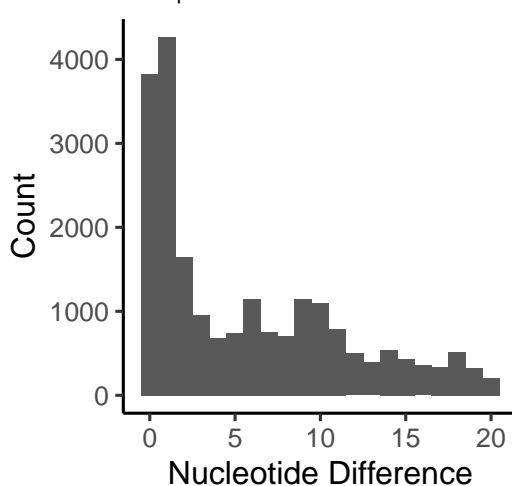
IGHV1-3*01_05

4504 sequences assigned
669 (14.9%) exact matches, in which:
559 unique CDR3
6 unique J



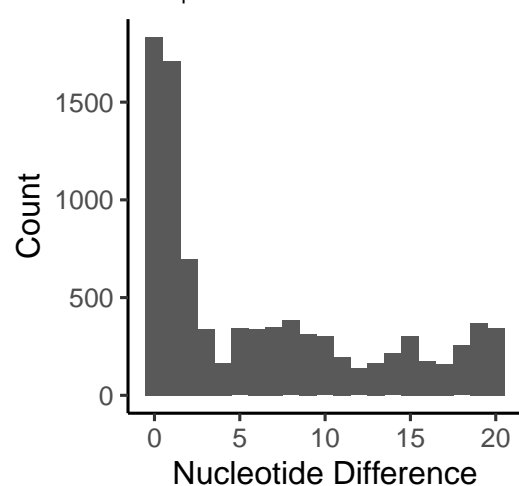
IGHV1-18*01

24416 sequences assigned
3828 (15.7%) exact matches, in which:
3080 unique CDR3
6 unique J



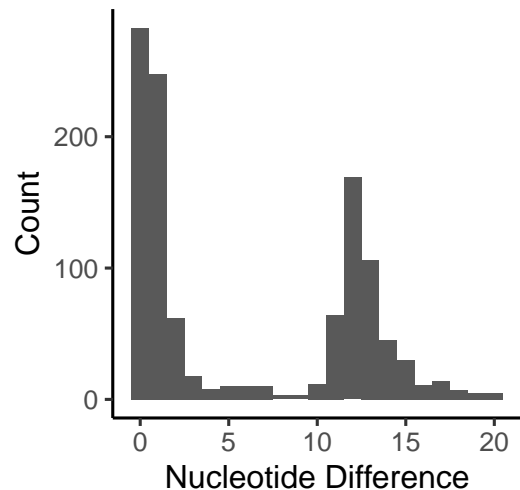
IGHV1-46*01

10555 sequences assigned
1833 (17.4%) exact matches, in which:
1554 unique CDR3
6 unique J



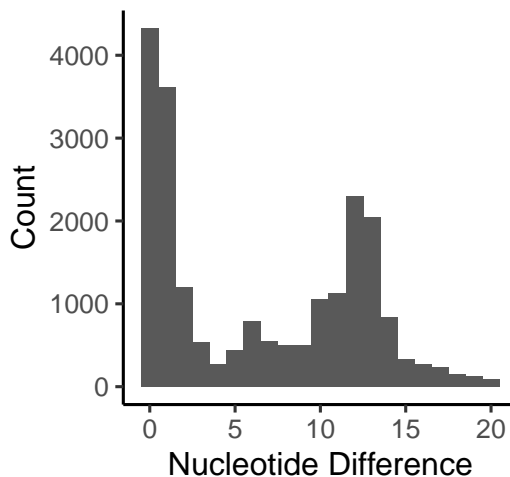
IGHV1–58*01_03

1240 sequences assigned
283 (22.8%) exact matches, in which:
232 unique CDR3
6 unique J



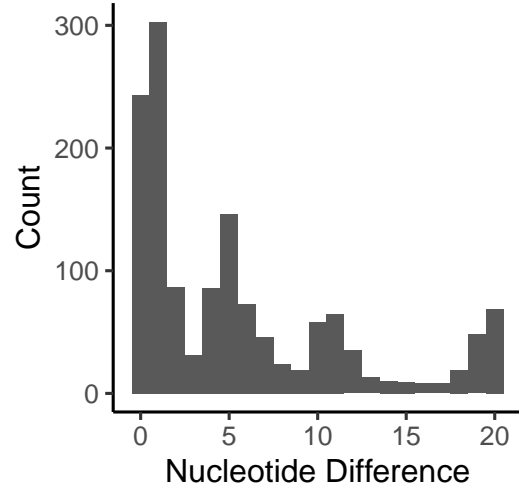
IGHV1–69*01_12_13

22137 sequences assigned
4324 (19.5%) exact matches, in which:
3794 unique CDR3
6 unique J



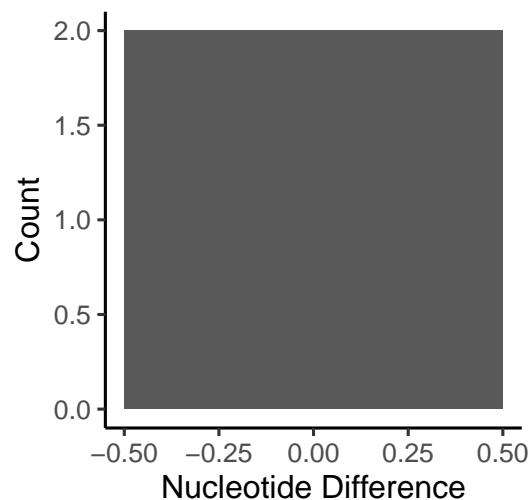
IGHV2–70*01

1811 sequences assigned
243 (13.4%) exact matches, in which:
178 unique CDR3
6 unique J



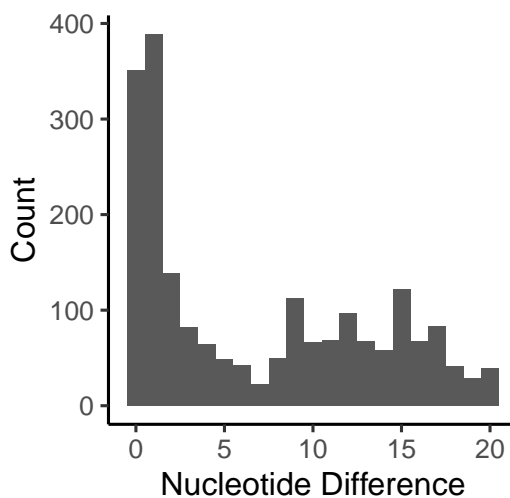
IGHV1–68*01

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
1 unique J



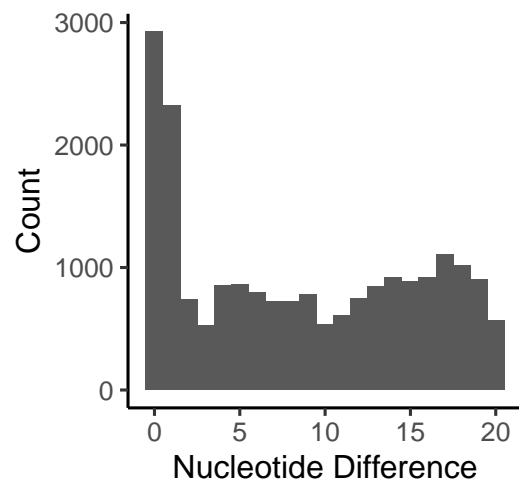
IGHV2–5*01

2506 sequences assigned
351 (14%) exact matches, in which:
287 unique CDR3
6 unique J



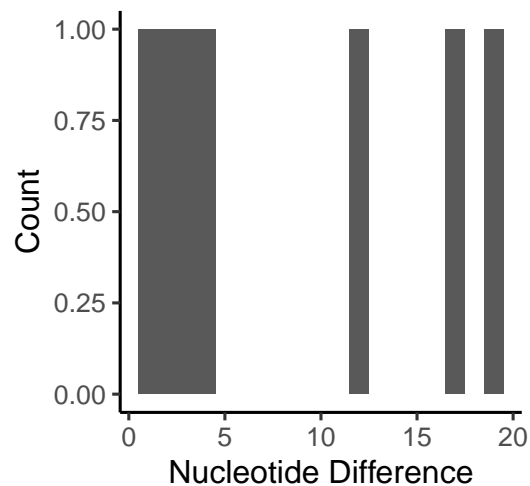
IGHV3–7*01

22763 sequences assigned
2925 (12.8%) exact matches, in which:
1990 unique CDR3
6 unique J



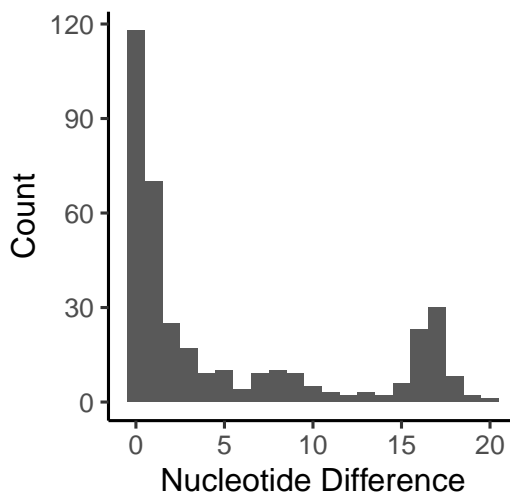
IGHV1–69–2*01

27 sequences assigned
No exact matches.



