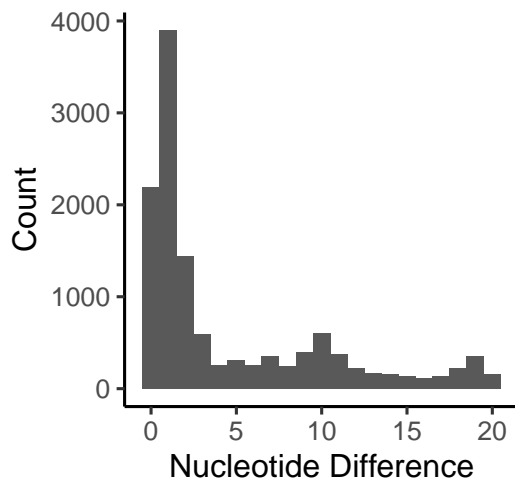


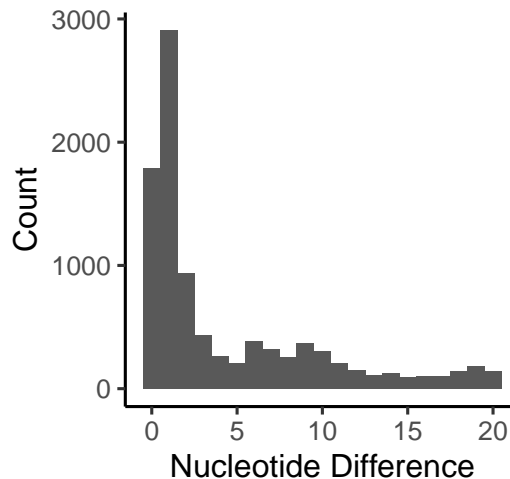
IGHV1-2*06

15307 sequences assigned
2195 (14.3%) exact matches, in which:
1513 unique CDR3
7 unique J



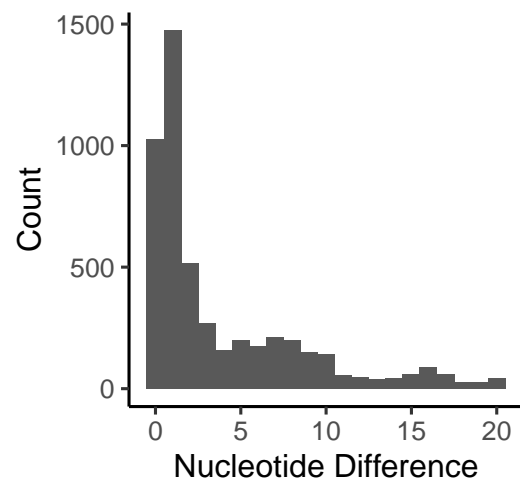
IGHV1-18*01

10614 sequences assigned
1789 (16.9%) exact matches, in which:
1328 unique CDR3
7 unique J



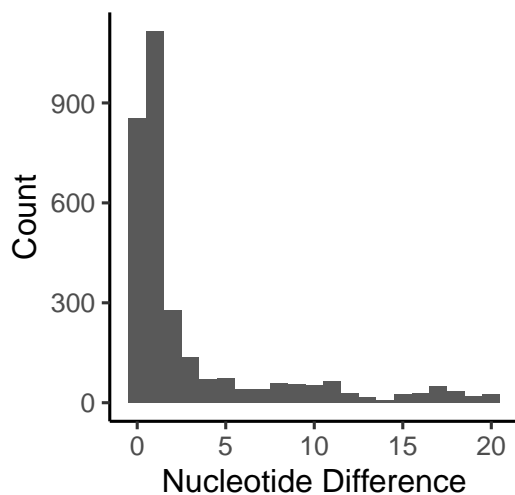
IGHV1-46*01

6197 sequences assigned
1026 (16.6%) exact matches, in which:
795 unique CDR3
7 unique J



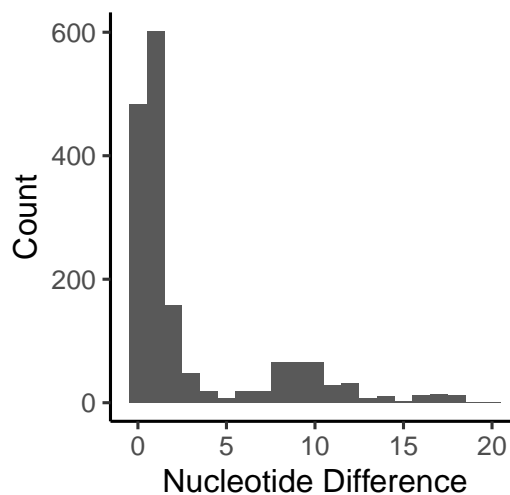
IGHV1-3*01_05

3333 sequences assigned
853 (25.6%) exact matches, in which:
632 unique CDR3
7 unique J



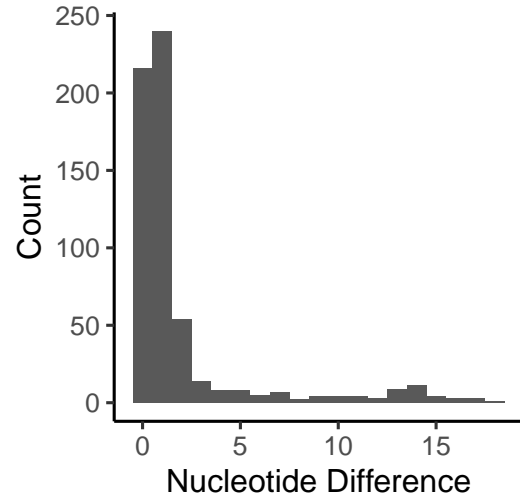
IGHV1-24*01

1704 sequences assigned
483 (28.3%) exact matches, in which:
377 unique CDR3
7 unique J



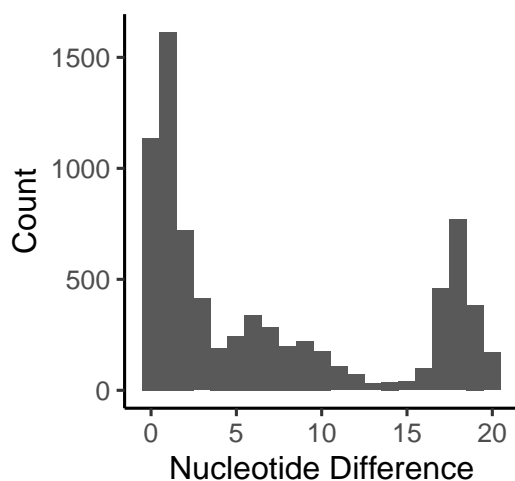
IGHV1-58*01_03

600 sequences assigned
216 (36%) exact matches, in which:
172 unique CDR3
6 unique J



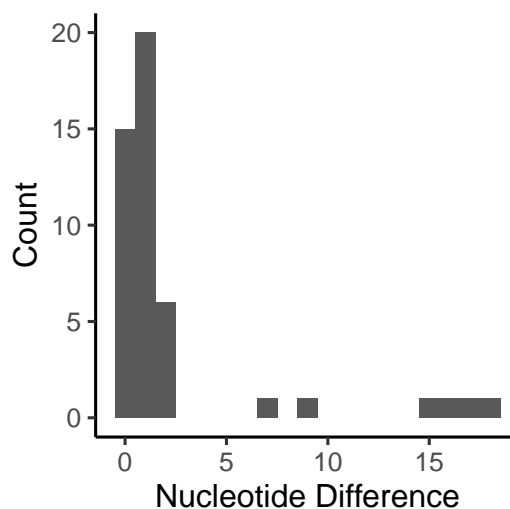
IGHV1-8*01

8109 sequences assigned
1138 (14%) exact matches, in which:
918 unique CDR3
7 unique J



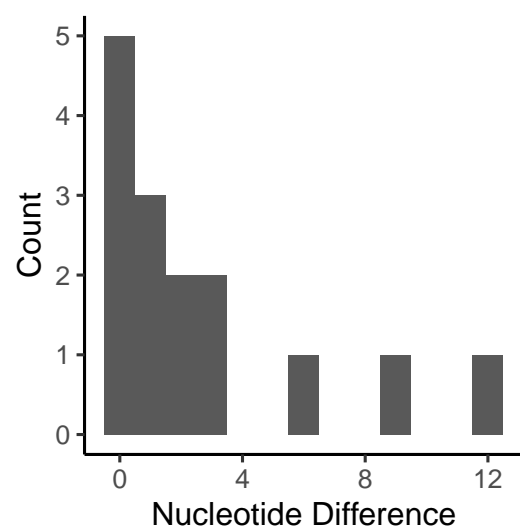
IGHV1-45*02

47 sequences assigned
15 (31.9%) exact matches, in which:
11 unique CDR3
4 unique J



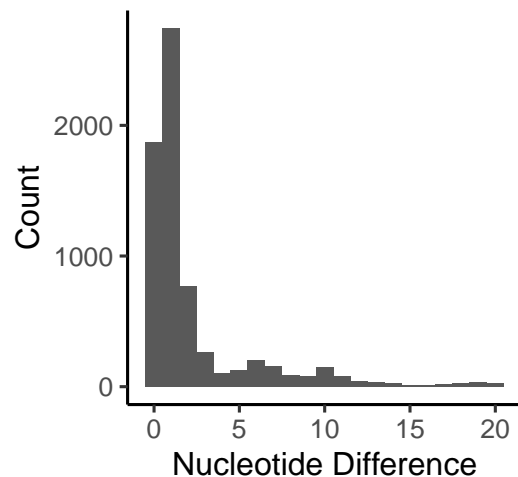
IGHV1-69-2*01

15 sequences assigned
5 (33.3%) exact matches, in which:
5 unique CDR3
2 unique J



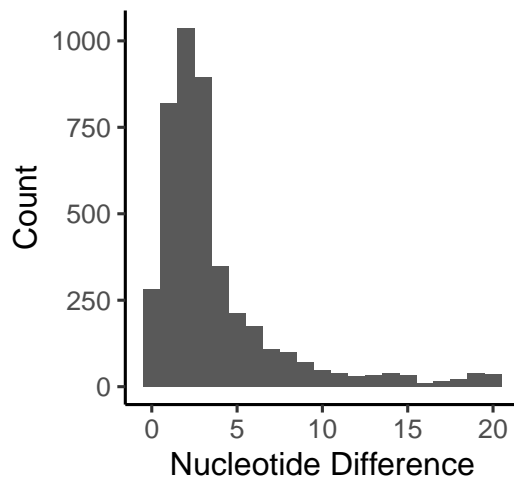
IGHV1-69*01_12_13

7147 sequences assigned
1869 (26.2%) exact matches, in which:
1387 unique CDR3
7 unique J



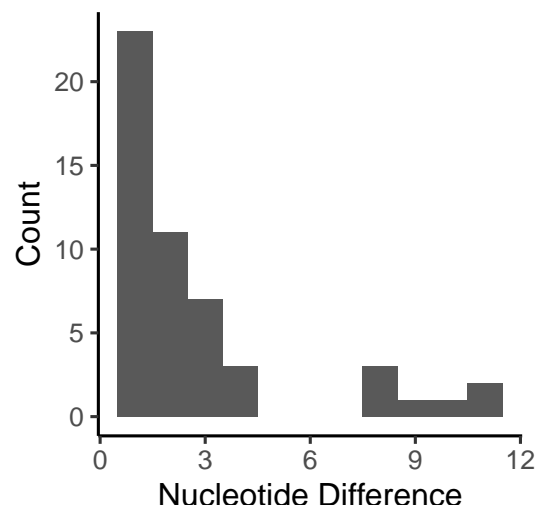
IGHV2-5*02

5218 sequences assigned
282 (5.4%) exact matches, in which:
179 unique CDR3
7 unique J



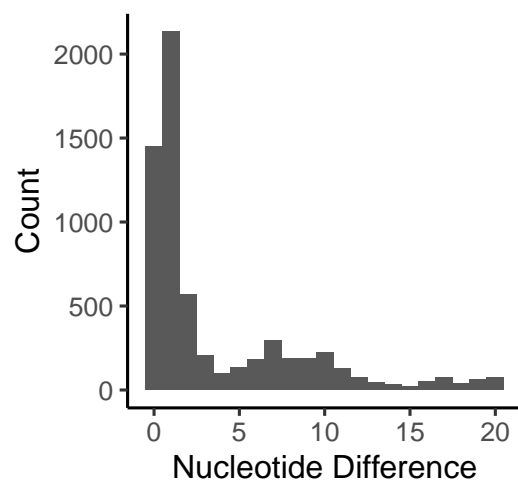
IGHV2-70*12

53 sequences assigned
No exact matches.



