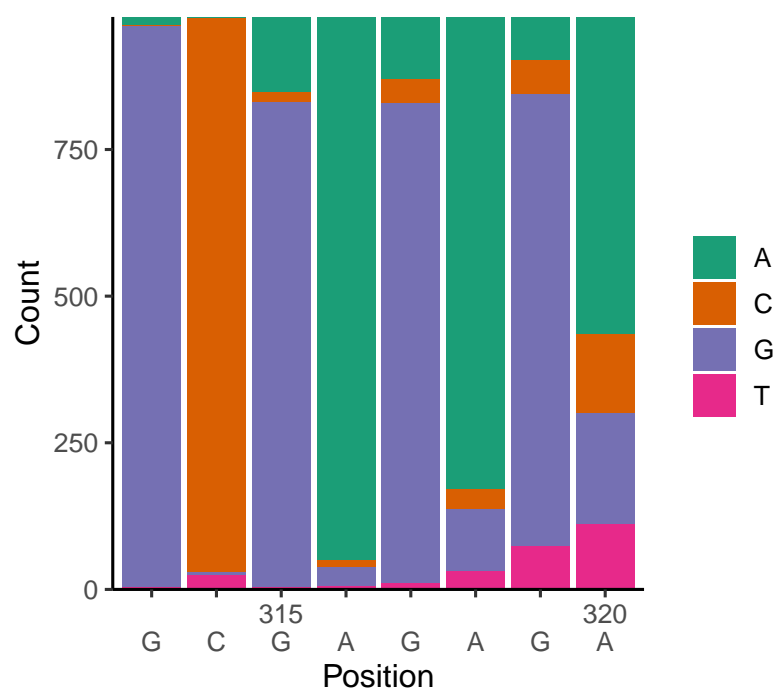
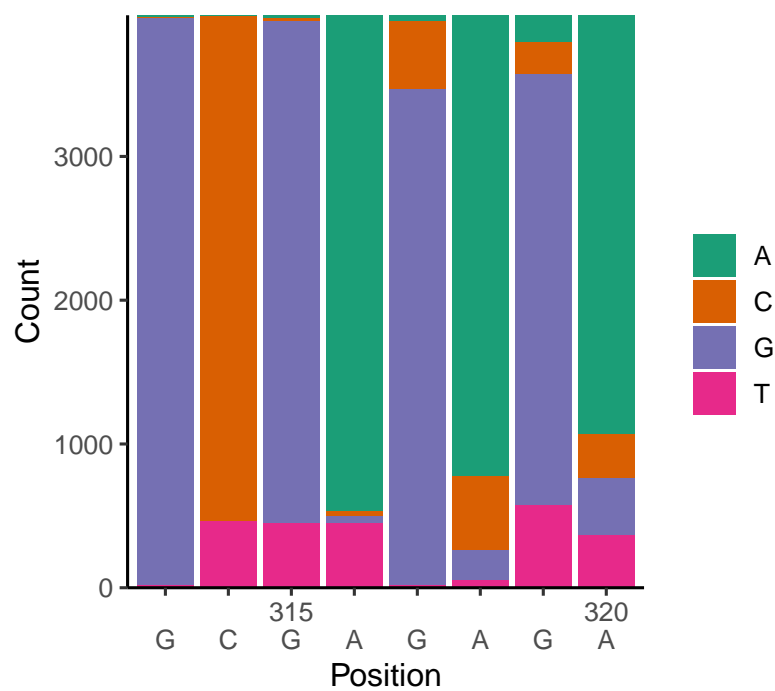


