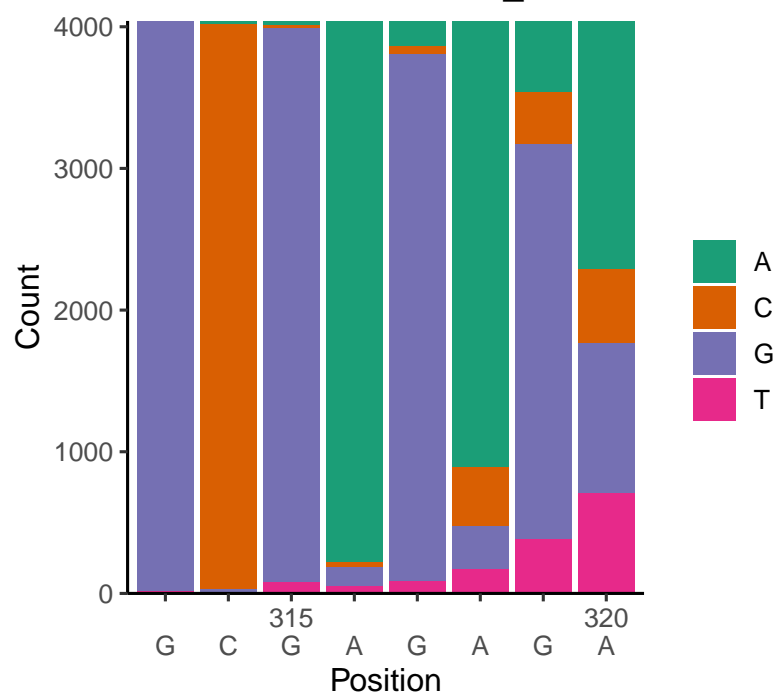
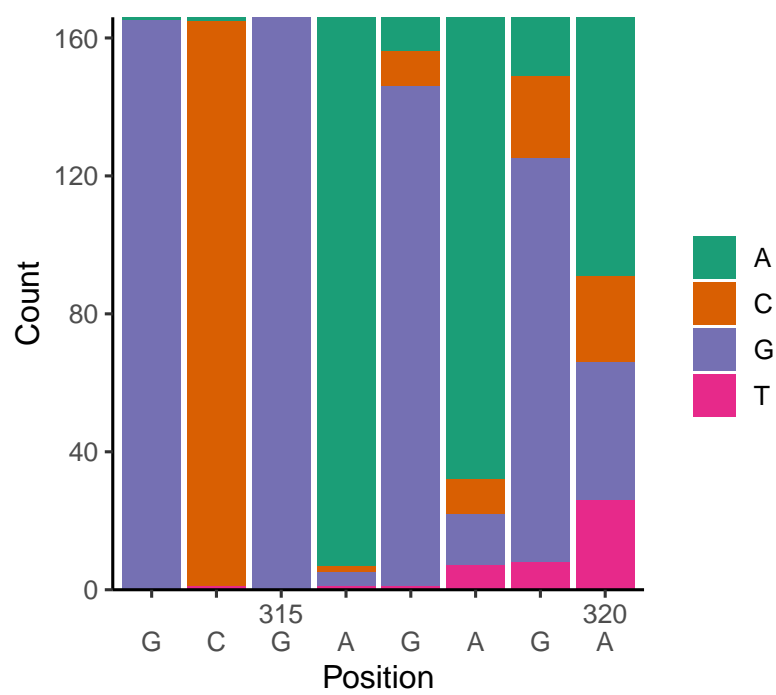


