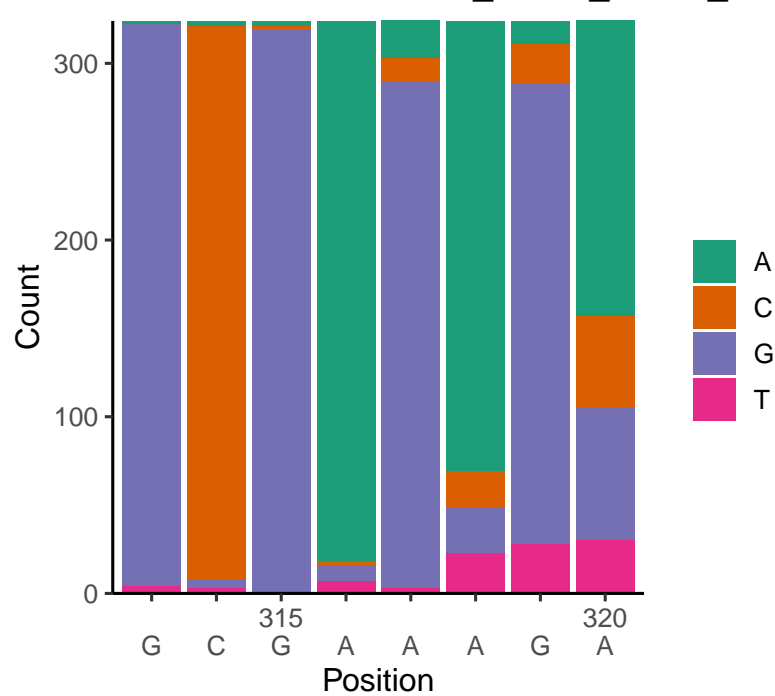
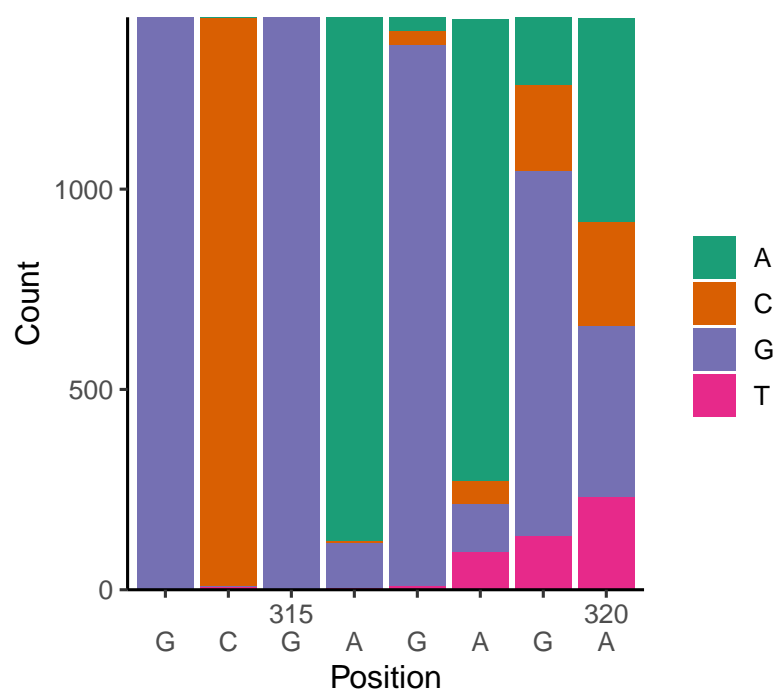


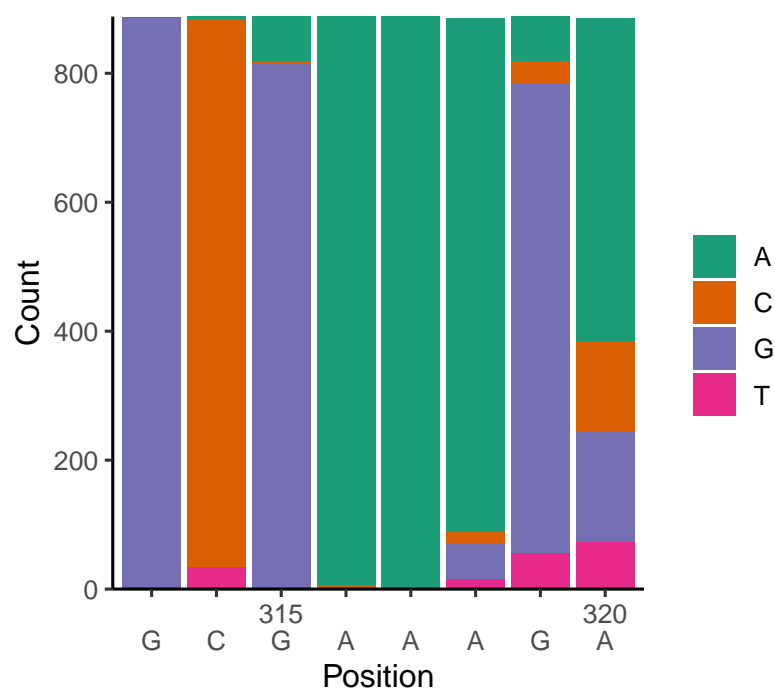
Gene IGHV3-NL1*01_G49A_G75C_T201C_C223A_G267T_T288C



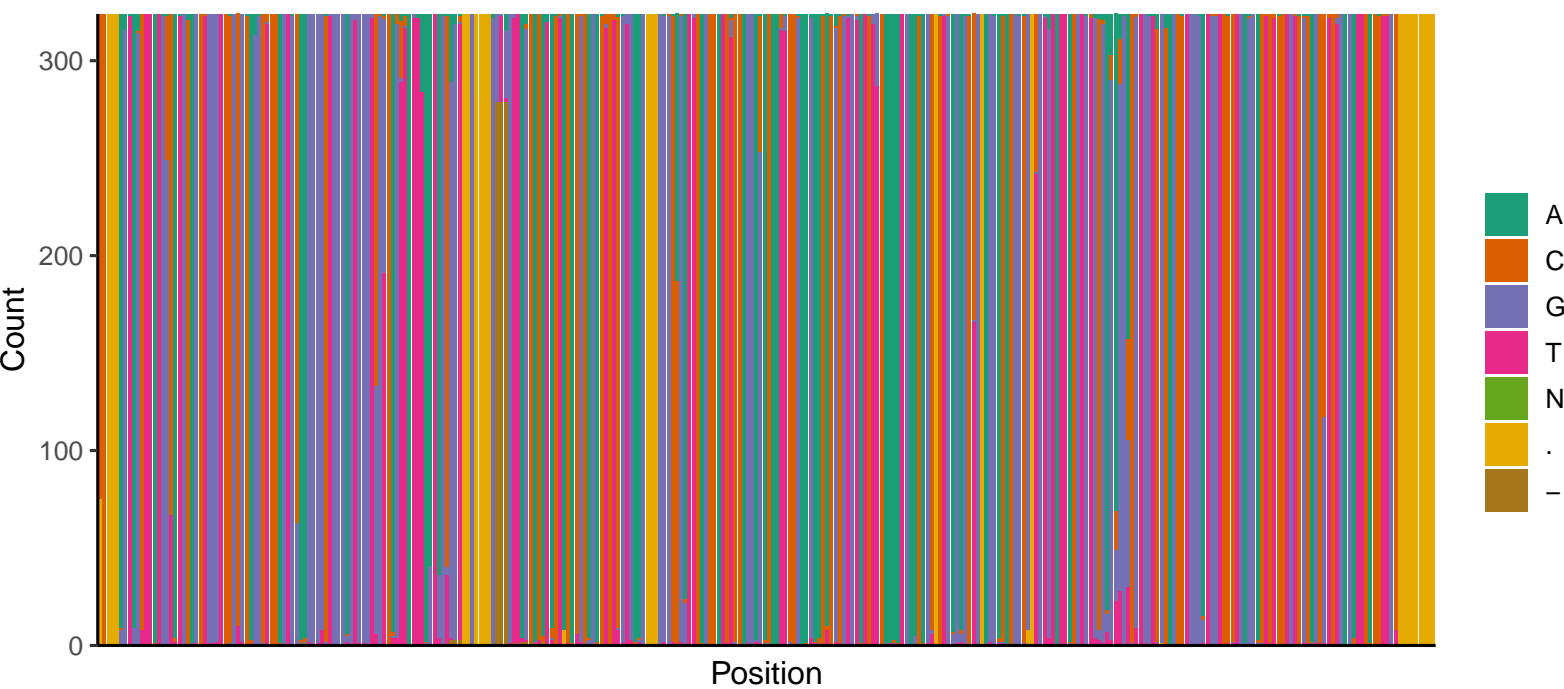
Gene IGHV4-30-2*01_C315G



Gene IGHV3-30-3*02_G75C



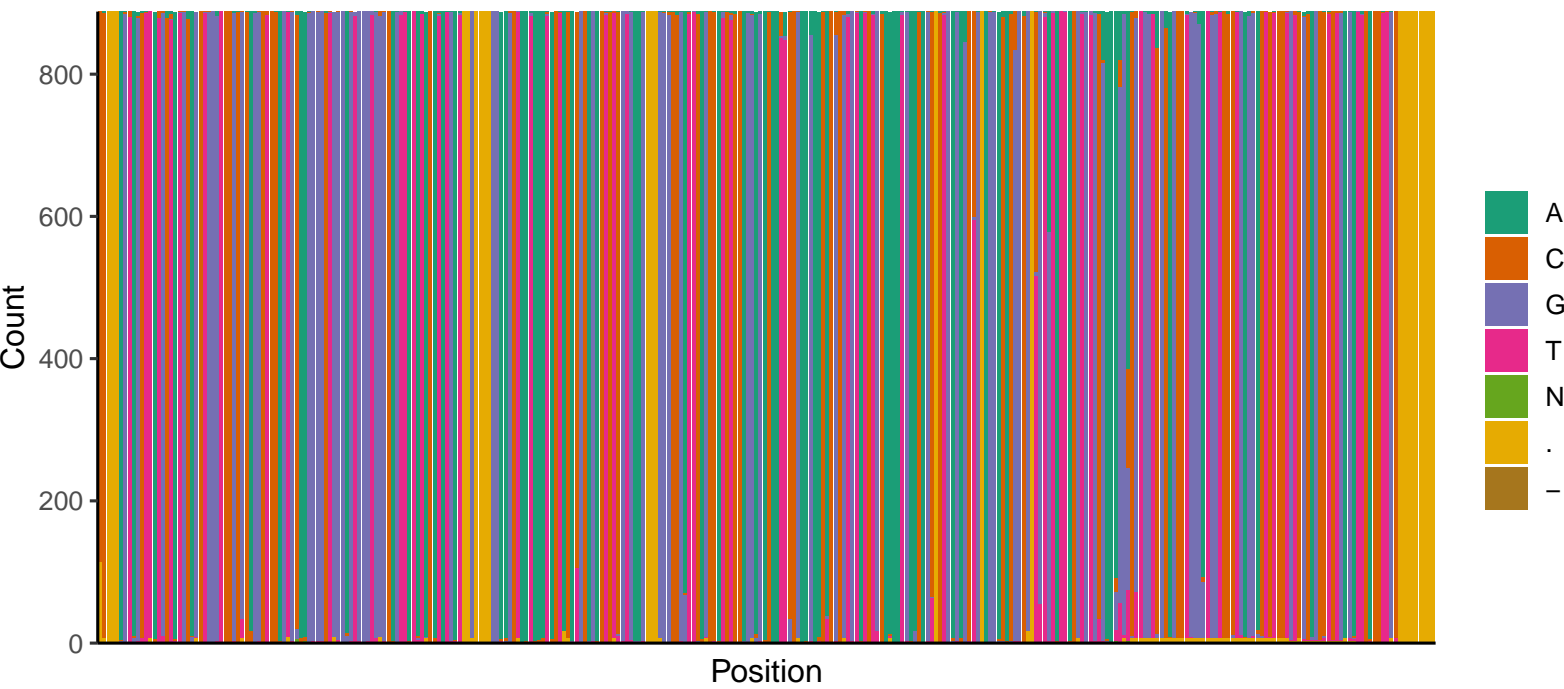
Gene IGHV3–NL1*01_G49A_G75C_T201C_C223A_G267T_T288C