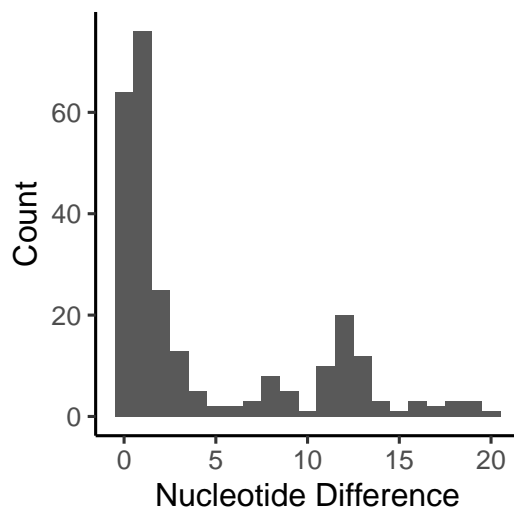
IGHV1-69*06_14

6589 sequences assigned
1449 (22%) exact matches, in which:
1107 unique CDR3
7 unique J



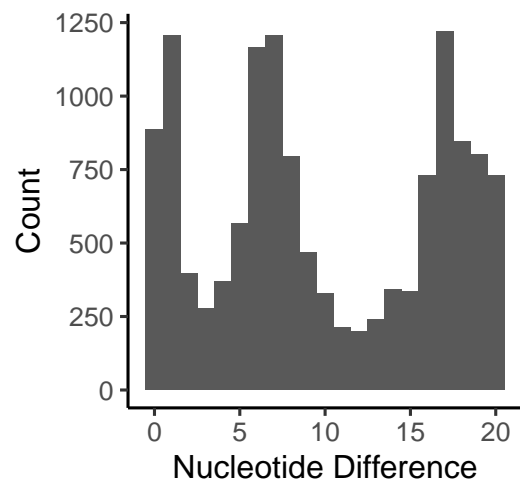
IGHV2-26*01

264 sequences assigned
64 (24.2%) exact matches, in which:
47 unique CDR3
6 unique J



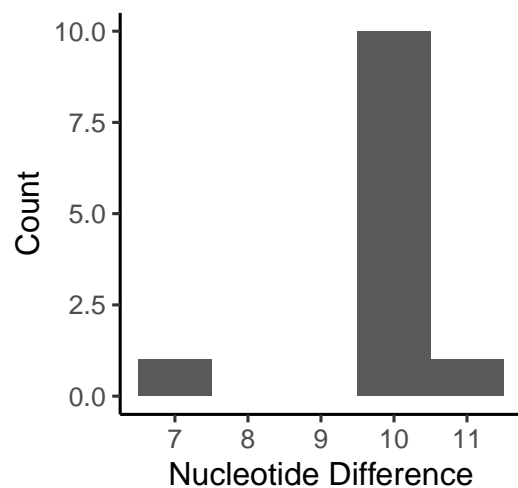
IGHV3-7*01

17209 sequences assigned
888 (5.2%) exact matches, in which:
580 unique CDR3
7 unique J



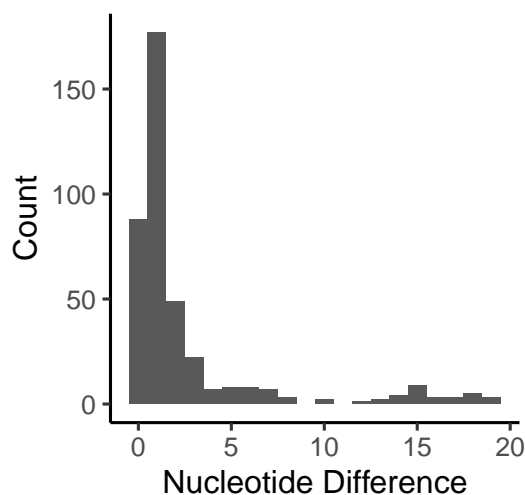
IGHV1-NL1*01

12 sequences assigned
No exact matches.



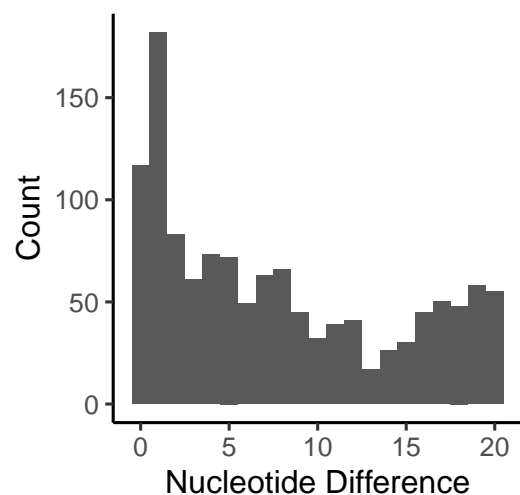
IGHV2-70*01

415 sequences assigned
88 (21.2%) exact matches, in which:
49 unique CDR3
5 unique J



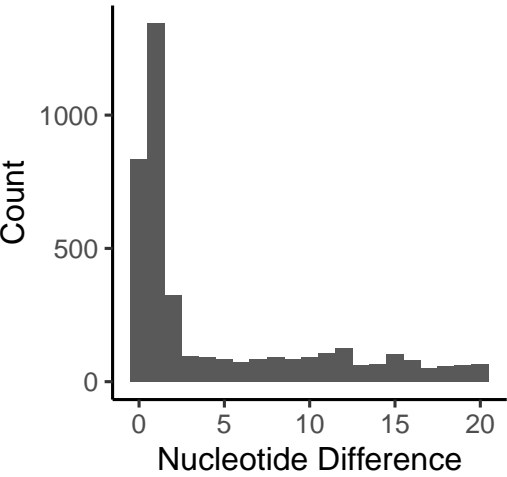
IGHV3-7*03

2393 sequences assigned
117 (4.9%) exact matches, in which:
86 unique CDR3
5 unique J



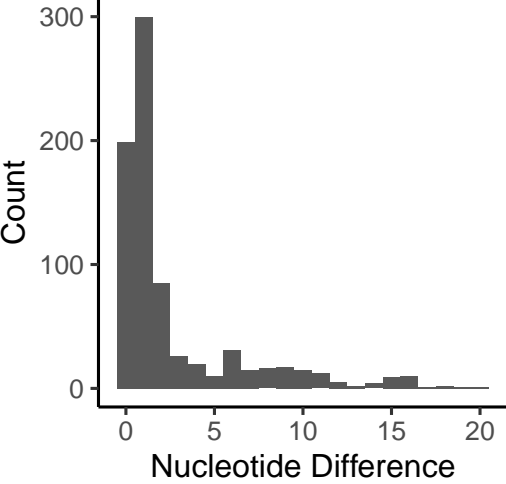
IGHV3-9*01

18048 sequences assigned
833 (4.6%) exact matches, in which:
454 unique CDR3
7 unique J



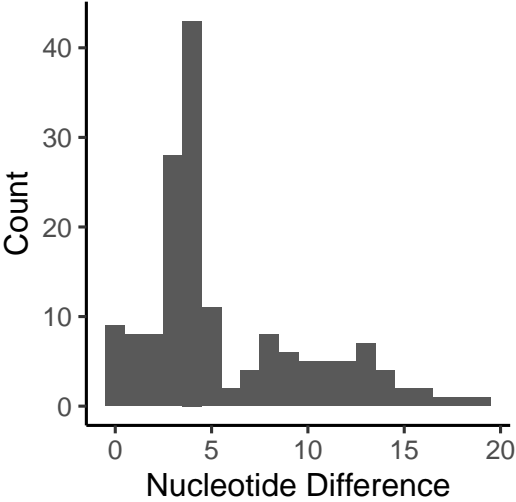
IGHV3-13*01

831 sequences assigned
199 (23.9%) exact matches, in which:
138 unique CDR3
7 unique J



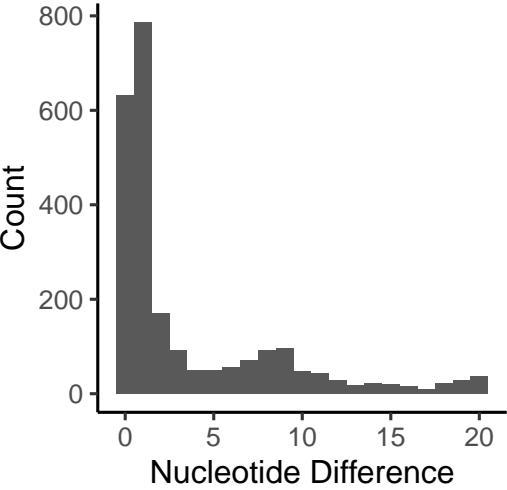
IGHV3-20*01_02

171 sequences assigned
9 (5.3%) exact matches, in which:
7 unique CDR3
2 unique J



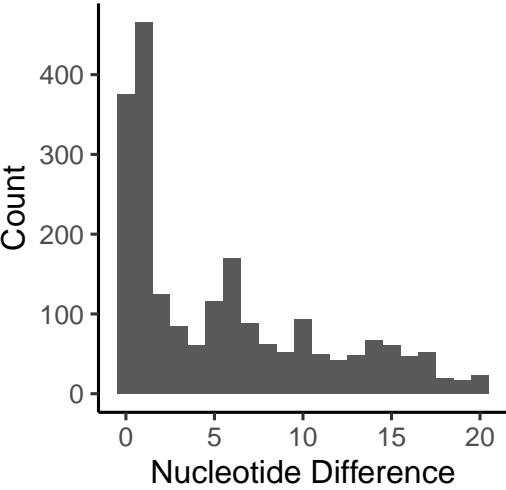
IGHV3-11*01

3621 sequences assigned
633 (17.5%) exact matches, in which:
411 unique CDR3
7 unique J



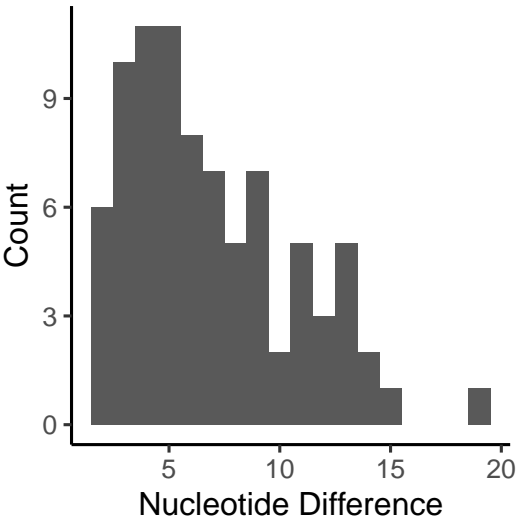
IGHV3-15*01_02

2599 sequences assigned
376 (14.5%) exact matches, in which:
203 unique CDR3
7 unique J



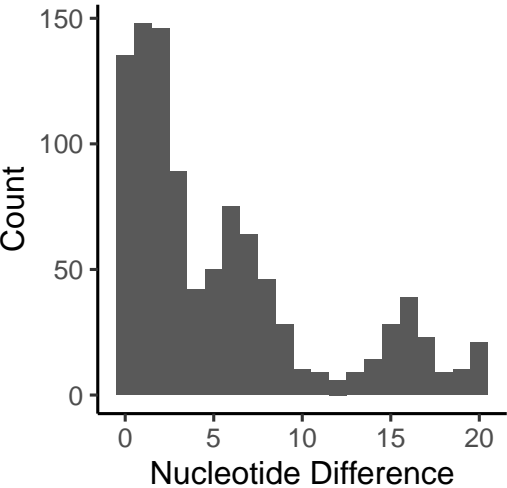
IGHV3-20*03_04

163 sequences assigned
No exact matches.



