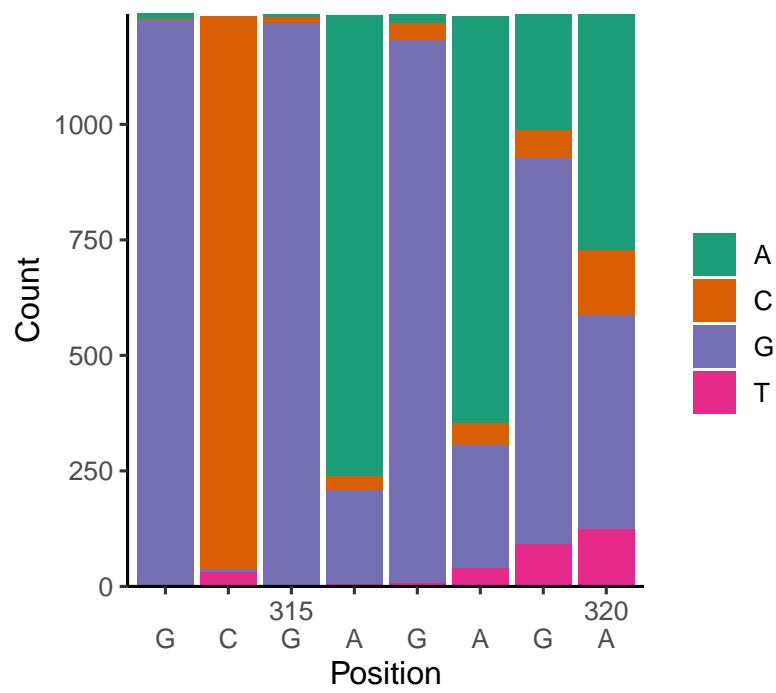
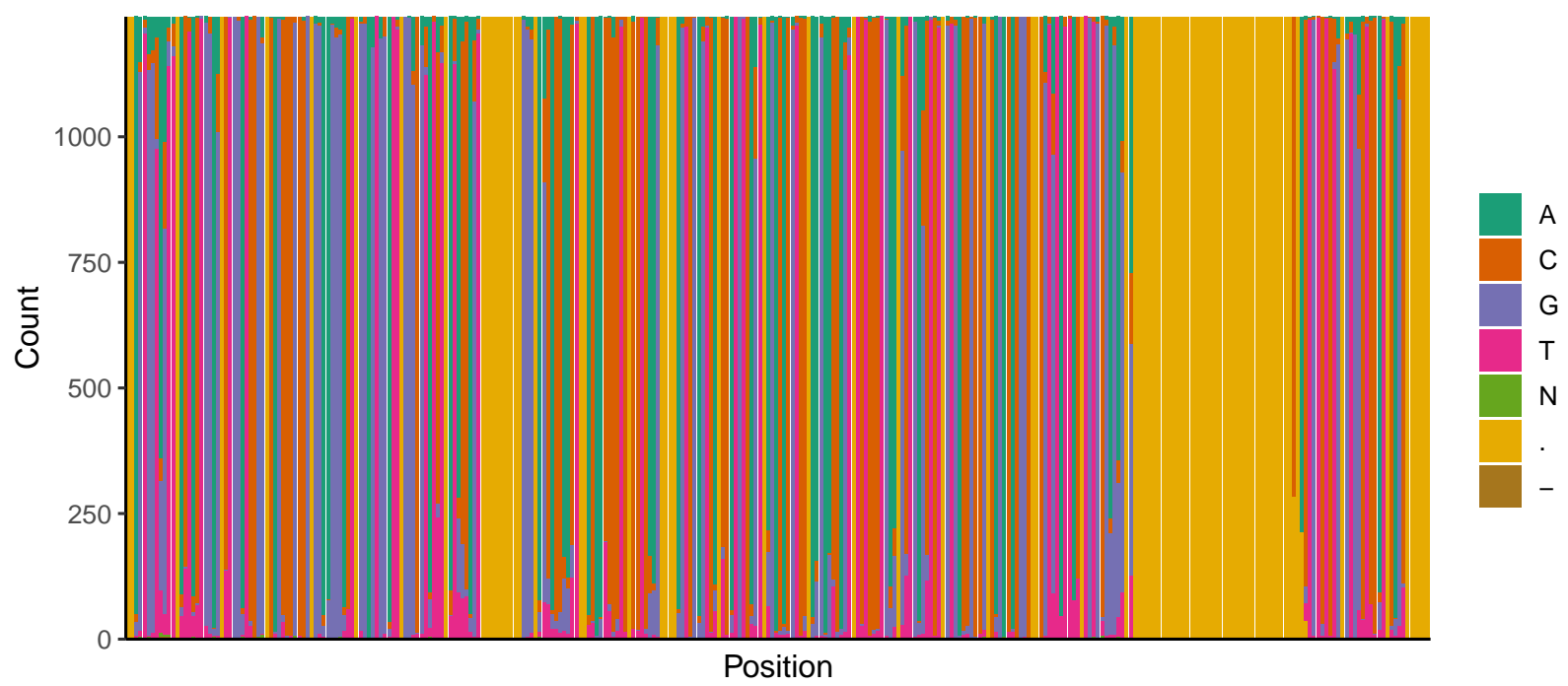


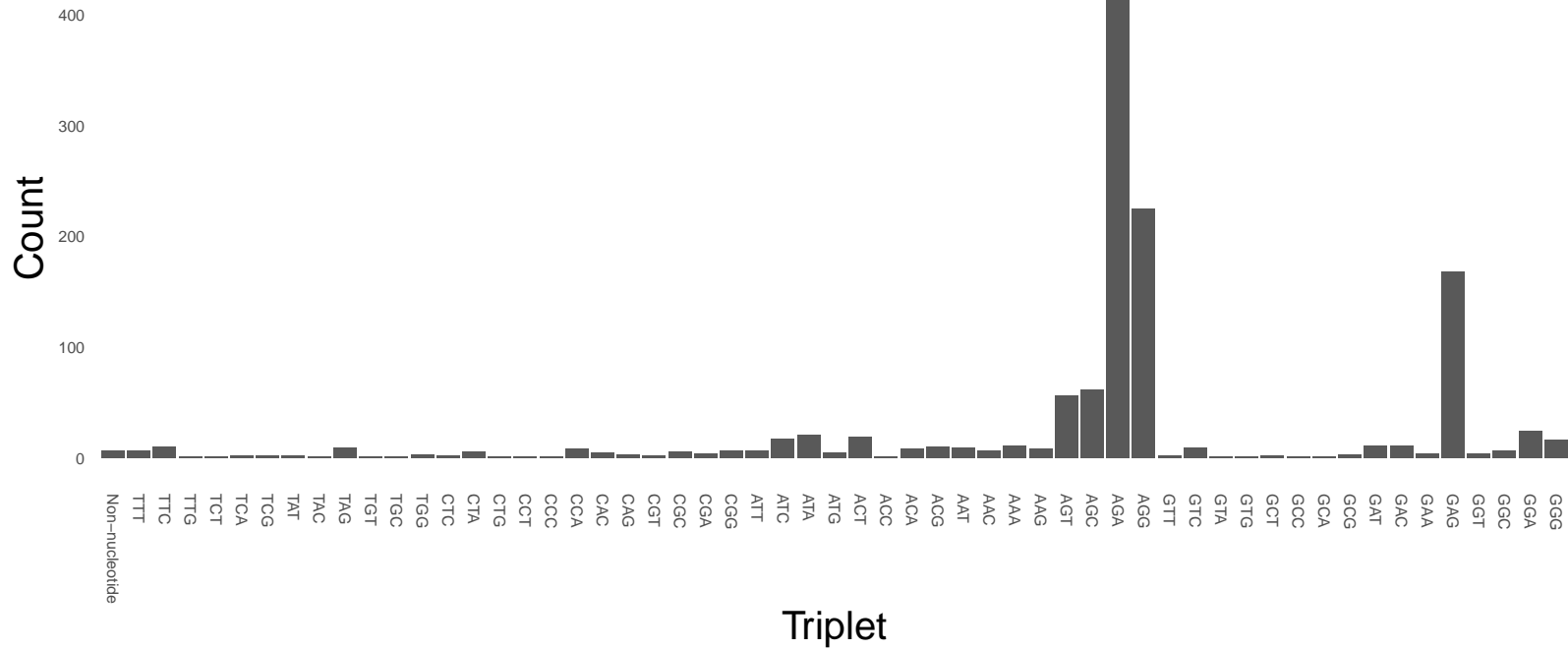
Gene IGHV4-61*02_A234G



Gene IGHV4-61*02_A234G

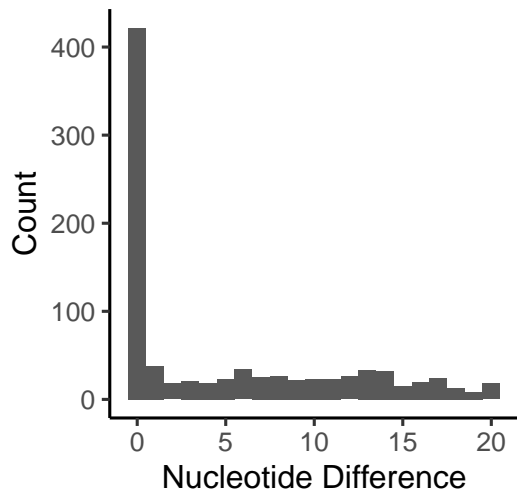


IGHV4-61*02_A234G- Final 3 nucleotides as a triplet



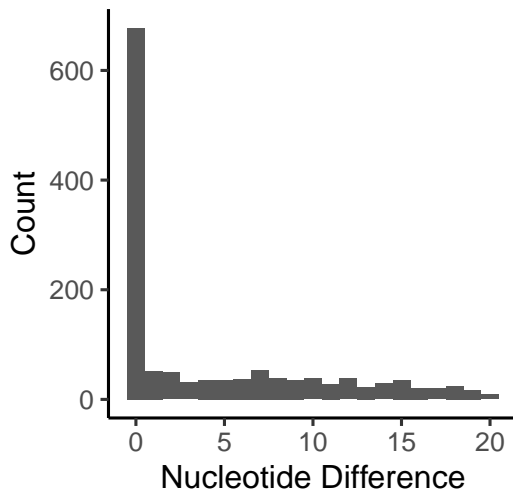
IGHV1-2*02

1055 sequences assigned
422 (40%) exact matches, in which:
418 unique CDR3
7 unique J



