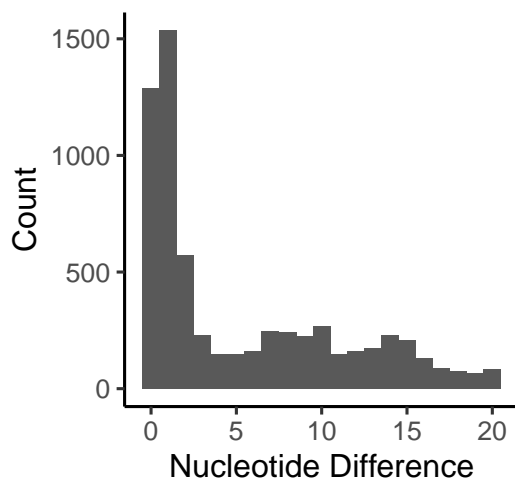


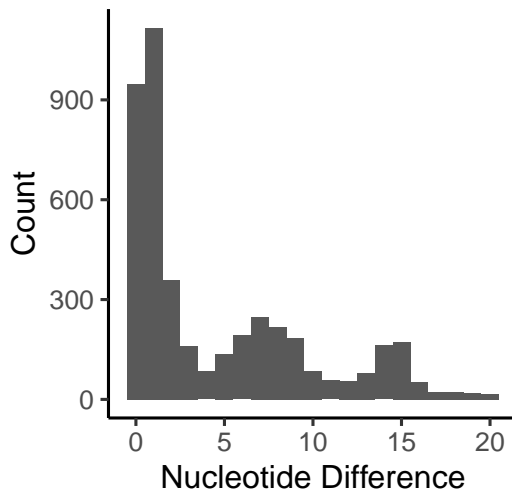
IGHV1-2*02

7199 sequences assigned
1288 (17.9%) exact matches, in which:
1061 unique CDR3
7 unique J



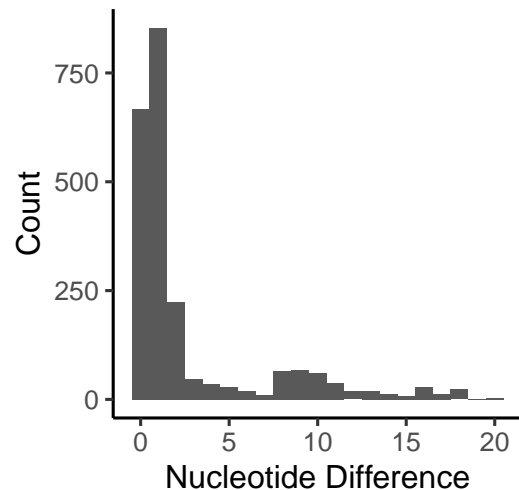
IGHV1-8*01

6017 sequences assigned
948 (15.8%) exact matches, in which:
792 unique CDR3
7 unique J



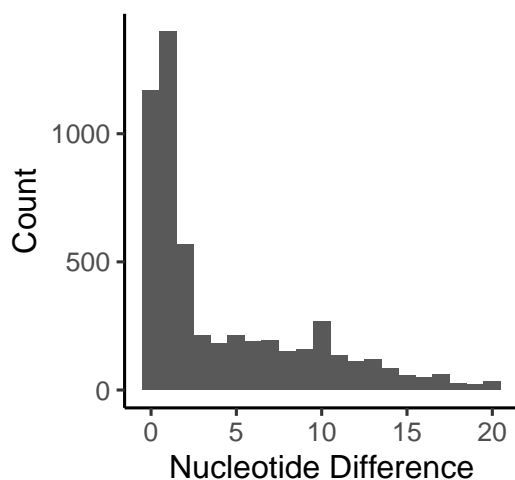
IGHV1-24*01

2361 sequences assigned
667 (28.3%) exact matches, in which:
540 unique CDR3
7 unique J



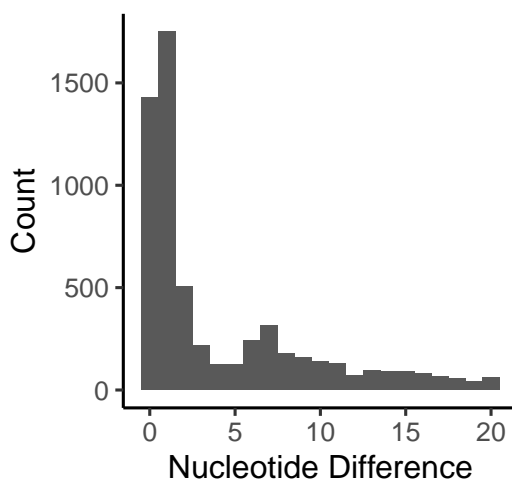
IGHV1-2*06

5729 sequences assigned
1170 (20.4%) exact matches, in which:
956 unique CDR3
7 unique J



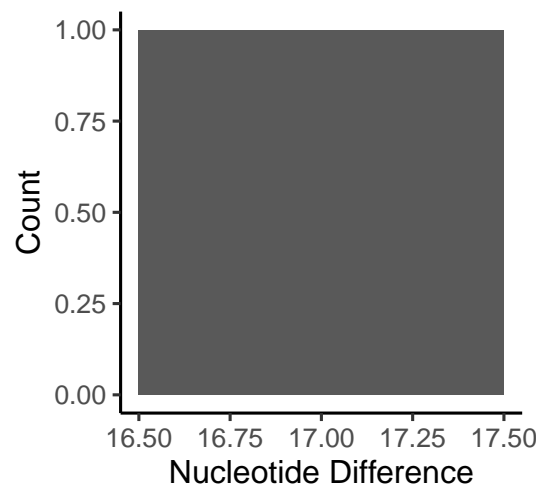
IGHV1-18*01

7419 sequences assigned
1431 (19.3%) exact matches, in which:
1155 unique CDR3
7 unique J



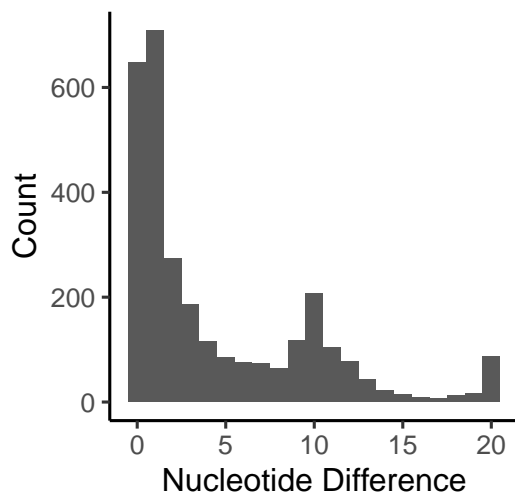
IGHV1-45*02

1 sequences assigned
No exact matches.



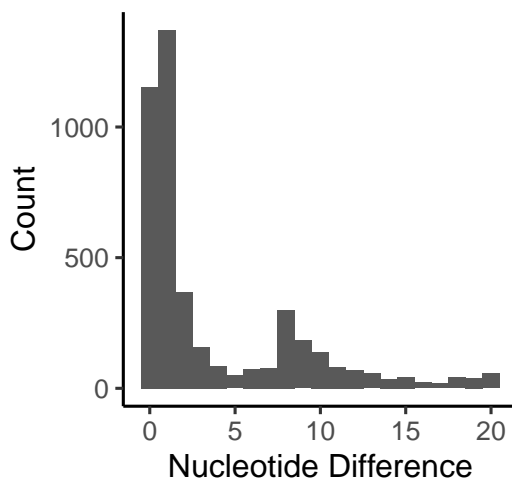
IGHV1-3*01_05

3495 sequences assigned
647 (18.5%) exact matches, in which:
513 unique CDR3
7 unique J



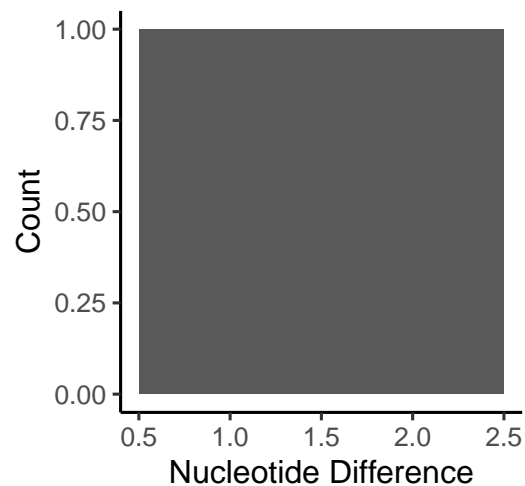
IGHV1-18*04

4742 sequences assigned
1154 (24.3%) exact matches, in which:
991 unique CDR3
7 unique J



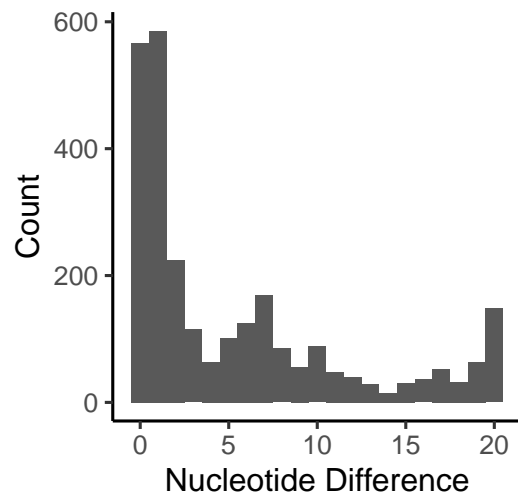
IGHV1-45*03

2 sequences assigned
No exact matches.



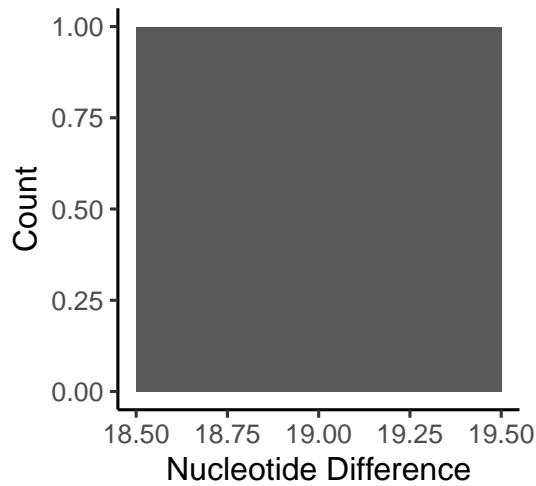
IGHV1-46*01

2942 sequences assigned
567 (19.3%) exact matches, in which:
474 unique CDR3
7 unique J



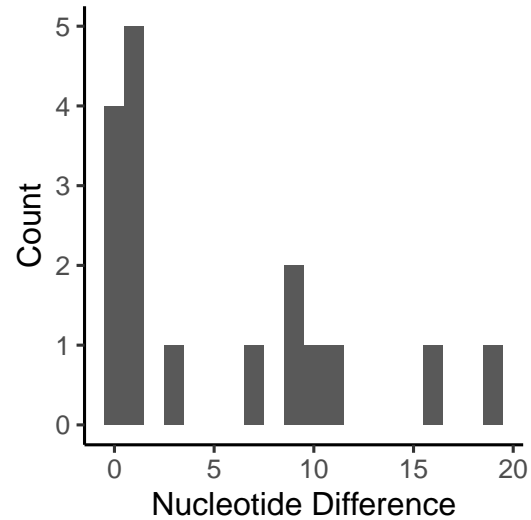
IGHV1-69-2*01

9 sequences assigned
No exact matches.