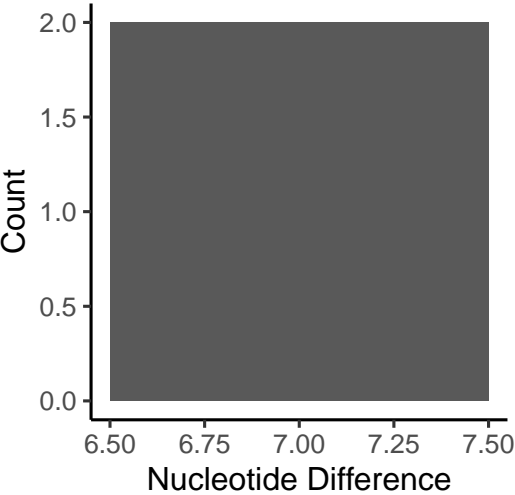
IGHV3-11*04

1105 sequences assigned
135 (12.2%) exact matches, in which:
108 unique CDR3
6 unique J



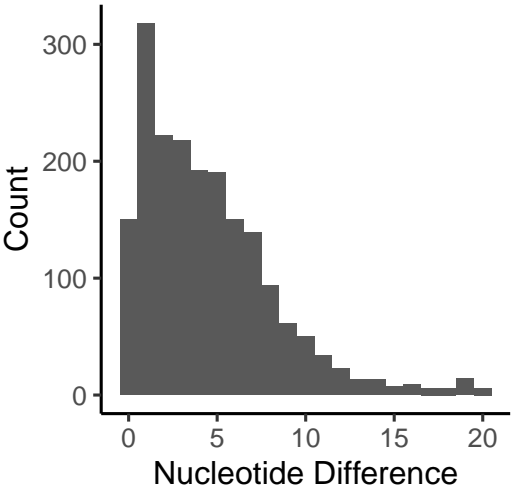
IGHV3-19*01

2 sequences assigned
No exact matches.



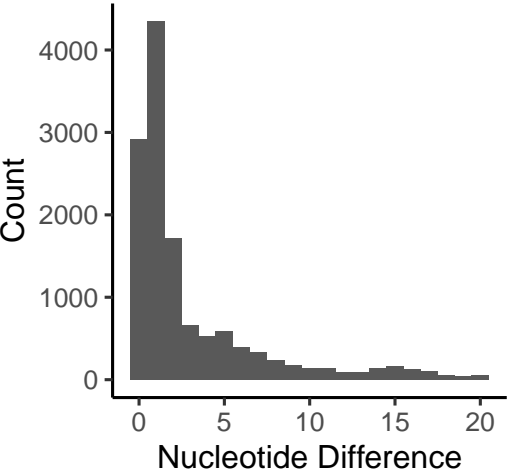
IGHV3-21*04

1982 sequences assigned
150 (7.6%) exact matches, in which:
119 unique CDR3
6 unique J



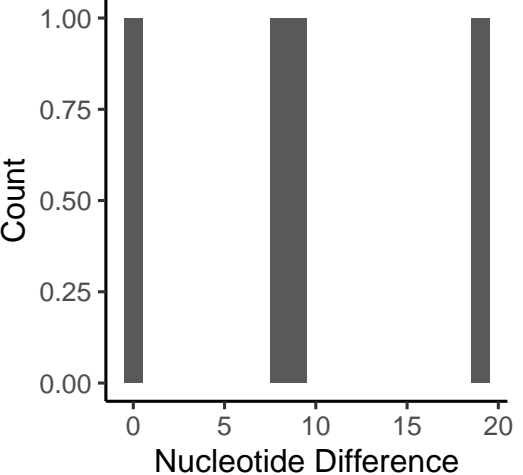
IGHV3-21*01_02

13841 sequences assigned
2915 (21.1%) exact matches, in which:
1607 unique CDR3
7 unique J



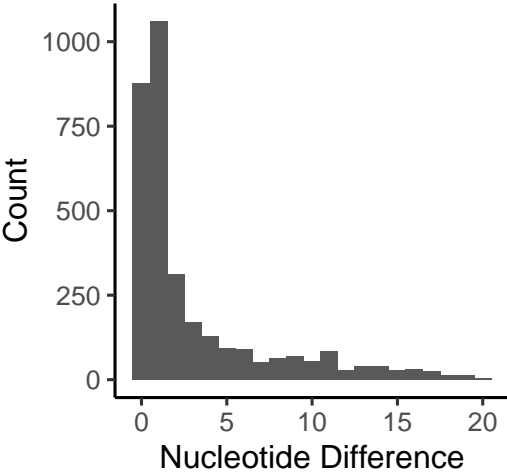
IGHV3-30-3*01

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



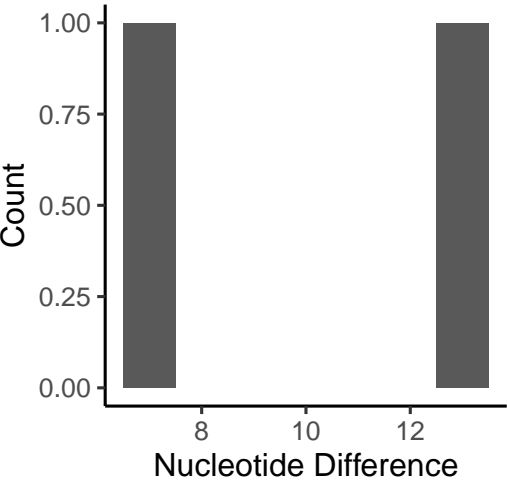
IGHV3-30*03

3440 sequences assigned
876 (25.5%) exact matches, in which:
561 unique CDR3
7 unique J



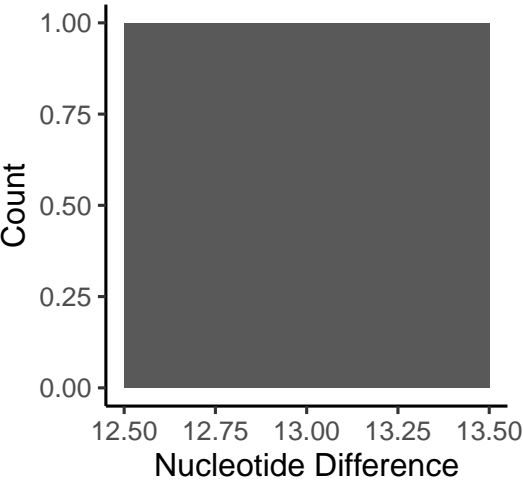
IGHV3-22*01_02

2 sequences assigned
No exact matches.



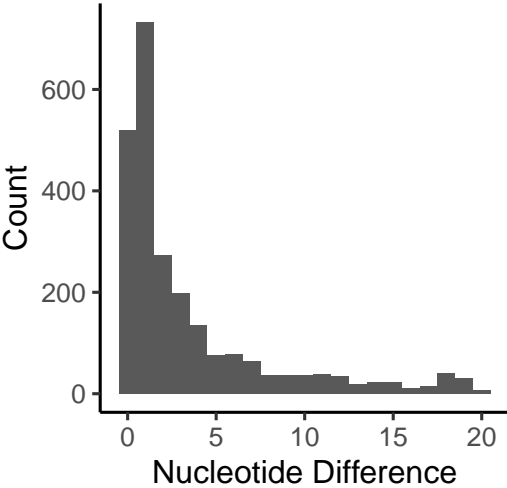
IGHV3-30-3*02

10 sequences assigned
No exact matches.



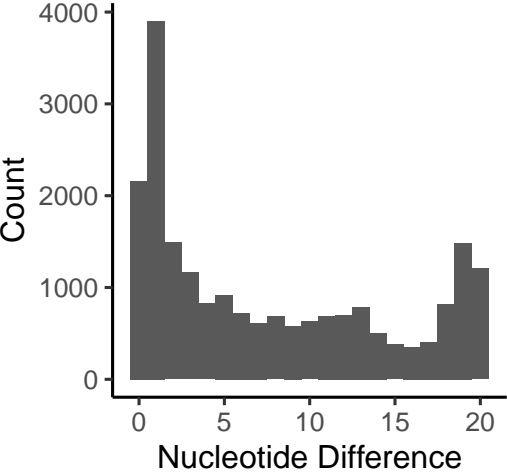
IGHV3-33*01

3245 sequences assigned
519 (16%) exact matches, in which:
329 unique CDR3
7 unique J



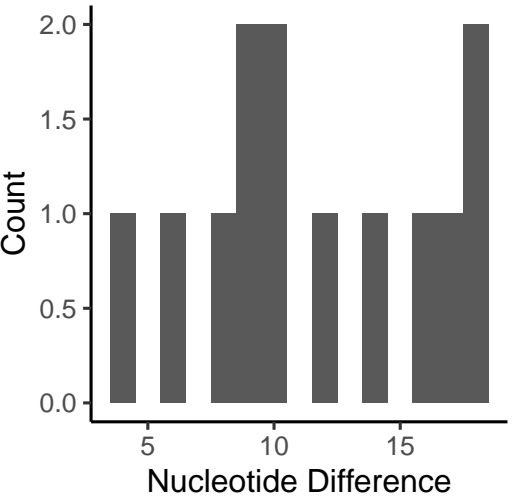
IGHV3-23*01_04

29582 sequences assigned
2160 (7.3%) exact matches, in which:
1199 unique CDR3
7 unique J



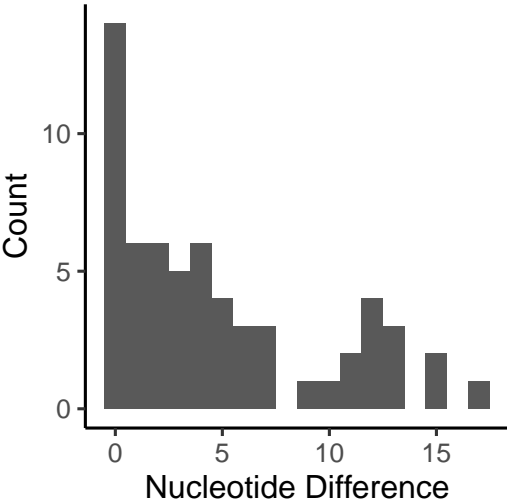
IGHV3-30-3*03

20 sequences assigned
No exact matches.



