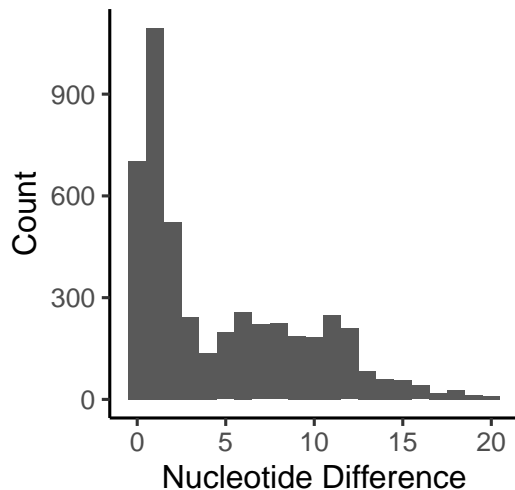


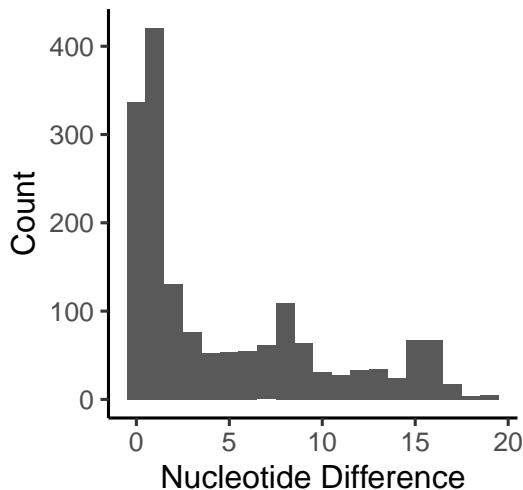
IGHV1-2*02

4803 sequences assigned
704 (14.7%) exact matches, in which:
595 unique CDR3
7 unique J



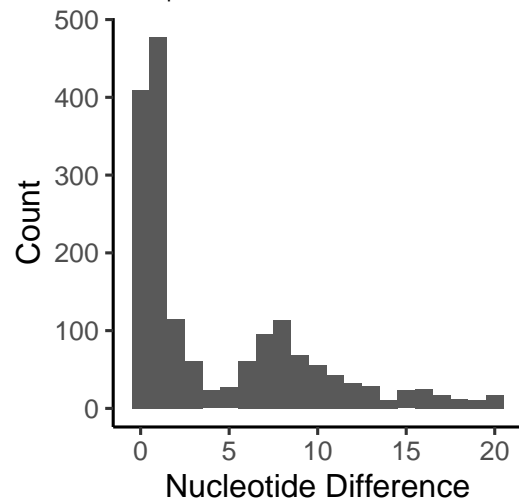
IGHV1-3*01_05

1682 sequences assigned
337 (20%) exact matches, in which:
254 unique CDR3
6 unique J



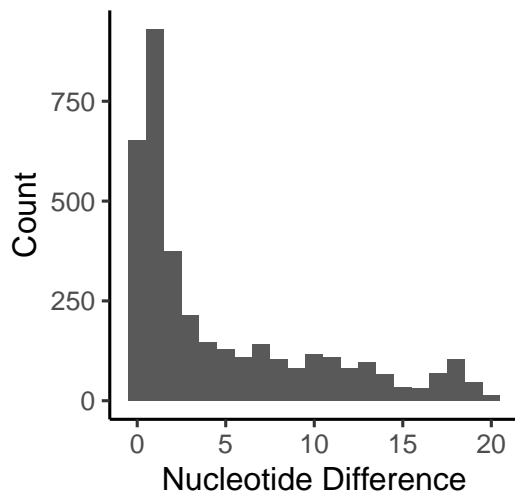
IGHV1-18*04

1863 sequences assigned
409 (22%) exact matches, in which:
359 unique CDR3
7 unique J



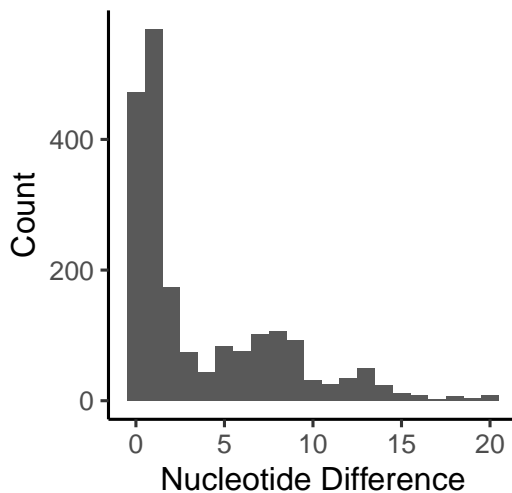
IGHV1-2*06

3795 sequences assigned
653 (17.2%) exact matches, in which:
549 unique CDR3
7 unique J



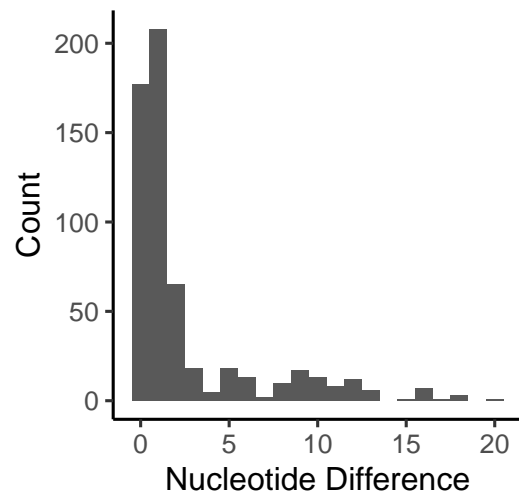
IGHV1-8*01

2311 sequences assigned
472 (20.4%) exact matches, in which:
404 unique CDR3
7 unique J



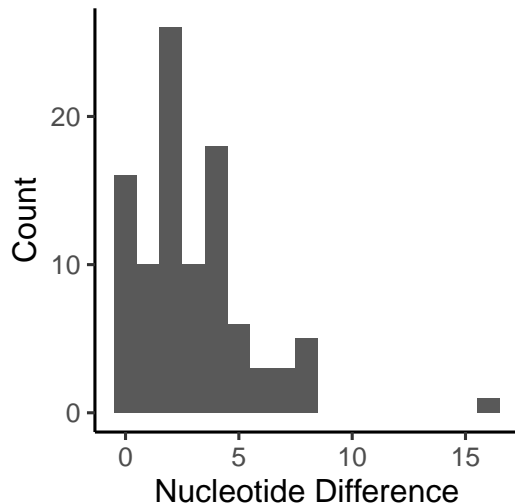
IGHV1-24*01

590 sequences assigned
177 (30%) exact matches, in which:
152 unique CDR3
7 unique J



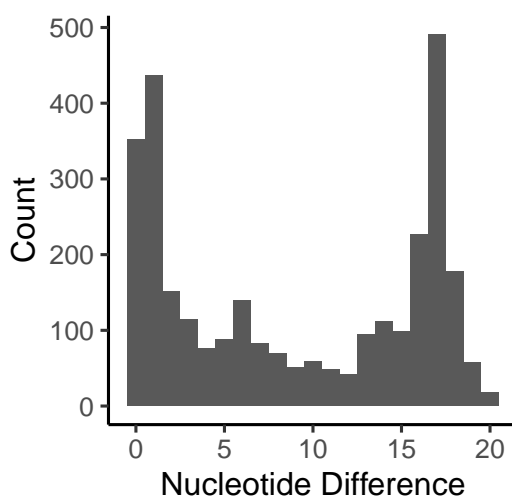
IGHV1-3*02

99 sequences assigned
16 (16.2%) exact matches, in which:
16 unique CDR3
5 unique J



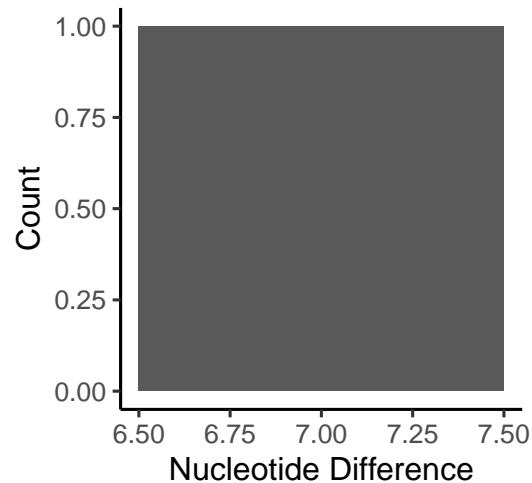
IGHV1-18*01

3067 sequences assigned
352 (11.5%) exact matches, in which:
304 unique CDR3
7 unique J



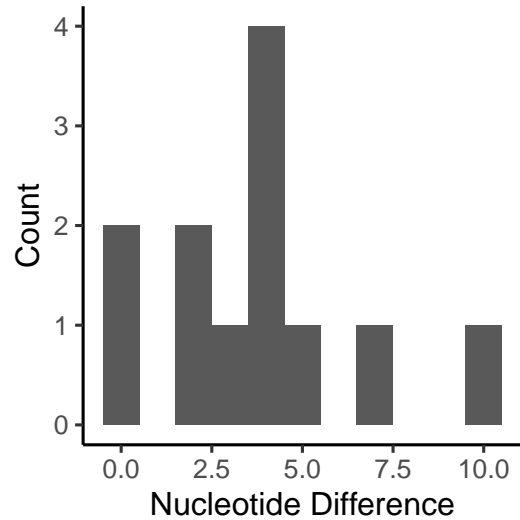
IGHV1-38-4*01

1 sequences assigned
No exact matches.



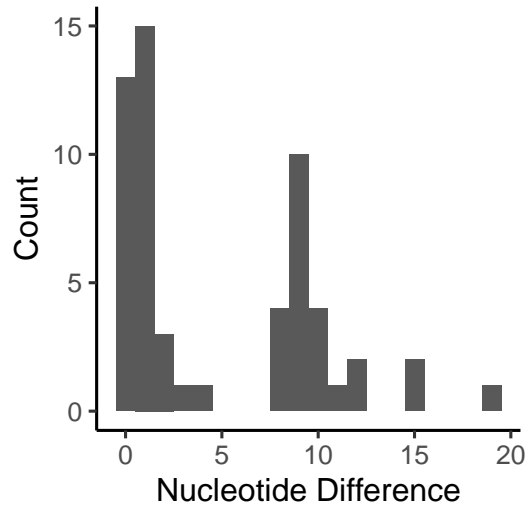
IGHV1-45*02

12 sequences assigned
2 (16.7%) exact matches, in which:
2 unique CDR3
2 unique J



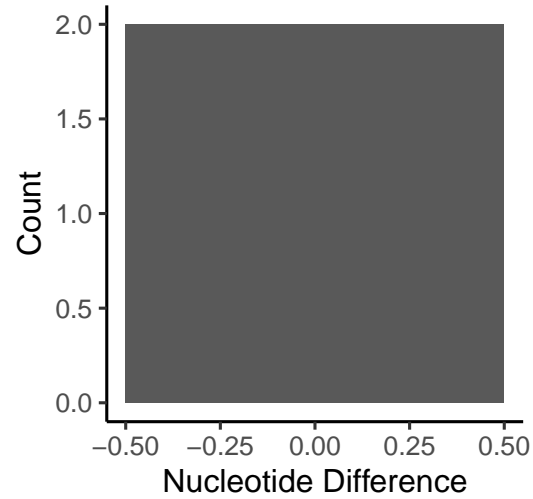
IGHV1-58*02

57 sequences assigned
13 (22.8%) exact matches, in which:
9 unique CDR3
5 unique J



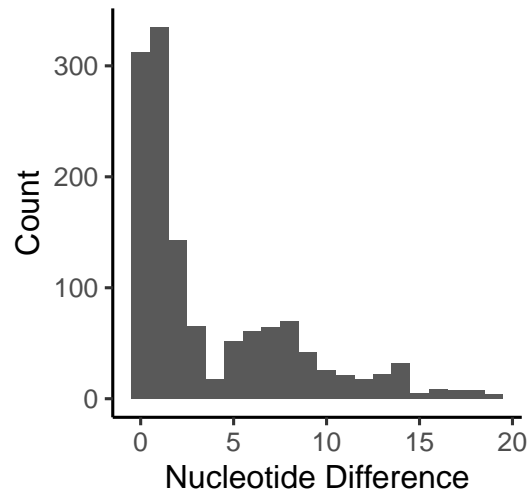
IGHV1-69-2*01

3 sequences assigned
2 (66.7%) exact matches, in which:
2 unique CDR3
1 unique J



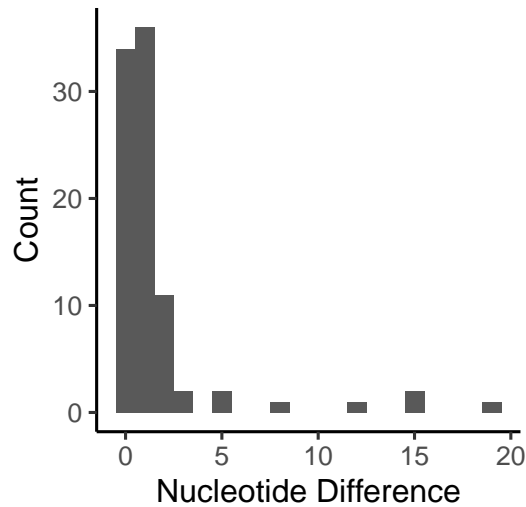
IGHV1-46*01

1379 sequences assigned
312 (22.6%) exact matches, in which:
288 unique CDR3
6 unique J