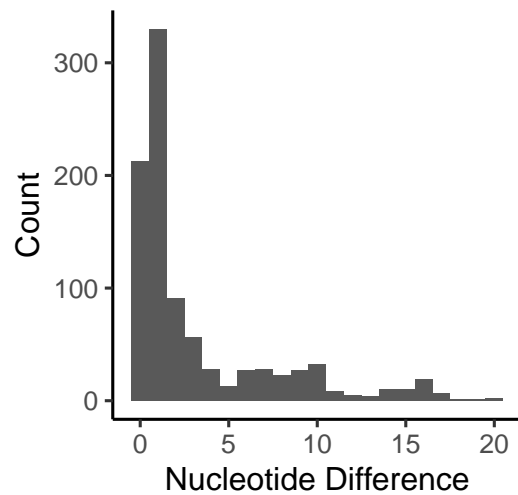
IGHV1-69D*01

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



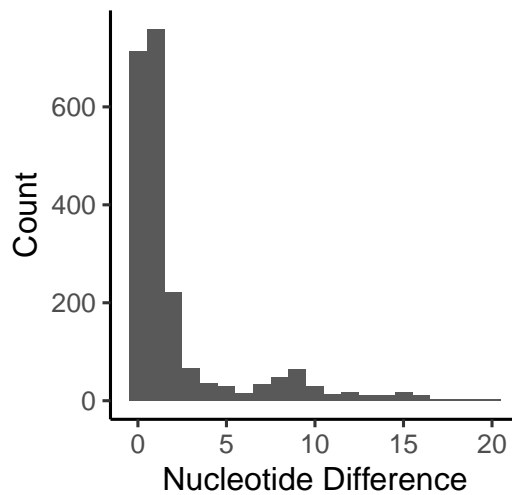
IGHV1-46*03

954 sequences assigned
213 (22.3%) exact matches, in which:
155 unique CDR3
5 unique J



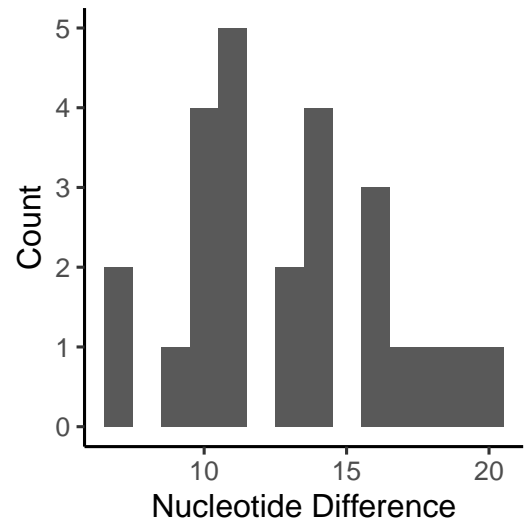
IGHV1-69*02

2788 sequences assigned
714 (25.6%) exact matches, in which:
588 unique CDR3
7 unique J



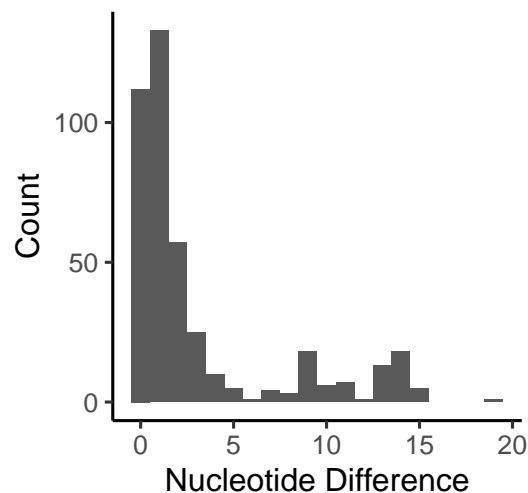
IGHV1-NL1*01

25 sequences assigned
No exact matches.



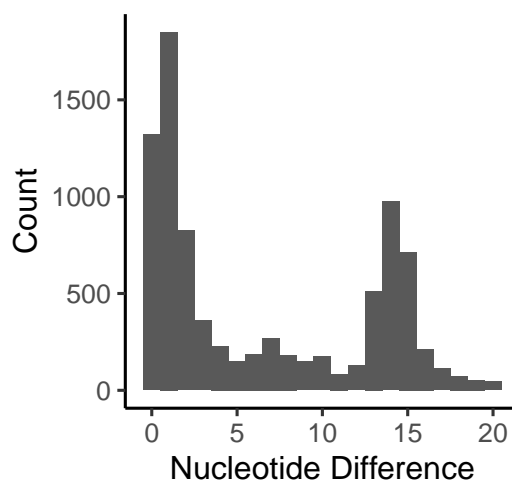
IGHV1-58*02

446 sequences assigned
112 (25.1%) exact matches, in which:
99 unique CDR3
6 unique J



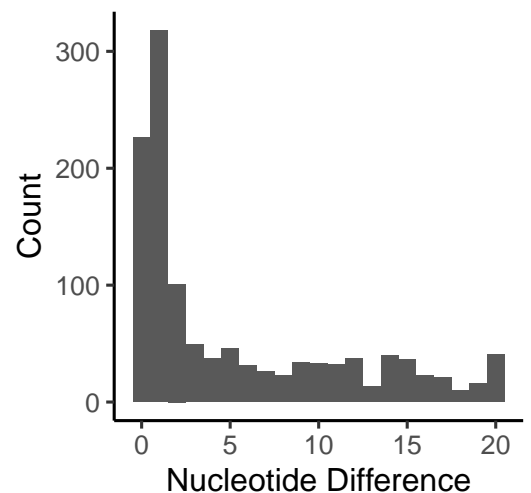
IGHV1-69*04_09

8921 sequences assigned
1321 (14.8%) exact matches, in which:
1113 unique CDR3
7 unique J



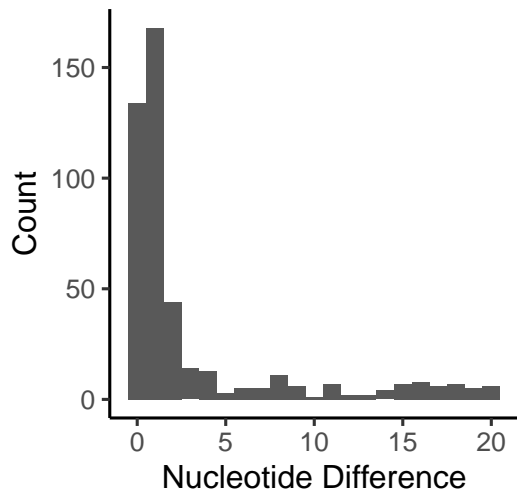
IGHV2-5*02

2189 sequences assigned
226 (10.3%) exact matches, in which:
184 unique CDR3
7 unique J



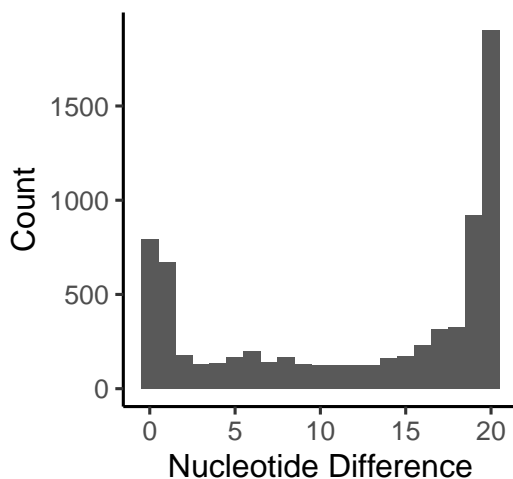
IGHV2–26*01

475 sequences assigned
134 (28.2%) exact matches, in which:
108 unique CDR3
7 unique J



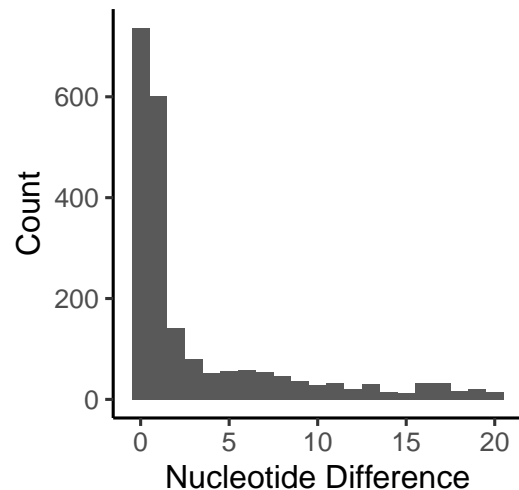
IGHV3–7*01

9824 sequences assigned
791 (8.1%) exact matches, in which:
546 unique CDR3
7 unique J



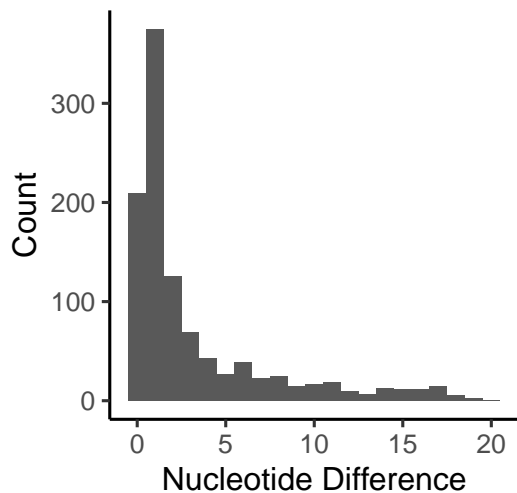
IGHV3–11*01

2314 sequences assigned
737 (31.8%) exact matches, in which:
472 unique CDR3
7 unique J



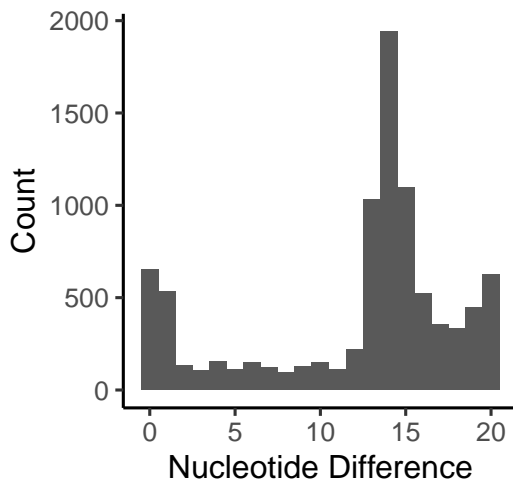
IGHV2–70*11_15

1075 sequences assigned
209 (19.4%) exact matches, in which:
150 unique CDR3
6 unique J



