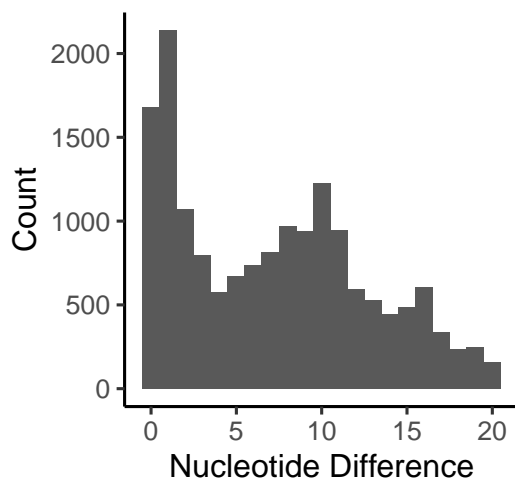


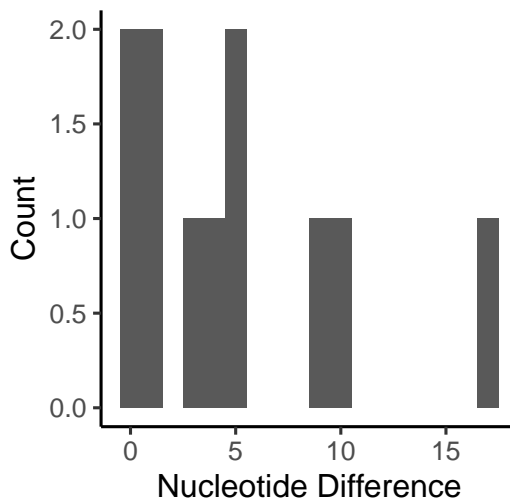
IGHV1-2*02

18190 sequences assigned
1677 (9.2%) exact matches, in which:
1338 unique CDR3
6 unique J



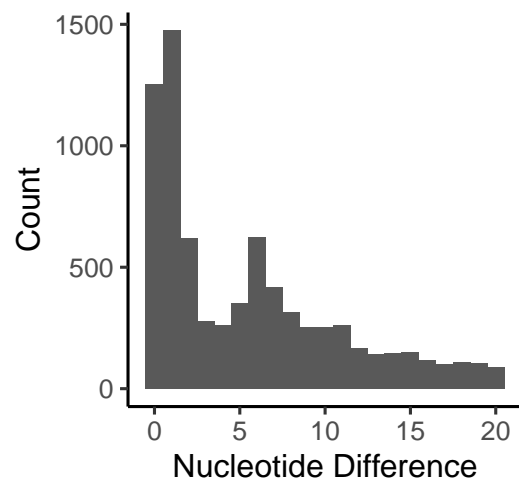
IGHV1-8*01

11 sequences assigned
2 (18.2%) exact matches, in which:
2 unique CDR3
1 unique J



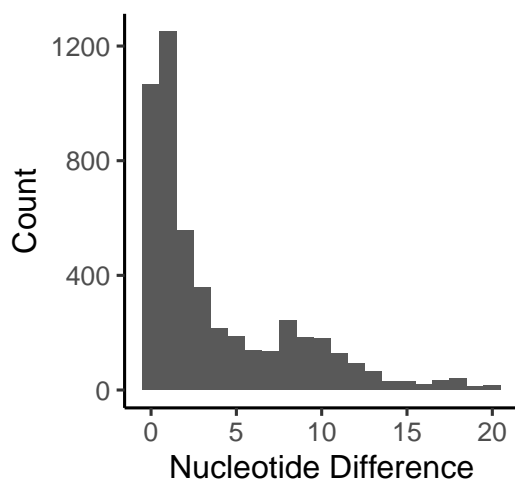
IGHV1-18*01

9763 sequences assigned
1255 (12.9%) exact matches, in which:
990 unique CDR3
6 unique J



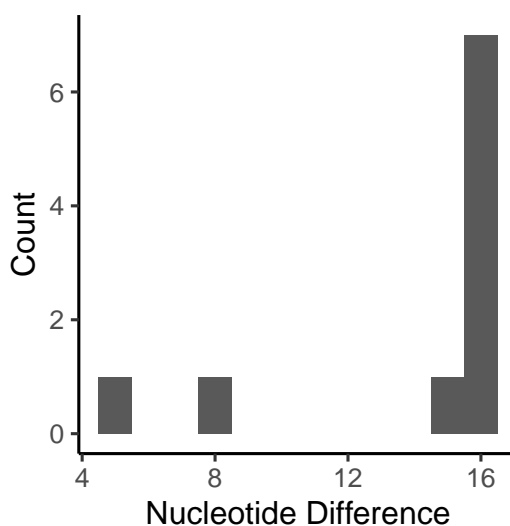
IGHV1-2*04

5051 sequences assigned
1066 (21.1%) exact matches, in which:
862 unique CDR3
6 unique J



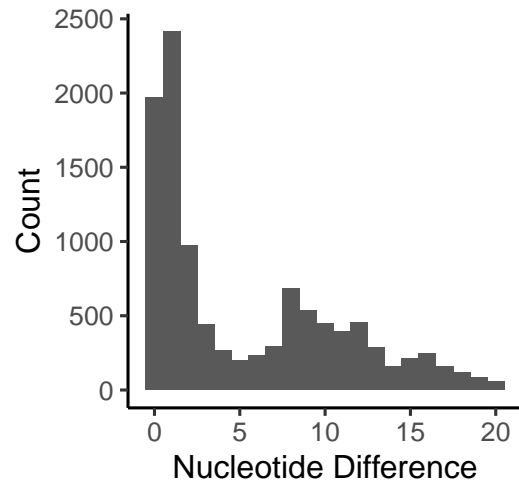
IGHV1-8*02

11 sequences assigned
No exact matches.



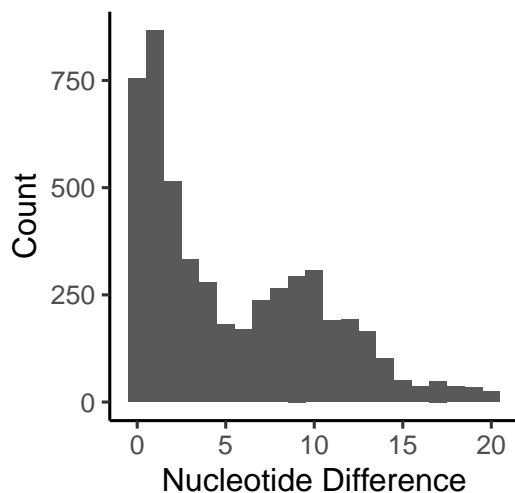
IGHV1-18*04

11779 sequences assigned
1968 (16.7%) exact matches, in which:
1518 unique CDR3
6 unique J



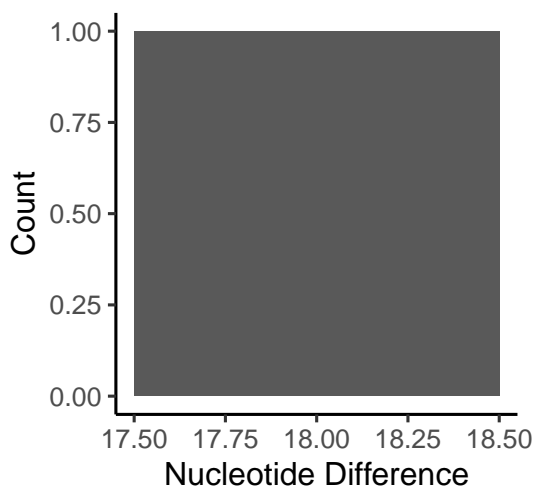
IGHV1-3*01_05

5767 sequences assigned
755 (13.1%) exact matches, in which:
575 unique CDR3
6 unique J



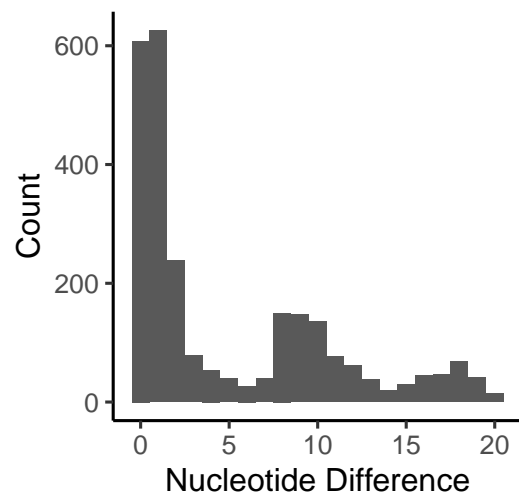
IGHV1-8*03

2 sequences assigned
No exact matches.



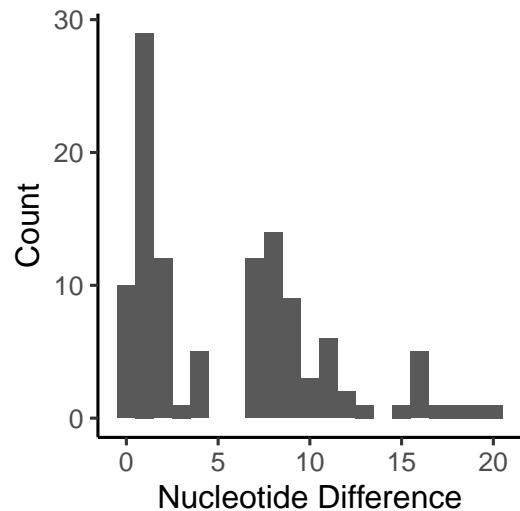
IGHV1-24*01

3289 sequences assigned
608 (18.5%) exact matches, in which:
505 unique CDR3
6 unique J



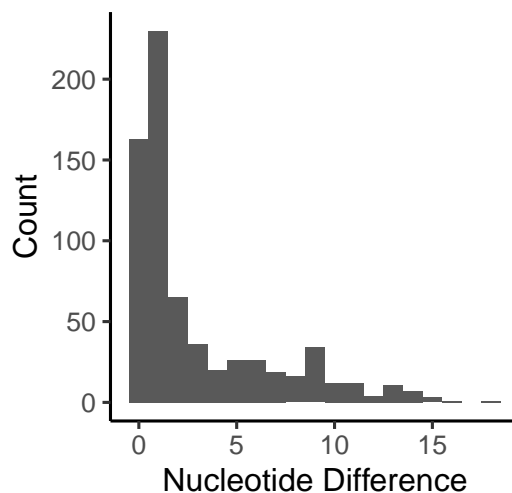
IGHV1-45*02

115 sequences assigned
10 (8.7%) exact matches, in which:
10 unique CDR3
3 unique J



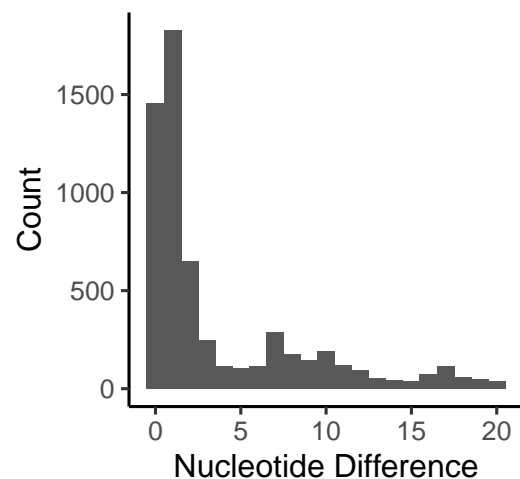
IGHV1-58*01_03

686 sequences assigned
163 (23.8%) exact matches, in which:
117 unique CDR3
6 unique J



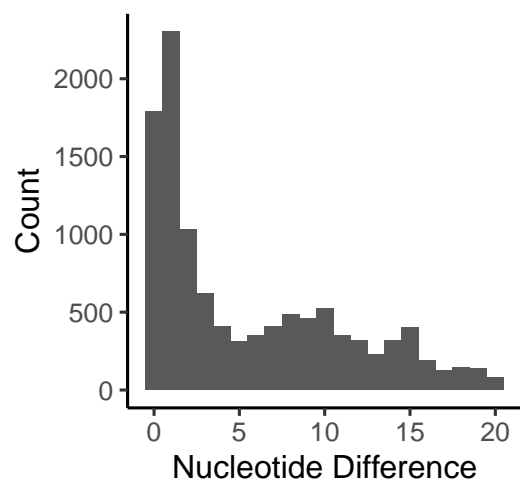
IGHV1-69*04_09

7495 sequences assigned
1457 (19.4%) exact matches, in which:
1217 unique CDR3
6 unique J



