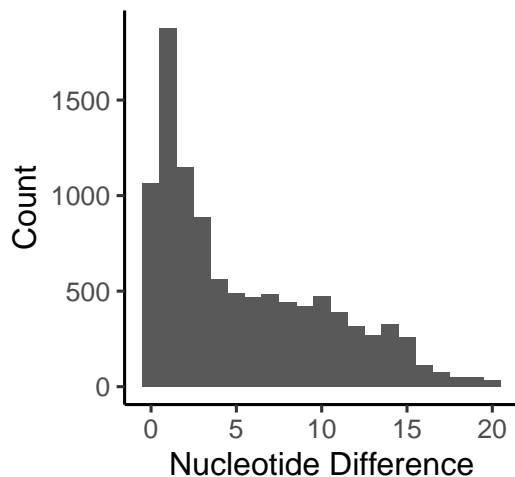


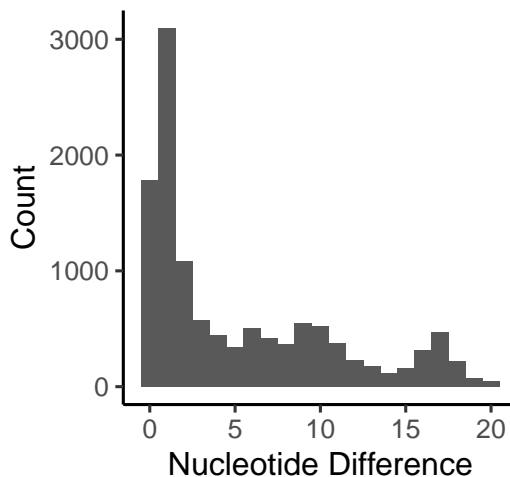
IGHV1-2*02

10460 sequences assigned
1063 (10.2%) exact matches, in which:
789 unique CDR3
7 unique J



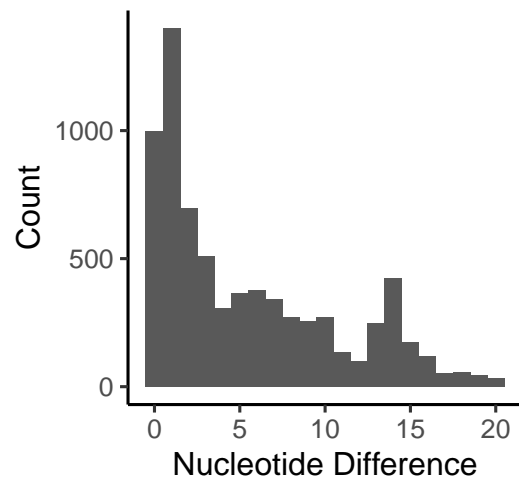
IGHV1-18*01

13490 sequences assigned
1786 (13.2%) exact matches, in which:
1314 unique CDR3
7 unique J



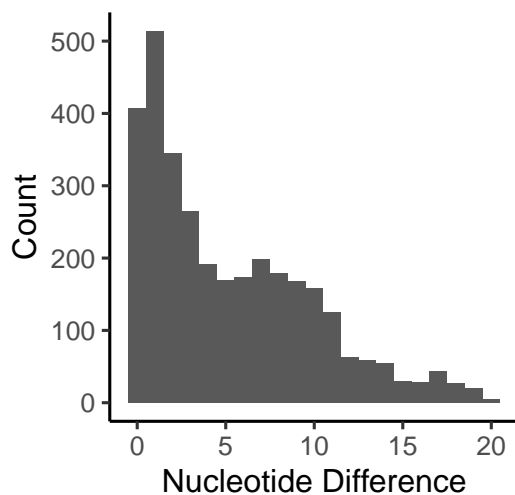
IGHV1-46*01

7403 sequences assigned
999 (13.5%) exact matches, in which:
767 unique CDR3
7 unique J



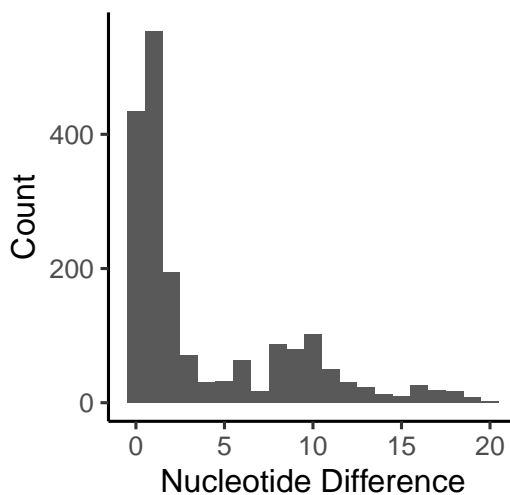
IGHV1-3*01_05

7942 sequences assigned
407 (5.1%) exact matches, in which:
321 unique CDR3
7 unique J



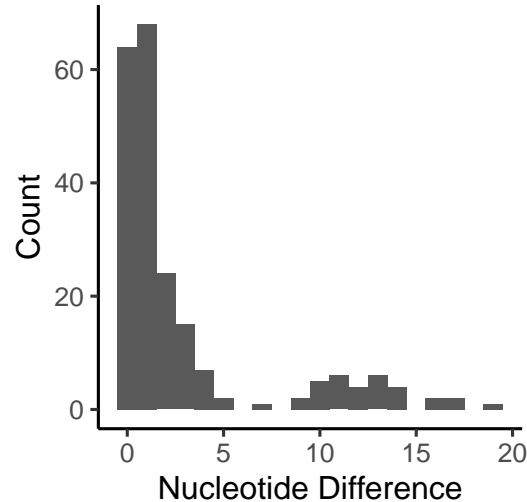
IGHV1-24*01

1887 sequences assigned
435 (23.1%) exact matches, in which:
350 unique CDR3
7 unique J



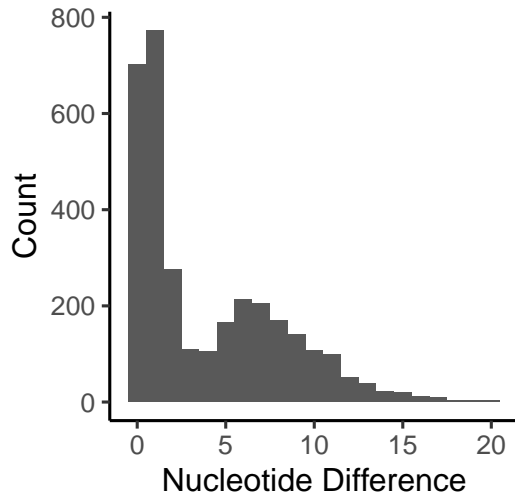
IGHV1-58*02

215 sequences assigned
64 (29.8%) exact matches, in which:
51 unique CDR3
5 unique J



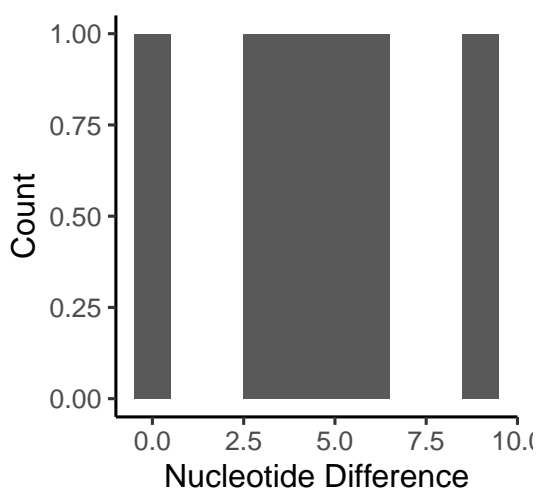
IGHV1-8*01

3226 sequences assigned
701 (21.7%) exact matches, in which:
585 unique CDR3
7 unique J



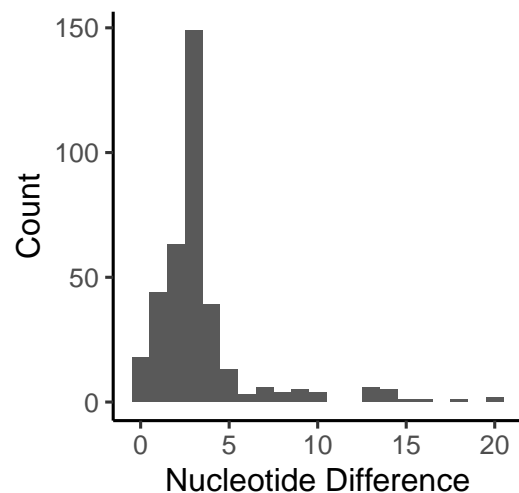
IGHV1-45*02

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



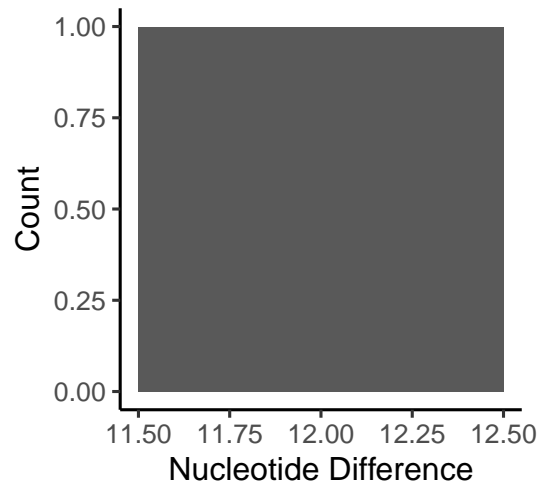
IGHV1-58*01_03

368 sequences assigned
18 (4.9%) exact matches, in which:
16 unique CDR3
5 unique J



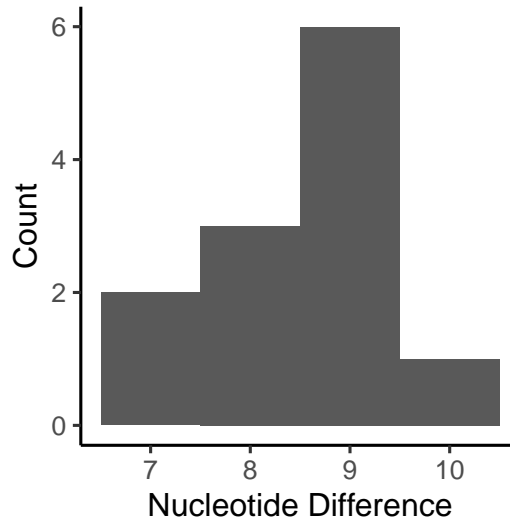
IGHV1-69-2*01

1 sequences assigned
No exact matches.



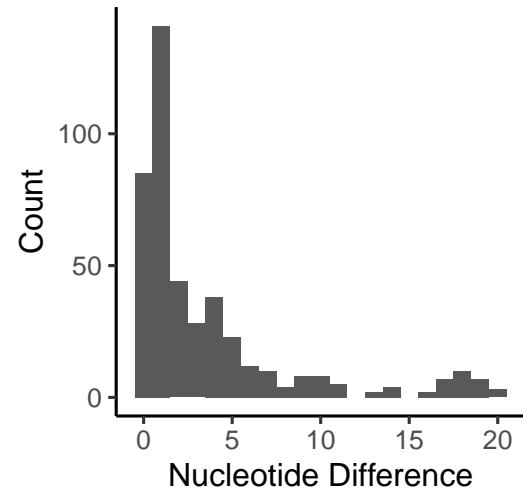
IGHV1-NL1*01

12 sequences assigned
No exact matches.