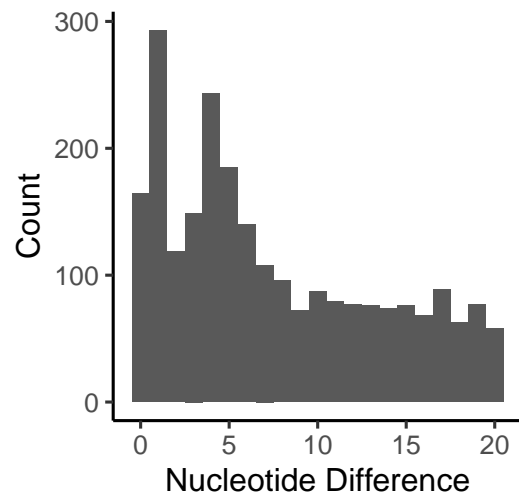
IGHV2–26*01

400 sequences assigned
118 (29.5%) exact matches, in which:
102 unique CDR3
6 unique J



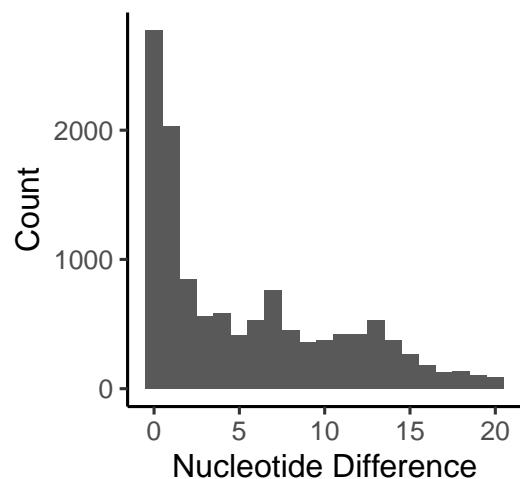
IGHV3–7*03

2800 sequences assigned
164 (5.9%) exact matches, in which:
152 unique CDR3
6 unique J



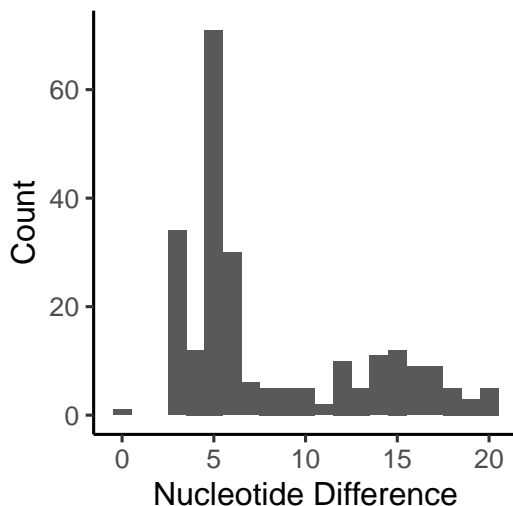
IGHV3-9*01

13434 sequences assigned
2772 (20.6%) exact matches, in which:
1705 unique CDR3
6 unique J



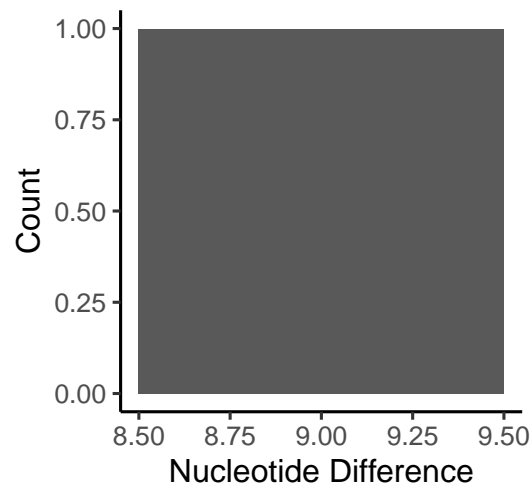
IGHV3-11*06

271 sequences assigned
1 (0.4%) exact matches, in which:
1 unique CDR3
1 unique J



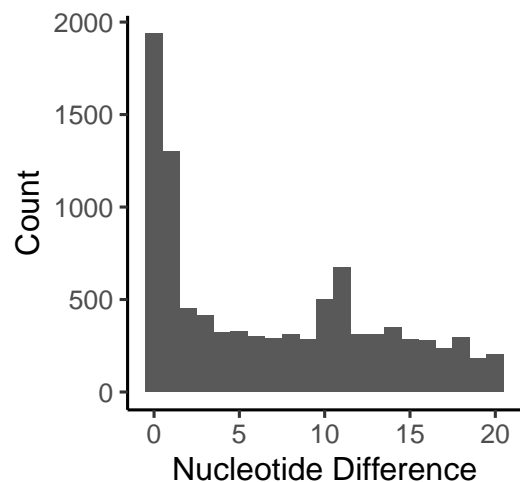
IGHV3-19*01

1 sequences assigned
No exact matches.



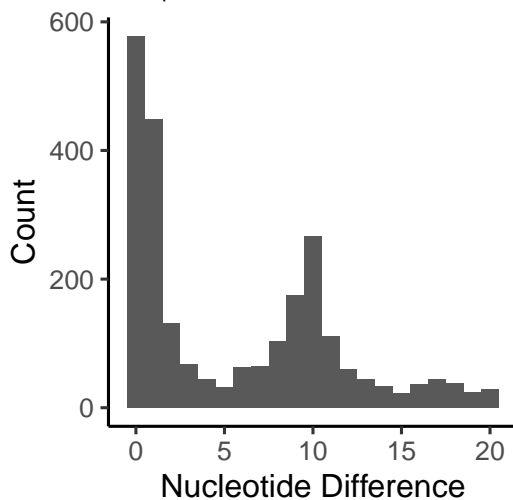
IGHV3-11*01

13655 sequences assigned
1937 (14.2%) exact matches, in which:
1311 unique CDR3
6 unique J



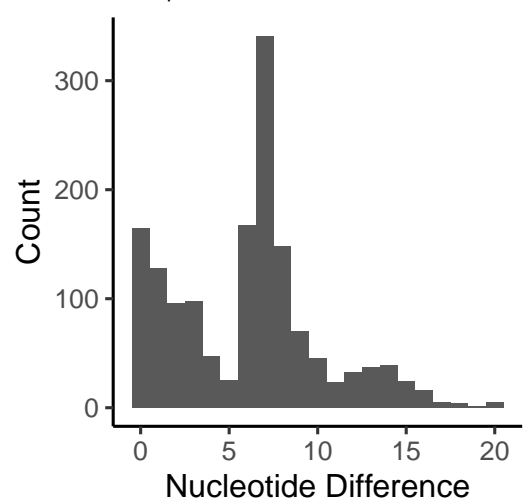
IGHV3-13*01

2685 sequences assigned
578 (21.5%) exact matches, in which:
372 unique CDR3
6 unique J



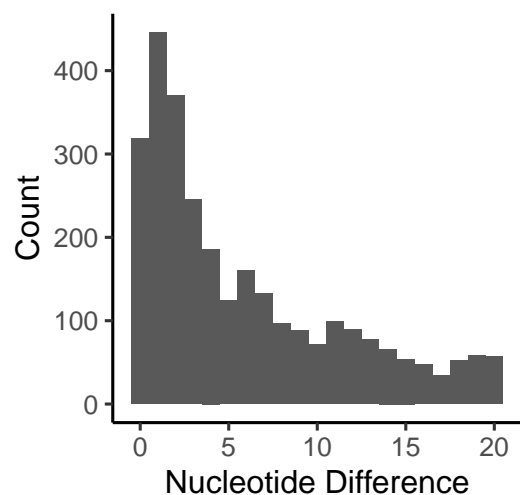
IGHV3-20*01_02

1533 sequences assigned
165 (10.8%) exact matches, in which:
102 unique CDR3
5 unique J



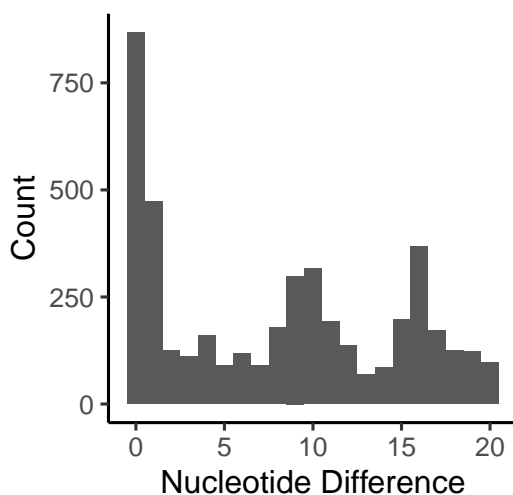
IGHV3-11*04

3059 sequences assigned
319 (10.4%) exact matches, in which:
300 unique CDR3
6 unique J



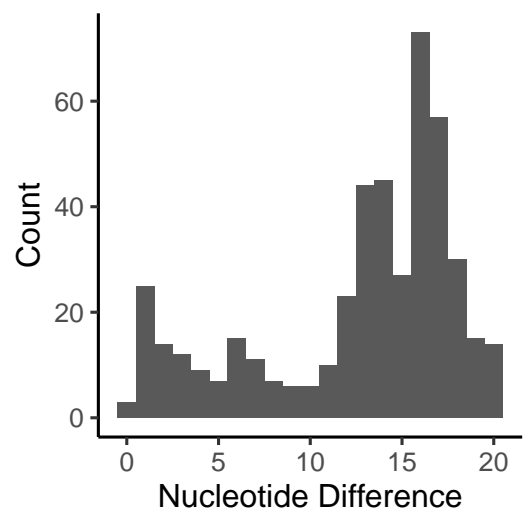
IGHV3-15*01_02

4966 sequences assigned
868 (17.5%) exact matches, in which:
556 unique CDR3
6 unique J



