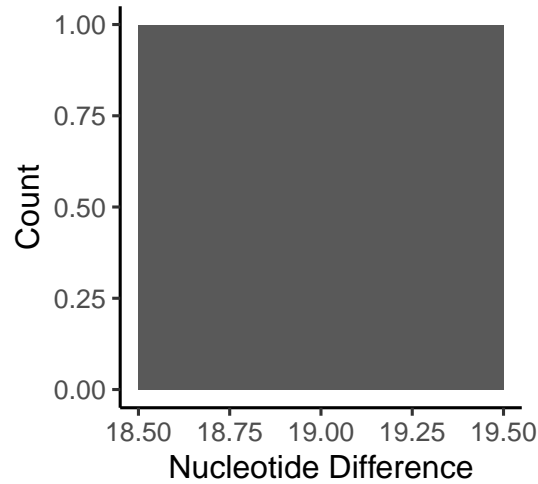


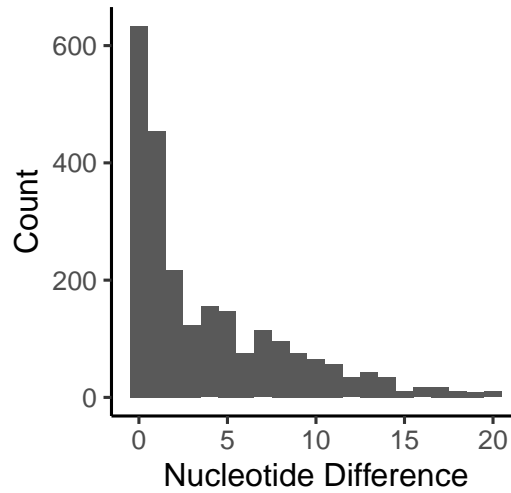
IGHV1/OR21-1*01

1 sequences assigned
No exact matches.



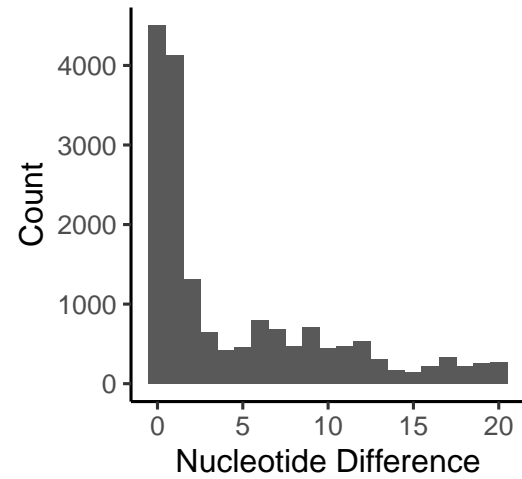
IGHV1-3*01_05

2496 sequences assigned
634 (25.4%) exact matches, in which:
562 unique CDR3
7 unique J



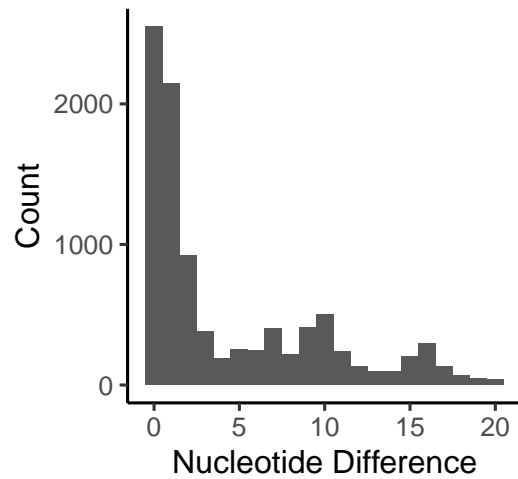
IGHV1-18*01

18949 sequences assigned
4503 (23.8%) exact matches, in which:
3826 unique CDR3
7 unique J



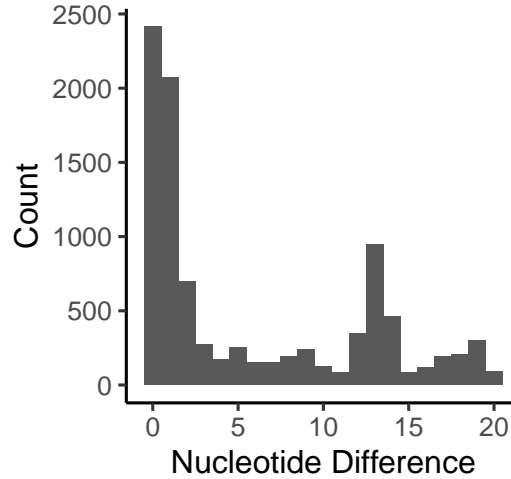
IGHV1-2*02

10519 sequences assigned
2549 (24.2%) exact matches, in which:
2236 unique CDR3
7 unique J



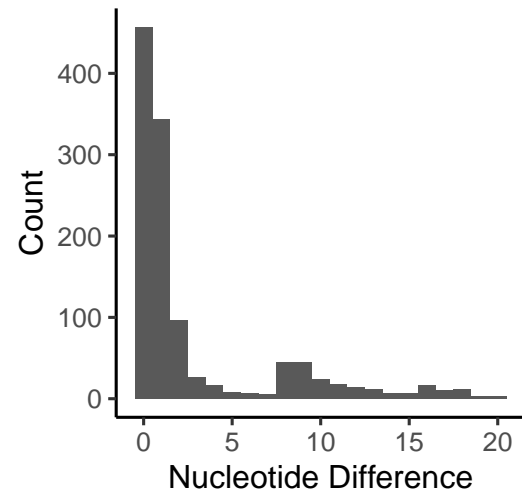
IGHV1-8*01

9715 sequences assigned
2414 (24.8%) exact matches, in which:
2129 unique CDR3
7 unique J



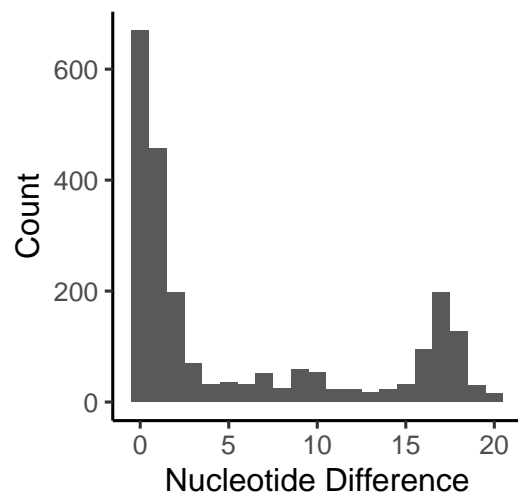
IGHV1-24*01

1309 sequences assigned
457 (34.9%) exact matches, in which:
401 unique CDR3
7 unique J



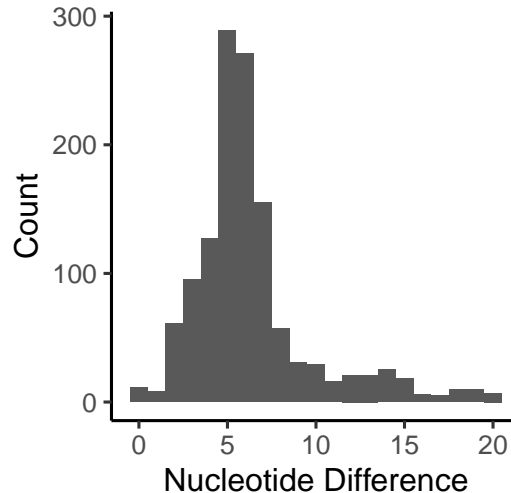
IGHV1-2*04

2308 sequences assigned
670 (29%) exact matches, in which:
591 unique CDR3
7 unique J



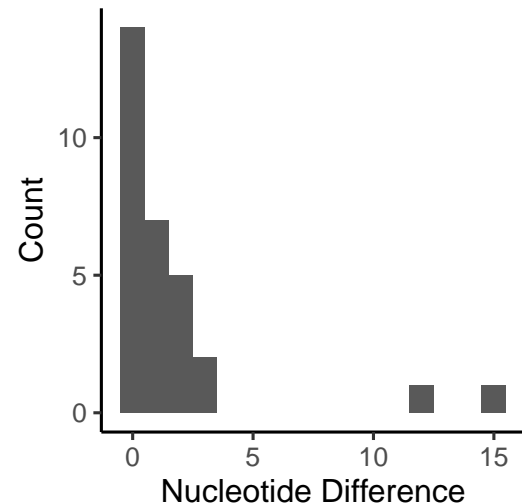
IGHV1-8*02

1321 sequences assigned
11 (0.8%) exact matches, in which:
11 unique CDR3
4 unique J



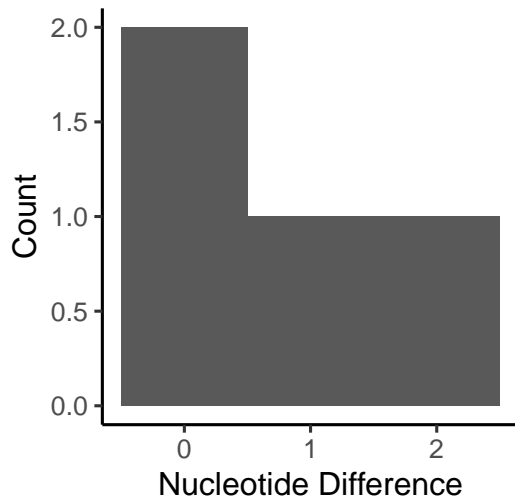
IGHV1-45*02

32 sequences assigned
14 (43.8%) exact matches, in which:
13 unique CDR3
4 unique J



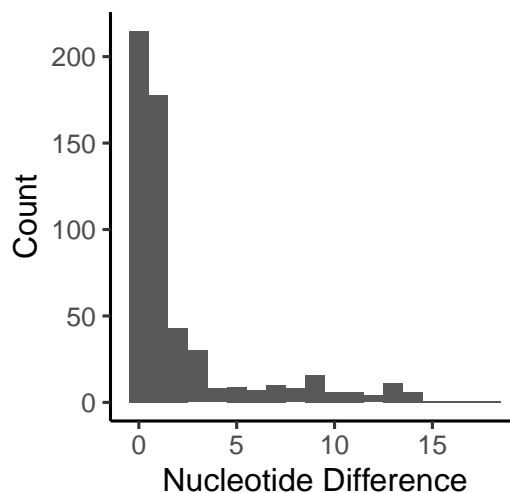
IGHV1-45*03

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



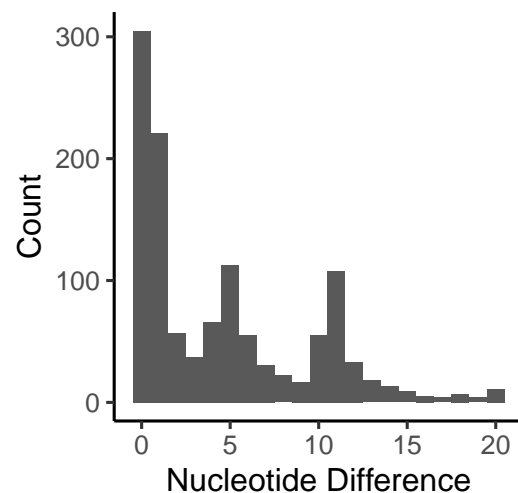
IGHV1-58*02

562 sequences assigned
215 (38.3%) exact matches, in which:
179 unique CDR3
7 unique J