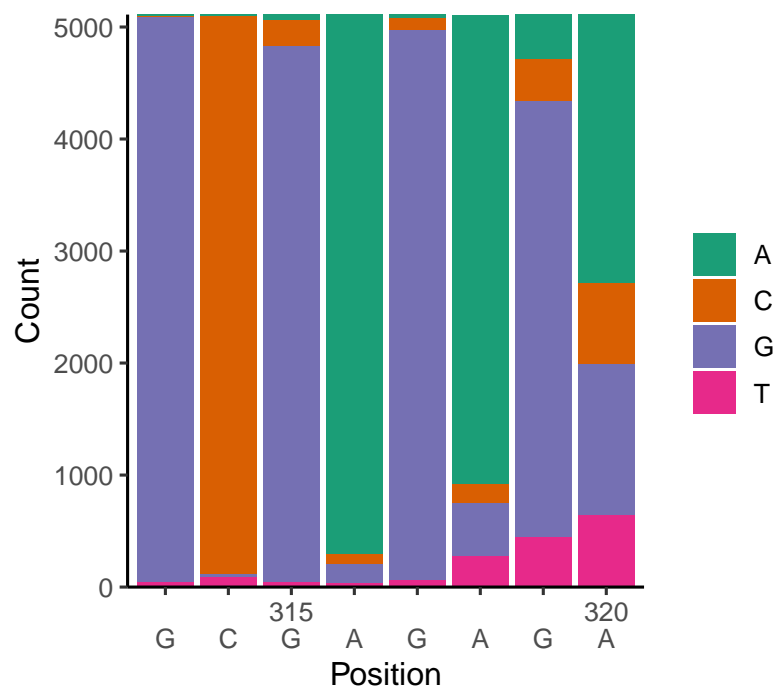
Gene IGHV3-48*03_T303G



Gene IGHV4-38-2*02_A70G



Gene IGHV4-61*02_A234G



Gene IGHV3-48*03_T303G



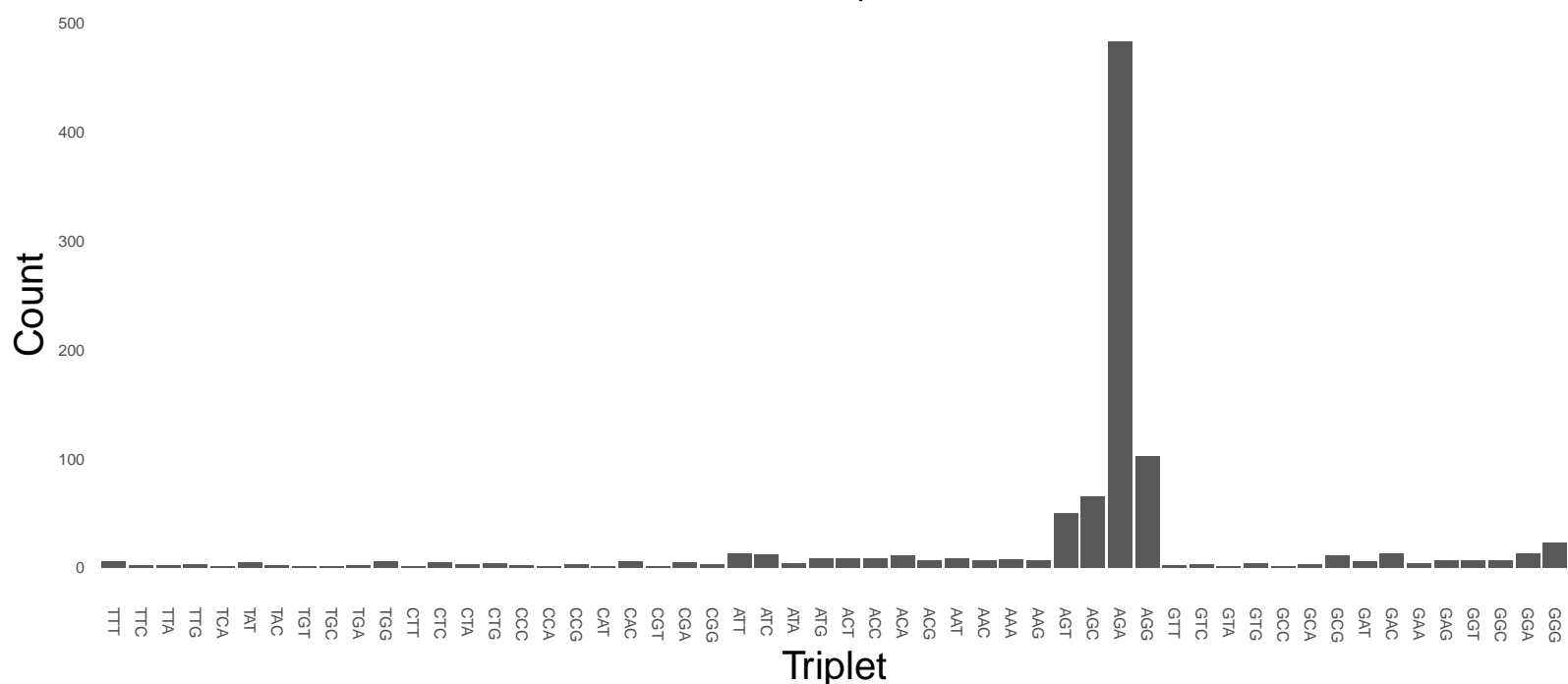
Gene IGHV4-38-2*02_A70G



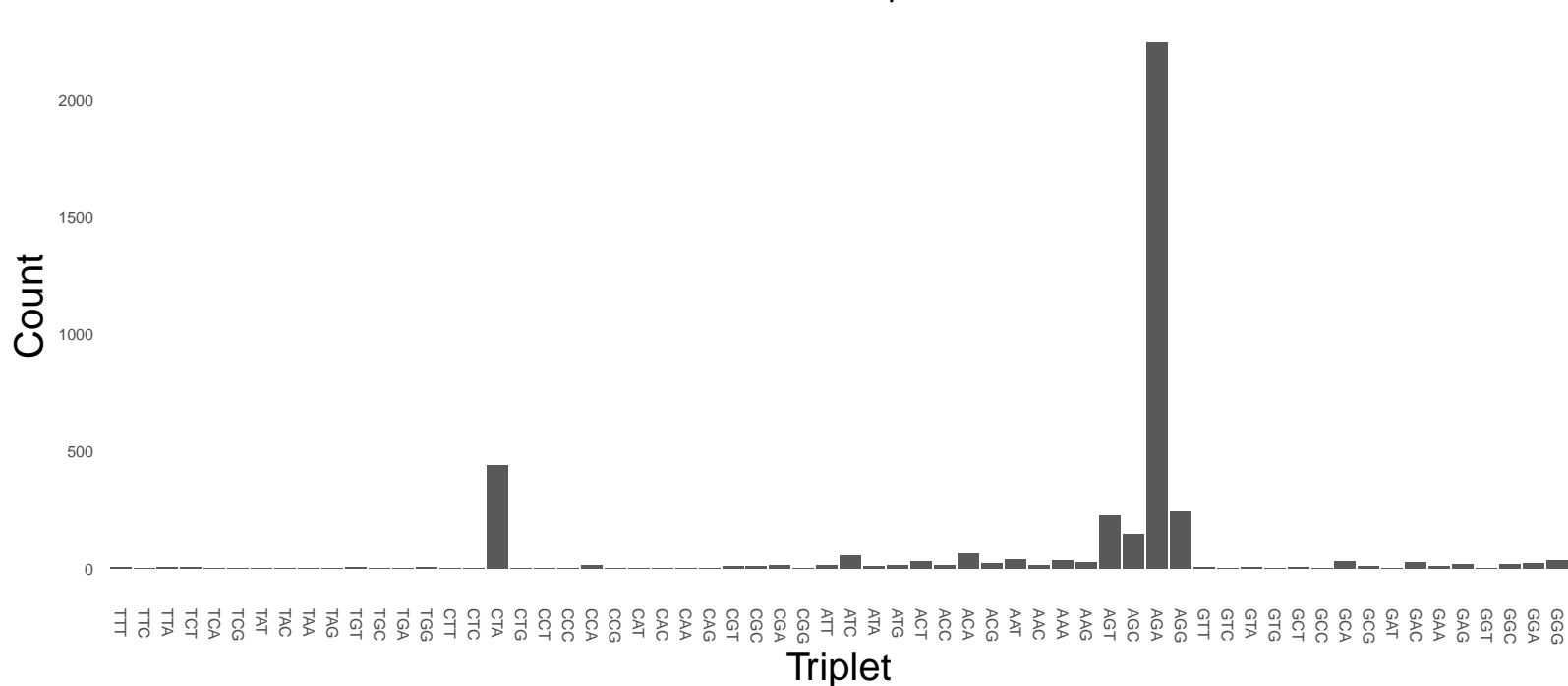
Gene IGHV4-61*02_A234G



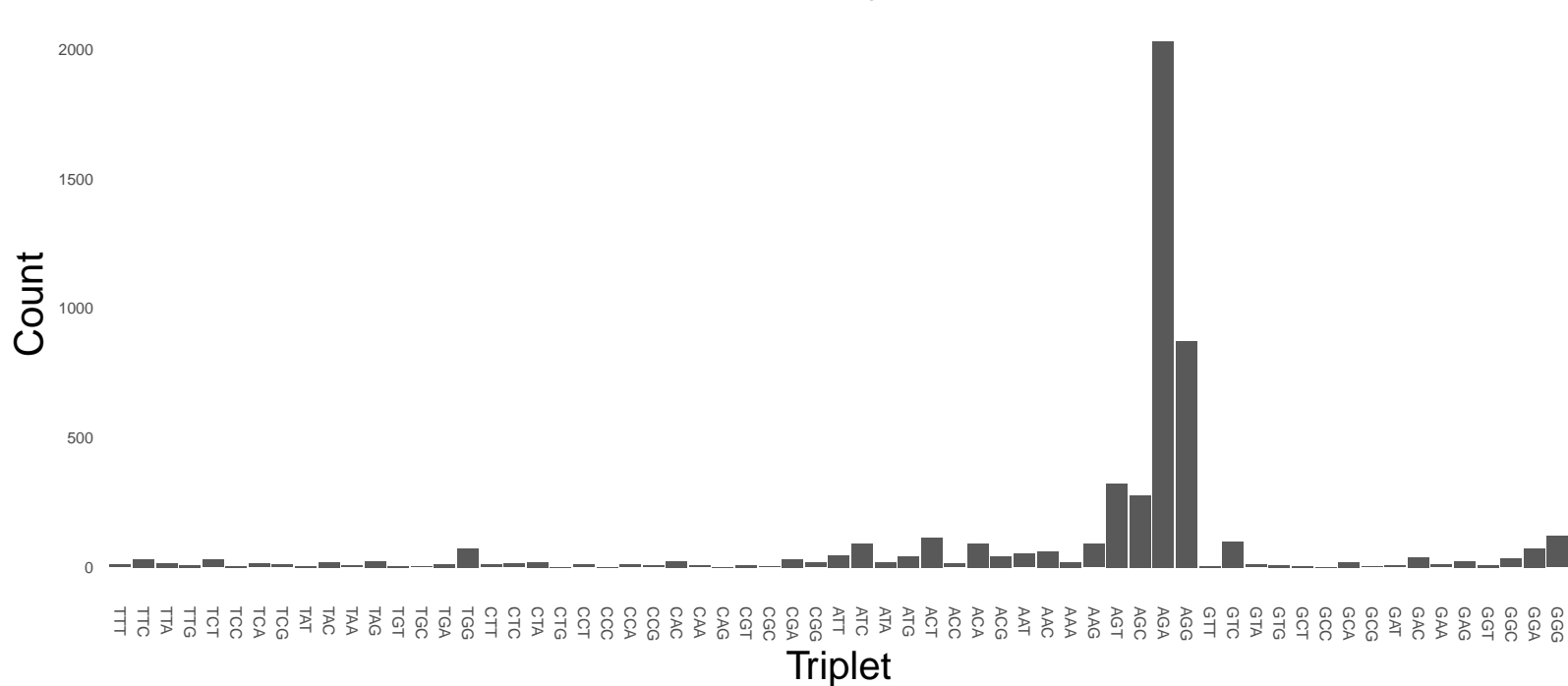
IGHV3-48*03_T303G- Final 3 nucleotides as a triplet



IGHV4-38-2*02_A70G- Final 3 nucleotides as a triplet

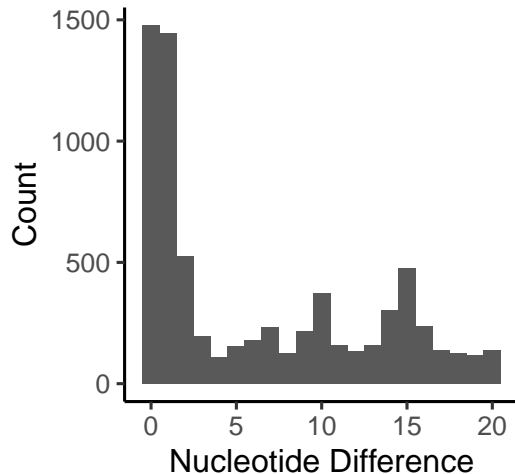


IGHV4-61*02_A234G- Final 3 nucleotides as a triplet



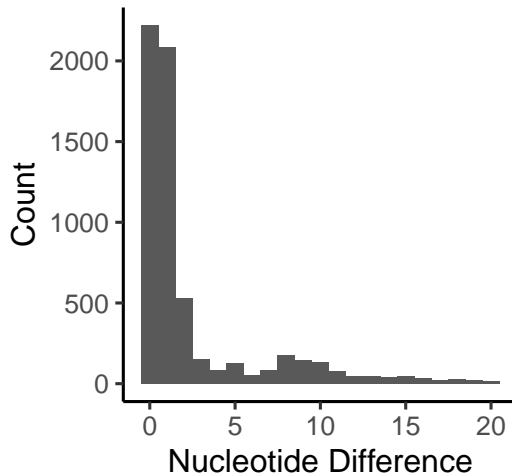
IGHV1-2*02

8582 sequences assigned
1477 (17.2%) exact matches, in which:
1251 unique CDR3
6 unique J



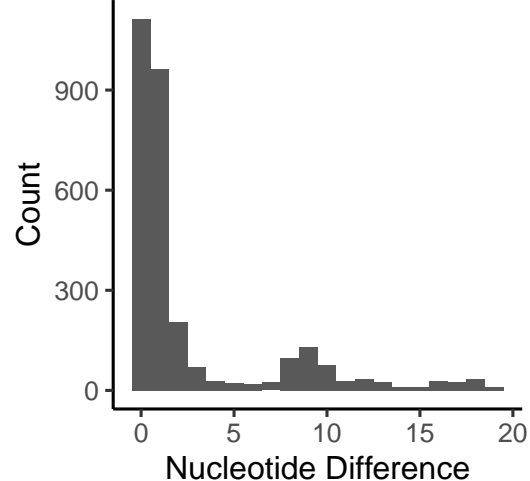
IGHV1-8*01

6636 sequences assigned
2220 (33.5%) exact matches, in which:
1940 unique CDR3
6 unique J



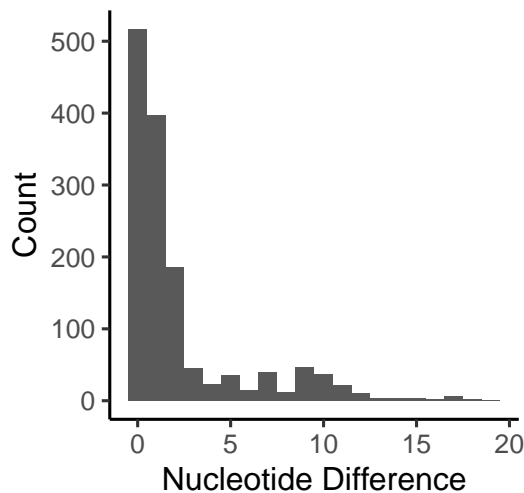
IGHV1-24*01

3015 sequences assigned
1114 (36.9%) exact matches, in which:
965 unique CDR3
6 unique J



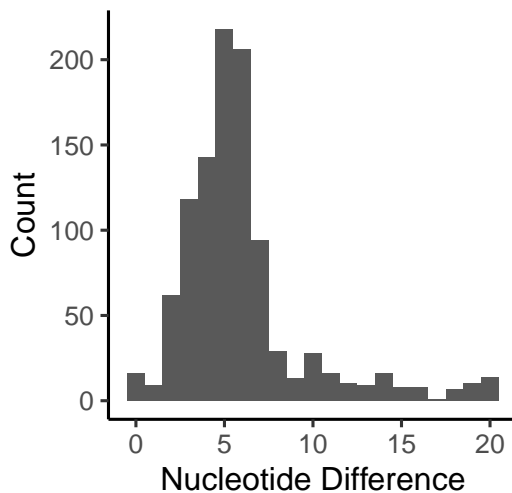
IGHV1-2*04

1407 sequences assigned
517 (36.7%) exact matches, in which:
460 unique CDR3
5 unique J



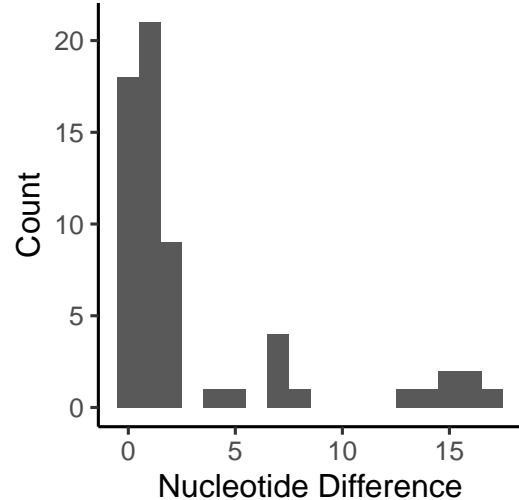
IGHV1-8*02

1078 sequences assigned
16 (1.5%) exact matches, in which:
16 unique CDR3
3 unique J



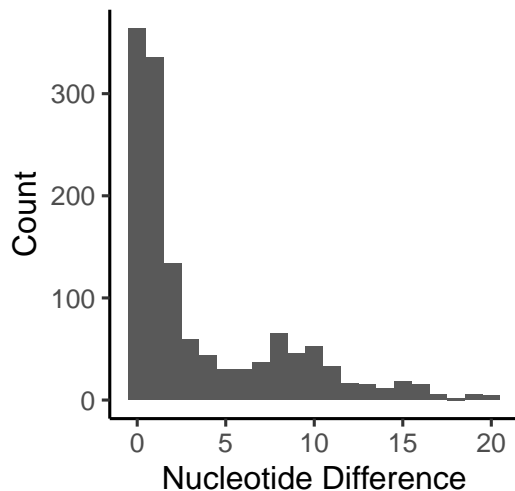
IGHV1-45*02

65 sequences assigned
18 (27.7%) exact matches, in which:
16 unique CDR3
3 unique J