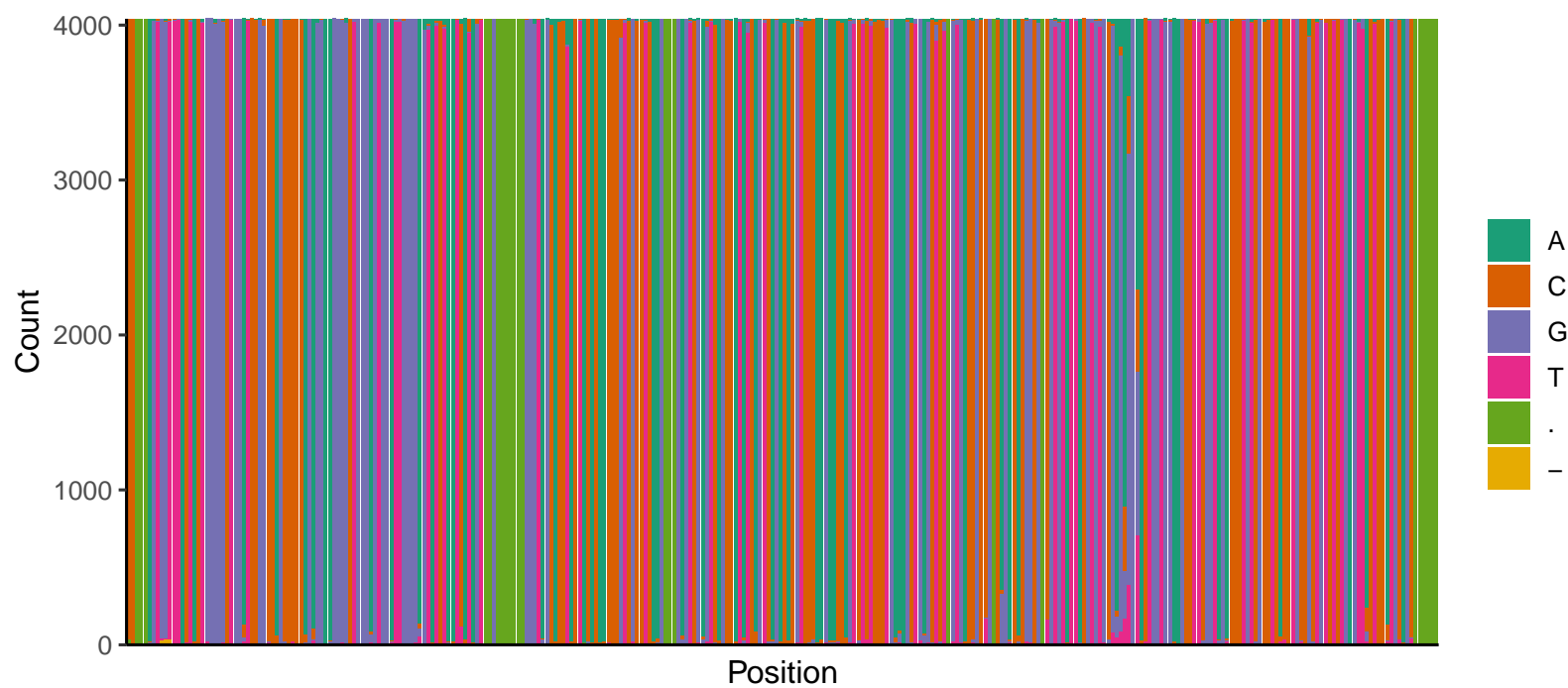
Gene IGHV4-38-2*02_A70G



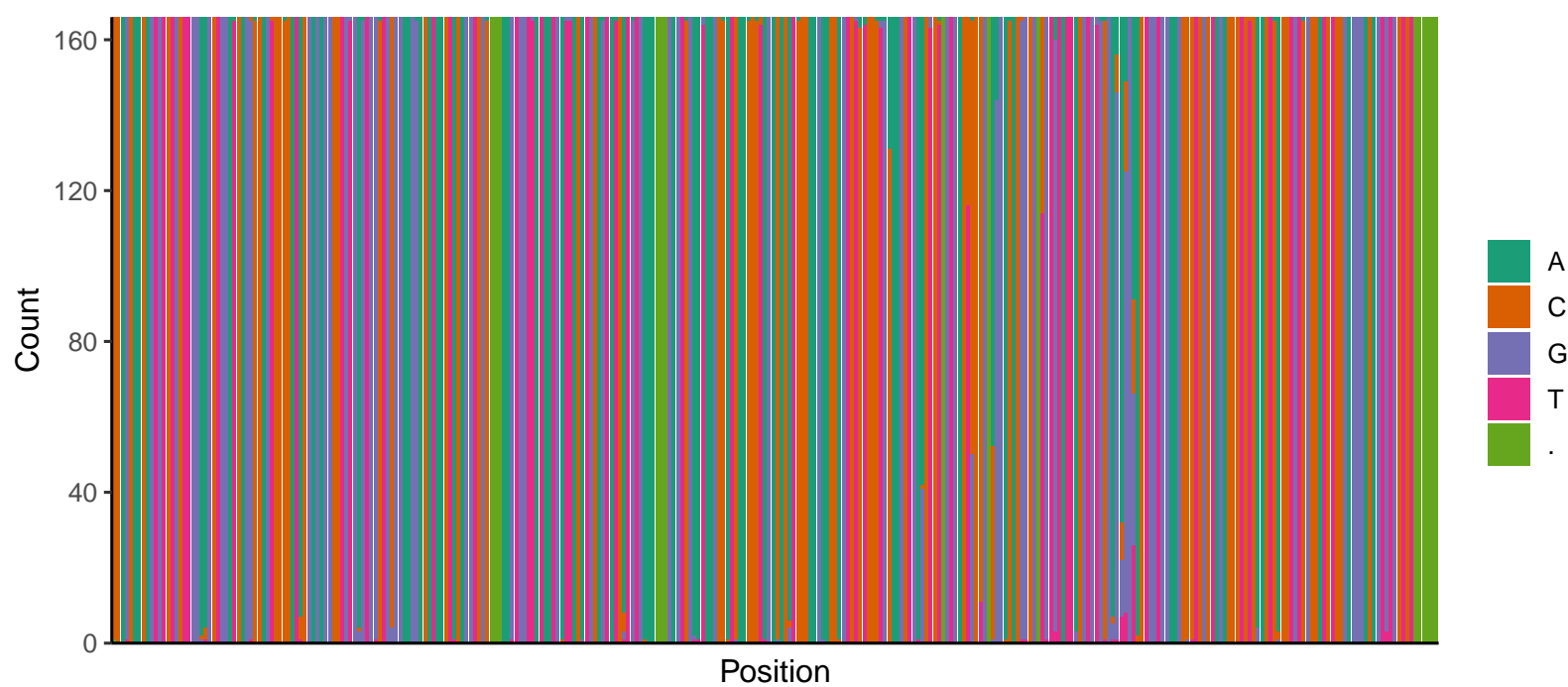
Gene IGHV6-1*01_A315G



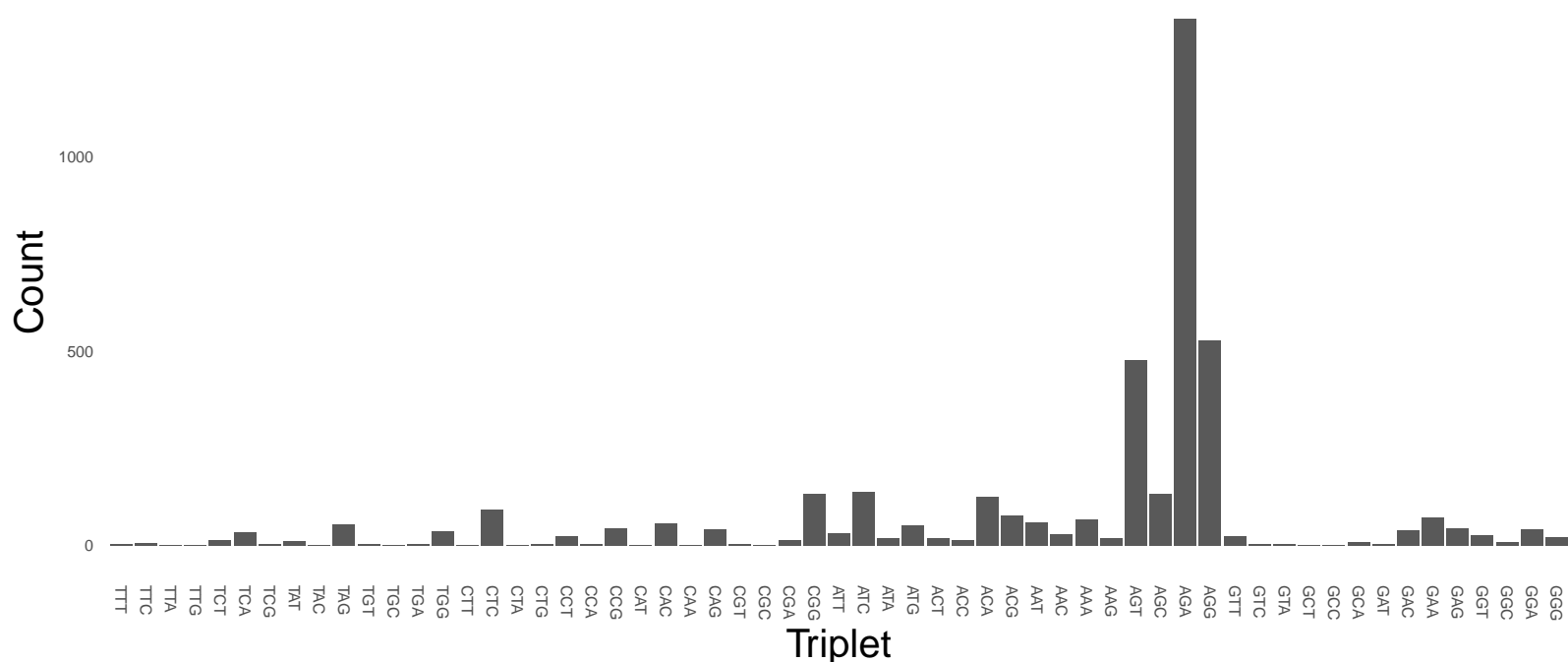
Gene IGHV4-38-2*02_A70G



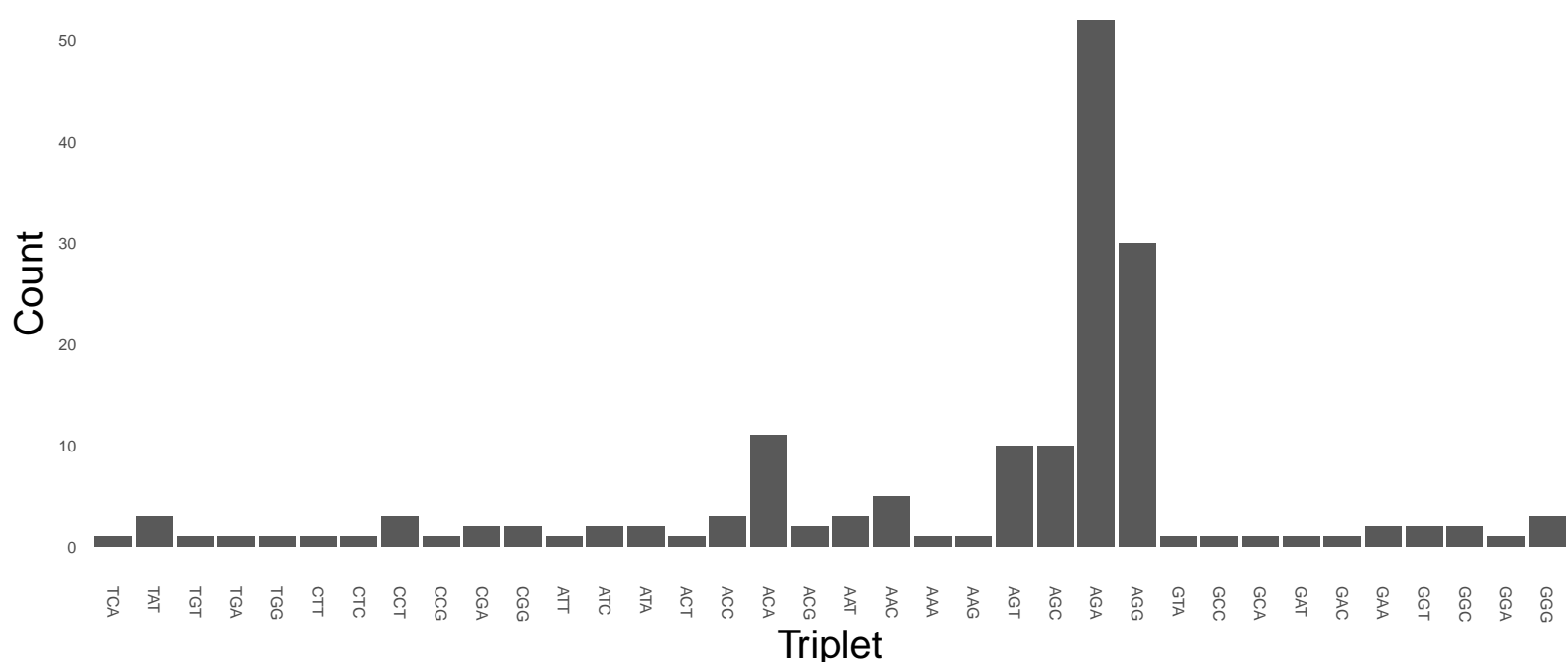
Gene IGHV6-1*01_A315G



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

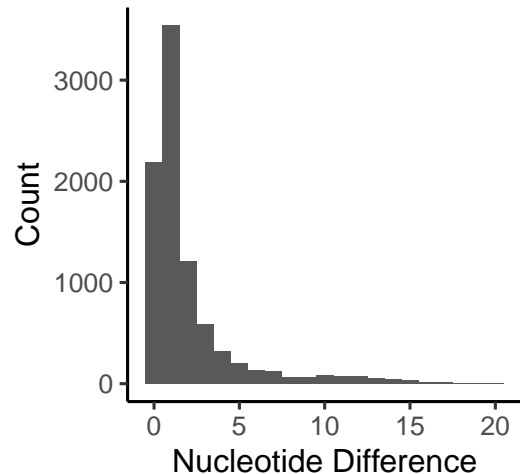


IGHV6-1*01_A315G- Final 3 nucleotides as a triplet



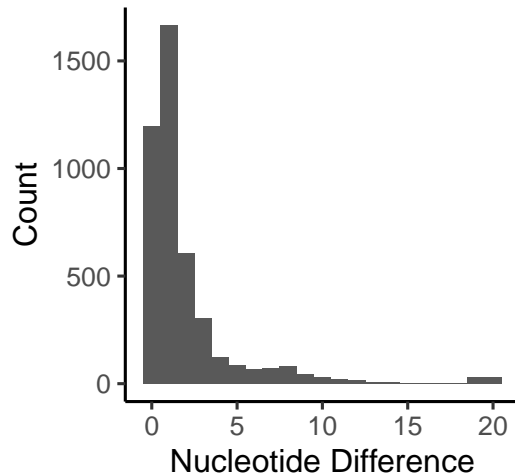
IGHV1-2*02

8861 sequences assigned
2185 (24.7%) exact matches, in which:
1740 unique CDR3
7 unique J



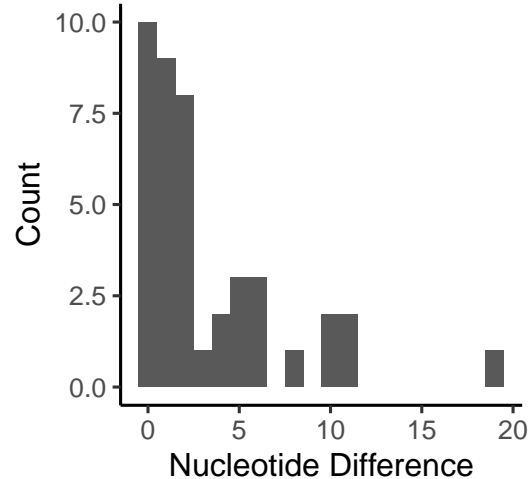
IGHV1-8*01

4436 sequences assigned
1199 (27%) exact matches, in which:
1005 unique CDR3
7 unique J



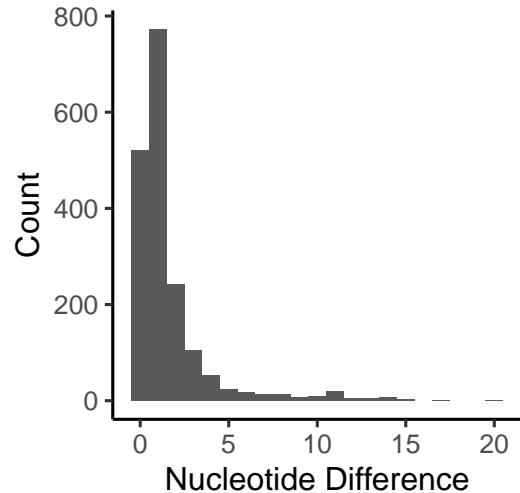
IGHV1-45*03

43 sequences assigned
10 (23.3%) exact matches, in which:
7 unique CDR3
4 unique J



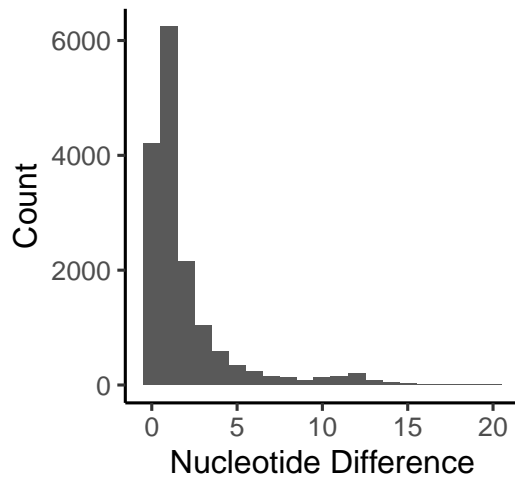
IGHV1-2*04

1832 sequences assigned
520 (28.4%) exact matches, in which:
431 unique CDR3
7 unique J



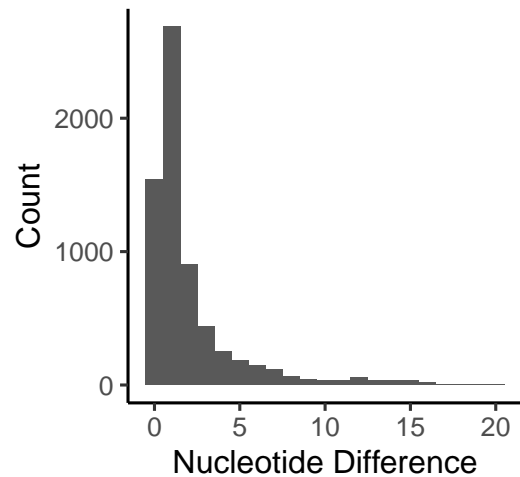
IGHV1-18*01

15911 sequences assigned
4209 (26.5%) exact matches, in which:
3428 unique CDR3
7 unique J



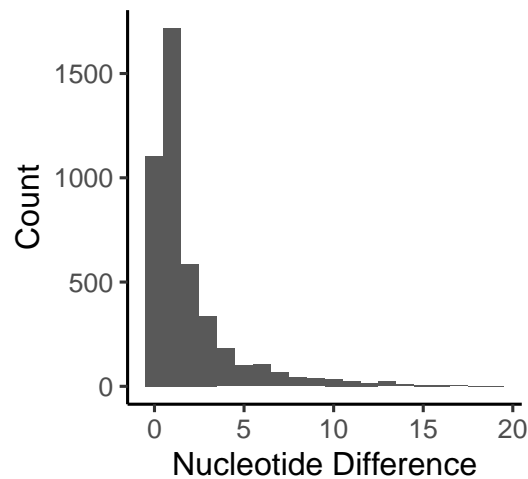
IGHV1-46*01

6663 sequences assigned
1544 (23.2%) exact matches, in which:
1241 unique CDR3
7 unique J