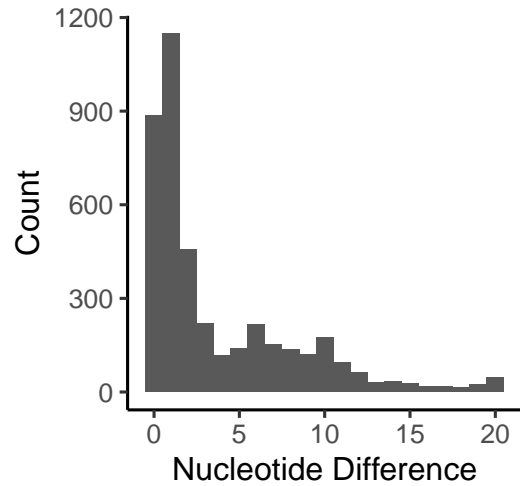
IGHV2-70*01

442 sequences assigned
85 (19.2%) exact matches, in which:
61 unique CDR3
6 unique J



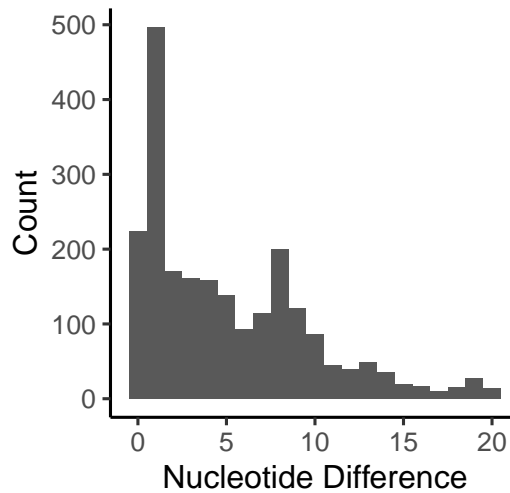
IGHV1-69*01_12_13

4391 sequences assigned
887 (20.2%) exact matches, in which:
744 unique CDR3
7 unique J



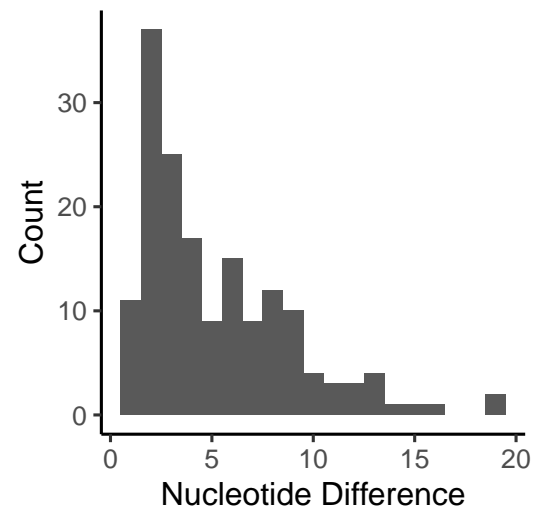
IGHV2-5*02

2288 sequences assigned
224 (9.8%) exact matches, in which:
156 unique CDR3
6 unique J



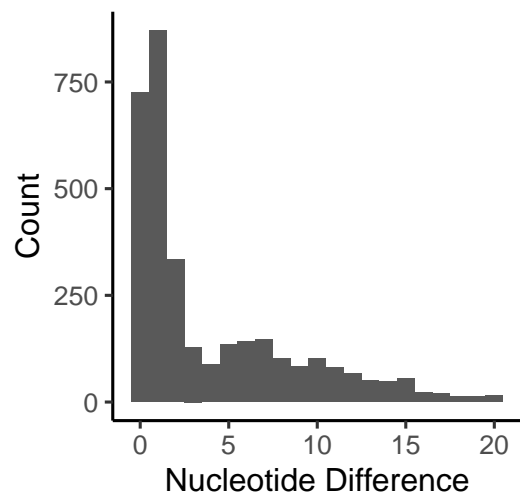
IGHV2-70*12

164 sequences assigned
No exact matches.



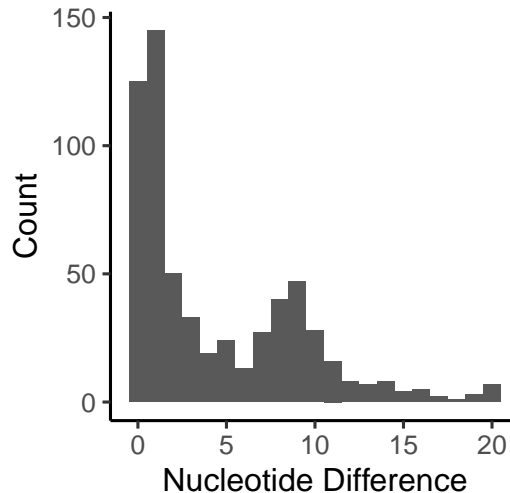
IGHV1-69*04_09

3422 sequences assigned
726 (21.2%) exact matches, in which:
605 unique CDR3
7 unique J



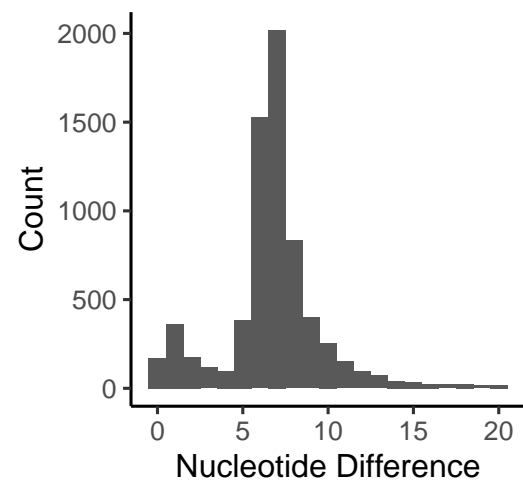
IGHV2-26*01

619 sequences assigned
125 (20.2%) exact matches, in which:
87 unique CDR3
6 unique J



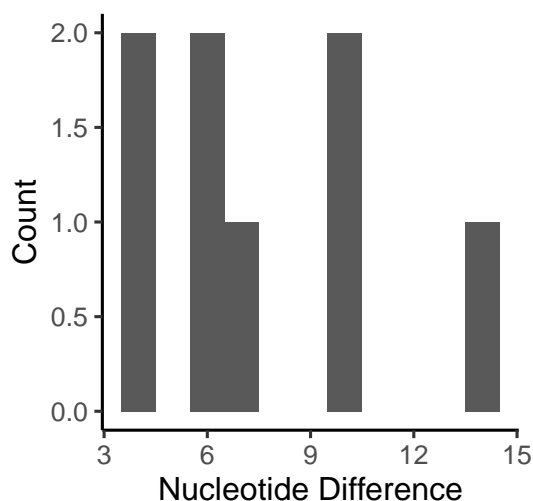
IGHV2-70*11_15

6908 sequences assigned
171 (2.5%) exact matches, in which:
121 unique CDR3
6 unique J



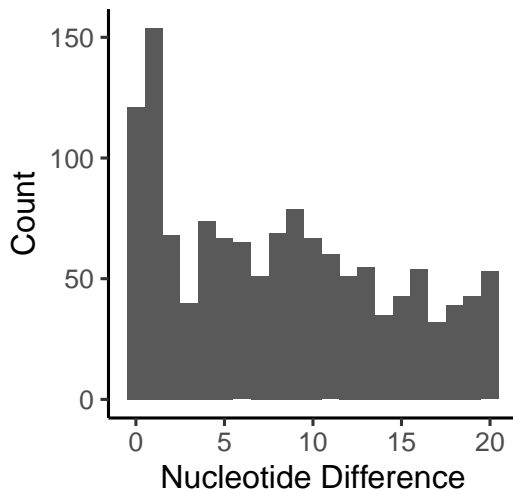
IGHV2-70D*04

8 sequences assigned
No exact matches.



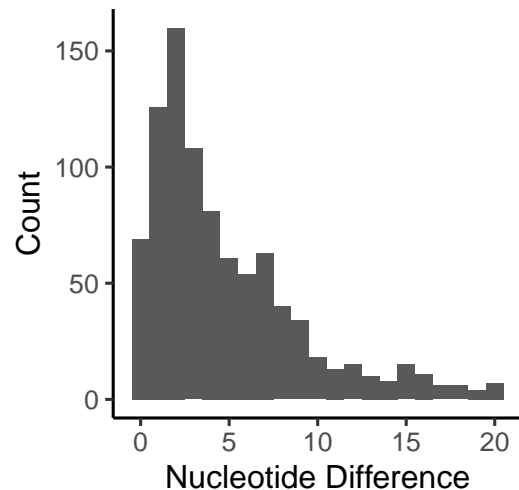
IGHV3-7*03

1855 sequences assigned
121 (6.5%) exact matches, in which:
93 unique CDR3
7 unique J



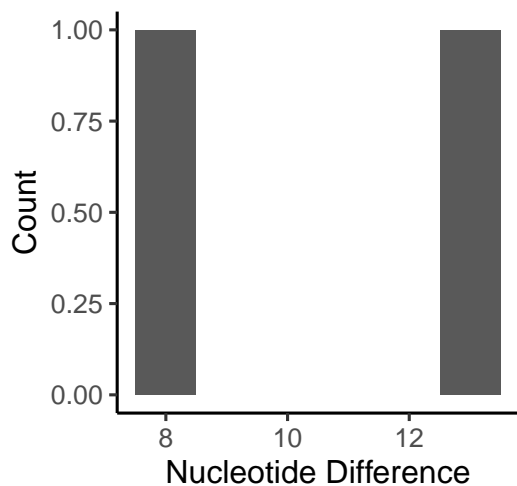
IGHV3-11*04

1015 sequences assigned
69 (6.8%) exact matches, in which:
63 unique CDR3
6 unique J



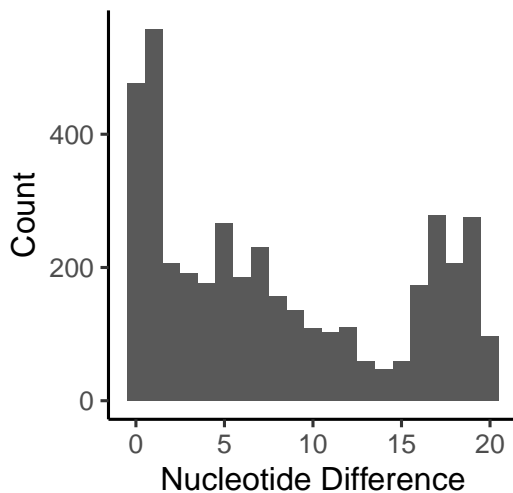
IGHV2-70D*14

2 sequences assigned
No exact matches.



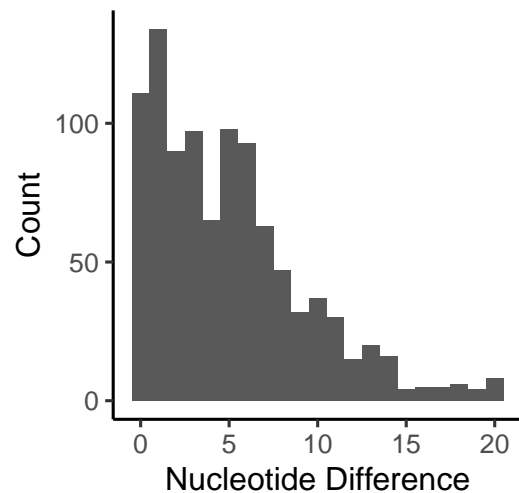
IGHV3-9*01

4484 sequences assigned
476 (10.6%) exact matches, in which:
270 unique CDR3
7 unique J



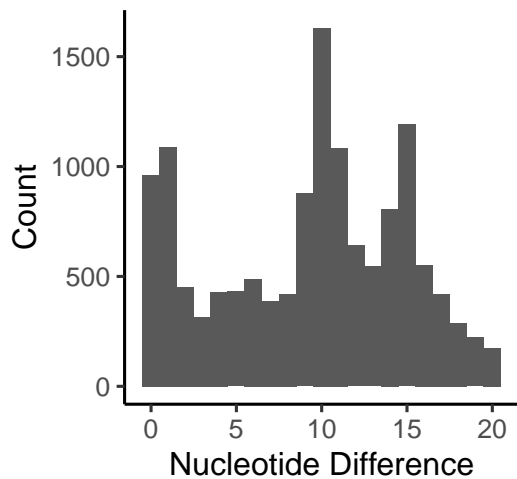
IGHV3-11*06

1030 sequences assigned
111 (10.8%) exact matches, in which:
106 unique CDR3
6 unique J



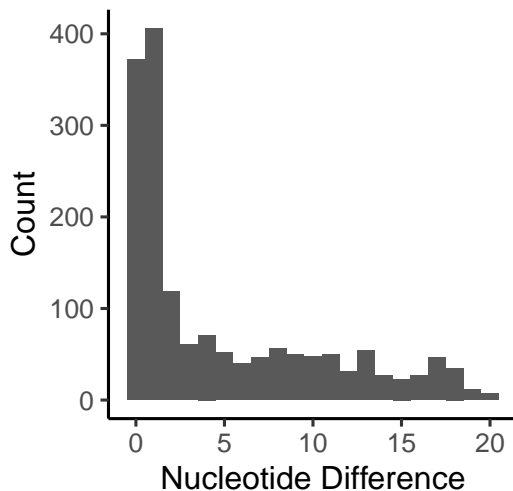
IGHV3-7*01

15212 sequences assigned
961 (6.3%) exact matches, in which:
652 unique CDR3
7 unique J



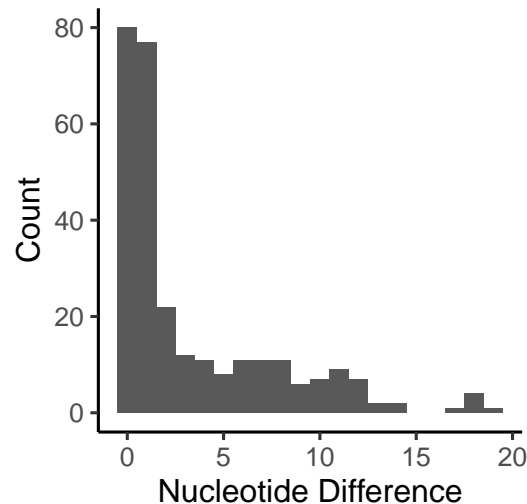
IGHV3-11*01

2527 sequences assigned
372 (14.7%) exact matches, in which:
242 unique CDR3
7 unique J