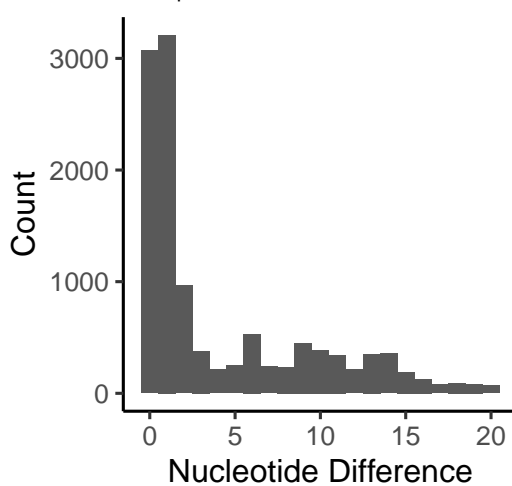
IGHV1-3*01_05

1424 sequences assigned
364 (25.6%) exact matches, in which:
313 unique CDR3
6 unique J



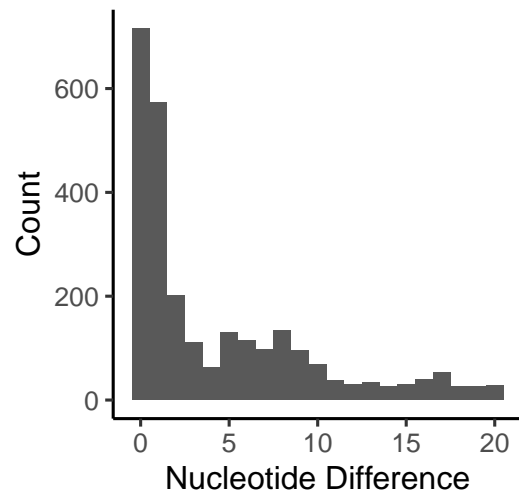
IGHV1-18*01

13582 sequences assigned
3071 (22.6%) exact matches, in which:
2633 unique CDR3
6 unique J



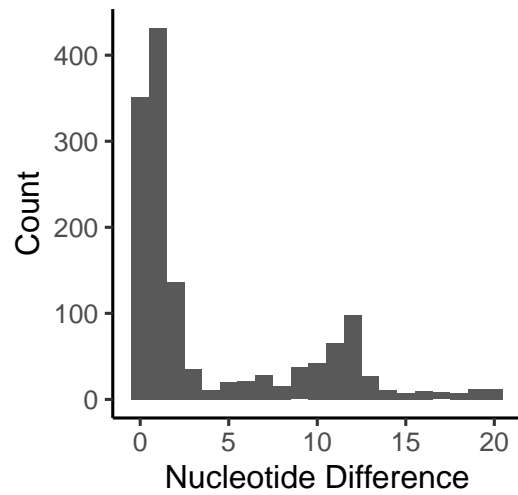
IGHV1-46*01

3446 sequences assigned
716 (20.8%) exact matches, in which:
623 unique CDR3
6 unique J



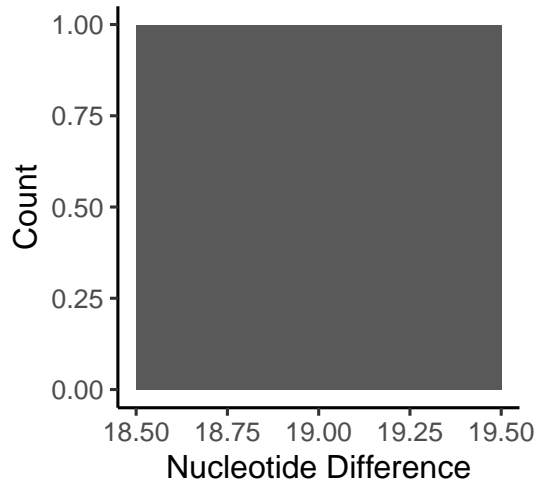
IGHV1-46*03

1461 sequences assigned
351 (24%) exact matches, in which:
288 unique CDR3
6 unique J



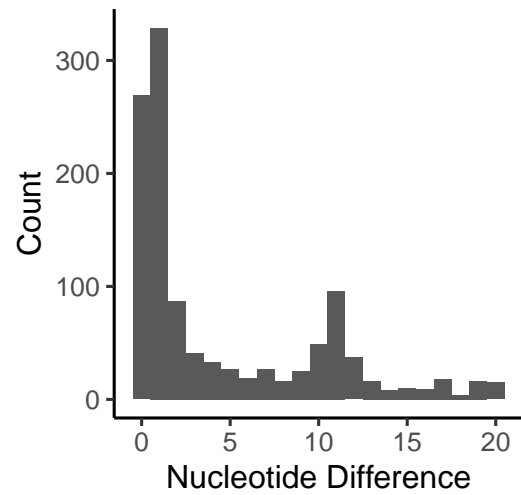
IGHV1-69-2*01

1 sequences assigned
No exact matches.



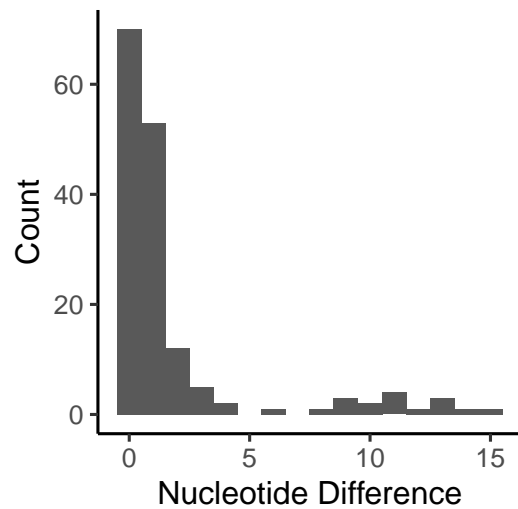
IGHV2-5*02

1209 sequences assigned
269 (22.2%) exact matches, in which:
226 unique CDR3
5 unique J



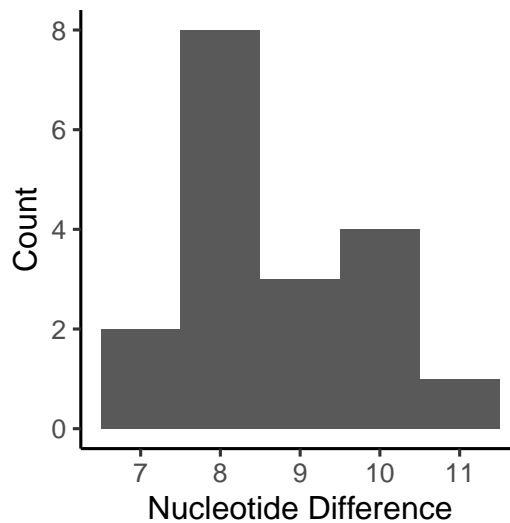
IGHV1-58*02

161 sequences assigned
70 (43.5%) exact matches, in which:
62 unique CDR3
5 unique J



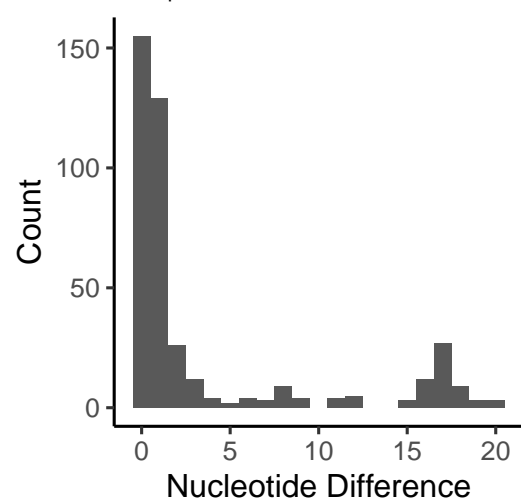
IGHV1-NL1*01

18 sequences assigned
No exact matches.



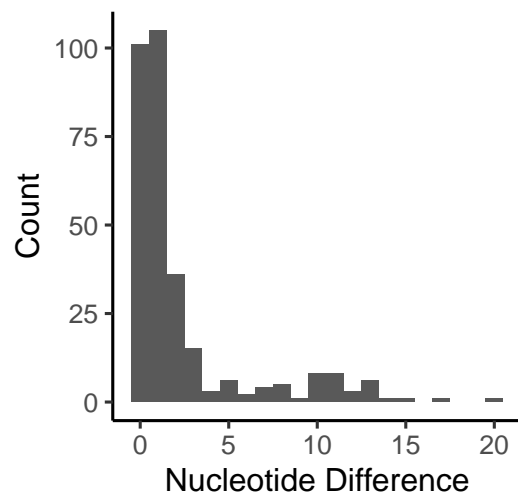
IGHV2-26*01

417 sequences assigned
155 (37.2%) exact matches, in which:
133 unique CDR3
5 unique J



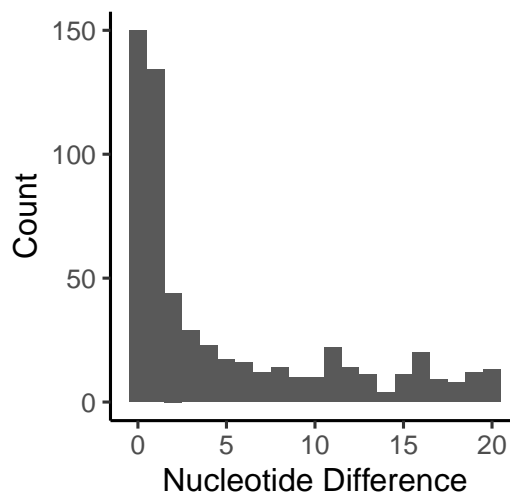
IGHV1-58*01_03

313 sequences assigned
101 (32.3%) exact matches, in which:
88 unique CDR3
5 unique J



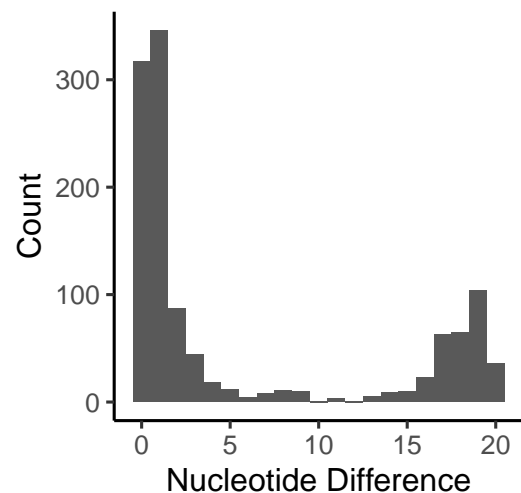
IGHV2-5*01

628 sequences assigned
150 (23.9%) exact matches, in which:
122 unique CDR3
5 unique J



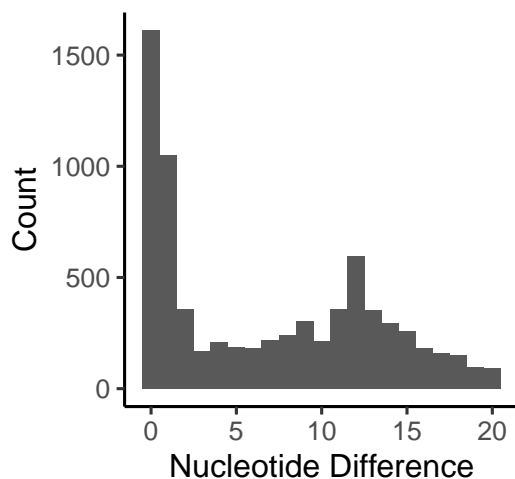
IGHV2-70*01

1434 sequences assigned
317 (22.1%) exact matches, in which:
259 unique CDR3
5 unique J