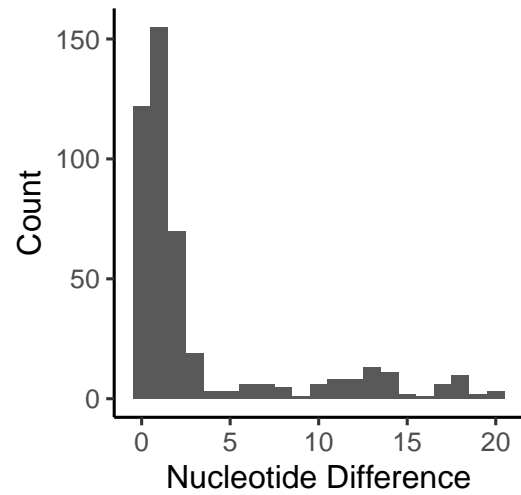
IGHV1-58*01_03

101 sequences assigned
34 (33.7%) exact matches, in which:
31 unique CDR3
6 unique J



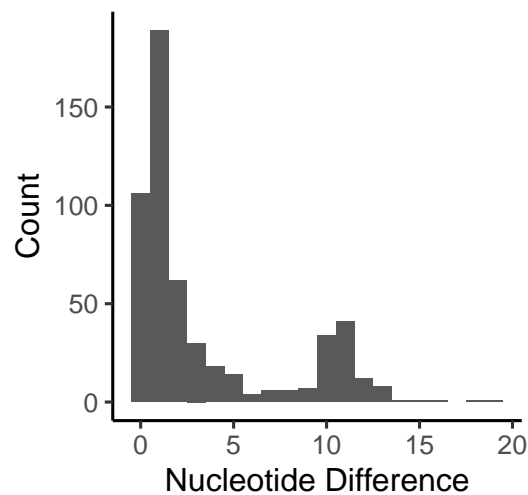
IGHV1-69*02

484 sequences assigned
122 (25.2%) exact matches, in which:
109 unique CDR3
7 unique J



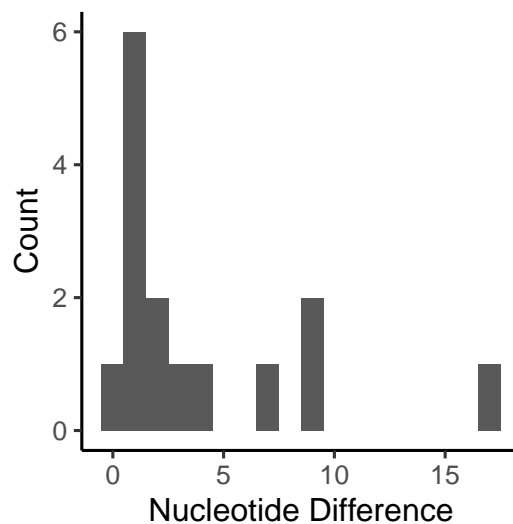
IGHV1-46*03

545 sequences assigned
106 (19.4%) exact matches, in which:
77 unique CDR3
6 unique J



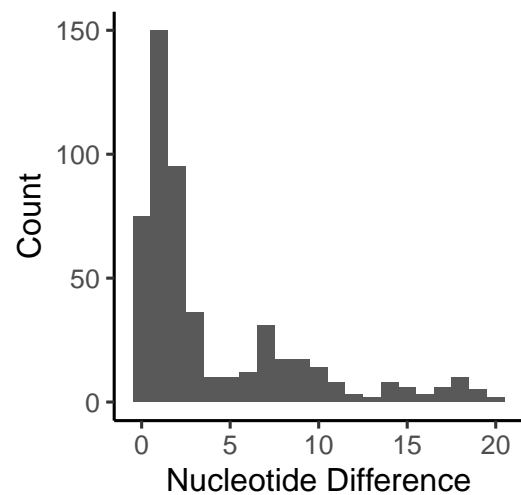
IGHV1-68*01

15 sequences assigned
1 (6.7%) exact matches, in which:
1 unique CDR3
1 unique J



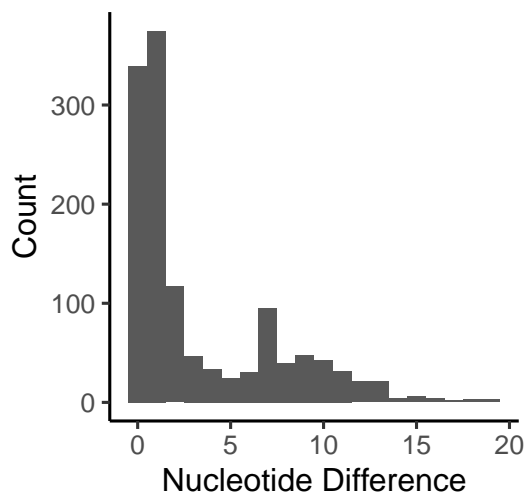
IGHV1-69*04_09

530 sequences assigned
75 (14.2%) exact matches, in which:
67 unique CDR3
7 unique J



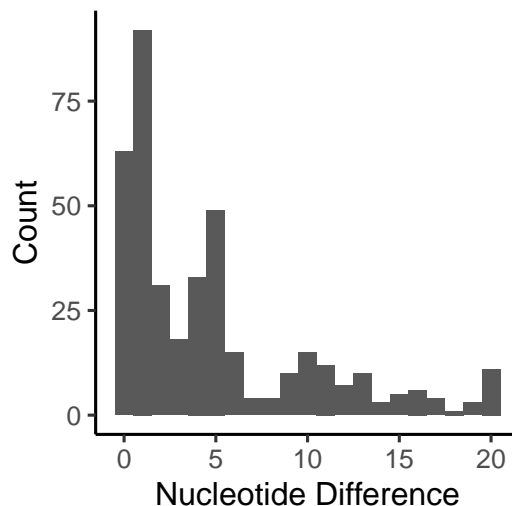
IGHV1–69*06_14

1326 sequences assigned
339 (25.6%) exact matches, in which:
309 unique CDR3
7 unique J



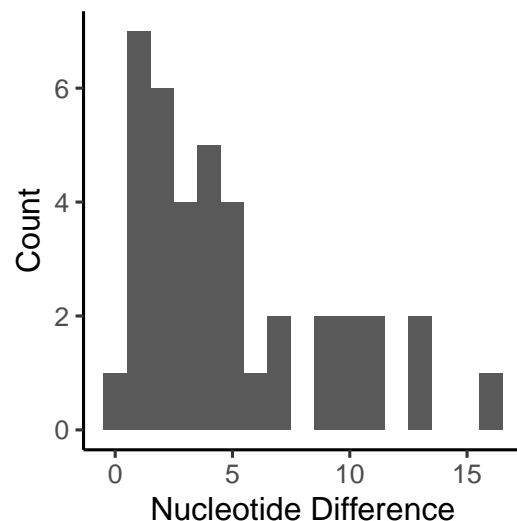
IGHV2–5*02

415 sequences assigned
63 (15.2%) exact matches, in which:
50 unique CDR3
6 unique J



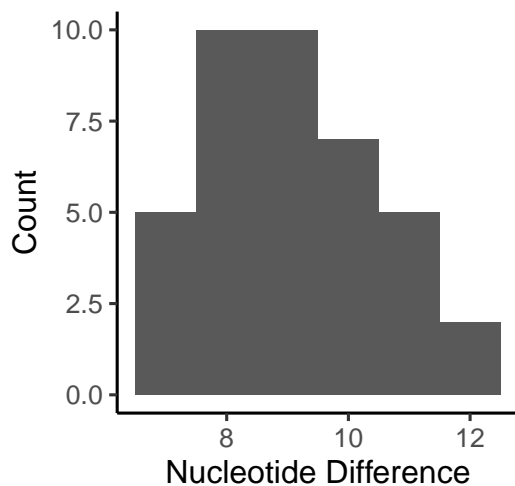
IGHV2–70*12

39 sequences assigned
1 (2.6%) exact matches, in which:
1 unique CDR3
1 unique J



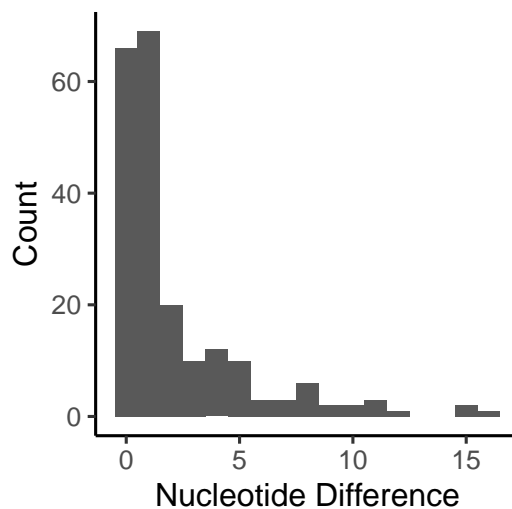
IGHV1–NL1*01

39 sequences assigned
No exact matches.



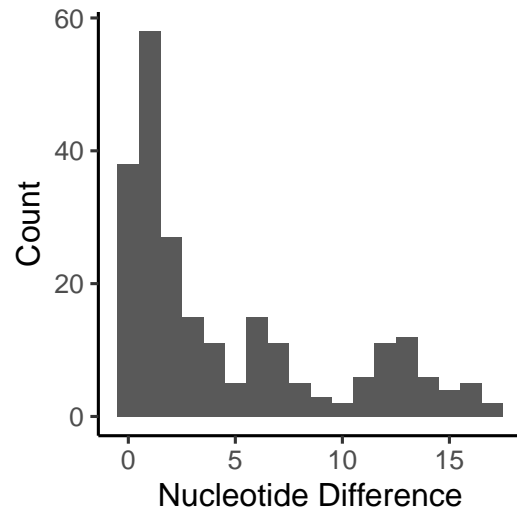
IGHV2–26*01

210 sequences assigned
66 (31.4%) exact matches, in which:
48 unique CDR3
5 unique J



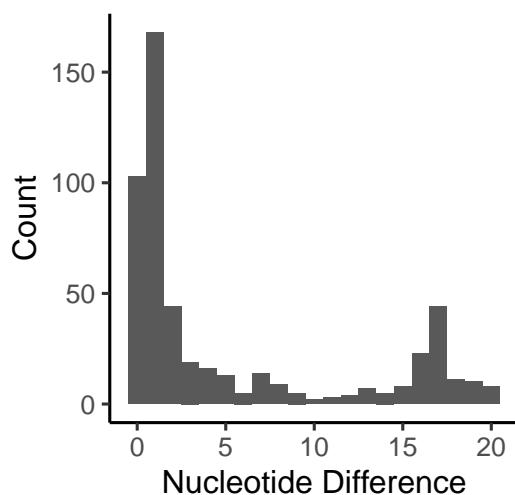
IGHV2–70*11_15

238 sequences assigned
38 (16%) exact matches, in which:
28 unique CDR3
4 unique J



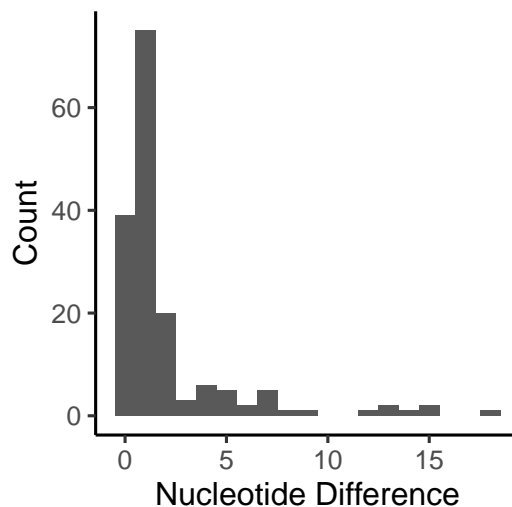
IGHV2–5*01

556 sequences assigned
103 (18.5%) exact matches, in which:
81 unique CDR3
7 unique J



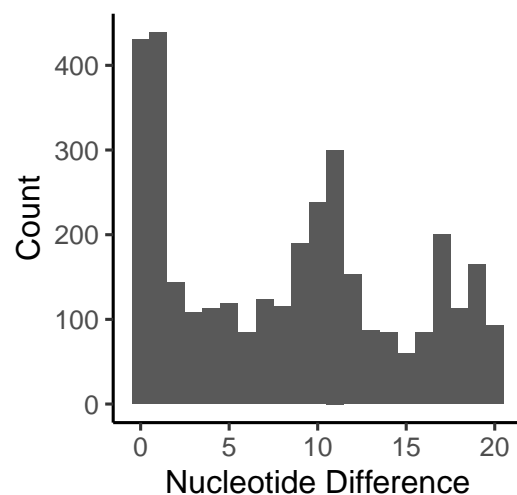
IGHV2–70*01

167 sequences assigned
39 (23.4%) exact matches, in which:
26 unique CDR3
5 unique J



