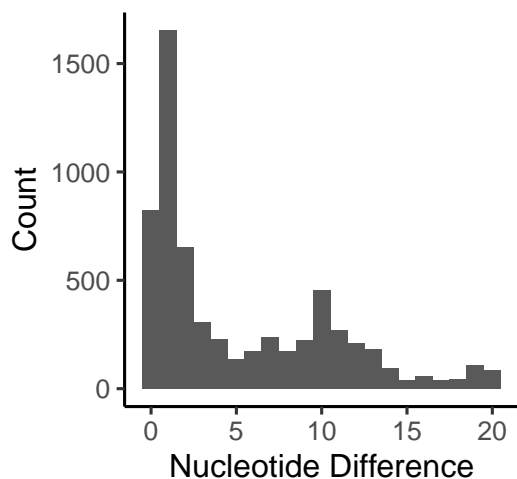


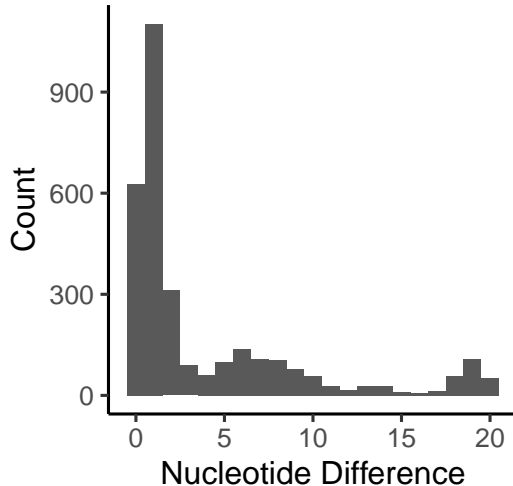
IGHV1-2*02

8148 sequences assigned
822 (10.1%) exact matches, in which:
598 unique CDR3
5 unique J



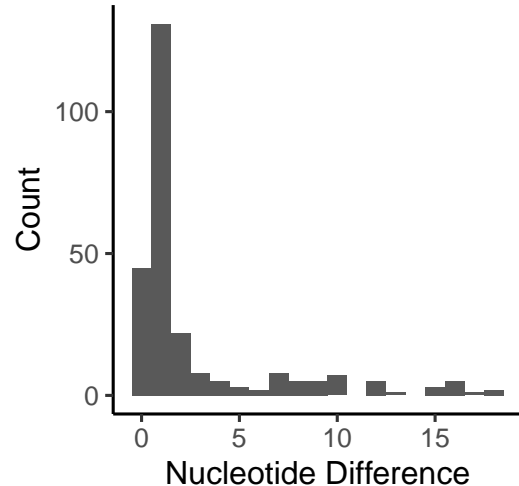
IGHV1-8*01

3408 sequences assigned
627 (18.4%) exact matches, in which:
455 unique CDR3
6 unique J



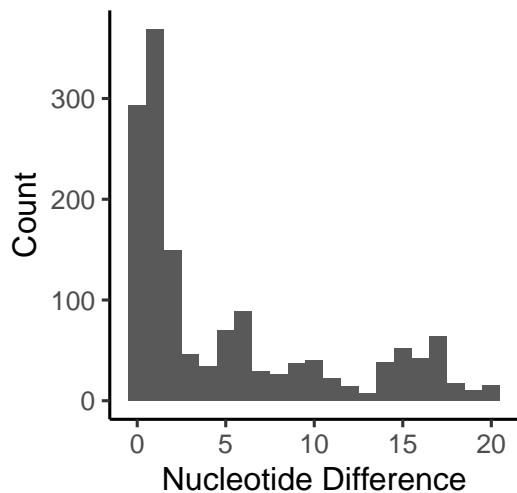
IGHV1-45*02

258 sequences assigned
45 (17.4%) exact matches, in which:
23 unique CDR3
3 unique J



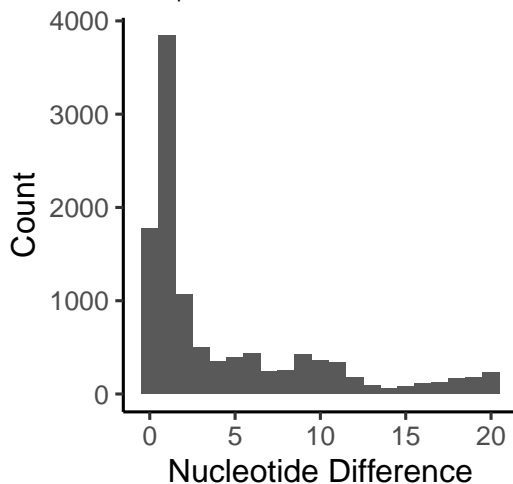
IGHV1-2*04

1479 sequences assigned
293 (19.8%) exact matches, in which:
235 unique CDR3
6 unique J



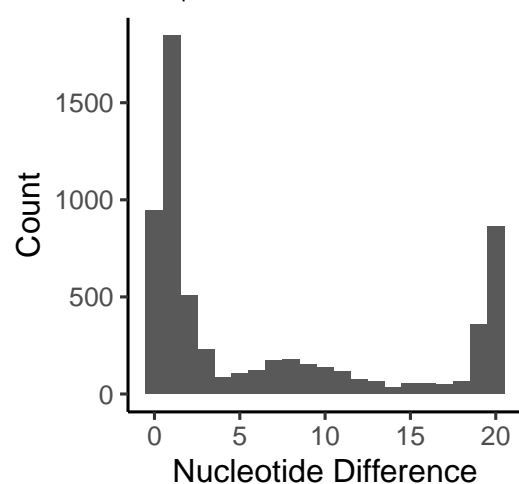
IGHV1-18*01

12911 sequences assigned
1772 (13.7%) exact matches, in which:
1168 unique CDR3
6 unique J



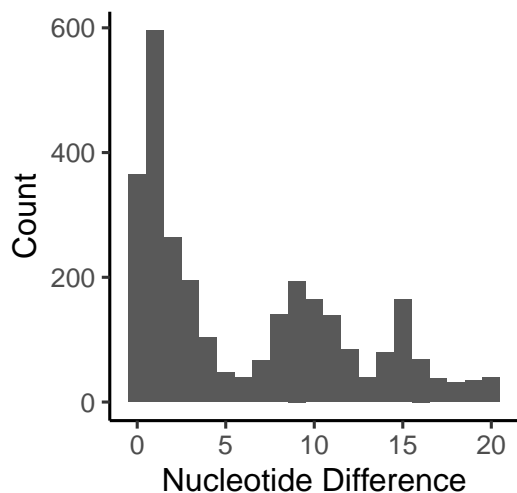
IGHV1-46*01

7756 sequences assigned
945 (12.2%) exact matches, in which:
631 unique CDR3
6 unique J



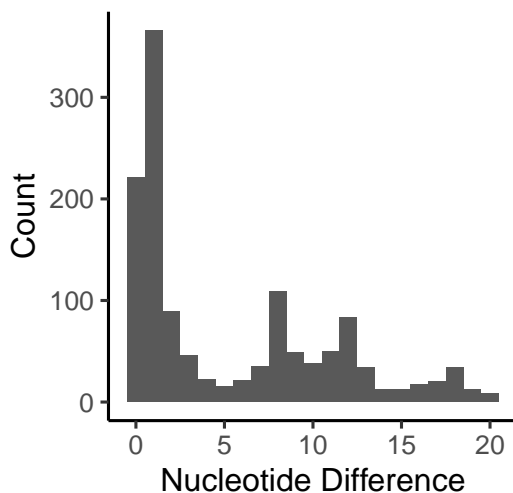
IGHV1-3*01_05

3305 sequences assigned
365 (11%) exact matches, in which:
267 unique CDR3
6 unique J



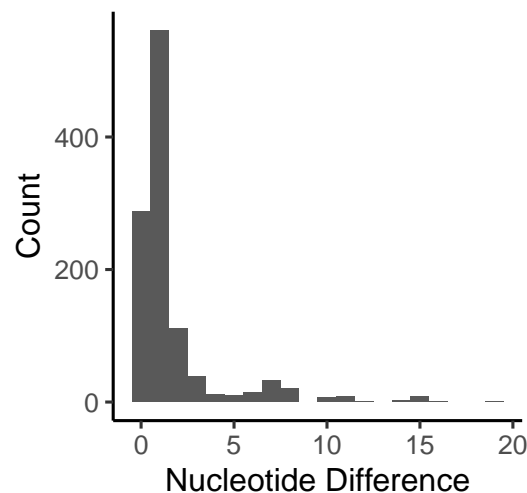
IGHV1-24*01

1327 sequences assigned
221 (16.7%) exact matches, in which:
150 unique CDR3
4 unique J



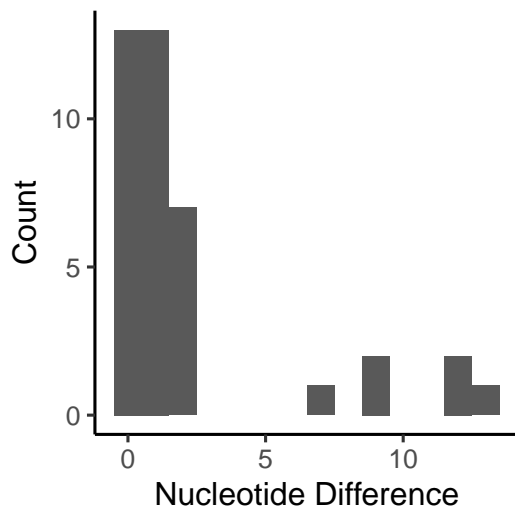
IGHV1-58*01_03

1119 sequences assigned
288 (25.7%) exact matches, in which:
194 unique CDR3
6 unique J



