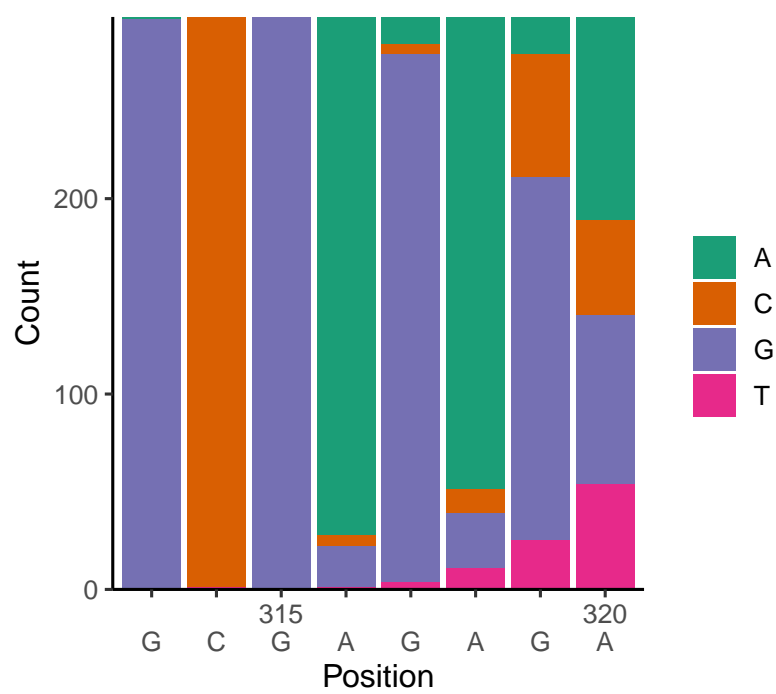
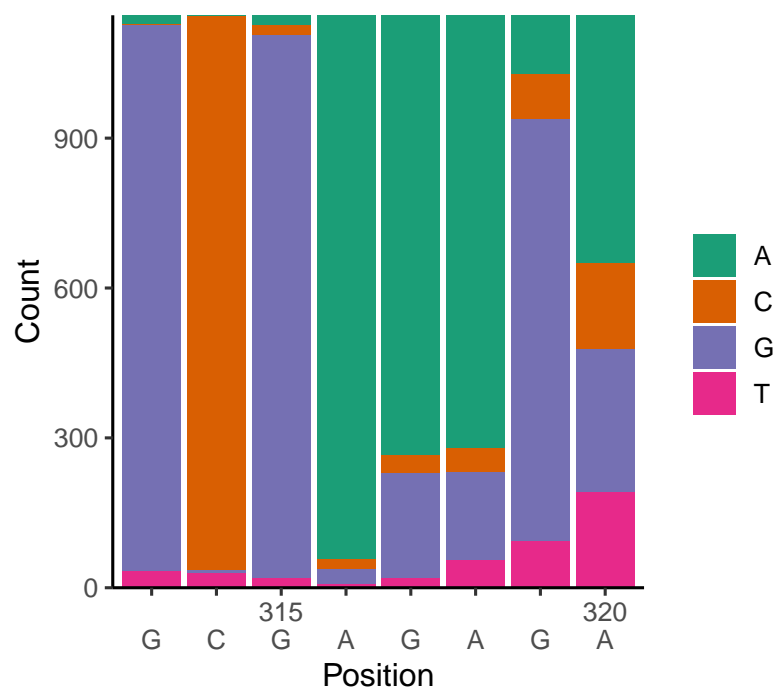


