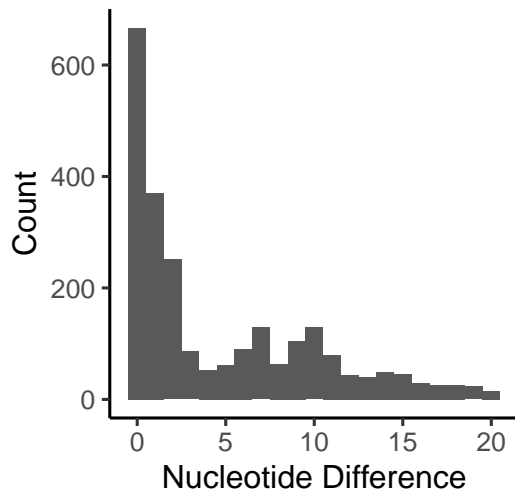


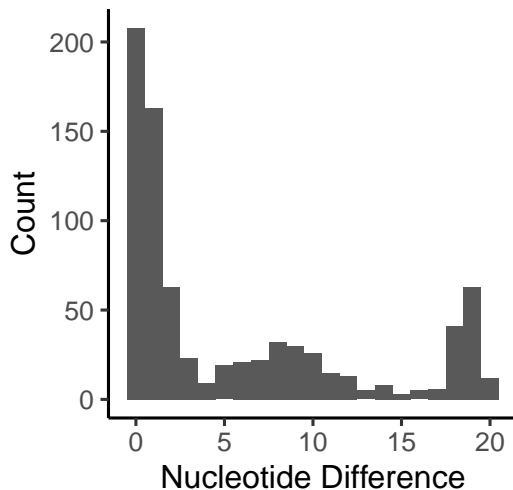
IGHV1-2*02

2630 sequences assigned
667 (25.4%) exact matches, in which:
649 unique CDR3
6 unique J



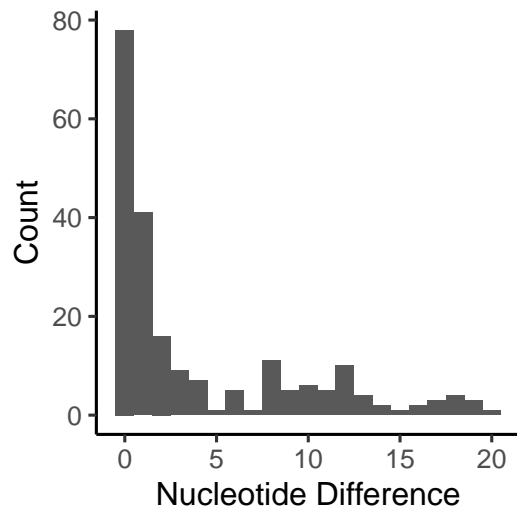
IGHV1-8*01

833 sequences assigned
208 (25%) exact matches, in which:
200 unique CDR3
5 unique J



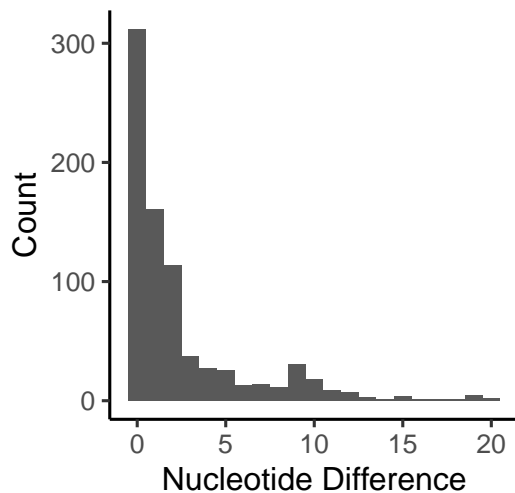
IGHV1-24*01

302 sequences assigned
78 (25.8%) exact matches, in which:
74 unique CDR3
6 unique J



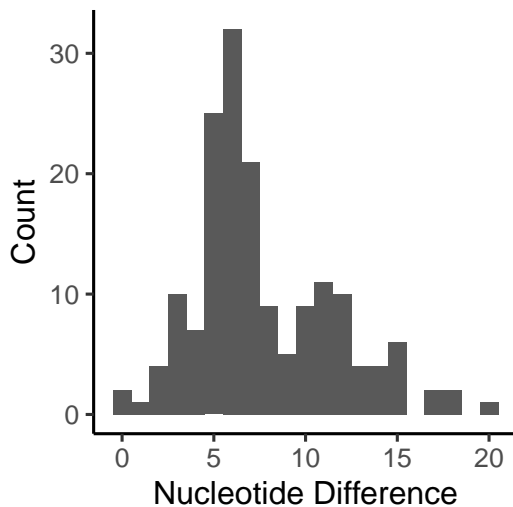
IGHV1-2*04

876 sequences assigned
312 (35.6%) exact matches, in which:
296 unique CDR3
6 unique J



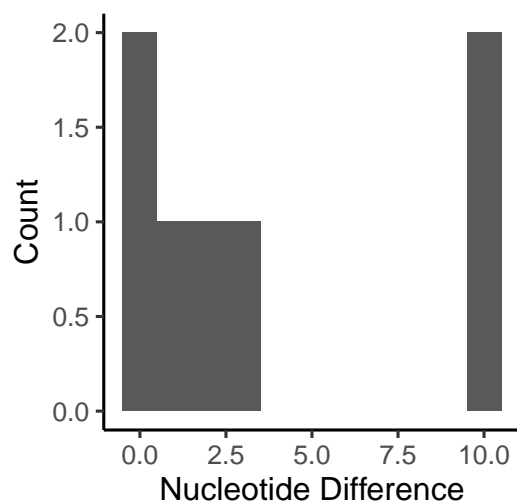
IGHV1-8*02

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



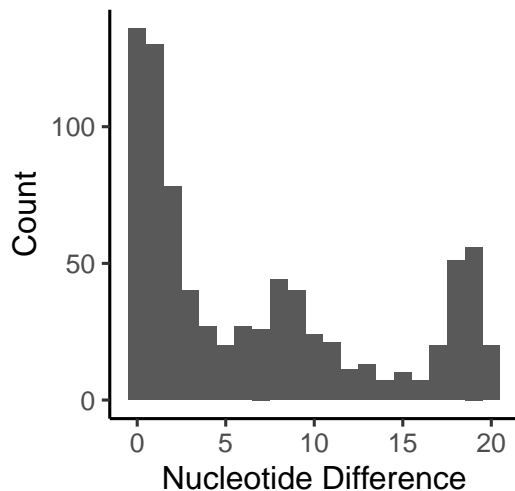
IGHV1-45*02

7 sequences assigned
2 (28.6%) exact matches, in which:
2 unique CDR3
2 unique J



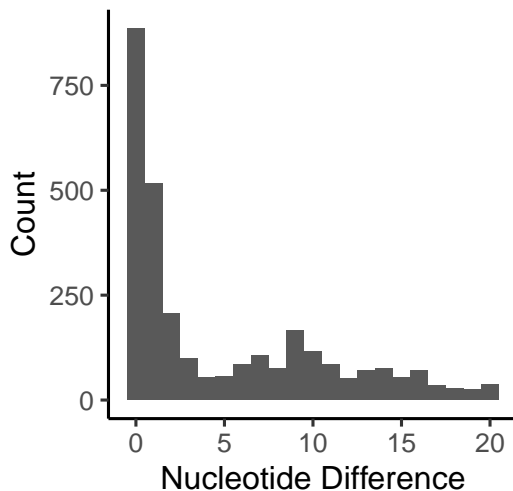
IGHV1-3*01_05

876 sequences assigned
136 (15.5%) exact matches, in which:
123 unique CDR3
6 unique J



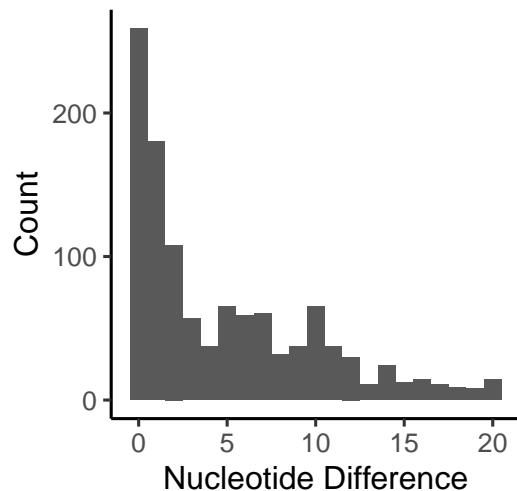
IGHV1-18*01

3345 sequences assigned
886 (26.5%) exact matches, in which:
843 unique CDR3
6 unique J



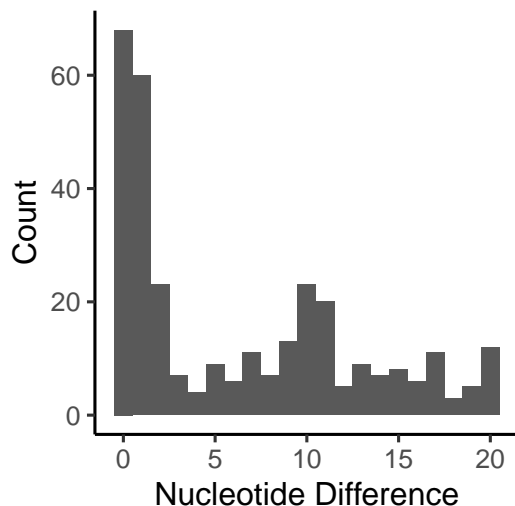
IGHV1-46*01

1340 sequences assigned
259 (19.3%) exact matches, in which:
254 unique CDR3
6 unique J



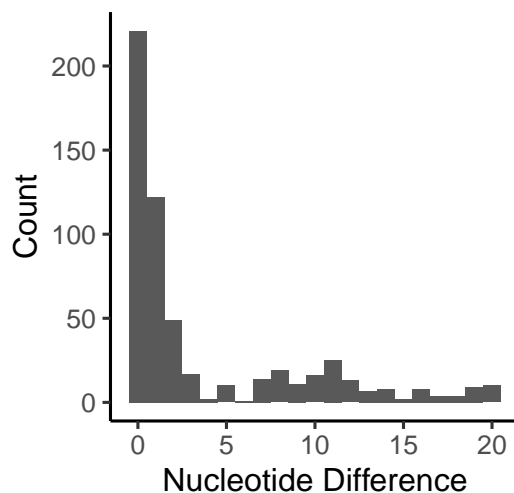
IGHV1-46*03

423 sequences assigned
68 (16.1%) exact matches, in which:
67 unique CDR3
4 unique J