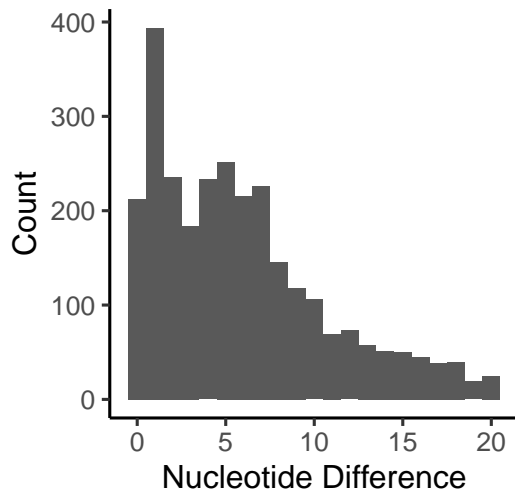
IGHV3-20*03_04

498 sequences assigned
3 (0.6%) exact matches, in which:
3 unique CDR3
2 unique J



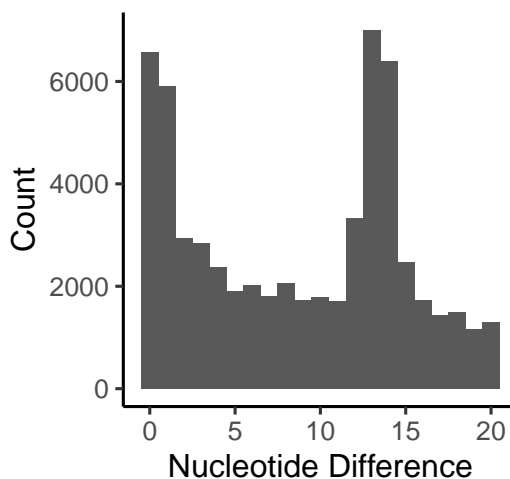
IGHV3-21*04

3095 sequences assigned
212 (6.8%) exact matches, in which:
201 unique CDR3
6 unique J



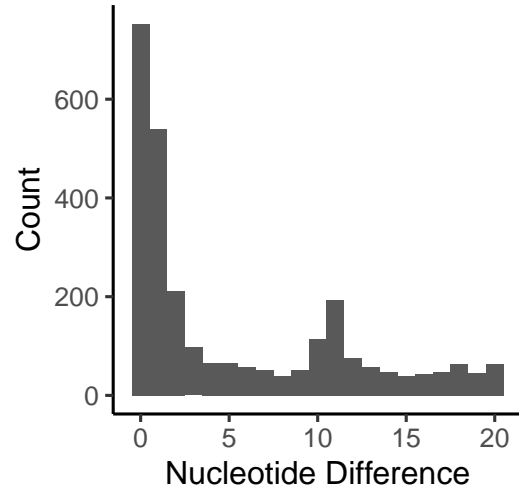
IGHV3-23*01_04

79033 sequences assigned
6571 (8.3%) exact matches, in which:
3818 unique CDR3
6 unique J



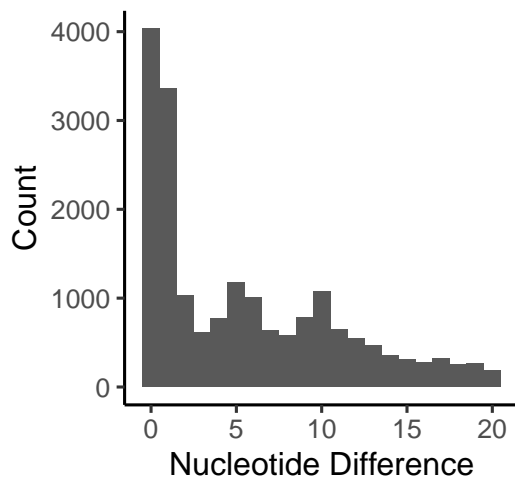
IGHV3-30*03

3043 sequences assigned
753 (24.7%) exact matches, in which:
689 unique CDR3
6 unique J



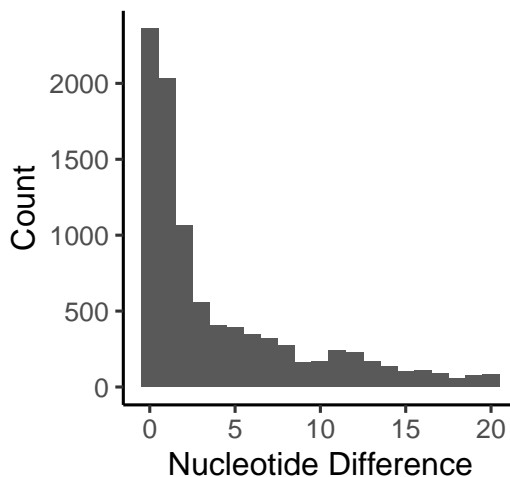
IGHV3-21*01_02

22515 sequences assigned
4033 (17.9%) exact matches, in which:
2574 unique CDR3
6 unique J



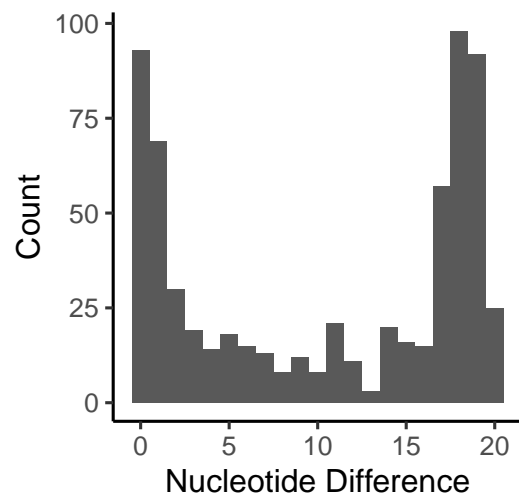
IGHV3-30*01

10221 sequences assigned
2360 (23.1%) exact matches, in which:
1645 unique CDR3
6 unique J



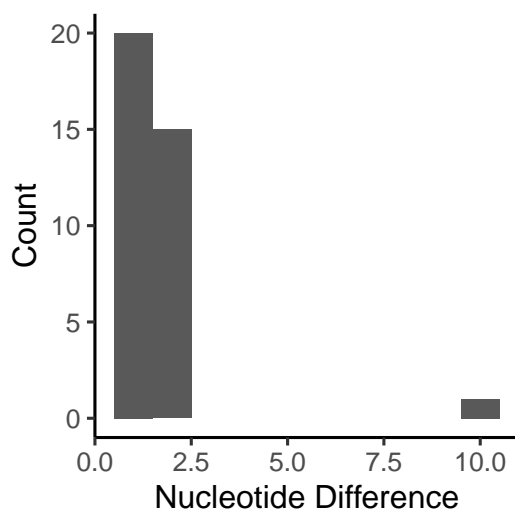
IGHV3-30*04

763 sequences assigned
93 (12.2%) exact matches, in which:
86 unique CDR3
5 unique J



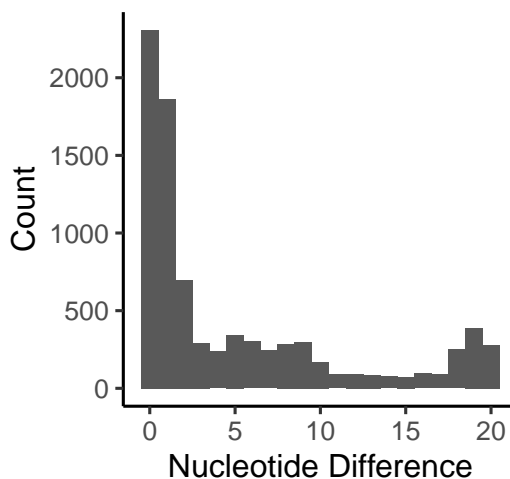
IGHV3-22*01_02

36 sequences assigned
No exact matches.



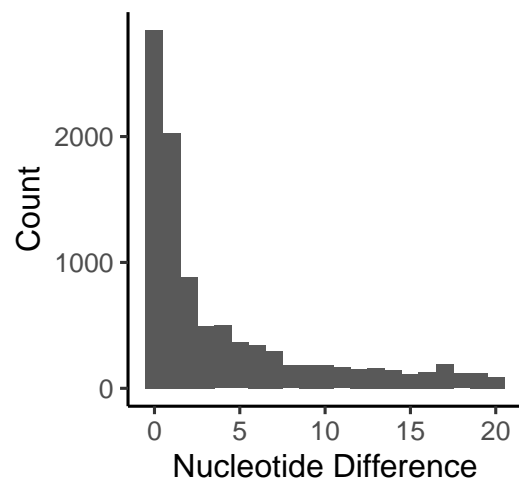
IGHV3-30-3*01

9919 sequences assigned
2307 (23.3%) exact matches, in which:
1626 unique CDR3
6 unique J



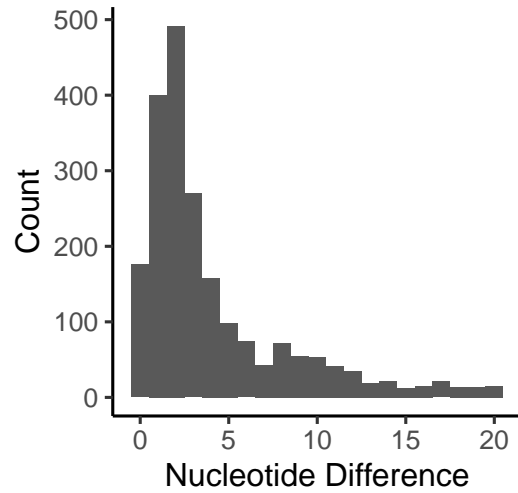
IGHV3-33*01

10460 sequences assigned
2846 (27.2%) exact matches, in which:
1891 unique CDR3
6 unique J



