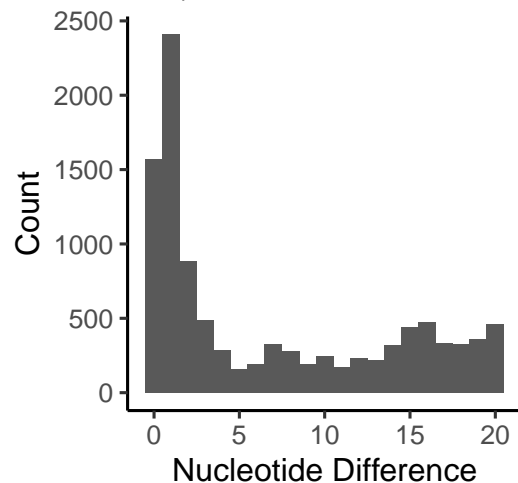


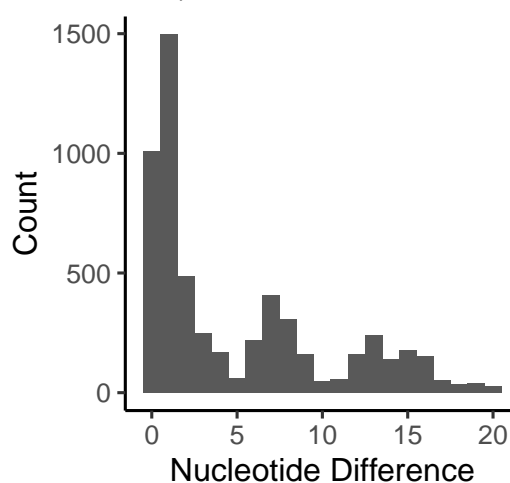
IGHV1-2*02

13092 sequences assigned
1567 (12%) exact matches, in which:
1181 unique CDR3
6 unique J



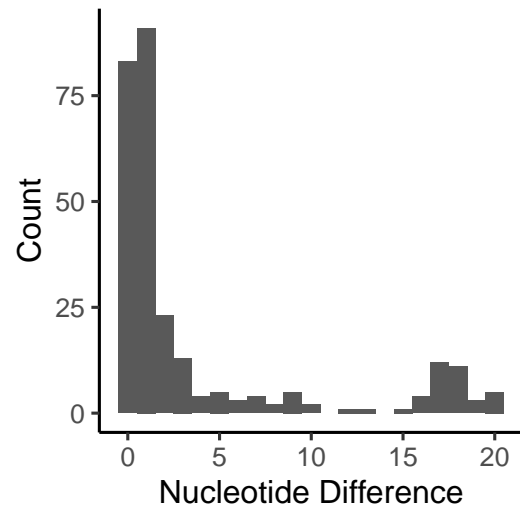
IGHV1-8*01

6916 sequences assigned
1008 (14.6%) exact matches, in which:
714 unique CDR3
6 unique J



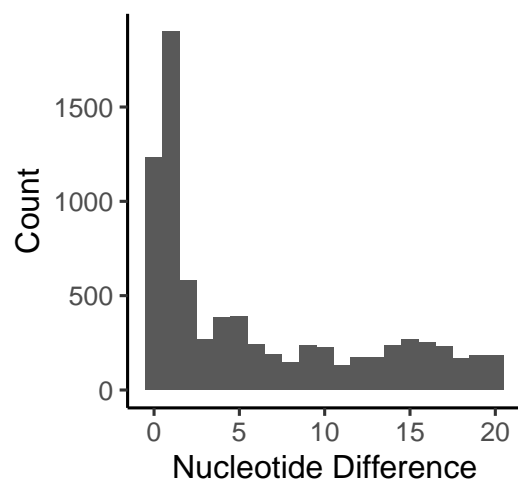
IGHV1-24*01

329 sequences assigned
83 (25.2%) exact matches, in which:
70 unique CDR3
6 unique J



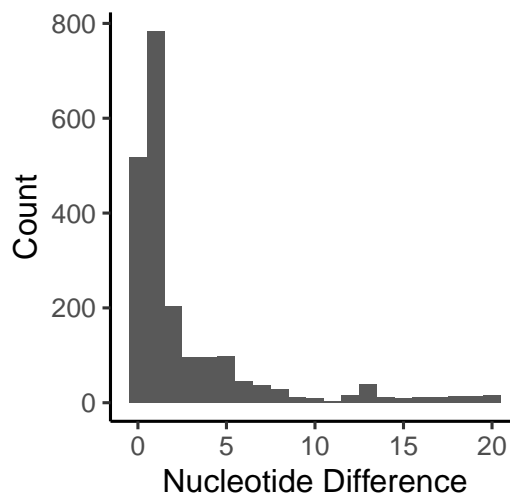
IGHV1-2*06

9148 sequences assigned
1234 (13.5%) exact matches, in which:
912 unique CDR3
6 unique J



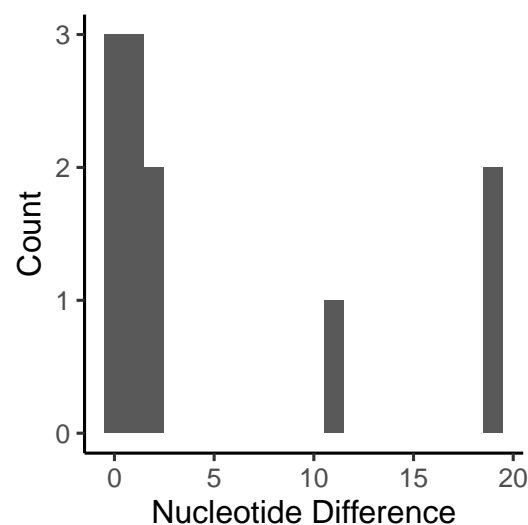
IGHV1-8*03

2337 sequences assigned
517 (22.1%) exact matches, in which:
371 unique CDR3
6 unique J



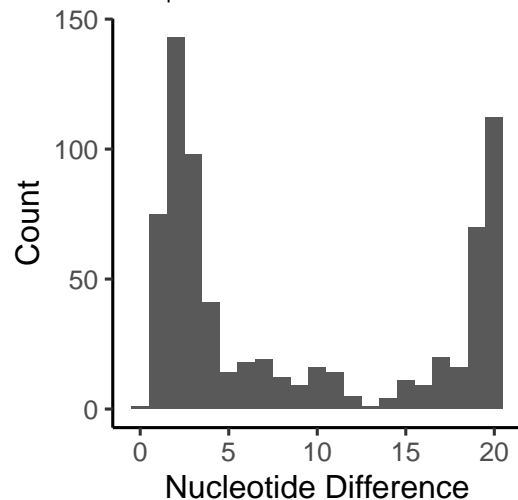
IGHV1-45*02

11 sequences assigned
3 (27.3%) exact matches, in which:
1 unique CDR3
1 unique J



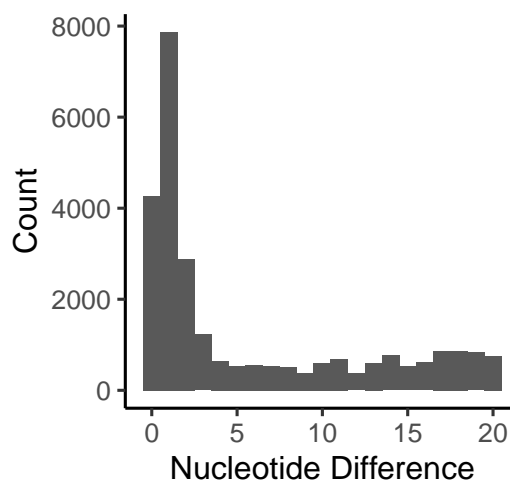
IGHV1-3*03

1204 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



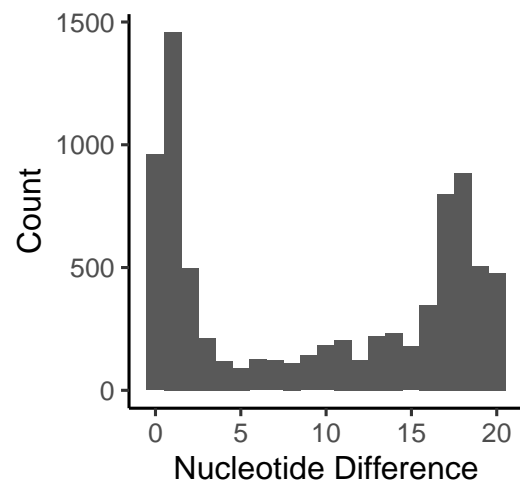
IGHV1-18*01

32274 sequences assigned
4271 (13.2%) exact matches, in which:
2931 unique CDR3
6 unique J