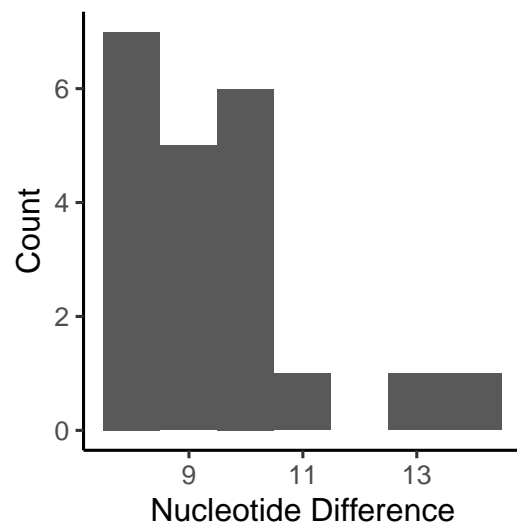
IGHV1-69*02

729 sequences assigned
221 (30.3%) exact matches, in which:
219 unique CDR3
6 unique J



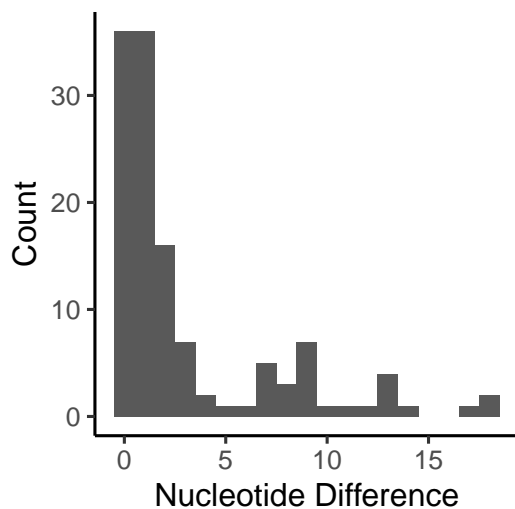
IGHV1-NL1*01

21 sequences assigned
No exact matches.



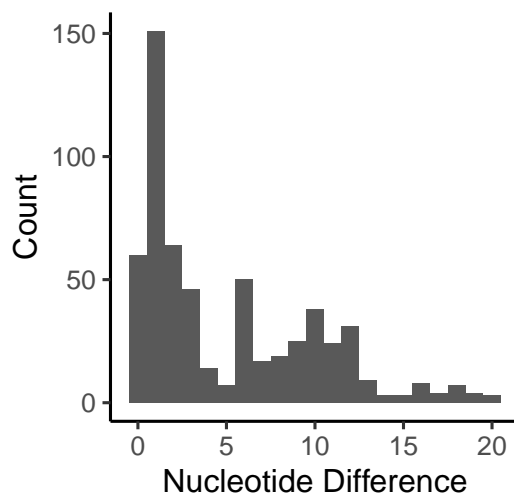
IGHV1-58*02

137 sequences assigned
36 (26.3%) exact matches, in which:
34 unique CDR3
3 unique J



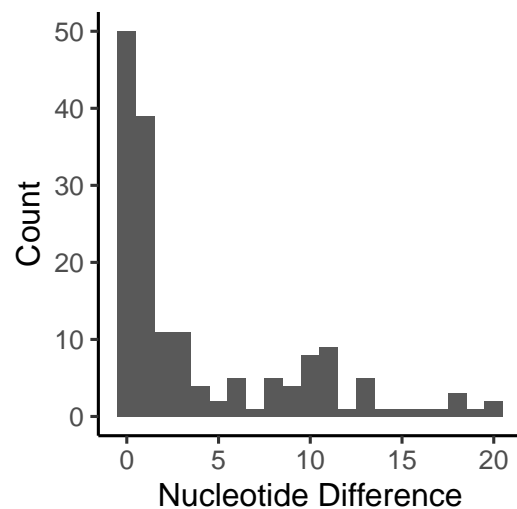
IGHV1-69*04_09

829 sequences assigned
60 (7.2%) exact matches, in which:
54 unique CDR3
4 unique J



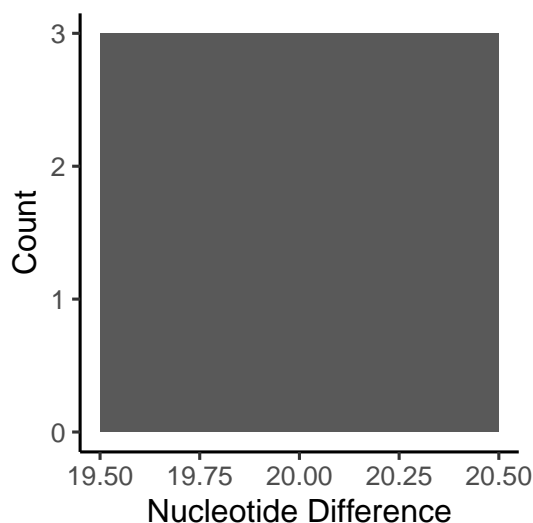
IGHV2-5*01

266 sequences assigned
50 (18.8%) exact matches, in which:
47 unique CDR3
6 unique J



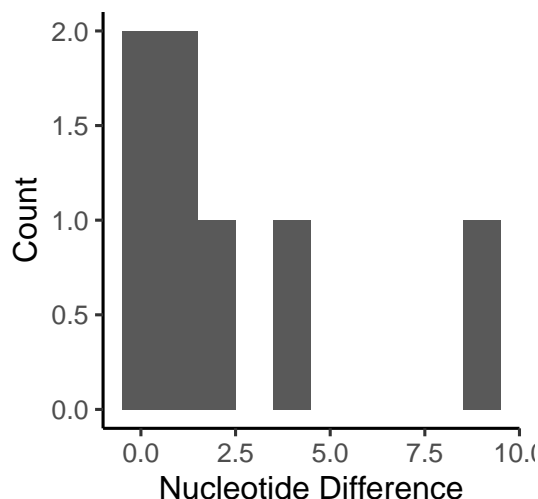
IGHV1-69-2*01

3 sequences assigned
No exact matches.



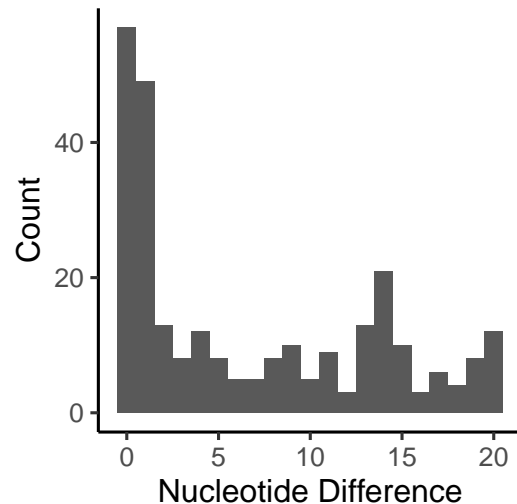
IGHV1-69D*01

15 sequences assigned
2 (13.3%) exact matches, in which:
2 unique CDR3
2 unique J



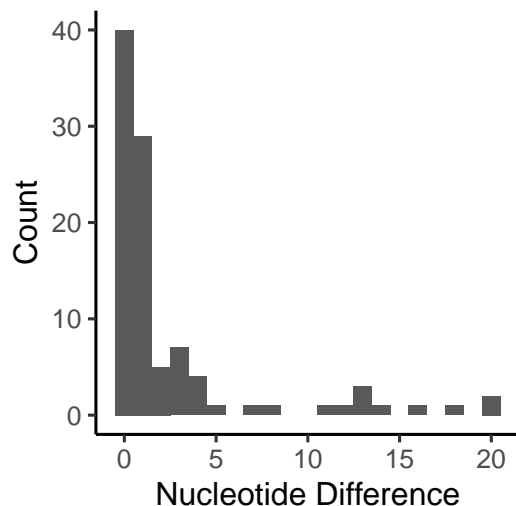
IGHV2-5*02

468 sequences assigned
57 (12.2%) exact matches, in which:
50 unique CDR3
6 unique J



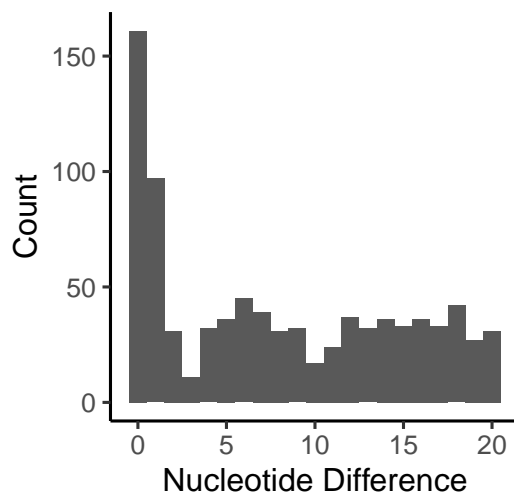
IGHV2-26*01

103 sequences assigned
40 (38.8%) exact matches, in which:
37 unique CDR3
5 unique J



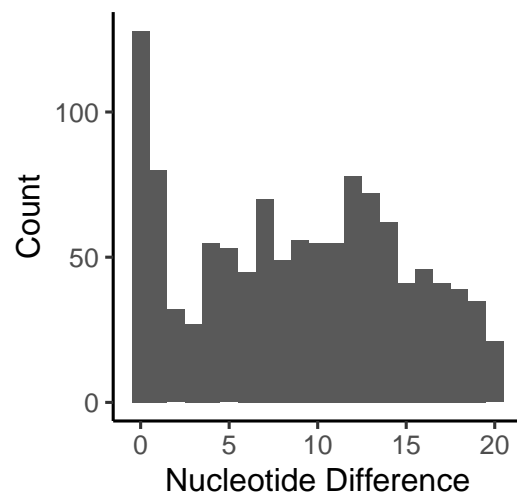
IGHV3-7*01

990 sequences assigned
161 (16.3%) exact matches, in which:
125 unique CDR3
5 unique J



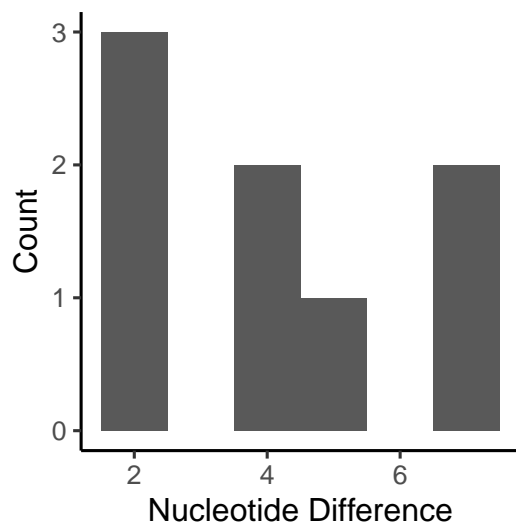
IGHV3-9*01

1376 sequences assigned
128 (9.3%) exact matches, in which:
94 unique CDR3
6 unique J



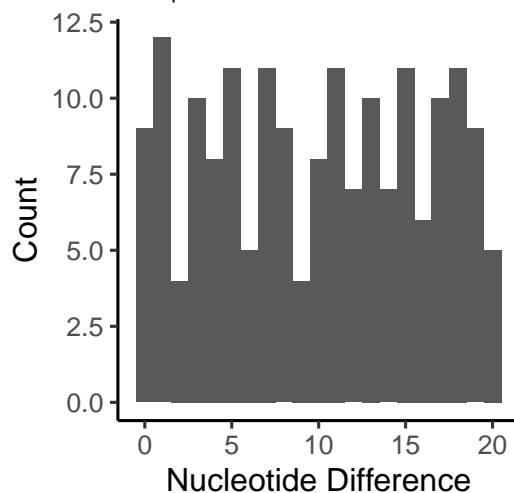
IGHV2-70*12

8 sequences assigned
No exact matches.