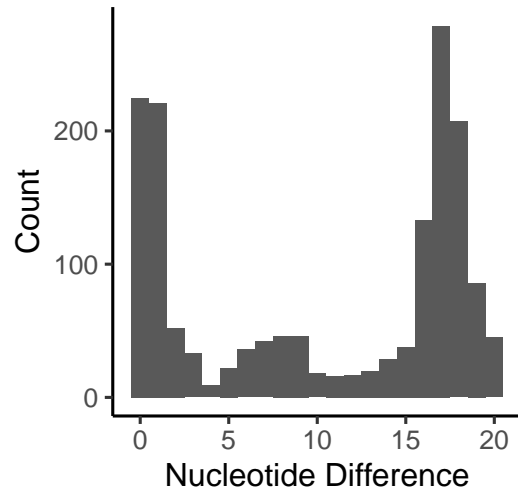
IGHV3-13*01

284 sequences assigned
80 (28.2%) exact matches, in which:
61 unique CDR3
6 unique J



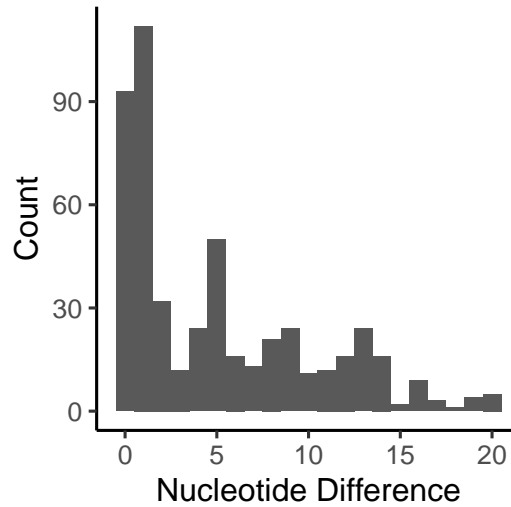
IGHV3-13*04

1928 sequences assigned
225 (11.7%) exact matches, in which:
146 unique CDR3
6 unique J



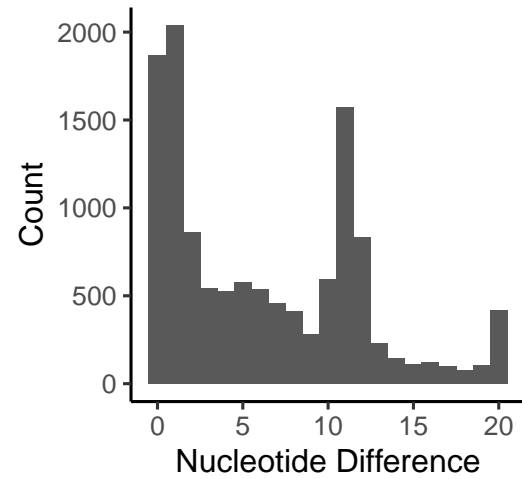
IGHV3-20*01_02

1707 sequences assigned
93 (5.4%) exact matches, in which:
56 unique CDR3
7 unique J



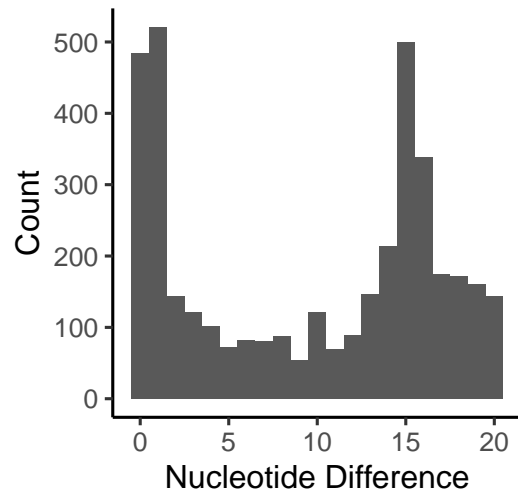
IGHV3-21*01_02

16101 sequences assigned
1867 (11.6%) exact matches, in which:
1152 unique CDR3
7 unique J



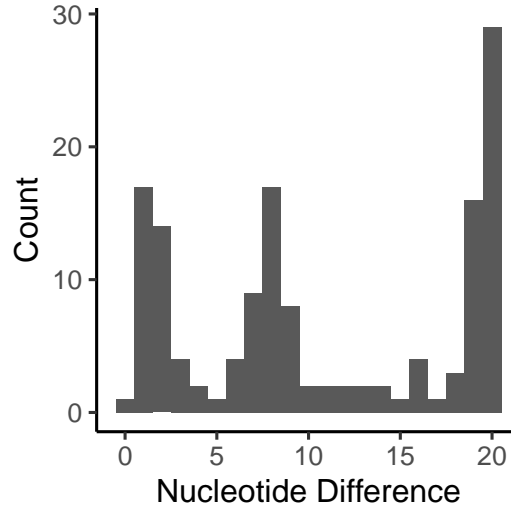
IGHV3-15*01_02

5730 sequences assigned
484 (8.4%) exact matches, in which:
282 unique CDR3
6 unique J



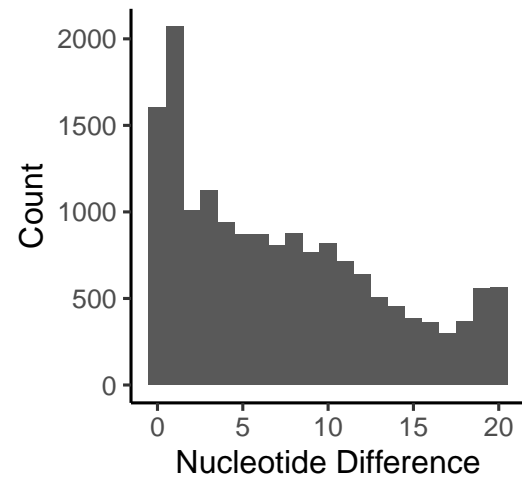
IGHV3-20*03_04

222 sequences assigned
1 (0.5%) exact matches, in which:
1 unique CDR3
1 unique J



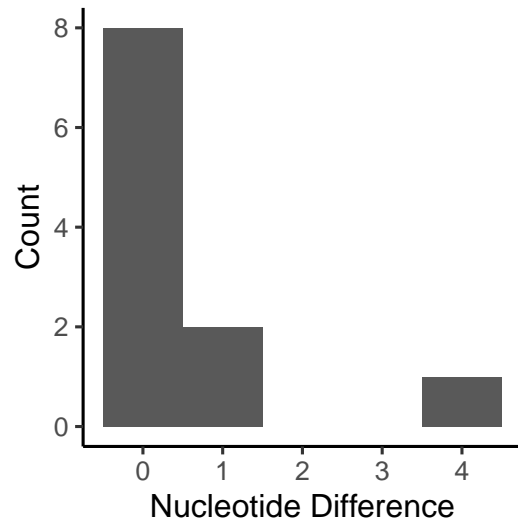
IGHV3-23*01_04

25659 sequences assigned
1603 (6.2%) exact matches, in which:
910 unique CDR3
7 unique J



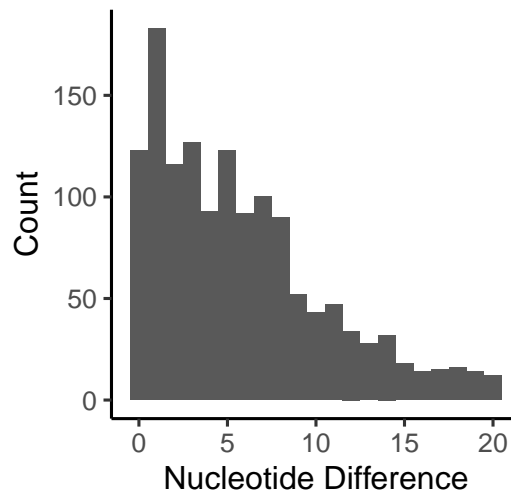
IGHV3-19*01

11 sequences assigned
8 (72.7%) exact matches, in which:
8 unique CDR3
4 unique J



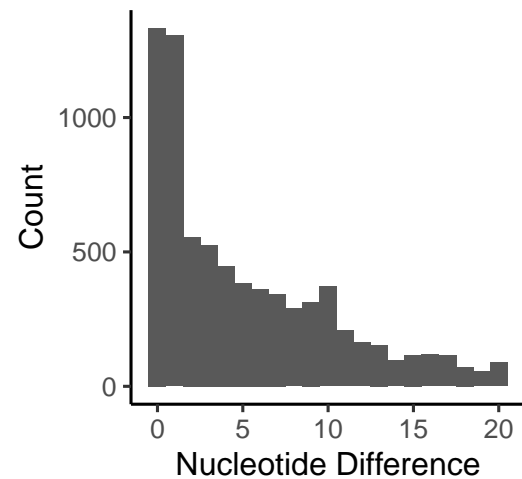
IGHV3-21*04

1546 sequences assigned
123 (8%) exact matches, in which:
103 unique CDR3
6 unique J



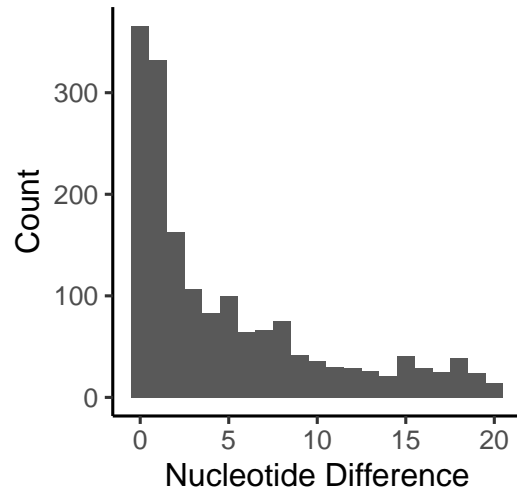
IGHV3-30-3*01

7871 sequences assigned
1333 (16.9%) exact matches, in which:
879 unique CDR3
7 unique J



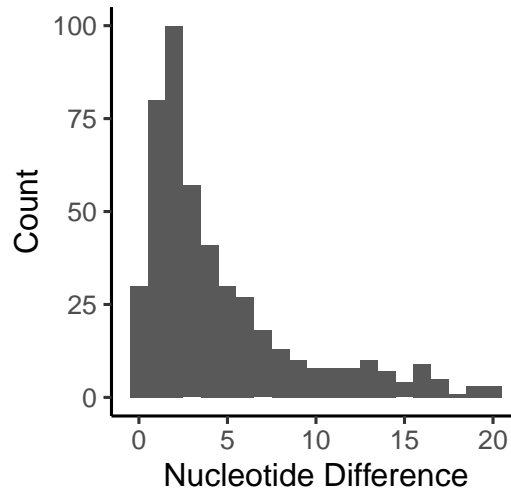
IGHV3-30*03

1787 sequences assigned
366 (20.5%) exact matches, in which:
319 unique CDR3
7 unique J



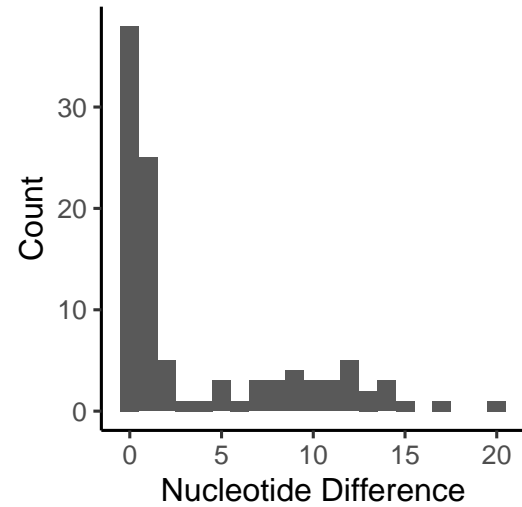
IGHV3-33*06

501 sequences assigned
30 (6%) exact matches, in which:
29 unique CDR3
4 unique J



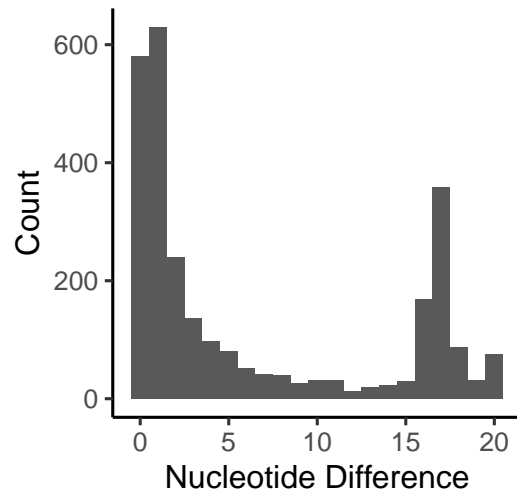
IGHV3-43*01

104 sequences assigned
38 (36.5%) exact matches, in which:
23 unique CDR3
6 unique J