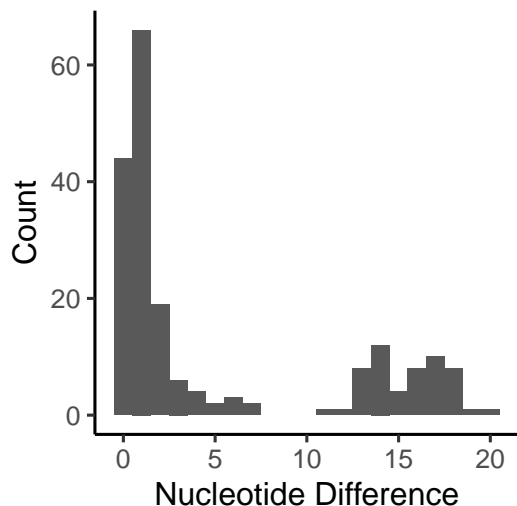
IGHV1-46*01

13889 sequences assigned
960 (6.9%) exact matches, in which:
692 unique CDR3
5 unique J



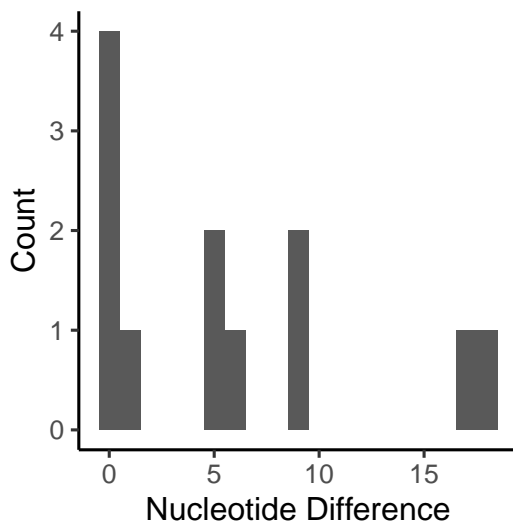
IGHV1-58*02

318 sequences assigned
44 (13.8%) exact matches, in which:
39 unique CDR3
4 unique J



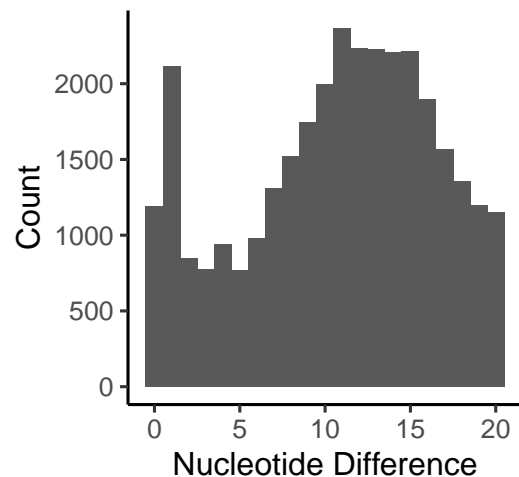
IGHV2-5*01

51 sequences assigned
4 (7.8%) exact matches, in which:
4 unique CDR3
2 unique J



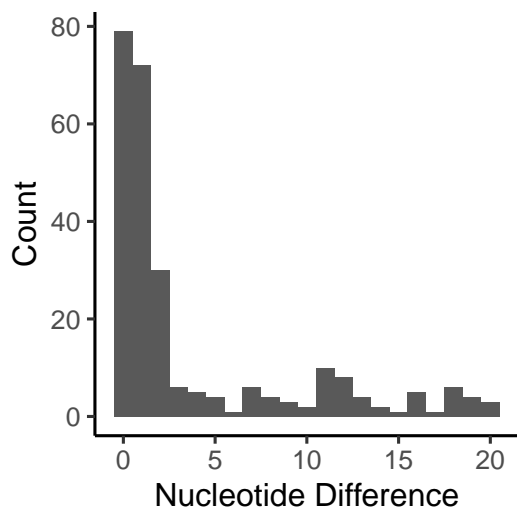
IGHV3-7*01

38509 sequences assigned
1190 (3.1%) exact matches, in which:
728 unique CDR3
6 unique J



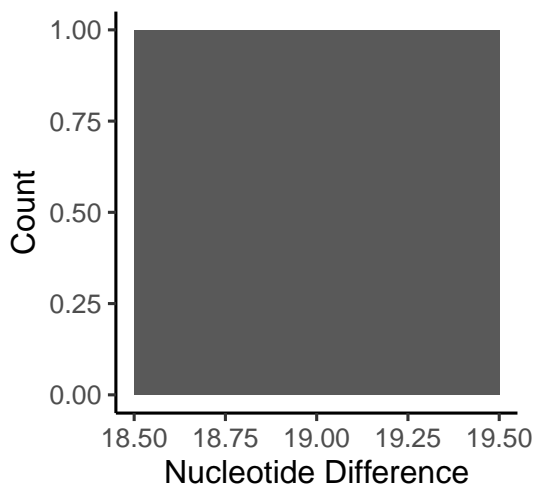
IGHV1-69-2*01

403 sequences assigned
79 (19.6%) exact matches, in which:
59 unique CDR3
5 unique J



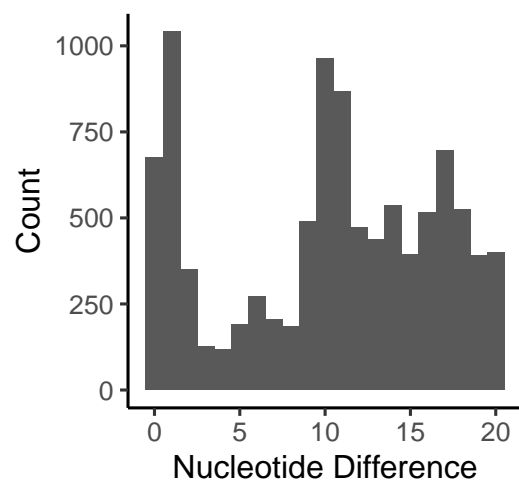
IGHV2-5*04

2 sequences assigned
No exact matches.



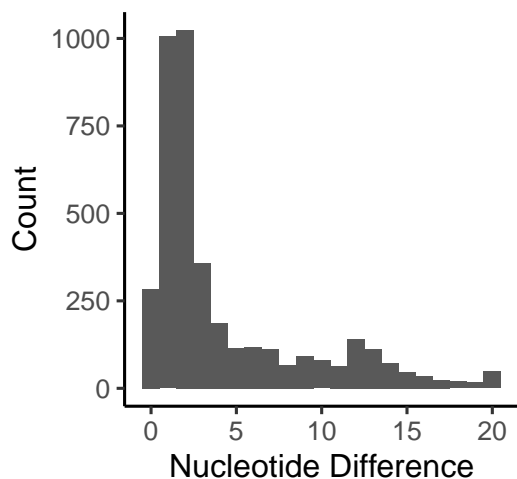
IGHV3-9*01

13470 sequences assigned
676 (5%) exact matches, in which:
408 unique CDR3
6 unique J



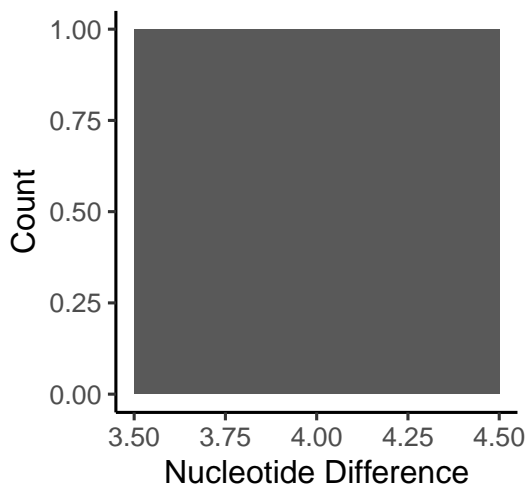
IGHV1-69*10

5178 sequences assigned
283 (5.5%) exact matches, in which:
230 unique CDR3
6 unique J



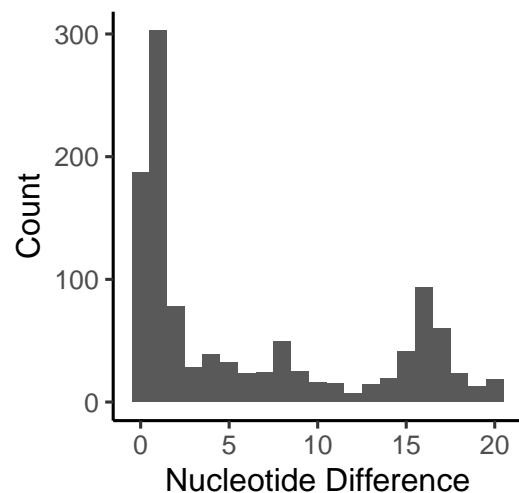
IGHV2-26*01

1 sequences assigned
No exact matches.