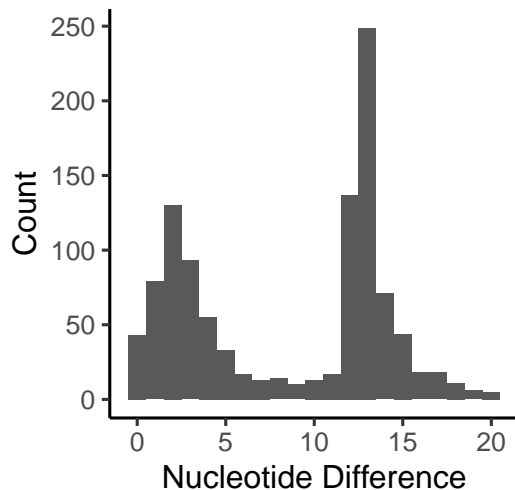
IGHV3-33*05

90 sequences assigned
14 (15.6%) exact matches, in which:
14 unique CDR3
5 unique J



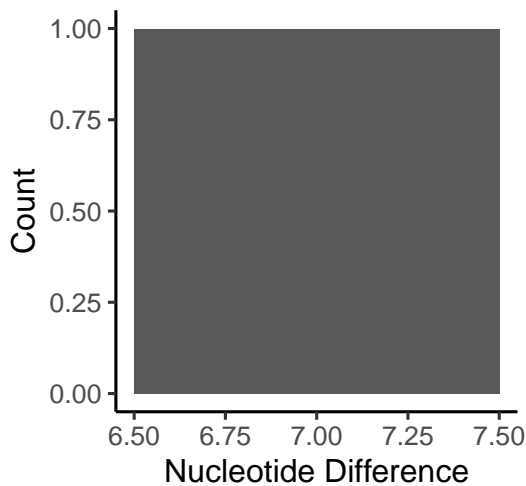
IGHV3-33*06

1132 sequences assigned
43 (3.8%) exact matches, in which:
35 unique CDR3
7 unique J



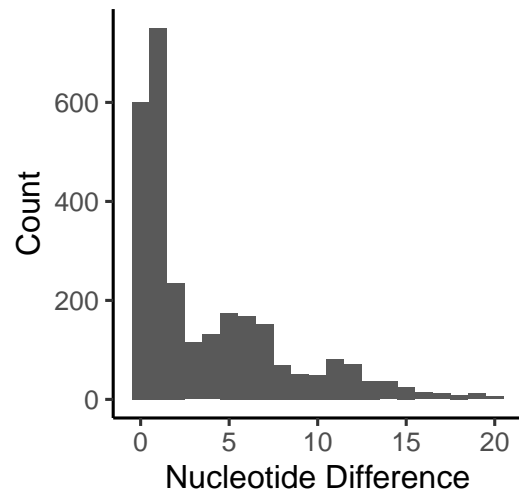
IGHV3-38*03

1 sequences assigned
No exact matches.



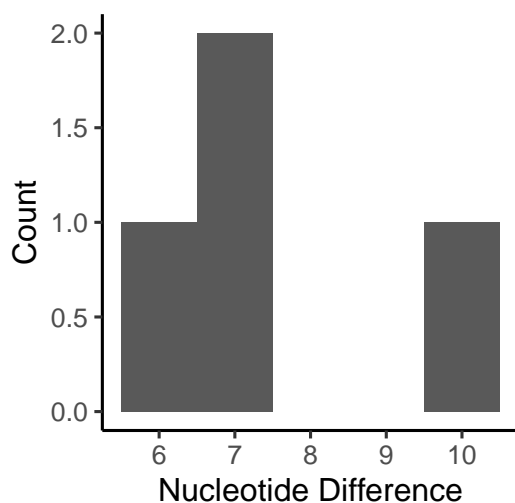
IGHV3-48*01

2910 sequences assigned
601 (20.7%) exact matches, in which:
353 unique CDR3
7 unique J



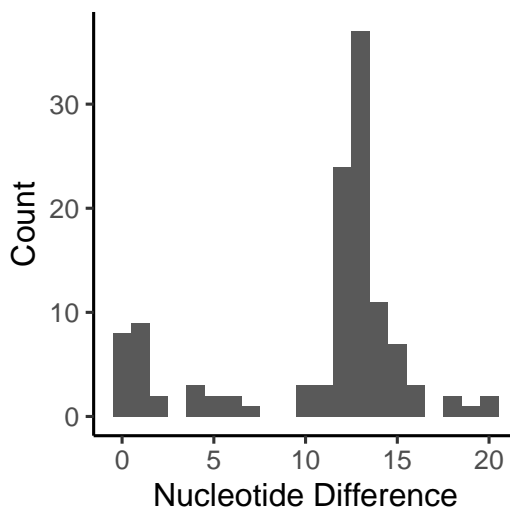
IGHV3-35*01

4 sequences assigned
No exact matches.



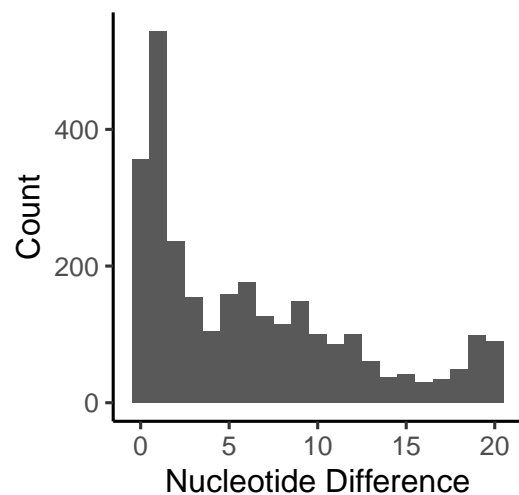
IGHV3-43*01

1606 sequences assigned
8 (0.5%) exact matches, in which:
5 unique CDR3
2 unique J



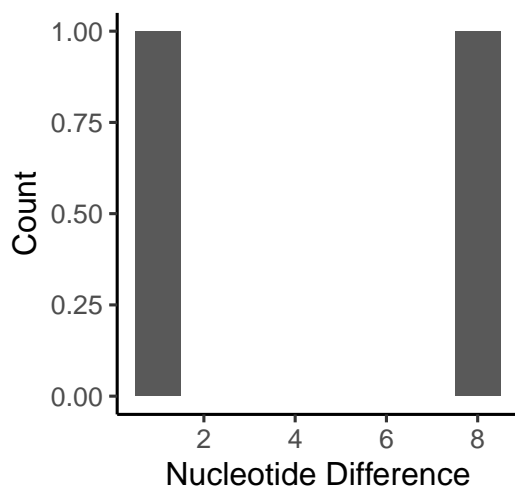
IGHV3-48*03

4193 sequences assigned
357 (8.5%) exact matches, in which:
199 unique CDR3
7 unique J



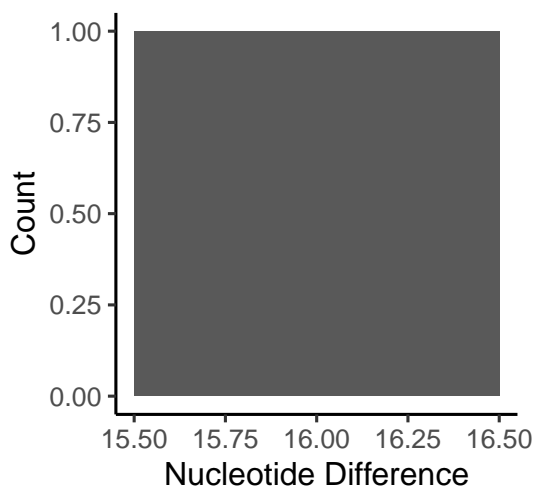
IGHV3-38-3*01

2 sequences assigned
No exact matches.



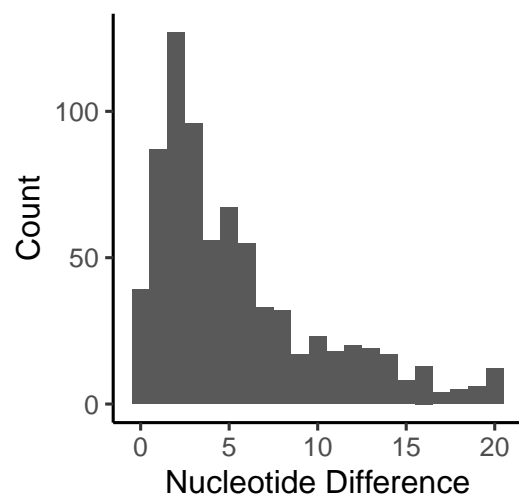
IGHV3-47*02

1 sequences assigned
No exact matches.



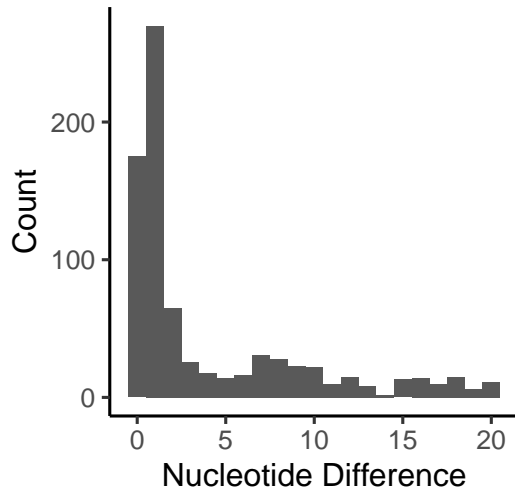
IGHV3-48*04

855 sequences assigned
39 (4.6%) exact matches, in which:
32 unique CDR3
6 unique J



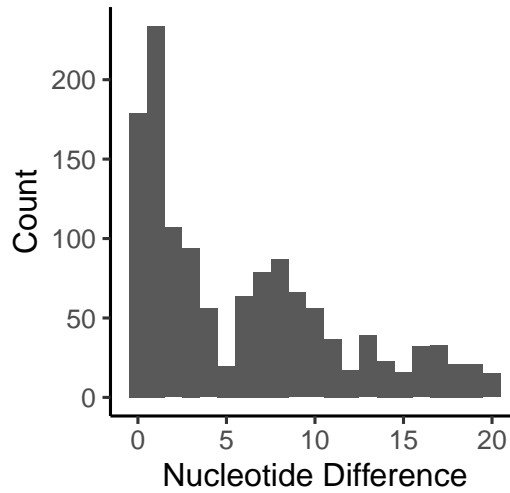
IGHV3-49*04

879 sequences assigned
175 (19.9%) exact matches, in which:
93 unique CDR3
6 unique J



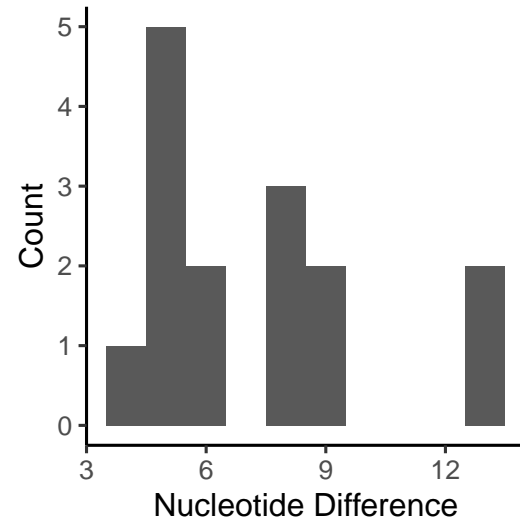
IGHV3-53*01_02

4536 sequences assigned
179 (3.9%) exact matches, in which:
124 unique CDR3
7 unique J



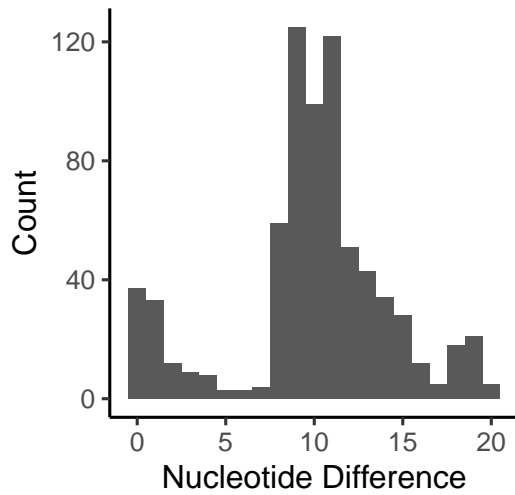
IGHV3-66*02

15 sequences assigned
No exact matches.



