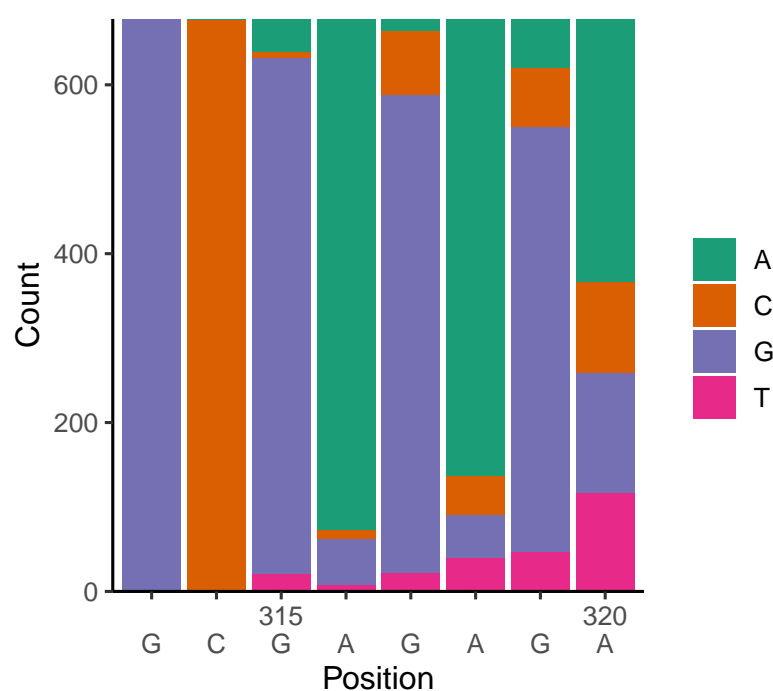
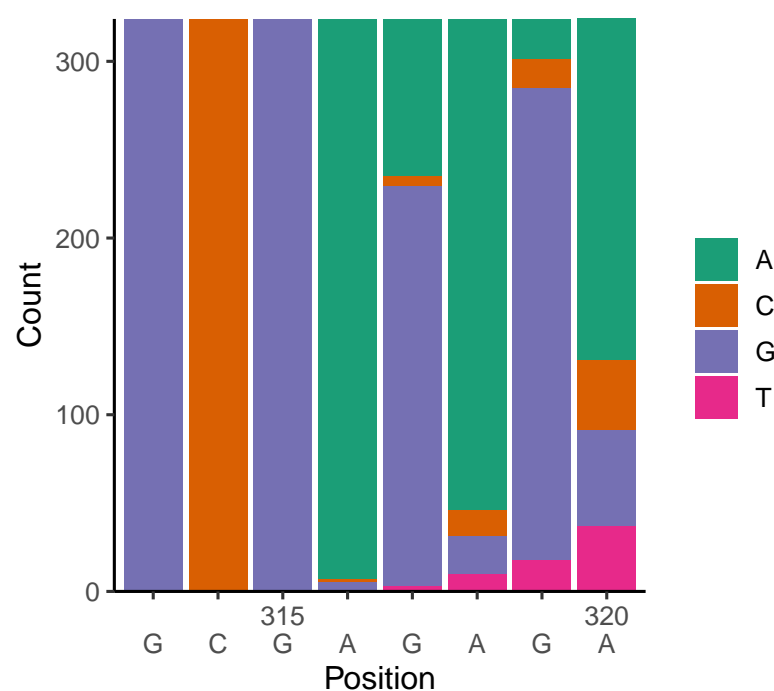


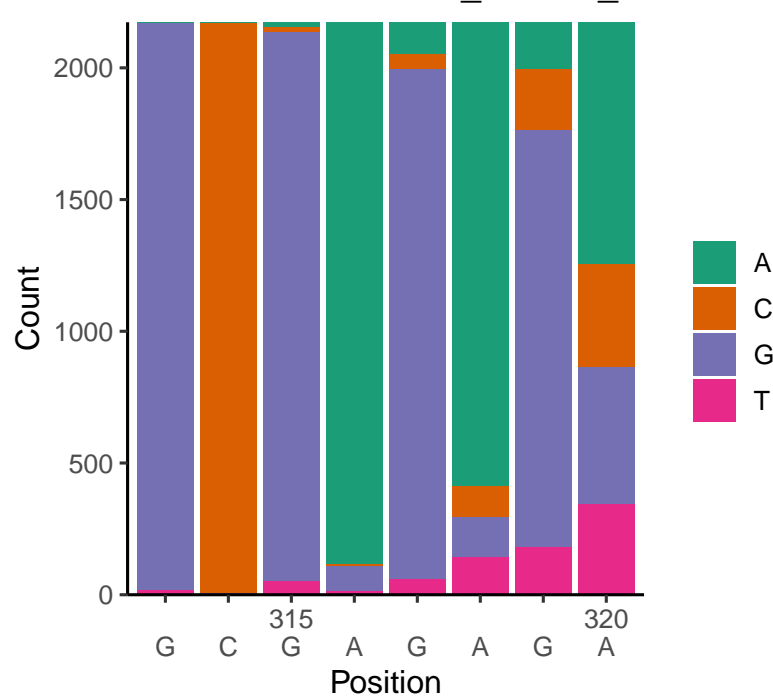
Gene IGHV1-3\*01\_A291G\_T300C



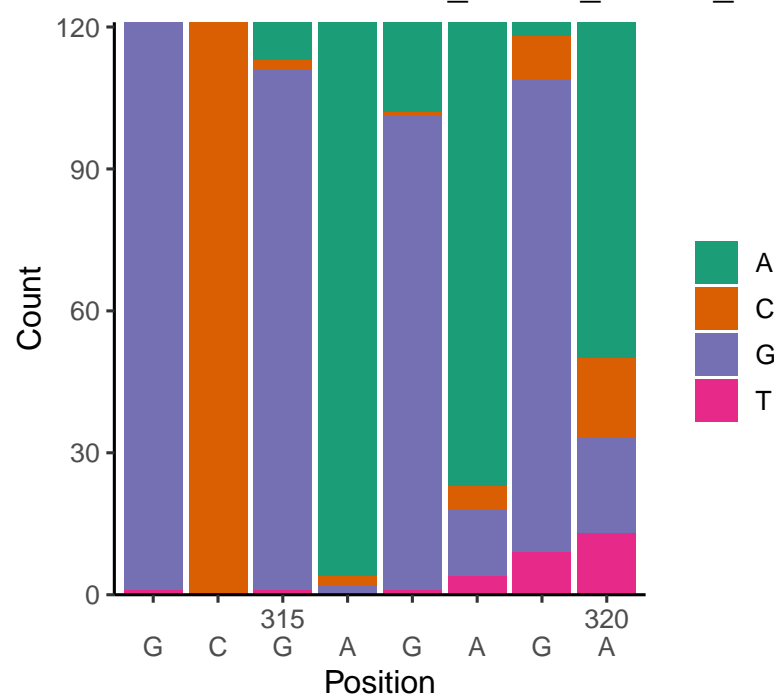
Gene IGHV3-13\*01\_A315G



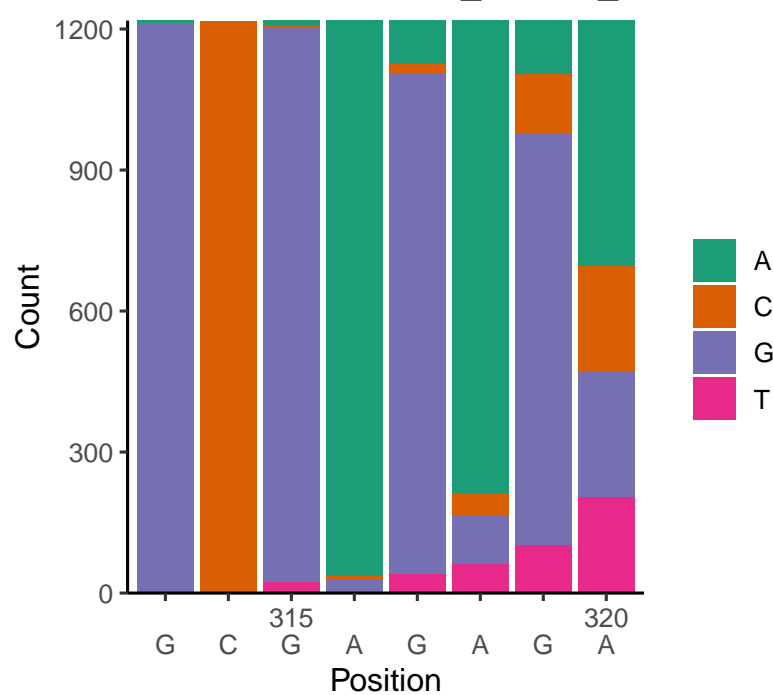
Gene IGHV1-24\*01\_A315G\_C317G



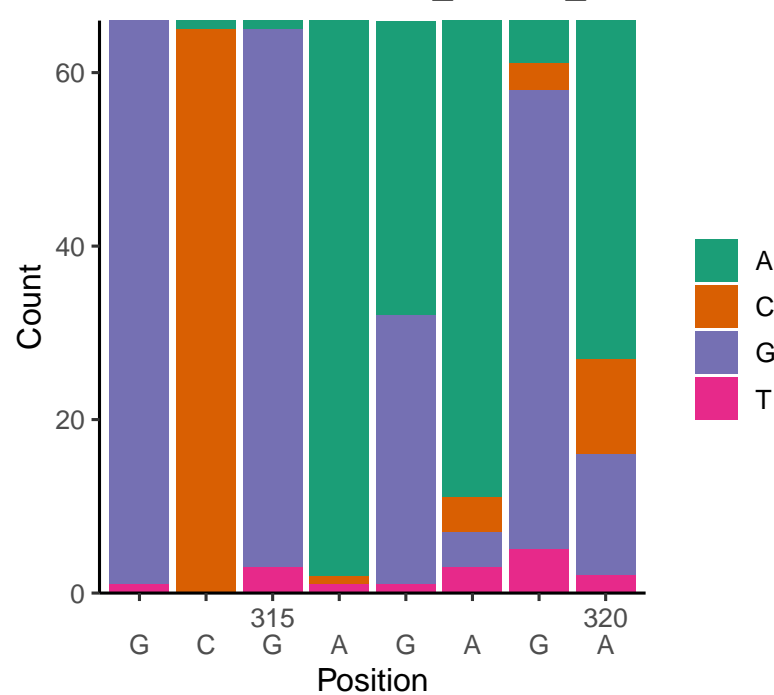
Gene IGHV3-20\*04\_T279C\_C300T\_T301A



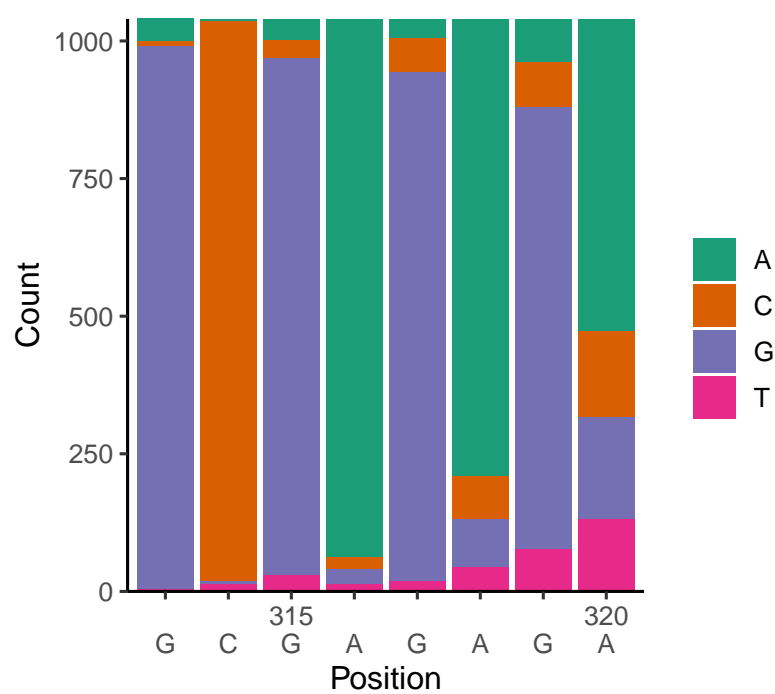
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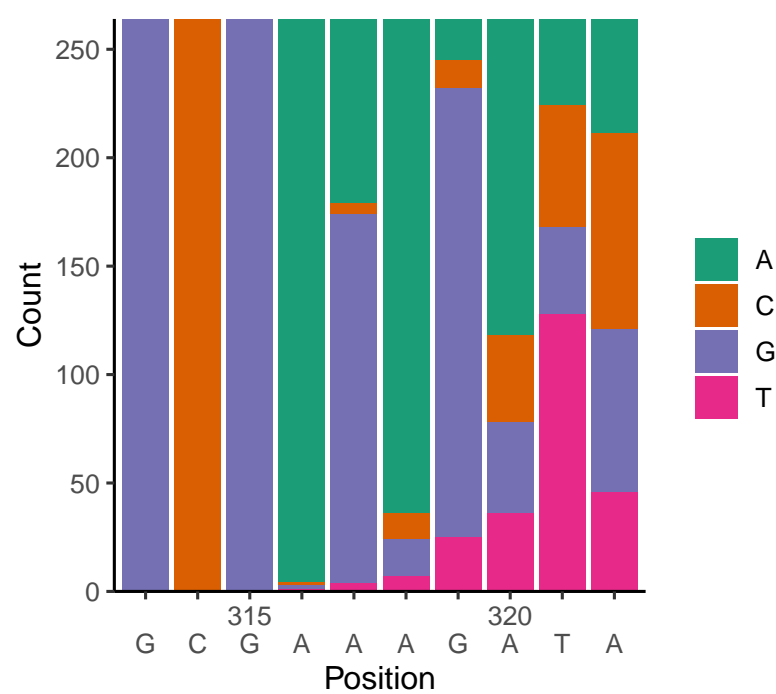
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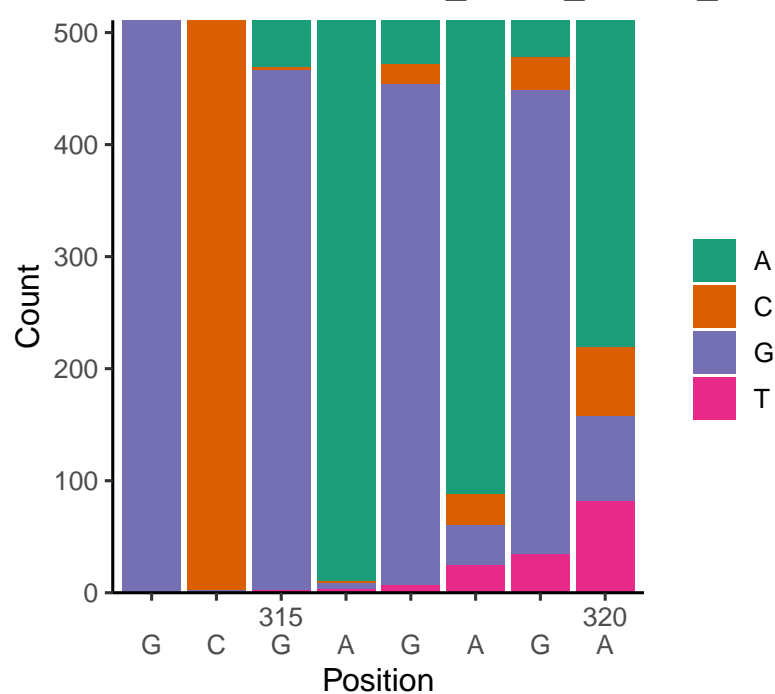
Gene IGHV3-30\*03\_T288C