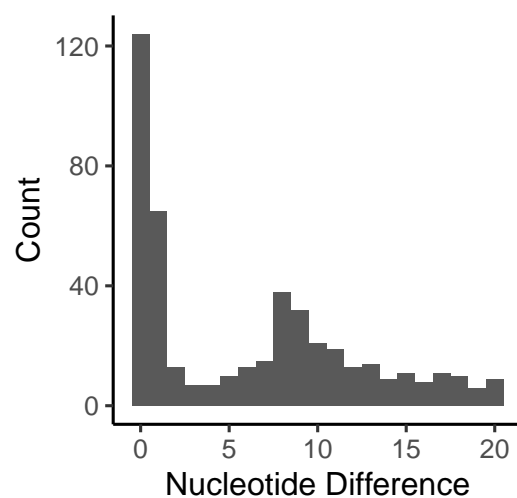
IGHV3-7*03

233 sequences assigned
9 (3.9%) exact matches, in which:
7 unique CDR3
3 unique J



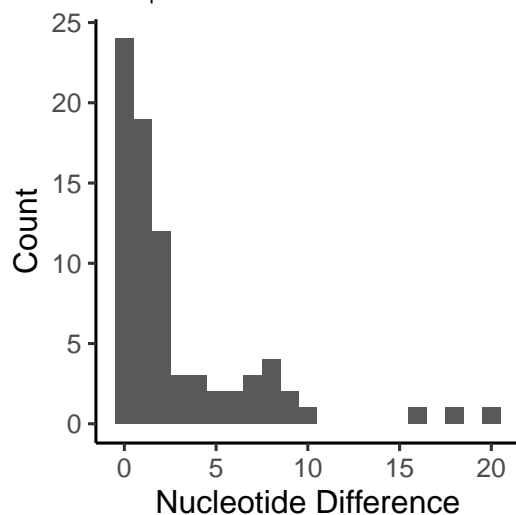
IGHV3-11*01

551 sequences assigned
124 (22.5%) exact matches, in which:
96 unique CDR3
5 unique J



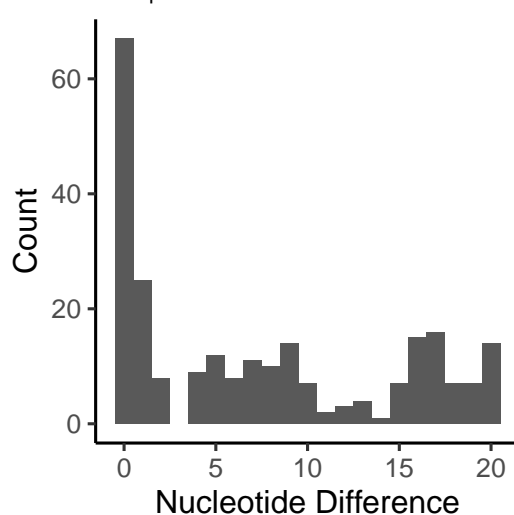
IGHV2-70*11_15

89 sequences assigned
24 (27%) exact matches, in which:
20 unique CDR3
5 unique J



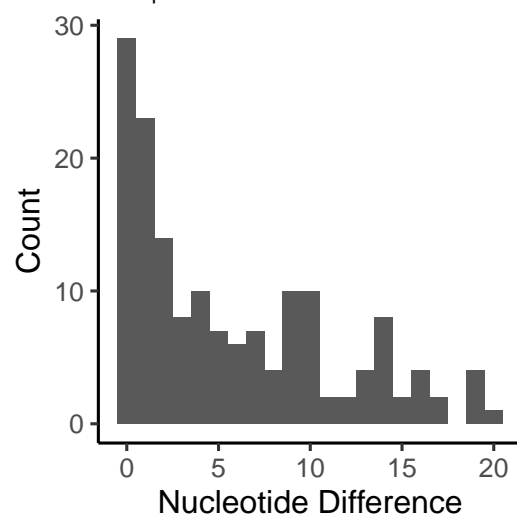
IGHV3-7*04

328 sequences assigned
67 (20.4%) exact matches, in which:
44 unique CDR3
4 unique J



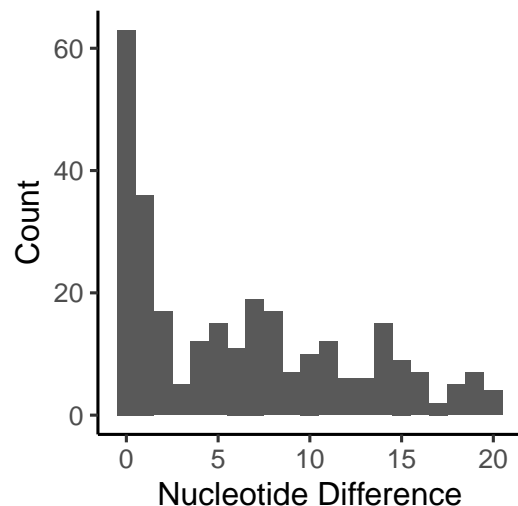
IGHV3-11*04

176 sequences assigned
29 (16.5%) exact matches, in which:
29 unique CDR3
5 unique J



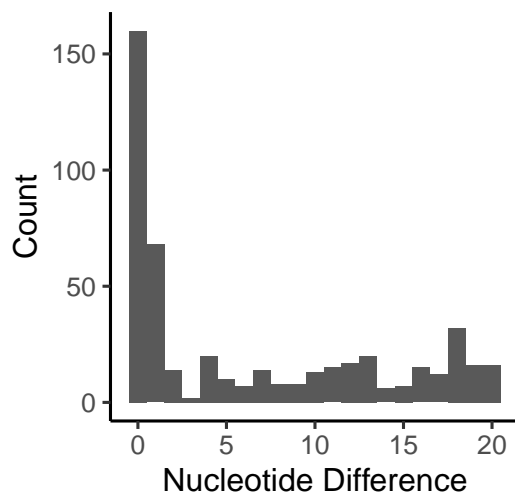
IGHV3-11*06

424 sequences assigned
63 (14.9%) exact matches, in which:
52 unique CDR3
5 unique J



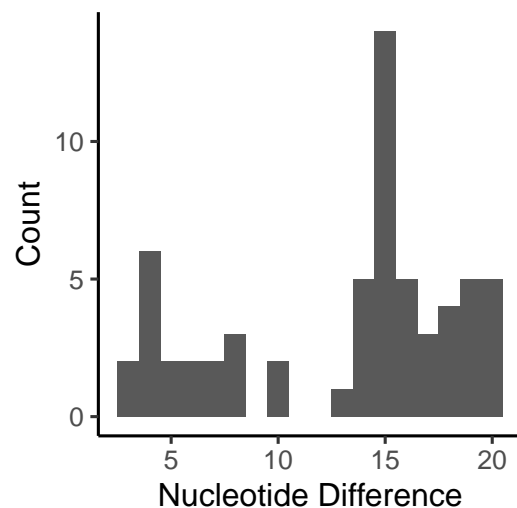
IGHV3-15*01_02

737 sequences assigned
160 (21.7%) exact matches, in which:
110 unique CDR3
6 unique J



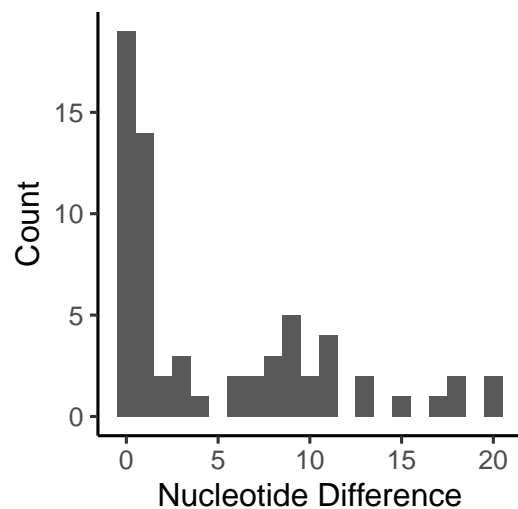
IGHV3-20*03_04

101 sequences assigned
No exact matches.



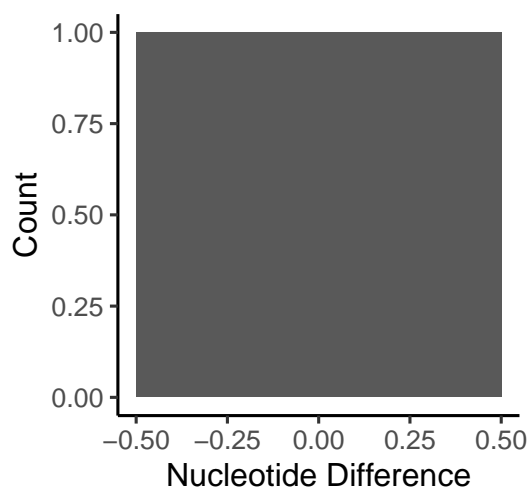
IGHV3-13*01

66 sequences assigned
19 (28.8%) exact matches, in which:
15 unique CDR3
2 unique J