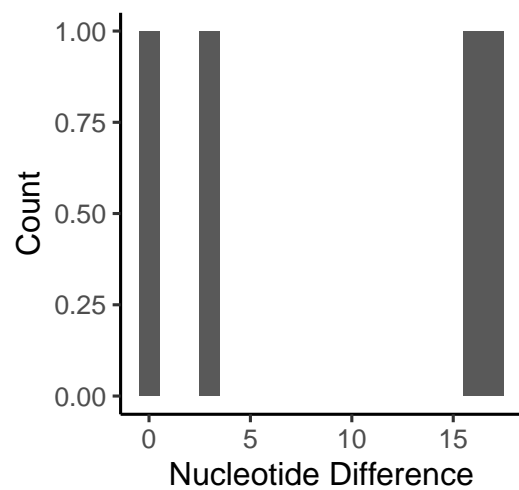
IGHV1-8*01

1440 sequences assigned
678 (47.1%) exact matches, in which:
677 unique CDR3
7 unique J



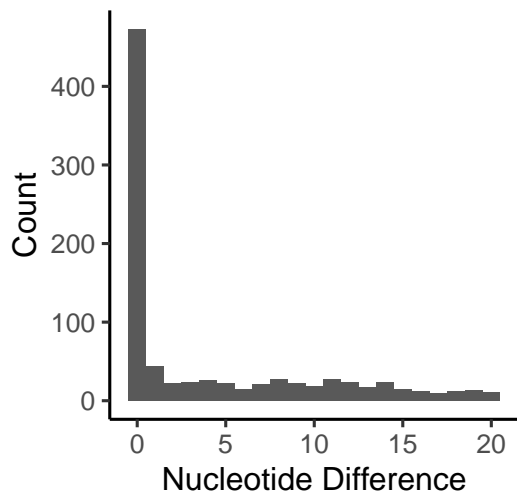
IGHV1-45*02

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



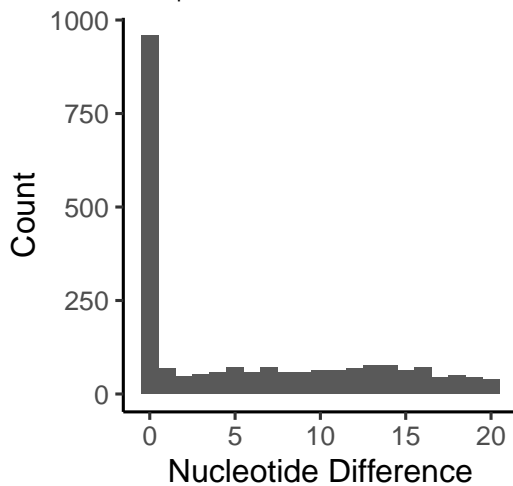
IGHV1-2*06

935 sequences assigned
473 (50.6%) exact matches, in which:
466 unique CDR3
7 unique J



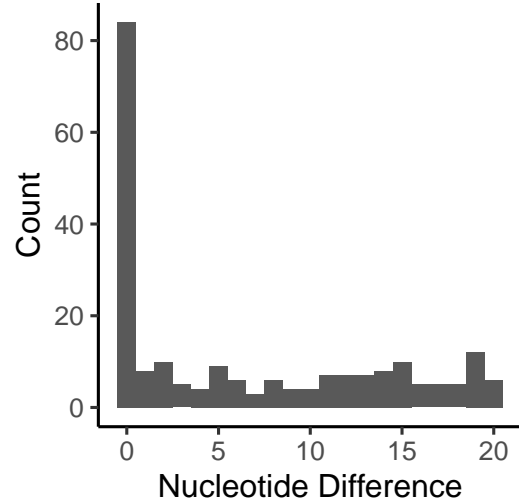
IGHV1-18*01

2530 sequences assigned
958 (37.9%) exact matches, in which:
952 unique CDR3
7 unique J



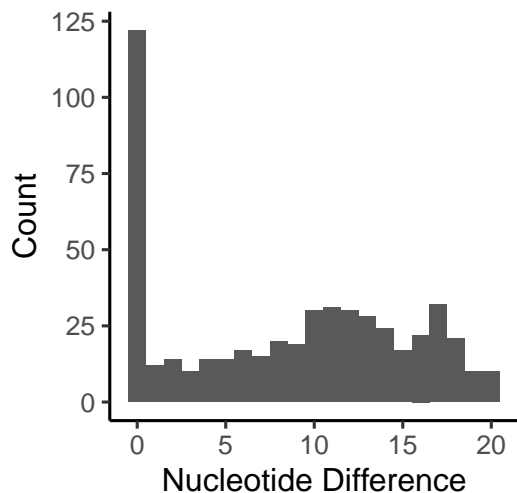
IGHV1-46*01

257 sequences assigned
84 (32.7%) exact matches, in which:
84 unique CDR3
6 unique J



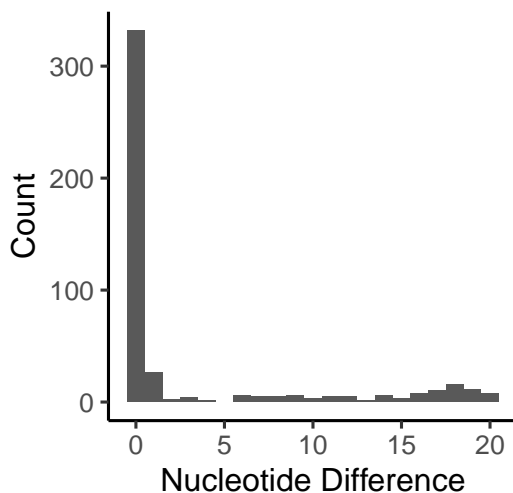
IGHV1-3*01_05

605 sequences assigned
122 (20.2%) exact matches, in which:
122 unique CDR3
6 unique J



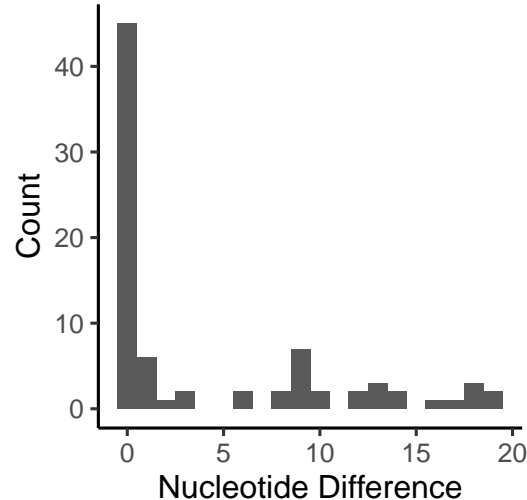
IGHV1-24*01

512 sequences assigned
332 (64.8%) exact matches, in which:
329 unique CDR3
7 unique J



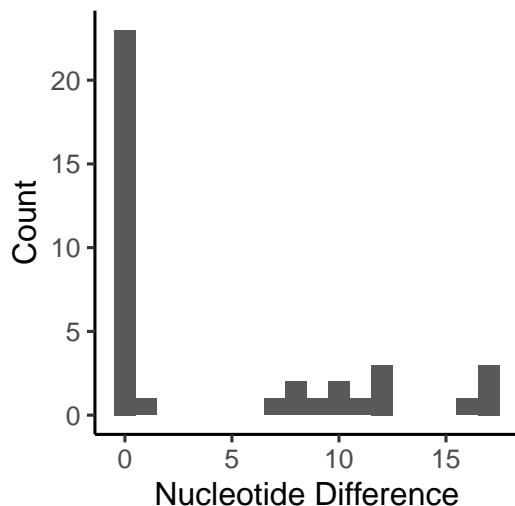
IGHV1-46*03

87 sequences assigned
45 (51.7%) exact matches, in which:
45 unique CDR3
7 unique J



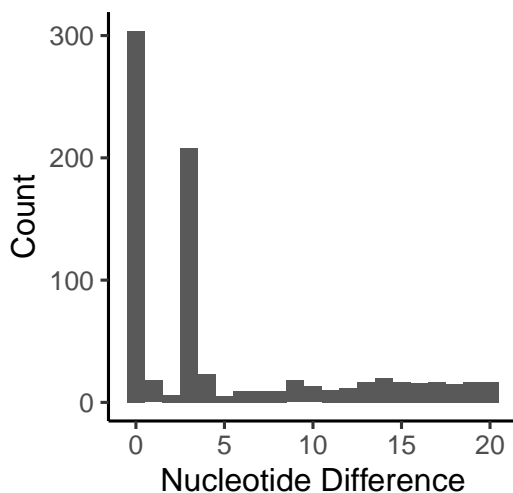
IGHV1-58*02

39 sequences assigned
23 (59%) exact matches, in which:
23 unique CDR3
7 unique J



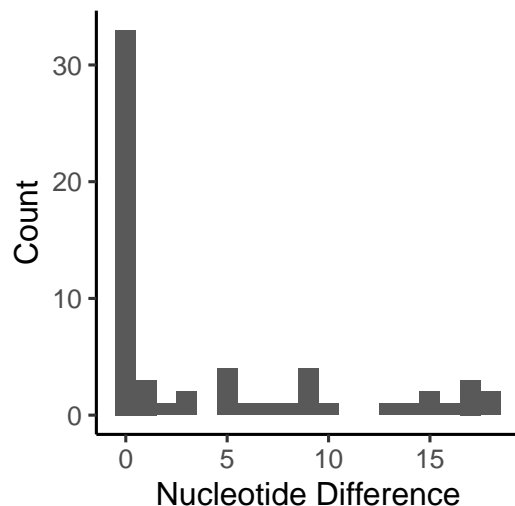
IGHV1-69*01_12_13

887 sequences assigned
304 (34.3%) exact matches, in which:
303 unique CDR3
7 unique J



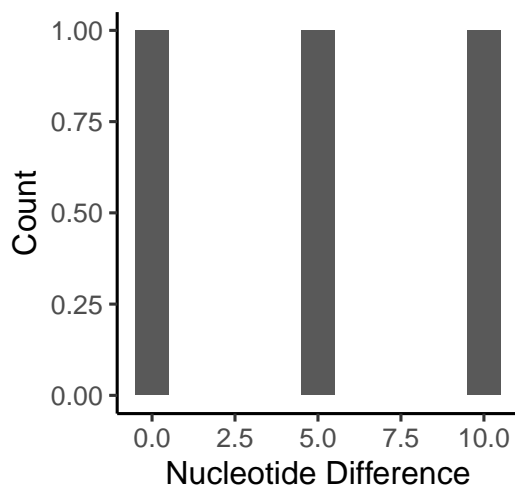
IGHV2-26*01

61 sequences assigned
33 (54.1%) exact matches, in which:
33 unique CDR3
6 unique J