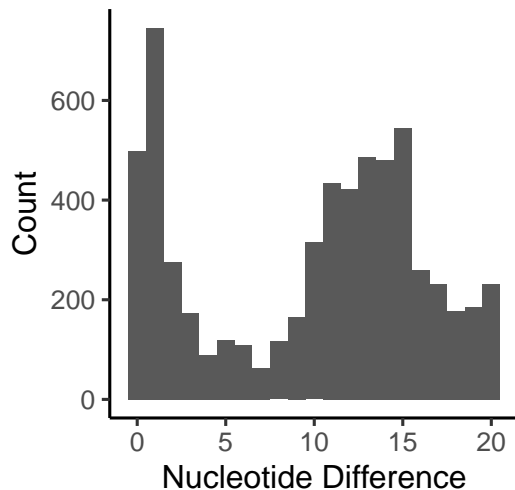
IGHV3-9*03

1197 sequences assigned
187 (15.6%) exact matches, in which:
117 unique CDR3
5 unique J



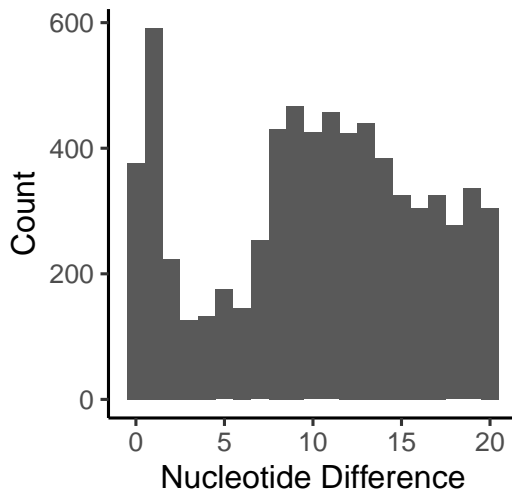
IGHV3-11*01

7855 sequences assigned
499 (6.4%) exact matches, in which:
345 unique CDR3
6 unique J



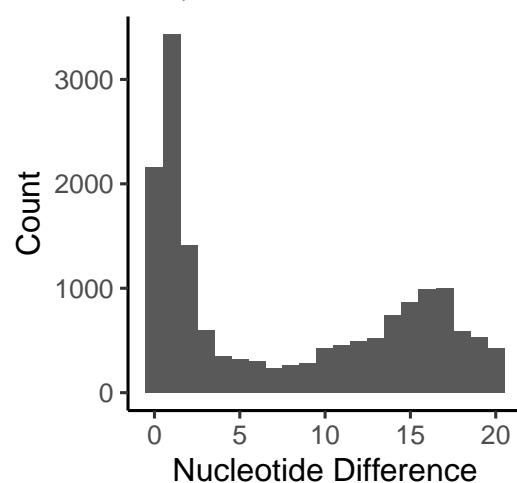
IGHV3-15*01_02

9406 sequences assigned
376 (4%) exact matches, in which:
278 unique CDR3
6 unique J



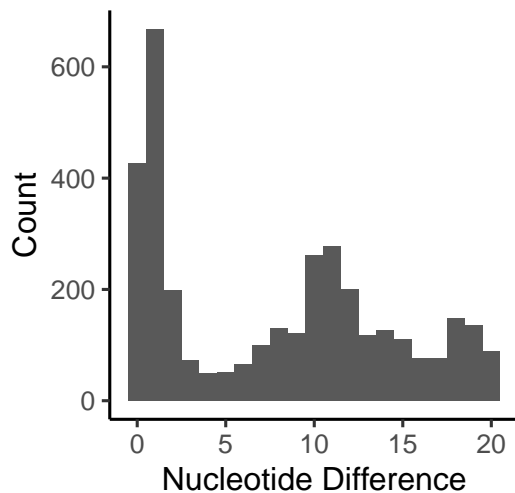
IGHV3-21*01_02

22183 sequences assigned
2159 (9.7%) exact matches, in which:
1322 unique CDR3
6 unique J



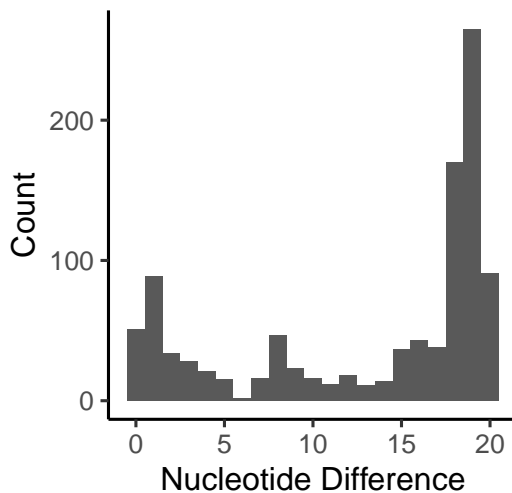
IGHV3-11*04

4093 sequences assigned
426 (10.4%) exact matches, in which:
281 unique CDR3
6 unique J



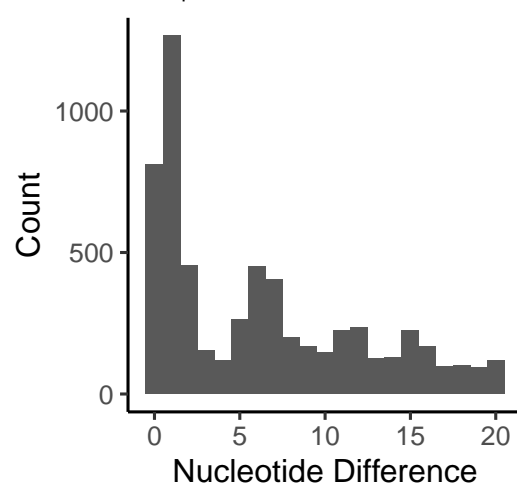
IGHV3-20*01_02

1173 sequences assigned
51 (4.3%) exact matches, in which:
33 unique CDR3
4 unique J



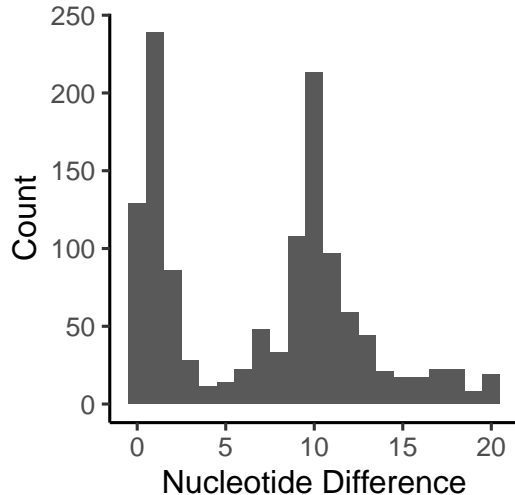
IGHV3-30*01

8254 sequences assigned
812 (9.8%) exact matches, in which:
539 unique CDR3
6 unique J



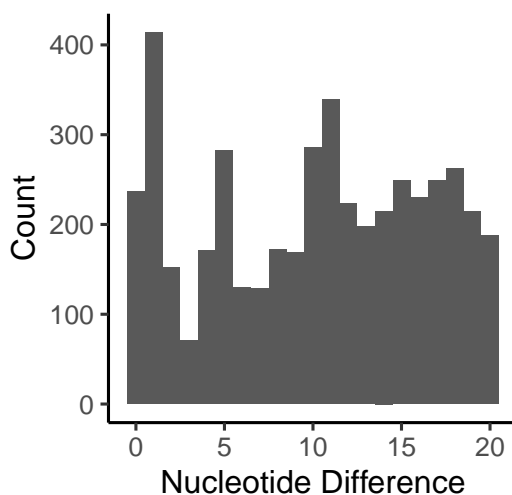
IGHV3-13*01

1727 sequences assigned
129 (7.5%) exact matches, in which:
87 unique CDR3
5 unique J



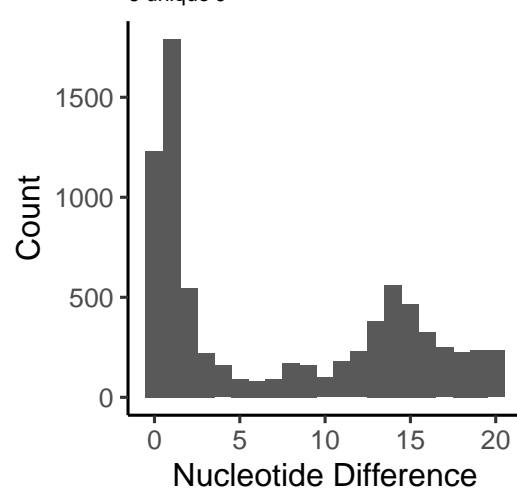
IGHV3-20*03_04

5666 sequences assigned
237 (4.2%) exact matches, in which:
161 unique CDR3
6 unique J



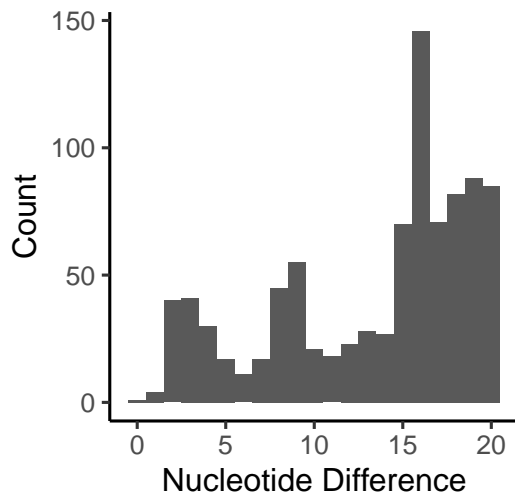
IGHV3-33*01

9870 sequences assigned
1230 (12.5%) exact matches, in which:
697 unique CDR3
6 unique J