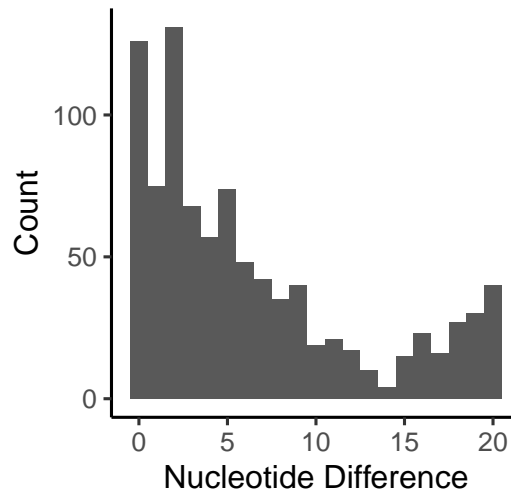
IGHV3-33*01

5047 sequences assigned
580 (11.5%) exact matches, in which:
394 unique CDR3
7 unique J



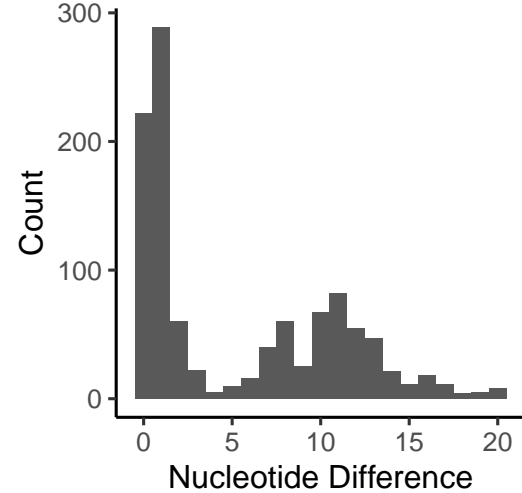
IGHV3-33*08

1110 sequences assigned
126 (11.4%) exact matches, in which:
85 unique CDR3
6 unique J



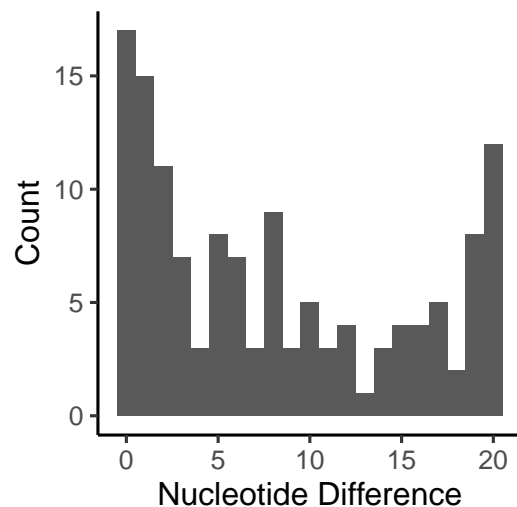
IGHV3-43*02

1091 sequences assigned
222 (20.3%) exact matches, in which:
132 unique CDR3
6 unique J



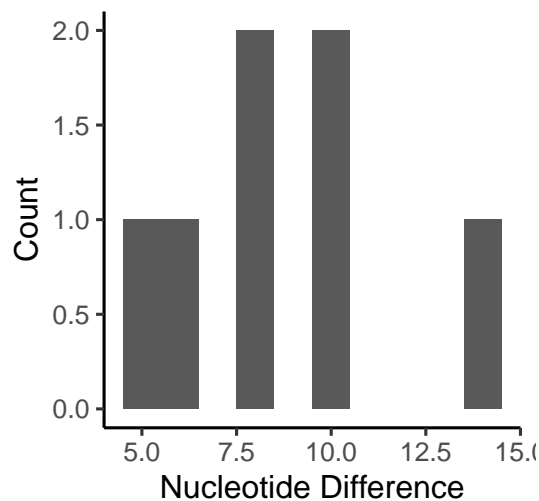
IGHV3-33*05

158 sequences assigned
17 (10.8%) exact matches, in which:
17 unique CDR3
5 unique J



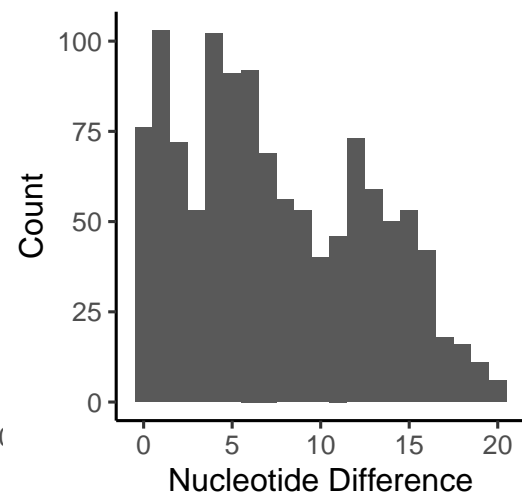
IGHV3-35*01

7 sequences assigned
No exact matches.



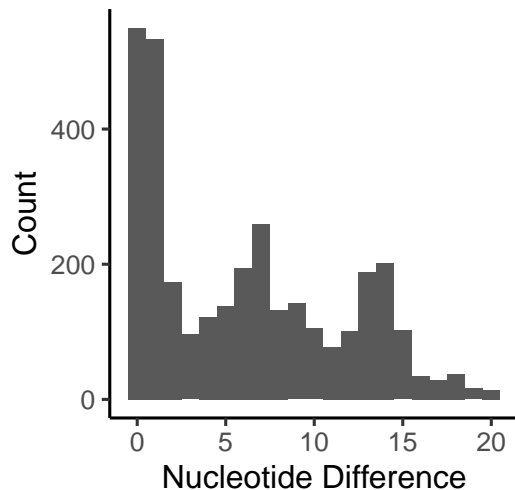
IGHV3-48*01

1225 sequences assigned
76 (6.2%) exact matches, in which:
70 unique CDR3
5 unique J



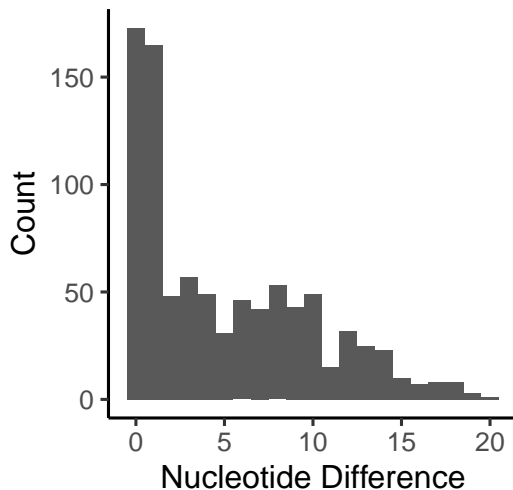
IGHV3-48*02

3290 sequences assigned
550 (16.7%) exact matches, in which:
361 unique CDR3
7 unique J



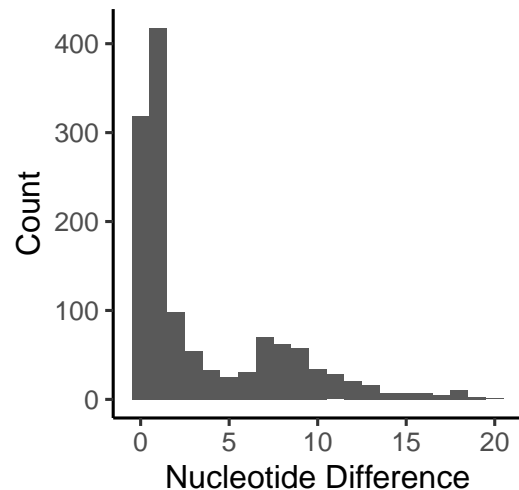
IGHV3-49*04

893 sequences assigned
173 (19.4%) exact matches, in which:
103 unique CDR3
7 unique J



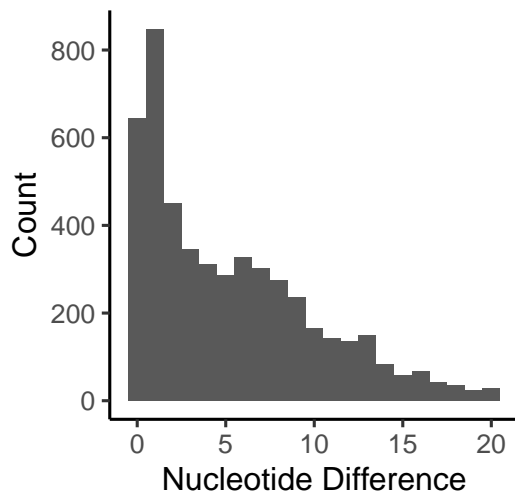
IGHV3-53*04

1319 sequences assigned
319 (24.2%) exact matches, in which:
197 unique CDR3
7 unique J



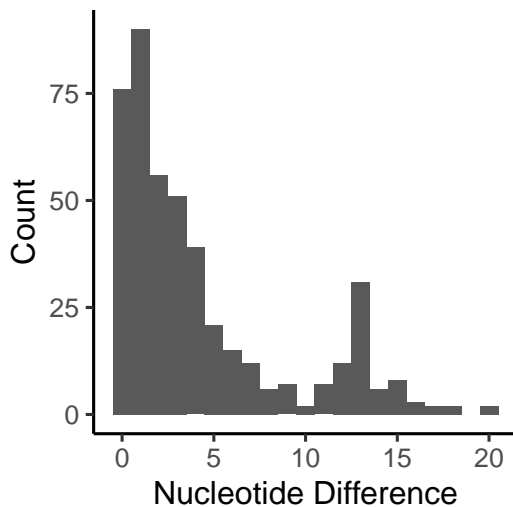
IGHV3-48*03

5134 sequences assigned
644 (12.5%) exact matches, in which:
389 unique CDR3
7 unique J



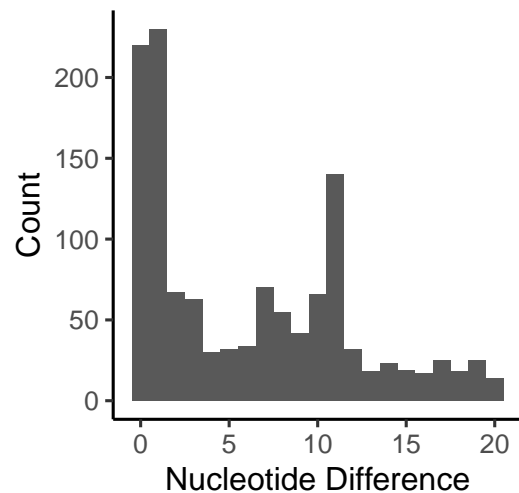
IGHV3-49*03_05

450 sequences assigned
76 (16.9%) exact matches, in which:
46 unique CDR3
5 unique J



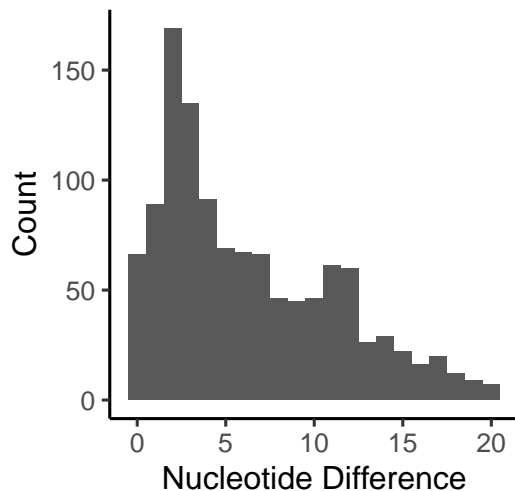
IGHV3-53*01_02

1384 sequences assigned
220 (15.9%) exact matches, in which:
155 unique CDR3
7 unique J



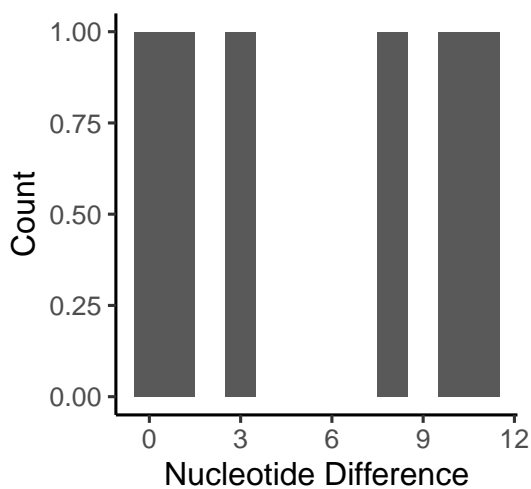
IGHV3-48*04

1212 sequences assigned
66 (5.4%) exact matches, in which:
62 unique CDR3
6 unique J