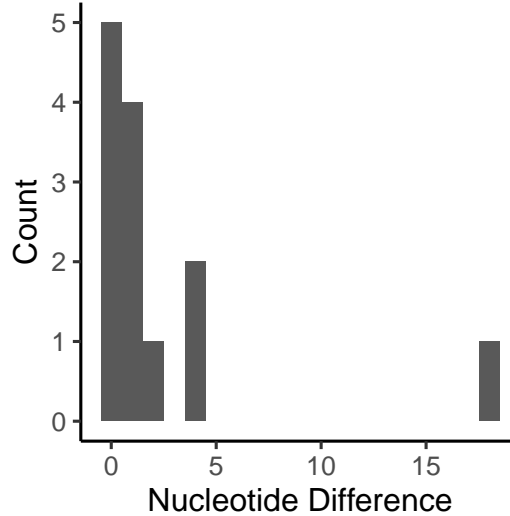
IGHV3-49*03_05

894 sequences assigned
37 (4.1%) exact matches, in which:
26 unique CDR3
6 unique J



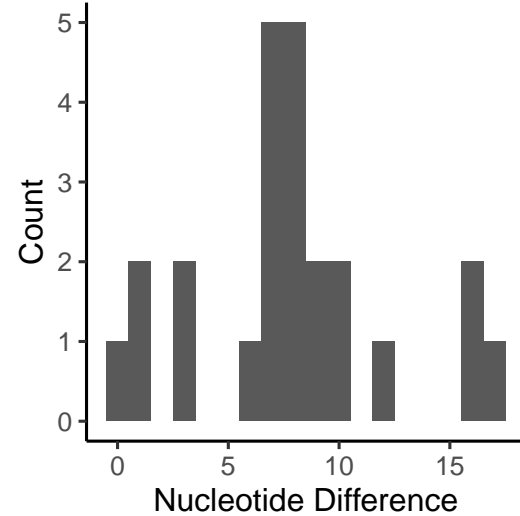
IGHV3-64*02_07

13 sequences assigned
5 (38.5%) exact matches, in which:
4 unique CDR3
1 unique J



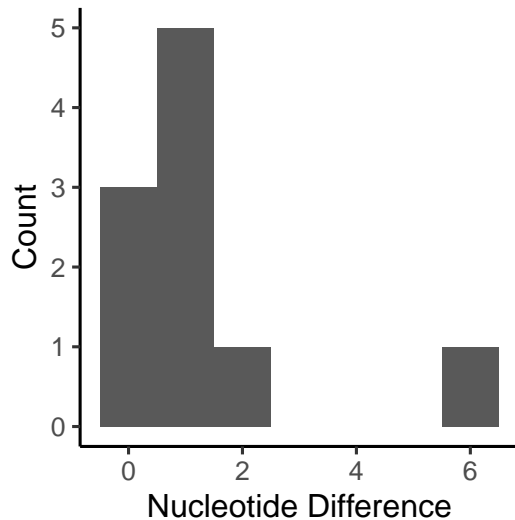
IGHV3-66*03

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



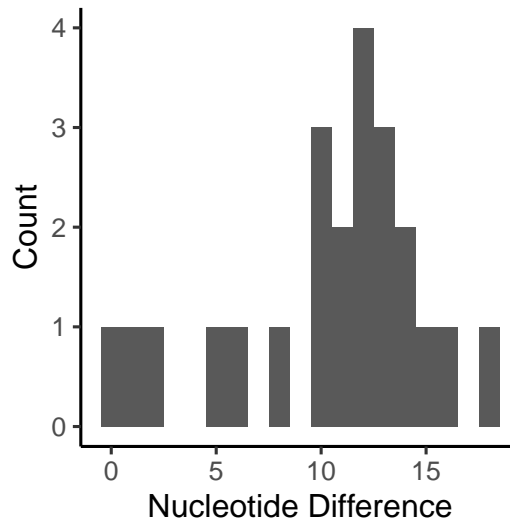
IGHV3-52*01_03

10 sequences assigned
3 (30%) exact matches, in which:
2 unique CDR3
1 unique J



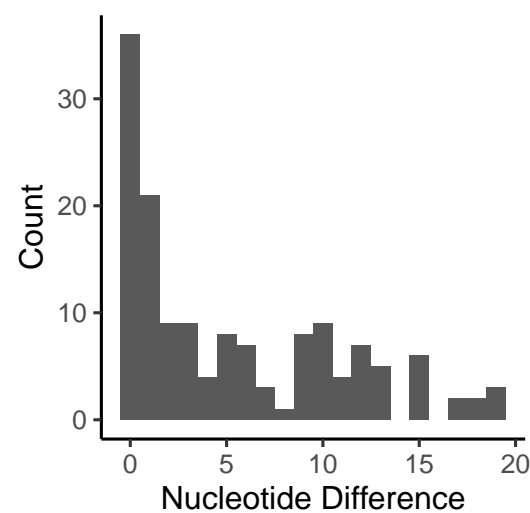
IGHV3-66*01

24 sequences assigned
1 (4.2%) exact matches, in which:
1 unique CDR3
0 unique J



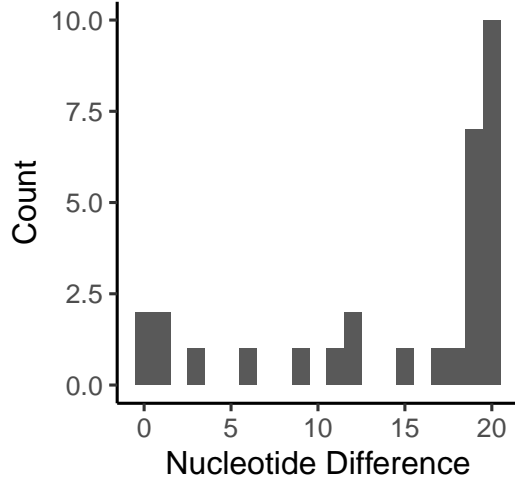
IGHV3-69-1*01

148 sequences assigned
36 (24.3%) exact matches, in which:
32 unique CDR3
6 unique J



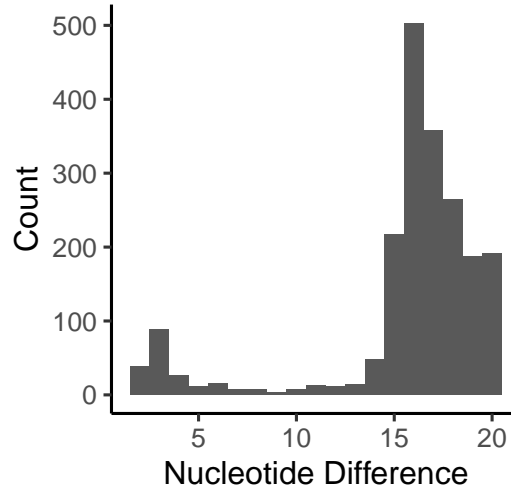
IGHV3-69-1*02

47 sequences assigned
2 (4.3%) exact matches, in which:
2 unique CDR3
2 unique J



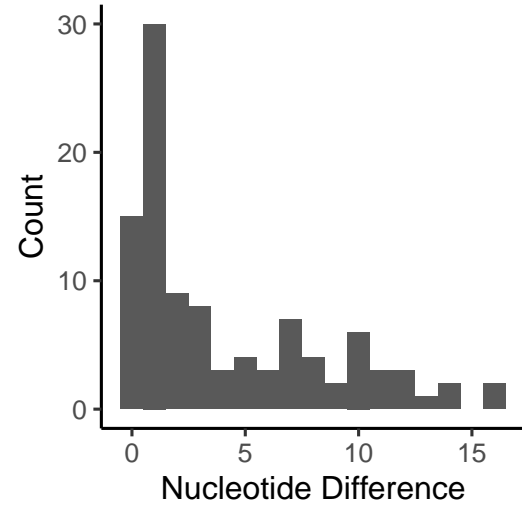
IGHV3-74*03

5583 sequences assigned
No exact matches.



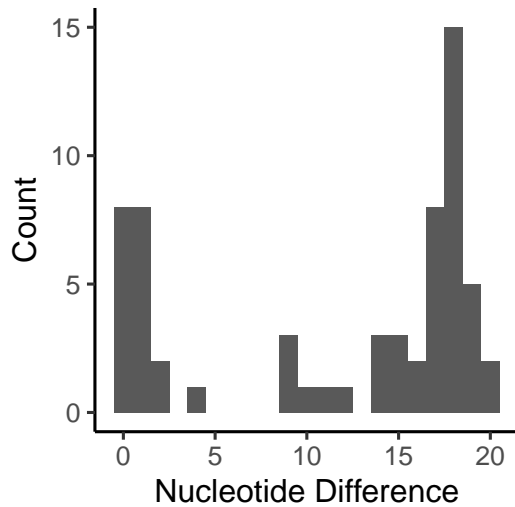
IGHV3-43D*04

105 sequences assigned
15 (14.3%) exact matches, in which:
10 unique CDR3
2 unique J



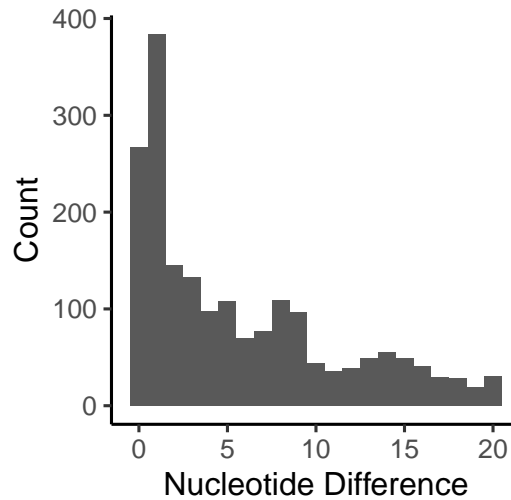
IGHV3-72*01

221 sequences assigned
8 (3.6%) exact matches, in which:
5 unique CDR3
4 unique J



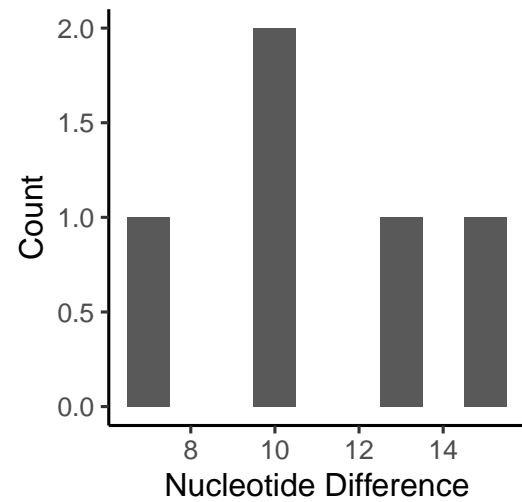
IGHV3-74*01_02

2176 sequences assigned
267 (12.3%) exact matches, in which:
183 unique CDR3
7 unique J



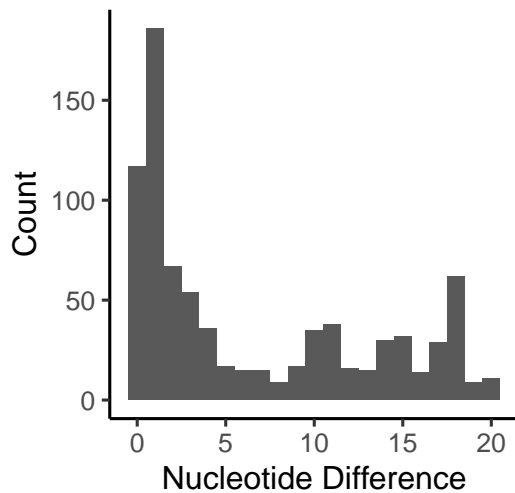
IGHV3-NL1*01

32 sequences assigned
No exact matches.