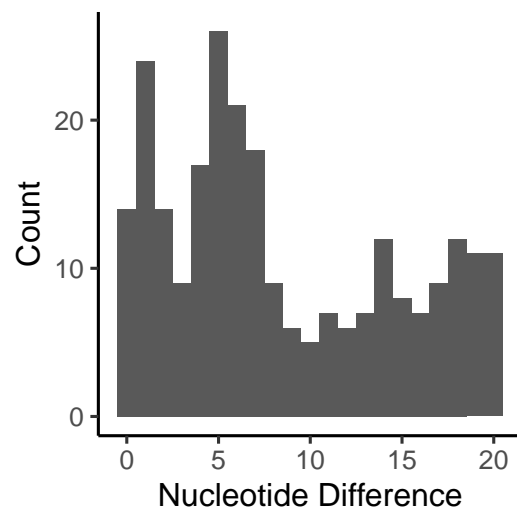
IGHV3-19*01

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



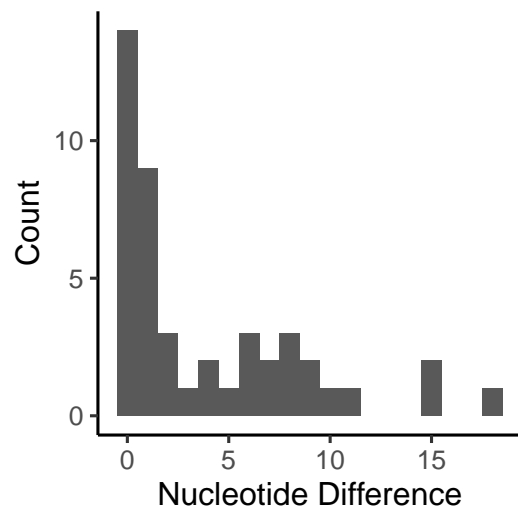
IGHV3-21*04

334 sequences assigned
14 (4.2%) exact matches, in which:
14 unique CDR3
4 unique J



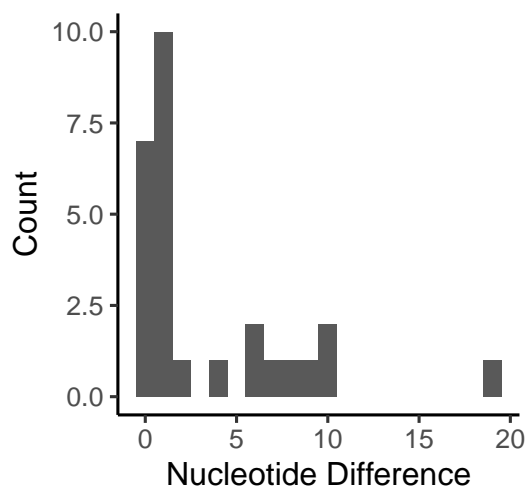
IGHV3-13*05

46 sequences assigned
14 (30.4%) exact matches, in which:
11 unique CDR3
5 unique J



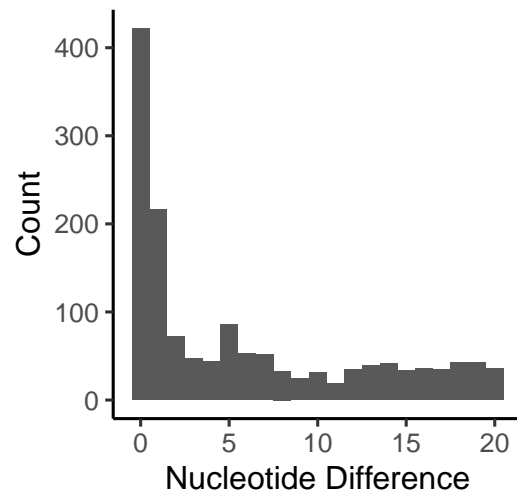
IGHV3-20*01_02

27 sequences assigned
7 (25.9%) exact matches, in which:
5 unique CDR3
2 unique J



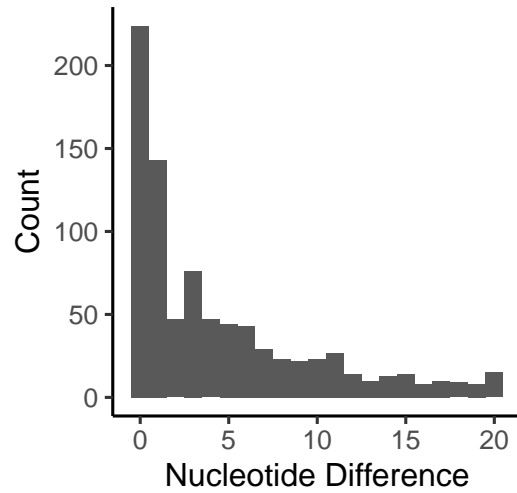
IGHV3-21*01_02

1829 sequences assigned
422 (23.1%) exact matches, in which:
336 unique CDR3
6 unique J



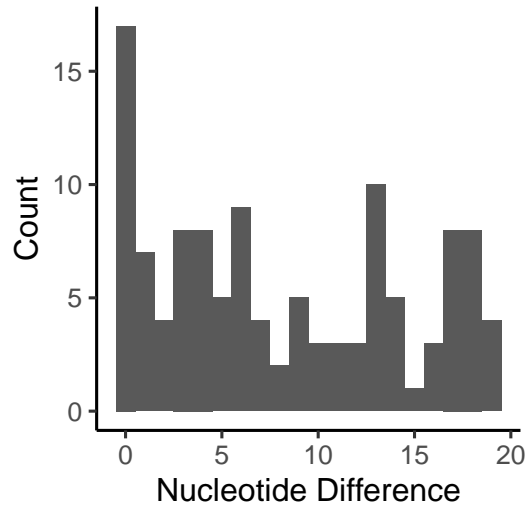
IGHV3-30-3*01

1054 sequences assigned
224 (21.3%) exact matches, in which:
180 unique CDR3
5 unique J



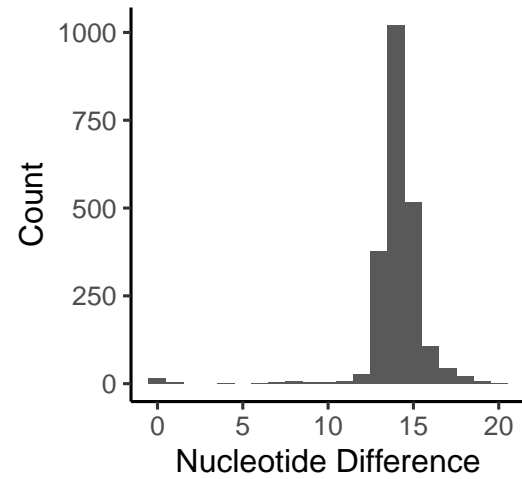
IGHV3-33*05

133 sequences assigned
17 (12.8%) exact matches, in which:
16 unique CDR3
4 unique J



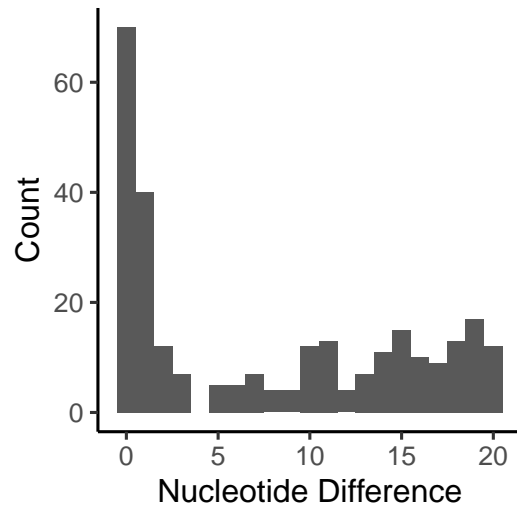
IGHV3-43*01

2218 sequences assigned
17 (0.8%) exact matches, in which:
13 unique CDR3
4 unique J



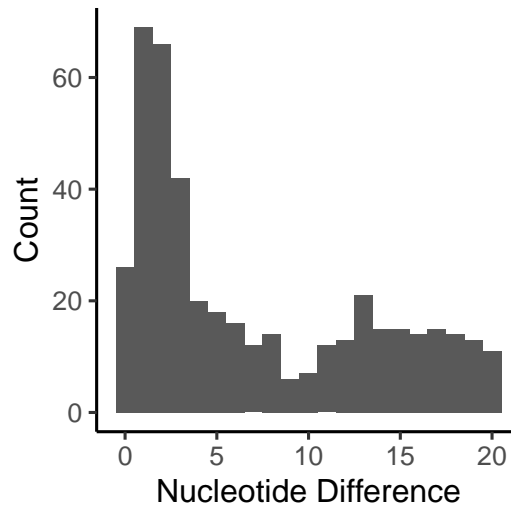
IGHV3-30*03

339 sequences assigned
70 (20.6%) exact matches, in which:
67 unique CDR3
4 unique J



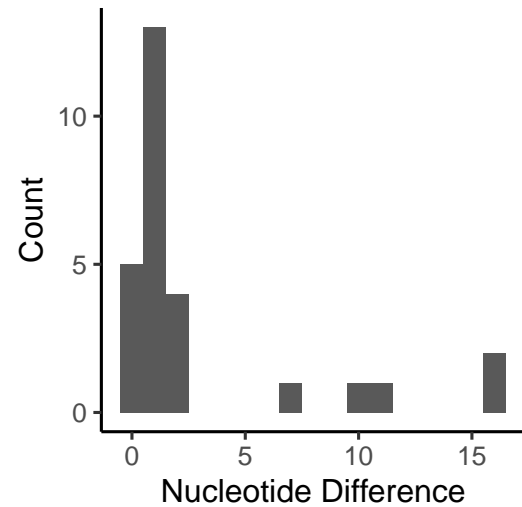
IGHV3-33*06

492 sequences assigned
26 (5.3%) exact matches, in which:
24 unique CDR3
4 unique J



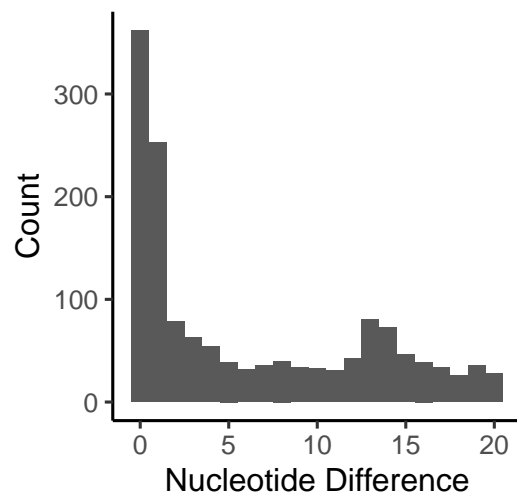
IGHV3-47*02

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



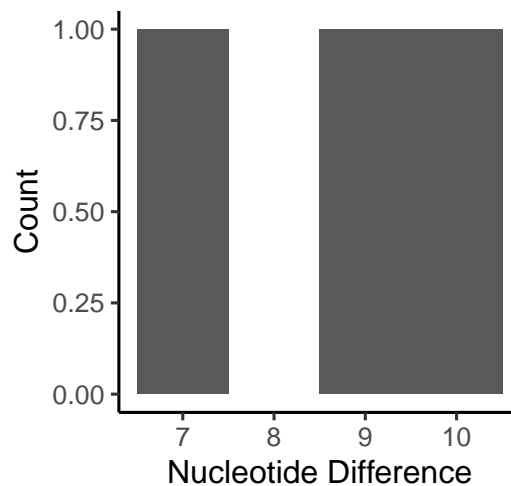
IGHV3-33*01

1707 sequences assigned
362 (21.2%) exact matches, in which:
280 unique CDR3
6 unique J



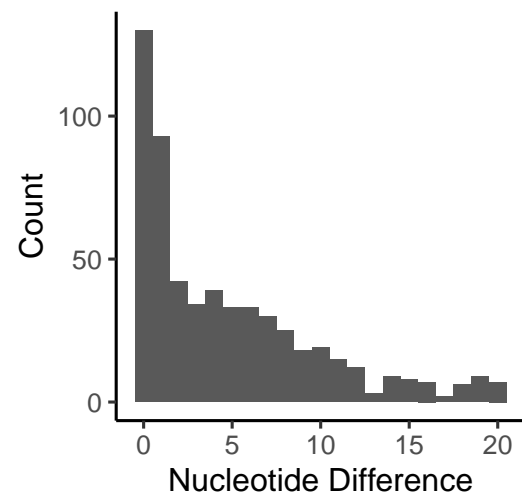
IGHV3-35*01

3 sequences assigned
No exact matches.