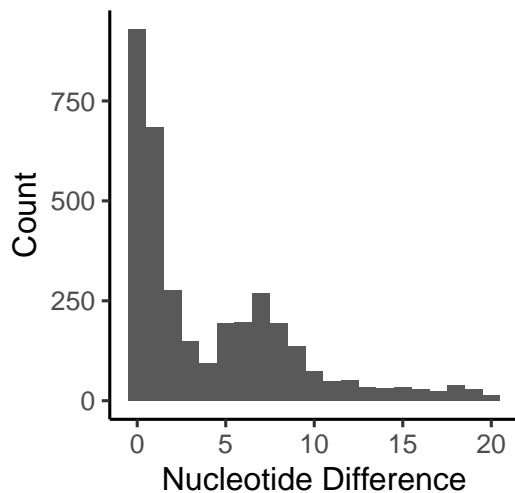
IGHV2-5*01

1614 sequences assigned
305 (18.9%) exact matches, in which:
268 unique CDR3
7 unique J



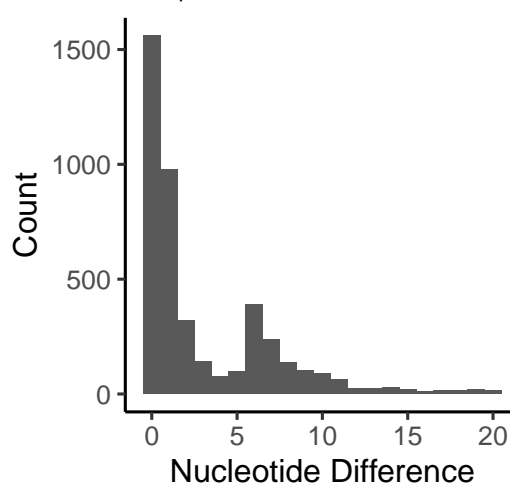
IGHV1-46*01

3853 sequences assigned
930 (24.1%) exact matches, in which:
841 unique CDR3
7 unique J



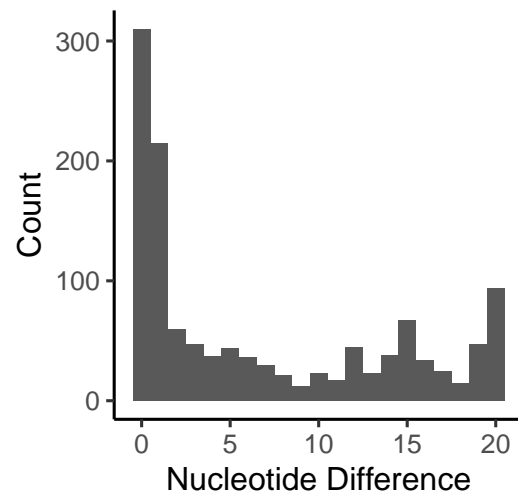
IGHV1-69*04_09

4671 sequences assigned
1560 (33.4%) exact matches, in which:
1417 unique CDR3
7 unique J



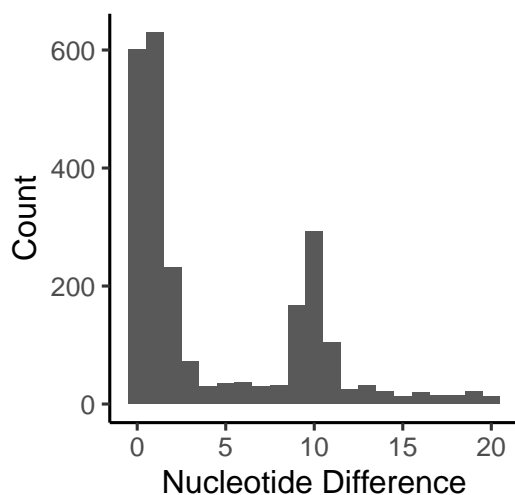
IGHV2-5*02

1470 sequences assigned
310 (21.1%) exact matches, in which:
277 unique CDR3
7 unique J



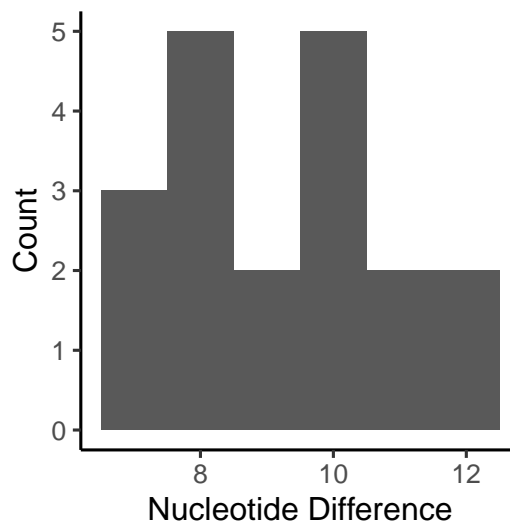
IGHV1-46*03

2519 sequences assigned
601 (23.9%) exact matches, in which:
499 unique CDR3
7 unique J



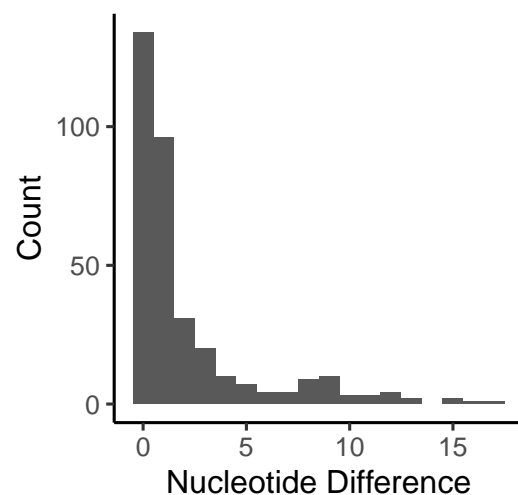
IGHV1-NL1*01

19 sequences assigned
No exact matches.



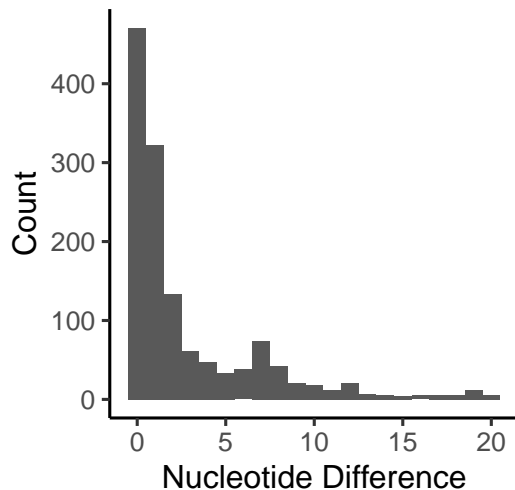
IGHV2-26*01

341 sequences assigned
134 (39.3%) exact matches, in which:
122 unique CDR3
5 unique J



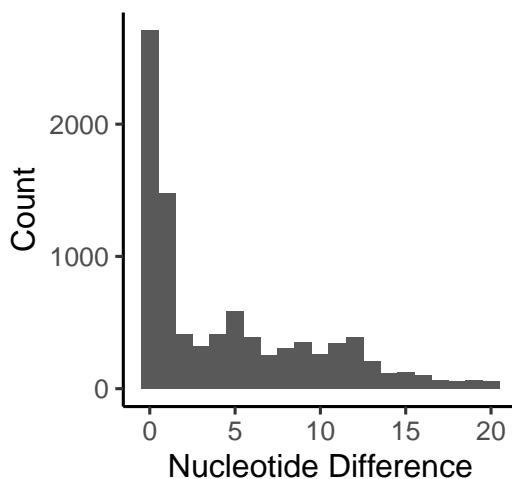
IGHV2-70*11_15

1694 sequences assigned
471 (27.8%) exact matches, in which:
415 unique CDR3
6 unique J



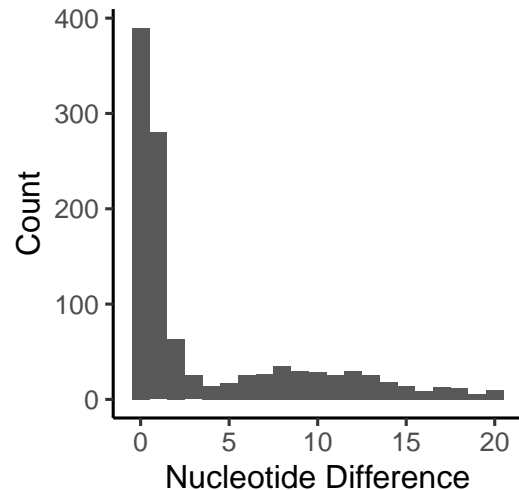
IGHV3-9*01

9738 sequences assigned
2709 (27.8%) exact matches, in which:
1698 unique CDR3
7 unique J



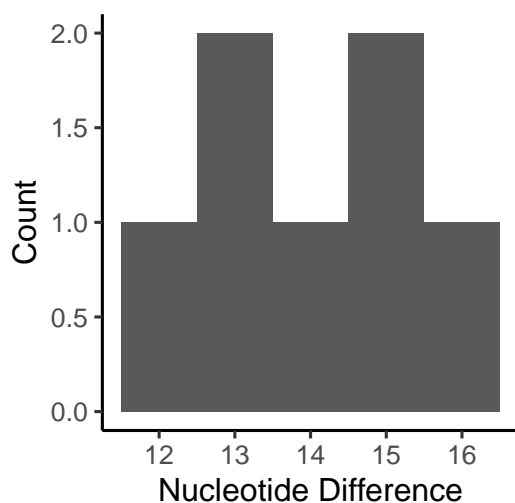
IGHV3-13*01

2249 sequences assigned
390 (17.3%) exact matches, in which:
243 unique CDR3
7 unique J



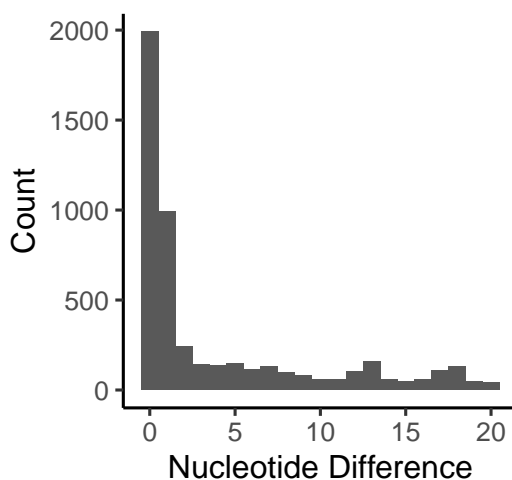
IGHV2-70D*04

8 sequences assigned
No exact matches.



