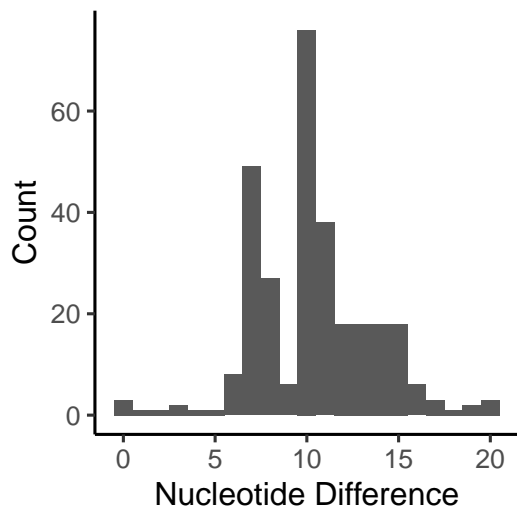


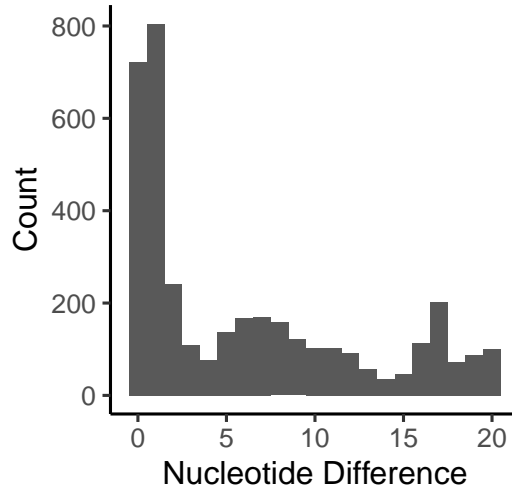
IGHV1-2*02

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



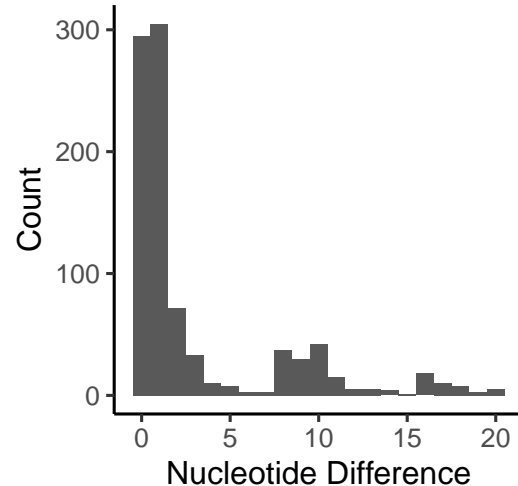
IGHV1-8*01

3877 sequences assigned
722 (18.6%) exact matches, in which:
607 unique CDR3
6 unique J



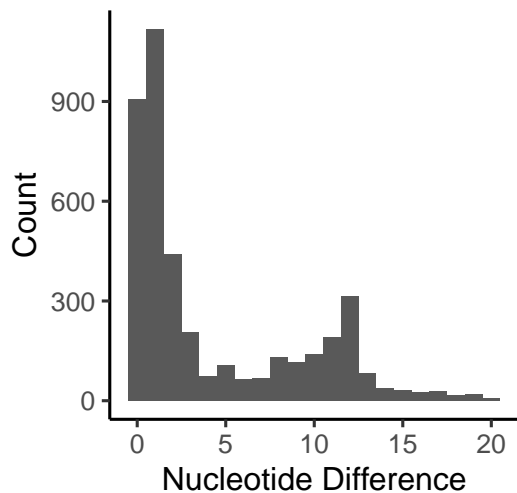
IGHV1-24*01

938 sequences assigned
295 (31.4%) exact matches, in which:
236 unique CDR3
6 unique J



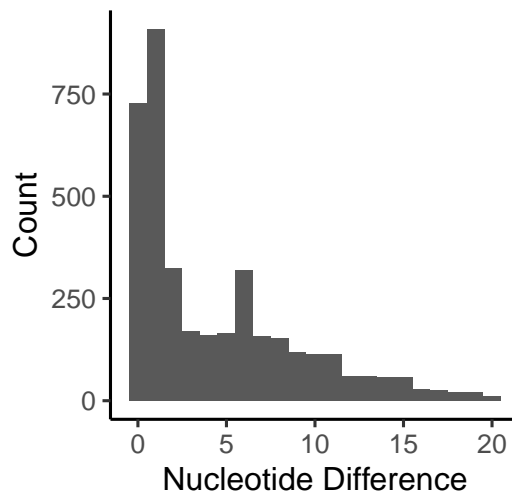
IGHV1-2*04

4191 sequences assigned
906 (21.6%) exact matches, in which:
734 unique CDR3
6 unique J



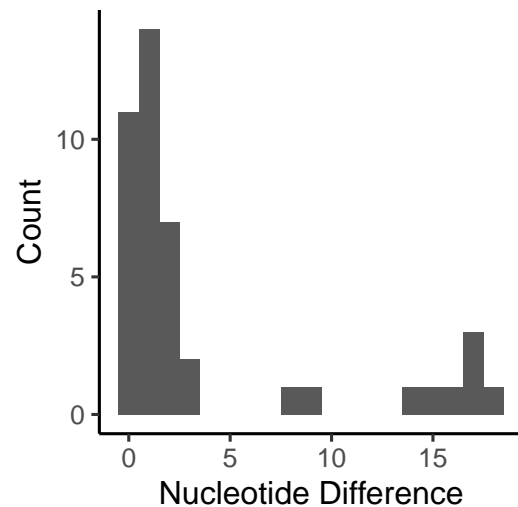
IGHV1-18*01

4194 sequences assigned
728 (17.4%) exact matches, in which:
616 unique CDR3
6 unique J



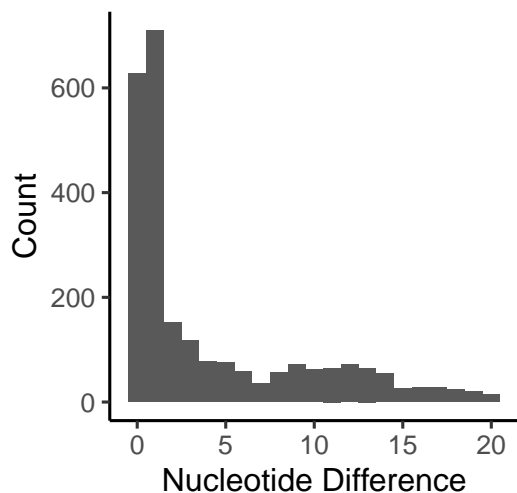
IGHV1-45*02

43 sequences assigned
11 (25.6%) exact matches, in which:
8 unique CDR3
4 unique J



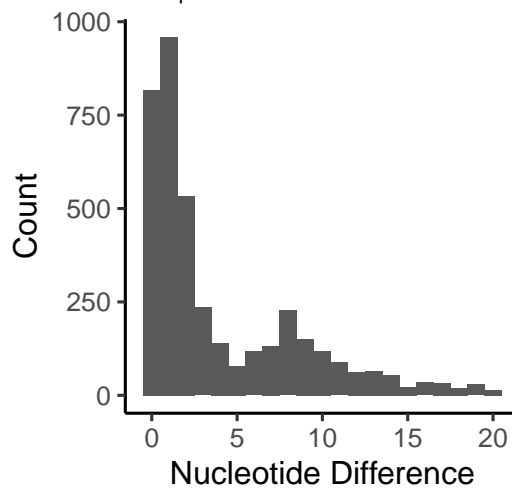
IGHV1-3*01_05

2822 sequences assigned
628 (22.3%) exact matches, in which:
488 unique CDR3
6 unique J



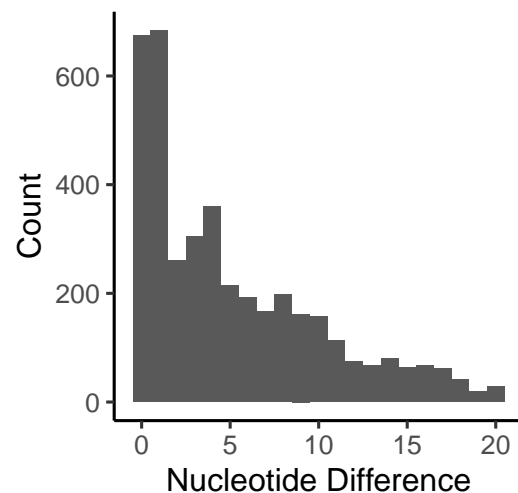
IGHV1-18*04

4284 sequences assigned
818 (19.1%) exact matches, in which:
659 unique CDR3
6 unique J



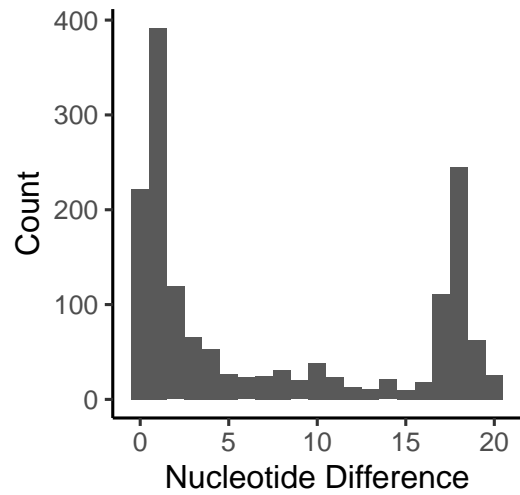
IGHV1-46*01

4156 sequences assigned
674 (16.2%) exact matches, in which:
580 unique CDR3
6 unique J



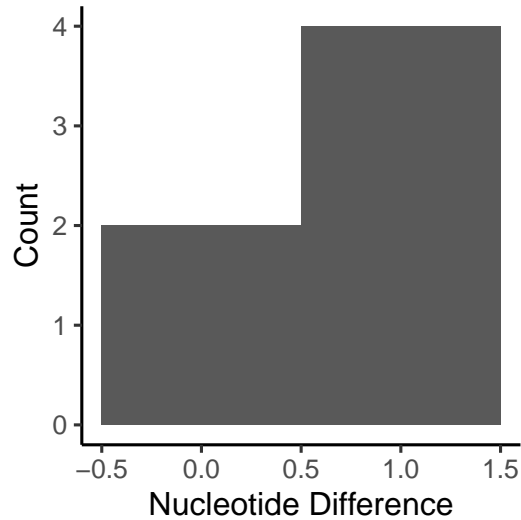
IGHV1-46*03

1627 sequences assigned
222 (13.6%) exact matches, in which:
152 unique CDR3
5 unique J



