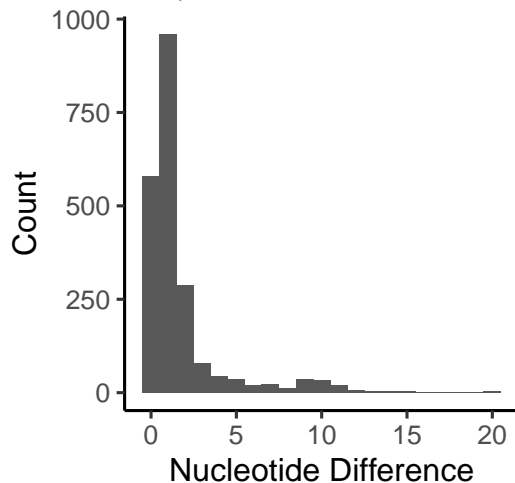


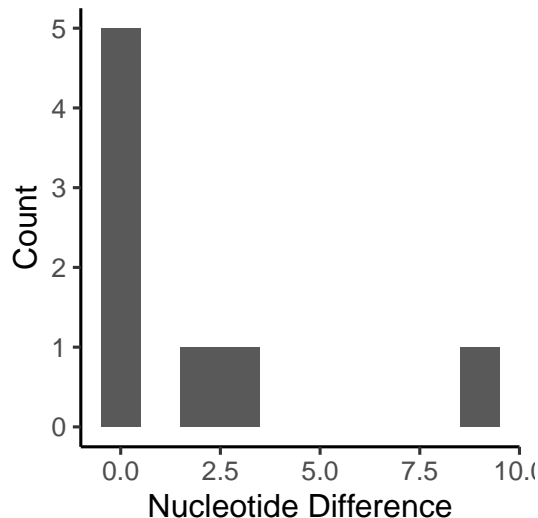
IGHV1-2*04

2163 sequences assigned
579 (26.8%) exact matches, in which:
437 unique CDR3
6 unique J



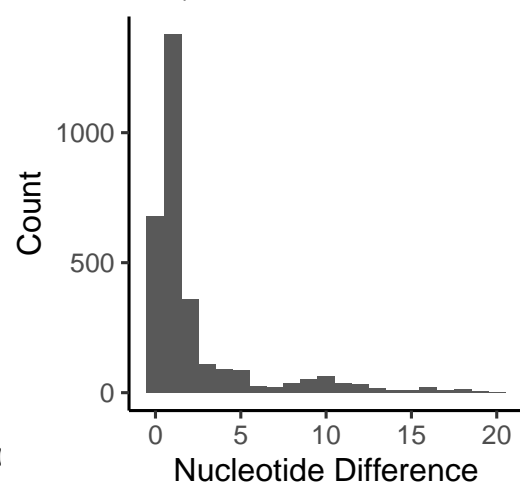
IGHV1-8*01

8 sequences assigned
5 (62.5%) exact matches, in which:
5 unique CDR3
3 unique J



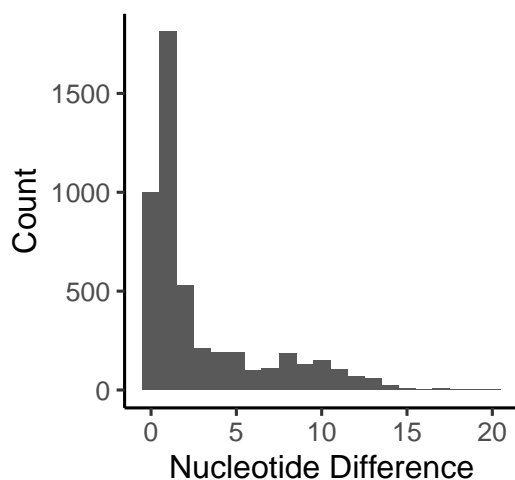
IGHV1-24*01

3050 sequences assigned
678 (22.2%) exact matches, in which:
491 unique CDR3
7 unique J



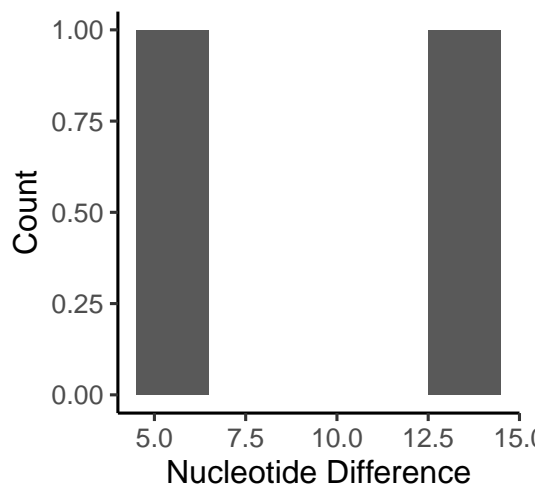
IGHV1-2*06

4885 sequences assigned
998 (20.4%) exact matches, in which:
683 unique CDR3
7 unique J



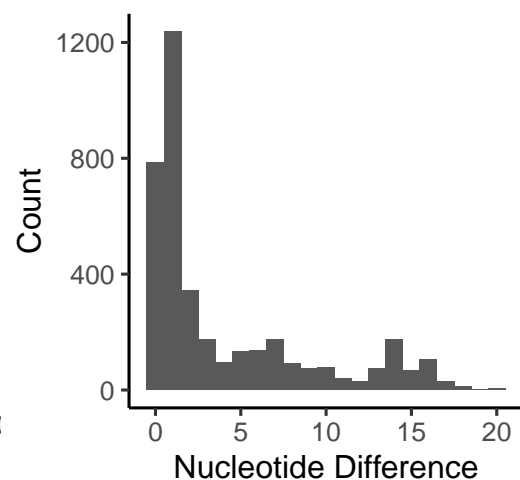
IGHV1-8*02

5 sequences assigned
No exact matches.



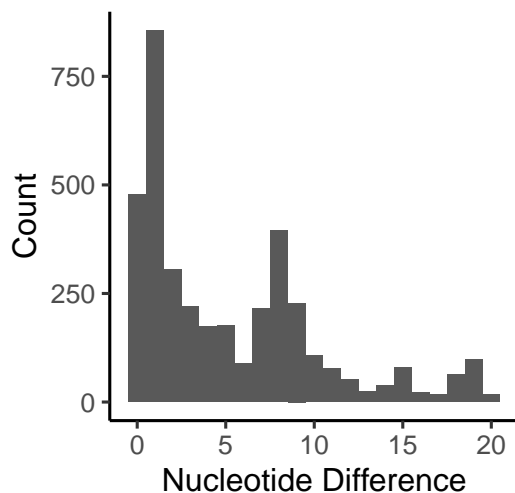
IGHV1-46*01

3874 sequences assigned
787 (20.3%) exact matches, in which:
583 unique CDR3
7 unique J



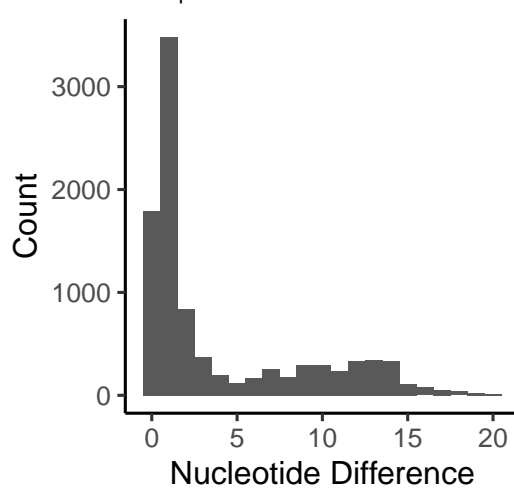
IGHV1-3*01_05

3762 sequences assigned
478 (12.7%) exact matches, in which:
353 unique CDR3
7 unique J



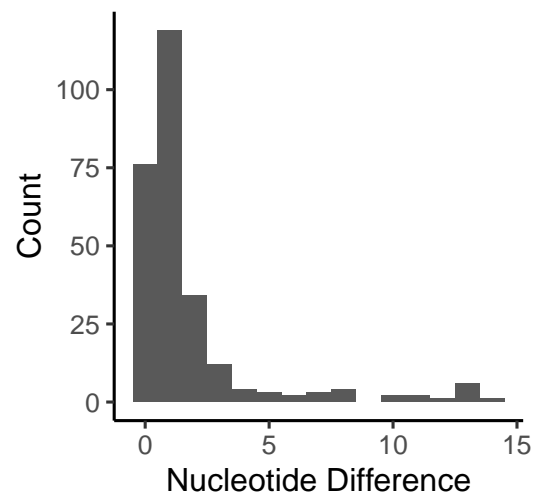
IGHV1-18*01

10262 sequences assigned
1794 (17.5%) exact matches, in which:
1237 unique CDR3
7 unique J



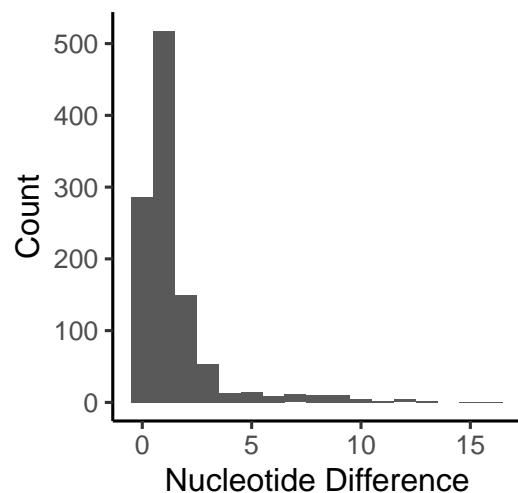
IGHV1-58*02

269 sequences assigned
76 (28.3%) exact matches, in which:
63 unique CDR3
5 unique J



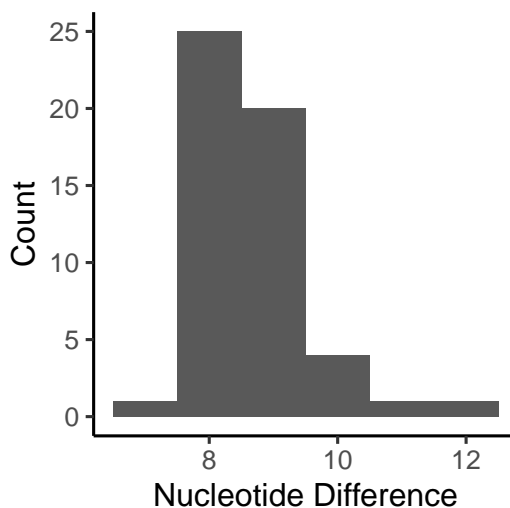
IGHV1-69*02

1090 sequences assigned
286 (26.2%) exact matches, in which:
200 unique CDR3
6 unique J



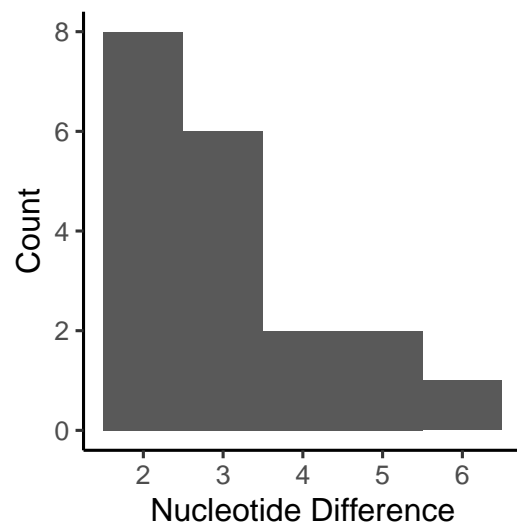
IGHV1-NL1*01

52 sequences assigned
No exact matches.