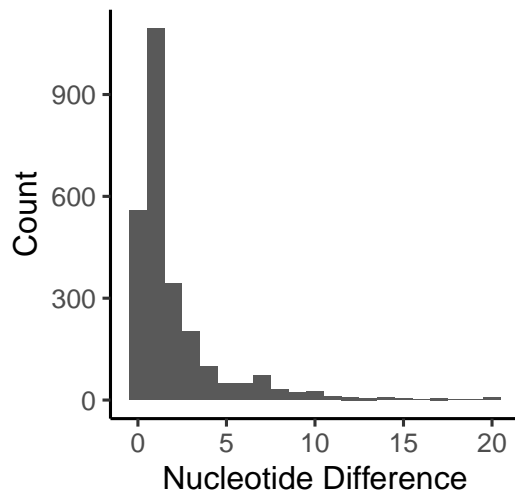
IGHV1-3*01

4419 sequences assigned
1105 (25%) exact matches, in which:
920 unique CDR3
7 unique J



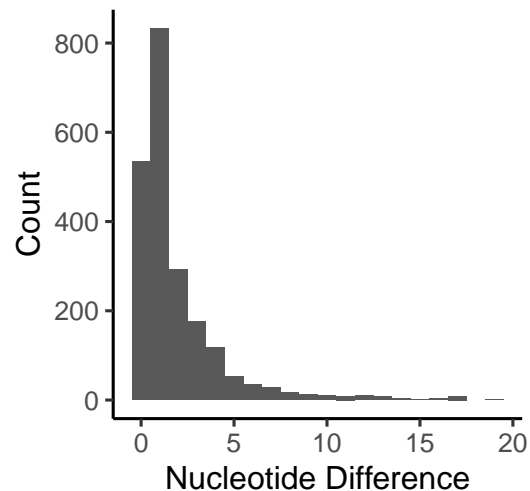
IGHV1-24*01

2622 sequences assigned
559 (21.3%) exact matches, in which:
428 unique CDR3
7 unique J



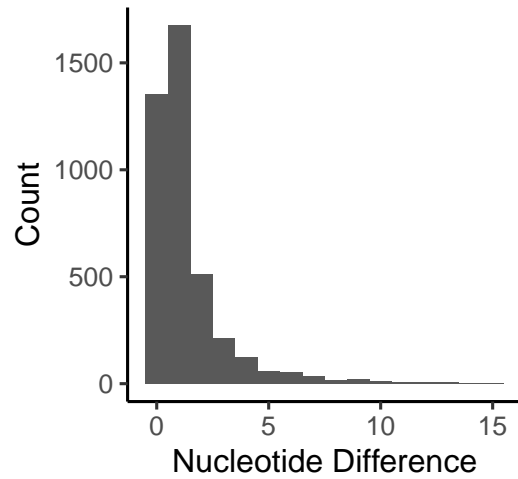
IGHV1-58*02

2160 sequences assigned
534 (24.7%) exact matches, in which:
423 unique CDR3
7 unique J



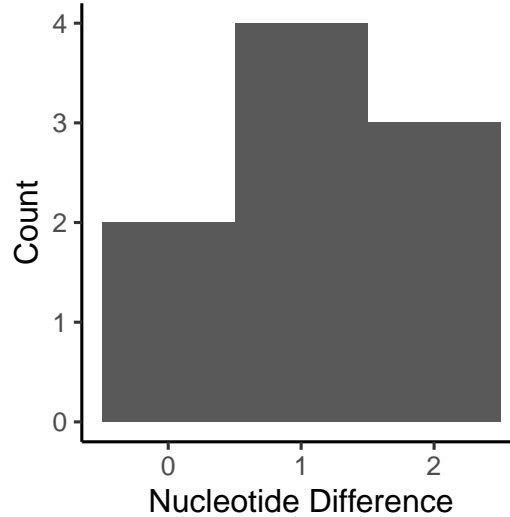
IGHV1-69*02

4094 sequences assigned
1355 (33.1%) exact matches, in which:
1087 unique CDR3
7 unique J



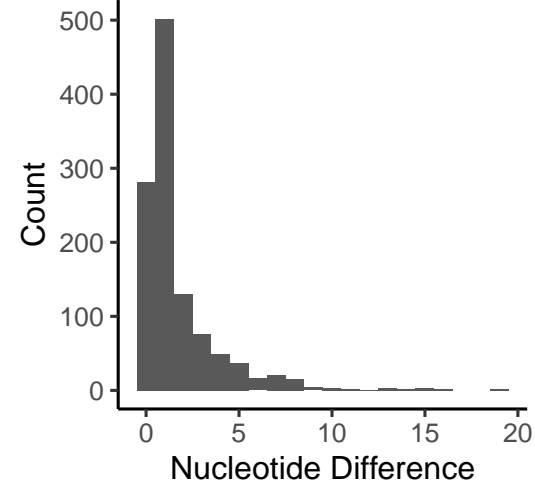
IGHV1-69D*01

9 sequences assigned
2 (22.2%) exact matches, in which:
2 unique CDR3
1 unique J



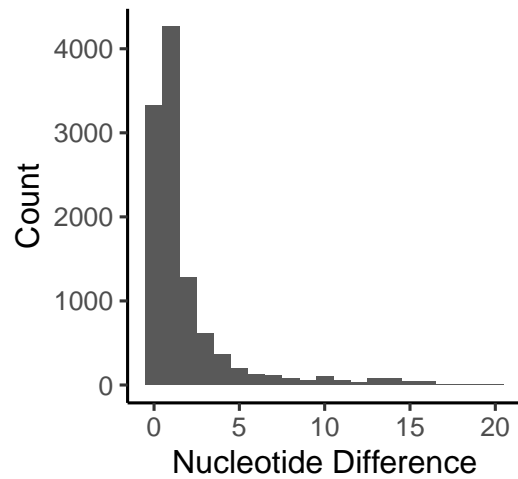
IGHV2-70*15

1169 sequences assigned
281 (24%) exact matches, in which:
227 unique CDR3
7 unique J



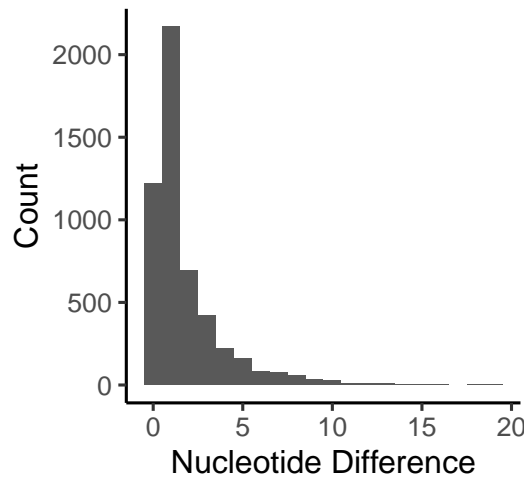
IGHV1-69*04

10878 sequences assigned
3321 (30.5%) exact matches, in which:
2698 unique CDR3
7 unique J



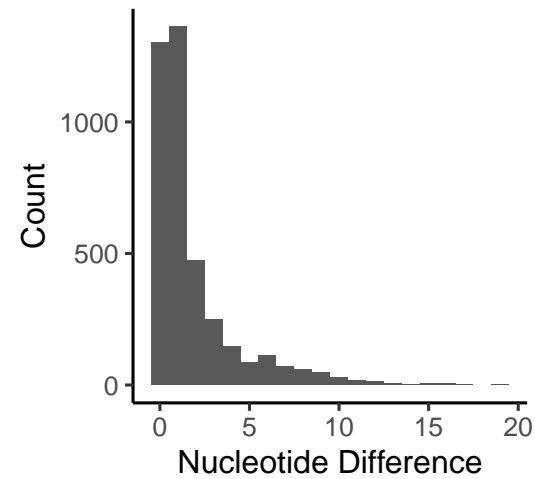
IGHV2-5*02

5229 sequences assigned
1221 (23.4%) exact matches, in which:
957 unique CDR3
7 unique J



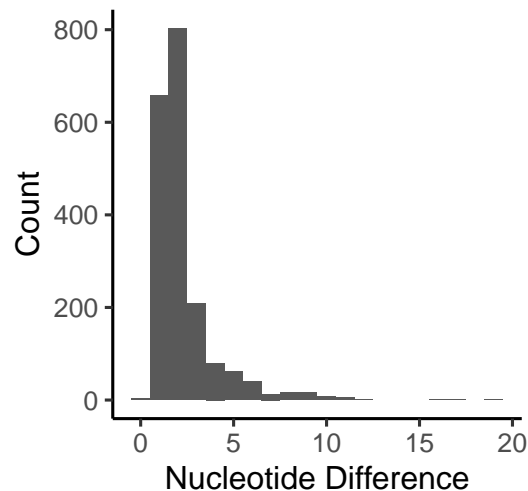
IGHV3-7*01

4001 sequences assigned
1304 (32.6%) exact matches, in which:
1105 unique CDR3
7 unique J



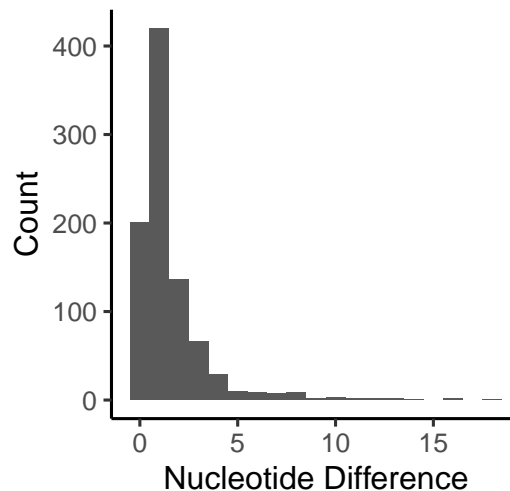
IGHV1-69*08

1922 sequences assigned
4 (0.2%) exact matches, in which:
4 unique CDR3
4 unique J



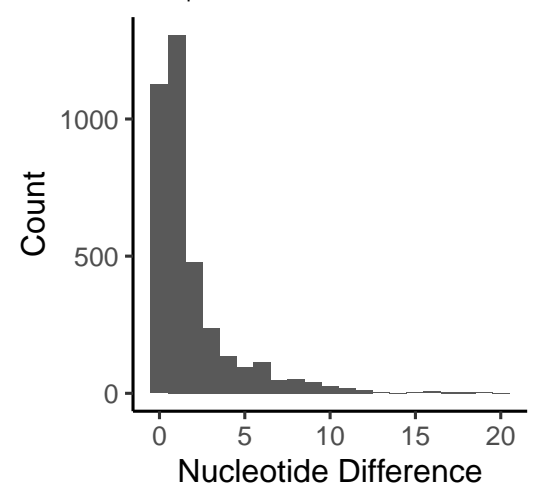
IGHV2-26*01

915 sequences assigned
201 (22%) exact matches, in which:
153 unique CDR3
6 unique J



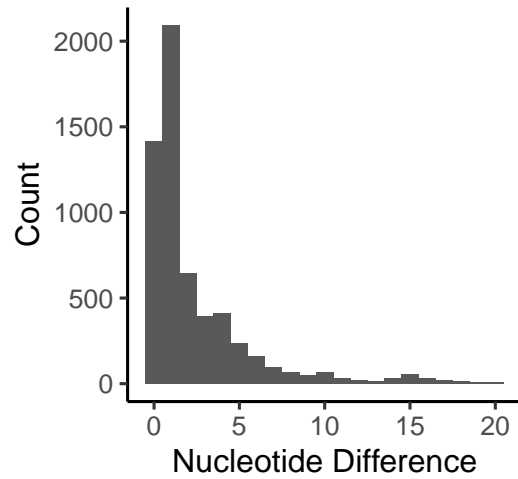
IGHV3-7*03

3739 sequences assigned
1126 (30.1%) exact matches, in which:
950 unique CDR3
7 unique J