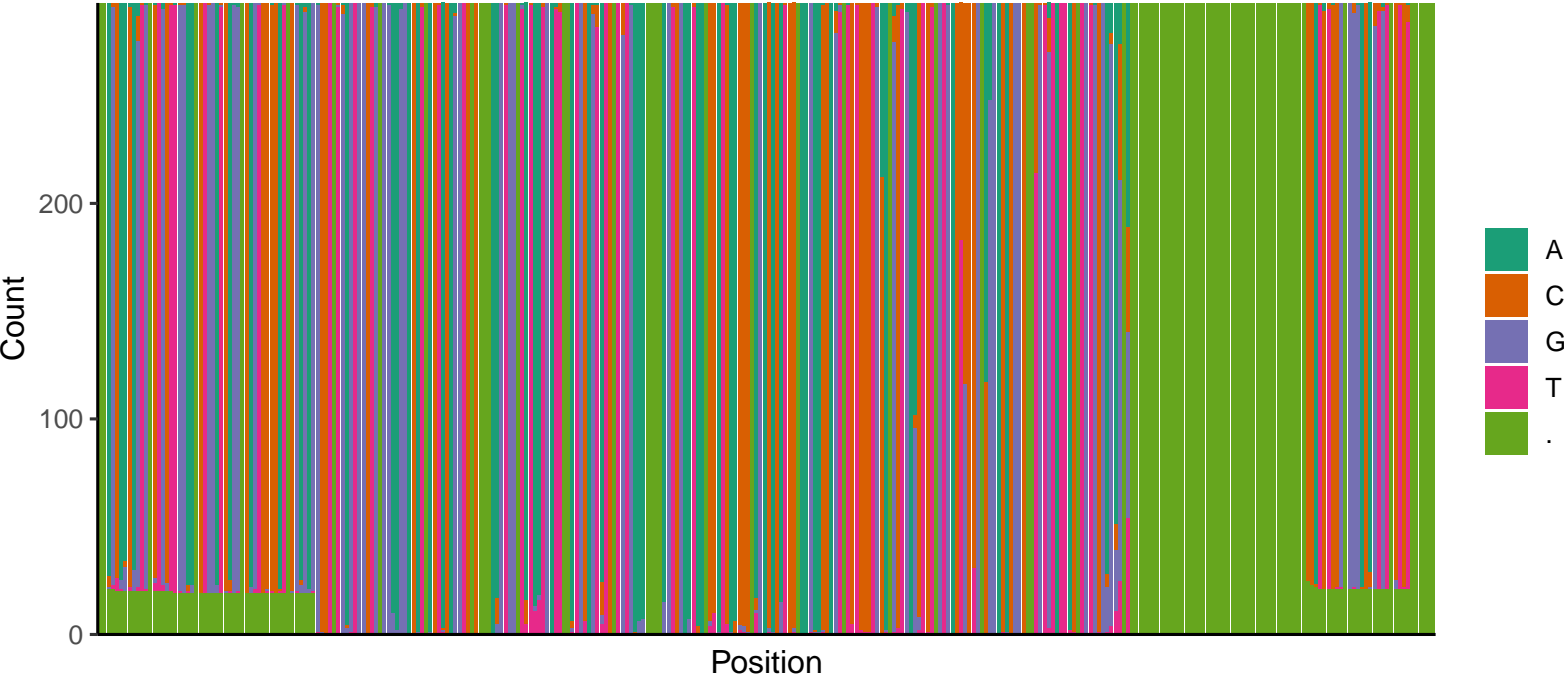
Gene IGHV6-1*01_02_A315G



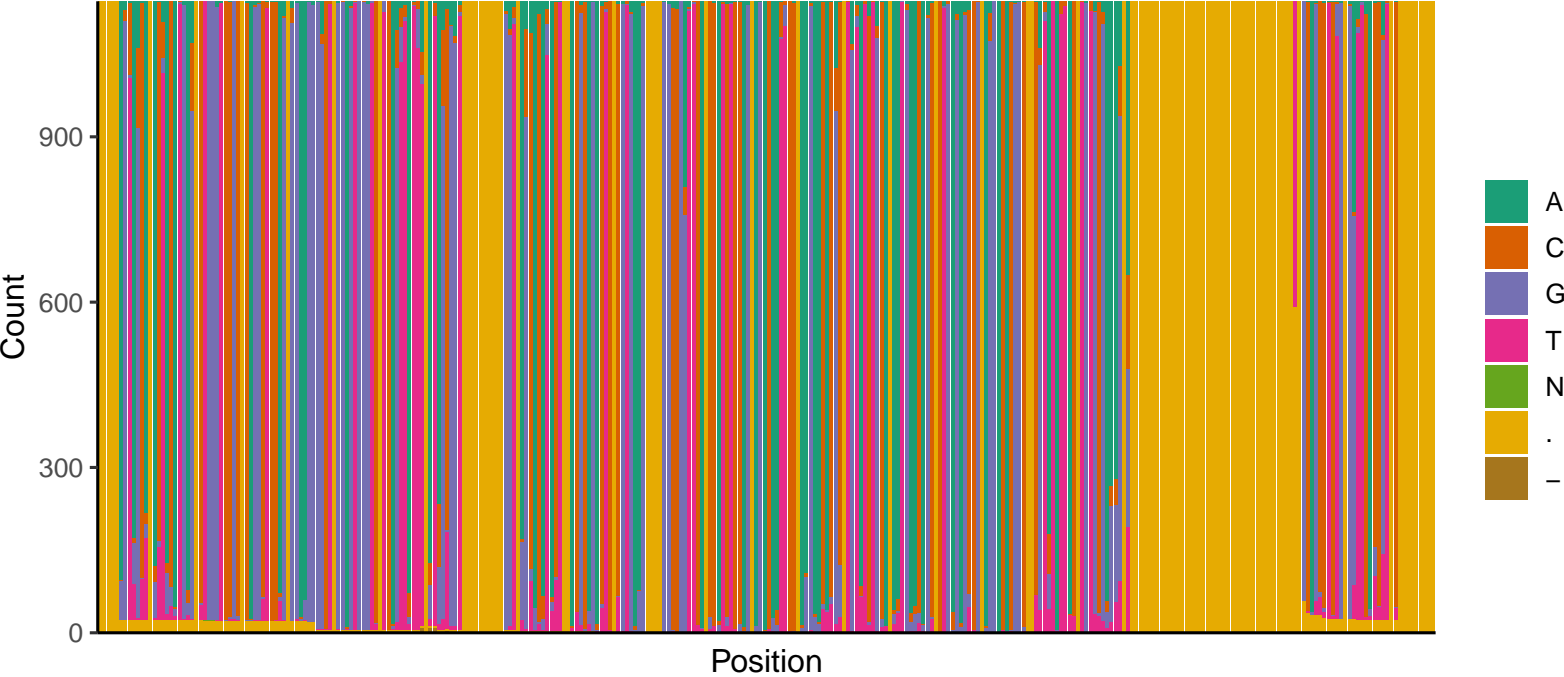
Gene IGHV3-53*01_02_A225G_T267G_G303A



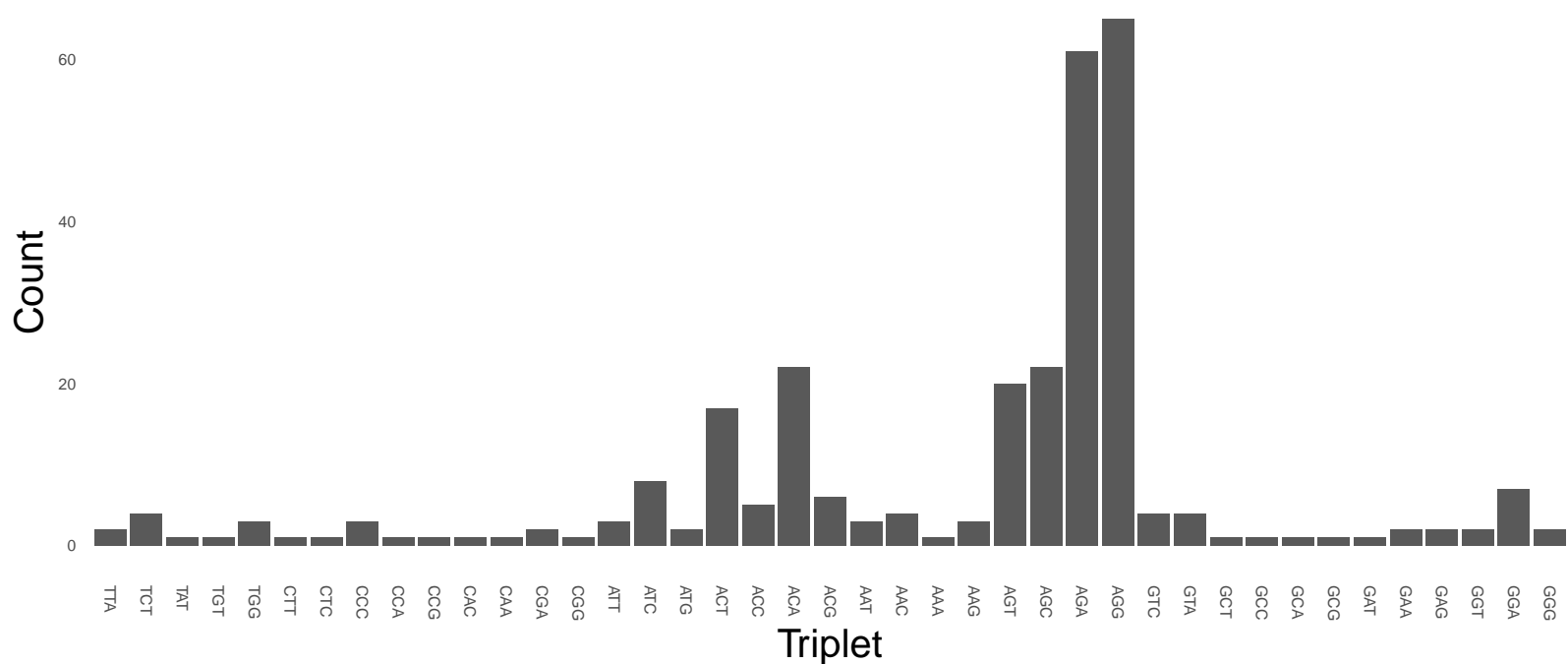
Gene IGHV6-1*01_02_A315G



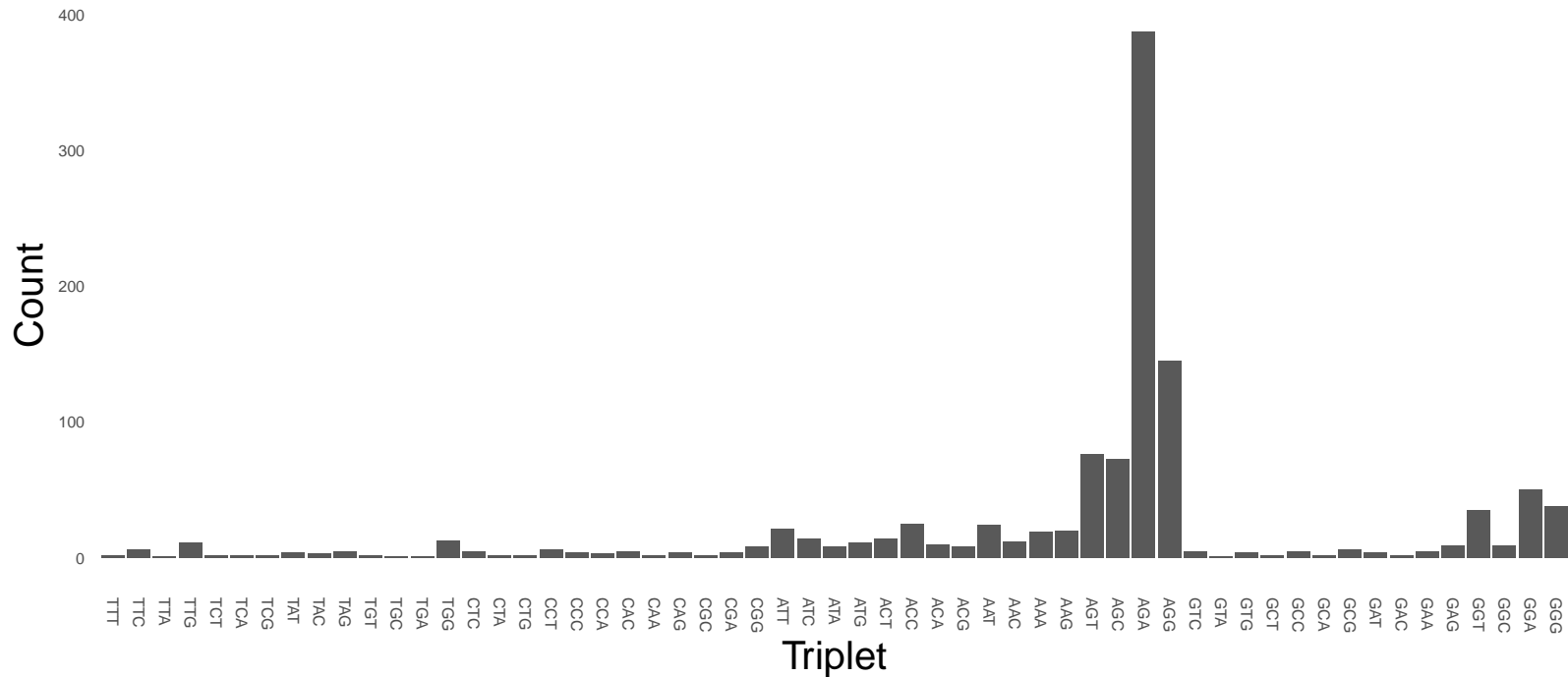
Gene IGHV3-53*01_02_A225G_T267G_G303A



IGHV6-1*01_02_A315G- Final 3 nucleotides as a triplet

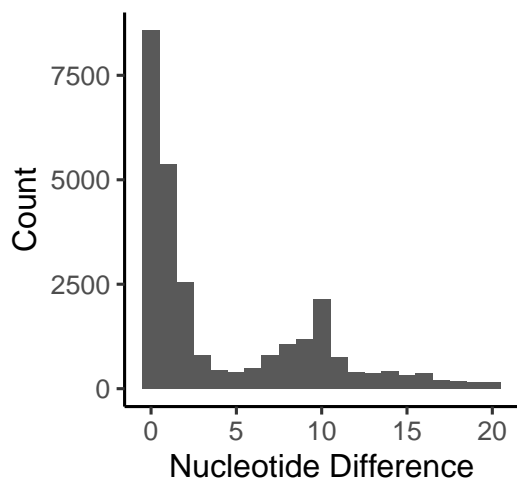


IGHV3-53*01_02_A225G_T267G_G303A- Final 3 nucleotides as a triplet



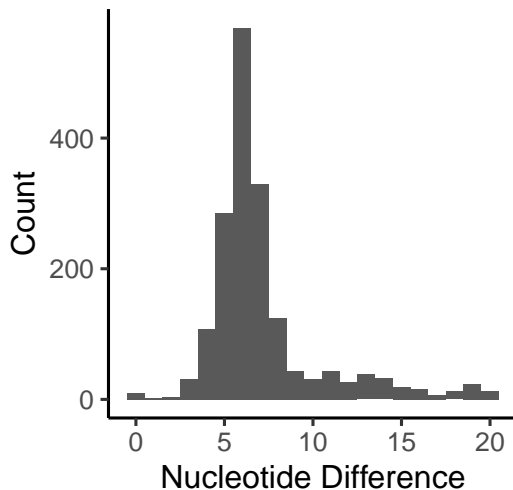
IGHV1-2*02

29678 sequences assigned
8575 (28.9%) exact matches, in which:
7712 unique CDR3
7 unique J



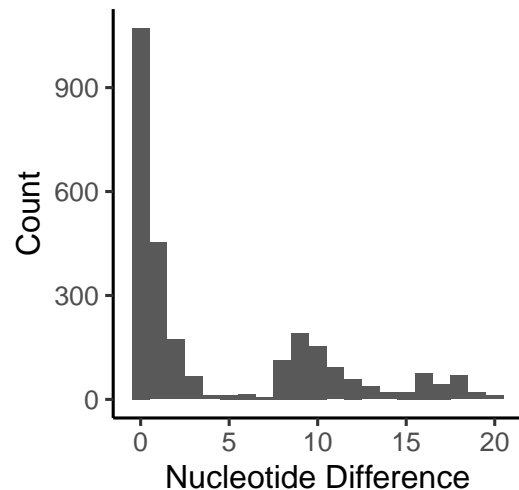
IGHV1-8*02

1827 sequences assigned
10 (0.5%) exact matches, in which:
10 unique CDR3
4 unique J



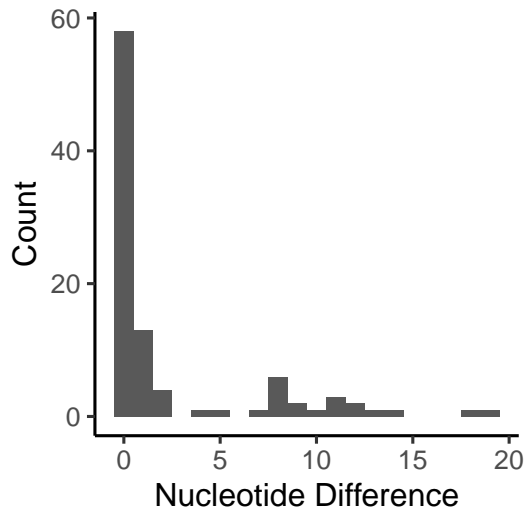
IGHV1-24*01

2771 sequences assigned
1073 (38.7%) exact matches, in which:
1007 unique CDR3
7 unique J



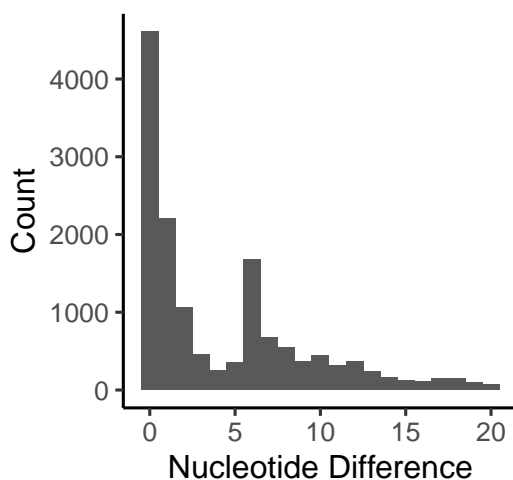
IGHV1-3*02

100 sequences assigned
58 (58%) exact matches, in which:
56 unique CDR3
6 unique J



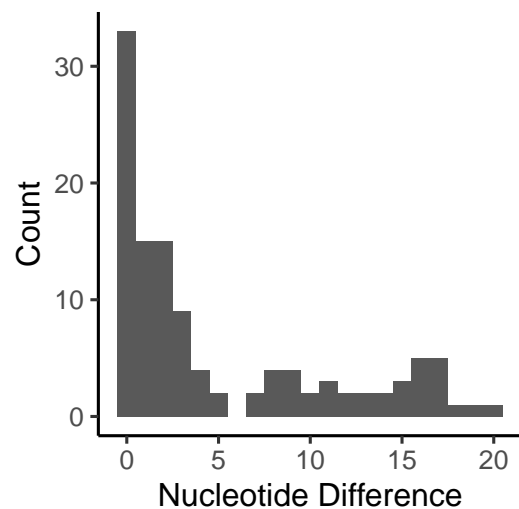
IGHV1-18*01

15629 sequences assigned
4608 (29.5%) exact matches, in which:
4319 unique CDR3
7 unique J



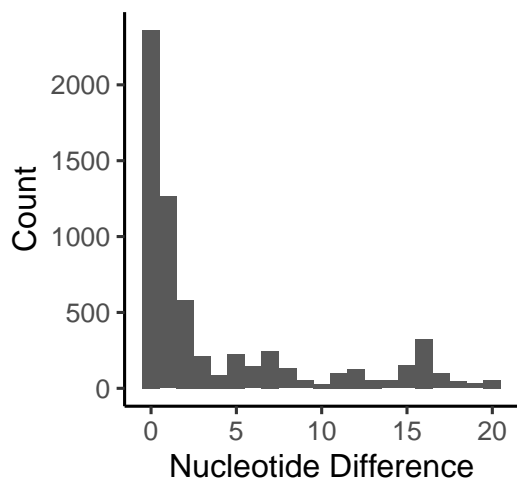
IGHV1-45*02

145 sequences assigned
33 (22.8%) exact matches, in which:
29 unique CDR3
6 unique J



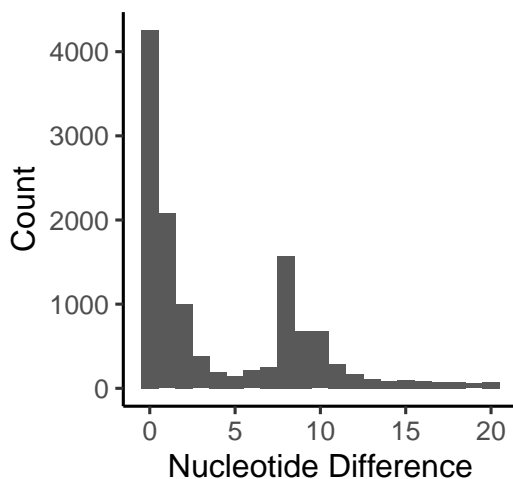
IGHV1-8*01

6594 sequences assigned
2361 (35.8%) exact matches, in which:
2202 unique CDR3
7 unique J



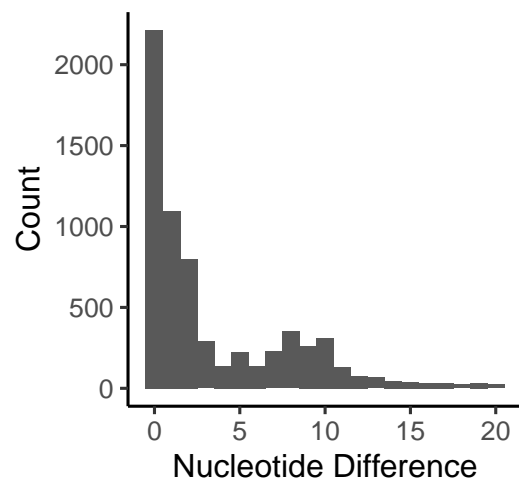
IGHV1-18*04

13163 sequences assigned
4257 (32.3%) exact matches, in which:
3967 unique CDR3
7 unique J



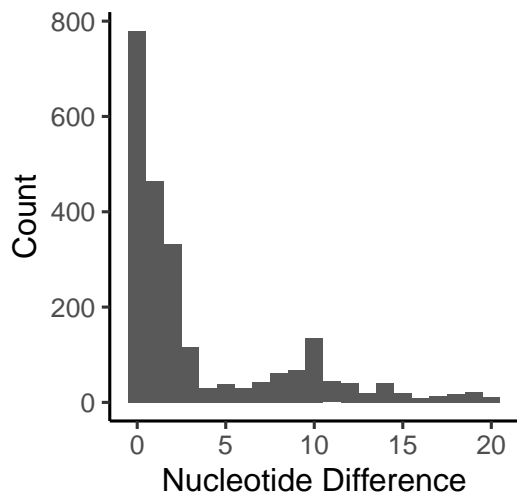
IGHV1-46*01

6756 sequences assigned
2214 (32.8%) exact matches, in which:
2089 unique CDR3
7 unique J



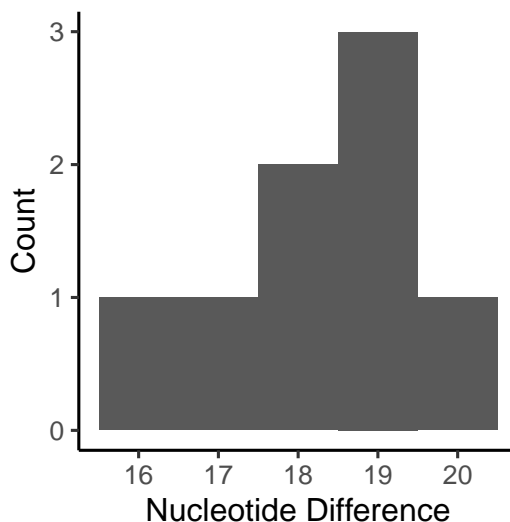
IGHV1-46*03

2422 sequences assigned
780 (32.2%) exact matches, in which:
689 unique CDR3
7 unique J



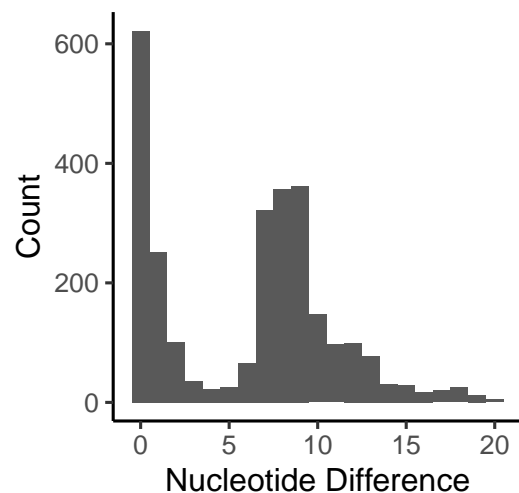
IGHV1-69-2*01

8 sequences assigned
No exact matches.