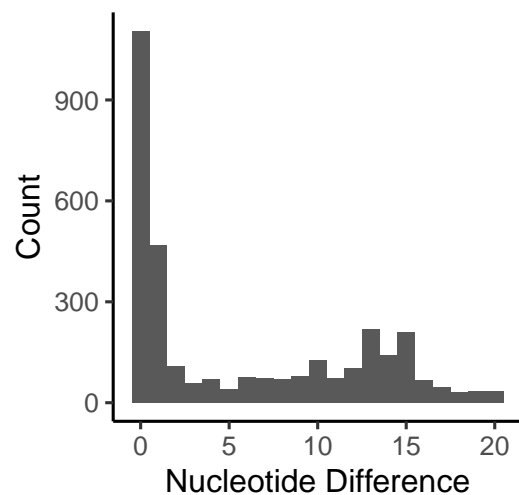
IGHV3-11*01

7438 sequences assigned
1991 (26.8%) exact matches, in which:
1339 unique CDR3
7 unique J



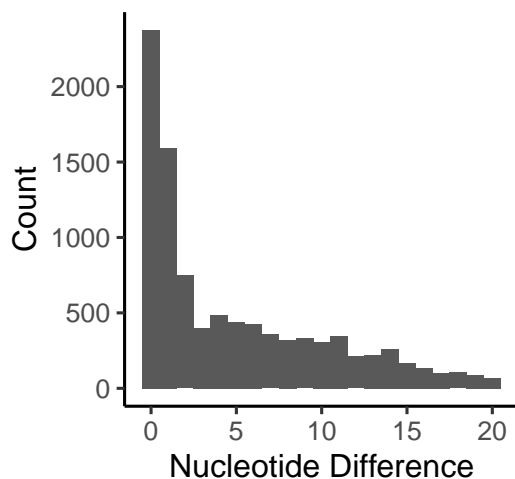
IGHV3-15*01_02

3568 sequences assigned
1105 (31%) exact matches, in which:
726 unique CDR3
7 unique J



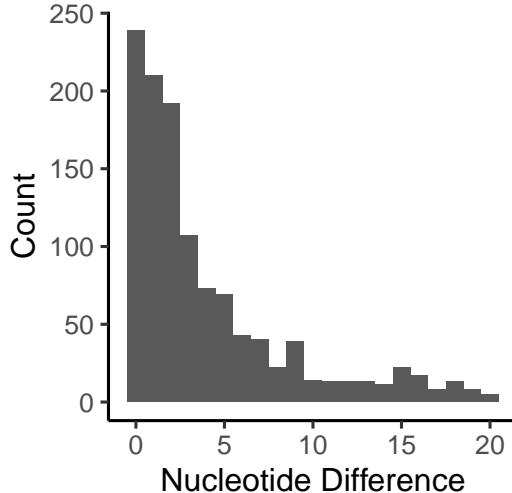
IGHV3-7*01

10718 sequences assigned
2375 (22.2%) exact matches, in which:
1629 unique CDR3
7 unique J



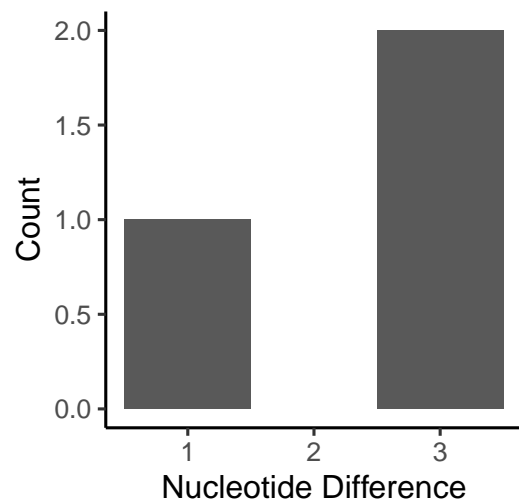
IGHV3-11*04

1394 sequences assigned
239 (17.1%) exact matches, in which:
233 unique CDR3
7 unique J



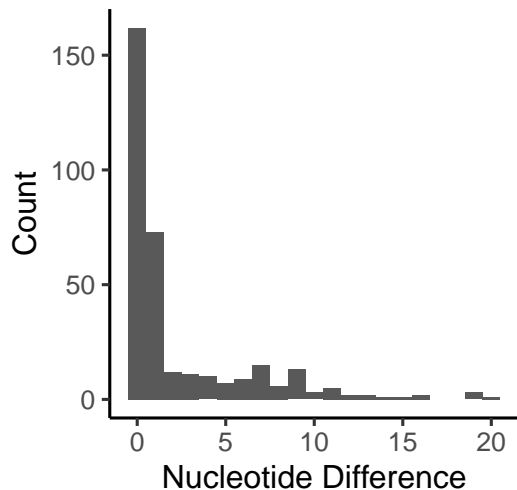
IGHV3-19*01

3 sequences assigned
No exact matches.



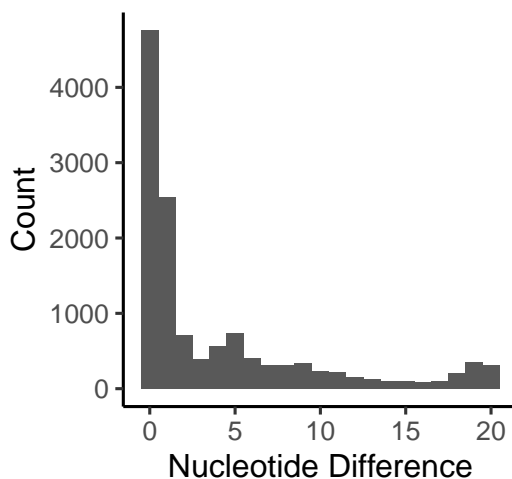
IGHV3-20*01_02

338 sequences assigned
162 (47.9%) exact matches, in which:
96 unique CDR3
6 unique J



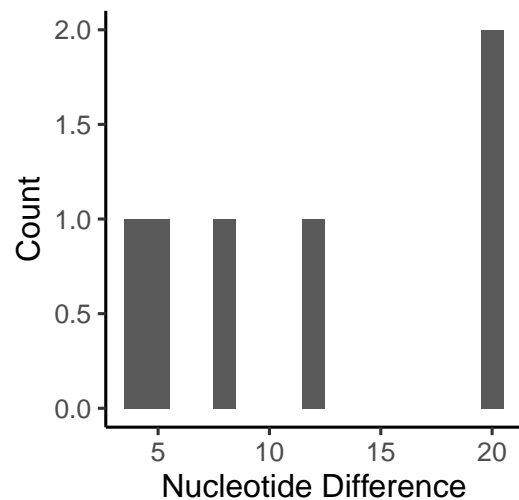
IGHV3-21*01_02

13862 sequences assigned
4756 (34.3%) exact matches, in which:
3091 unique CDR3
7 unique J



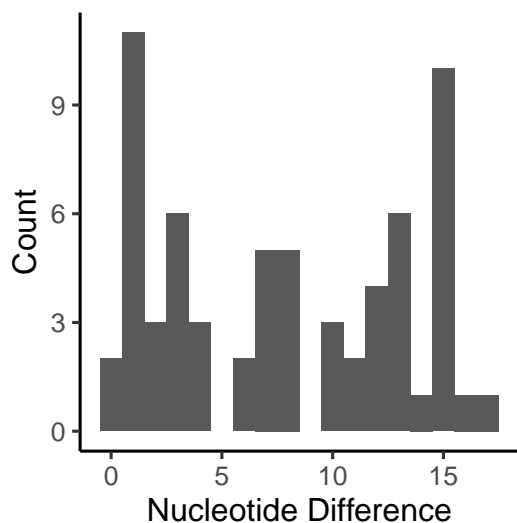
IGHV3-30-3*01

12 sequences assigned
No exact matches.



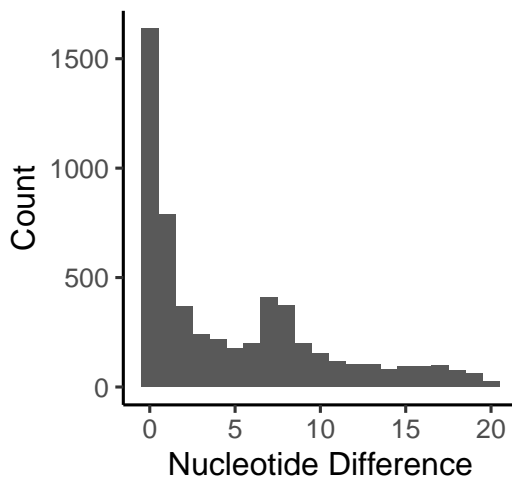
IGHV3-20*03_04

69 sequences assigned
2 (2.9%) exact matches, in which:
2 unique CDR3
2 unique J



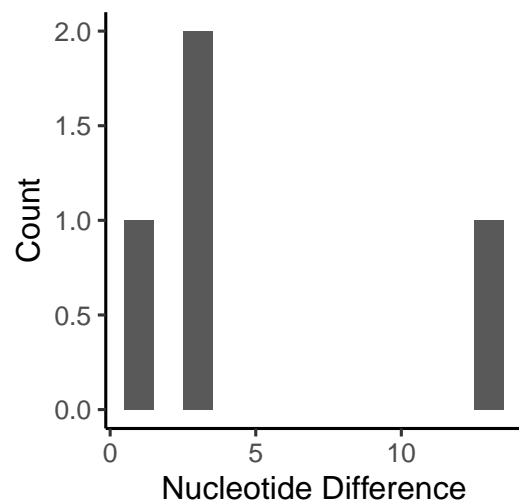
IGHV3-23*03

6153 sequences assigned
1637 (26.6%) exact matches, in which:
1135 unique CDR3
7 unique J



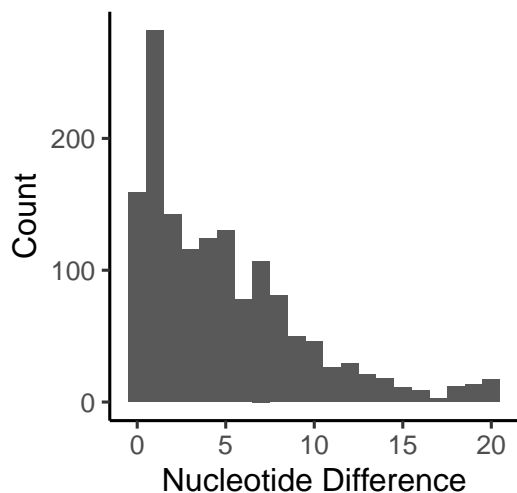
IGHV3-30-3*02

6 sequences assigned
No exact matches.



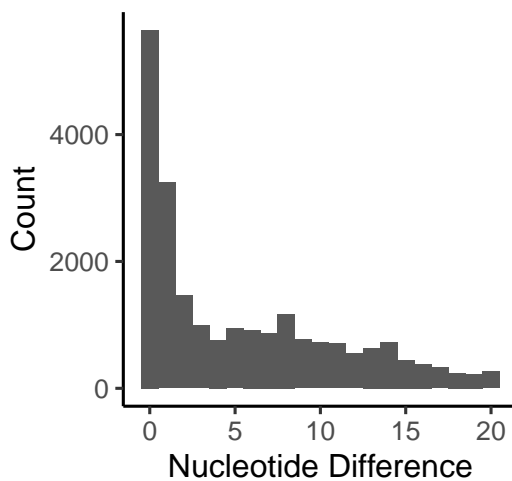
IGHV3-21*04

1546 sequences assigned
159 (10.3%) exact matches, in which:
156 unique CDR3
6 unique J



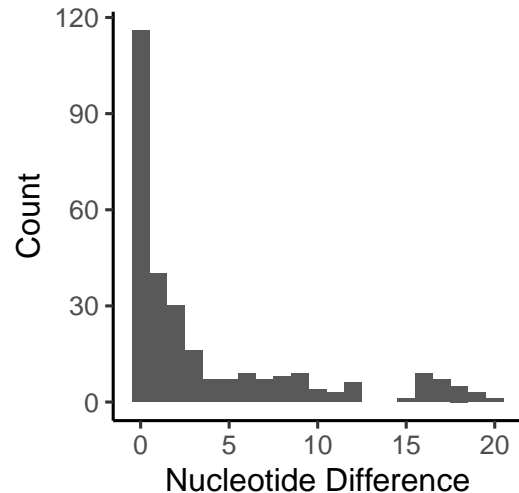
IGHV3-23*01_04

25003 sequences assigned
5648 (22.6%) exact matches, in which:
3560 unique CDR3
7 unique J



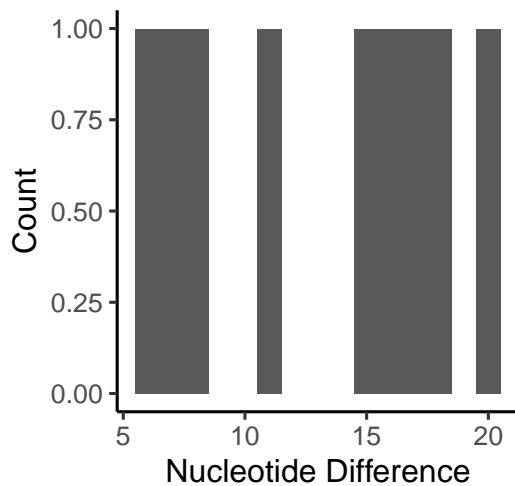
IGHV3-30*03

331 sequences assigned
116 (35%) exact matches, in which:
113 unique CDR3
6 unique J



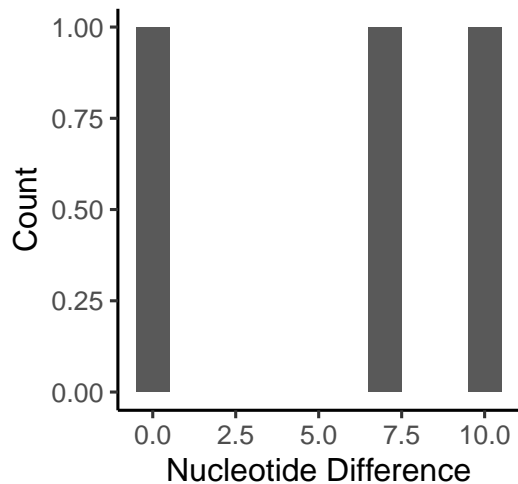
IGHV3-30-3*03

20 sequences assigned
No exact matches.