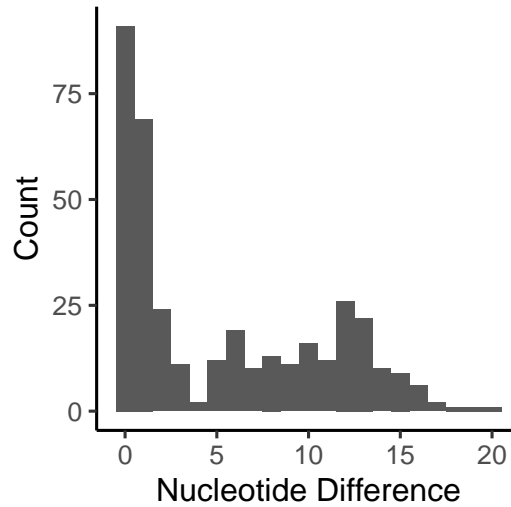
IGHV3-33*06

2189 sequences assigned
176 (8%) exact matches, in which:
163 unique CDR3
6 unique J



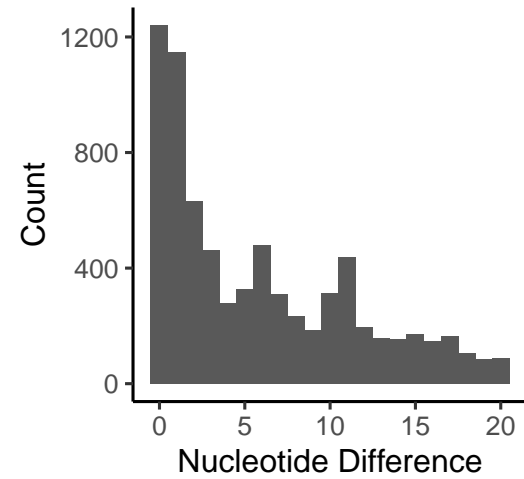
IGHV3-43*01

423 sequences assigned
91 (21.5%) exact matches, in which:
51 unique CDR3
5 unique J



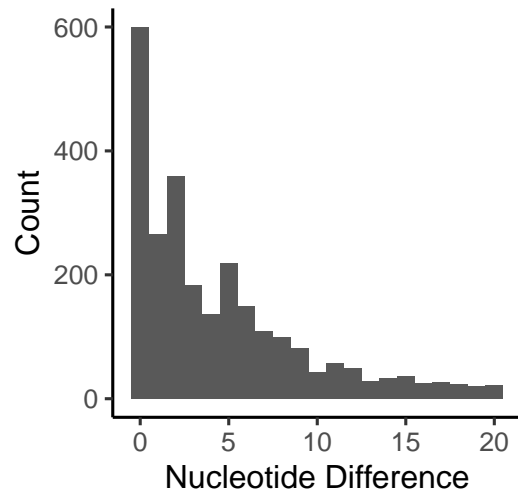
IGHV3-48*03

8424 sequences assigned
1240 (14.7%) exact matches, in which:
792 unique CDR3
6 unique J



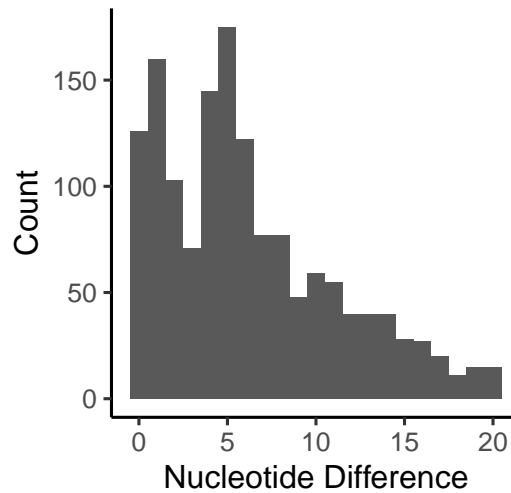
IGHV3-33*08

2686 sequences assigned
600 (22.3%) exact matches, in which:
486 unique CDR3
6 unique J



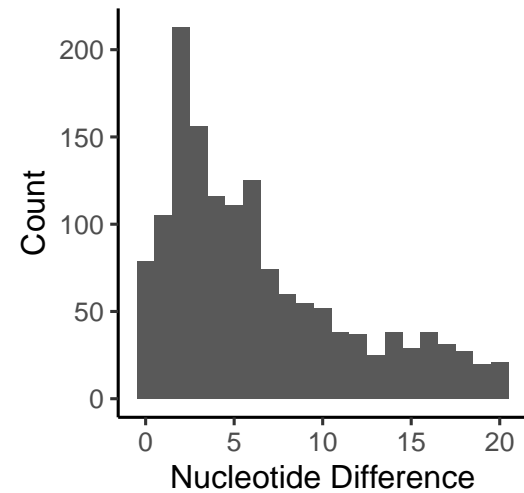
IGHV3-48*01

1537 sequences assigned
126 (8.2%) exact matches, in which:
122 unique CDR3
5 unique J



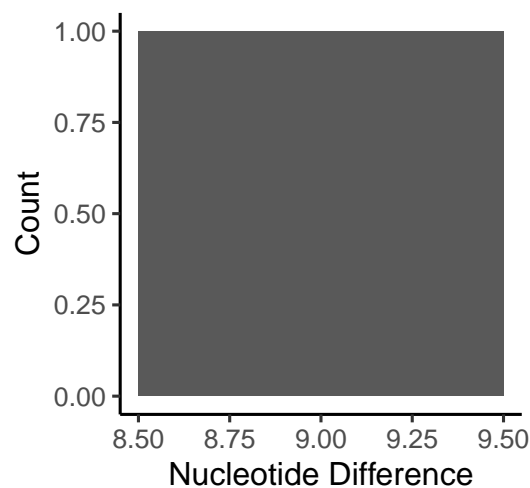
IGHV3-48*04

1603 sequences assigned
79 (4.9%) exact matches, in which:
77 unique CDR3
6 unique J



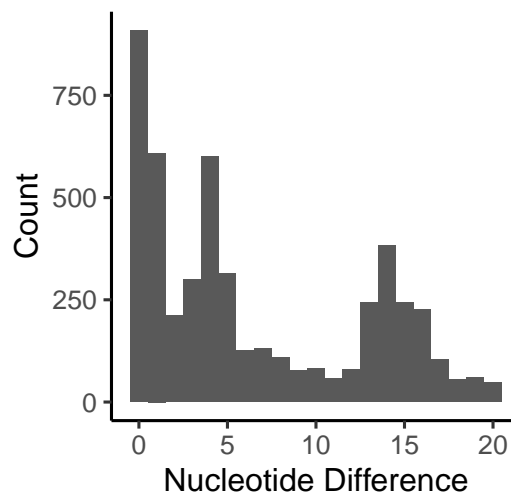
IGHV3-35*01

1 sequences assigned
No exact matches.



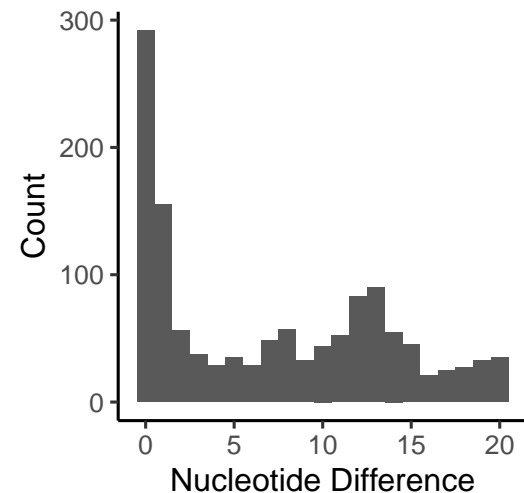
IGHV3-48*02

5657 sequences assigned
909 (16.1%) exact matches, in which:
584 unique CDR3
6 unique J



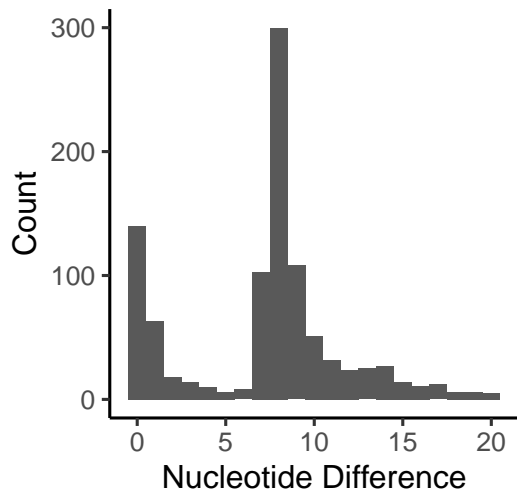
IGHV3-49*04

1385 sequences assigned
292 (21.1%) exact matches, in which:
186 unique CDR3
6 unique J



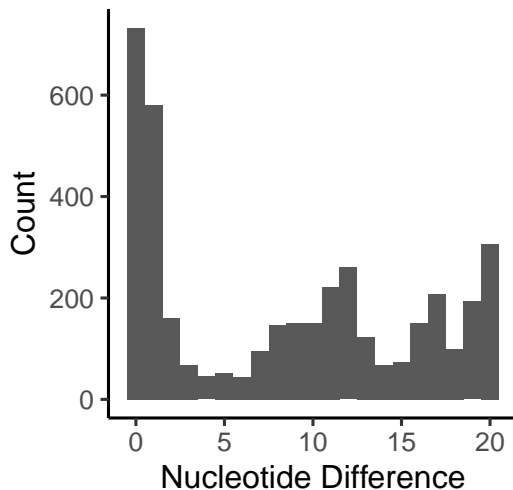
IGHV3-49*03_05

995 sequences assigned
140 (14.1%) exact matches, in which:
93 unique CDR3
5 unique J