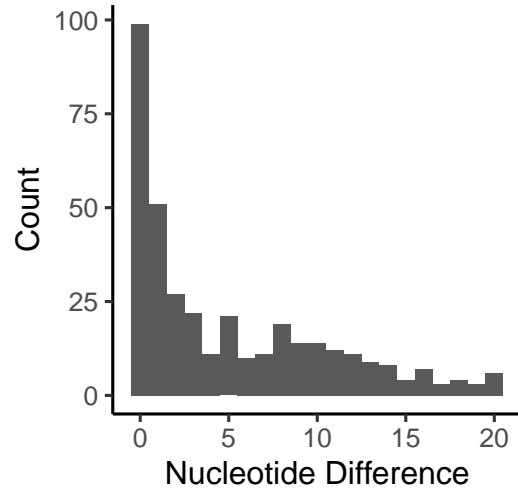
IGHV3-48*01

676 sequences assigned
130 (19.2%) exact matches, in which:
99 unique CDR3
6 unique J



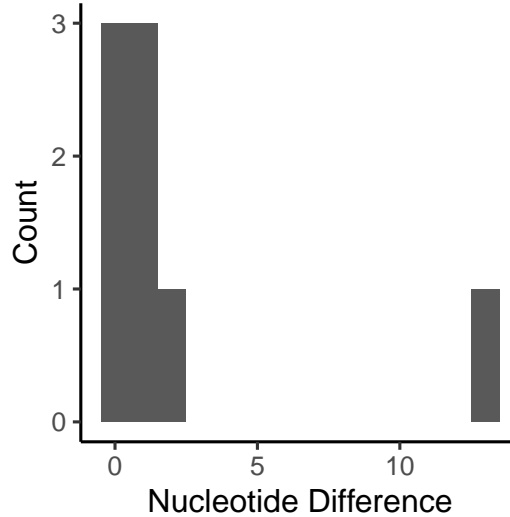
IGHV3-48*02

421 sequences assigned
99 (23.5%) exact matches, in which:
74 unique CDR3
5 unique J



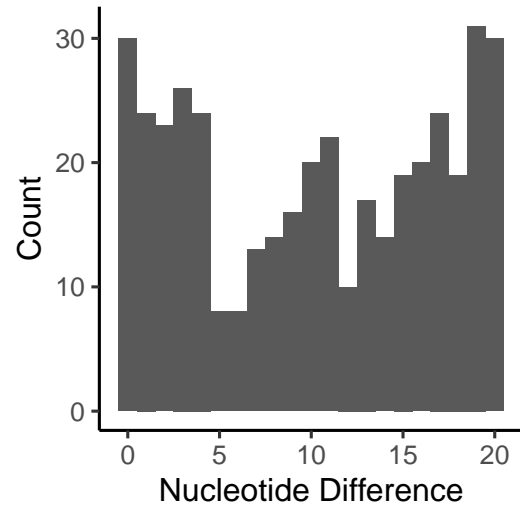
IGHV3-52*02

8 sequences assigned
3 (37.5%) exact matches, in which:
2 unique CDR3
1 unique J



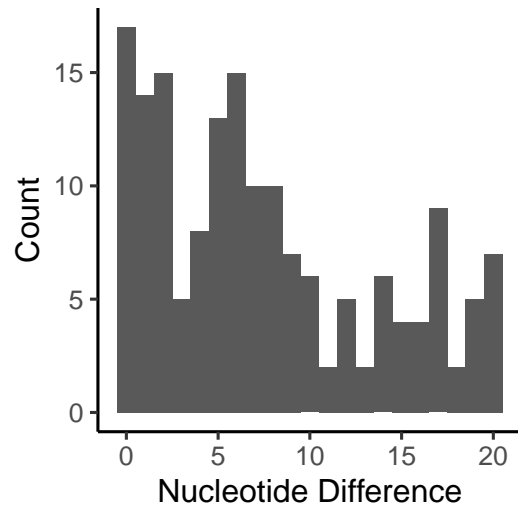
IGHV3-53*01_02

528 sequences assigned
30 (5.7%) exact matches, in which:
25 unique CDR3
3 unique J



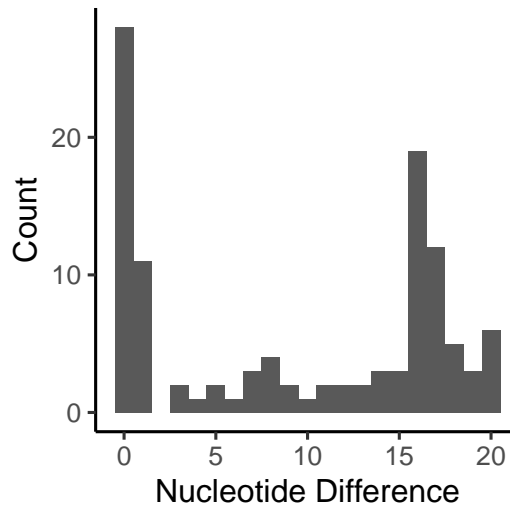
IGHV3-48*04

233 sequences assigned
17 (7.3%) exact matches, in which:
17 unique CDR3
3 unique J



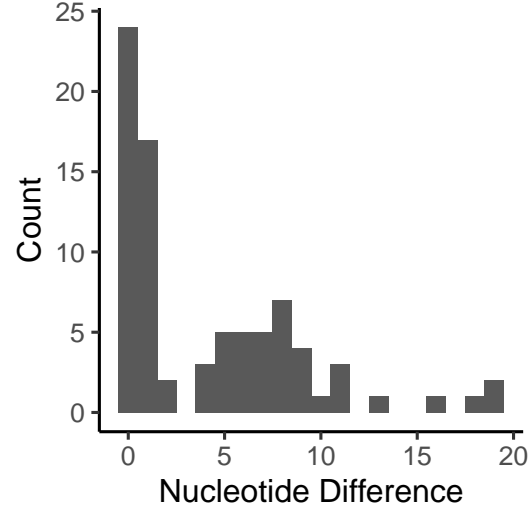
IGHV3-53*04

131 sequences assigned
28 (21.4%) exact matches, in which:
20 unique CDR3
4 unique J



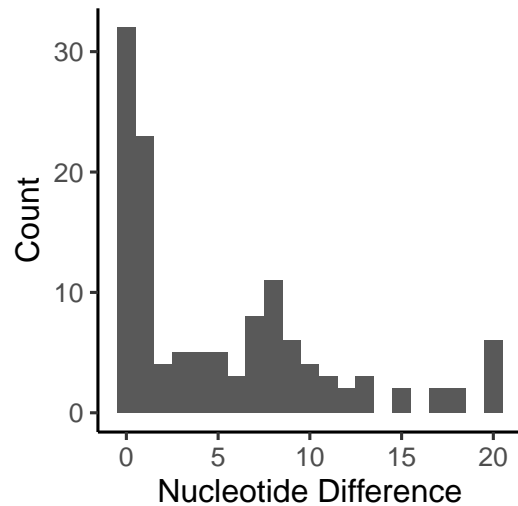
IGHV3-64*01

85 sequences assigned
24 (28.2%) exact matches, in which:
18 unique CDR3
5 unique J



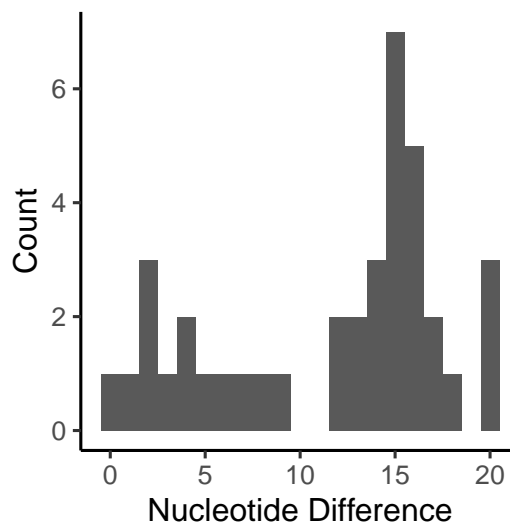
IGHV3-49*03_05

150 sequences assigned
32 (21.3%) exact matches, in which:
25 unique CDR3
5 unique J



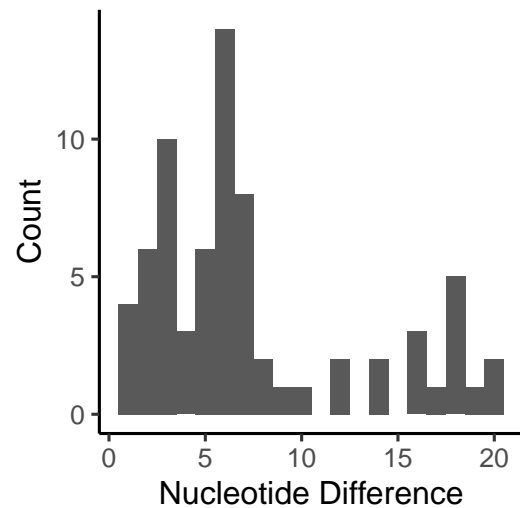
IGHV3-53*05

41 sequences assigned
1 (2.4%) exact matches, in which:
1 unique CDR3
1 unique J



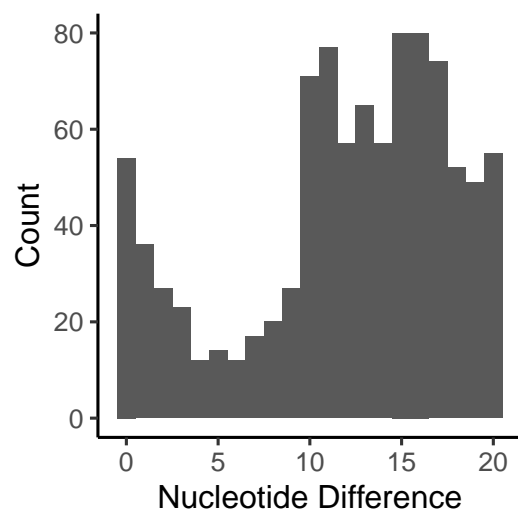
IGHV3-64*04

85 sequences assigned
No exact matches.