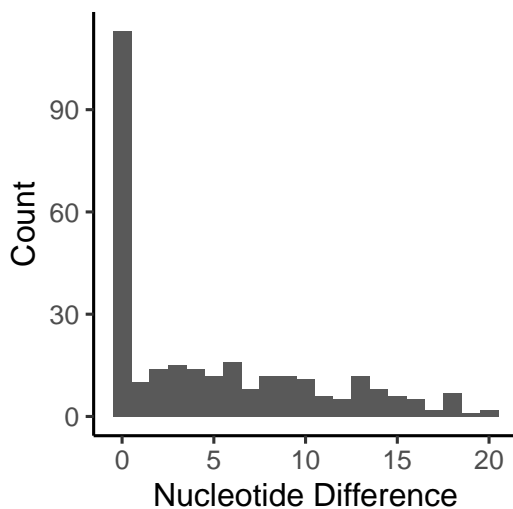
IGHV1-58*01_03

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



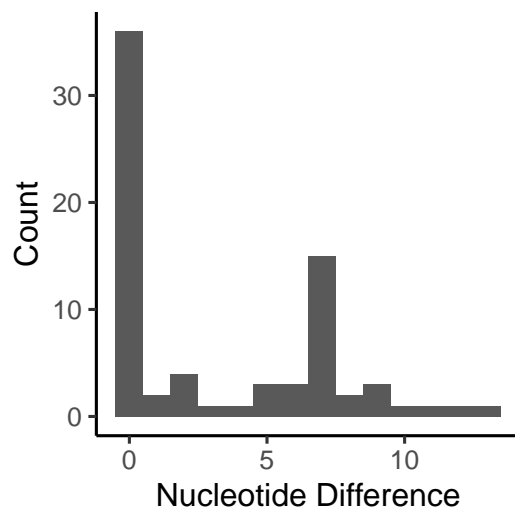
IGHV2-5*01

296 sequences assigned
113 (38.2%) exact matches, in which:
113 unique CDR3
6 unique J



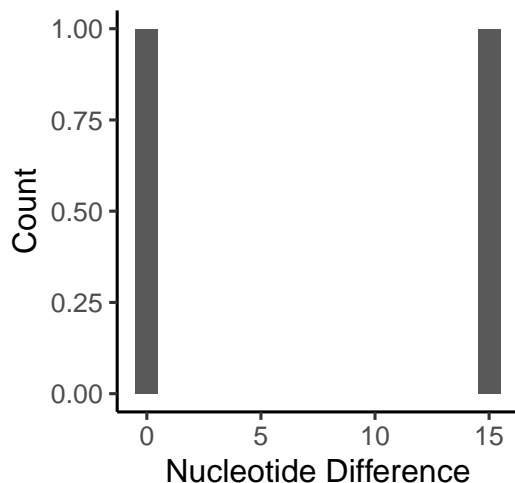
IGHV2-70*01

78 sequences assigned
36 (46.2%) exact matches, in which:
35 unique CDR3
4 unique J



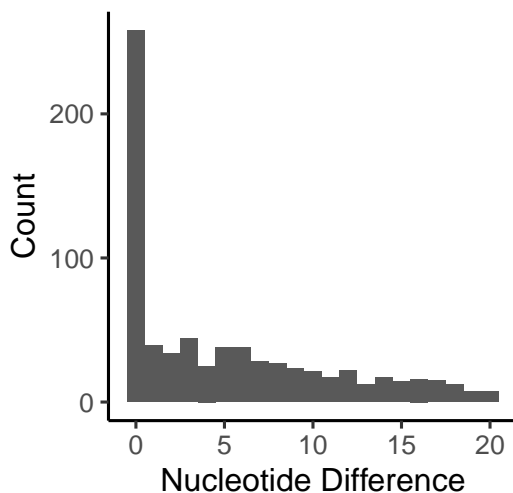
IGHV1-69-2*01

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



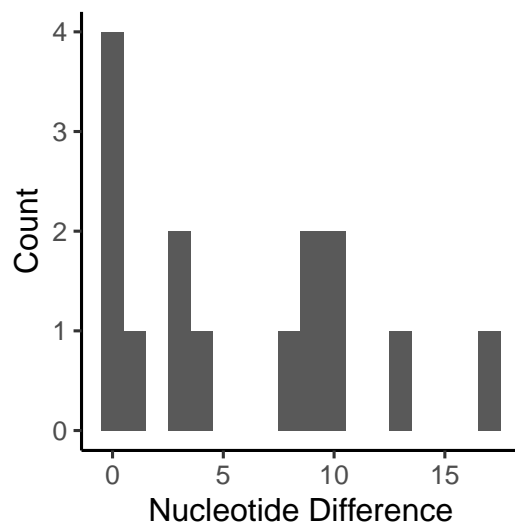
IGHV2-5*02

755 sequences assigned
258 (34.2%) exact matches, in which:
258 unique CDR3
6 unique J



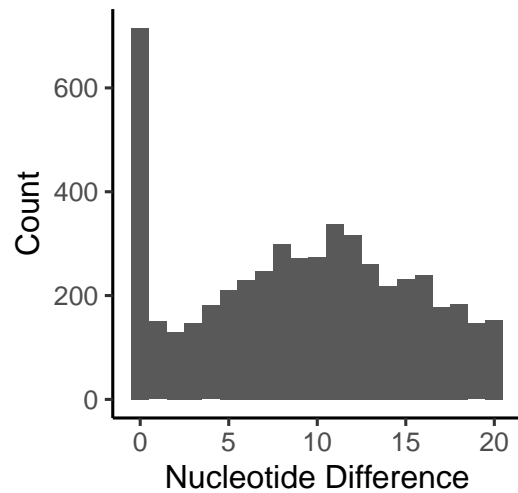
IGHV2-70*11_15

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



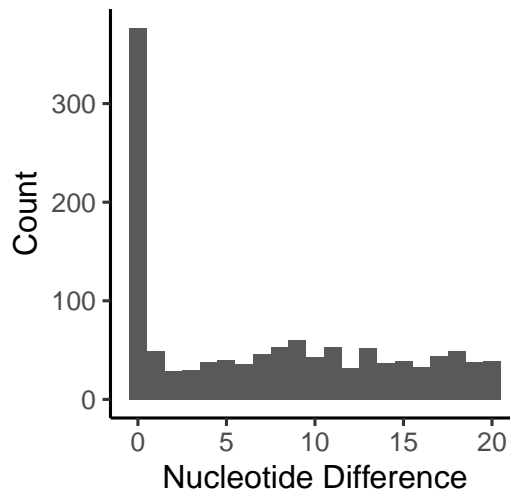
IGHV3-7*01

5771 sequences assigned
716 (12.4%) exact matches, in which:
625 unique CDR3
7 unique J



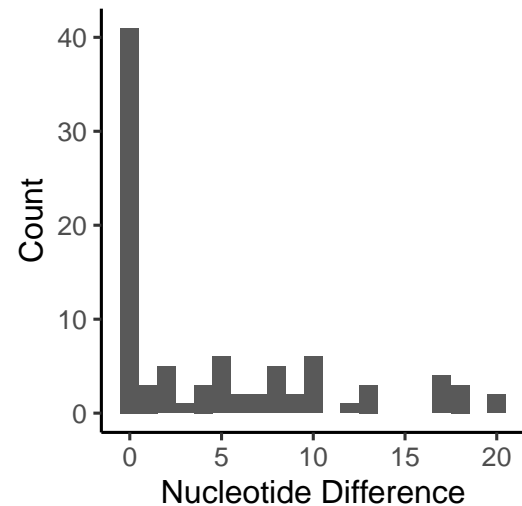
IGHV3-11*01

1461 sequences assigned
377 (25.8%) exact matches, in which:
349 unique CDR3
7 unique J



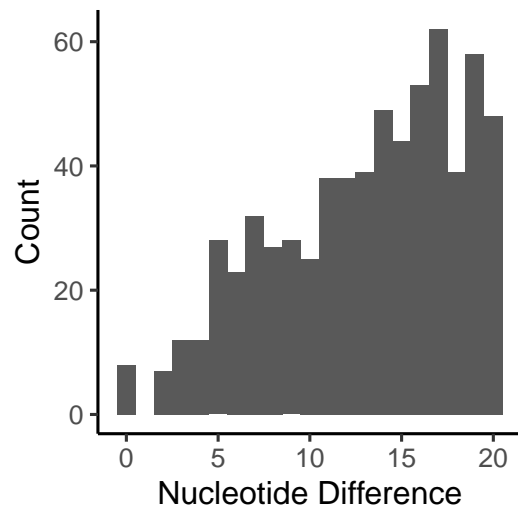
IGHV3-20*01_02

90 sequences assigned
41 (45.6%) exact matches, in which:
40 unique CDR3
6 unique J



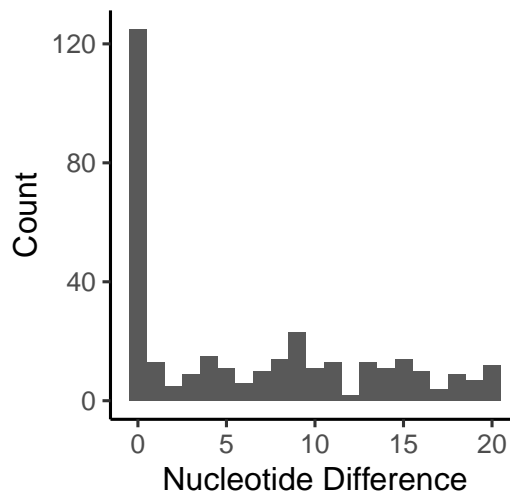
IGHV3-7*03

1042 sequences assigned
8 (0.8%) exact matches, in which:
4 unique CDR3
4 unique J



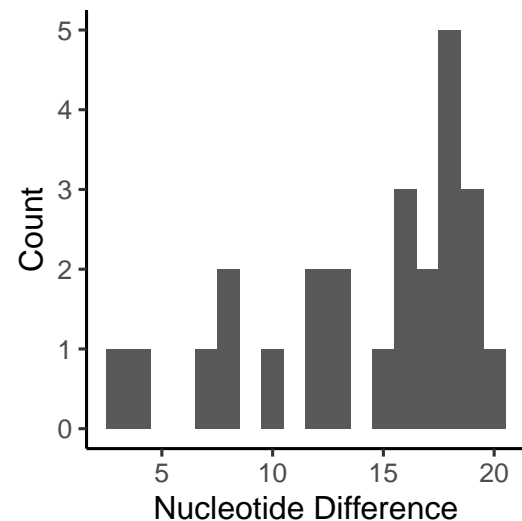
IGHV3-13*01

369 sequences assigned
125 (33.9%) exact matches, in which:
124 unique CDR3
6 unique J



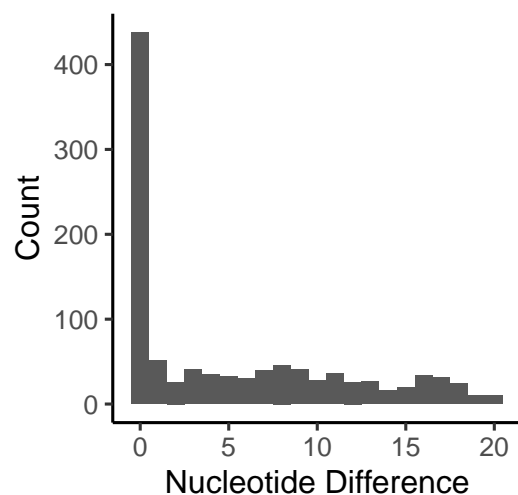
IGHV3-20*03_04

33 sequences assigned
No exact matches.