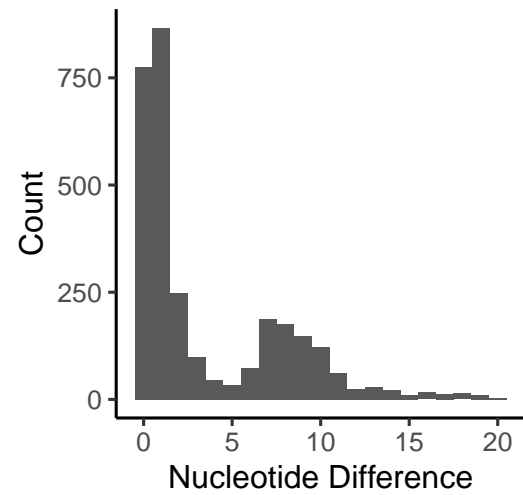
IGHV1-68*01

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



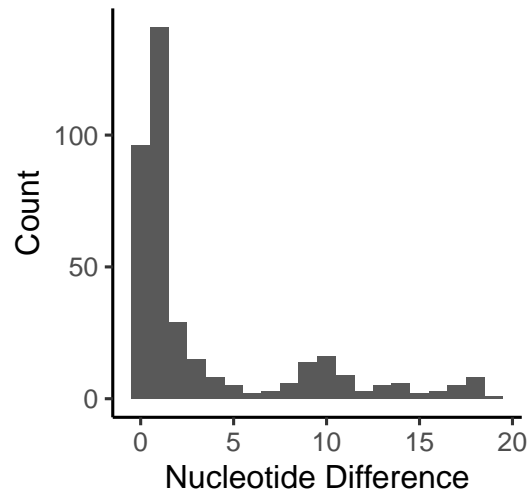
IGHV1-69*06_14

3014 sequences assigned
776 (25.7%) exact matches, in which:
679 unique CDR3
6 unique J



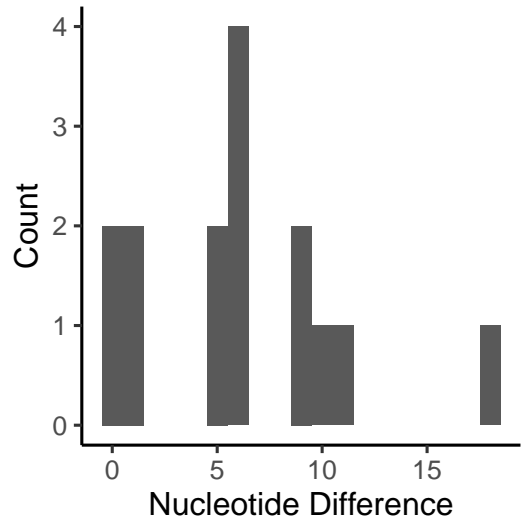
IGHV1-58*02

384 sequences assigned
96 (25%) exact matches, in which:
78 unique CDR3
5 unique J



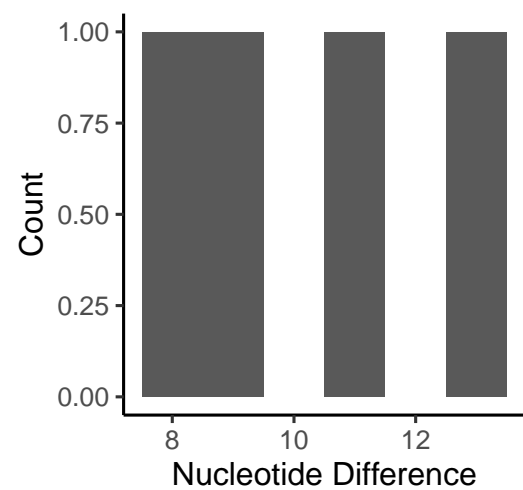
IGHV1-69-2*01

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



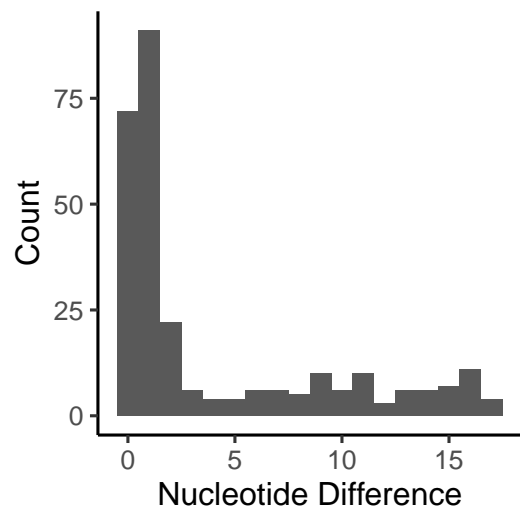
IGHV1-NL1*01

4 sequences assigned
No exact matches.



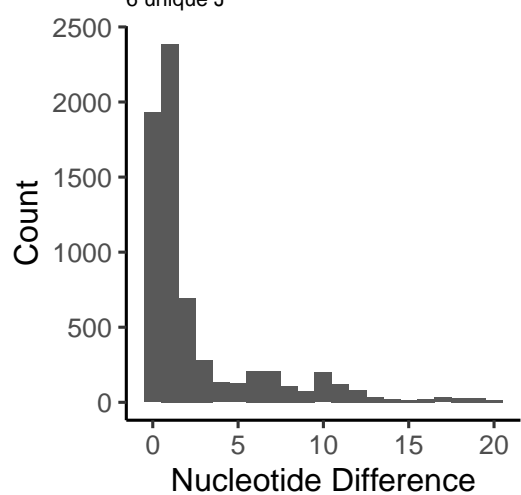
IGHV1-58*01_03

288 sequences assigned
72 (25%) exact matches, in which:
61 unique CDR3
6 unique J



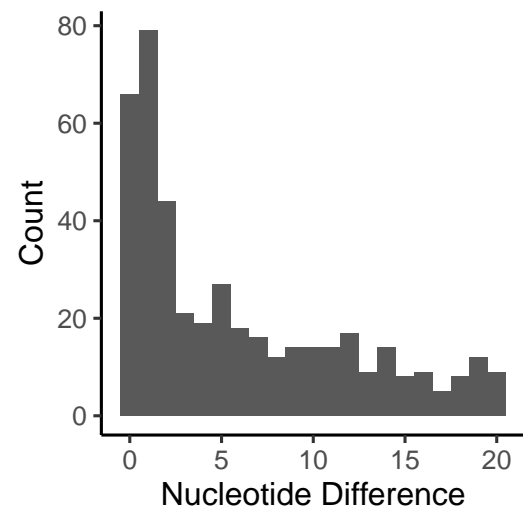
IGHV1-69*01_12_13

7052 sequences assigned
1930 (27.4%) exact matches, in which:
1597 unique CDR3
6 unique J



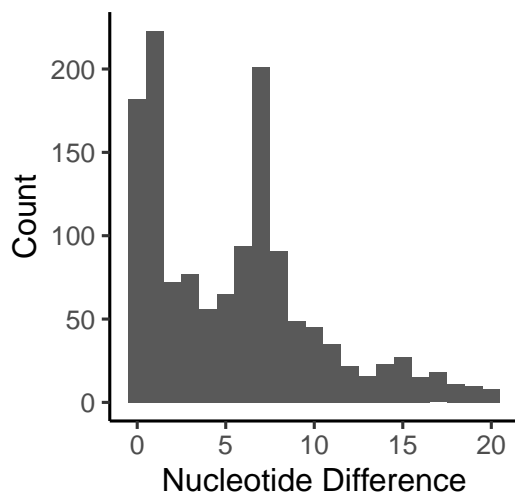
IGHV2-5*01

476 sequences assigned
66 (13.9%) exact matches, in which:
53 unique CDR3
6 unique J



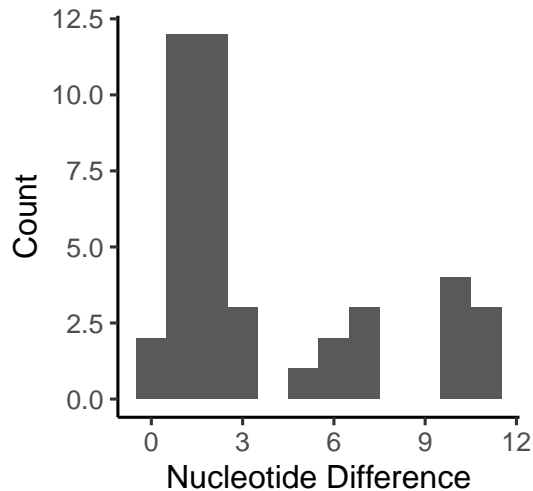
IGHV2-5*02

1686 sequences assigned
182 (10.8%) exact matches, in which:
141 unique CDR3
5 unique J



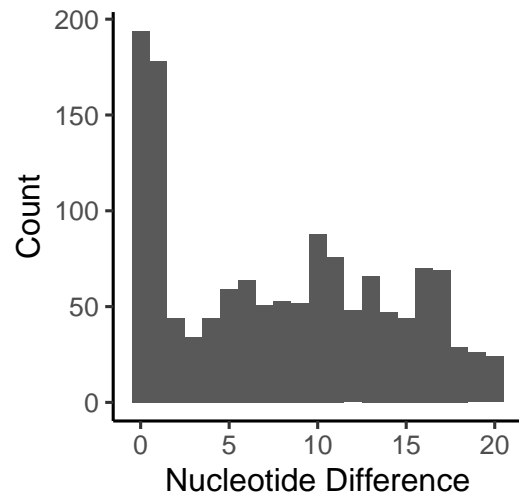
IGHV2-70*12

42 sequences assigned
2 (4.8%) exact matches, in which:
2 unique CDR3
2 unique J



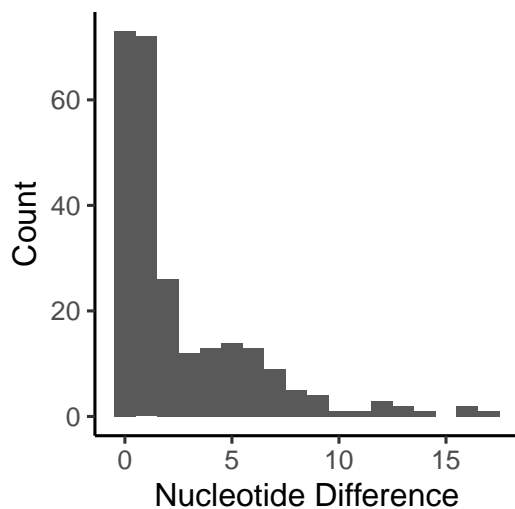
IGHV3-7*05

1635 sequences assigned
194 (11.9%) exact matches, in which:
139 unique CDR3
5 unique J



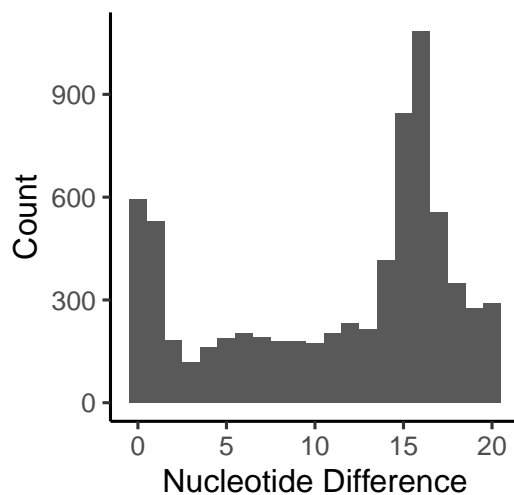
IGHV2-26*01

254 sequences assigned
73 (28.7%) exact matches, in which:
63 unique CDR3
5 unique J