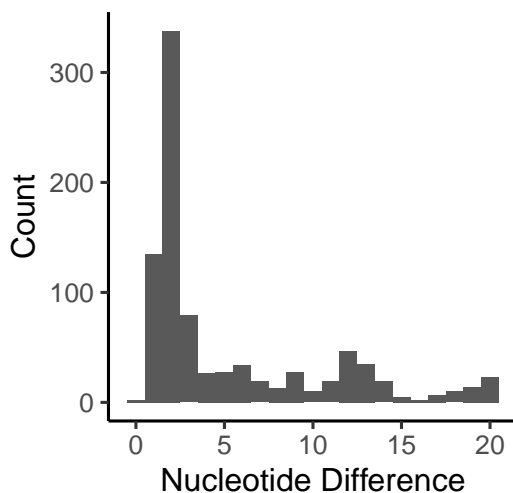
IGHV1-69-2*01

39 sequences assigned
13 (33.3%) exact matches, in which:
8 unique CDR3
3 unique J



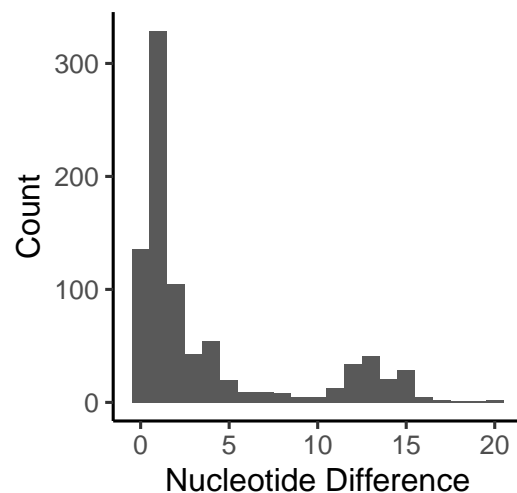
IGHV2-5*01

909 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
1 unique J



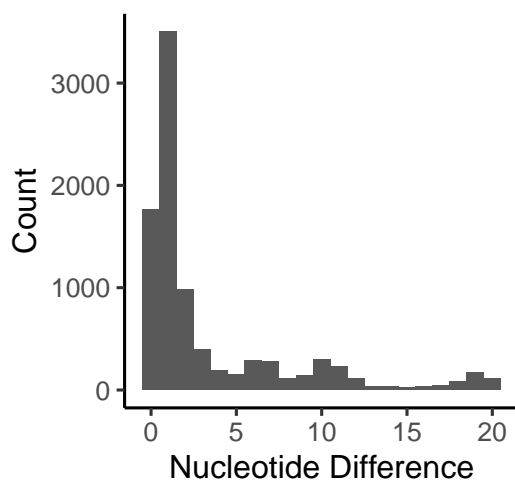
IGHV2-70*01

899 sequences assigned
136 (15.1%) exact matches, in which:
78 unique CDR3
4 unique J



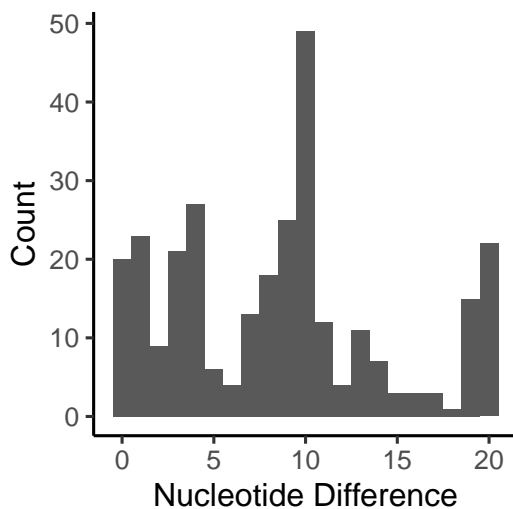
IGHV1-69*01_12_13

9851 sequences assigned
1763 (17.9%) exact matches, in which:
1244 unique CDR3
6 unique J



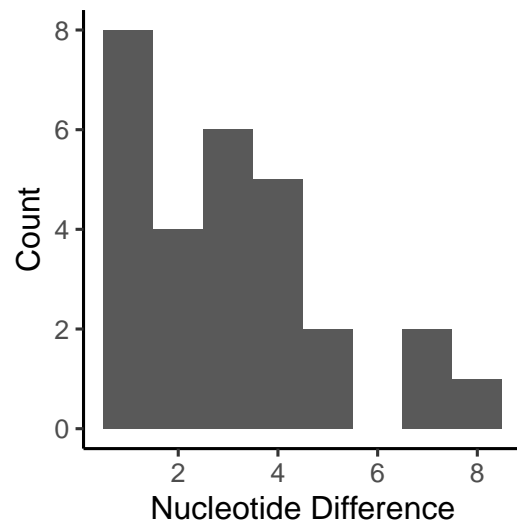
IGHV2-5*02

338 sequences assigned
20 (5.9%) exact matches, in which:
16 unique CDR3
2 unique J



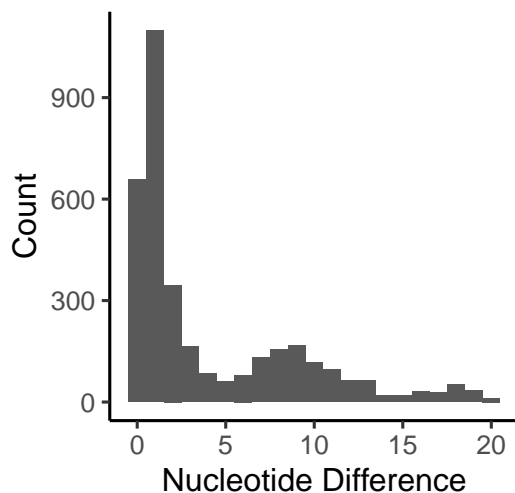
IGHV2-70*12

28 sequences assigned
No exact matches.



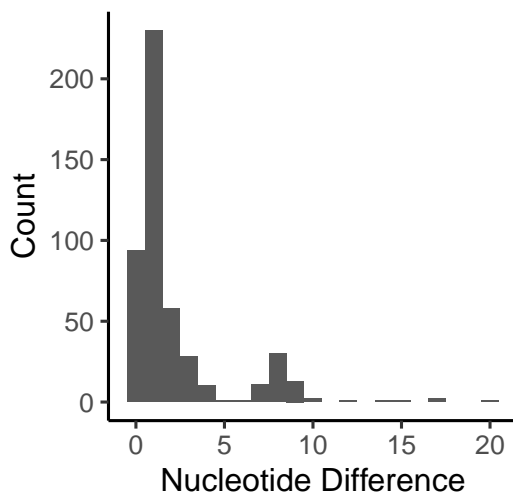
IGHV1-69*06_14

3800 sequences assigned
659 (17.3%) exact matches, in which:
506 unique CDR3
6 unique J



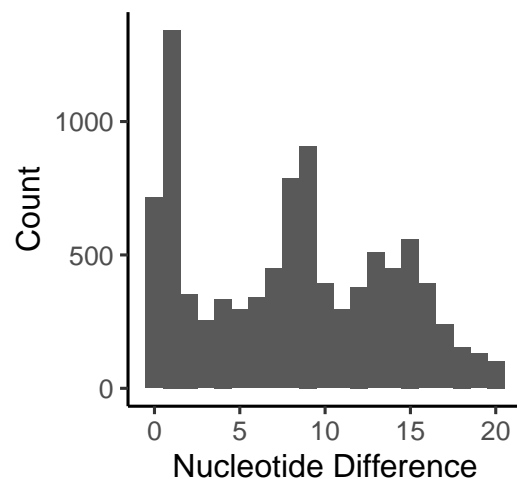
IGHV2-26*01

484 sequences assigned
94 (19.4%) exact matches, in which:
59 unique CDR3
5 unique J



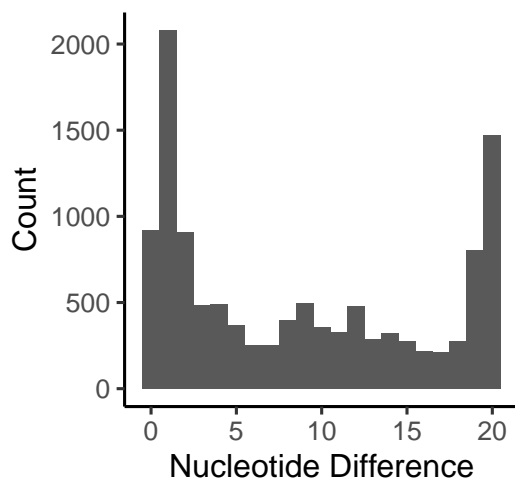
IGHV3-7*01

10157 sequences assigned
716 (7%) exact matches, in which:
450 unique CDR3
6 unique J



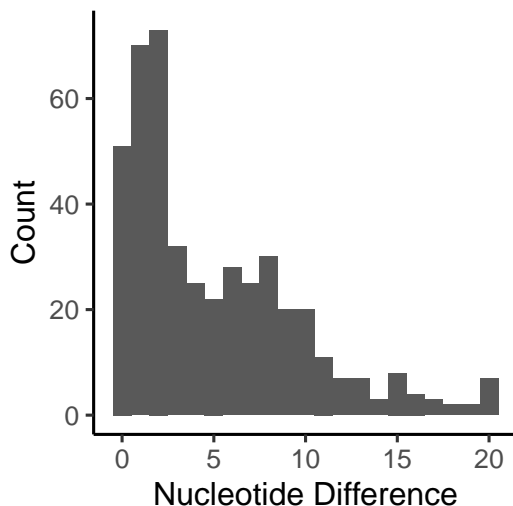
IGHV3-7*03

18158 sequences assigned
921 (5.1%) exact matches, in which:
482 unique CDR3
6 unique J



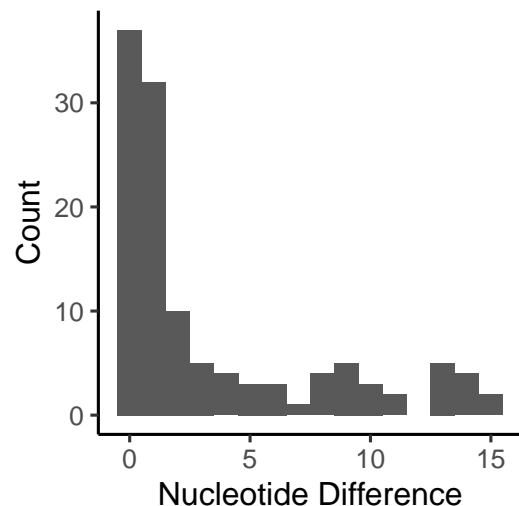
IGHV3-11*04

471 sequences assigned
51 (10.8%) exact matches, in which:
46 unique CDR3
4 unique J