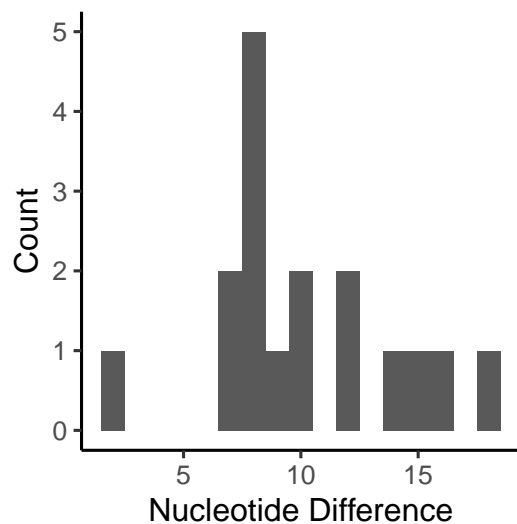
IGHV3-53*01_02

5546 sequences assigned
733 (13.2%) exact matches, in which:
513 unique CDR3
6 unique J



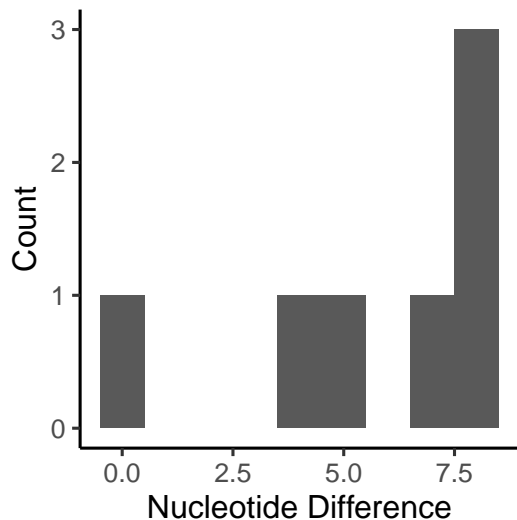
IGHV3-66*01

19 sequences assigned
No exact matches.



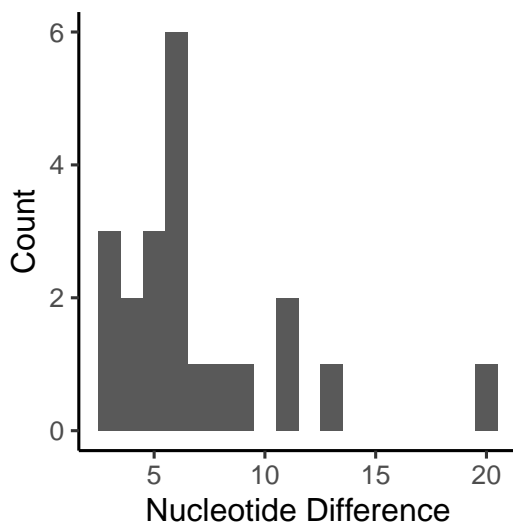
IGHV3-52*02

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



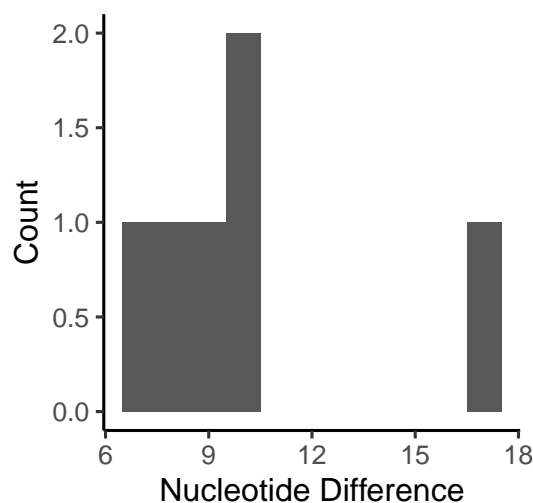
IGHV3-64*04

21 sequences assigned
No exact matches.



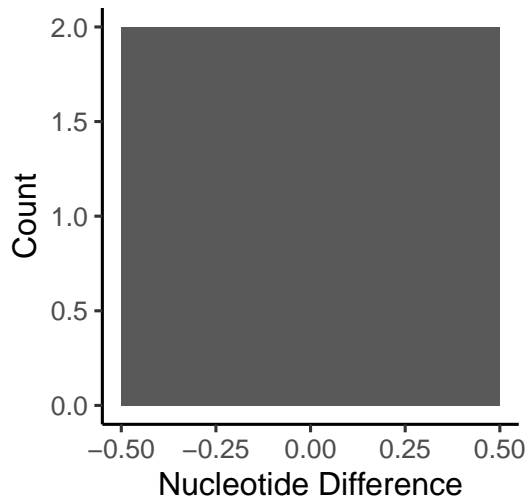
IGHV3-66*02

9 sequences assigned
No exact matches.



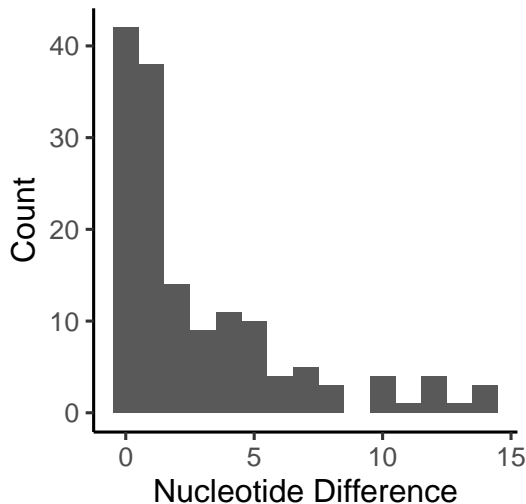
IGHV3-52*01_03

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
2 unique J



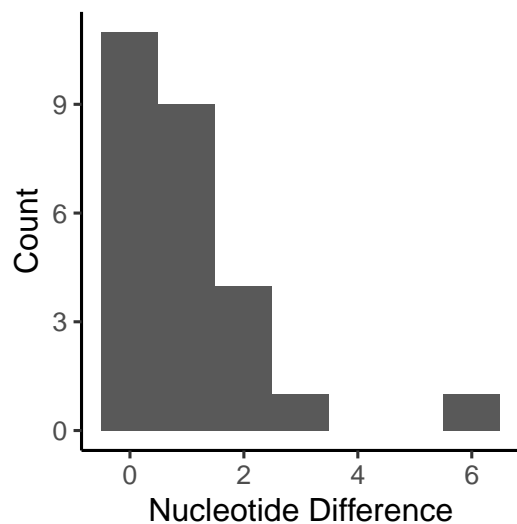
IGHV3-64*02_07

150 sequences assigned
42 (28%) exact matches, in which:
30 unique CDR3
5 unique J



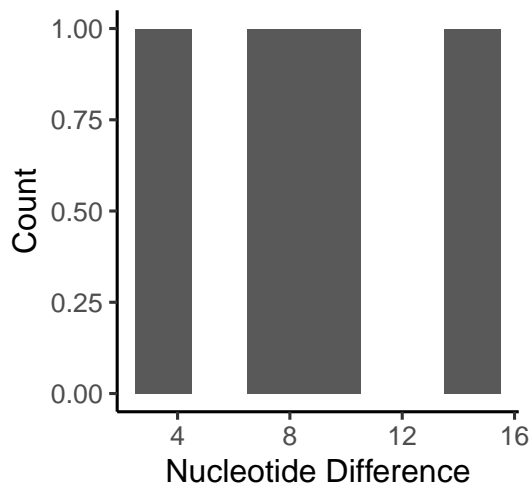
IGHV3-66*03

26 sequences assigned
11 (42.3%) exact matches, in which:
11 unique CDR3
3 unique J



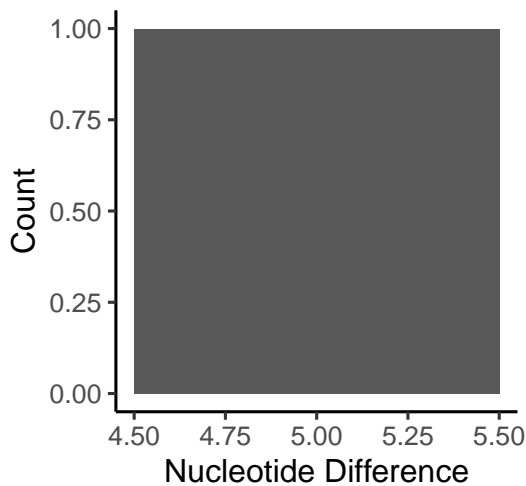
IGHV3-66*04

13 sequences assigned
No exact matches.



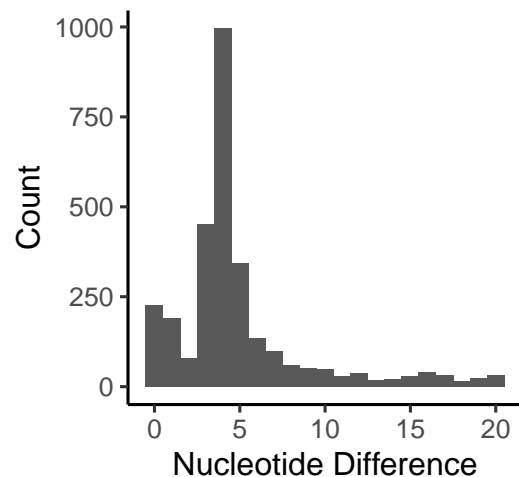
IGHV3-71*03

2 sequences assigned
No exact matches.