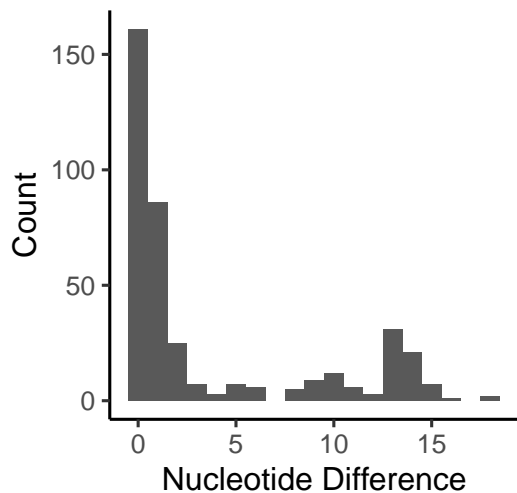
IGHV1-69*06_14

2896 sequences assigned
622 (21.5%) exact matches, in which:
618 unique CDR3
7 unique J



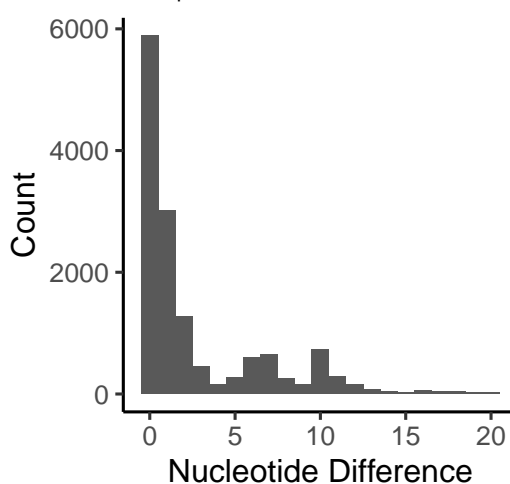
IGHV1-58*02

404 sequences assigned
161 (39.9%) exact matches, in which:
153 unique CDR3
7 unique J



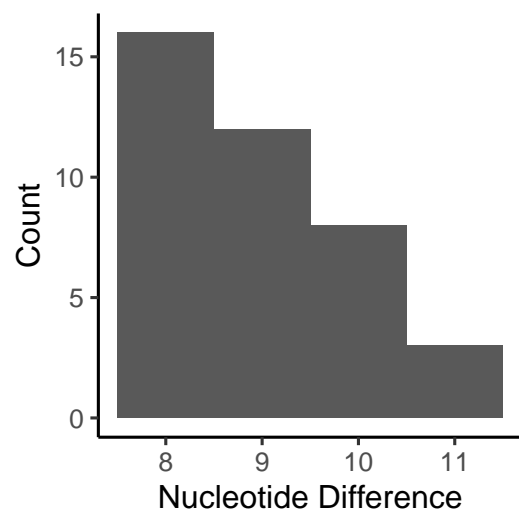
IGHV1-69*01_12_13

14708 sequences assigned
5887 (40%) exact matches, in which:
5495 unique CDR3
7 unique J



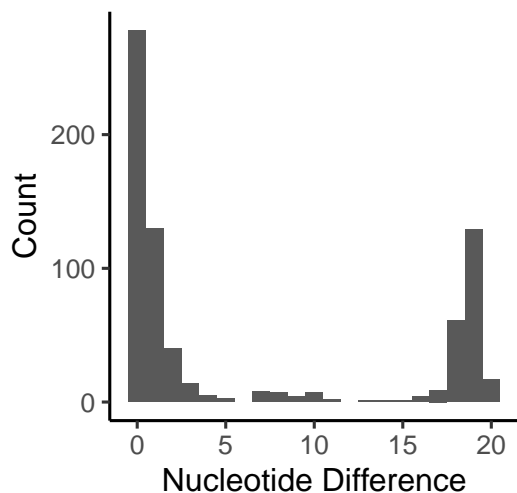
IGHV1-NL1*01

39 sequences assigned
No exact matches.



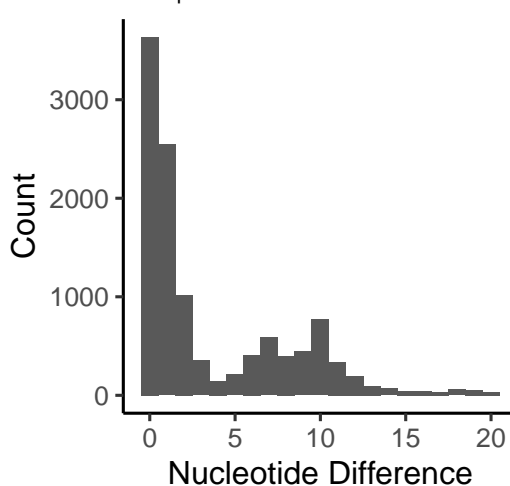
IGHV1-58*01_03

743 sequences assigned
278 (37.4%) exact matches, in which:
264 unique CDR3
7 unique J



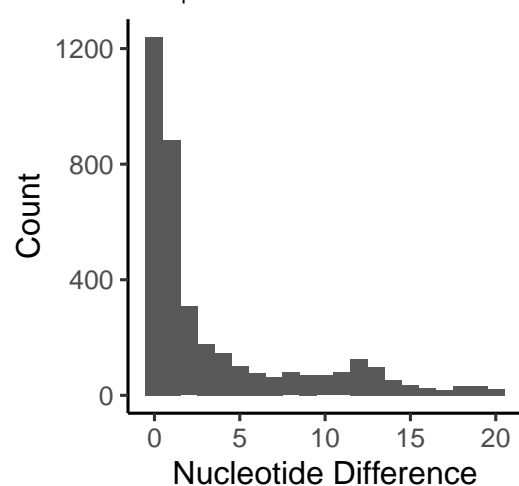
IGHV1-69*04_09

12030 sequences assigned
3636 (30.2%) exact matches, in which:
3423 unique CDR3
7 unique J



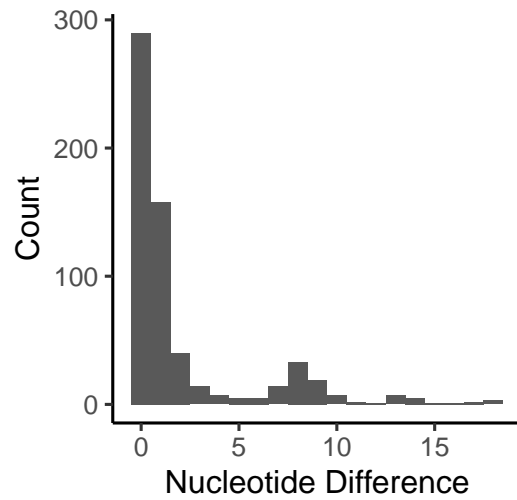
IGHV2-5*02

4191 sequences assigned
1240 (29.6%) exact matches, in which:
1122 unique CDR3
7 unique J



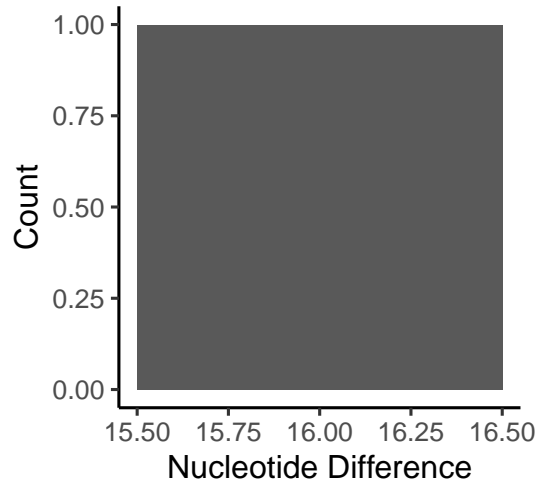
IGHV2-26*01

629 sequences assigned
290 (46.1%) exact matches, in which:
269 unique CDR3
7 unique J



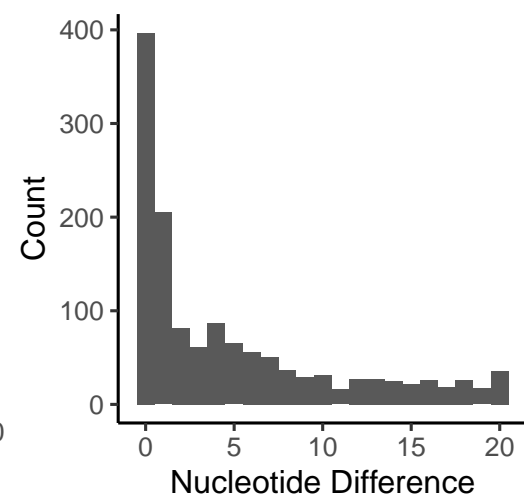
IGHV2-70D*04

6 sequences assigned
No exact matches.



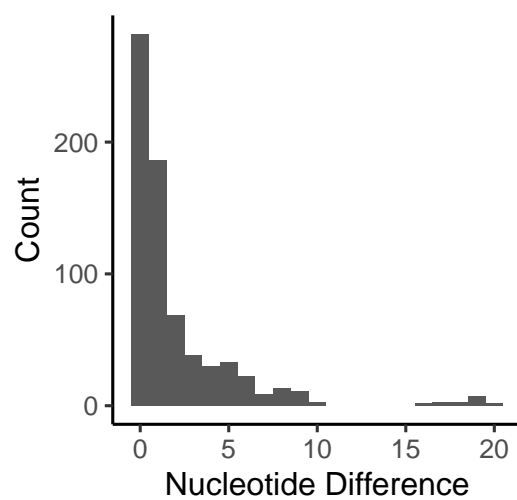
IGHV3-7*04

2974 sequences assigned
397 (13.3%) exact matches, in which:
314 unique CDR3
7 unique J



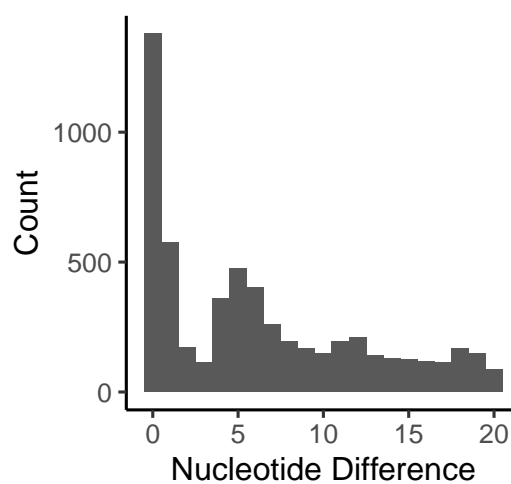
IGHV2-70*01

723 sequences assigned
282 (39%) exact matches, in which:
257 unique CDR3
7 unique J



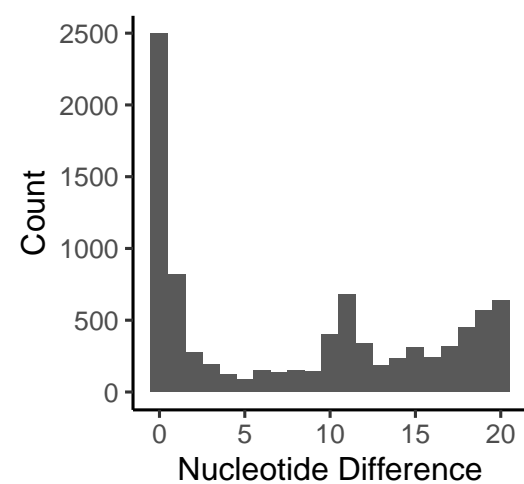
IGHV3-7*01

6172 sequences assigned
1379 (22.3%) exact matches, in which:
1118 unique CDR3
7 unique J



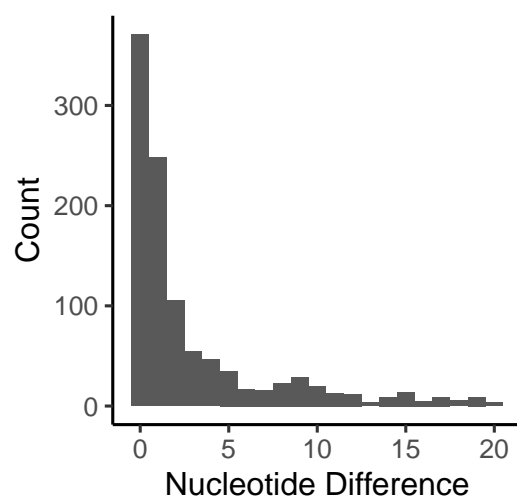
IGHV3-9*01

10263 sequences assigned
2496 (24.3%) exact matches, in which:
1835 unique CDR3
7 unique J



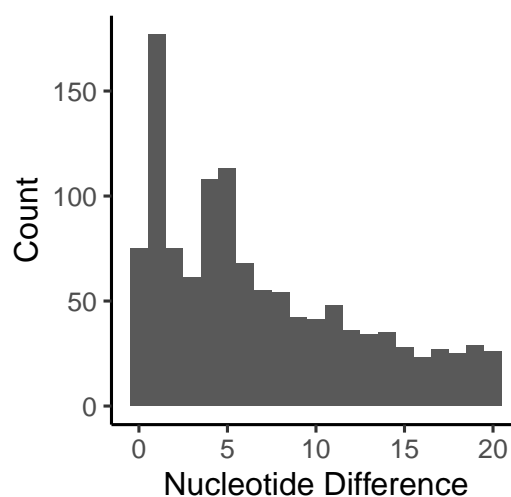
IGHV2-70*11_15

1079 sequences assigned
371 (34.4%) exact matches, in which:
341 unique CDR3
7 unique J



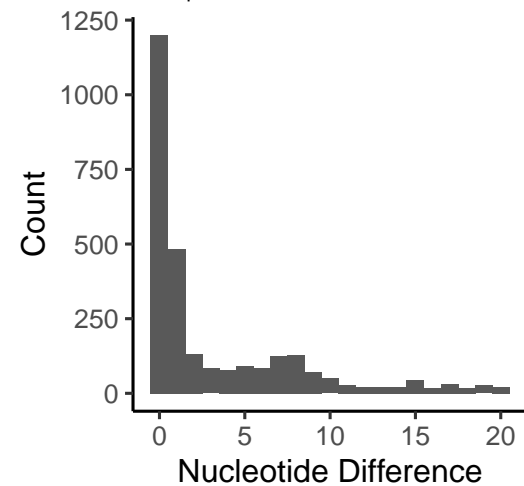
IGHV3-7*03

1438 sequences assigned
75 (5.2%) exact matches, in which:
72 unique CDR3
7 unique J



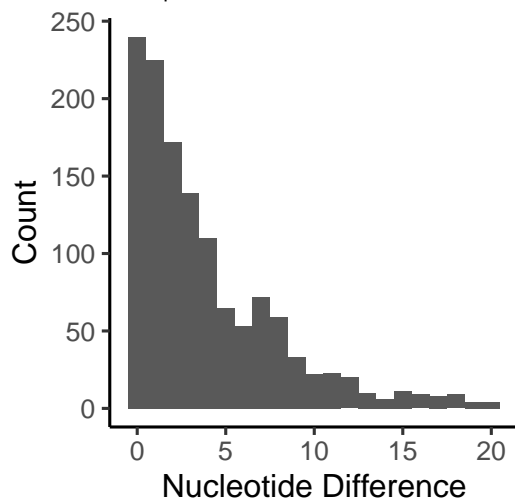
IGHV3-11*01

4896 sequences assigned
1200 (24.5%) exact matches, in which:
968 unique CDR3
7 unique J



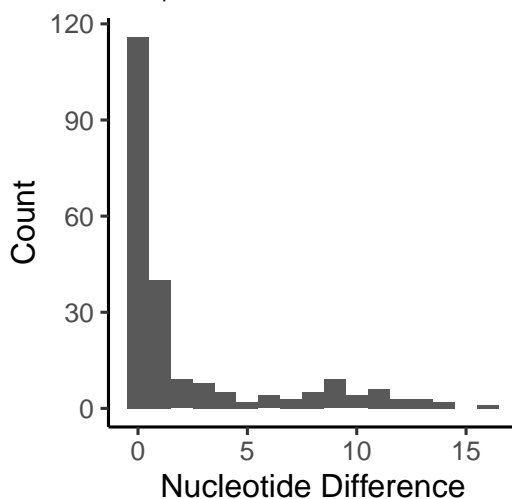
IGHV3-11*04

1428 sequences assigned
240 (16.8%) exact matches, in which:
240 unique CDR3
7 unique J