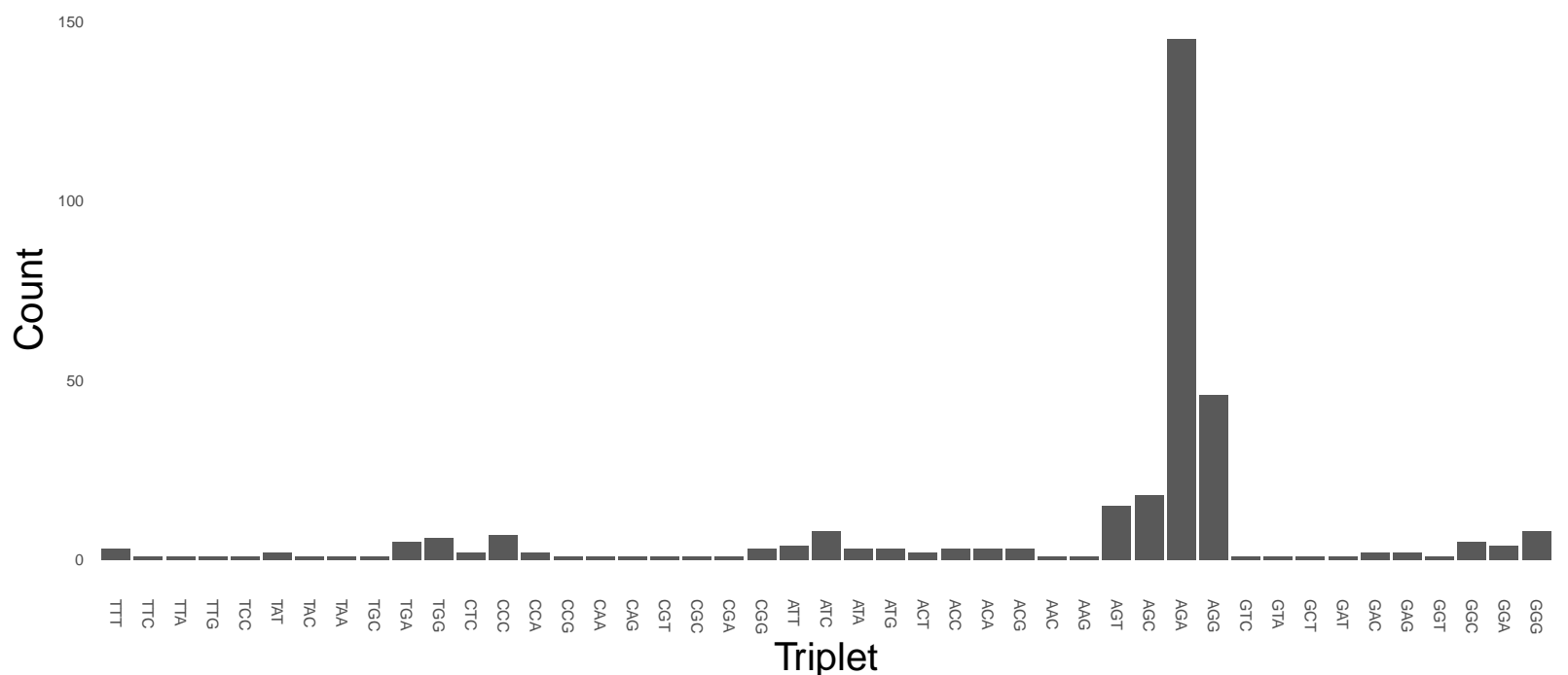
Gene IGHV4–30–2*01_C315G



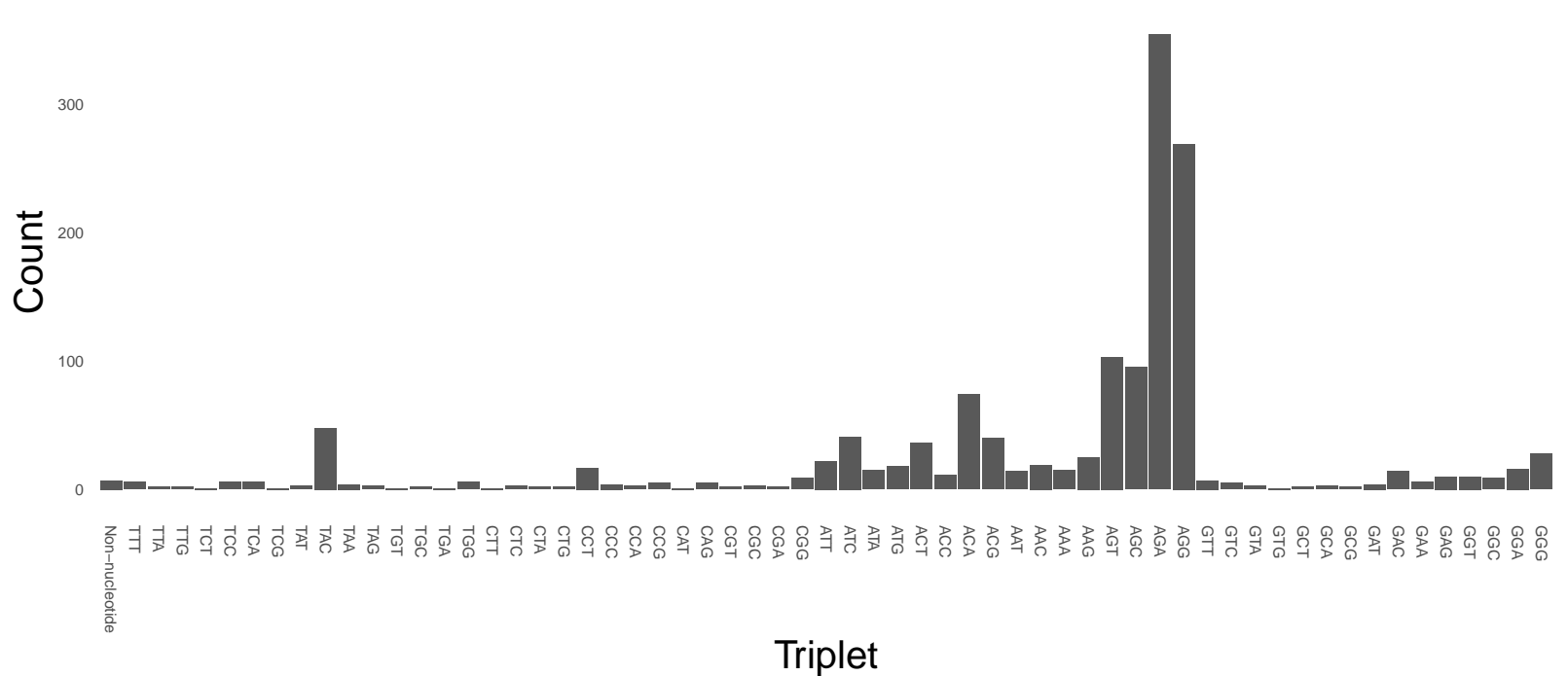
Gene IGHV3–30–3*02_G75C



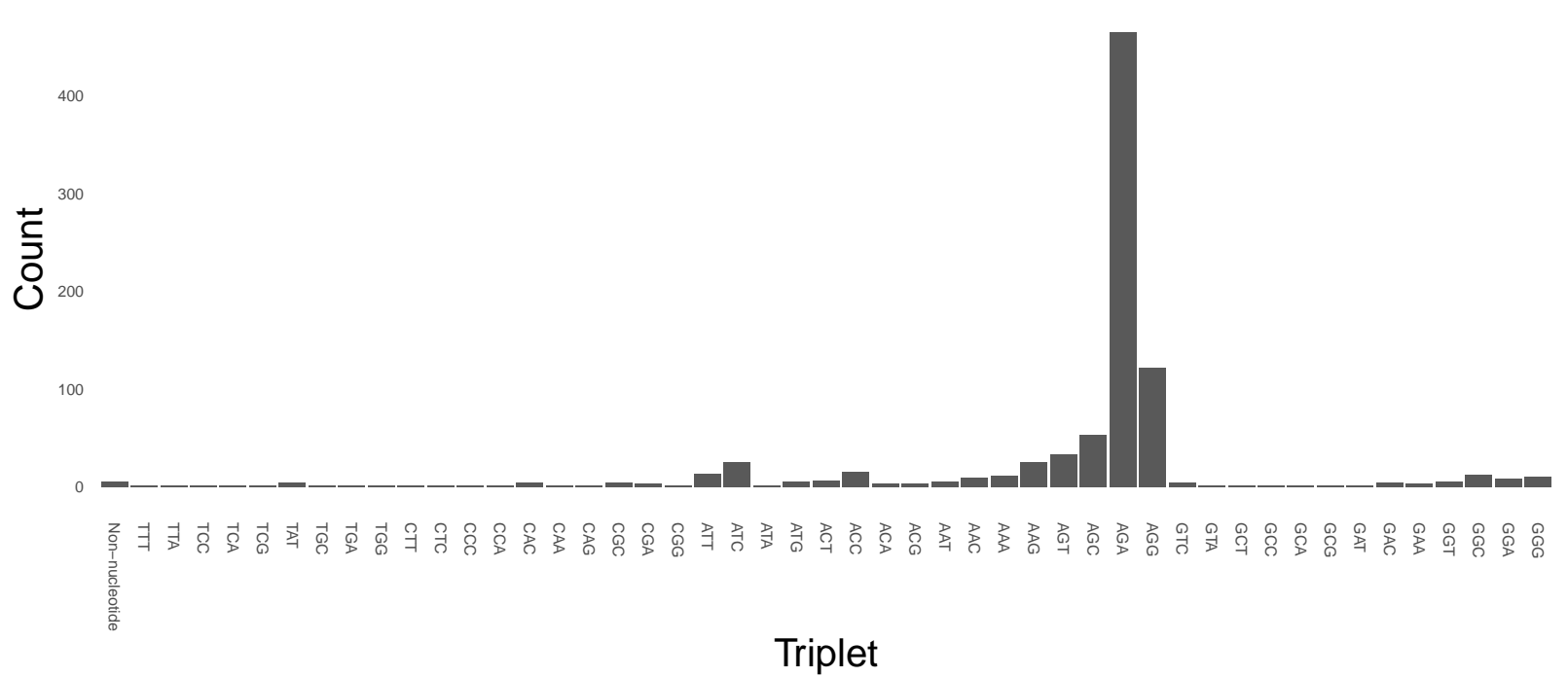
IGHV3–NL1*01_G49A_G75C_T201C_C223A_G267T_T288C– Final 3 nucleotides as a triplet



IGHV4–30–2*01_C315G– Final 3 nucleotides as a triplet

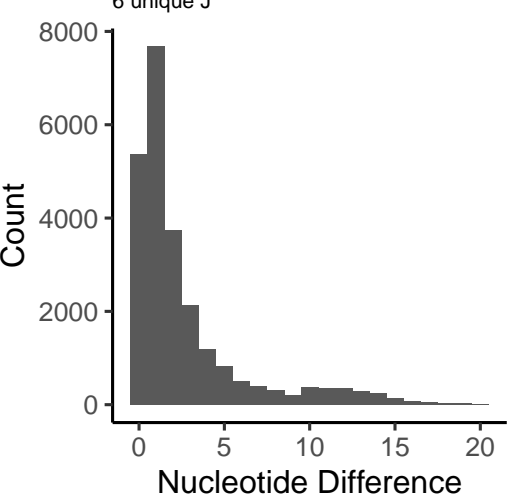


IGHV3–30–3*02_G75C– Final 3 nucleotides as a triplet



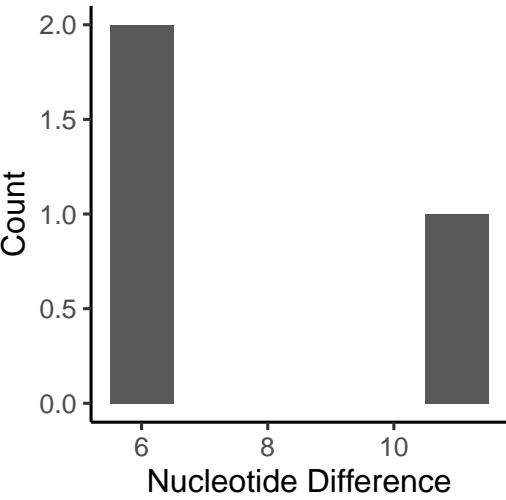
IGHV1-2*02

24479 sequences assigned
5364 (21.9%) exact matches, in which:
3910 unique CDR3
6 unique J



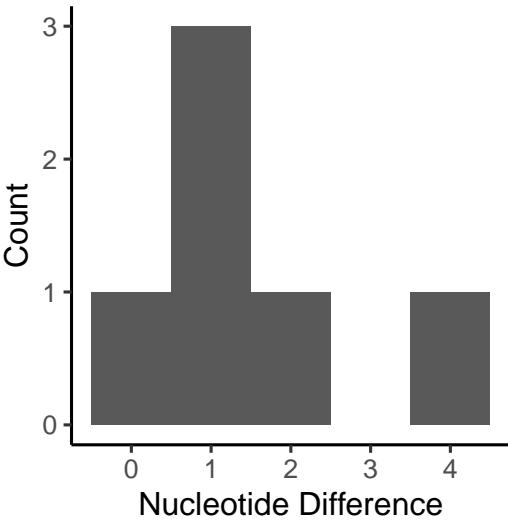
IGHV1-8*01

3 sequences assigned
No exact matches.