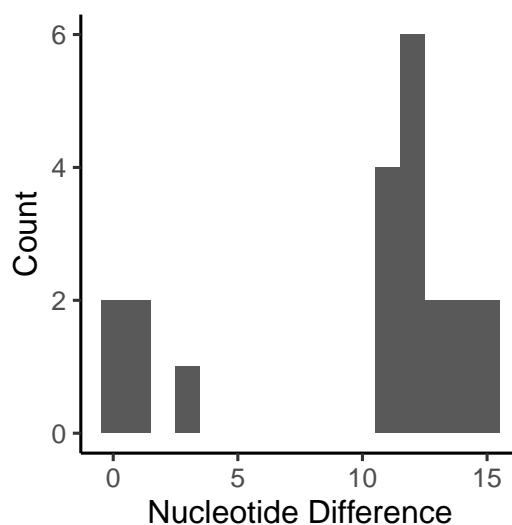
IGHV1-46*01

12217 sequences assigned
1792 (14.7%) exact matches, in which:
1437 unique CDR3
6 unique J



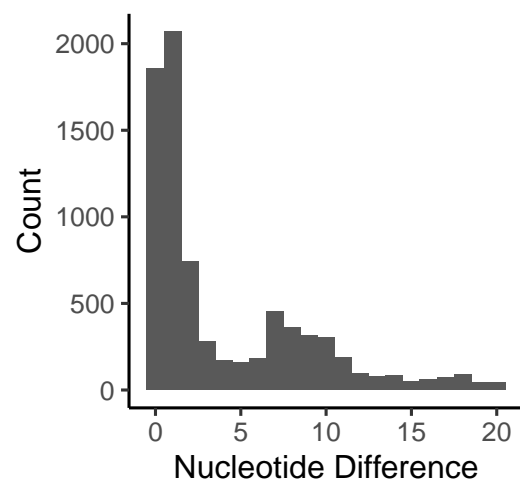
IGHV1-69-2*01

24 sequences assigned
2 (8.3%) exact matches, in which:
2 unique CDR3
1 unique J



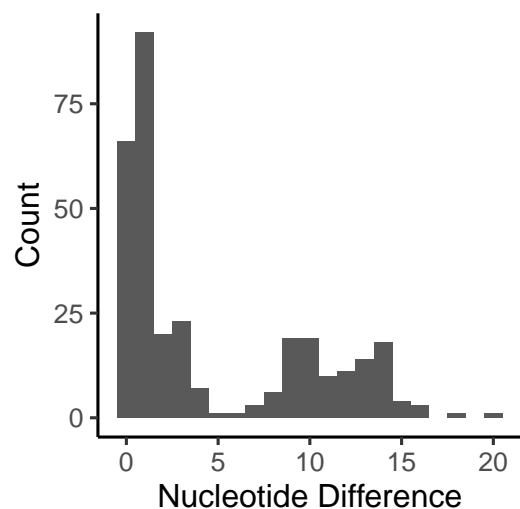
IGHV1-69*06_14

8361 sequences assigned
1858 (22.2%) exact matches, in which:
1536 unique CDR3
6 unique J



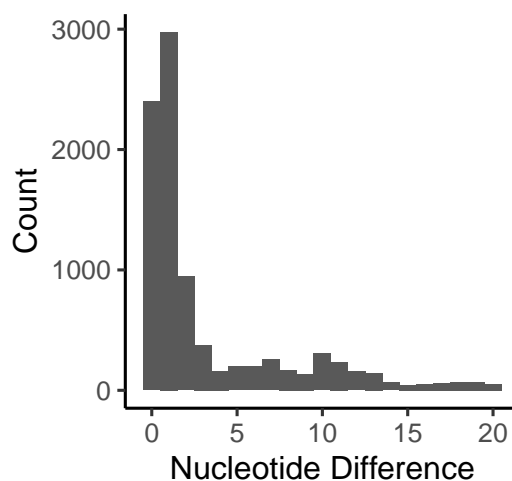
IGHV1-58*02

320 sequences assigned
66 (20.6%) exact matches, in which:
52 unique CDR3
5 unique J



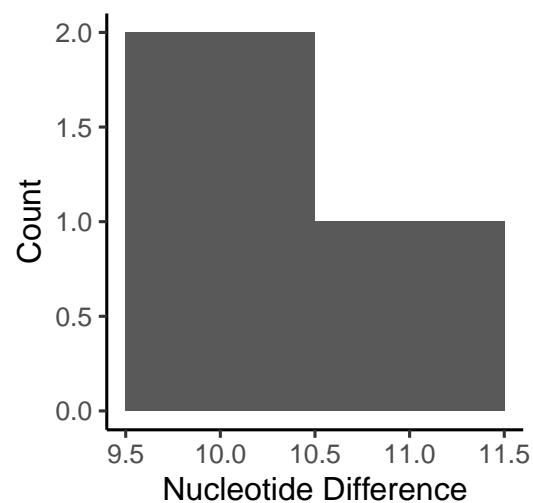
IGHV1-69*01_12_13

9697 sequences assigned
2400 (24.7%) exact matches, in which:
1948 unique CDR3
6 unique J



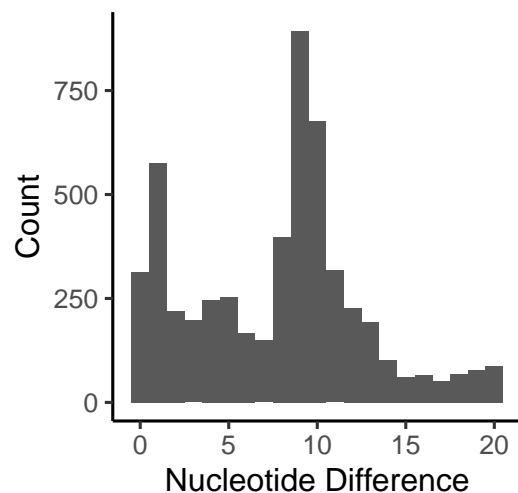
IGHV1-NL1*01

3 sequences assigned
No exact matches.



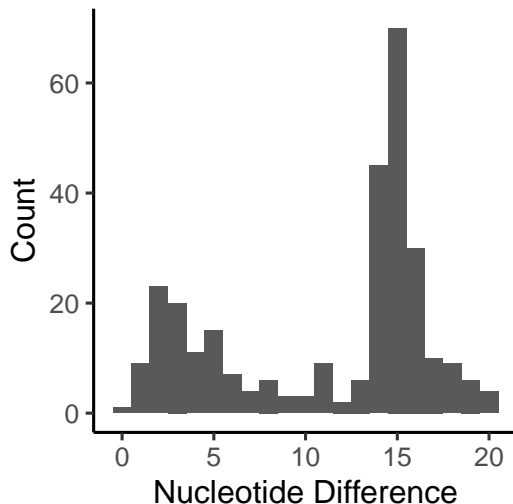
IGHV2-5*02

6709 sequences assigned
314 (4.7%) exact matches, in which:
220 unique CDR3
6 unique J



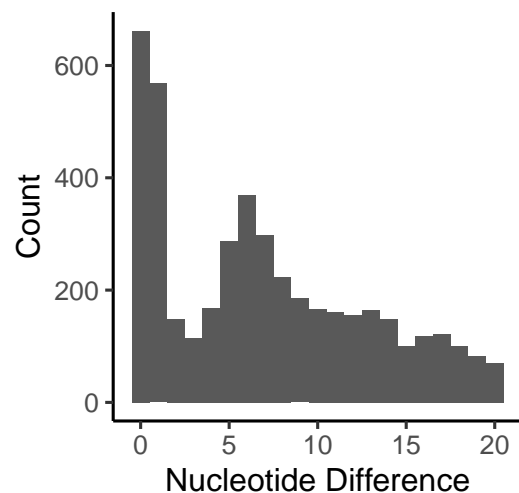
IGHV2-70*12

310 sequences assigned
1 (0.3%) exact matches, in which:
1 unique CDR3
1 unique J



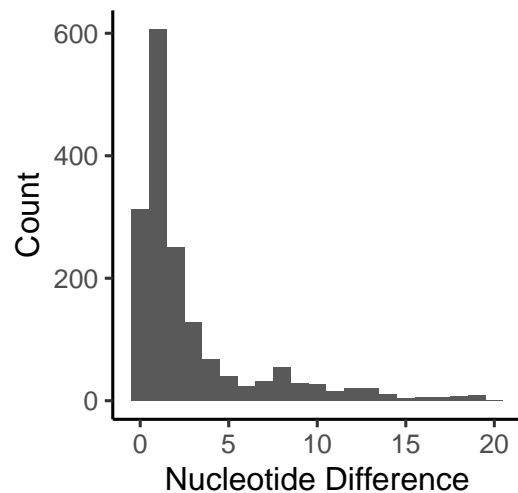
IGHV3-7*03

5753 sequences assigned
662 (11.5%) exact matches, in which:
426 unique CDR3
6 unique J



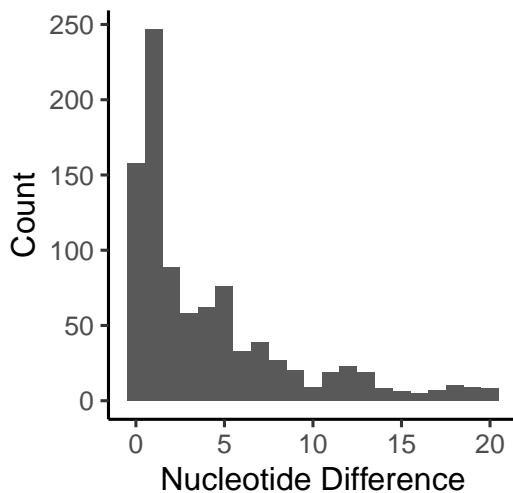
IGHV2-26*01

2054 sequences assigned
312 (15.2%) exact matches, in which:
203 unique CDR3
6 unique J



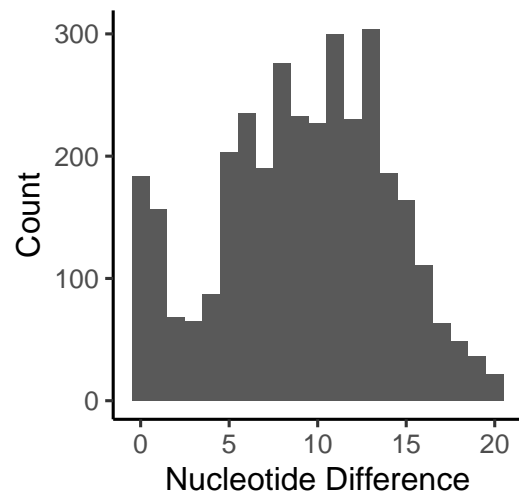
IGHV2-70*11_15

1011 sequences assigned
158 (15.6%) exact matches, in which:
111 unique CDR3
5 unique J



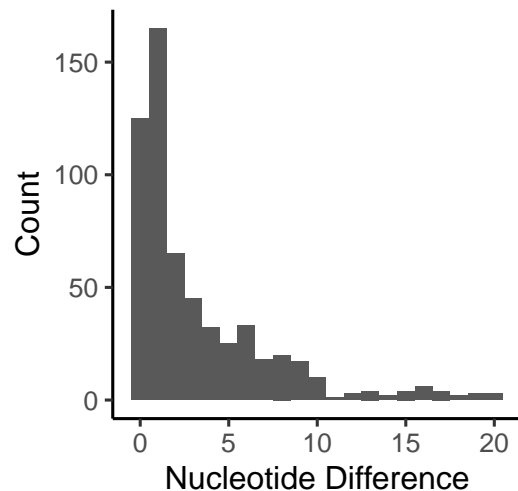
IGHV3-7*04

3715 sequences assigned
184 (5%) exact matches, in which:
115 unique CDR3
5 unique J



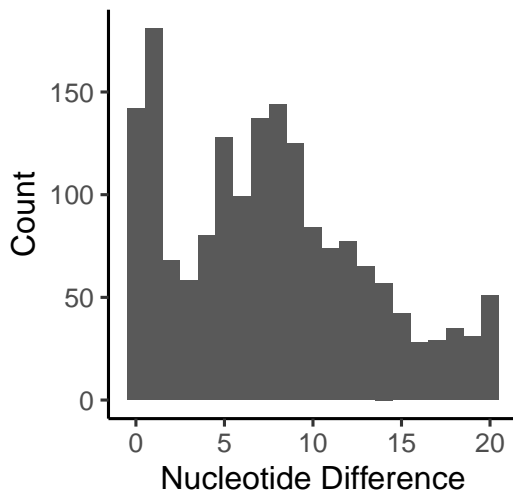
IGHV2-70*01

718 sequences assigned
125 (17.4%) exact matches, in which:
105 unique CDR3
6 unique J