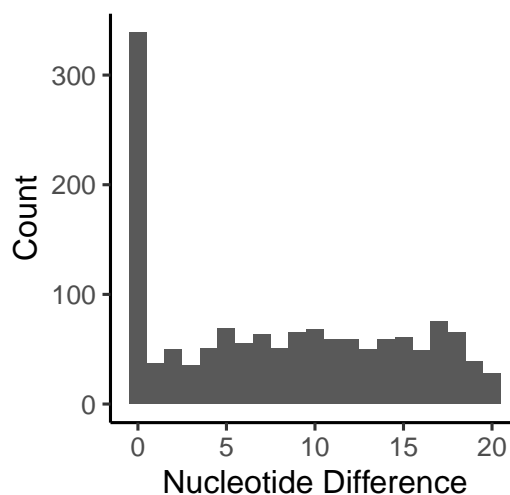
IGHV3-9*01

1125 sequences assigned
438 (38.9%) exact matches, in which:
413 unique CDR3
7 unique J



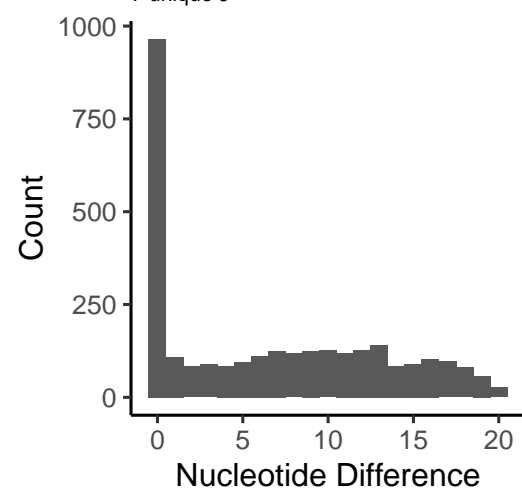
IGHV3-15*01_02

1674 sequences assigned
339 (20.3%) exact matches, in which:
306 unique CDR3
7 unique J



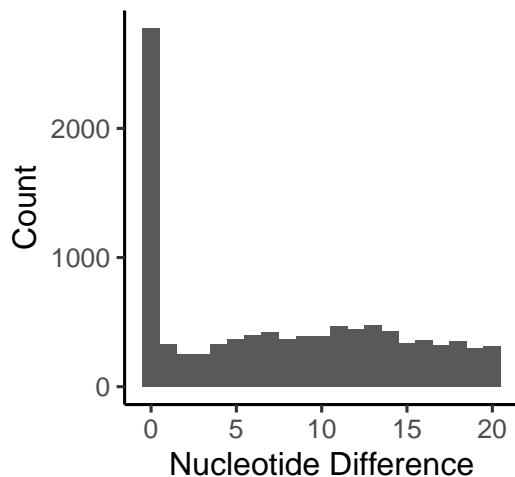
IGHV3-21*01_02

3240 sequences assigned
965 (29.8%) exact matches, in which:
879 unique CDR3
7 unique J



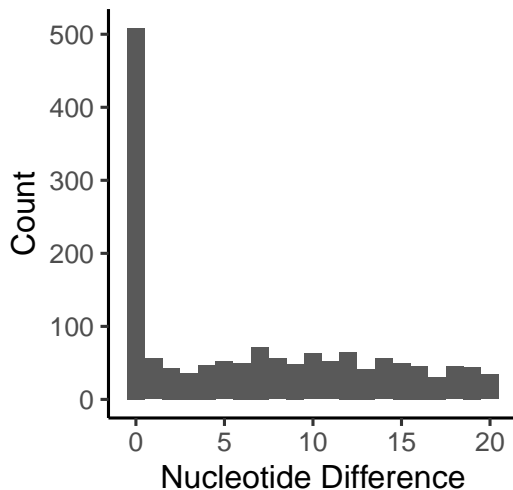
IGHV3-23*01_04

12142 sequences assigned
2774 (22.8%) exact matches, in which:
2556 unique CDR3
7 unique J



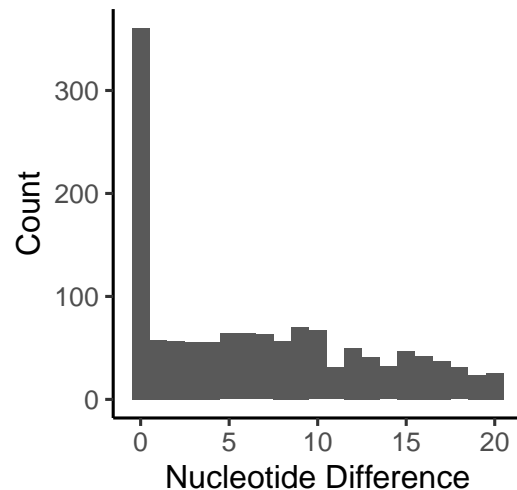
IGHV3-33*01

1763 sequences assigned
509 (28.9%) exact matches, in which:
489 unique CDR3
7 unique J



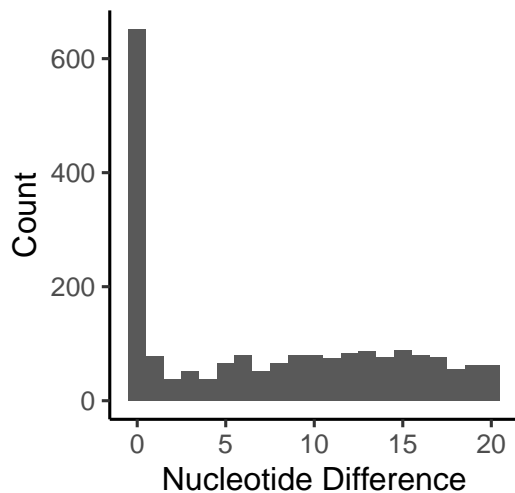
IGHV3-48*03

1529 sequences assigned
361 (23.6%) exact matches, in which:
331 unique CDR3
6 unique J



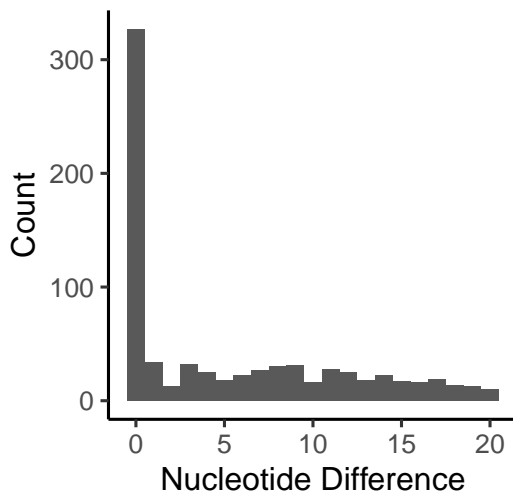
IGHV3-30-3*01

2309 sequences assigned
652 (28.2%) exact matches, in which:
619 unique CDR3
7 unique J



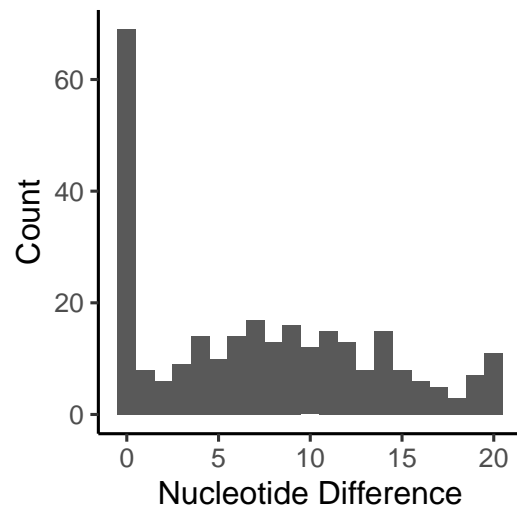
IGHV3-43*02

819 sequences assigned
327 (39.9%) exact matches, in which:
291 unique CDR3
7 unique J



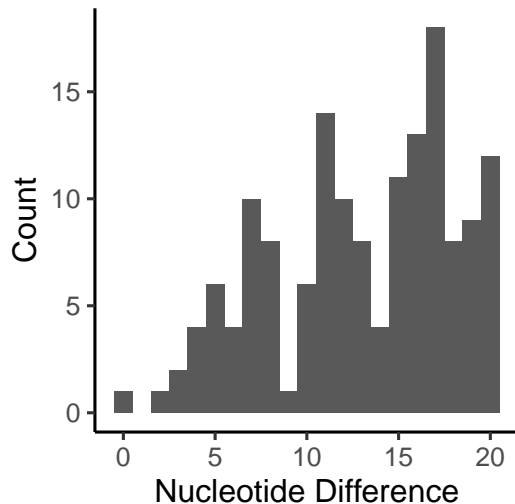
IGHV3-49*04

317 sequences assigned
69 (21.8%) exact matches, in which:
64 unique CDR3
5 unique J