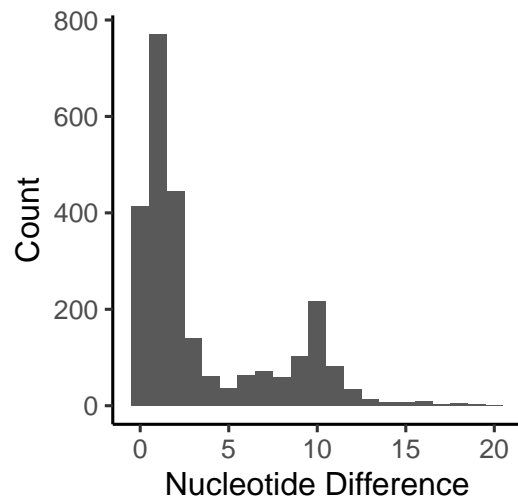
IGHV2-70*12

19 sequences assigned
No exact matches.



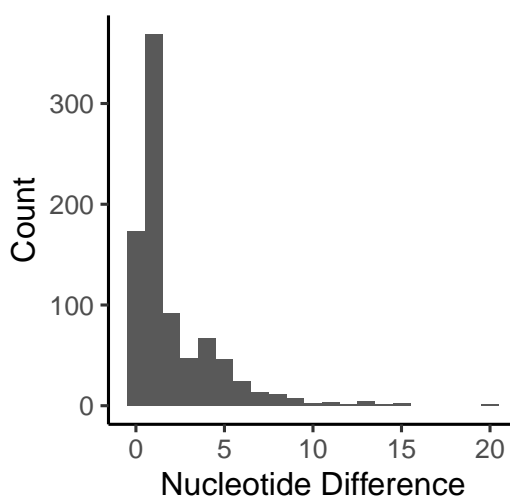
IGHV1-69*04_09

2549 sequences assigned
414 (16.2%) exact matches, in which:
342 unique CDR3
7 unique J



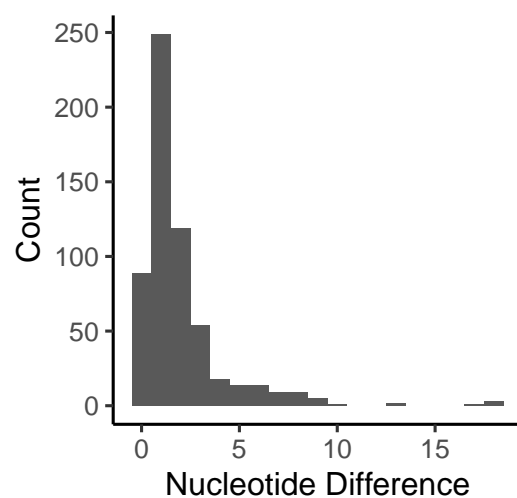
IGHV2-5*02

863 sequences assigned
173 (20%) exact matches, in which:
106 unique CDR3
6 unique J



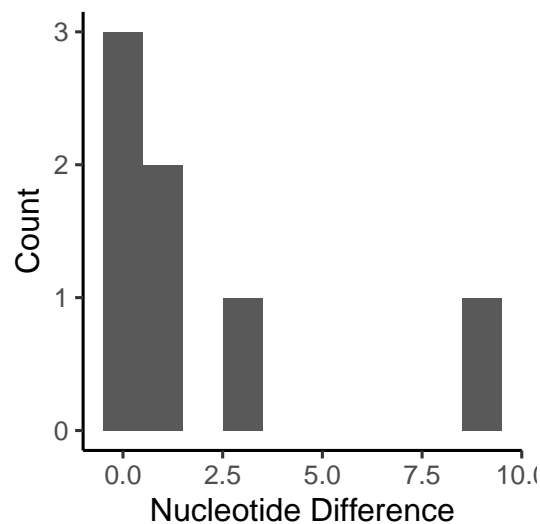
IGHV2-70*11_15

588 sequences assigned
89 (15.1%) exact matches, in which:
51 unique CDR3
4 unique J



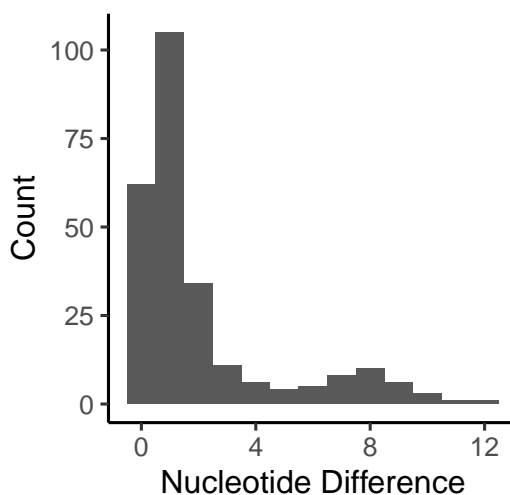
IGHV1-69D*01

7 sequences assigned
3 (42.9%) exact matches, in which:
3 unique CDR3
3 unique J



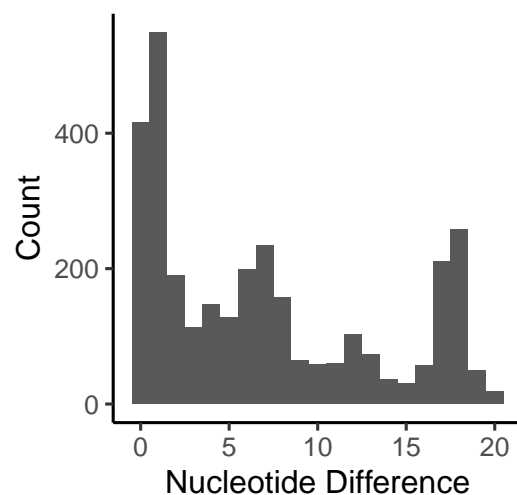
IGHV2-26*01

258 sequences assigned
62 (24%) exact matches, in which:
42 unique CDR3
5 unique J



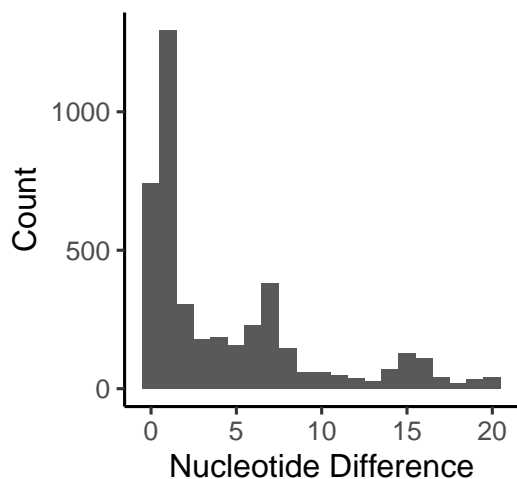
IGHV3-7*01

3570 sequences assigned
416 (11.7%) exact matches, in which:
277 unique CDR3
6 unique J



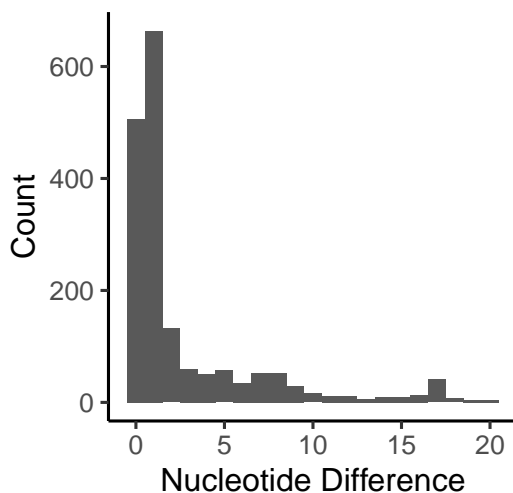
IGHV3-7*03

5454 sequences assigned
743 (13.6%) exact matches, in which:
476 unique CDR3
7 unique J



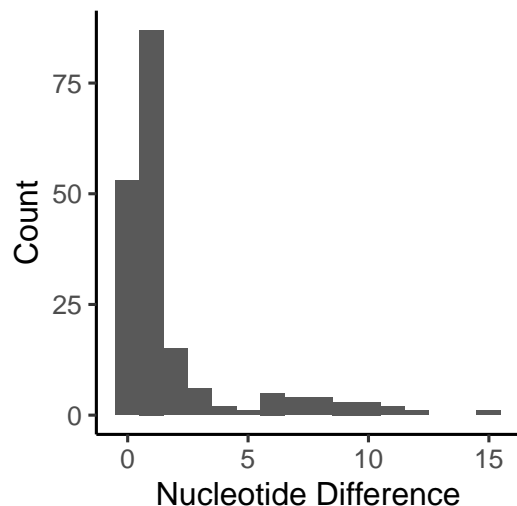
IGHV3-11*03_05

1775 sequences assigned
506 (28.5%) exact matches, in which:
318 unique CDR3
7 unique J



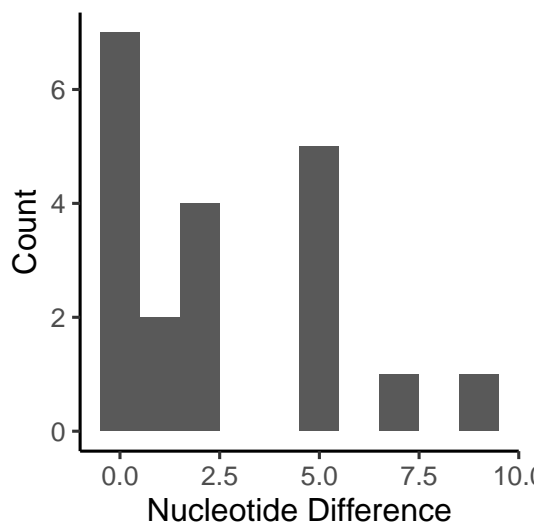
IGHV3-13*05

187 sequences assigned
53 (28.3%) exact matches, in which:
31 unique CDR3
6 unique J