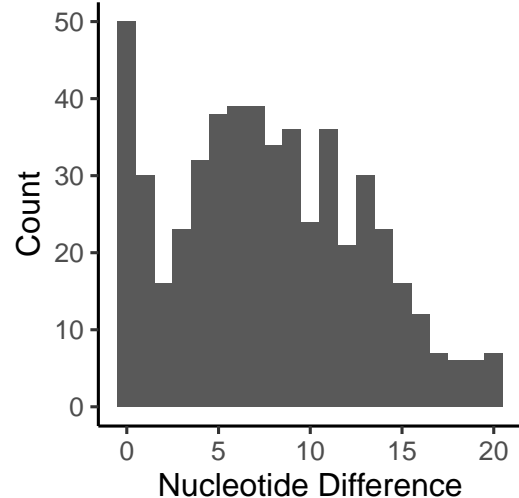
IGHV3-7*01

1964 sequences assigned
142 (7.2%) exact matches, in which:
122 unique CDR3
6 unique J



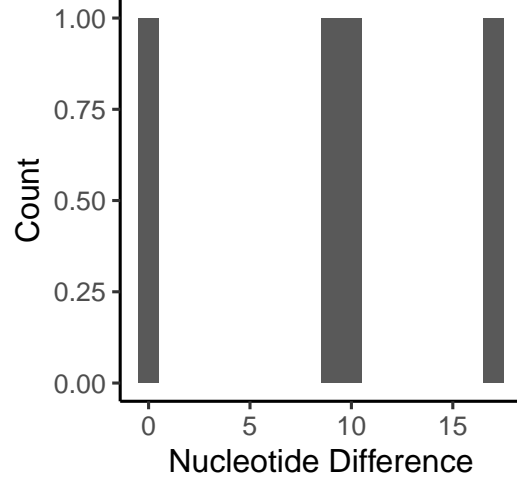
IGHV3-7*05

641 sequences assigned
50 (7.8%) exact matches, in which:
46 unique CDR3
6 unique J



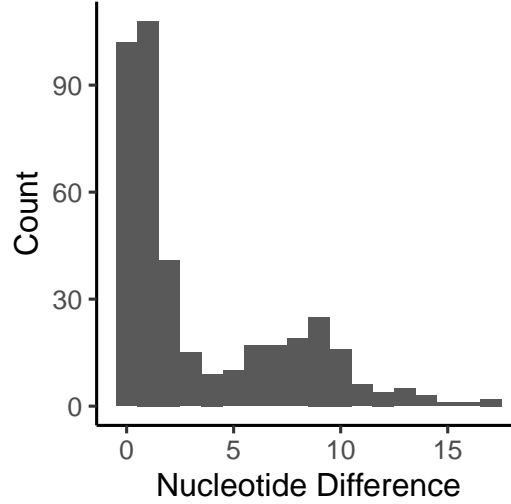
IGHV3-9*01

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



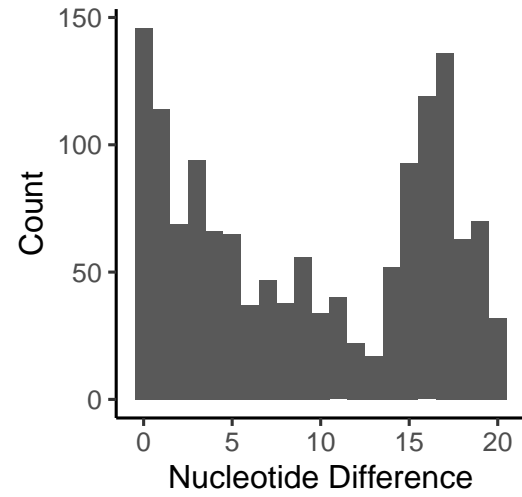
IGHV3-13*05

403 sequences assigned
102 (25.3%) exact matches, in which:
72 unique CDR3
6 unique J



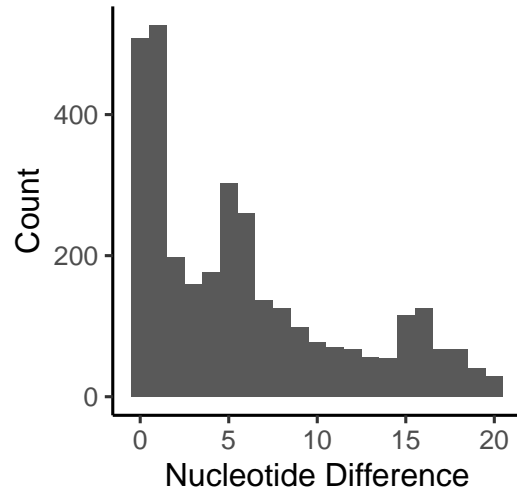
IGHV3-20*03_04

1909 sequences assigned
146 (7.6%) exact matches, in which:
88 unique CDR3
5 unique J



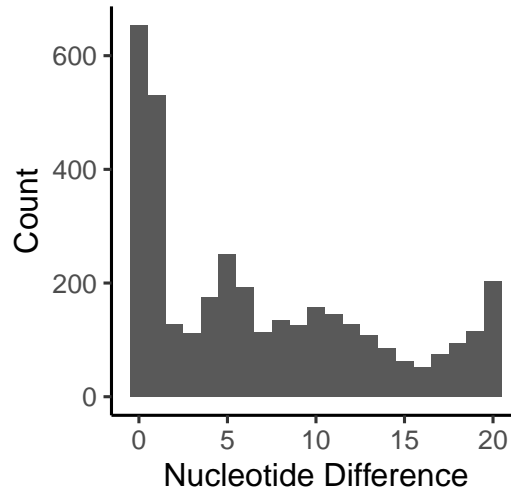
IGHV3-11*06

4082 sequences assigned
508 (12.4%) exact matches, in which:
368 unique CDR3
6 unique J



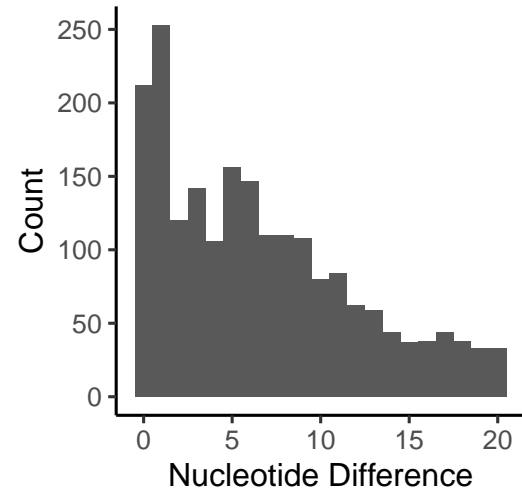
IGHV3-15*01_02

4561 sequences assigned
654 (14.3%) exact matches, in which:
368 unique CDR3
5 unique J



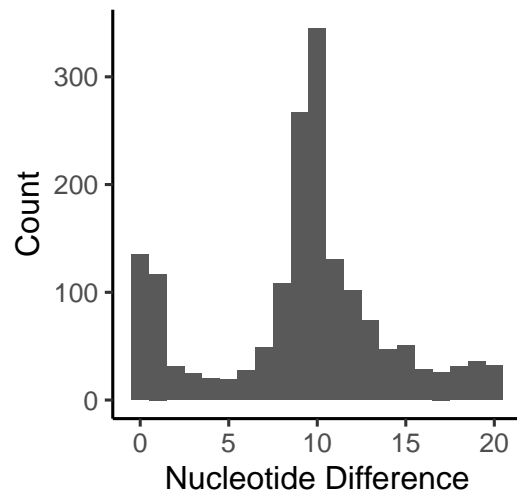
IGHV3-21*04

2213 sequences assigned
212 (9.6%) exact matches, in which:
184 unique CDR3
6 unique J



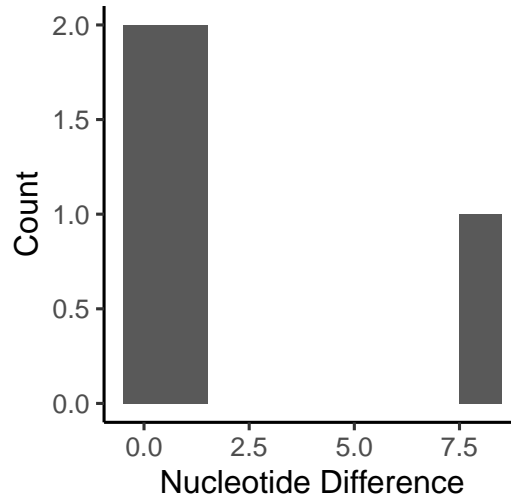
IGHV3-13*04

1749 sequences assigned
135 (7.7%) exact matches, in which:
89 unique CDR3
6 unique J



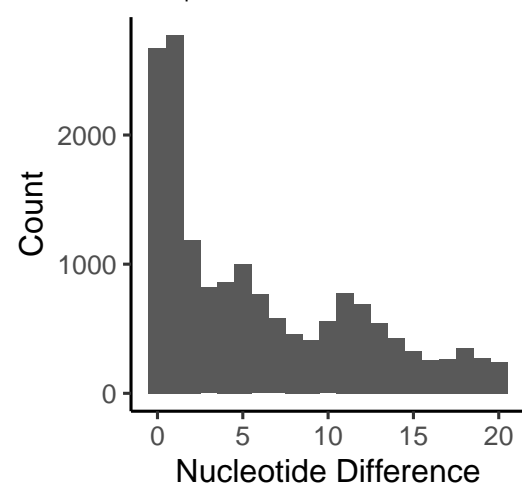
IGHV3-19*01

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
2 unique J



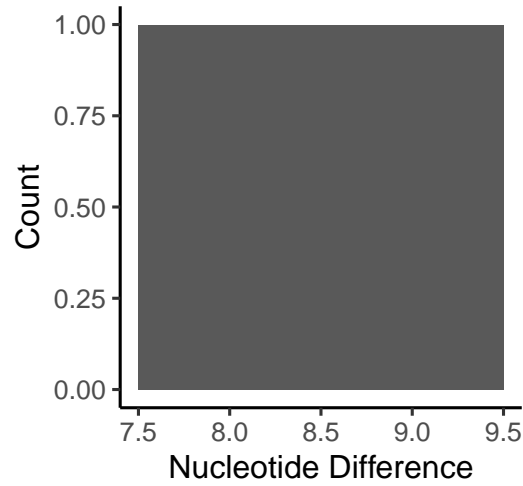
IGHV3-21*01_02

18572 sequences assigned
2675 (14.4%) exact matches, in which:
1647 unique CDR3
6 unique J



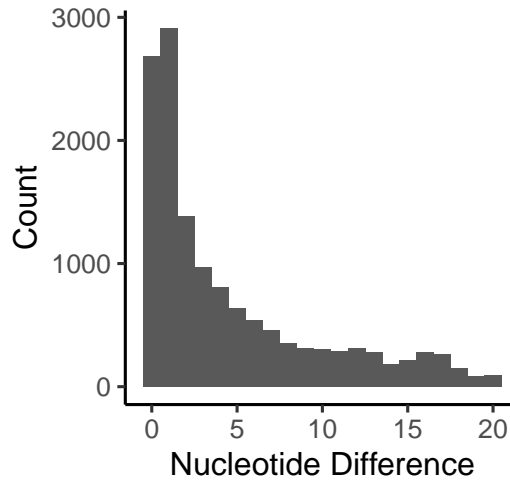
IGHV3-22*01_02

2 sequences assigned
No exact matches.