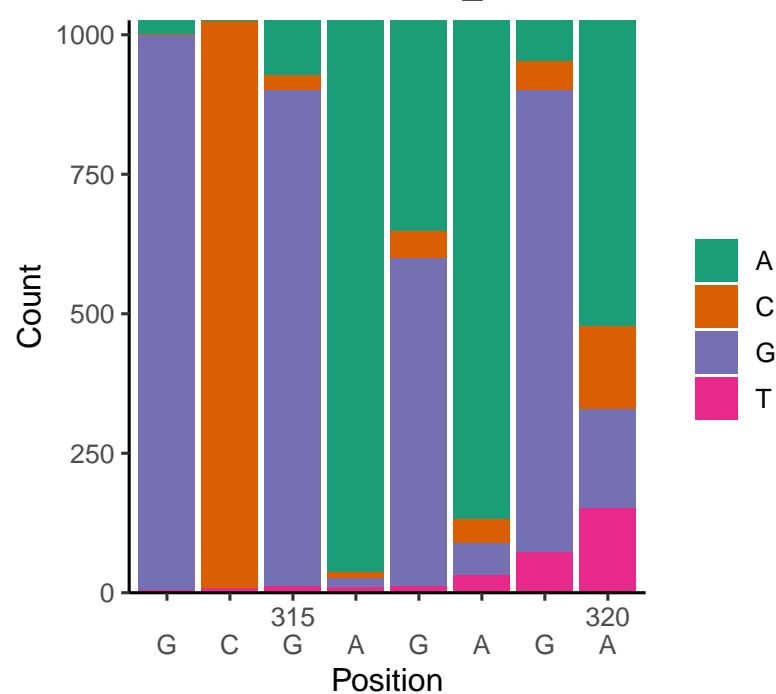
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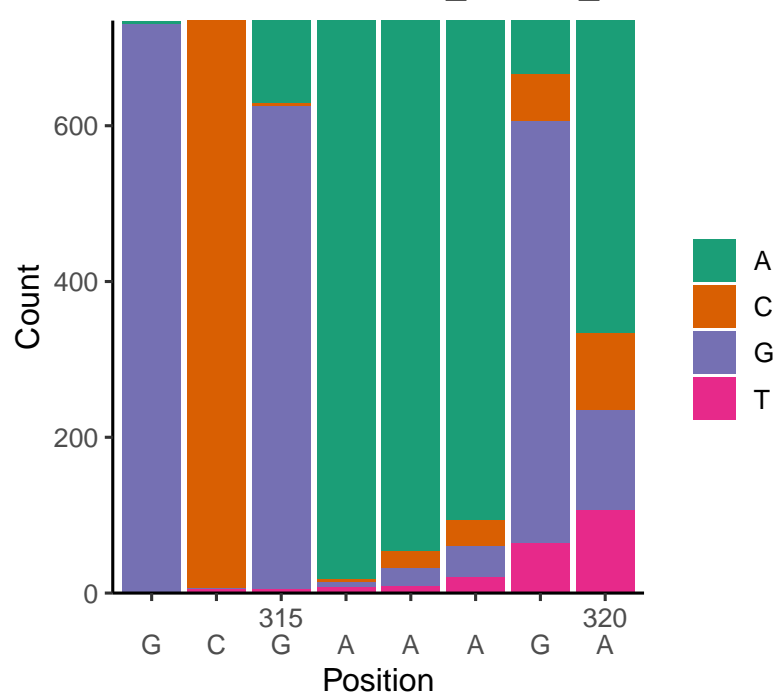
Gene IGHV3-33\*05\_G75C\_T246C\_T247C



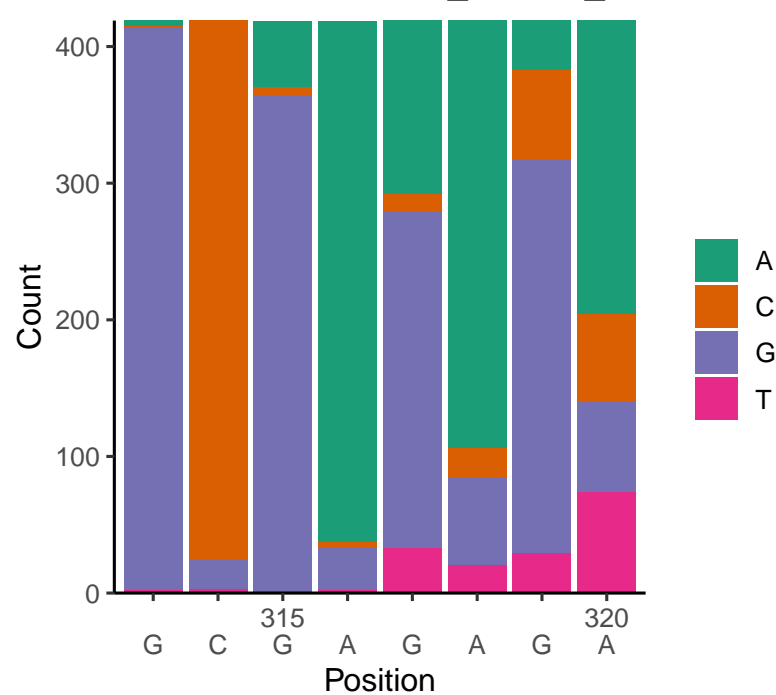
Gene IGHV3-48\*01\_T300C



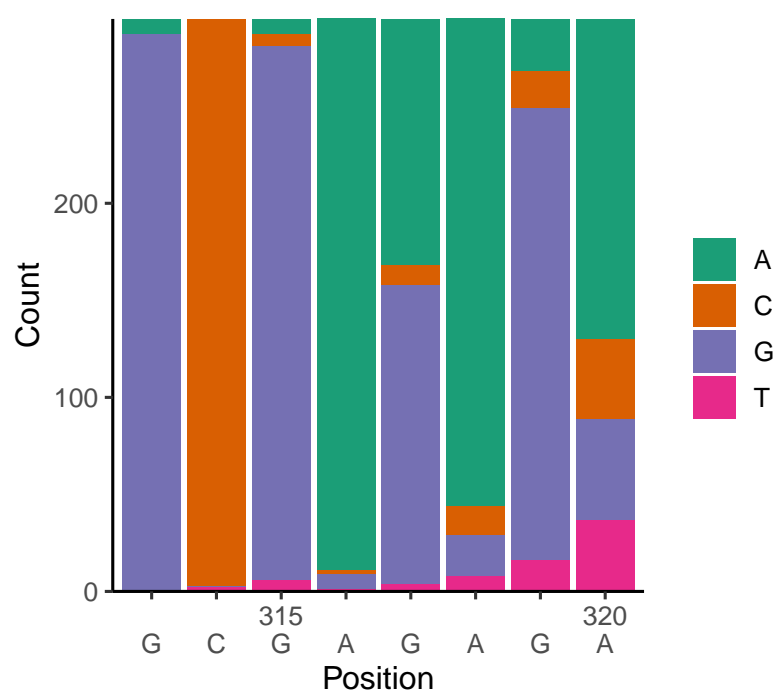
Gene IGHV3-33\*06\_T300C\_G303A



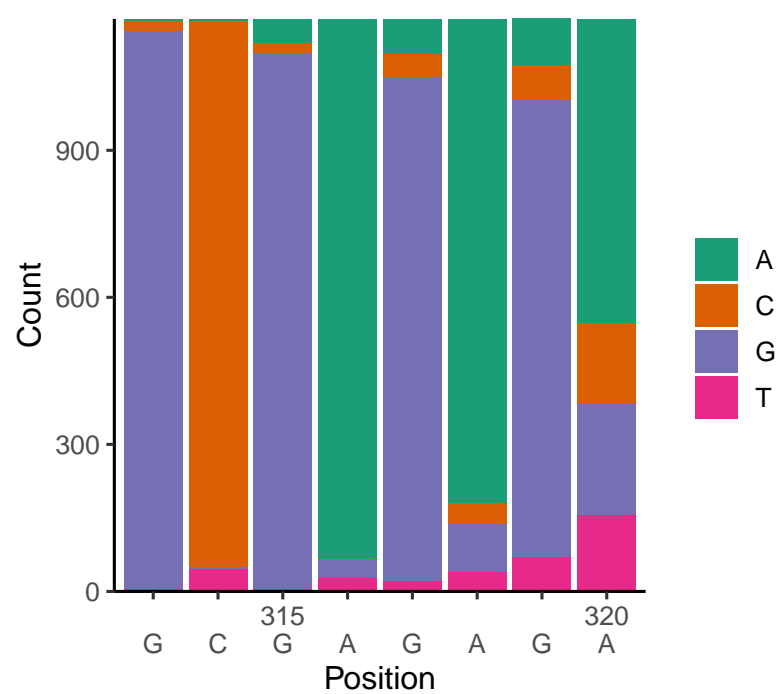
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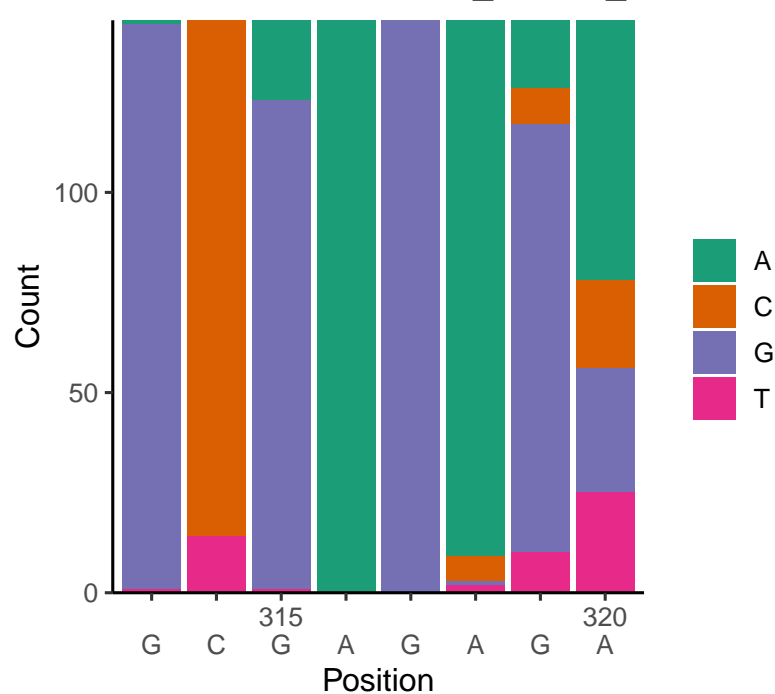
Gene IGHV3-64\*04\_A210C\_T288C