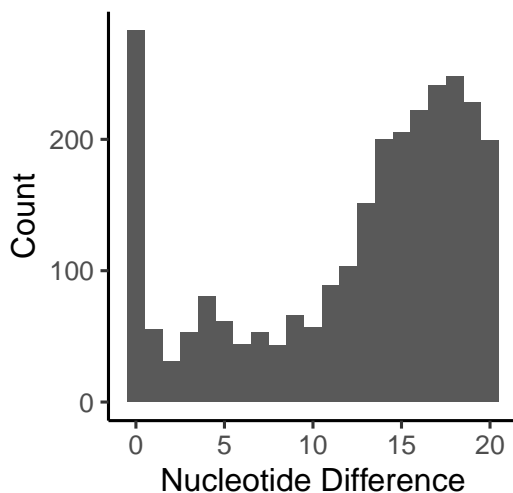
IGHV3-30*04

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



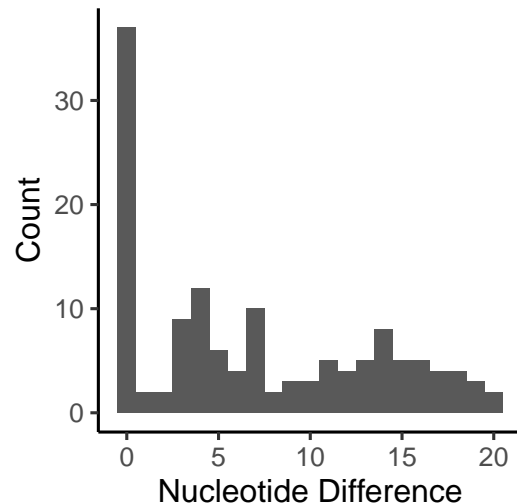
IGHV3-48*01

3651 sequences assigned
283 (7.8%) exact matches, in which:
245 unique CDR3
6 unique J



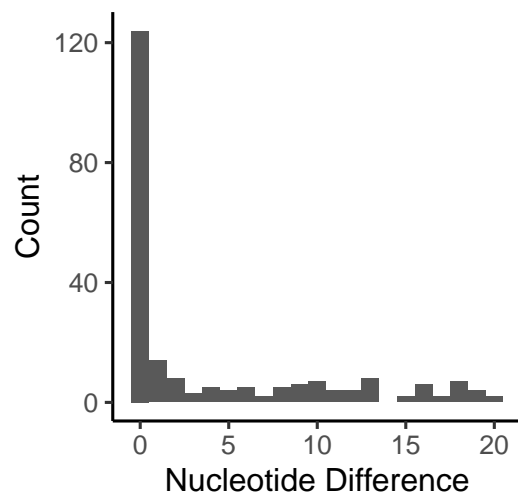
IGHV3-49*03_05

148 sequences assigned
37 (25%) exact matches, in which:
36 unique CDR3
5 unique J



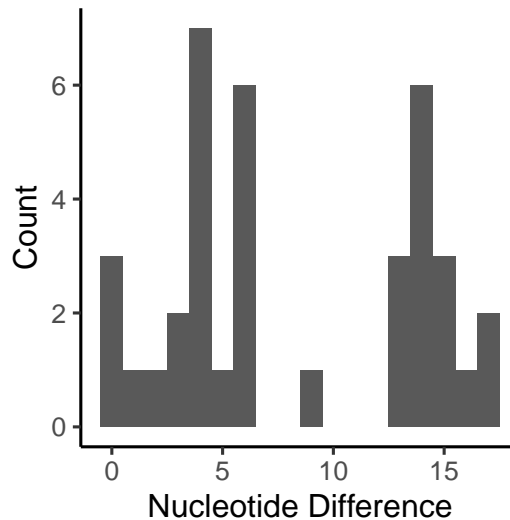
IGHV3-53*04

264 sequences assigned
124 (47%) exact matches, in which:
116 unique CDR3
6 unique J



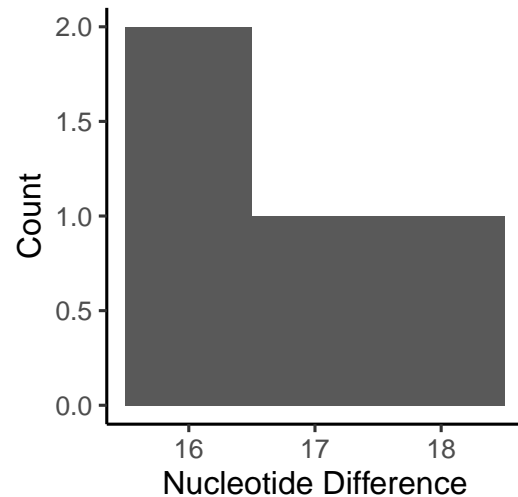
IGHV3-64*02_07

48 sequences assigned
3 (6.2%) exact matches, in which:
3 unique CDR3
3 unique J



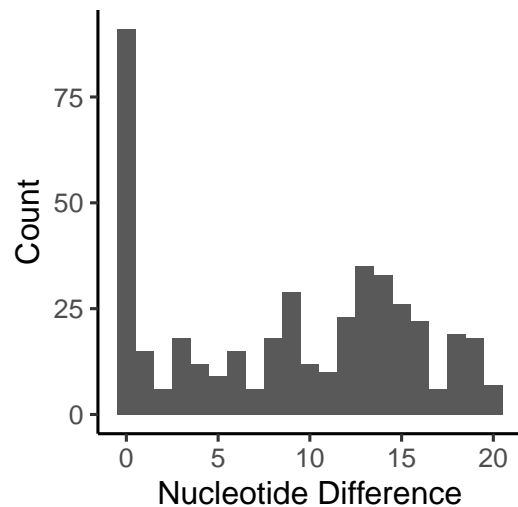
IGHV3-69-1*02

8 sequences assigned
No exact matches.



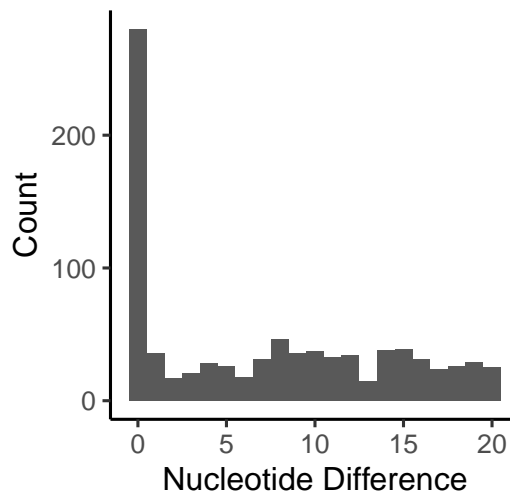
IGHV3-53*01_02

515 sequences assigned
91 (17.7%) exact matches, in which:
85 unique CDR3
6 unique J



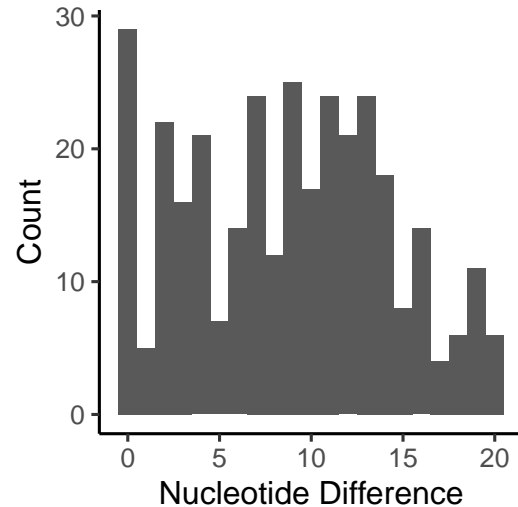
IGHV3-66*02

1090 sequences assigned
280 (25.7%) exact matches, in which:
263 unique CDR3
6 unique J



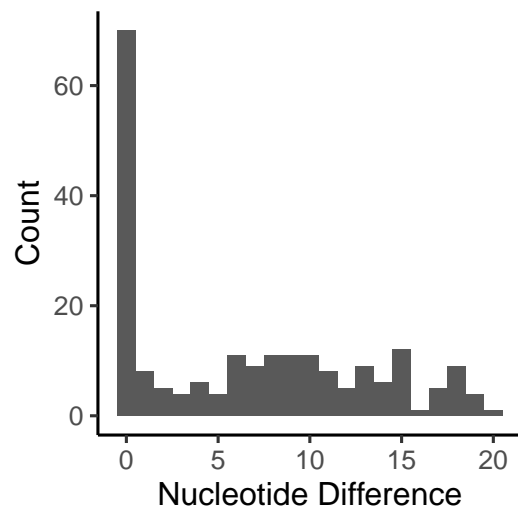
IGHV3-72*01

354 sequences assigned
29 (8.2%) exact matches, in which:
24 unique CDR3
5 unique J



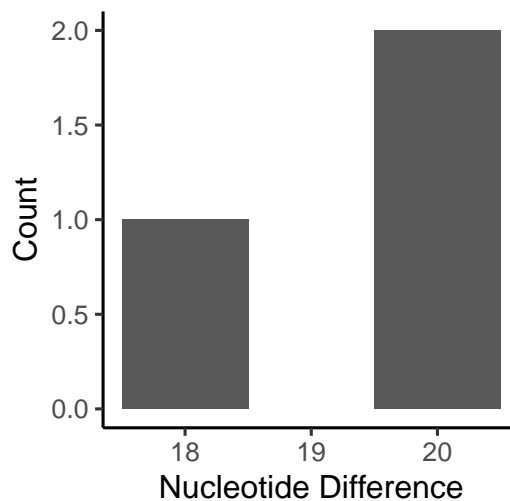
IGHV3-64*01

227 sequences assigned
70 (30.8%) exact matches, in which:
62 unique CDR3
5 unique J



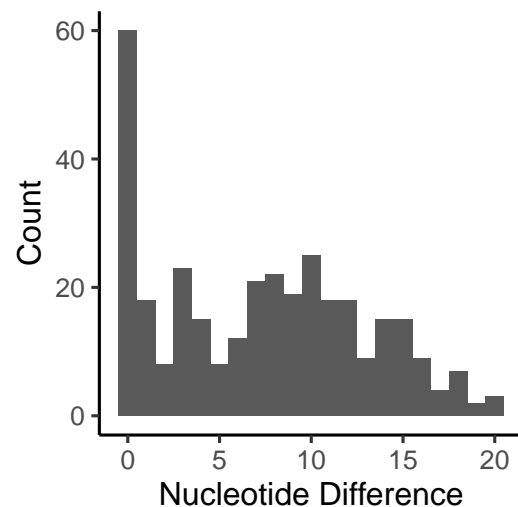
IGHV3-69-1*01

7 sequences assigned
No exact matches.