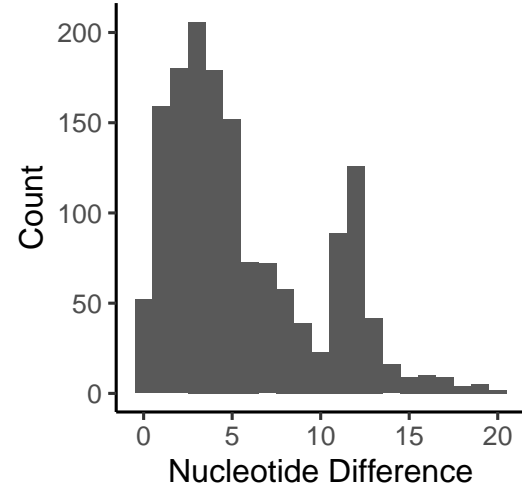
IGHV3-30-3*01

14802 sequences assigned
2682 (18.1%) exact matches, in which:
1692 unique CDR3
6 unique J



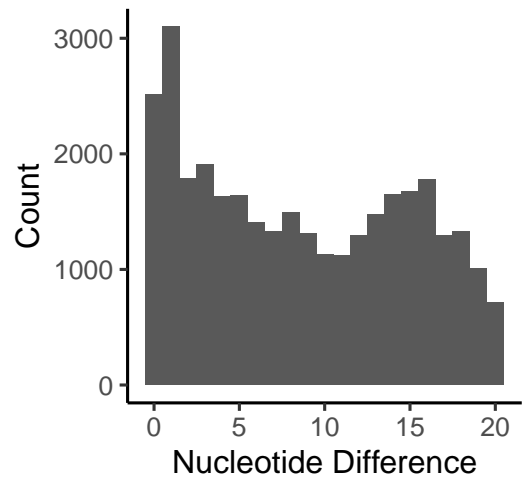
IGHV3-33*05

1522 sequences assigned
52 (3.4%) exact matches, in which:
38 unique CDR3
5 unique J



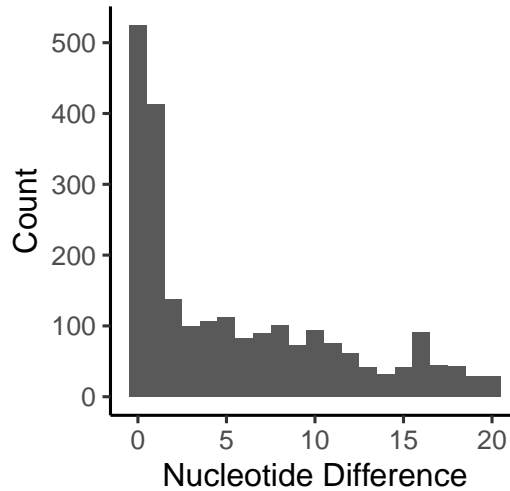
IGHV3-23*01_04

39567 sequences assigned
2518 (6.4%) exact matches, in which:
1368 unique CDR3
6 unique J



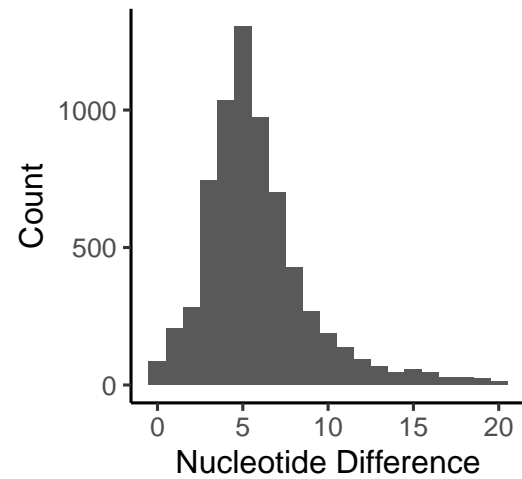
IGHV3-30*03

2980 sequences assigned
525 (17.6%) exact matches, in which:
441 unique CDR3
6 unique J



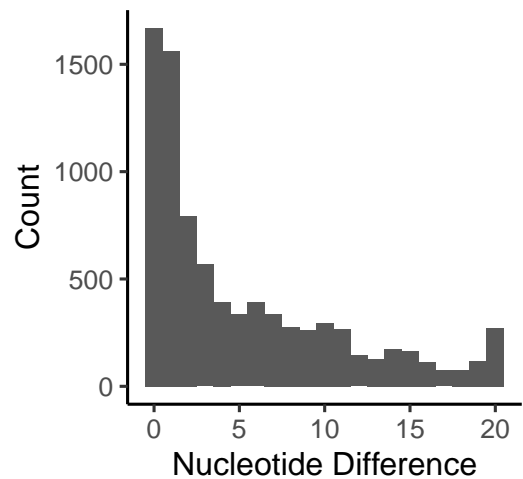
IGHV3-33*06

6838 sequences assigned
84 (1.2%) exact matches, in which:
77 unique CDR3
5 unique J



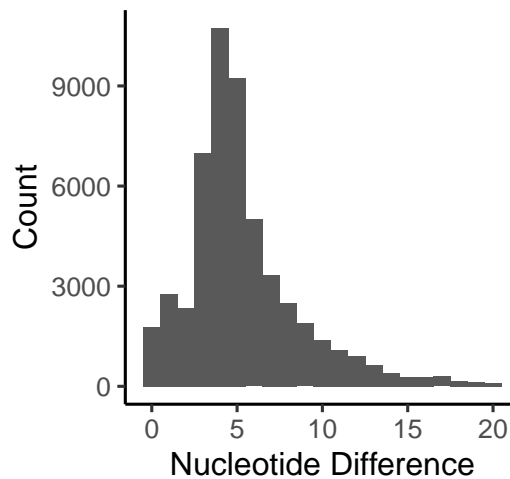
IGHV3-30*01

9968 sequences assigned
1669 (16.7%) exact matches, in which:
1102 unique CDR3
6 unique J



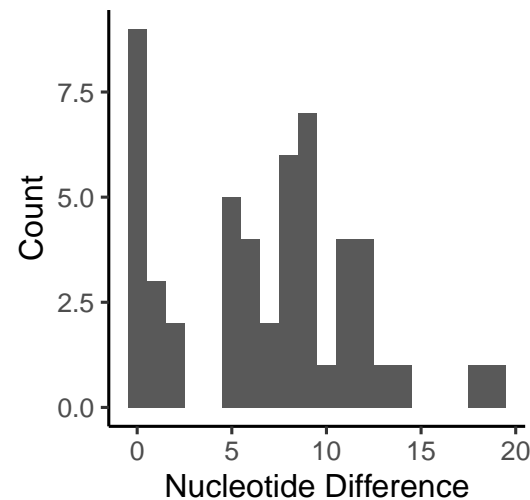
IGHV3-33*01

54261 sequences assigned
1773 (3.3%) exact matches, in which:
1106 unique CDR3
6 unique J



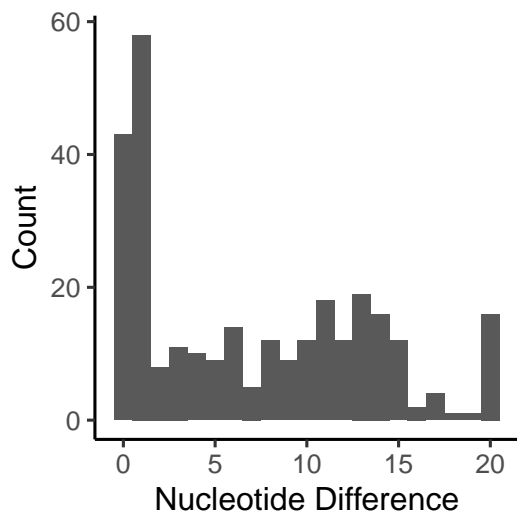
IGHV3-35*01

51 sequences assigned
9 (17.6%) exact matches, in which:
9 unique CDR3
3 unique J



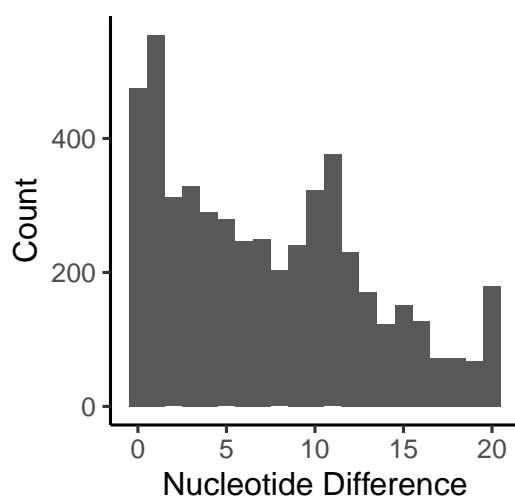
IGHV3-43*01

1093 sequences assigned
43 (3.9%) exact matches, in which:
21 unique CDR3
3 unique J



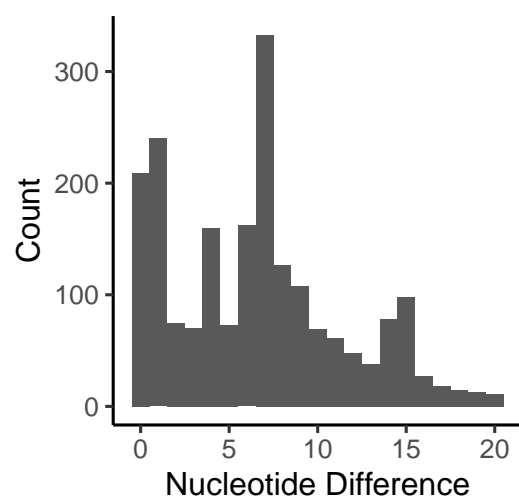
IGHV3-48*01

6283 sequences assigned
475 (7.6%) exact matches, in which:
304 unique CDR3
6 unique J



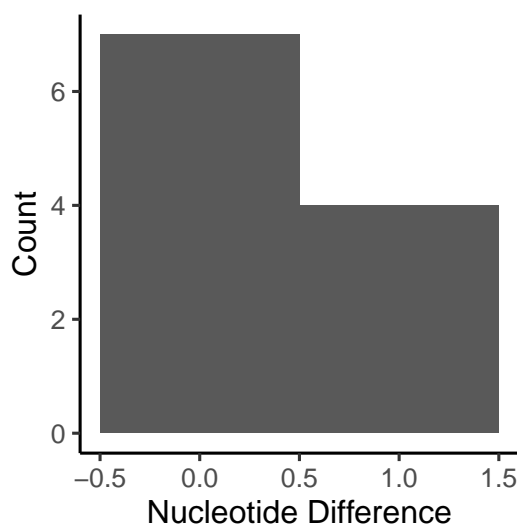
IGHV3-49*03_05

2135 sequences assigned
209 (9.8%) exact matches, in which:
120 unique CDR3
6 unique J



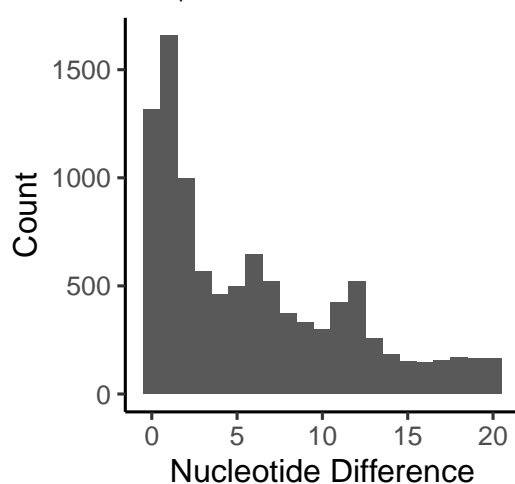
IGHV3-47*01

11 sequences assigned
7 (63.6%) exact matches, in which:
5 unique CDR3
1 unique J



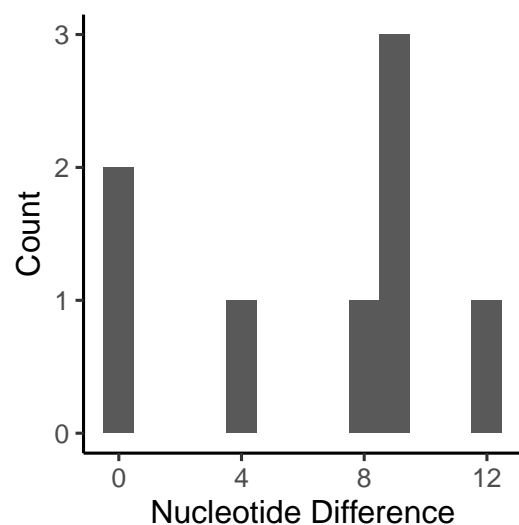
IGHV3-48*03

12604 sequences assigned
1316 (10.4%) exact matches, in which:
769 unique CDR3
6 unique J



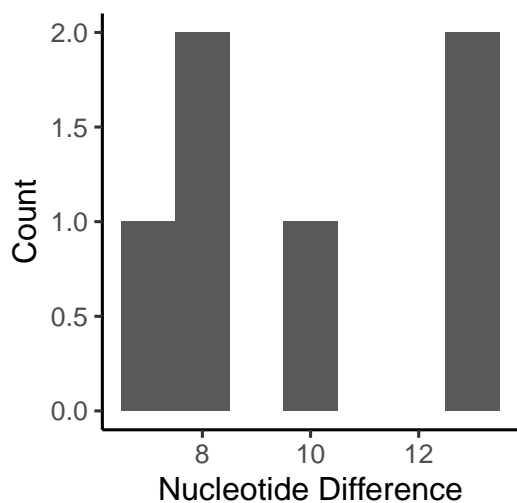
IGHV3-52*02

8 sequences assigned
2 (25%) exact matches, in which:
2 unique CDR3
2 unique J



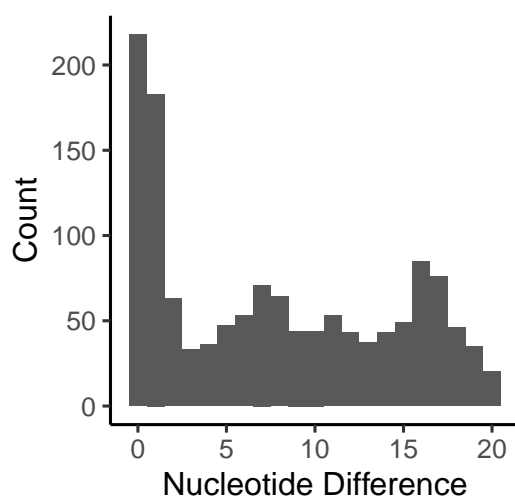
IGHV3-47*02

6 sequences assigned
No exact matches.