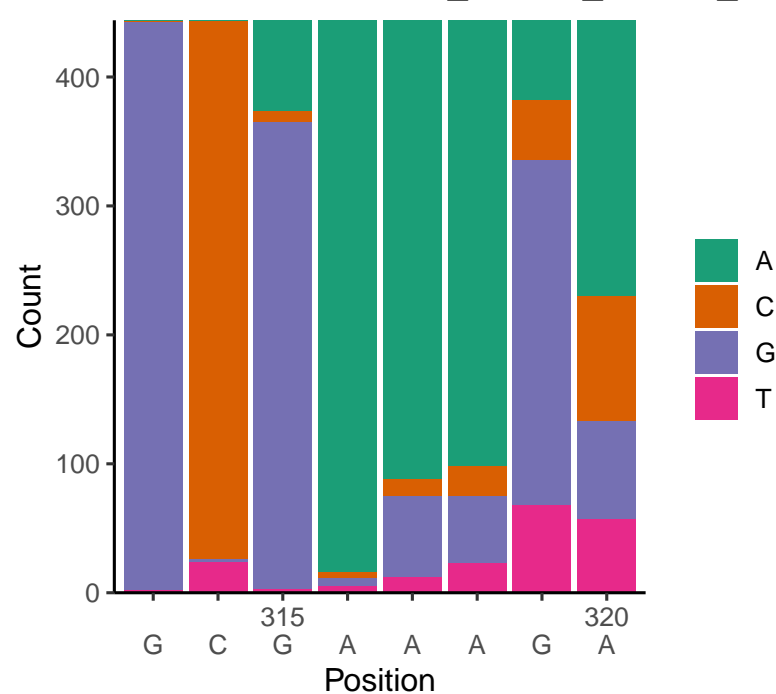
Gene IGHV3-66\*01\_G13T\_C39A\_A223C



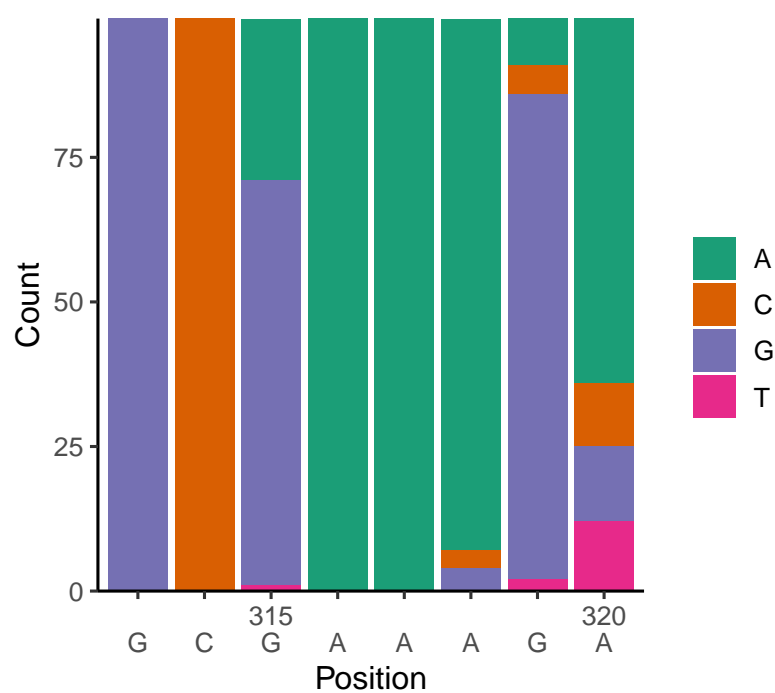
Gene IGHV3-64D\*06\_T314C\_A317G



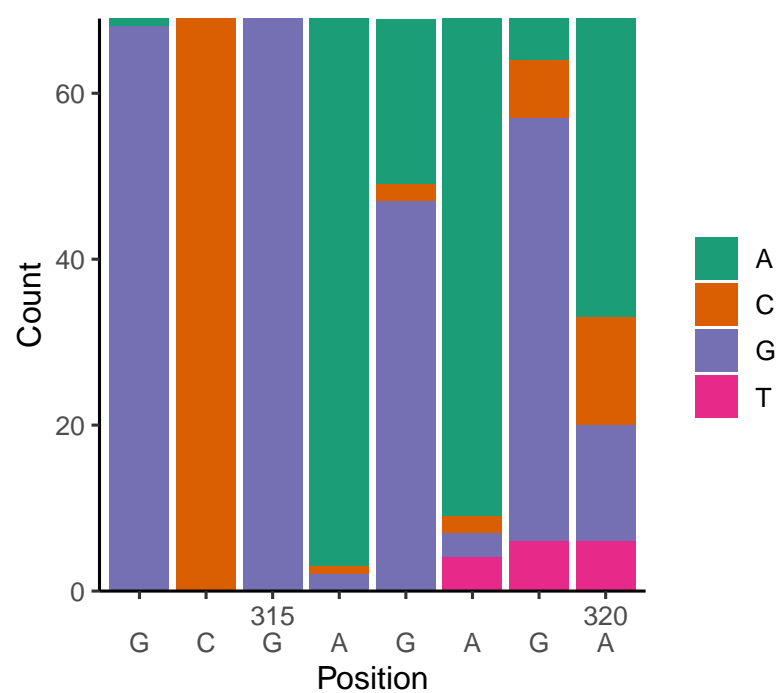
Gene IGHV3-66\*03\_T175G\_T267G\_G31



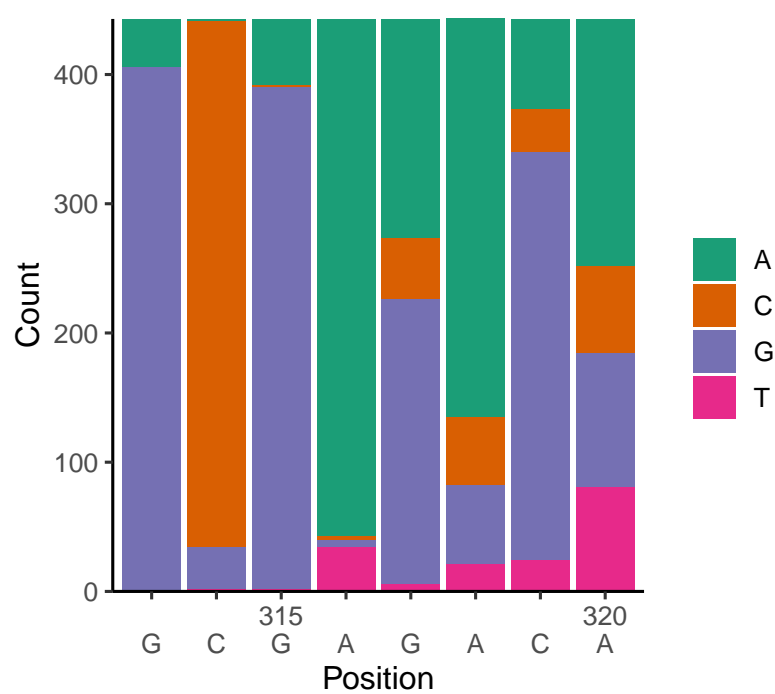
Gene IGHV3-64D\*06\_T314C



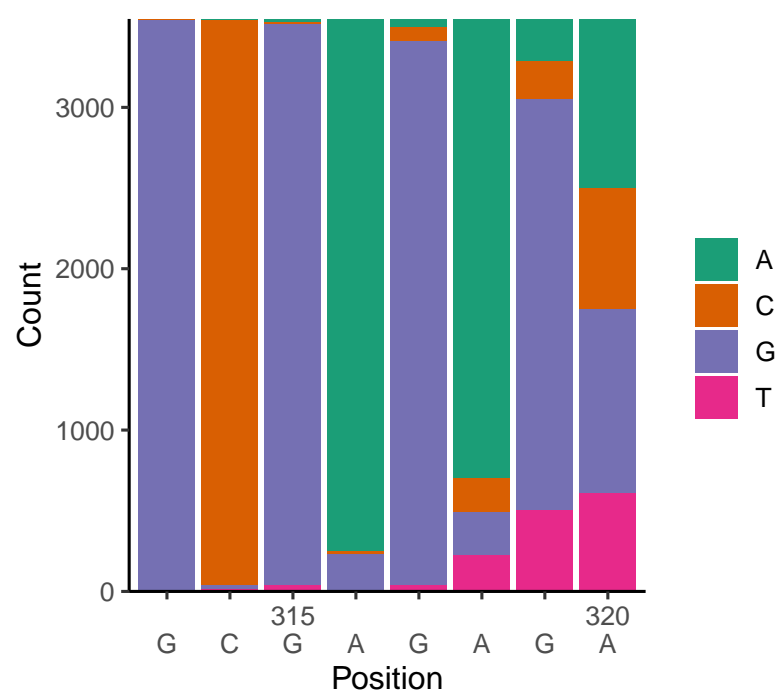
Gene IGHV3-72\*01\_T315G



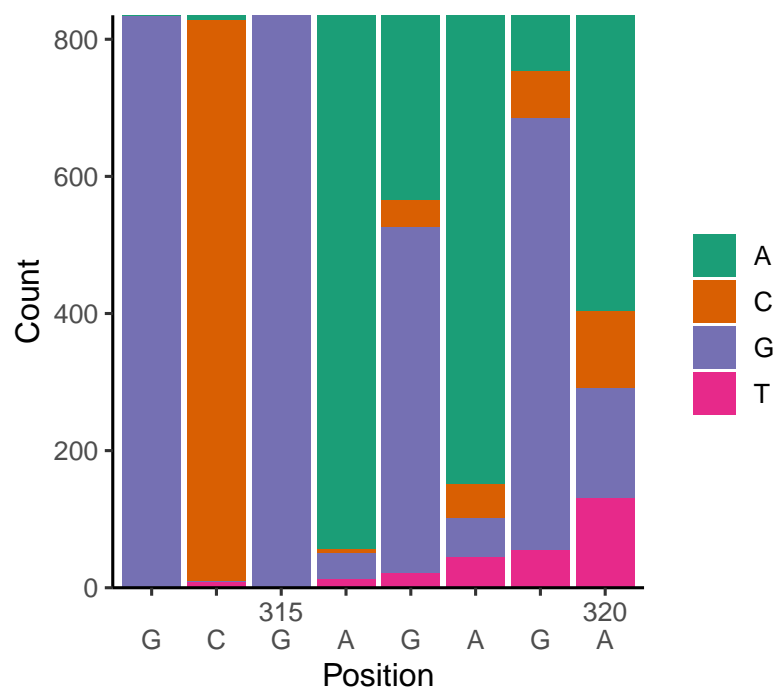
Gene IGHV3-73\*02\_A313G\_T315G