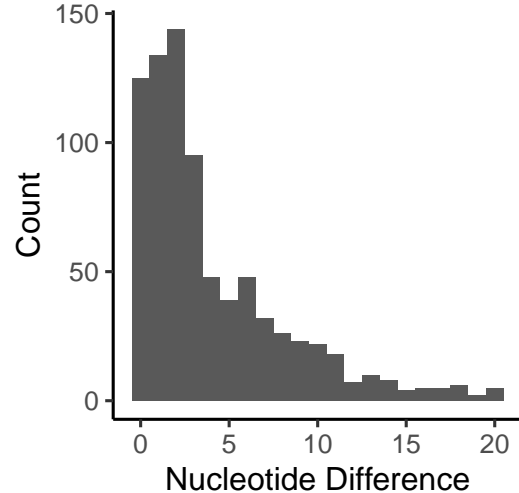
IGHV3–7*03

10950 sequences assigned
653 (6%) exact matches, in which:
434 unique CDR3
7 unique J



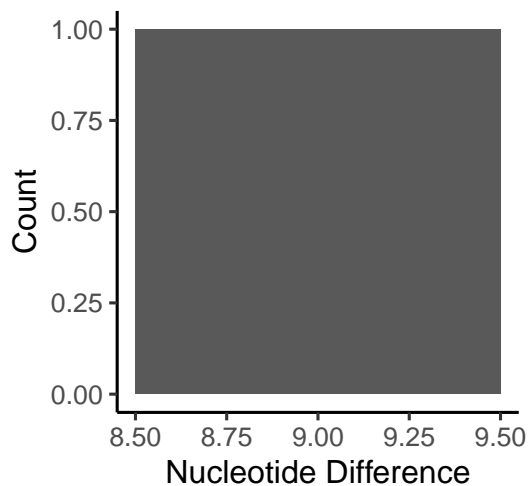
IGHV3–11*04

834 sequences assigned
125 (15%) exact matches, in which:
117 unique CDR3
7 unique J



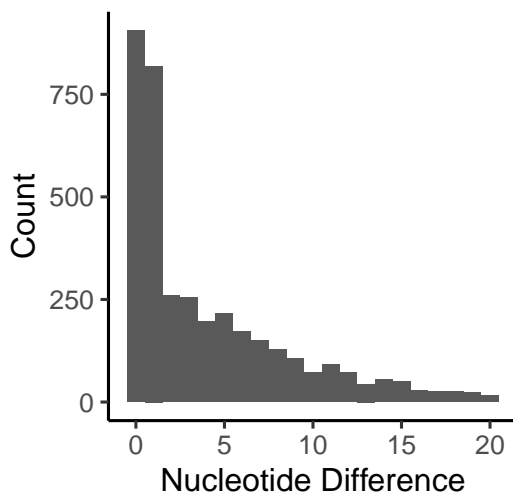
IGHV2–70D*04

1 sequences assigned
No exact matches.



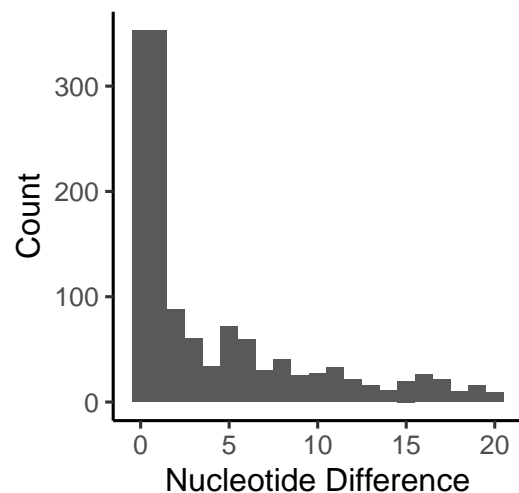
IGHV3–9*01

3900 sequences assigned
906 (23.2%) exact matches, in which:
541 unique CDR3
7 unique J



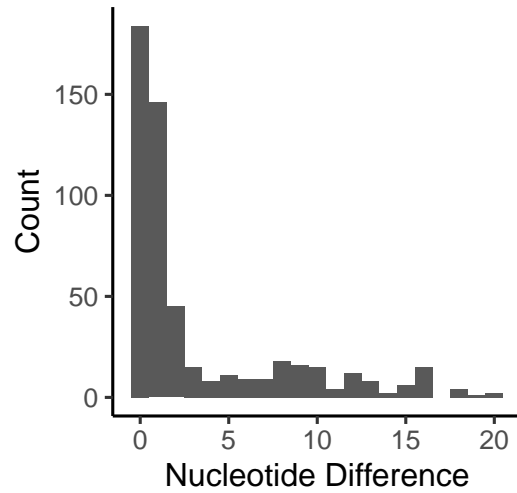
IGHV3–11*06

1396 sequences assigned
353 (25.3%) exact matches, in which:
240 unique CDR3
6 unique J



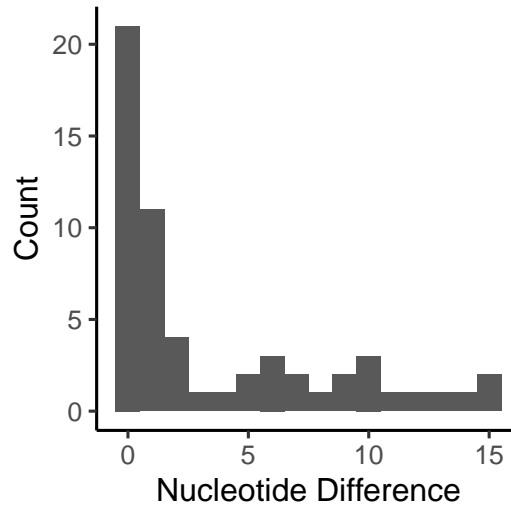
IGHV3-13*01

555 sequences assigned
184 (33.2%) exact matches, in which:
123 unique CDR3
6 unique J



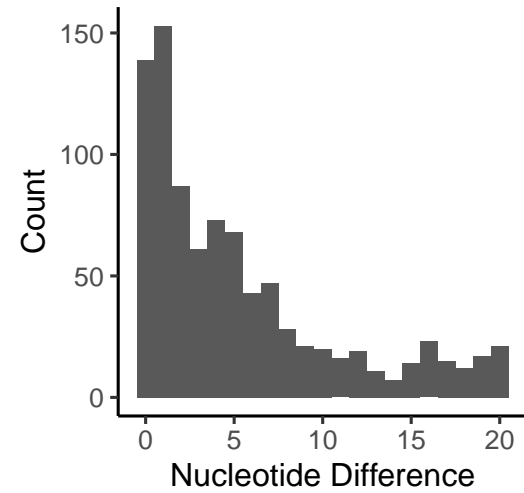
IGHV3-19*01

57 sequences assigned
21 (36.8%) exact matches, in which:
17 unique CDR3
4 unique J



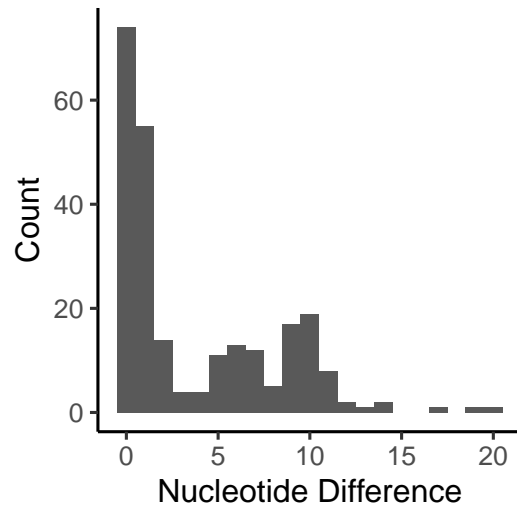
IGHV3-21*04

991 sequences assigned
139 (14%) exact matches, in which:
126 unique CDR3
6 unique J



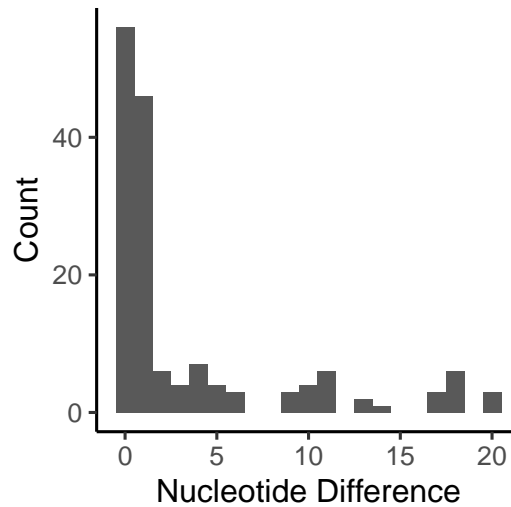
IGHV3-13*05

244 sequences assigned
74 (30.3%) exact matches, in which:
51 unique CDR3
6 unique J



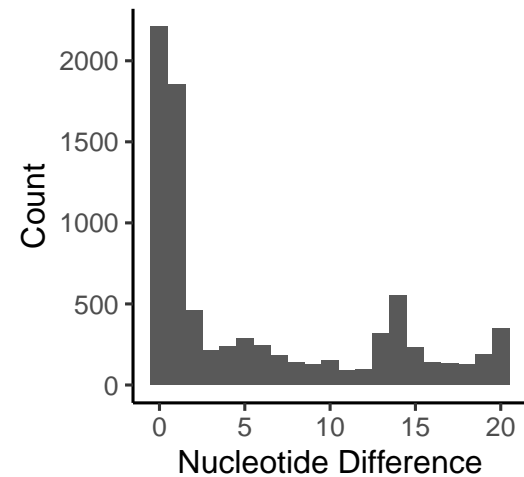
IGHV3-20*01_02

163 sequences assigned
56 (34.4%) exact matches, in which:
33 unique CDR3
4 unique J



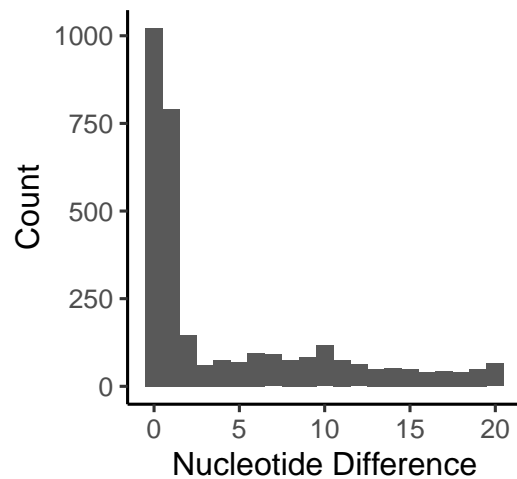
IGHV3-21*01_02

10474 sequences assigned
2210 (21.1%) exact matches, in which:
1363 unique CDR3
7 unique J



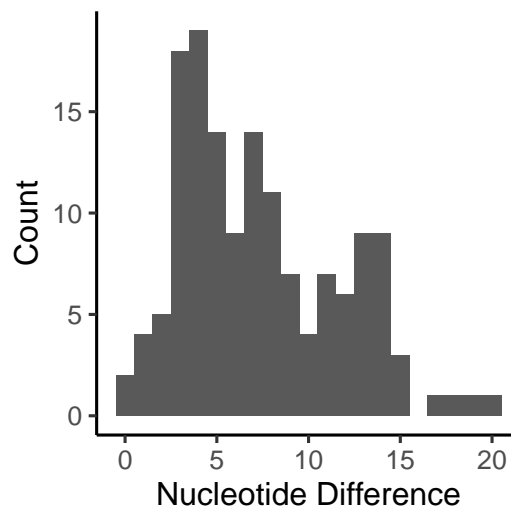
IGHV3-15*01_02

5182 sequences assigned
1022 (19.7%) exact matches, in which:
621 unique CDR3
7 unique J