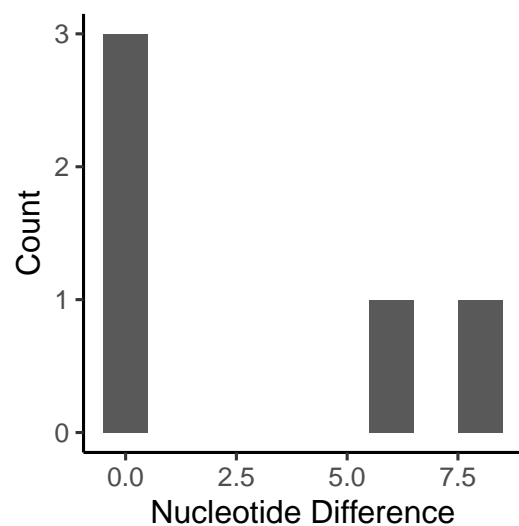
IGHV3-49*04

1432 sequences assigned
218 (15.2%) exact matches, in which:
132 unique CDR3
6 unique J



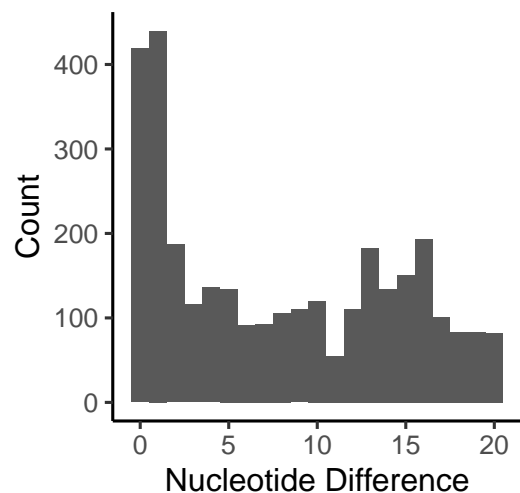
IGHV3-52*01_03

5 sequences assigned
3 (60%) exact matches, in which:
3 unique CDR3
2 unique J



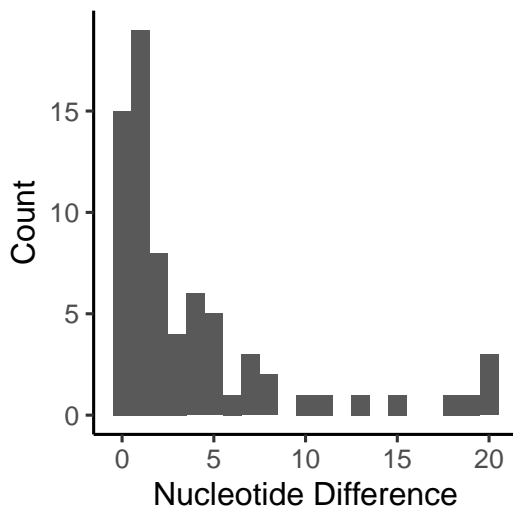
IGHV3-53*01_02

3525 sequences assigned
419 (11.9%) exact matches, in which:
276 unique CDR3
6 unique J



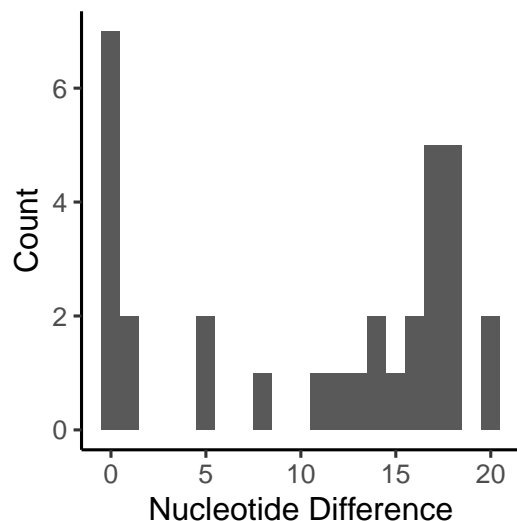
IGHV3-64*02_07

74 sequences assigned
15 (20.3%) exact matches, in which:
9 unique CDR3
3 unique J



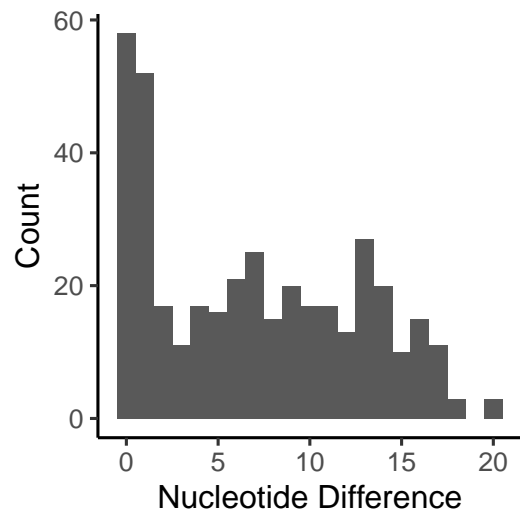
IGHV3-69-1*02

68 sequences assigned
7 (10.3%) exact matches, in which:
7 unique CDR3
3 unique J



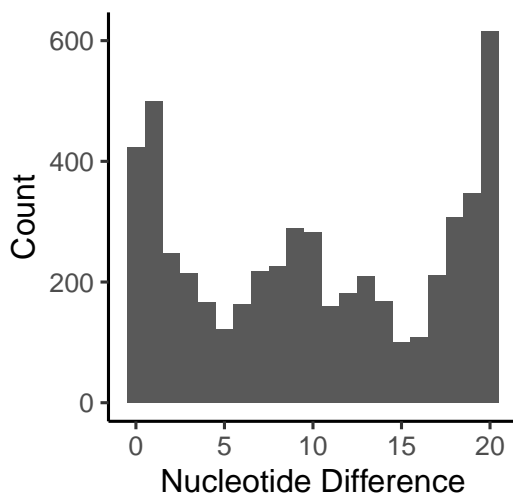
IGHV3-64*01

395 sequences assigned
58 (14.7%) exact matches, in which:
34 unique CDR3
6 unique J



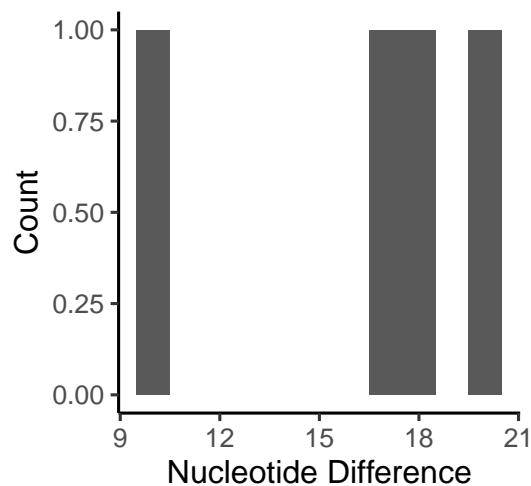
IGHV3-66*01

8082 sequences assigned
424 (5.2%) exact matches, in which:
293 unique CDR3
6 unique J



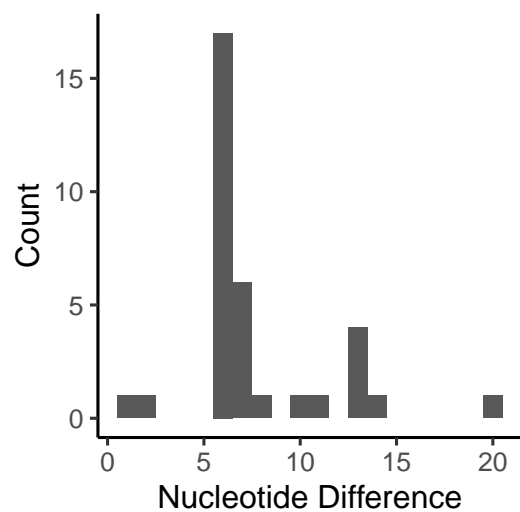
IGHV3-71*01_04

4 sequences assigned
No exact matches.



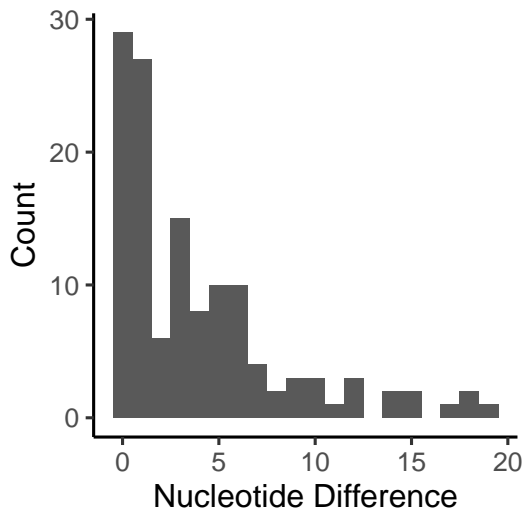
IGHV3-64*04

36 sequences assigned
No exact matches.



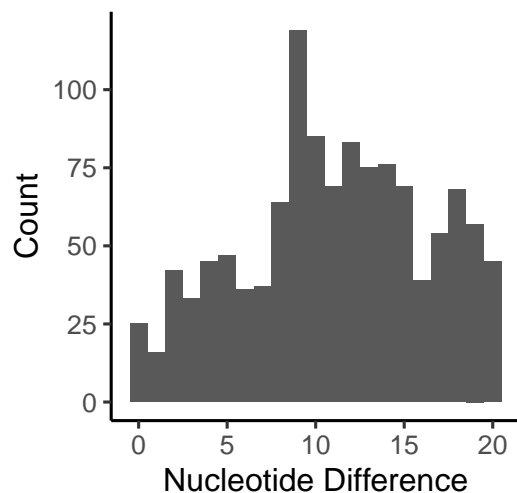
IGHV3-69-1*01

134 sequences assigned
29 (21.6%) exact matches, in which:
21 unique CDR3
3 unique J



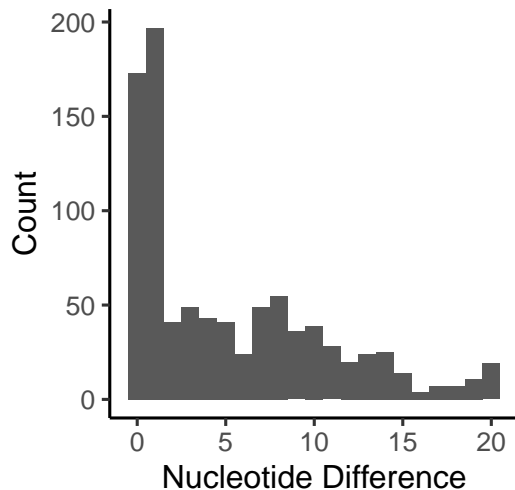
IGHV3-72*01

1289 sequences assigned
25 (1.9%) exact matches, in which:
17 unique CDR3
5 unique J