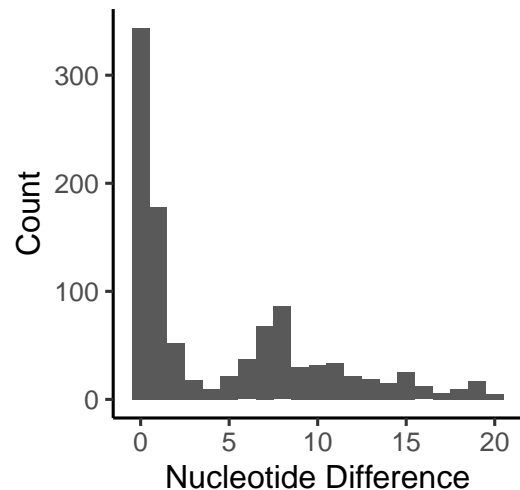
IGHV3-35*01

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



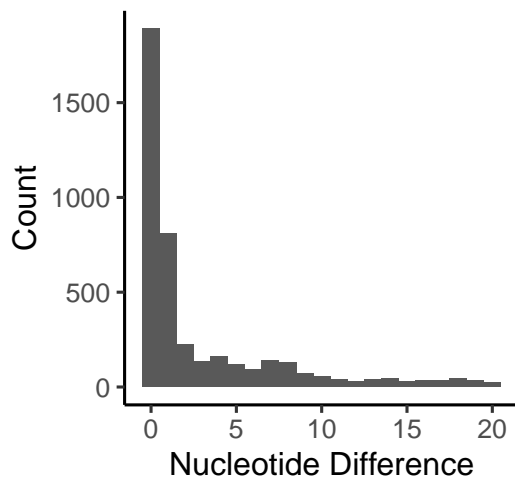
IGHV3-43*02

1113 sequences assigned
344 (30.9%) exact matches, in which:
212 unique CDR3
7 unique J



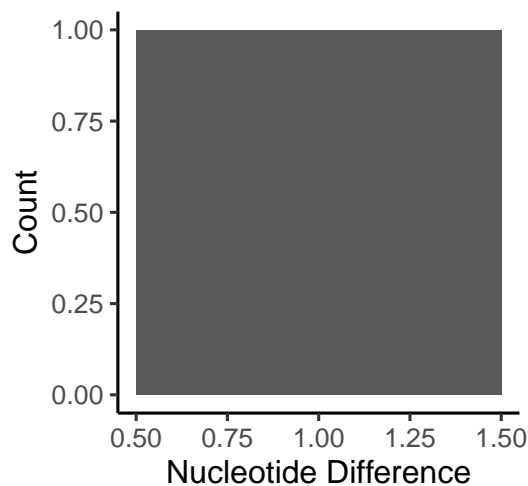
IGHV3-33*01

4317 sequences assigned
1890 (43.8%) exact matches, in which:
1341 unique CDR3
7 unique J



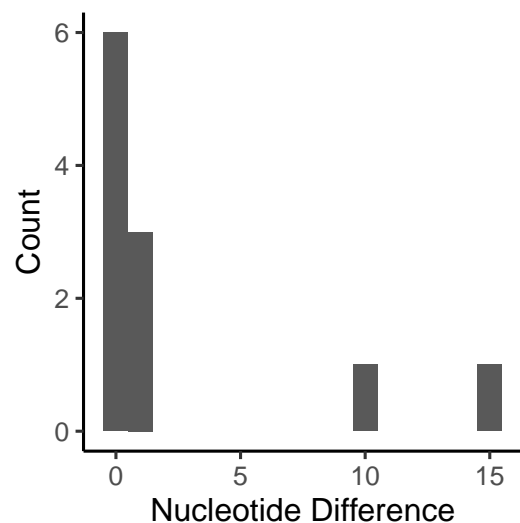
IGHV3-41*02

1 sequences assigned
No exact matches.



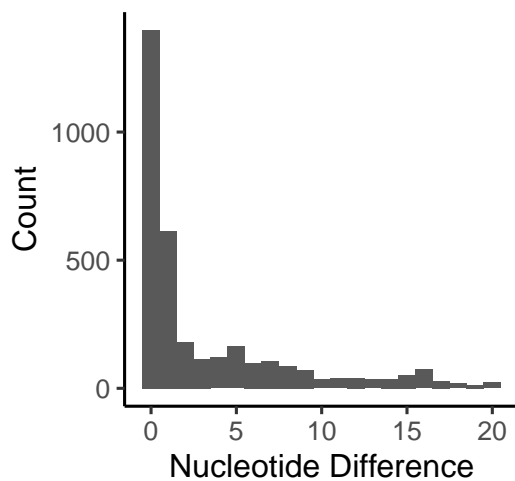
IGHV3-47*01

11 sequences assigned
6 (54.5%) exact matches, in which:
4 unique CDR3
2 unique J



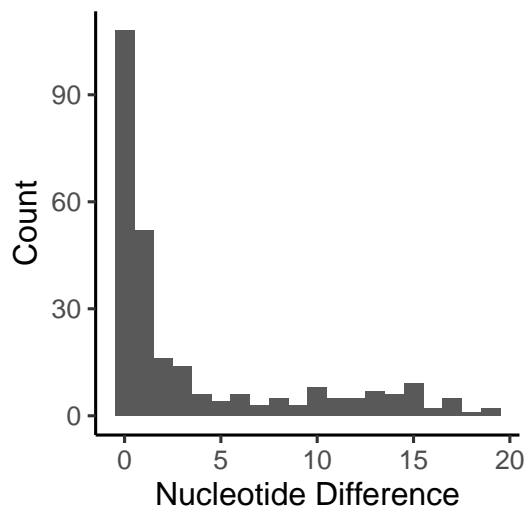
IGHV3-33*08

3739 sequences assigned
1398 (37.4%) exact matches, in which:
1009 unique CDR3
7 unique J



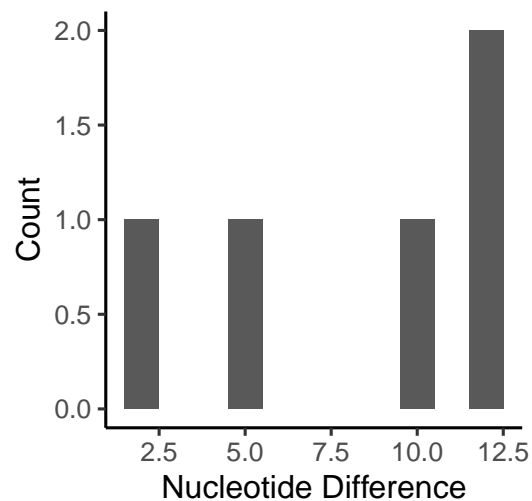
IGHV3-43*01

302 sequences assigned
108 (35.8%) exact matches, in which:
72 unique CDR3
6 unique J



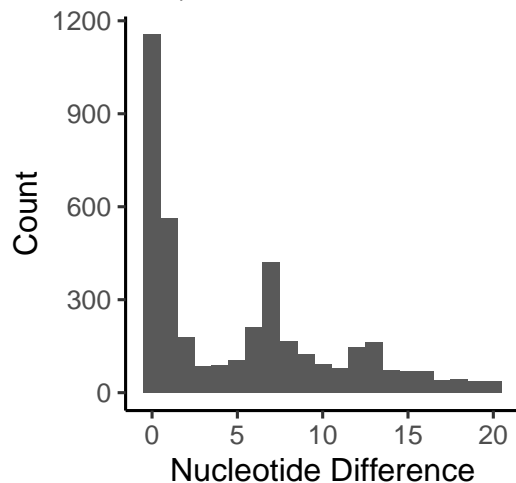
IGHV3-47*02

5 sequences assigned
No exact matches.



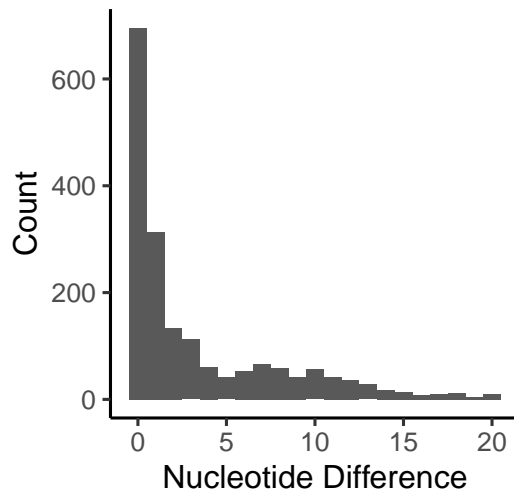
IGHV3-48*02

4629 sequences assigned
1156 (25%) exact matches, in which:
756 unique CDR3
7 unique J



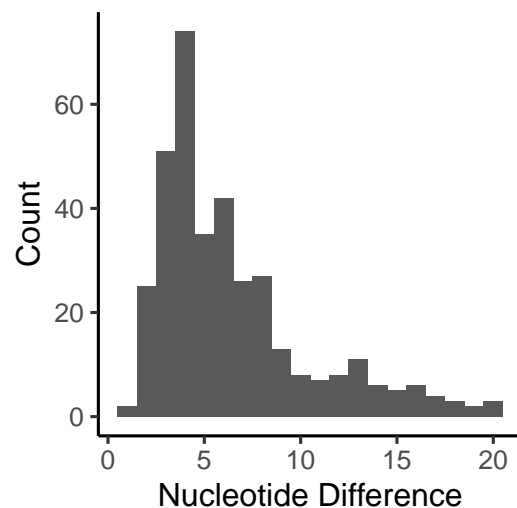
IGHV3-49*04

2072 sequences assigned
696 (33.6%) exact matches, in which:
444 unique CDR3
7 unique J



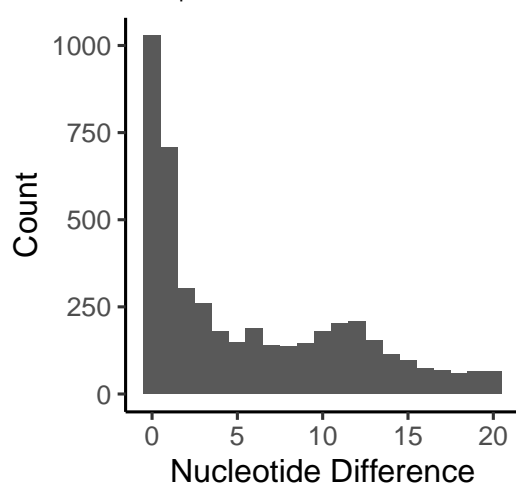
IGHV3-53*01_02

373 sequences assigned
No exact matches.