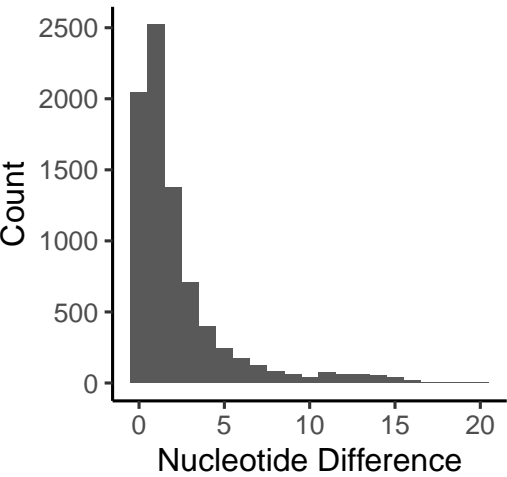
IGHV1-38-4*01

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



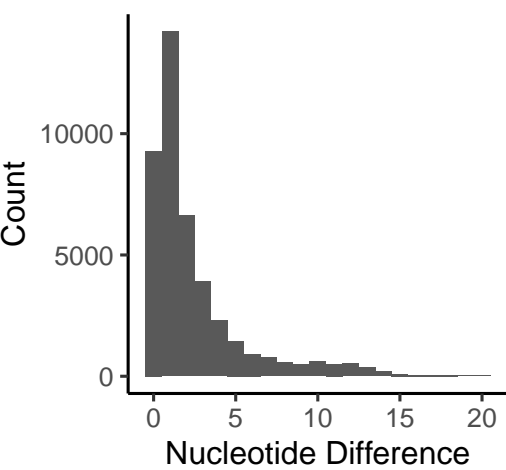
IGHV1-2*04

8146 sequences assigned
2046 (25.1%) exact matches, in which:
1557 unique CDR3
6 unique J



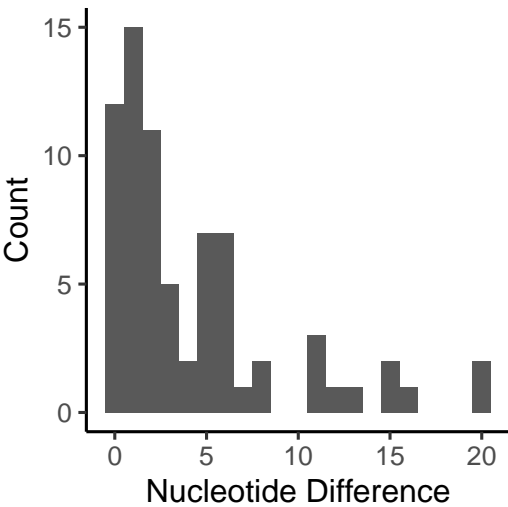
IGHV1-18*01

43372 sequences assigned
9295 (21.4%) exact matches, in which:
6782 unique CDR3
6 unique J



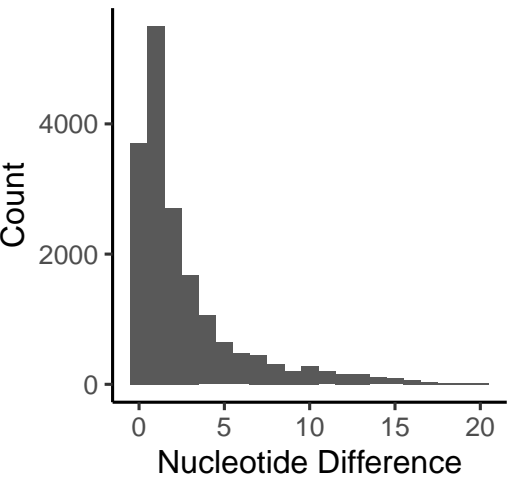
IGHV1-45*02

75 sequences assigned
12 (16%) exact matches, in which:
11 unique CDR3
4 unique J



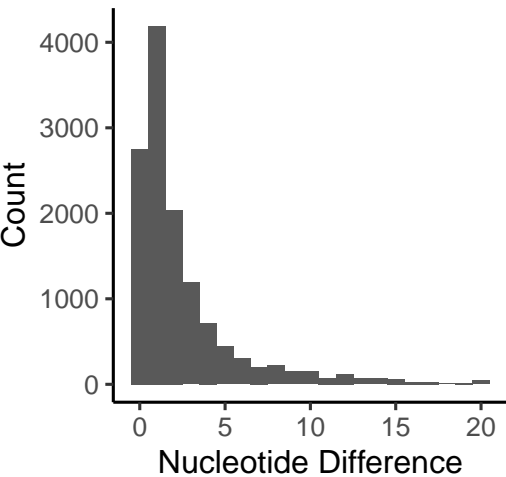
IGHV1-3*01

18075 sequences assigned
3706 (20.5%) exact matches, in which:
2689 unique CDR3
6 unique J



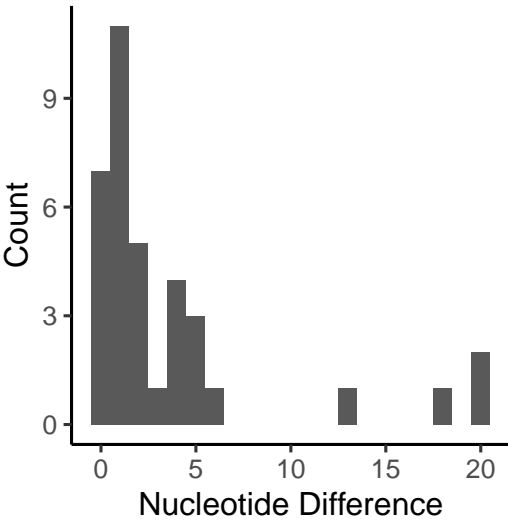
IGHV1-24*01

13115 sequences assigned
2754 (21%) exact matches, in which:
2032 unique CDR3
6 unique J



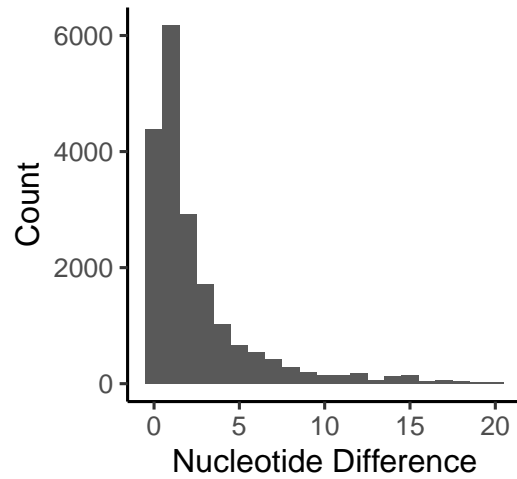
IGHV1-45*03

37 sequences assigned
7 (18.9%) exact matches, in which:
7 unique CDR3
3 unique J



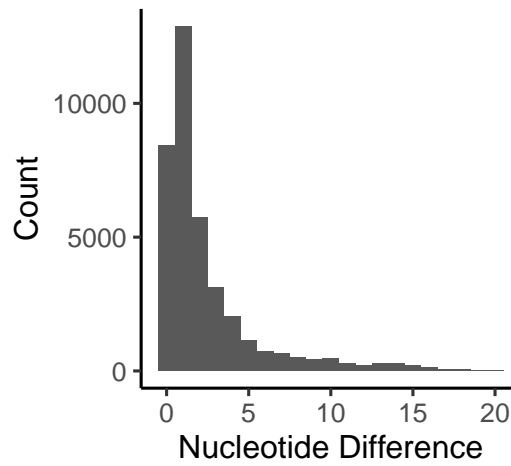
IGHV1-46*01

19506 sequences assigned
4383 (22.5%) exact matches, in which:
3212 unique CDR3
6 unique J



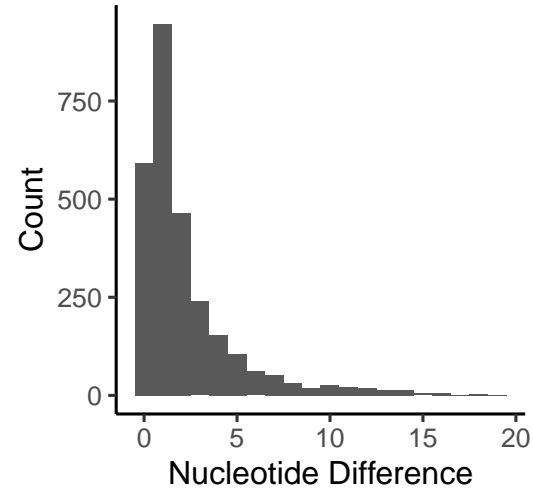
IGHV1-69*04

38011 sequences assigned
8416 (22.1%) exact matches, in which:
6134 unique CDR3
6 unique J



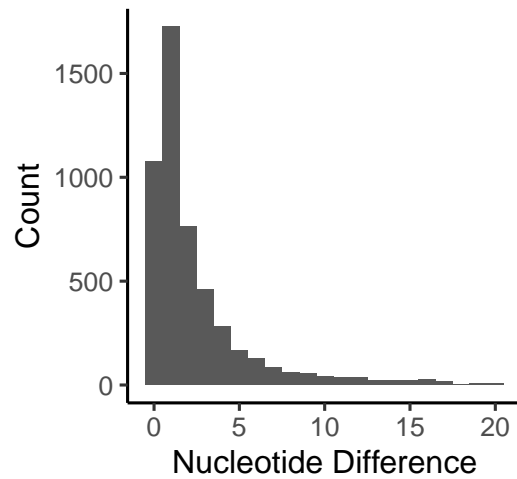
IGHV2-26*01

2835 sequences assigned
592 (20.9%) exact matches, in which:
439 unique CDR3
6 unique J



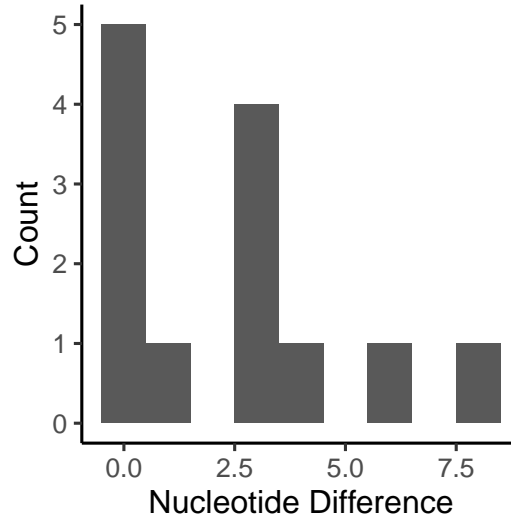
IGHV1-58*02

5076 sequences assigned
1078 (21.2%) exact matches, in which:
759 unique CDR3
6 unique J



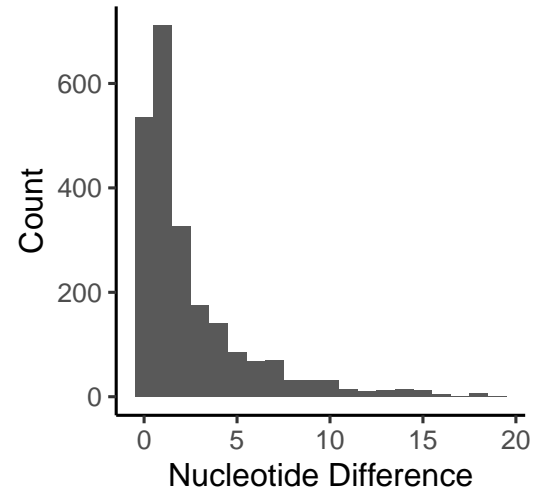
IGHV1-69D*01

13 sequences assigned
5 (38.5%) exact matches, in which:
5 unique CDR3
3 unique J



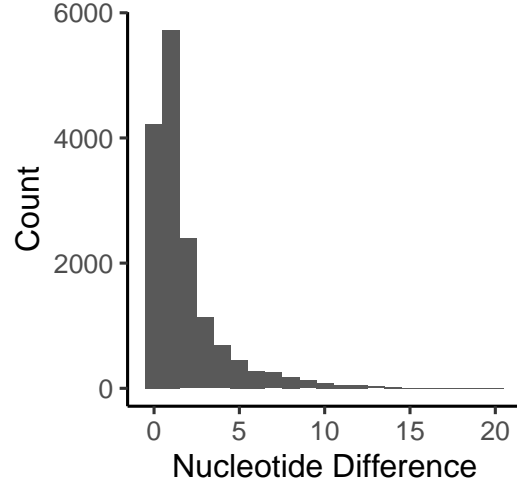
IGHV2-70*15

2333 sequences assigned
536 (23%) exact matches, in which:
378 unique CDR3
6 unique J



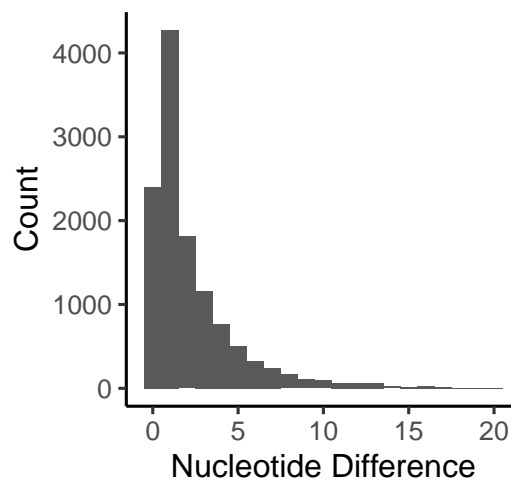
IGHV1-69*02

15753 sequences assigned
4223 (26.8%) exact matches, in which:
3204 unique CDR3
6 unique J



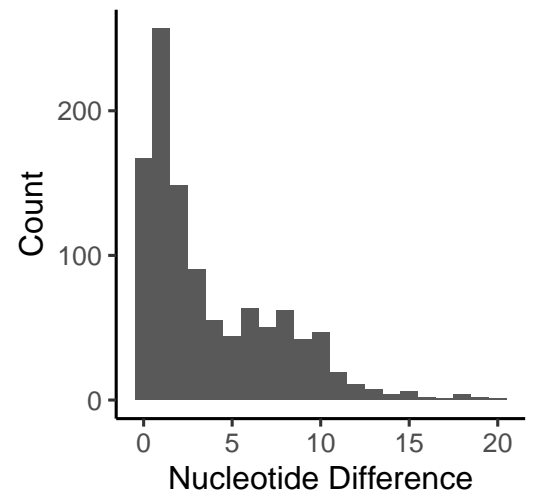
IGHV2-5*02

12275 sequences assigned
2402 (19.6%) exact matches, in which:
1644 unique CDR3
6 unique J