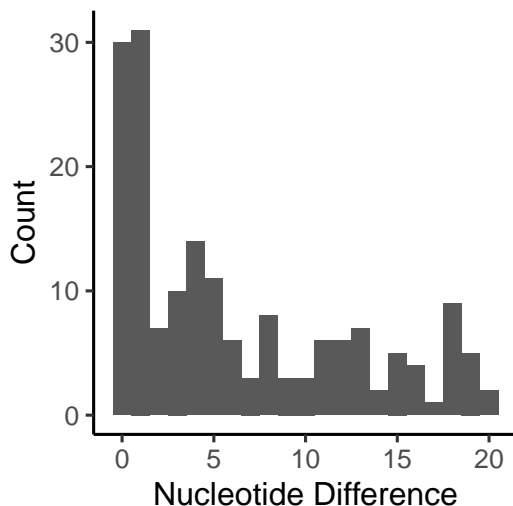
IGHV3-73*01_02

1061 sequences assigned
173 (16.3%) exact matches, in which:
107 unique CDR3
6 unique J



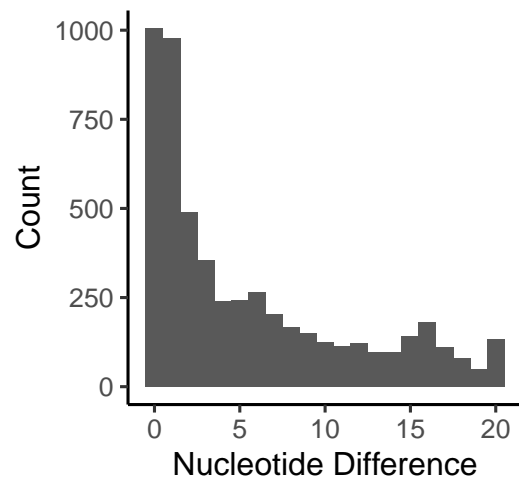
IGHV3-43D*04

302 sequences assigned
30 (9.9%) exact matches, in which:
14 unique CDR3
3 unique J



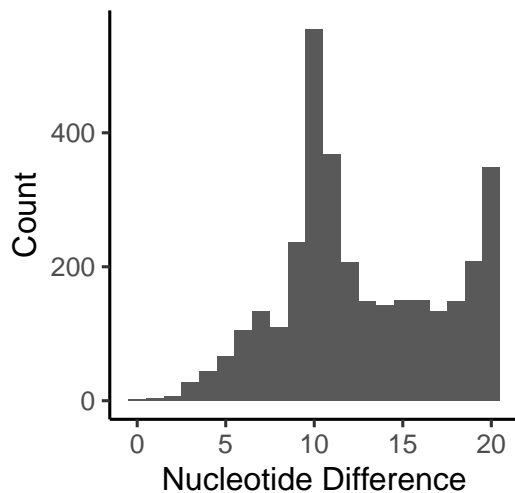
IGHV4-4*02_03

6319 sequences assigned
1005 (15.9%) exact matches, in which:
753 unique CDR3
6 unique J



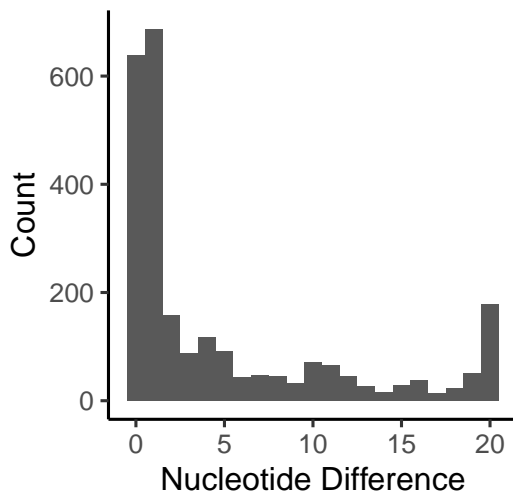
IGHV3-74*03

5329 sequences assigned
3 (0.1%) exact matches, in which:
2 unique CDR3
2 unique J



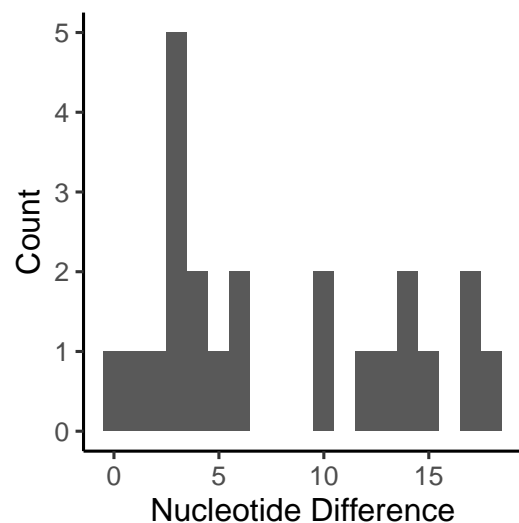
IGHV3-64D*06

3315 sequences assigned
639 (19.3%) exact matches, in which:
294 unique CDR3
6 unique J



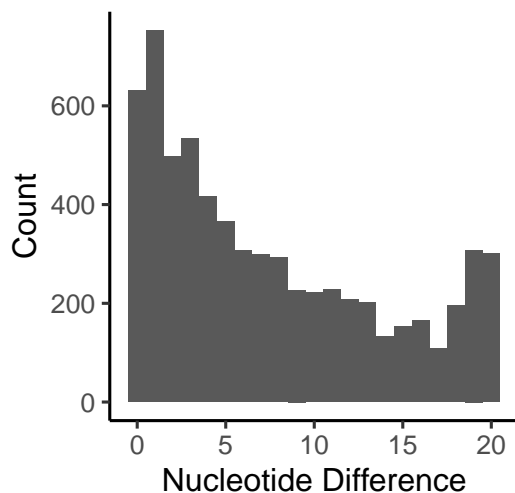
IGHV4-28*03

36 sequences assigned
1 (2.8%) exact matches, in which:
1 unique CDR3
1 unique J



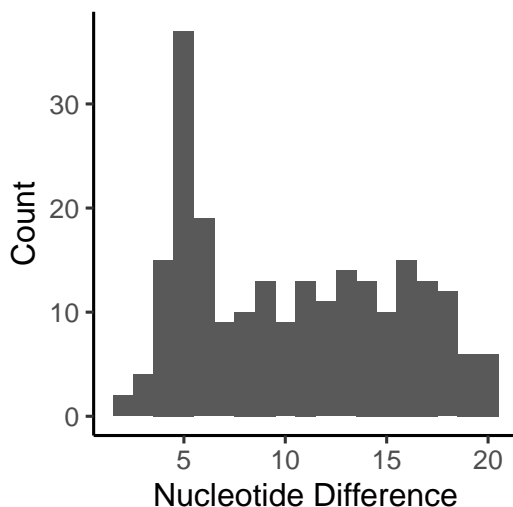
IGHV3-74*01_02

9216 sequences assigned
632 (6.9%) exact matches, in which:
406 unique CDR3
6 unique J



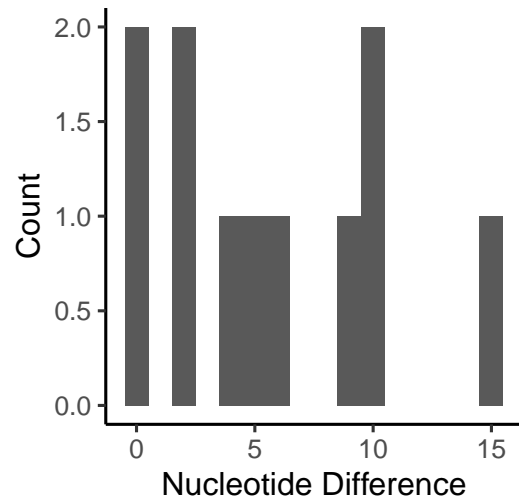
IGHV3-NL1*01

258 sequences assigned
No exact matches.



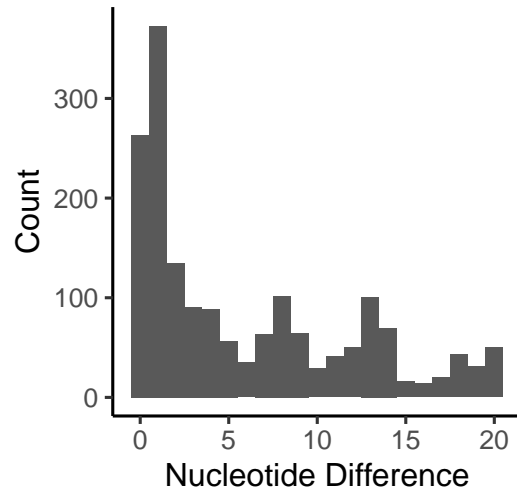
IGHV4-28*01_07

12 sequences assigned
2 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



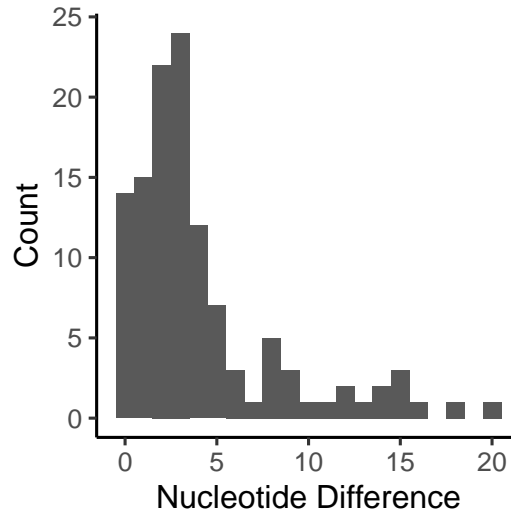
IGHV4-30-2*01

2414 sequences assigned
263 (10.9%) exact matches, in which:
153 unique CDR3
6 unique J



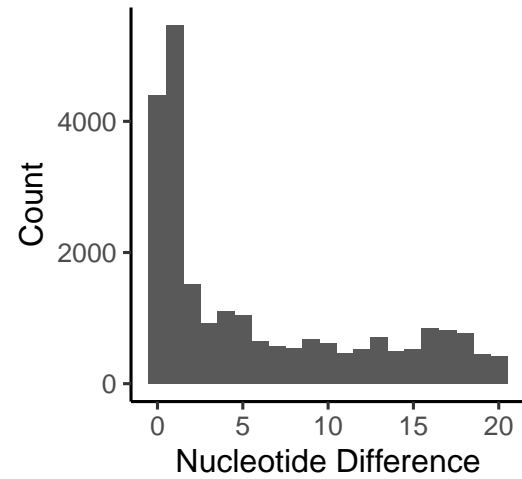
IGHV4-30-2*05

130 sequences assigned
14 (10.8%) exact matches, in which:
13 unique CDR3
6 unique J



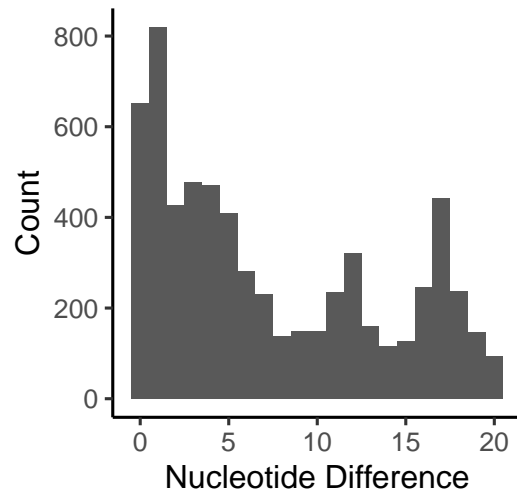
IGHV4-34*01_02

26218 sequences assigned
4402 (16.8%) exact matches, in which:
2870 unique CDR3
6 unique J



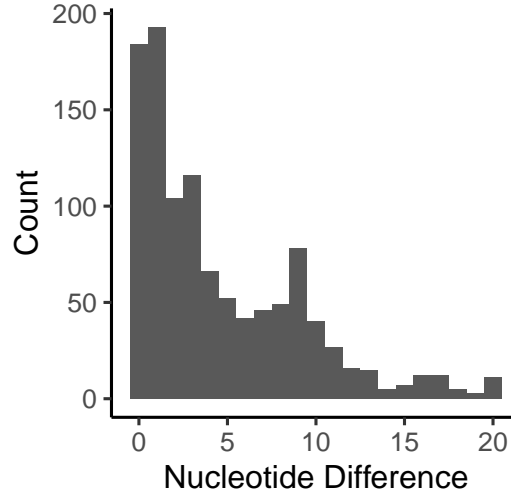
IGHV4-30-4*01

6657 sequences assigned
652 (9.8%) exact matches, in which:
487 unique CDR3
6 unique J