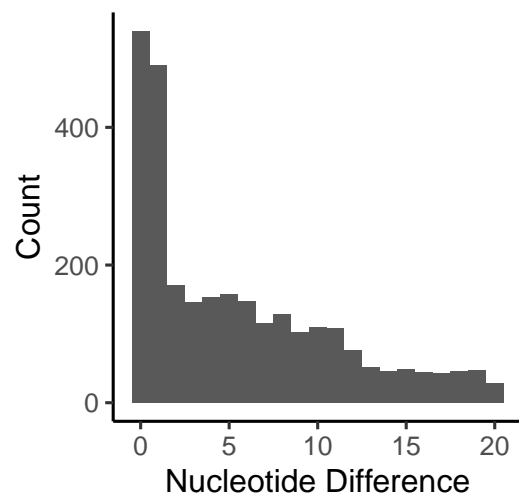
IGHV3-7*01

9557 sequences assigned
595 (6.2%) exact matches, in which:
400 unique CDR3
5 unique J



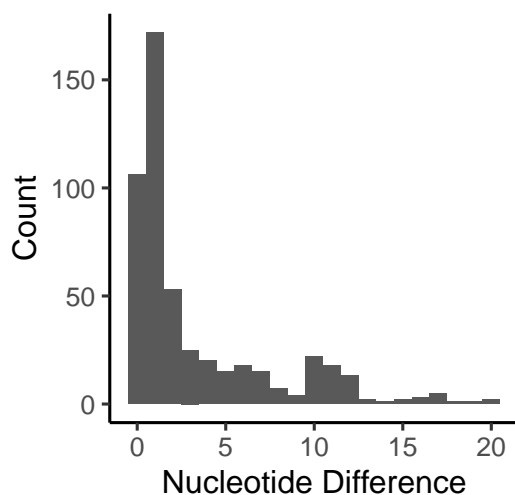
IGHV3-9*01

3192 sequences assigned
540 (16.9%) exact matches, in which:
310 unique CDR3
6 unique J



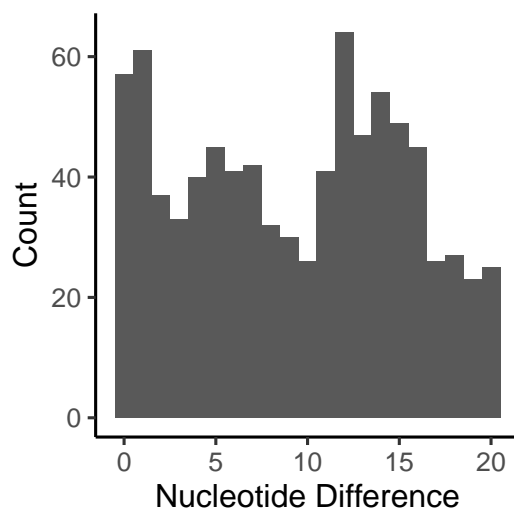
IGHV2-70*01

509 sequences assigned
106 (20.8%) exact matches, in which:
72 unique CDR3
5 unique J



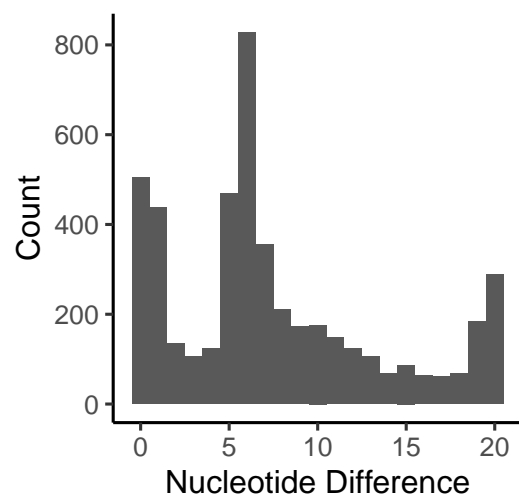
IGHV3-7*03

982 sequences assigned
57 (5.8%) exact matches, in which:
49 unique CDR3
5 unique J



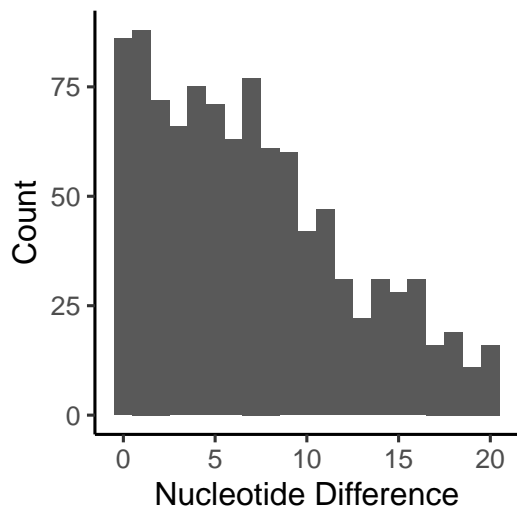
IGHV3-11*01

5090 sequences assigned
505 (9.9%) exact matches, in which:
324 unique CDR3
6 unique J



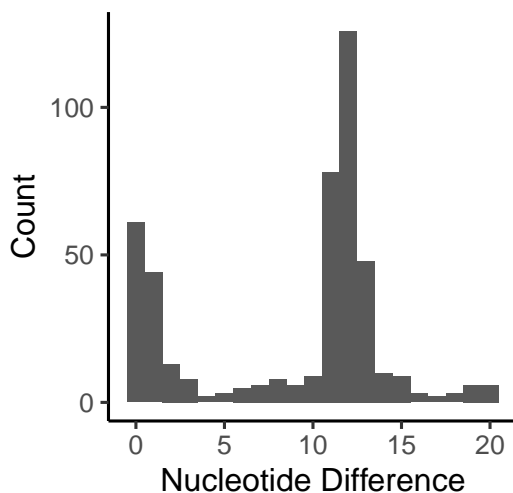
IGHV3-11*04

1053 sequences assigned
86 (8.2%) exact matches, in which:
82 unique CDR3
5 unique J



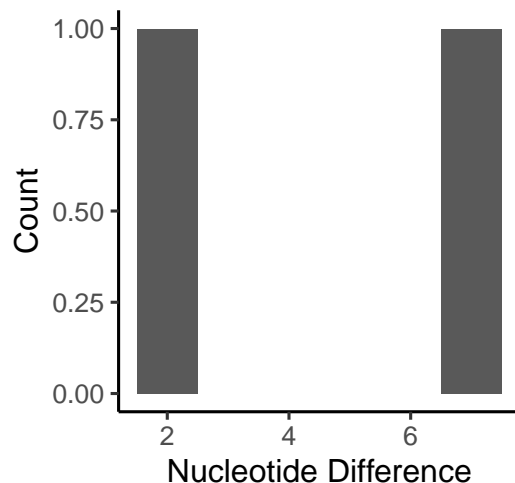
IGHV3-13*05

469 sequences assigned
61 (13%) exact matches, in which:
49 unique CDR3
5 unique J



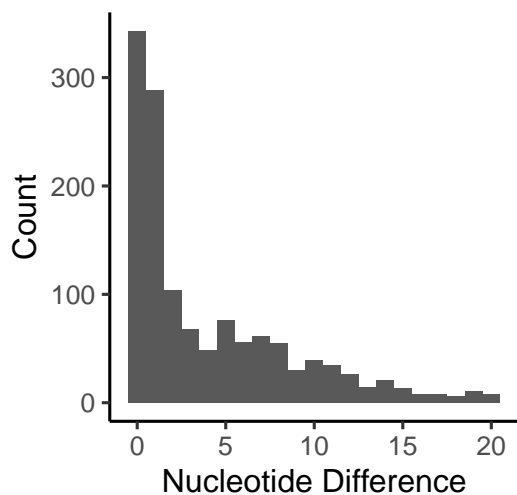
IGHV3-19*01

2 sequences assigned
No exact matches.



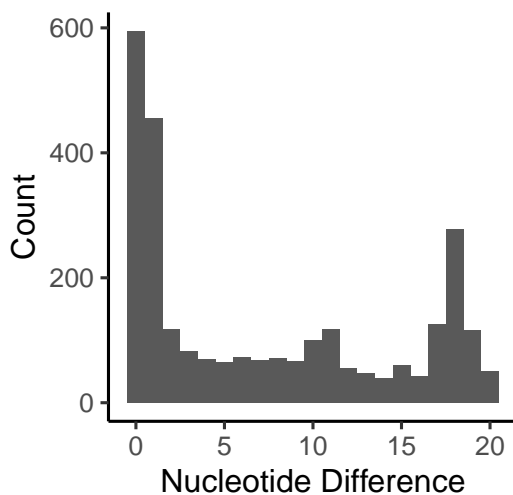
IGHV3-11*06

1632 sequences assigned
343 (21%) exact matches, in which:
243 unique CDR3
6 unique J



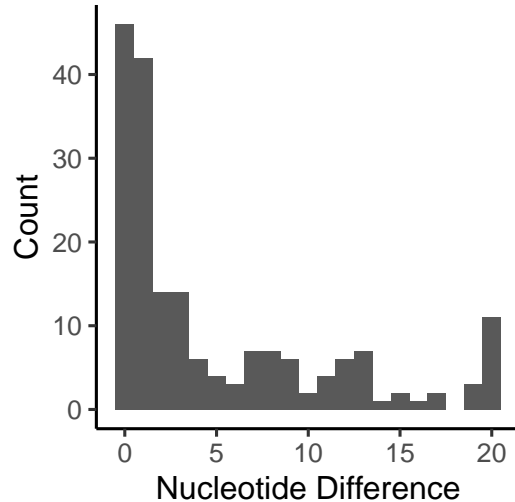
IGHV3-15*07

3819 sequences assigned
595 (15.6%) exact matches, in which:
360 unique CDR3
5 unique J



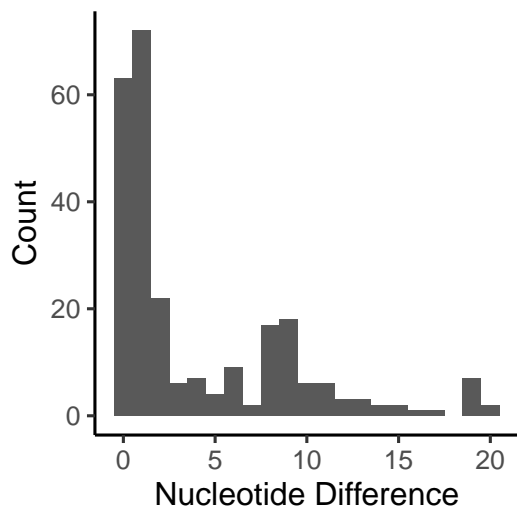
IGHV3-20*03_04

392 sequences assigned
46 (11.7%) exact matches, in which:
30 unique CDR3
5 unique J