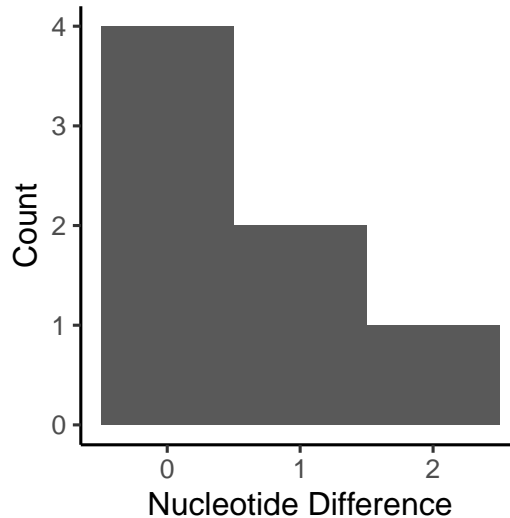
IGHV3-33*05

1904 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



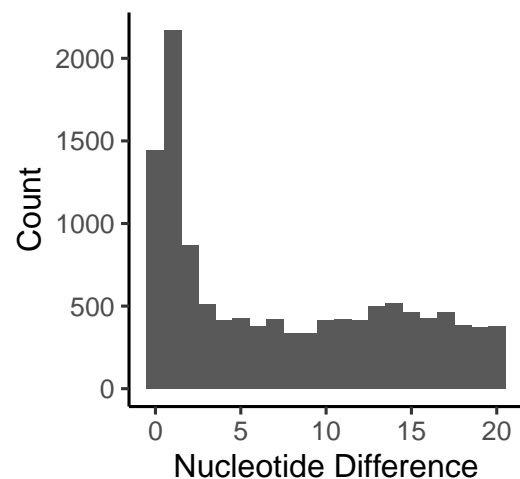
IGHV3-38-3*01

7 sequences assigned
4 (57.1%) exact matches, in which:
4 unique CDR3
1 unique J



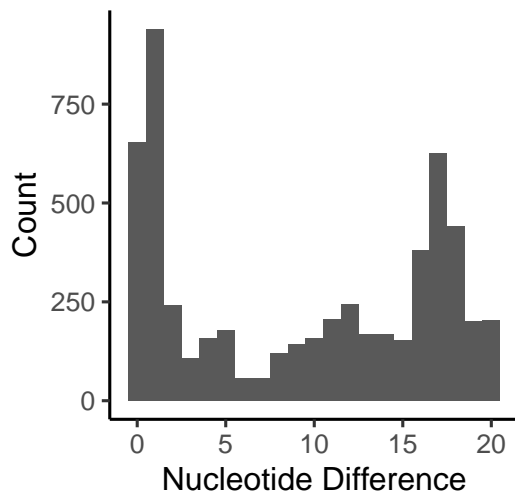
IGHV3-48*03

15780 sequences assigned
1444 (9.2%) exact matches, in which:
950 unique CDR3
6 unique J



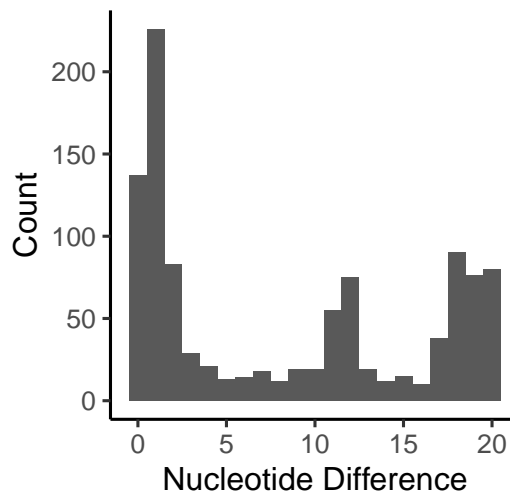
IGHV3-33*06

7093 sequences assigned
653 (9.2%) exact matches, in which:
340 unique CDR3
6 unique J



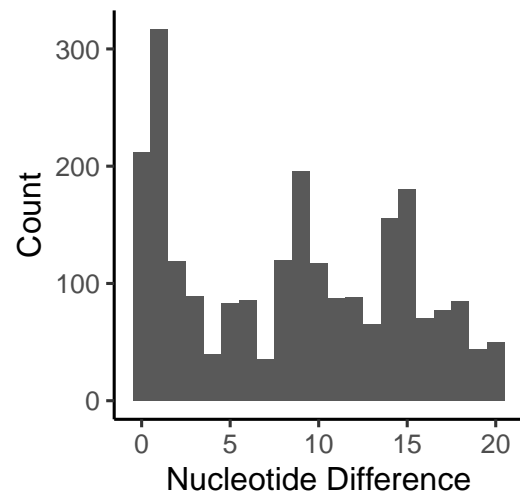
IGHV3-43*01

1963 sequences assigned
137 (7%) exact matches, in which:
93 unique CDR3
4 unique J



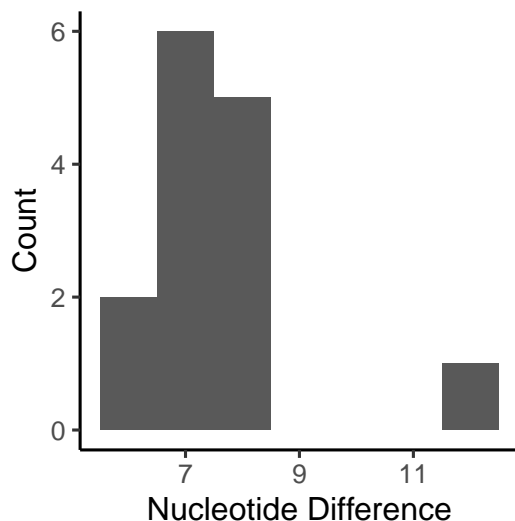
IGHV3-49*04

3268 sequences assigned
212 (6.5%) exact matches, in which:
143 unique CDR3
6 unique J



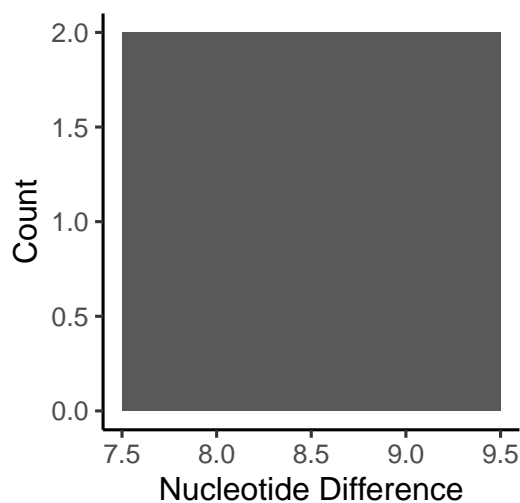
IGHV3-35*01

14 sequences assigned
No exact matches.



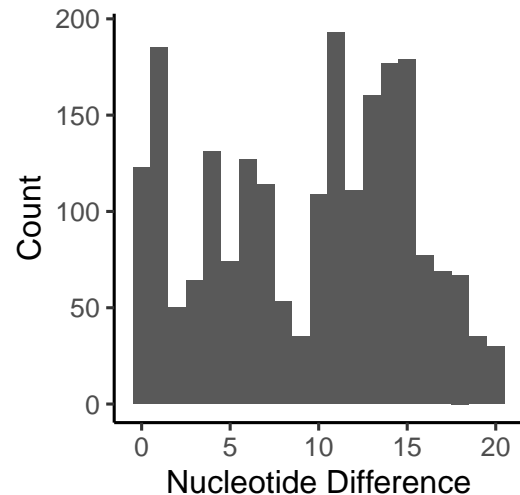
IGHV3-47*01

4 sequences assigned
No exact matches.