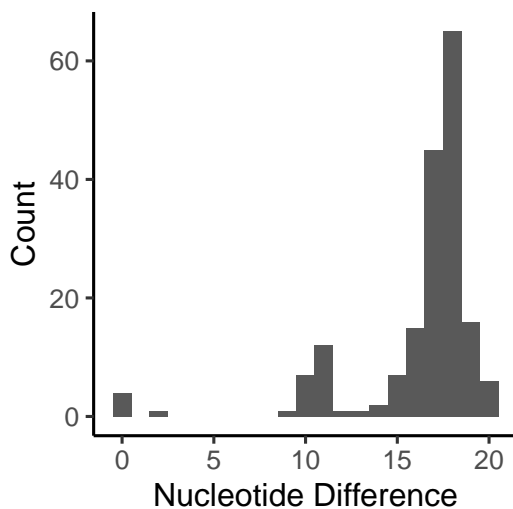
IGHV3-9*01

21 sequences assigned
7 (33.3%) exact matches, in which:
4 unique CDR3
3 unique J



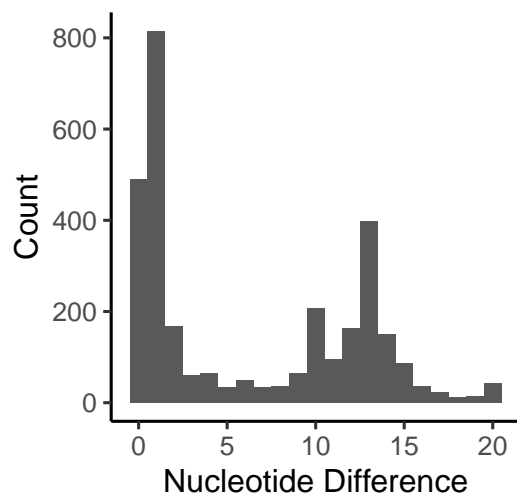
IGHV3-13*01

194 sequences assigned
4 (2.1%) exact matches, in which:
4 unique CDR3
2 unique J



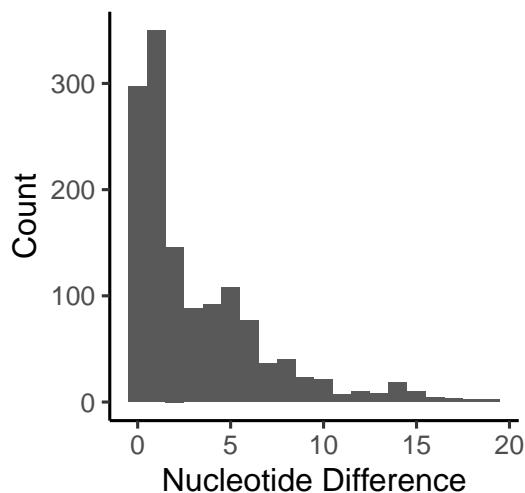
IGHV3-15*01_02

3694 sequences assigned
489 (13.2%) exact matches, in which:
269 unique CDR3
6 unique J



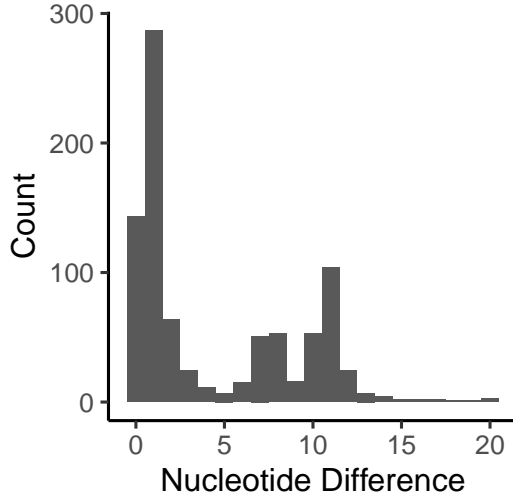
IGHV3-11*06

1344 sequences assigned
297 (22.1%) exact matches, in which:
196 unique CDR3
6 unique J



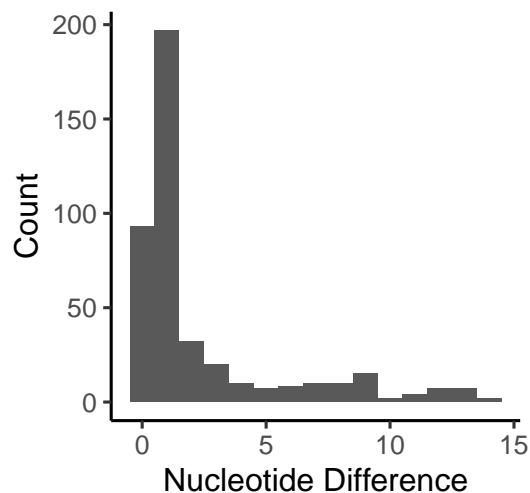
IGHV3-13*04

874 sequences assigned
143 (16.4%) exact matches, in which:
89 unique CDR3
6 unique J



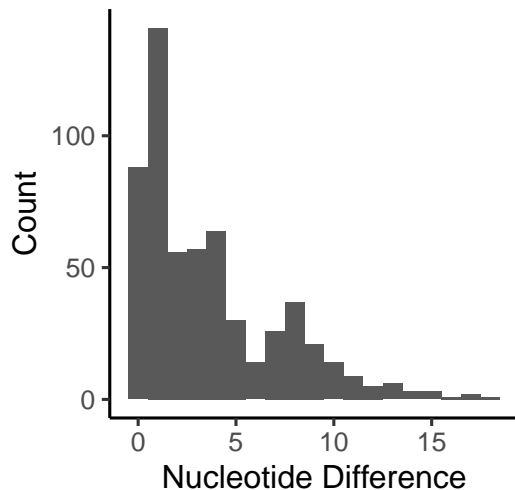
IGHV3-20*01_02

425 sequences assigned
93 (21.9%) exact matches, in which:
44 unique CDR3
5 unique J



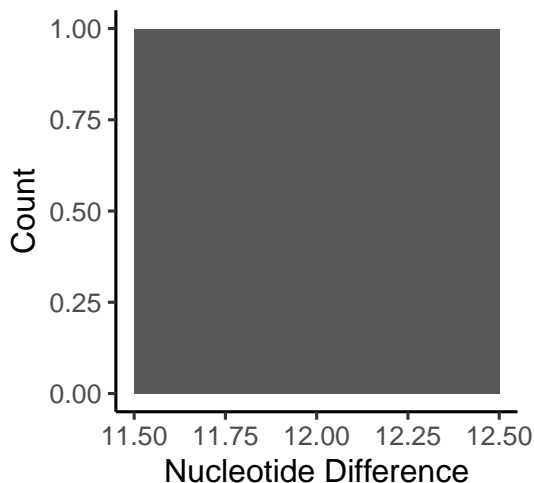
IGHV3-20*03_04

579 sequences assigned
88 (15.2%) exact matches, in which:
61 unique CDR3
4 unique J



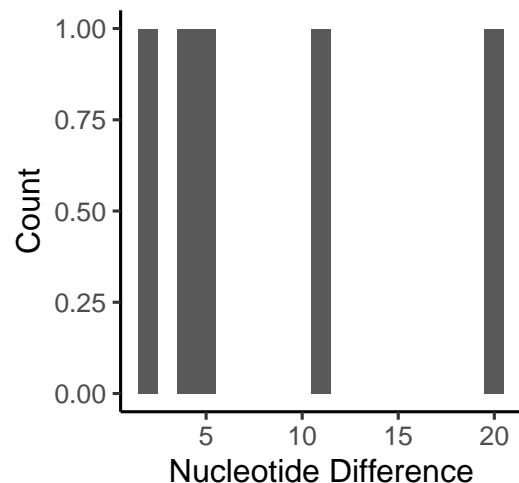
IGHV3-22*01_02

1 sequences assigned
No exact matches.



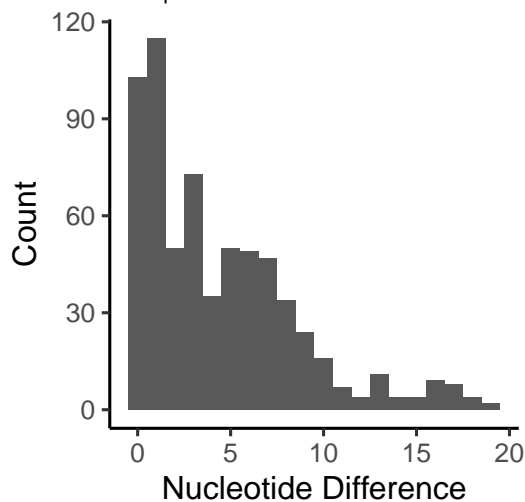
IGHV3-30-3*02

1294 sequences assigned
No exact matches.



