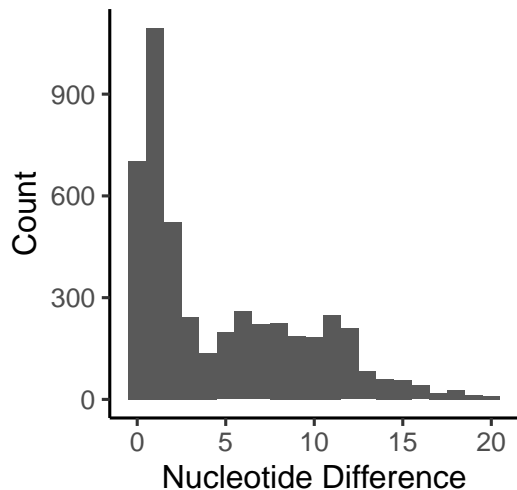


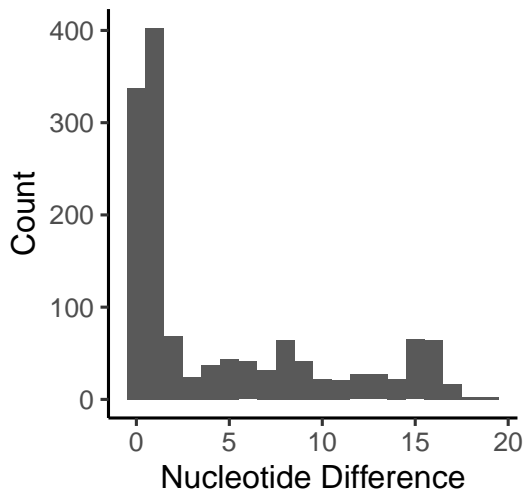
IGHV1-2*02

4802 sequences assigned
703 (14.6%) exact matches, in which:
594 unique CDR3
7 unique J



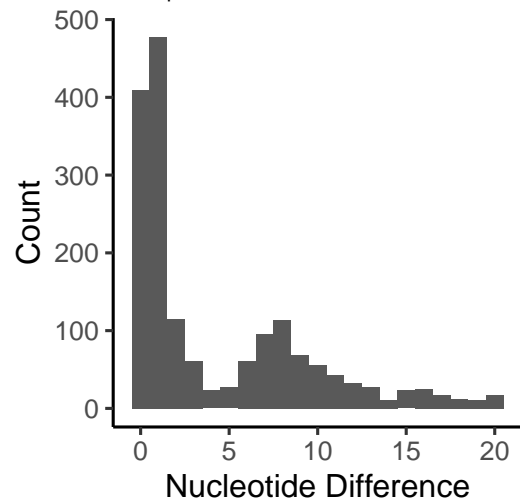
IGHV1-3*01_05

1376 sequences assigned
338 (24.6%) exact matches, in which:
254 unique CDR3
6 unique J



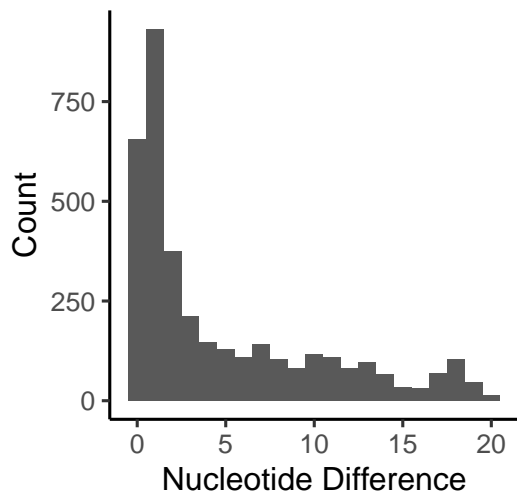
IGHV1-18*04

1860 sequences assigned
409 (22%) exact matches, in which:
359 unique CDR3
7 unique J



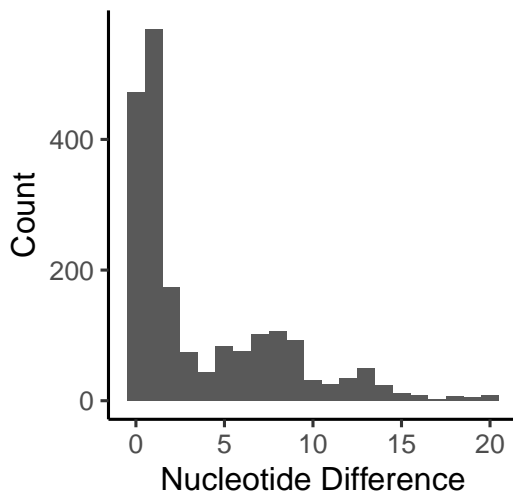
IGHV1-2*06

3798 sequences assigned
655 (17.2%) exact matches, in which:
550 unique CDR3
7 unique J



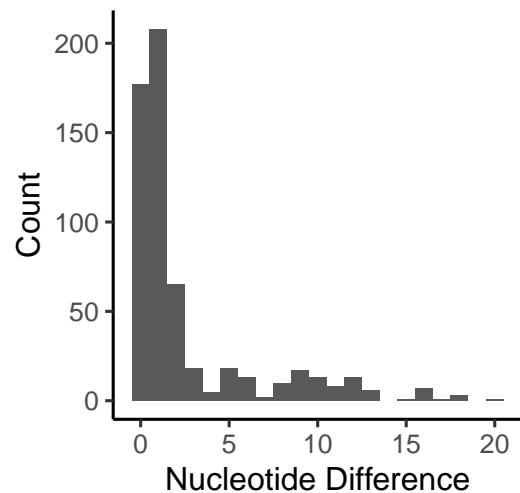
IGHV1-8*01

2315 sequences assigned
472 (20.4%) exact matches, in which:
404 unique CDR3
7 unique J



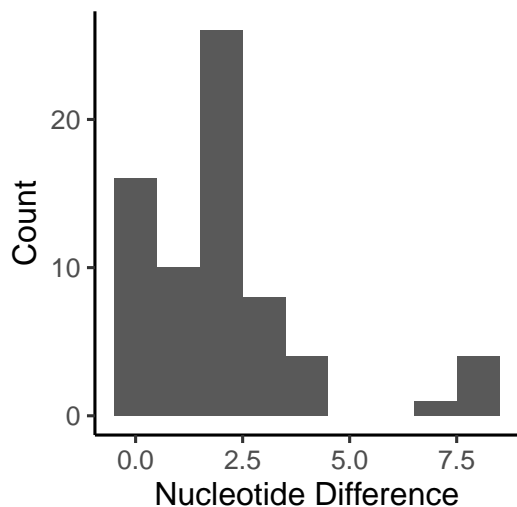
IGHV1-24*01

591 sequences assigned
177 (29.9%) exact matches, in which:
152 unique CDR3
7 unique J



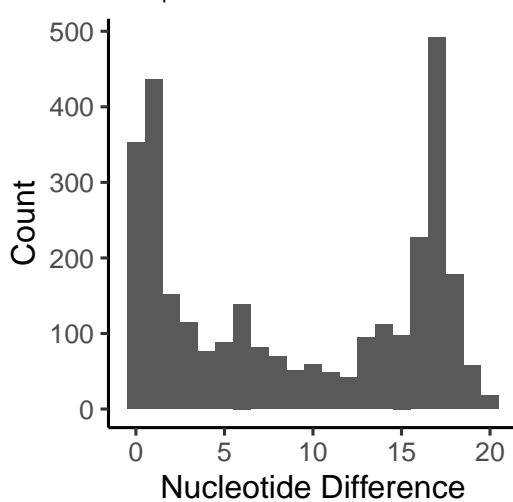
IGHV1-3*02

70 sequences assigned
16 (22.9%) exact matches, in which:
16 unique CDR3
5 unique J



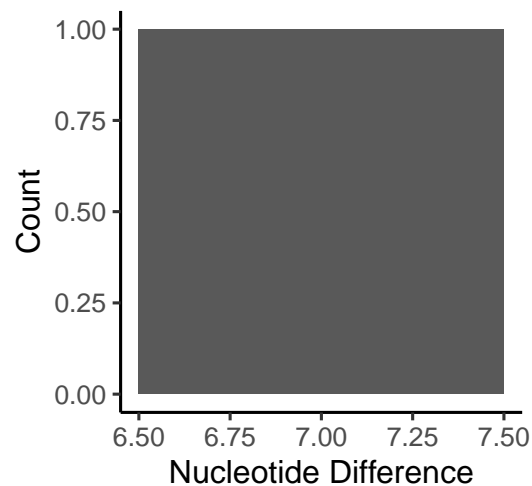
IGHV1-18*01

3070 sequences assigned
353 (11.5%) exact matches, in which:
305 unique CDR3
7 unique J



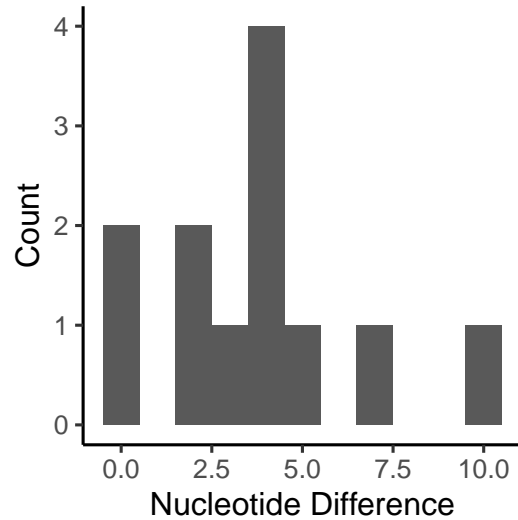
IGHV1-38-4*01

1 sequences assigned
No exact matches.



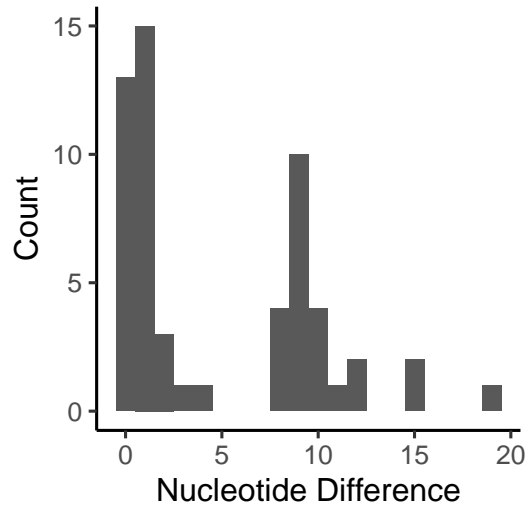
IGHV1-45*02

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



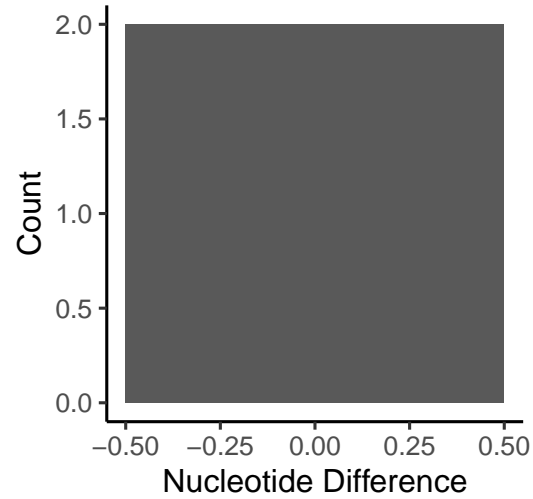
IGHV1-58*02

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



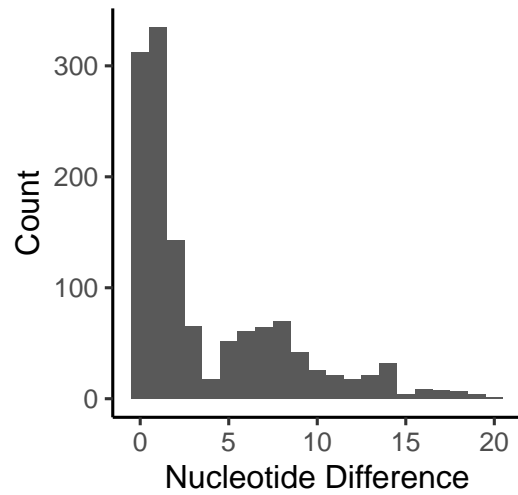
IGHV1-69-2*01

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



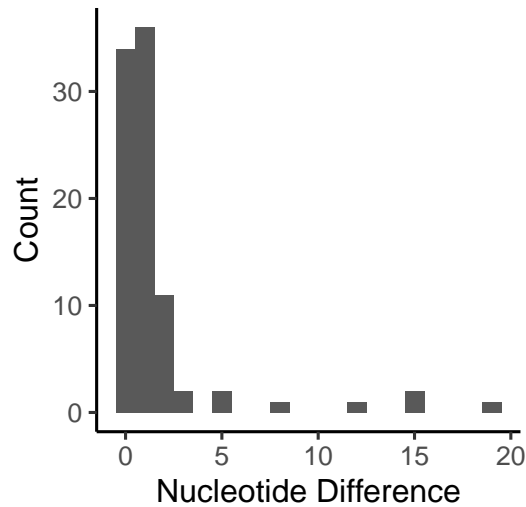
IGHV1-46*01

1377 sequences assigned
312 (22.7%) exact matches, in which:
288 unique CDR3
6 unique J