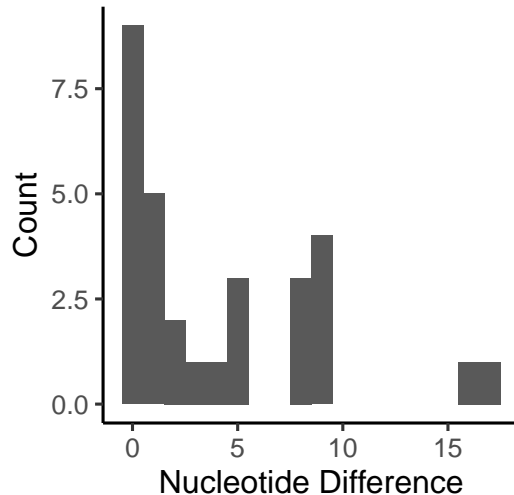
IGHV3-48*03

4933 sequences assigned
1028 (20.8%) exact matches, in which:
671 unique CDR3
7 unique J



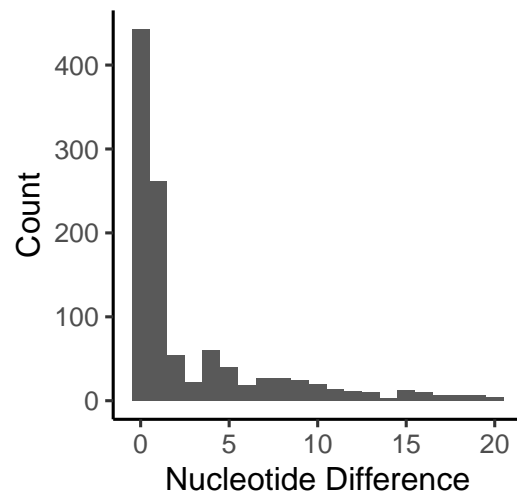
IGHV3-52*01_03

30 sequences assigned
9 (30%) exact matches, in which:
7 unique CDR3
4 unique J



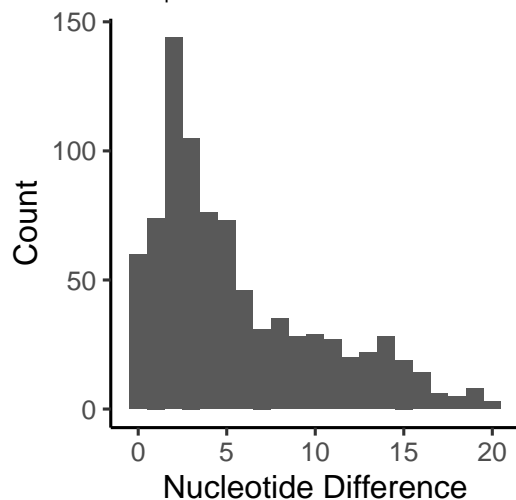
IGHV3-64*01

1118 sequences assigned
443 (39.6%) exact matches, in which:
290 unique CDR3
6 unique J



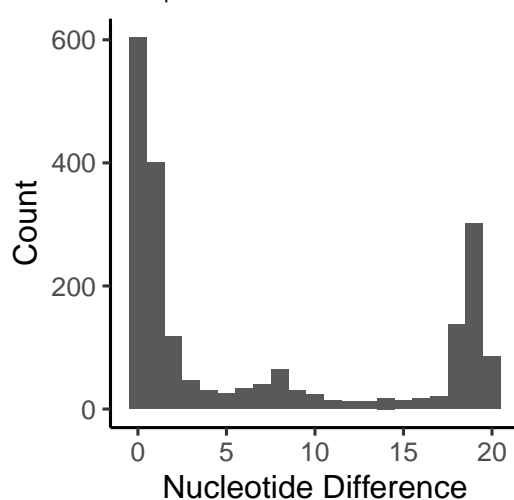
IGHV3-48*04

887 sequences assigned
60 (6.8%) exact matches, in which:
60 unique CDR3
7 unique J



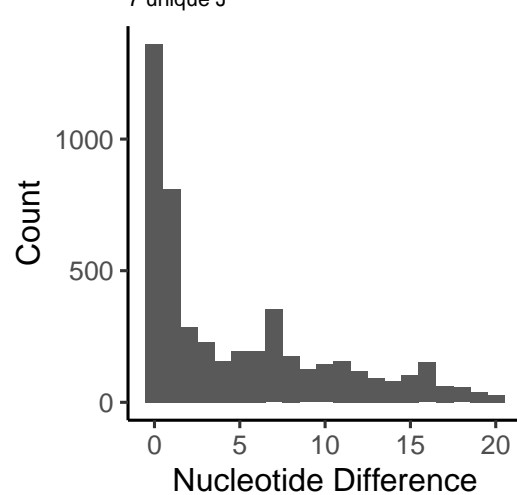
IGHV3-53*04

2186 sequences assigned
604 (27.6%) exact matches, in which:
411 unique CDR3
7 unique J



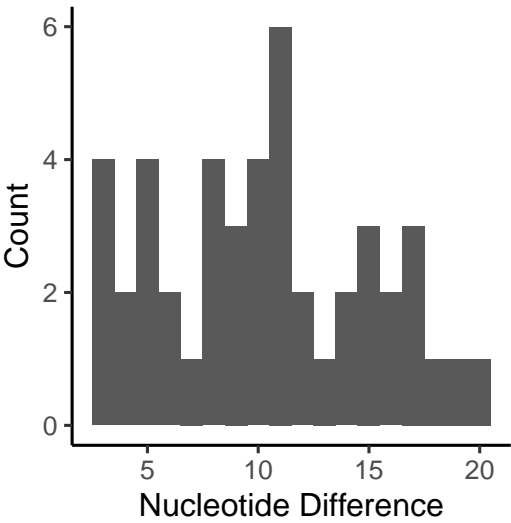
IGHV3-66*01

5520 sequences assigned
1361 (24.7%) exact matches, in which:
911 unique CDR3
7 unique J



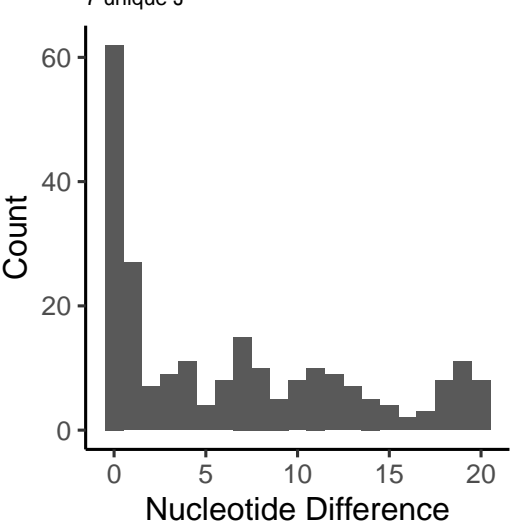
IGHV3-69-1*01

65 sequences assigned
No exact matches.



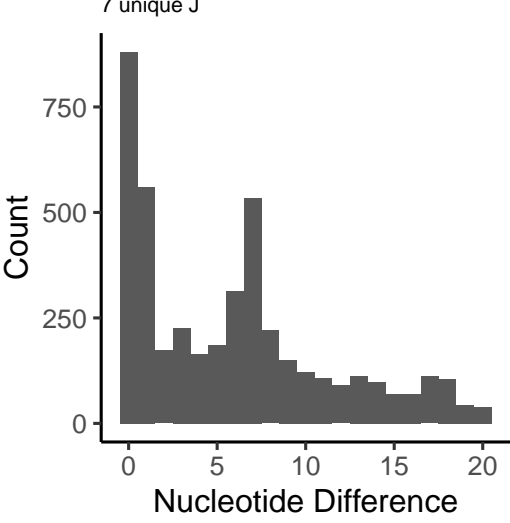
IGHV3-72*01

331 sequences assigned
62 (18.7%) exact matches, in which:
41 unique CDR3
7 unique J



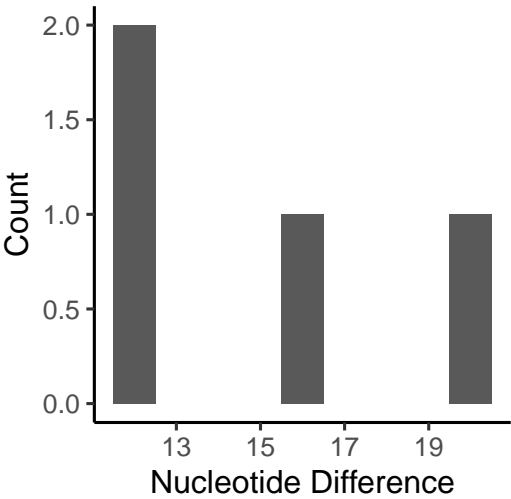
IGHV3-74*01_02

4561 sequences assigned
881 (19.3%) exact matches, in which:
570 unique CDR3
7 unique J



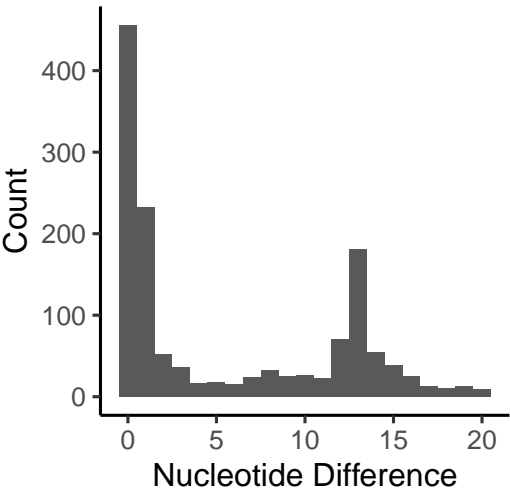
IGHV3-69-1*02

19 sequences assigned
No exact matches.



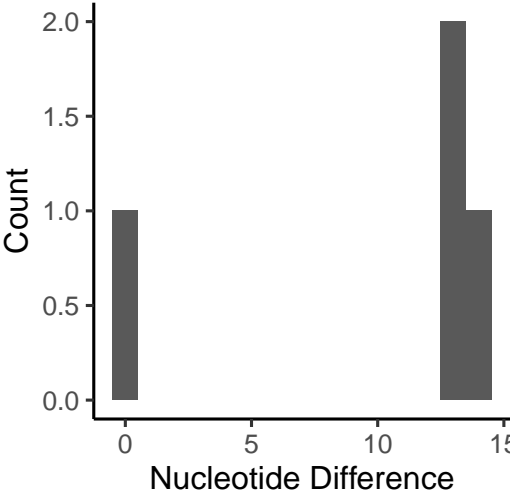
IGHV3-73*01_02

1449 sequences assigned
456 (31.5%) exact matches, in which:
309 unique CDR3
7 unique J



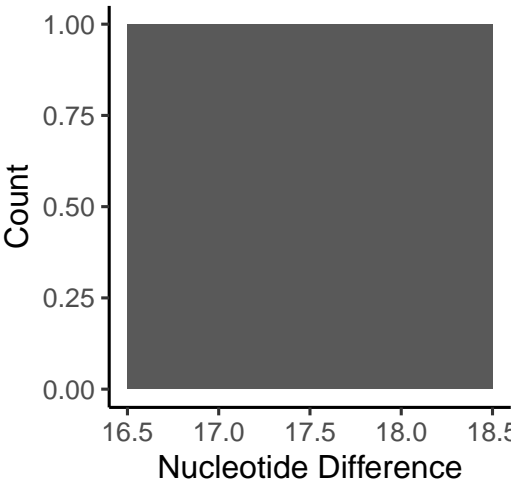
IGHV3-43D*04

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



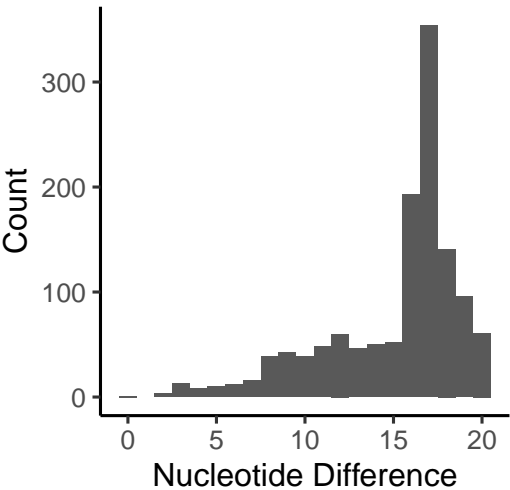
IGHV3-71*01_04

2 sequences assigned
No exact matches.