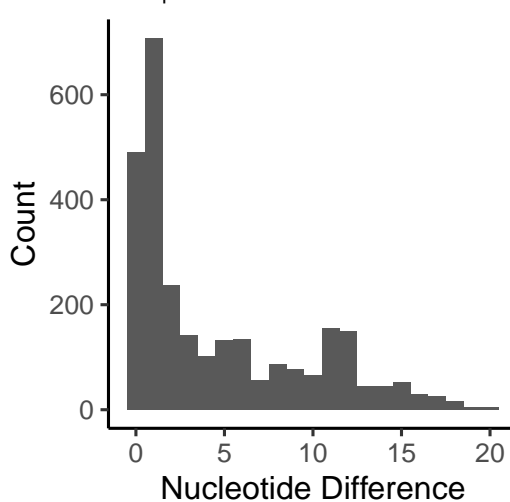
IGHV3-21*04

655 sequences assigned
103 (15.7%) exact matches, in which:
85 unique CDR3
6 unique J



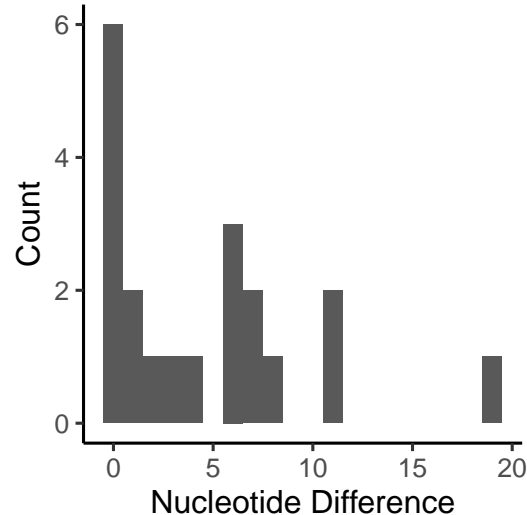
IGHV3-30*01

3088 sequences assigned
491 (15.9%) exact matches, in which:
311 unique CDR3
7 unique J



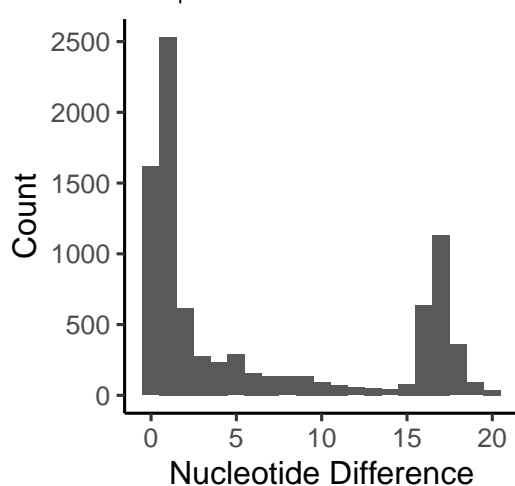
IGHV3-30-3*03

21 sequences assigned
6 (28.6%) exact matches, in which:
6 unique CDR3
3 unique J



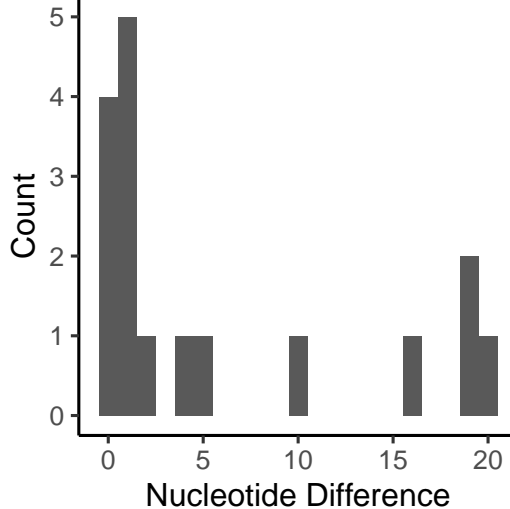
IGHV3-21*01_02

8841 sequences assigned
1617 (18.3%) exact matches, in which:
898 unique CDR3
7 unique J



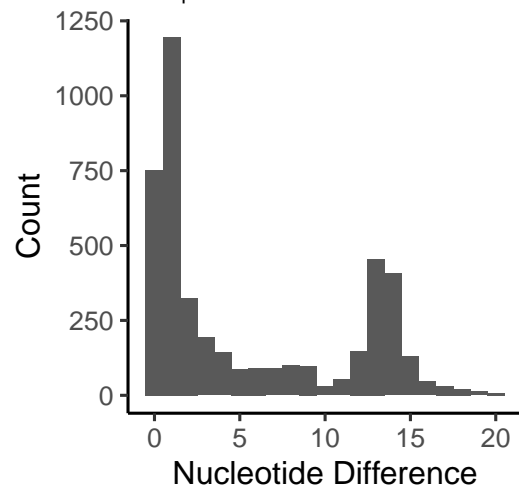
IGHV3-30-3*01

20 sequences assigned
4 (20%) exact matches, in which:
3 unique CDR3
1 unique J



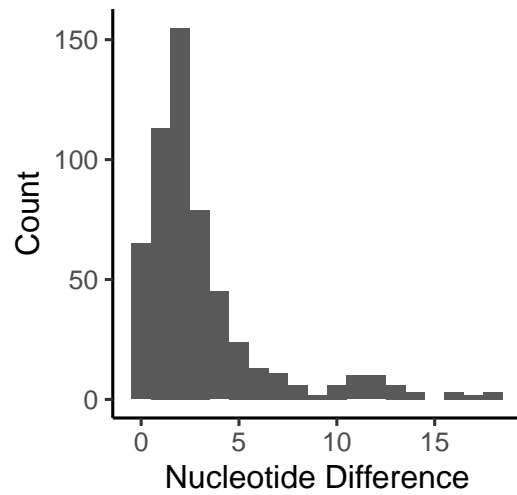
IGHV3-33*01

4849 sequences assigned
752 (15.5%) exact matches, in which:
477 unique CDR3
7 unique J



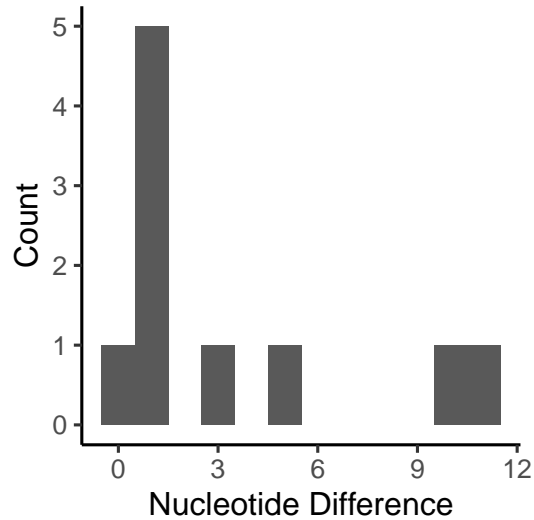
IGHV3–33*06

559 sequences assigned
65 (11.6%) exact matches, in which:
56 unique CDR3
6 unique J



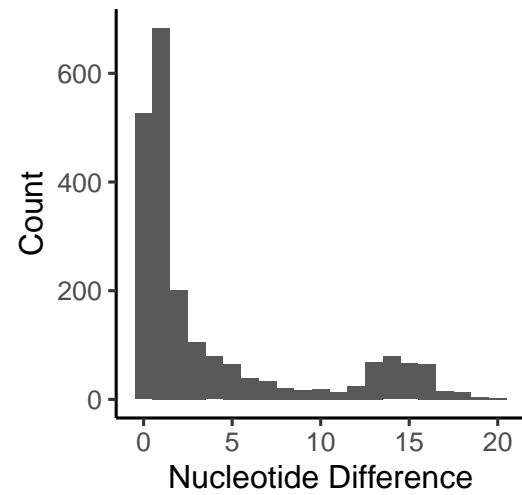
IGHV3–47*01

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



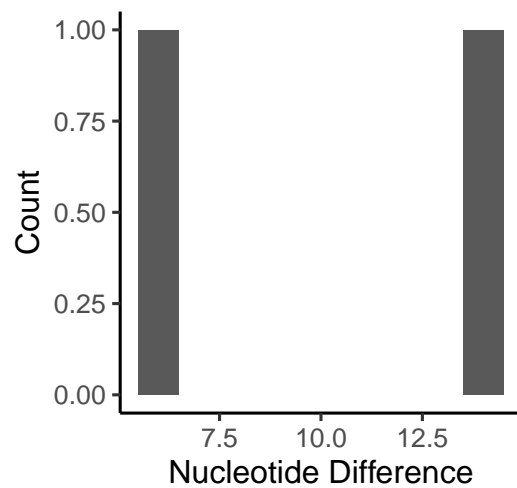
IGHV3–48*04

2533 sequences assigned
526 (20.8%) exact matches, in which:
342 unique CDR3
7 unique J



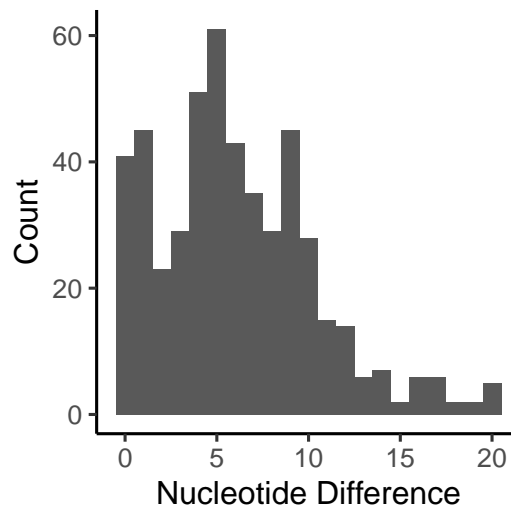
IGHV3–35*01

2 sequences assigned
No exact matches.



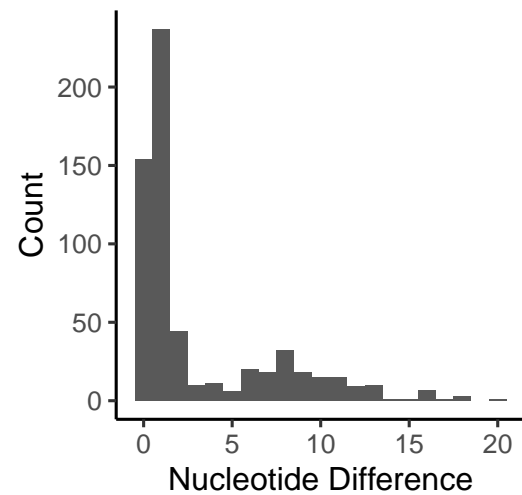
IGHV3–48*01

781 sequences assigned
41 (5.2%) exact matches, in which:
37 unique CDR3
6 unique J



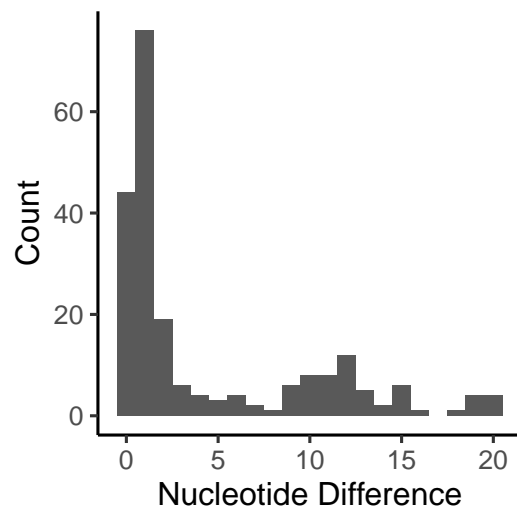
IGHV3–49*03_05

614 sequences assigned
154 (25.1%) exact matches, in which:
104 unique CDR3
6 unique J