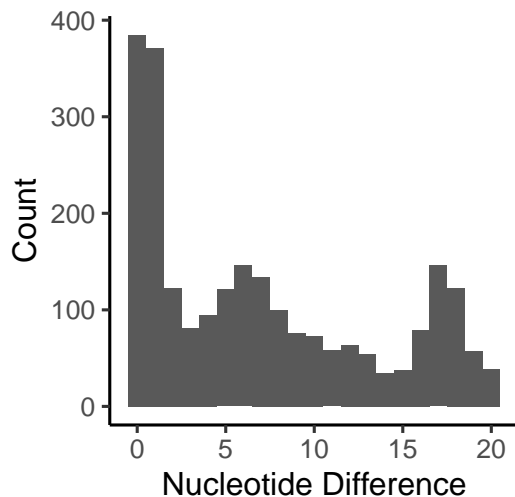
IGHV3–7*01

4268 sequences assigned
430 (10.1%) exact matches, in which:
310 unique CDR3
7 unique J



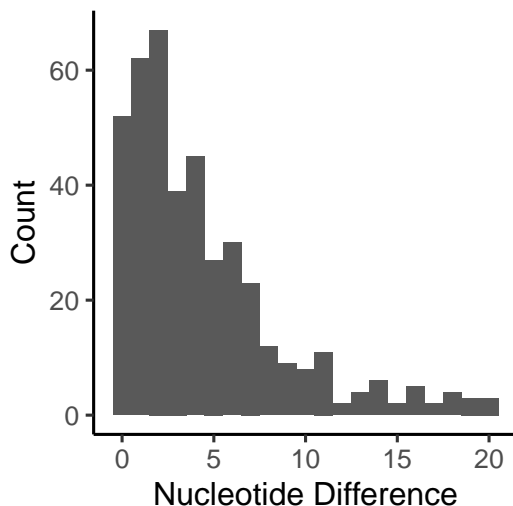
IGHV3-7*03

3158 sequences assigned
385 (12.2%) exact matches, in which:
279 unique CDR3
7 unique J



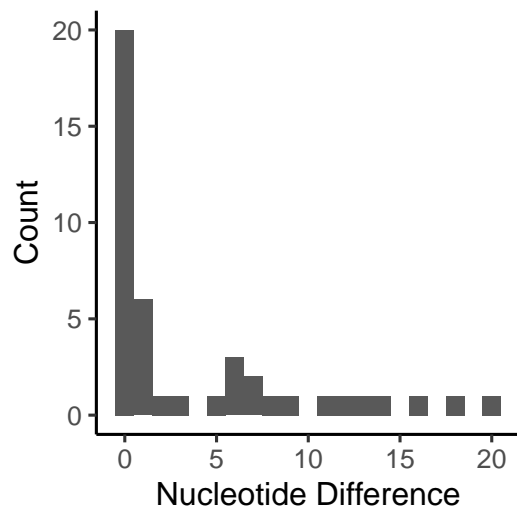
IGHV3-11*04

419 sequences assigned
52 (12.4%) exact matches, in which:
48 unique CDR3
7 unique J



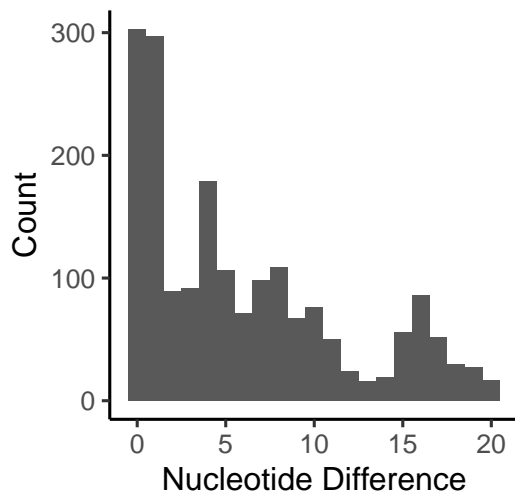
IGHV3-13*05

46 sequences assigned
20 (43.5%) exact matches, in which:
16 unique CDR3
6 unique J



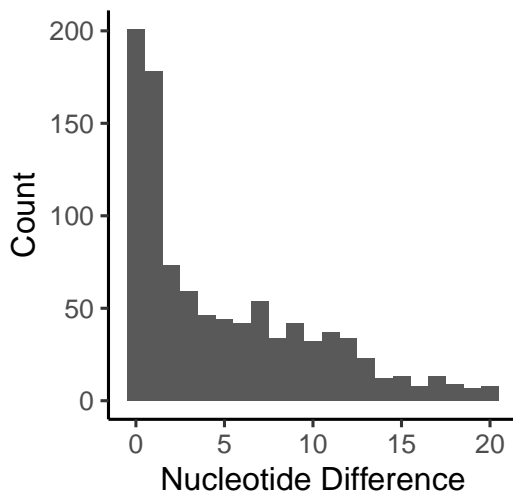
IGHV3-9*01

2316 sequences assigned
303 (13.1%) exact matches, in which:
200 unique CDR3
6 unique J



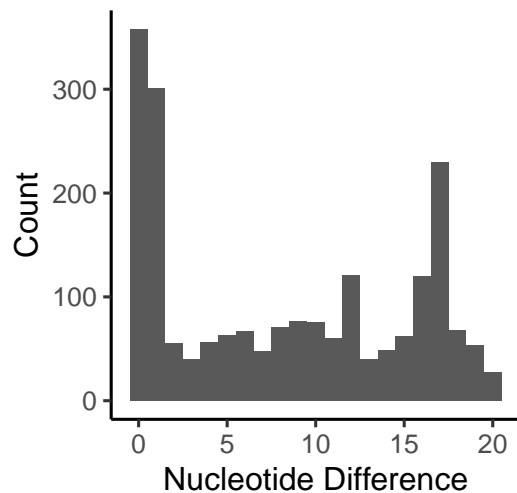
IGHV3-11*06

1028 sequences assigned
201 (19.6%) exact matches, in which:
146 unique CDR3
7 unique J



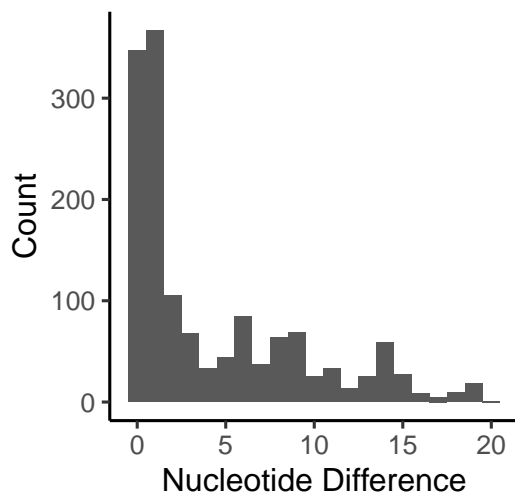
IGHV3-15*07

2335 sequences assigned
358 (15.3%) exact matches, in which:
238 unique CDR3
6 unique J



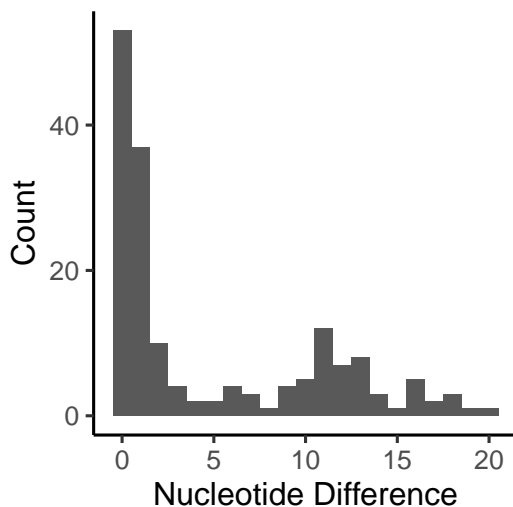
IGHV3-11*01

1621 sequences assigned
347 (21.4%) exact matches, in which:
241 unique CDR3
7 unique J



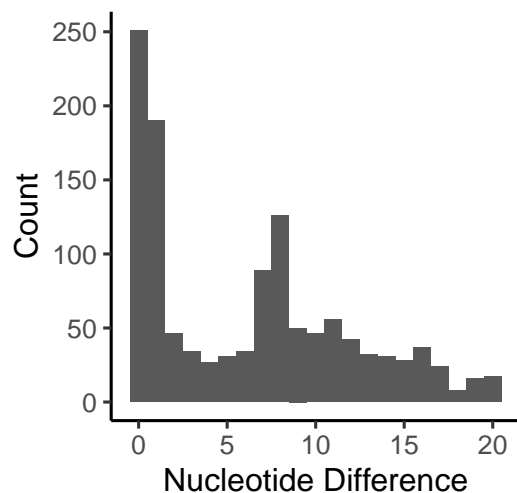
IGHV3-13*01

186 sequences assigned
53 (28.5%) exact matches, in which:
44 unique CDR3
6 unique J



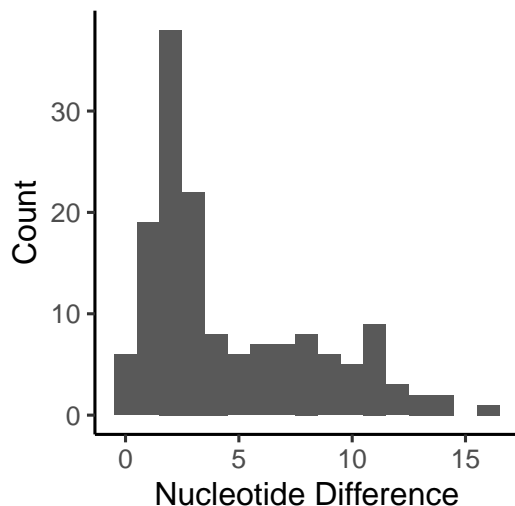
IGHV3-15*01_02

1367 sequences assigned
251 (18.4%) exact matches, in which:
165 unique CDR3
7 unique J



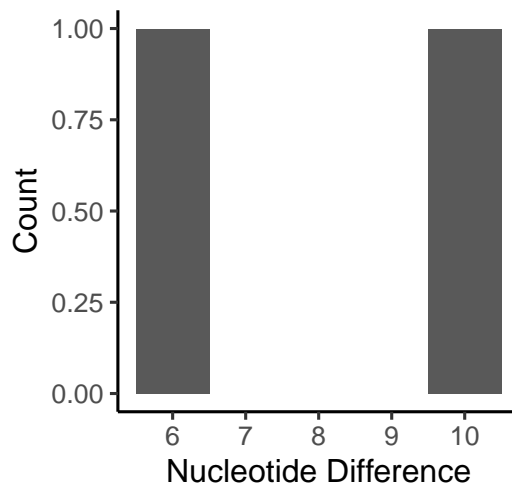
IGHV3-20*03_04

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



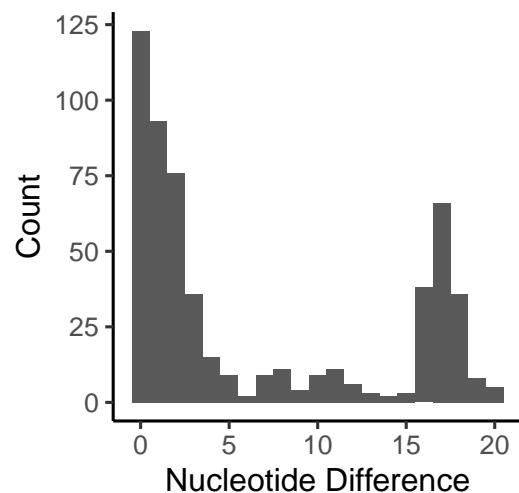
IGHV3-22*01_02

2 sequences assigned
No exact matches.