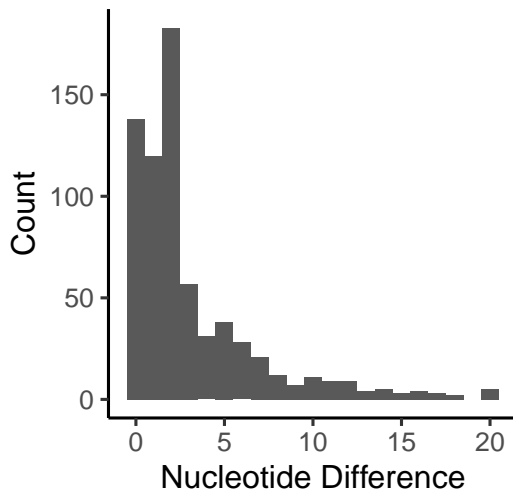
IGHV3-7*01

9156 sequences assigned
1611 (17.6%) exact matches, in which:
1058 unique CDR3
6 unique J



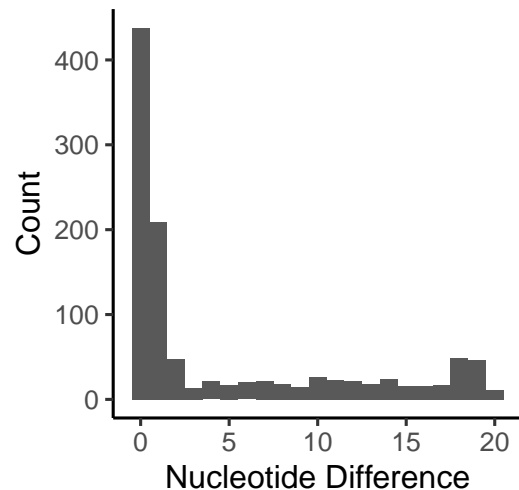
IGHV3-11*04

708 sequences assigned
138 (19.5%) exact matches, in which:
133 unique CDR3
6 unique J



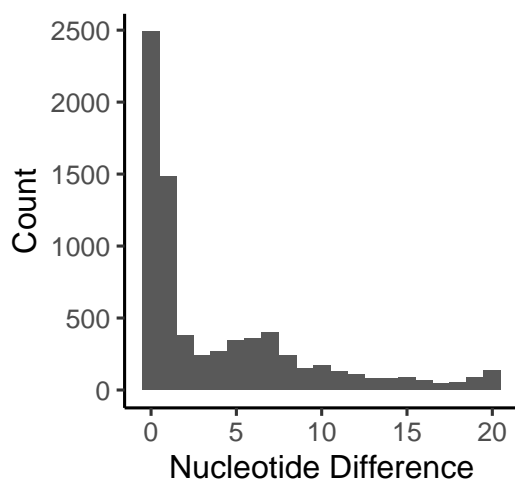
IGHV3-15*01_02

1274 sequences assigned
438 (34.4%) exact matches, in which:
286 unique CDR3
6 unique J



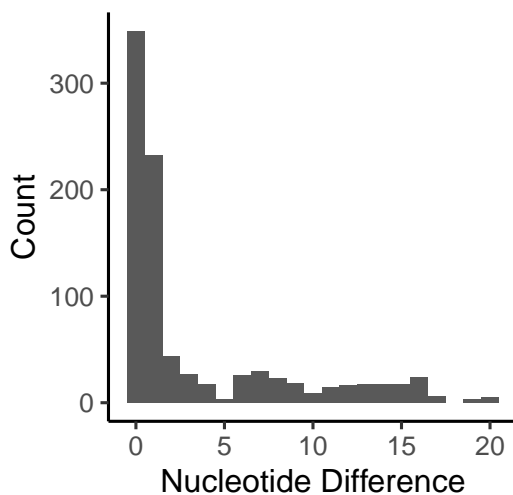
IGHV3-9*01

8596 sequences assigned
2489 (29%) exact matches, in which:
1449 unique CDR3
6 unique J



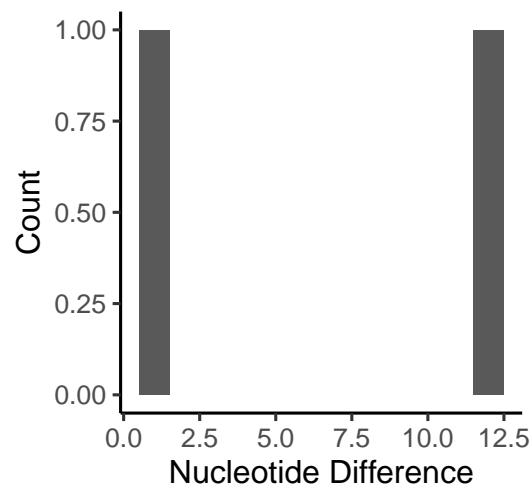
IGHV3-13*01

906 sequences assigned
349 (38.5%) exact matches, in which:
211 unique CDR3
5 unique J



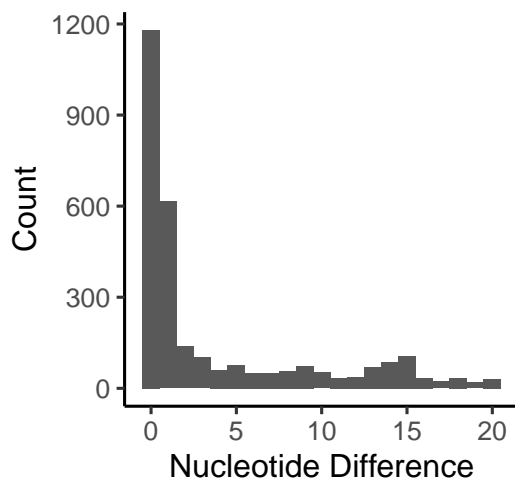
IGHV3-19*01

2 sequences assigned
No exact matches.



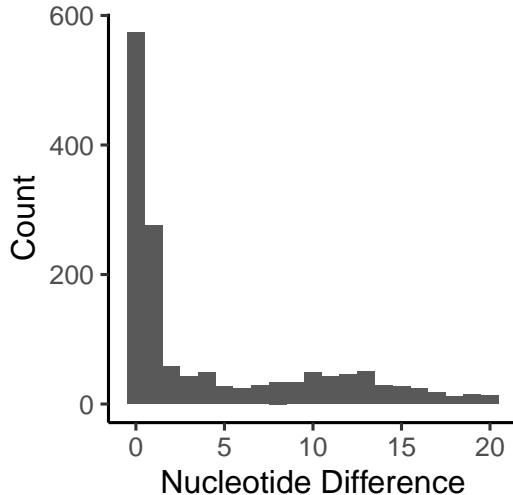
IGHV3-11*01

3486 sequences assigned
1180 (33.8%) exact matches, in which:
756 unique CDR3
6 unique J



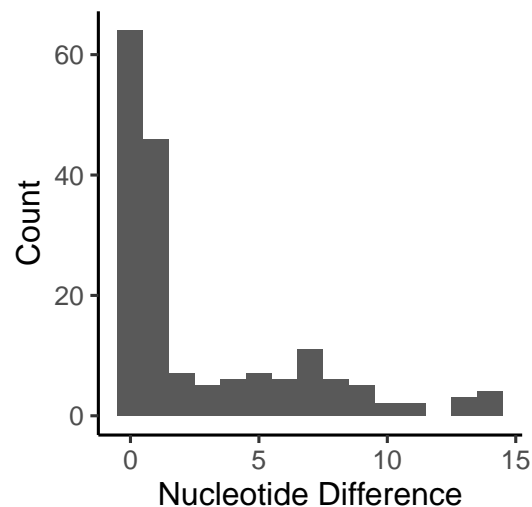
IGHV3-15*07

2316 sequences assigned
574 (24.8%) exact matches, in which:
383 unique CDR3
5 unique J



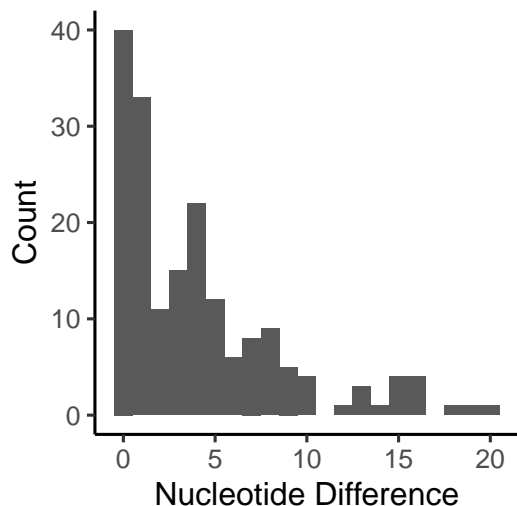
IGHV3-20*01_02

174 sequences assigned
64 (36.8%) exact matches, in which:
39 unique CDR3
5 unique J



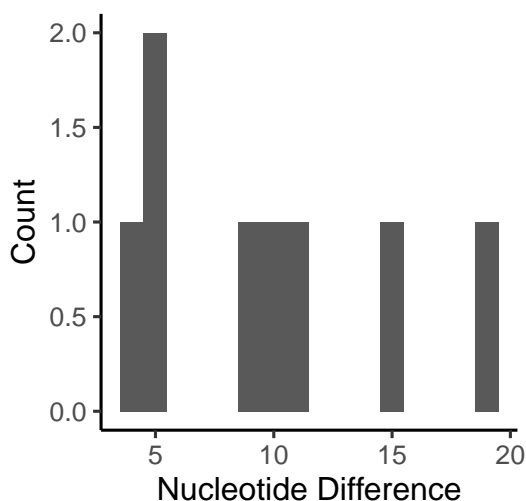
IGHV3-20*03_04

194 sequences assigned
40 (20.6%) exact matches, in which:
25 unique CDR3
4 unique J



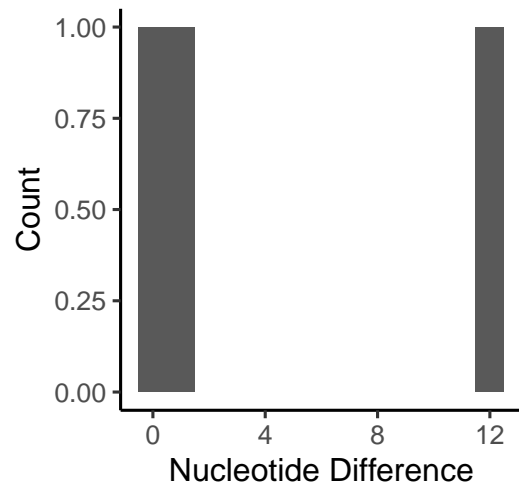
IGHV3-30-5*02

11 sequences assigned
No exact matches.