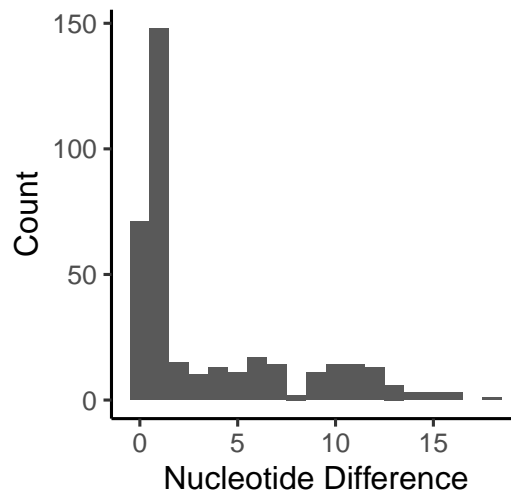
IGHV3-73*01_02

2520 sequences assigned
117 (4.6%) exact matches, in which:
71 unique CDR3
7 unique J



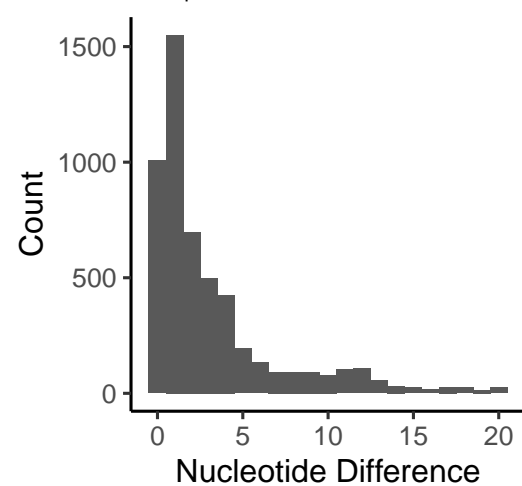
IGHV3-43D*03

379 sequences assigned
71 (18.7%) exact matches, in which:
47 unique CDR3
4 unique J



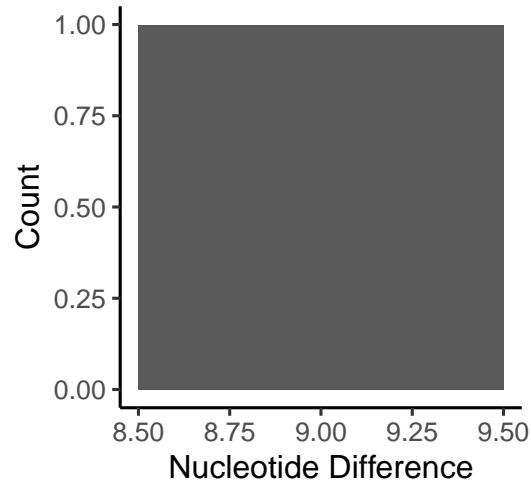
IGHV4-4*02_03

5616 sequences assigned
1007 (17.9%) exact matches, in which:
676 unique CDR3
7 unique J



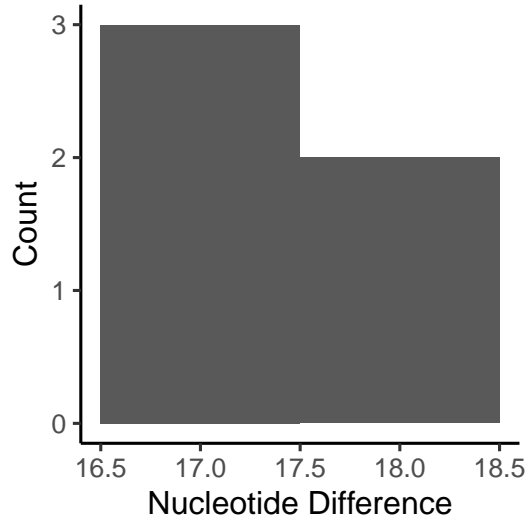
IGHV4-28*03

6 sequences assigned
No exact matches.



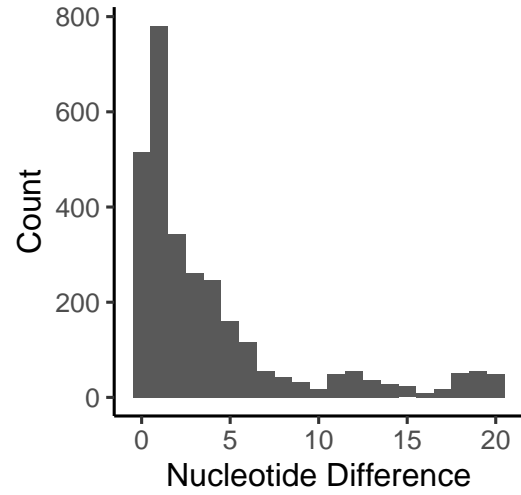
IGHV4-30-2*01

7 sequences assigned
No exact matches.



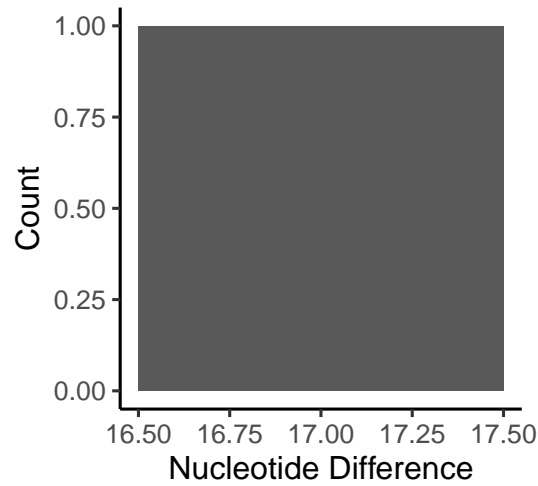
IGHV4-31*02

18667 sequences assigned
515 (2.8%) exact matches, in which:
383 unique CDR3
7 unique J



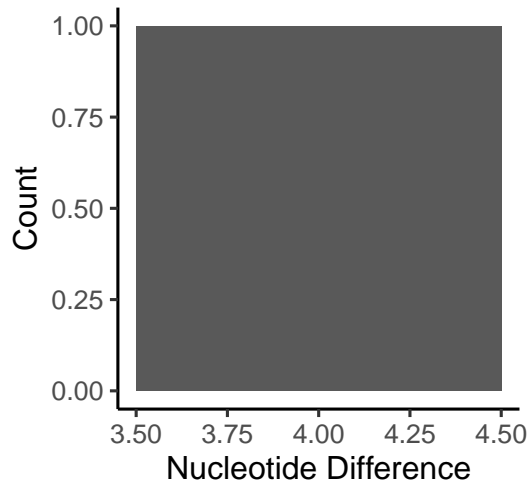
IGHV4-28*01_07

1 sequences assigned
No exact matches.



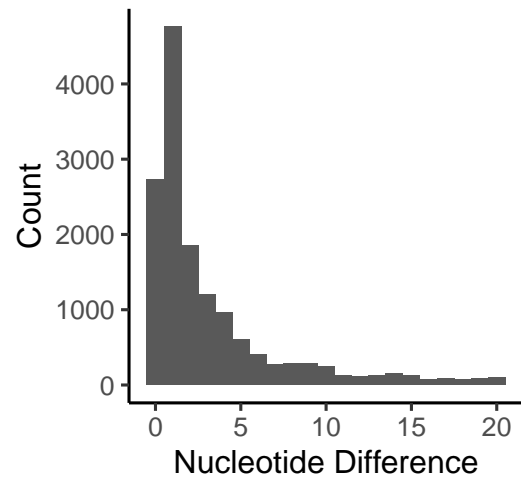
IGHV4-30-2*04

3 sequences assigned
No exact matches.



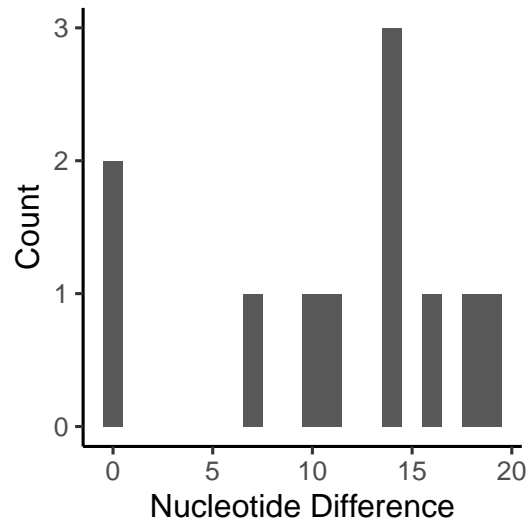
IGHV4-34*01_02

19118 sequences assigned
2734 (14.3%) exact matches, in which:
1697 unique CDR3
7 unique J



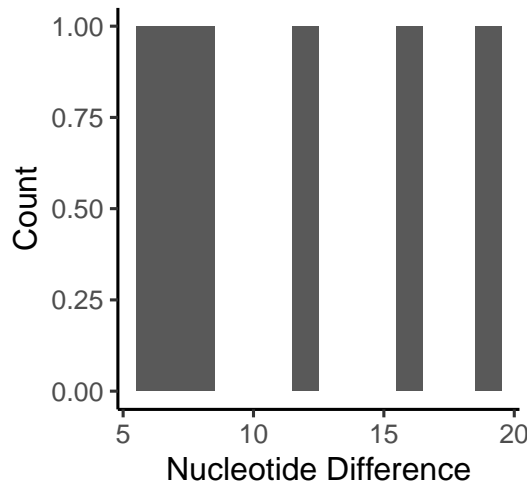
IGHV4-30-4*01

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



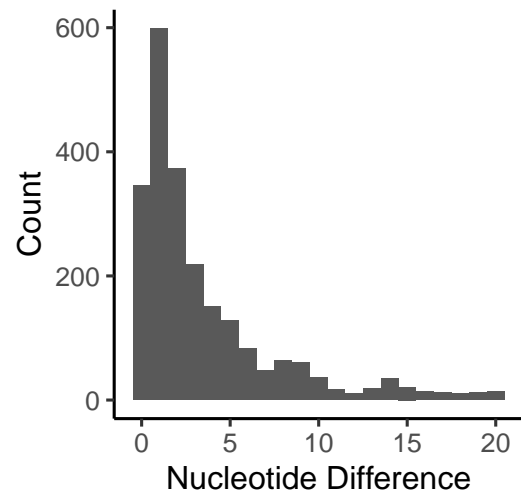
IGHV4-30-4*08

24 sequences assigned
No exact matches.