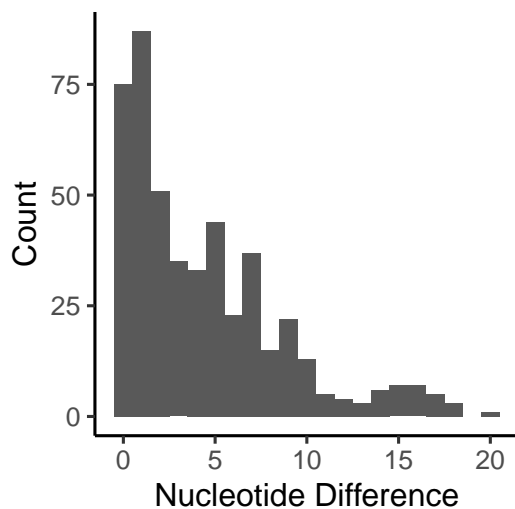
IGHV3-30*03

582 sequences assigned
123 (21.1%) exact matches, in which:
116 unique CDR3
7 unique J



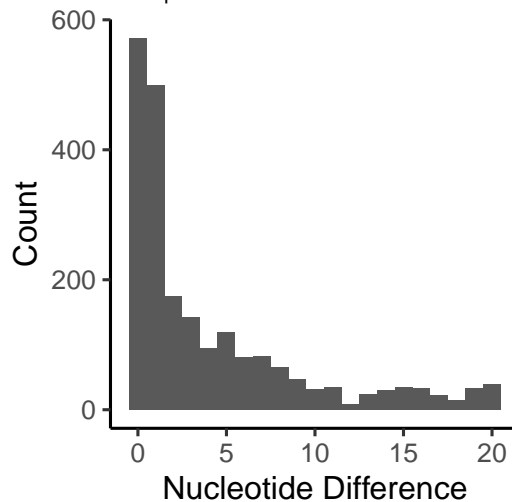
IGHV3-21*04

494 sequences assigned
75 (15.2%) exact matches, in which:
64 unique CDR3
5 unique J



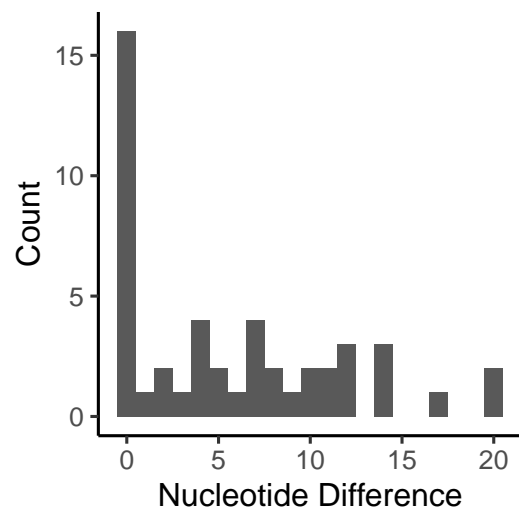
IGHV3-30*01

3053 sequences assigned
572 (18.7%) exact matches, in which:
396 unique CDR3
7 unique J



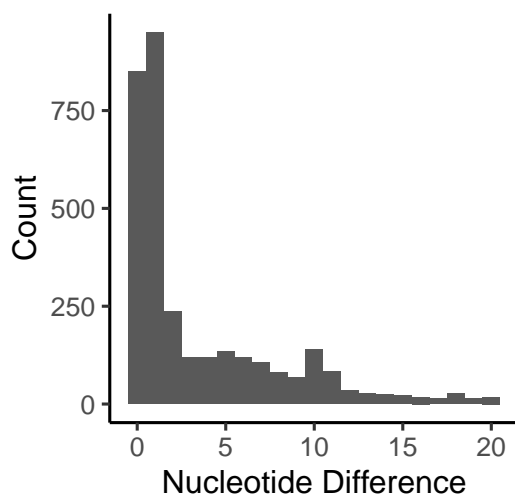
IGHV3-30-3*03

52 sequences assigned
16 (30.8%) exact matches, in which:
13 unique CDR3
2 unique J



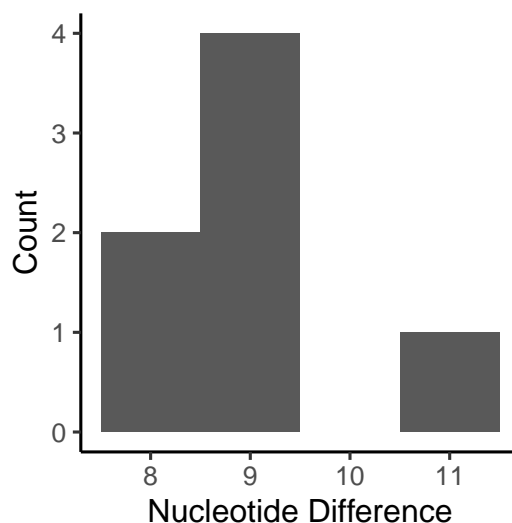
IGHV3-21*01_02

3325 sequences assigned
851 (25.6%) exact matches, in which:
548 unique CDR3
7 unique J



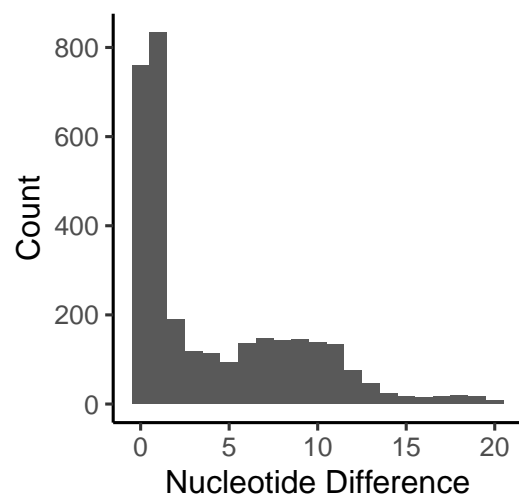
IGHV3-30-3*01

8 sequences assigned
No exact matches.



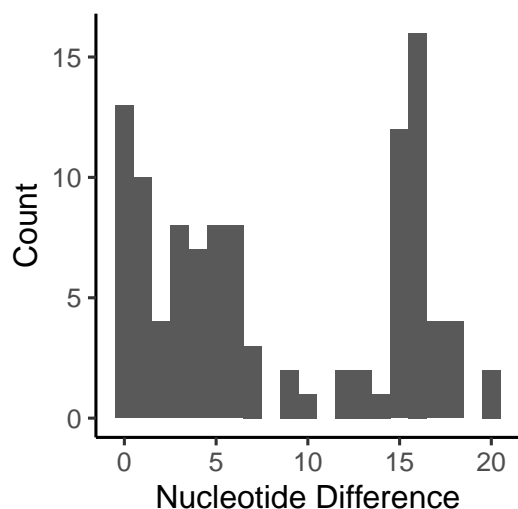
IGHV3-33*01

3431 sequences assigned
759 (22.1%) exact matches, in which:
493 unique CDR3
7 unique J



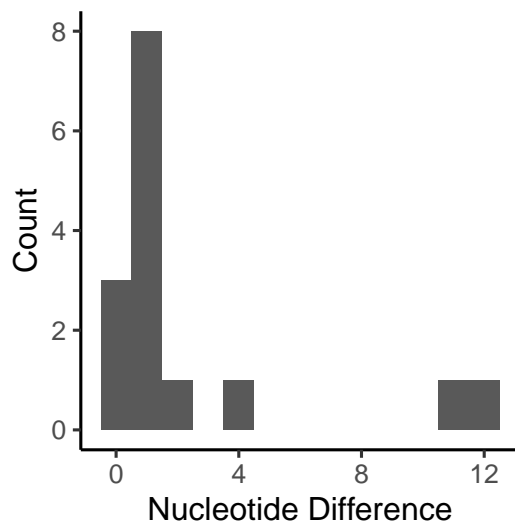
IGHV3-33*05

118 sequences assigned
13 (11%) exact matches, in which:
12 unique CDR3
3 unique J



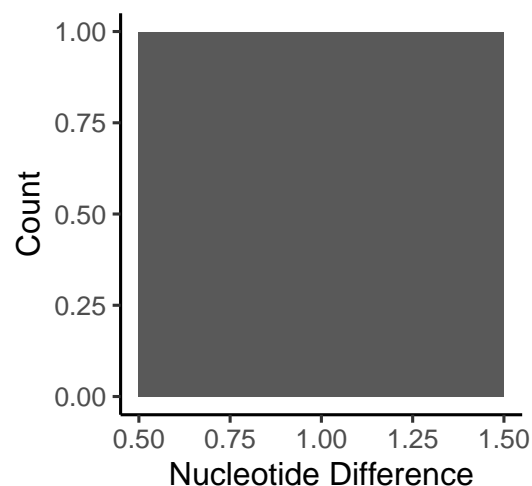
IGHV3-38-3*01

15 sequences assigned
3 (20%) exact matches, in which:
3 unique CDR3
2 unique J



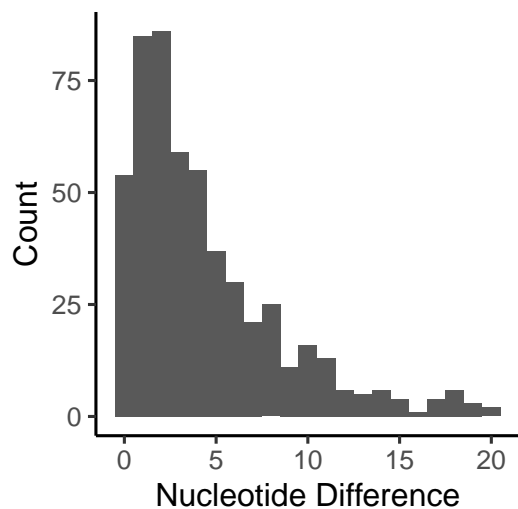
IGHV3-47*01

1 sequences assigned
No exact matches.



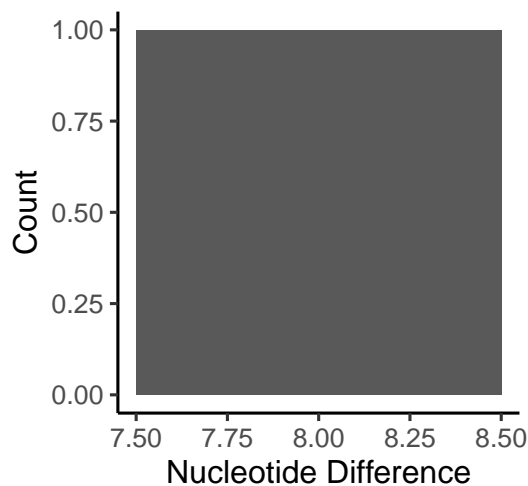
IGHV3-33*06

534 sequences assigned
54 (10.1%) exact matches, in which:
51 unique CDR3
6 unique J



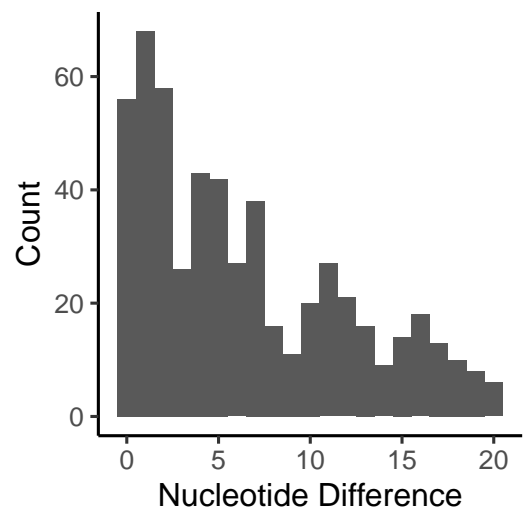
IGHV3-38*03

1 sequences assigned
No exact matches.



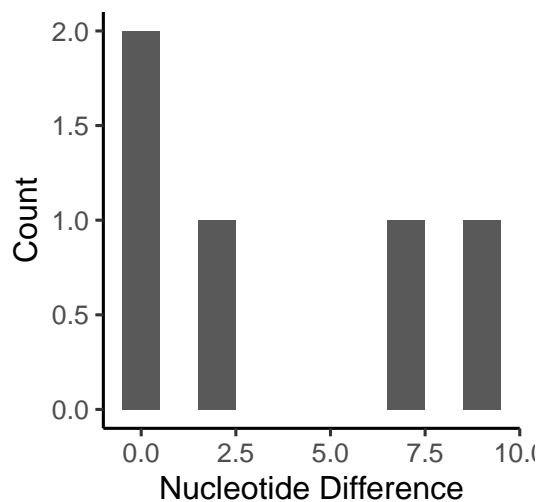
IGHV3-48*01

556 sequences assigned
56 (10.1%) exact matches, in which:
53 unique CDR3
6 unique J