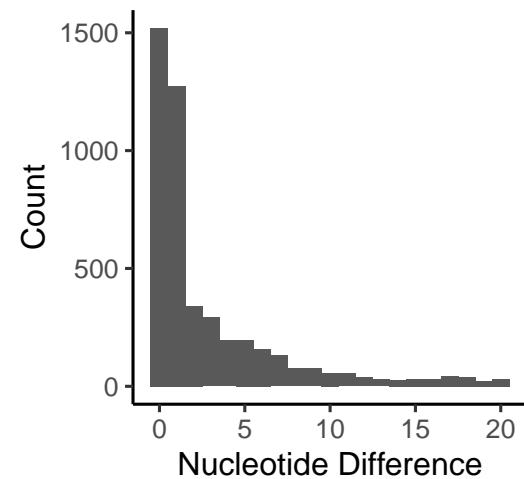
IGHV3-20*03_04

156 sequences assigned
2 (1.3%) exact matches, in which:
2 unique CDR3
2 unique J



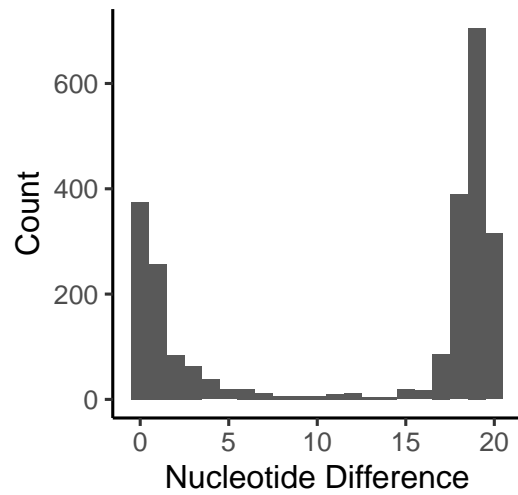
IGHV3-30-3*01

4960 sequences assigned
1520 (30.6%) exact matches, in which:
1031 unique CDR3
7 unique J



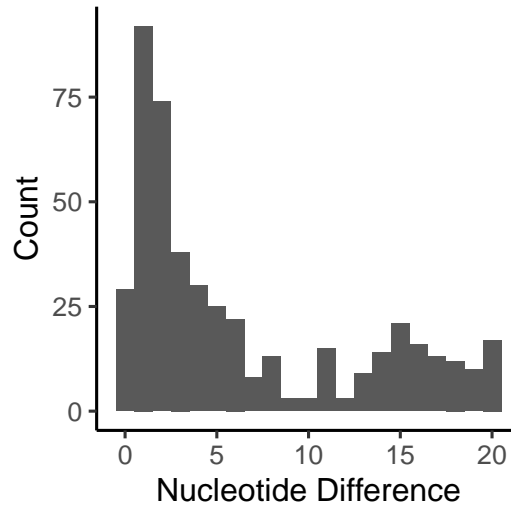
IGHV3-30*03

2837 sequences assigned
375 (13.2%) exact matches, in which:
341 unique CDR3
7 unique J



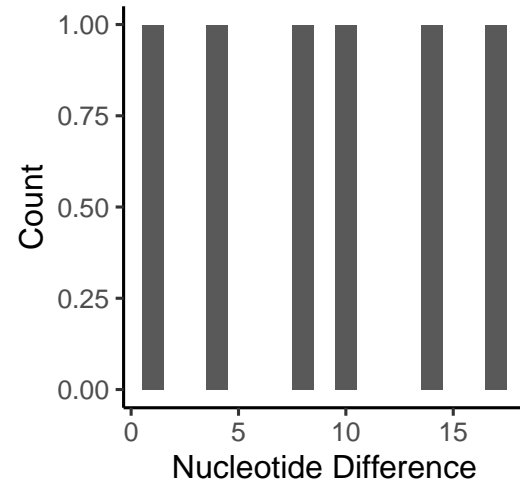
IGHV3-33*06

521 sequences assigned
29 (5.6%) exact matches, in which:
27 unique CDR3
6 unique J



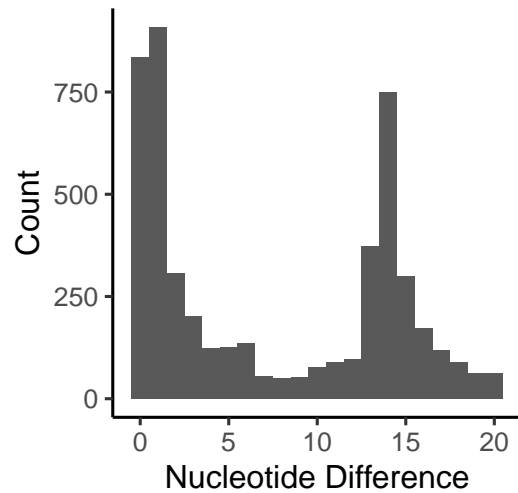
IGHV3-47*02

6 sequences assigned
No exact matches.



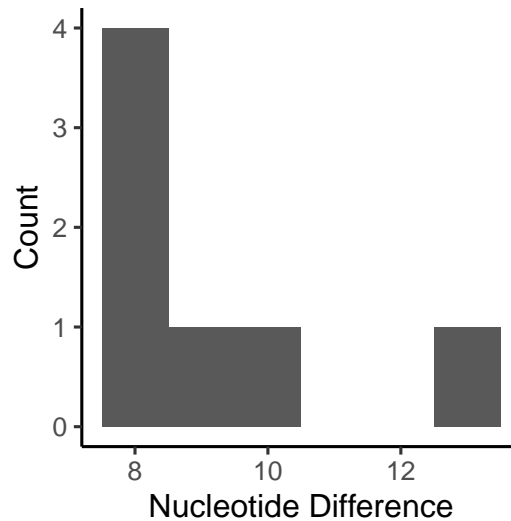
IGHV3-33*01

6338 sequences assigned
835 (13.2%) exact matches, in which:
552 unique CDR3
7 unique J



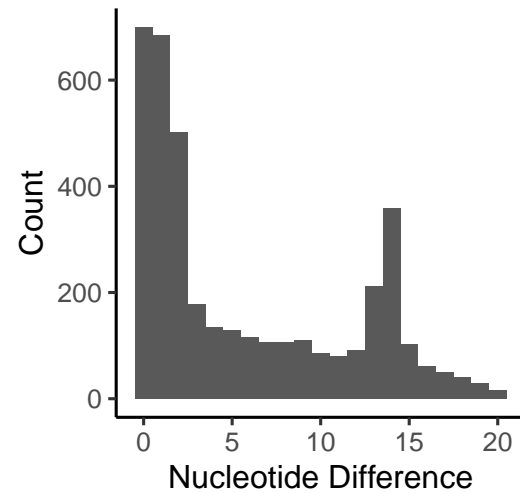
IGHV3-35*01

7 sequences assigned
No exact matches.



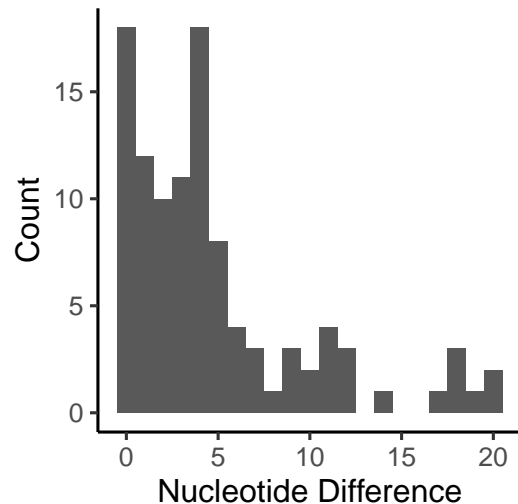
IGHV3-48*01

6377 sequences assigned
700 (11%) exact matches, in which:
465 unique CDR3
7 unique J



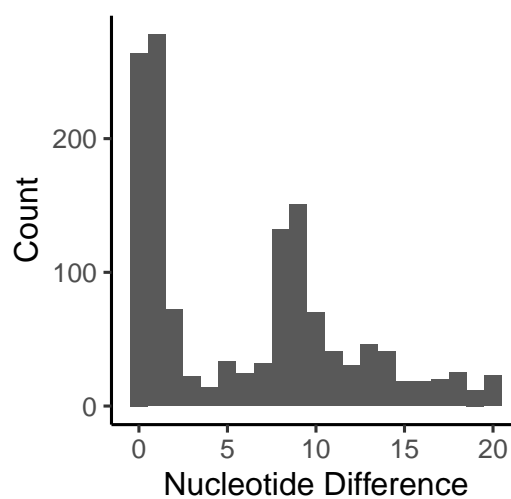
IGHV3-33*05

147 sequences assigned
18 (12.2%) exact matches, in which:
18 unique CDR3
5 unique J



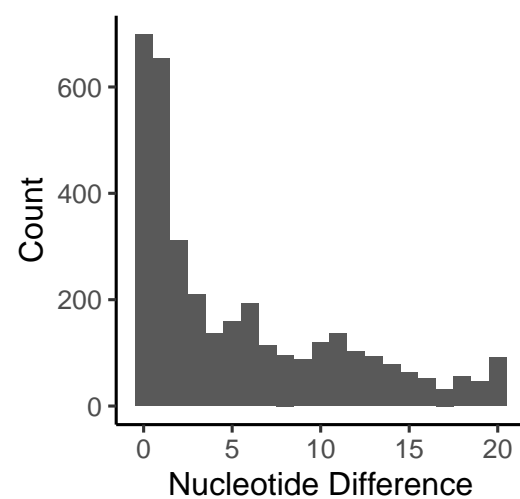
IGHV3-43*02

2399 sequences assigned
264 (11%) exact matches, in which:
145 unique CDR3
6 unique J



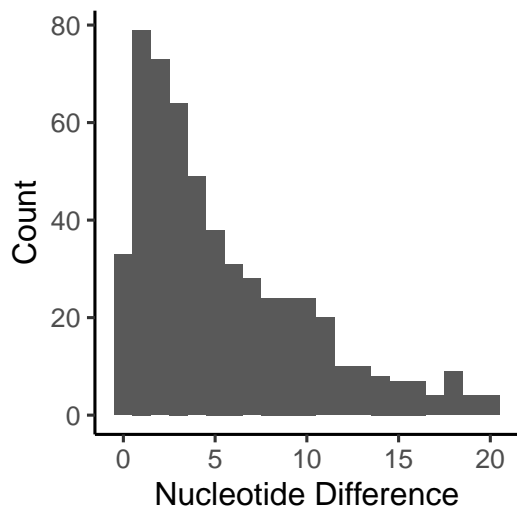
IGHV3-48*03

5603 sequences assigned
699 (12.5%) exact matches, in which:
436 unique CDR3
6 unique J



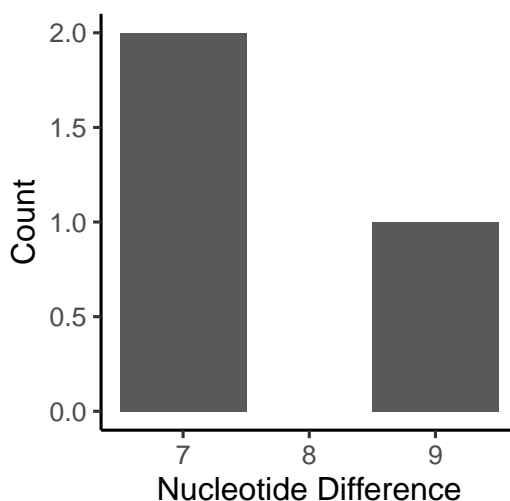
IGHV3-48*04

639 sequences assigned
33 (5.2%) exact matches, in which:
33 unique CDR3
5 unique J



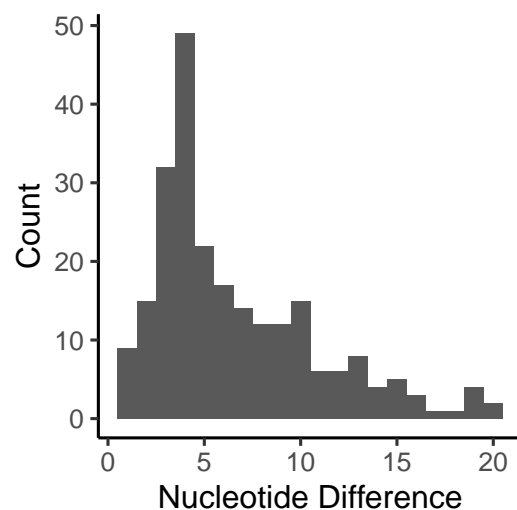
IGHV3-52*02

3 sequences assigned
No exact matches.