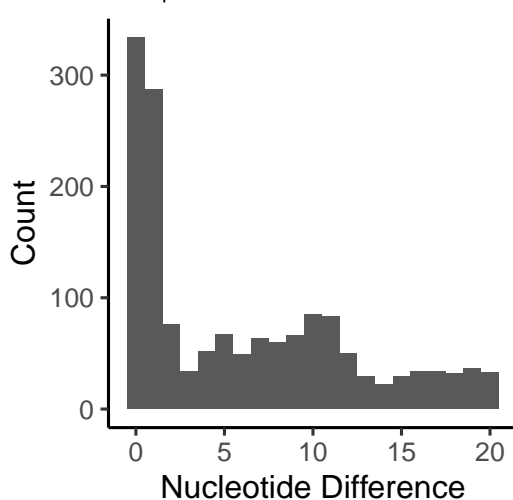
IGHV3-13*01

285 sequences assigned
63 (22.1%) exact matches, in which:
39 unique CDR3
4 unique J



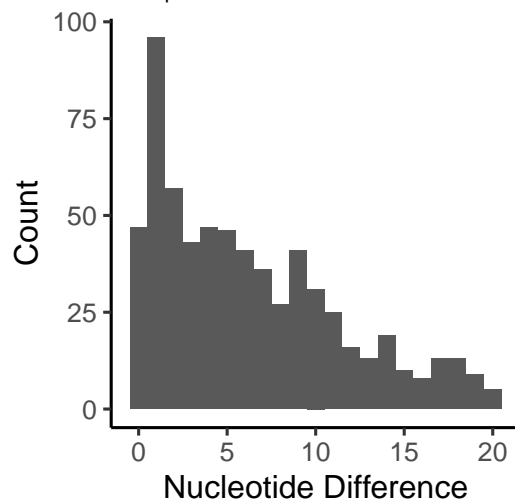
IGHV3-15*01_02

1936 sequences assigned
334 (17.3%) exact matches, in which:
209 unique CDR3
5 unique J



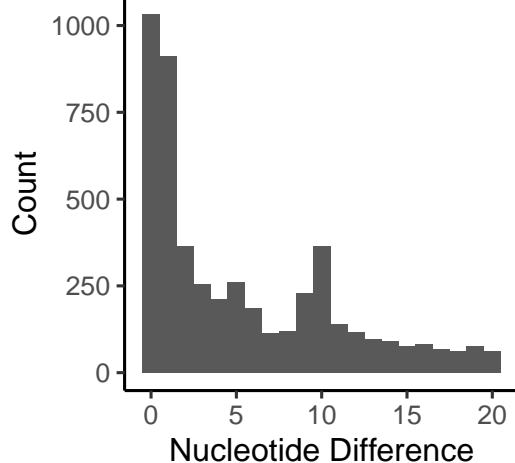
IGHV3-21*04

709 sequences assigned
47 (6.6%) exact matches, in which:
45 unique CDR3
5 unique J



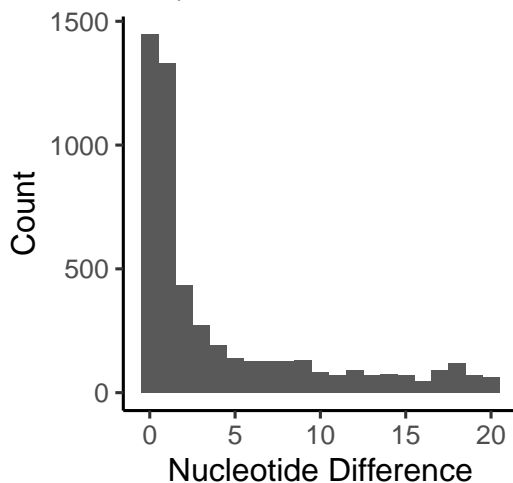
IGHV3-21*01_02

5332 sequences assigned
1032 (19.4%) exact matches, in which:
687 unique CDR3
6 unique J



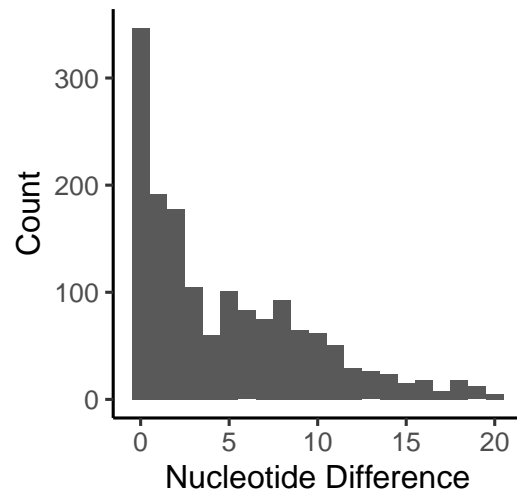
IGHV3-30*03

7053 sequences assigned
1447 (20.5%) exact matches, in which:
967 unique CDR3
6 unique J



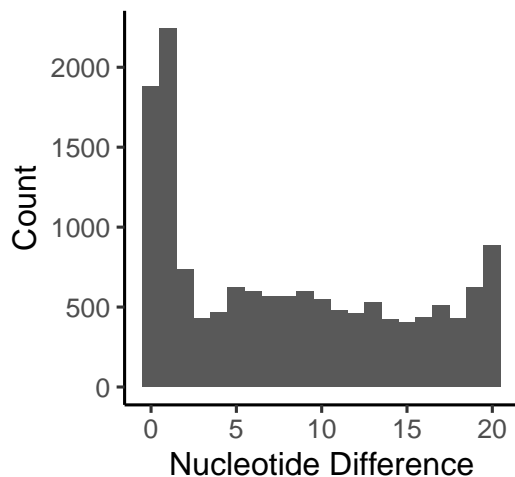
IGHV3-33*08

1656 sequences assigned
347 (21%) exact matches, in which:
260 unique CDR3
6 unique J



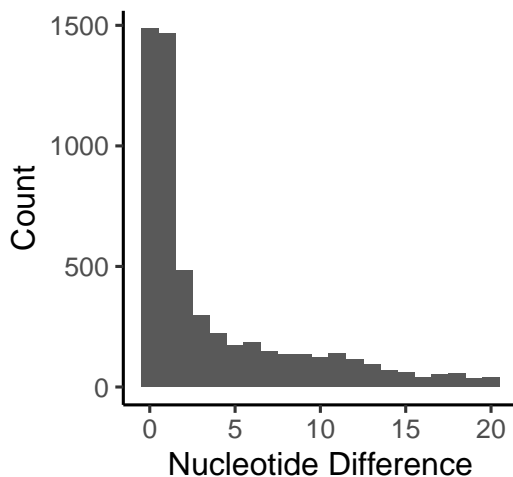
IGHV3-23*01_04

23920 sequences assigned
1877 (7.8%) exact matches, in which:
1069 unique CDR3
6 unique J



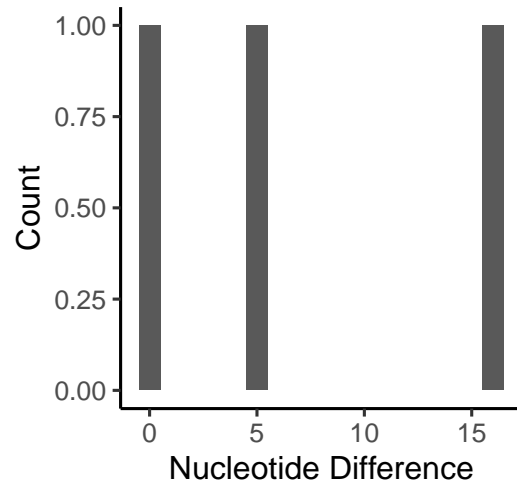
IGHV3-33*01

5936 sequences assigned
1486 (25%) exact matches, in which:
950 unique CDR3
6 unique J



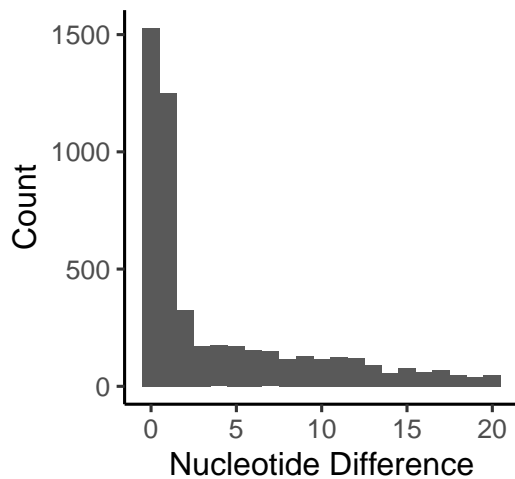
IGHV3-35*01

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



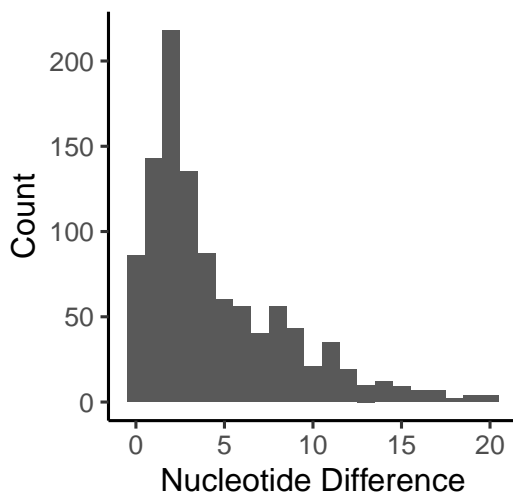
IGHV3-30-3*01

5272 sequences assigned
1528 (29%) exact matches, in which:
1026 unique CDR3
6 unique J



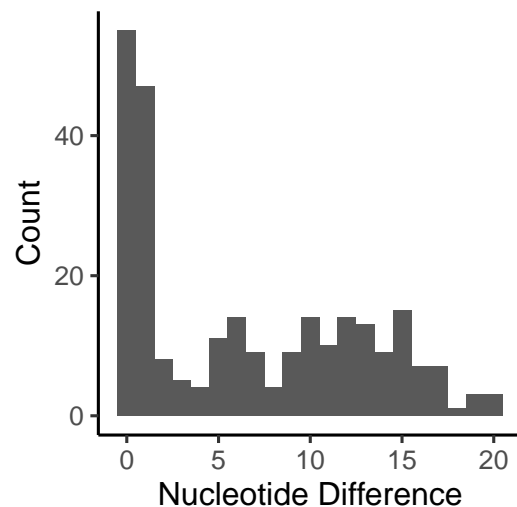
IGHV3-33*06

1081 sequences assigned
86 (8%) exact matches, in which:
82 unique CDR3
6 unique J



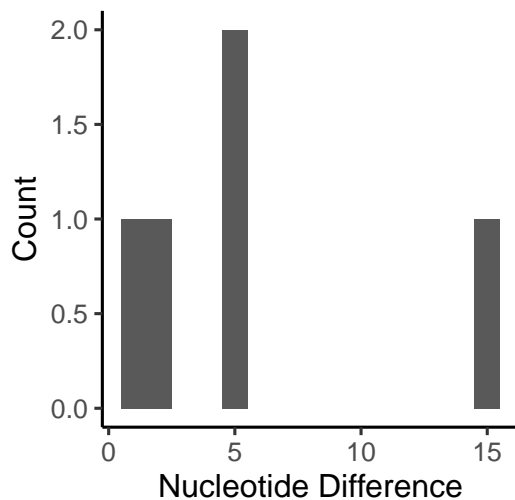
IGHV3-43*01

309 sequences assigned
55 (17.8%) exact matches, in which:
28 unique CDR3
5 unique J



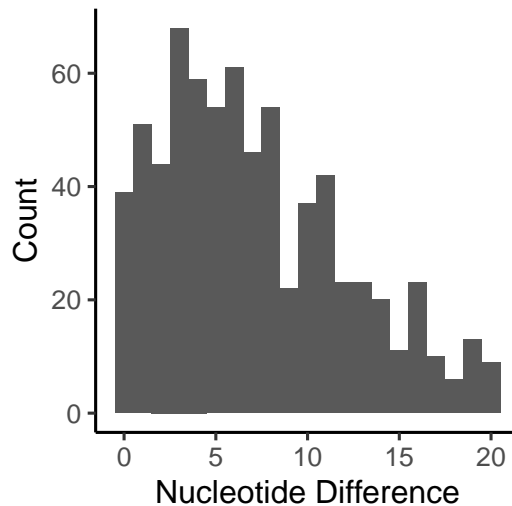
IGHV3-47*02

5 sequences assigned
No exact matches.