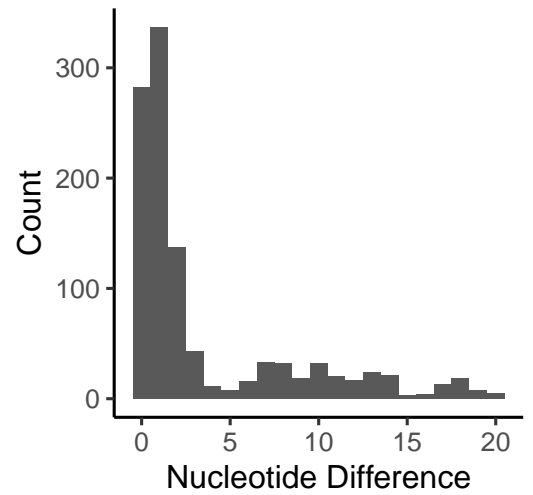
IGHV1-58*01_03

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



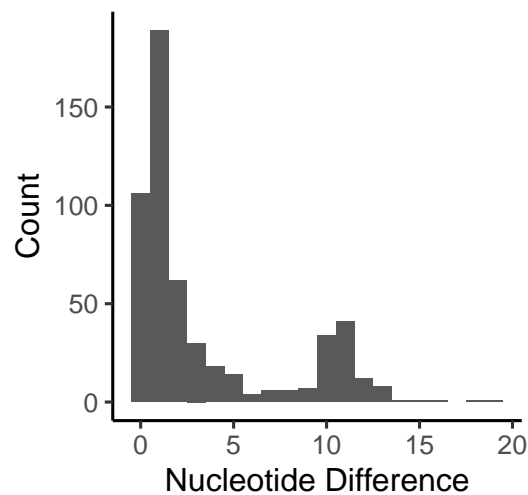
IGHV1-69*02

1119 sequences assigned
282 (25.2%) exact matches, in which:
255 unique CDR3
7 unique J



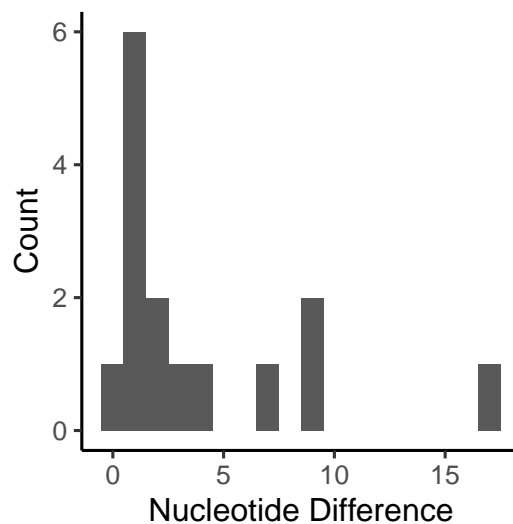
IGHV1-46*03

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



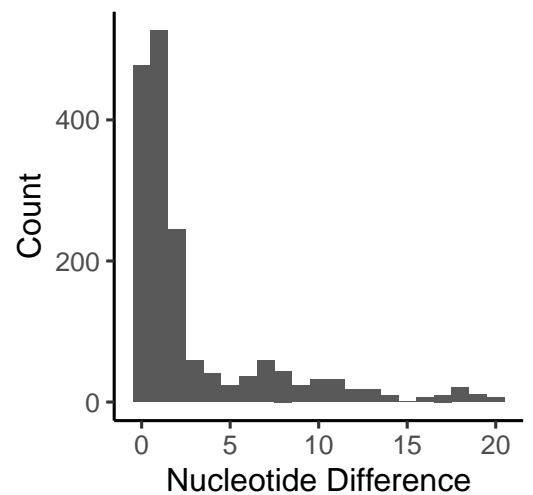
IGHV1-68*01

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



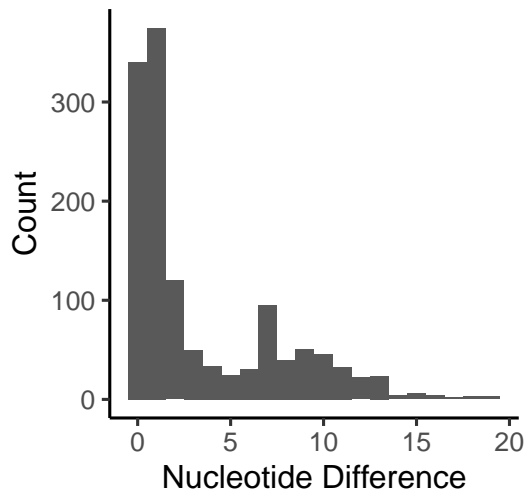
IGHV1-69*01_12_13

1741 sequences assigned
477 (27.4%) exact matches, in which:
425 unique CDR3
7 unique J



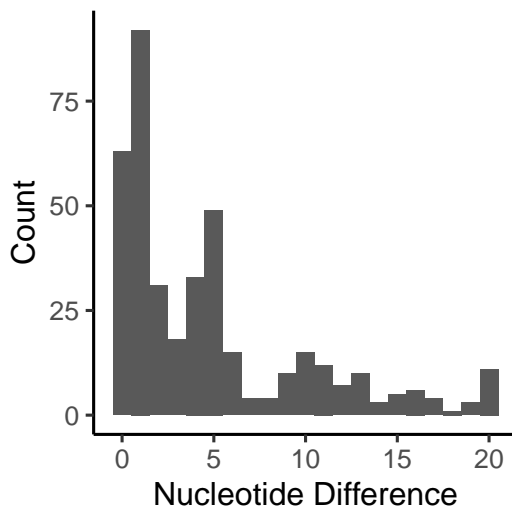
IGHV1–69*06_14

1344 sequences assigned
340 (25.3%) exact matches, in which:
309 unique CDR3
7 unique J



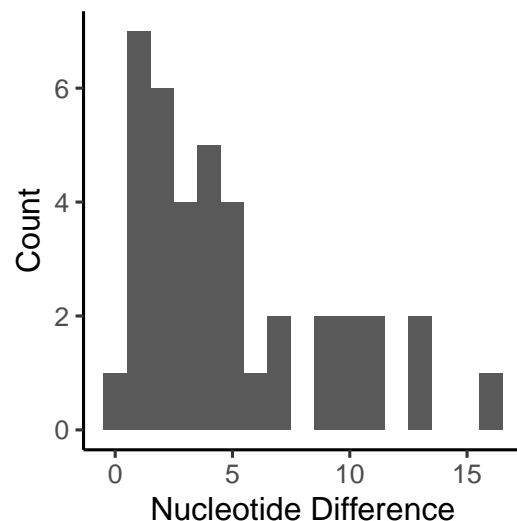
IGHV2–5*02

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



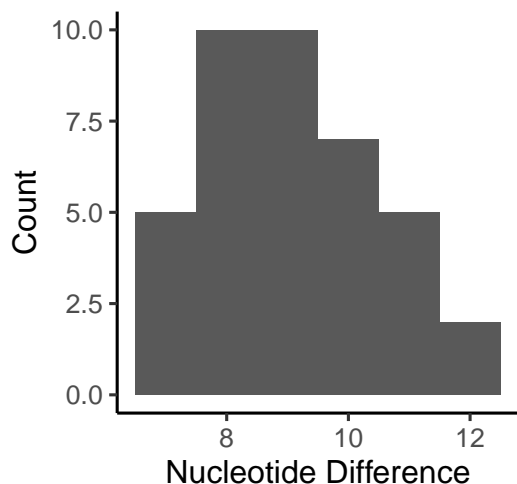
IGHV2–70*12

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



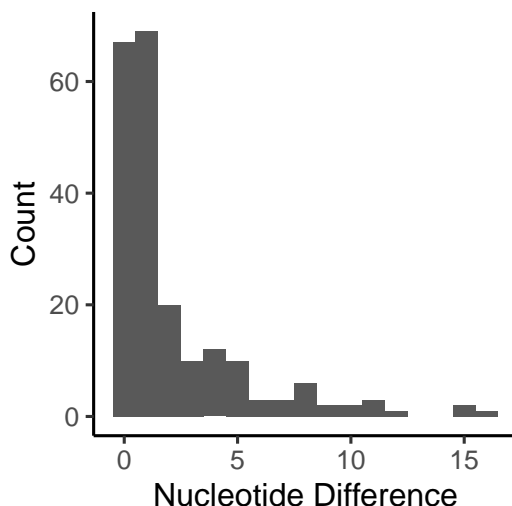
IGHV1–NL1*01

39 sequences assigned
No exact matches.



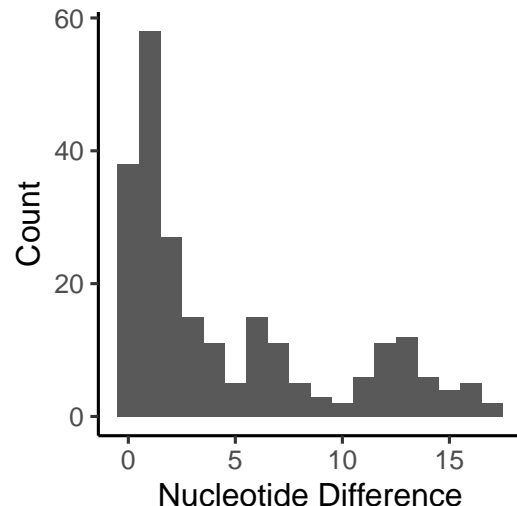
IGHV2–26*01

211 sequences assigned
67 (31.8%) exact matches, in which:
49 unique CDR3
5 unique J



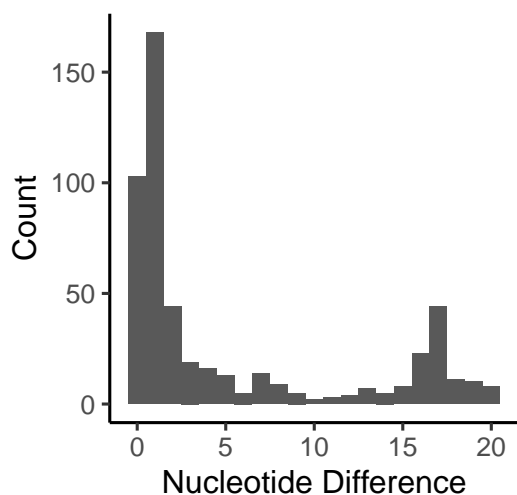
IGHV2–70*11_15

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



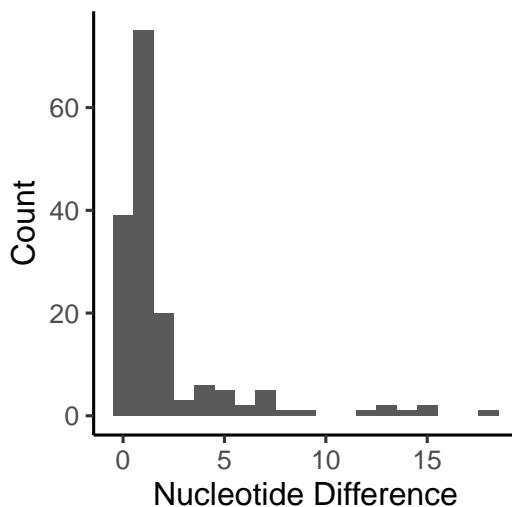
IGHV2–5*01

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



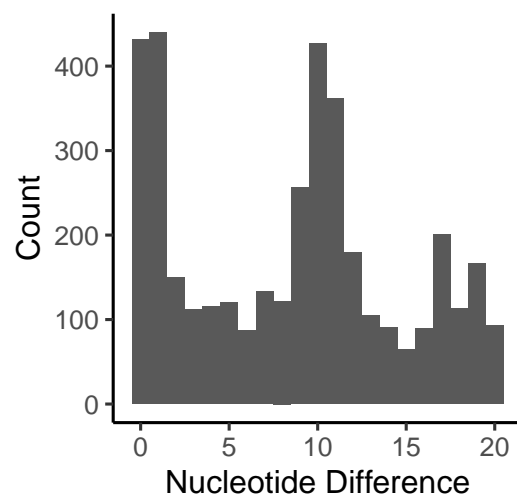
IGHV2–70*01

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



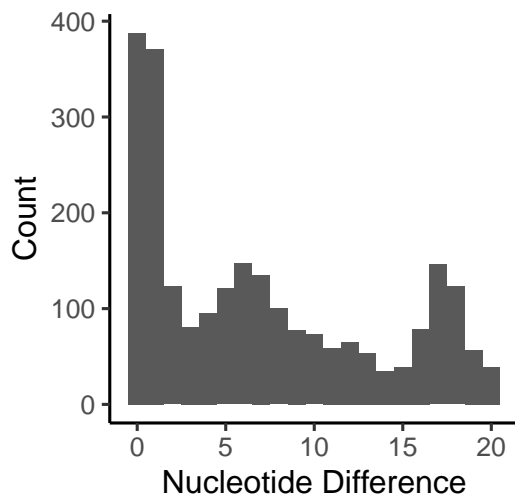
IGHV3–7*01

4683 sequences assigned
432 (9.2%) exact matches, in which:
311 unique CDR3
7 unique J