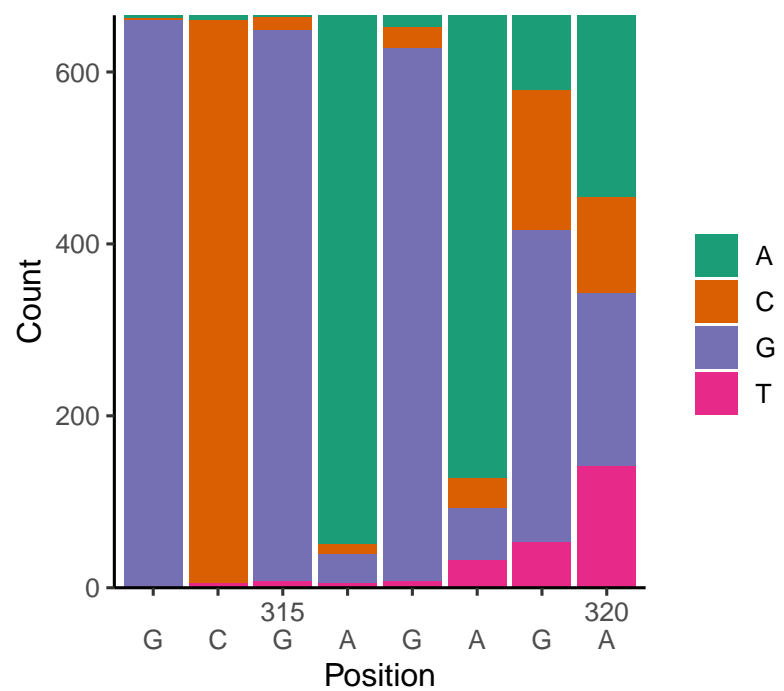
Gene IGHV4-30-2\*01\_C285T\_C315G



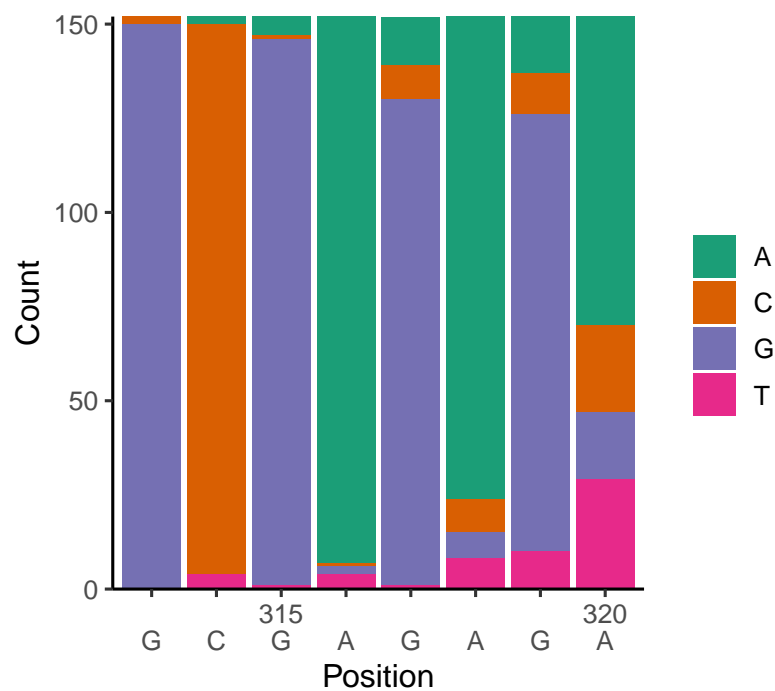
Gene IGHV3-74\*01\_A315G



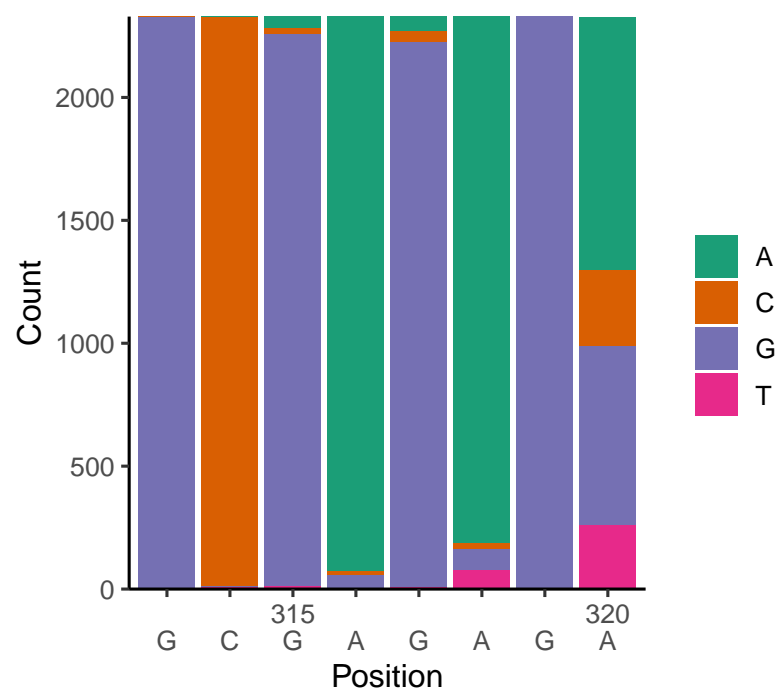
Gene IGHV4-30-2\*01\_C315G



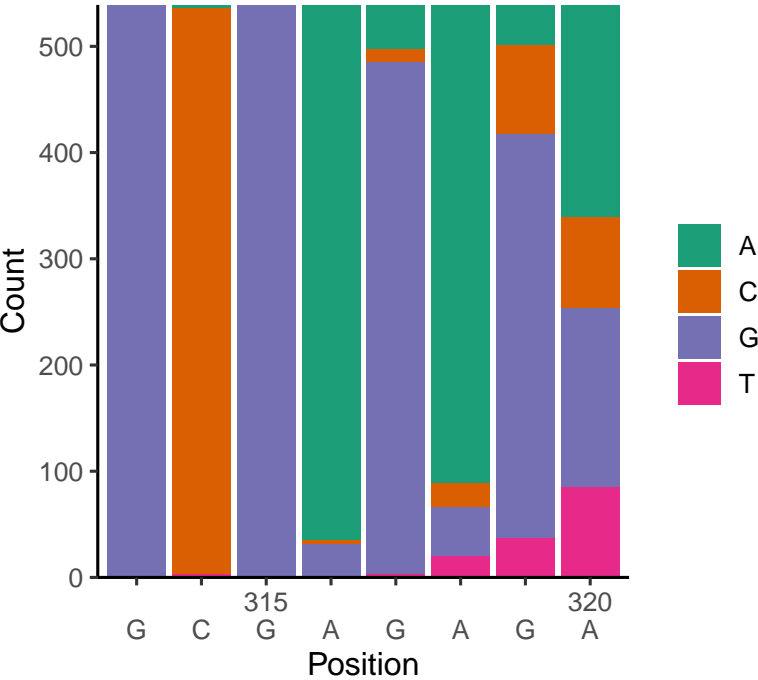
Gene IGHV3-NL1\*01\_G49A\_G75C\_C155G



Gene IGHV4-39\*02\_C258G



Gene IGHV6-1\*01\_A315G



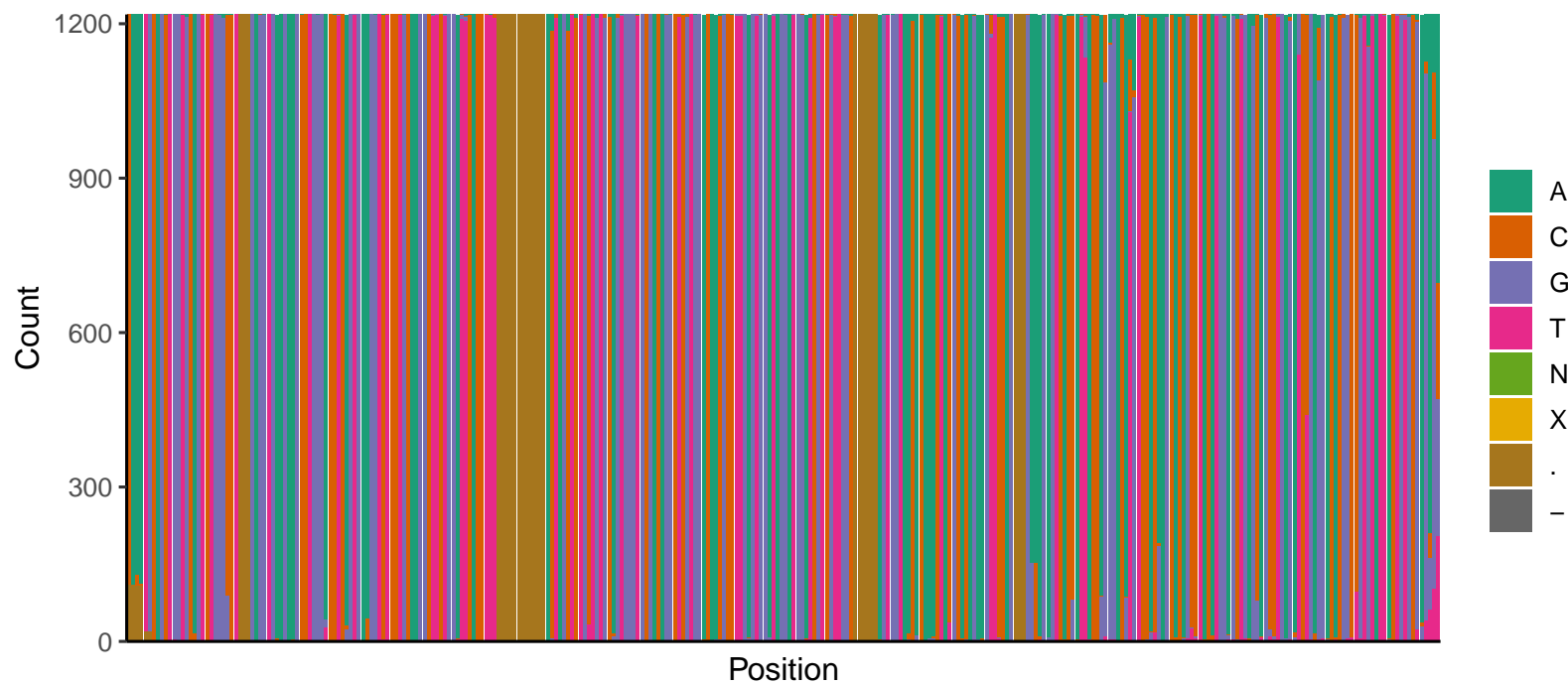
Gene IGHV1-3\*01\_A291G\_T300C



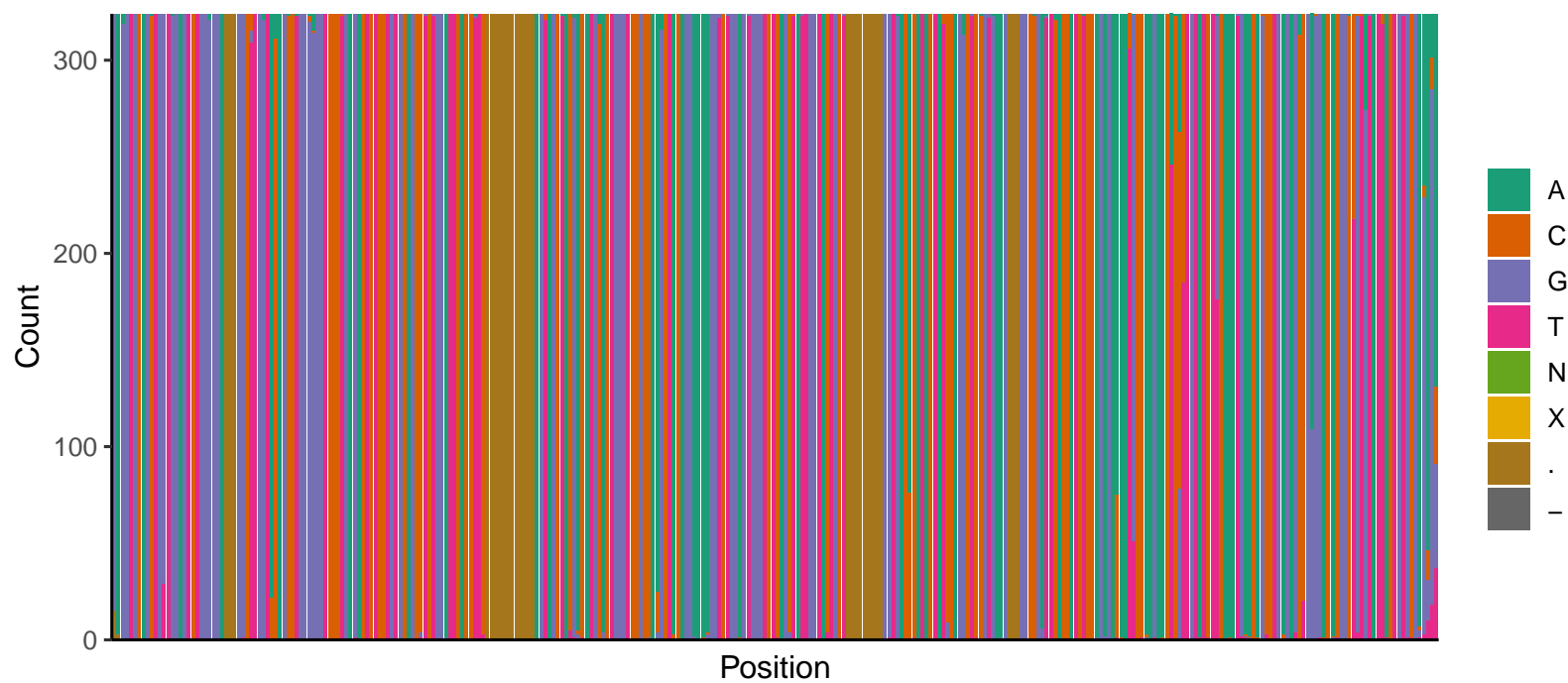