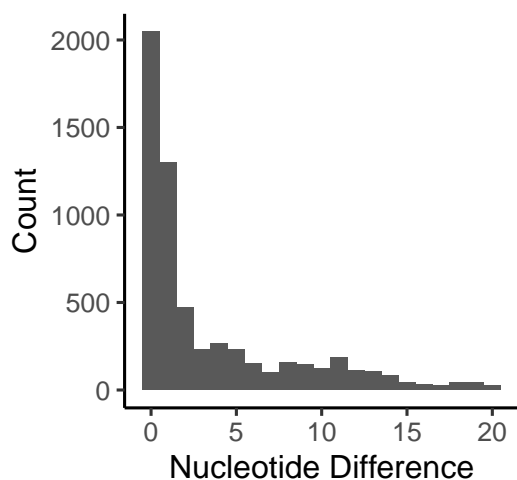
IGHV3-47*02

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



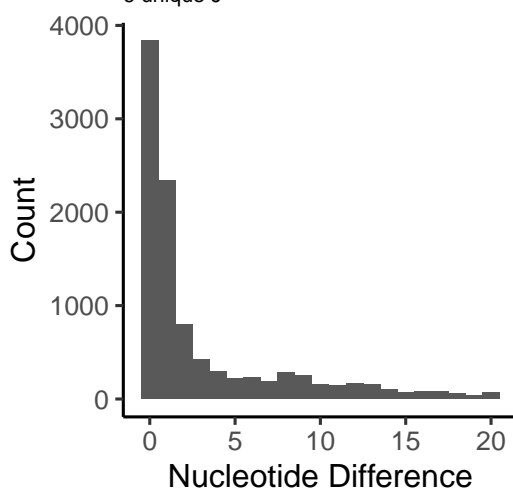
IGHV3-21*01_02

7140 sequences assigned
2047 (28.7%) exact matches, in which:
1291 unique CDR3
6 unique J



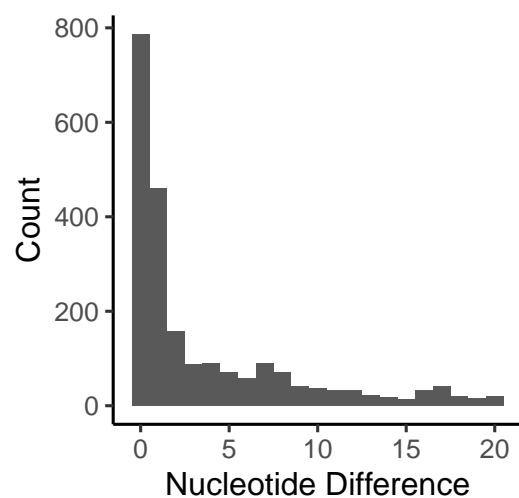
IGHV3-33*01

10514 sequences assigned
3836 (36.5%) exact matches, in which:
2437 unique CDR3
6 unique J



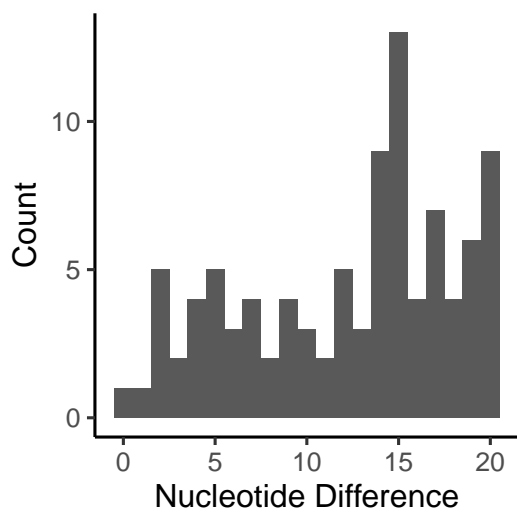
IGHV3-48*01

2321 sequences assigned
787 (33.9%) exact matches, in which:
525 unique CDR3
6 unique J



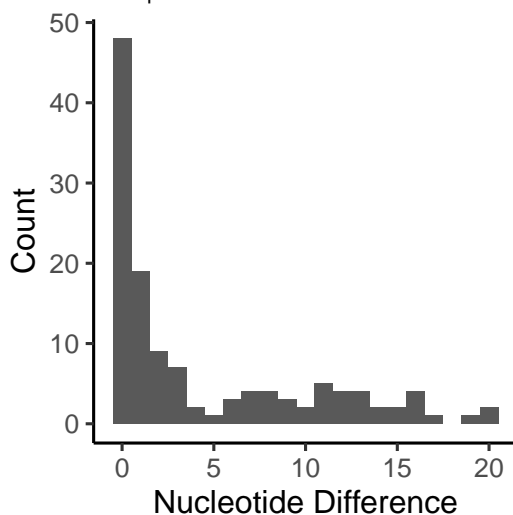
IGHV3-30-5*01

167 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



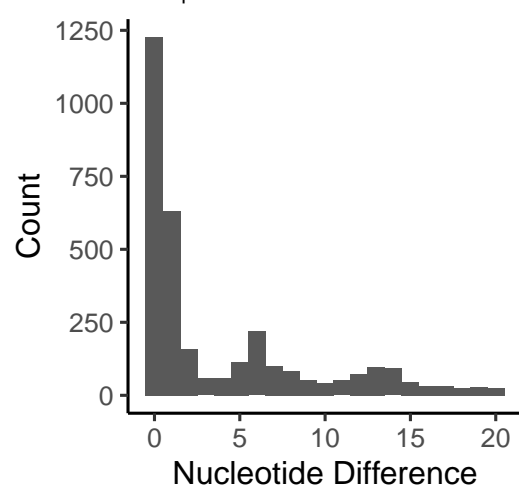
IGHV3-43*01

154 sequences assigned
48 (31.2%) exact matches, in which:
30 unique CDR3
4 unique J



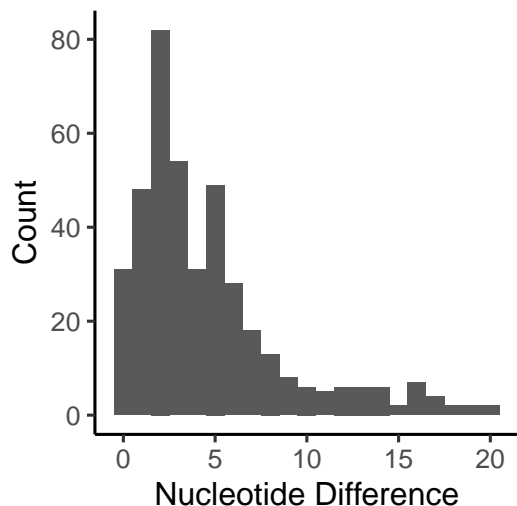
IGHV3-48*03

3441 sequences assigned
1227 (35.7%) exact matches, in which:
752 unique CDR3
6 unique J



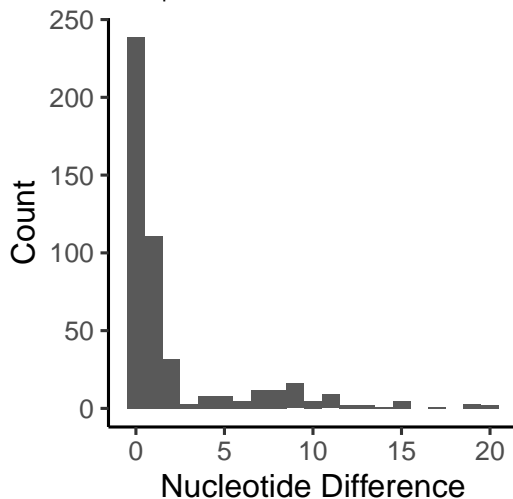
IGHV3-48*04

515 sequences assigned
31 (6%) exact matches, in which:
31 unique CDR3
4 unique J



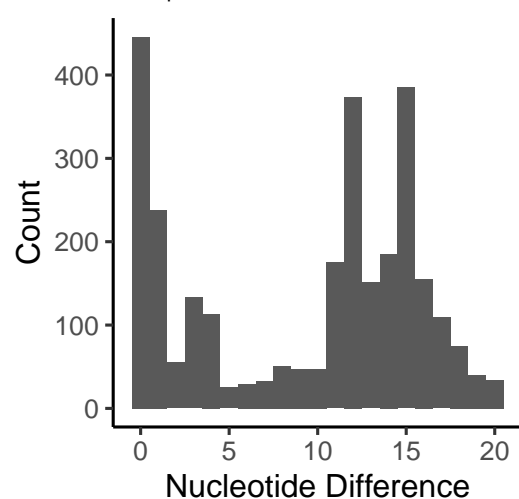
IGHV3-49*03_05

516 sequences assigned
239 (46.3%) exact matches, in which:
151 unique CDR3
6 unique J



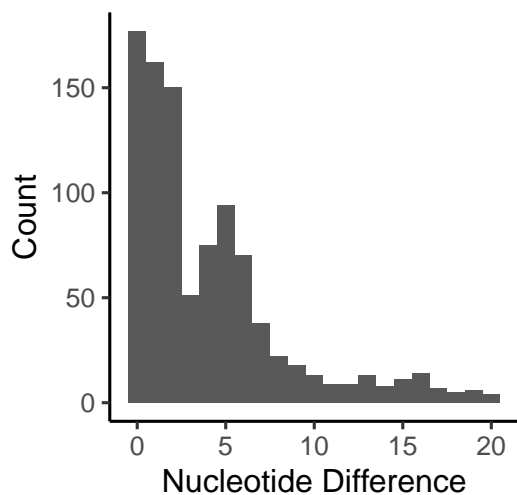
IGHV3-53*01_02

3062 sequences assigned
446 (14.6%) exact matches, in which:
270 unique CDR3
6 unique J



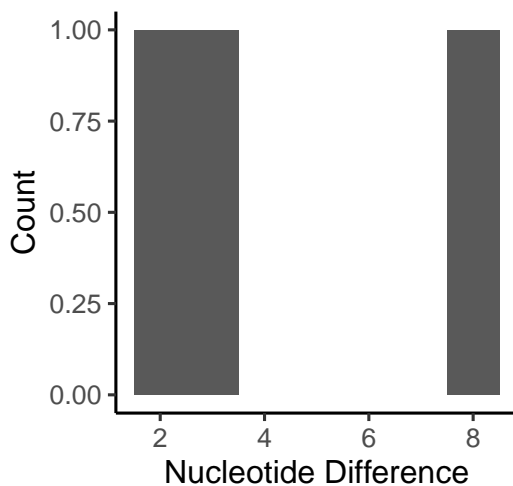
IGHV3-48*03_T303G

976 sequences assigned
177 (18.1%) exact matches, in which:
171 unique CDR3
5 unique J



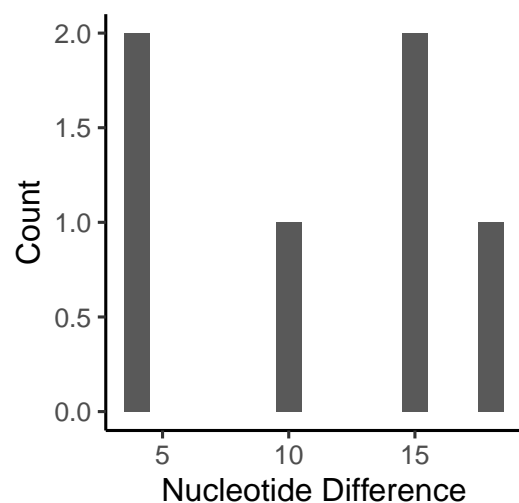
IGHV3-52*02

3 sequences assigned
No exact matches.



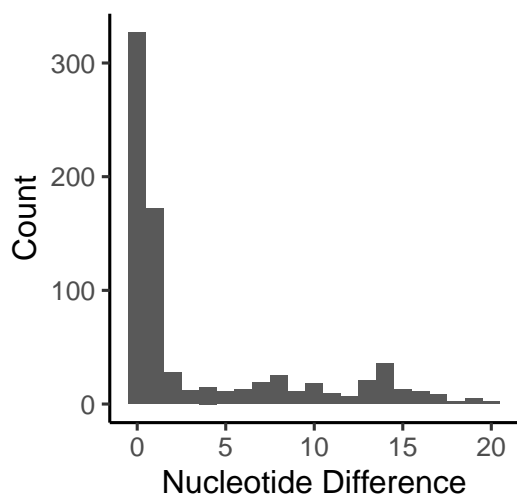
IGHV3-64*04

8 sequences assigned
No exact matches.