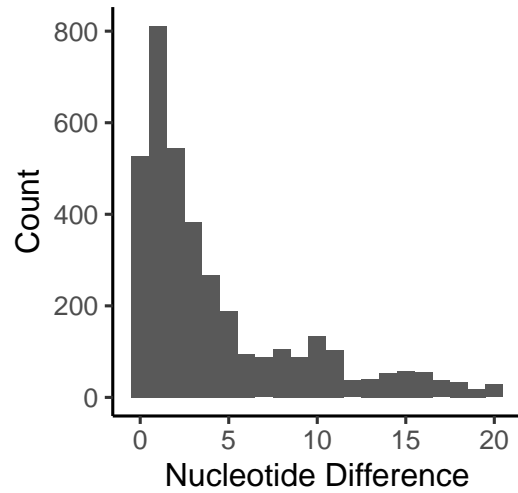
IGHV4-38-2*01

2402 sequences assigned
346 (14.4%) exact matches, in which:
261 unique CDR3
7 unique J



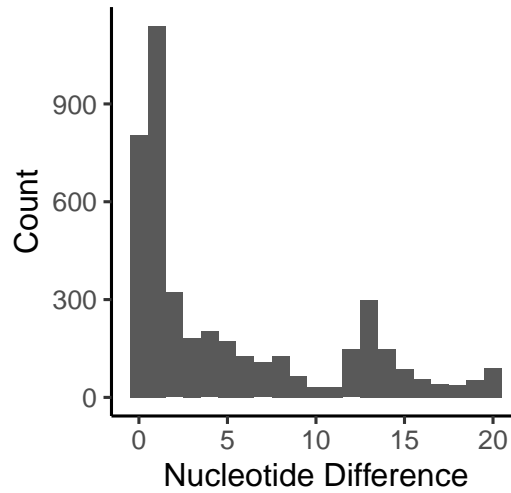
IGHV4-38-2*02

4957 sequences assigned
527 (10.6%) exact matches, in which:
390 unique CDR3
7 unique J



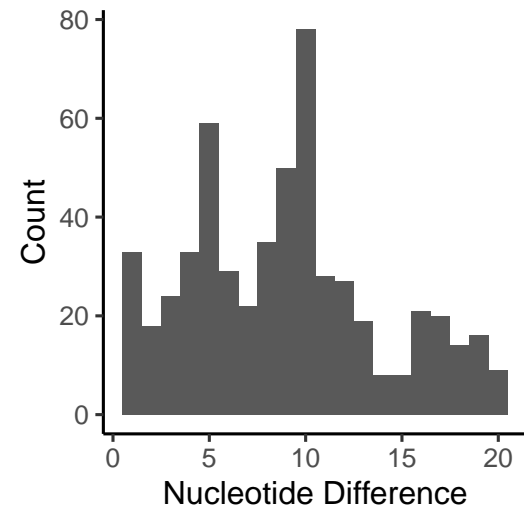
IGHV4-59*01_07

5582 sequences assigned
805 (14.4%) exact matches, in which:
586 unique CDR3
7 unique J



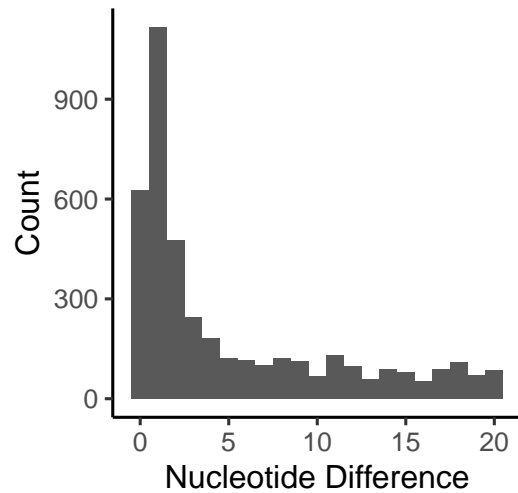
IGHV4-61*08

621 sequences assigned
No exact matches.



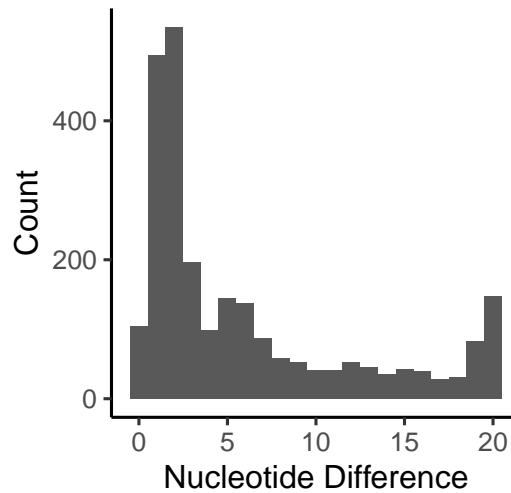
IGHV4-39*07

4808 sequences assigned
626 (13%) exact matches, in which:
461 unique CDR3
7 unique J



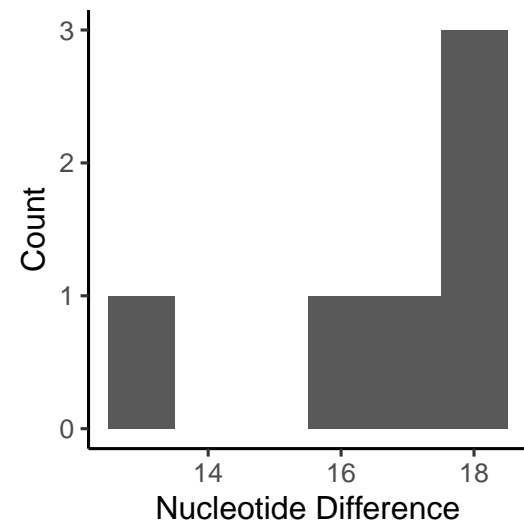
IGHV4-59*12

3745 sequences assigned
105 (2.8%) exact matches, in which:
102 unique CDR3
7 unique J



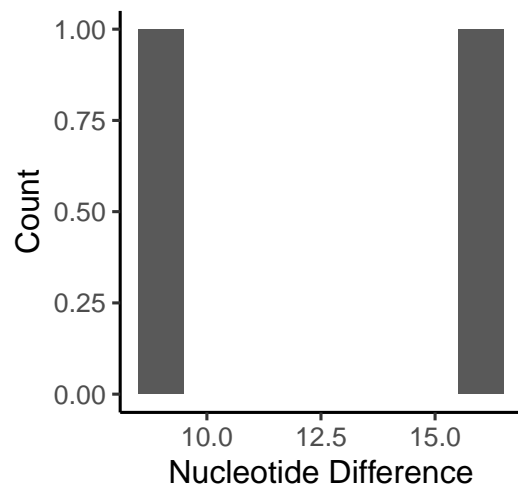
IGHV1/OR15-2*02_03

9 sequences assigned
No exact matches.



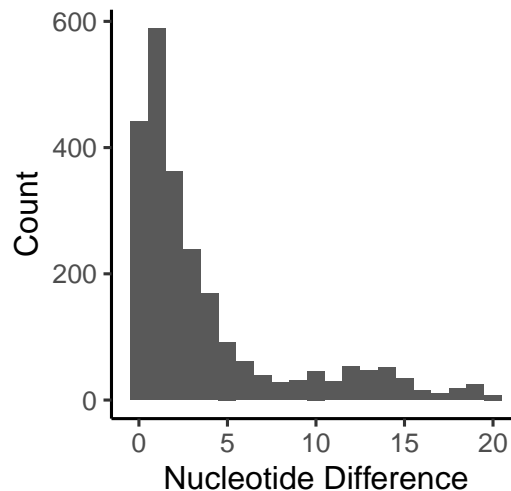
IGHV4-55*09

2 sequences assigned
No exact matches.



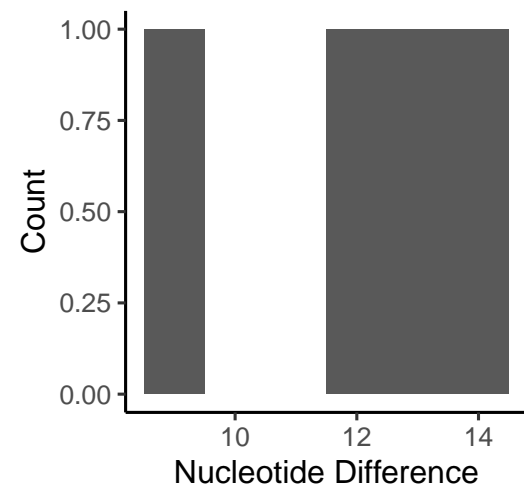
IGHV4-61*01

2504 sequences assigned
441 (17.6%) exact matches, in which:
344 unique CDR3
6 unique J



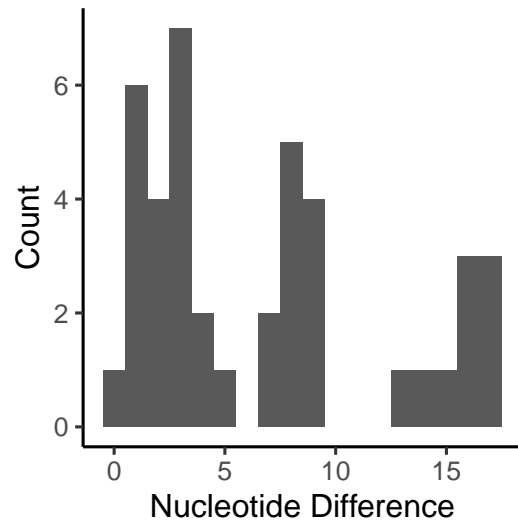
IGHV1/OR15-3*02

4 sequences assigned
No exact matches.



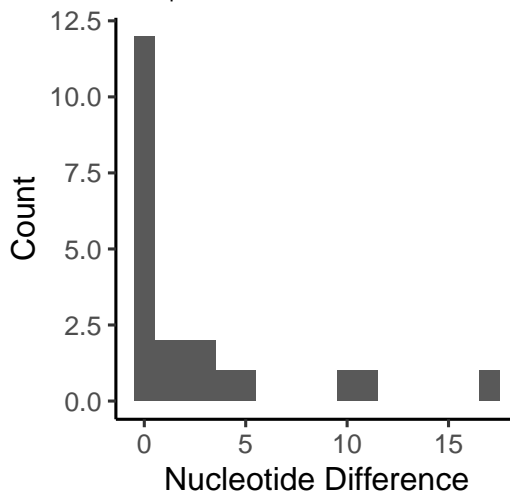
IGHV4/OR15–8*01

81 sequences assigned
1 (1.2%) exact matches, in which:
1 unique CDR3
1 unique J



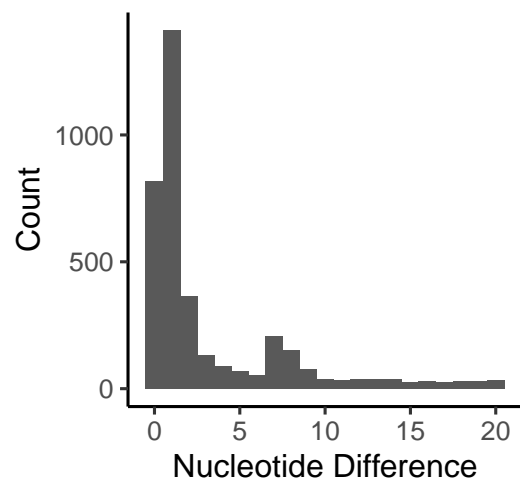
IGHV5–51*06

23 sequences assigned
12 (52.2%) exact matches, in which:
12 unique CDR3
4 unique J