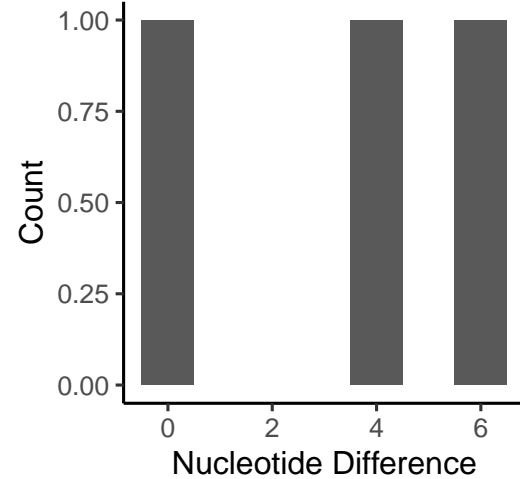
IGHV3-48*04

810 sequences assigned
39 (4.8%) exact matches, in which:
38 unique CDR3
6 unique J



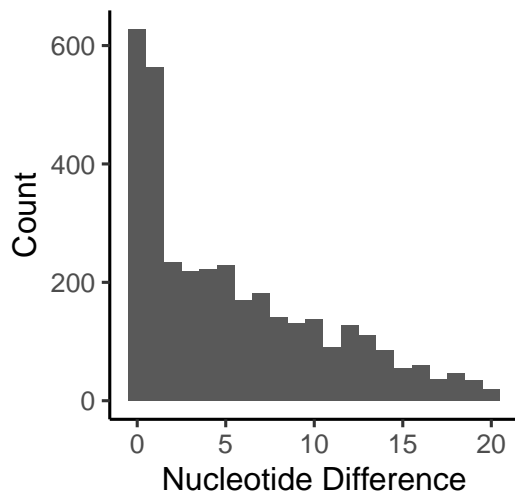
IGHV3-52*01_03

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



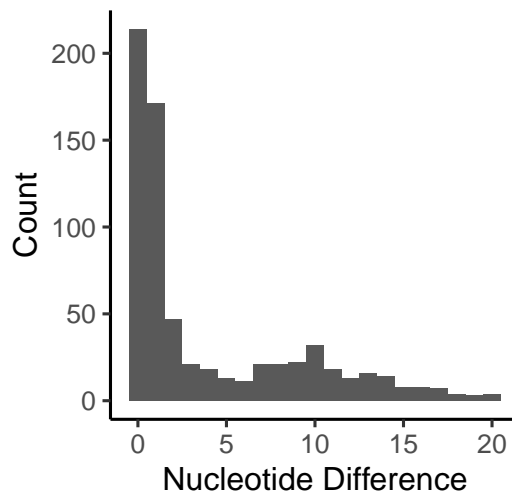
IGHV3-48*01

3630 sequences assigned
628 (17.3%) exact matches, in which:
418 unique CDR3
6 unique J



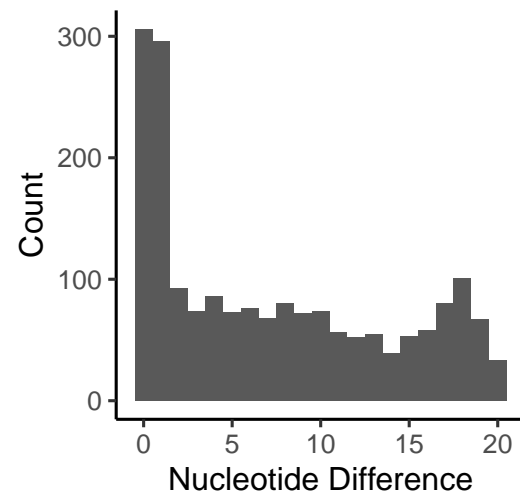
IGHV3-49*03_05

925 sequences assigned
214 (23.1%) exact matches, in which:
125 unique CDR3
5 unique J



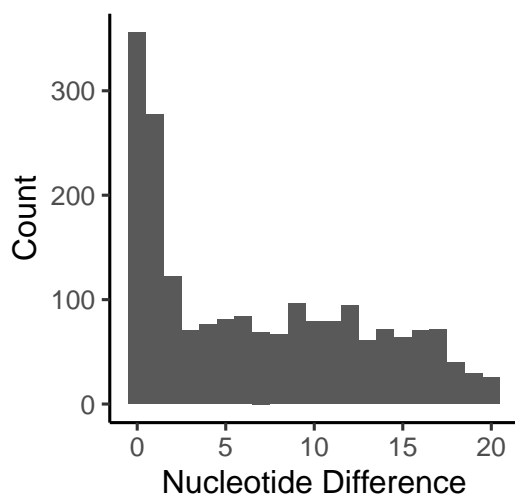
IGHV3-53*01_02

2215 sequences assigned
306 (13.8%) exact matches, in which:
201 unique CDR3
6 unique J



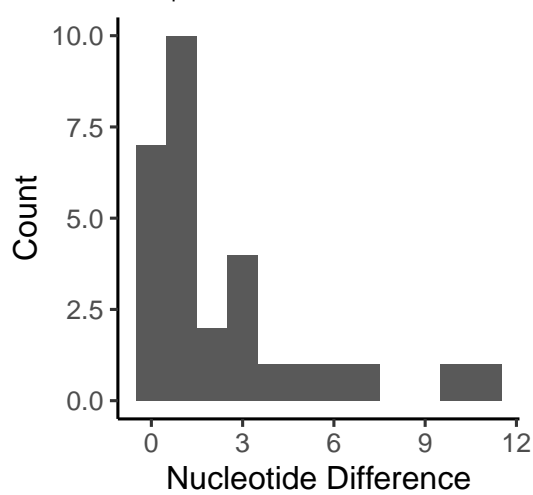
IGHV3-48*02

2119 sequences assigned
356 (16.8%) exact matches, in which:
224 unique CDR3
6 unique J



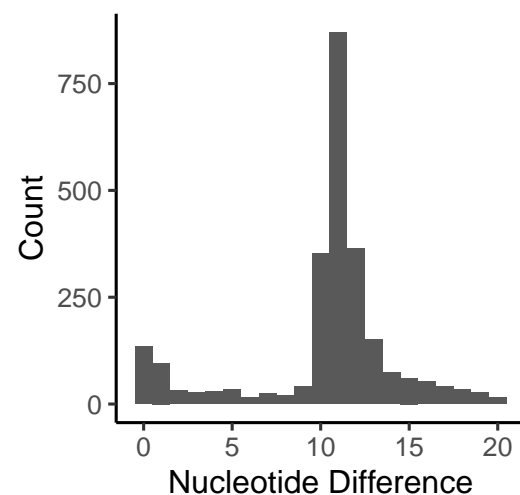
IGHV3-52*02

30 sequences assigned
7 (23.3%) exact matches, in which:
5 unique CDR3
1 unique J



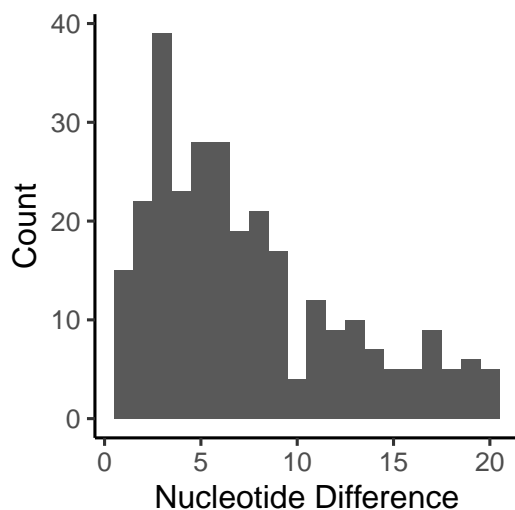
IGHV3-64*01

2656 sequences assigned
134 (5%) exact matches, in which:
88 unique CDR3
5 unique J



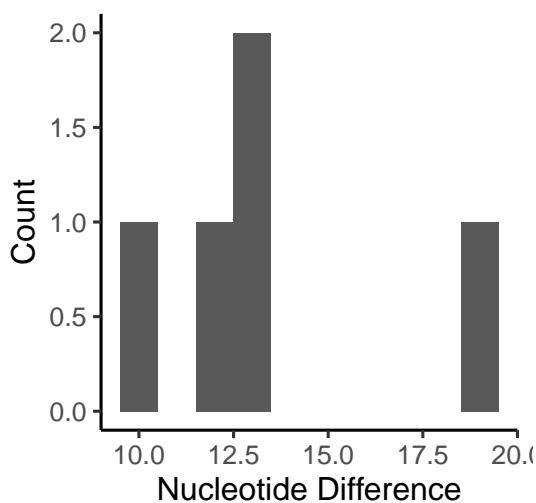
IGHV3-64*04

312 sequences assigned
No exact matches.



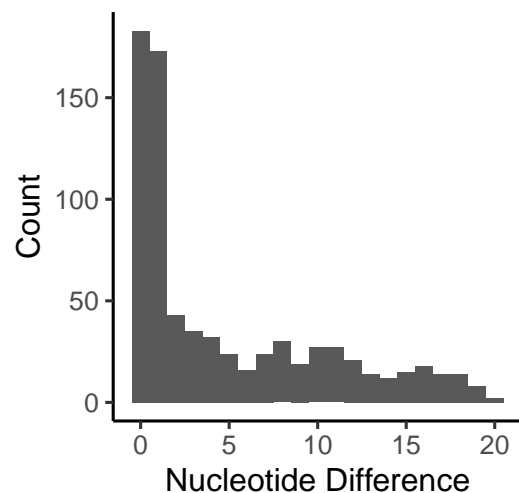
IGHV3-69-1*02

17 sequences assigned
No exact matches.