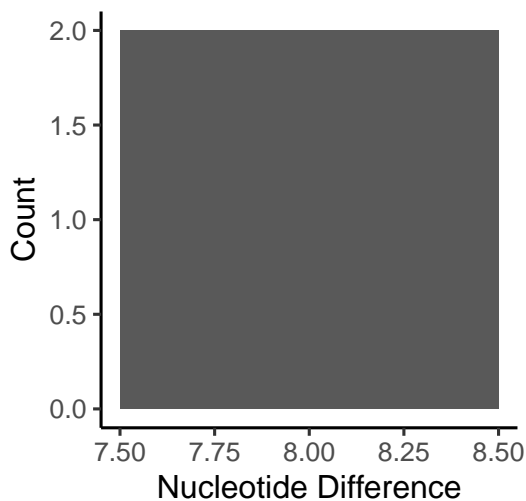
IGHV3-49*04

820 sequences assigned
327 (39.9%) exact matches, in which:
203 unique CDR3
6 unique J



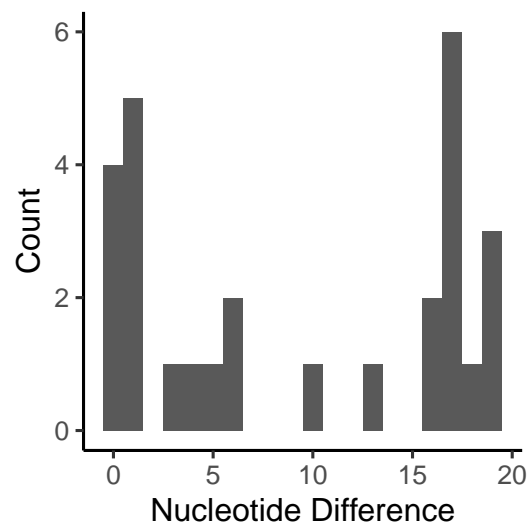
IGHV3-52*01_03

2 sequences assigned
No exact matches.



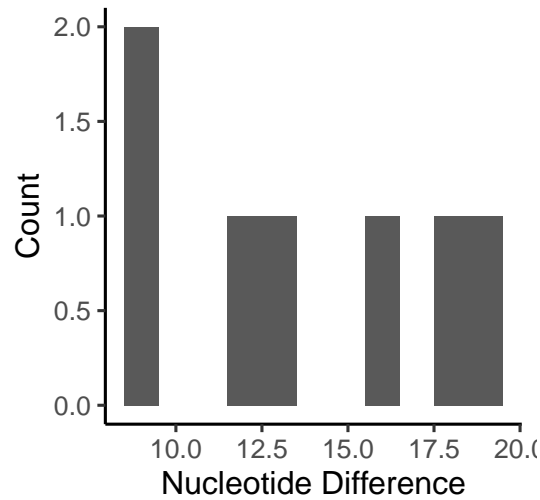
IGHV3-64*02_07

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



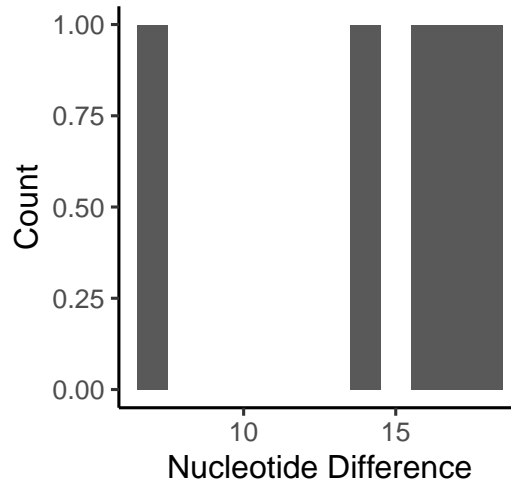
IGHV3-66*01

10 sequences assigned
No exact matches.



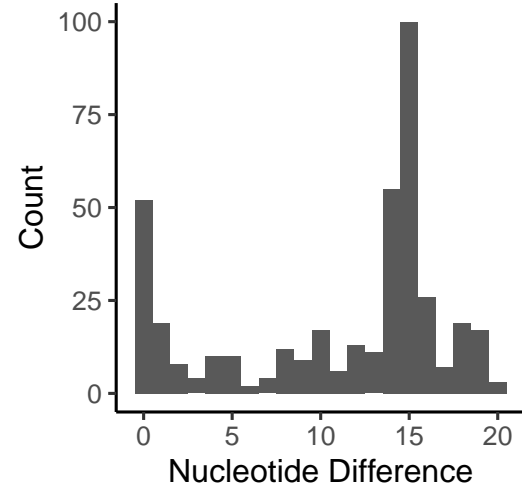
IGHV3-66*04

8 sequences assigned
No exact matches.



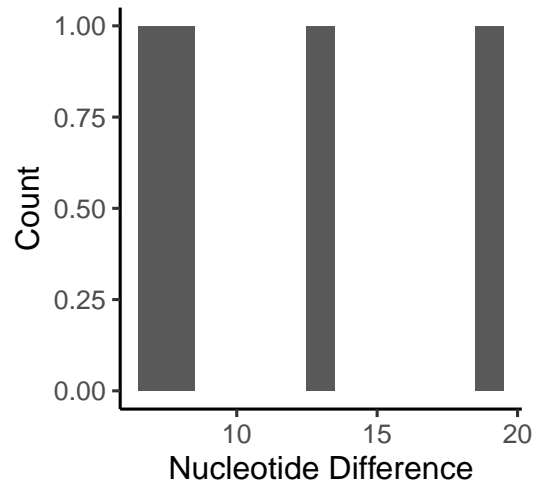
IGHV3-72*01

441 sequences assigned
52 (11.8%) exact matches, in which:
36 unique CDR3
3 unique J



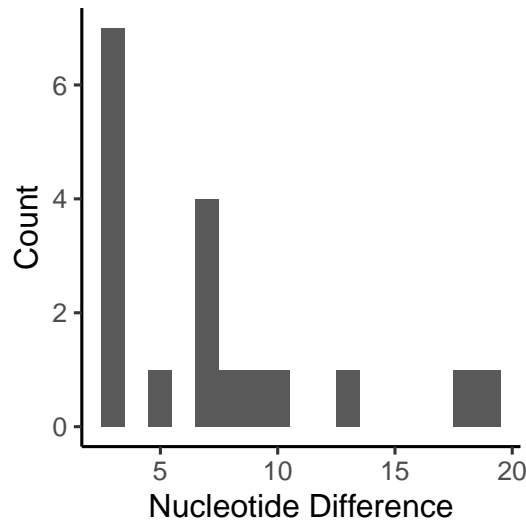
IGHV3-66*02

5 sequences assigned
No exact matches.



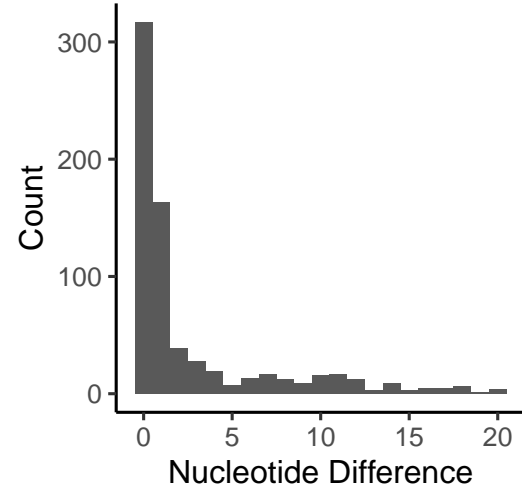
IGHV3-69-1*01

28 sequences assigned
No exact matches.



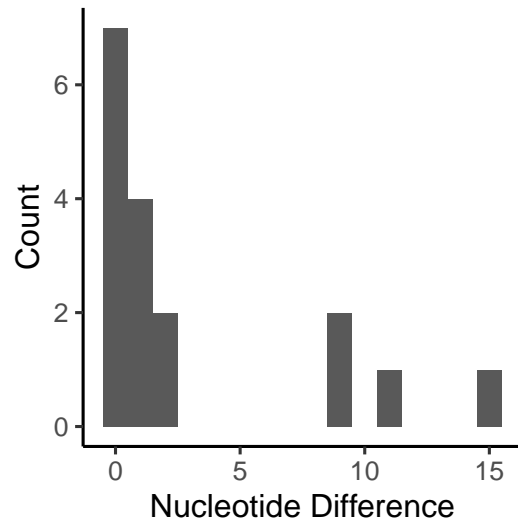
IGHV3-73*01_02

747 sequences assigned
317 (42.4%) exact matches, in which:
201 unique CDR3
6 unique J



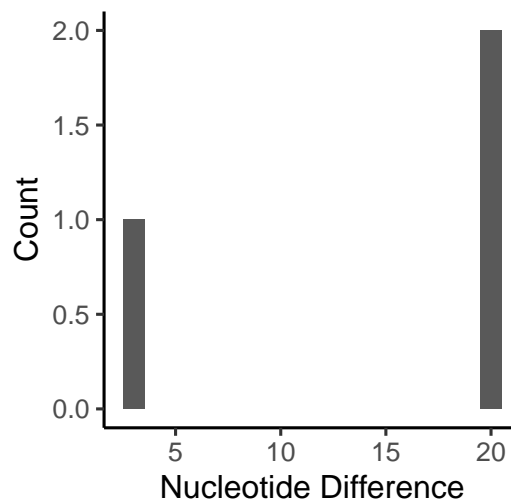
IGHV3-66*03

17 sequences assigned
7 (41.2%) exact matches, in which:
7 unique CDR3
2 unique J



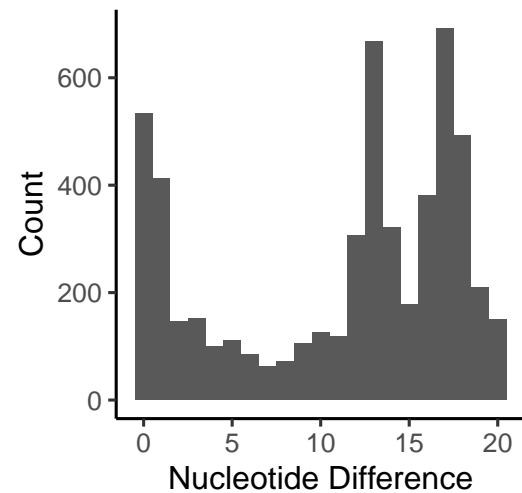
IGHV3-69-1*02

27 sequences assigned
No exact matches.