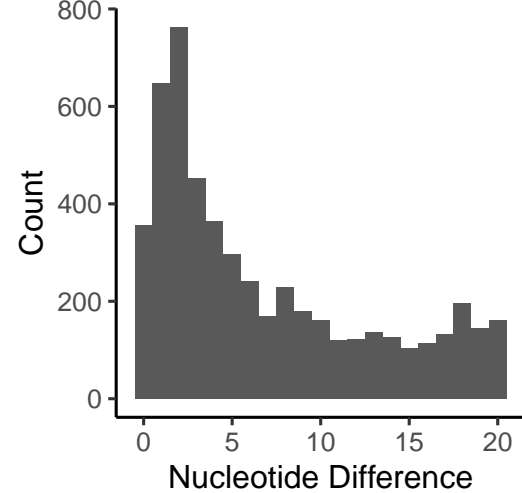
IGHV4-31*01

1129 sequences assigned
184 (16.3%) exact matches, in which:
149 unique CDR3
6 unique J



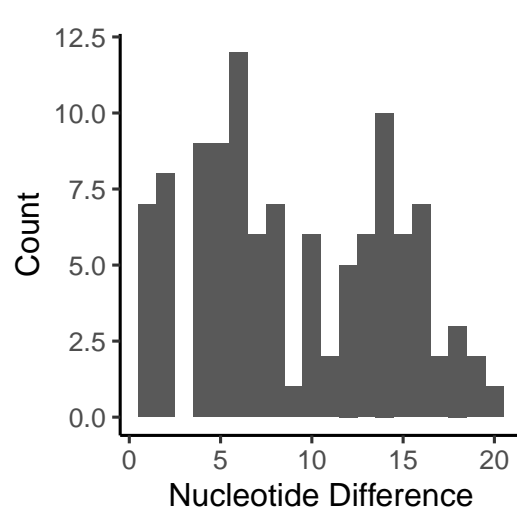
IGHV4-38-2*01

6298 sequences assigned
356 (5.7%) exact matches, in which:
300 unique CDR3
6 unique J



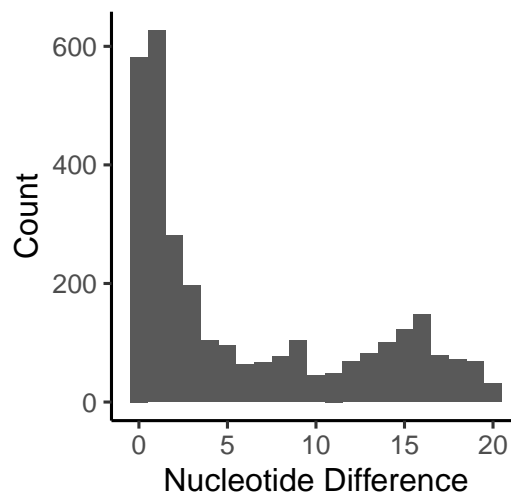
IGHV4-30-2*03

132 sequences assigned
No exact matches.



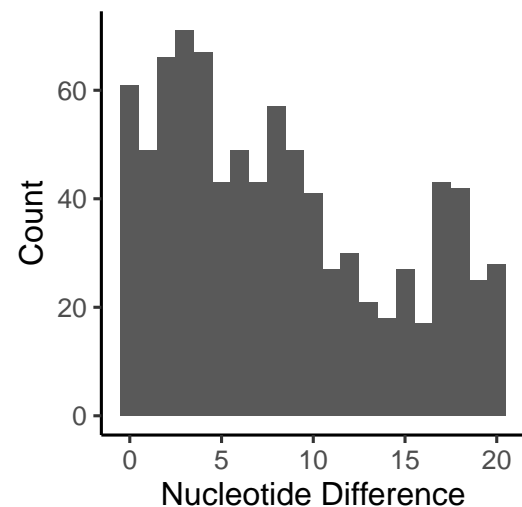
IGHV4-31*02

3399 sequences assigned
582 (17.1%) exact matches, in which:
453 unique CDR3
6 unique J



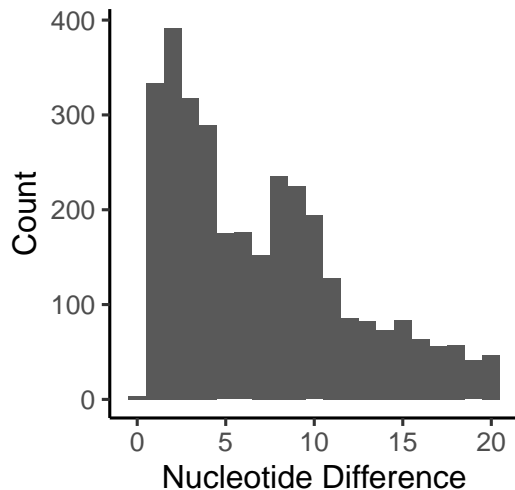
IGHV4-38-2*02

1554 sequences assigned
61 (3.9%) exact matches, in which:
52 unique CDR3
4 unique J



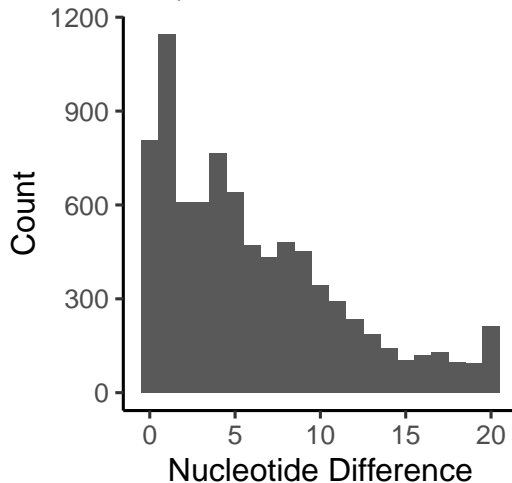
IGHV4-39*07

3680 sequences assigned
4 (0.1%) exact matches, in which:
4 unique CDR3
2 unique J



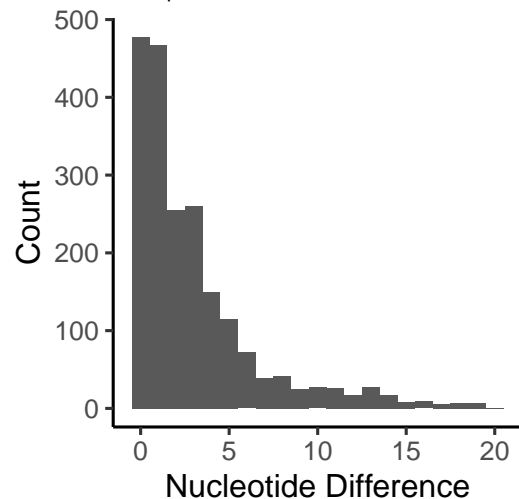
IGHV4-59*08

10409 sequences assigned
807 (7.8%) exact matches, in which:
656 unique CDR3
6 unique J



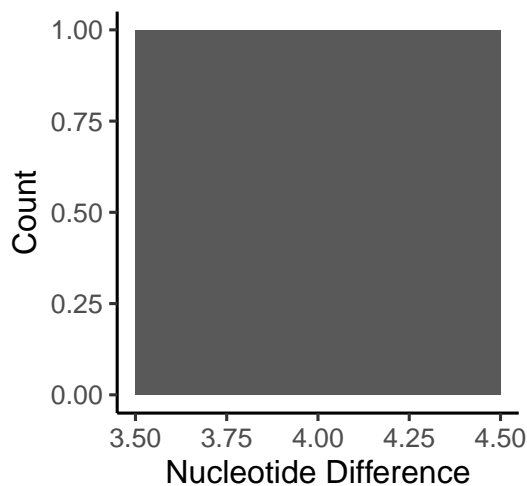
IGHV4-61*01

2419 sequences assigned
478 (19.8%) exact matches, in which:
405 unique CDR3
6 unique J



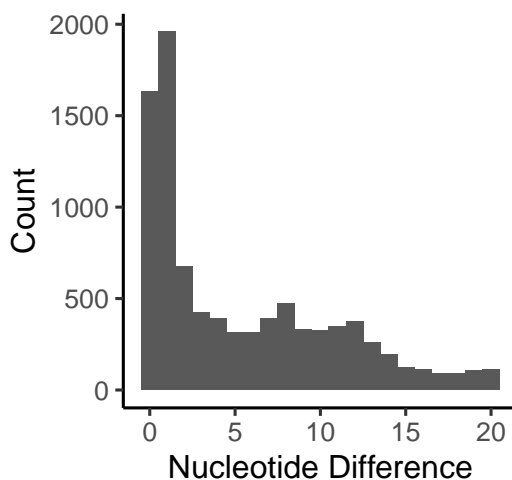
IGHV4-55*09

2 sequences assigned
No exact matches.



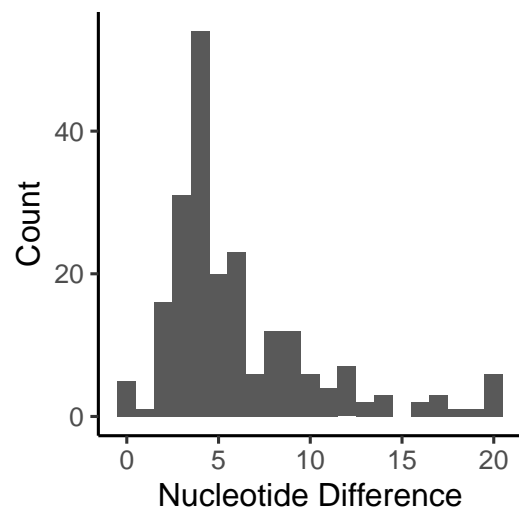
IGHV4-59*01_07

11492 sequences assigned
1633 (14.2%) exact matches, in which:
1256 unique CDR3
6 unique J



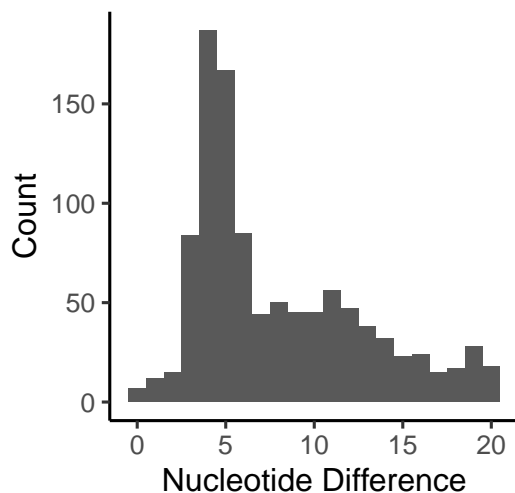
IGHV4-61*05

238 sequences assigned
5 (2.1%) exact matches, in which:
4 unique CDR3
2 unique J



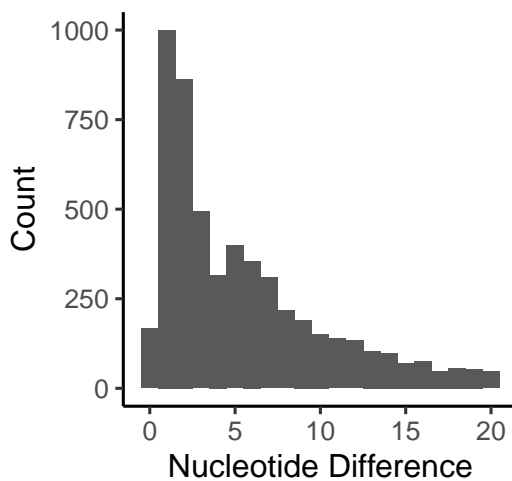
IGHV4-59*02

2730 sequences assigned
7 (0.3%) exact matches, in which:
6 unique CDR3
4 unique J



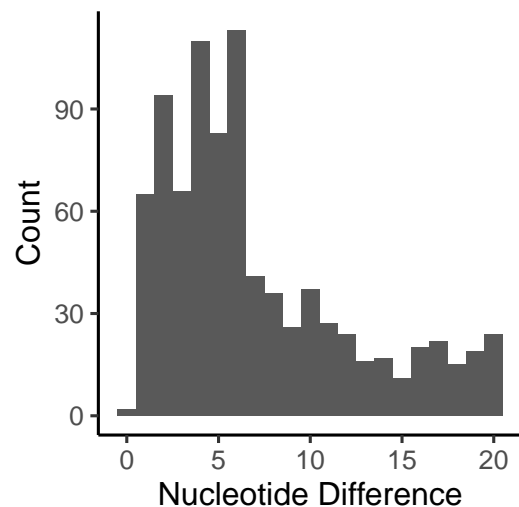
IGHV4-59*12

5769 sequences assigned
167 (2.9%) exact matches, in which:
160 unique CDR3
6 unique J



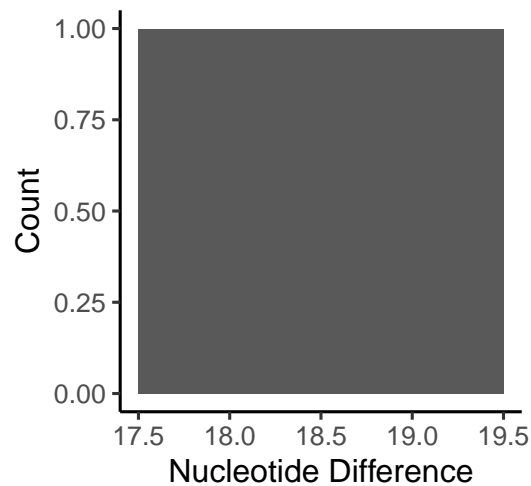
IGHV4-61*08

1185 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
1 unique J



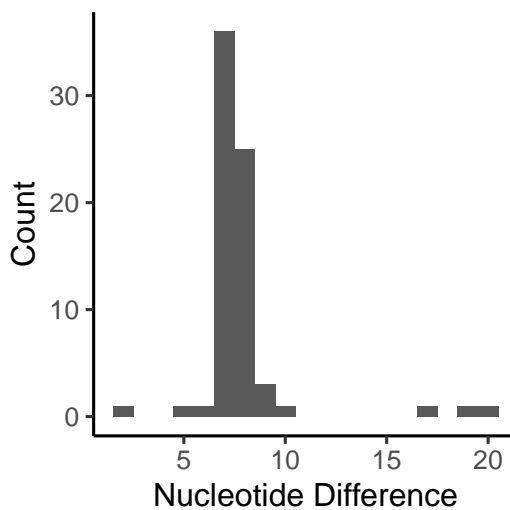
IGHV1/OR15-2*02_03

3 sequences assigned
No exact matches.