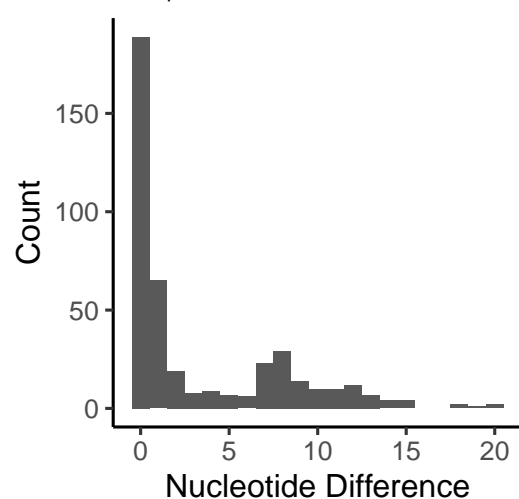
IGHV3-13*05

224 sequences assigned
116 (51.8%) exact matches, in which:
89 unique CDR3
6 unique J



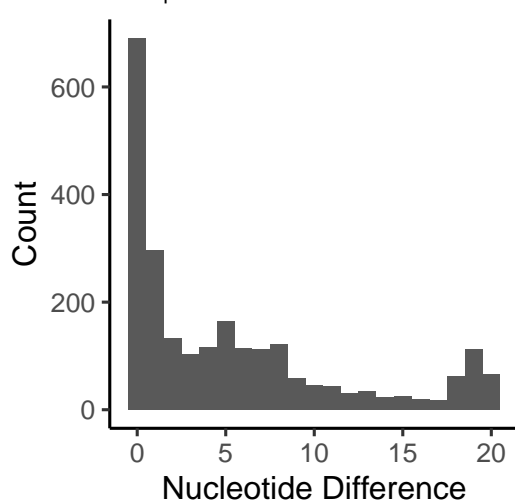
IGHV3-20*01_02

422 sequences assigned
189 (44.8%) exact matches, in which:
150 unique CDR3
7 unique J



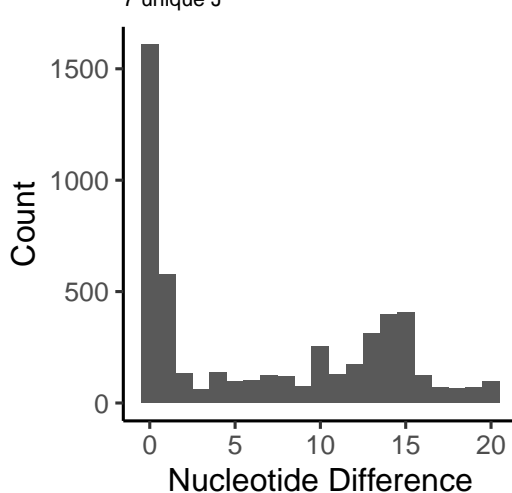
IGHV3-11*06

2557 sequences assigned
691 (27%) exact matches, in which:
570 unique CDR3
7 unique J



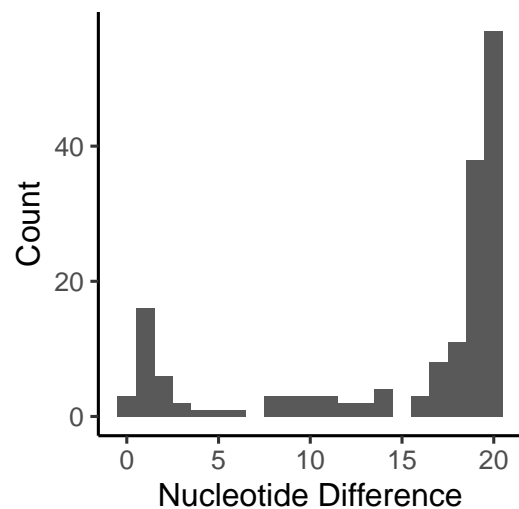
IGHV3-15*01_02

5915 sequences assigned
1608 (27.2%) exact matches, in which:
1216 unique CDR3
7 unique J



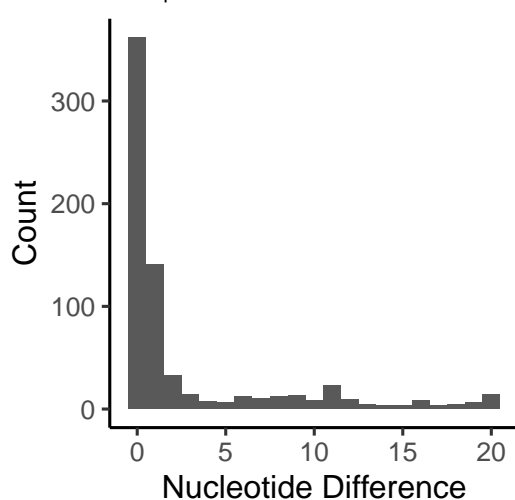
IGHV3-20*03_04

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



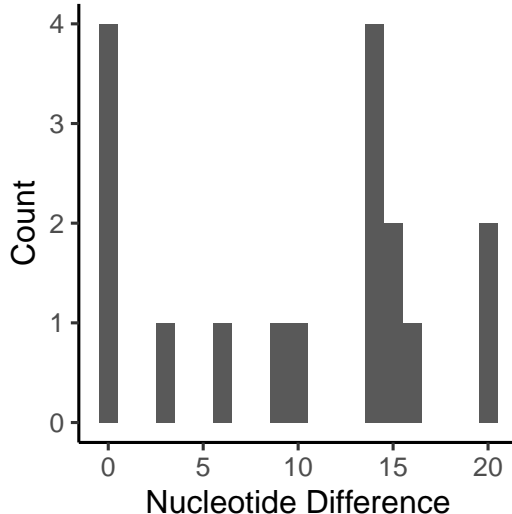
IGHV3-13*01

723 sequences assigned
362 (50.1%) exact matches, in which:
280 unique CDR3
6 unique J



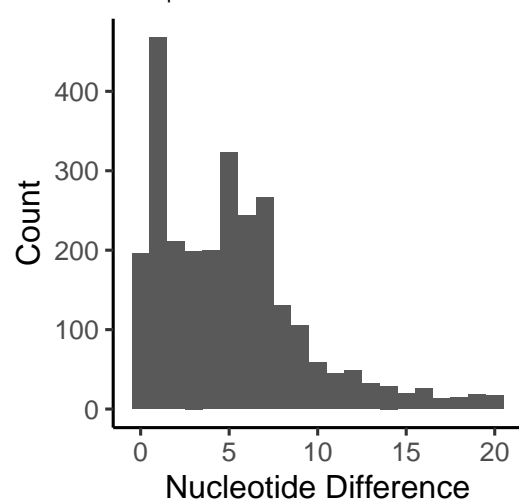
IGHV3-19*01

17 sequences assigned
4 (23.5%) exact matches, in which:
4 unique CDR3
3 unique J



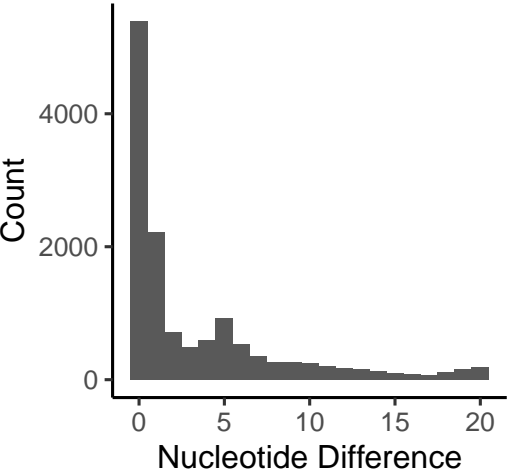
IGHV3-21*04

2834 sequences assigned
196 (6.9%) exact matches, in which:
195 unique CDR3
7 unique J



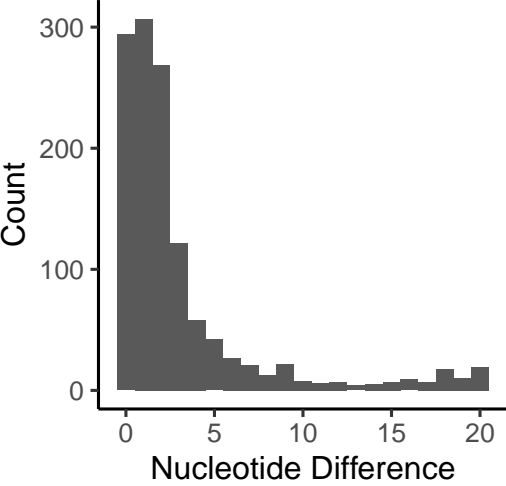
IGHV3-21*01_02

15508 sequences assigned
5389 (34.7%) exact matches, in which:
4134 unique CDR3
7 unique J



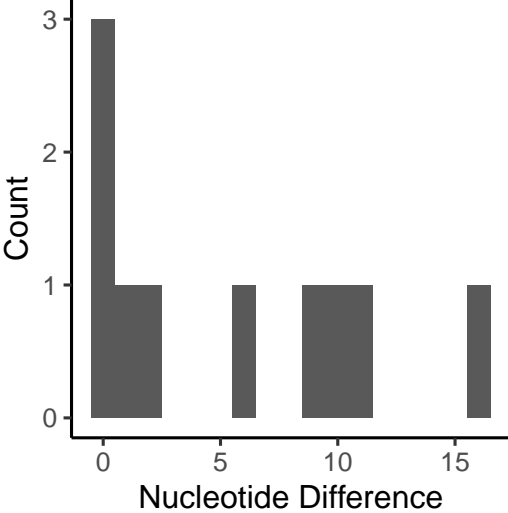
IGHV3-30*03

1706 sequences assigned
294 (17.2%) exact matches, in which:
290 unique CDR3
7 unique J



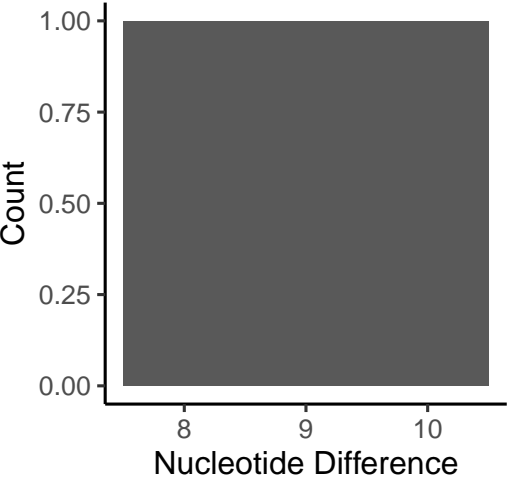
IGHV3-35*01

10 sequences assigned
3 (30%) exact matches, in which:
2 unique CDR3
1 unique J



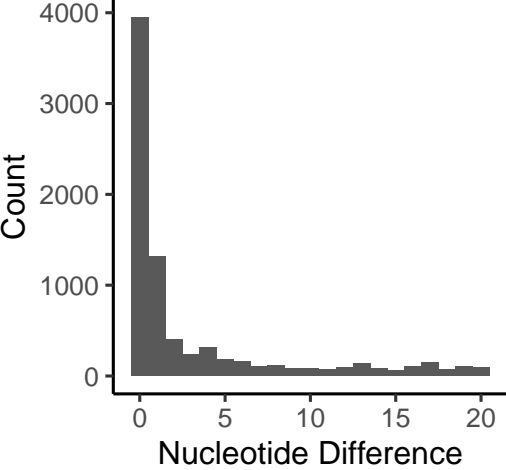
IGHV3-22*01_02

4 sequences assigned
No exact matches.



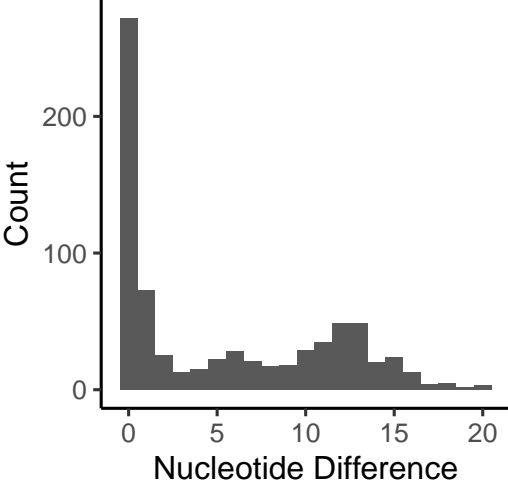
IGHV3-33*01

9172 sequences assigned
3945 (43%) exact matches, in which:
3250 unique CDR3
7 unique J



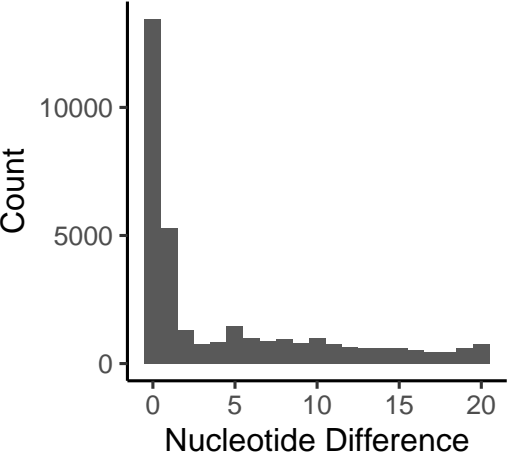
IGHV3-43*01

1100 sequences assigned
272 (24.7%) exact matches, in which:
210 unique CDR3
7 unique J



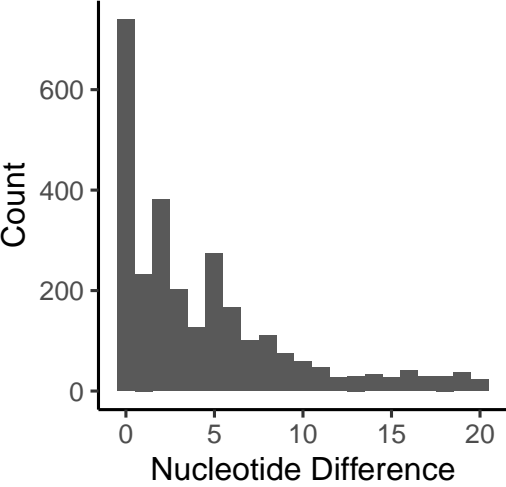
IGHV3-23*01_04

40591 sequences assigned
13459 (33.2%) exact matches, in which:
9303 unique CDR3
7 unique J