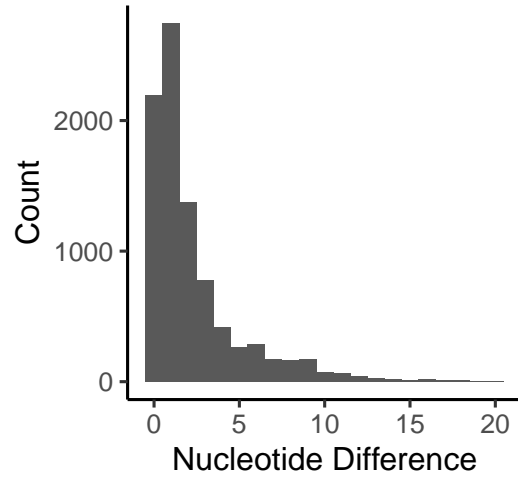
IGHV3-7*01

1092 sequences assigned
167 (15.3%) exact matches, in which:
165 unique CDR3
6 unique J



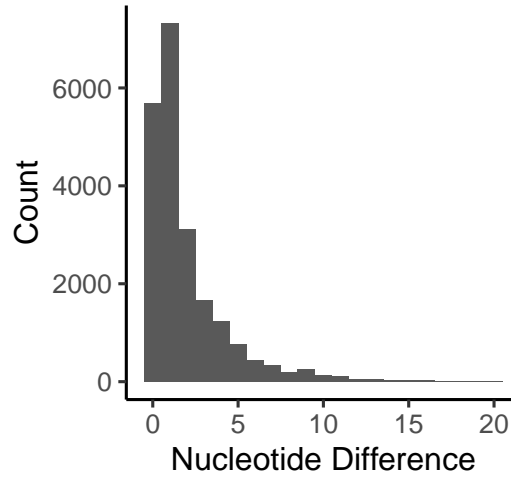
IGHV3-7*03

8927 sequences assigned
2194 (24.6%) exact matches, in which:
1660 unique CDR3
6 unique J



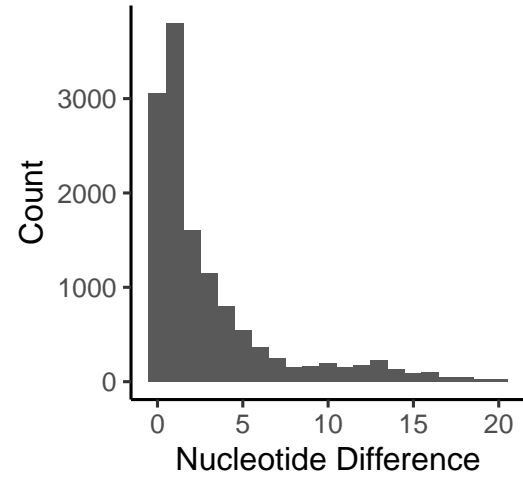
IGHV3-11*05

21748 sequences assigned
5683 (26.1%) exact matches, in which:
4015 unique CDR3
6 unique J



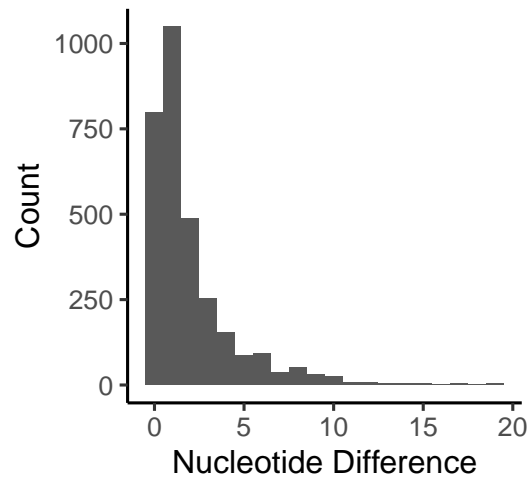
IGHV3-15*01

13315 sequences assigned
3062 (23%) exact matches, in which:
2129 unique CDR3
6 unique J



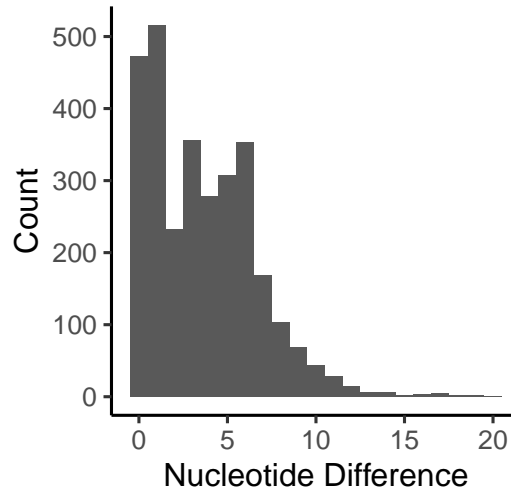
IGHV3-7*04

3128 sequences assigned
799 (25.5%) exact matches, in which:
578 unique CDR3
6 unique J



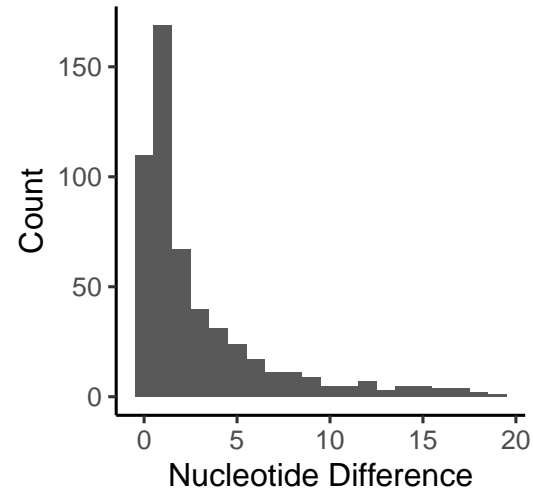
IGHV3-11*06

3020 sequences assigned
473 (15.7%) exact matches, in which:
462 unique CDR3
6 unique J



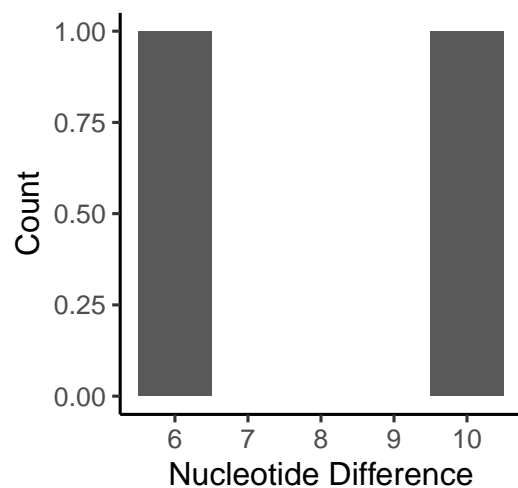
IGHV3-20*01

535 sequences assigned
110 (20.6%) exact matches, in which:
86 unique CDR3
5 unique J



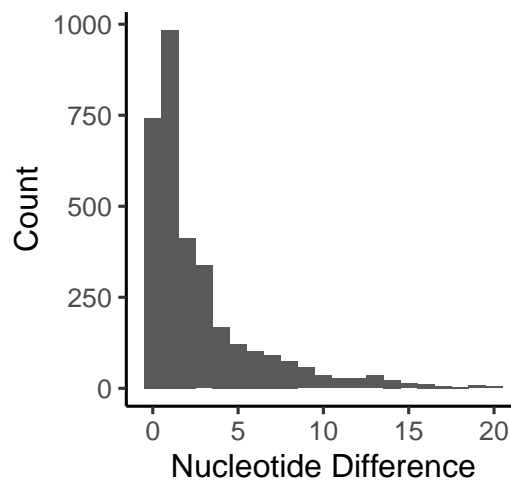
IGHV3-9*01

2 sequences assigned
No exact matches.



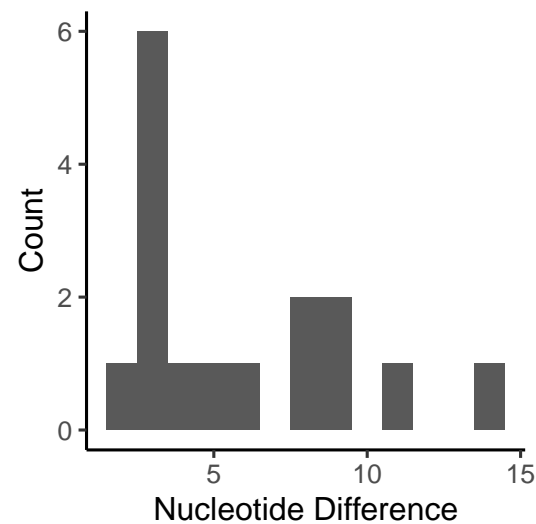
IGHV3-13*04

3313 sequences assigned
742 (22.4%) exact matches, in which:
538 unique CDR3
6 unique J



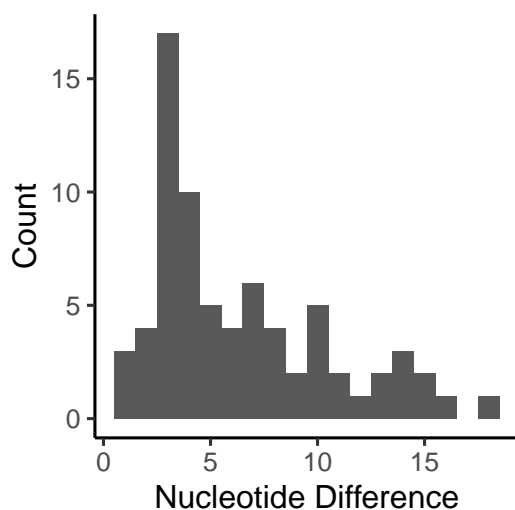
IGHV3-20*03

16 sequences assigned
No exact matches.



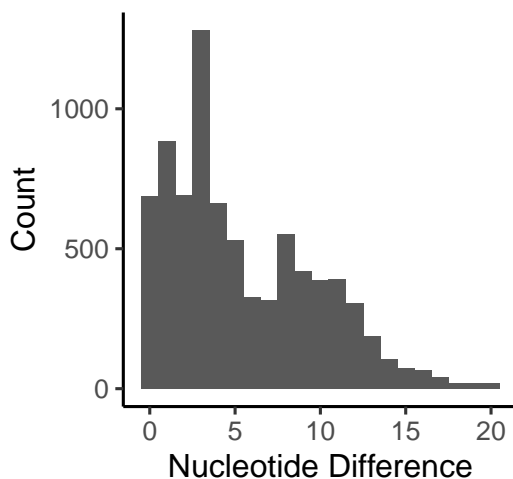
IGHV3-20*04

73 sequences assigned
No exact matches.



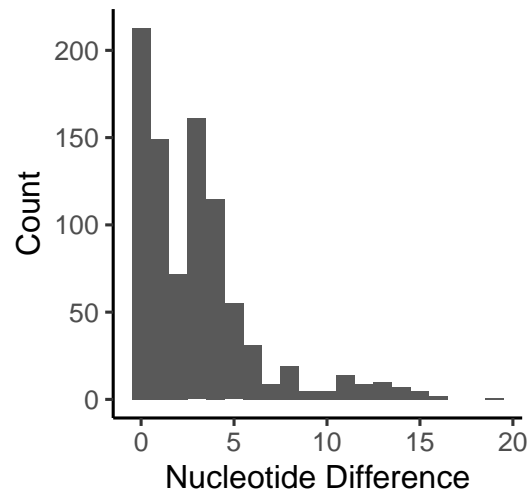
IGHV3-23*04

8164 sequences assigned
688 (8.4%) exact matches, in which:
618 unique CDR3
6 unique J



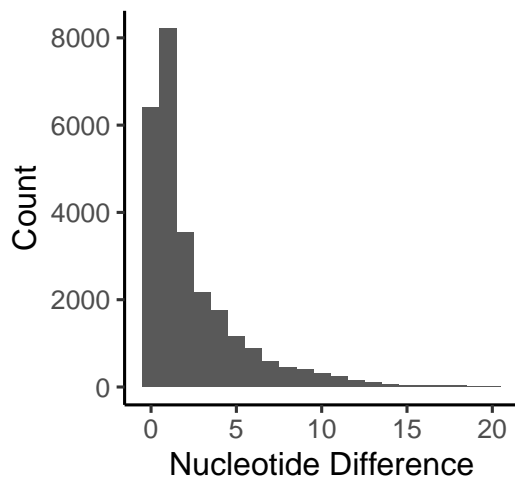
IGHV3-30-3*02_G75C

888 sequences assigned
213 (24%) exact matches, in which:
209 unique CDR3
6 unique J



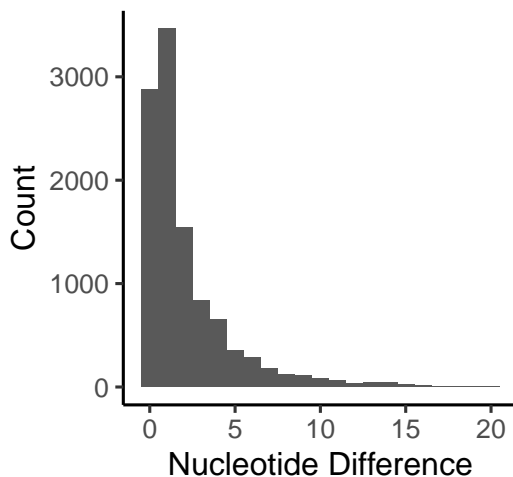
IGHV3-21*01

26756 sequences assigned
6393 (23.9%) exact matches, in which:
4679 unique CDR3
6 unique J