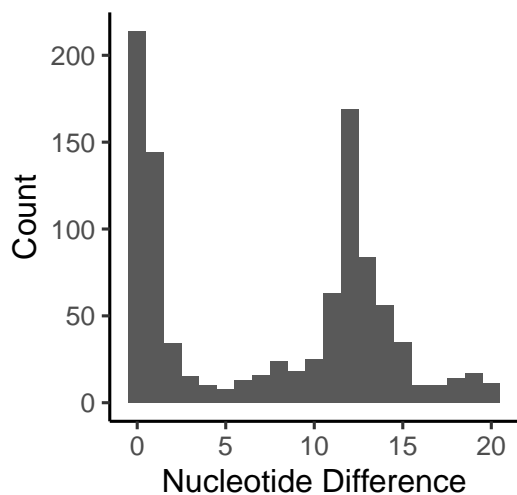
IGHV3-53*01_02

255 sequences assigned
No exact matches.



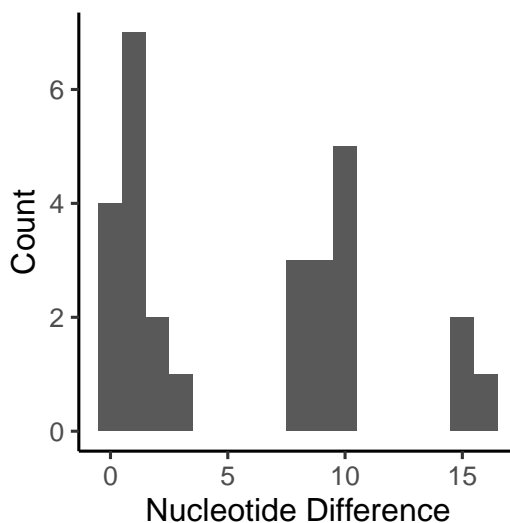
IGHV3-49*04

1078 sequences assigned
214 (19.9%) exact matches, in which:
133 unique CDR3
5 unique J



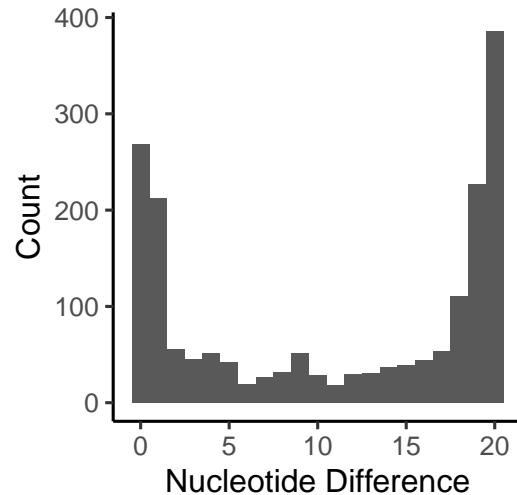
IGHV3-52*01_03

28 sequences assigned
4 (14.3%) exact matches, in which:
2 unique CDR3
2 unique J



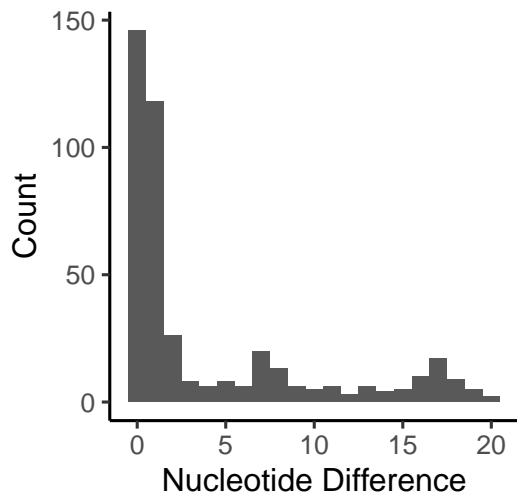
IGHV3-64*01

5467 sequences assigned
268 (4.9%) exact matches, in which:
172 unique CDR3
6 unique J



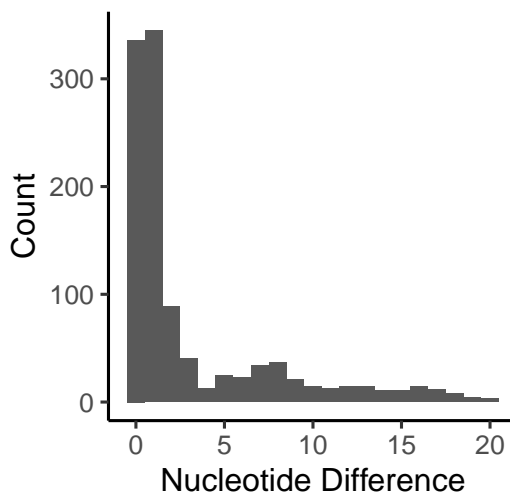
IGHV3-49*03_05

561 sequences assigned
146 (26%) exact matches, in which:
91 unique CDR3
7 unique J



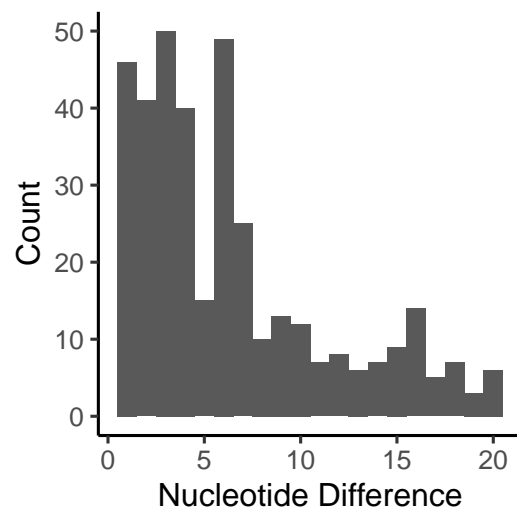
IGHV3-53*04

1115 sequences assigned
336 (30.1%) exact matches, in which:
221 unique CDR3
7 unique J



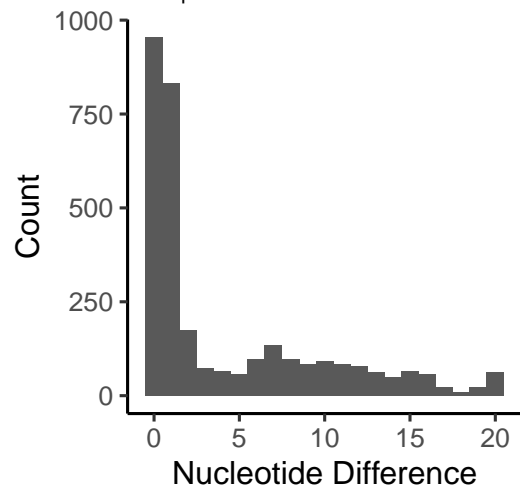
IGHV3-64*04

567 sequences assigned
No exact matches.



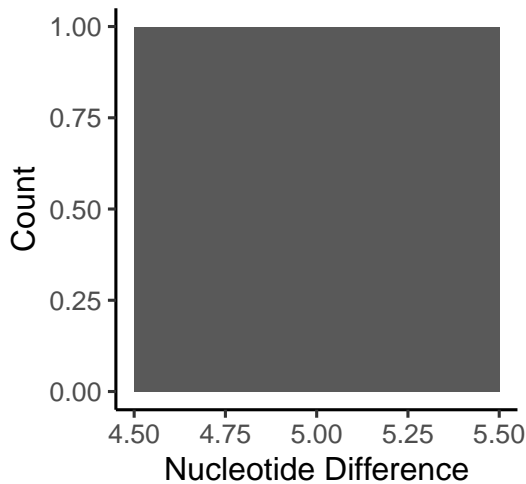
IGHV3-66*01

4029 sequences assigned
954 (23.7%) exact matches, in which:
643 unique CDR3
7 unique J



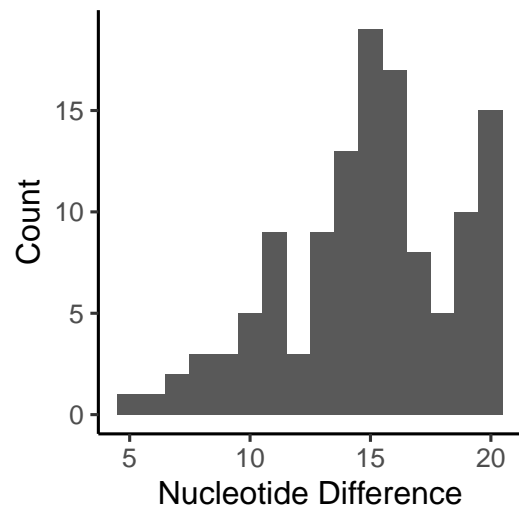
IGHV3-71*03

1 sequences assigned
No exact matches.



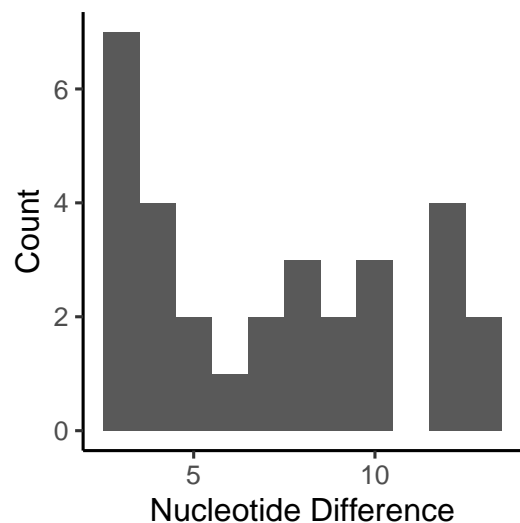
IGHV3-74*03

3206 sequences assigned
No exact matches.