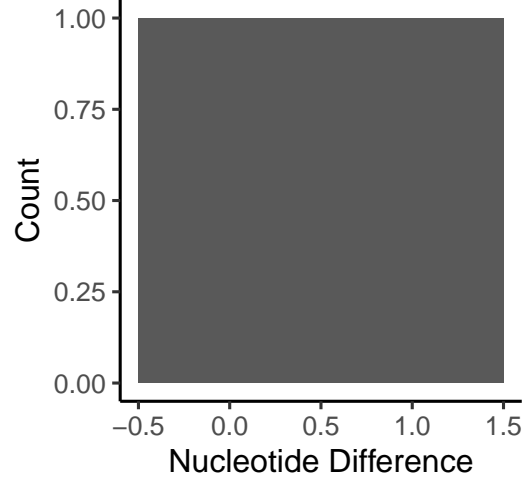
IGHV3-49*03_05

2989 sequences assigned
123 (4.1%) exact matches, in which:
79 unique CDR3
5 unique J



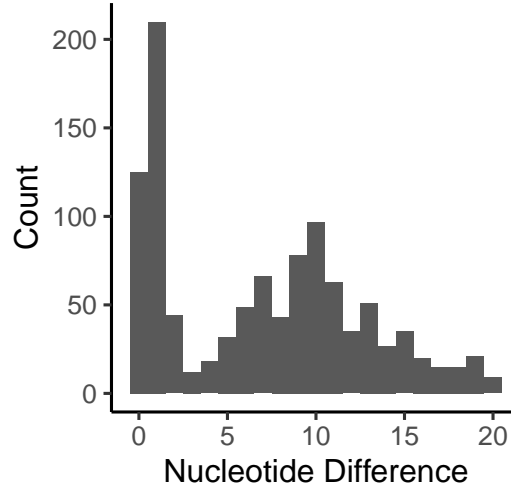
IGHV3-52*01_03

2 sequences assigned
1 (50%) exact matches, in which:
1 unique CDR3
1 unique J



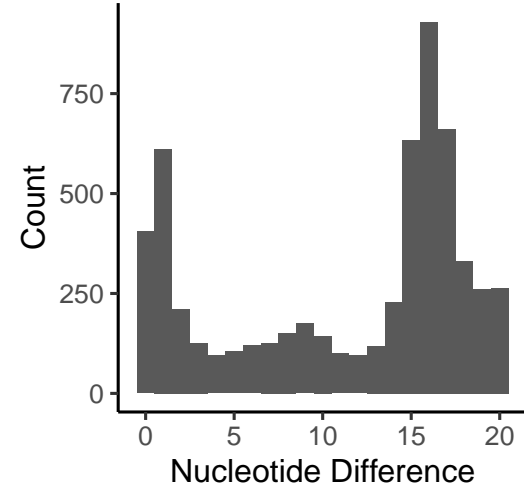
IGHV3-64*01

1562 sequences assigned
125 (8%) exact matches, in which:
75 unique CDR3
5 unique J



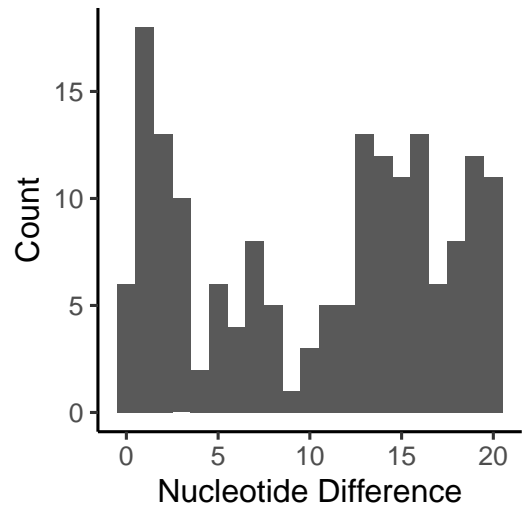
IGHV3-66*02

7590 sequences assigned
405 (5.3%) exact matches, in which:
238 unique CDR3
6 unique J



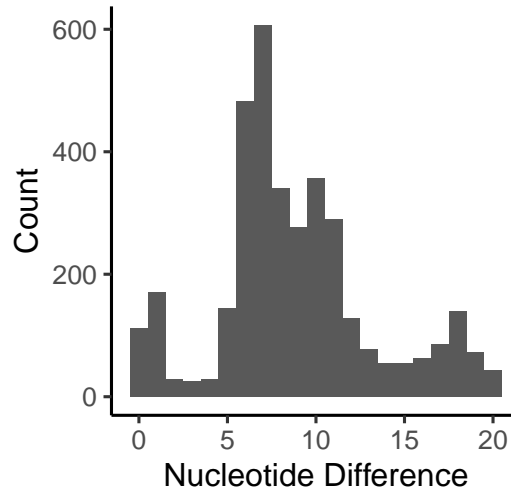
IGHV3-53*05

280 sequences assigned
6 (2.1%) exact matches, in which:
6 unique CDR3
4 unique J



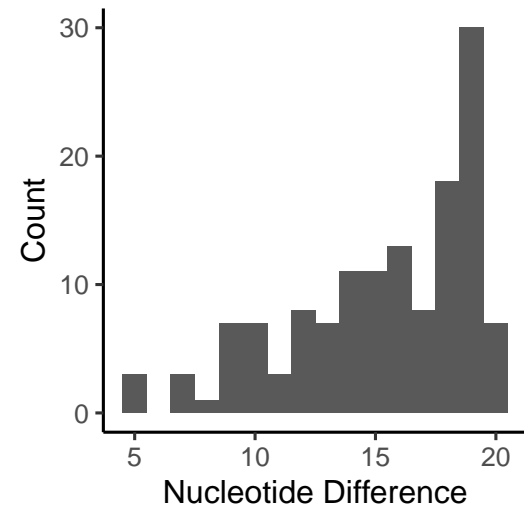
IGHV3-64*02_07

3964 sequences assigned
112 (2.8%) exact matches, in which:
74 unique CDR3
5 unique J



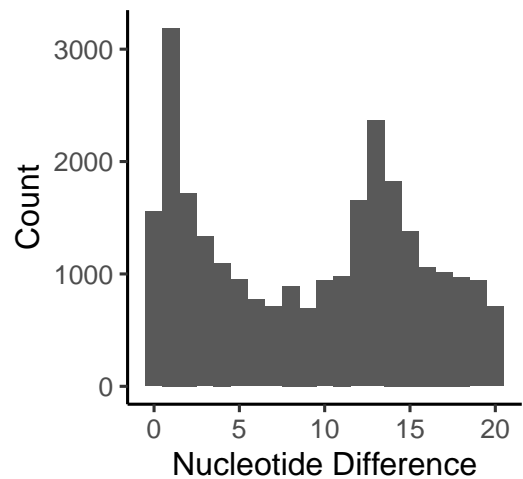
IGHV3-66*03

444 sequences assigned
No exact matches.



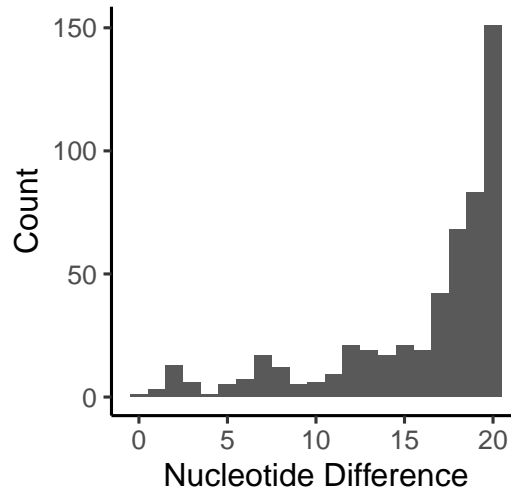
IGHV3-53*01_02

34677 sequences assigned
1555 (4.5%) exact matches, in which:
945 unique CDR3
6 unique J



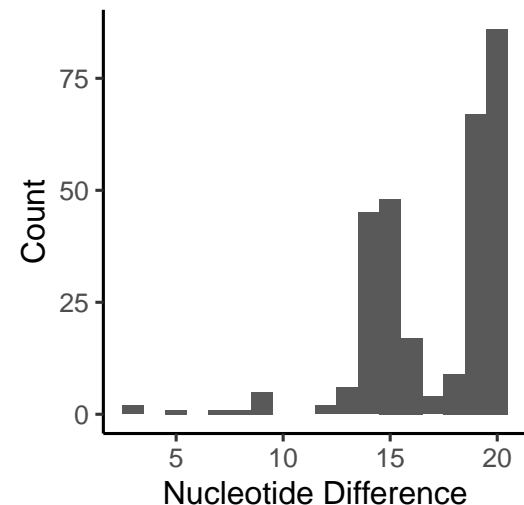
IGHV3-66*01

1219 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



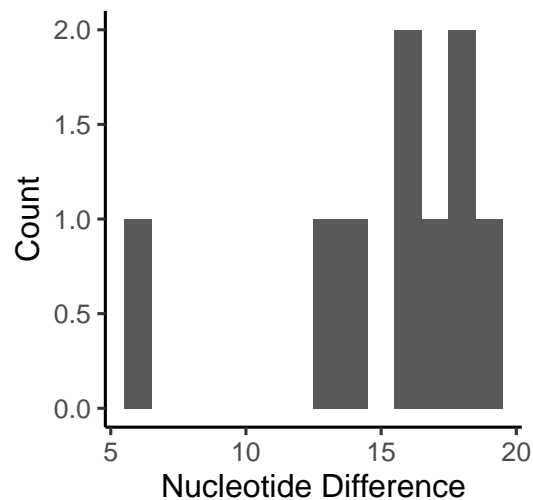
IGHV3-69-1*01

348 sequences assigned
No exact matches.