Gene IGHV1-24\*01\_A315G\_C317G



Gene IGHV1-58\*01\_G316A\_C317G



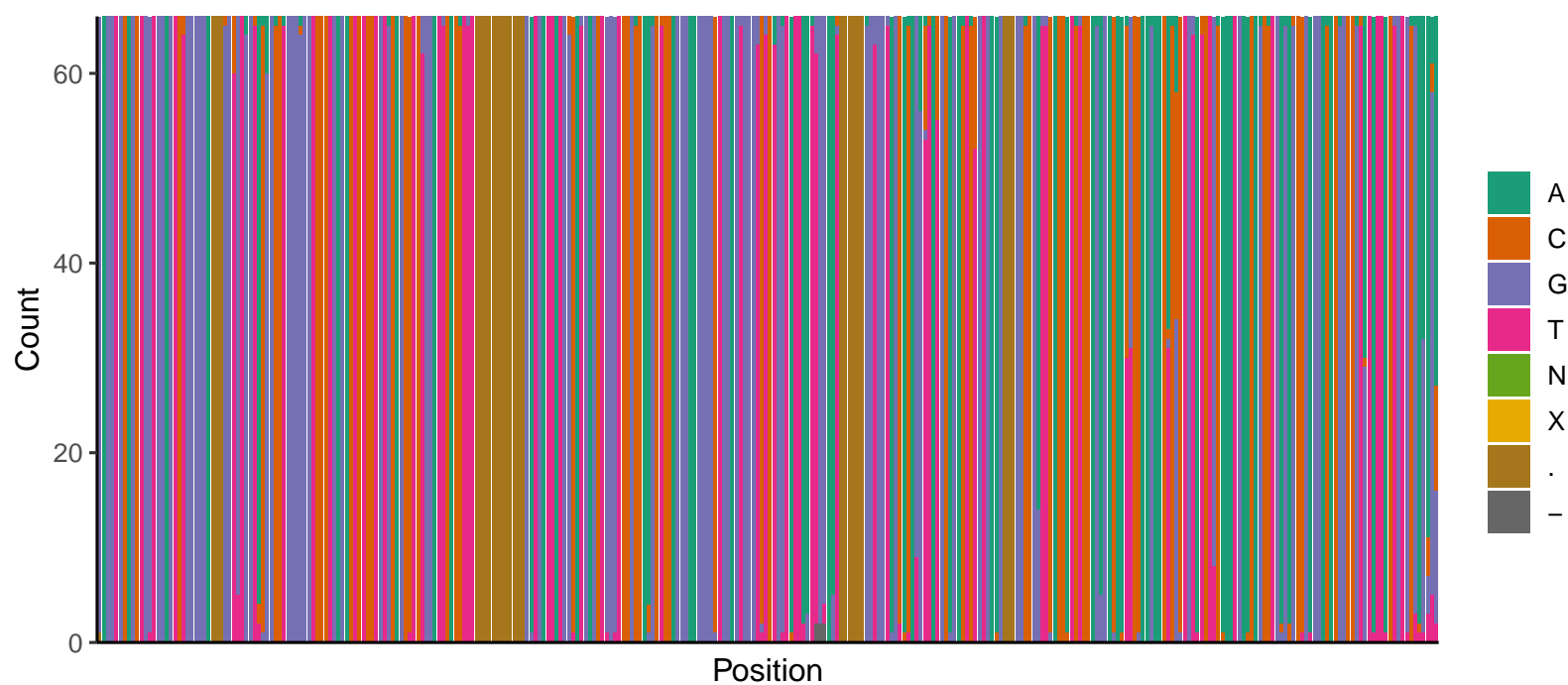
Gene IGHV3-13\*01\_A315G



Gene IGHV3-20\*04\_T279C\_C300T\_T301G



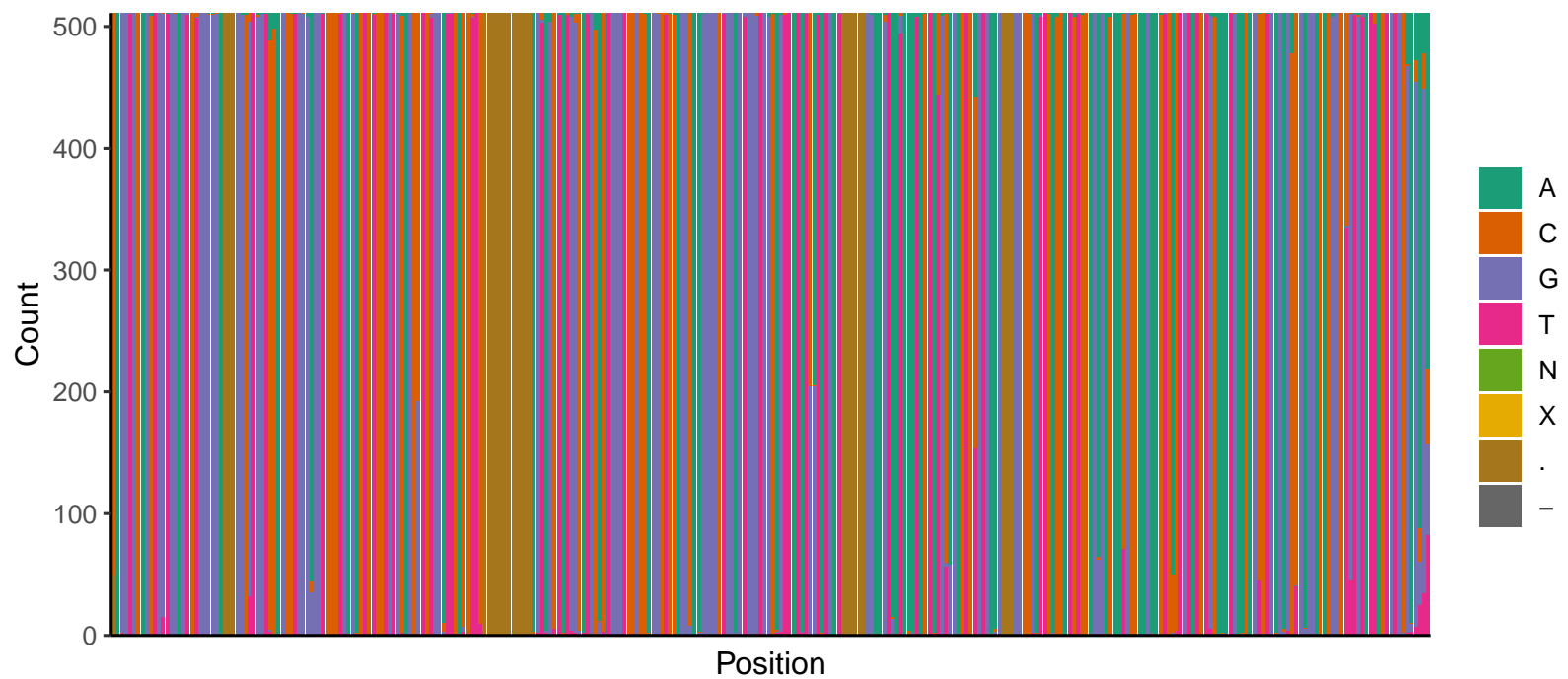
Gene IGHV3-20\*04\_T279C\_T301G



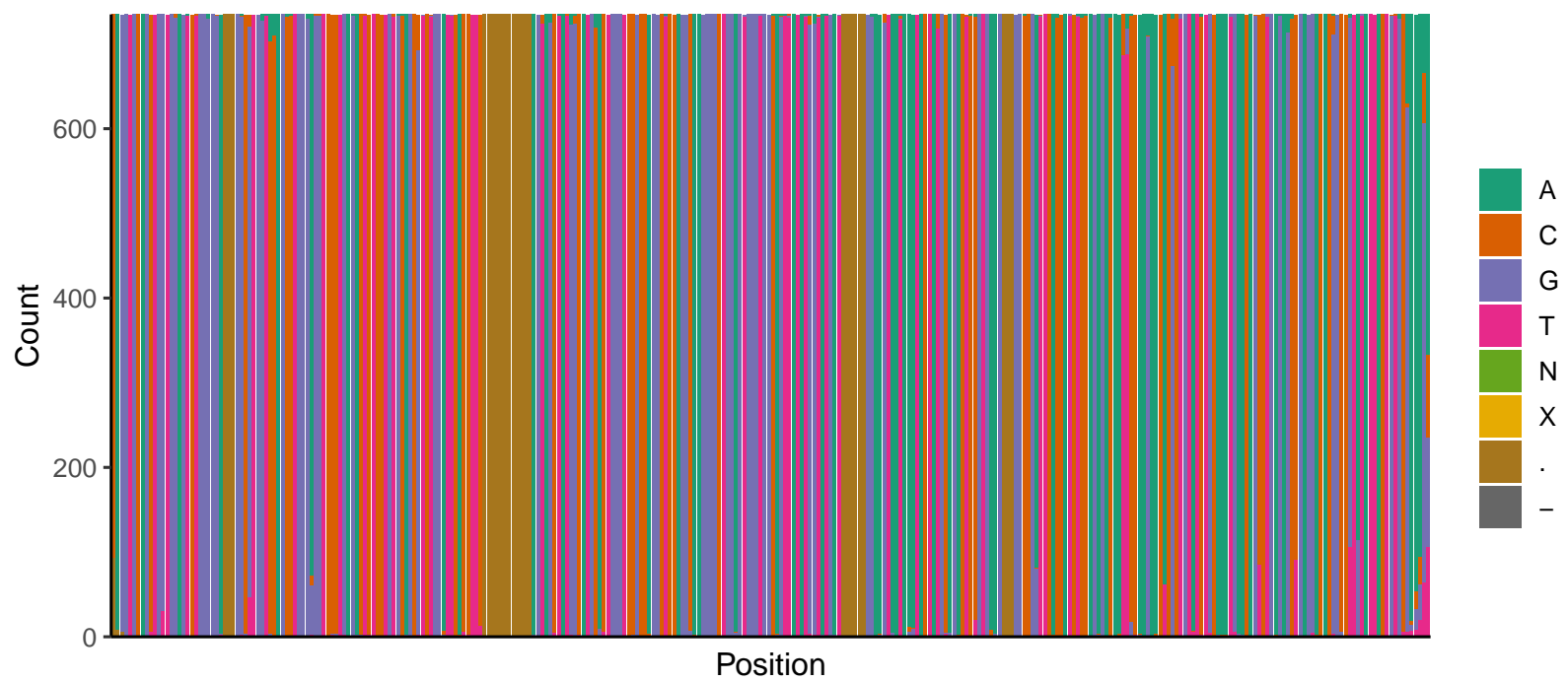
Gene IGHV3-30\*03\_T288C



Gene IGHV3-33\*05\_G75C\_T246C\_T247G\_A256T\_G258A



Gene IGHV3-33\*06\_T300C\_G303A





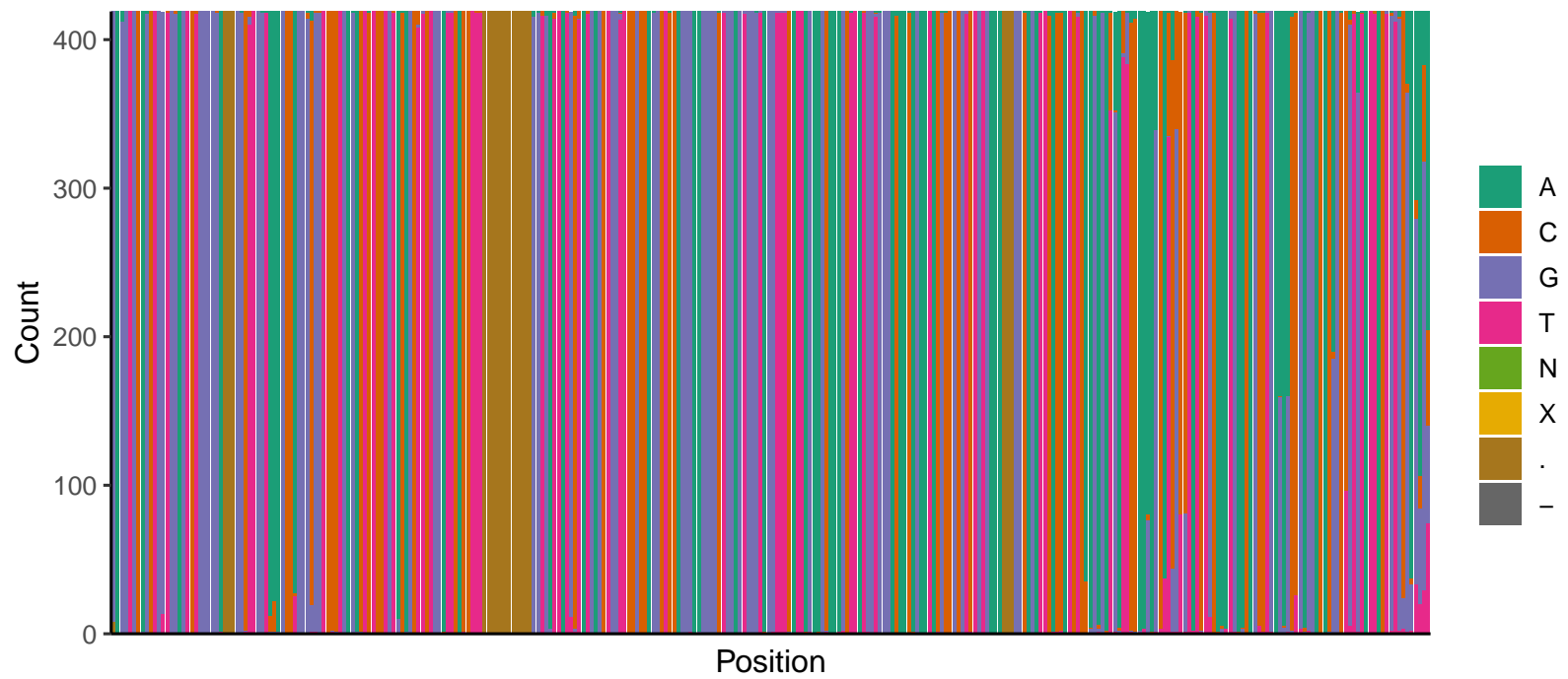