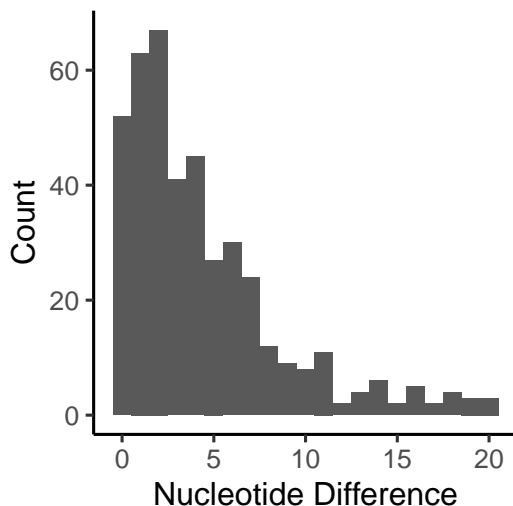
IGHV3-7*03

3168 sequences assigned
388 (12.2%) exact matches, in which:
281 unique CDR3
7 unique J



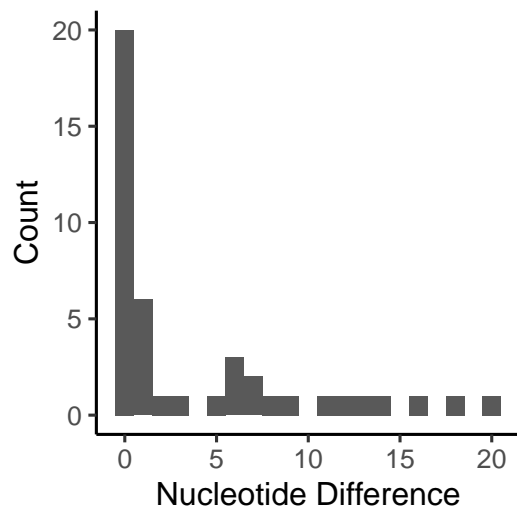
IGHV3-11*04

423 sequences assigned
52 (12.3%) exact matches, in which:
48 unique CDR3
7 unique J



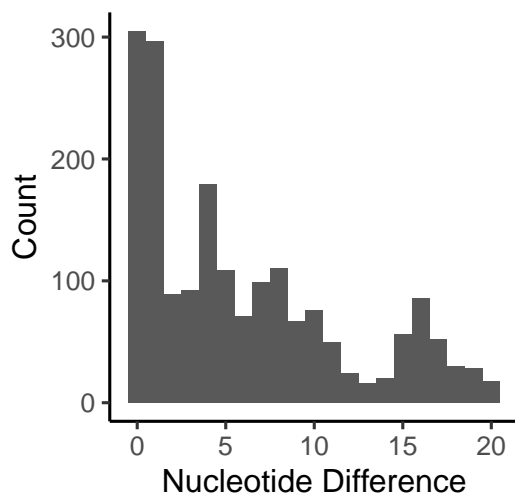
IGHV3-13*05

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



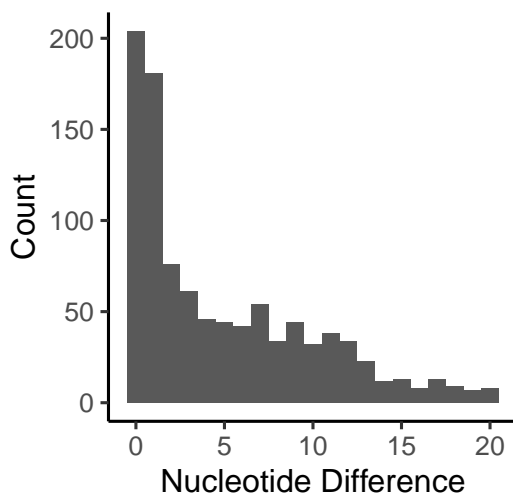
IGHV3-9*01

2327 sequences assigned
305 (13.1%) exact matches, in which:
201 unique CDR3
6 unique J



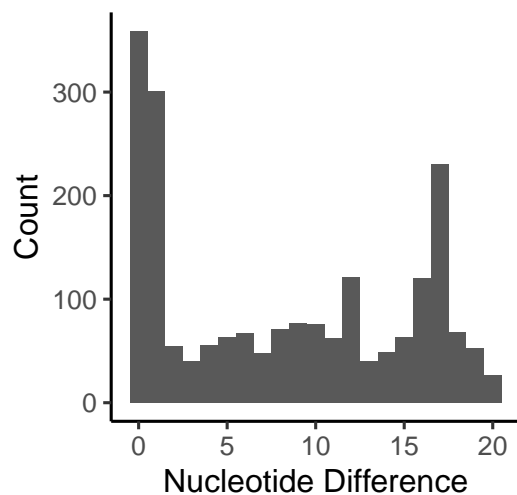
IGHV3-11*06

1042 sequences assigned
204 (19.6%) exact matches, in which:
147 unique CDR3
7 unique J



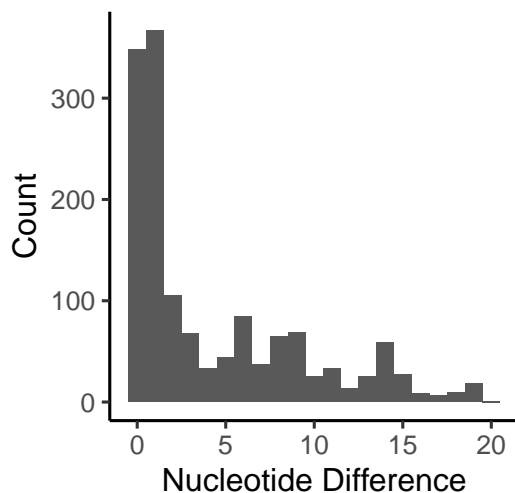
IGHV3-15*07

2338 sequences assigned
359 (15.4%) exact matches, in which:
238 unique CDR3
6 unique J



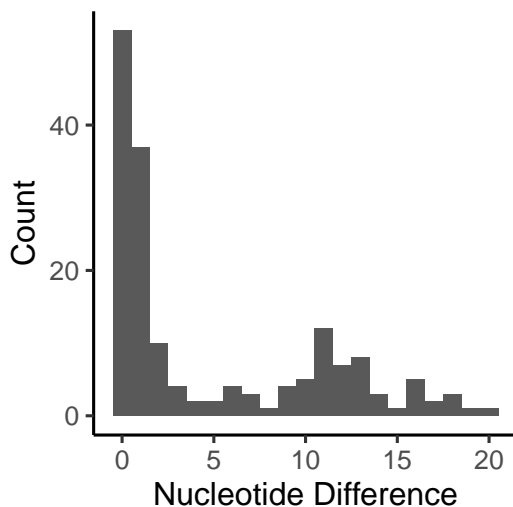
IGHV3-11*01

1624 sequences assigned
348 (21.4%) exact matches, in which:
242 unique CDR3
7 unique J



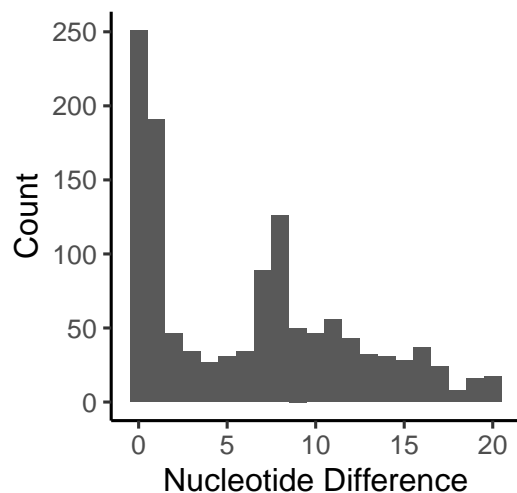
IGHV3-13*01

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



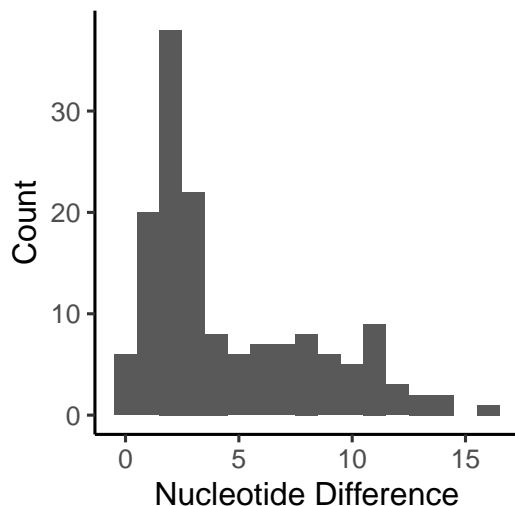
IGHV3-15*01_02

1369 sequences assigned
251 (18.3%) exact matches, in which:
165 unique CDR3
7 unique J



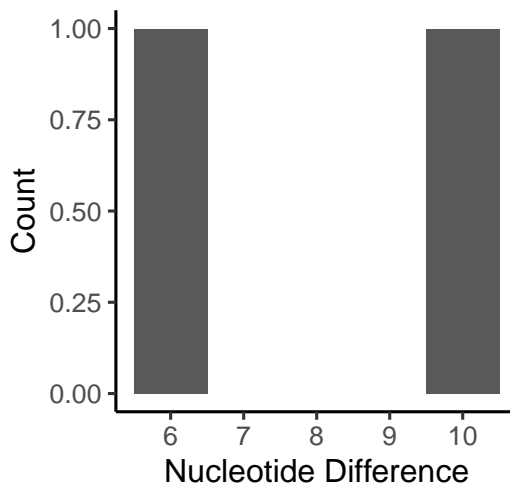
IGHV3-20*03_04

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



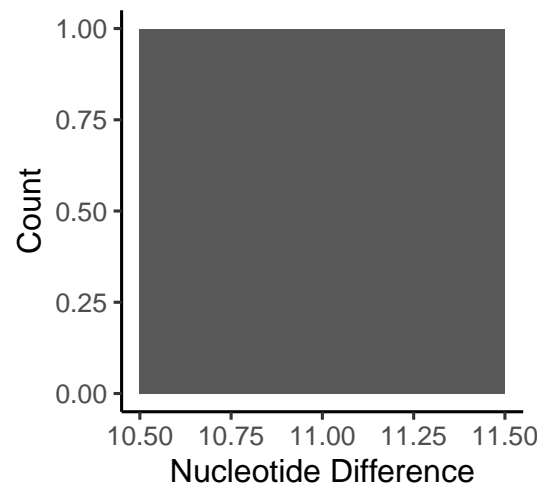
IGHV3-22*01_02

2 sequences assigned
No exact matches.



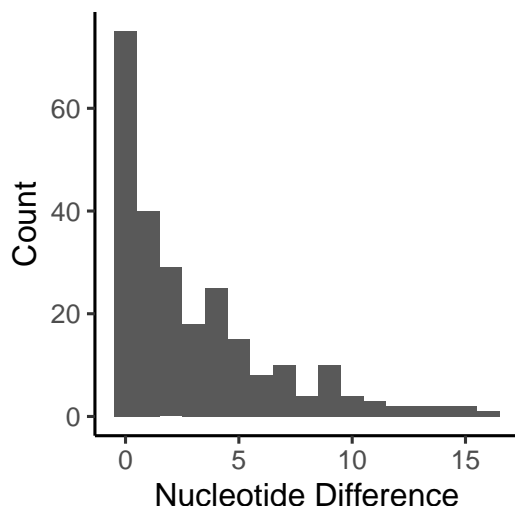
IGHV3-30-3*01

1 sequences assigned
No exact matches.



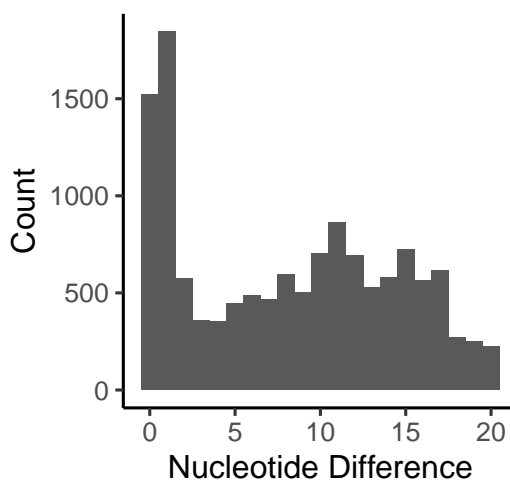
IGHV3-21*04

251 sequences assigned
75 (29.9%) exact matches, in which:
64 unique CDR3
5 unique J



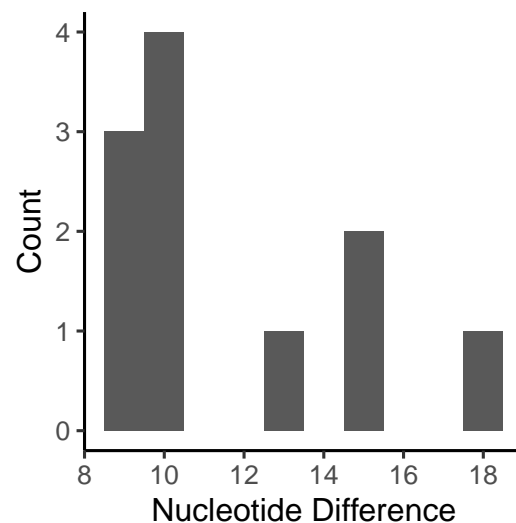
IGHV3-23*01_04

14993 sequences assigned
1522 (10.2%) exact matches, in which:
968 unique CDR3
7 unique J



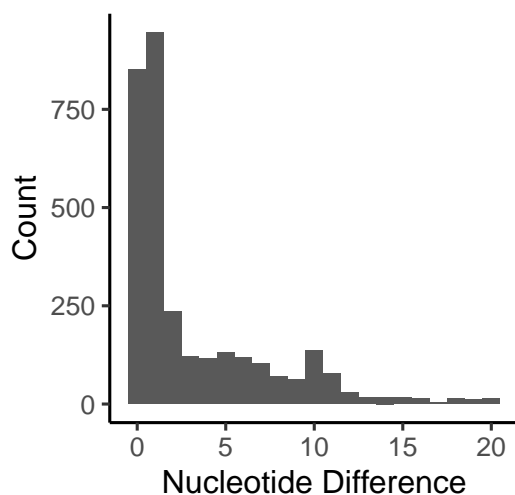
IGHV3-30-3*02

13 sequences assigned
No exact matches.