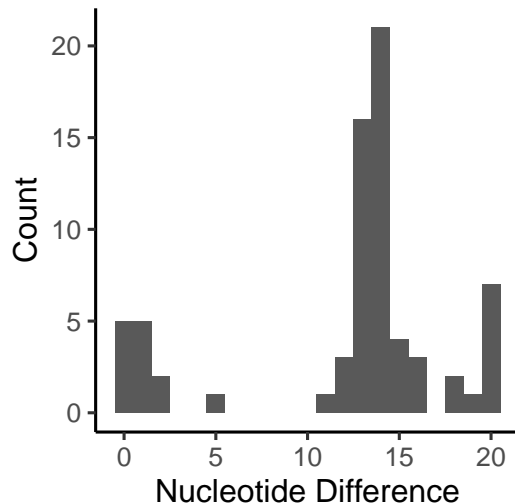
IGHV3-35*01

5 sequences assigned
2 (40%) exact matches, in which:
2 unique CDR3
2 unique J



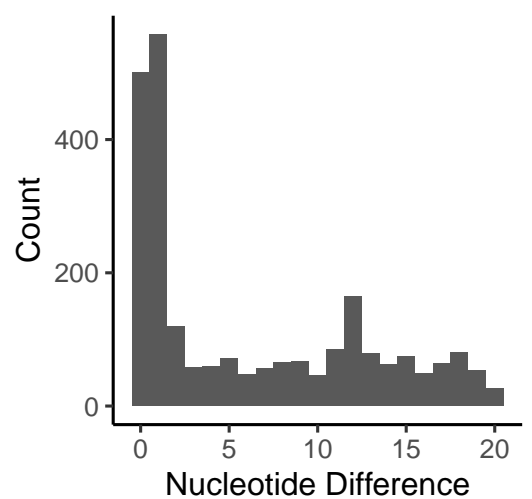
IGHV3-43*01

85 sequences assigned
5 (5.9%) exact matches, in which:
4 unique CDR3
3 unique J



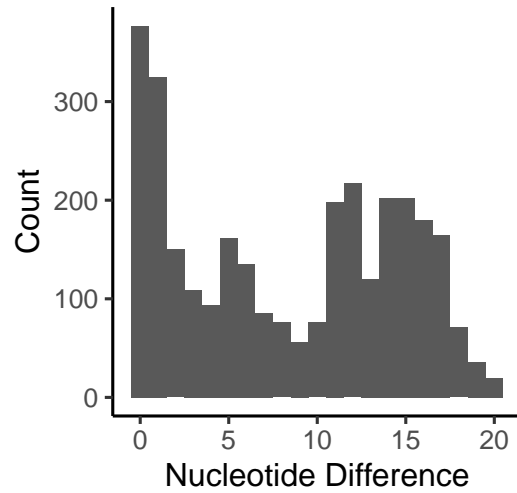
IGHV3-48*02

2433 sequences assigned
500 (20.6%) exact matches, in which:
306 unique CDR3
7 unique J



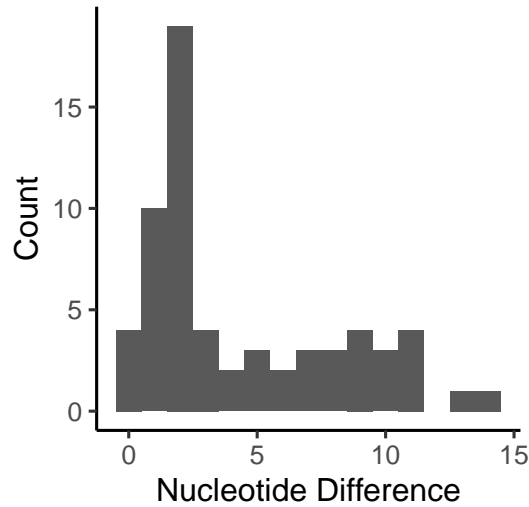
IGHV3-48*03

3459 sequences assigned
377 (10.9%) exact matches, in which:
248 unique CDR3
7 unique J



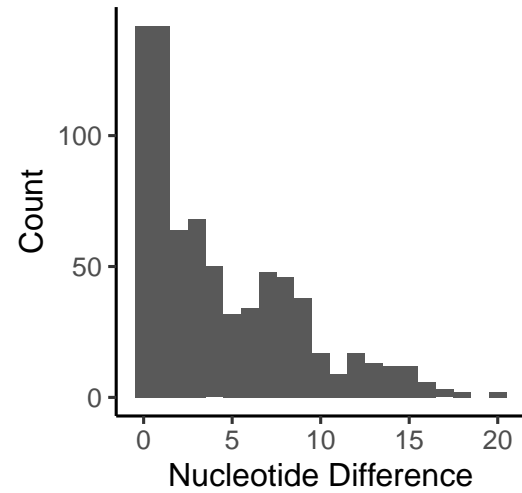
IGHV3-52*01_03

63 sequences assigned
4 (6.3%) exact matches, in which:
4 unique CDR3
3 unique J



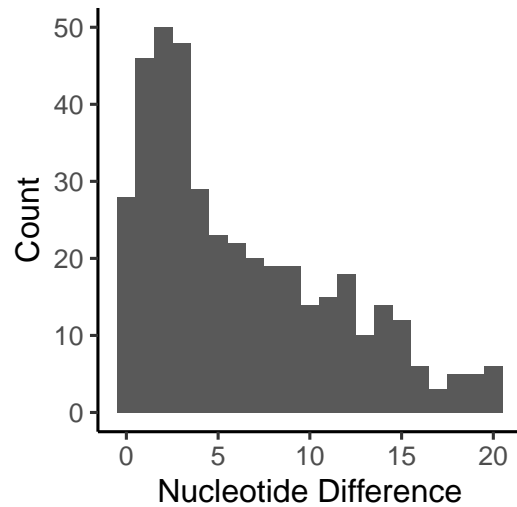
IGHV3-53*01_02

779 sequences assigned
142 (18.2%) exact matches, in which:
103 unique CDR3
6 unique J



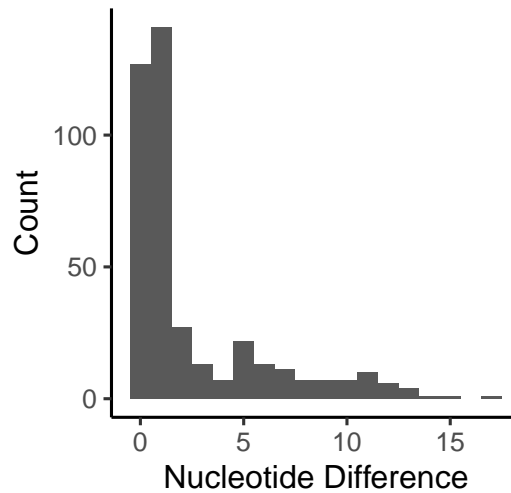
IGHV3-48*04

420 sequences assigned
28 (6.7%) exact matches, in which:
23 unique CDR3
6 unique J



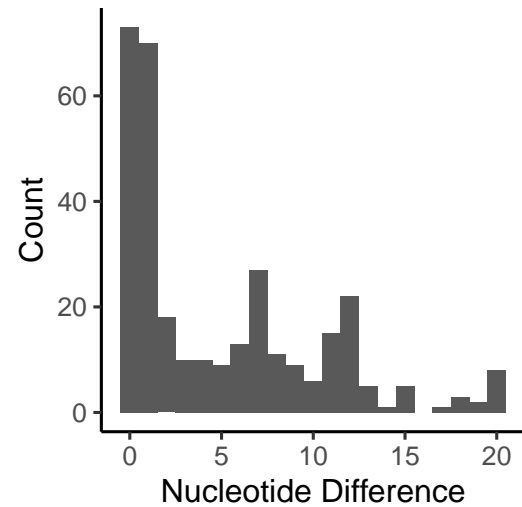
IGHV3-53*04

406 sequences assigned
127 (31.3%) exact matches, in which:
93 unique CDR3
5 unique J



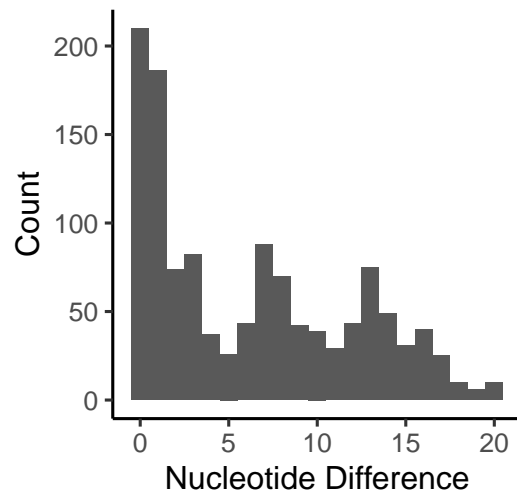
IGHV3-64*01

364 sequences assigned
73 (20.1%) exact matches, in which:
50 unique CDR3
4 unique J



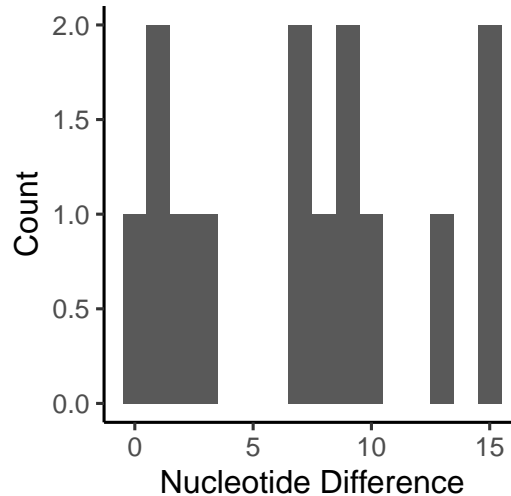
IGHV3-49*04

1240 sequences assigned
210 (16.9%) exact matches, in which:
138 unique CDR3
7 unique J



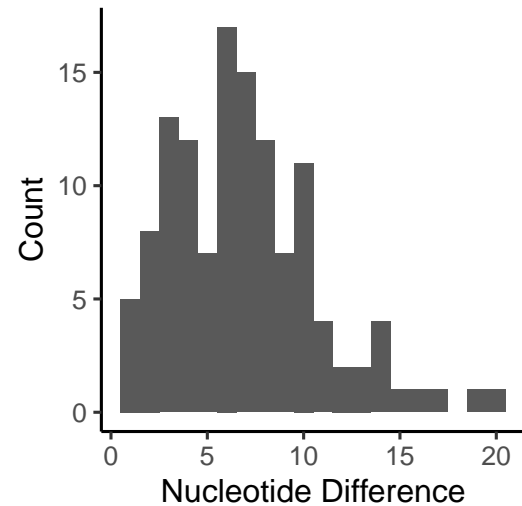
IGHV3-53*05

14 sequences assigned
1 (7.1%) exact matches, in which:
1 unique CDR3
1 unique J



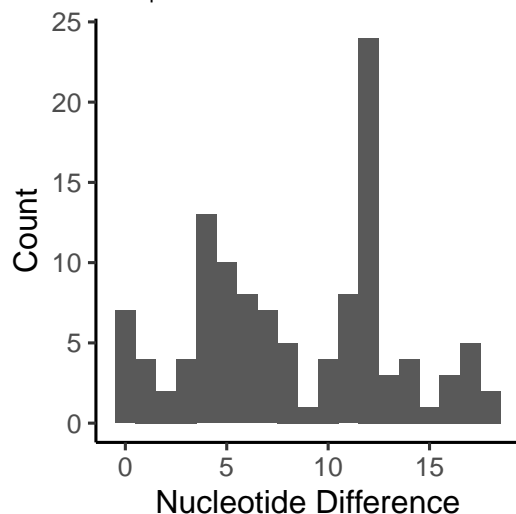
IGHV3-64*04

127 sequences assigned
No exact matches.



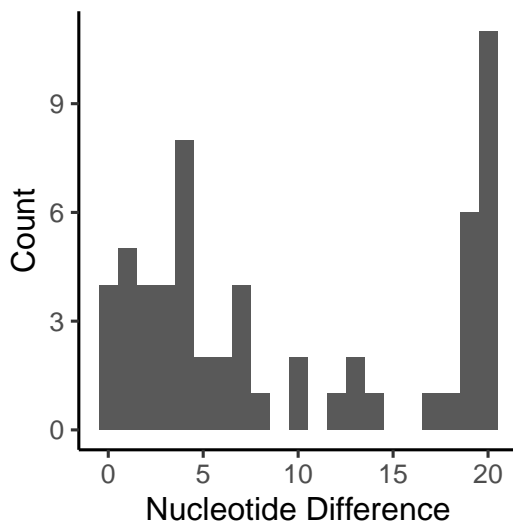
IGHV3-64*02_07

117 sequences assigned
7 (6%) exact matches, in which:
7 unique CDR3
3 unique J



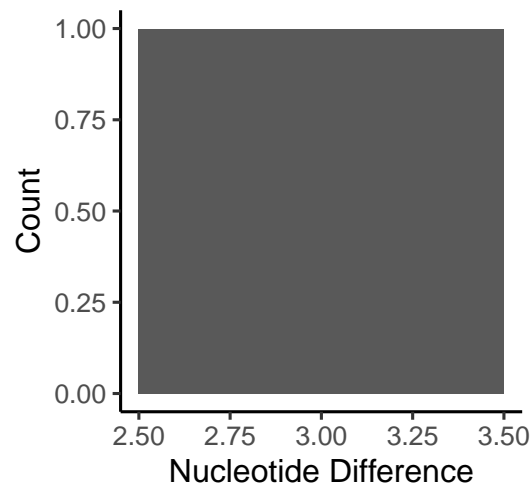
IGHV3-69-1*01

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



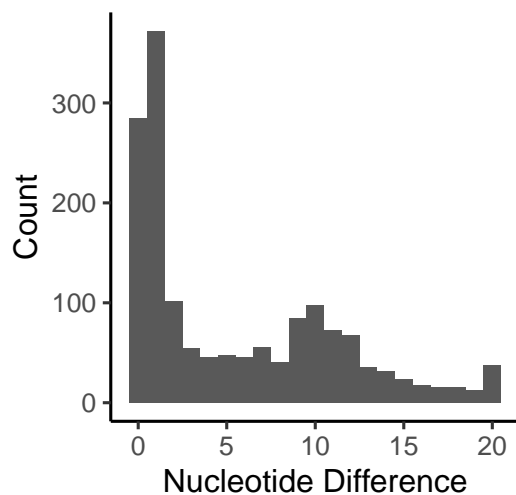
IGHV3-71*01_04

2 sequences assigned
No exact matches.