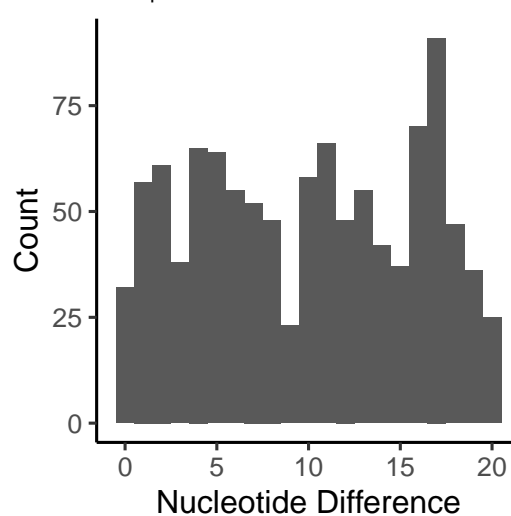
IGHV3-69-1*02

37 sequences assigned
No exact matches.



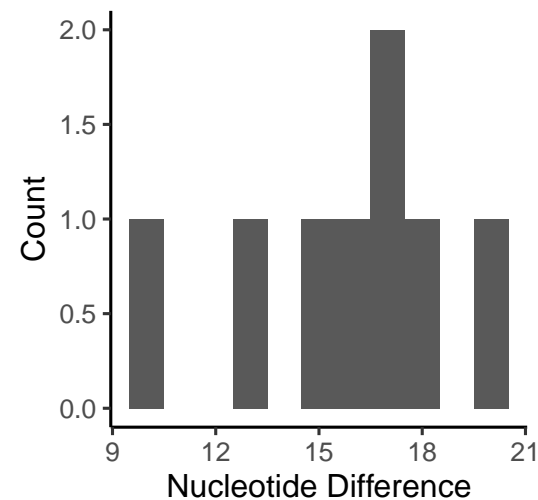
IGHV3-73*01_02

1608 sequences assigned
32 (2%) exact matches, in which:
29 unique CDR3
5 unique J



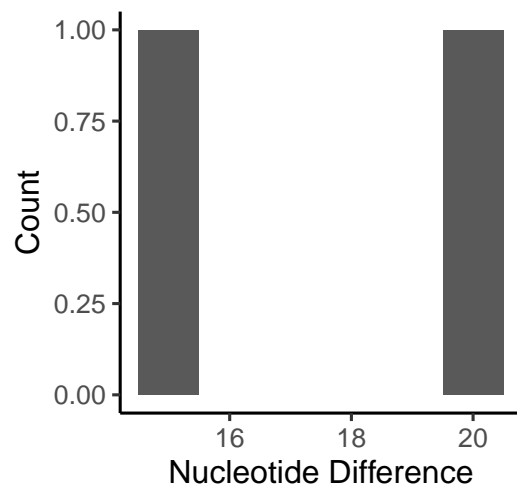
IGHV3-64D*06

9 sequences assigned
No exact matches.



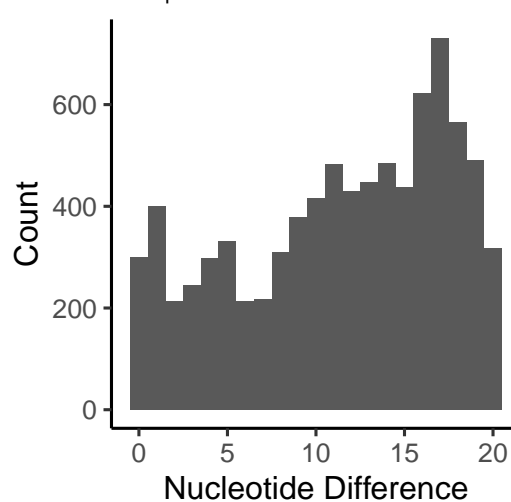
IGHV3-71*01_04

14 sequences assigned
No exact matches.



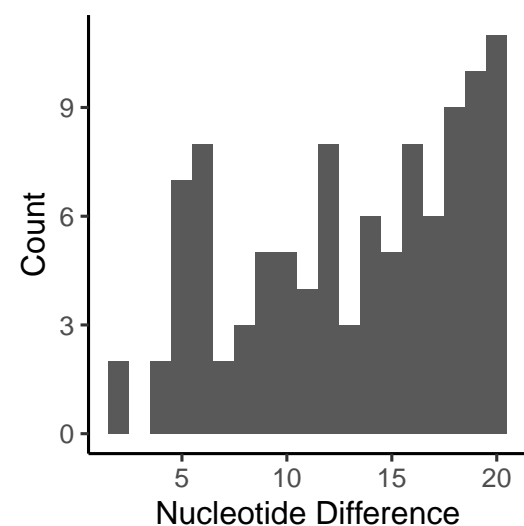
IGHV3-74*01_02

13360 sequences assigned
299 (2.2%) exact matches, in which:
192 unique CDR3
6 unique J



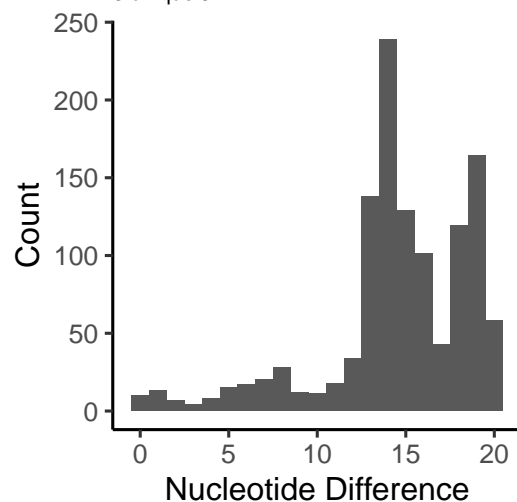
IGHV3-NL1*01

156 sequences assigned
No exact matches.



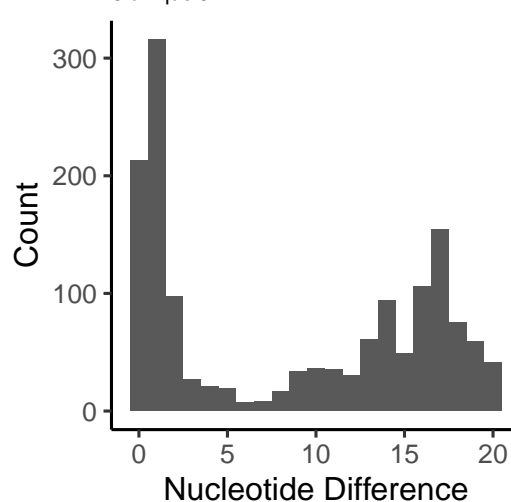
IGHV3-72*01

1828 sequences assigned
10 (0.5%) exact matches, in which:
6 unique CDR3
3 unique J



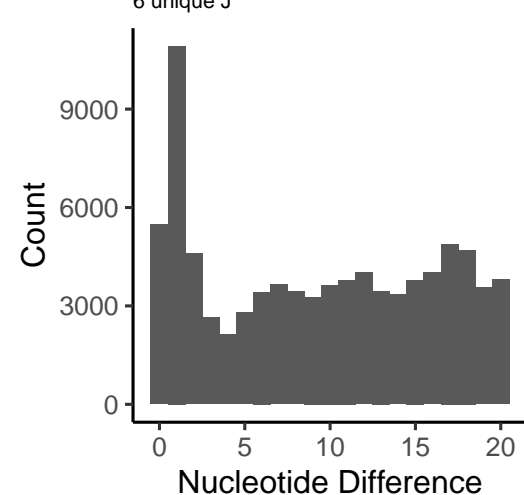
IGHV3-43D*03

1917 sequences assigned
213 (11.1%) exact matches, in which:
139 unique CDR3
6 unique J



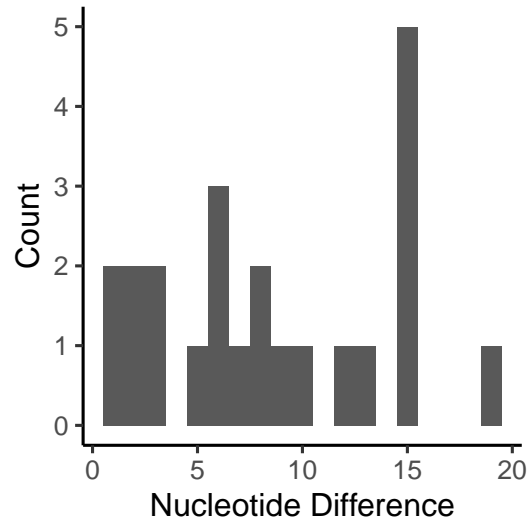
IGHV4-4*07

111185 sequences assigned
5479 (4.9%) exact matches, in which:
3268 unique CDR3
6 unique J



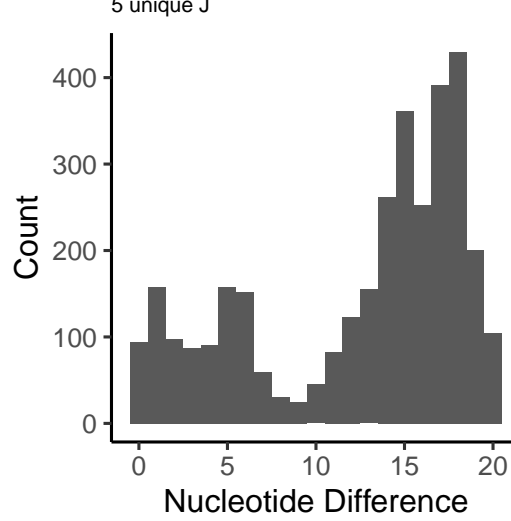
IGHV4-28*03

37 sequences assigned
No exact matches.