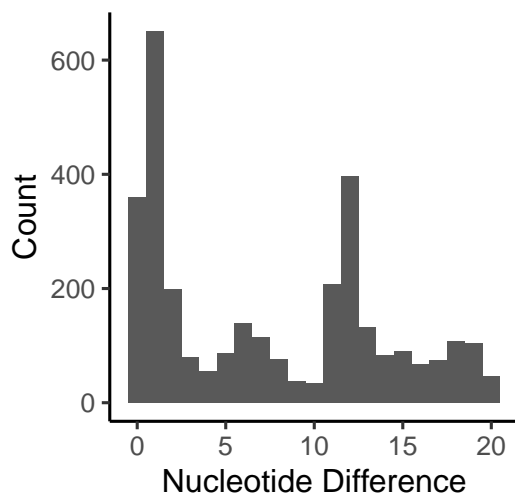
IGHV3-13*05

121 sequences assigned
37 (30.6%) exact matches, in which:
28 unique CDR3
5 unique J



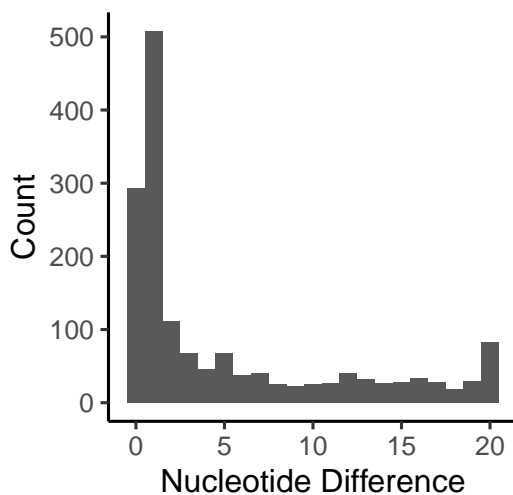
IGHV3-9*01

3914 sequences assigned
360 (9.2%) exact matches, in which:
198 unique CDR3
6 unique J



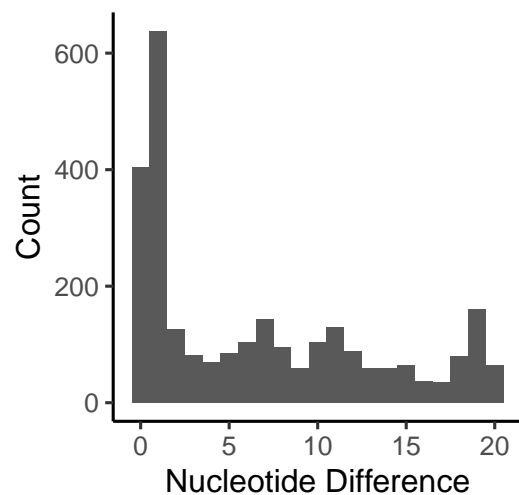
IGHV3-11*06

2035 sequences assigned
293 (14.4%) exact matches, in which:
176 unique CDR3
6 unique J



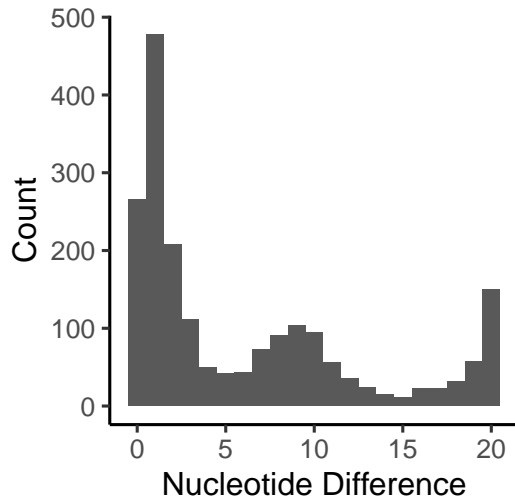
IGHV3-15*01_02

3239 sequences assigned
404 (12.5%) exact matches, in which:
239 unique CDR3
6 unique J



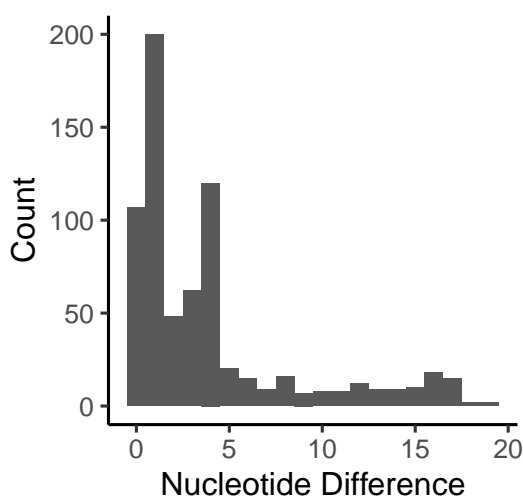
IGHV3-11*01

2988 sequences assigned
266 (8.9%) exact matches, in which:
180 unique CDR3
6 unique J



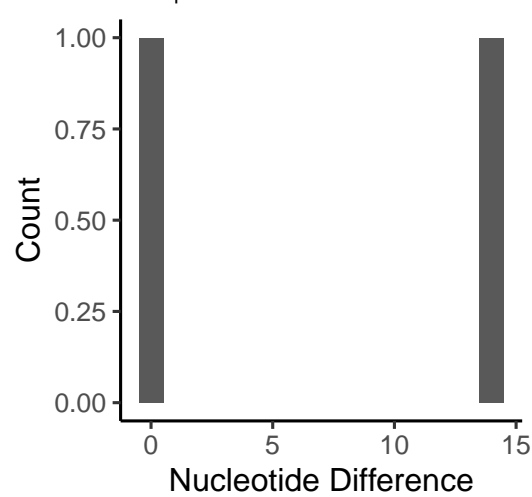
IGHV3-13*01

712 sequences assigned
107 (15%) exact matches, in which:
74 unique CDR3
5 unique J



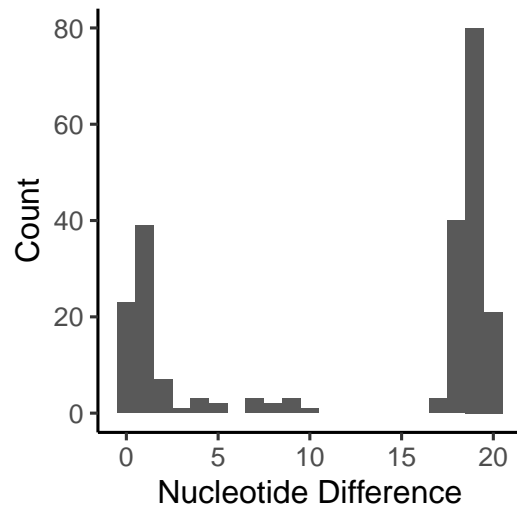
IGHV3-19*01

2 sequences assigned
1 (50%) exact matches, in which:
1 unique CDR3
1 unique J



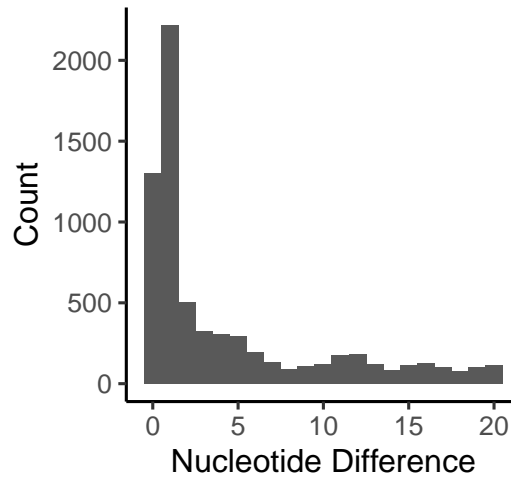
IGHV3-20*01_02

267 sequences assigned
23 (8.6%) exact matches, in which:
13 unique CDR3
3 unique J



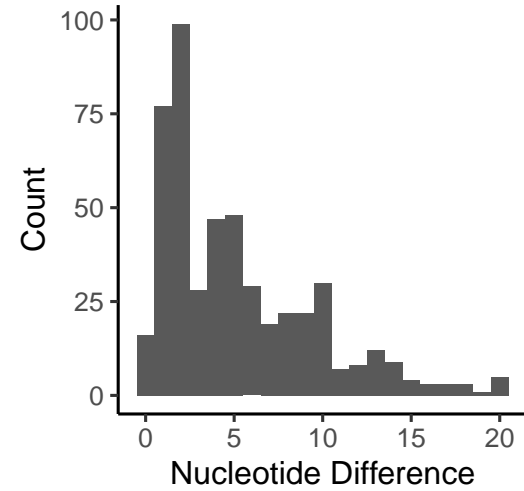
IGHV3-21*01_02

7921 sequences assigned
1303 (16.4%) exact matches, in which:
776 unique CDR3
6 unique J



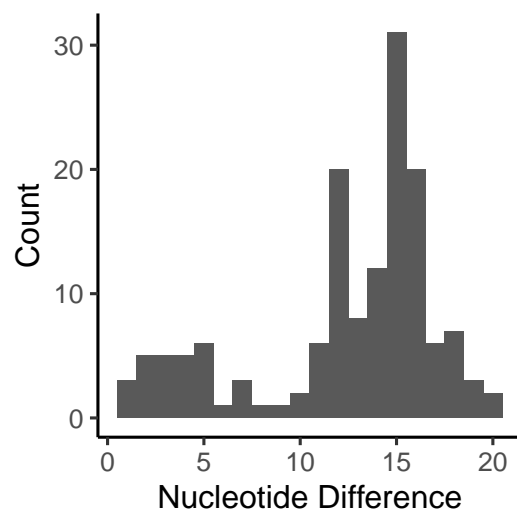
IGHV3-30-3*02

524 sequences assigned
16 (3.1%) exact matches, in which:
15 unique CDR3
3 unique J



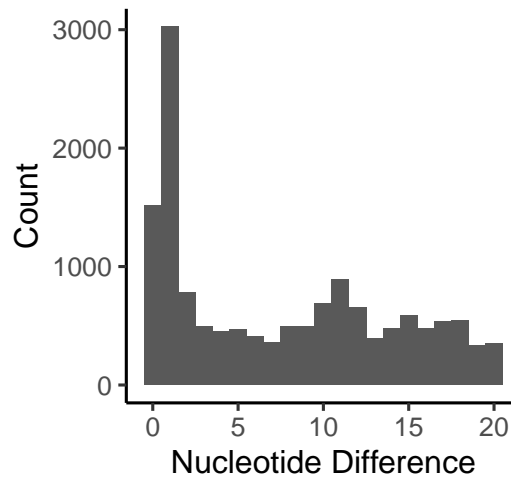
IGHV3-20*03_04

160 sequences assigned
No exact matches.