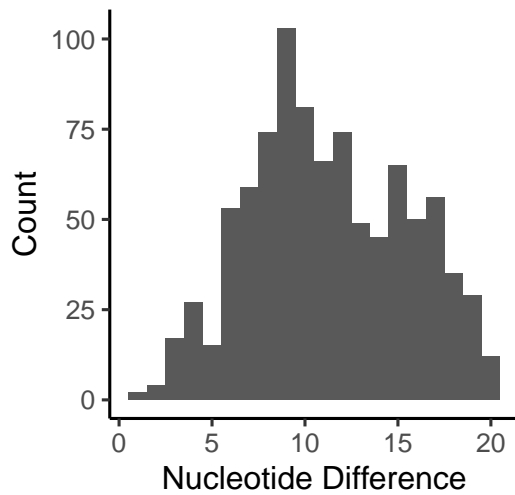
IGHV3-73*01_02

364 sequences assigned
60 (16.5%) exact matches, in which:
55 unique CDR3
6 unique J



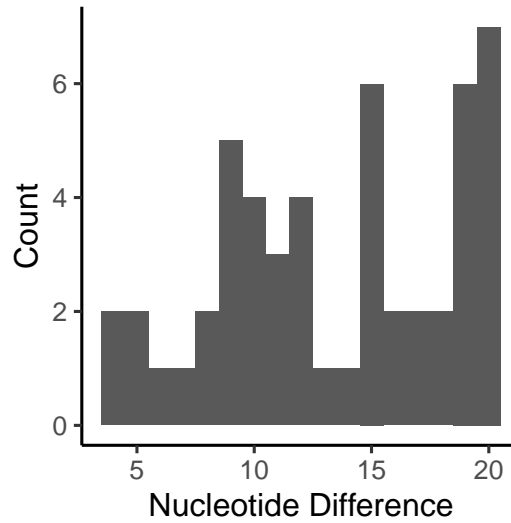
IGHV3-74*03

1003 sequences assigned
No exact matches.



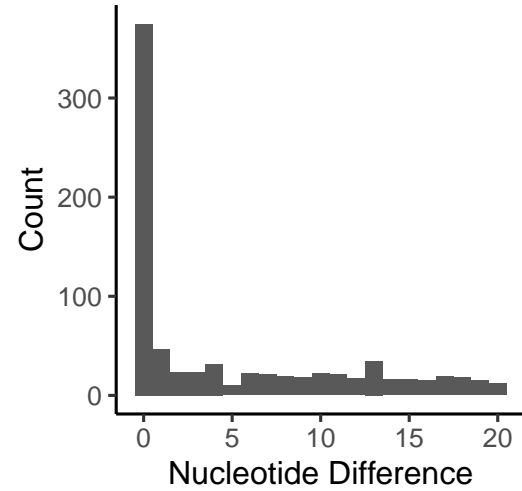
IGHV3-64D*06

158 sequences assigned
No exact matches.



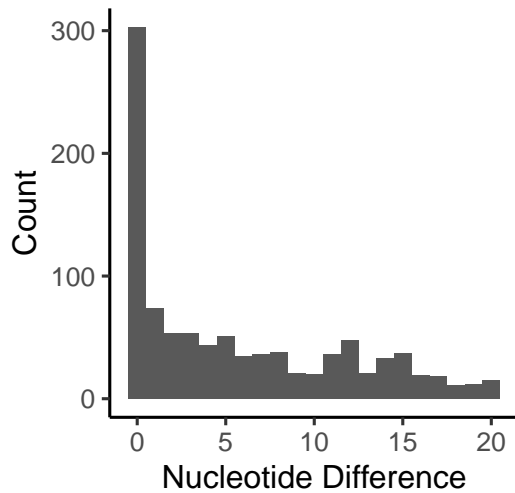
IGHV4-4*07

863 sequences assigned
375 (43.5%) exact matches, in which:
352 unique CDR3
6 unique J



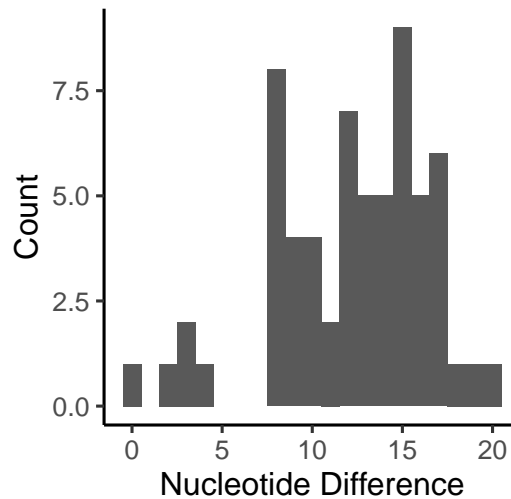
IGHV3-74*01_02

1021 sequences assigned
303 (29.7%) exact matches, in which:
267 unique CDR3
7 unique J



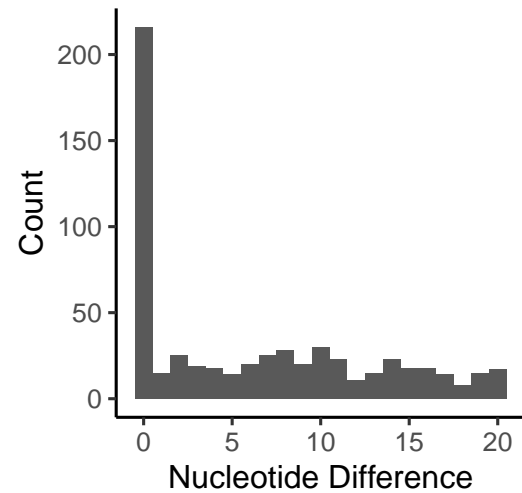
IGHV3-64D*09

80 sequences assigned
1 (1.2%) exact matches, in which:
1 unique CDR3
1 unique J



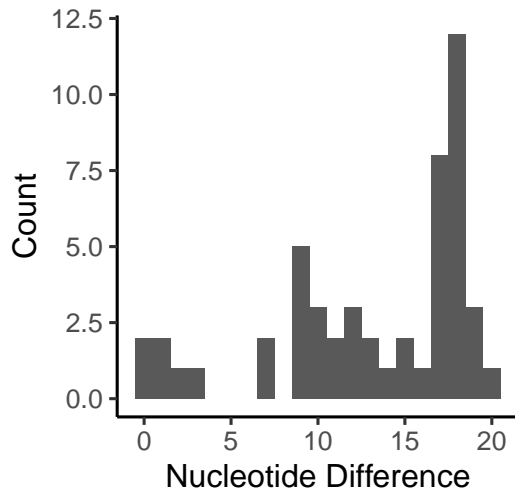
IGHV4-4*02_03

696 sequences assigned
216 (31%) exact matches, in which:
206 unique CDR3
6 unique J



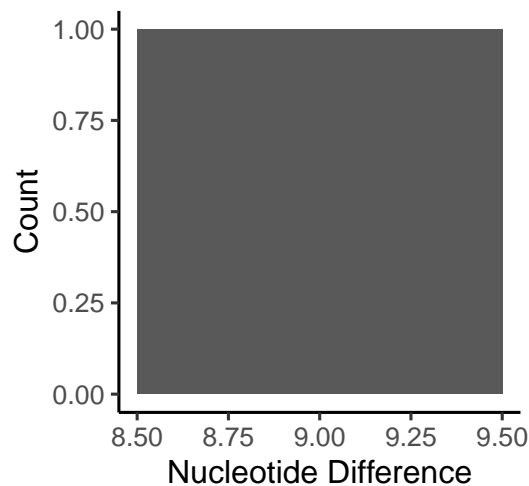
IGHV3-43D*03

57 sequences assigned
2 (3.5%) exact matches, in which:
2 unique CDR3
1 unique J



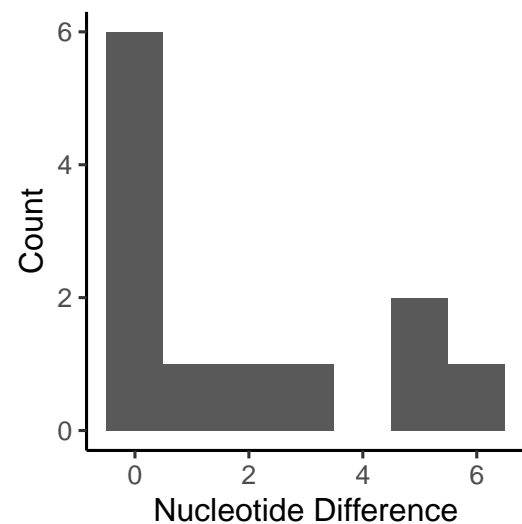
IGHV3-NL1*01

1 sequences assigned
No exact matches.



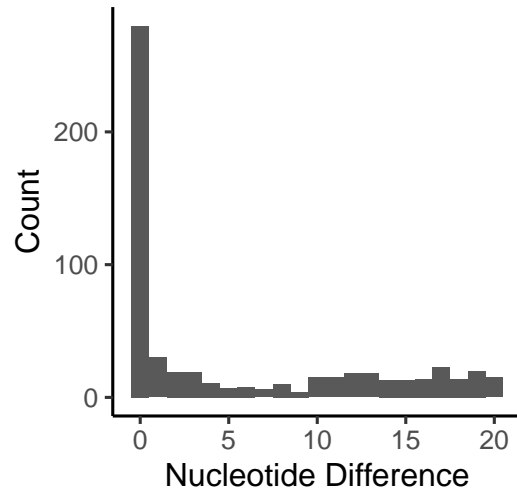
IGHV4-28*01_07

15 sequences assigned
6 (40%) exact matches, in which:
6 unique CDR3
3 unique J



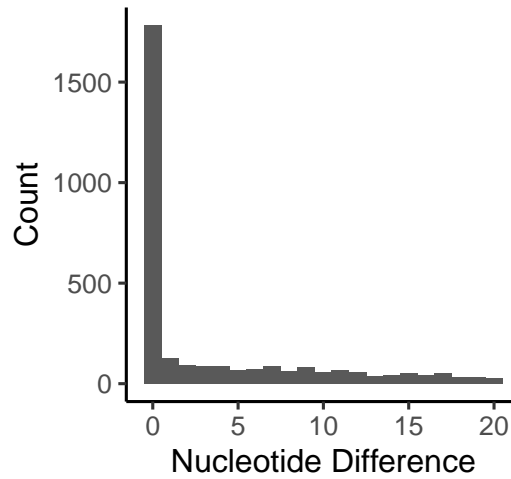
IGHV4-30-2*01

777 sequences assigned
280 (36%) exact matches, in which:
270 unique CDR3
7 unique J