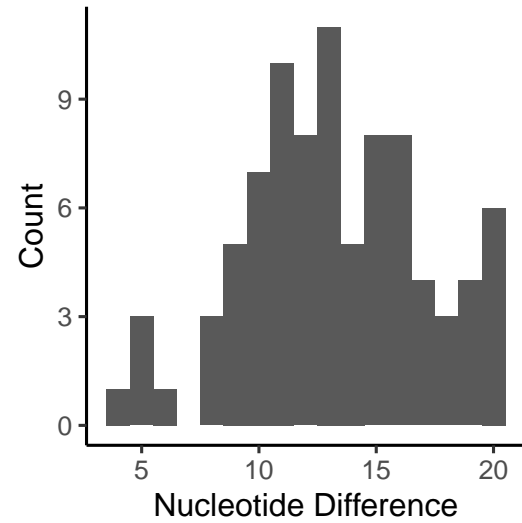
IGHV4-30-2*01

4611 sequences assigned
94 (2%) exact matches, in which:
65 unique CDR3
5 unique J



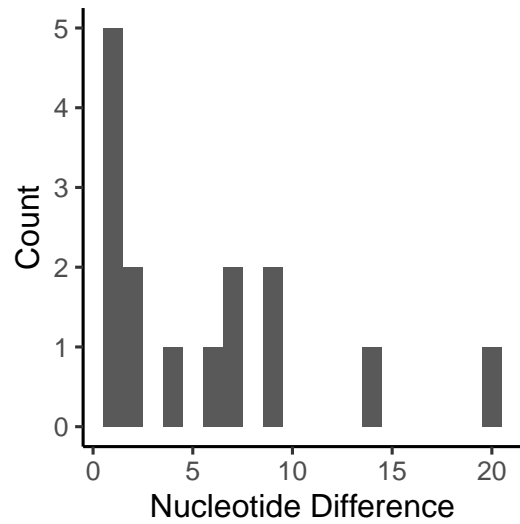
IGHV4-30-4*08

133 sequences assigned
No exact matches.



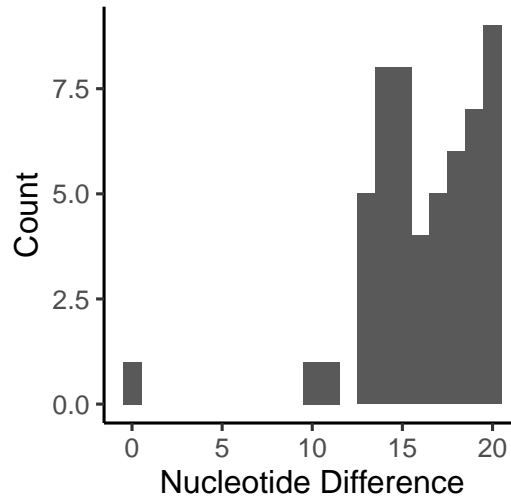
IGHV4-28*06

16 sequences assigned
No exact matches.



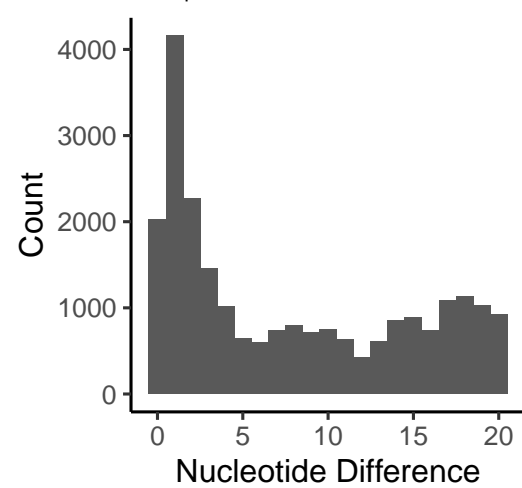
IGHV4-30-4*01

128 sequences assigned
1 (0.8%) exact matches, in which:
1 unique CDR3
1 unique J



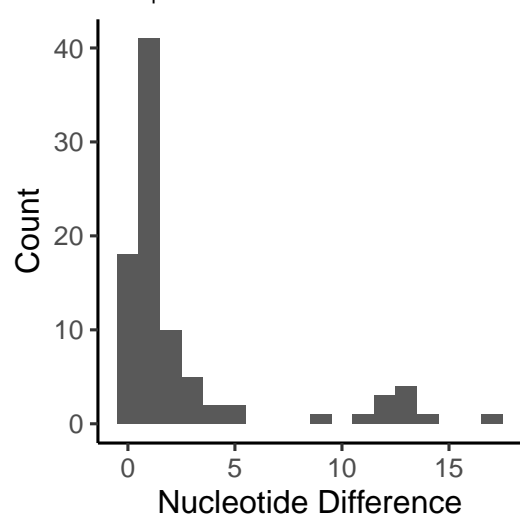
IGHV4-31*03_04

34724 sequences assigned
2025 (5.8%) exact matches, in which:
1213 unique CDR3
6 unique J



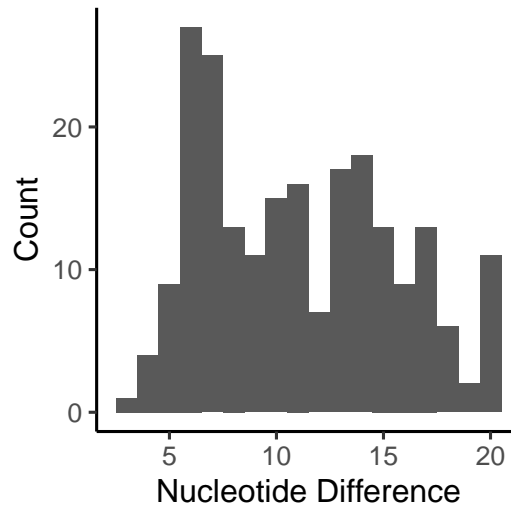
IGHV4-28*02_05

90 sequences assigned
18 (20%) exact matches, in which:
9 unique CDR3
2 unique J



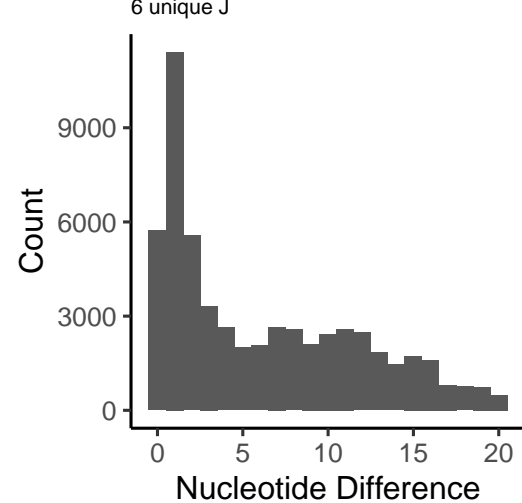
IGHV4-30-4*07

289 sequences assigned
No exact matches.



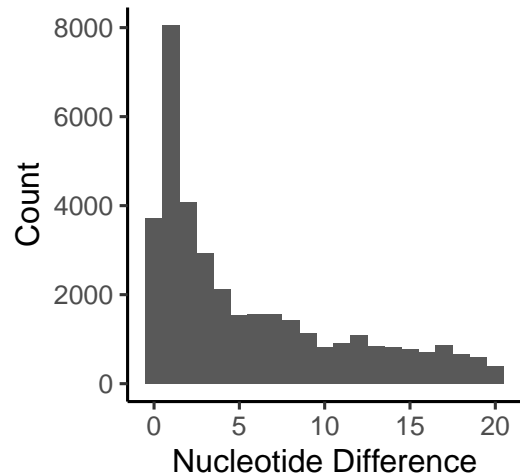
IGHV4-34*01_02

63736 sequences assigned
5726 (9%) exact matches, in which:
3250 unique CDR3
6 unique J



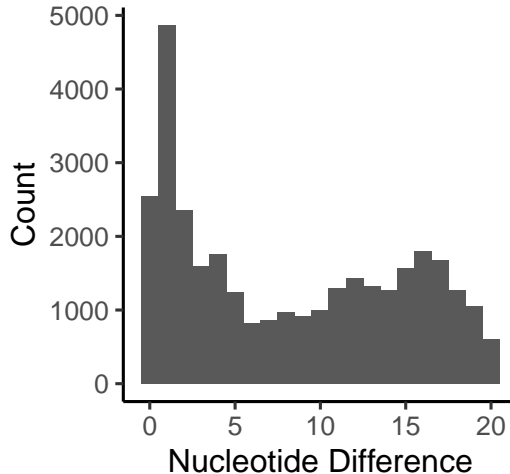
IGHV4-38-2*02

45048 sequences assigned
3717 (8.3%) exact matches, in which:
2151 unique CDR3
6 unique J