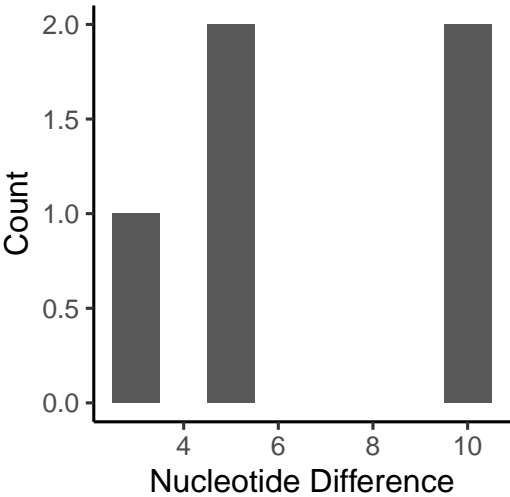
IGHV3-74*03

1508 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



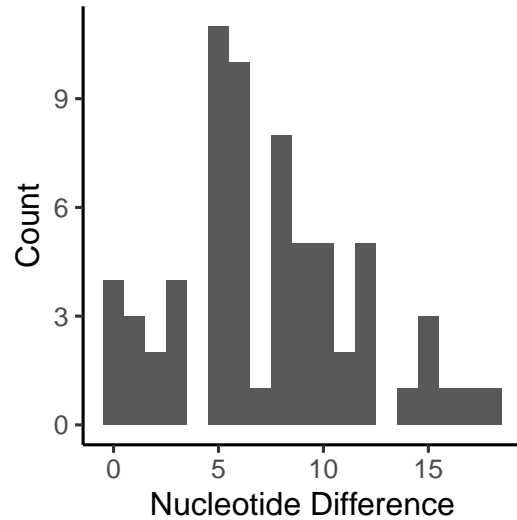
IGHV3-64D*06

20 sequences assigned
No exact matches.



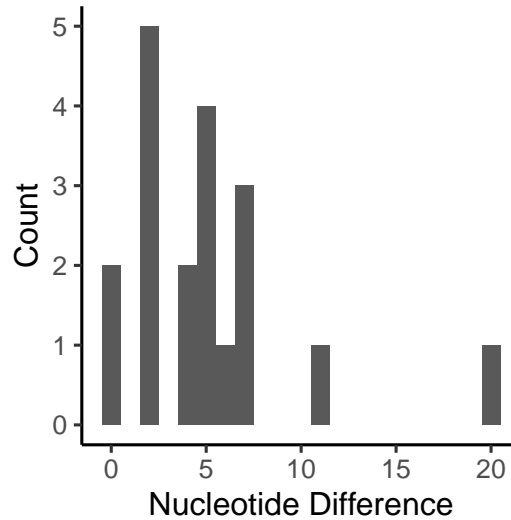
IGHV3–NL1*01

70 sequences assigned
4 (5.7%) exact matches, in which:
4 unique CDR3
2 unique J



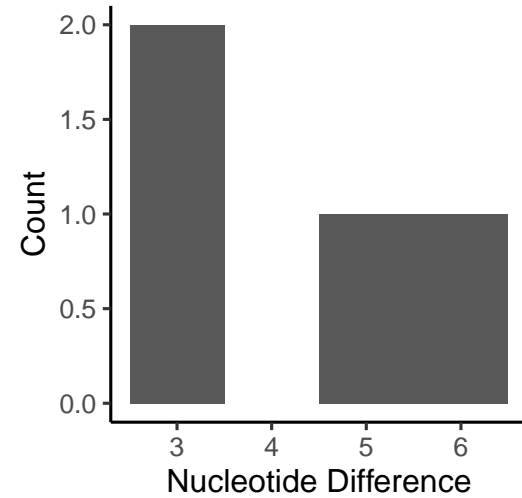
IGHV4–28*03

21 sequences assigned
2 (9.5%) exact matches, in which:
2 unique CDR3
1 unique J



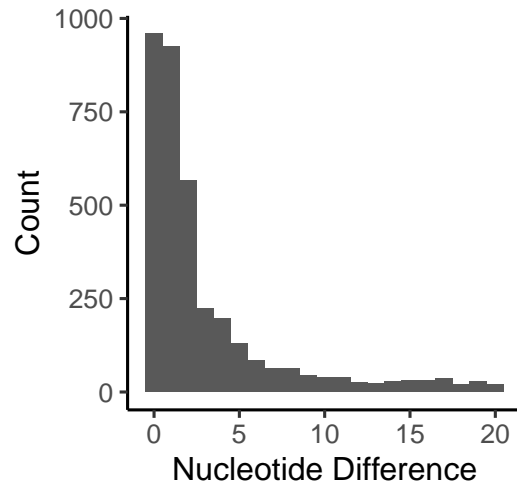
IGHV4–30–2*04

4 sequences assigned
No exact matches.



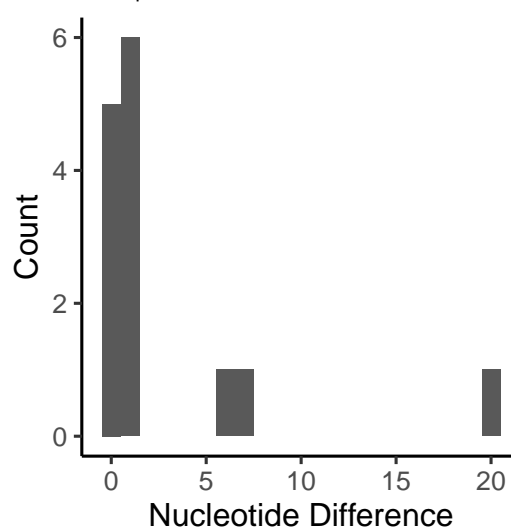
IGHV4–4*07

4764 sequences assigned
959 (20.1%) exact matches, in which:
847 unique CDR3
7 unique J



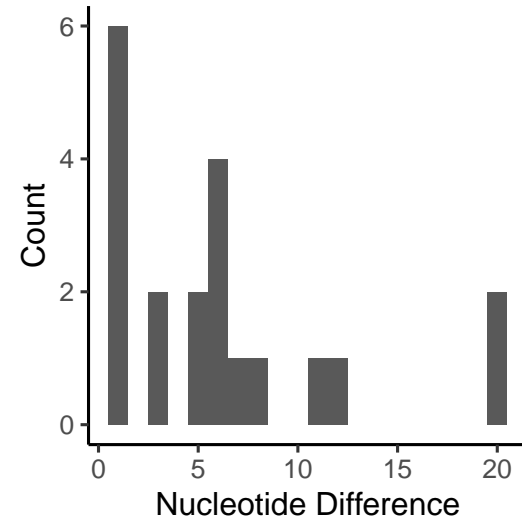
IGHV4–28*01_07

14 sequences assigned
5 (35.7%) exact matches, in which:
3 unique CDR3
3 unique J



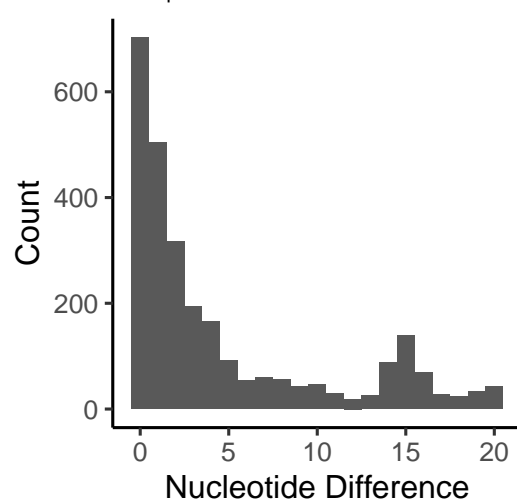
IGHV4–30–4*08

22 sequences assigned
No exact matches.



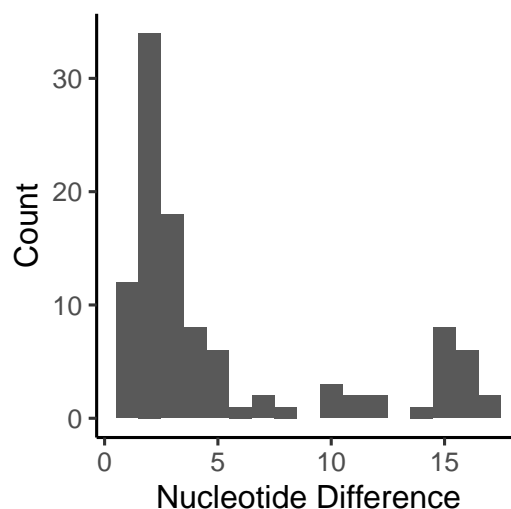
IGHV4–4*02_03

3081 sequences assigned
703 (22.8%) exact matches, in which:
597 unique CDR3
7 unique J



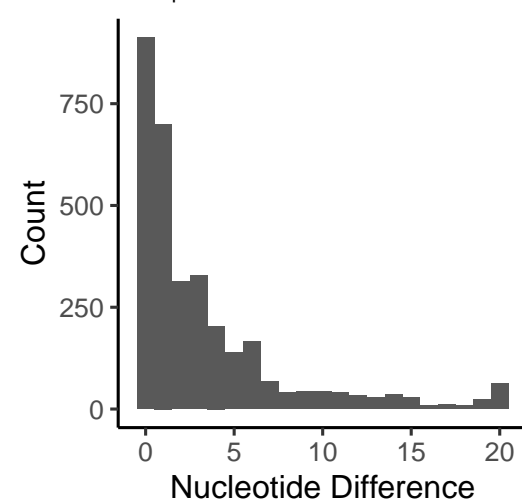
IGHV4–30–2*03

113 sequences assigned
No exact matches.