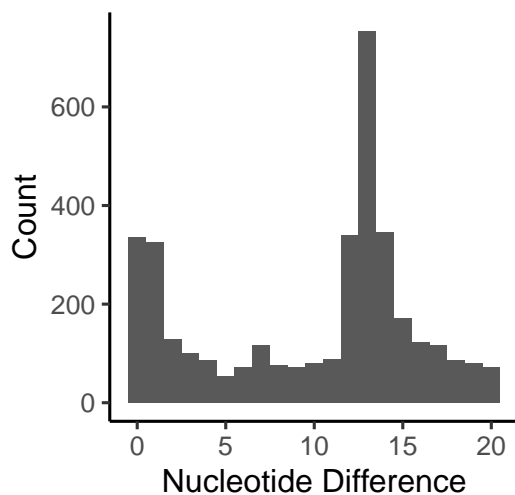
IGHV3-73*01_02

1718 sequences assigned
183 (10.7%) exact matches, in which:
111 unique CDR3
5 unique J



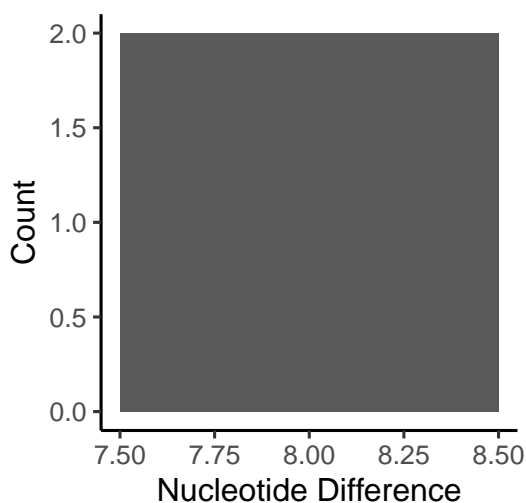
IGHV3-66*01

3917 sequences assigned
336 (8.6%) exact matches, in which:
215 unique CDR3
6 unique J



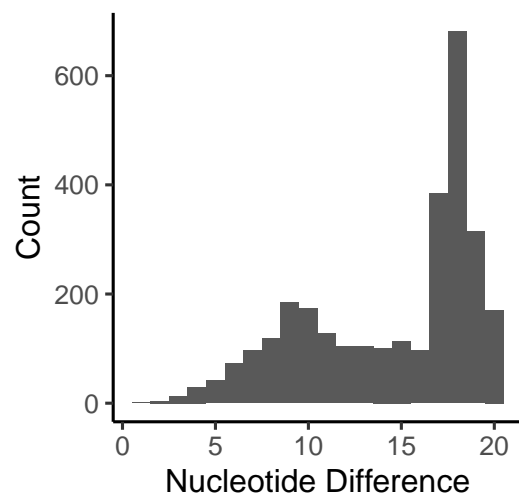
IGHV3-71*01_04

2 sequences assigned
No exact matches.



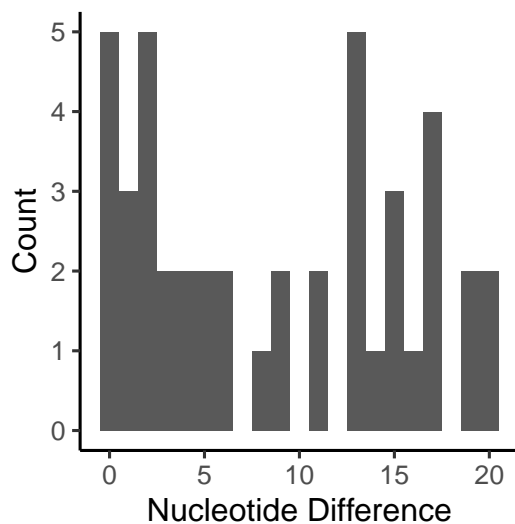
IGHV3-74*03

5840 sequences assigned
No exact matches.



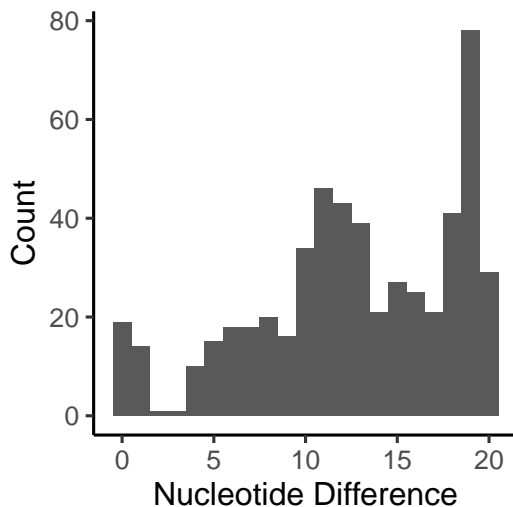
IGHV3-69-1*01

57 sequences assigned
5 (8.8%) exact matches, in which:
5 unique CDR3
3 unique J



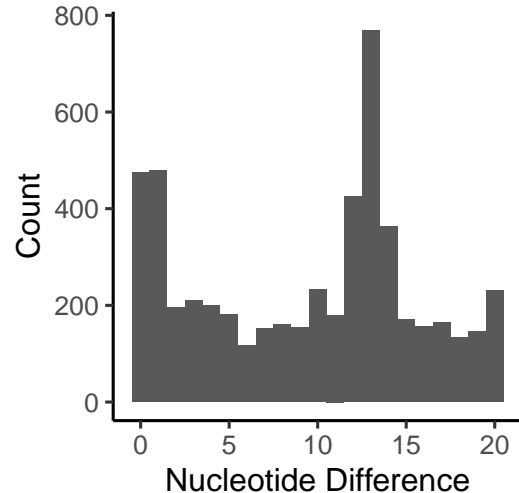
IGHV3-72*01

661 sequences assigned
19 (2.9%) exact matches, in which:
10 unique CDR3
3 unique J



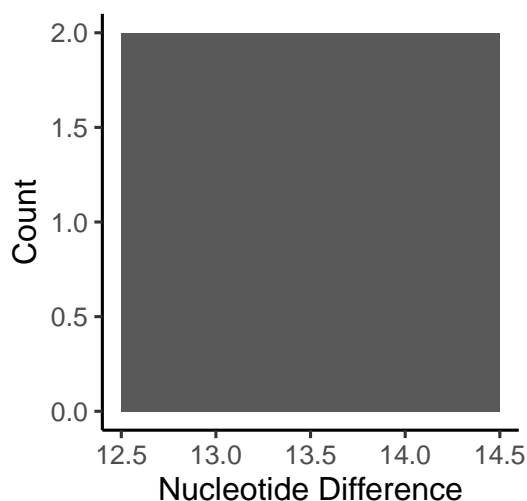
IGHV3-74*01_02

6370 sequences assigned
474 (7.4%) exact matches, in which:
302 unique CDR3
5 unique J



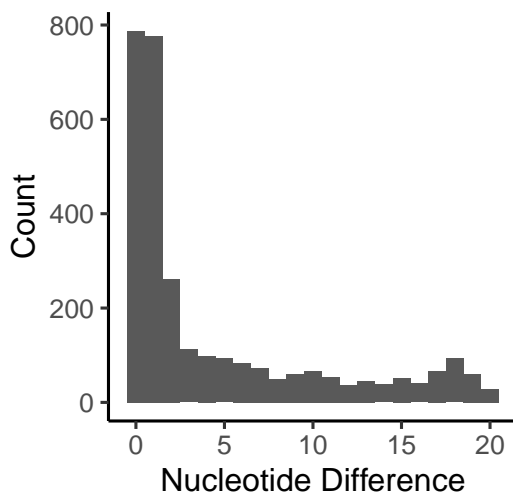
IGHV3-43D*04

4 sequences assigned
No exact matches.



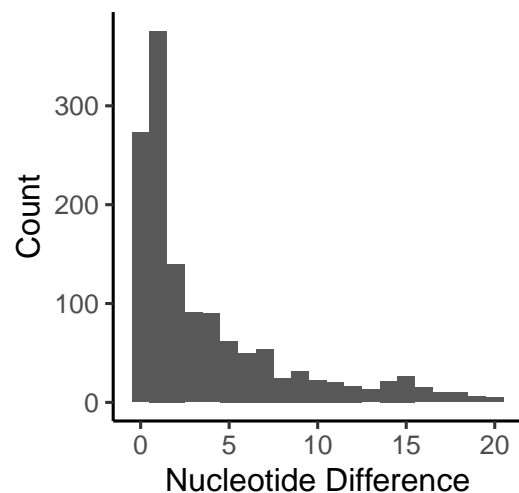
IGHV4-4*02_03

5031 sequences assigned
788 (15.7%) exact matches, in which:
591 unique CDR3
6 unique J



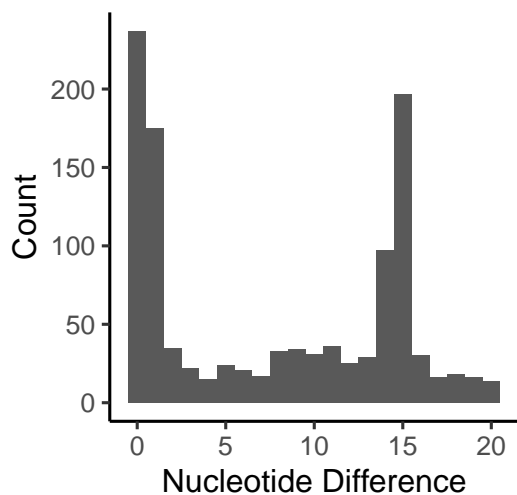
IGHV4-30-2*01

1884 sequences assigned
273 (14.5%) exact matches, in which:
162 unique CDR3
5 unique J



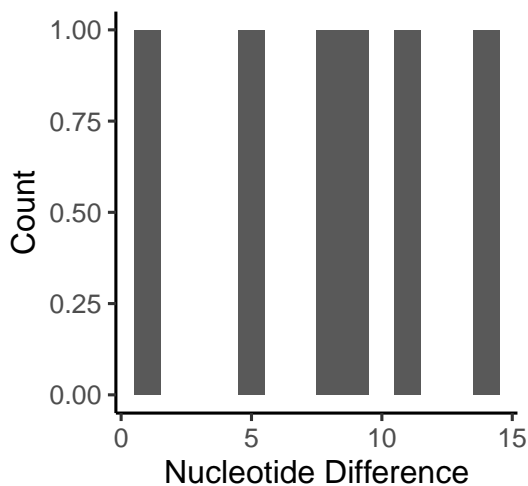
IGHV3-64D*08

1237 sequences assigned
237 (19.2%) exact matches, in which:
138 unique CDR3
5 unique J



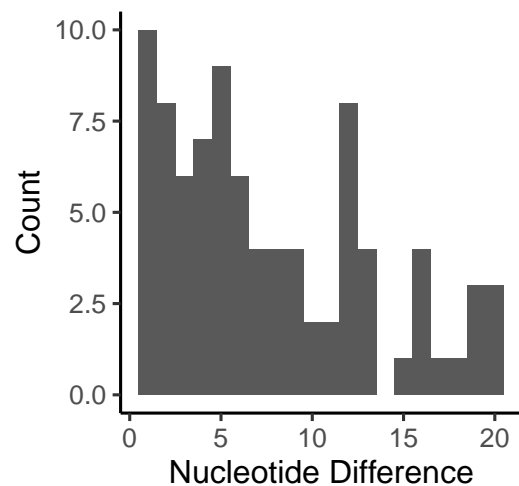
IGHV4-28*03

6 sequences assigned
No exact matches.