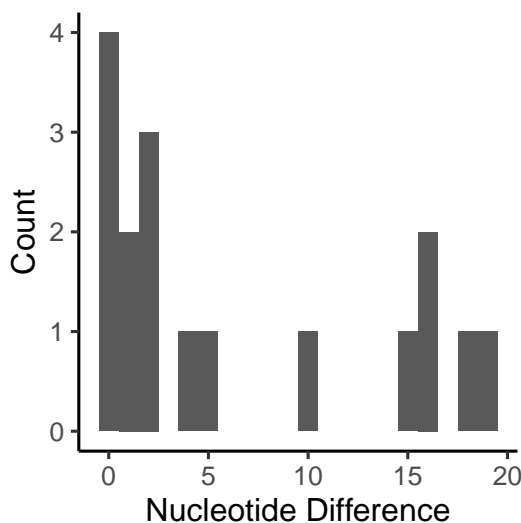
IGHV3-66*01

1666 sequences assigned
285 (17.1%) exact matches, in which:
204 unique CDR3
7 unique J



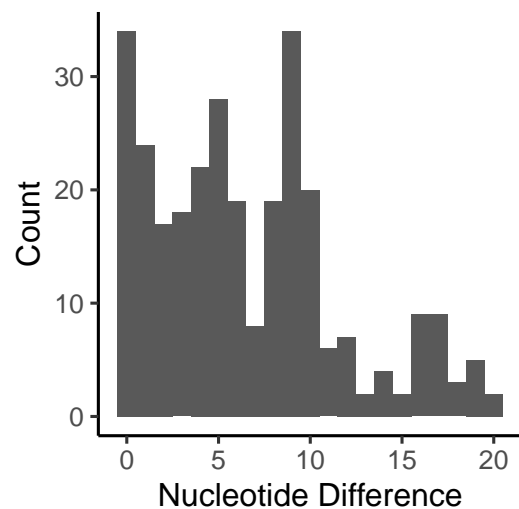
IGHV3-69-1*02

17 sequences assigned
4 (23.5%) exact matches, in which:
4 unique CDR3
2 unique J



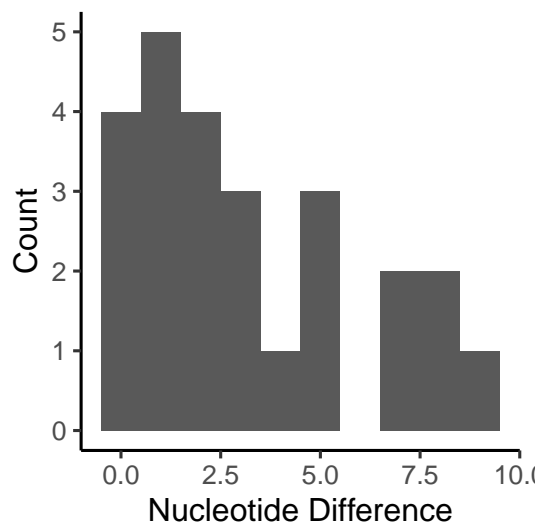
IGHV3-72*01

301 sequences assigned
34 (11.3%) exact matches, in which:
26 unique CDR3
7 unique J



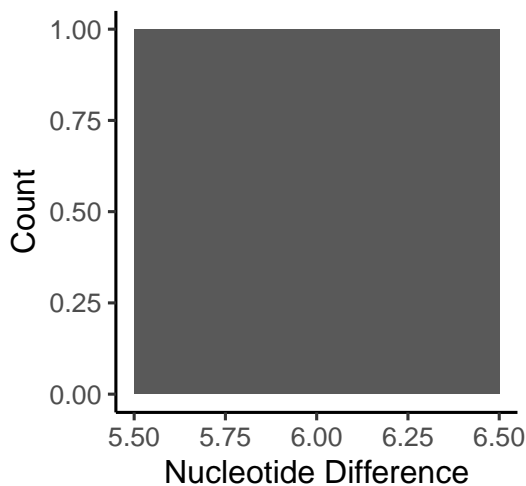
IGHV3-66*03

25 sequences assigned
4 (16%) exact matches, in which:
4 unique CDR3
2 unique J



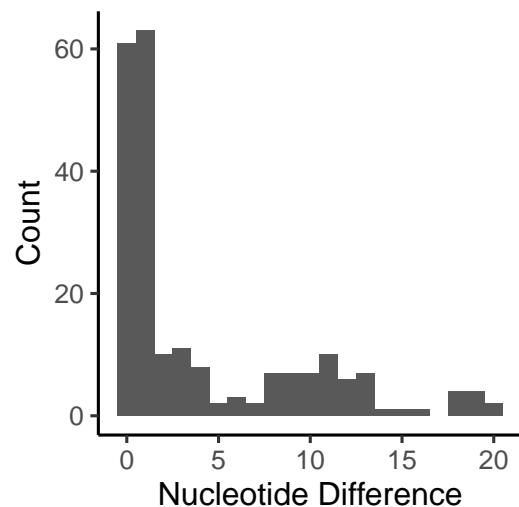
IGHV3-71*03

1 sequences assigned
No exact matches.



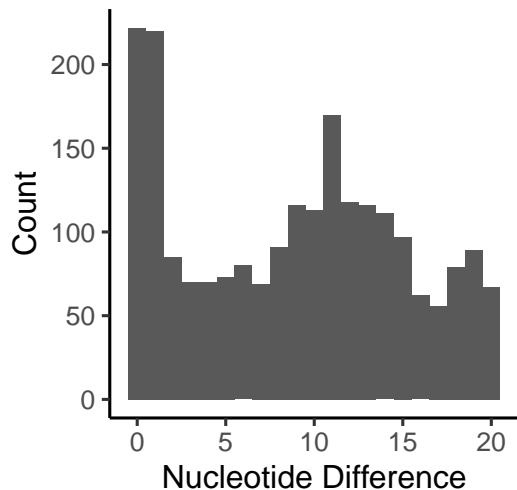
IGHV3-73*01_02

232 sequences assigned
61 (26.3%) exact matches, in which:
40 unique CDR3
6 unique J



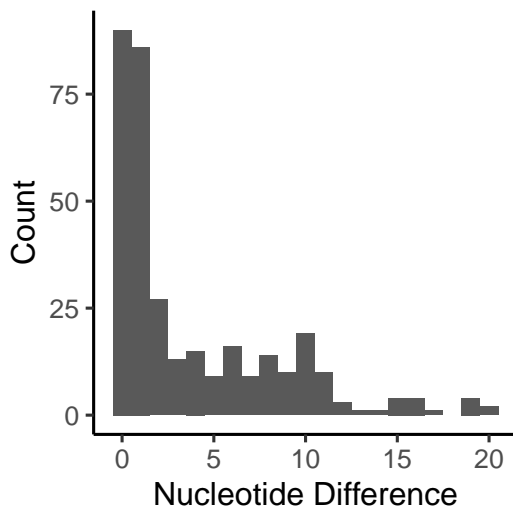
IGHV3-74*01_02

2761 sequences assigned
222 (8%) exact matches, in which:
155 unique CDR3
6 unique J



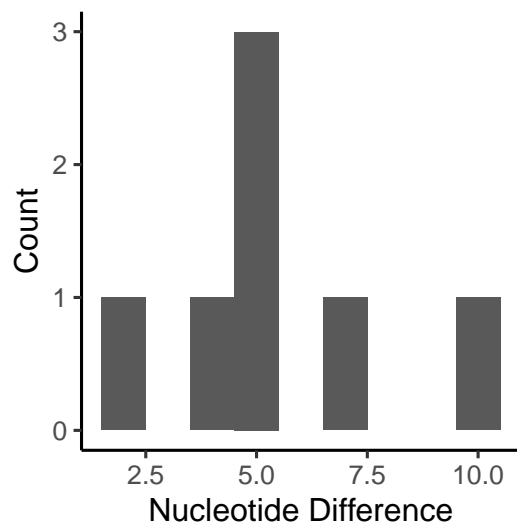
IGHV3-64D*06

378 sequences assigned
90 (23.8%) exact matches, in which:
60 unique CDR3
6 unique J



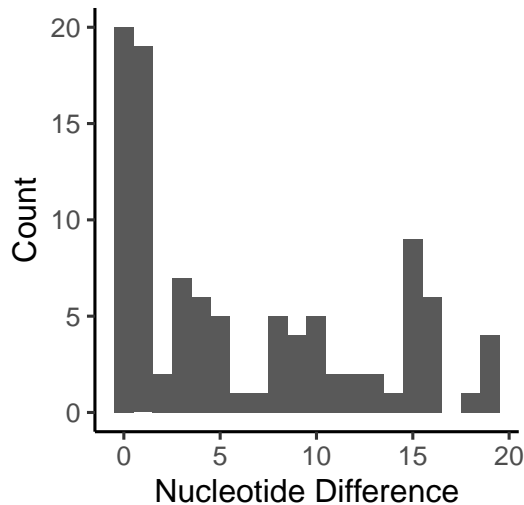
IGHV4-28*03

7 sequences assigned
No exact matches.



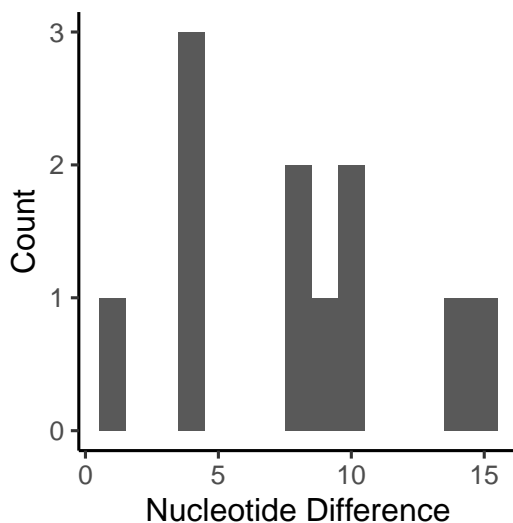
IGHV3-43D*03

110 sequences assigned
20 (18.2%) exact matches, in which:
11 unique CDR3
4 unique J



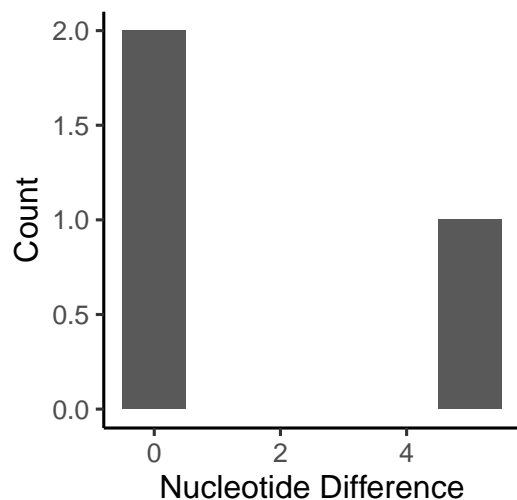
IGHV3-NL1*01

13 sequences assigned
No exact matches.