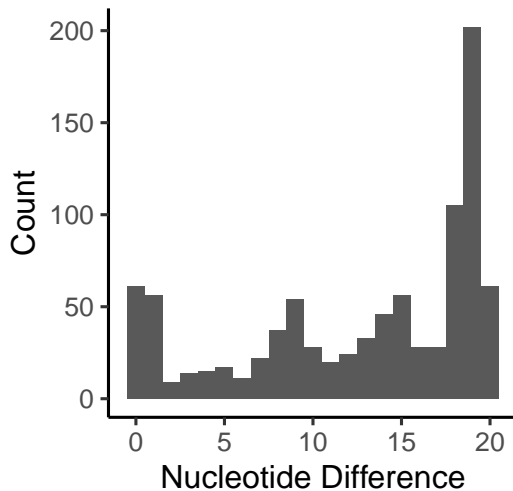
IGHV3-69-1*01

37 sequences assigned
No exact matches.



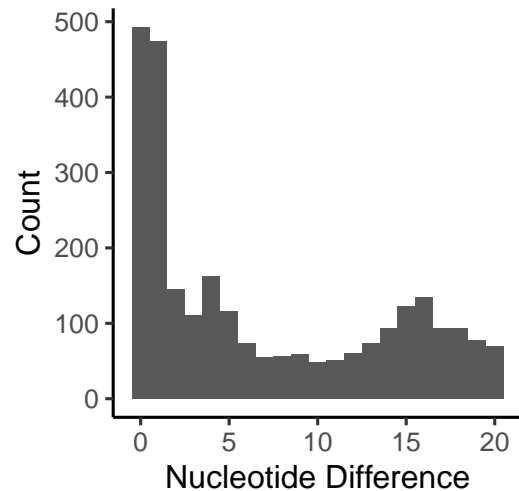
IGHV3-72*01

1144 sequences assigned
61 (5.3%) exact matches, in which:
38 unique CDR3
6 unique J



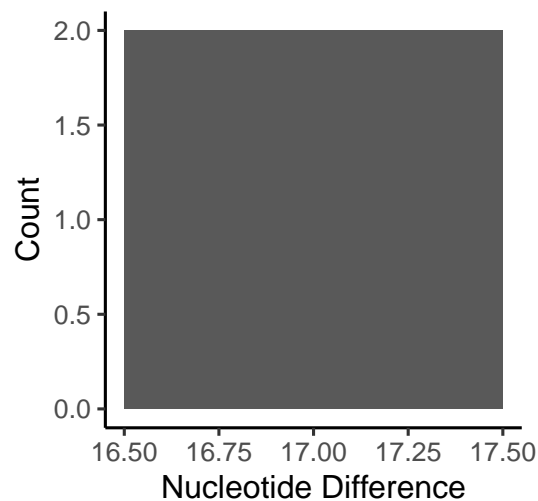
IGHV3-74*01_02

3404 sequences assigned
493 (14.5%) exact matches, in which:
325 unique CDR3
7 unique J



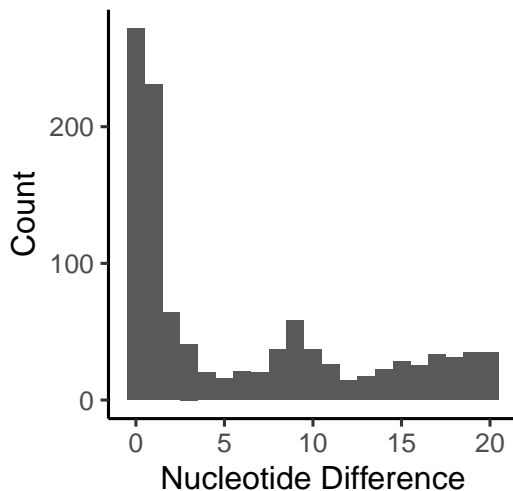
IGHV3-69-1*02

9 sequences assigned
No exact matches.



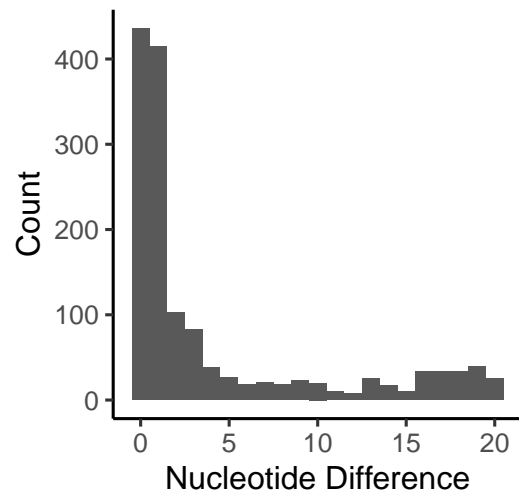
IGHV3-73*01_02

1545 sequences assigned
272 (17.6%) exact matches, in which:
161 unique CDR3
7 unique J



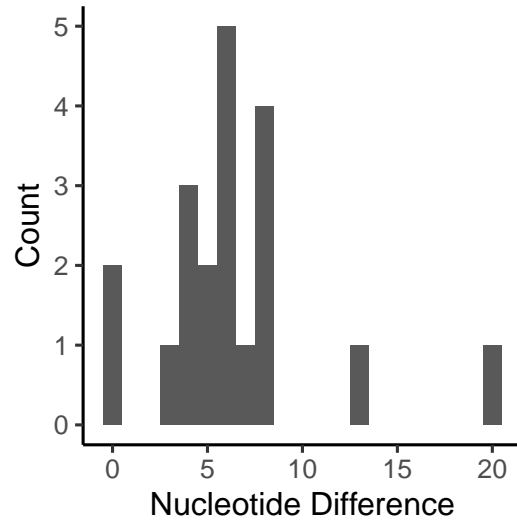
IGHV3-64D*06

3495 sequences assigned
436 (12.5%) exact matches, in which:
241 unique CDR3
7 unique J



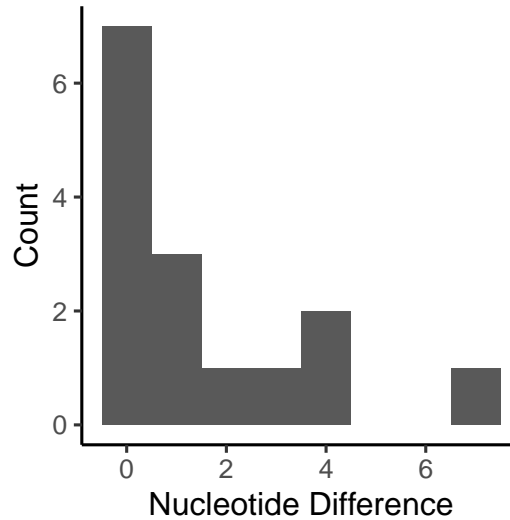
IGHV3–NL1*01

29 sequences assigned
2 (6.9%) exact matches, in which:
2 unique CDR3
2 unique J



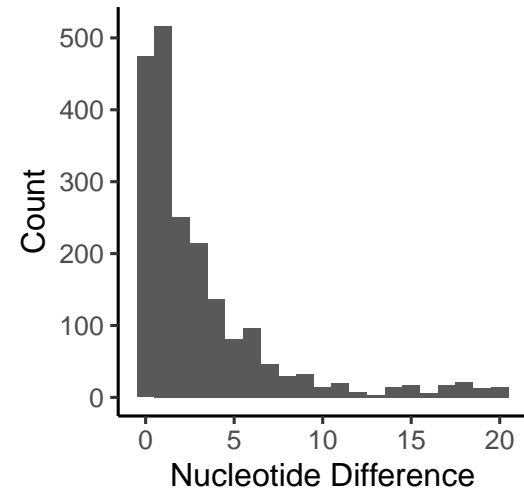
IGHV4–28*01_07

15 sequences assigned
7 (46.7%) exact matches, in which:
4 unique CDR3
2 unique J



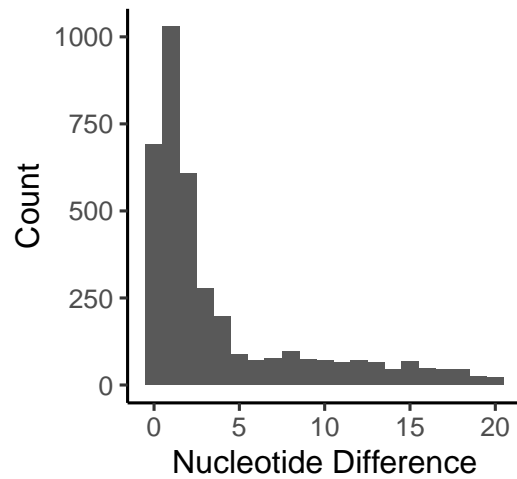
IGHV4–31*03_04

2248 sequences assigned
474 (21.1%) exact matches, in which:
391 unique CDR3
7 unique J



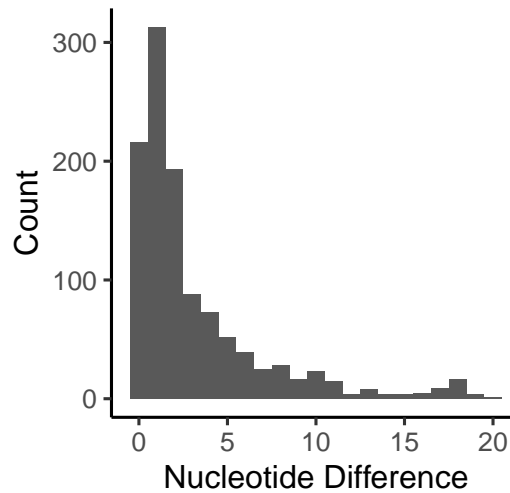
IGHV4–4*07

3945 sequences assigned
690 (17.5%) exact matches, in which:
561 unique CDR3
7 unique J



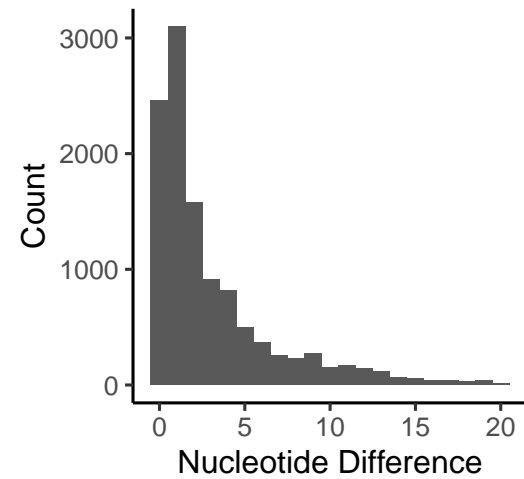
IGHV4–30–2*01

1215 sequences assigned
216 (17.8%) exact matches, in which:
150 unique CDR3
7 unique J



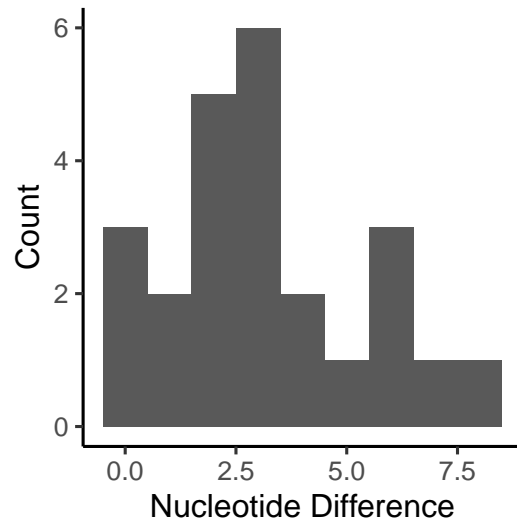
IGHV4–34*01_02

11530 sequences assigned
2456 (21.3%) exact matches, in which:
1821 unique CDR3
7 unique J