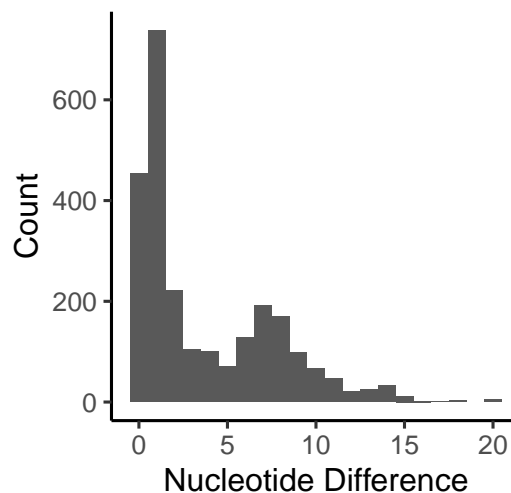
IGHV3–43*01

425 sequences assigned
44 (10.4%) exact matches, in which:
28 unique CDR3
2 unique J



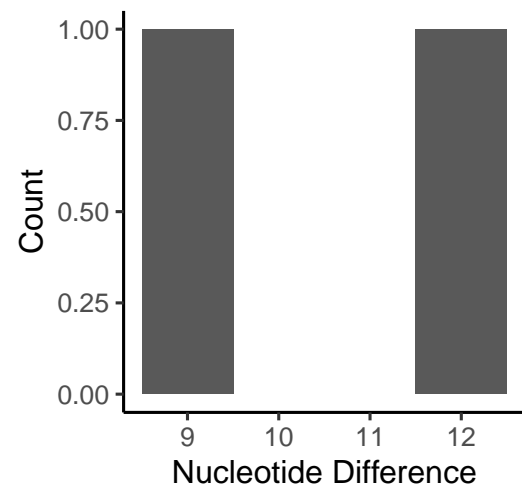
IGHV3–48*02

2547 sequences assigned
453 (17.8%) exact matches, in which:
278 unique CDR3
6 unique J



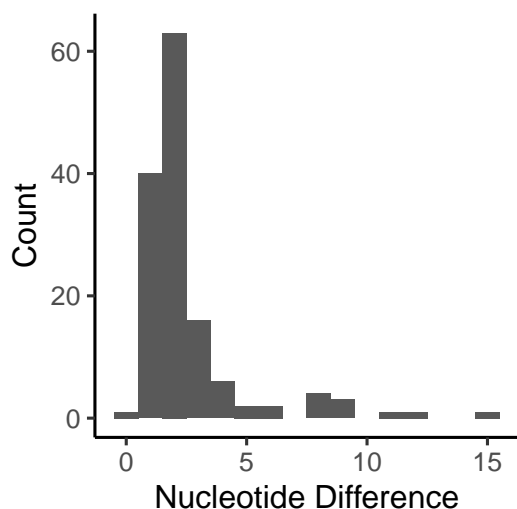
IGHV3–52*01_03

2 sequences assigned
No exact matches.



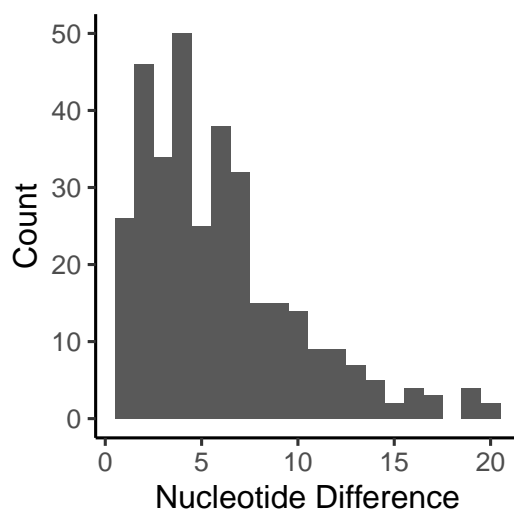
IGHV3-53*05

140 sequences assigned
1 (0.7%) exact matches, in which:
1 unique CDR3
1 unique J



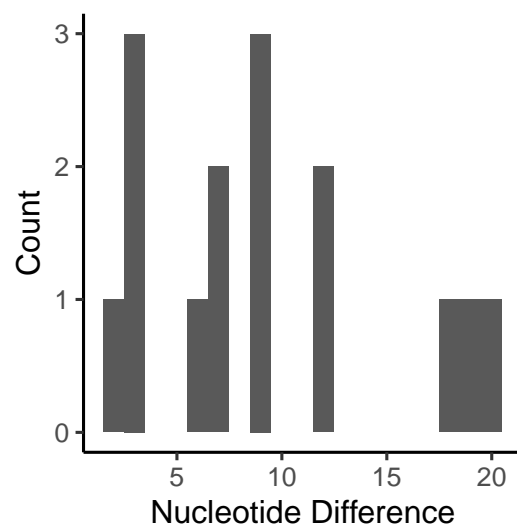
IGHV3-64*04

345 sequences assigned
No exact matches.



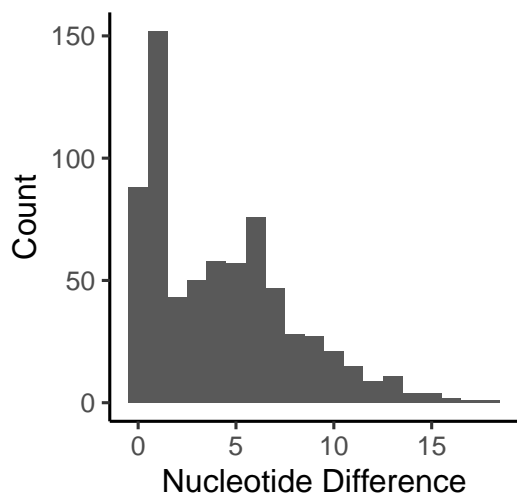
IGHV3-69-1*01

17 sequences assigned
No exact matches.



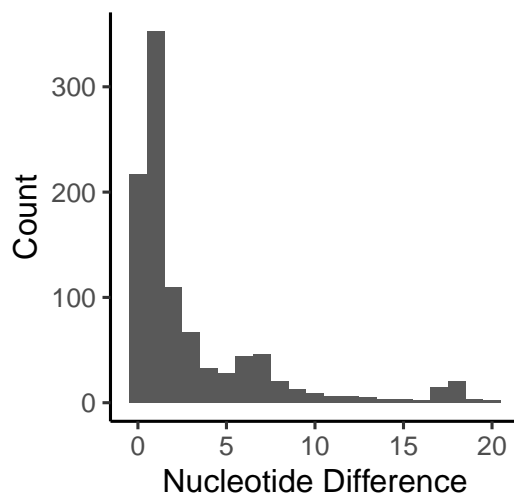
IGHV3-53*01_02

699 sequences assigned
88 (12.6%) exact matches, in which:
59 unique CDR3
6 unique J



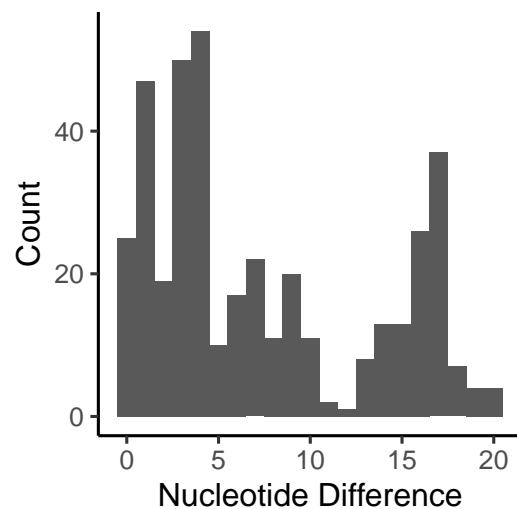
IGHV3-66*01

1010 sequences assigned
217 (21.5%) exact matches, in which:
147 unique CDR3
6 unique J



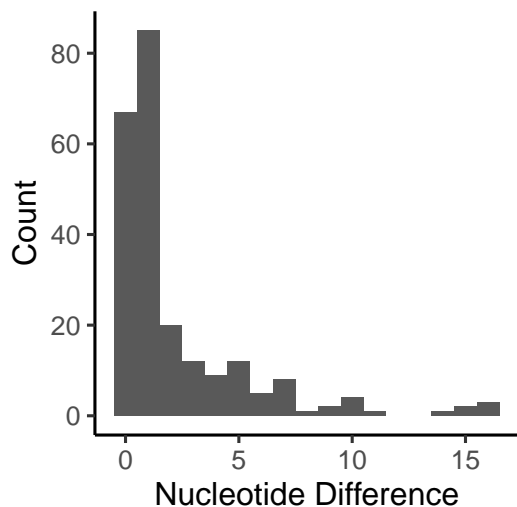
IGHV3-72*01

406 sequences assigned
25 (6.2%) exact matches, in which:
16 unique CDR3
4 unique J



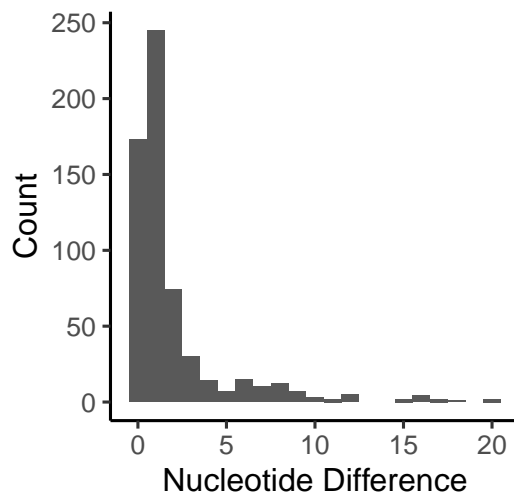
IGHV3-64*01

232 sequences assigned
67 (28.9%) exact matches, in which:
44 unique CDR3
6 unique J



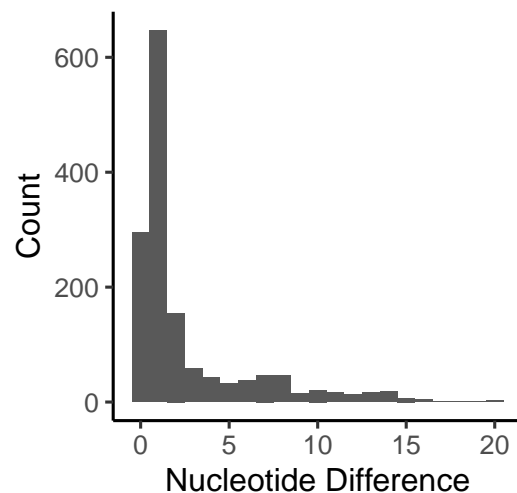
IGHV3-66*02

609 sequences assigned
173 (28.4%) exact matches, in which:
121 unique CDR3
7 unique J