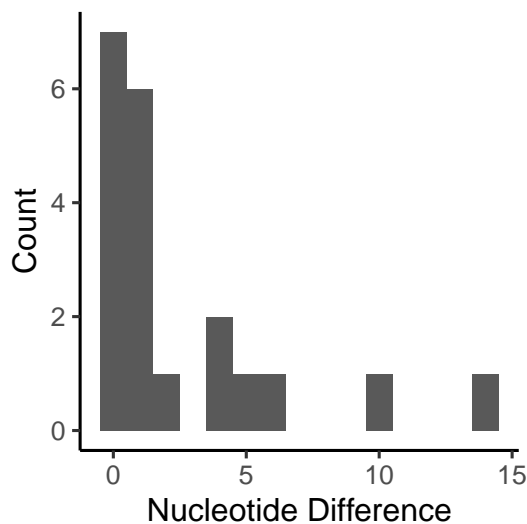
IGHV4-28*02_05

3 sequences assigned
2 (66.7%) exact matches, in which:
2 unique CDR3
2 unique J



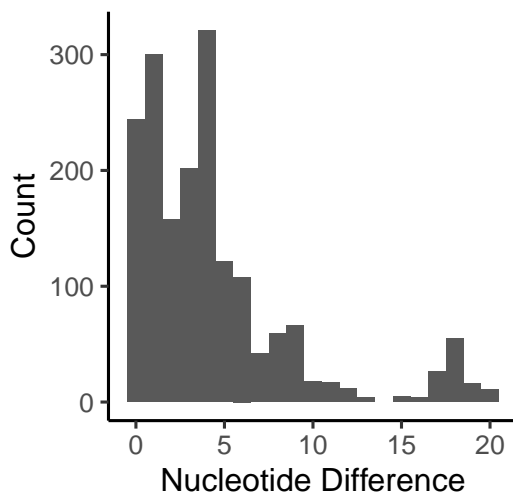
IGHV3-43D*04

20 sequences assigned
7 (35%) exact matches, in which:
5 unique CDR3
3 unique J



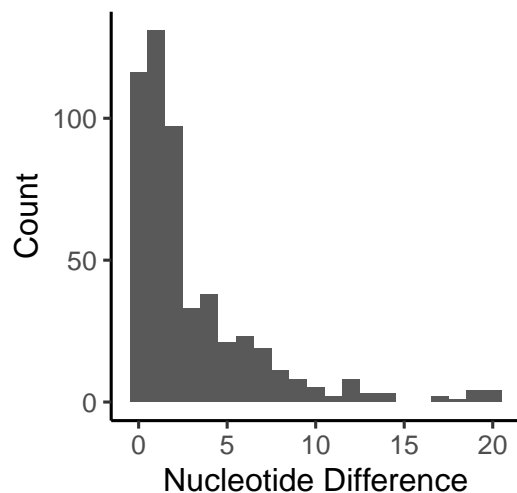
IGHV4-4*07

1827 sequences assigned
244 (13.4%) exact matches, in which:
212 unique CDR3
7 unique J



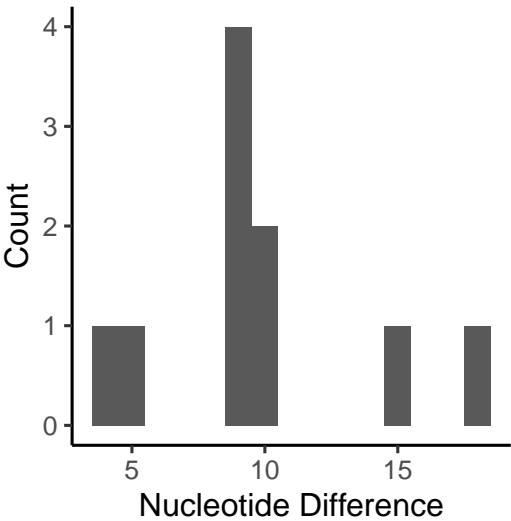
IGHV4-30-2*01

565 sequences assigned
116 (20.5%) exact matches, in which:
93 unique CDR3
6 unique J



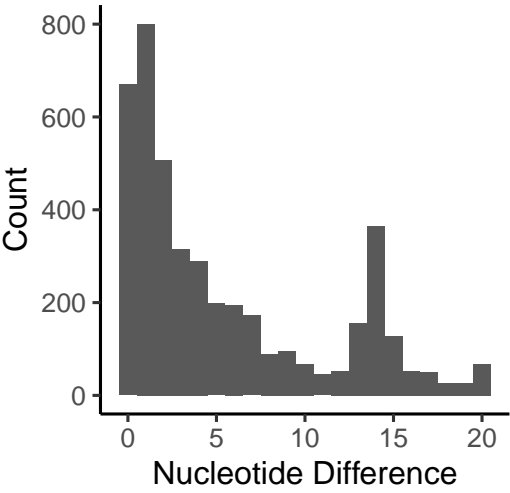
IGHV4-30-4*07

11 sequences assigned
No exact matches.



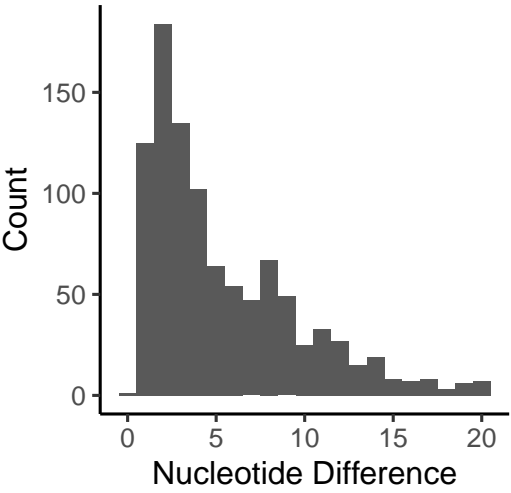
IGHV4-34*01_02

4775 sequences assigned
670 (14%) exact matches, in which:
494 unique CDR3
7 unique J



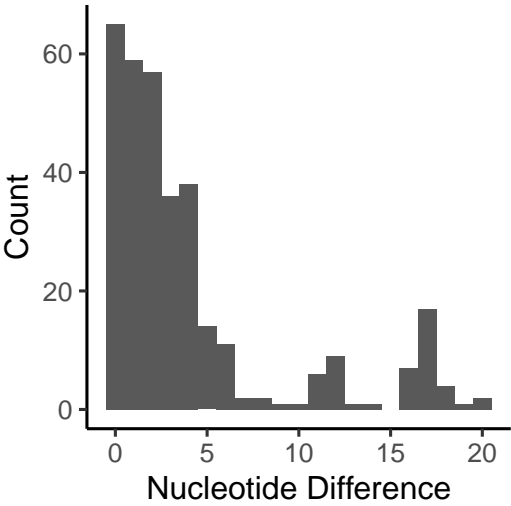
IGHV4-39*07

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



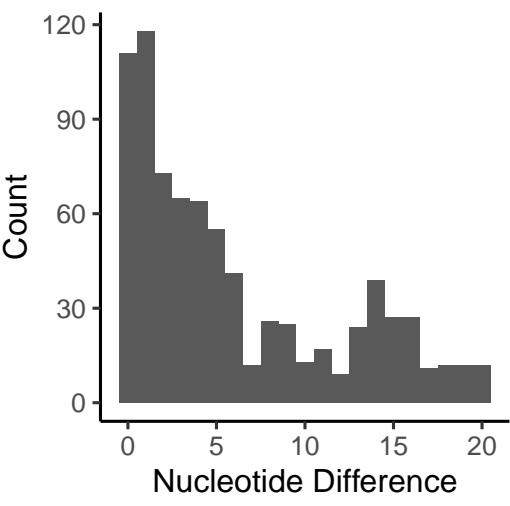
IGHV4-31*01

335 sequences assigned
65 (19.4%) exact matches, in which:
54 unique CDR3
5 unique J



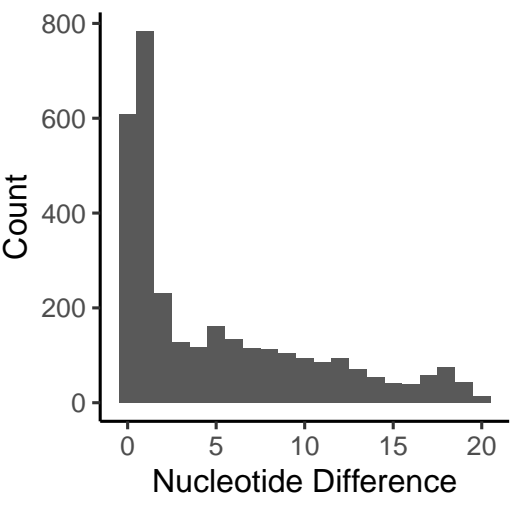
IGHV4-38-2*01

902 sequences assigned
111 (12.3%) exact matches, in which:
103 unique CDR3
7 unique J



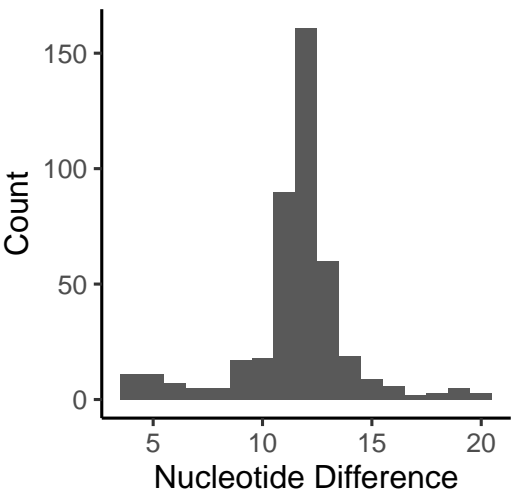
IGHV4-39*01_05

3530 sequences assigned
608 (17.2%) exact matches, in which:
451 unique CDR3
7 unique J



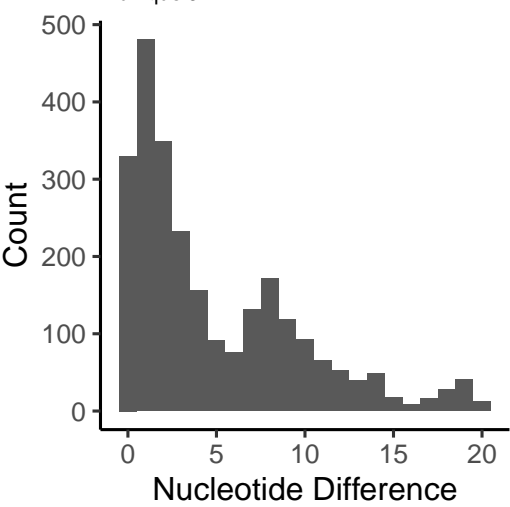
IGHV4-31*03_04

440 sequences assigned
No exact matches.



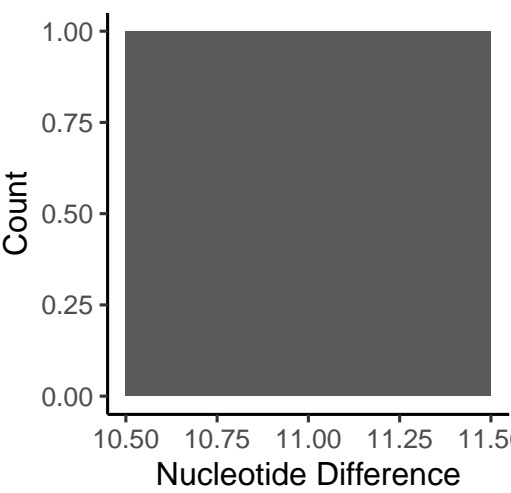
IGHV4-38-2*02

2627 sequences assigned
330 (12.6%) exact matches, in which:
268 unique CDR3
7 unique J



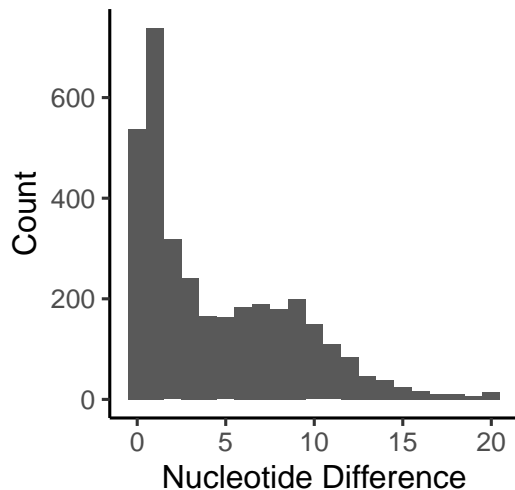
IGHV4-55*02_04_08

1 sequences assigned
No exact matches.



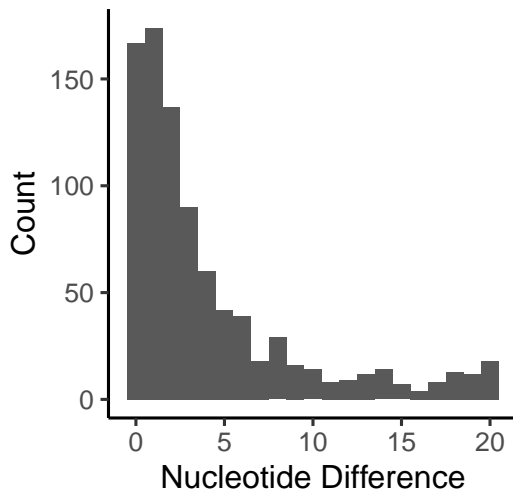
IGHV4-59*08

3634 sequences assigned
538 (14.8%) exact matches, in which:
441 unique CDR3
7 unique J



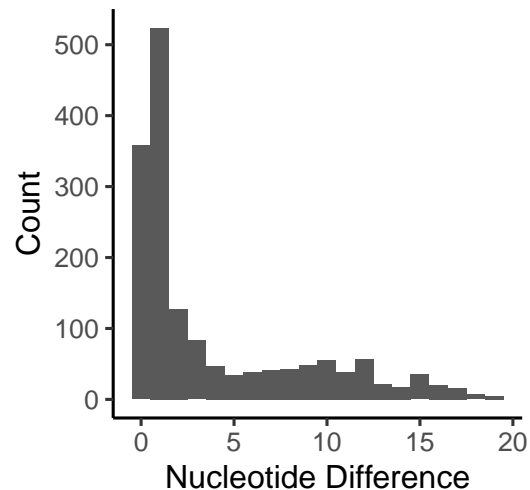
IGHV4-61*01

927 sequences assigned
167 (18%) exact matches, in which:
145 unique CDR3
7 unique J