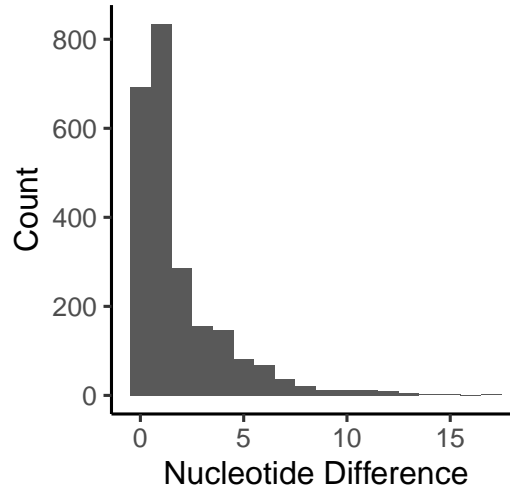
IGHV3-9*01

5906 sequences assigned
1418 (24%) exact matches, in which:
1099 unique CDR3
7 unique J



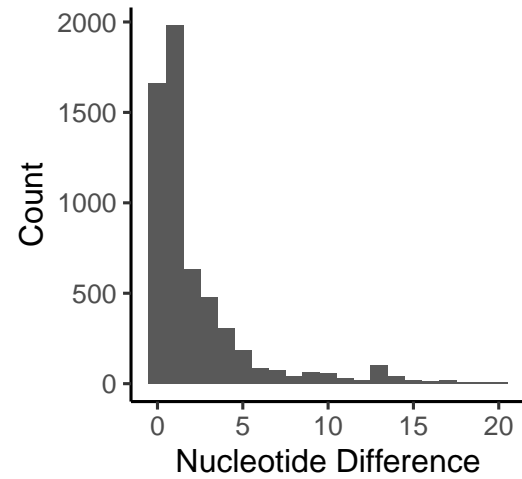
IGHV3-11*06

2400 sequences assigned
693 (28.9%) exact matches, in which:
539 unique CDR3
7 unique J



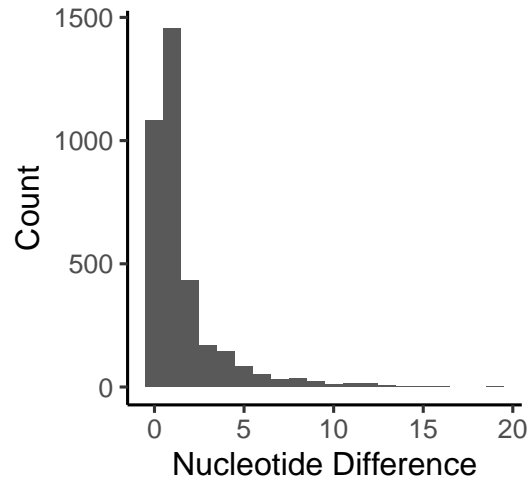
IGHV3-15*01

5898 sequences assigned
1663 (28.2%) exact matches, in which:
1308 unique CDR3
7 unique J



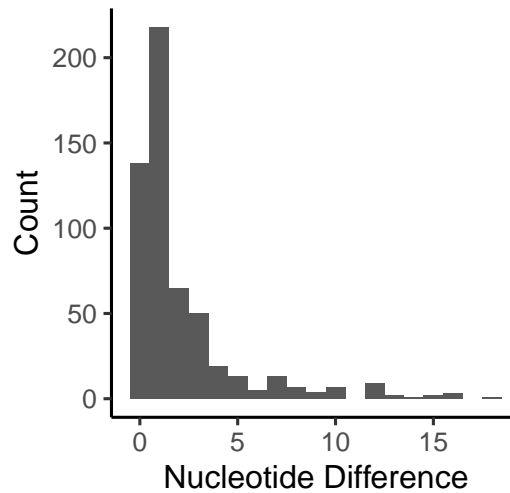
IGHV3-11*01

3570 sequences assigned
1080 (30.3%) exact matches, in which:
864 unique CDR3
7 unique J



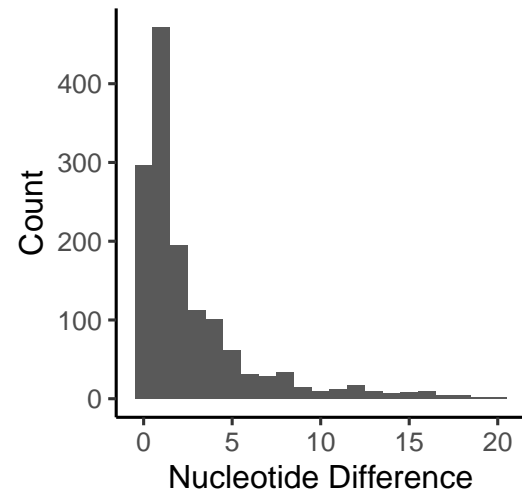
IGHV3-13*01

560 sequences assigned
138 (24.6%) exact matches, in which:
103 unique CDR3
6 unique J



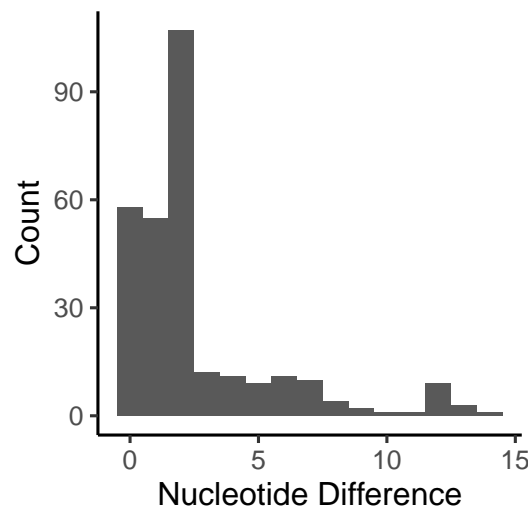
IGHV3-20*04

1435 sequences assigned
296 (20.6%) exact matches, in which:
245 unique CDR3
7 unique J



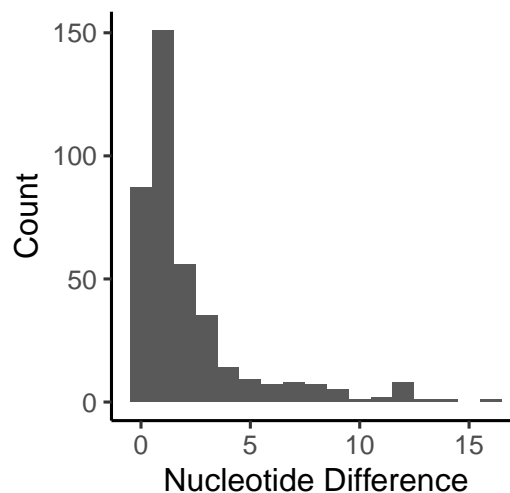
IGHV3-11*04

316 sequences assigned
58 (18.4%) exact matches, in which:
58 unique CDR3
7 unique J



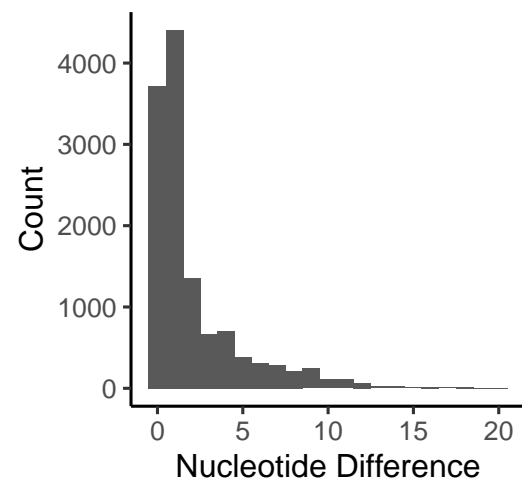
IGHV3-13*05

393 sequences assigned
87 (22.1%) exact matches, in which:
67 unique CDR3
5 unique J



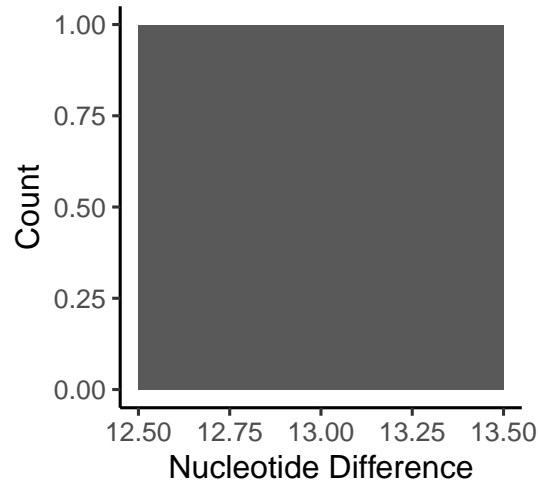
IGHV3-21*01

12723 sequences assigned
3721 (29.2%) exact matches, in which:
2965 unique CDR3
7 unique J



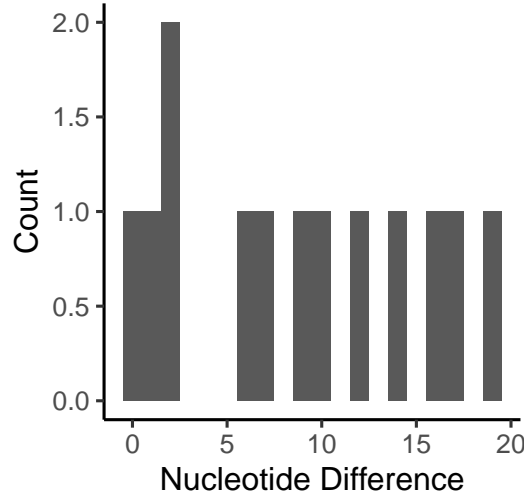
IGHV3-22*02

1 sequences assigned
No exact matches.



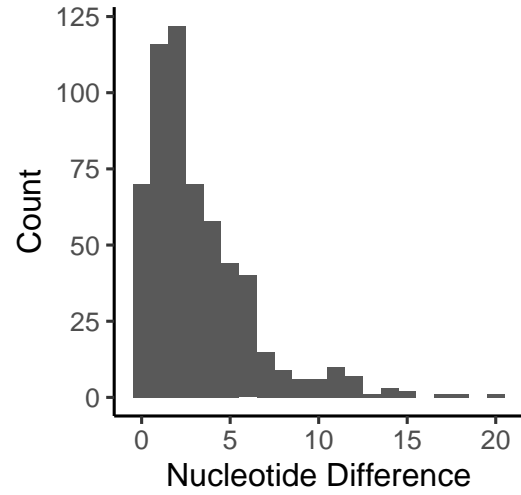
IGHV3-30-5*01

14 sequences assigned
1 (7.1%) exact matches, in which:
1 unique CDR3
1 unique J



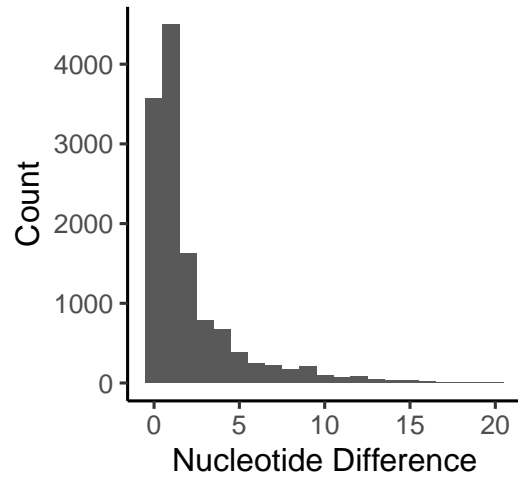
IGHV3-30*07

584 sequences assigned
70 (12%) exact matches, in which:
70 unique CDR3
6 unique J



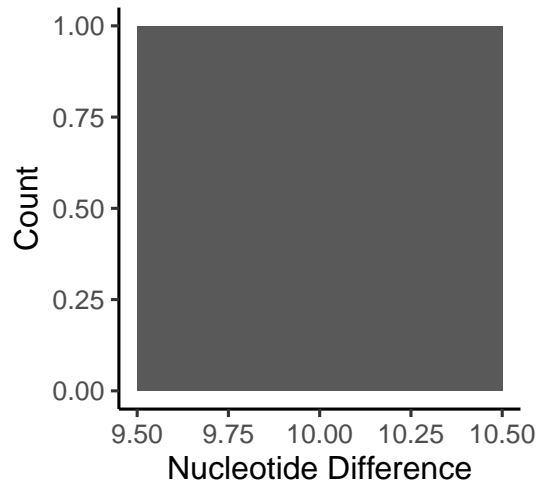
IGHV3-23*03

12791 sequences assigned
3564 (27.9%) exact matches, in which:
2936 unique CDR3
7 unique J



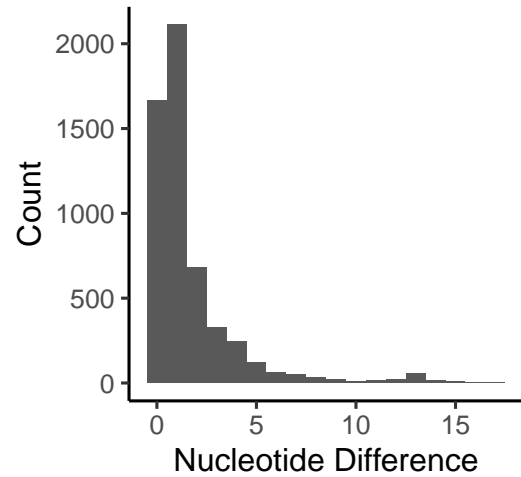
IGHV3-30-5*02

1 sequences assigned
No exact matches.