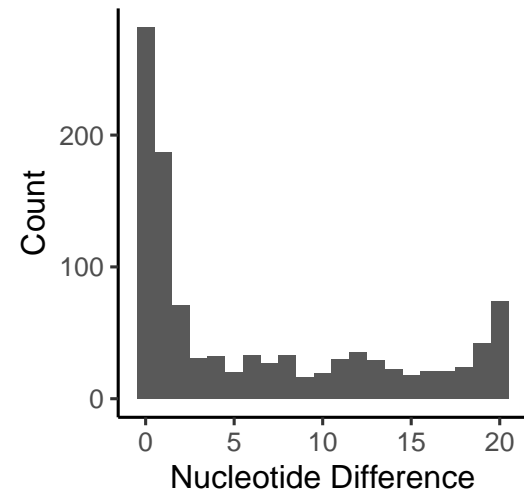
IGHV3-23*01_04

18555 sequences assigned
1518 (8.2%) exact matches, in which:
885 unique CDR3
6 unique J



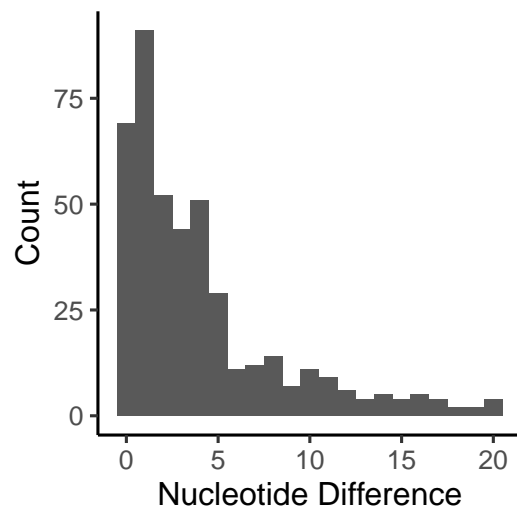
IGHV3-30*03

1326 sequences assigned
282 (21.3%) exact matches, in which:
221 unique CDR3
6 unique J



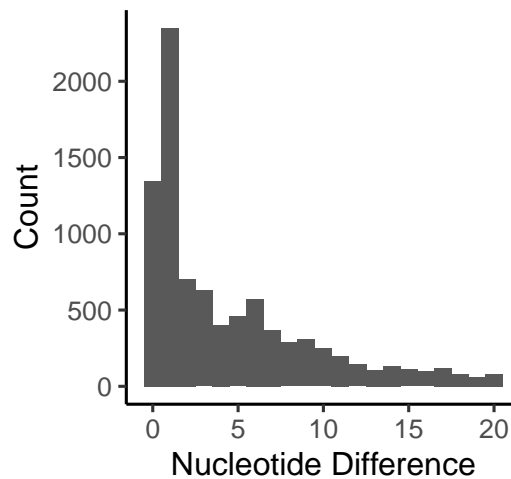
IGHV3-21*04

475 sequences assigned
69 (14.5%) exact matches, in which:
56 unique CDR3
6 unique J



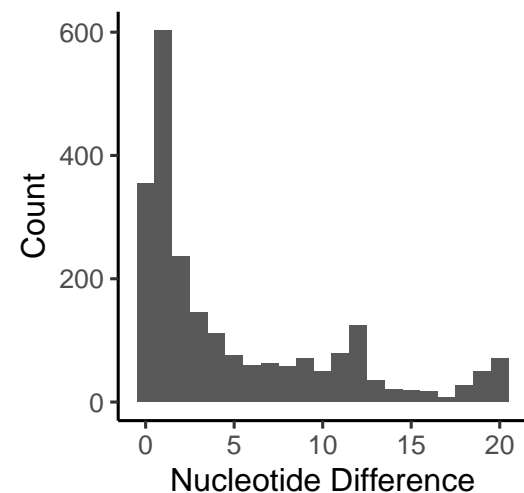
IGHV3-30-3*01

10718 sequences assigned
1346 (12.6%) exact matches, in which:
796 unique CDR3
6 unique J



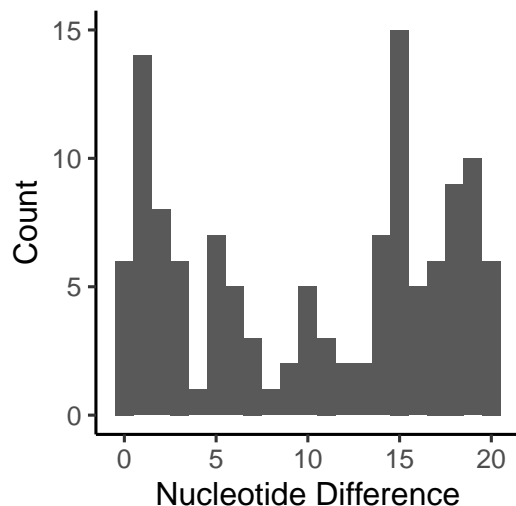
IGHV3-33*01

2995 sequences assigned
354 (11.8%) exact matches, in which:
224 unique CDR3
6 unique J



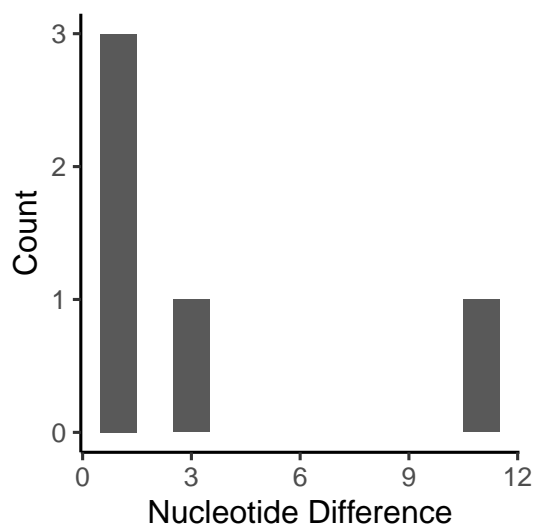
IGHV3-33*05

158 sequences assigned
6 (3.8%) exact matches, in which:
6 unique CDR3
4 unique J



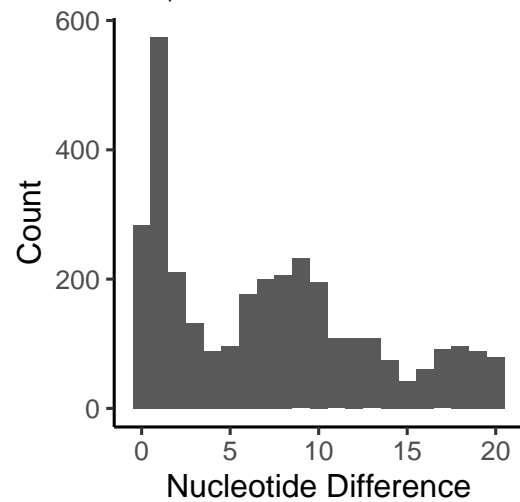
IGHV3-47*02

5 sequences assigned
No exact matches.



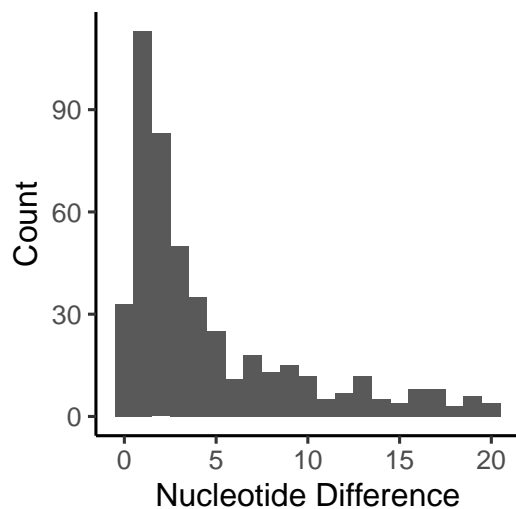
IGHV3-48*03

3687 sequences assigned
284 (7.7%) exact matches, in which:
164 unique CDR3
6 unique J



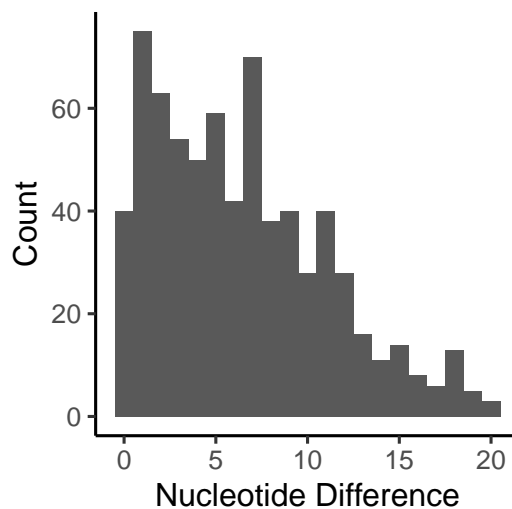
IGHV3-33*06

495 sequences assigned
33 (6.7%) exact matches, in which:
33 unique CDR3
3 unique J