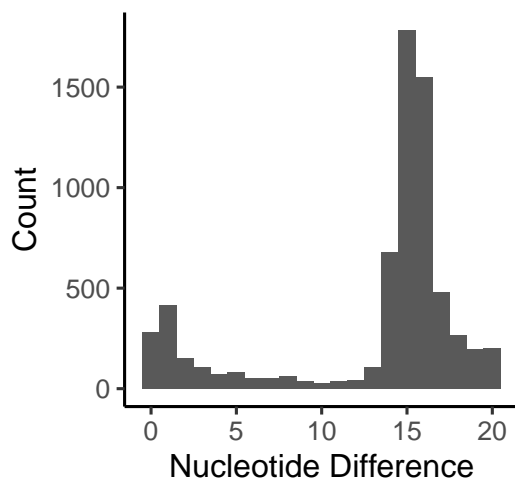
IGHV3-73*01_02

1481 sequences assigned
295 (19.9%) exact matches, in which:
173 unique CDR3
6 unique J



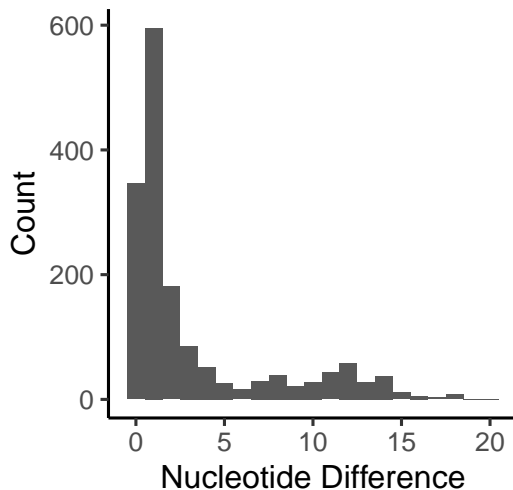
IGHV3-74*01_02

6927 sequences assigned
281 (4.1%) exact matches, in which:
189 unique CDR3
7 unique J



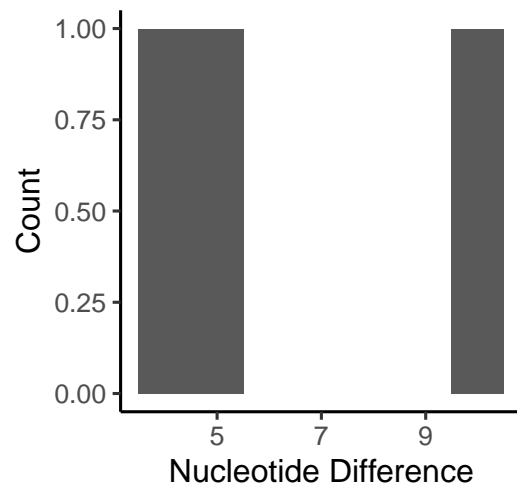
IGHV3-64D*06

1777 sequences assigned
346 (19.5%) exact matches, in which:
209 unique CDR3
7 unique J



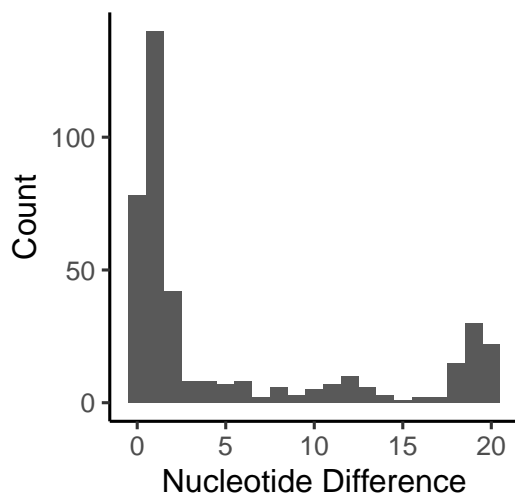
IGHV4-28*03

3 sequences assigned
No exact matches.



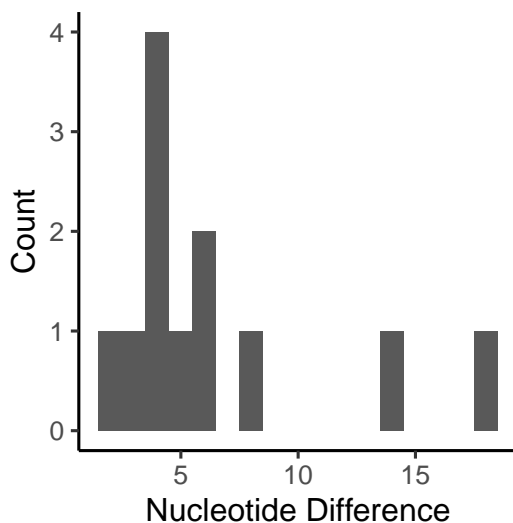
IGHV3-43D*03

418 sequences assigned
78 (18.7%) exact matches, in which:
46 unique CDR3
4 unique J



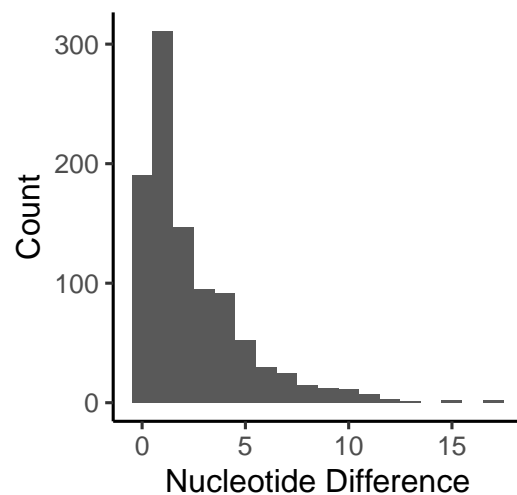
IGHV3-NL1*01

15 sequences assigned
No exact matches.



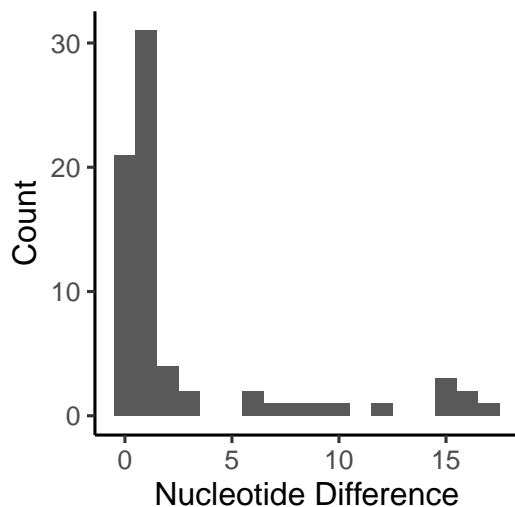
IGHV4-30-2*01

995 sequences assigned
190 (19.1%) exact matches, in which:
132 unique CDR3
7 unique J



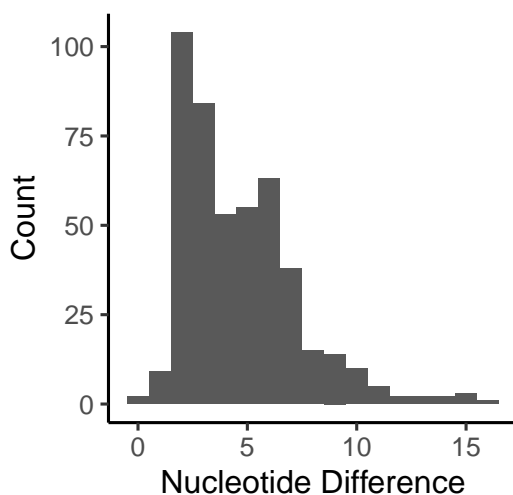
IGHV3-43D*04

72 sequences assigned
21 (29.2%) exact matches, in which:
16 unique CDR3
4 unique J



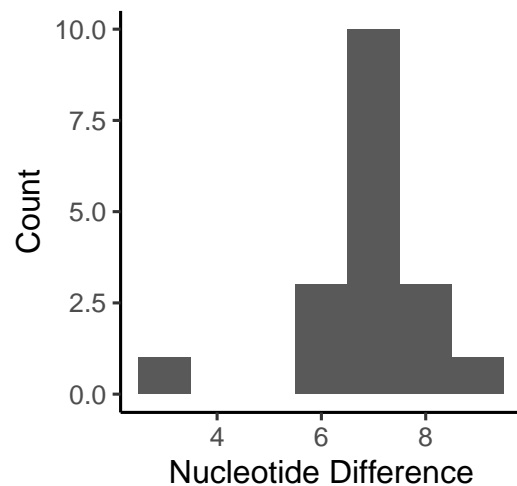
IGHV4-4*07

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



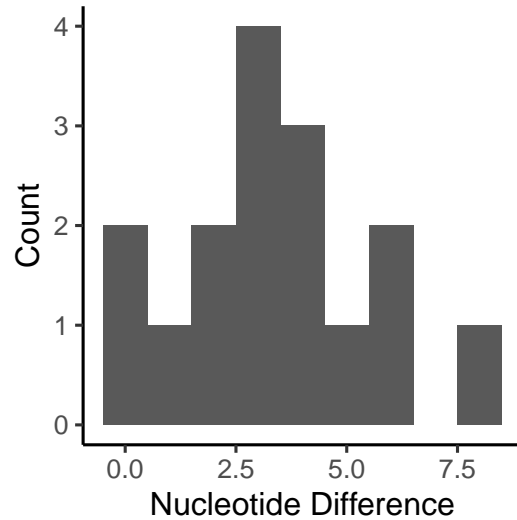
IGHV4-30-4*01

18 sequences assigned
No exact matches.