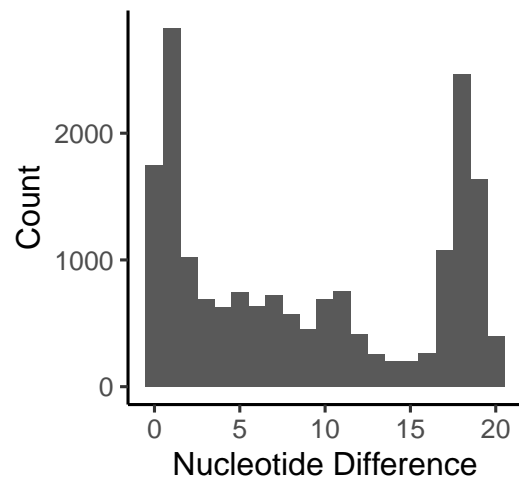
IGHV4/OR15-8*02

173 sequences assigned
No exact matches.



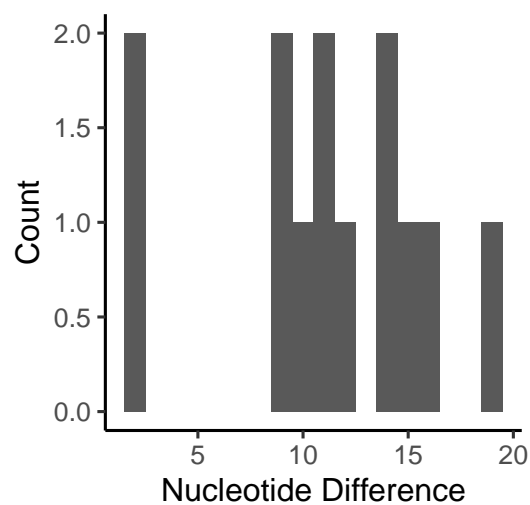
IGHV5-51*01_03

19234 sequences assigned
1744 (9.1%) exact matches, in which:
909 unique CDR3
6 unique J



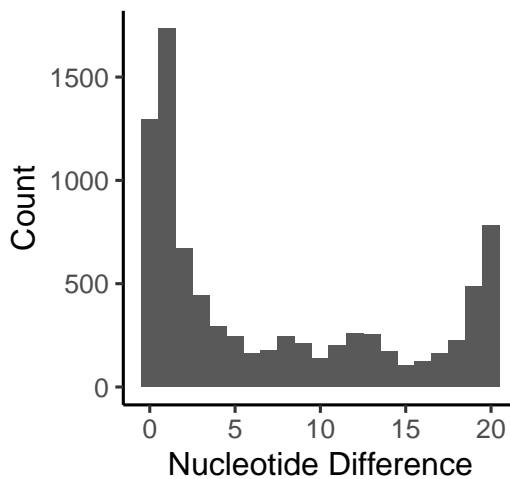
IGHV1/OR15-3*02

14 sequences assigned
No exact matches.



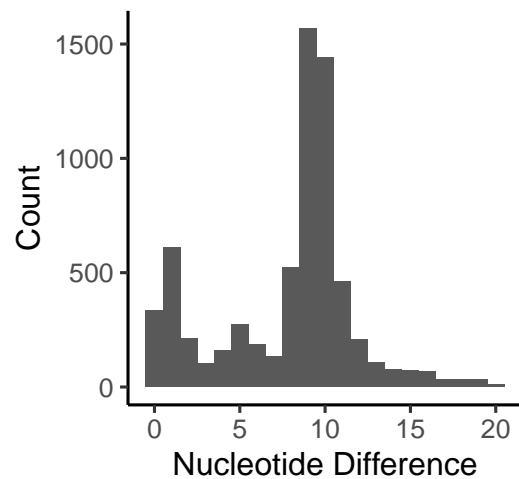
IGHV5-10-1*01_03

11575 sequences assigned
1296 (11.2%) exact matches, in which:
737 unique CDR3
6 unique J



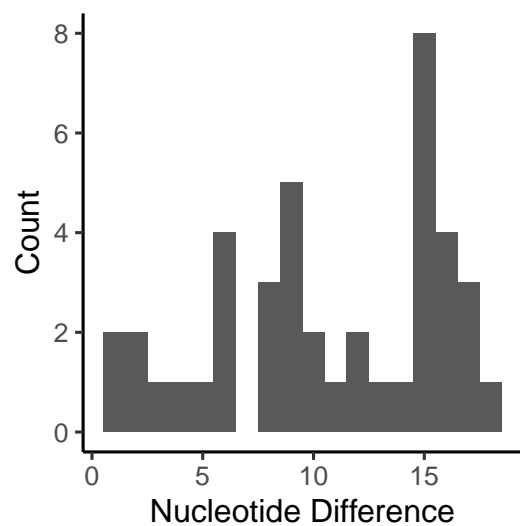
IGHV6-1*01_02

6668 sequences assigned
335 (5%) exact matches, in which:
255 unique CDR3
6 unique J



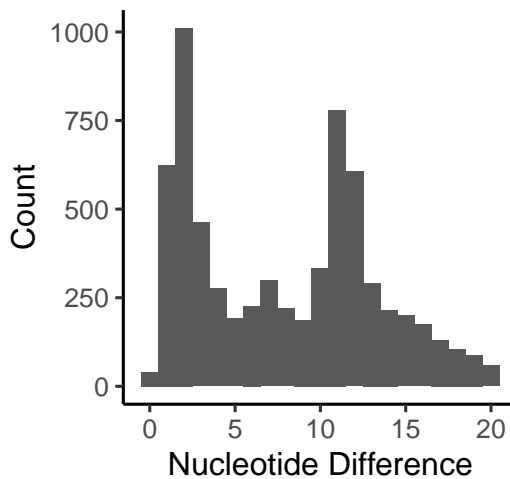
IGHV4/OR15-8*01

61 sequences assigned
No exact matches.



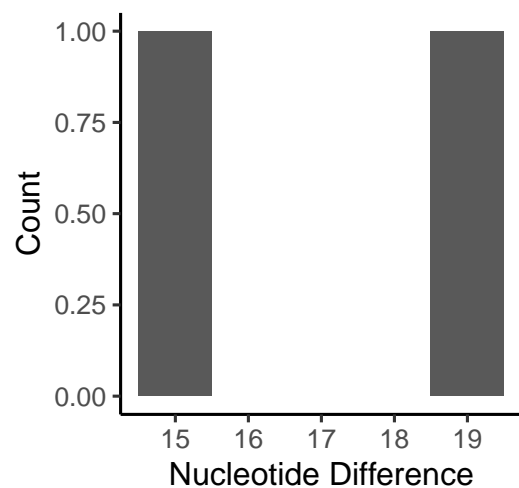
IGHV5-51*07

6695 sequences assigned
41 (0.6%) exact matches, in which:
31 unique CDR3
4 unique J



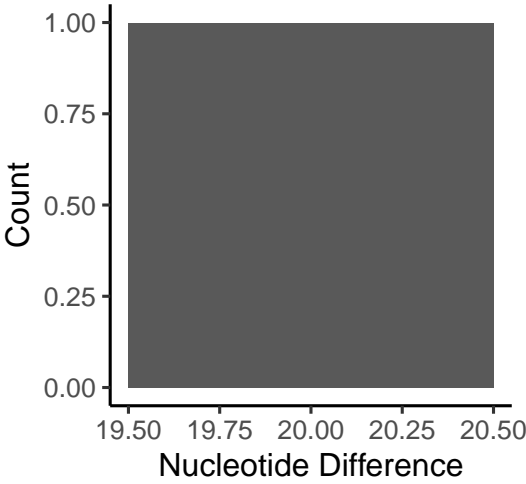
IGHV3/OR16-6*02

3 sequences assigned
No exact matches.



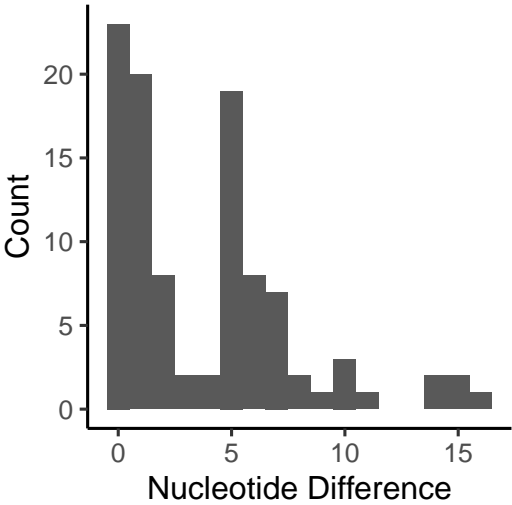
IGHV3/OR16-8*01

1 sequences assigned
No exact matches.



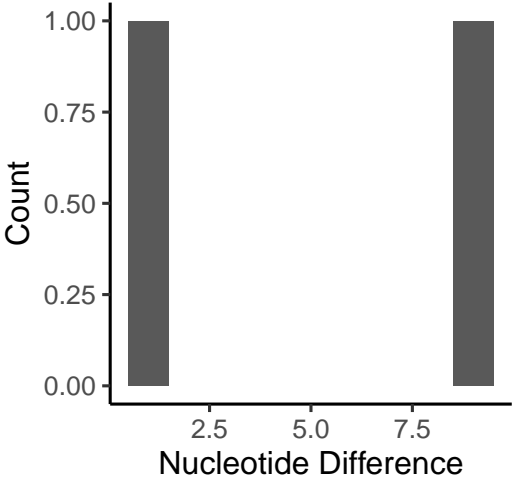
IGHV7-4-1*01

101 sequences assigned
23 (22.8%) exact matches, in which:
21 unique CDR3
3 unique J



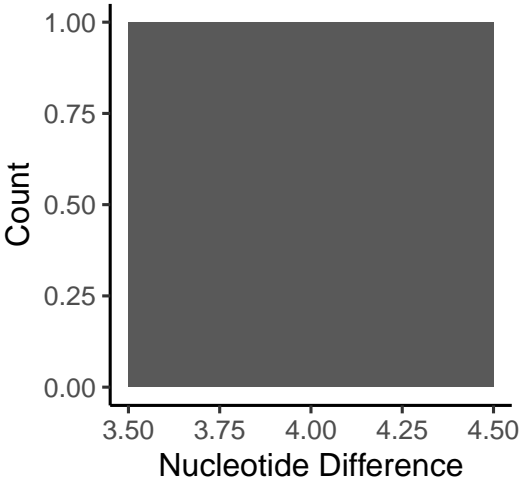
IGHV3/OR16-9*01

2 sequences assigned
No exact matches.



IGHV3/OR16-10*01_03

1 sequences assigned
No exact matches.





Novel sequence(s)IGHV3-33*01_T105C_A173T_T192G are not listed in the genotype and will be ignored.