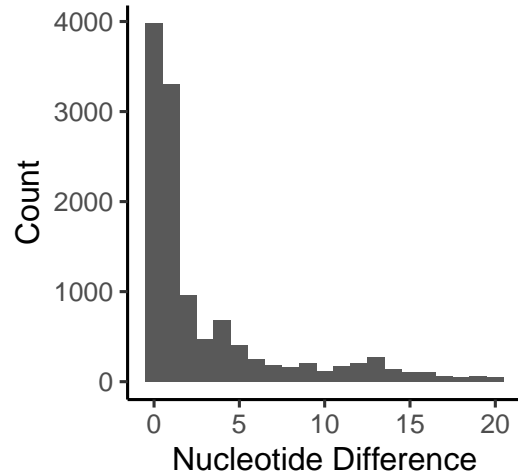
IGHV4–31*02

3777 sequences assigned
913 (24.2%) exact matches, in which:
836 unique CDR3
7 unique J



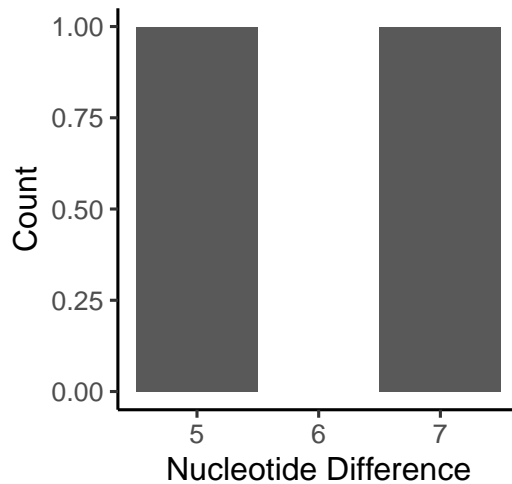
IGHV4-34*01_02

12327 sequences assigned
3979 (32.3%) exact matches, in which:
3266 unique CDR3
7 unique J



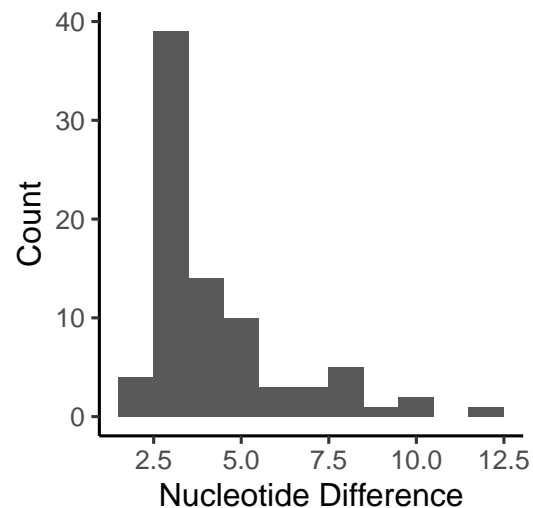
IGHV4-55*09

2 sequences assigned
No exact matches.



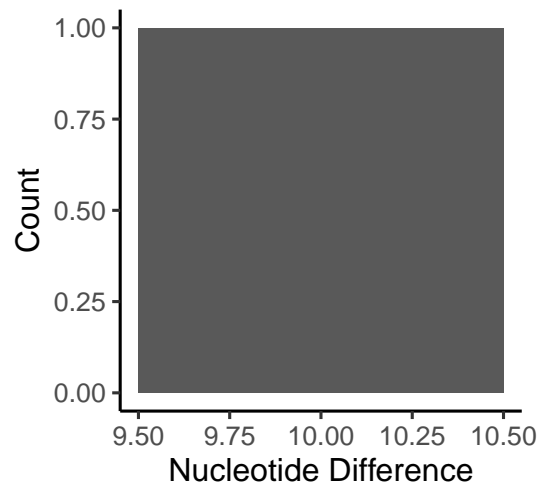
IGHV4-61*02

85 sequences assigned
No exact matches.



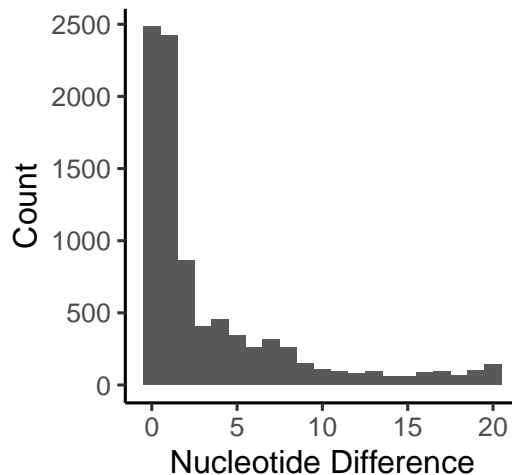
IGHV4-38-2*02

5 sequences assigned
No exact matches.



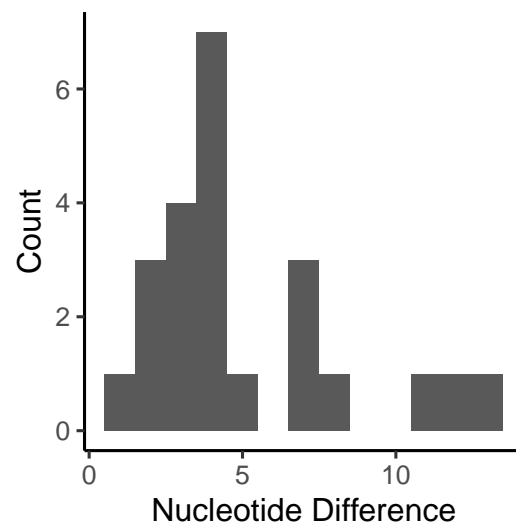
IGHV4-59*08

10889 sequences assigned
2483 (22.8%) exact matches, in which:
2117 unique CDR3
7 unique J



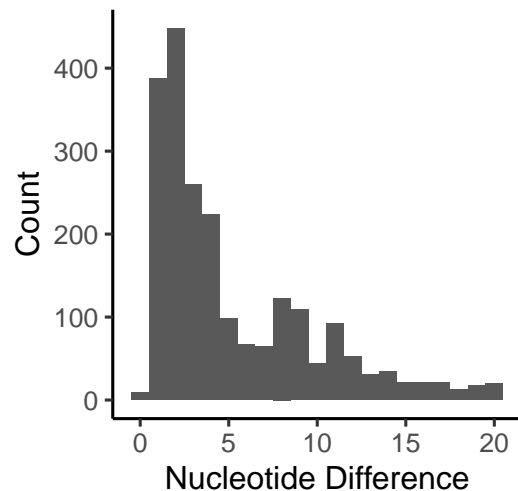
IGHV4-61*05

25 sequences assigned
No exact matches.



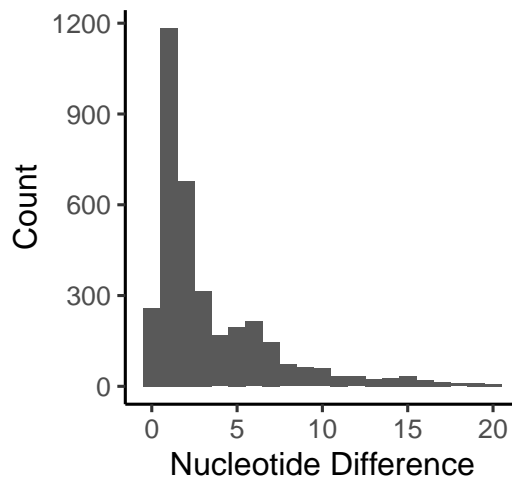
IGHV4-39*07

2493 sequences assigned
9 (0.4%) exact matches, in which:
9 unique CDR3
4 unique J



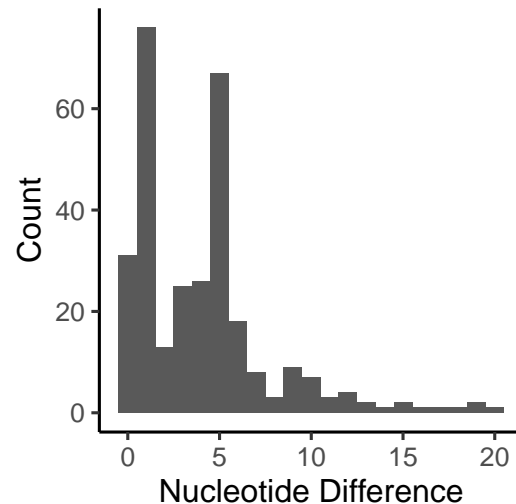
IGHV4-59*12

3723 sequences assigned
258 (6.9%) exact matches, in which:
250 unique CDR3
7 unique J



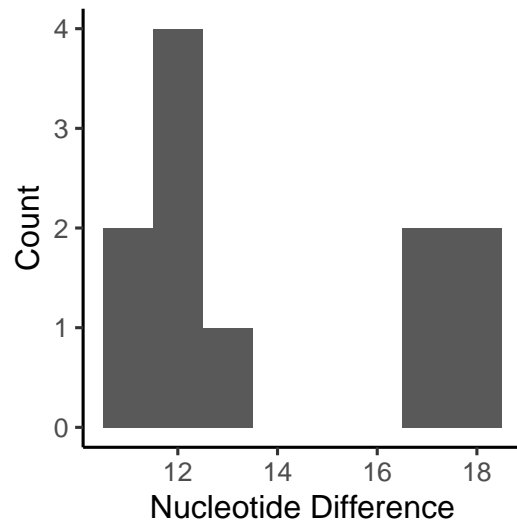
IGHV4-61*08

323 sequences assigned
31 (9.6%) exact matches, in which:
23 unique CDR3
5 unique J



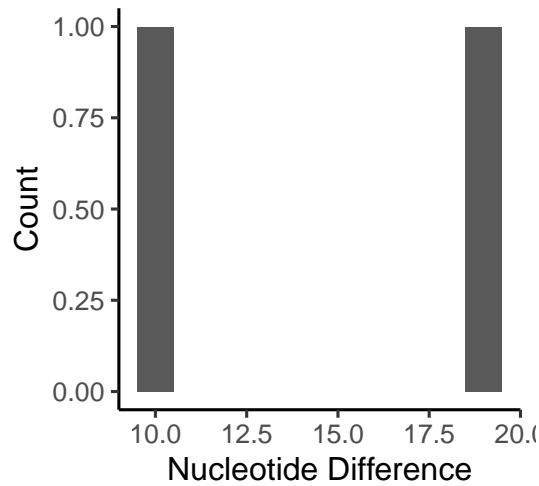
IGHV1/OR15-2*02_03

14 sequences assigned
No exact matches.



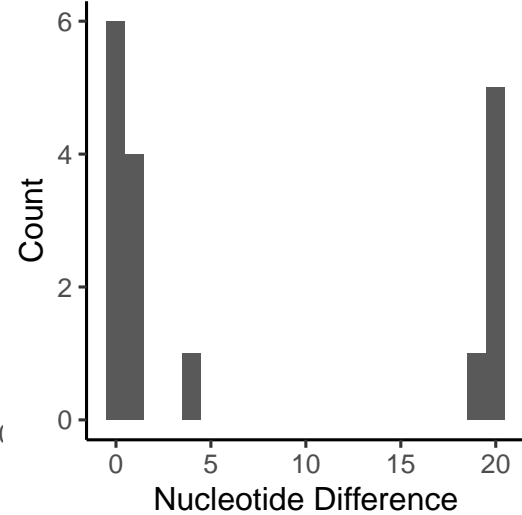
IGHV4/OR15-8*02

7 sequences assigned
No exact matches.



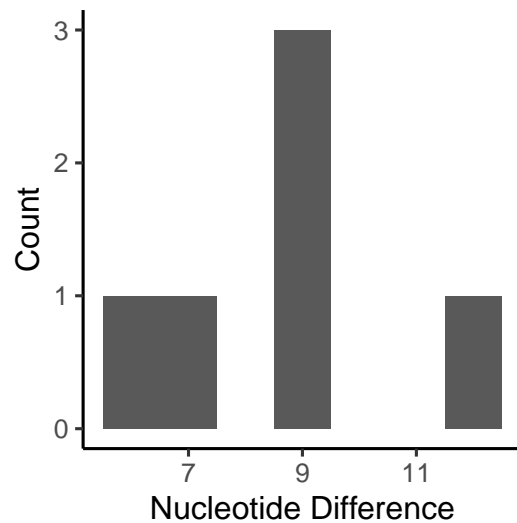
IGHV5-51*06

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



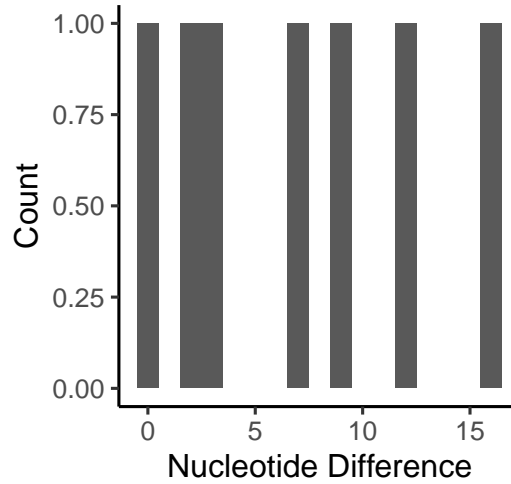
IGHV1/OR15-3*02

6 sequences assigned
No exact matches.