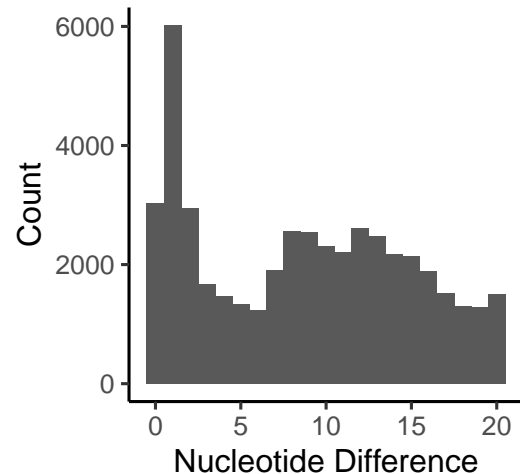
IGHV4-59*08

38724 sequences assigned
2549 (6.6%) exact matches, in which:
1499 unique CDR3
6 unique J



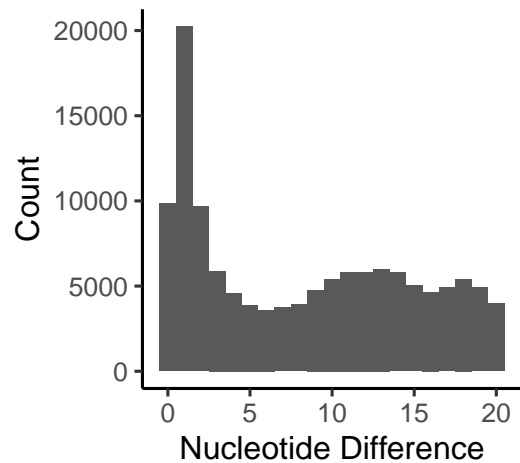
IGHV4-61*02

59339 sequences assigned
3026 (5.1%) exact matches, in which:
1732 unique CDR3
6 unique J



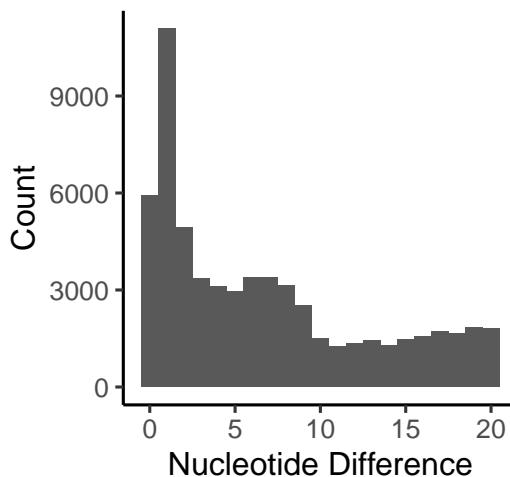
IGHV4-39*07

170179 sequences assigned
9846 (5.8%) exact matches, in which:
5470 unique CDR3
6 unique J



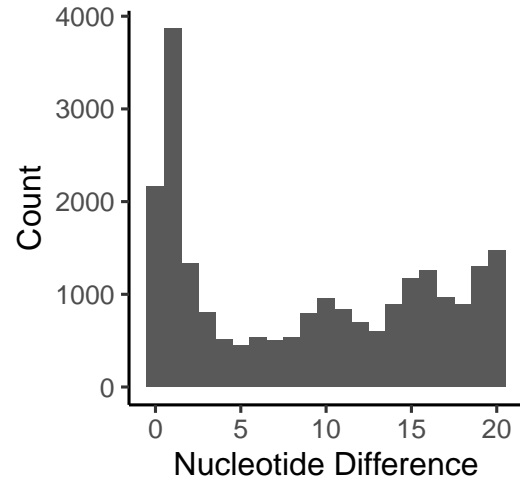
IGHV4-59*01_07

77005 sequences assigned
5921 (7.7%) exact matches, in which:
3300 unique CDR3
6 unique J



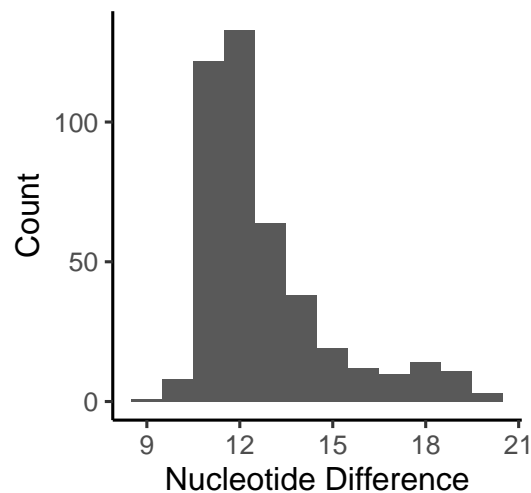
IGHV5-51*01_03

28754 sequences assigned
2167 (7.5%) exact matches, in which:
1415 unique CDR3
6 unique J



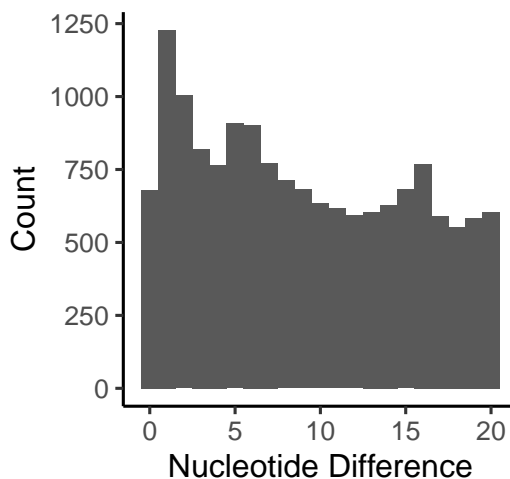
IGHV4-55*02_04_08

461 sequences assigned
No exact matches.



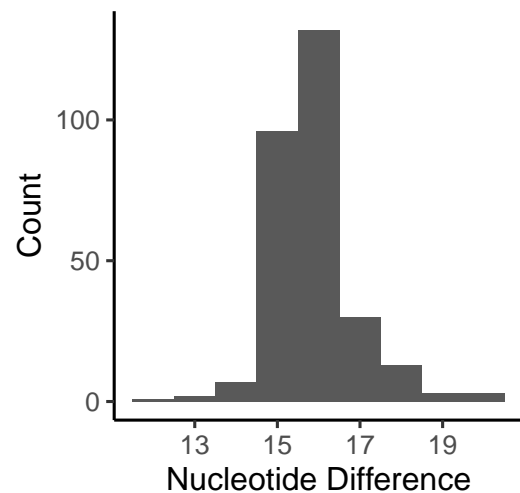
IGHV4-59*12

18957 sequences assigned
679 (3.6%) exact matches, in which:
593 unique CDR3
6 unique J



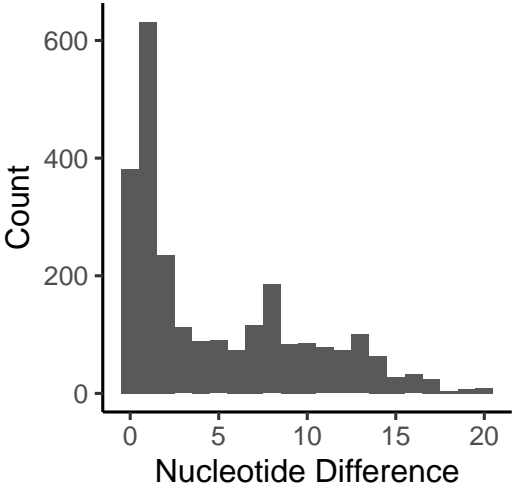
IGHV5-78*01

288 sequences assigned
No exact matches.



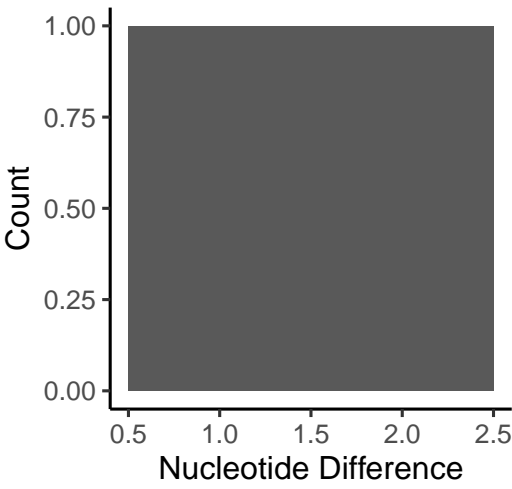
IGHV6-1*01_02

2818 sequences assigned
382 (13.6%) exact matches, in which:
249 unique CDR3
5 unique J



IGHV7-4-1*02

139 sequences assigned
No exact matches.





Warning – no inferred sequences found.

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

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning: IGHV4–31*02, IGHV4–31*03_04 have identical germline sequences.

Warning – no inferred sequences found.