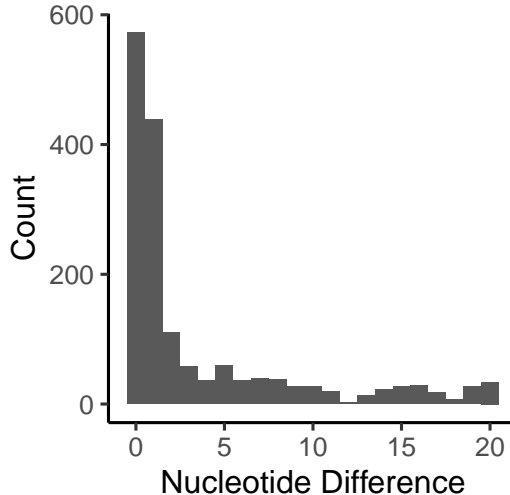
IGHV3-21*01_02

3178 sequences assigned
852 (26.8%) exact matches, in which:
549 unique CDR3
7 unique J



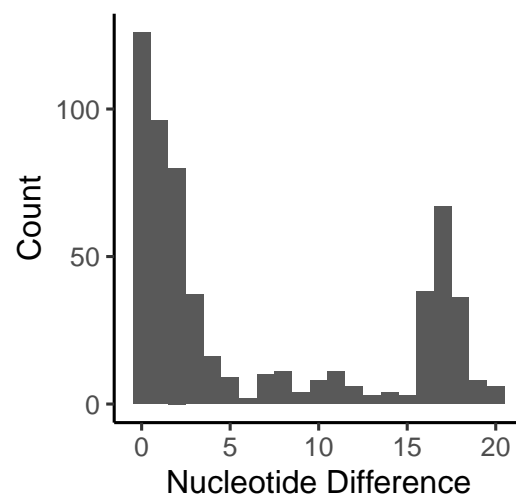
IGHV3-30*01

2485 sequences assigned
573 (23.1%) exact matches, in which:
397 unique CDR3
7 unique J



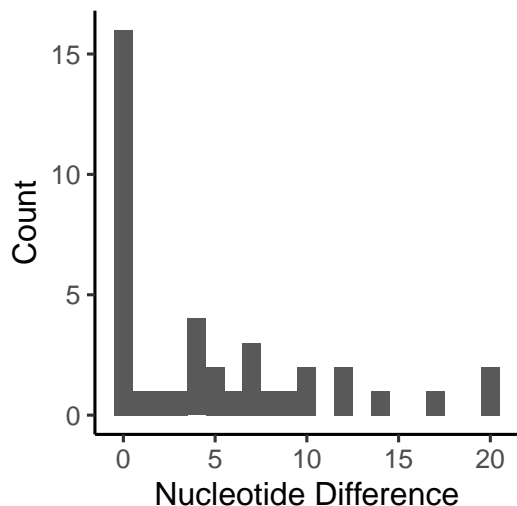
IGHV3-30*03

596 sequences assigned
126 (21.1%) exact matches, in which:
118 unique CDR3
7 unique J



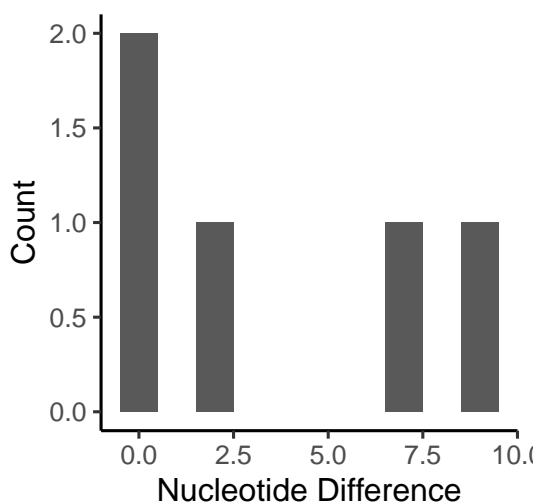
IGHV3-30-3*03

43 sequences assigned
16 (37.2%) exact matches, in which:
13 unique CDR3
2 unique J



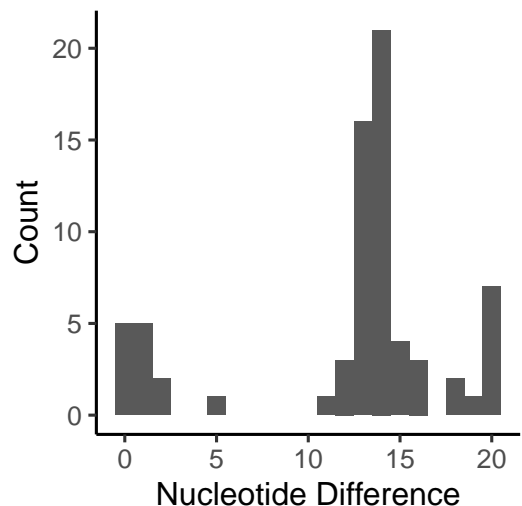
IGHV3-35*01

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



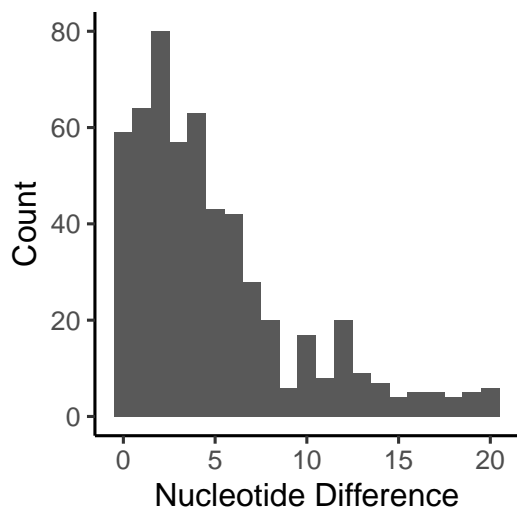
IGHV3-43*01

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



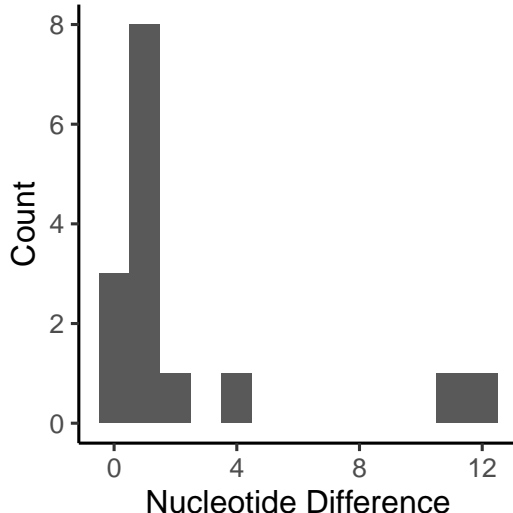
IGHV3-30*07

567 sequences assigned
59 (10.4%) exact matches, in which:
56 unique CDR3
7 unique J



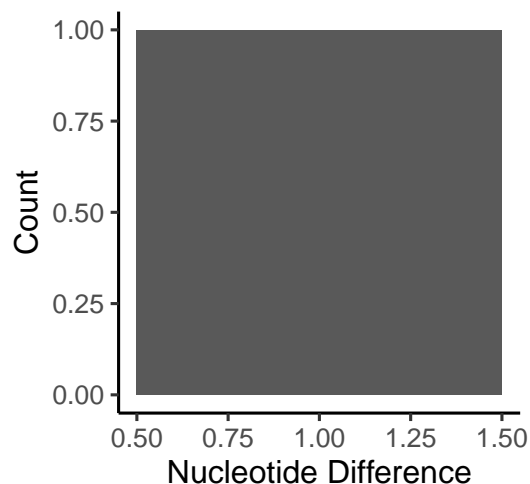
IGHV3-38-3*01

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



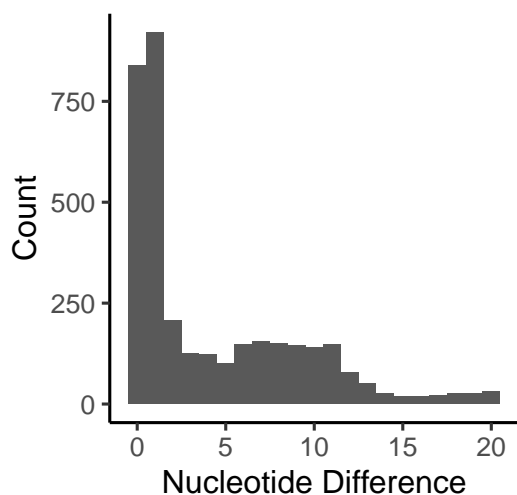
IGHV3-47*01

1 sequences assigned
No exact matches.



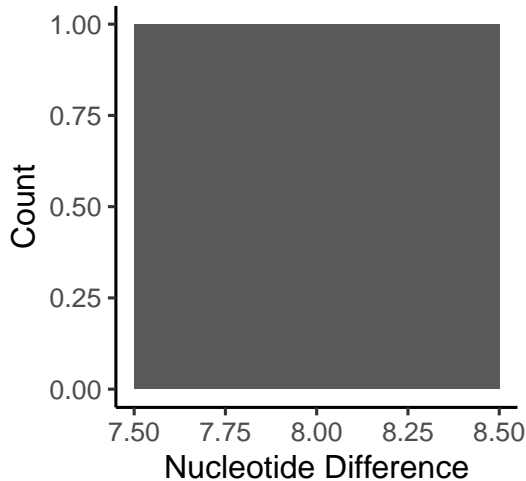
IGHV3-33*01

3915 sequences assigned
839 (21.4%) exact matches, in which:
568 unique CDR3
7 unique J



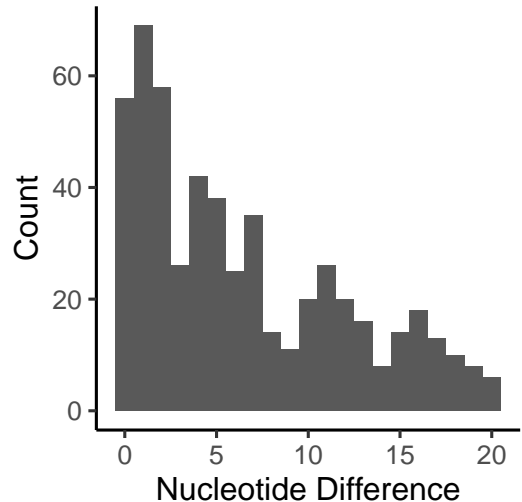
IGHV3-38*03

1 sequences assigned
No exact matches.



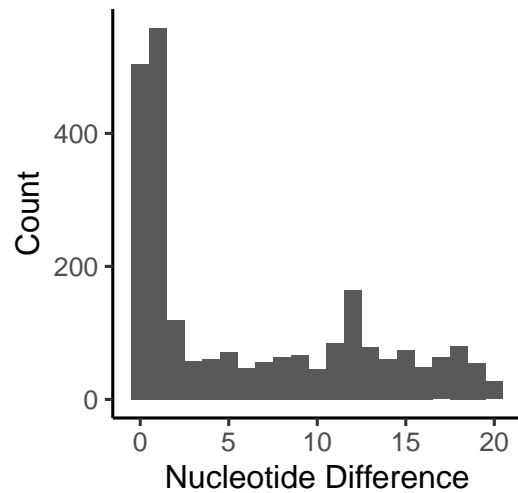
IGHV3-48*01

542 sequences assigned
56 (10.3%) exact matches, in which:
53 unique CDR3
6 unique J



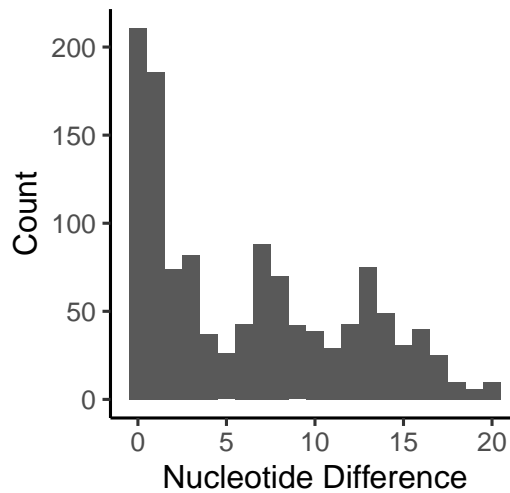
IGHV3-48*02

2437 sequences assigned
504 (20.7%) exact matches, in which:
307 unique CDR3
7 unique J



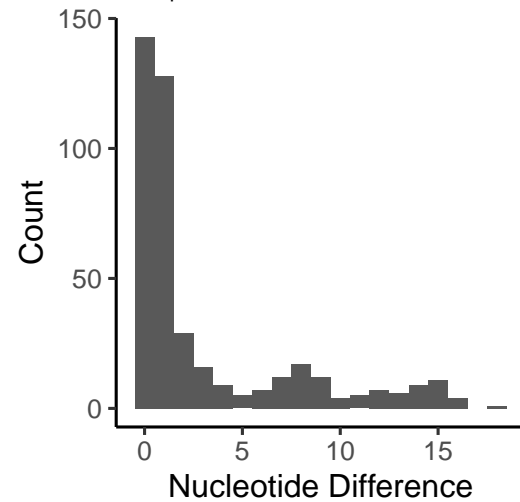
IGHV3-49*04

1241 sequences assigned
211 (17%) exact matches, in which:
138 unique CDR3
7 unique J