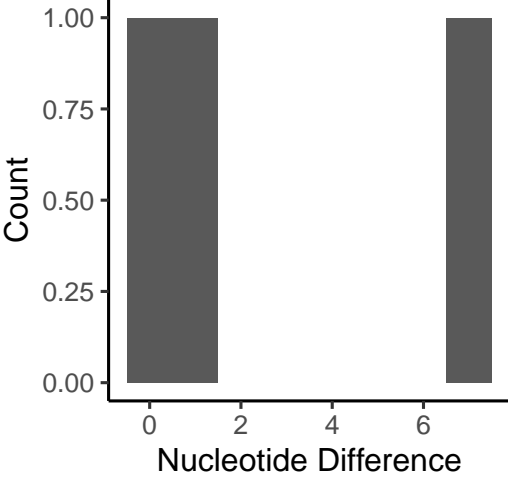
IGHV3-33*08

3090 sequences assigned
740 (23.9%) exact matches, in which:
698 unique CDR3
7 unique J



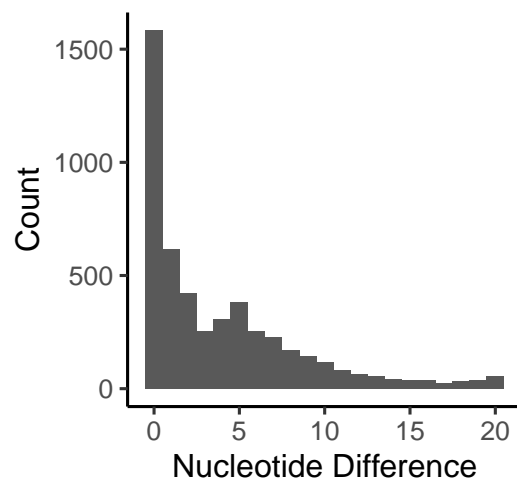
IGHV3-47*02

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



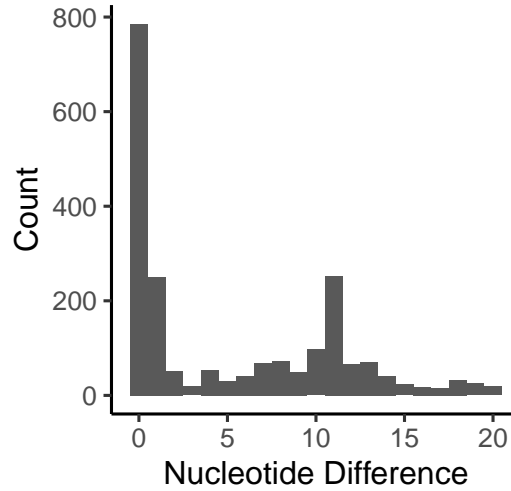
IGHV3-48*01

5623 sequences assigned
1583 (28.2%) exact matches, in which:
1273 unique CDR3
7 unique J



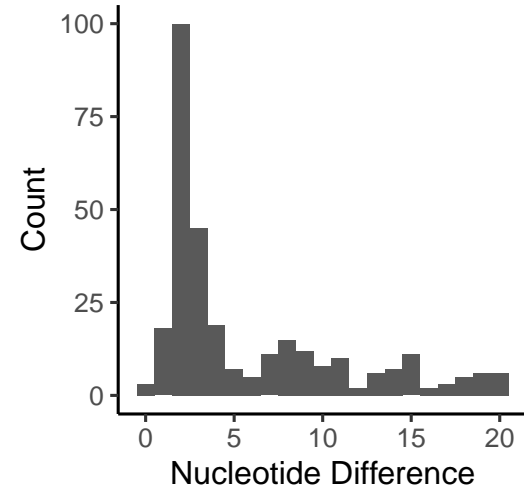
IGHV3-49*03_05

2244 sequences assigned
786 (35%) exact matches, in which:
606 unique CDR3
6 unique J



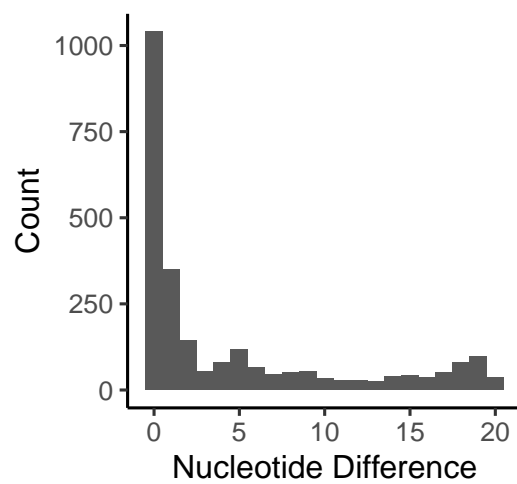
IGHV3-53*05

373 sequences assigned
3 (0.8%) exact matches, in which:
3 unique CDR3
3 unique J



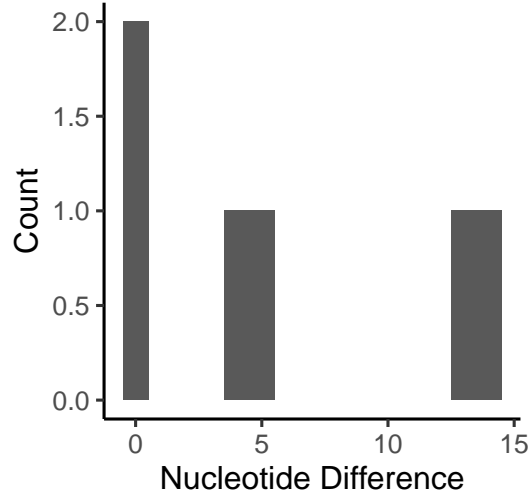
IGHV3-48*02

2887 sequences assigned
1040 (36%) exact matches, in which:
798 unique CDR3
7 unique J



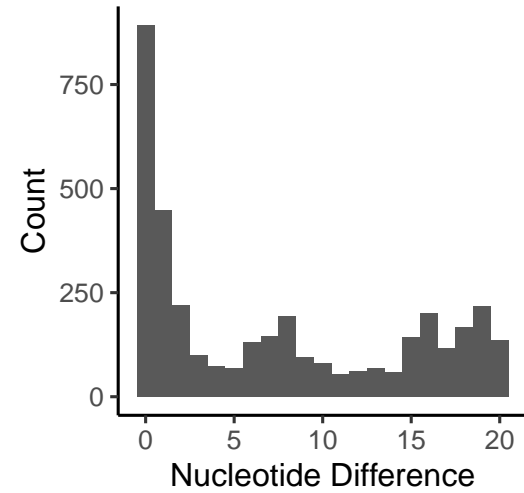
IGHV3-52*02

6 sequences assigned
2 (33.3%) exact matches, in which:
2 unique CDR3
1 unique J



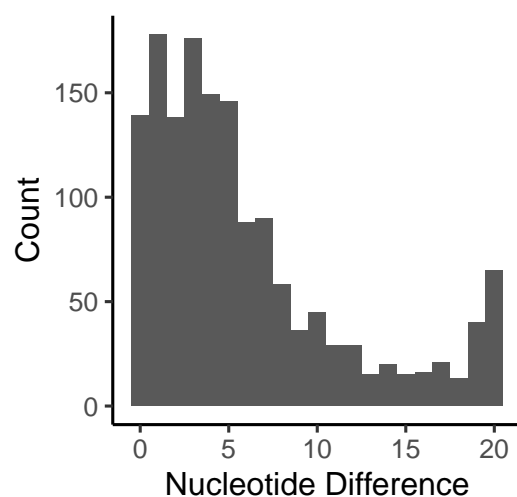
IGHV3-53*01_02

4299 sequences assigned
893 (20.8%) exact matches, in which:
713 unique CDR3
7 unique J



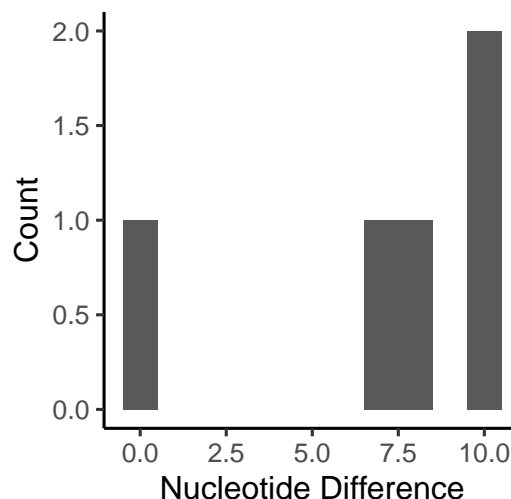
IGHV3-48*04

1801 sequences assigned
139 (7.7%) exact matches, in which:
138 unique CDR3
7 unique J



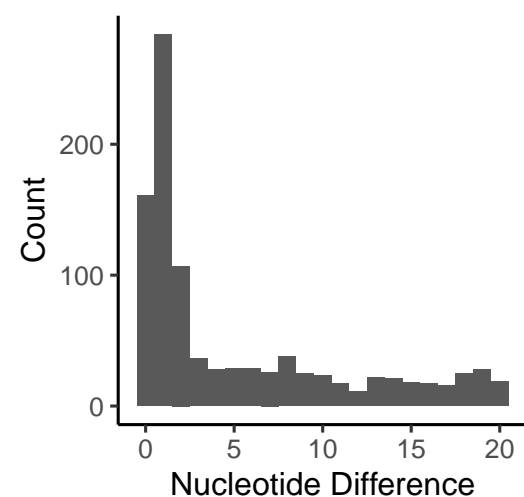
IGHV3-52*01_03

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



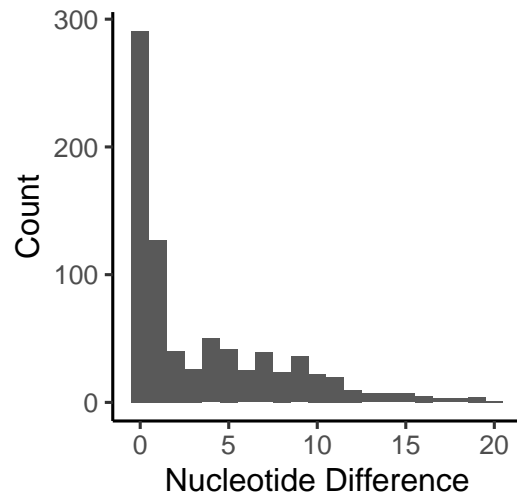
IGHV3-53*01_02_A225G

1146 sequences assigned
161 (14%) exact matches, in which:
159 unique CDR3
7 unique J



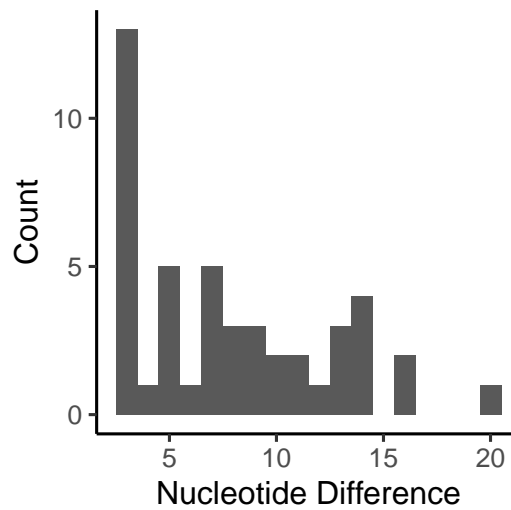
IGHV3-64*01

823 sequences assigned
291 (35.4%) exact matches, in which:
211 unique CDR3
6 unique J



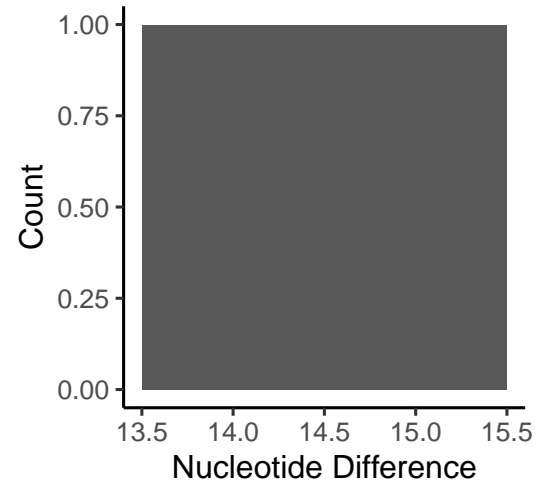
IGHV3-69-1*01

82 sequences assigned
No exact matches.



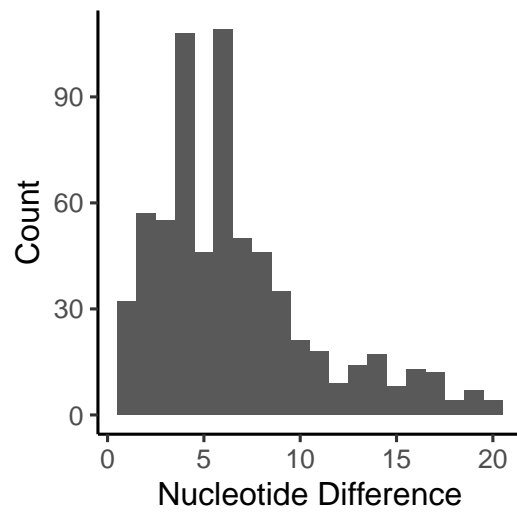
IGHV3-71*01_04

3 sequences assigned
No exact matches.



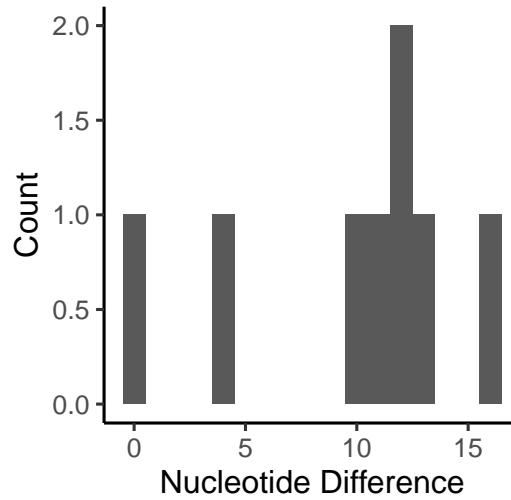
IGHV3-64*04

694 sequences assigned
No exact matches.