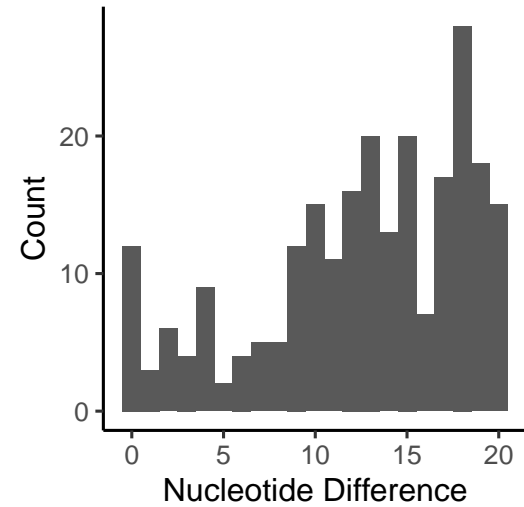
IGHV4-34*01_02

3318 sequences assigned
1782 (53.7%) exact matches, in which:
1736 unique CDR3
7 unique J



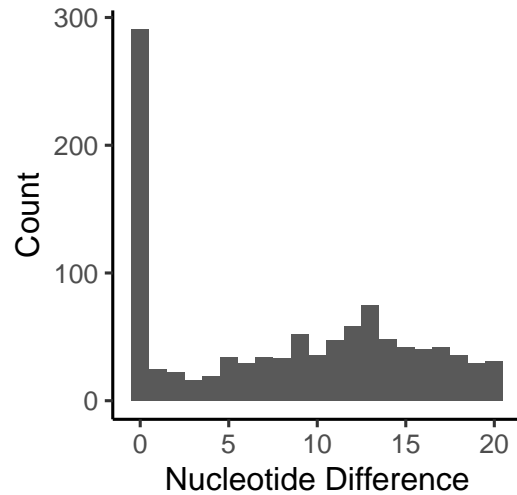
IGHV4-39*07

423 sequences assigned
12 (2.8%) exact matches, in which:
11 unique CDR3
3 unique J



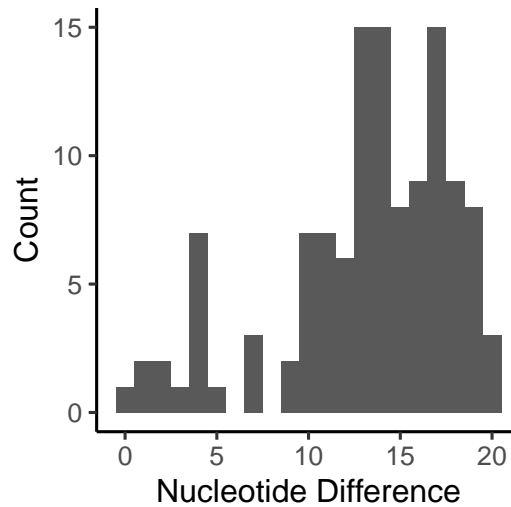
IGHV4-30-4*01

1224 sequences assigned
291 (23.8%) exact matches, in which:
277 unique CDR3
7 unique J



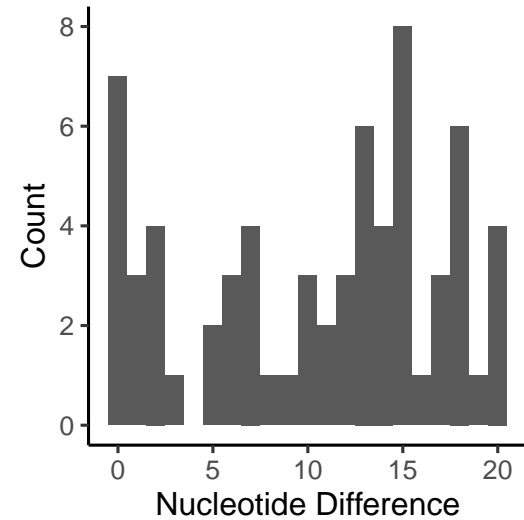
IGHV4-38-2*02

186 sequences assigned
1 (0.5%) exact matches, in which:
1 unique CDR3
1 unique J



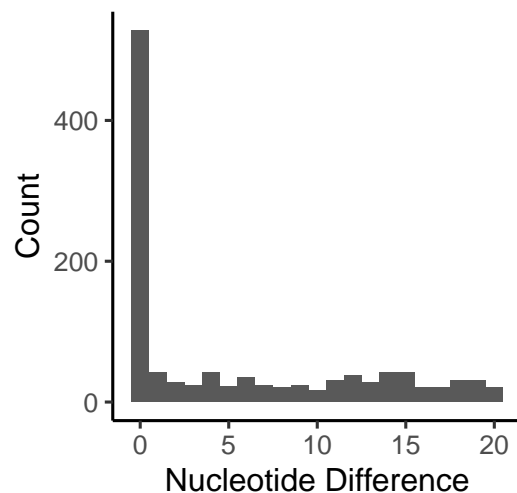
IGHV4-59*02

252 sequences assigned
7 (2.8%) exact matches, in which:
7 unique CDR3
2 unique J



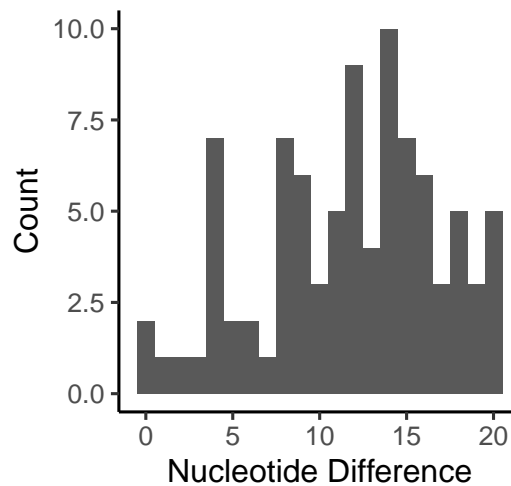
IGHV4-31*02

1382 sequences assigned
528 (38.2%) exact matches, in which:
515 unique CDR3
7 unique J



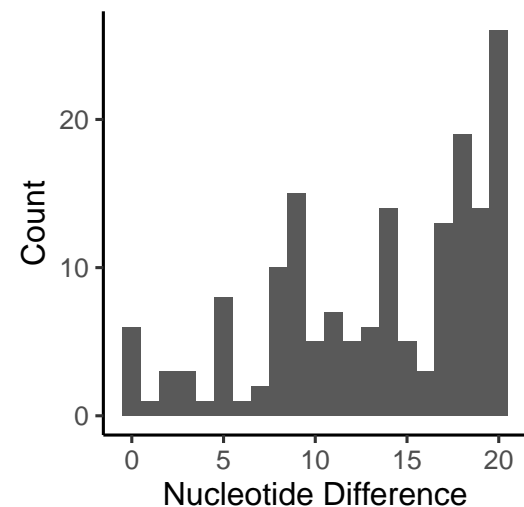
IGHV4-39*02

148 sequences assigned
2 (1.4%) exact matches, in which:
2 unique CDR3
2 unique J



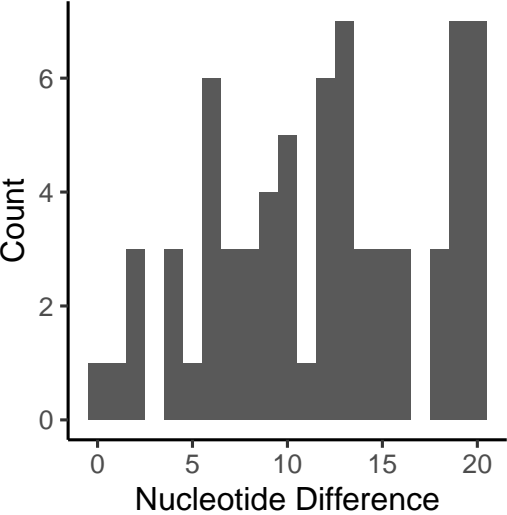
IGHV4-59*08

351 sequences assigned
6 (1.7%) exact matches, in which:
4 unique CDR3
3 unique J



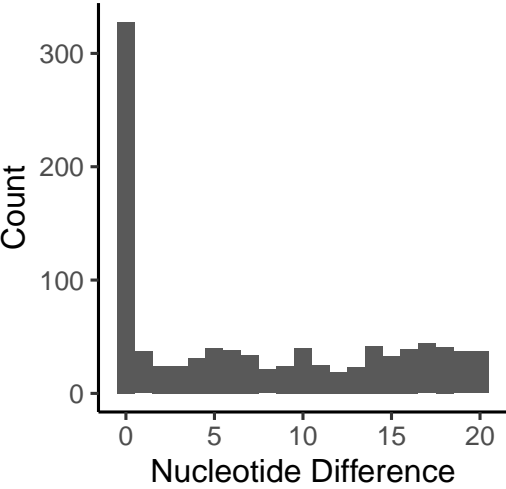
IGHV4-59*11

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



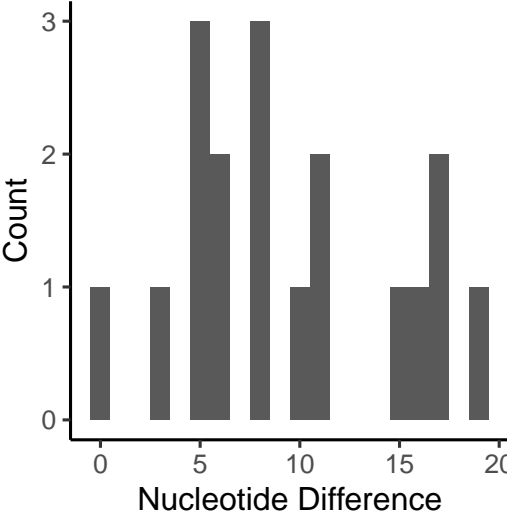
IGHV4-61*02_A234G

1239 sequences assigned
328 (26.5%) exact matches, in which:
317 unique CDR3
6 unique J