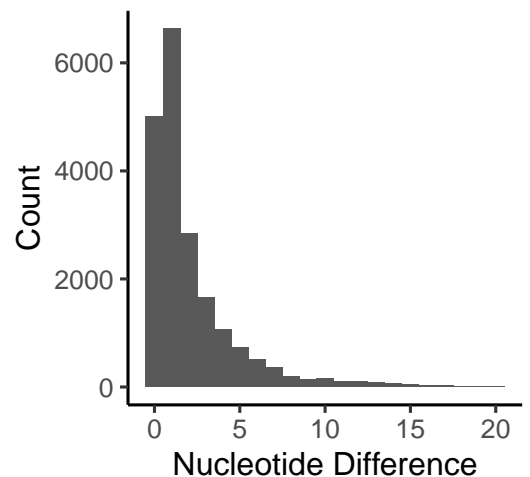
IGHV3-30-3*01

10832 sequences assigned
2882 (26.6%) exact matches, in which:
2116 unique CDR3
6 unique J



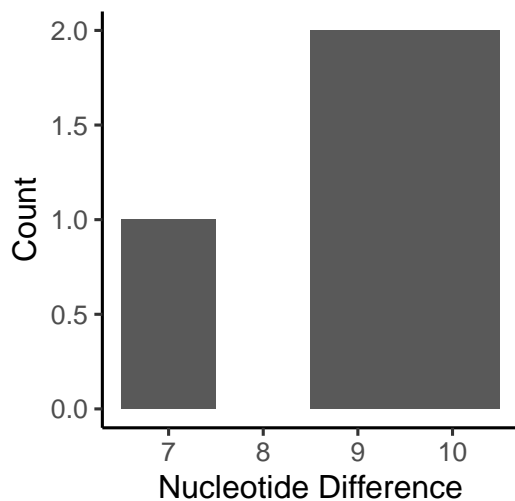
IGHV3-33*01

19887 sequences assigned
5001 (25.1%) exact matches, in which:
3679 unique CDR3
6 unique J



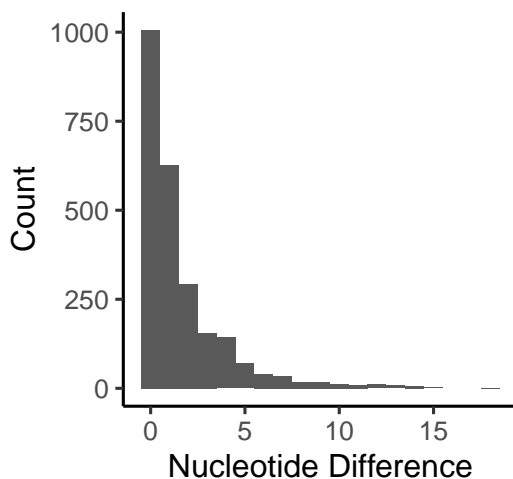
IGHV3-22*02

6 sequences assigned
No exact matches.



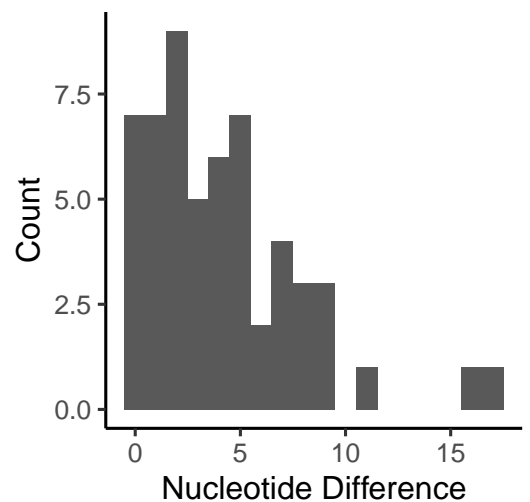
IGHV3-30*03

2462 sequences assigned
1006 (40.9%) exact matches, in which:
946 unique CDR3
6 unique J



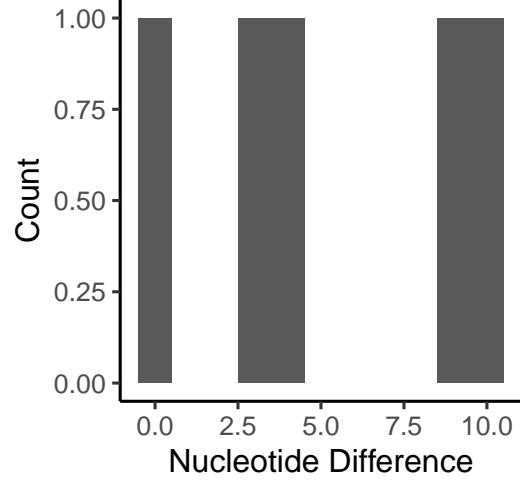
IGHV3-33*05

59 sequences assigned
7 (11.9%) exact matches, in which:
7 unique CDR3
4 unique J



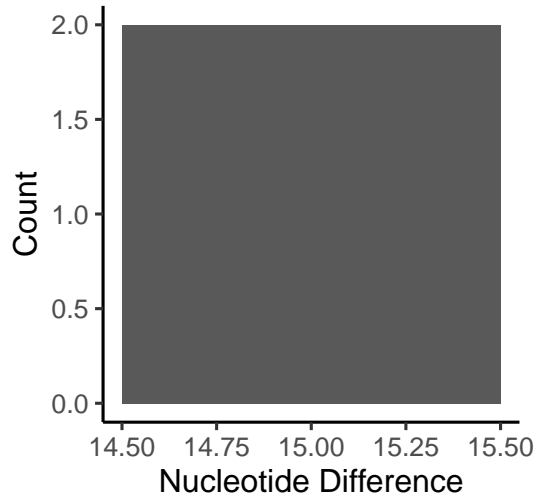
IGHV3–35*01

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



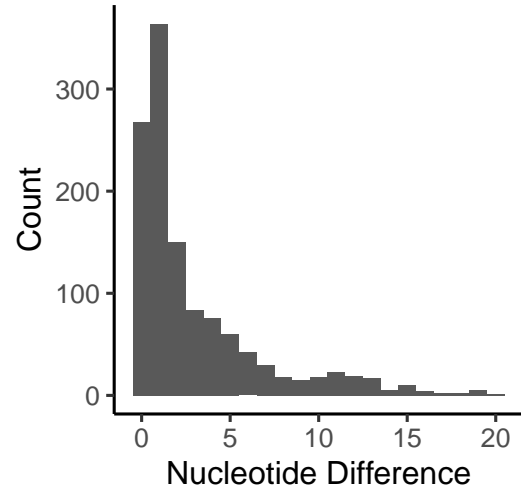
IGHV3–38*02

2 sequences assigned
No exact matches.



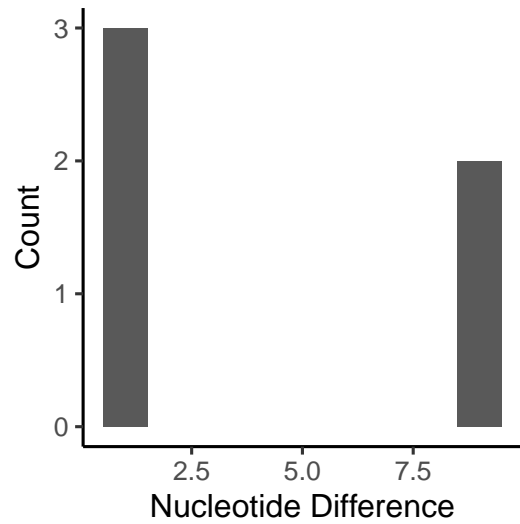
IGHV3–43*01

1222 sequences assigned
268 (21.9%) exact matches, in which:
193 unique CDR3
6 unique J



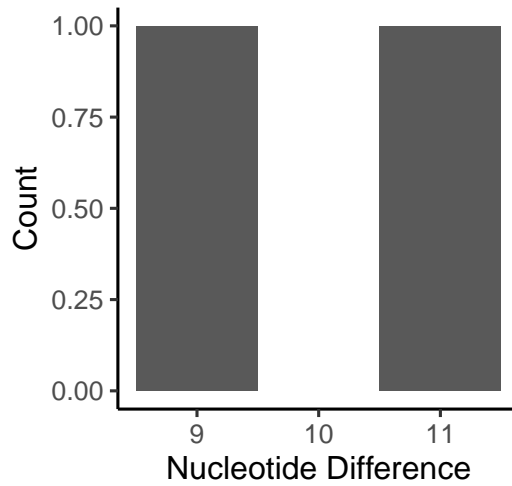
IGHV3–35*02

5 sequences assigned
No exact matches.



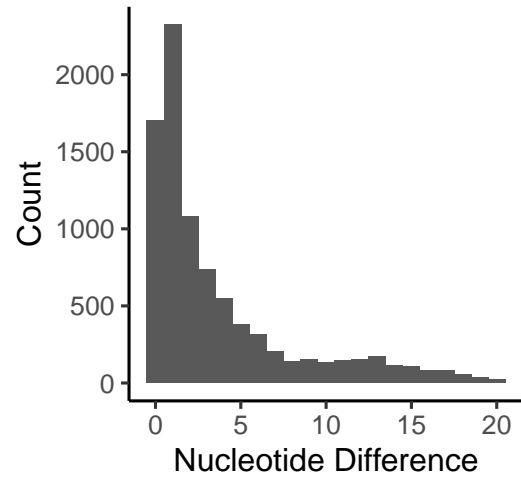
IGHV3–38*03

3 sequences assigned
No exact matches.



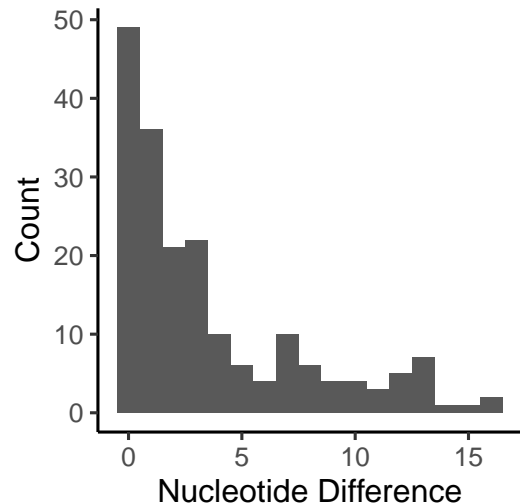
IGHV3–43*02

8802 sequences assigned
1702 (19.3%) exact matches, in which:
1258 unique CDR3
6 unique J



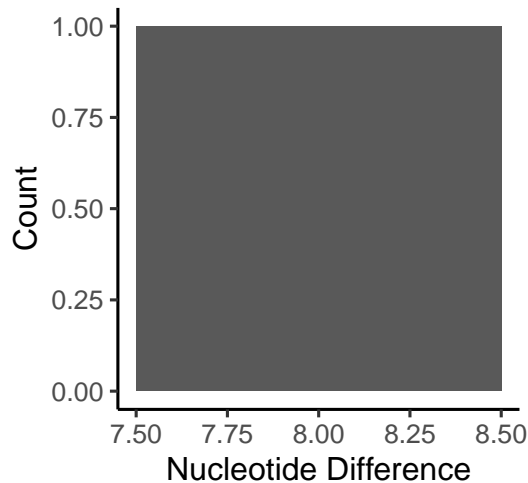
IGHV3–38–3*01

195 sequences assigned
49 (25.1%) exact matches, in which:
44 unique CDR3
4 unique J



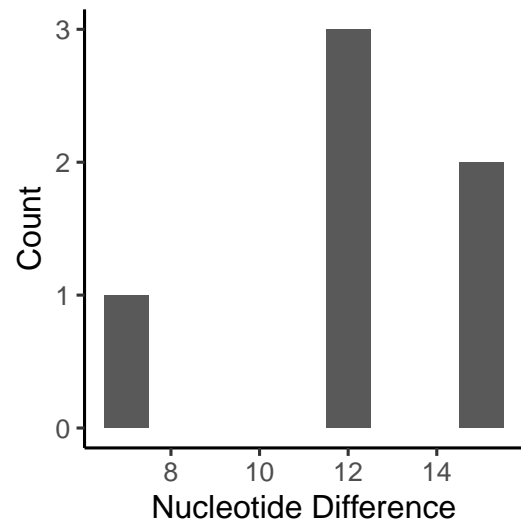
IGHV3–41*02

1 sequences assigned
No exact matches.



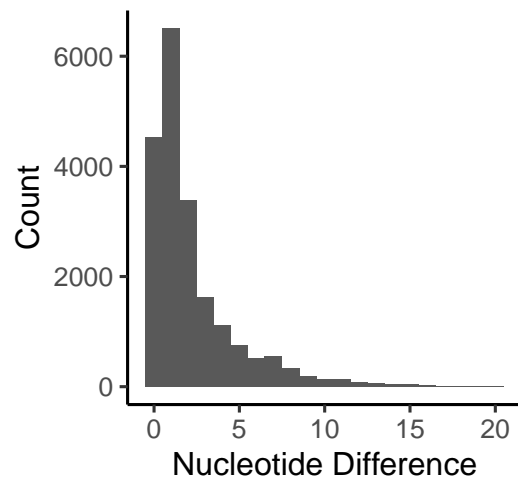
IGHV3–47*01

6 sequences assigned
No exact matches.