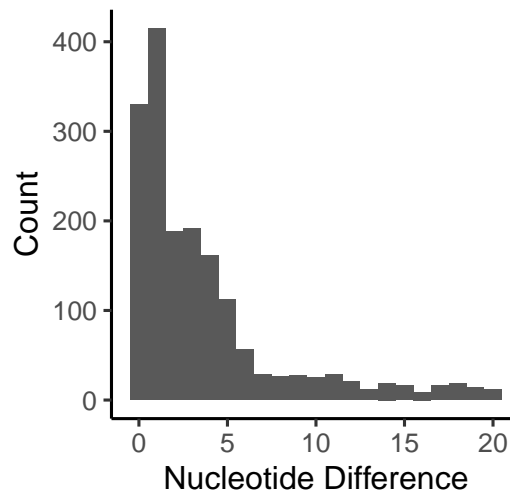
IGHV4–28*03

25 sequences assigned
3 (12%) exact matches, in which:
3 unique CDR3
2 unique J



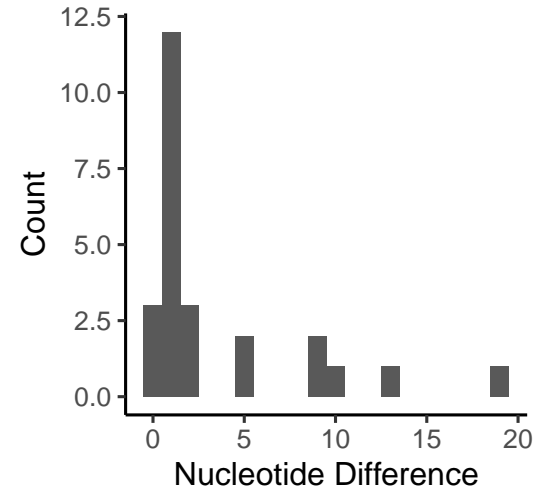
IGHV4–30–4*01

3019 sequences assigned
330 (10.9%) exact matches, in which:
267 unique CDR3
7 unique J



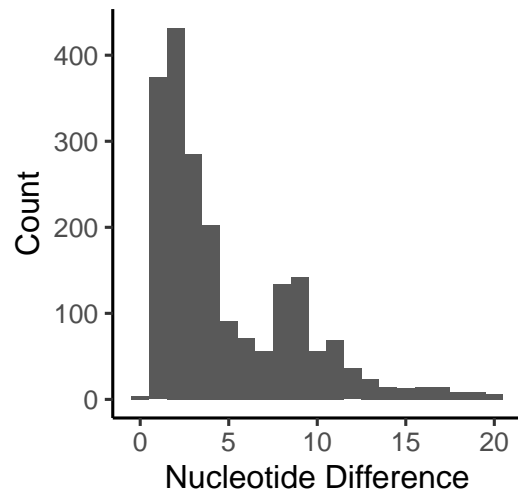
IGHV4–38–2*02

29 sequences assigned
3 (10.3%) exact matches, in which:
3 unique CDR3
3 unique J



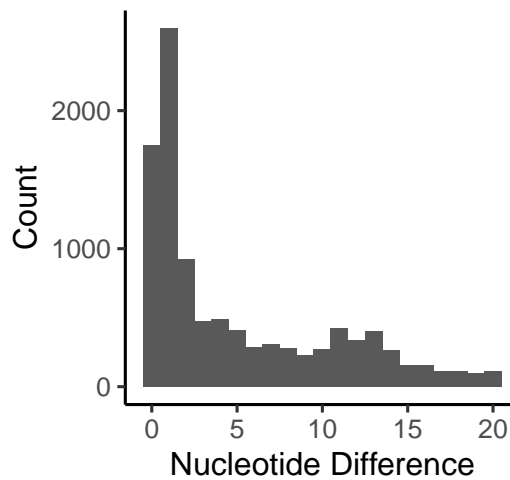
IGHV4–39*07

2118 sequences assigned
4 (0.2%) exact matches, in which:
4 unique CDR3
3 unique J



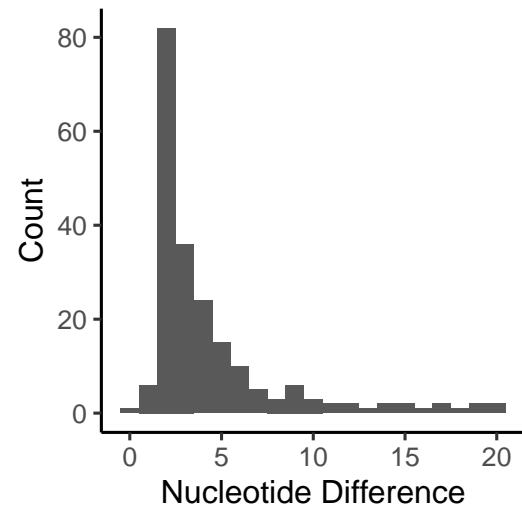
IGHV4–59*08

15217 sequences assigned
1747 (11.5%) exact matches, in which:
1314 unique CDR3
7 unique J



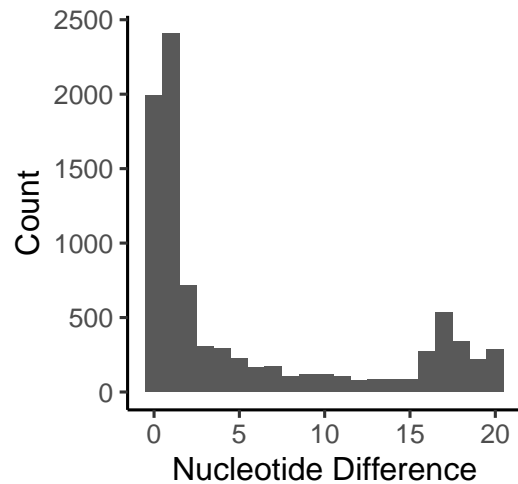
IGHV4–61*01

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



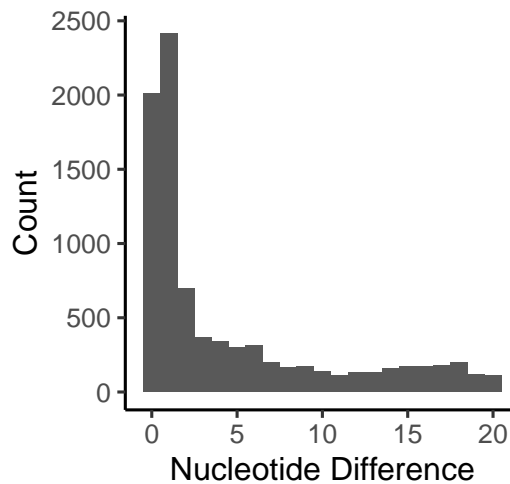
IGHV4–39*01_05

12905 sequences assigned
1993 (15.4%) exact matches, in which:
1479 unique CDR3
7 unique J



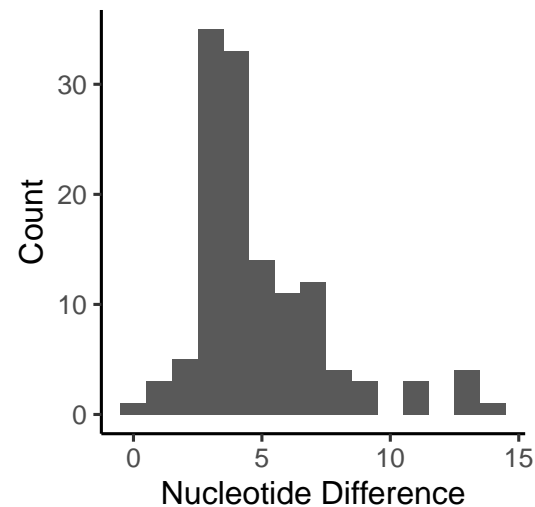
IGHV4–59*01_07

10740 sequences assigned
2013 (18.7%) exact matches, in which:
1605 unique CDR3
7 unique J



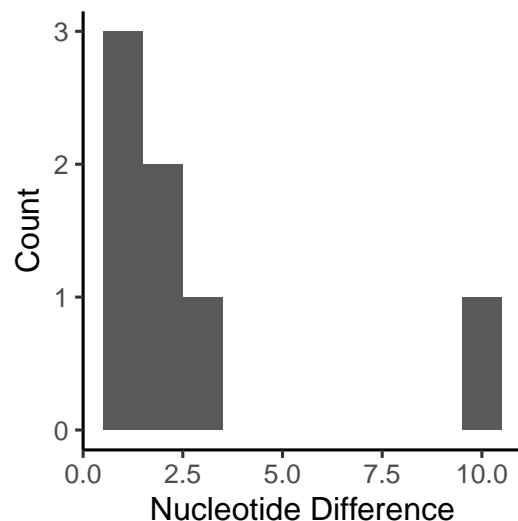
IGHV4–61*02

130 sequences assigned
1 (0.8%) exact matches, in which:
1 unique CDR3
1 unique J



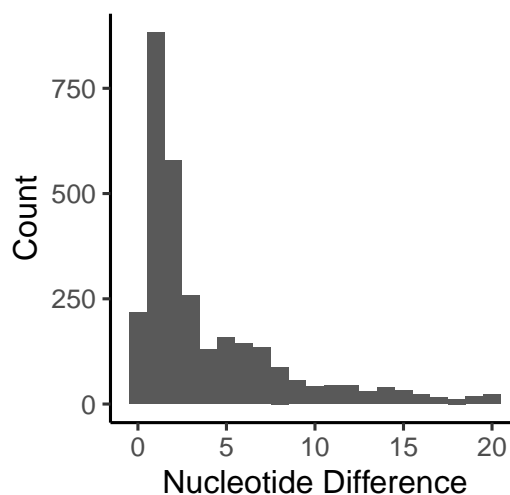
IGHV4–55*02_04_08

7 sequences assigned
No exact matches.