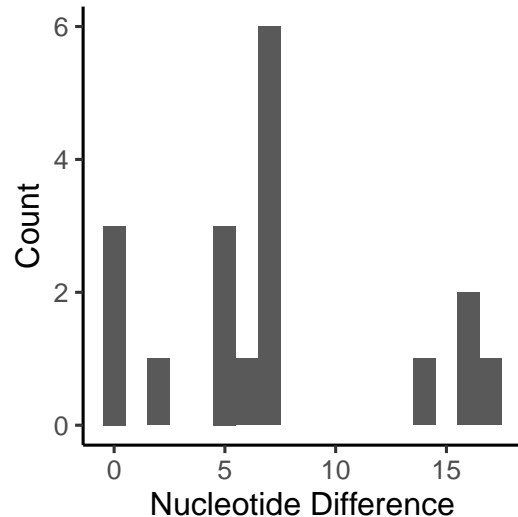
IGHV7–4–1*02

4716 sequences assigned
817 (17.3%) exact matches, in which:
579 unique CDR3
7 unique J



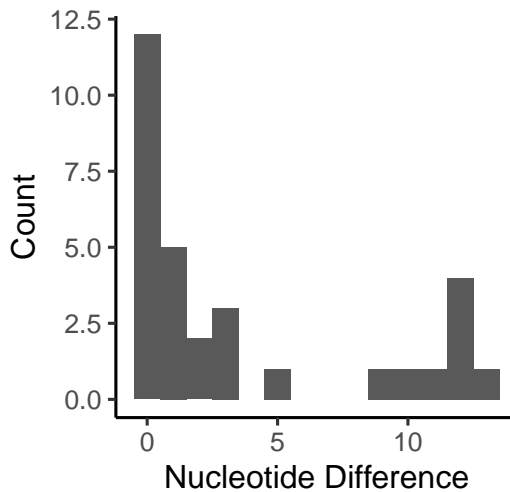
IGHV5–10–1*01_03

18 sequences assigned
3 (16.7%) exact matches, in which:
3 unique CDR3
3 unique J



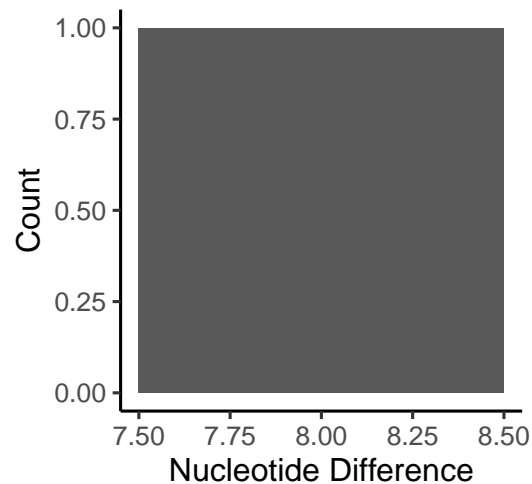
IGHV5–51*07

31 sequences assigned
12 (38.7%) exact matches, in which:
11 unique CDR3
5 unique J



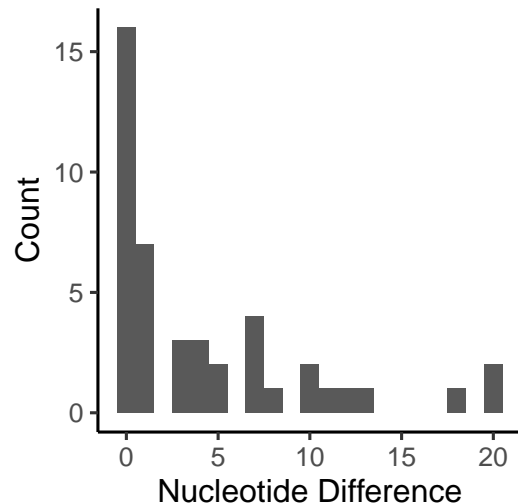
IGHV7–40*03

1 sequences assigned
No exact matches.



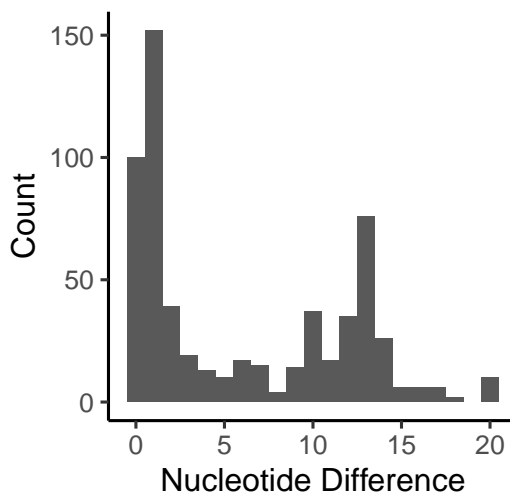
IGHV5–51*04

46 sequences assigned
16 (34.8%) exact matches, in which:
16 unique CDR3
5 unique J



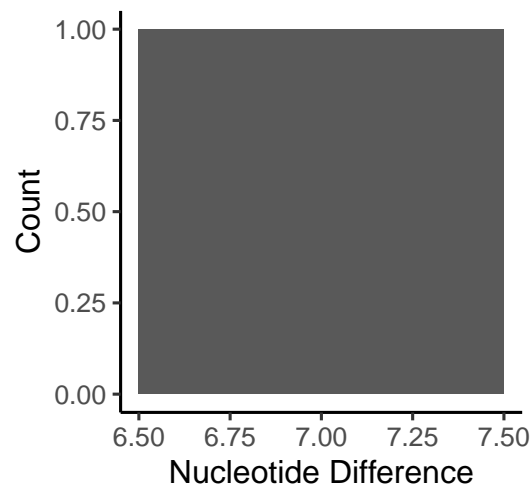
IGHV6–1*01_02

689 sequences assigned
100 (14.5%) exact matches, in which:
77 unique CDR3
5 unique J

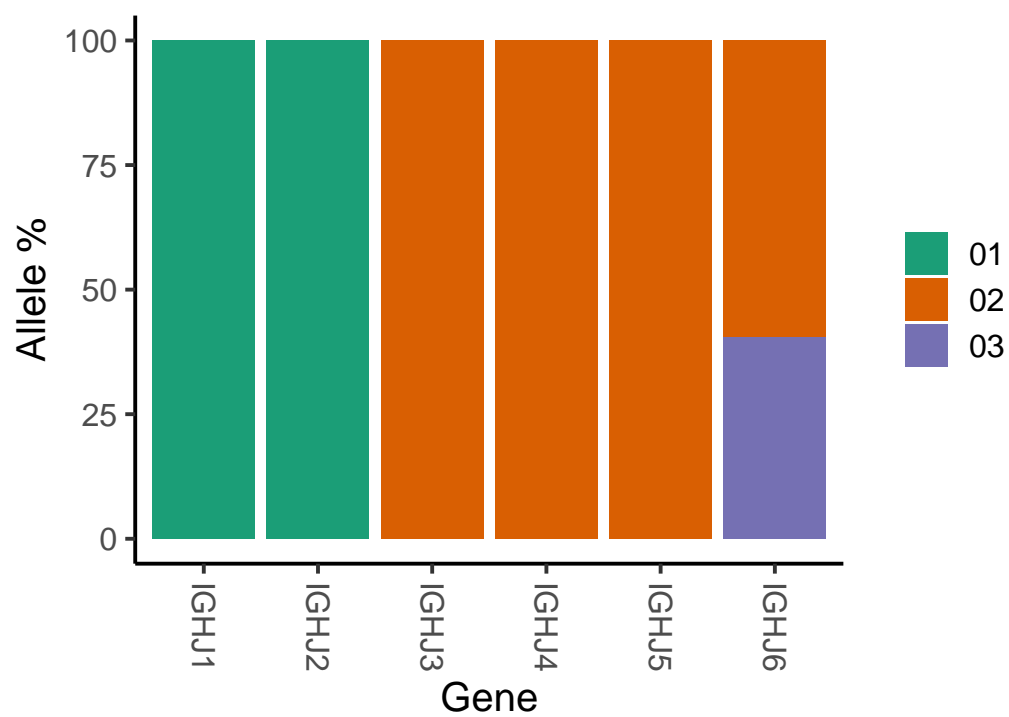


IGHV7–81*01

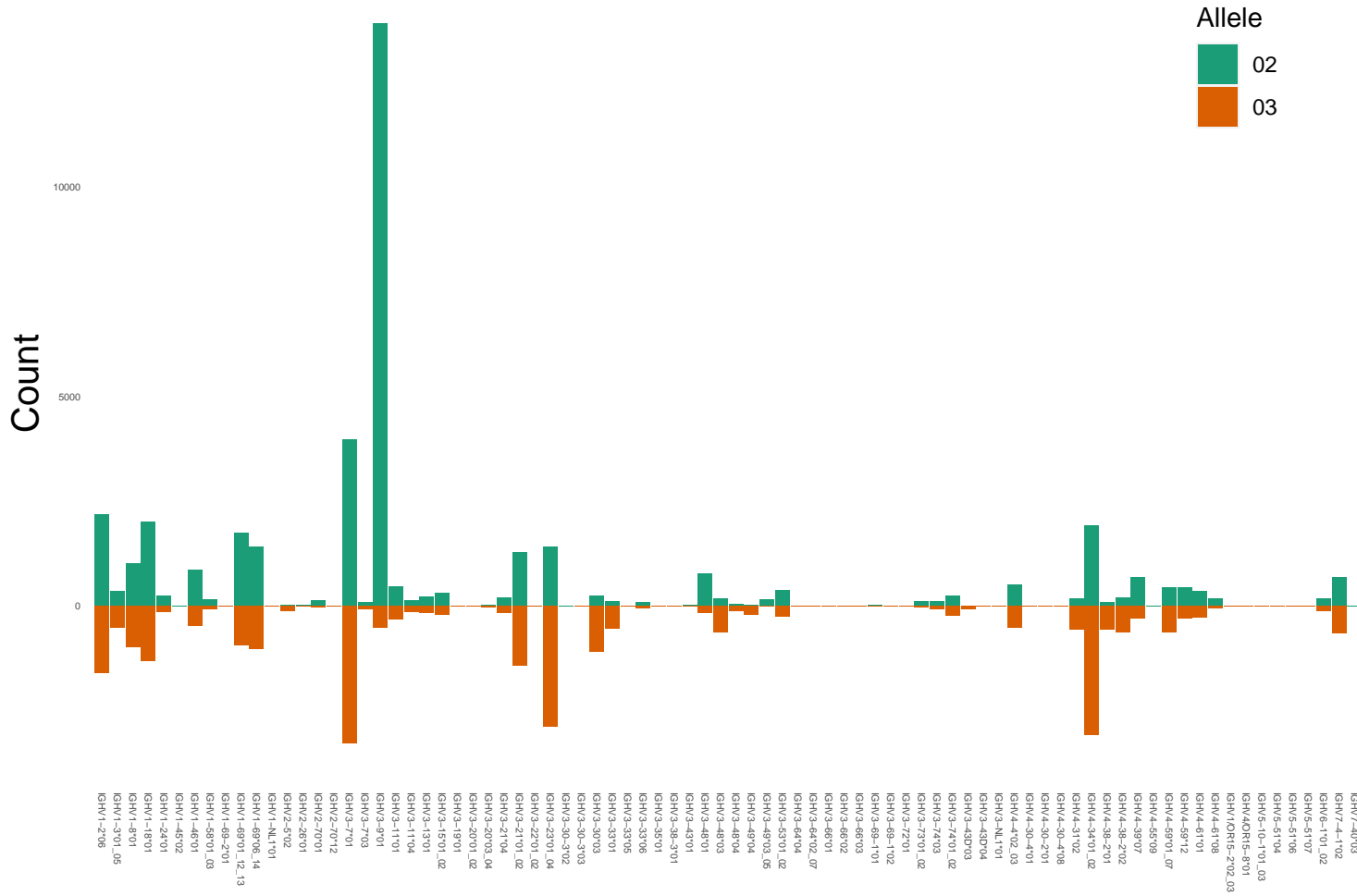
1 sequences assigned
No exact matches.



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]