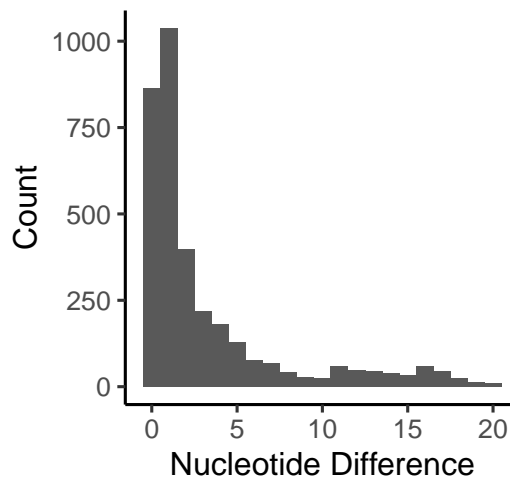
IGHV3-48*03

20223 sequences assigned
4528 (22.4%) exact matches, in which:
3303 unique CDR3
6 unique J



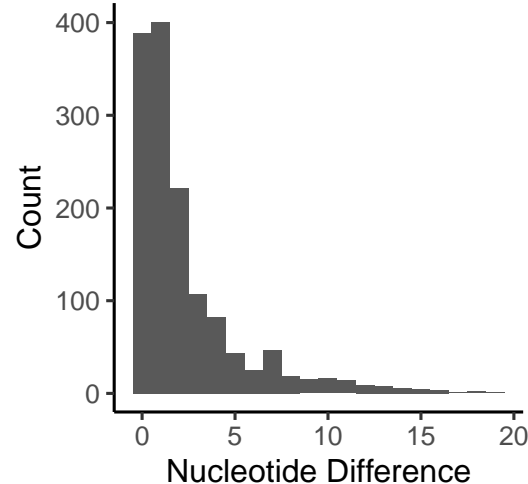
IGHV3-49*04

3491 sequences assigned
865 (24.8%) exact matches, in which:
642 unique CDR3
6 unique J



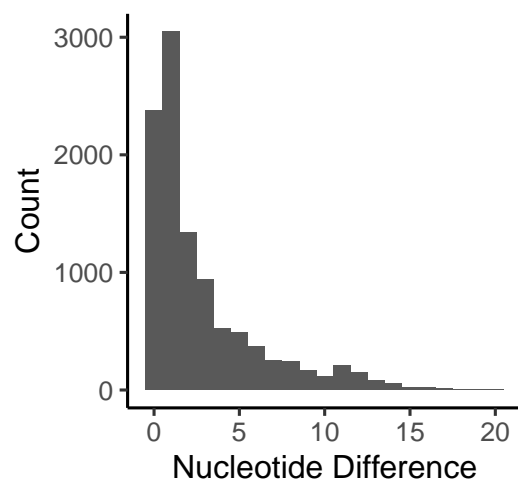
IGHV3-64*01

1430 sequences assigned
389 (27.2%) exact matches, in which:
298 unique CDR3
6 unique J



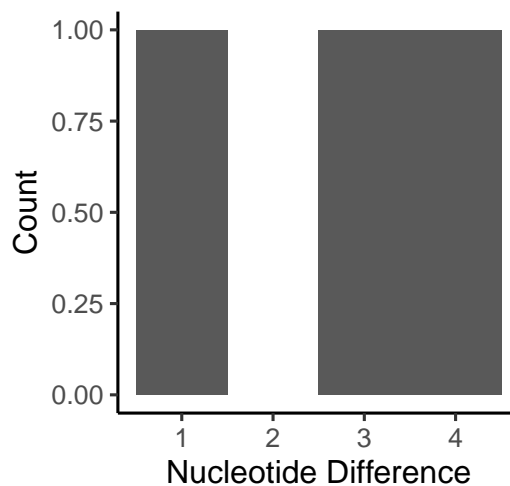
IGHV3-48*04

10504 sequences assigned
2375 (22.6%) exact matches, in which:
1803 unique CDR3
6 unique J



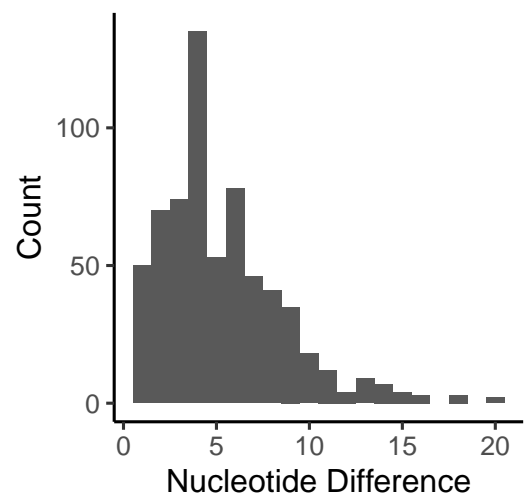
IGHV3-52*01

3 sequences assigned
No exact matches.



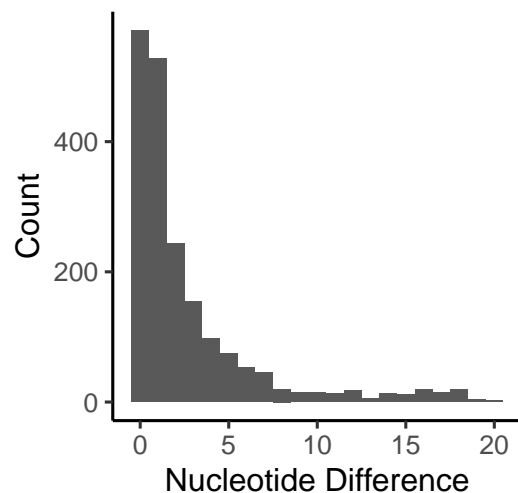
IGHV3-64*04

645 sequences assigned
No exact matches.



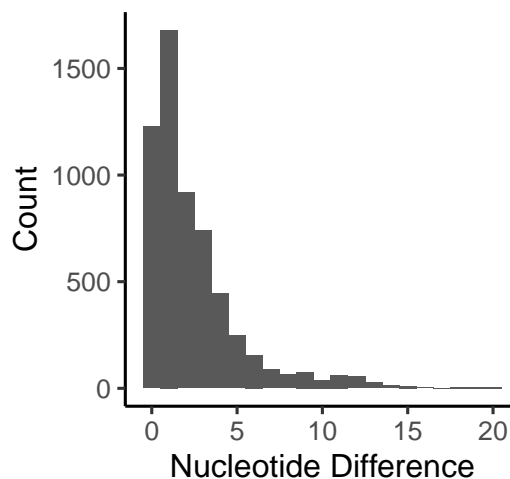
IGHV3-49*03

1956 sequences assigned
571 (29.2%) exact matches, in which:
431 unique CDR3
6 unique J



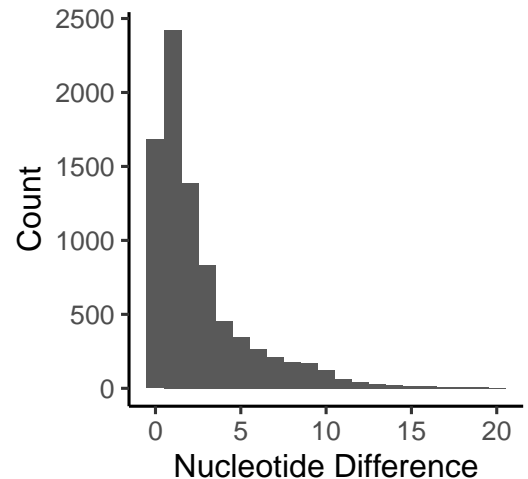
IGHV3-53*04

5943 sequences assigned
1228 (20.7%) exact matches, in which:
903 unique CDR3
6 unique J



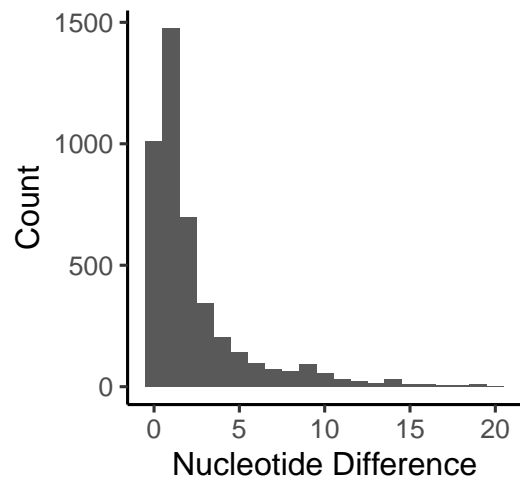
IGHV3-66*01

8369 sequences assigned
1681 (20.1%) exact matches, in which:
1197 unique CDR3
6 unique J



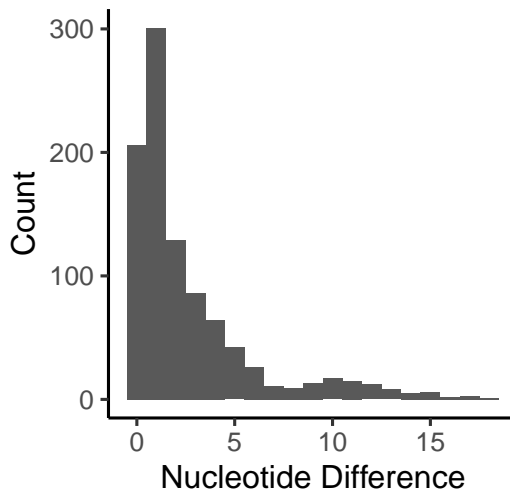
IGHV3-66*02

4430 sequences assigned
1009 (22.8%) exact matches, in which:
712 unique CDR3
6 unique J



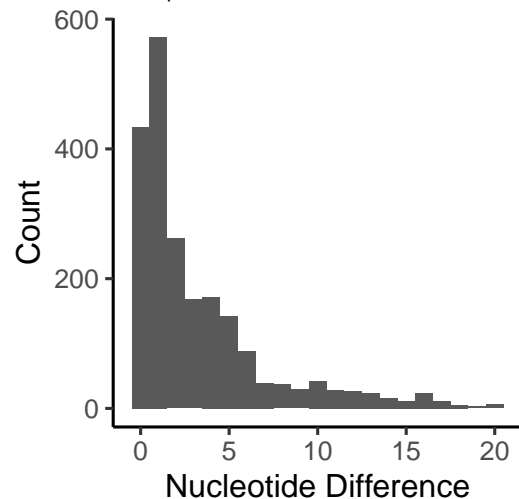
IGHV3-72*01

971 sequences assigned
206 (21.2%) exact matches, in which:
136 unique CDR3
5 unique J



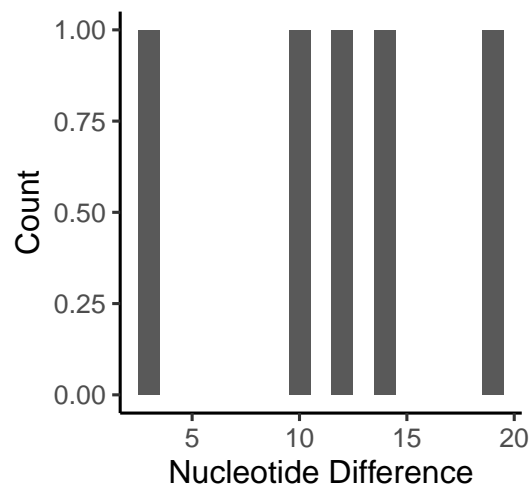
IGHV3-43D*03

2169 sequences assigned
434 (20%) exact matches, in which:
320 unique CDR3
6 unique J



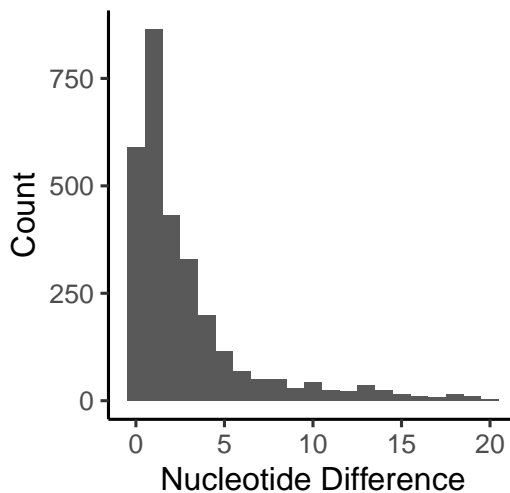
IGHV3-69-1*01

5 sequences assigned
No exact matches.