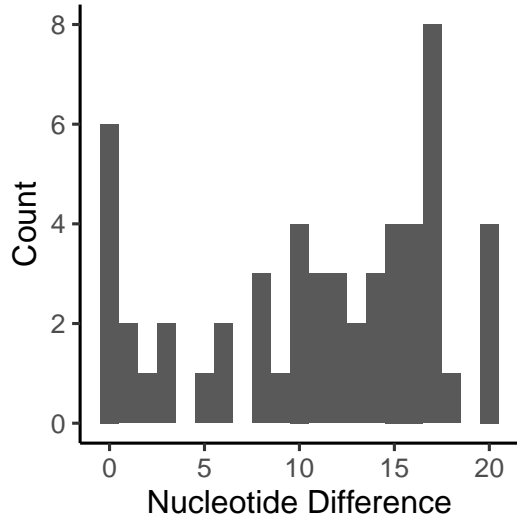
IGHV3-73*01_02

3150 sequences assigned
228 (7.2%) exact matches, in which:
144 unique CDR3
6 unique J



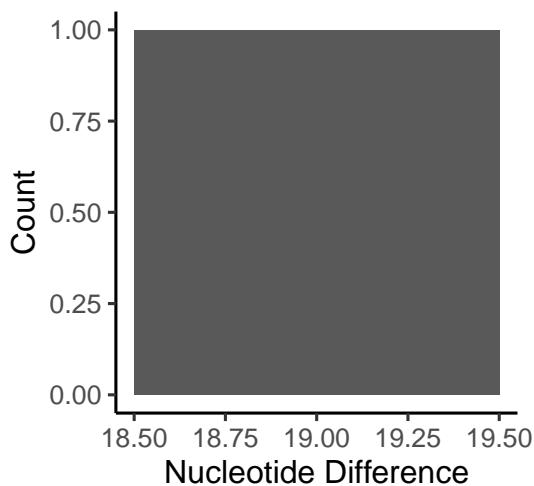
IGHV3-69-1*01

79 sequences assigned
6 (7.6%) exact matches, in which:
6 unique CDR3
4 unique J



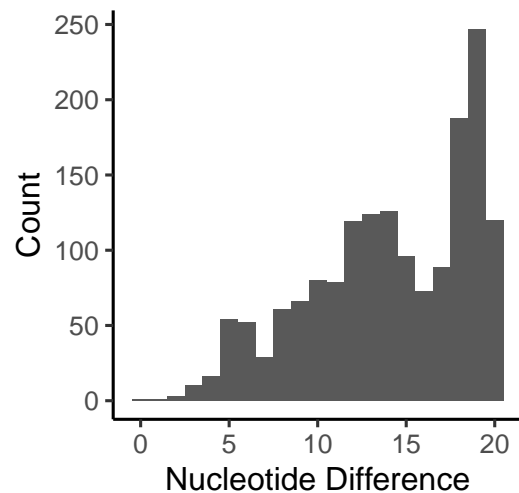
IGHV3-71*01_04

3 sequences assigned
No exact matches.



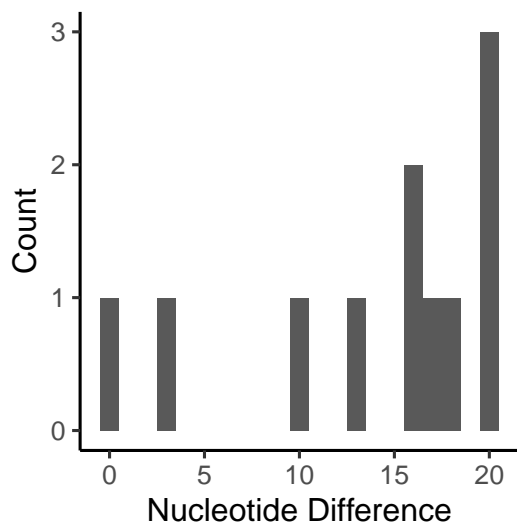
IGHV3-74*03

2064 sequences assigned
1 (0%) exact matches, in which:
1 unique CDR3
0 unique J



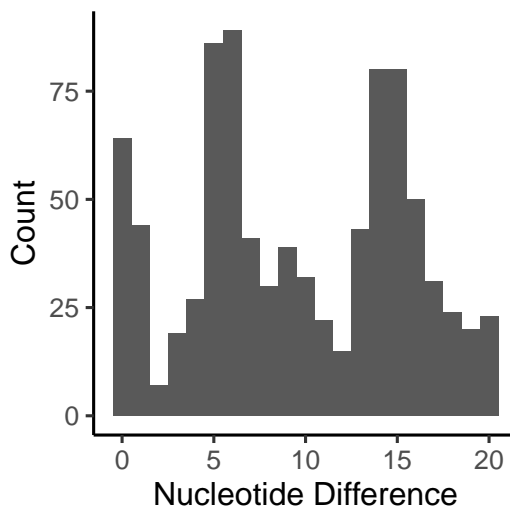
IGHV3-69-1*02

21 sequences assigned
1 (4.8%) exact matches, in which:
1 unique CDR3
1 unique J



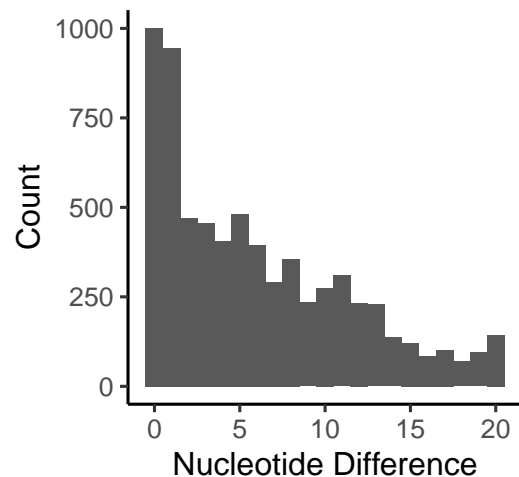
IGHV3-72*01

998 sequences assigned
64 (6.4%) exact matches, in which:
41 unique CDR3
3 unique J



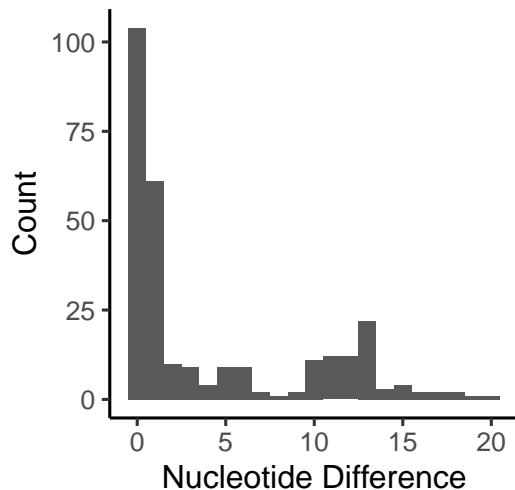
IGHV3-74*01_02

7738 sequences assigned
1001 (12.9%) exact matches, in which:
671 unique CDR3
6 unique J



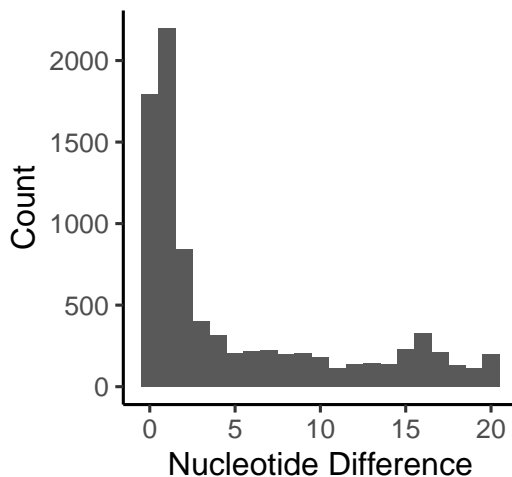
IGHV3-43D*04

283 sequences assigned
104 (36.7%) exact matches, in which:
59 unique CDR3
5 unique J



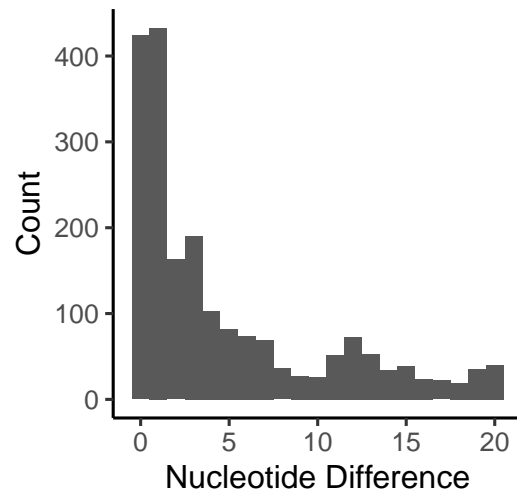
IGHV4-4*07

10325 sequences assigned
1794 (17.4%) exact matches, in which:
1470 unique CDR3
6 unique J



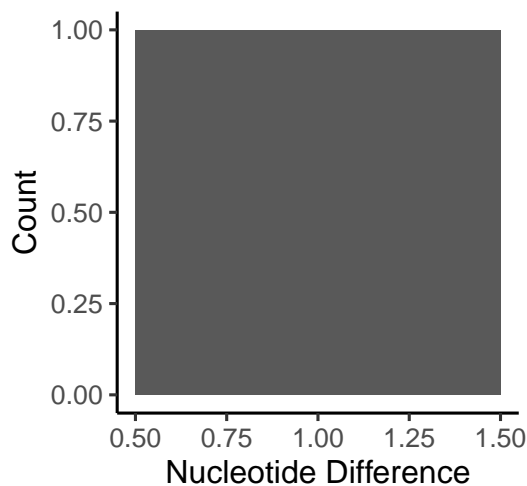
IGHV4-30-4*01

2676 sequences assigned
424 (15.8%) exact matches, in which:
373 unique CDR3
6 unique J



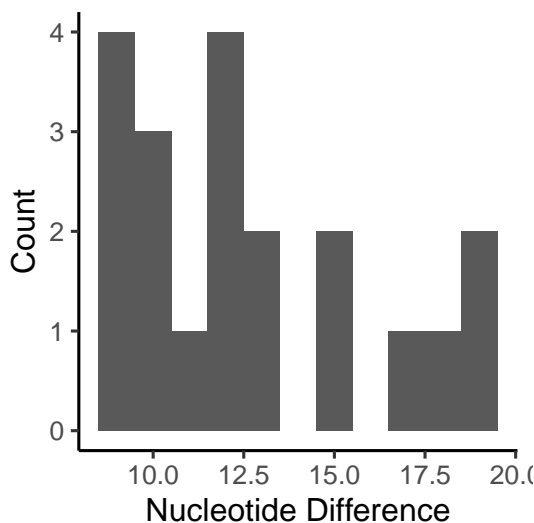
IGHV3-64D*09

1 sequences assigned
No exact matches.