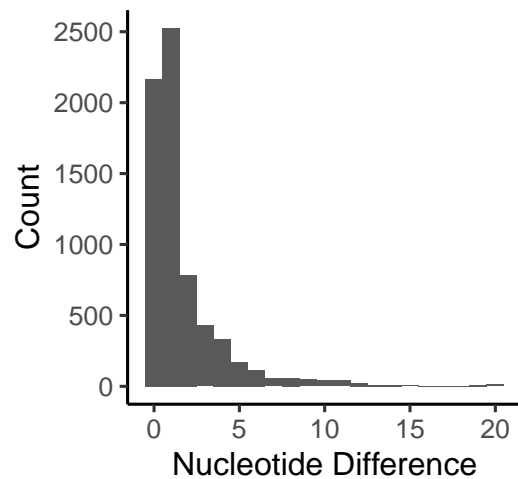
IGHV3-33*01

5446 sequences assigned
1663 (30.5%) exact matches, in which:
1350 unique CDR3
7 unique J



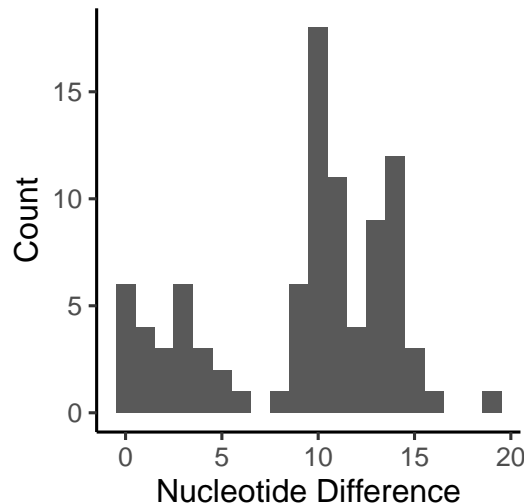
IGHV3-30*01

6866 sequences assigned
2168 (31.6%) exact matches, in which:
1743 unique CDR3
7 unique J



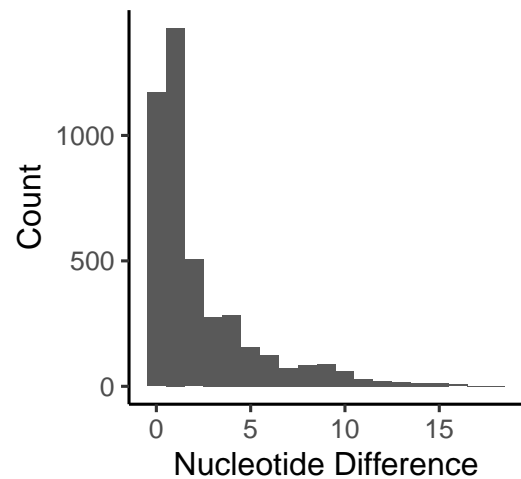
IGHV3-30-3*03

91 sequences assigned
6 (6.6%) exact matches, in which:
6 unique CDR3
2 unique J



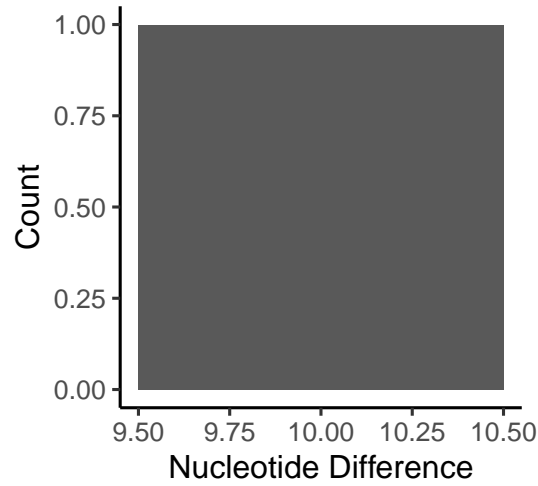
IGHV3-33*08

4367 sequences assigned
1171 (26.8%) exact matches, in which:
934 unique CDR3
7 unique J



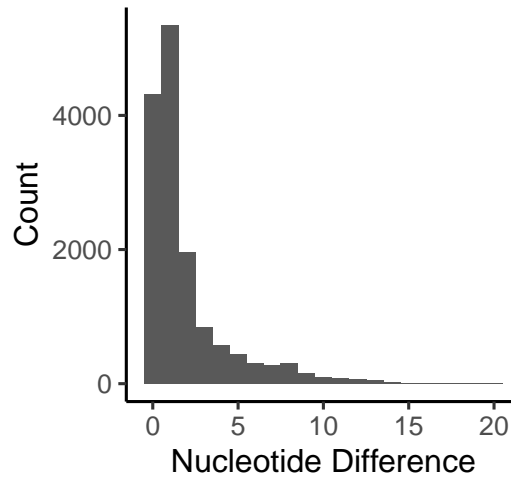
IGHV3-35*01

1 sequences assigned
No exact matches.



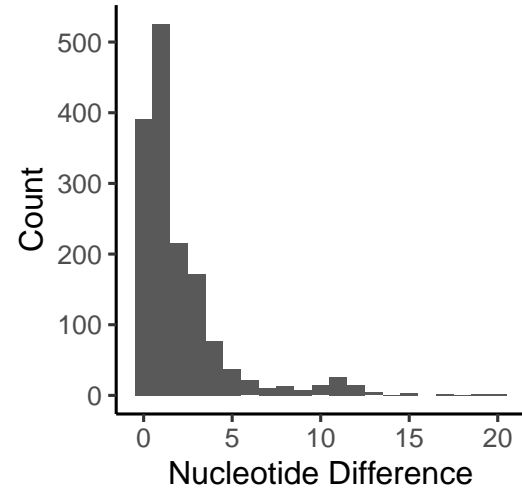
IGHV3-48*03

14915 sequences assigned
4316 (28.9%) exact matches, in which:
3540 unique CDR3
7 unique J



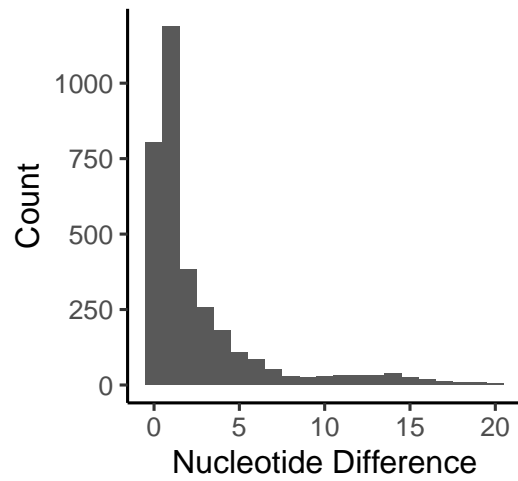
IGHV3-53*04

1551 sequences assigned
391 (25.2%) exact matches, in which:
305 unique CDR3
7 unique J



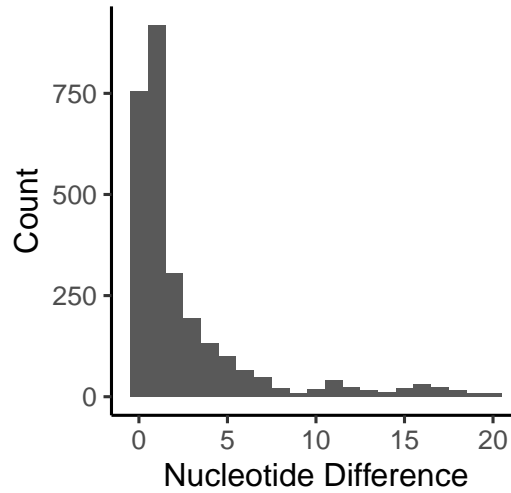
IGHV3-43*02

3355 sequences assigned
804 (24%) exact matches, in which:
650 unique CDR3
7 unique J



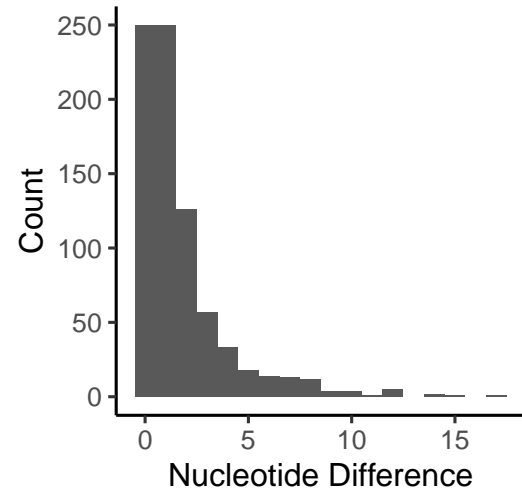
IGHV3-49*04

2782 sequences assigned
756 (27.2%) exact matches, in which:
596 unique CDR3
7 unique J



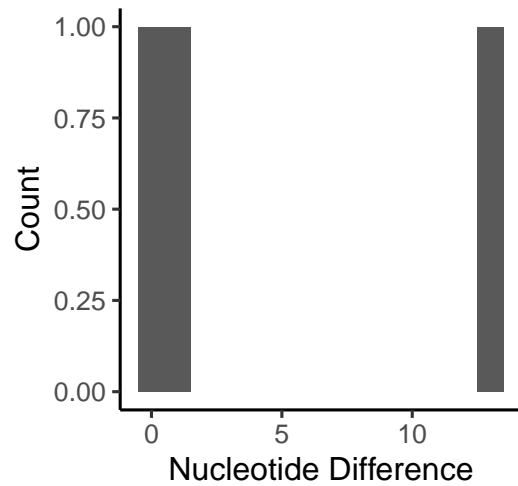
IGHV3-64*01

791 sequences assigned
250 (31.6%) exact matches, in which:
213 unique CDR3
7 unique J