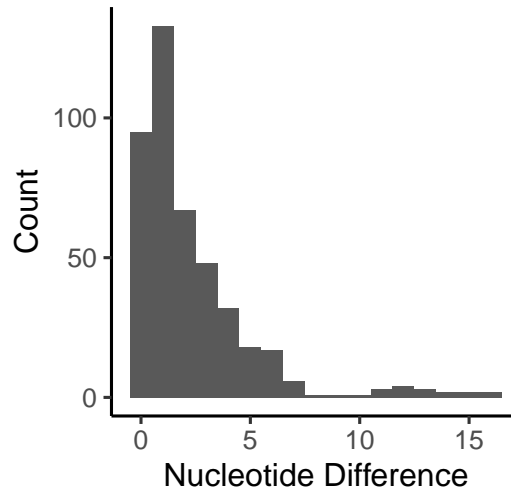
IGHV4-30-2*04

16 sequences assigned
2 (12.5%) exact matches, in which:
2 unique CDR3
1 unique J



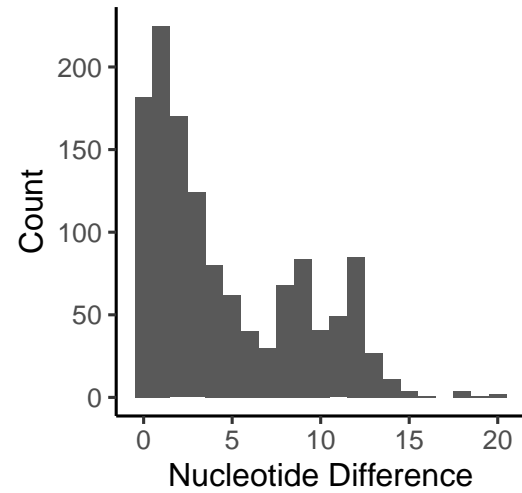
IGHV4-31*01

438 sequences assigned
95 (21.7%) exact matches, in which:
64 unique CDR3
5 unique J



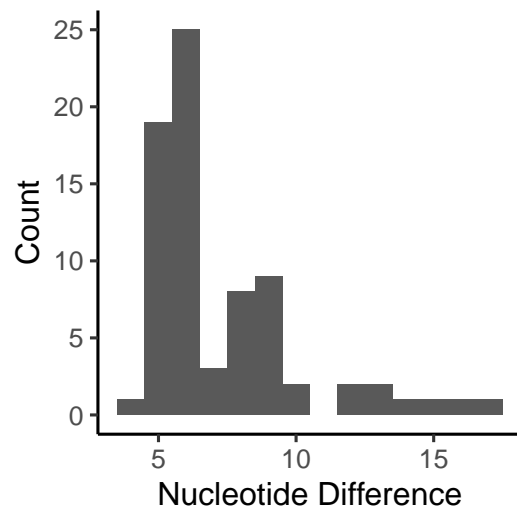
IGHV4-38-2*01

1293 sequences assigned
182 (14.1%) exact matches, in which:
159 unique CDR3
7 unique J



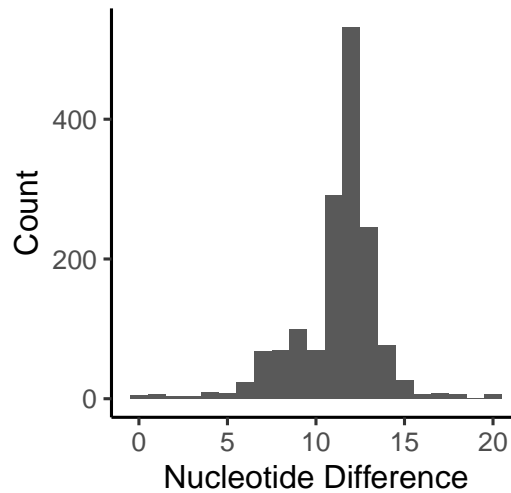
IGHV4-30-4*07

75 sequences assigned
No exact matches.



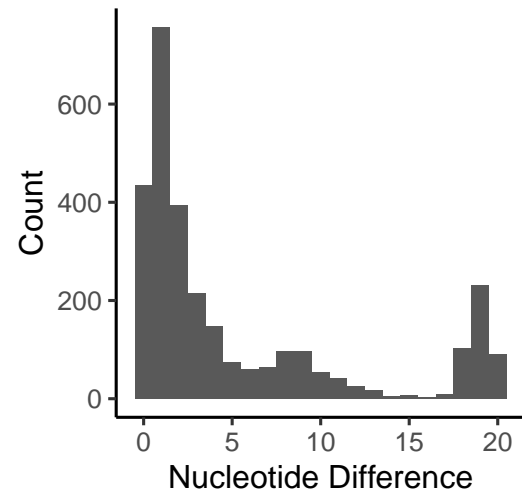
IGHV4-31*03_04

3692 sequences assigned
5 (0.1%) exact matches, in which:
4 unique CDR3
2 unique J



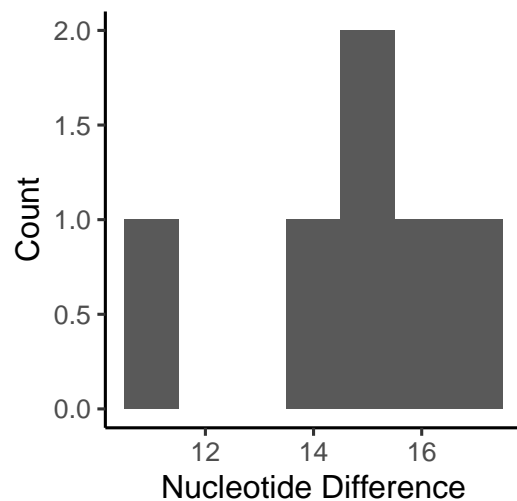
IGHV4-38-2*02

3036 sequences assigned
435 (14.3%) exact matches, in which:
318 unique CDR3
7 unique J



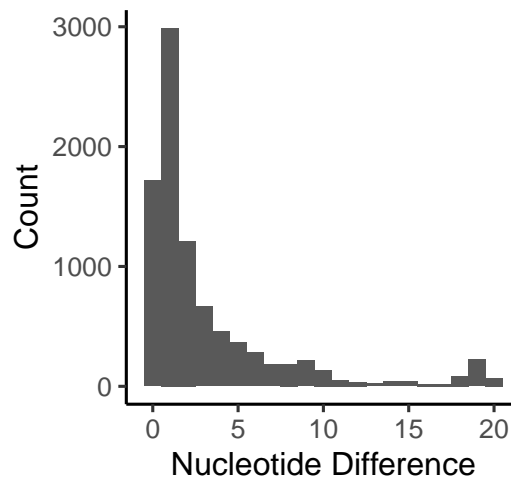
IGHV4-30-4*08

7 sequences assigned
No exact matches.



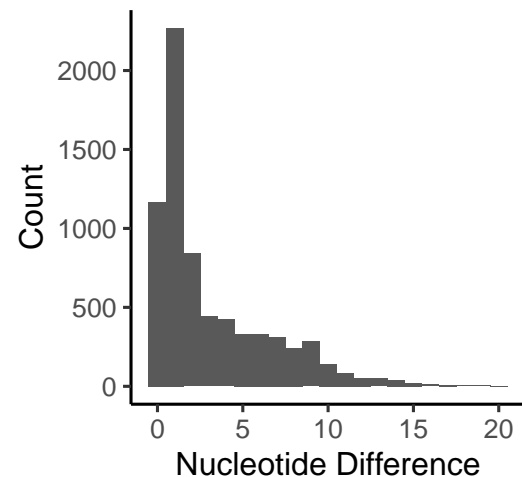
IGHV4-34*01_02

9079 sequences assigned
1716 (18.9%) exact matches, in which:
1074 unique CDR3
7 unique J



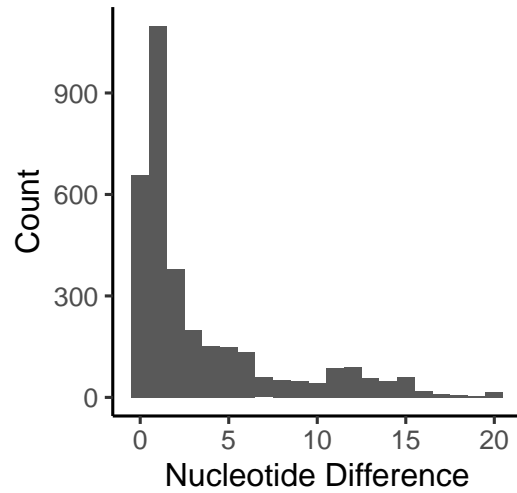
IGHV4-39*07

7866 sequences assigned
1169 (14.9%) exact matches, in which:
740 unique CDR3
7 unique J



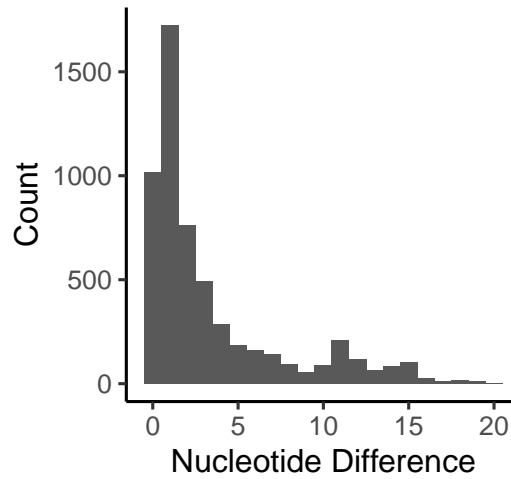
IGHV4–59*08

3782 sequences assigned
657 (17.4%) exact matches, in which:
432 unique CDR3
7 unique J



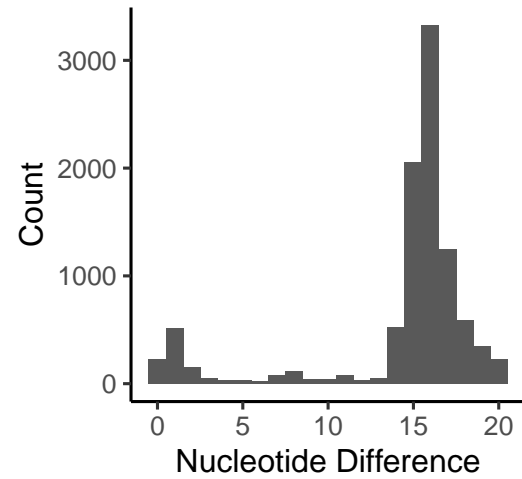
IGHV4–61*02

5687 sequences assigned
1019 (17.9%) exact matches, in which:
709 unique CDR3
7 unique J



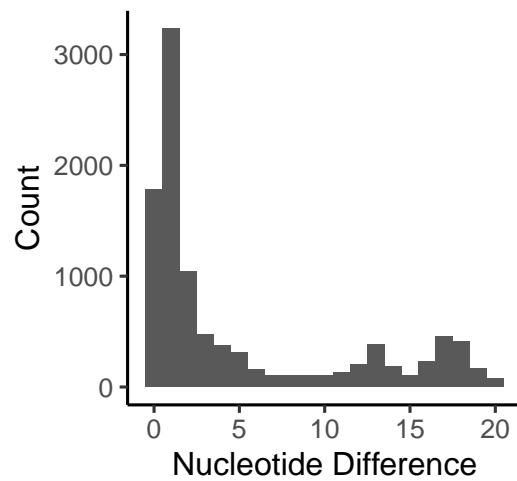
IGHV6–1*01_02

10289 sequences assigned
226 (2.2%) exact matches, in which:
157 unique CDR3
7 unique J