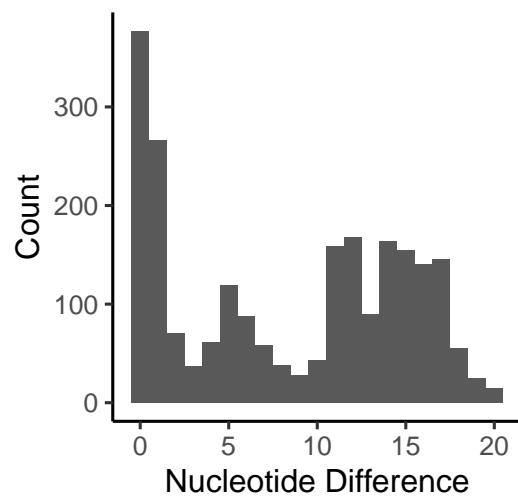
IGHV3-53*01_02

429 sequences assigned
143 (33.3%) exact matches, in which:
104 unique CDR3
6 unique J



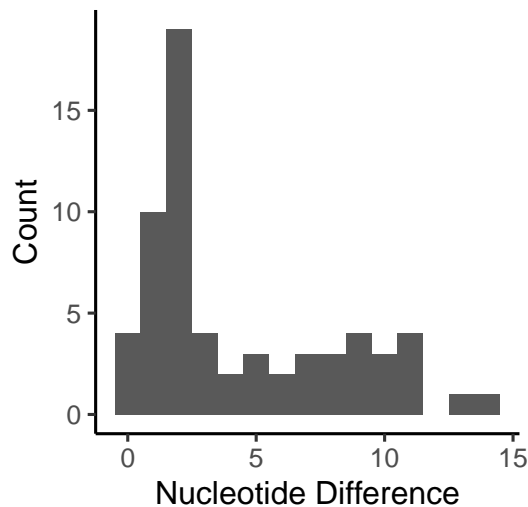
IGHV3-48*03

2610 sequences assigned
377 (14.4%) exact matches, in which:
248 unique CDR3
7 unique J



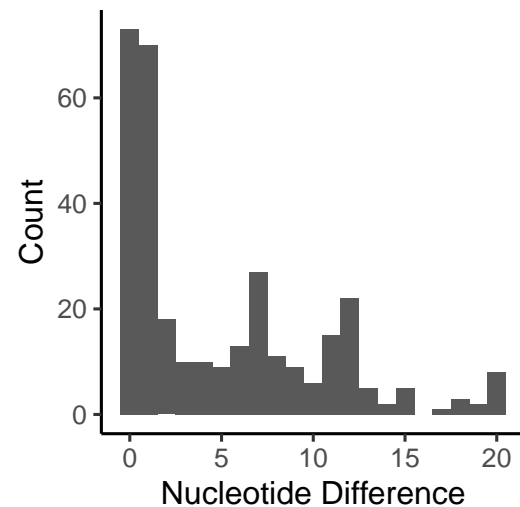
IGHV3-52*01_03

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



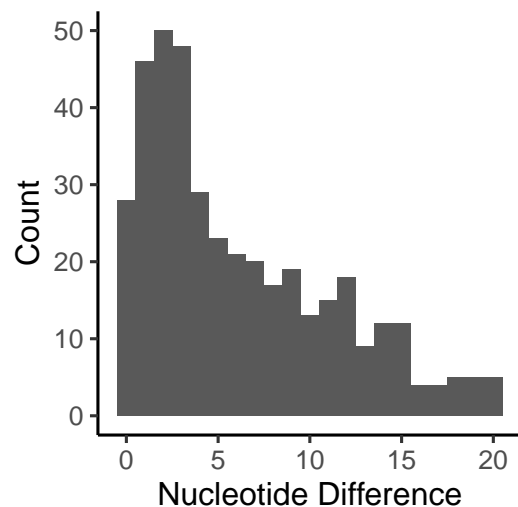
IGHV3-64*01

365 sequences assigned
73 (20%) exact matches, in which:
50 unique CDR3
4 unique J



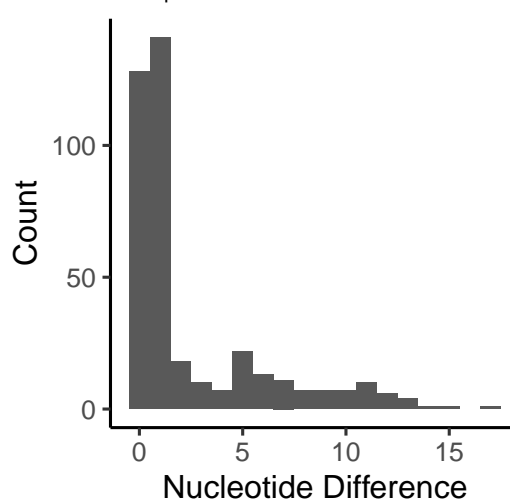
IGHV3-48*04

408 sequences assigned
28 (6.9%) exact matches, in which:
23 unique CDR3
6 unique J



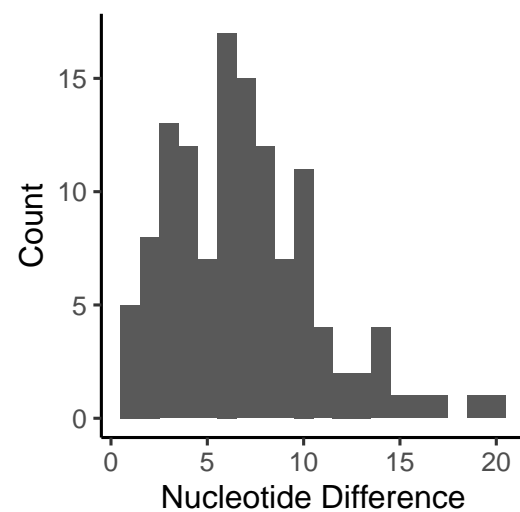
IGHV3-53*04

395 sequences assigned
128 (32.4%) exact matches, in which:
93 unique CDR3
5 unique J



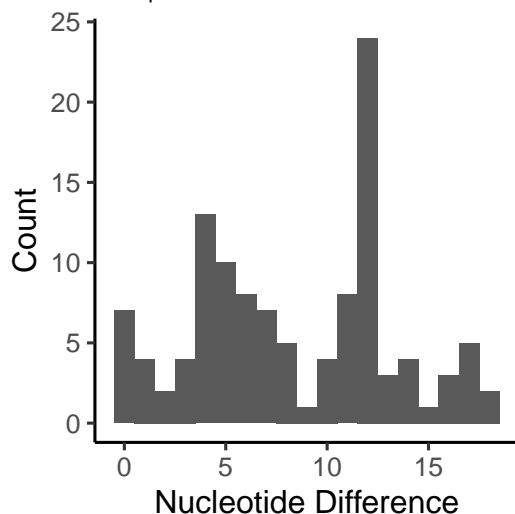
IGHV3-64*04

127 sequences assigned
No exact matches.



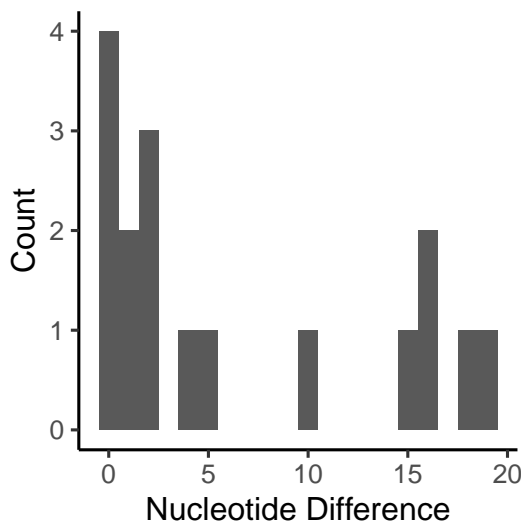
IGHV3-64*02_07

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



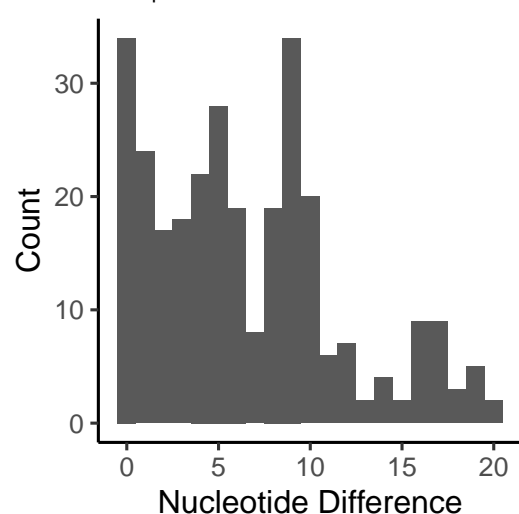
IGHV3-69-1*02

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



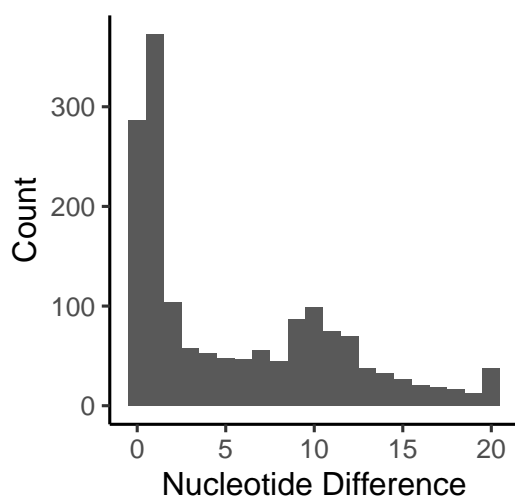
IGHV3-72*01

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



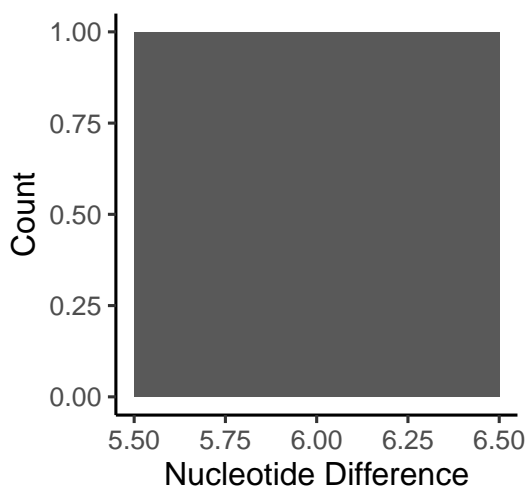
IGHV3-66*01

1706 sequences assigned
286 (16.8%) exact matches, in which:
205 unique CDR3
7 unique J



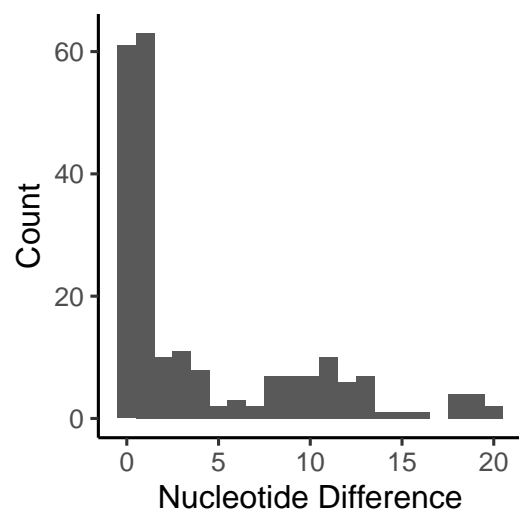
IGHV3-71*03

1 sequences assigned
No exact matches.



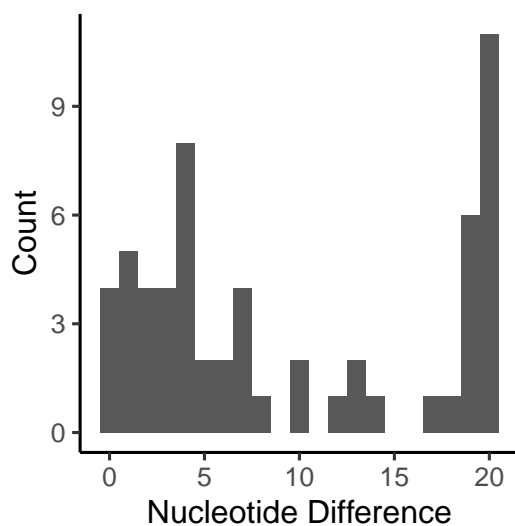
IGHV3-73*01_02

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



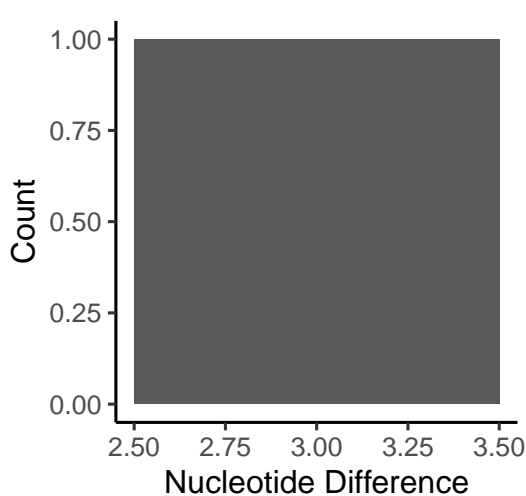
IGHV3-69-1*01

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



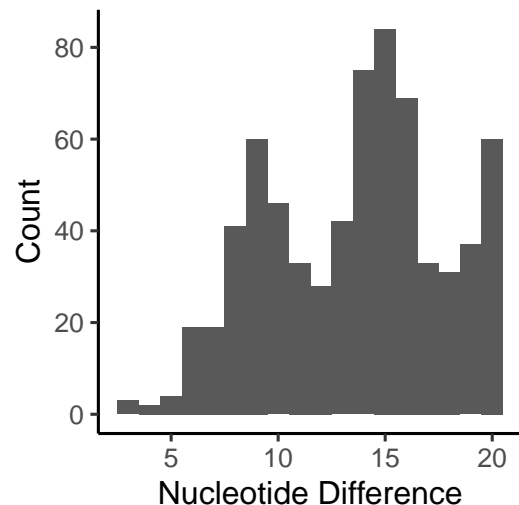
IGHV3-71*01_04

2 sequences assigned
No exact matches.