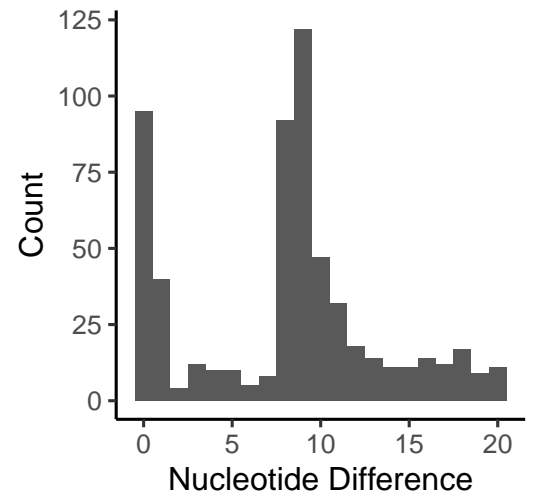
IGHV3-69-1*02

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



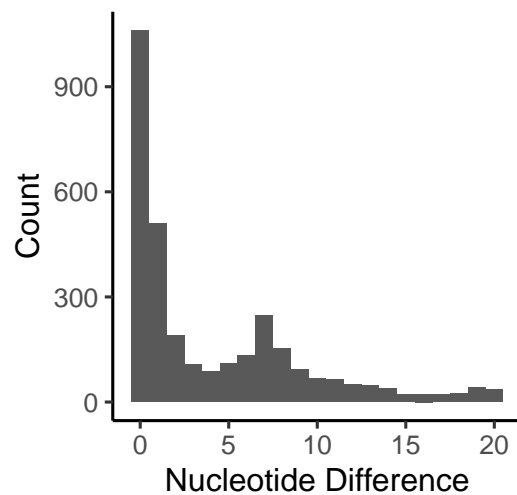
IGHV3-72*01

805 sequences assigned
95 (11.8%) exact matches, in which:
75 unique CDR3
6 unique J



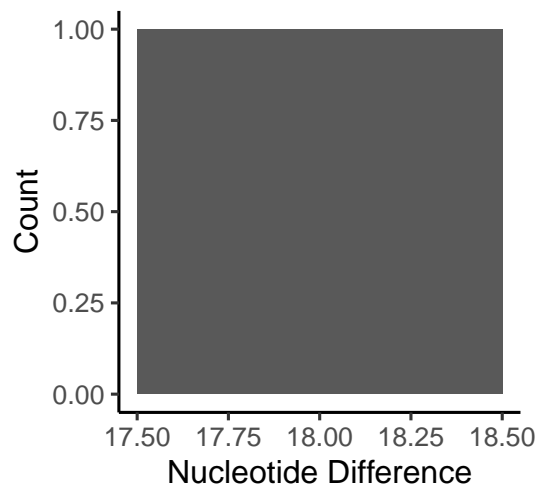
IGHV3-66*01

3689 sequences assigned
1061 (28.8%) exact matches, in which:
855 unique CDR3
7 unique J



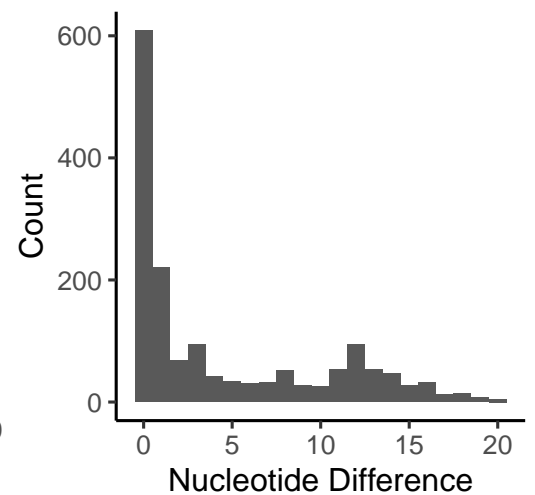
IGHV3-71*03

1 sequences assigned
No exact matches.



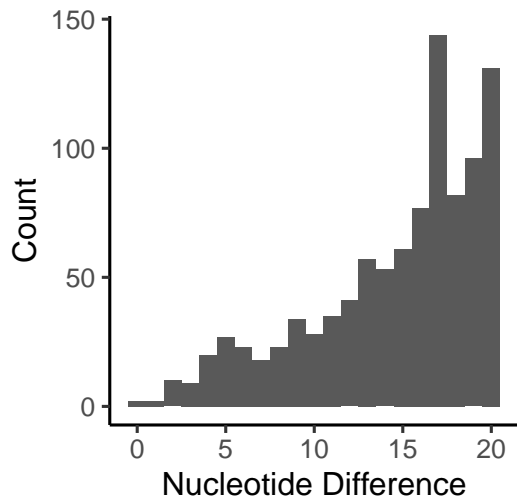
IGHV3-73*01_02

1740 sequences assigned
609 (35%) exact matches, in which:
458 unique CDR3
7 unique J



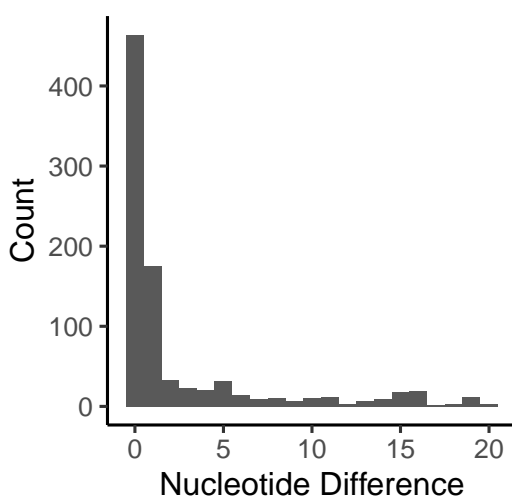
IGHV3-74*03

2456 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
2 unique J



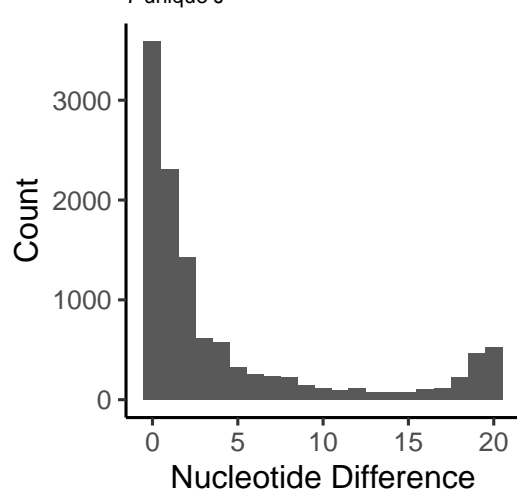
IGHV3-64D*06

906 sequences assigned
464 (51.2%) exact matches, in which:
310 unique CDR3
7 unique J



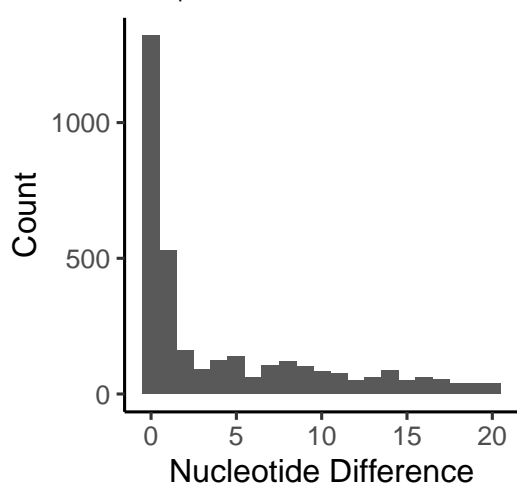
IGHV4-4*07

13109 sequences assigned
3589 (27.4%) exact matches, in which:
3323 unique CDR3
7 unique J



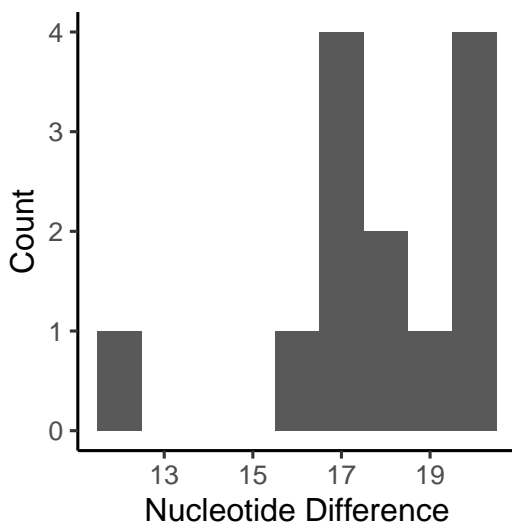
IGHV3-74*01_02

4356 sequences assigned
1320 (30.3%) exact matches, in which:
1024 unique CDR3
7 unique J



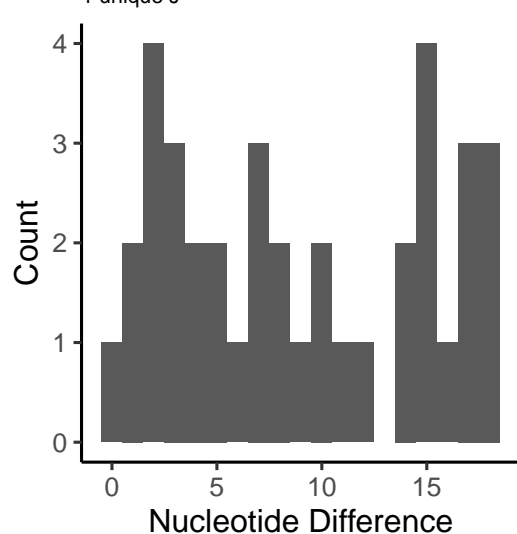
IGHV3-64D*08

30 sequences assigned
No exact matches.



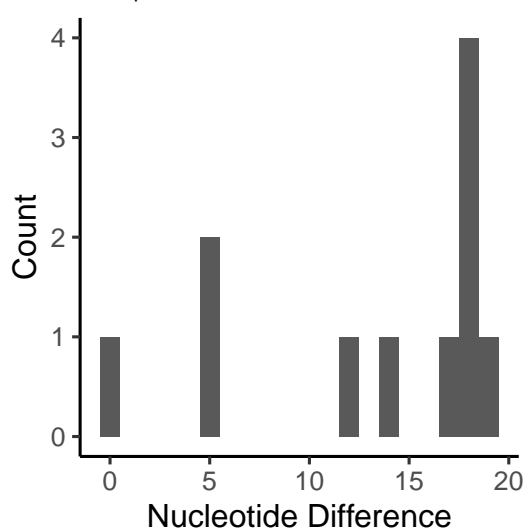
IGHV4-28*03

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



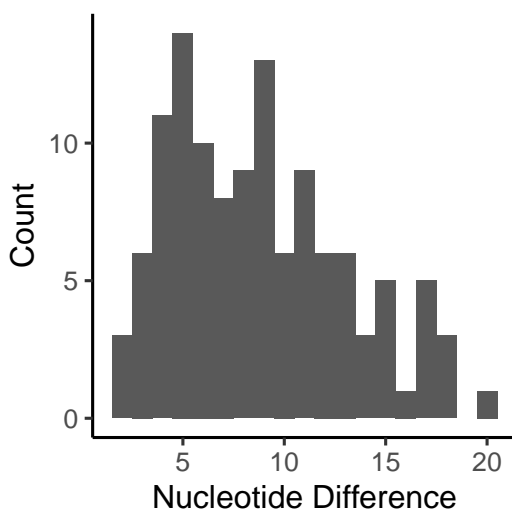
IGHV3-43D*04

13 sequences assigned
1 (7.7%) exact matches, in which:
1 unique CDR3
1 unique J



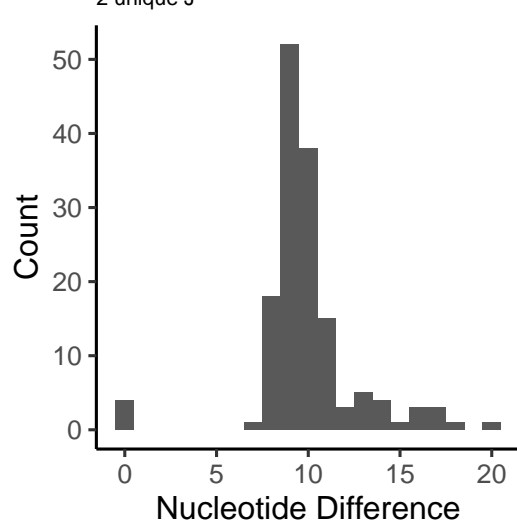
IGHV3-NL1*01

137 sequences assigned
No exact matches.



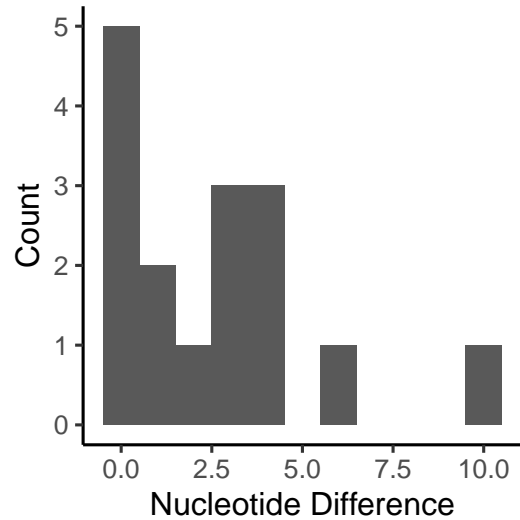
IGHV4-28*01_07

155 sequences assigned
4 (2.6%) exact matches, in which:
4 unique CDR3
2 unique J



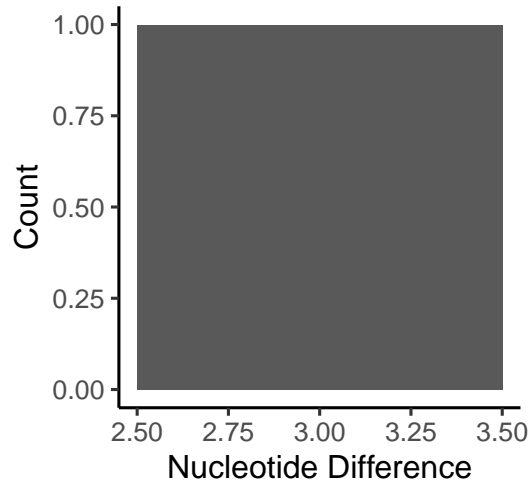
IGHV4-28*02_05

17 sequences assigned
5 (29.4%) exact matches, in which:
5 unique CDR3
3 unique J



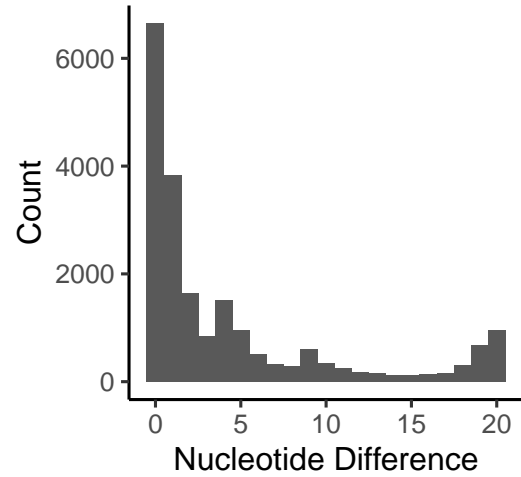
IGHV4-30-4*05

1 sequences assigned
No exact matches.