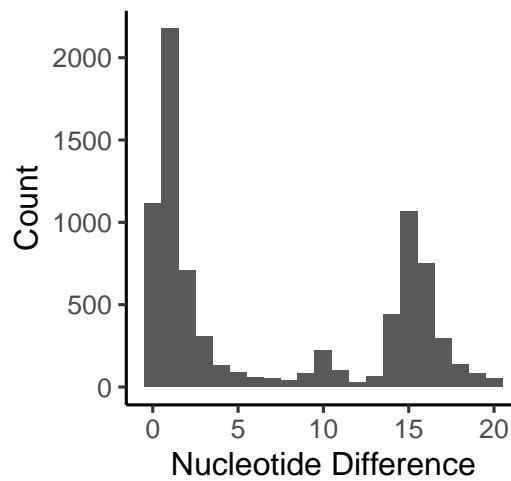
IGHV4–59*01_07

10273 sequences assigned
1785 (17.4%) exact matches, in which:
1122 unique CDR3
7 unique J



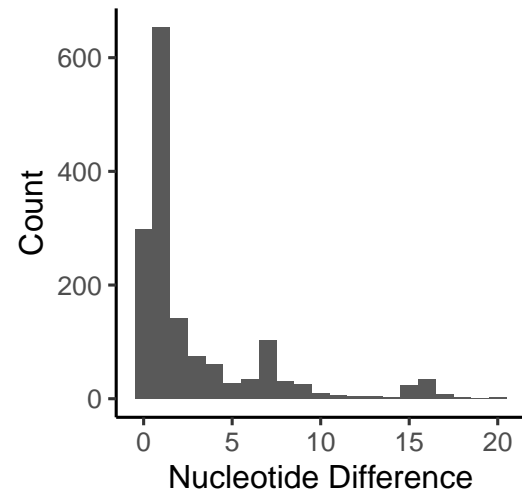
IGHV5–10–1*01_03

8098 sequences assigned
1112 (13.7%) exact matches, in which:
628 unique CDR3
6 unique J



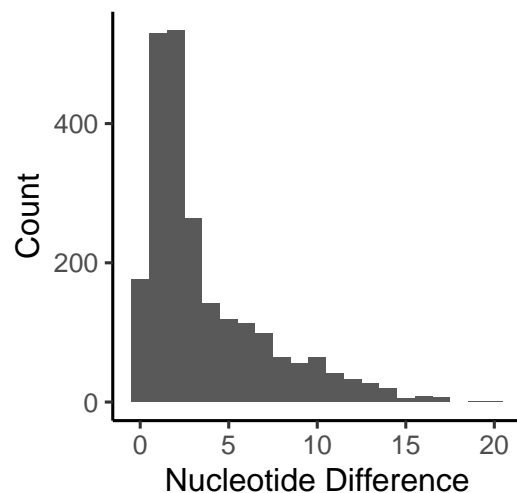
IGHV7–4–1*02

1555 sequences assigned
299 (19.2%) exact matches, in which:
205 unique CDR3
7 unique J



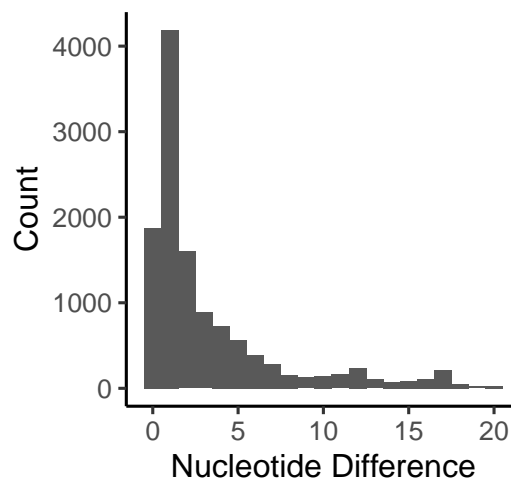
IGHV4–59*12

2522 sequences assigned
176 (7%) exact matches, in which:
152 unique CDR3
7 unique J

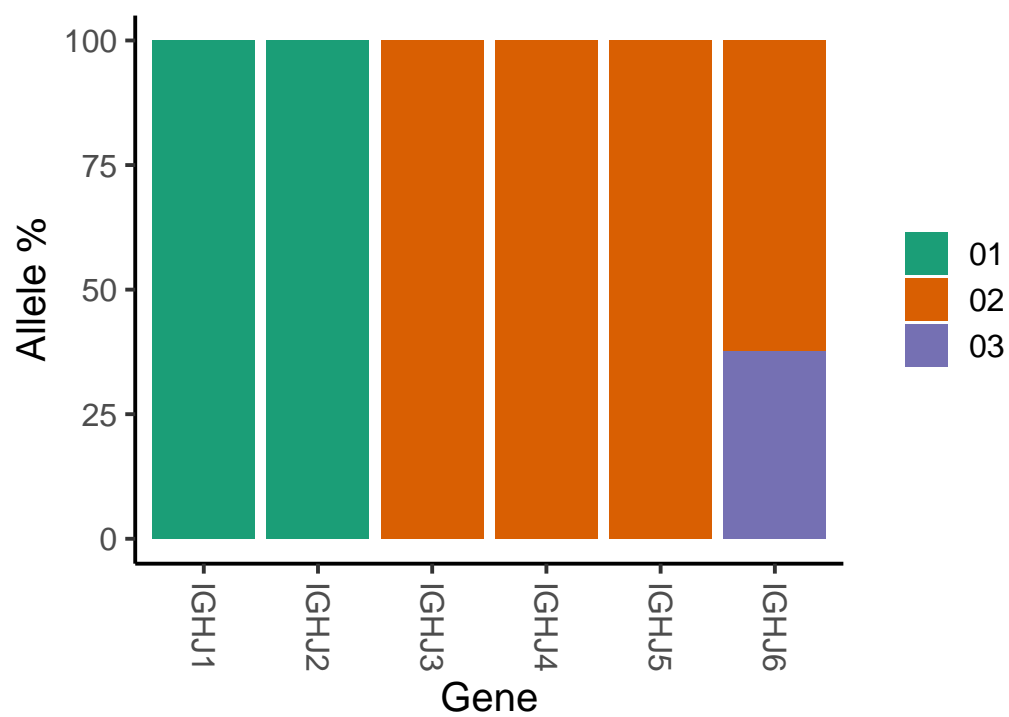


IGHV5–51*01_03

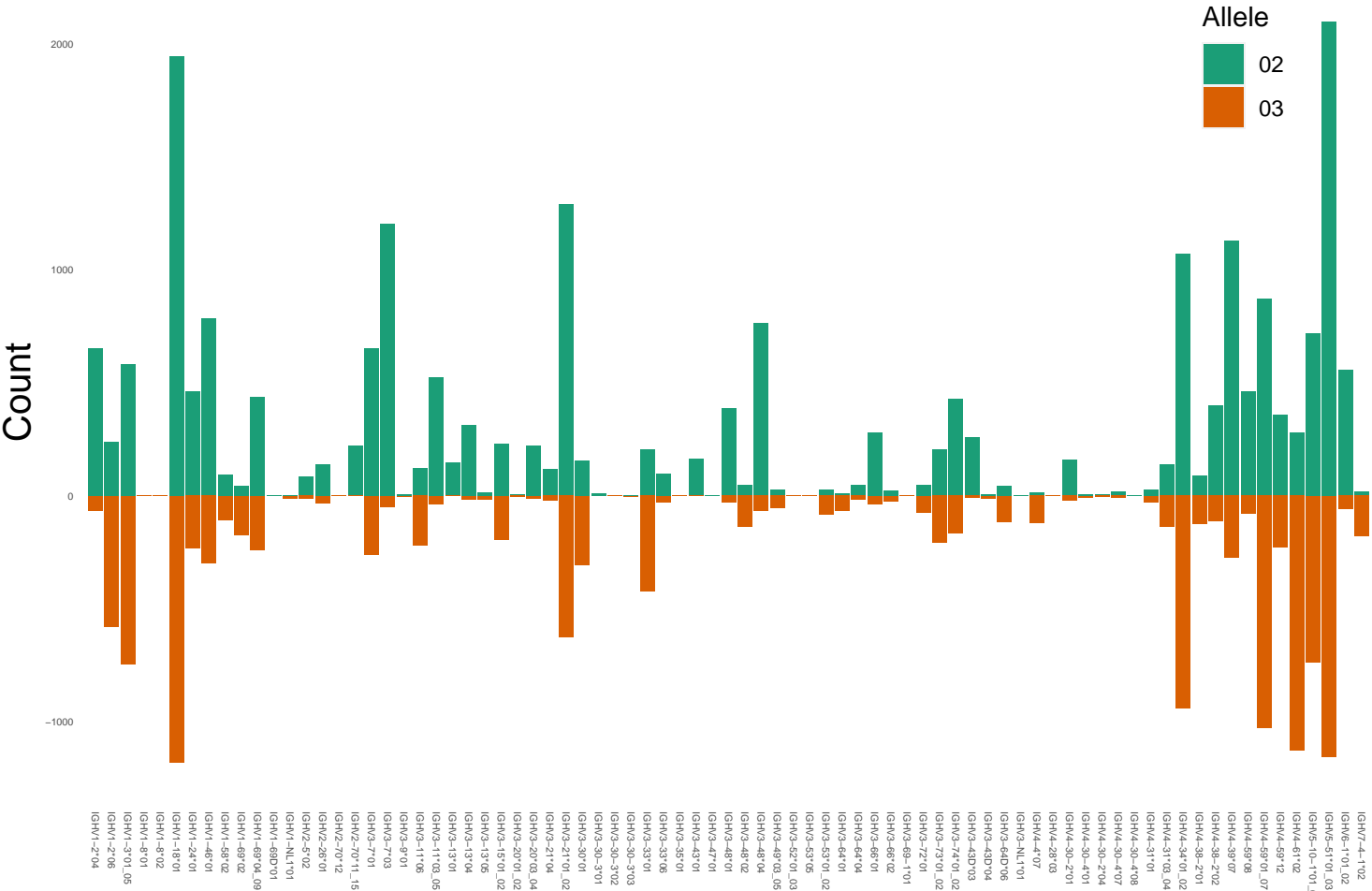
12053 sequences assigned
1875 (15.6%) exact matches, in which:
986 unique CDR3
6 unique J



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.