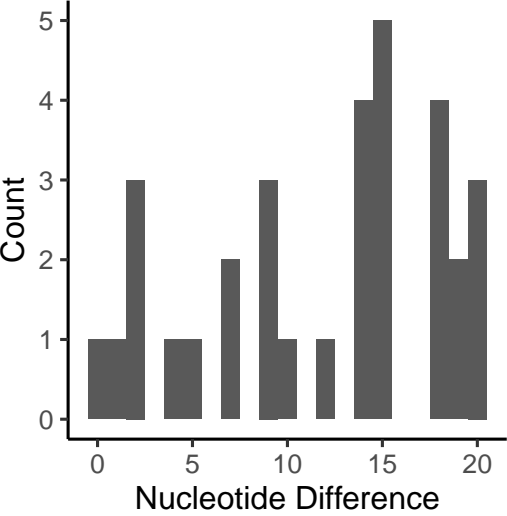
IGHV5-10-1*01_03

19 sequences assigned
1 (5.3%) exact matches, in which:
1 unique CDR3
1 unique J



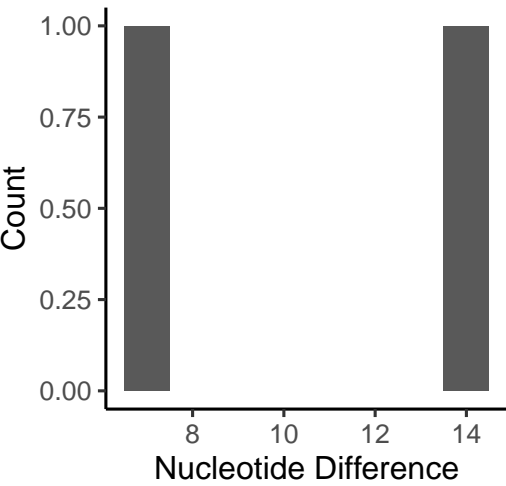
IGHV4-59*12

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



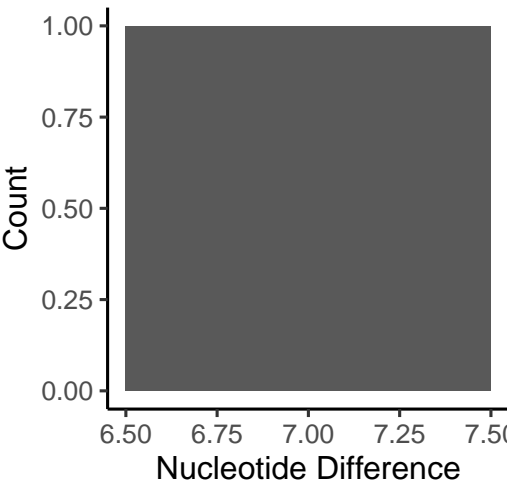
IGHV4/OR15-8*01

4 sequences assigned
No exact matches.



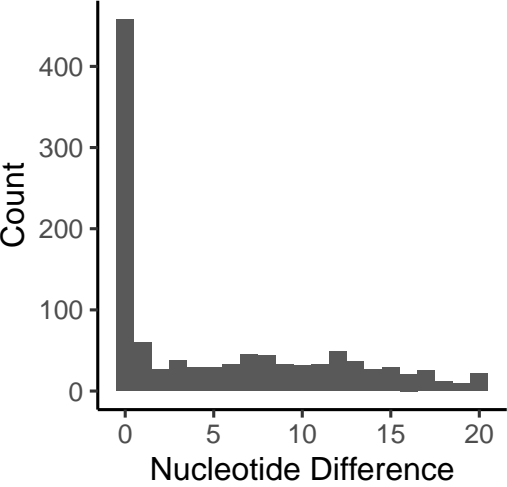
IGHV5-51*04

1 sequences assigned
No exact matches.



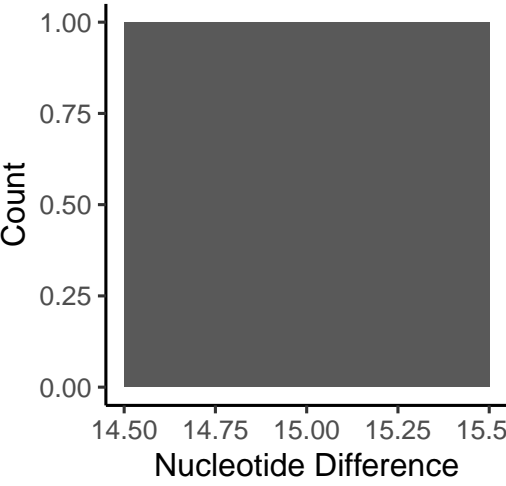
IGHV4-61*02

1156 sequences assigned
458 (39.6%) exact matches, in which:
427 unique CDR3
6 unique J



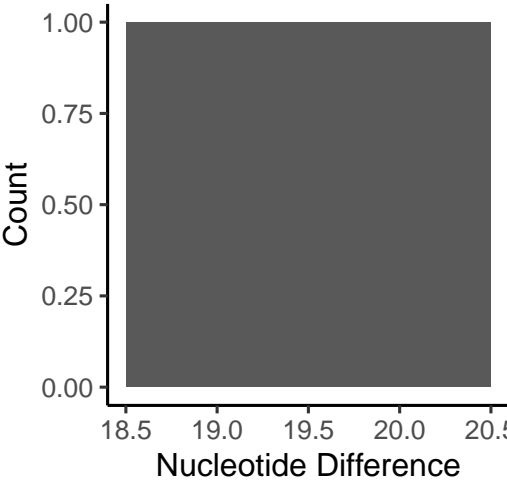
IGHV4/OR15-8*02

5 sequences assigned
No exact matches.



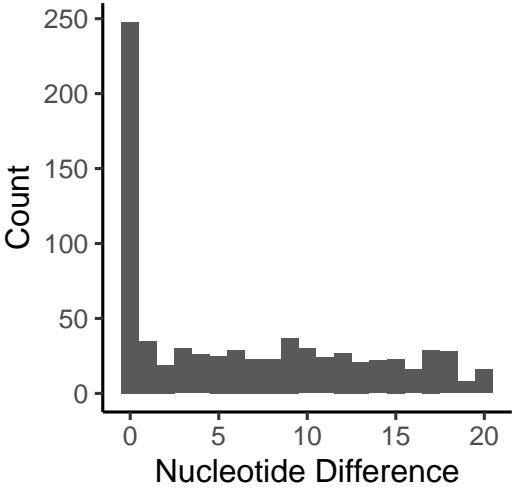
IGHV5-51*06

2 sequences assigned
No exact matches.



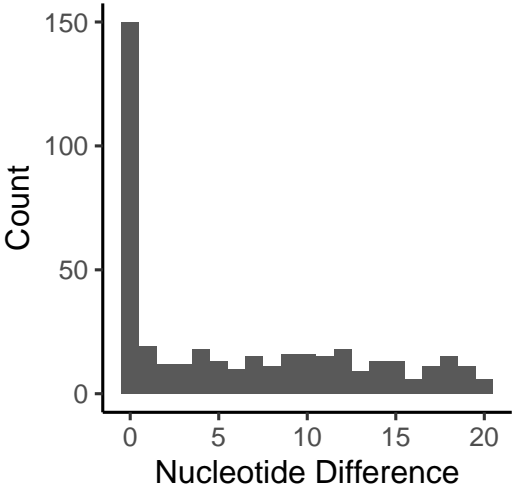
IGHV6-1*01_02

801 sequences assigned
248 (31%) exact matches, in which:
243 unique CDR3
6 unique J

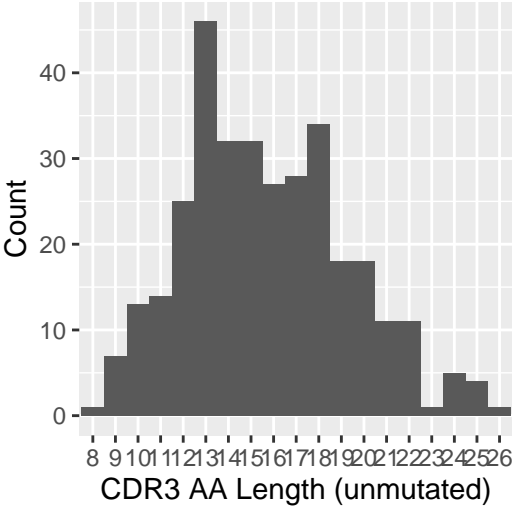


IGHV7-4-1*02

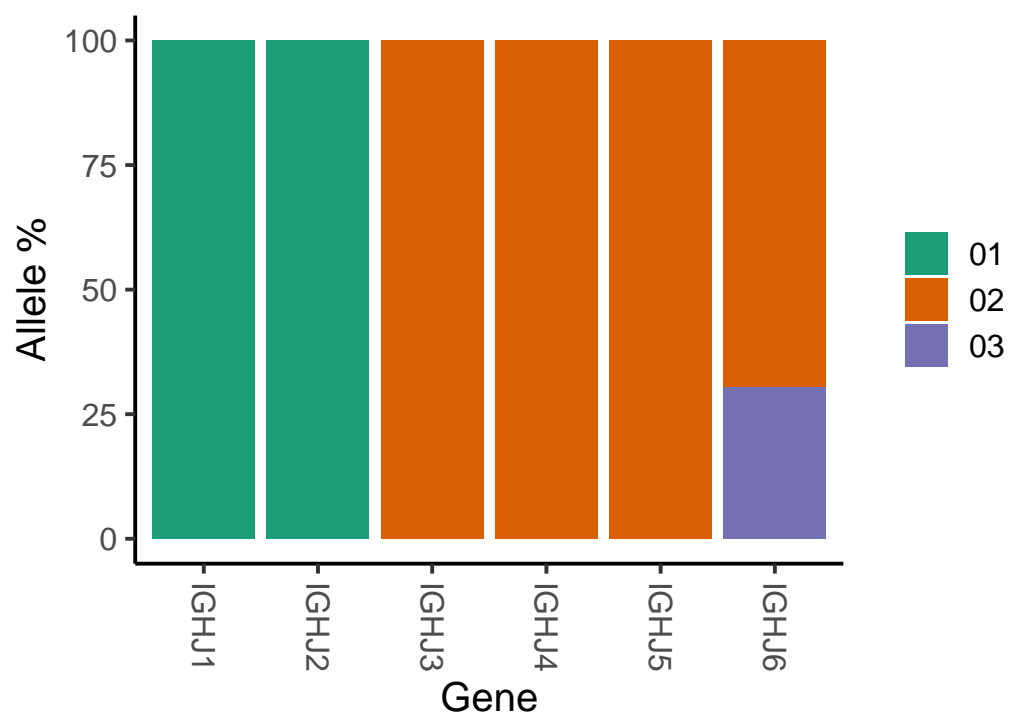
446 sequences assigned
150 (33.6%) exact matches, in which:
148 unique CDR3
7 unique J



IGHV4-61*02_A234G



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]