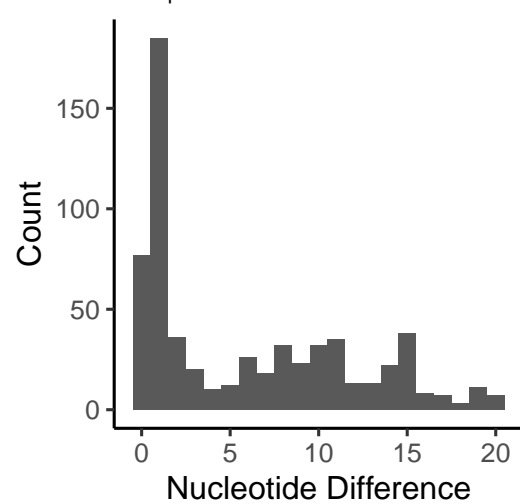
IGHV3-48*01

722 sequences assigned
40 (5.5%) exact matches, in which:
37 unique CDR3
5 unique J



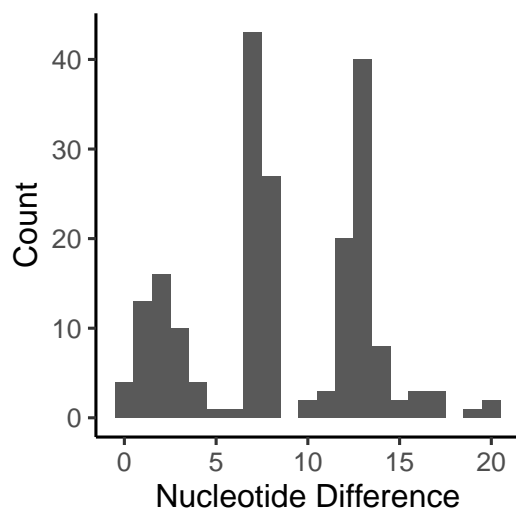
IGHV3-49*04

1031 sequences assigned
77 (7.5%) exact matches, in which:
39 unique CDR3
4 unique J



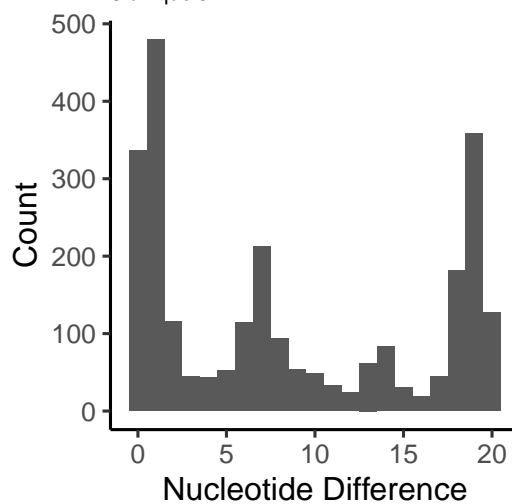
IGHV3-43*01

242 sequences assigned
4 (1.7%) exact matches, in which:
2 unique CDR3
1 unique J



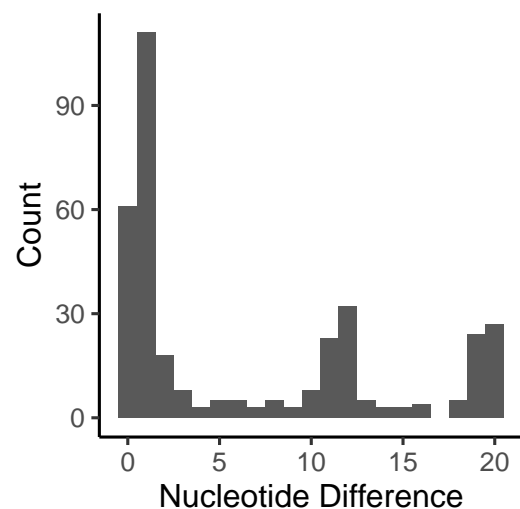
IGHV3-48*02

2686 sequences assigned
336 (12.5%) exact matches, in which:
212 unique CDR3
6 unique J



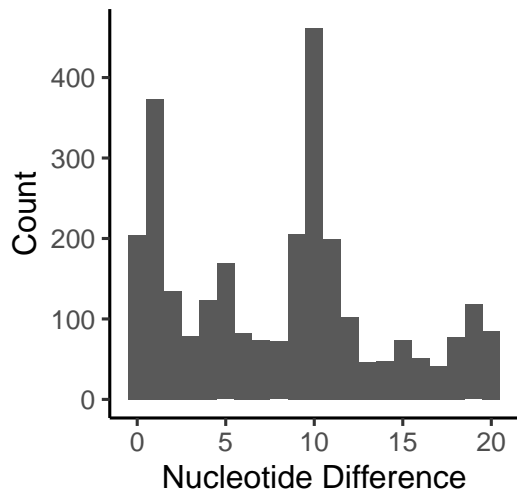
IGHV3-49*03_05

375 sequences assigned
61 (16.3%) exact matches, in which:
35 unique CDR3
4 unique J



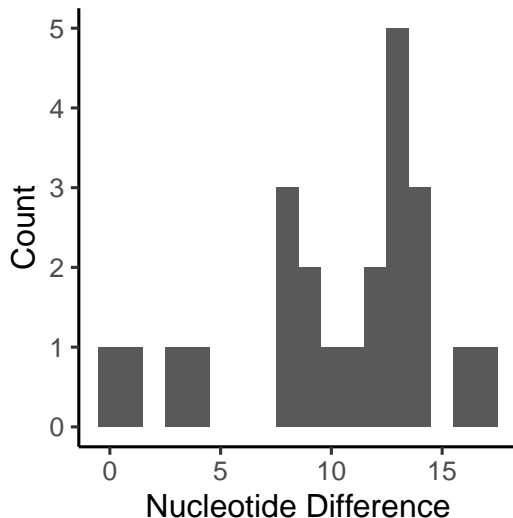
IGHV3-53*01_02

3040 sequences assigned
204 (6.7%) exact matches, in which:
124 unique CDR3
5 unique J



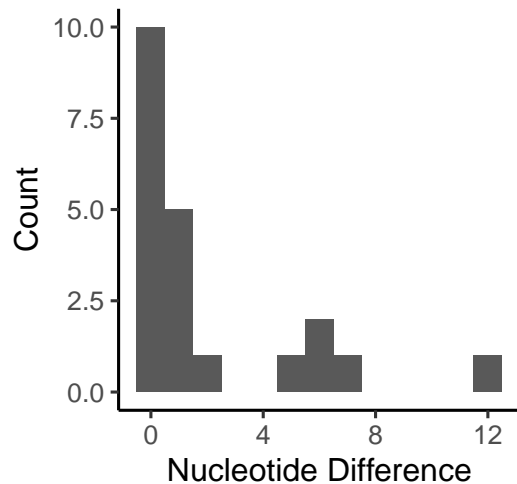
IGHV3-66*01

28 sequences assigned
1 (3.6%) exact matches, in which:
1 unique CDR3
1 unique J



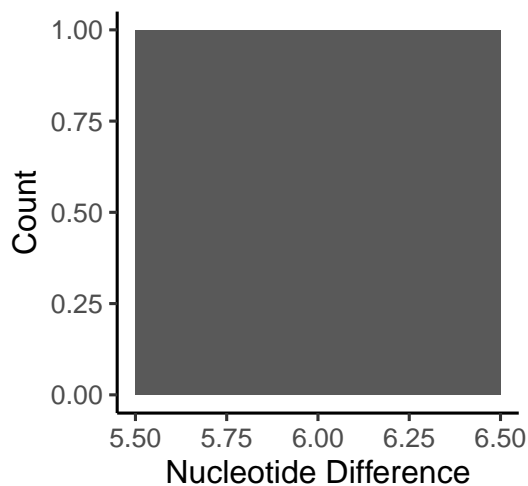
IGHV3-69-1*01

24 sequences assigned
10 (41.7%) exact matches, in which:
10 unique CDR3
5 unique J



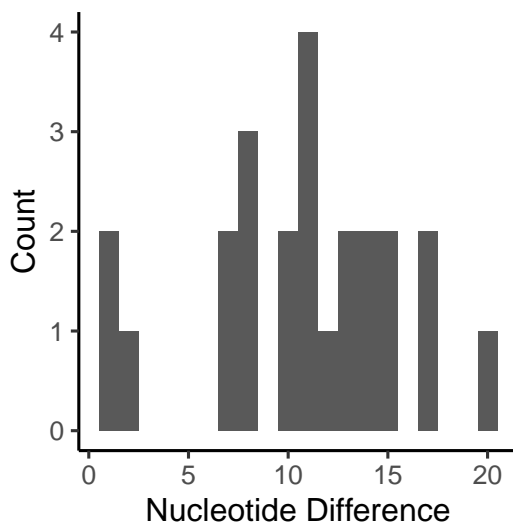
IGHV3-62*03

1 sequences assigned
No exact matches.



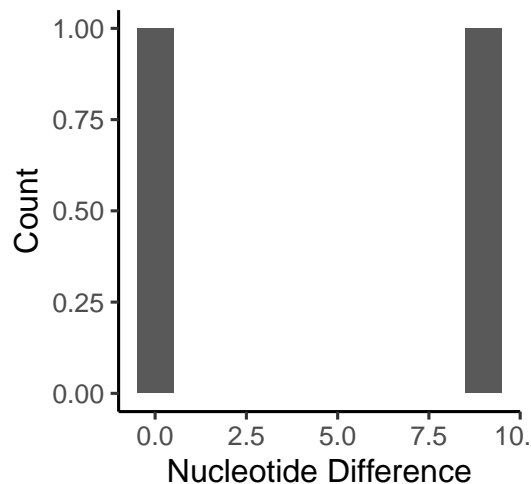
IGHV3-66*02

25 sequences assigned
No exact matches.