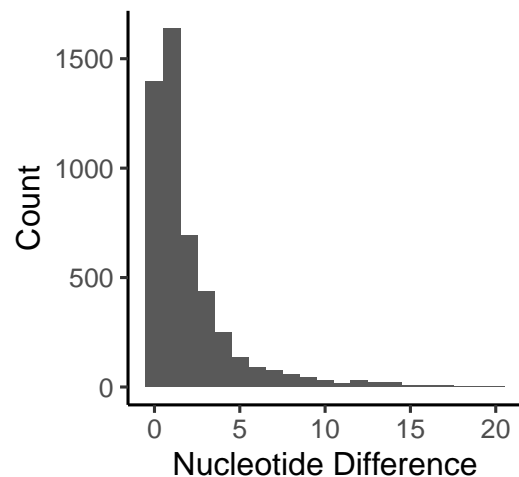
IGHV3-73*01

2966 sequences assigned
589 (19.9%) exact matches, in which:
415 unique CDR3
6 unique J



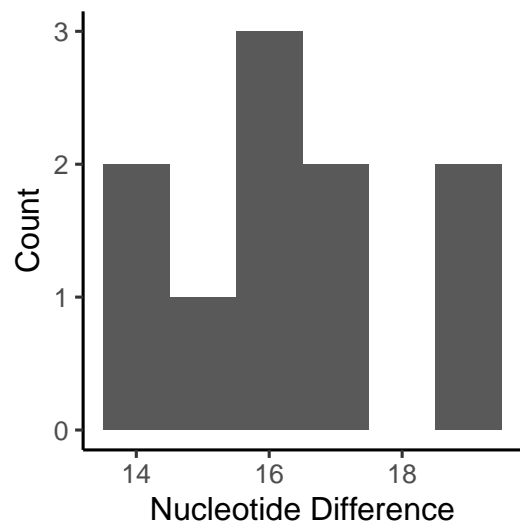
IGHV3-64D*06

4991 sequences assigned
1397 (28%) exact matches, in which:
1056 unique CDR3
6 unique J



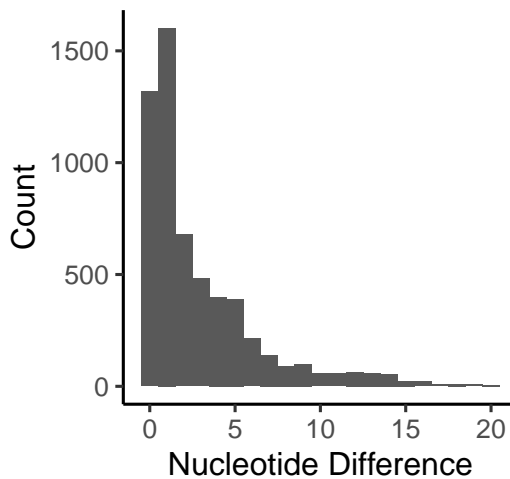
IGHV3-71*04

14 sequences assigned
No exact matches.



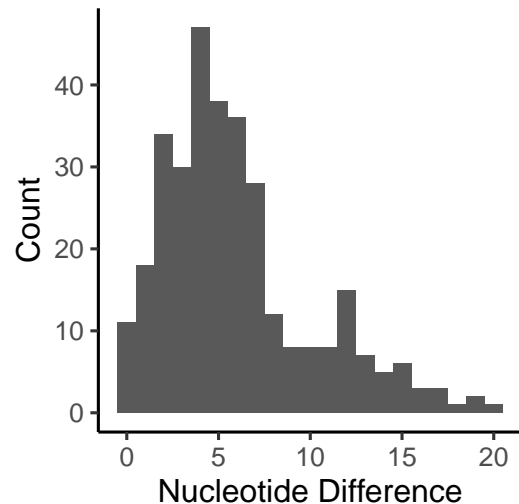
IGHV3-74*01

5848 sequences assigned
1319 (22.6%) exact matches, in which:
1004 unique CDR3
6 unique J



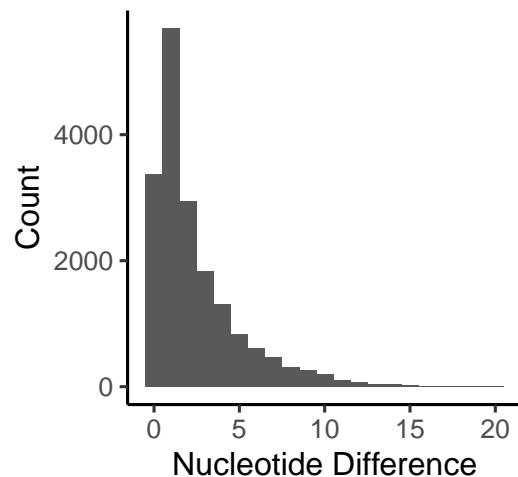
IGHV3-NL1*01_G49A_G7

324 sequences assigned
11 (3.4%) exact matches, in which:
10 unique CDR3
4 unique J



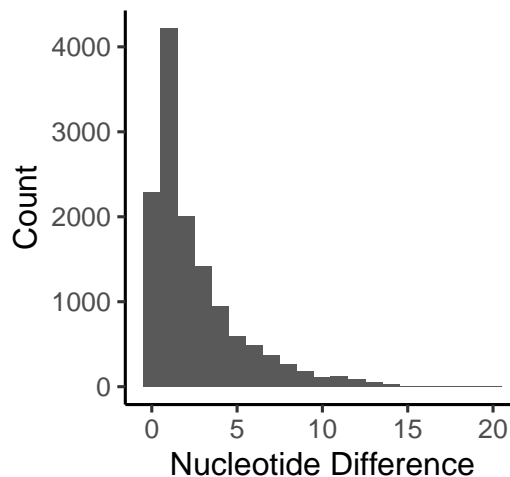
IGHV4-4*02

18304 sequences assigned
3375 (18.4%) exact matches, in which:
2495 unique CDR3
6 unique J



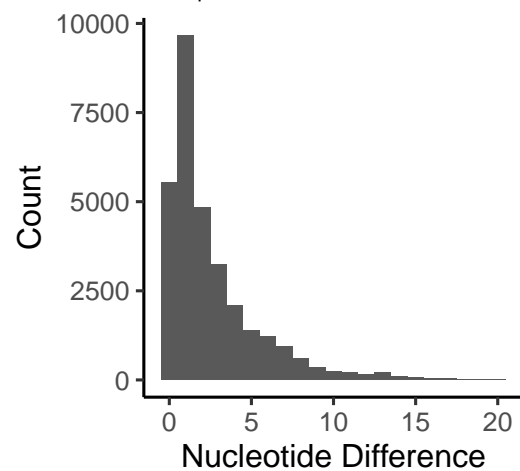
IGHV4-30-4*01

13335 sequences assigned
2294 (17.2%) exact matches, in which:
1688 unique CDR3
6 unique J



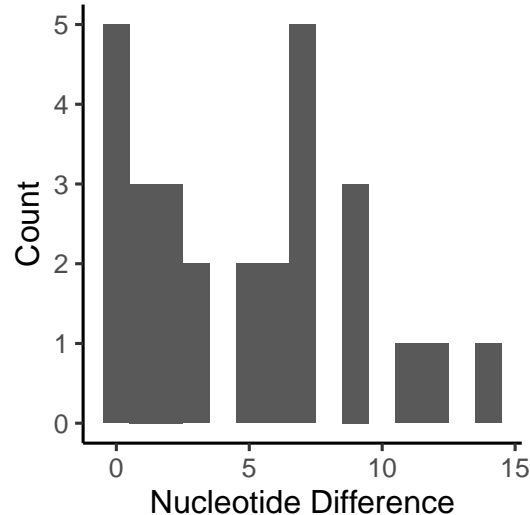
IGHV4-31*03

31244 sequences assigned
5538 (17.7%) exact matches, in which:
3976 unique CDR3
6 unique J



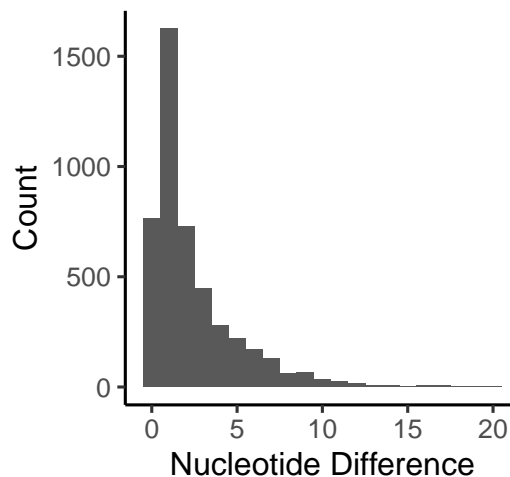
IGHV4-28*03

28 sequences assigned
5 (17.9%) exact matches, in which:
5 unique CDR3
3 unique J



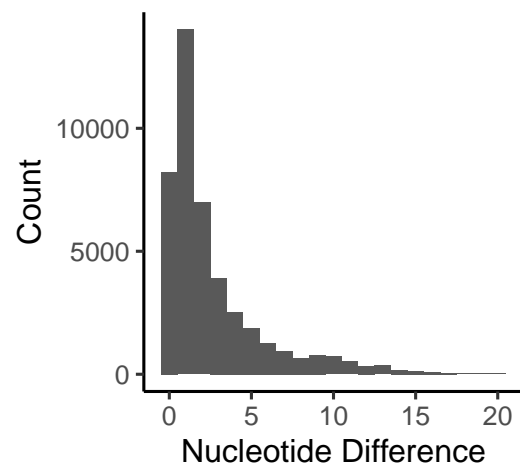
IGHV4-30-2*01

4620 sequences assigned
763 (16.5%) exact matches, in which:
512 unique CDR3
5 unique J



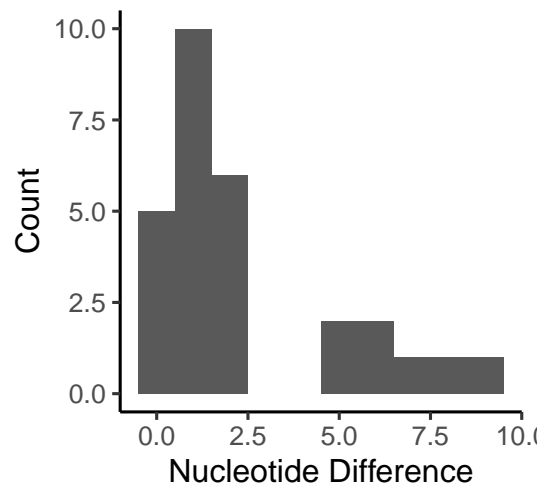
IGHV4-34*01

44012 sequences assigned
8219 (18.7%) exact matches, in which:
5871 unique CDR3
6 unique J



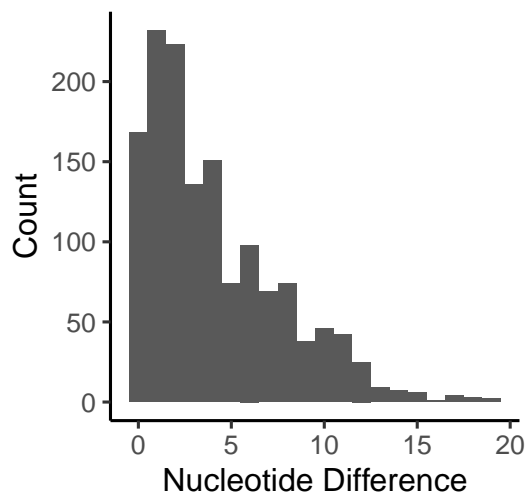
IGHV4-28*07

28 sequences assigned
5 (17.9%) exact matches, in which:
3 unique CDR3
2 unique J



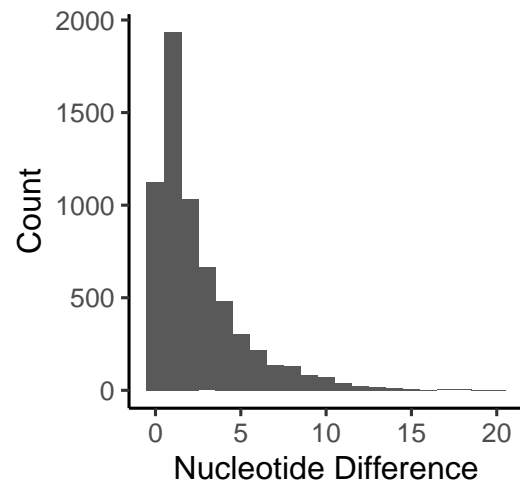
IGHV4-30-2*01_C315G

1429 sequences assigned
168 (11.8%) exact matches, in which:
162 unique CDR3
6 unique J



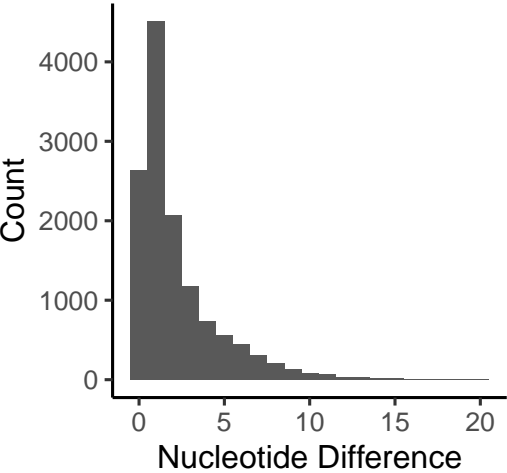
IGHV4-38-2*02

6372 sequences assigned
1124 (17.6%) exact matches, in which:
833 unique CDR3
6 unique J



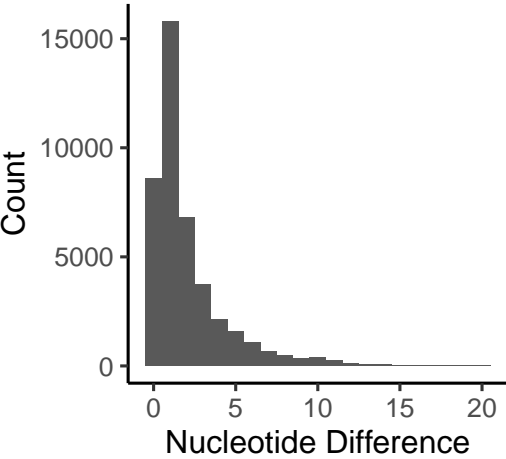
IGHV4-39*01

13151 sequences assigned
2643 (20.1%) exact matches, in which:
2047 unique CDR3
6 unique J