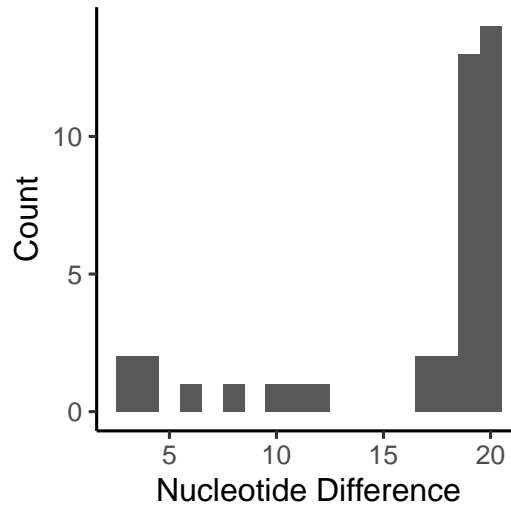
IGHV3-66*01

1202 sequences assigned
54 (4.5%) exact matches, in which:
46 unique CDR3
5 unique J



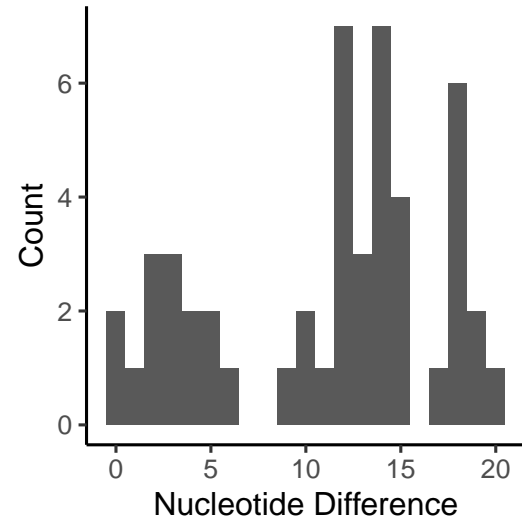
IGHV3-69-1*01

60 sequences assigned
No exact matches.



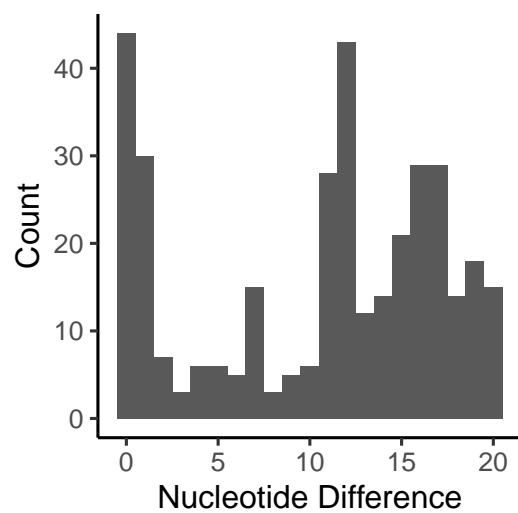
IGHV3-72*01

104 sequences assigned
2 (1.9%) exact matches, in which:
1 unique CDR3
1 unique J



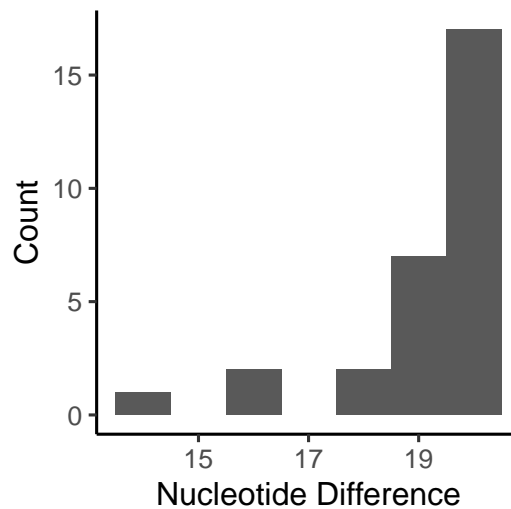
IGHV3-66*02

488 sequences assigned
44 (9%) exact matches, in which:
38 unique CDR3
5 unique J



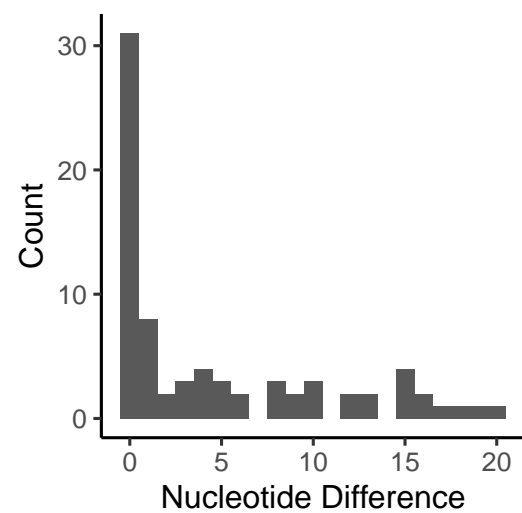
IGHV3-69-1*02

82 sequences assigned
No exact matches.



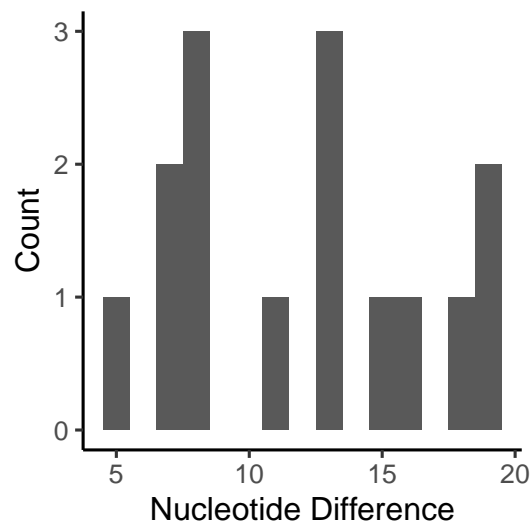
IGHV3-73*01_02

89 sequences assigned
31 (34.8%) exact matches, in which:
23 unique CDR3
4 unique J



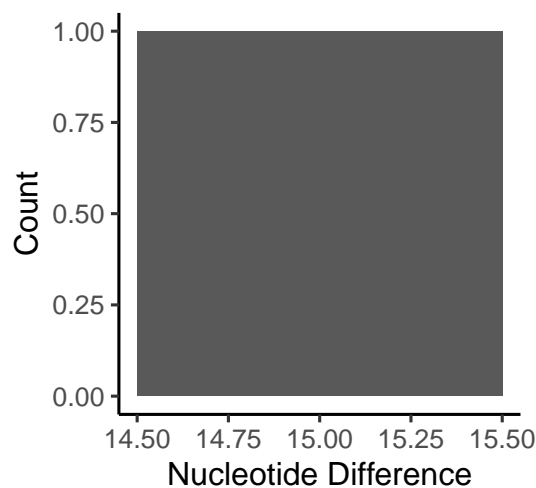
IGHV3-66*03

20 sequences assigned
No exact matches.



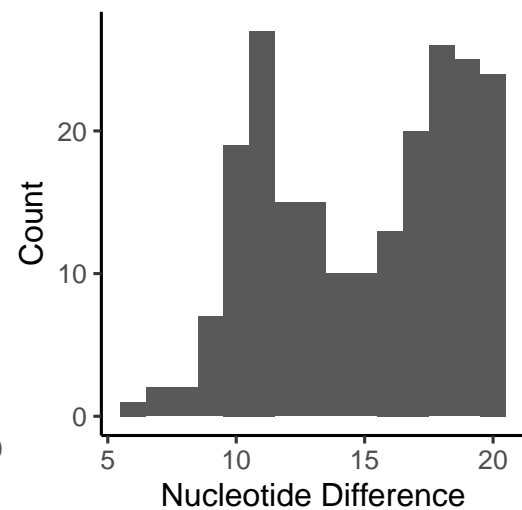
IGHV3-71*01_04

2 sequences assigned
No exact matches.



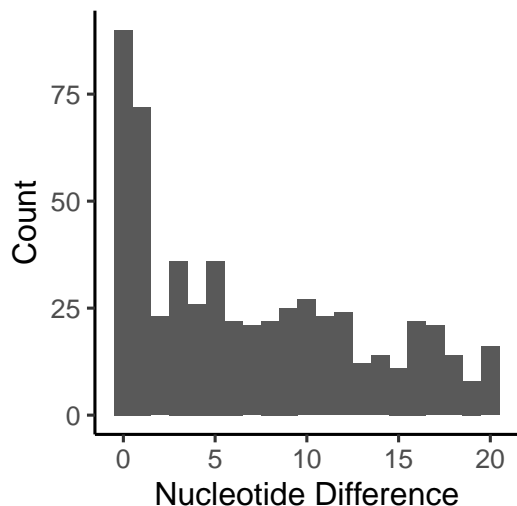
IGHV3-74*03

392 sequences assigned
No exact matches.