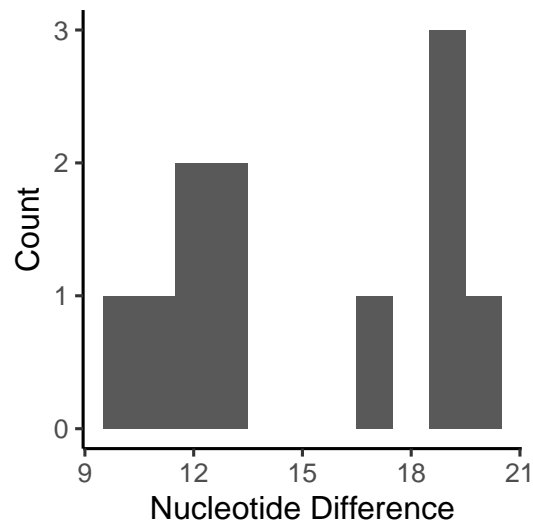
IGHV4-34*01_02

22512 sequences assigned
6648 (29.5%) exact matches, in which:
5885 unique CDR3
7 unique J



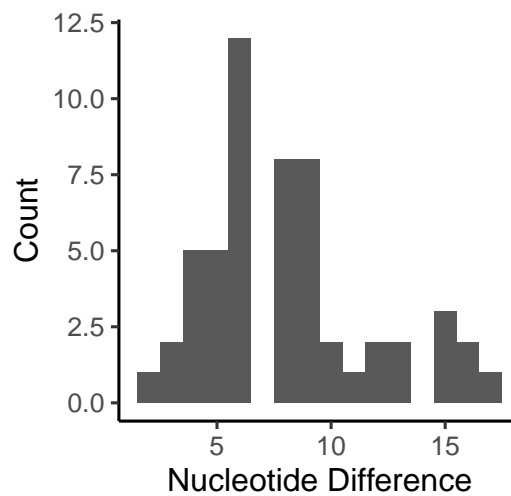
IGHV4-30-4*01

30 sequences assigned
No exact matches.



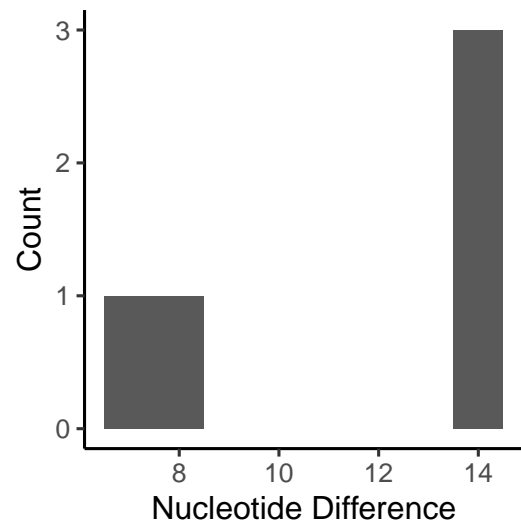
IGHV4-30-4*08

102 sequences assigned
No exact matches.



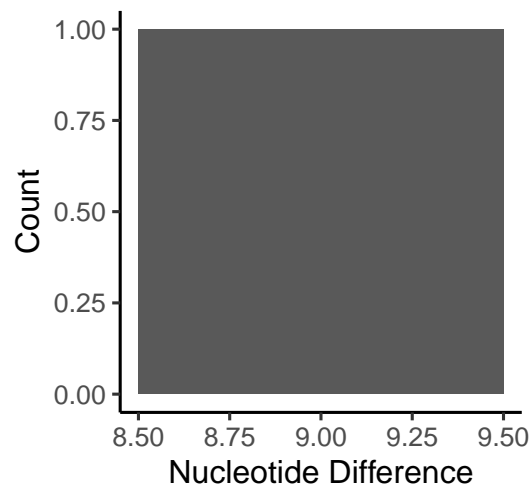
IGHV4-38-2*01

8 sequences assigned
No exact matches.



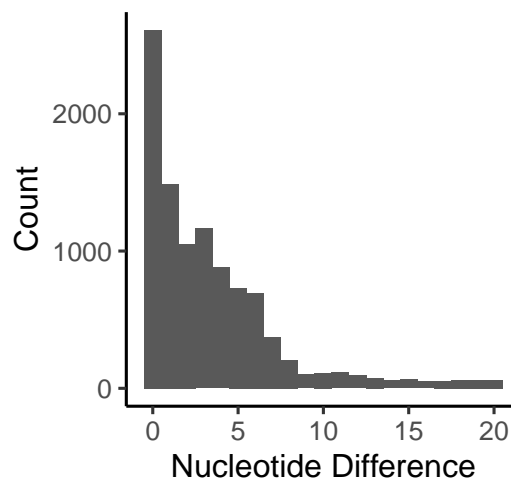
IGHV4-30-2*04

1 sequences assigned
No exact matches.



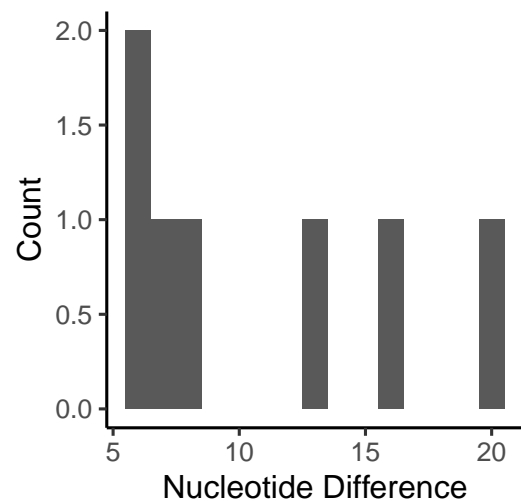
IGHV4-31*02

11413 sequences assigned
2610 (22.9%) exact matches, in which:
2446 unique CDR3
7 unique J



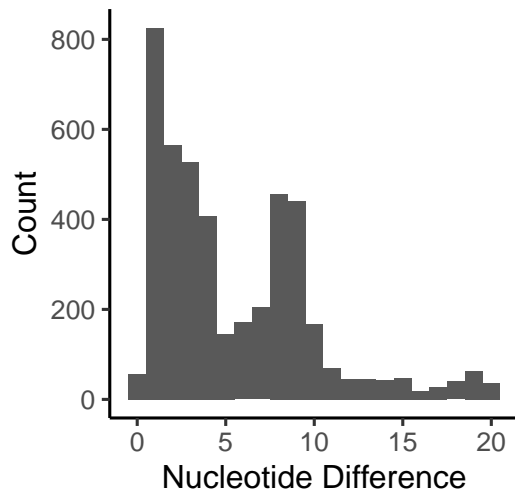
IGHV4-38-2*02

22 sequences assigned
No exact matches.



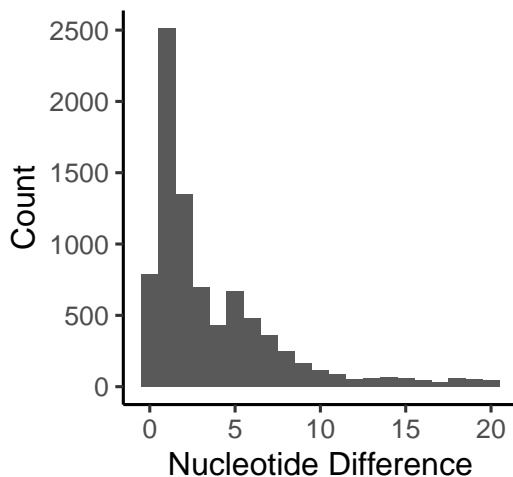
IGHV4–39*07

5403 sequences assigned
56 (1%) exact matches, in which:
56 unique CDR3
6 unique J



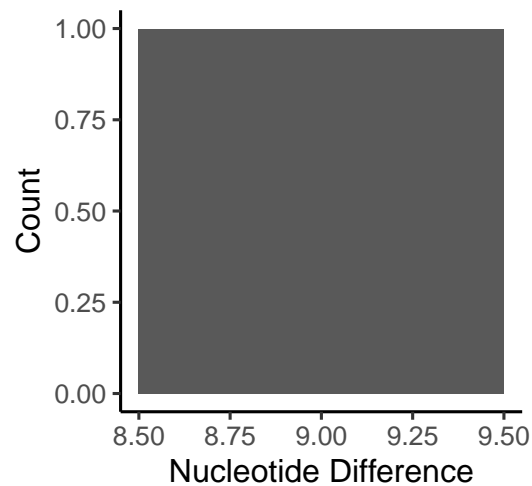
IGHV4–59*12

9279 sequences assigned
786 (8.5%) exact matches, in which:
769 unique CDR3
7 unique J



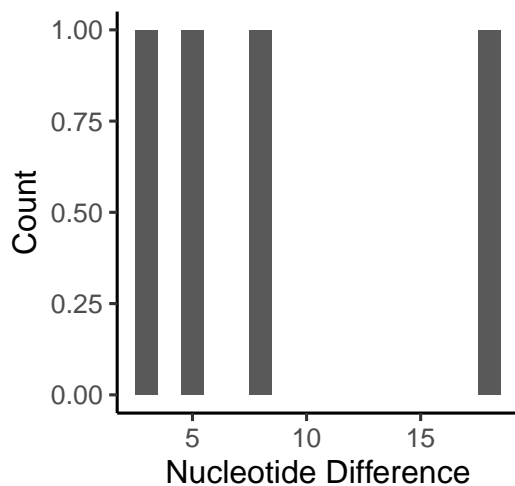
IGHV1/OR15–1*04

2 sequences assigned
No exact matches.



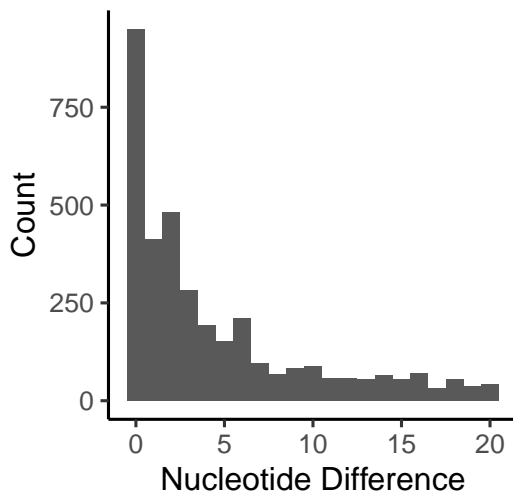
IGHV4–55*09

4 sequences assigned
No exact matches.



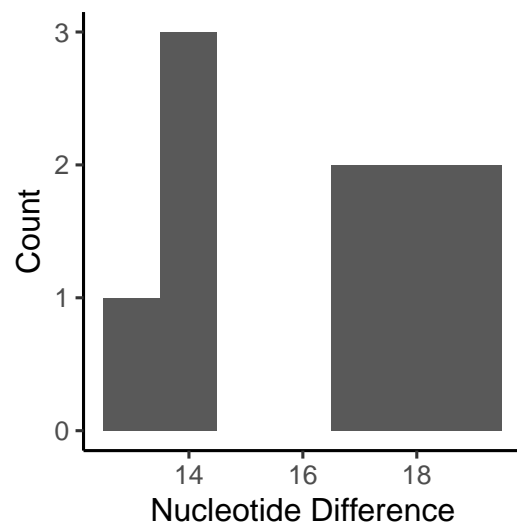
IGHV4–61*01

5647 sequences assigned
950 (16.8%) exact matches, in which:
904 unique CDR3
7 unique J



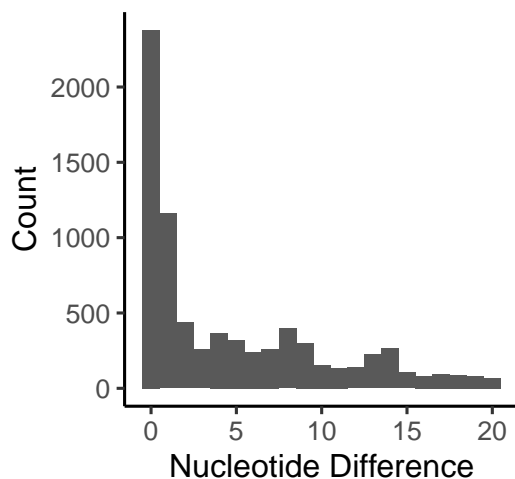
IGHV1/OR15–2*02_03

17 sequences assigned
No exact matches.



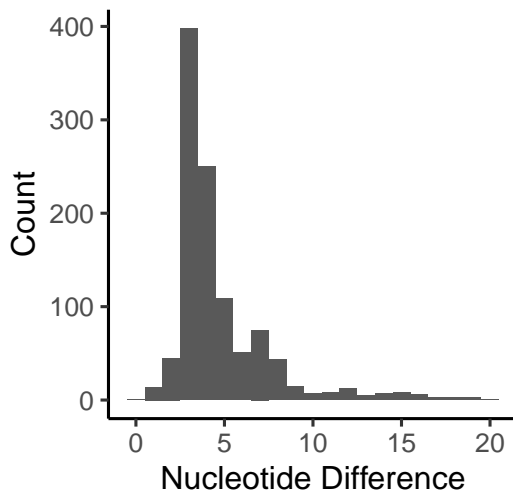
IGHV4–59*08

9995 sequences assigned
2378 (23.8%) exact matches, in which:
2169 unique CDR3
7 unique J



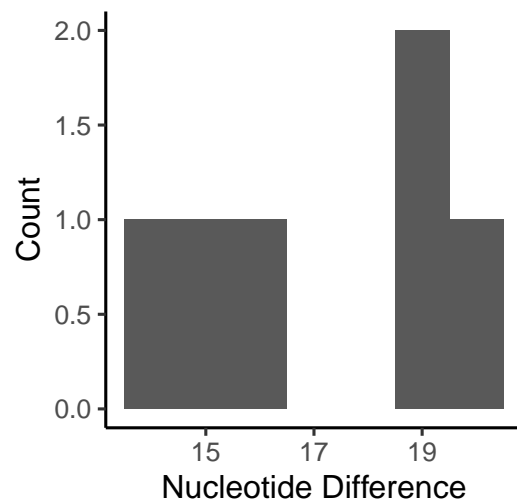
IGHV4–61*02

1115 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



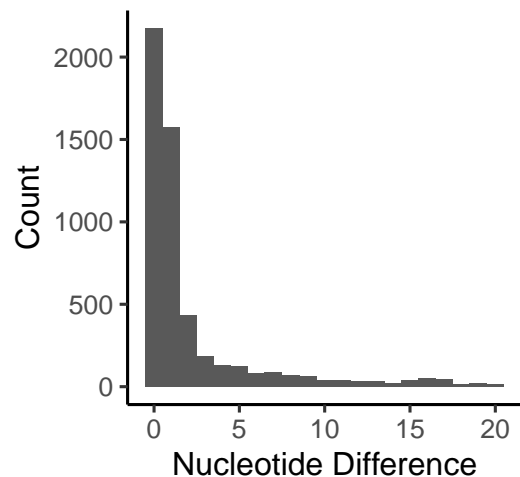
IGHV4/OR15–8*01

12 sequences assigned
No exact matches.