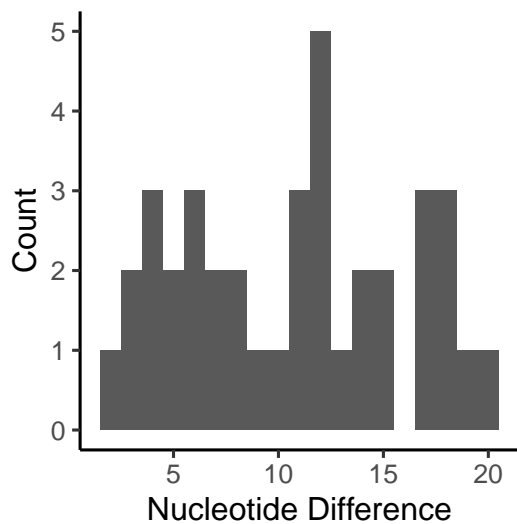
IGHV4-30-2*03

121 sequences assigned
No exact matches.



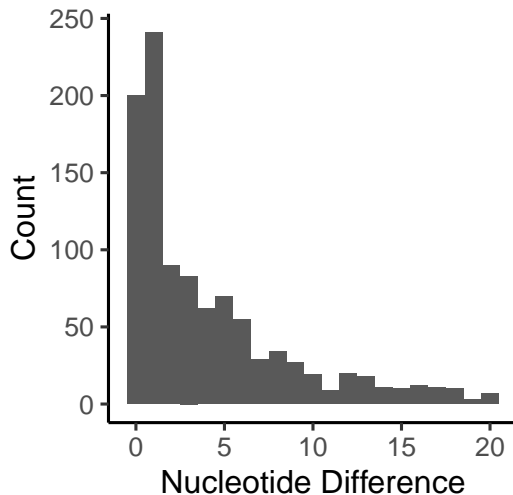
IGHV3-NL1*01

130 sequences assigned
No exact matches.



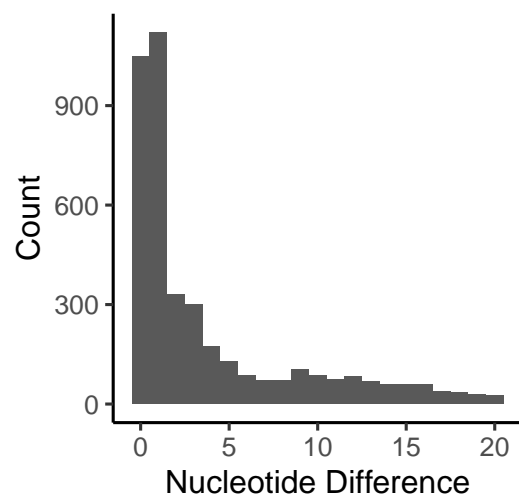
IGHV4-30-4*01

1102 sequences assigned
200 (18.1%) exact matches, in which:
160 unique CDR3
6 unique J



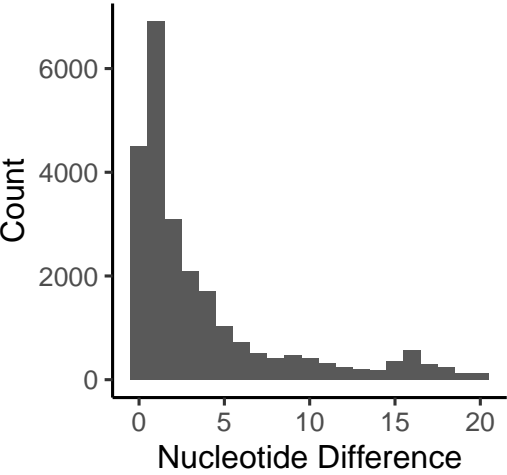
IGHV4-31*02

4926 sequences assigned
1048 (21.3%) exact matches, in which:
822 unique CDR3
6 unique J



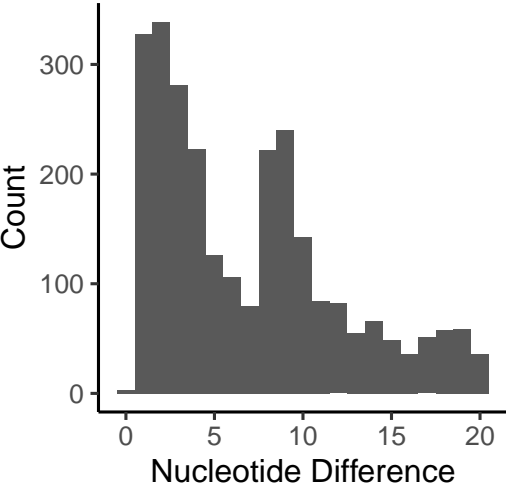
IGHV4-34*01_02

27537 sequences assigned
4499 (16.3%) exact matches, in which:
2992 unique CDR3
6 unique J



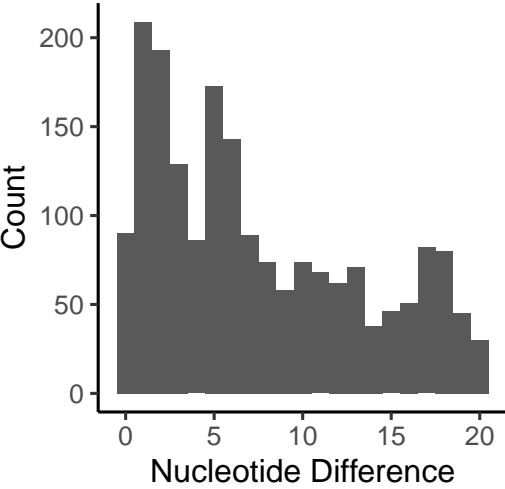
IGHV4-39*07

3033 sequences assigned
3 (0.1%) exact matches, in which:
3 unique CDR3
2 unique J



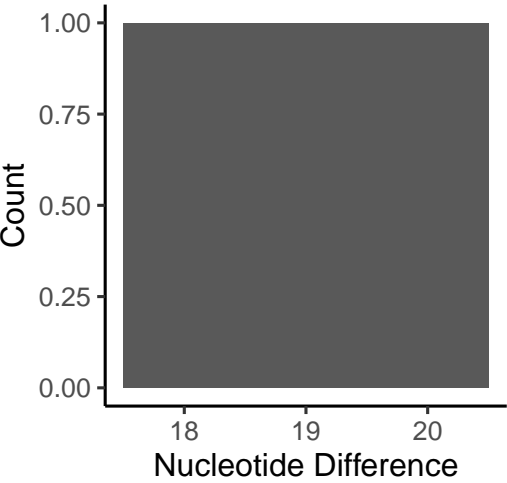
IGHV4-59*12

2547 sequences assigned
90 (3.5%) exact matches, in which:
85 unique CDR3
4 unique J



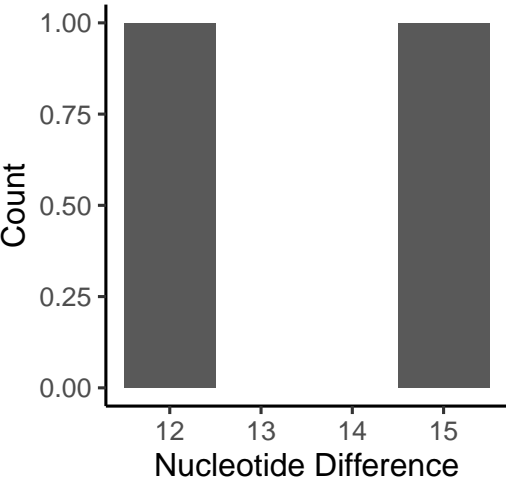
IGHV4-38-2*01

12 sequences assigned
No exact matches.



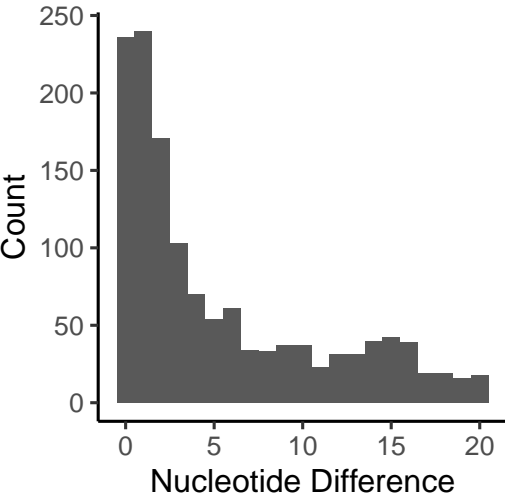
IGHV4-55*09

2 sequences assigned
No exact matches.



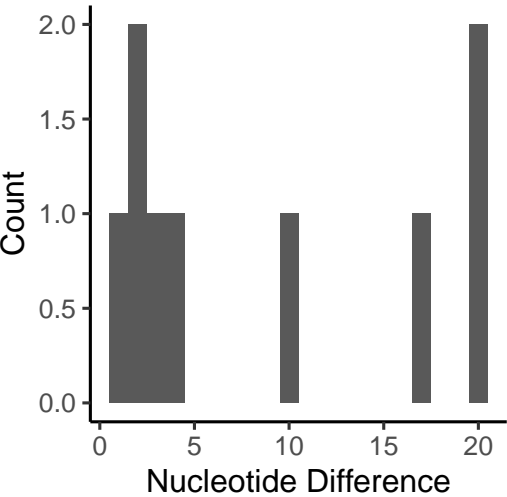
IGHV4-61*01

1517 sequences assigned
236 (15.6%) exact matches, in which:
187 unique CDR3
6 unique J



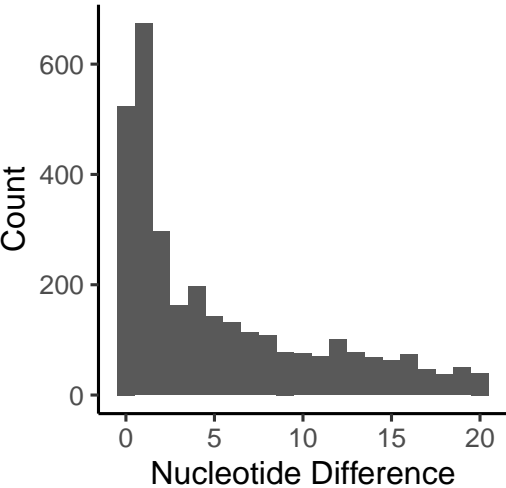
IGHV4-38-2*02

20 sequences assigned
No exact matches.