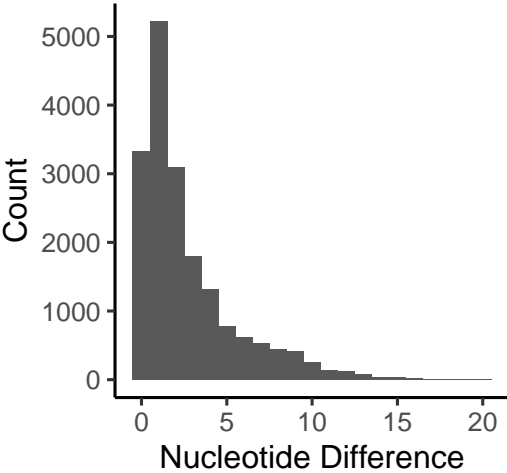
IGHV4-59*01

42466 sequences assigned
8605 (20.3%) exact matches, in which:
6115 unique CDR3
6 unique J



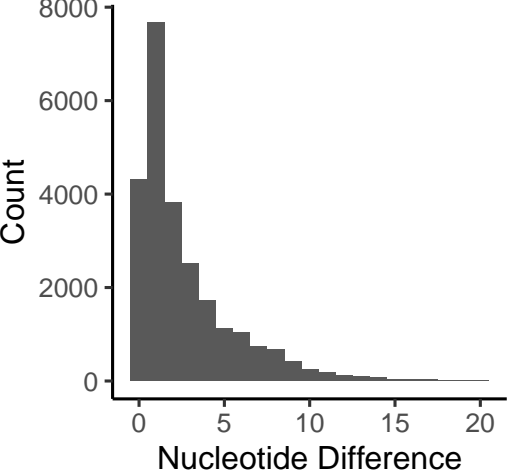
IGHV4-61*02

18360 sequences assigned
3336 (18.2%) exact matches, in which:
2592 unique CDR3
6 unique J



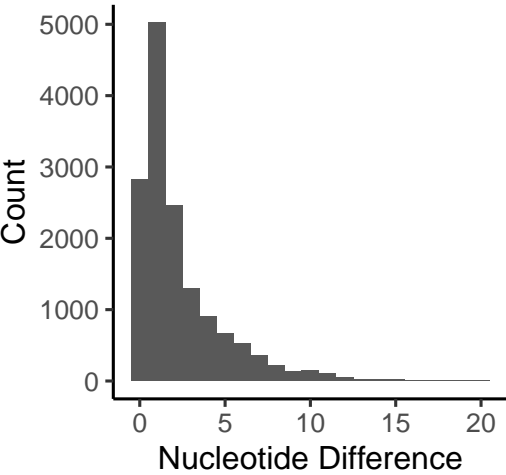
IGHV4-39*07

25106 sequences assigned
4323 (17.2%) exact matches, in which:
3278 unique CDR3
6 unique J



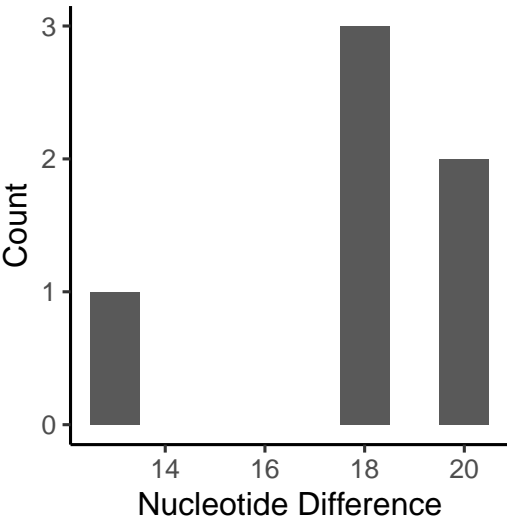
IGHV4-59*08

14869 sequences assigned
2827 (19%) exact matches, in which:
2034 unique CDR3
6 unique J



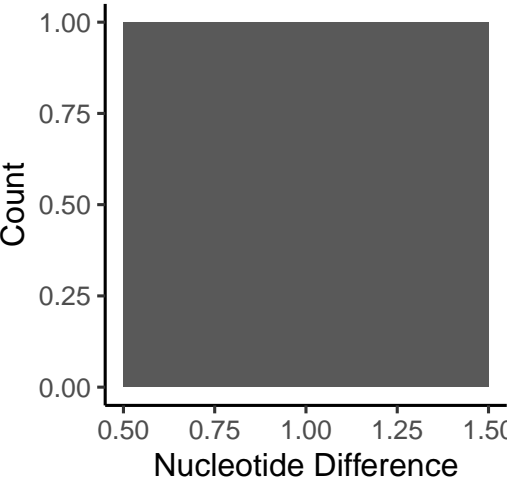
IGHV1/OR15-3*02

7 sequences assigned
No exact matches.



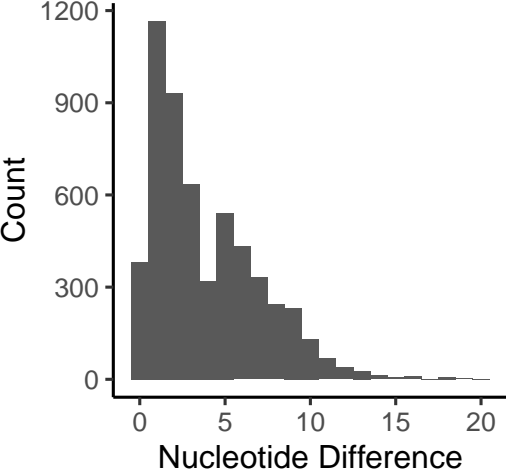
IGHV4-55*08

1 sequences assigned
No exact matches.



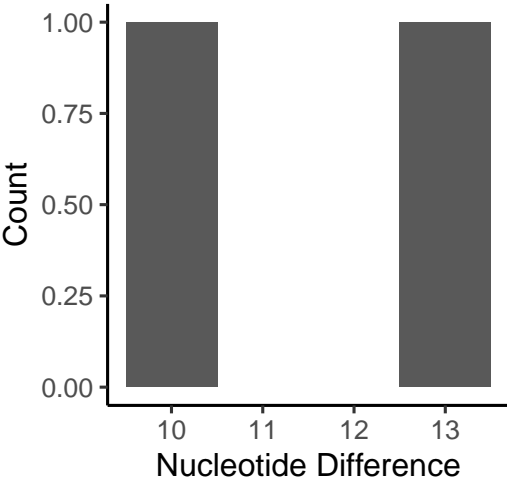
IGHV4-59*12

5608 sequences assigned
382 (6.8%) exact matches, in which:
375 unique CDR3
6 unique J



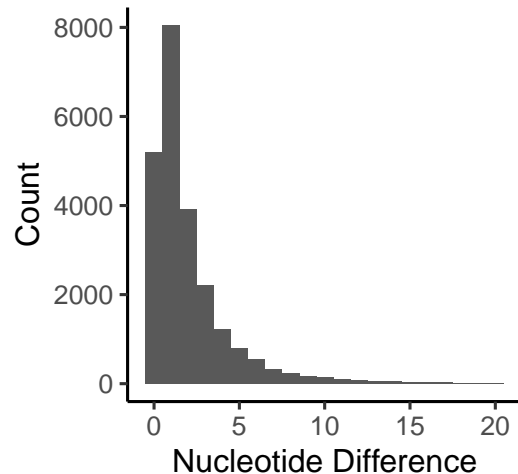
IGHV4/OR15-8*01

2 sequences assigned
No exact matches.



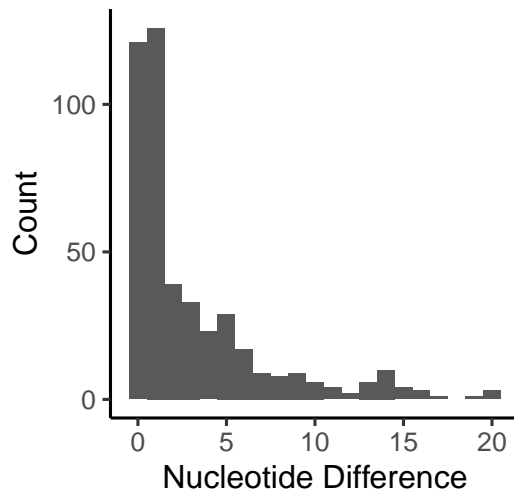
IGHV5-10-1*01

23426 sequences assigned
5188 (22.1%) exact matches, in which:
3834 unique CDR3
6 unique J



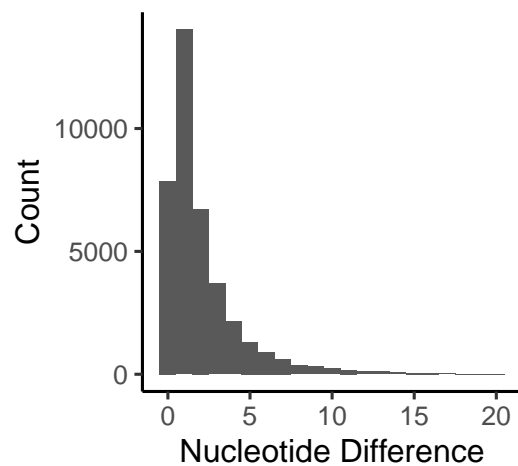
IGHV7-4-1*01

458 sequences assigned
121 (26.4%) exact matches, in which:
100 unique CDR3
6 unique J



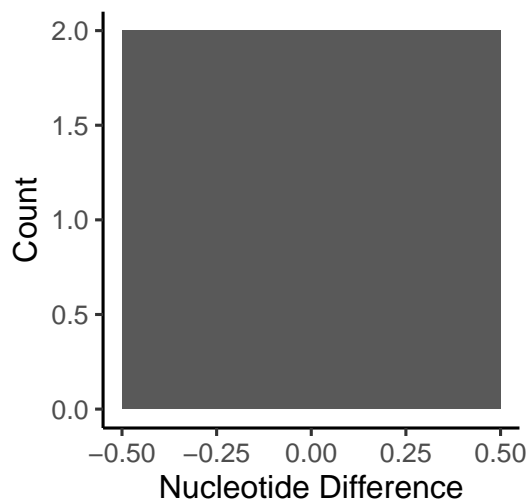
IGHV5-51*01

39139 sequences assigned
7858 (20.1%) exact matches, in which:
5509 unique CDR3
6 unique J



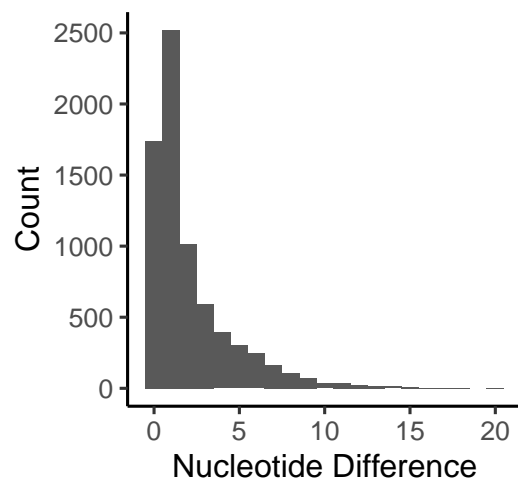
IGHV7-81*01

2 sequences assigned
2 (100%) exact matches, in which:
2 unique CDR3
2 unique J

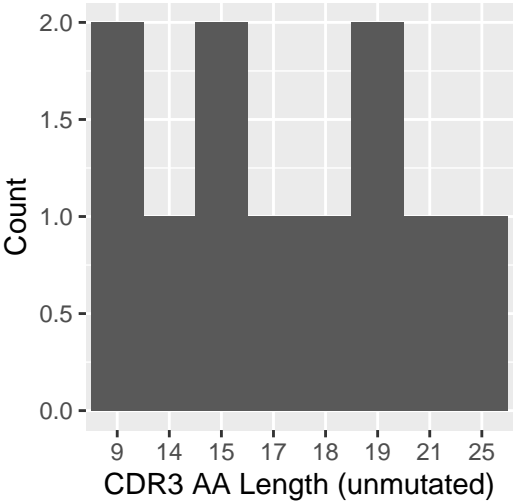


IGHV6-1*01

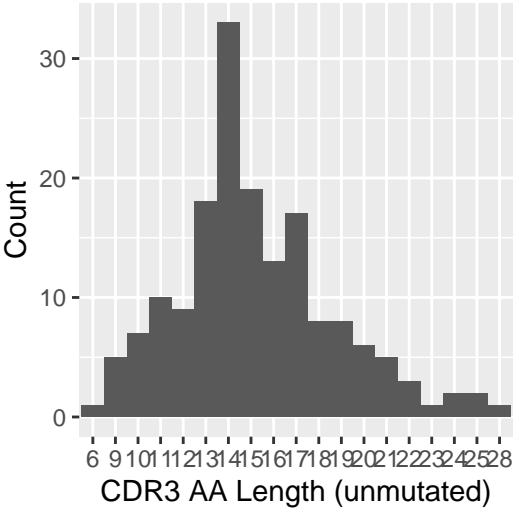
7325 sequences assigned
1739 (23.7%) exact matches, in which:
1200 unique CDR3
6 unique J



IGHV3–NL1*01_G49A_G75C_T201C_C223A_G267T_T288C



IGHV4–30–2*01_C315G



IGHV3–30–3*02_G75C