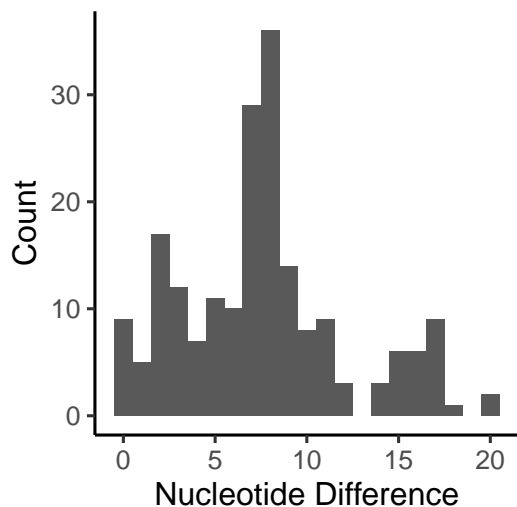
IGHV3-69-1*02

57 sequences assigned
1 (1.8%) exact matches, in which:
1 unique CDR3
1 unique J



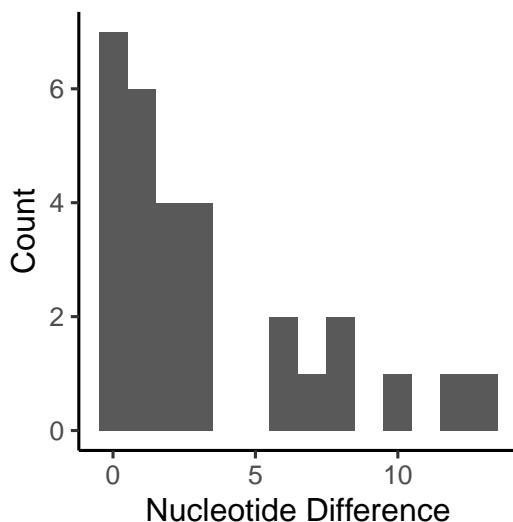
IGHV3-64*04

207 sequences assigned
9 (4.3%) exact matches, in which:
9 unique CDR3
4 unique J



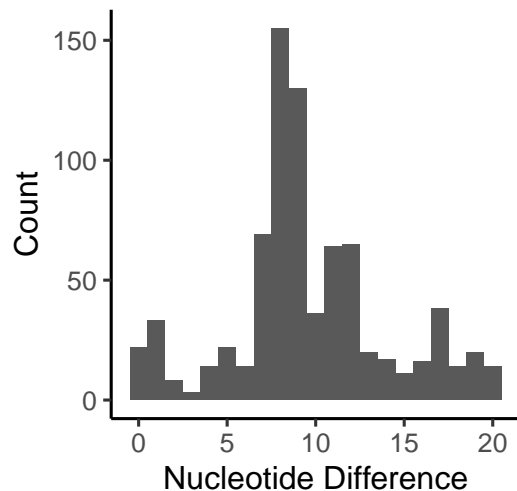
IGHV3-66*03

29 sequences assigned
7 (24.1%) exact matches, in which:
6 unique CDR3
4 unique J



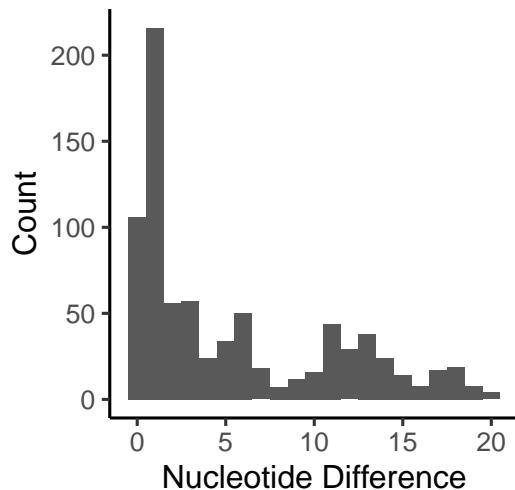
IGHV3-72*01

900 sequences assigned
22 (2.4%) exact matches, in which:
12 unique CDR3
4 unique J



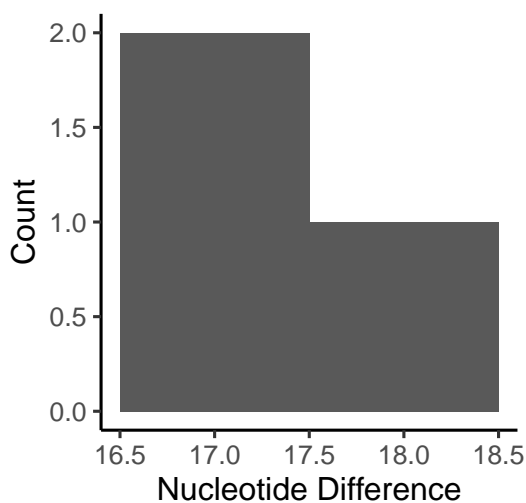
IGHV3-73*01_02

816 sequences assigned
106 (13%) exact matches, in which:
64 unique CDR3
5 unique J



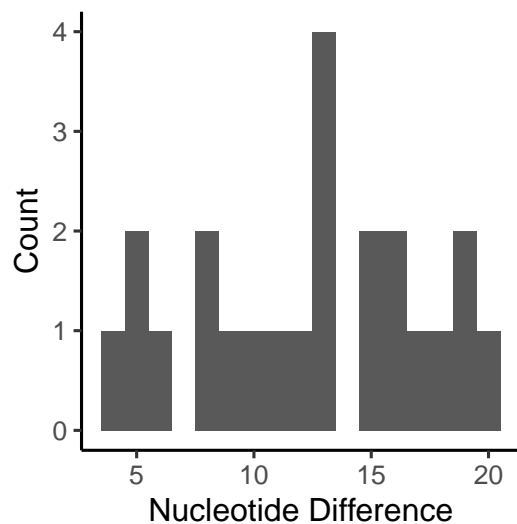
IGHV3-43D*03

3 sequences assigned
No exact matches.



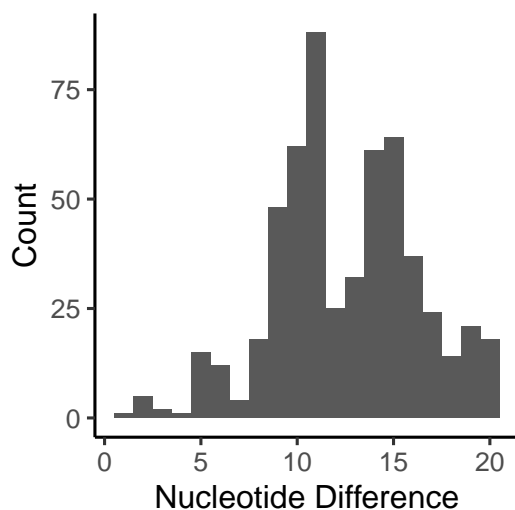
IGHV3-NL1*01

39 sequences assigned
No exact matches.



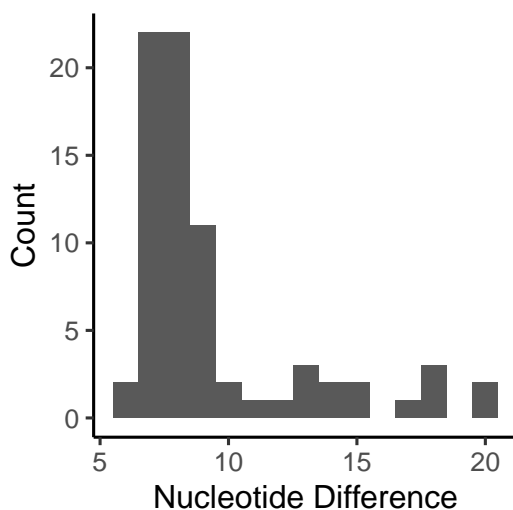
IGHV3-74*03

1182 sequences assigned
No exact matches.



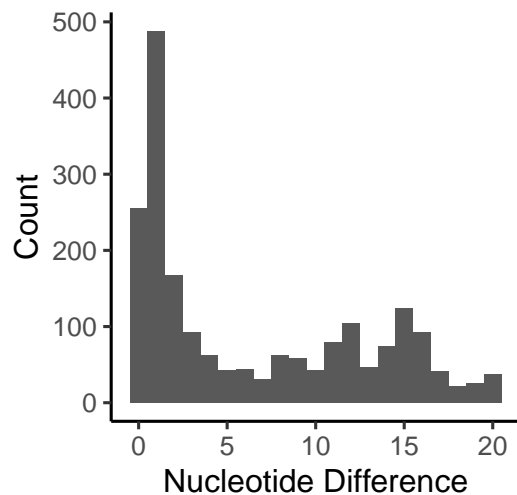
IGHV3-64D*06

99 sequences assigned
No exact matches.



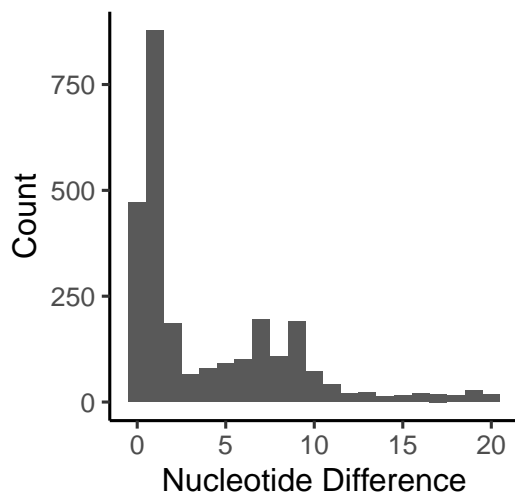
IGHV4-4*07

2210 sequences assigned
255 (11.5%) exact matches, in which:
171 unique CDR3
6 unique J



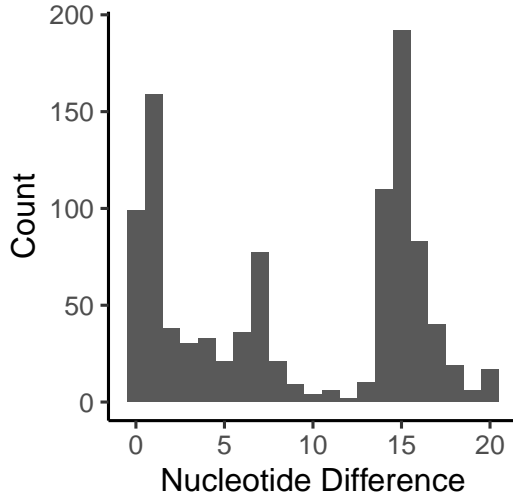
IGHV3-74*01_02

2775 sequences assigned
471 (17%) exact matches, in which:
298 unique CDR3
6 unique J