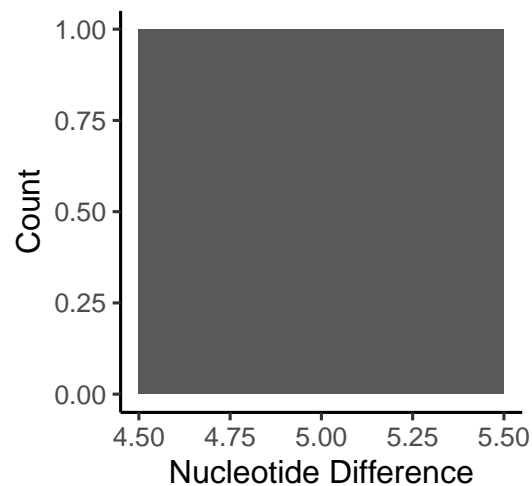
IGHV3-52*01_03

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



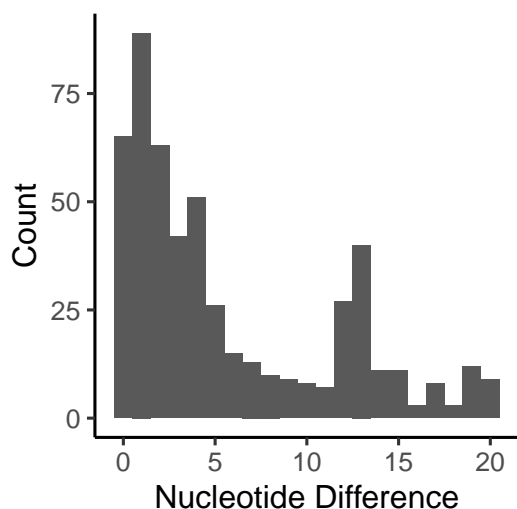
IGHV3-62*03

1 sequences assigned
No exact matches.



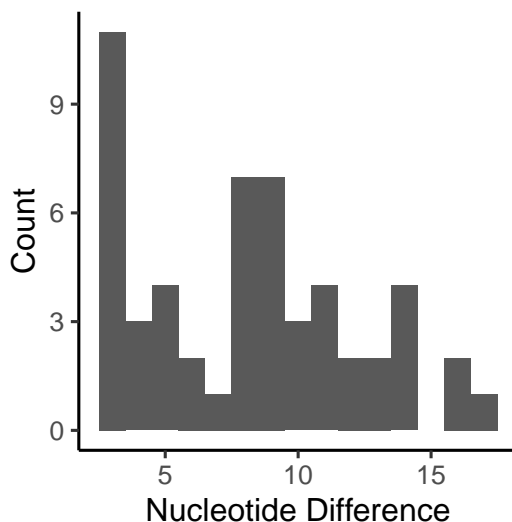
IGHV3-64*01

548 sequences assigned
65 (11.9%) exact matches, in which:
48 unique CDR3
5 unique J



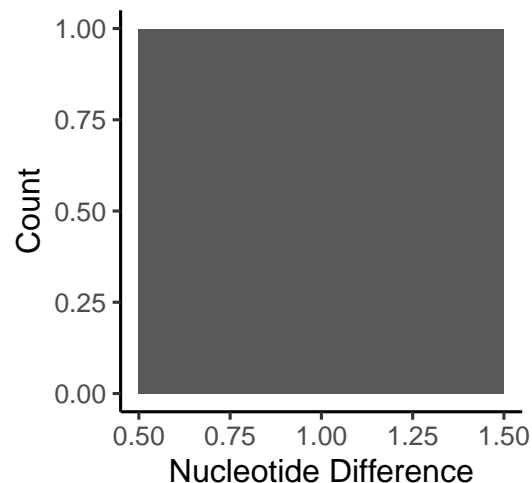
IGHV3-69-1*01

93 sequences assigned
No exact matches.



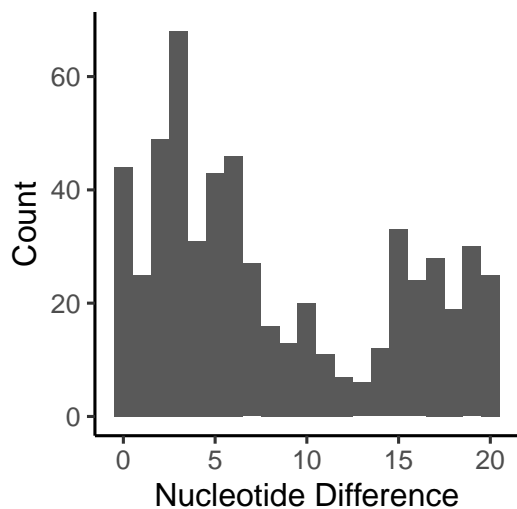
IGHV3-71*01_04

1 sequences assigned
No exact matches.



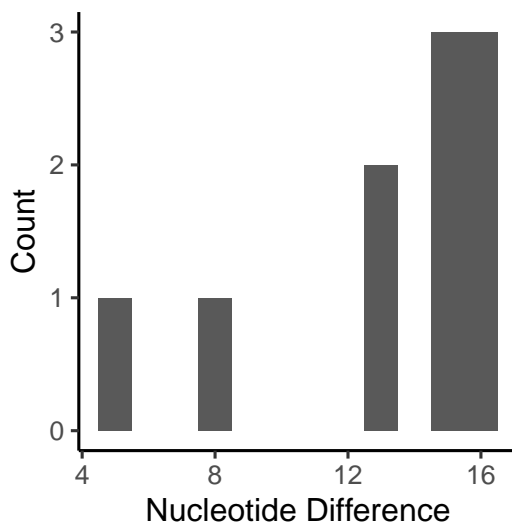
IGHV3-64*04

3008 sequences assigned
44 (1.5%) exact matches, in which:
43 unique CDR3
5 unique J



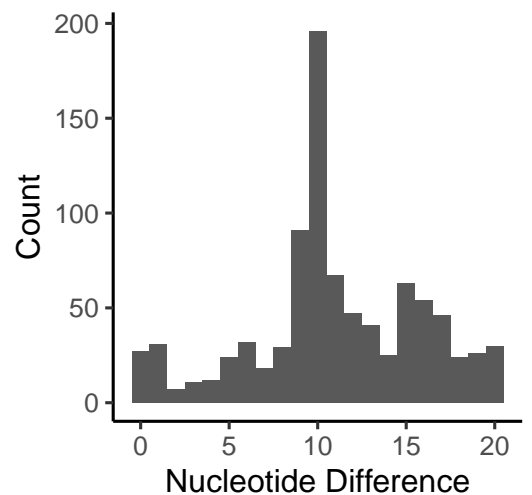
IGHV3-69-1*02

25 sequences assigned
No exact matches.



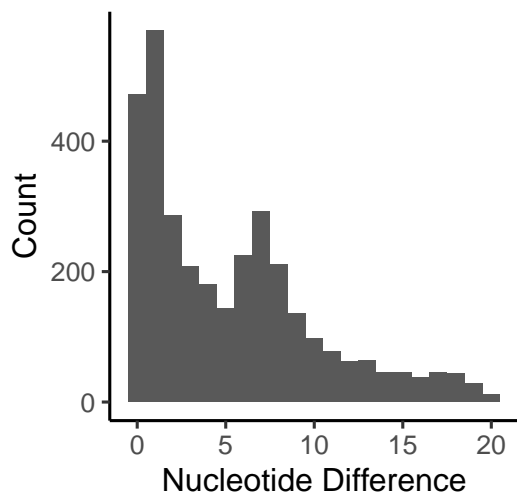
IGHV3-72*01

994 sequences assigned
27 (2.7%) exact matches, in which:
13 unique CDR3
4 unique J



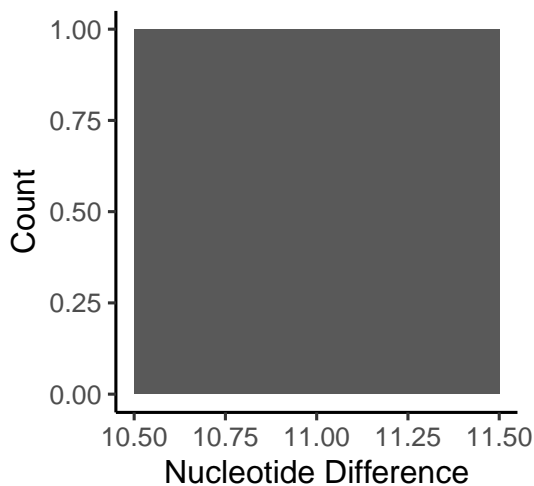
IGHV3-66*01

3357 sequences assigned
472 (14.1%) exact matches, in which:
333 unique CDR3
7 unique J



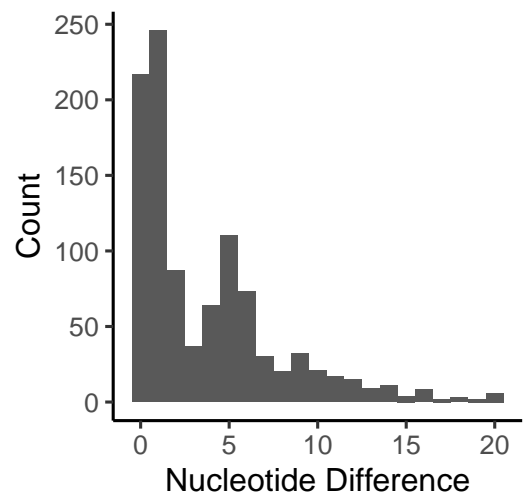
IGHV3-71*03

1 sequences assigned
No exact matches.



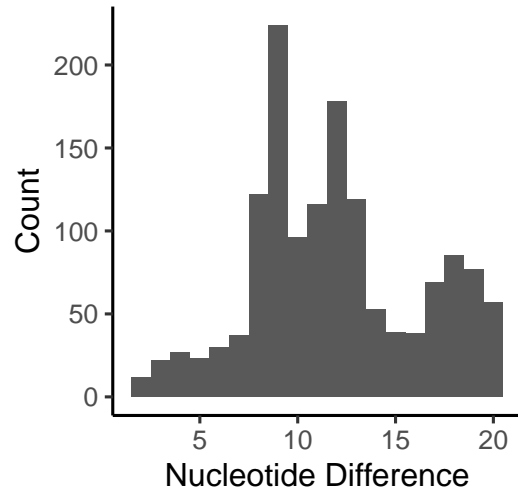
IGHV3-73*01_02

2577 sequences assigned
217 (8.4%) exact matches, in which:
127 unique CDR3
6 unique J



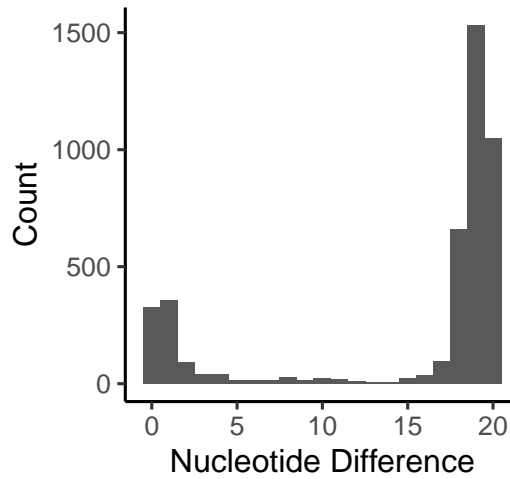
IGHV3-74*03

2527 sequences assigned
No exact matches.



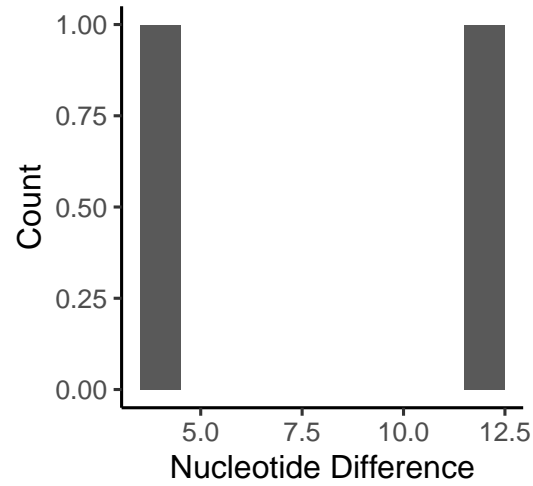
IGHV3-64D*09

5246 sequences assigned
329 (6.3%) exact matches, in which:
191 unique CDR3
7 unique J



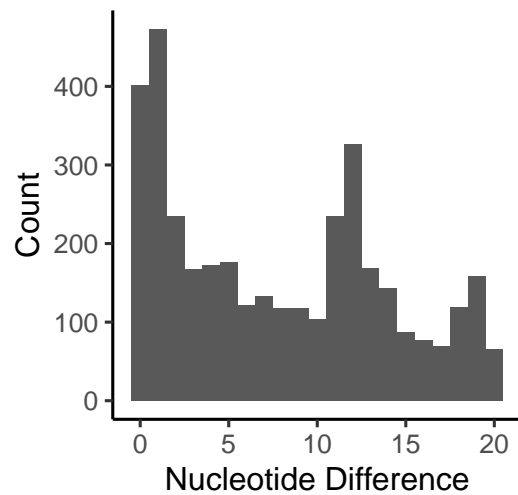
IGHV4-28*03

2 sequences assigned
No exact matches.