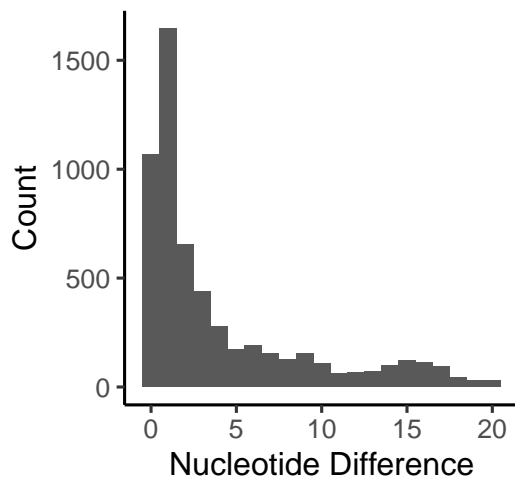
IGHV5-10-1*01_03

1677 sequences assigned
358 (21.3%) exact matches, in which:
240 unique CDR3
7 unique J



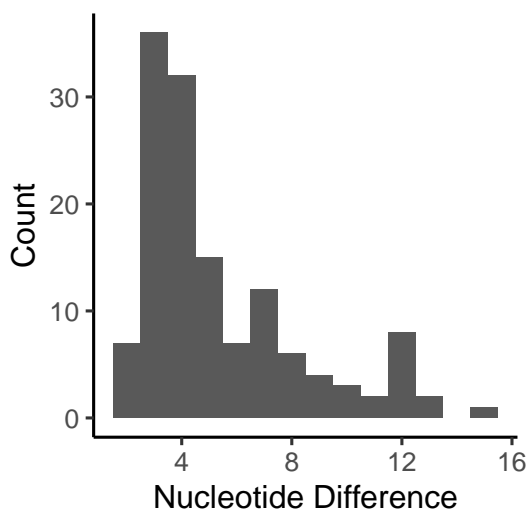
IGHV4-59*01_07

6438 sequences assigned
1069 (16.6%) exact matches, in which:
811 unique CDR3
7 unique J



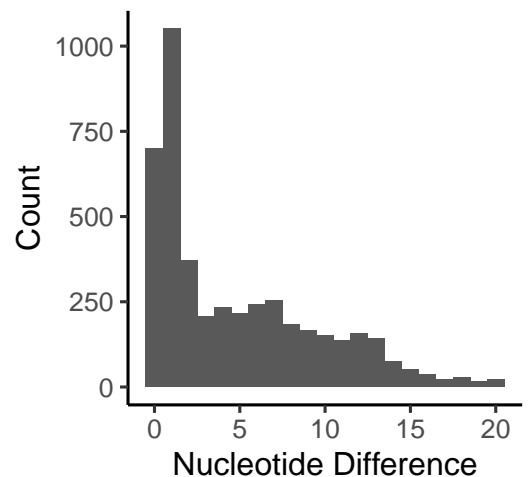
IGHV4-61*05

137 sequences assigned
No exact matches.



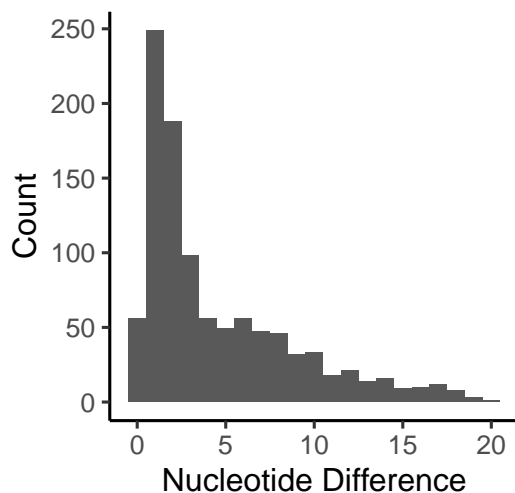
IGHV5-51*01_03

4700 sequences assigned
699 (14.9%) exact matches, in which:
452 unique CDR3
7 unique J



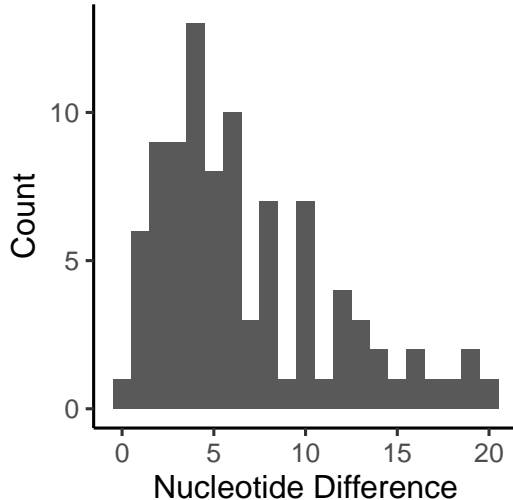
IGHV4-59*12

1047 sequences assigned
56 (5.3%) exact matches, in which:
54 unique CDR3
6 unique J



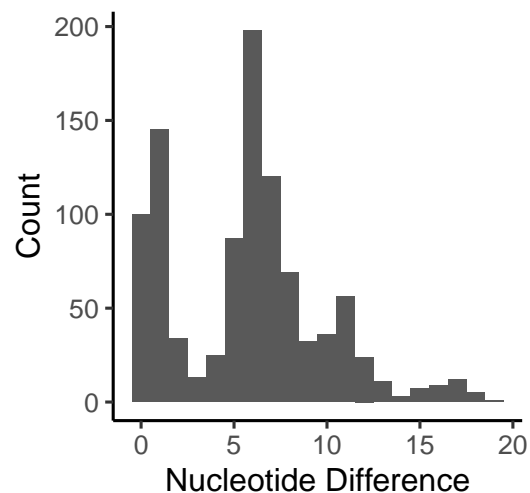
IGHV4-61*08

93 sequences assigned
1 (1.1%) exact matches, in which:
1 unique CDR3
1 unique J



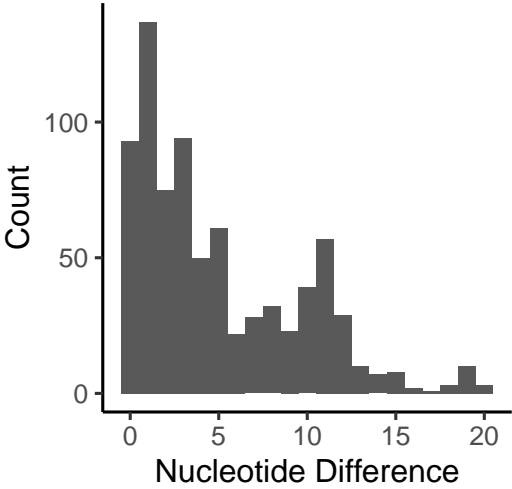
IGHV6-1*01_02

1090 sequences assigned
100 (9.2%) exact matches, in which:
86 unique CDR3
7 unique J

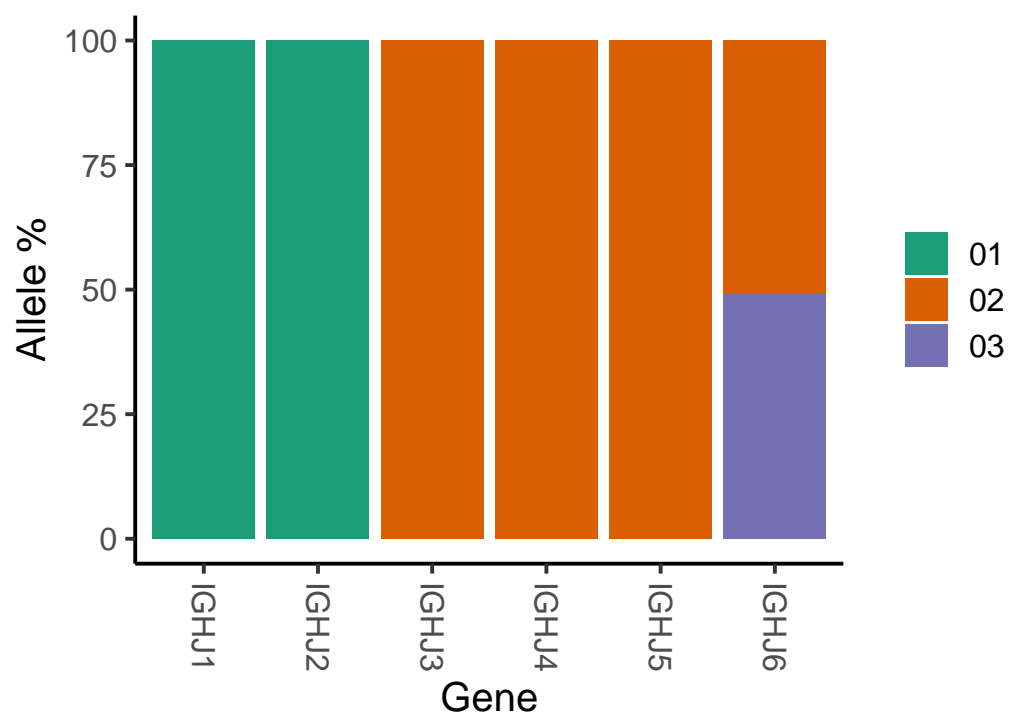


IGHV7-4-1*02

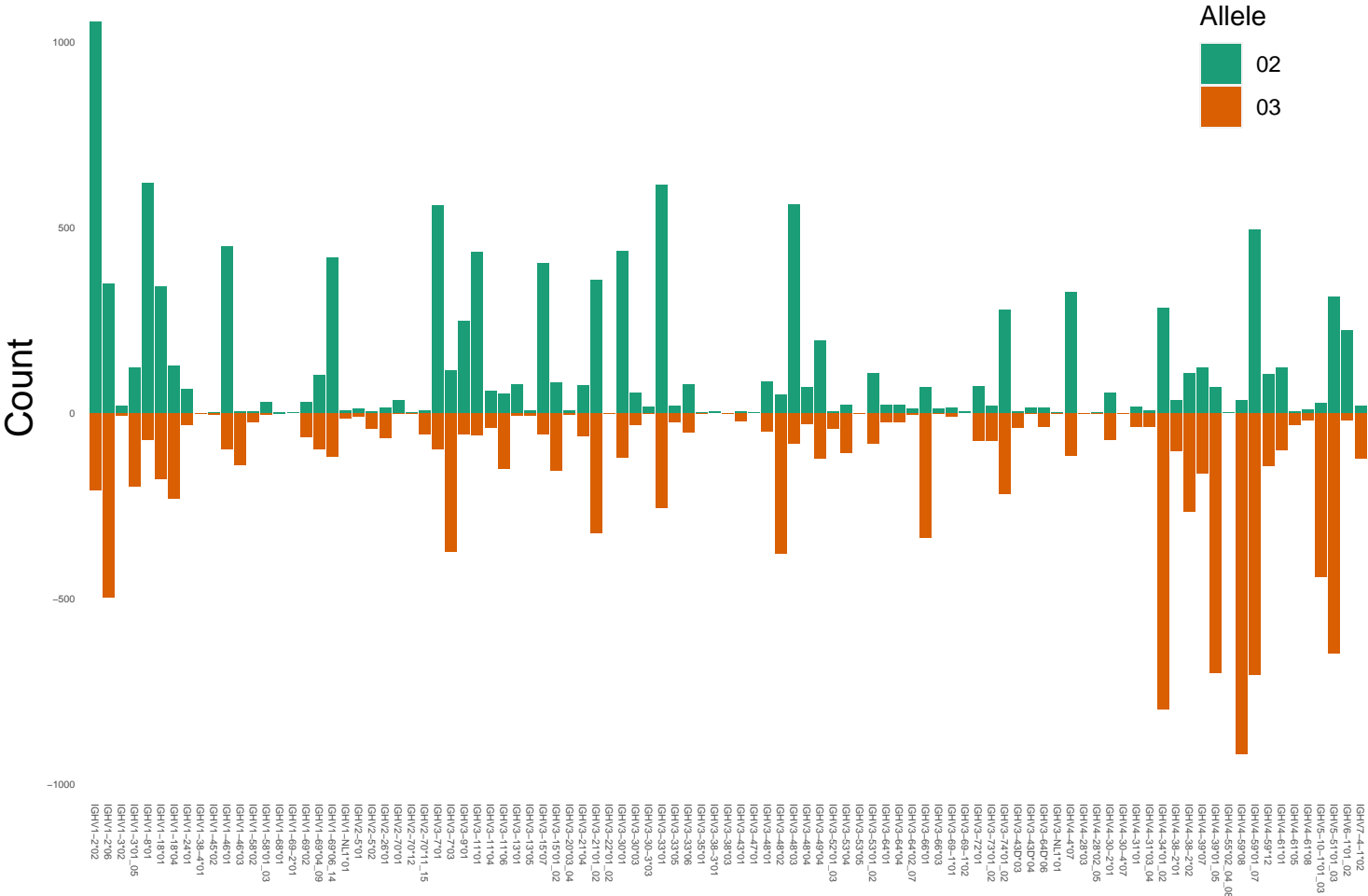
832 sequences assigned
93 (11.2%) exact matches, in which:
81 unique CDR3
5 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Novel sequence(s) IGHV1-69*01_12_13_G238A IGHV3-48*03_T303G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s) IGHV3-30-3*01_T288C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30*03_T288C are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.