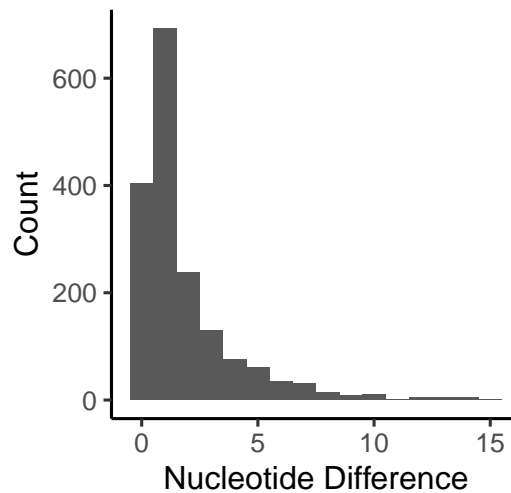
IGHV3-47*01

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



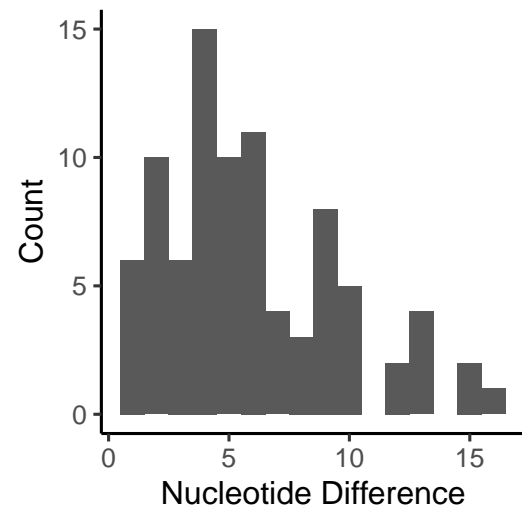
IGHV3-53*02

1717 sequences assigned
404 (23.5%) exact matches, in which:
316 unique CDR3
6 unique J



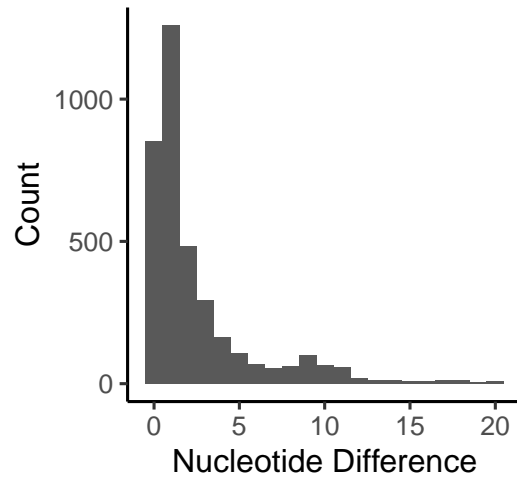
IGHV3-64*04

87 sequences assigned
No exact matches.



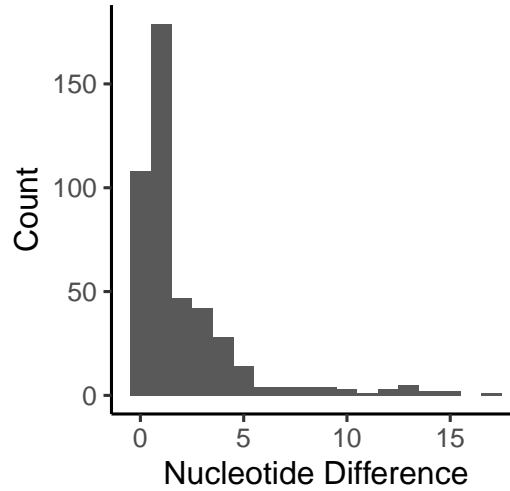
IGHV3-66*01

3700 sequences assigned
852 (23%) exact matches, in which:
672 unique CDR3
7 unique J



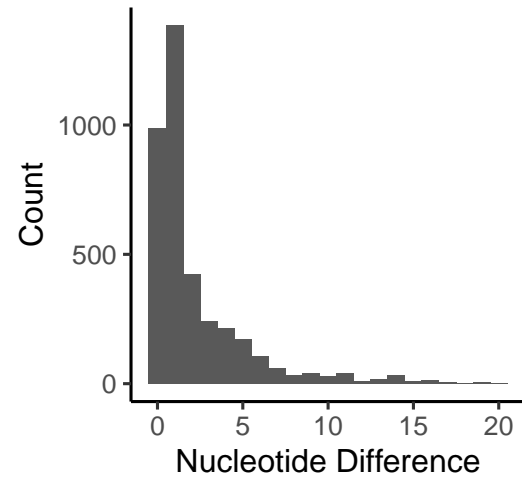
IGHV3-72*01

451 sequences assigned
108 (23.9%) exact matches, in which:
81 unique CDR3
6 unique J



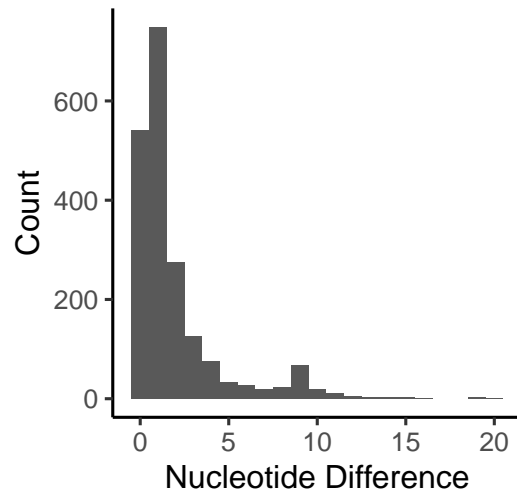
IGHV3-74*01

3839 sequences assigned
988 (25.7%) exact matches, in which:
809 unique CDR3
7 unique J



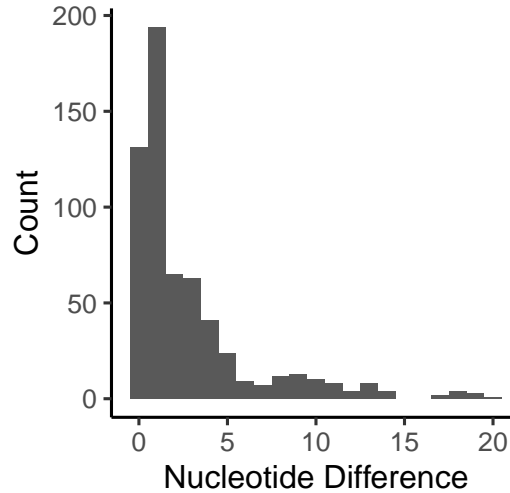
IGHV3-66*02

2002 sequences assigned
541 (27%) exact matches, in which:
422 unique CDR3
7 unique J



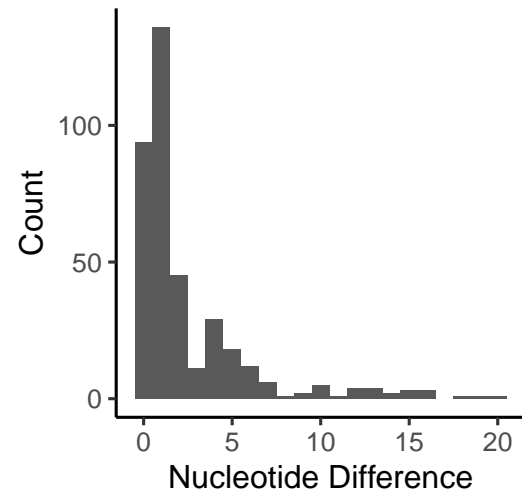
IGHV3-73*01

605 sequences assigned
131 (21.7%) exact matches, in which:
107 unique CDR3
6 unique J



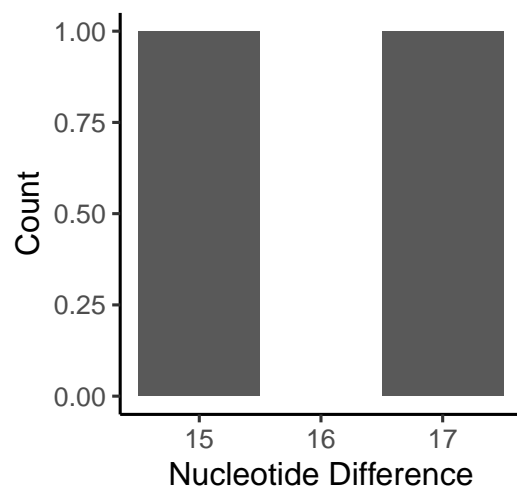
IGHV3-43D*04

380 sequences assigned
94 (24.7%) exact matches, in which:
81 unique CDR3
6 unique J



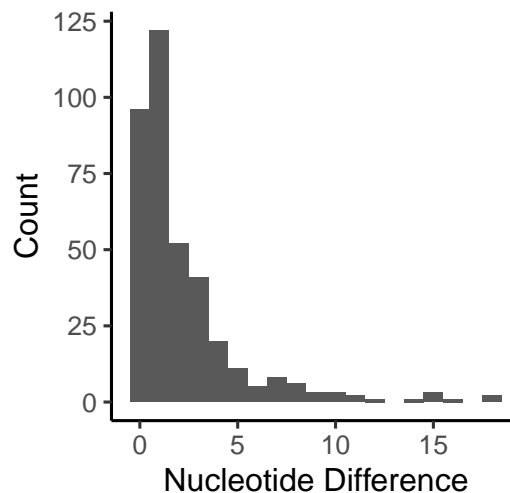
IGHV3-71*04

2 sequences assigned
No exact matches.



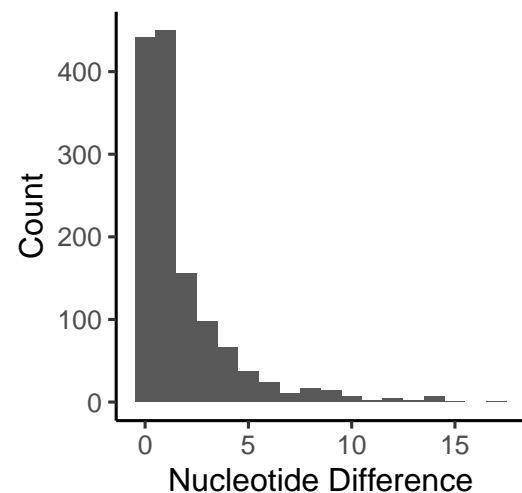
IGHV3-73*02

377 sequences assigned
96 (25.5%) exact matches, in which:
83 unique CDR3
6 unique J



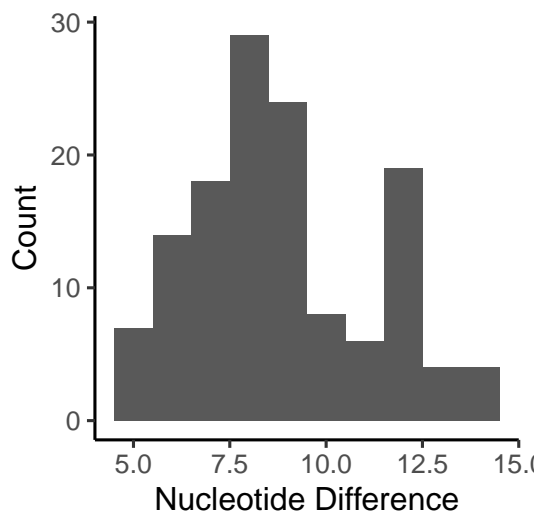
IGHV3-64D*06

1340 sequences assigned
441 (32.9%) exact matches, in which:
370 unique CDR3
7 unique J



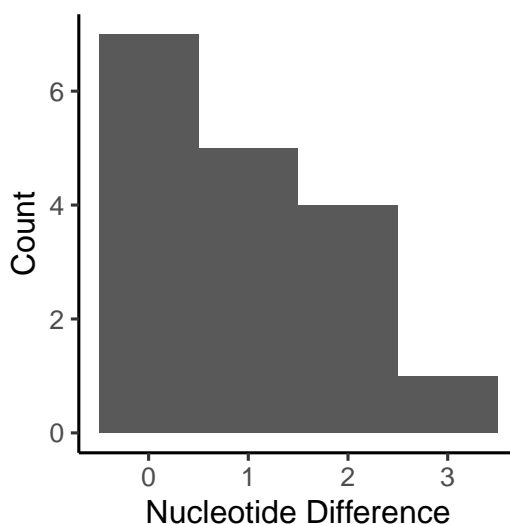
IGHV3–NL1*01

134 sequences assigned
No exact matches.