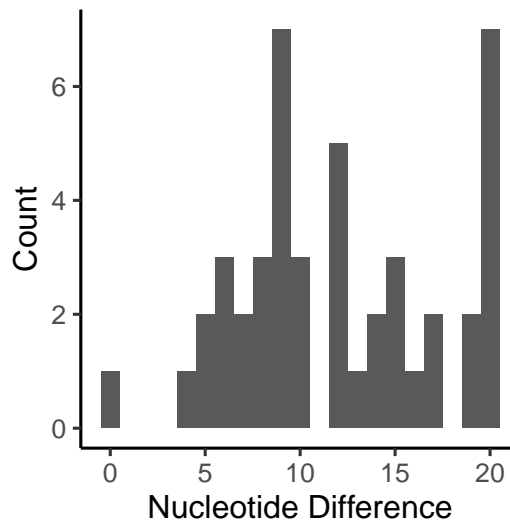
IGHV3-74*01_02

3861 sequences assigned
402 (10.4%) exact matches, in which:
284 unique CDR3
7 unique J



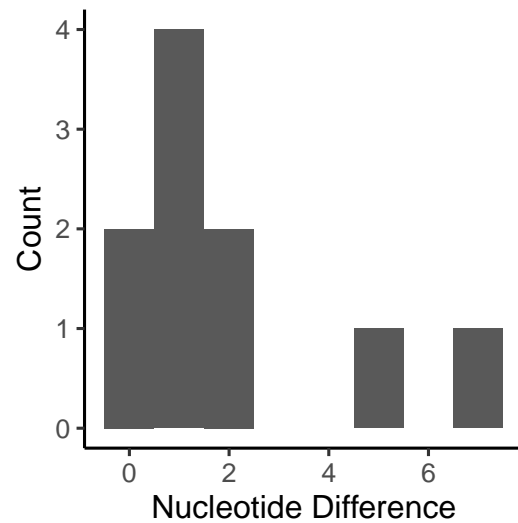
IGHV3-NL1*01

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



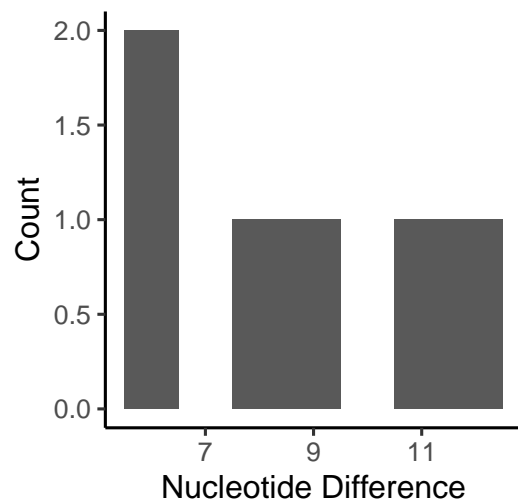
IGHV4-28*01_07

10 sequences assigned
2 (20%) exact matches, in which:
1 unique CDR3
1 unique J



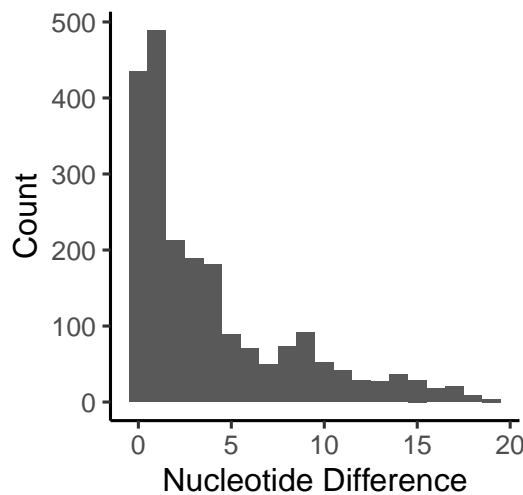
IGHV3-43D*04

6 sequences assigned
No exact matches.



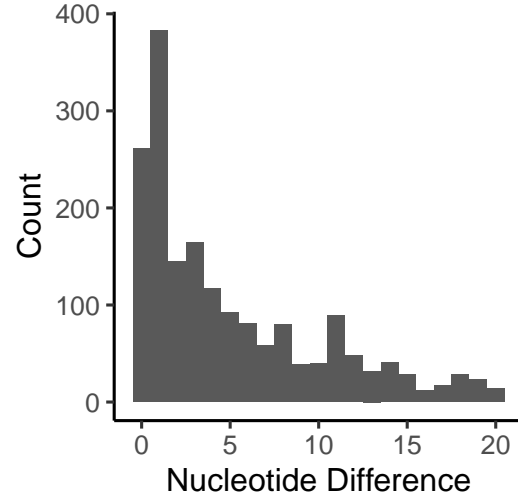
IGHV4-4*07

2219 sequences assigned
435 (19.6%) exact matches, in which:
340 unique CDR3
7 unique J



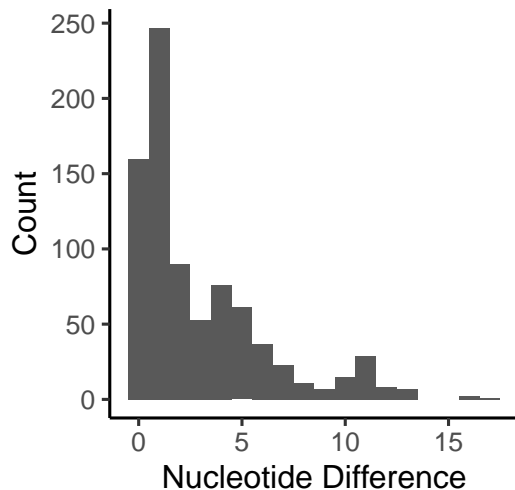
IGHV4-30-4*01

1887 sequences assigned
261 (13.8%) exact matches, in which:
202 unique CDR3
6 unique J



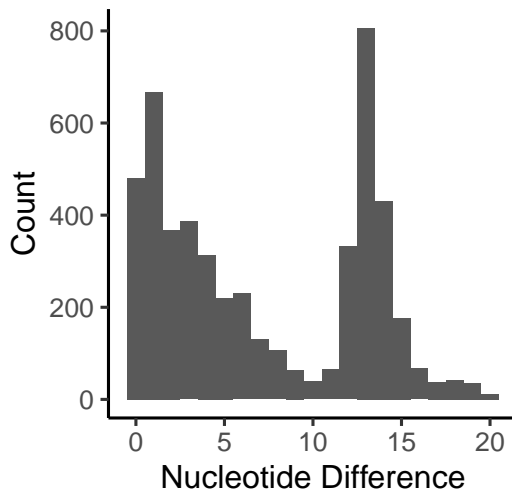
IGHV4-30-2*01

886 sequences assigned
160 (18.1%) exact matches, in which:
72 unique CDR3
7 unique J



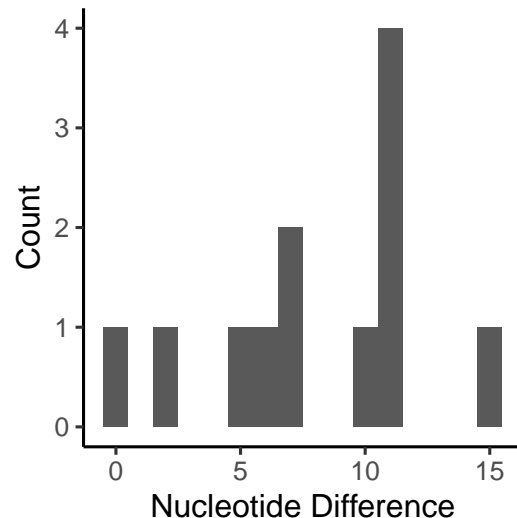
IGHV4-31*02

5155 sequences assigned
480 (9.3%) exact matches, in which:
367 unique CDR3
7 unique J



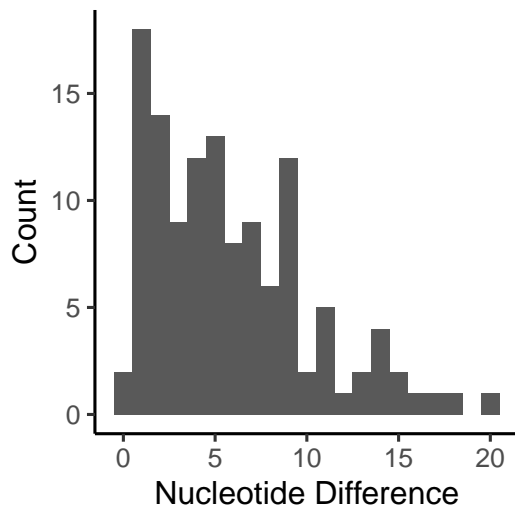
IGHV4-38-2*02

71 sequences assigned
1 (1.4%) exact matches, in which:
1 unique CDR3
1 unique J



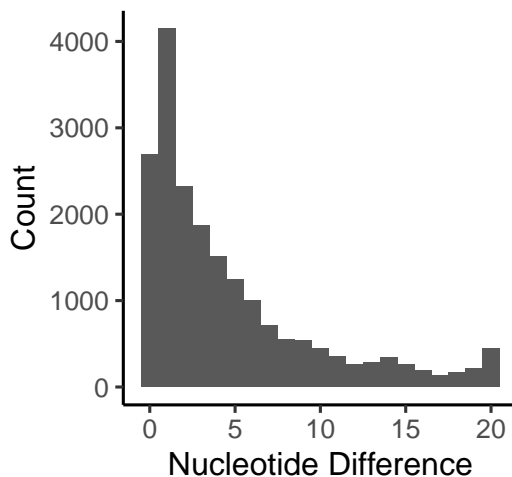
IGHV4-30-2*03

128 sequences assigned
2 (1.6%) exact matches, in which:
2 unique CDR3
2 unique J



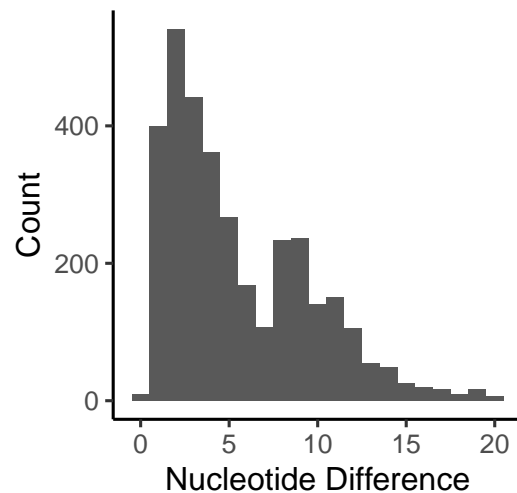
IGHV4-34*01_02

22519 sequences assigned
2687 (11.9%) exact matches, in which:
1735 unique CDR3
7 unique J



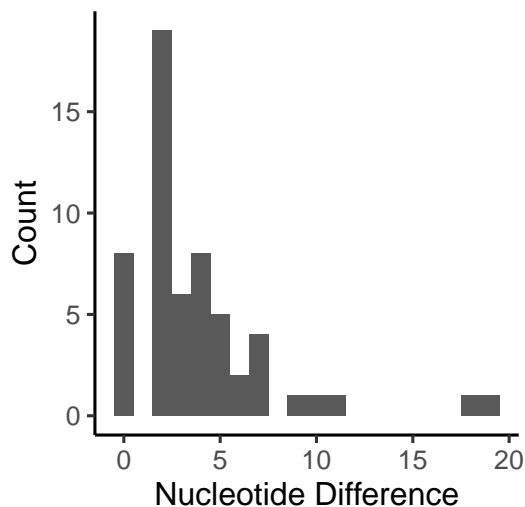
IGHV4-39*07

3565 sequences assigned
10 (0.3%) exact matches, in which:
10 unique CDR3
4 unique J



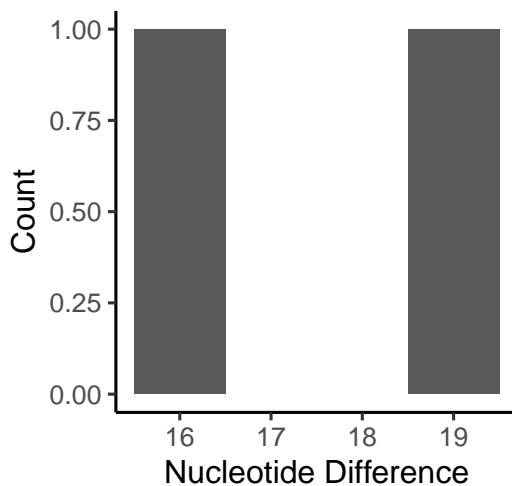
IGHV4-30-2*05

57 sequences assigned
8 (14%) exact matches, in which:
8 unique CDR3
3 unique J



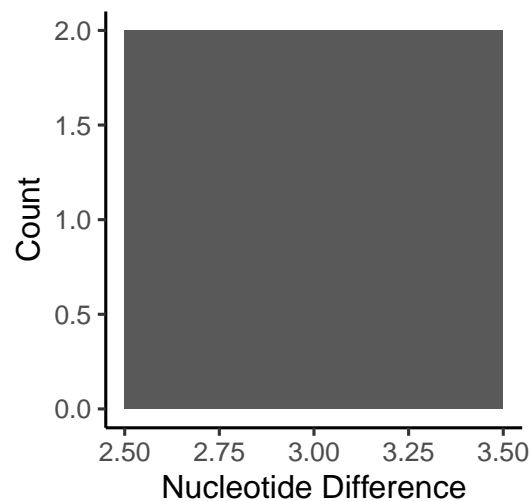
IGHV4-38-2*01

3 sequences assigned
No exact matches.