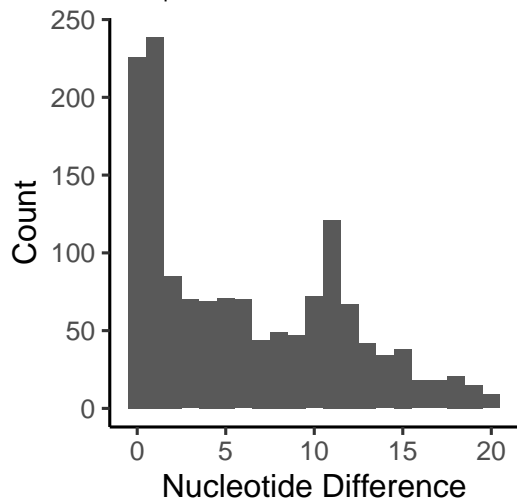
IGHV3-74*03

920 sequences assigned
No exact matches.



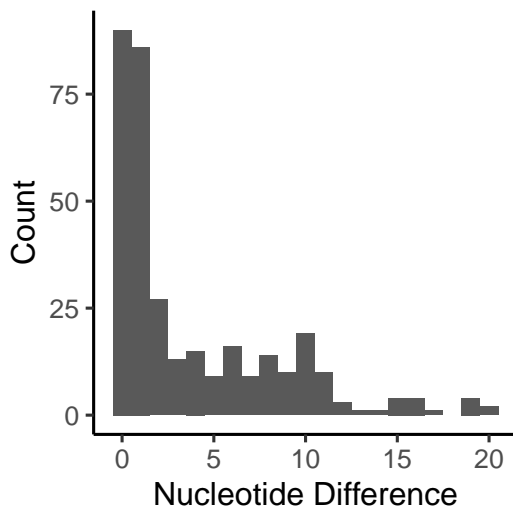
IGHV3-74*01_02

1767 sequences assigned
226 (12.8%) exact matches, in which:
157 unique CDR3
6 unique J



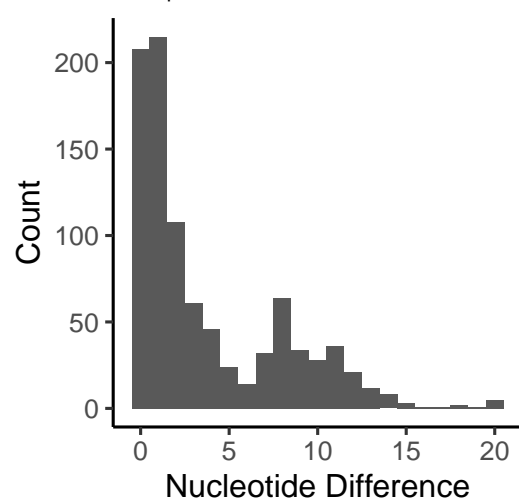
IGHV3-64D*06

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



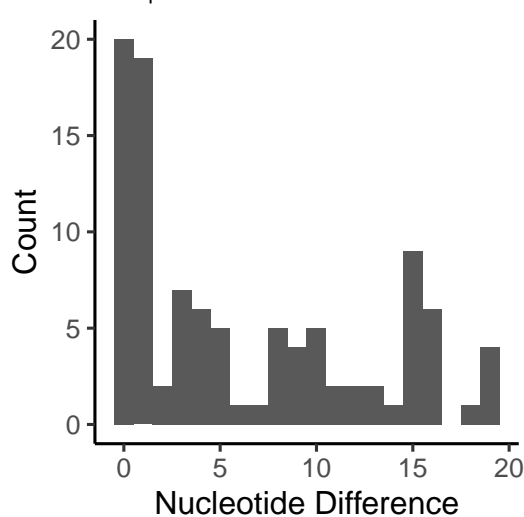
IGHV4-4*02_03

966 sequences assigned
208 (21.5%) exact matches, in which:
166 unique CDR3
7 unique J



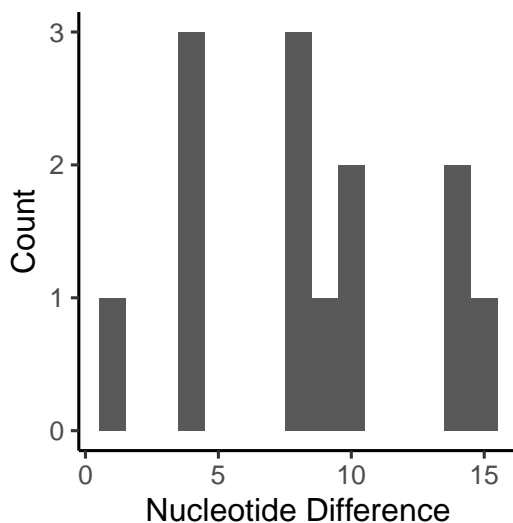
IGHV3-43D*03

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



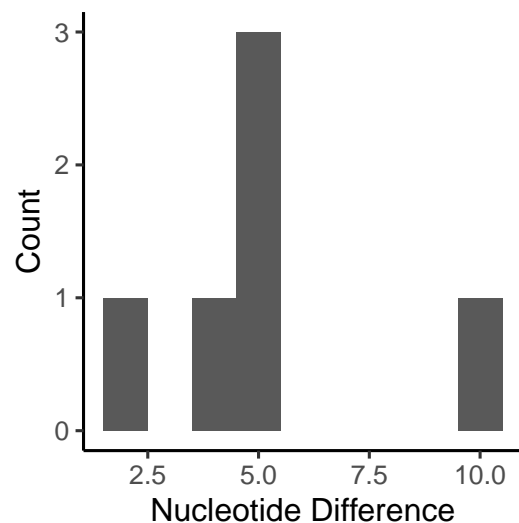
IGHV3-NL1*01

15 sequences assigned
No exact matches.



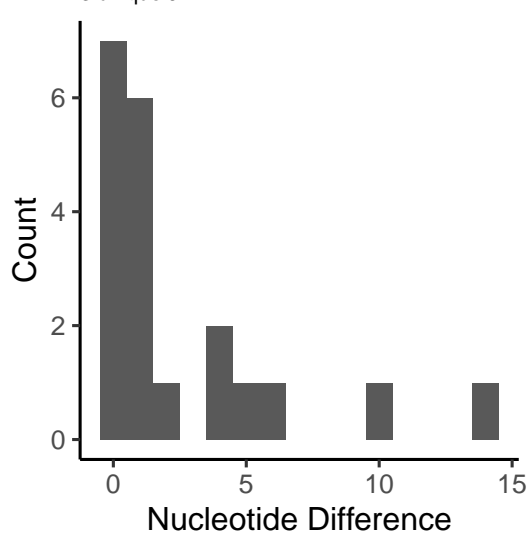
IGHV4-28*03

6 sequences assigned
No exact matches.



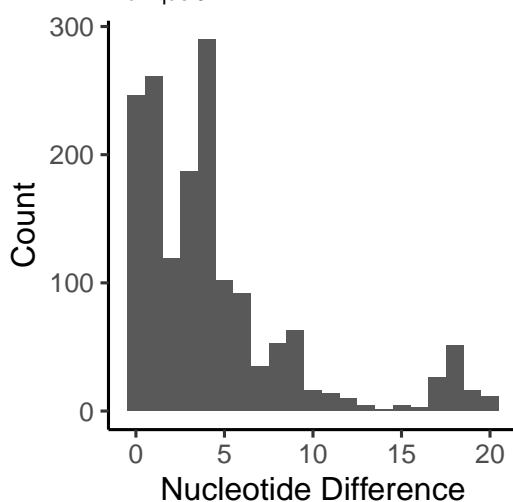
IGHV3-43D*04

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



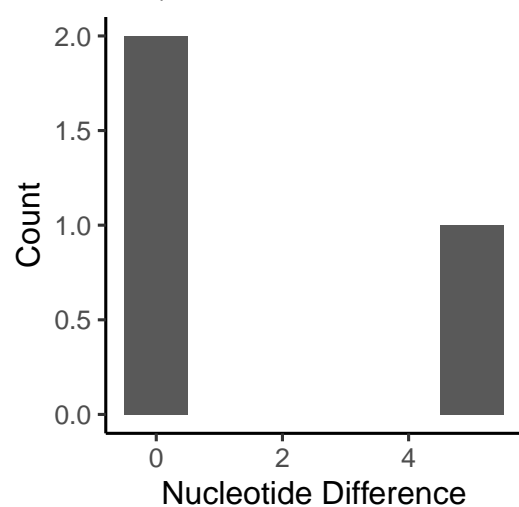
IGHV4-4*07

1640 sequences assigned
246 (15%) exact matches, in which:
214 unique CDR3
7 unique J



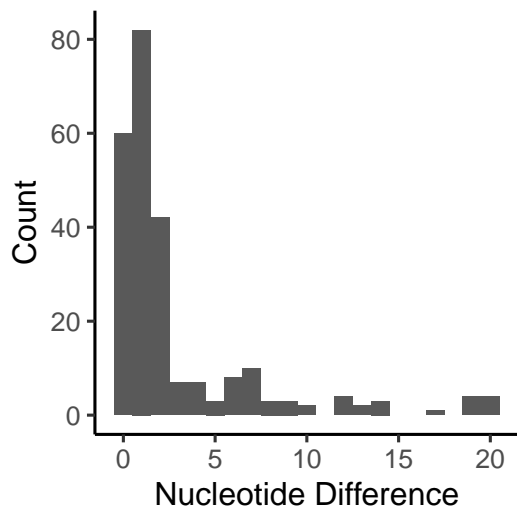
IGHV4-28*02_05

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



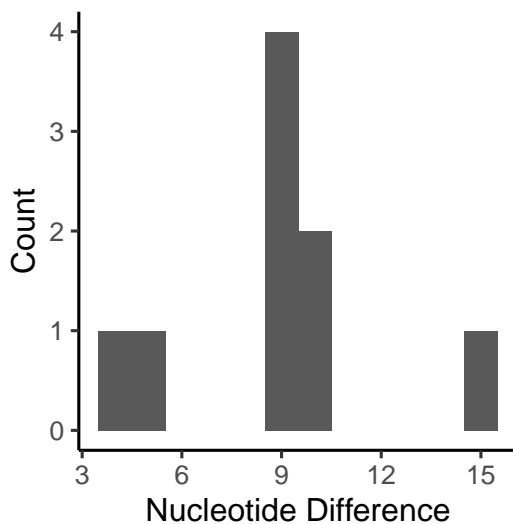
IGHV4-30-2*01

277 sequences assigned
60 (21.7%) exact matches, in which:
37 unique CDR3
6 unique J



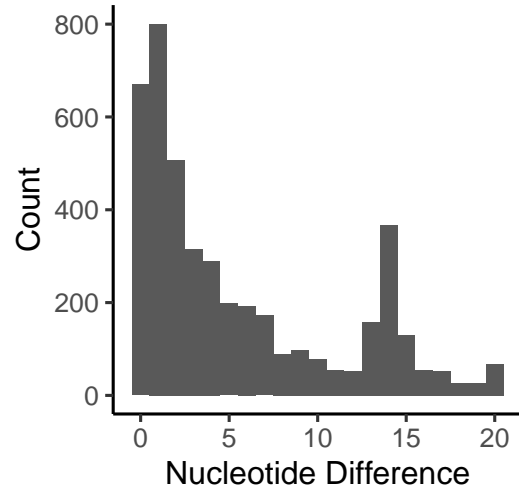
IGHV4-30-4*07

10 sequences assigned
No exact matches.