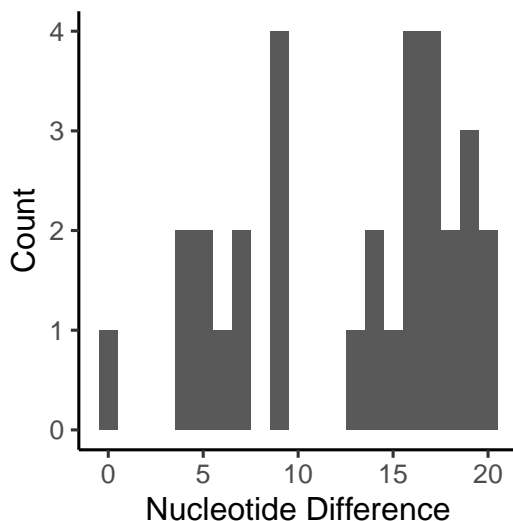
IGHV3-74*01_02

710 sequences assigned
90 (12.7%) exact matches, in which:
69 unique CDR3
4 unique J



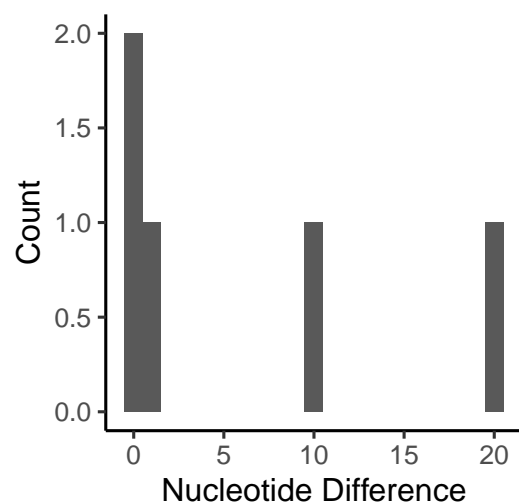
IGHV3-NL1*01

52 sequences assigned
1 (1.9%) exact matches, in which:
1 unique CDR3
1 unique J



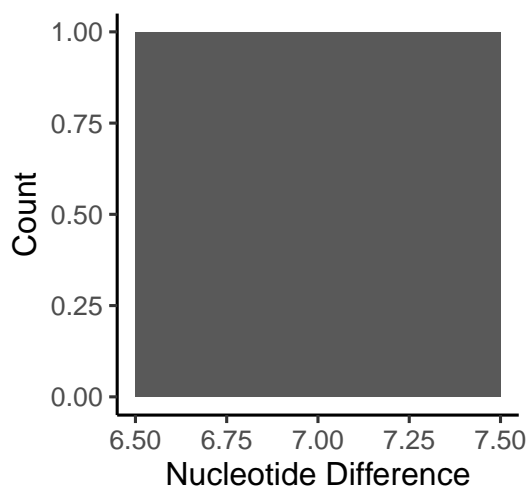
IGHV4-28*01_07

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



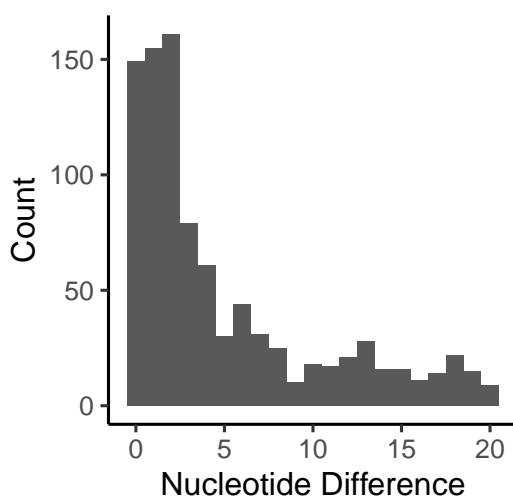
IGHV3-43D*04

2 sequences assigned
No exact matches.



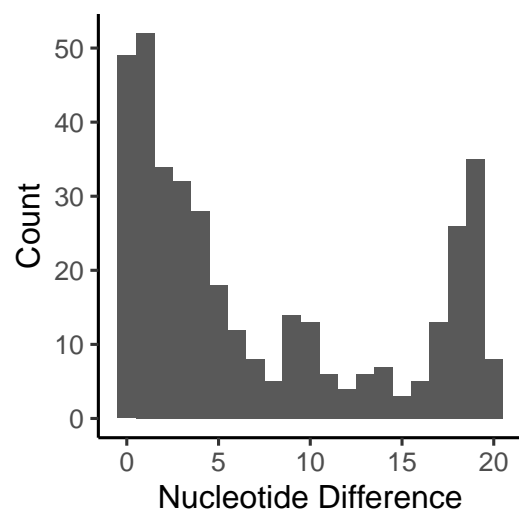
IGHV4-4*07

1065 sequences assigned
149 (14%) exact matches, in which:
143 unique CDR3
5 unique J



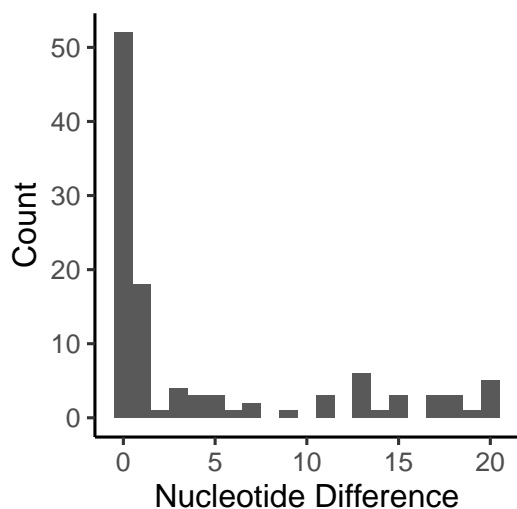
IGHV4-30-4*01

499 sequences assigned
49 (9.8%) exact matches, in which:
47 unique CDR3
5 unique J



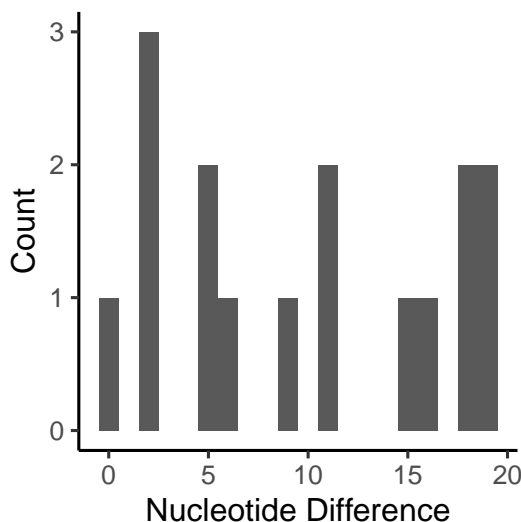
IGHV3-64D*06

278 sequences assigned
52 (18.7%) exact matches, in which:
41 unique CDR3
6 unique J



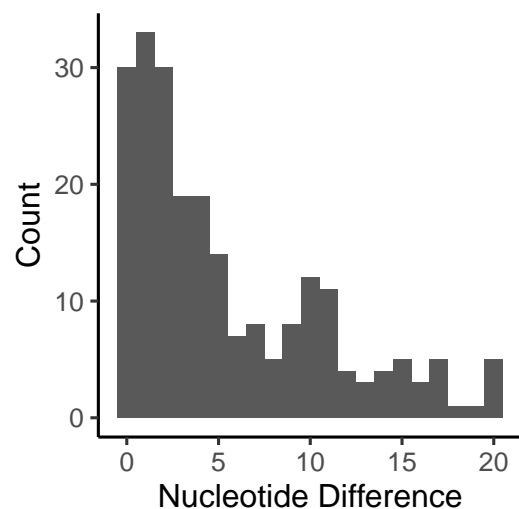
IGHV4-28*03

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



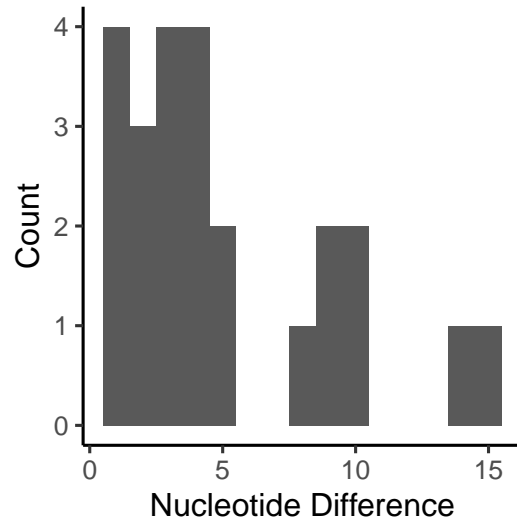
IGHV4-30-2*01

239 sequences assigned
30 (12.6%) exact matches, in which:
27 unique CDR3
5 unique J



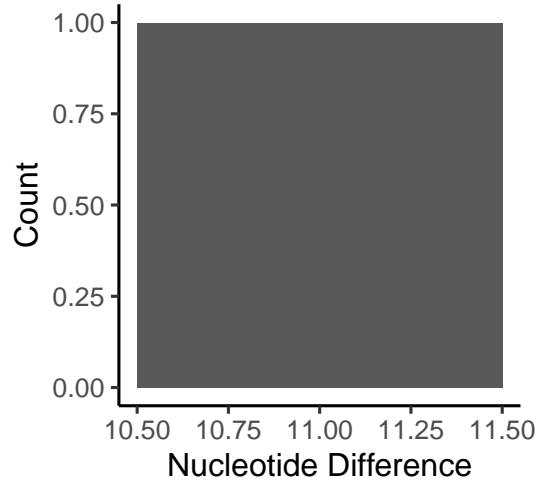
IGHV4-30-2*04

25 sequences assigned
No exact matches.



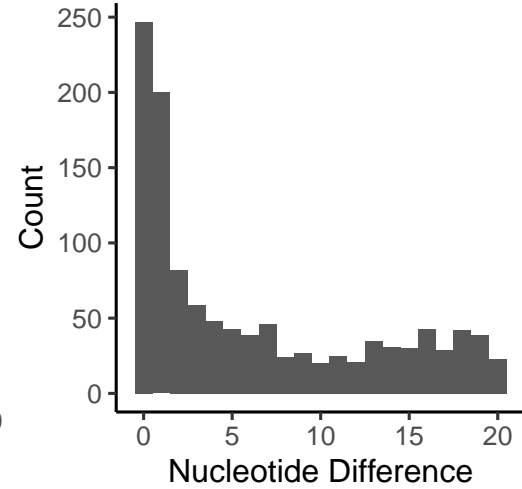
IGHV4-38-2*02

1 sequences assigned
No exact matches.