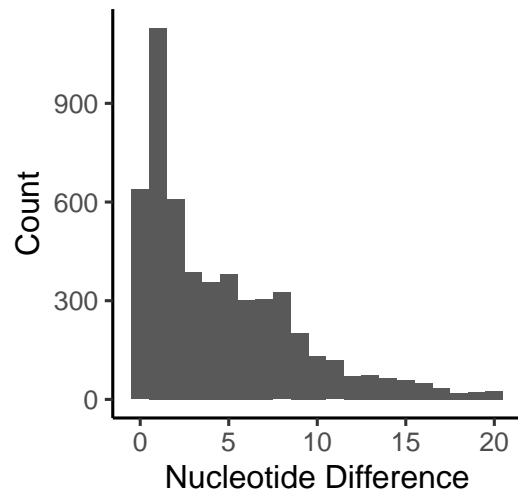
IGHV4-55*09

2 sequences assigned
No exact matches.



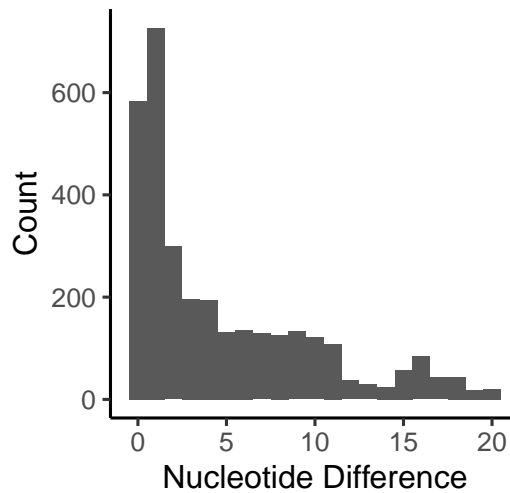
IGHV4–59*08

5510 sequences assigned
638 (11.6%) exact matches, in which:
467 unique CDR3
7 unique J



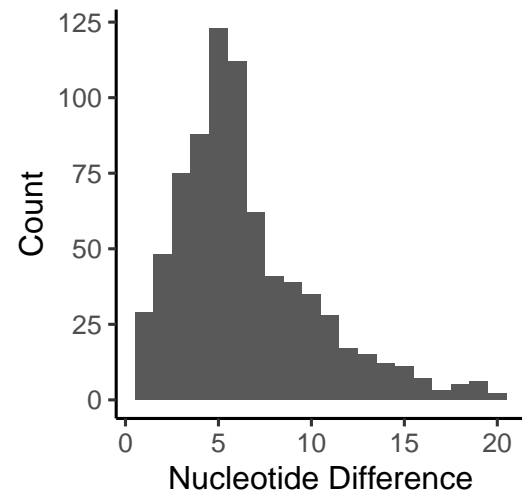
IGHV4–59*13

3416 sequences assigned
584 (17.1%) exact matches, in which:
454 unique CDR3
7 unique J



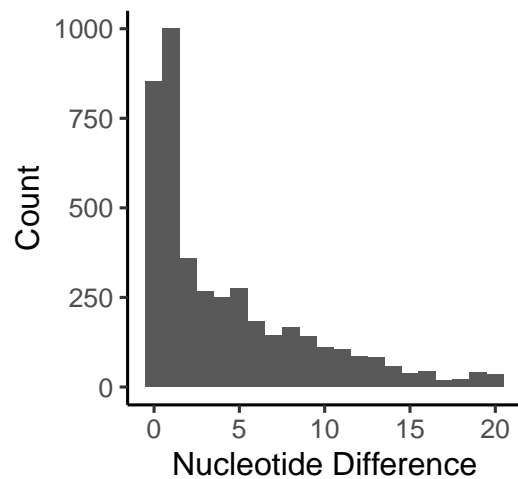
IGHV4–61*08

795 sequences assigned
No exact matches.



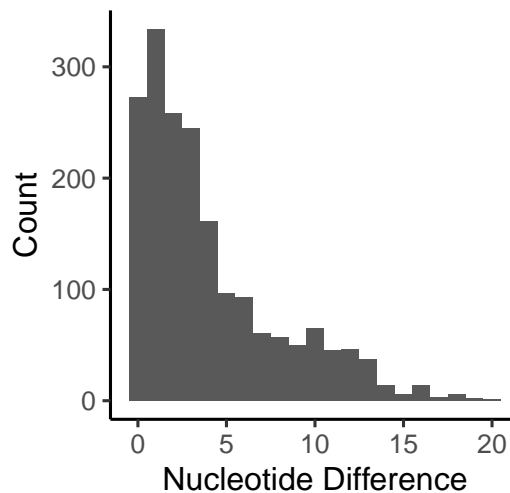
IGHV4–59*01_07

5647 sequences assigned
853 (15.1%) exact matches, in which:
667 unique CDR3
7 unique J



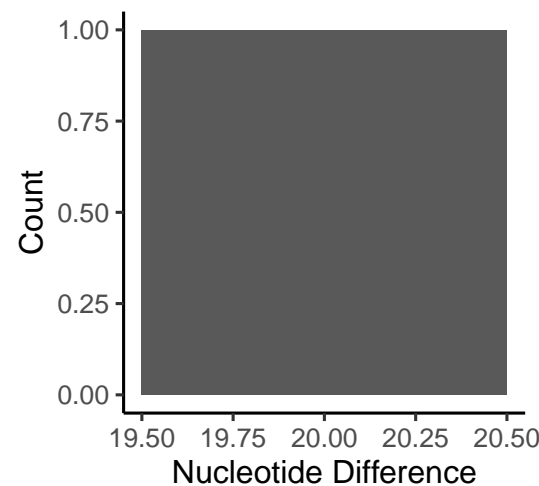
IGHV4–61*01

1911 sequences assigned
273 (14.3%) exact matches, in which:
224 unique CDR3
7 unique J



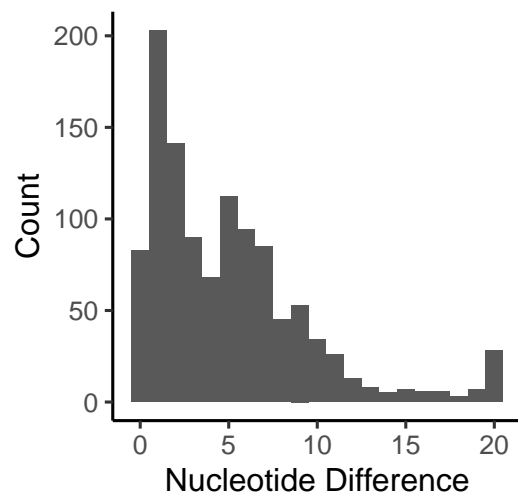
IGHV1/OR15–2*01

1 sequences assigned
No exact matches.



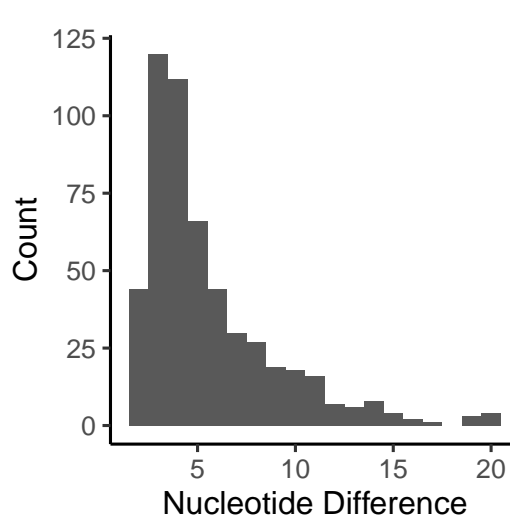
IGHV4–59*12

1246 sequences assigned
83 (6.7%) exact matches, in which:
75 unique CDR3
6 unique J



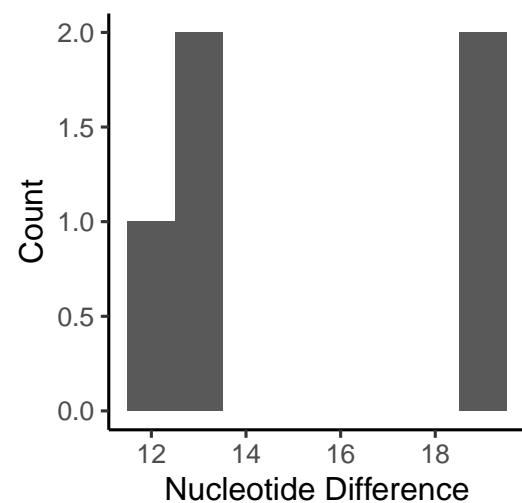
IGHV4–61*05

544 sequences assigned
No exact matches.



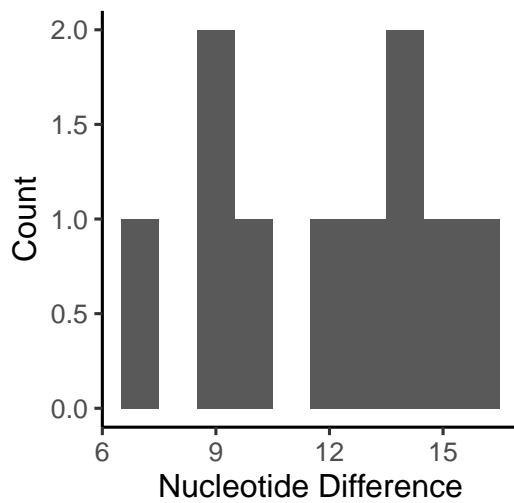
IGHV1/OR15–2*02_03

6 sequences assigned
No exact matches.



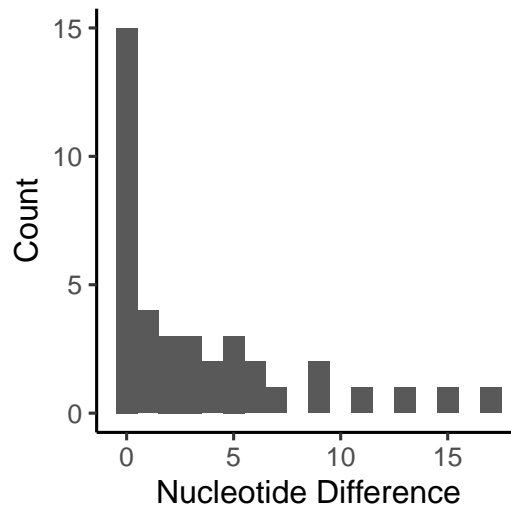
IGHV1/OR15-3*02

10 sequences assigned
No exact matches.