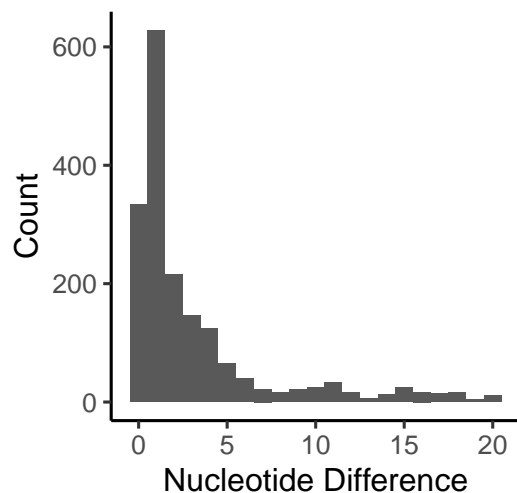
IGHV3-64D*09

1357 sequences assigned
99 (7.3%) exact matches, in which:
59 unique CDR3
5 unique J



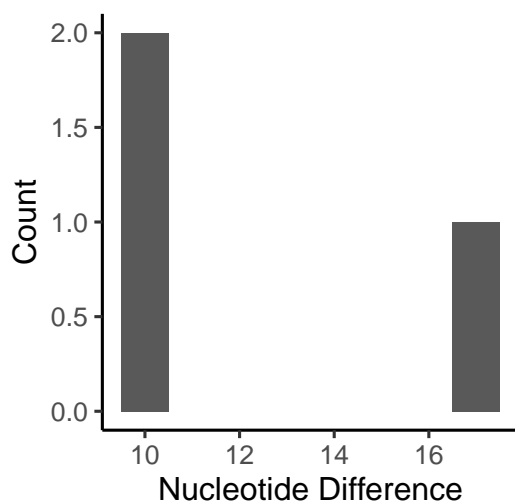
IGHV4-4*02_03

1877 sequences assigned
333 (17.7%) exact matches, in which:
211 unique CDR3
5 unique J



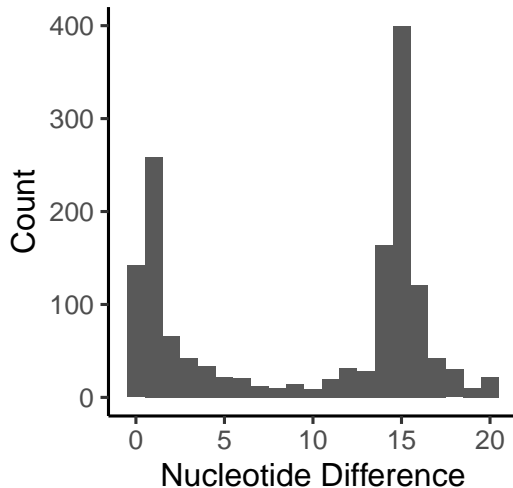
IGHV4-28*03

4 sequences assigned
No exact matches.



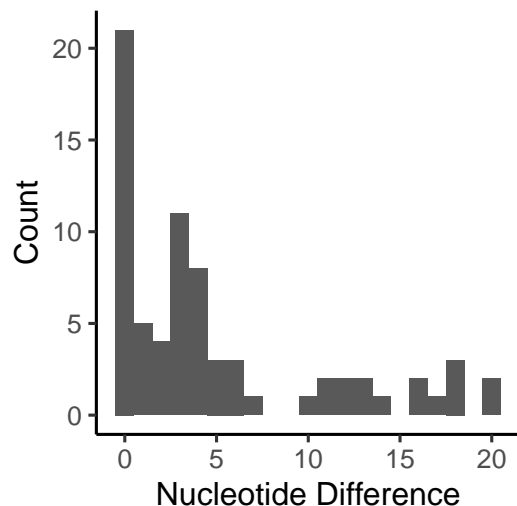
IGHV4-31*02

2284 sequences assigned
142 (6.2%) exact matches, in which:
104 unique CDR3
5 unique J



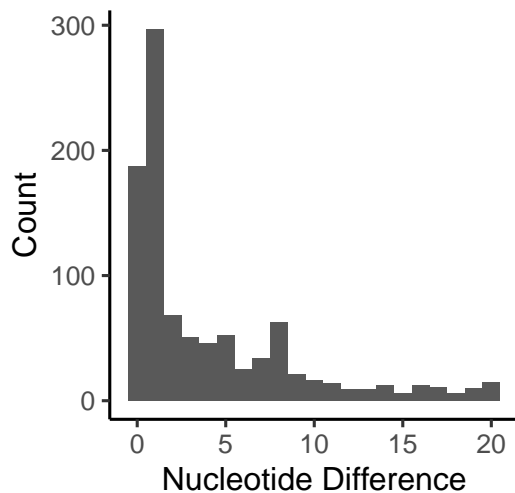
IGHV4-38-2*02

73 sequences assigned
21 (28.8%) exact matches, in which:
20 unique CDR3
4 unique J



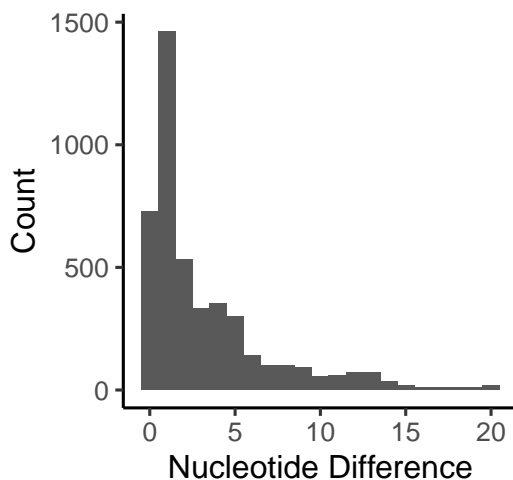
IGHV4-30-4*01

1680 sequences assigned
187 (11.1%) exact matches, in which:
138 unique CDR3
6 unique J



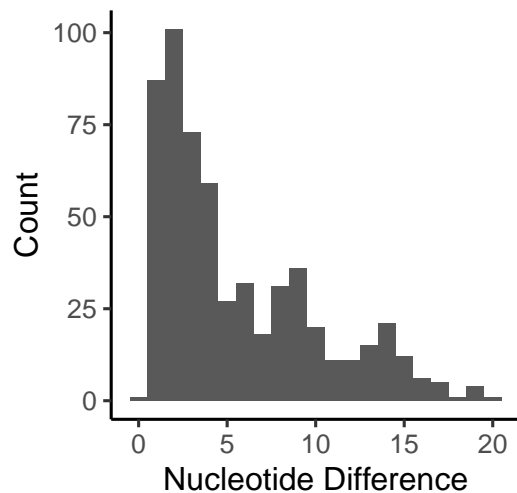
IGHV4-34*01_02

5318 sequences assigned
727 (13.7%) exact matches, in which:
470 unique CDR3
6 unique J



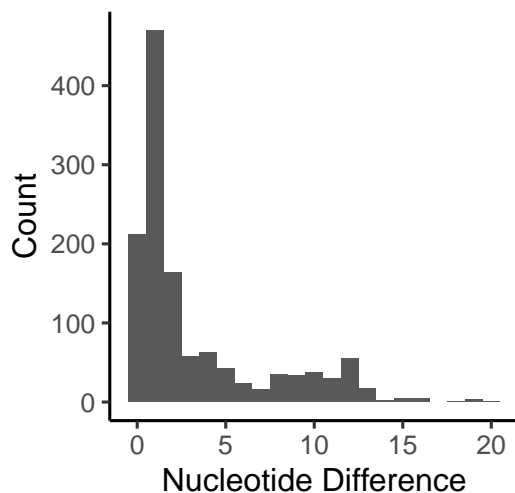
IGHV4-39*07

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



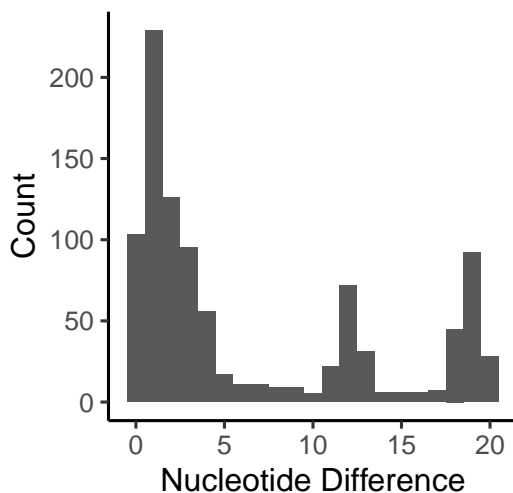
IGHV4-30-2*01

1321 sequences assigned
212 (16%) exact matches, in which:
136 unique CDR3
5 unique J



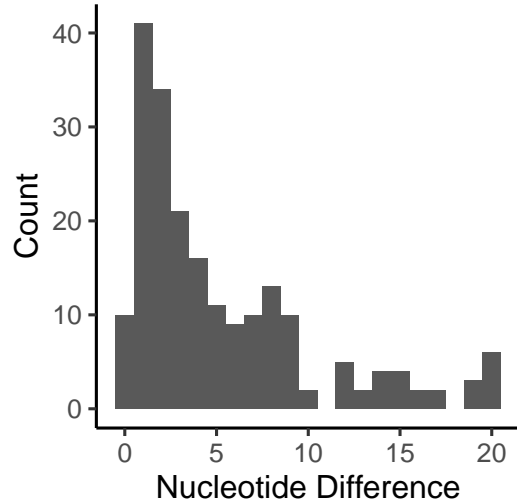
IGHV4-38-2*01

1088 sequences assigned
103 (9.5%) exact matches, in which:
75 unique CDR3
5 unique J



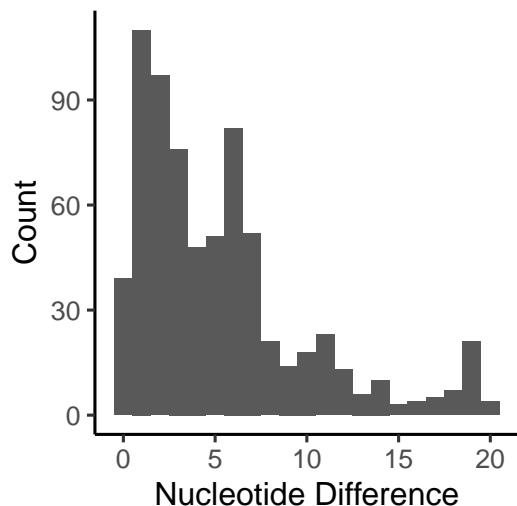
IGHV4-59*08

296 sequences assigned
10 (3.4%) exact matches, in which:
9 unique CDR3
4 unique J