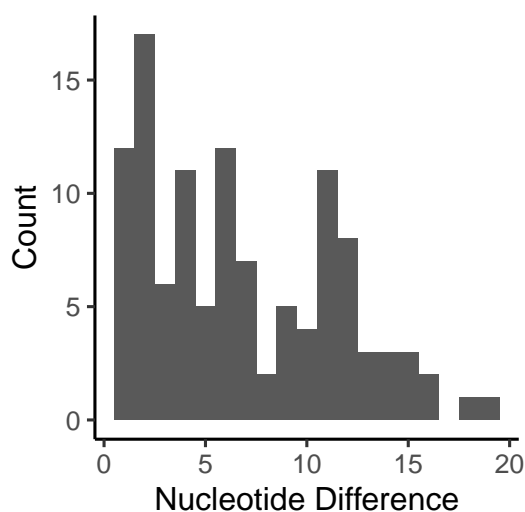
IGHV4-34*01_02

4813 sequences assigned
670 (13.9%) exact matches, in which:
494 unique CDR3
7 unique J



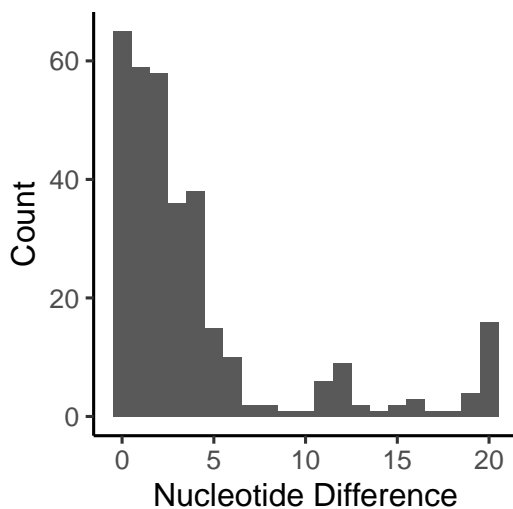
IGHV4-30-2*03

157 sequences assigned
No exact matches.



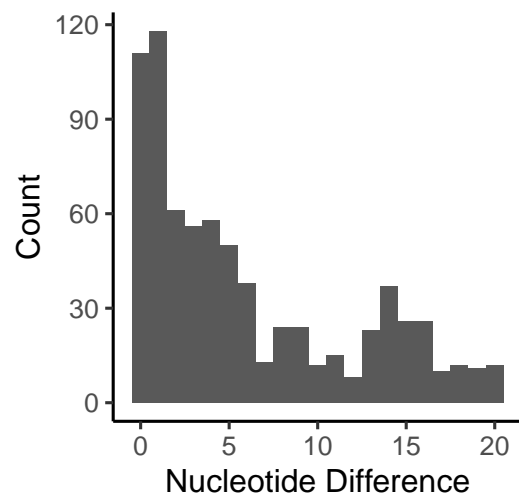
IGHV4-31*01

340 sequences assigned
65 (19.1%) exact matches, in which:
54 unique CDR3
5 unique J



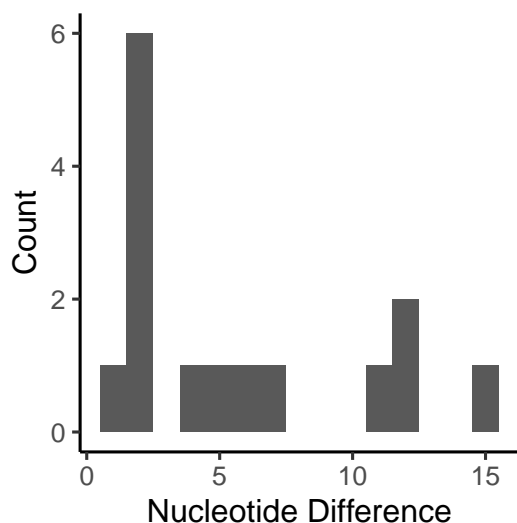
IGHV4-38-2*01

854 sequences assigned
111 (13%) exact matches, in which:
103 unique CDR3
7 unique J



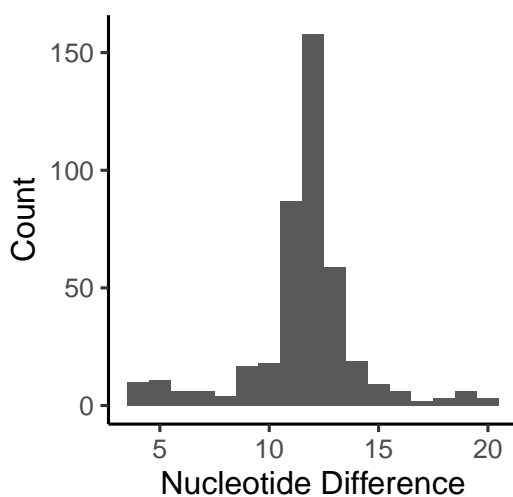
IGHV4-30-2*04

15 sequences assigned
No exact matches.



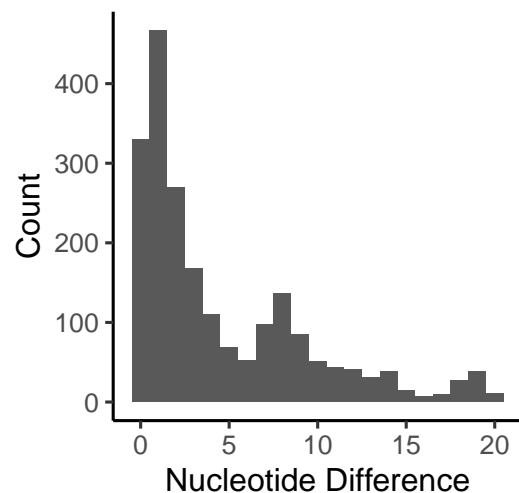
IGHV4-31*02

432 sequences assigned
No exact matches.



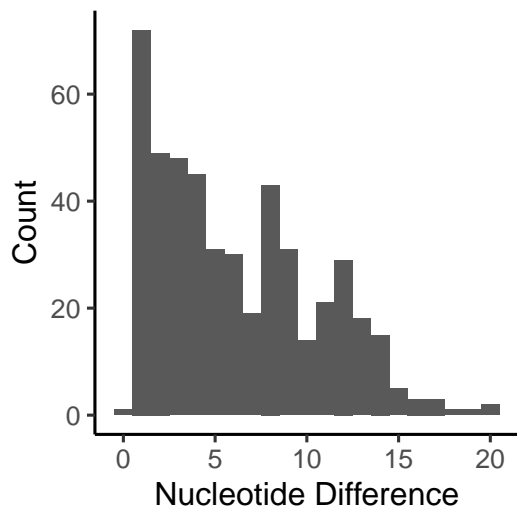
IGHV4-38-2*02

2155 sequences assigned
330 (15.3%) exact matches, in which:
268 unique CDR3
7 unique J



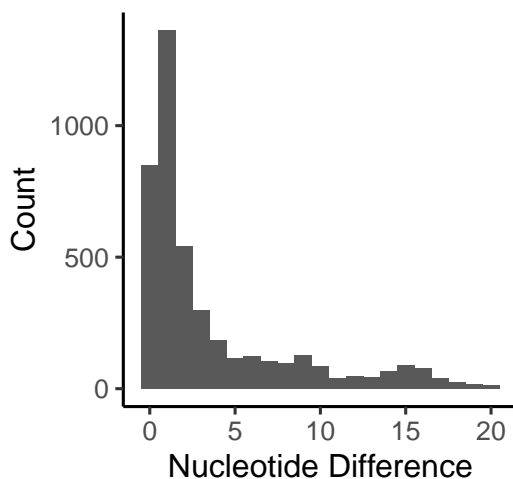
IGHV4-39*07

488 sequences assigned
1 (0.2%) exact matches, in which:
1 unique CDR3
1 unique J



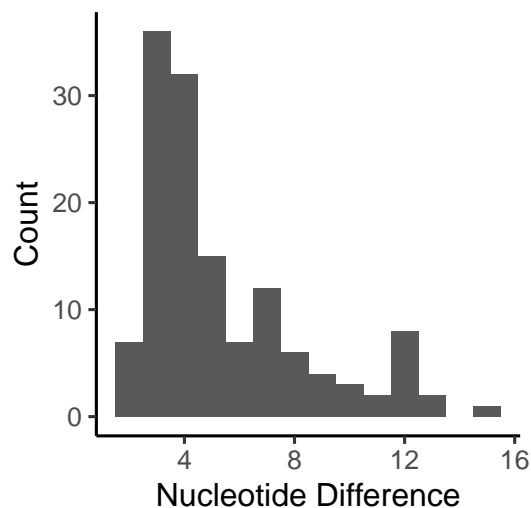
IGHV4-59*01_07

4678 sequences assigned
849 (18.1%) exact matches, in which:
635 unique CDR3
7 unique J



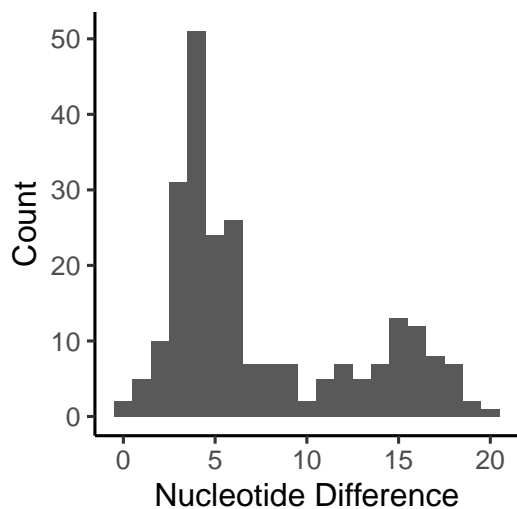
IGHV4-61*05

137 sequences assigned
No exact matches.



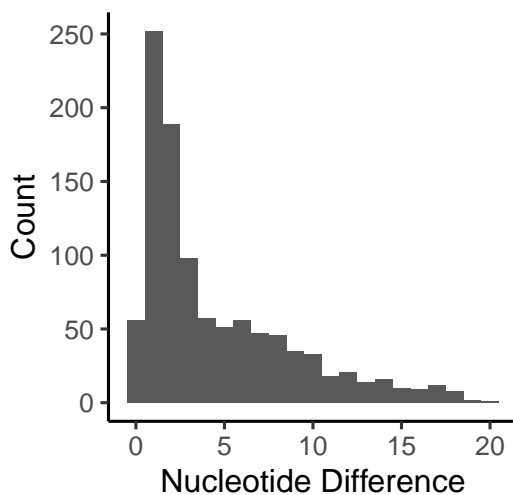
IGHV4-59*02

514 sequences assigned
2 (0.4%) exact matches, in which:
2 unique CDR3
1 unique J



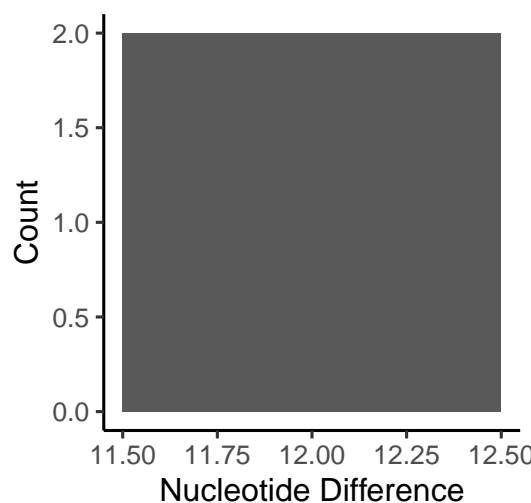
IGHV4-59*12

1057 sequences assigned
56 (5.3%) exact matches, in which:
54 unique CDR3
6 unique J



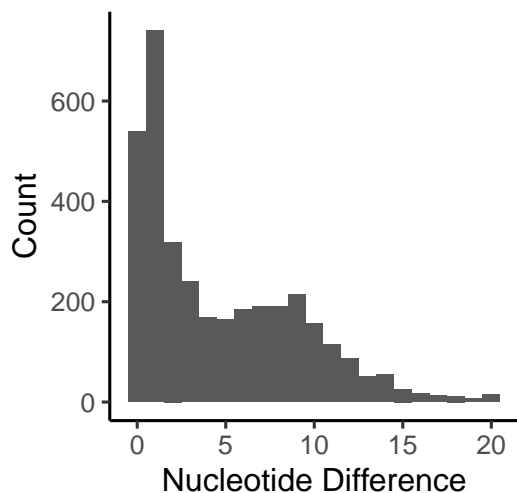
IGHV1/OR15-2*02_03

2 sequences assigned
No exact matches.



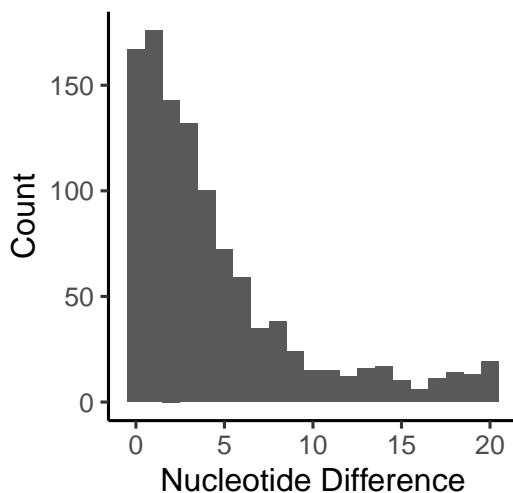
IGHV4-59*08

3714 sequences assigned
540 (14.5%) exact matches, in which:
442 unique CDR3
7 unique J



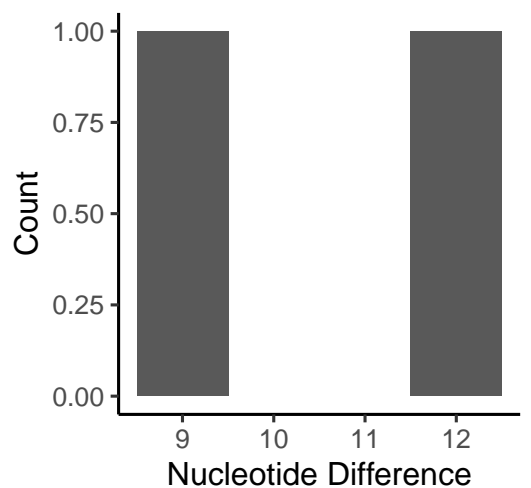
IGHV4-61*01

1133 sequences assigned
167 (14.7%) exact matches, in which:
145 unique CDR3
7 unique J



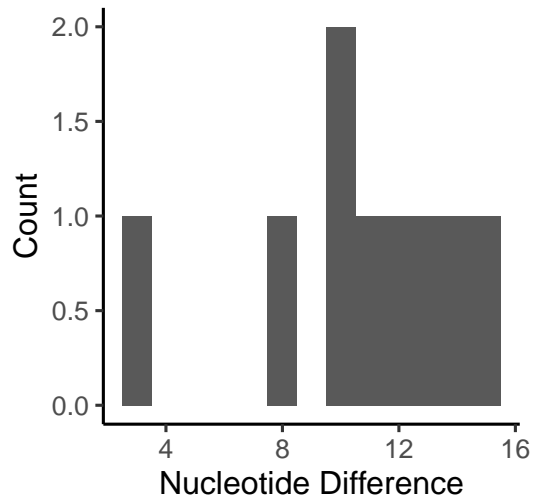
IGHV1/OR15-3*02

2 sequences assigned
No exact matches.