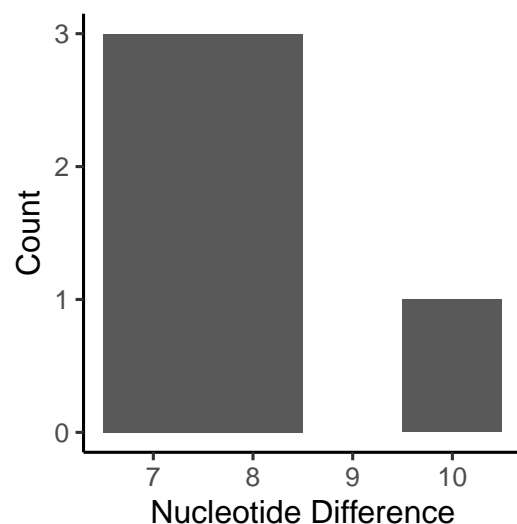
IGHV4–28*02

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



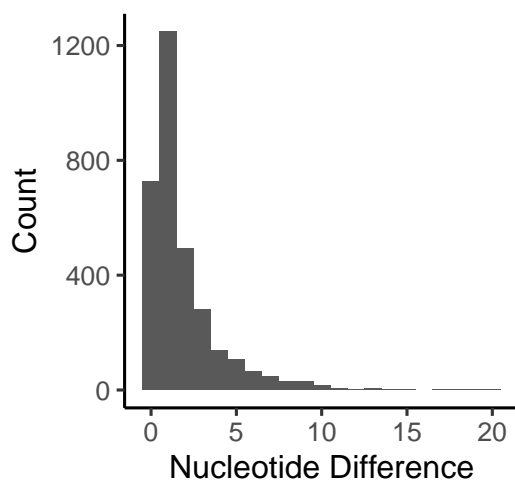
IGHV4–30–4*07

9 sequences assigned
No exact matches.



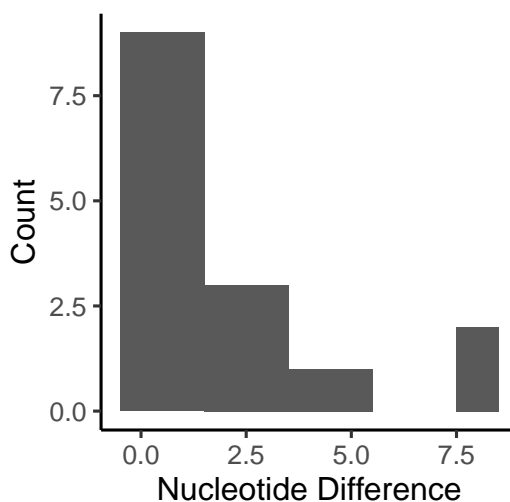
IGHV4–4*02

3221 sequences assigned
726 (22.5%) exact matches, in which:
582 unique CDR3
7 unique J



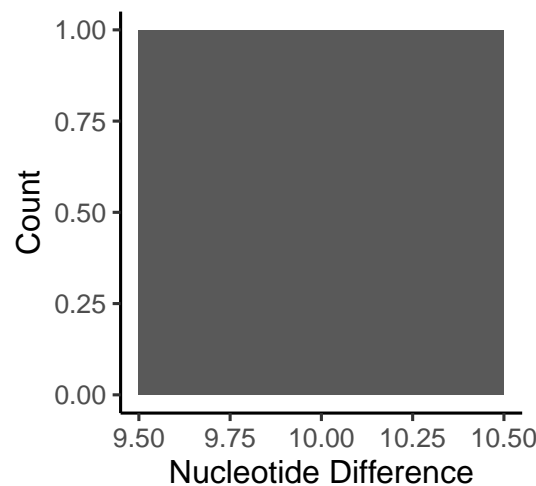
IGHV4–28*07

28 sequences assigned
9 (32.1%) exact matches, in which:
6 unique CDR3
1 unique J



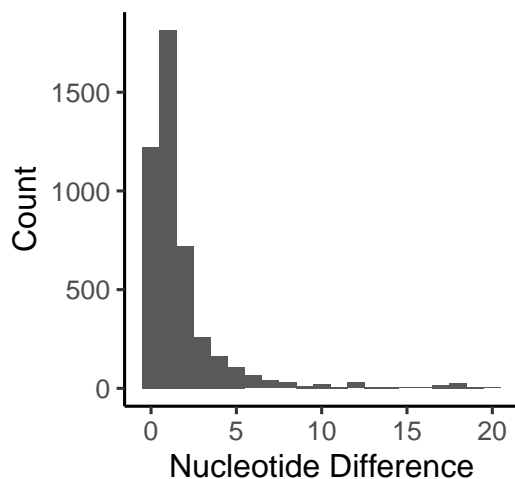
IGHV4–30–4*08

1 sequences assigned
No exact matches.



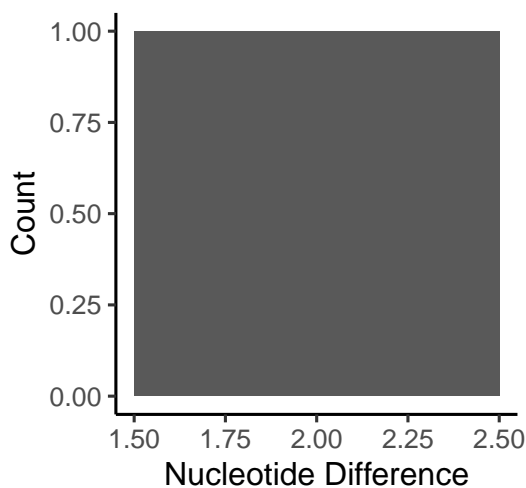
IGHV4–4*07

4583 sequences assigned
1223 (26.7%) exact matches, in which:
993 unique CDR3
7 unique J



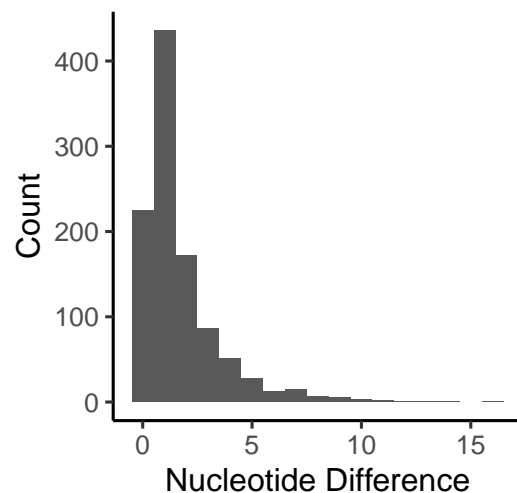
IGHV4–30–2*01

1 sequences assigned
No exact matches.



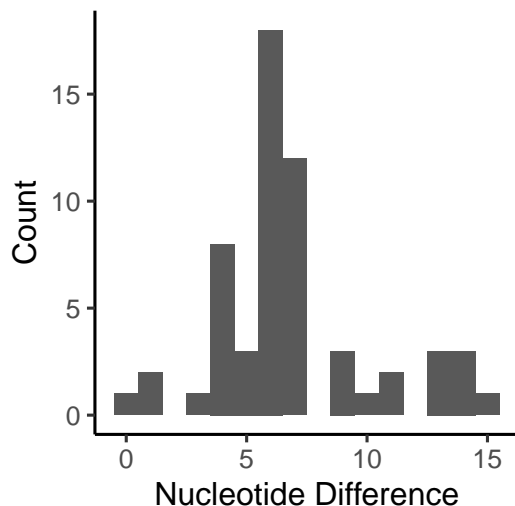
IGHV4–31*01

1053 sequences assigned
225 (21.4%) exact matches, in which:
183 unique CDR3
6 unique J



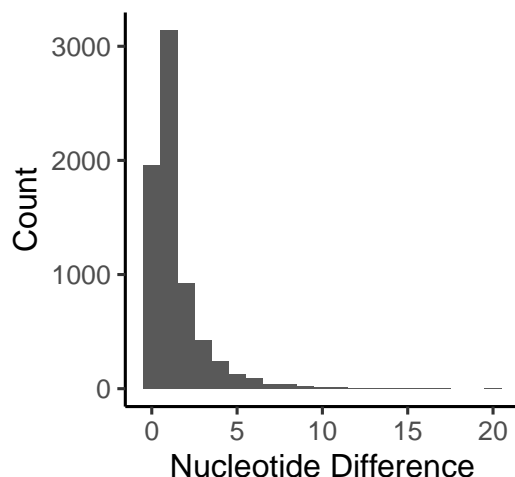
IGHV4-31*03

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



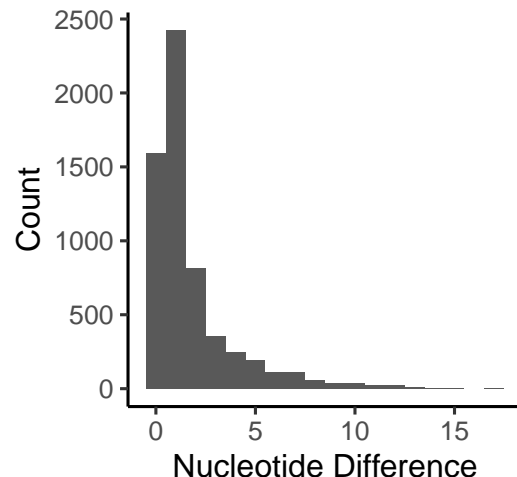
IGHV4-39*01

7063 sequences assigned
1960 (27.8%) exact matches, in which:
1585 unique CDR3
7 unique J



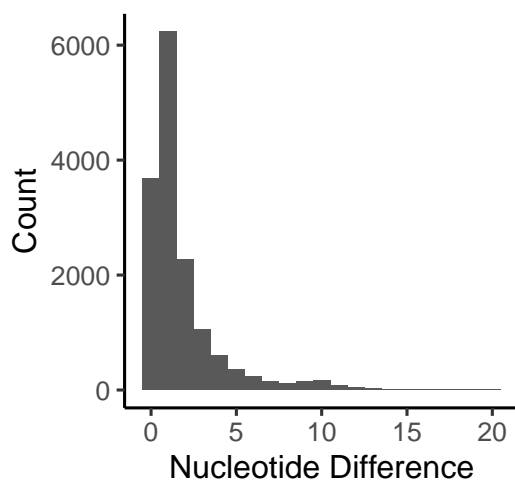
IGHV4-59*08

6063 sequences assigned
1592 (26.3%) exact matches, in which:
1281 unique CDR3
7 unique J



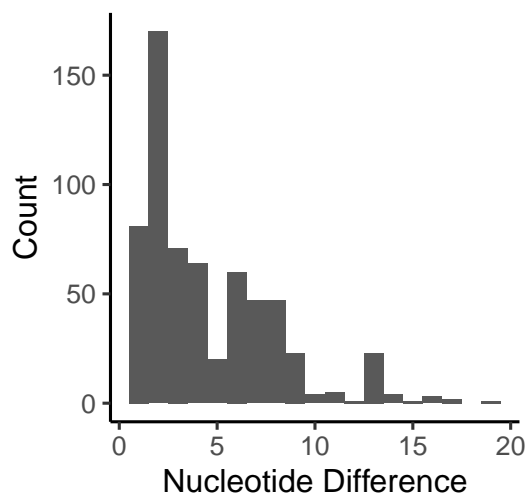
IGHV4-34*01

15263 sequences assigned
3682 (24.1%) exact matches, in which:
2927 unique CDR3
7 unique J



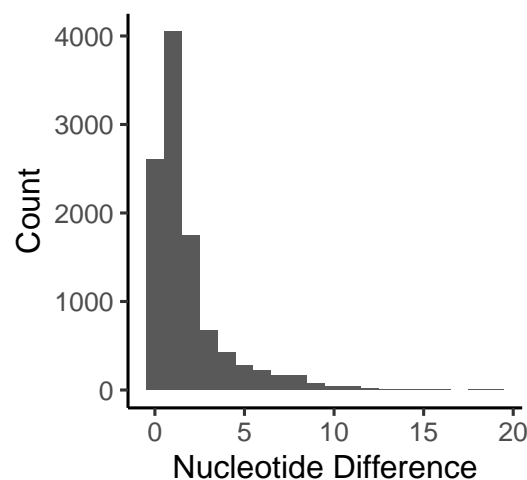
IGHV4-39*07

634 sequences assigned
No exact matches.