Gene IGHV3-43\*01\_A315G



Gene IGHV3-48\*01\_T300C



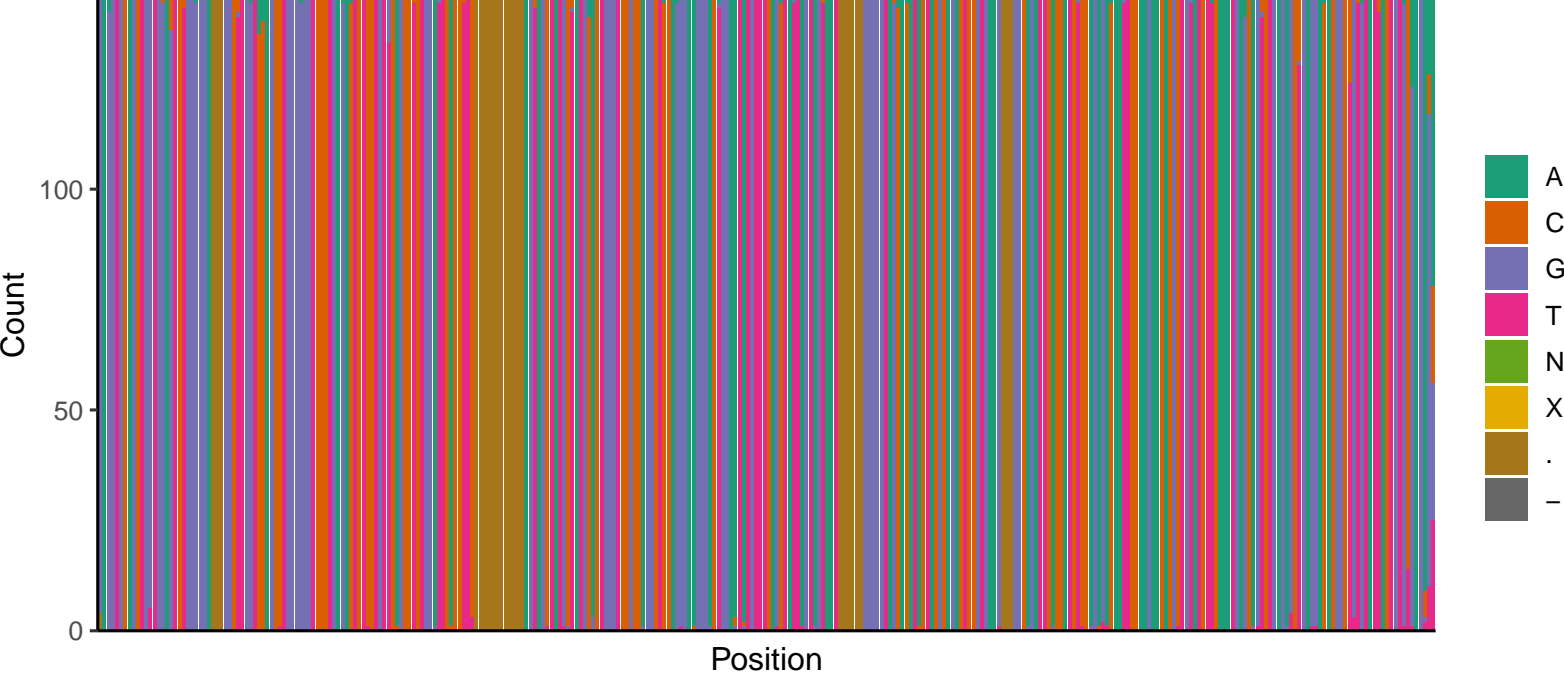
Gene IGHV3-49\*05\_A313G\_T315G



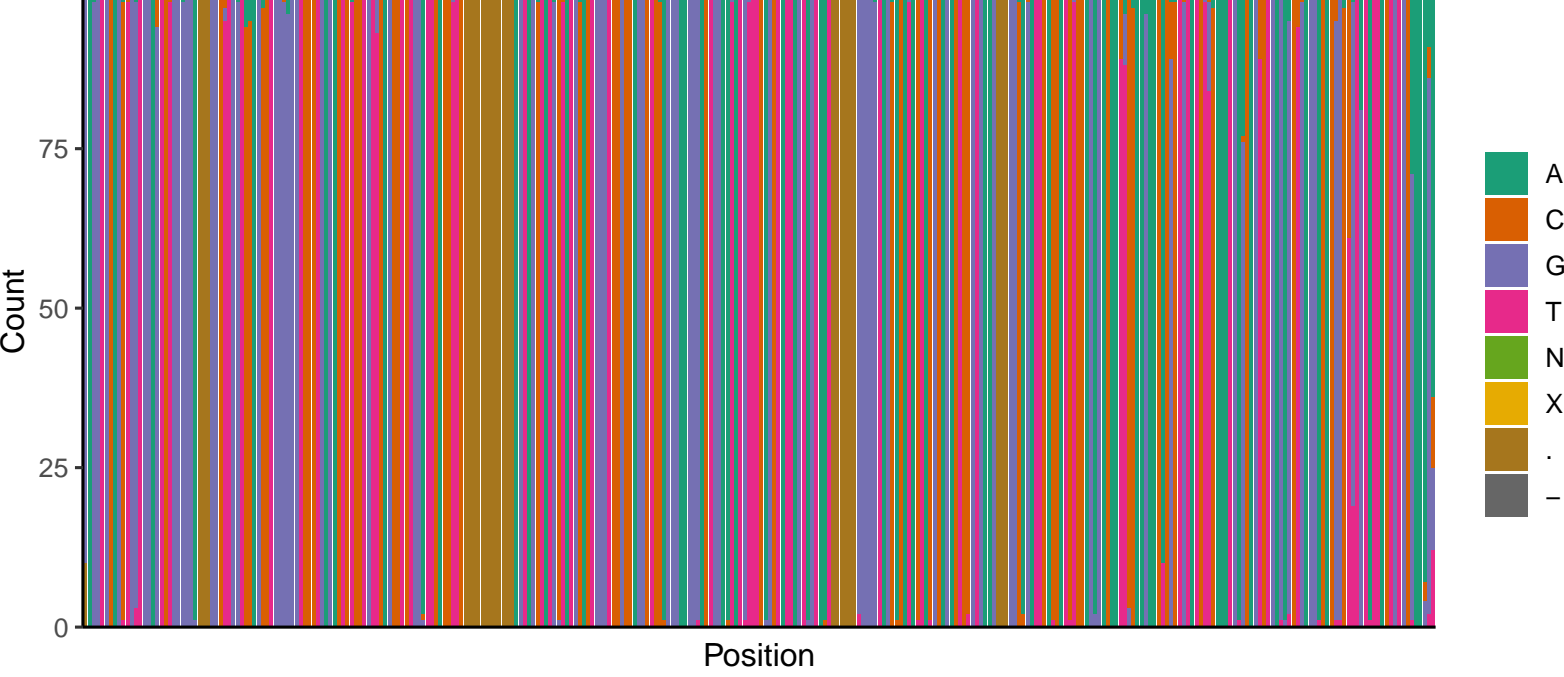
Gene IGHV3-64\*04\_A210C\_T288C



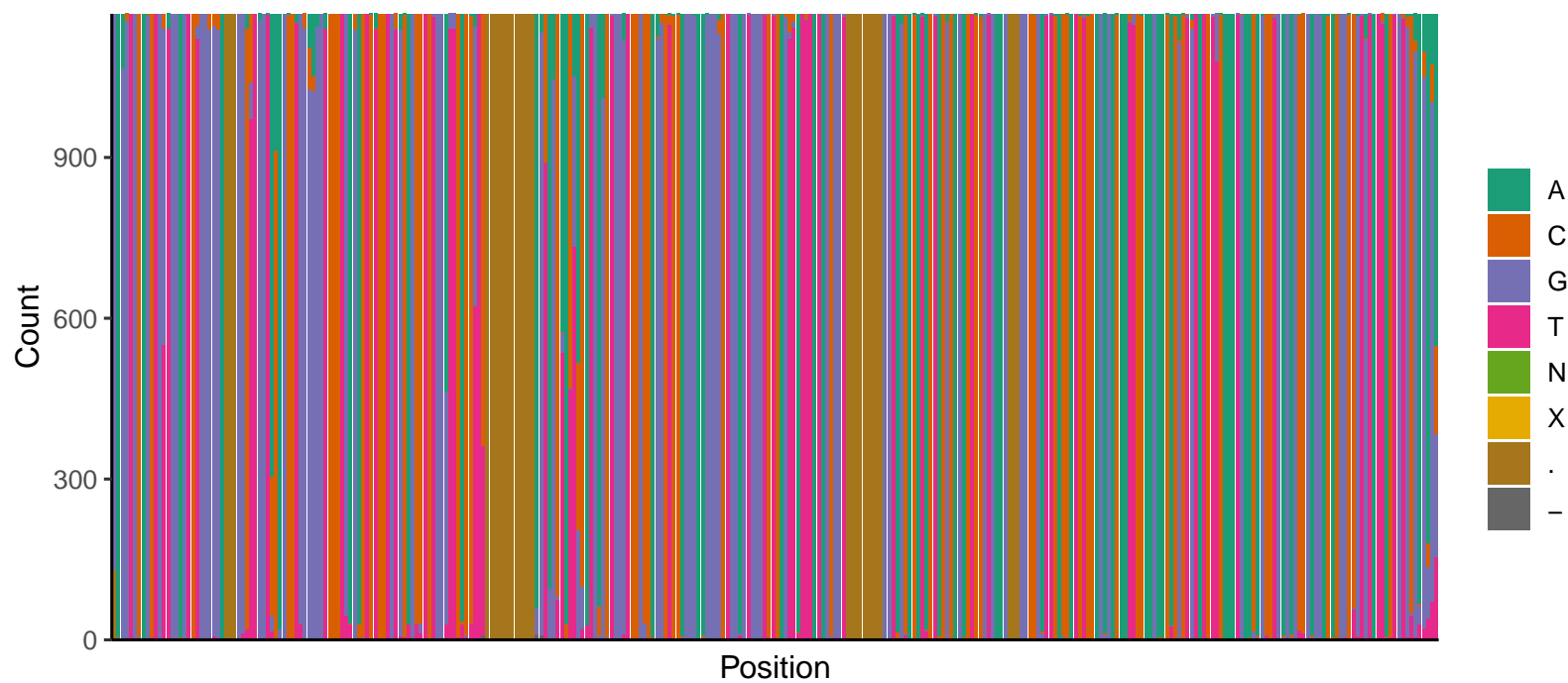
Gene IGHV3-64D\*06\_T314C\_A317G



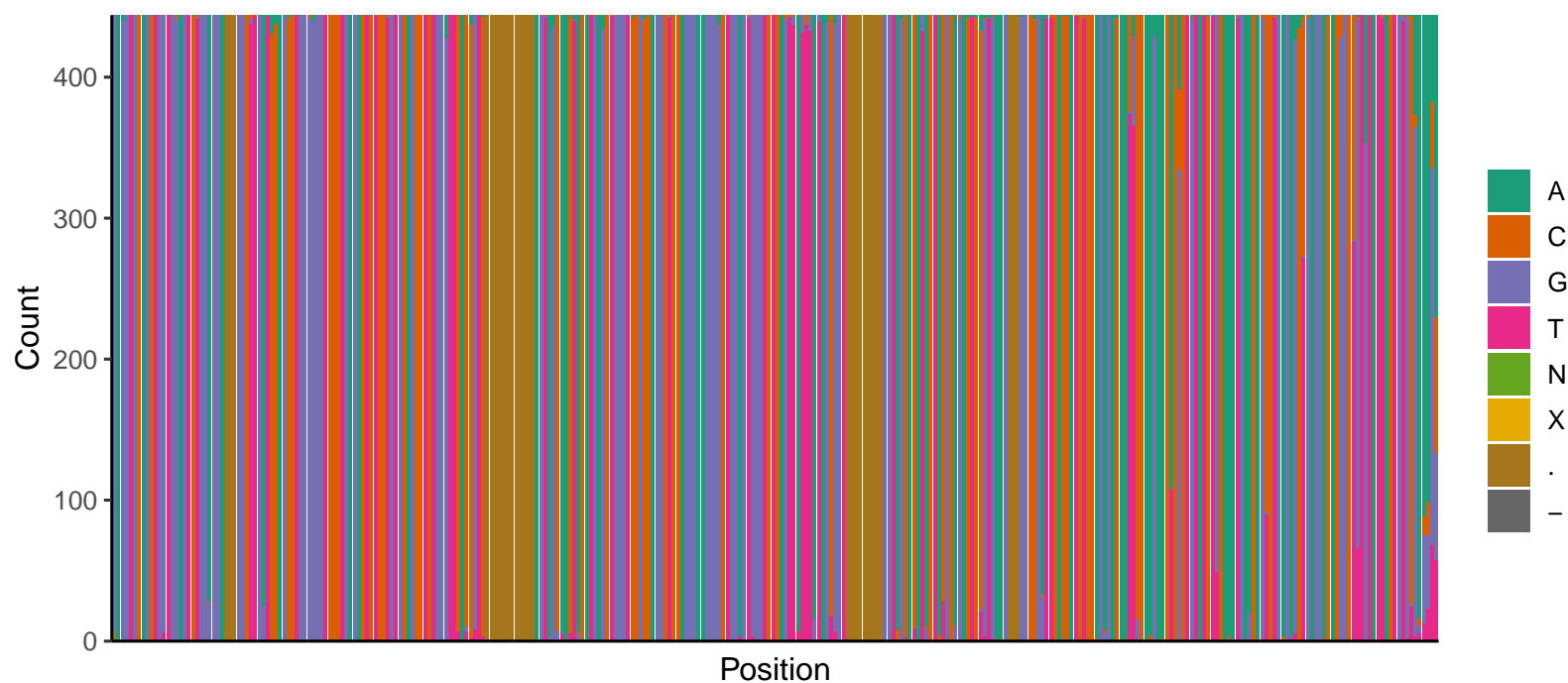
Gene IGHV3-64D\*06\_T314C



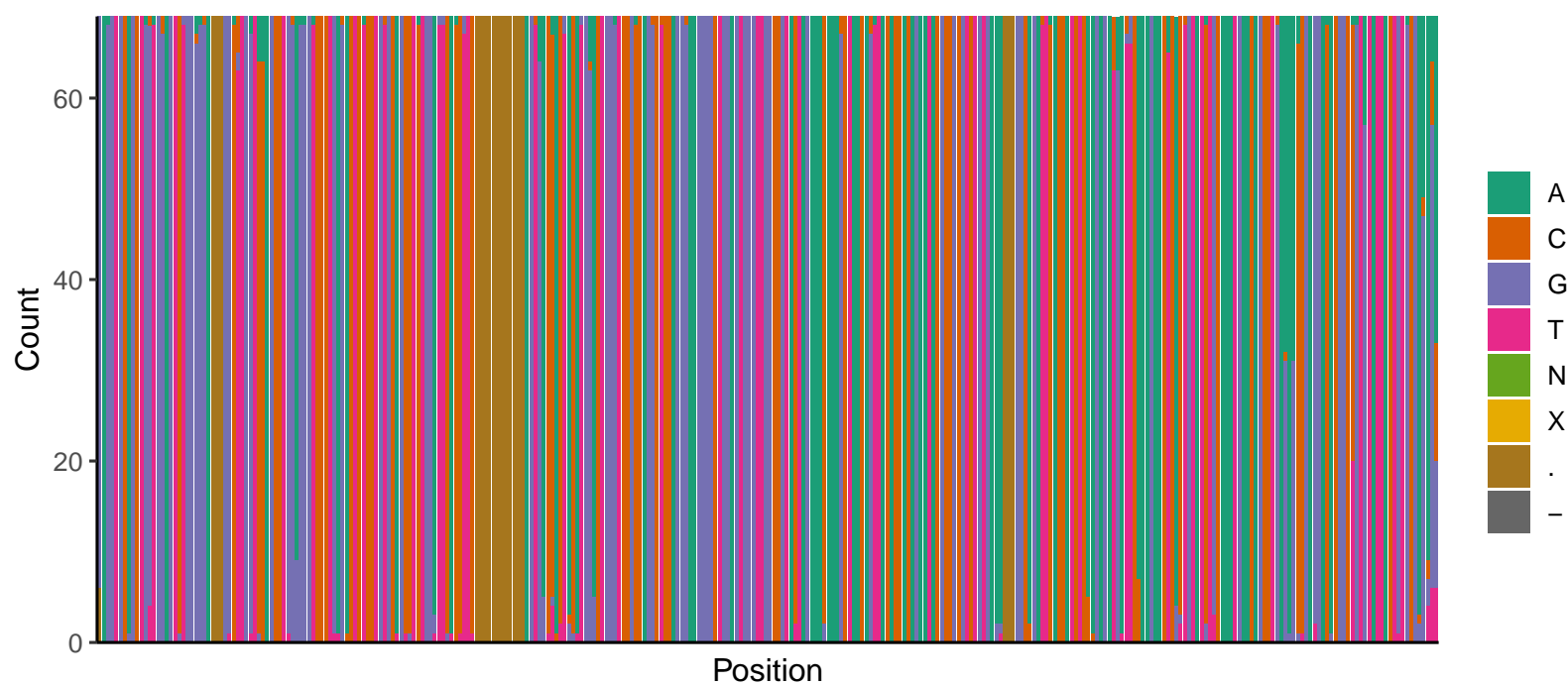
Gene IGHV3-66\*01\_G13T\_C39A\_A223C\_T300C