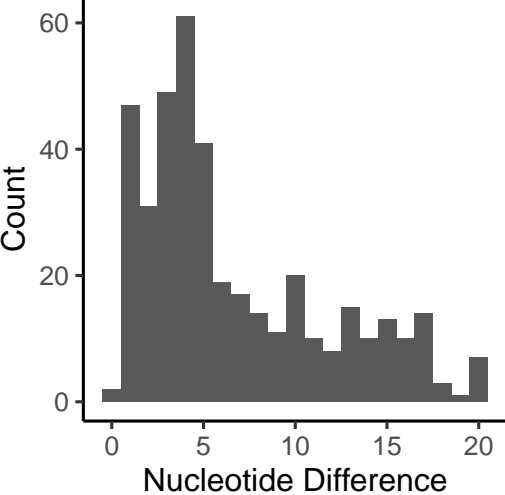
IGHV4-59*08

3435 sequences assigned
524 (15.3%) exact matches, in which:
412 unique CDR3
5 unique J



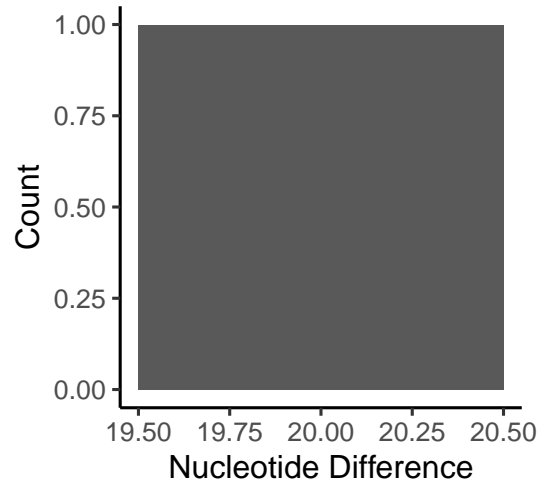
IGHV4-61*08

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



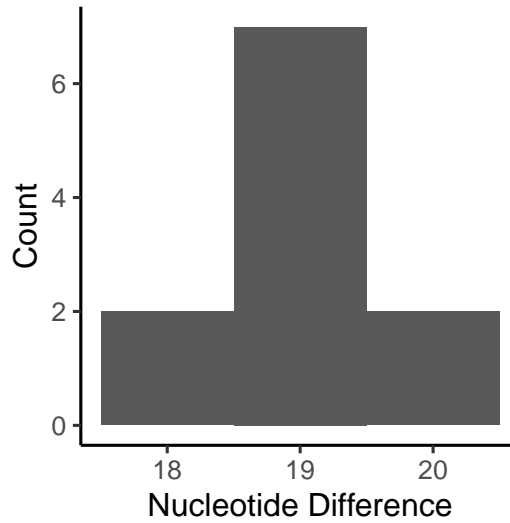
IGHV1/OR15-2*02_03

1 sequences assigned
No exact matches.



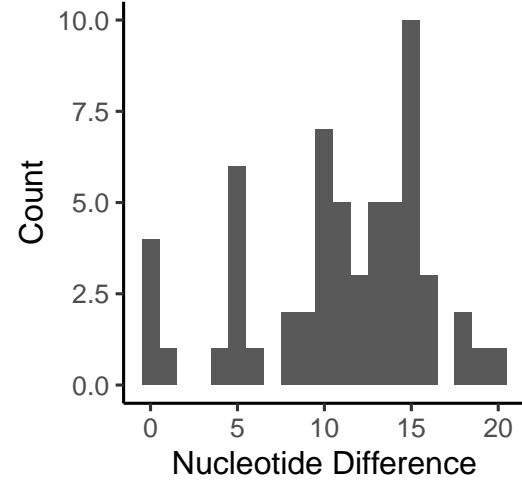
IGHV4/OR15-8*02

53 sequences assigned
No exact matches.



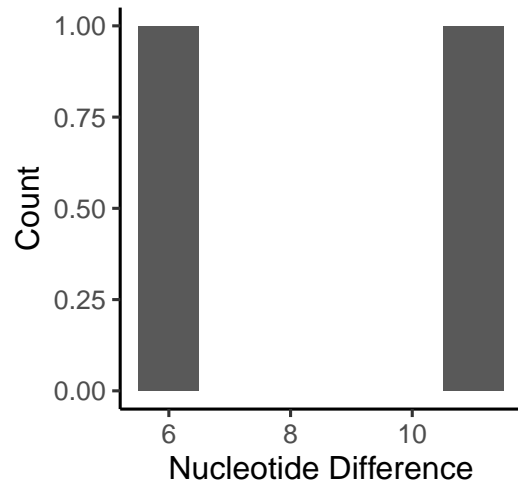
IGHV5-51*06

61 sequences assigned
4 (6.6%) exact matches, in which:
4 unique CDR3
2 unique J



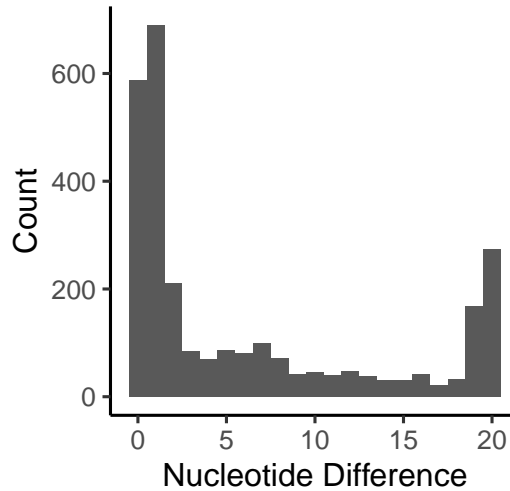
IGHV1/OR15-3*02

2 sequences assigned
No exact matches.



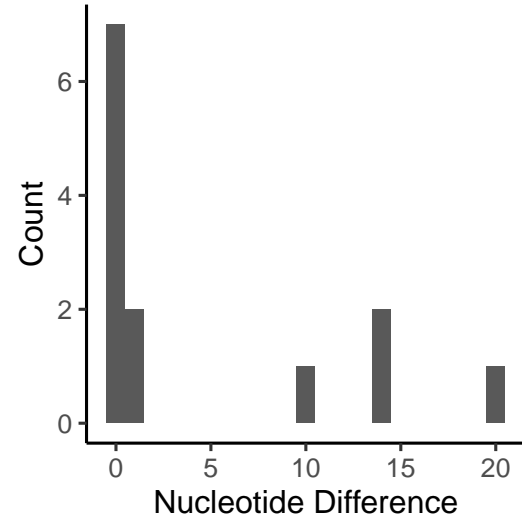
IGHV5-10-1*01_03

3501 sequences assigned
588 (16.8%) exact matches, in which:
366 unique CDR3
5 unique J



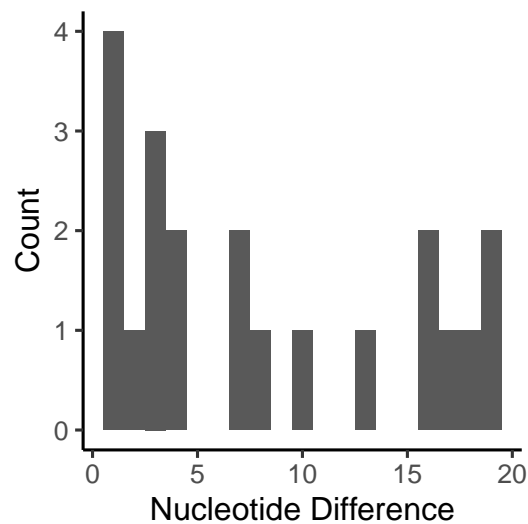
IGHV5-51*07

14 sequences assigned
7 (50%) exact matches, in which:
7 unique CDR3
4 unique J



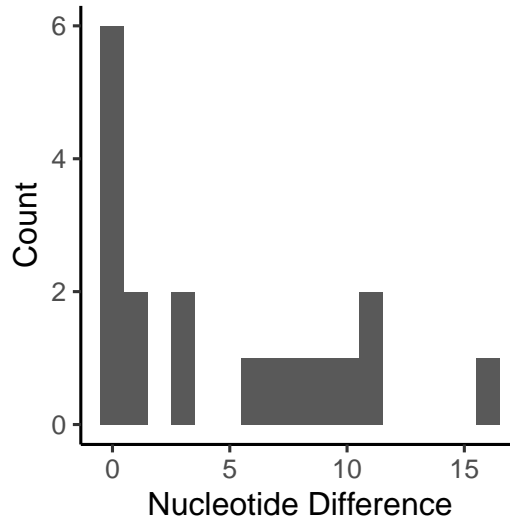
IGHV4/OR15-8*01

30 sequences assigned
No exact matches.



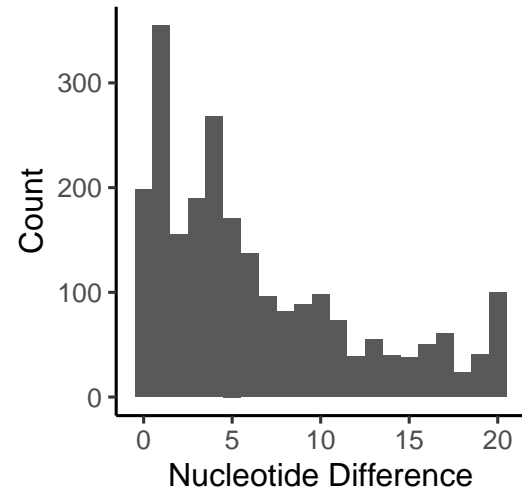
IGHV5-51*04

21 sequences assigned
6 (28.6%) exact matches, in which:
6 unique CDR3
2 unique J



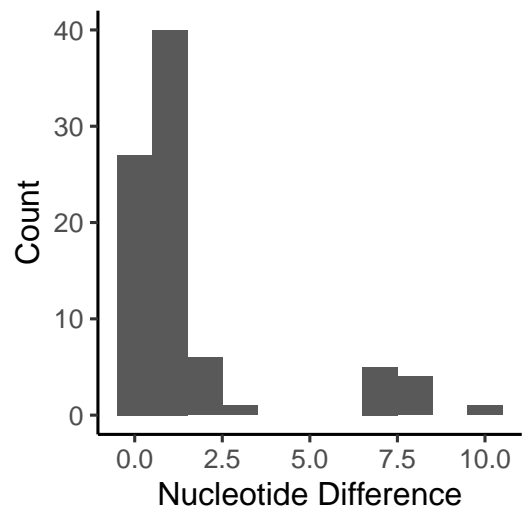
IGHV6-1*01_02

2515 sequences assigned
198 (7.9%) exact matches, in which:
161 unique CDR3
6 unique J



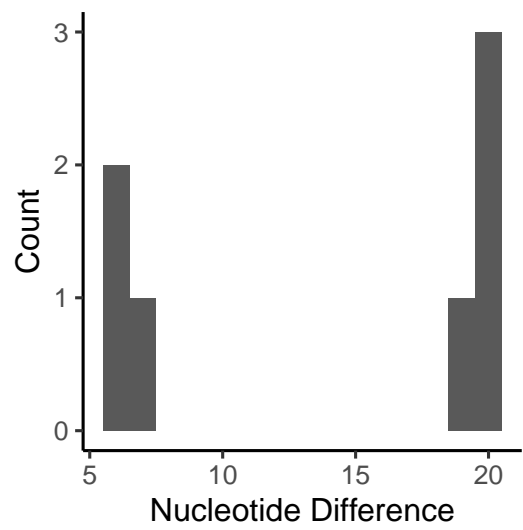
IGHV7-4-1*01

84 sequences assigned
27 (32.1%) exact matches, in which:
23 unique CDR3
4 unique J



IGHV7-4-1*02

12 sequences assigned
No exact matches.





[illegible]