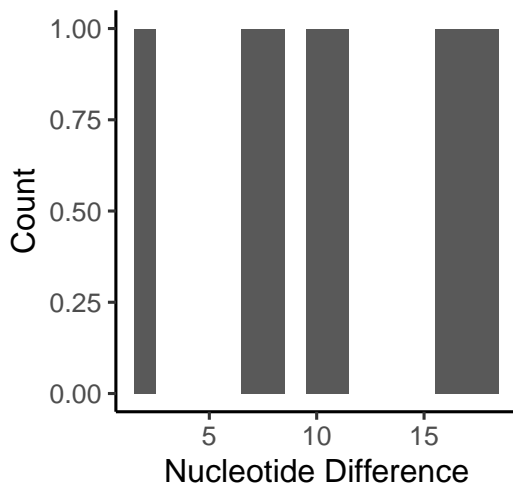
IGHV4–59*12

747 sequences assigned
39 (5.2%) exact matches, in which:
36 unique CDR3
6 unique J



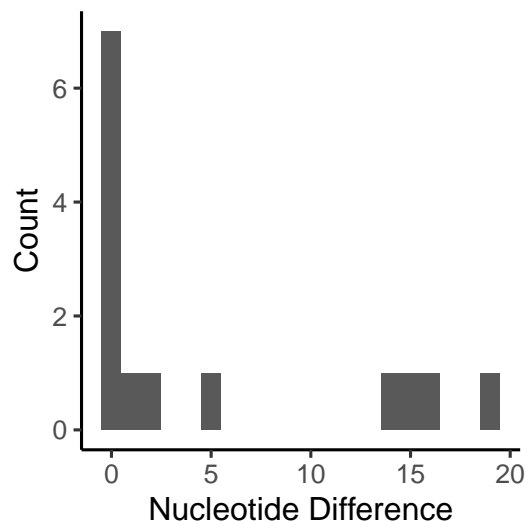
IGHV4/OR15–8*01

8 sequences assigned
No exact matches.



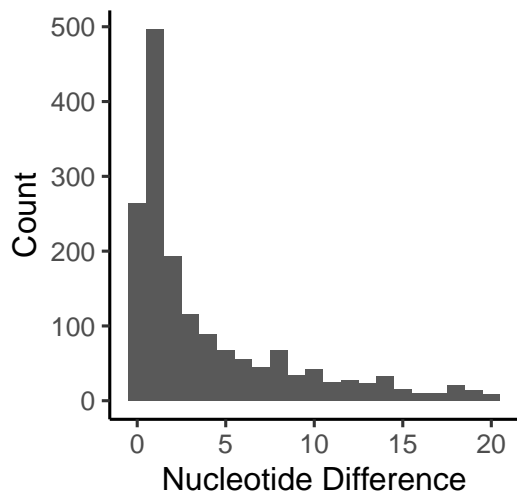
IGHV5–51*06

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



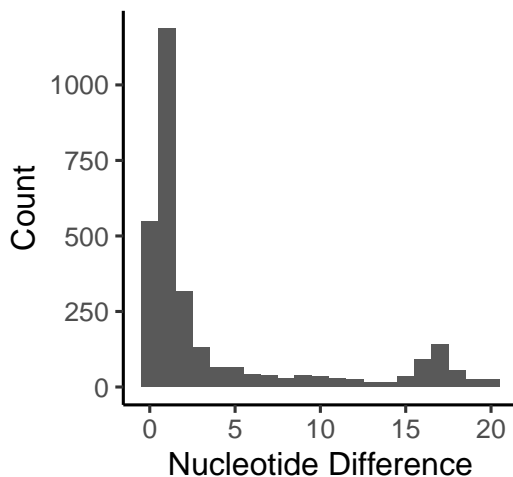
IGHV4–61*01

1972 sequences assigned
264 (13.4%) exact matches, in which:
192 unique CDR3
6 unique J



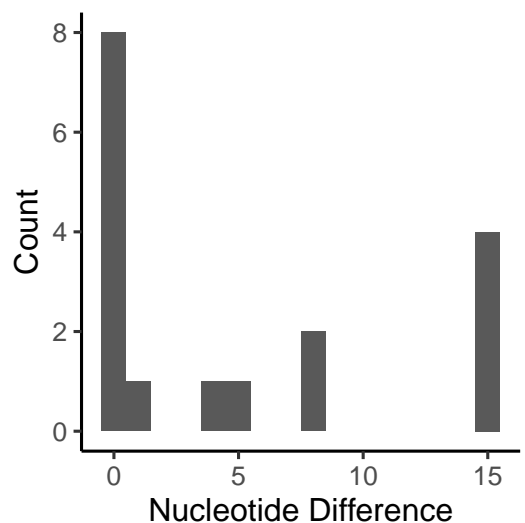
IGHV5–10–1*01_03

3062 sequences assigned
548 (17.9%) exact matches, in which:
322 unique CDR3
6 unique J



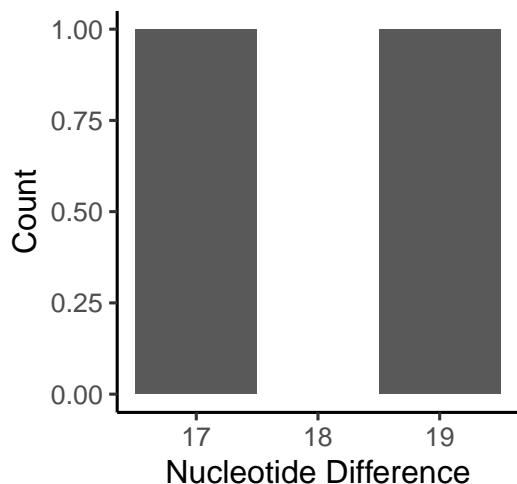
IGHV5–51*07

17 sequences assigned
8 (47.1%) exact matches, in which:
8 unique CDR3
4 unique J



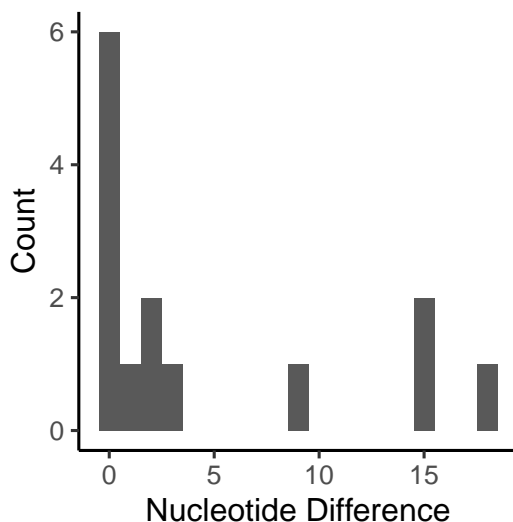
IGHV1/OR15–3*02

2 sequences assigned
No exact matches.



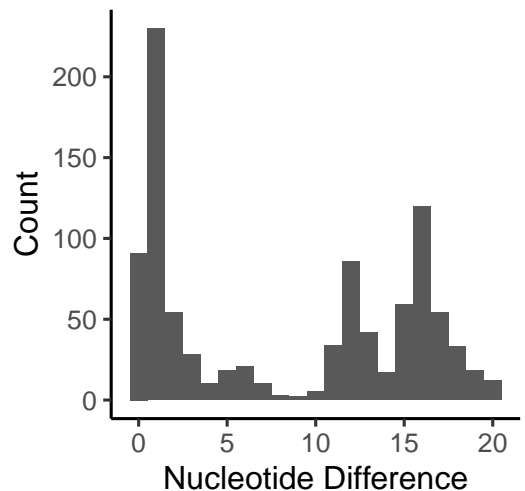
IGHV5–51*04

16 sequences assigned
6 (37.5%) exact matches, in which:
6 unique CDR3
1 unique J



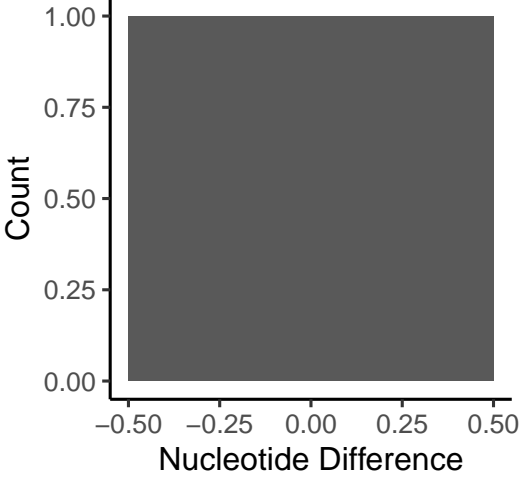
IGHV6–1*01_02

1351 sequences assigned
91 (6.7%) exact matches, in which:
61 unique CDR3
4 unique J



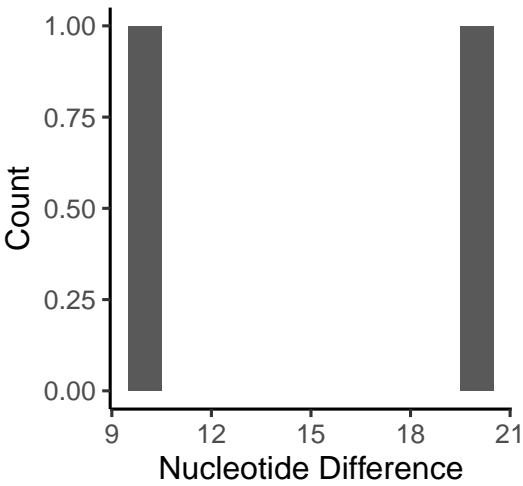
IGHV7-4-1*01

1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV7-4-1*02

2 sequences assigned
No exact matches.





[illegible]