Gene IGHV3-66\*03\_T175G\_T267G\_G317A



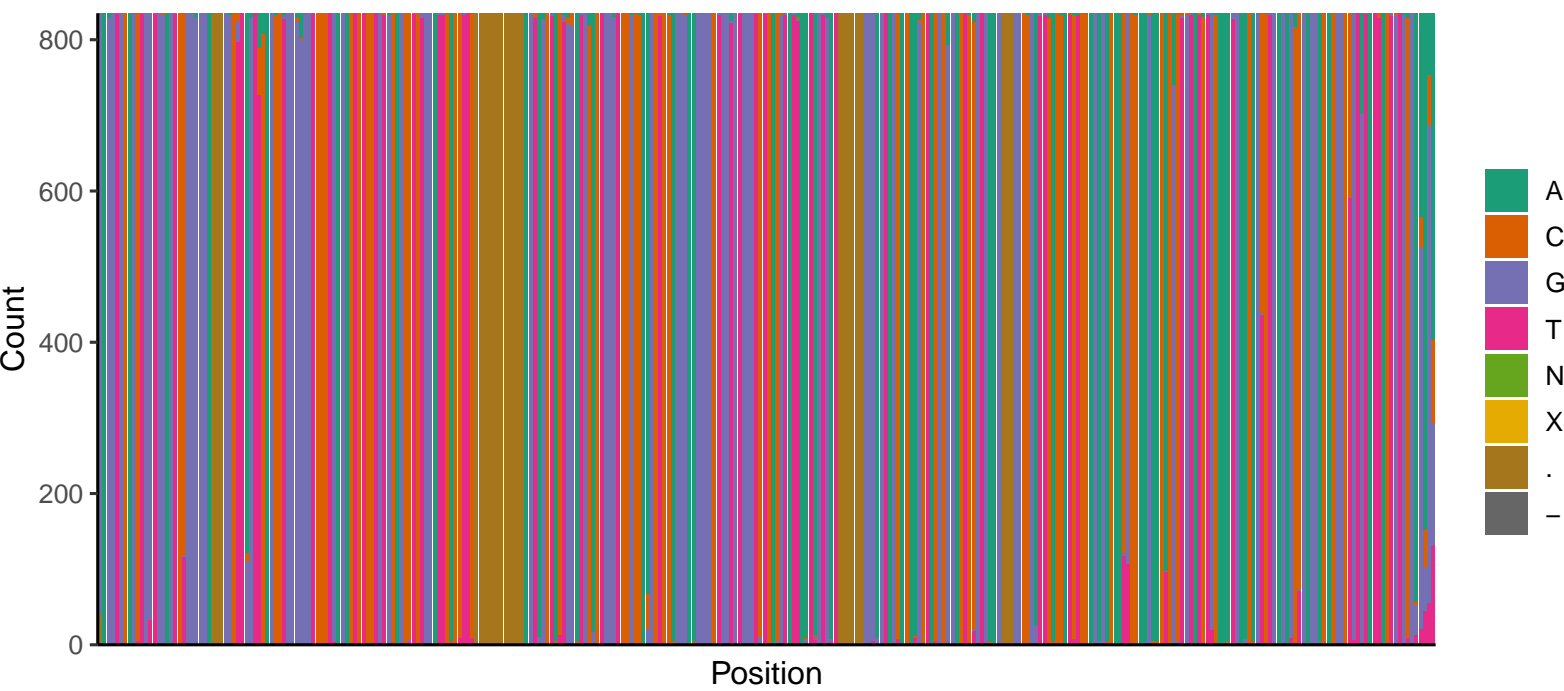
Gene IGHV3-72\*01\_T315G



Gene IGHV3-73\*02\_A313G\_T315G



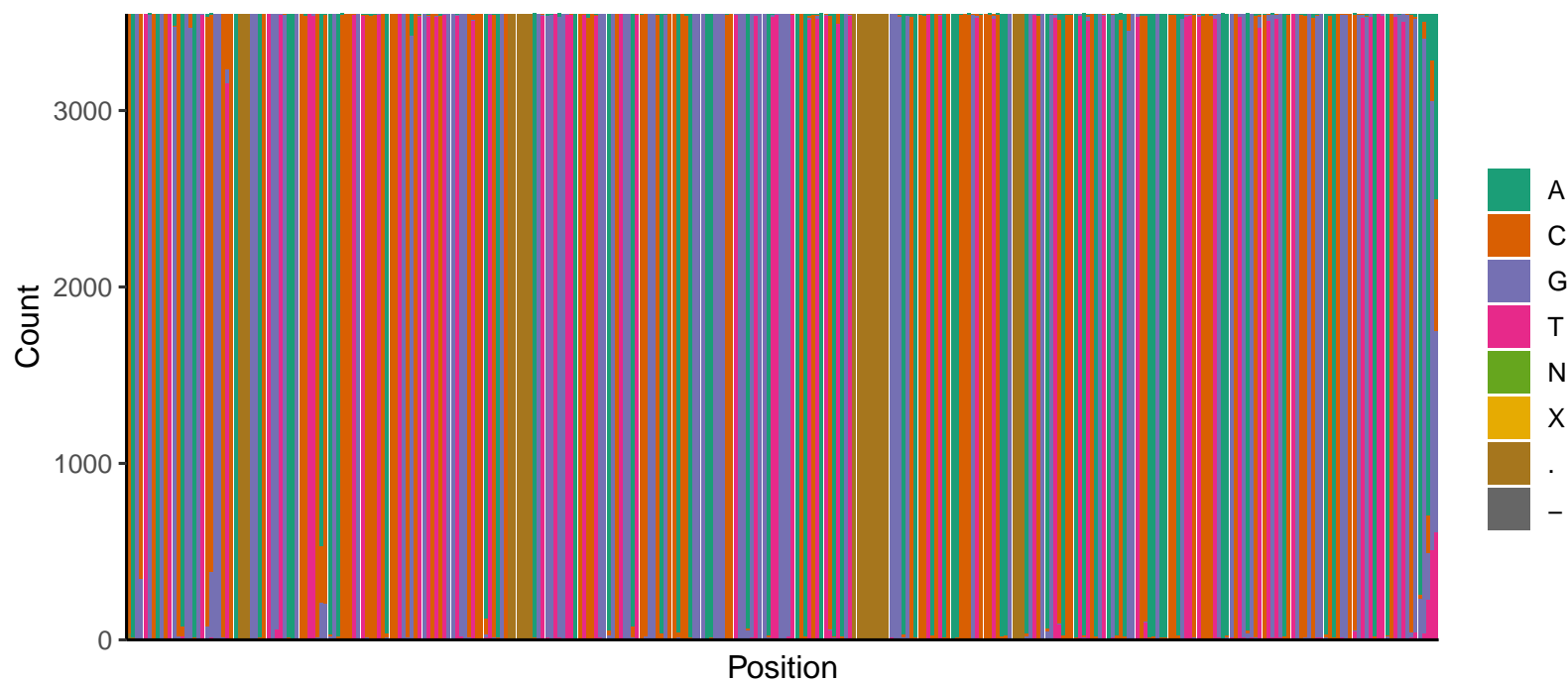
Gene IGHV3-74\*01\_A315G



Gene IGHV3-NL1\*01\_G49A\_G75C\_C159G\_T160G\_T201C\_G267T\_T288C\_T300C\_A317



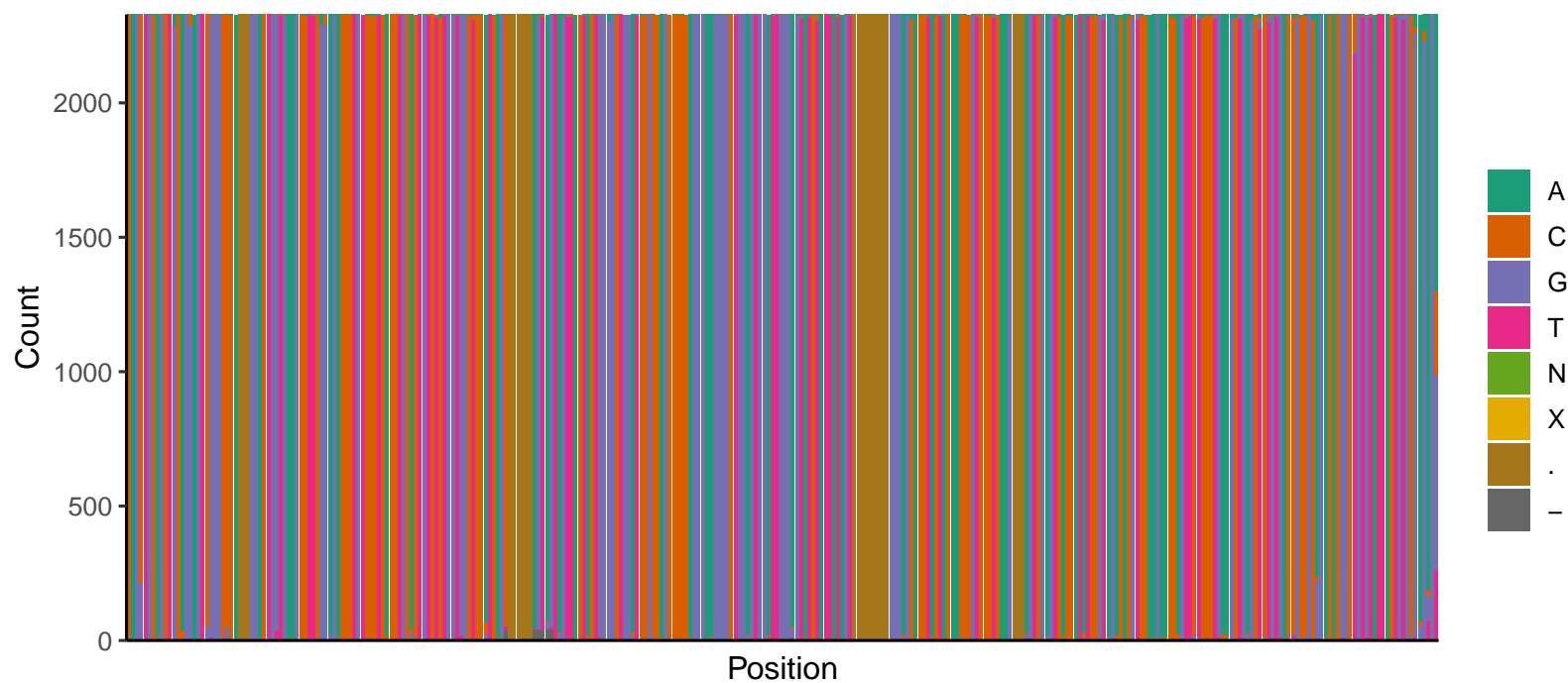
Gene IGHV4-30-2\*01\_C285T\_C315G



Gene IGHV4-30-2\*01\_C315G



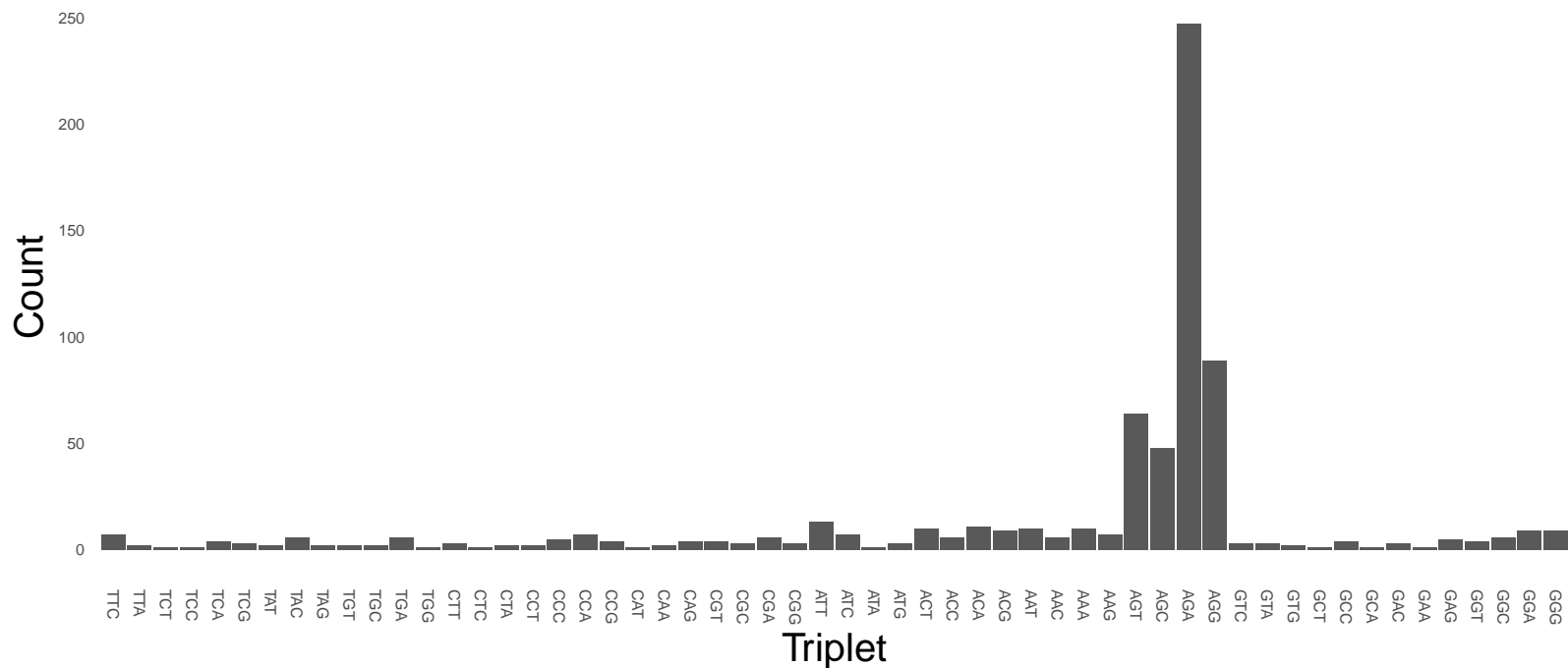
Gene IGHV4-39\*02\_C258G



Gene IGHV6-1\*01\_A315G



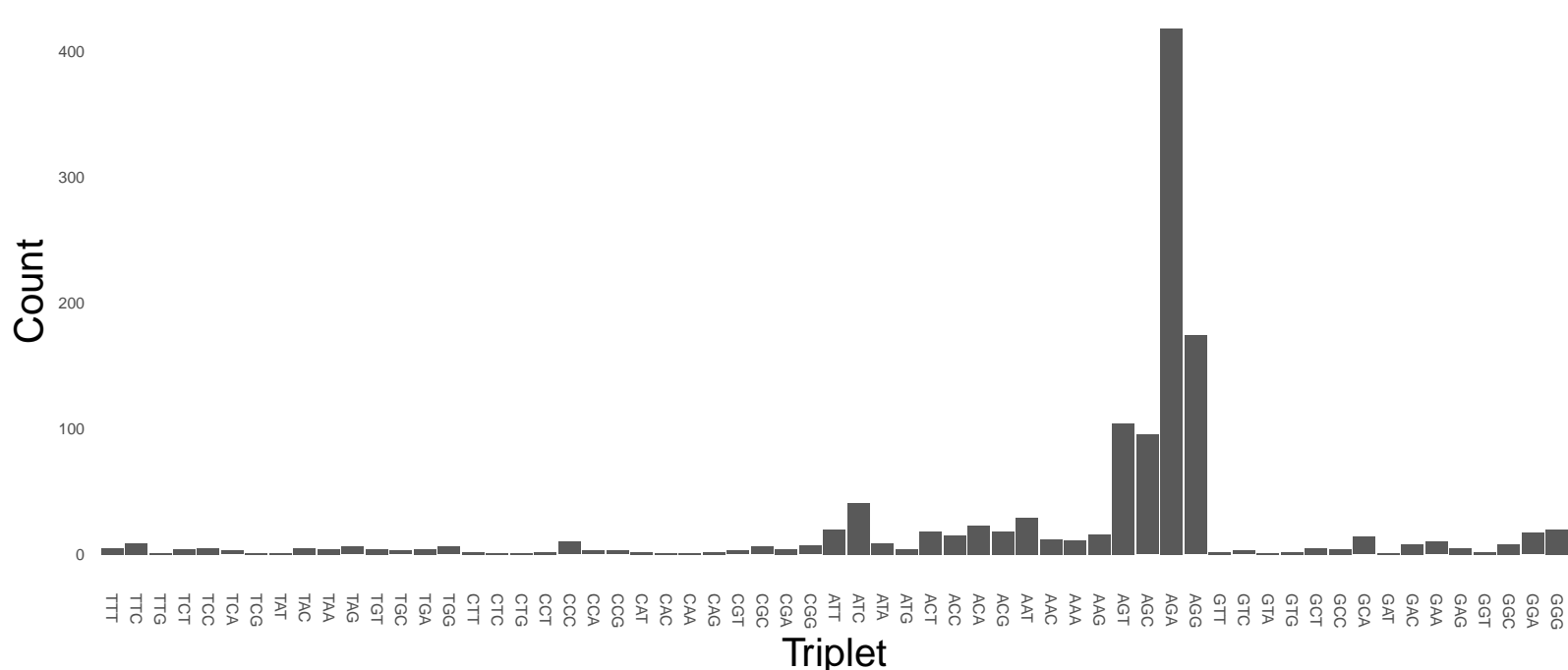
IGHV1-3\*01\_A291G\_T300C- Final 3 nucleotides as a triplet



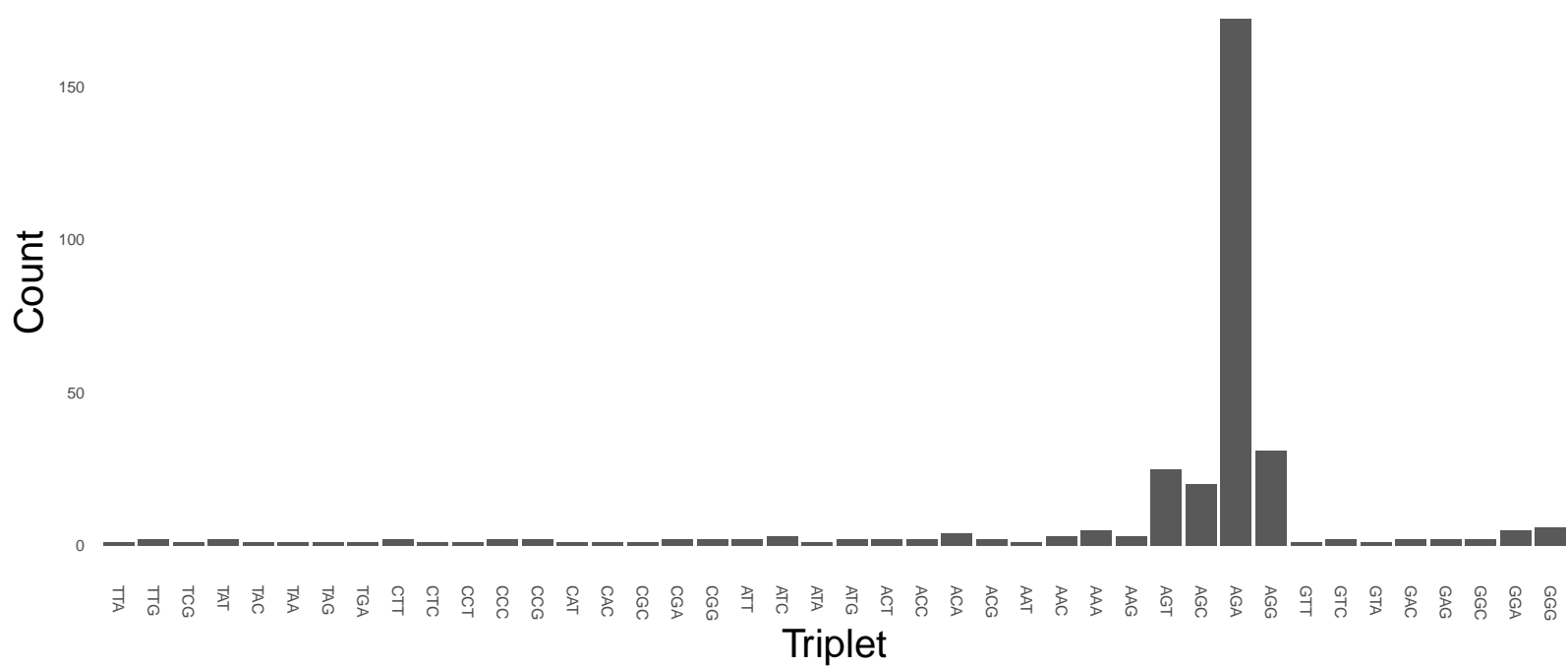
IGHV1-24\*01\_A315G\_C317G- Final 3 nucleotides as a triplet