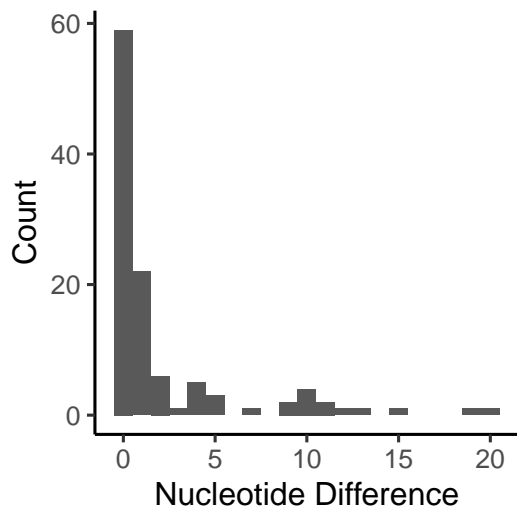
IGHV3-74*01_02

7386 sequences assigned
533 (7.2%) exact matches, in which:
331 unique CDR3
5 unique J



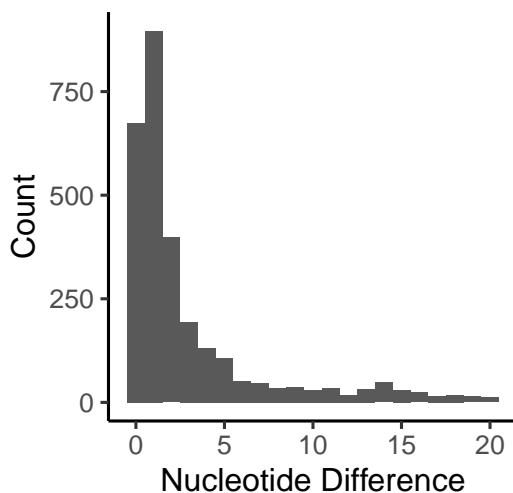
IGHV3-43D*04

112 sequences assigned
59 (52.7%) exact matches, in which:
35 unique CDR3
2 unique J



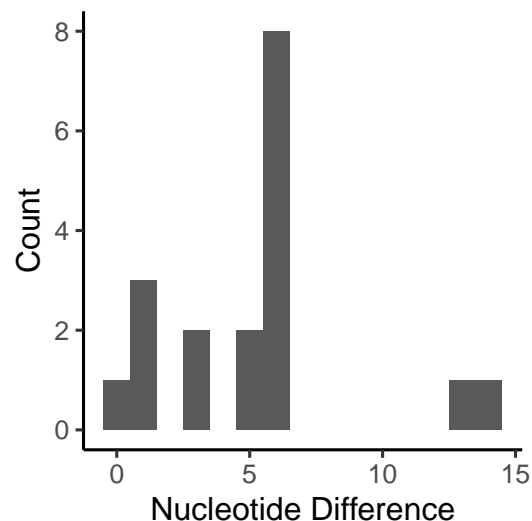
IGHV4-4*07

3210 sequences assigned
675 (21%) exact matches, in which:
589 unique CDR3
6 unique J



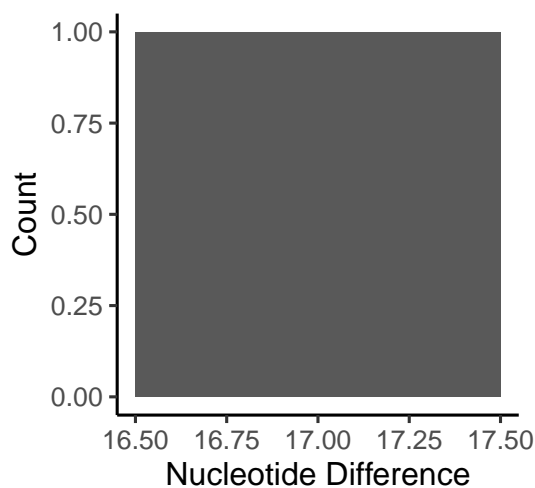
IGHV4-28*02_05

18 sequences assigned
1 (5.6%) exact matches, in which:
1 unique CDR3
1 unique J



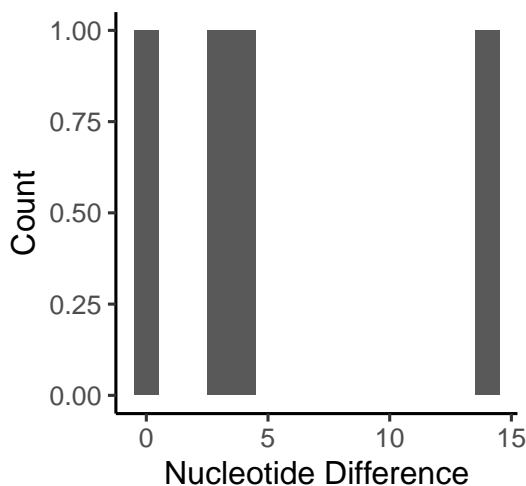
IGHV3-64D*06

86 sequences assigned
No exact matches.



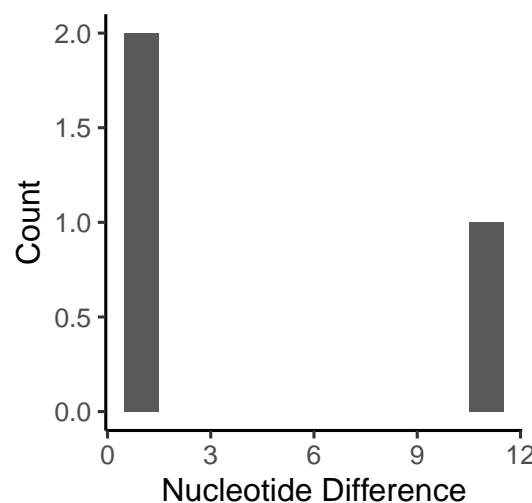
IGHV4-28*03

9 sequences assigned
1 (11.1%) exact matches, in which:
1 unique CDR3
1 unique J



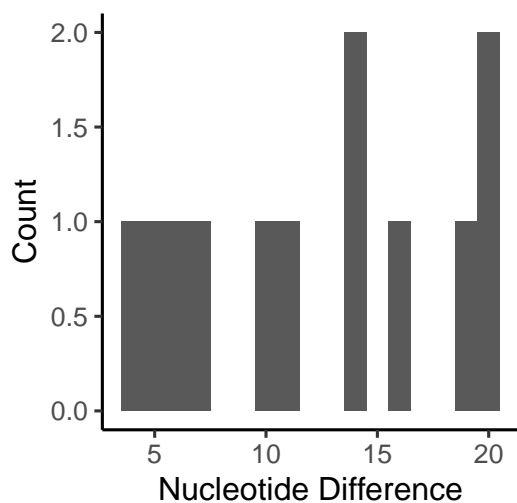
IGHV4-30-4*01

3 sequences assigned
No exact matches.



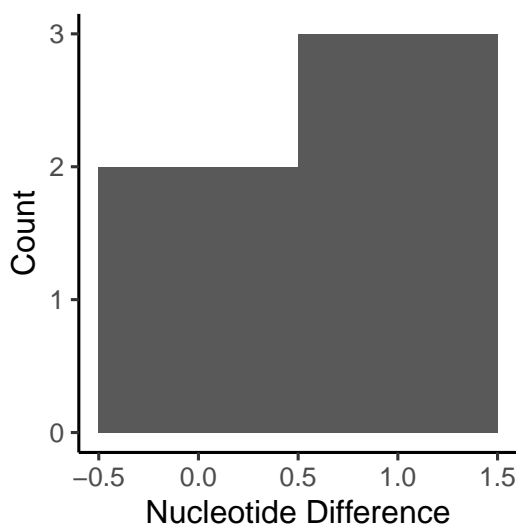
IGHV3-NL1*01

18 sequences assigned
No exact matches.



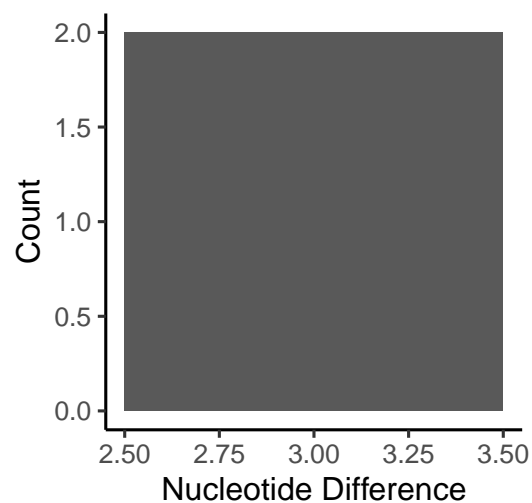
IGHV4-28*01_07

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



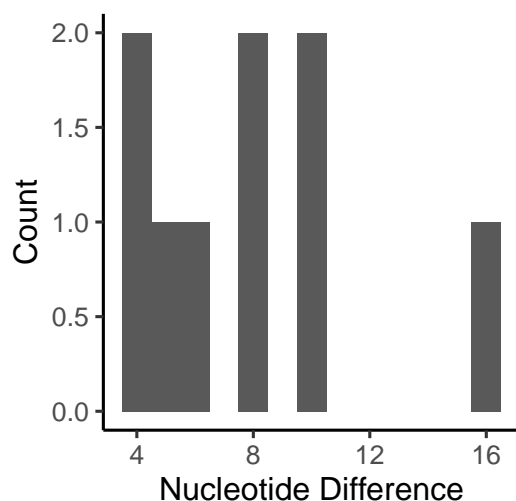
IGHV4-30-2*04

2 sequences assigned
No exact matches.



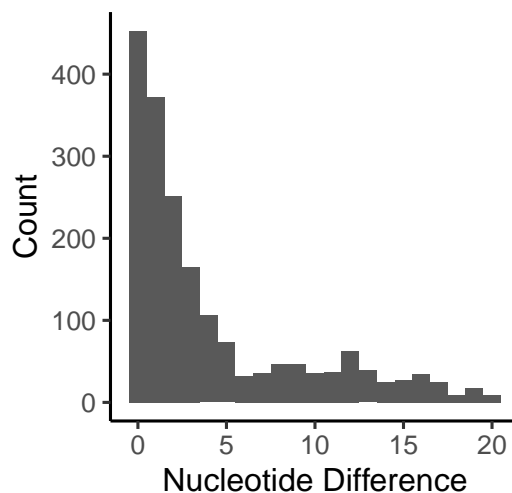
IGHV4-30-4*08

12 sequences assigned
No exact matches.



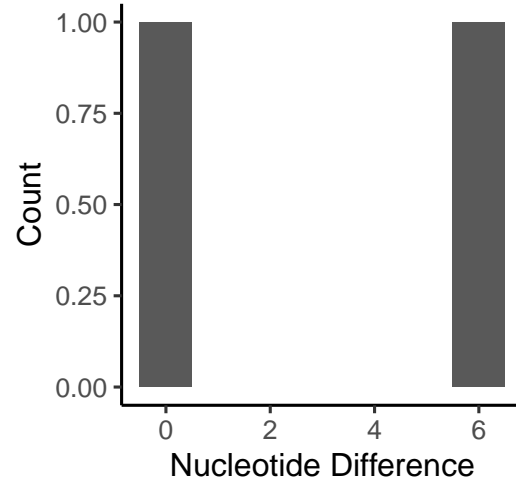
IGHV4-38-2*02_A70G

3982 sequences assigned
453 (11.4%) exact matches, in which:
387 unique CDR3
6 unique J