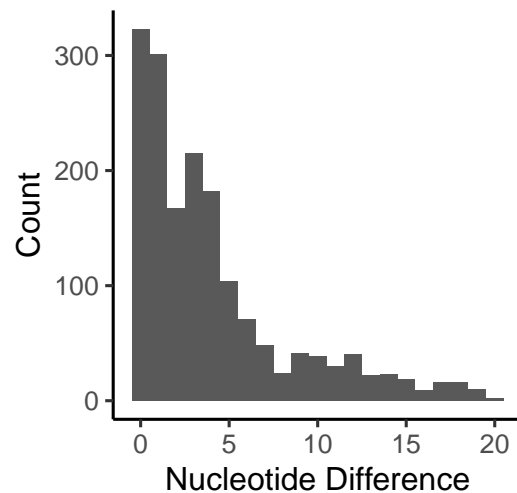
IGHV4-28*03

26 sequences assigned
No exact matches.



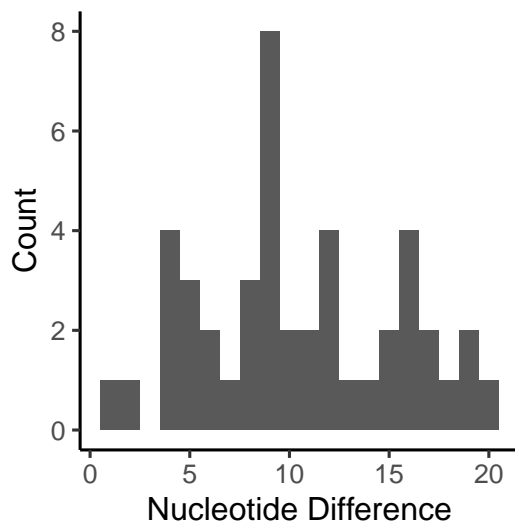
IGHV4-30-2*01

1876 sequences assigned
323 (17.2%) exact matches, in which:
208 unique CDR3
6 unique J



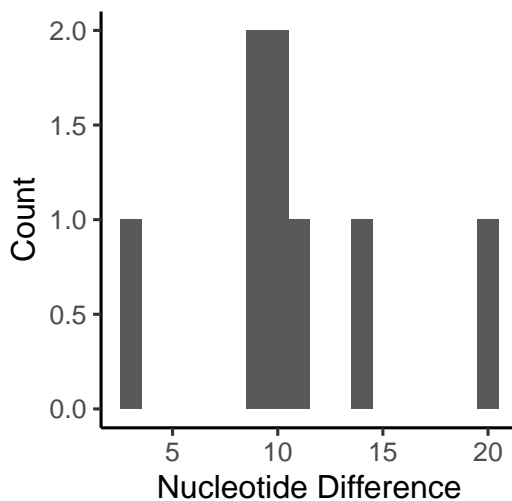
IGHV3-NL1*01

87 sequences assigned
No exact matches.



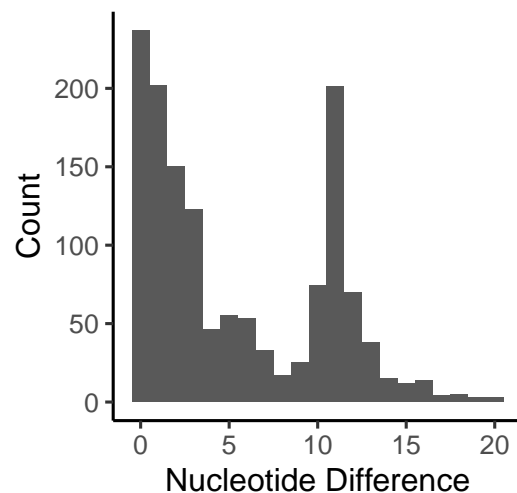
IGHV4-28*01_07

12 sequences assigned
No exact matches.



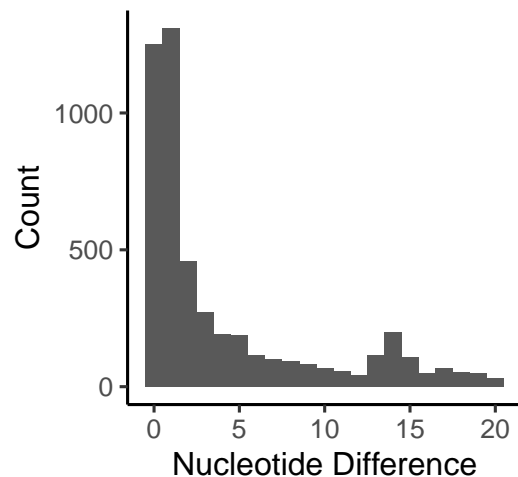
IGHV4-31*01

1398 sequences assigned
237 (17%) exact matches, in which:
202 unique CDR3
6 unique J



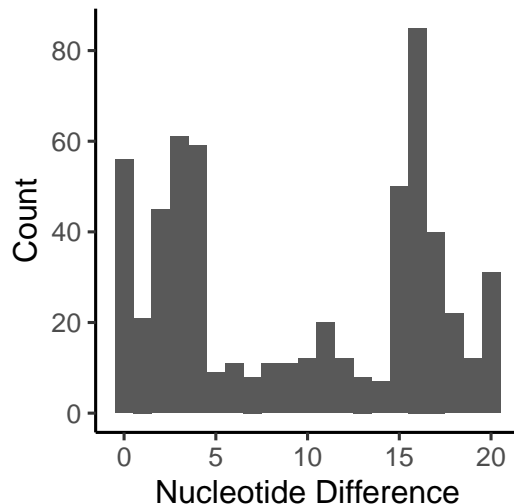
IGHV4-31*02

5410 sequences assigned
1251 (23.1%) exact matches, in which:
1048 unique CDR3
6 unique J



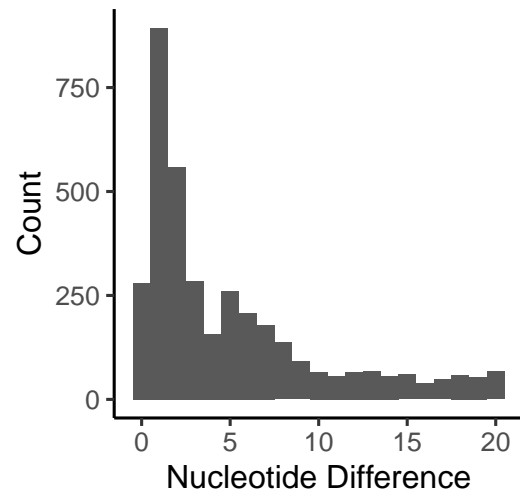
IGHV4-38-2*02

1014 sequences assigned
56 (5.5%) exact matches, in which:
53 unique CDR3
6 unique J



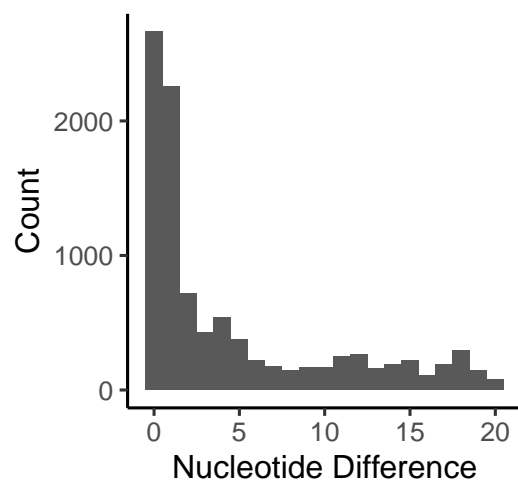
IGHV4-59*12

9929 sequences assigned
280 (2.8%) exact matches, in which:
274 unique CDR3
6 unique J



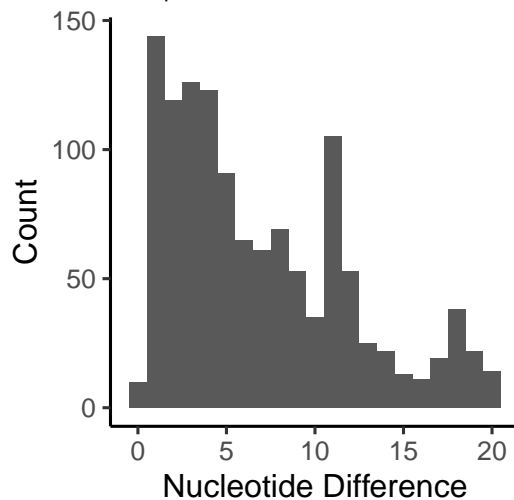
IGHV4-34*01_02

10871 sequences assigned
2663 (24.5%) exact matches, in which:
2203 unique CDR3
6 unique J



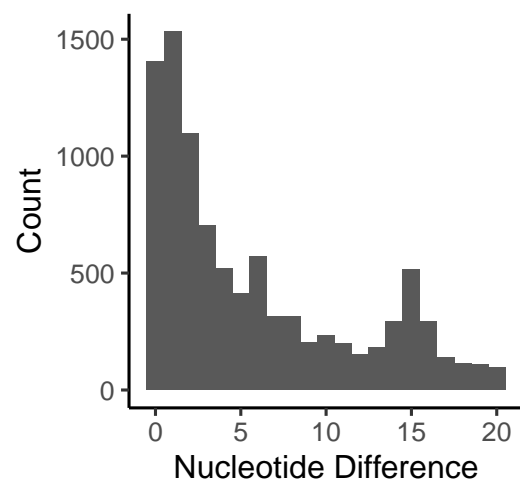
IGHV4-39*07

1369 sequences assigned
10 (0.7%) exact matches, in which:
10 unique CDR3
4 unique J