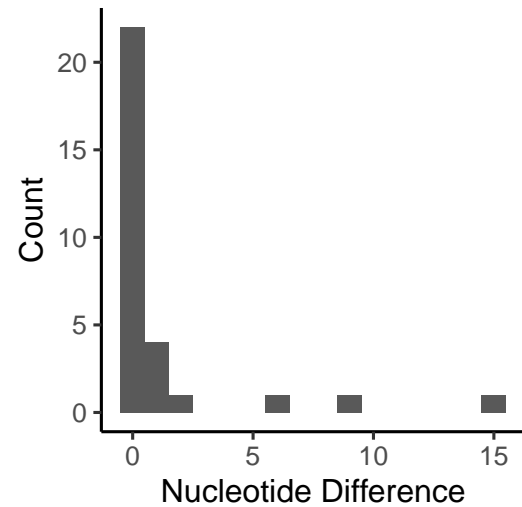
IGHV5-10-1*01_03

9 sequences assigned
1 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



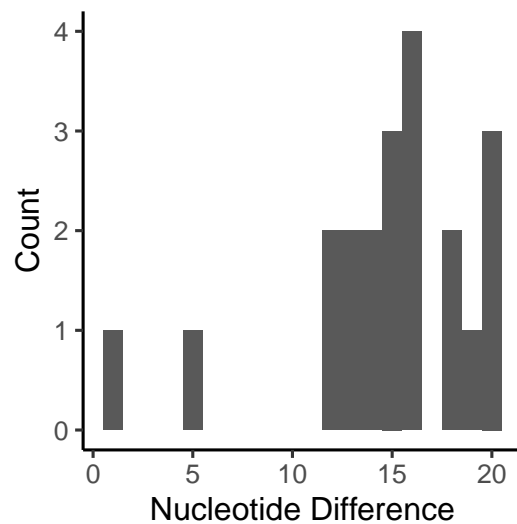
IGHV5-51*07

35 sequences assigned
22 (62.9%) exact matches, in which:
21 unique CDR3
5 unique J



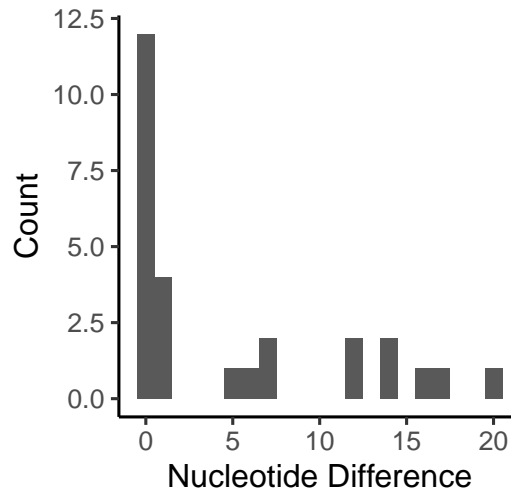
IGHV4/OR15-8*01

27 sequences assigned
No exact matches.



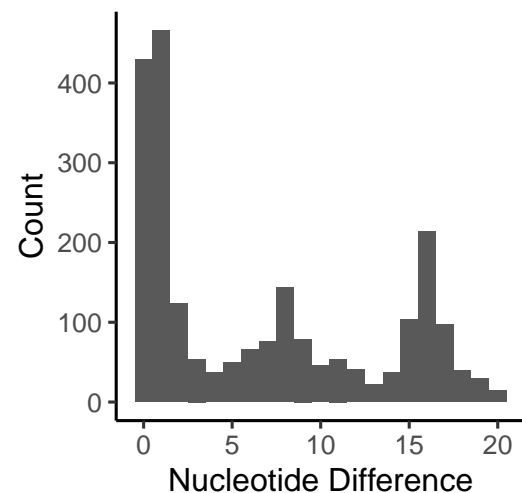
IGHV5-51*04

136 sequences assigned
12 (8.8%) exact matches, in which:
12 unique CDR3
4 unique J



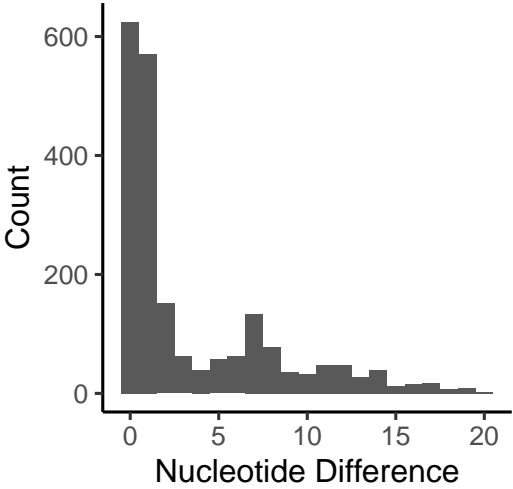
IGHV6-1*01_02

2467 sequences assigned
429 (17.4%) exact matches, in which:
368 unique CDR3
6 unique J

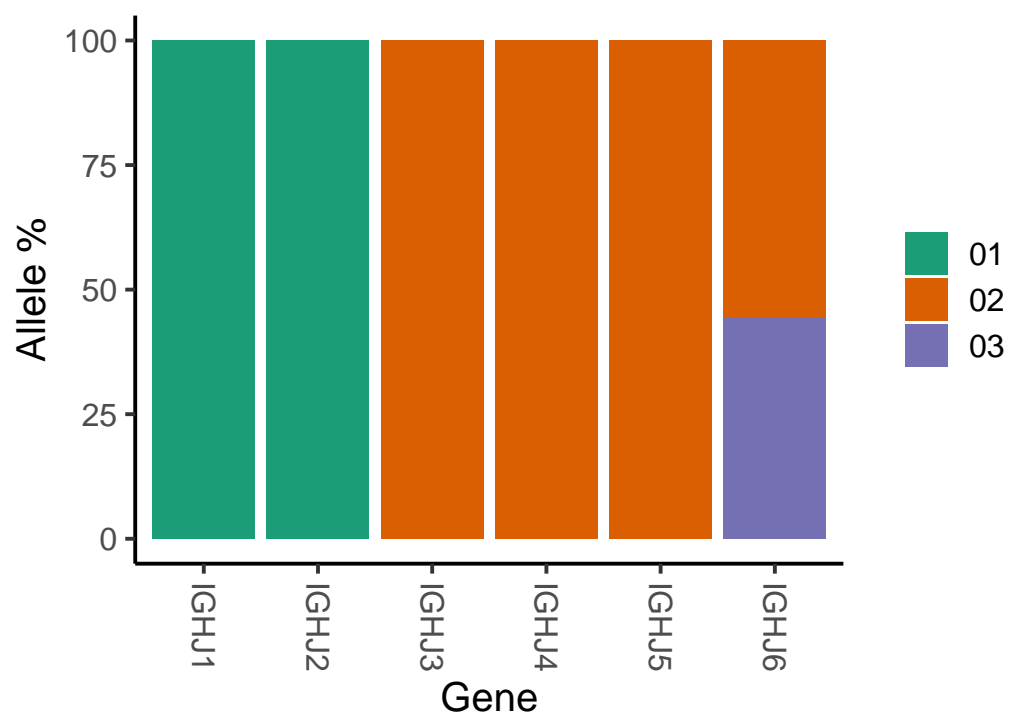


IGHV7-4-1*02

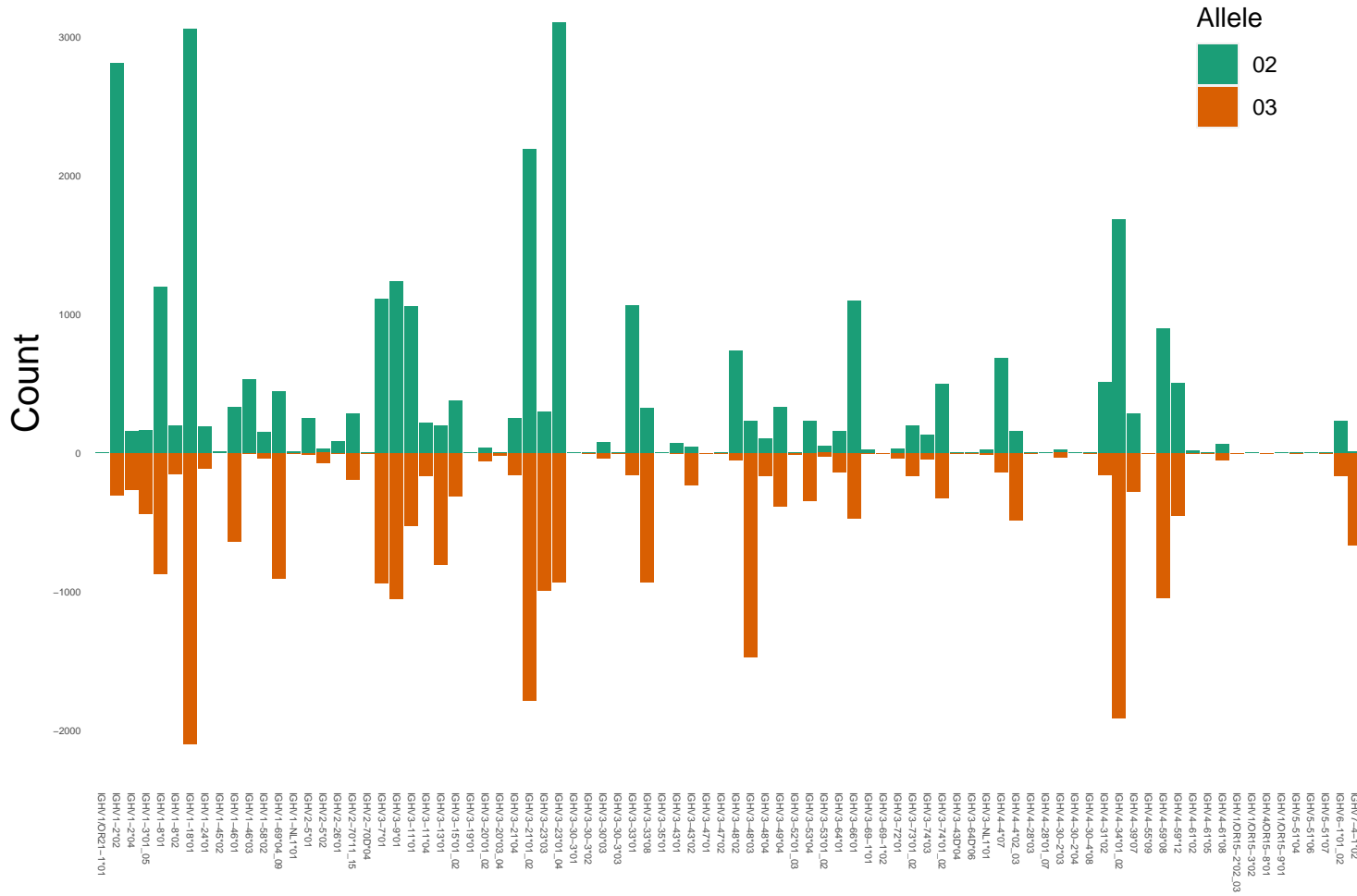
2236 sequences assigned
625 (28%) exact matches, in which:
531 unique CDR3
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]