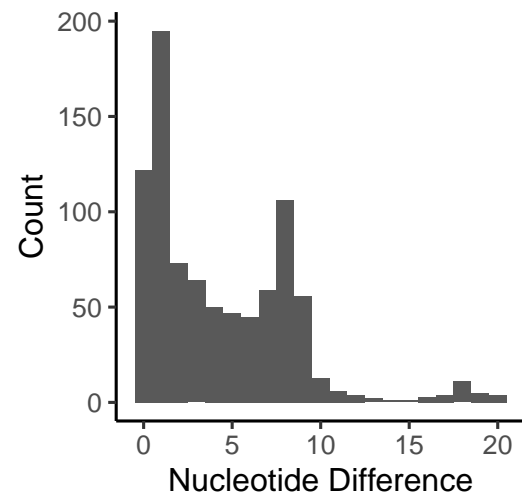
IGHV5-51*04

44 sequences assigned
15 (34.1%) exact matches, in which:
14 unique CDR3
4 unique J



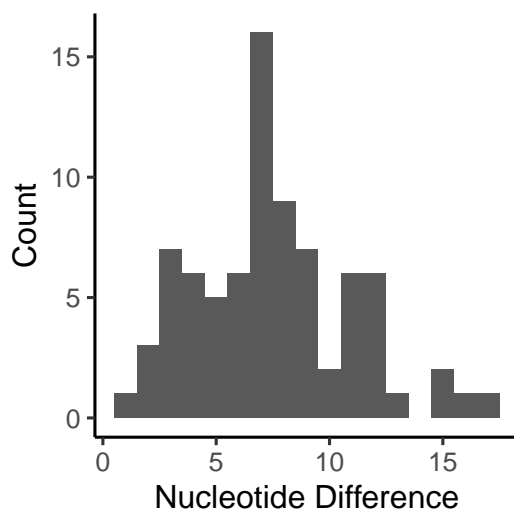
IGHV6-1*01_02

912 sequences assigned
122 (13.4%) exact matches, in which:
89 unique CDR3
5 unique J



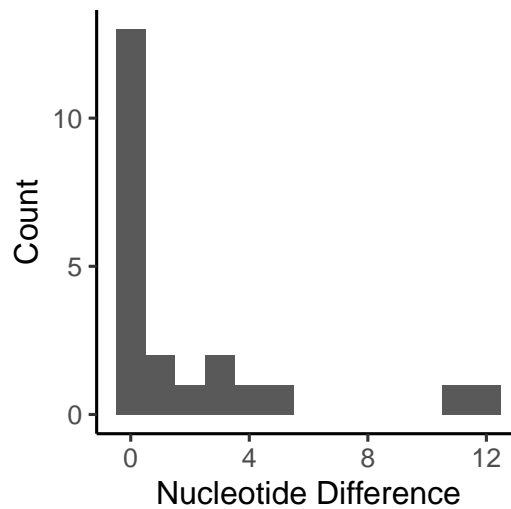
IGHV4/OR15-8*01

87 sequences assigned
No exact matches.



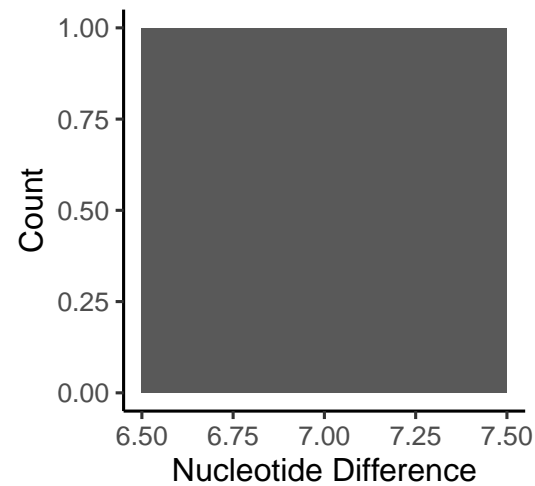
IGHV5-51*06

27 sequences assigned
13 (48.1%) exact matches, in which:
13 unique CDR3
4 unique J



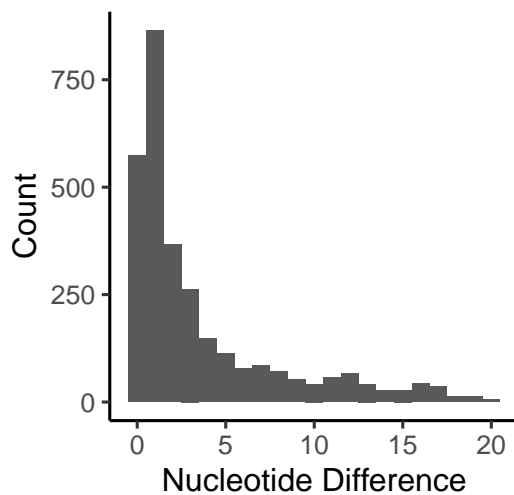
IGHV3/OR16-10*01_03

1 sequences assigned
No exact matches.



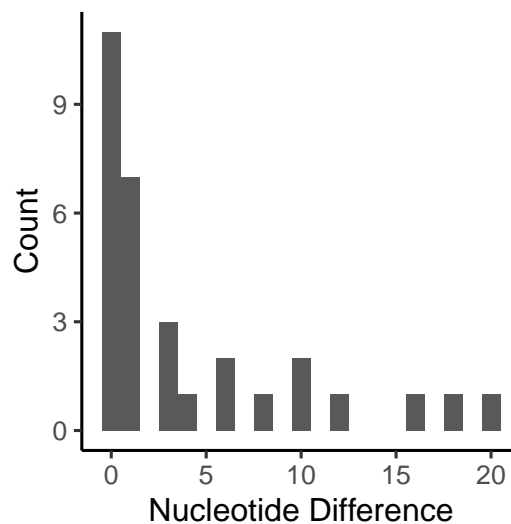
IGHV5-10-1*01_03

3000 sequences assigned
574 (19.1%) exact matches, in which:
366 unique CDR3
7 unique J



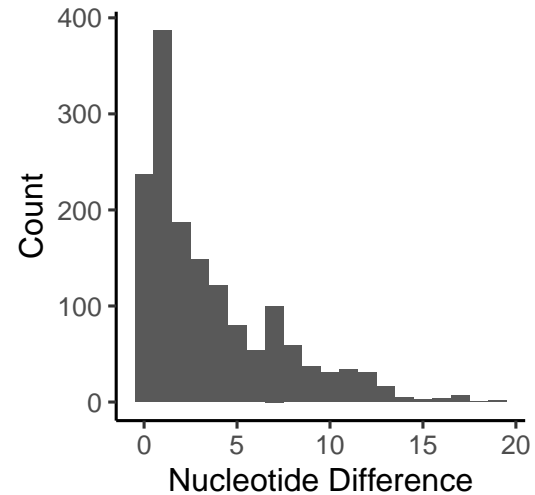
IGHV5-51*07

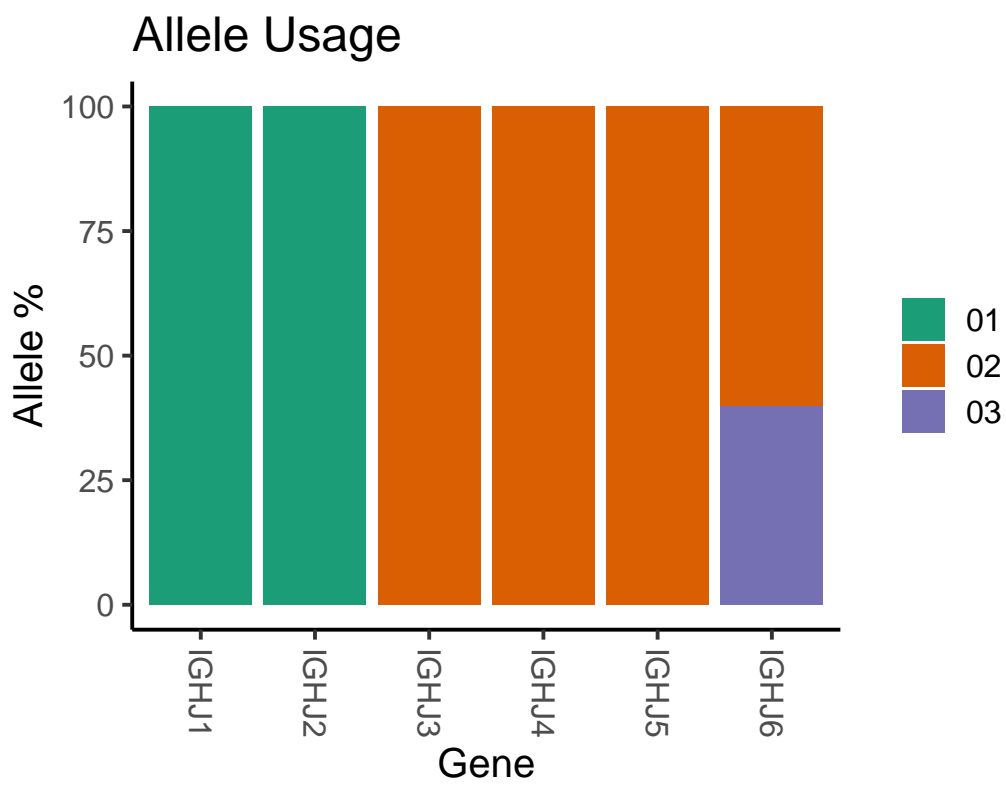
35 sequences assigned
11 (31.4%) exact matches, in which:
10 unique CDR3
4 unique J



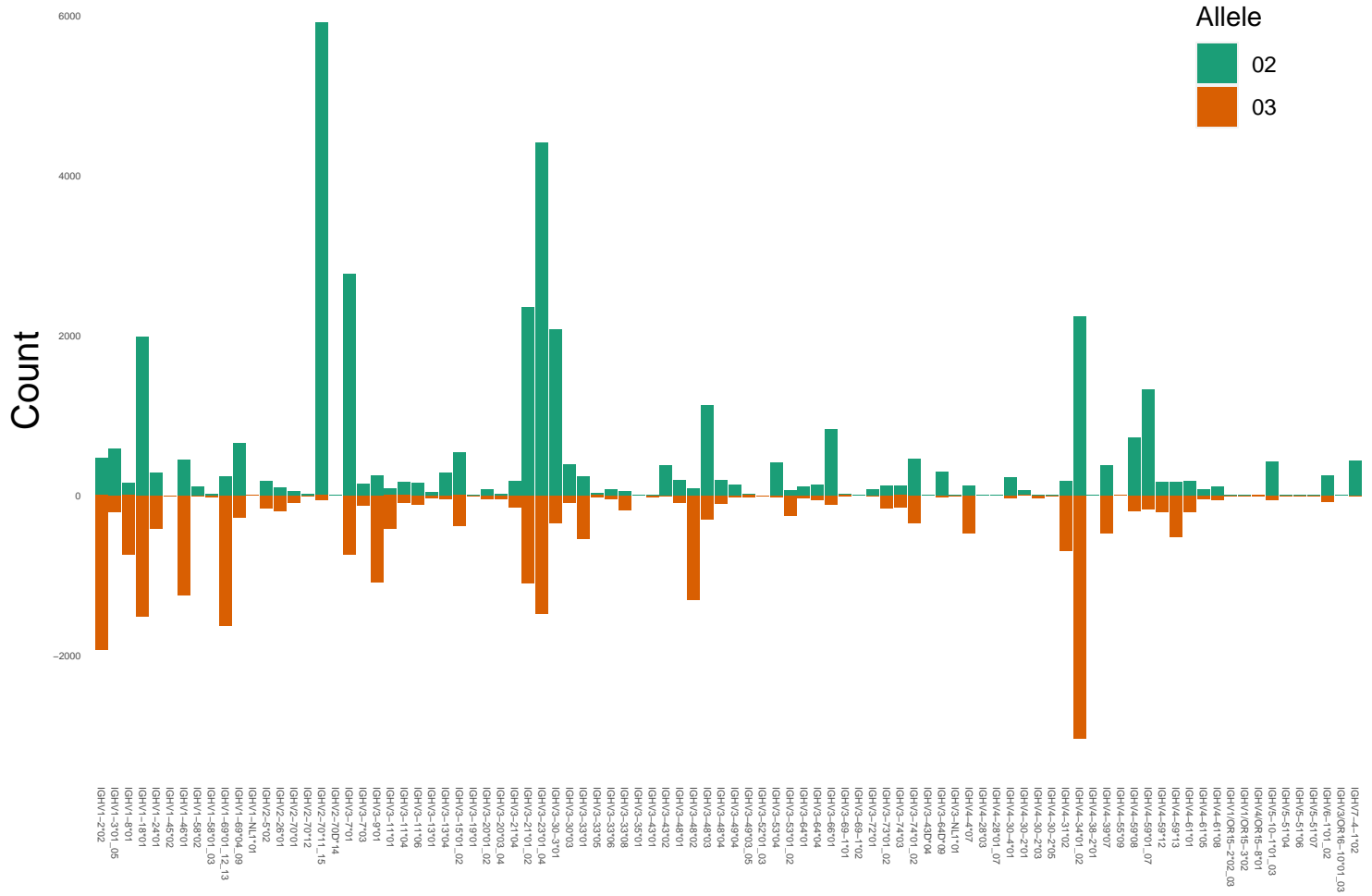
IGHV7-4-1*02

1716 sequences assigned
237 (13.8%) exact matches, in which:
181 unique CDR3
6 unique J





Sequence Count by IGHJ6 allele usage



[illegible]