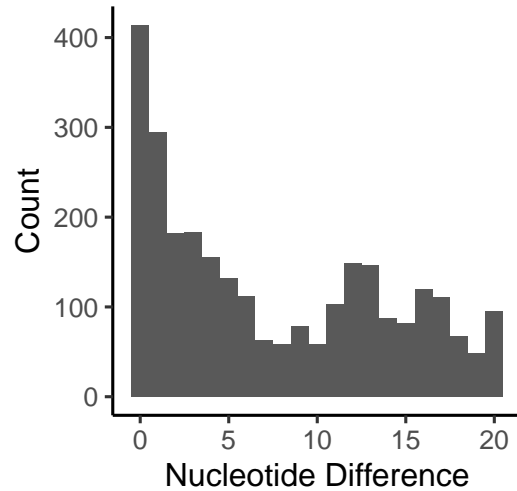
IGHV4-59*08

1574 sequences assigned
247 (15.7%) exact matches, in which:
229 unique CDR3
6 unique J



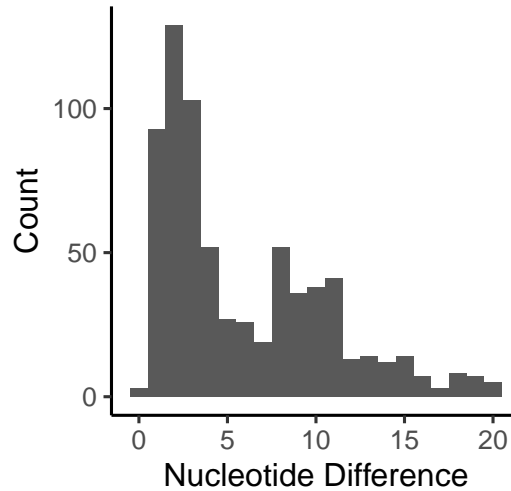
IGHV4-31*03_04

3213 sequences assigned
414 (12.9%) exact matches, in which:
375 unique CDR3
6 unique J



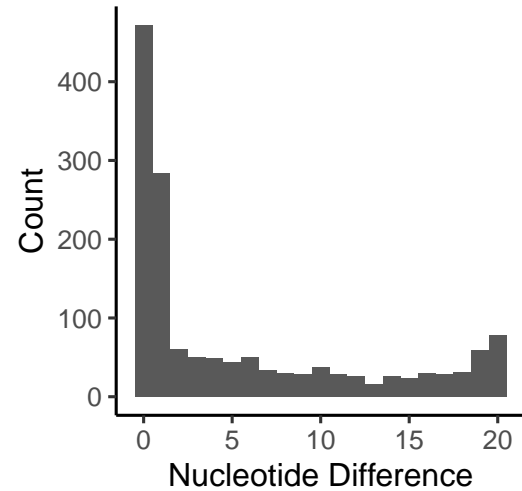
IGHV4-39*07

759 sequences assigned
3 (0.4%) exact matches, in which:
3 unique CDR3
2 unique J



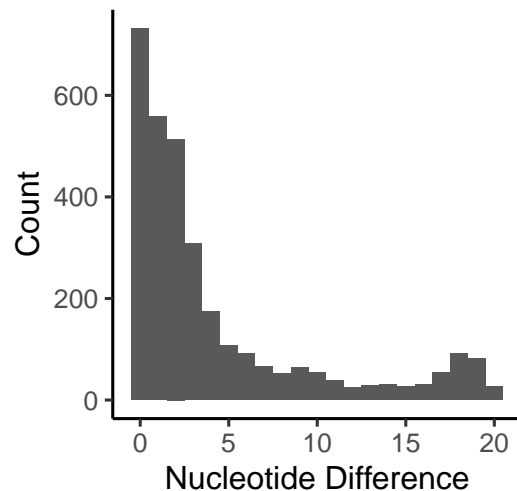
IGHV4-59*01_07

1812 sequences assigned
472 (26%) exact matches, in which:
441 unique CDR3
6 unique J



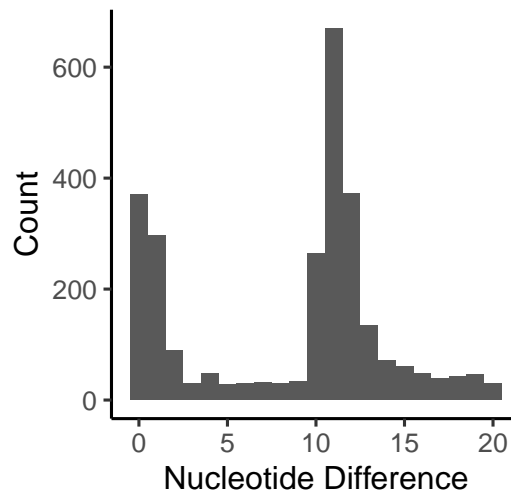
IGHV4-34*01_02

3417 sequences assigned
732 (21.4%) exact matches, in which:
674 unique CDR3
6 unique J



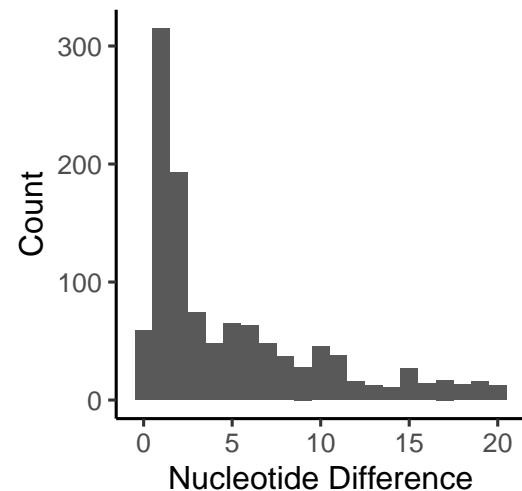
IGHV4-39*01_05

3889 sequences assigned
370 (9.5%) exact matches, in which:
331 unique CDR3
6 unique J



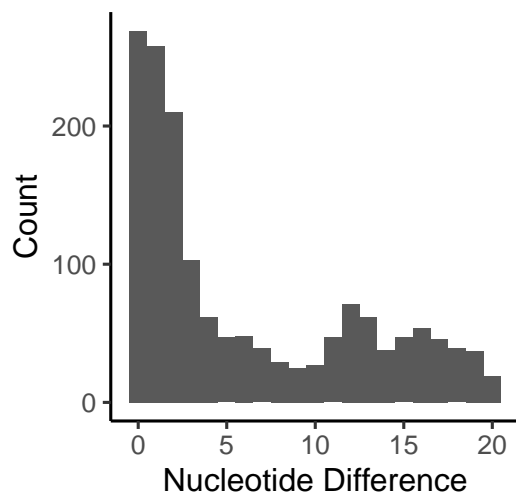
IGHV4-59*12

1250 sequences assigned
59 (4.7%) exact matches, in which:
59 unique CDR3
6 unique J



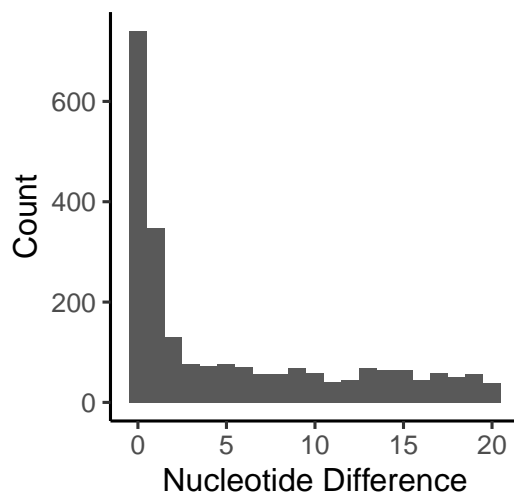
IGHV4-61*02

1910 sequences assigned
269 (14.1%) exact matches, in which:
243 unique CDR3
6 unique J



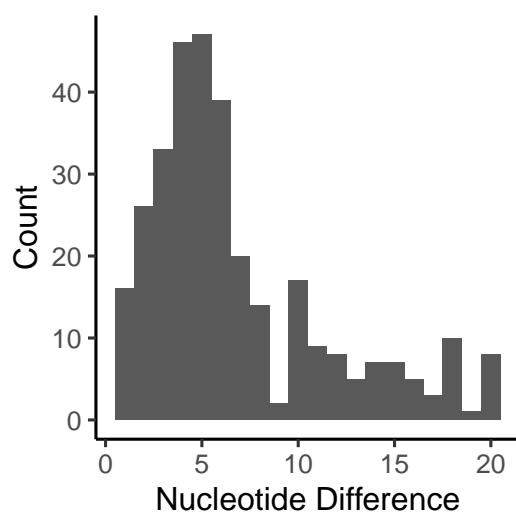
IGHV5-51*01_03

2565 sequences assigned
741 (28.9%) exact matches, in which:
675 unique CDR3
6 unique J



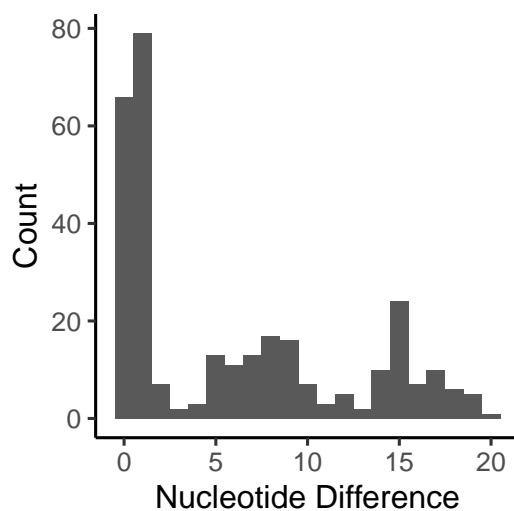
IGHV4-61*08

376 sequences assigned
No exact matches.



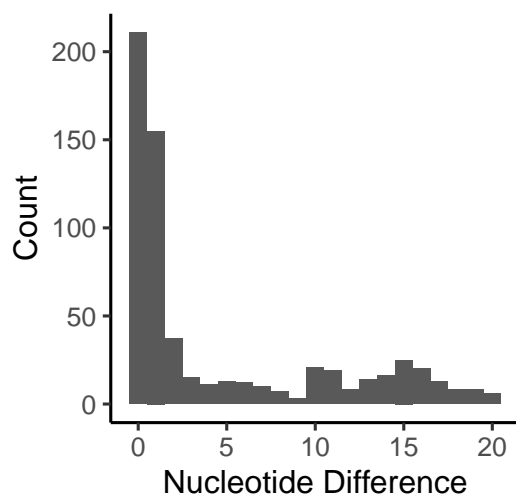
IGHV6-1*01_02

392 sequences assigned
66 (16.8%) exact matches, in which:
61 unique CDR3
5 unique J



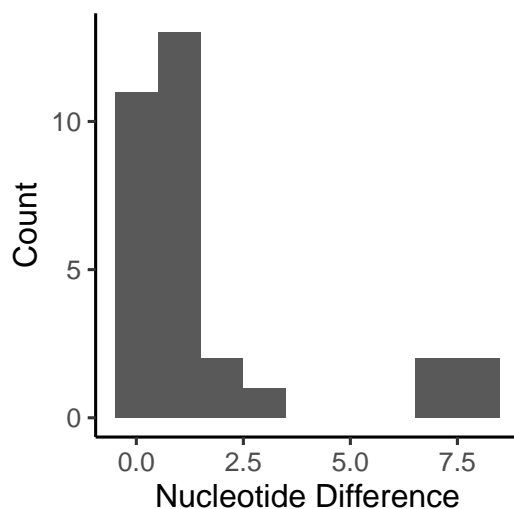
IGHV5-10-1*01_03

744 sequences assigned
211 (28.4%) exact matches, in which:
188 unique CDR3
6 unique J



IGHV7-4-1*01

31 sequences assigned
11 (35.5%) exact matches, in which:
11 unique CDR3
2 unique J





Novel sequence(s) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4-59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30-3*01_T288C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30*03_T288C are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV3-33*01_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-33*01_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30*03_T288C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1-69*04_09_G112A IGHV4-59*02_G88A IGHV5-10-1*01_03_T258C IGHV5-51*07_A128G are not listed in the genotype and will be ignored.