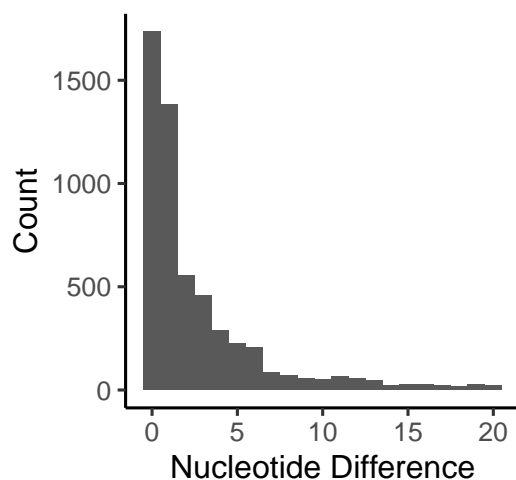
IGHV4-55*01_05

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



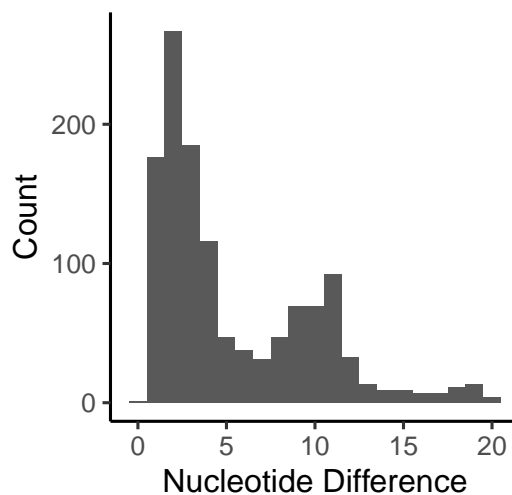
IGHV4-31*03_04

5663 sequences assigned
1735 (30.6%) exact matches, in which:
1524 unique CDR3
6 unique J



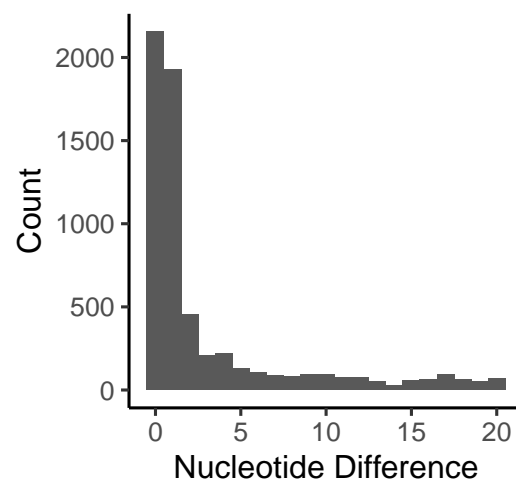
IGHV4-39*07

1323 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



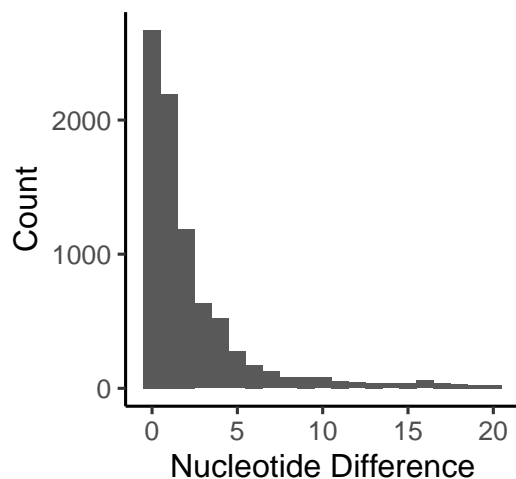
IGHV4-59*01_07

6596 sequences assigned
2155 (32.7%) exact matches, in which:
1860 unique CDR3
6 unique J



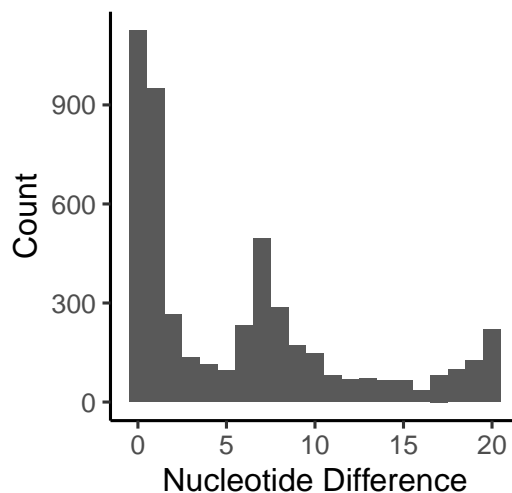
IGHV4-34*01_02

10630 sequences assigned
2671 (25.1%) exact matches, in which:
2177 unique CDR3
6 unique J



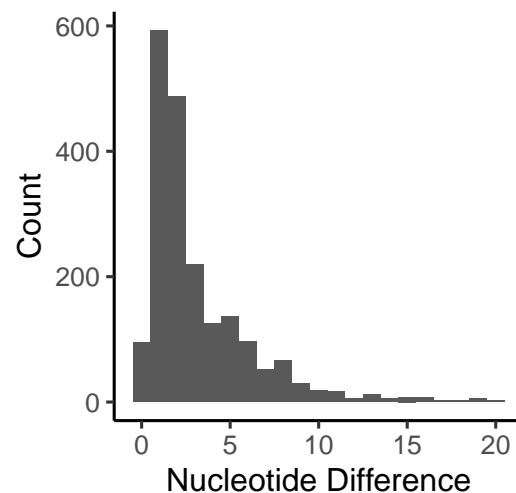
IGHV4-39*01_05

6227 sequences assigned
1126 (18.1%) exact matches, in which:
948 unique CDR3
6 unique J



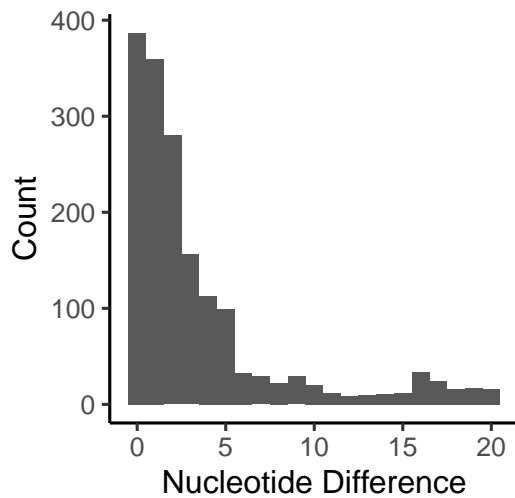
IGHV4-59*12

2069 sequences assigned
95 (4.6%) exact matches, in which:
94 unique CDR3
6 unique J



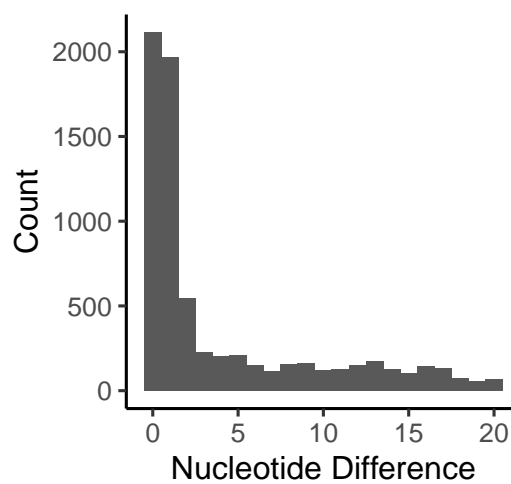
IGHV4-61*01

2684 sequences assigned
387 (14.4%) exact matches, in which:
351 unique CDR3
6 unique J



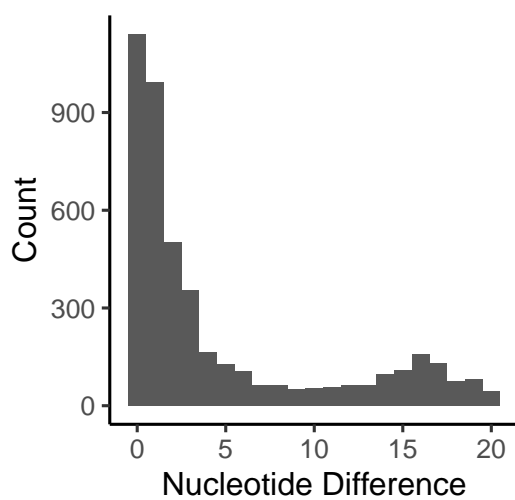
IGHV5-51*01_03

8446 sequences assigned
2114 (25%) exact matches, in which:
1276 unique CDR3
6 unique J



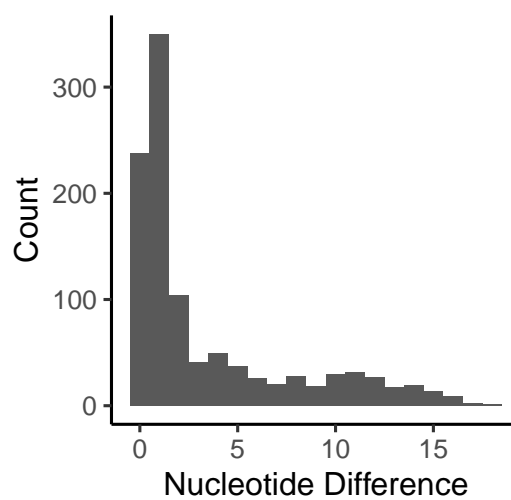
IGHV4-61*02_A234G

5111 sequences assigned
1141 (22.3%) exact matches, in which:
1014 unique CDR3
6 unique J



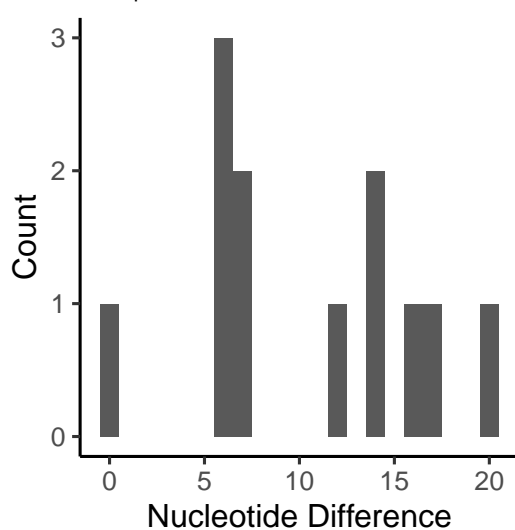
IGHV6-1*01_02

1149 sequences assigned
238 (20.7%) exact matches, in which:
207 unique CDR3
5 unique J



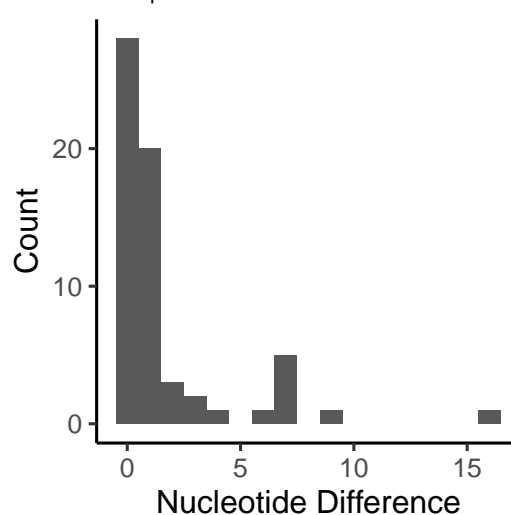
IGHV5-10-1*01_03

12 sequences assigned
1 (8.3%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV7-4-1*01

62 sequences assigned
28 (45.2%) exact matches, in which:
24 unique CDR3
3 unique J





Novel sequence(s) IGHV3-30-3*01_T288C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30*03_T288C 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.

Warning - no inferred sequences found.

Warning - no inferred sequences found.

Novel sequence(s) IGHV3-33*01_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-33*01_G75C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3-30*03_T288C IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.

Warning - no inferred sequences found.

Warning - no inferred sequences found.

Novel sequence(s) IGHV1-69*04_09_G112A IGHV4-59*02_G88A IGHV5-10-1*01_03_T258C IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.

Novel sequence(s) IGHV1-69*08_C191T IGHV3-48*03_T303G IGHV4-59*02_G88A IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.

Warning - no inferred sequences found.