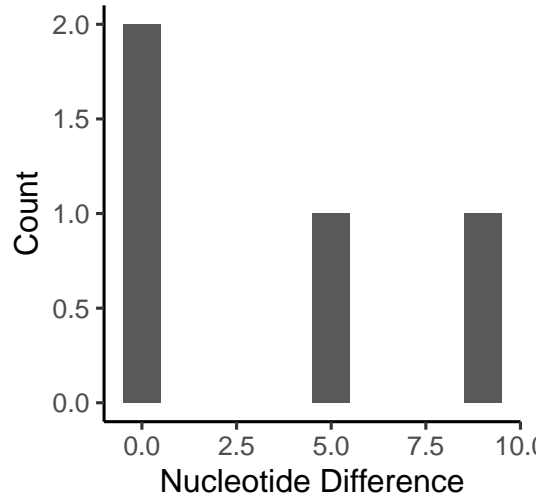
IGHV4/OR15-8*01

9 sequences assigned
No exact matches.



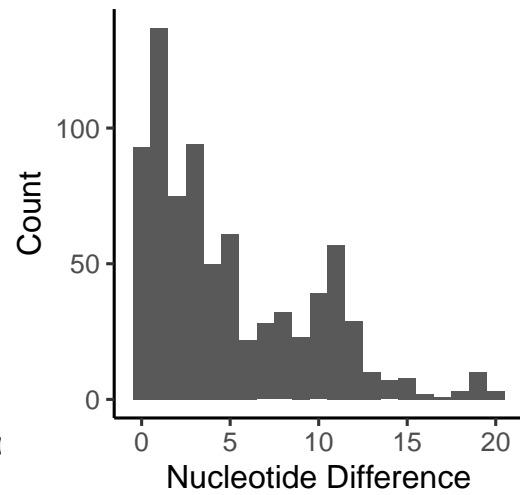
IGHV5-51*06

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



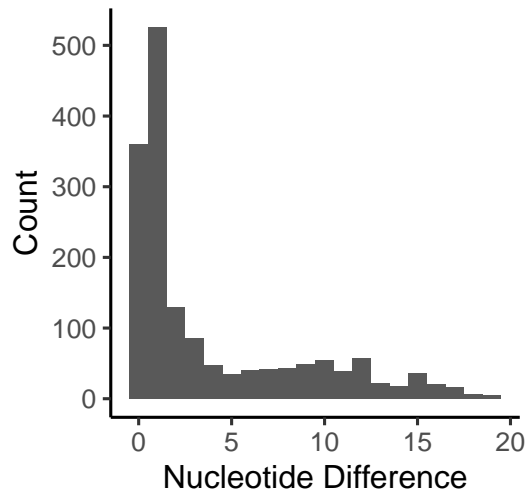
IGHV7-4-1*02

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



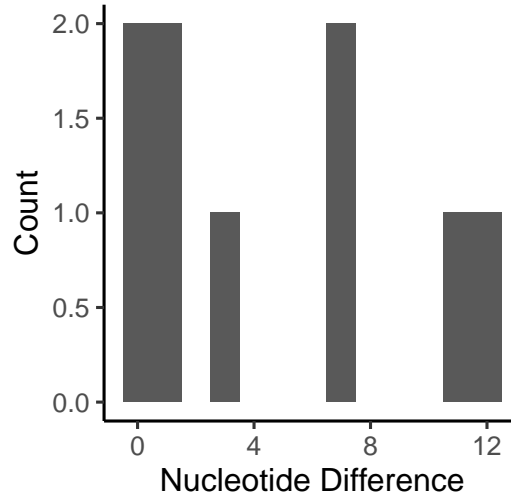
IGHV5-10-1*01_03

1687 sequences assigned
360 (21.3%) exact matches, in which:
241 unique CDR3
7 unique J



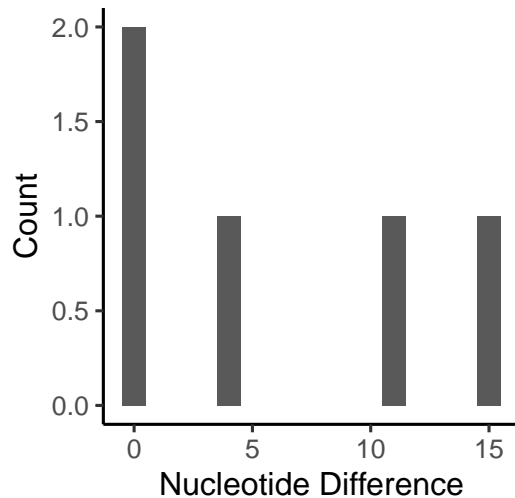
IGHV5-51*07

9 sequences assigned
2 (22.2%) exact matches, in which:
2 unique CDR3
1 unique J



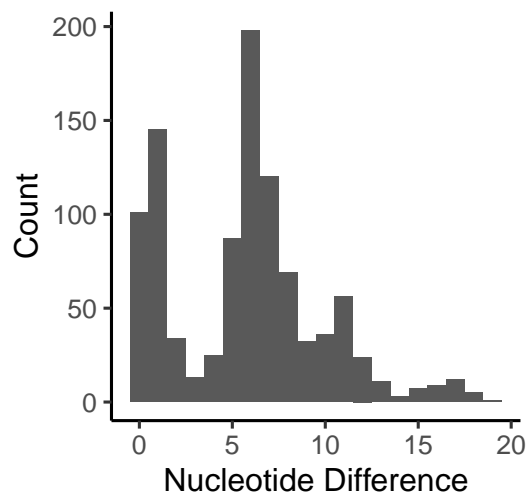
IGHV5-51*04

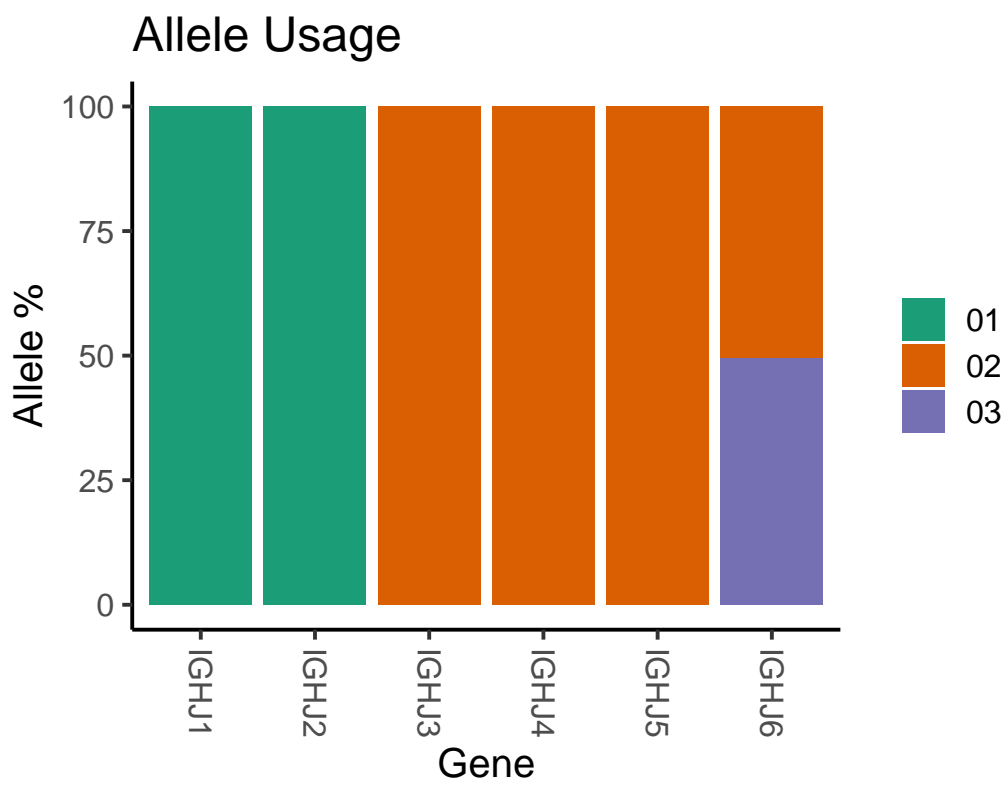
5 sequences assigned
2 (40%) exact matches, in which:
1 unique CDR3
1 unique J



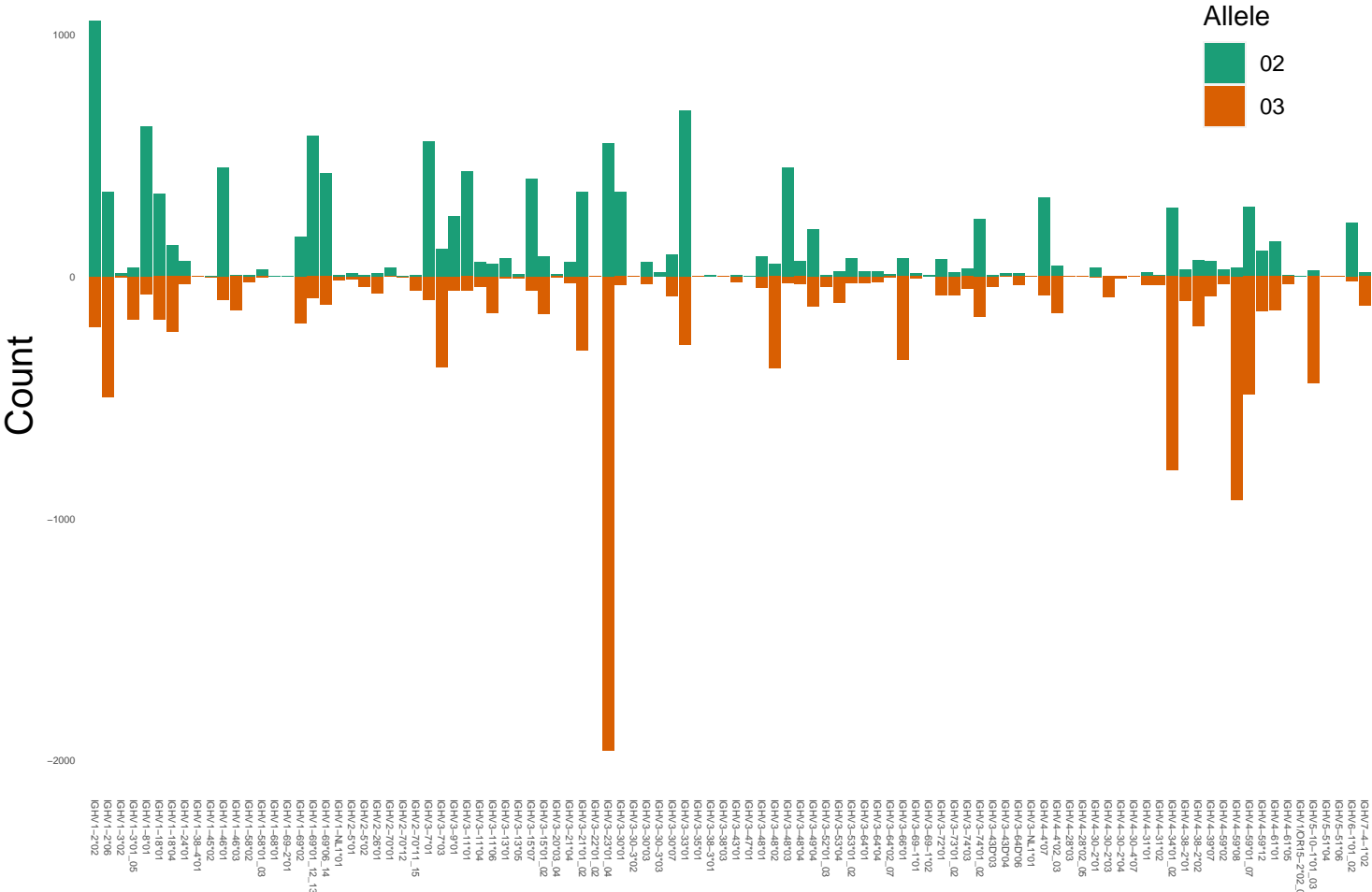
IGHV6-1*01_02

1091 sequences assigned
101 (9.3%) exact matches, in which:
87 unique CDR3
7 unique J





Sequence Count byIGHJ6 allele usage



Warning – no inferred sequences found.