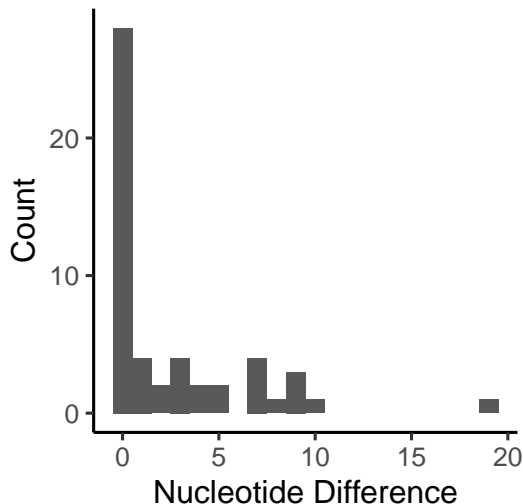
IGHV5-10-1*01_03

5611 sequences assigned
2174 (38.7%) exact matches, in which:
1779 unique CDR3
7 unique J



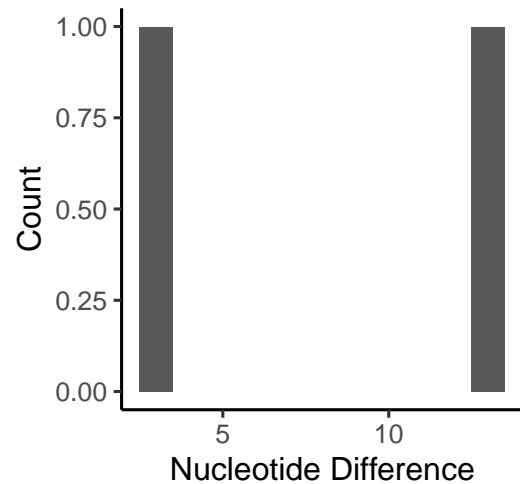
IGHV5-51*07

53 sequences assigned
28 (52.8%) exact matches, in which:
27 unique CDR3
6 unique J



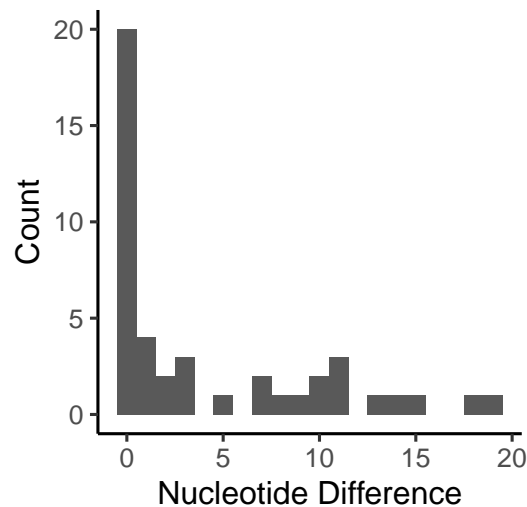
IGHV3/OR16-10*01_03

3 sequences assigned
No exact matches.



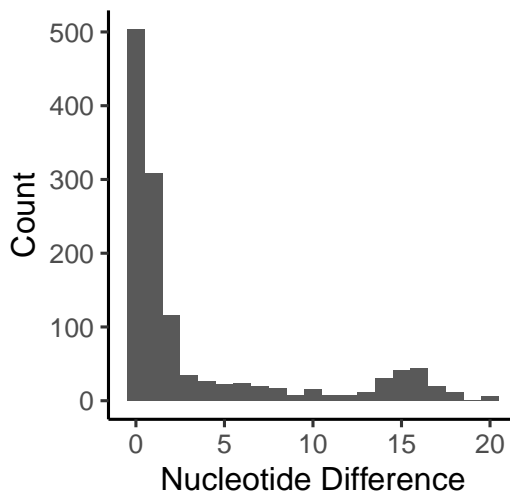
IGHV5-51*04

46 sequences assigned
20 (43.5%) exact matches, in which:
18 unique CDR3
4 unique J



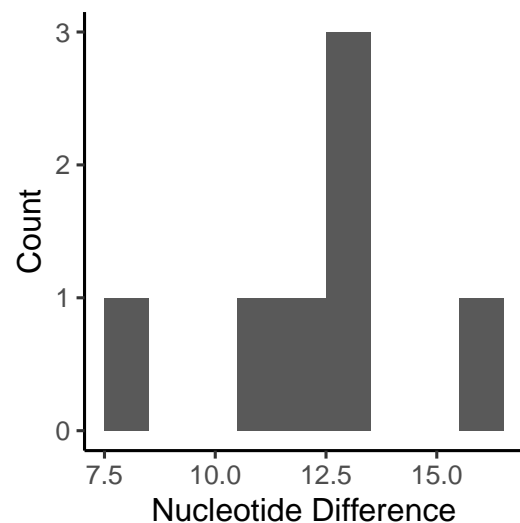
IGHV6-1*01_02

1366 sequences assigned
504 (36.9%) exact matches, in which:
456 unique CDR3
7 unique J



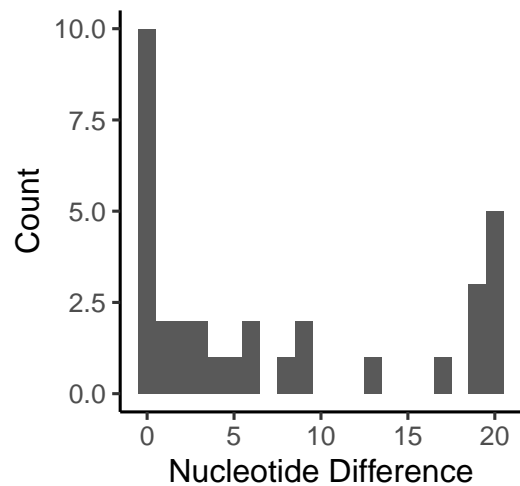
IGHV7-4-1*02

7 sequences assigned
No exact matches.



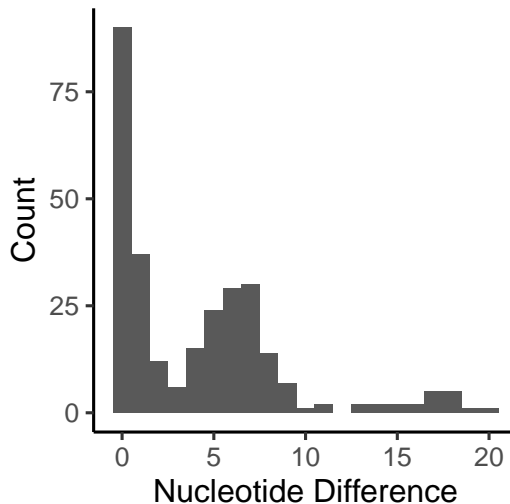
IGHV5-51*06

86 sequences assigned
10 (11.6%) exact matches, in which:
10 unique CDR3
3 unique J



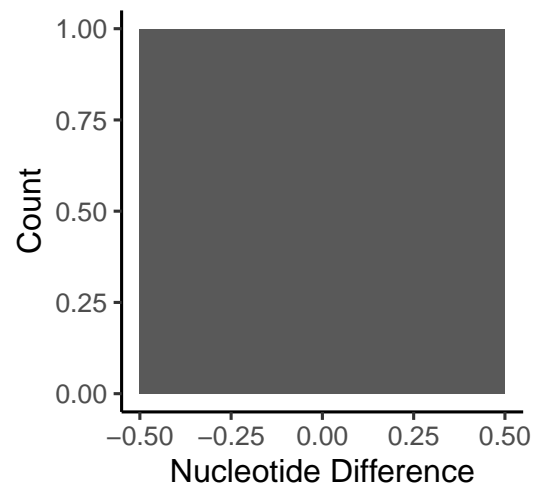
IGHV6-1*01_02_A315G

293 sequences assigned
90 (30.7%) exact matches, in which:
90 unique CDR3
5 unique J

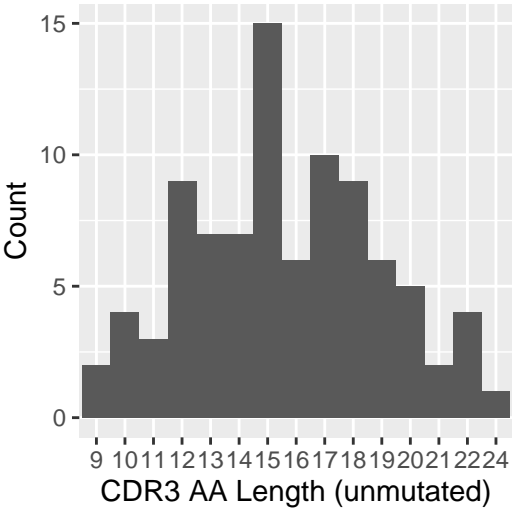


IGHV7-81*01

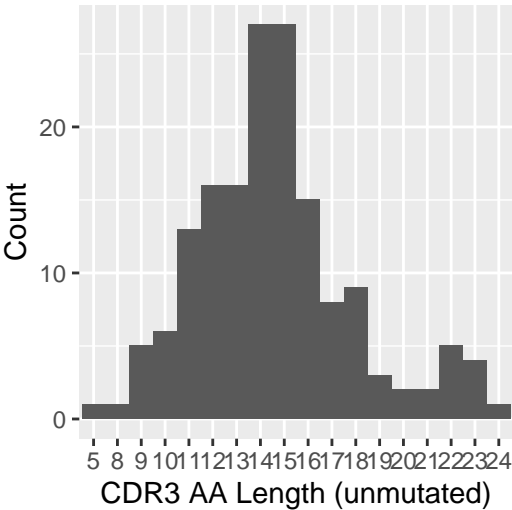
1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



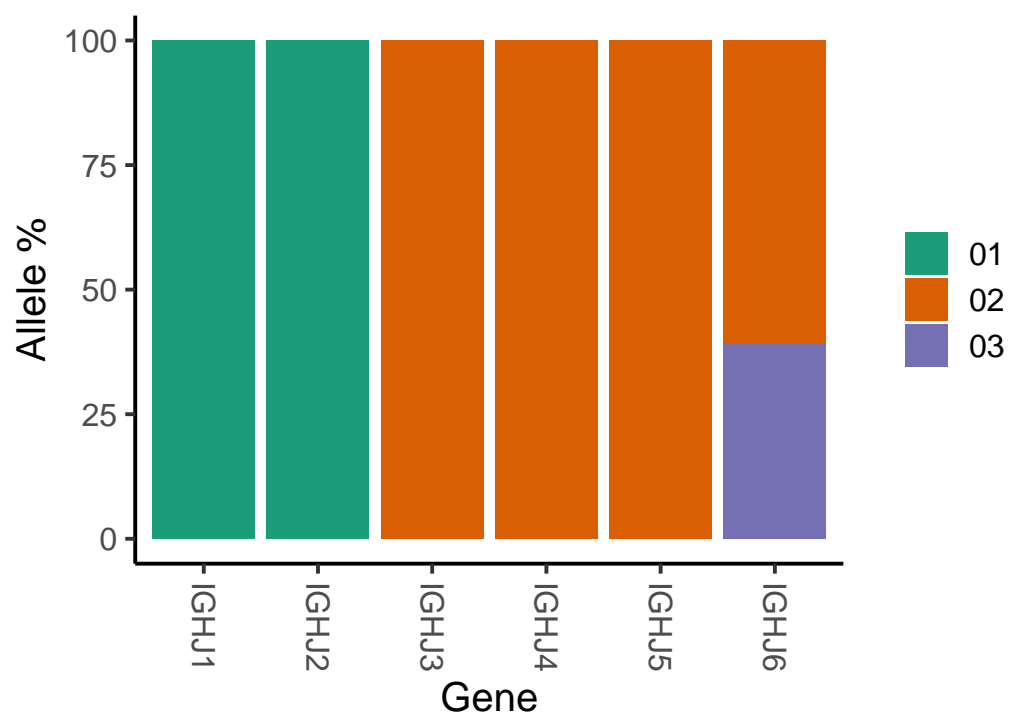
IGHV6-1*01_02_A315G



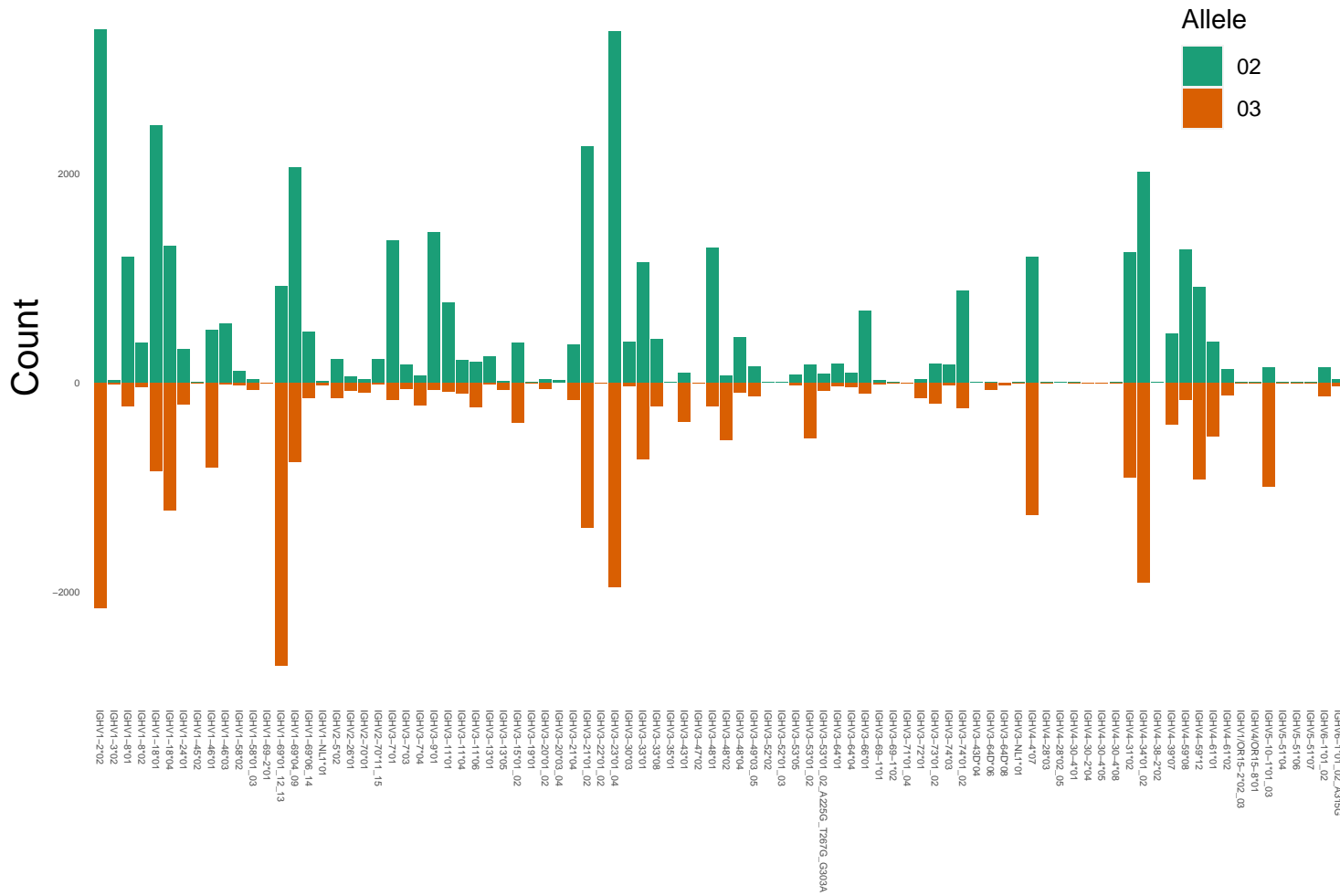
IGHV3-53*01_02_A225G_T267G_G303A



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]