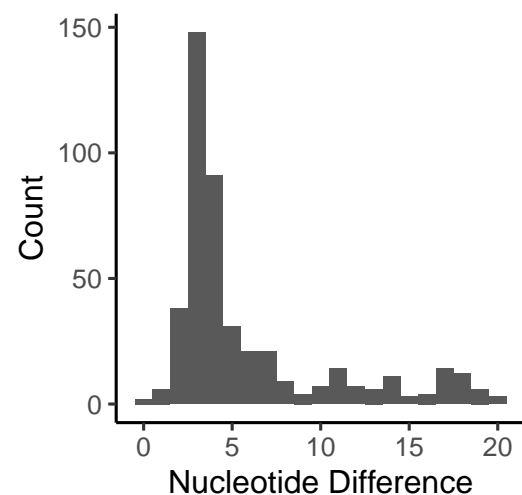
IGHV4–59*12

3197 sequences assigned
218 (6.8%) exact matches, in which:
203 unique CDR3
7 unique J



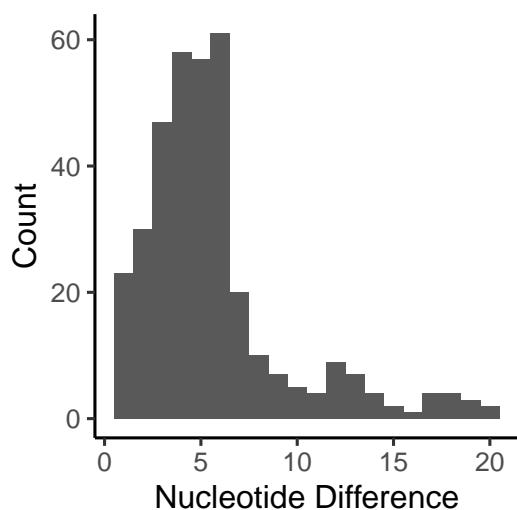
IGHV4–61*05

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



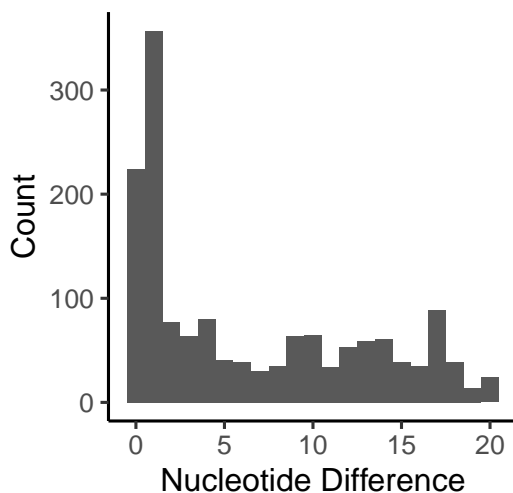
IGHV4-61*08

412 sequences assigned
No exact matches.



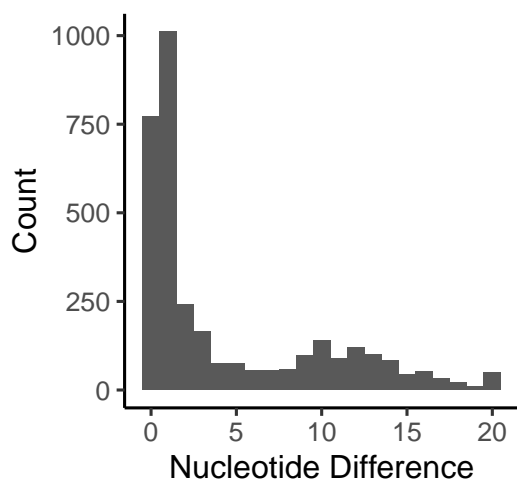
IGHV6-1*01_02

1654 sequences assigned
224 (13.5%) exact matches, in which:
179 unique CDR3
7 unique J



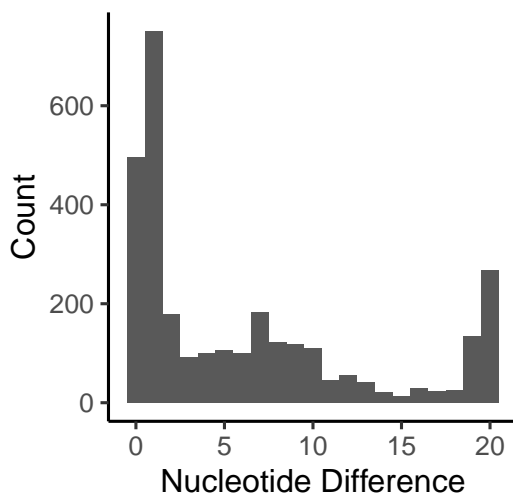
IGHV5-10-1*01_03

3606 sequences assigned
772 (21.4%) exact matches, in which:
519 unique CDR3
7 unique J



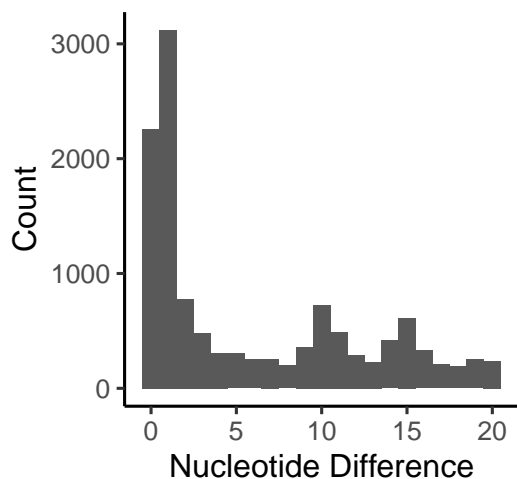
IGHV7-4-1*02

4083 sequences assigned
497 (12.2%) exact matches, in which:
377 unique CDR3
7 unique J

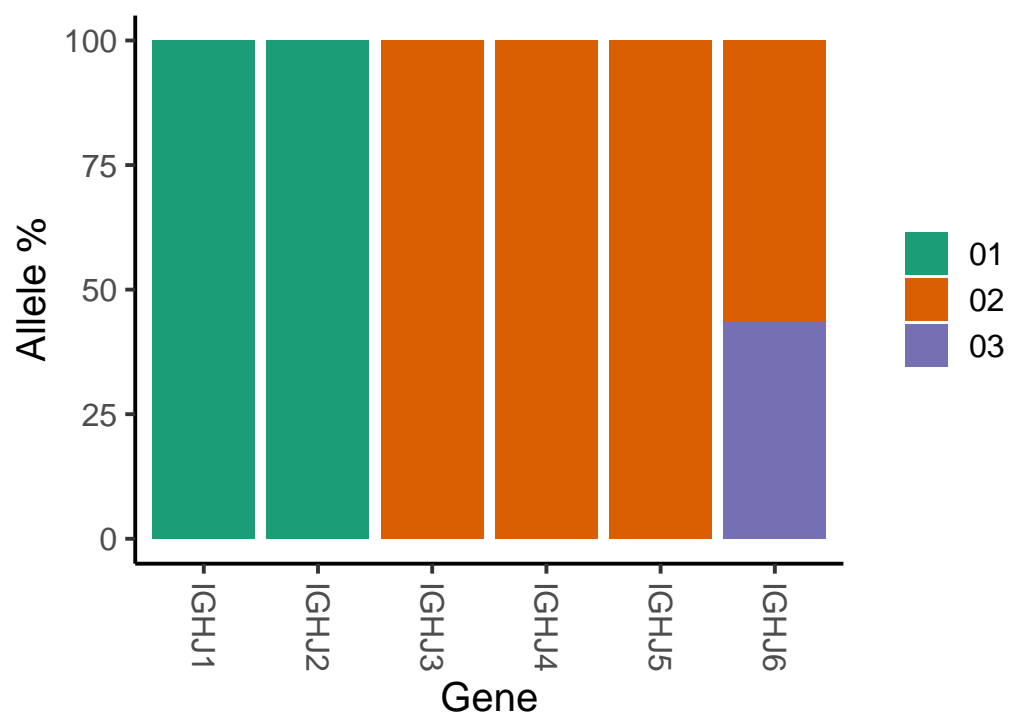


IGHV5-51*01_03

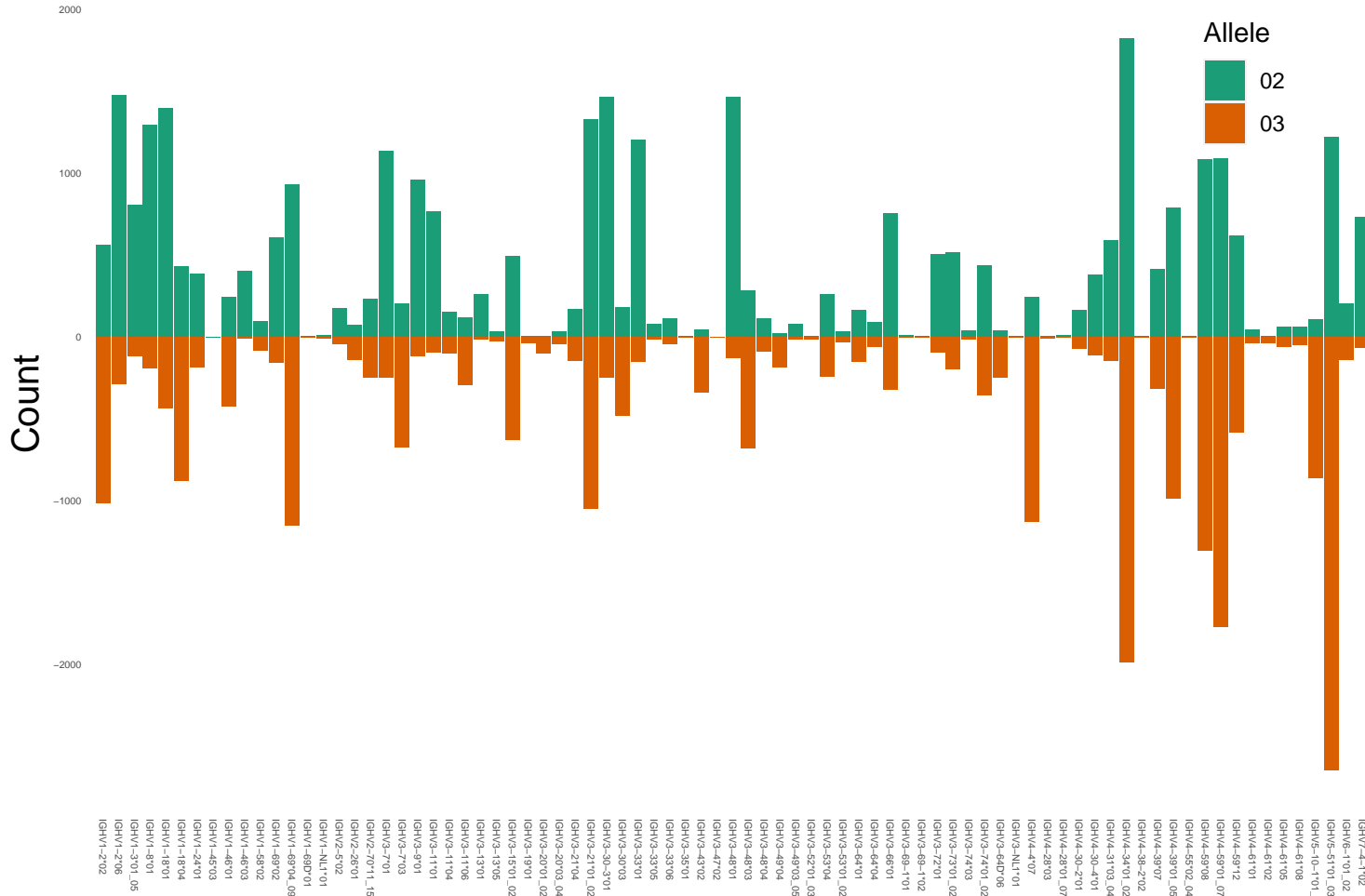
14015 sequences assigned
2261 (16.1%) exact matches, in which:
1277 unique CDR3
7 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Novel sequence(s)IGHV1-69*01_12_13_G238AIGHV3-48*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.