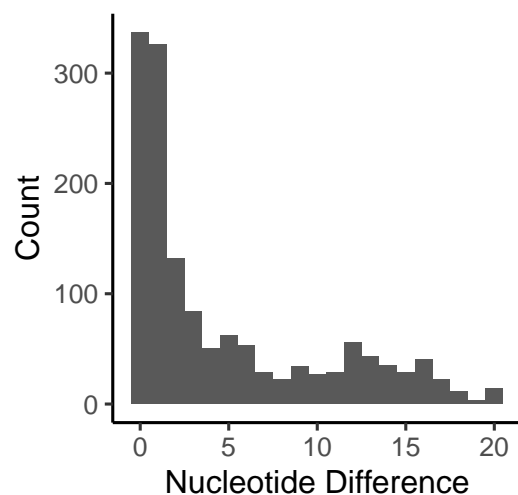
IGHV4-61*01

10727 sequences assigned
1405 (13.1%) exact matches, in which:
1206 unique CDR3
6 unique J



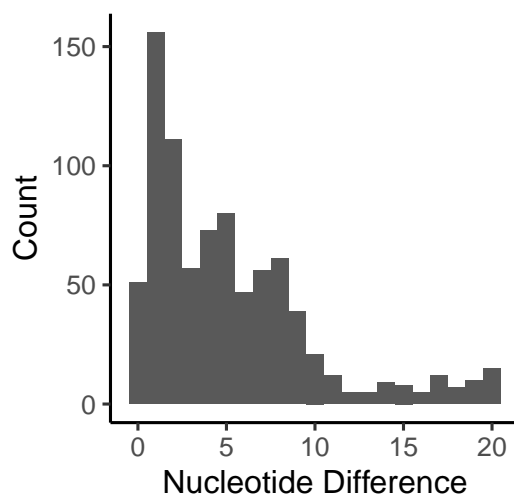
IGHV4-38-2*01

1529 sequences assigned
337 (22%) exact matches, in which:
292 unique CDR3
6 unique J



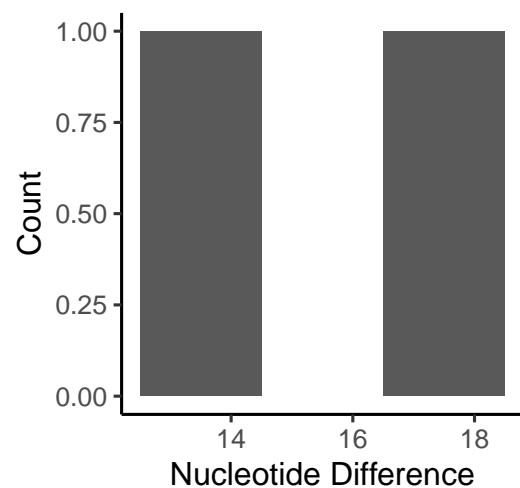
IGHV4-59*08

978 sequences assigned
51 (5.2%) exact matches, in which:
47 unique CDR3
5 unique J



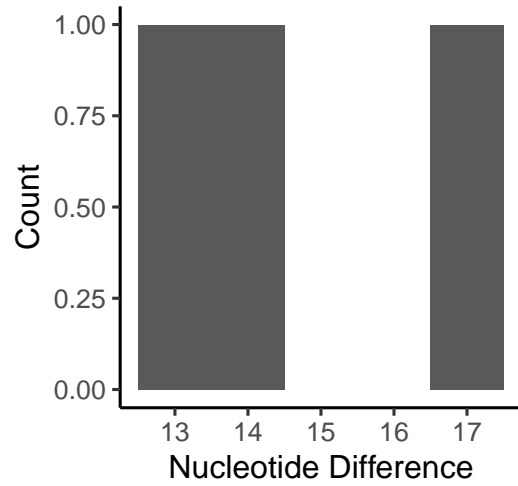
IGHV1/OR15-2*02_03

8 sequences assigned
No exact matches.



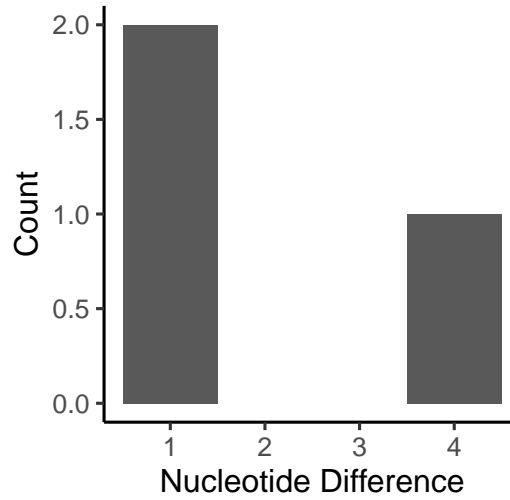
IGHV1/OR15-3*02

3 sequences assigned
No exact matches.



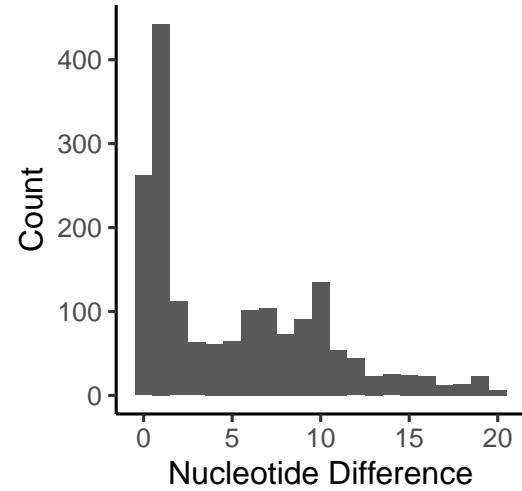
IGHV5-10-1*01_03

4 sequences assigned
No exact matches.



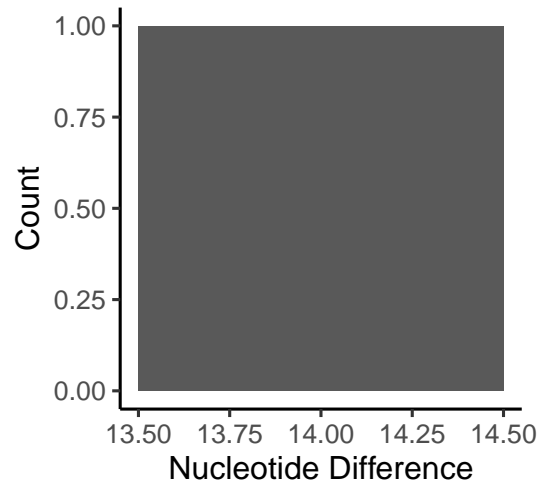
IGHV6-1*01_02

1908 sequences assigned
262 (13.7%) exact matches, in which:
203 unique CDR3
6 unique J



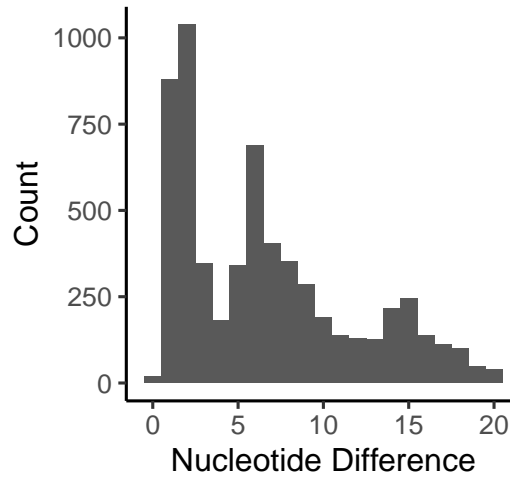
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



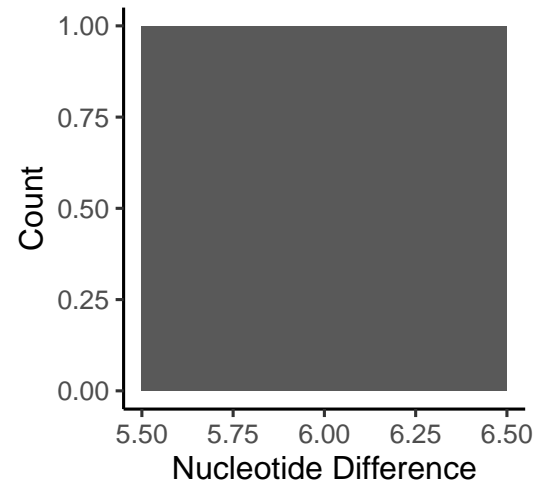
IGHV5-51*07

6165 sequences assigned
18 (0.3%) exact matches, in which:
18 unique CDR3
5 unique J



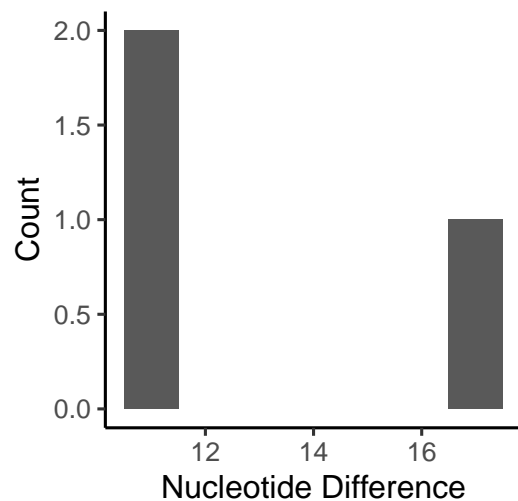
IGHV3/OR16-13*01

3 sequences assigned
No exact matches.



IGHV4/OR15-8*01

3 sequences assigned
No exact matches.



IGHV5-51*01_03

13440 sequences assigned
2517 (18.7%) exact matches, in which:
1405 unique CDR3
6 unique J