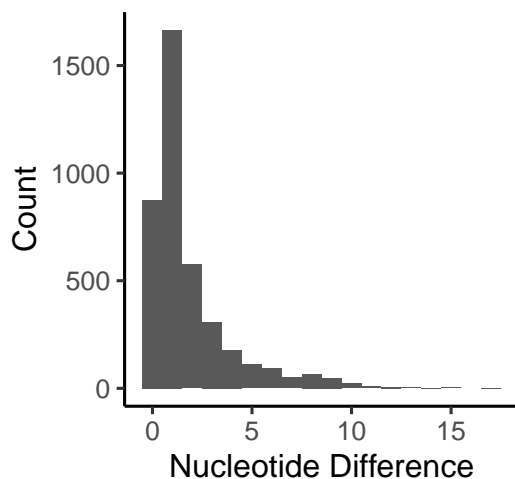
IGHV4-61*02

10483 sequences assigned
2602 (24.8%) exact matches, in which:
2115 unique CDR3
7 unique J



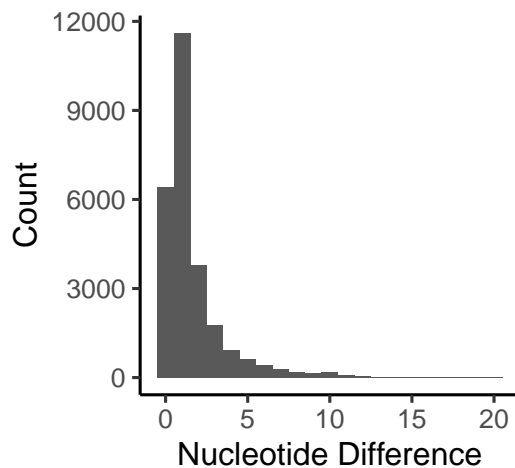
IGHV4-38-2*02_A70G

4041 sequences assigned
875 (21.7%) exact matches, in which:
706 unique CDR3
7 unique J



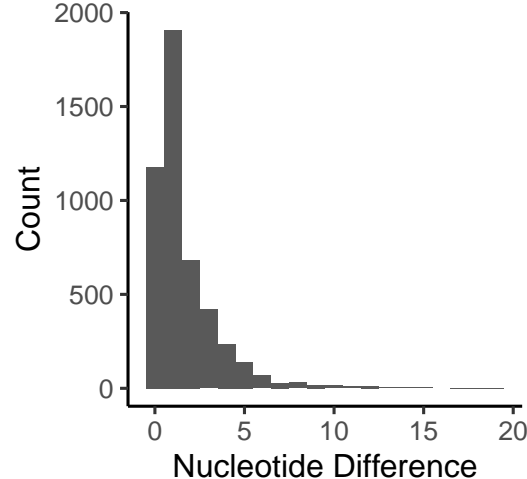
IGHV4-59*01

26636 sequences assigned
6427 (24.1%) exact matches, in which:
4911 unique CDR3
7 unique J



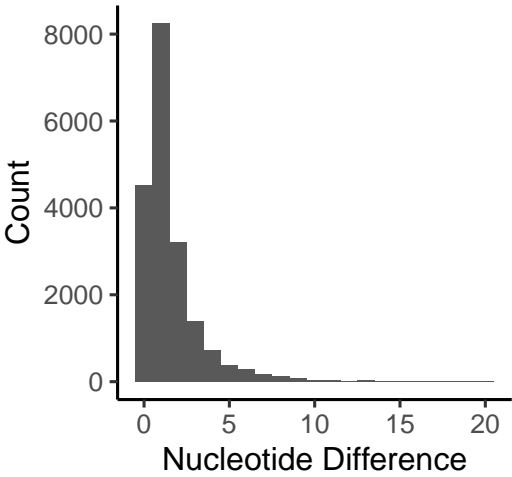
IGHV5-10-1*03

4792 sequences assigned
1177 (24.6%) exact matches, in which:
951 unique CDR3
7 unique J



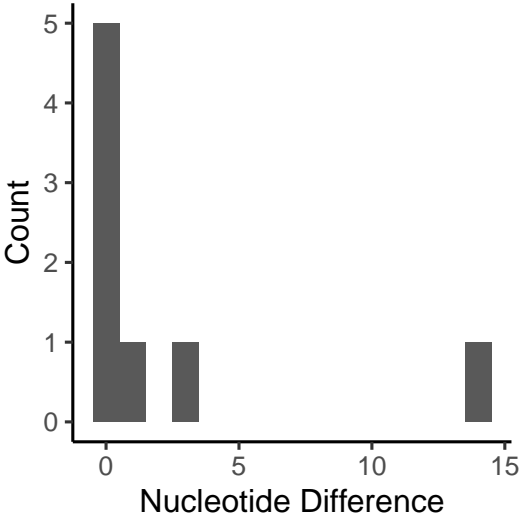
IGHV5-51*01

19385 sequences assigned
4531 (23.4%) exact matches, in which:
3482 unique CDR3
7 unique J



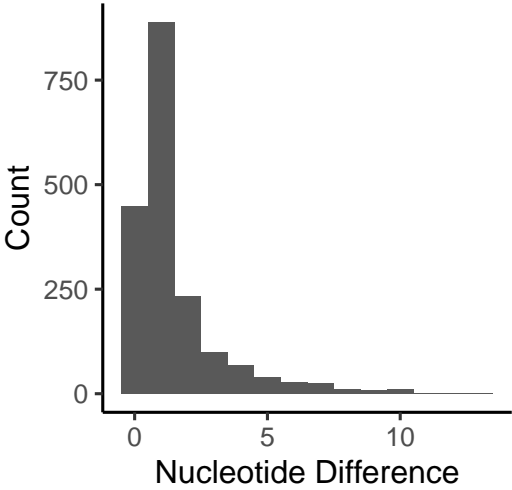
IGHV7-4-1*01

9 sequences assigned
5 (55.6%) exact matches, in which:
5 unique CDR3
1 unique J



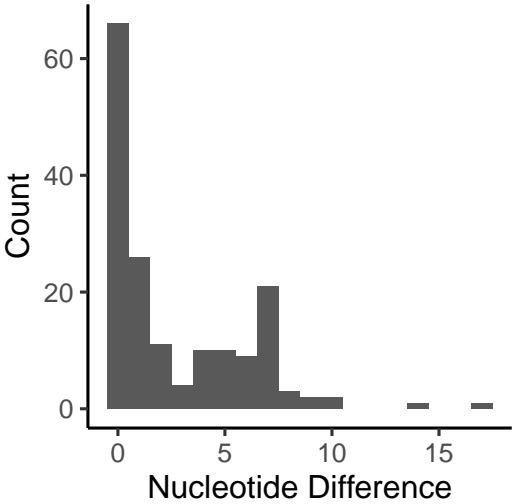
IGHV6-1*01

1871 sequences assigned
449 (24%) exact matches, in which:
326 unique CDR3
6 unique J

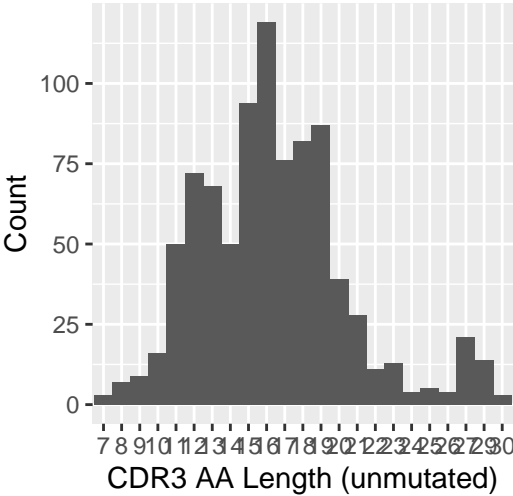


IGHV6-1*01_A315G

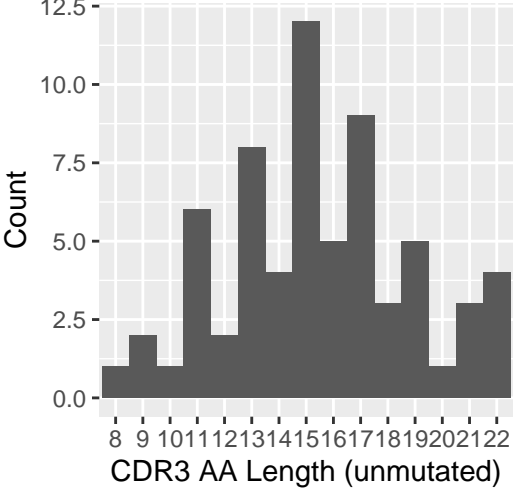
166 sequences assigned
66 (39.8%) exact matches, in which:
65 unique CDR3
6 unique J

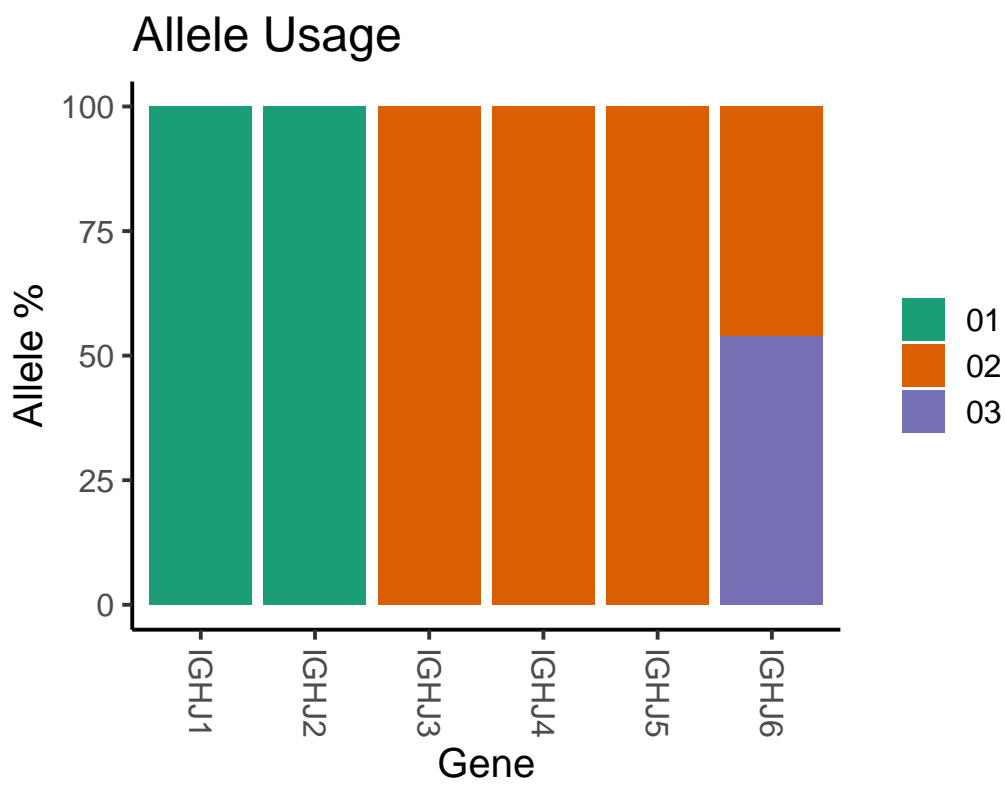


IGHV4-38-2*02_A70G



IGHV6-1*01_A315G





Sequence Count by IGHJ6 allele usage