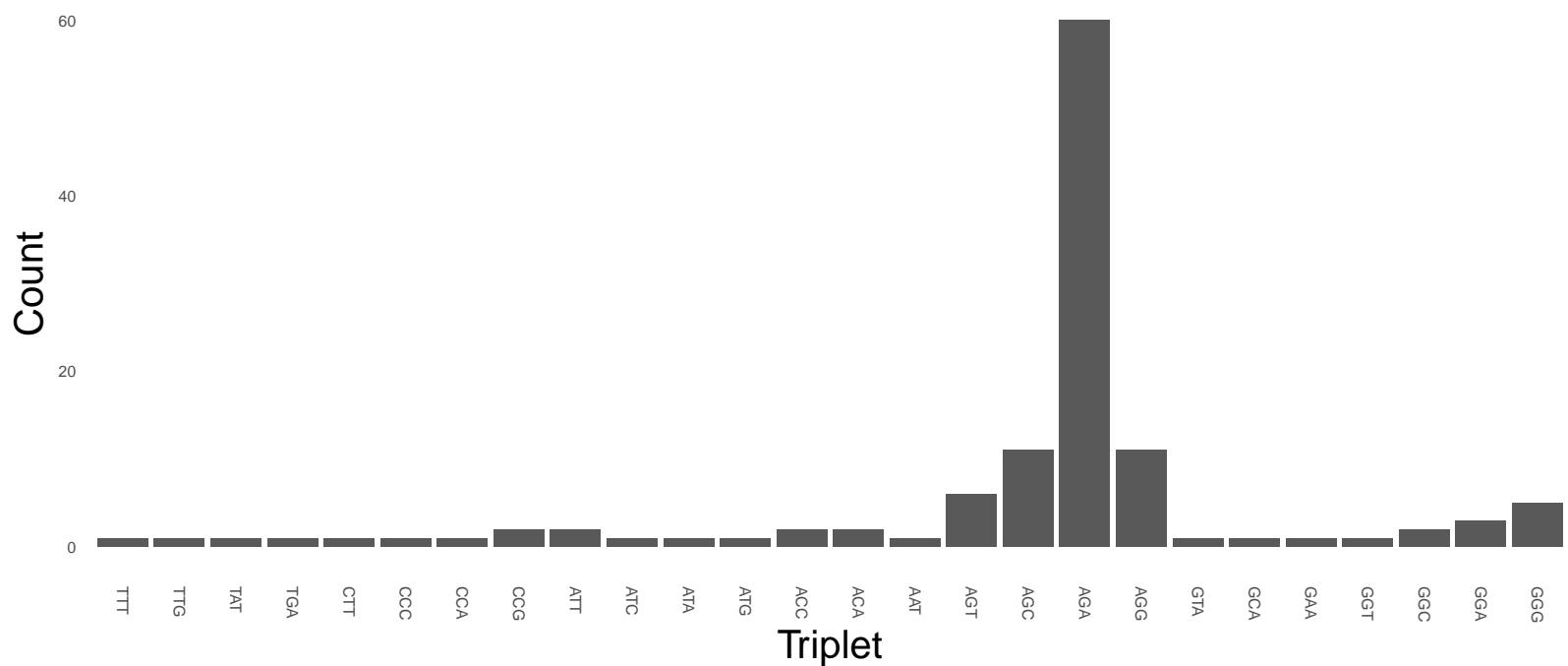
IGHV1-58\*01\_G316A\_C317G- Final 3 nucleotides as a triplet



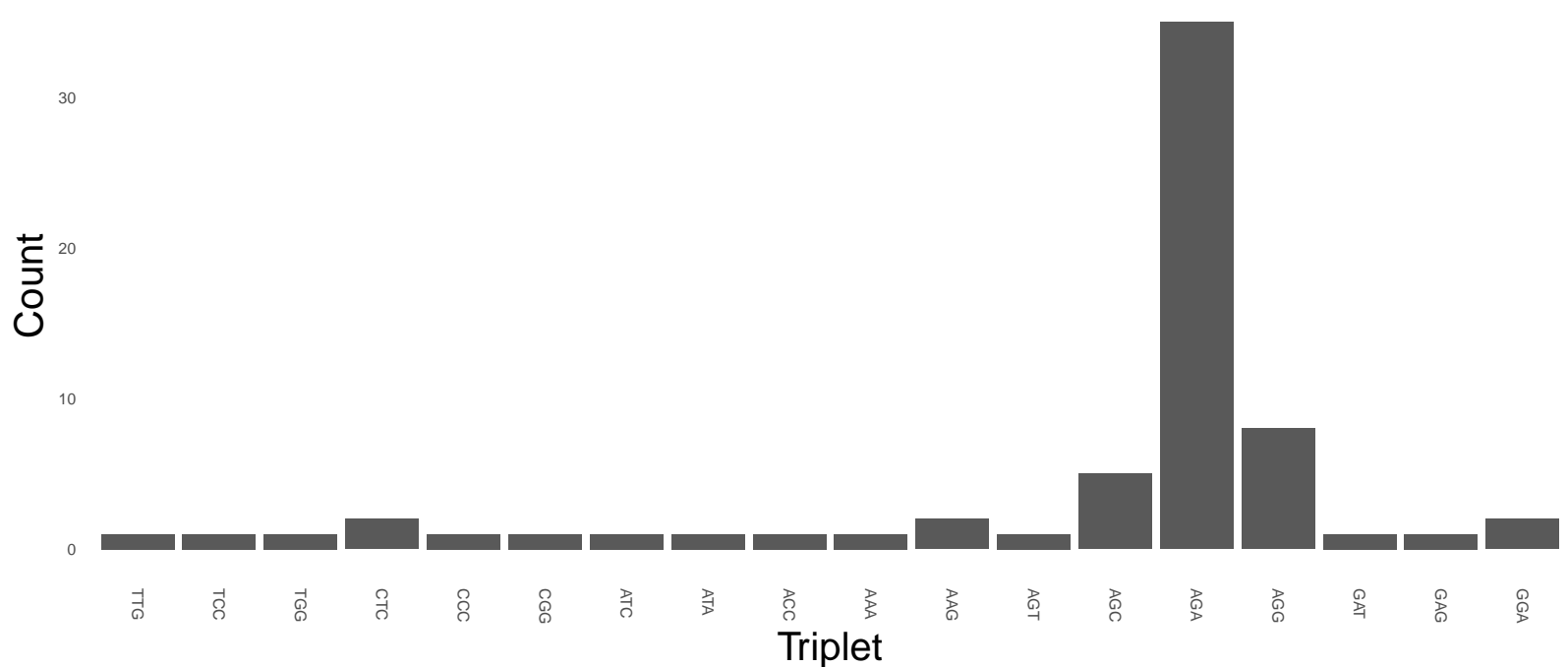
IGHV3–13\*01\_A315G– Final 3 nucleotides as a triplet



IGHV3–20\*04\_T279C\_C300T\_T301G– Final 3 nucleotides as a triplet

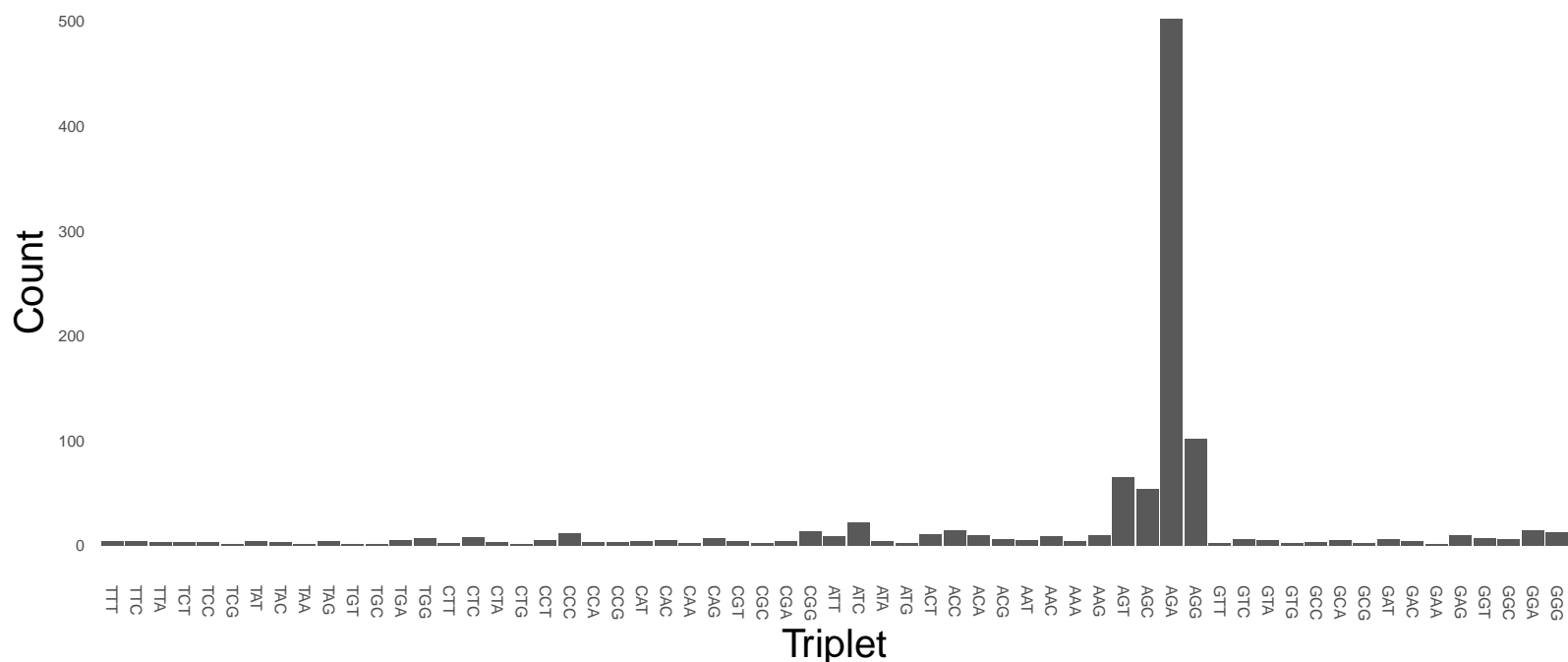


IGHV3–20\*04\_T279C\_T301G– Final 3 nucleotides as a triplet

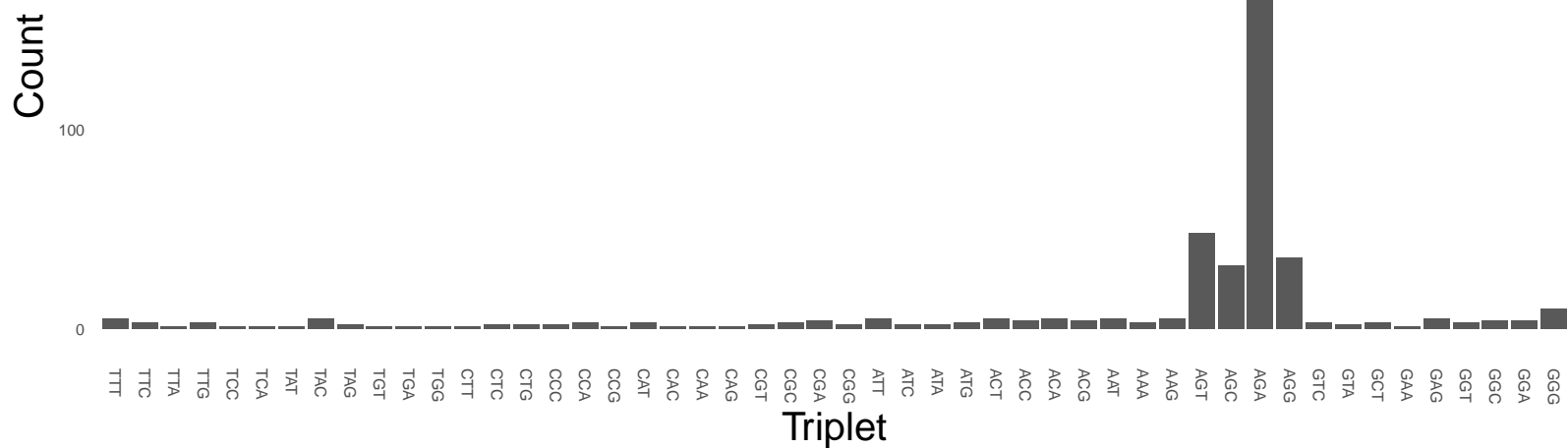




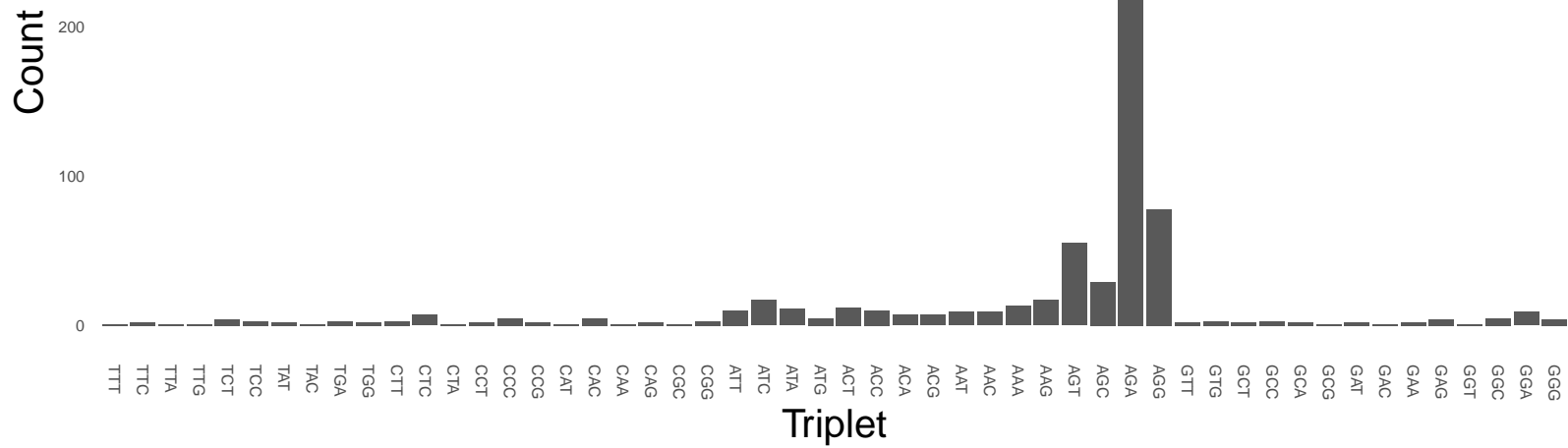
IGHV3-30\*03\_T288C- Final 3 nucleotides as a triplet



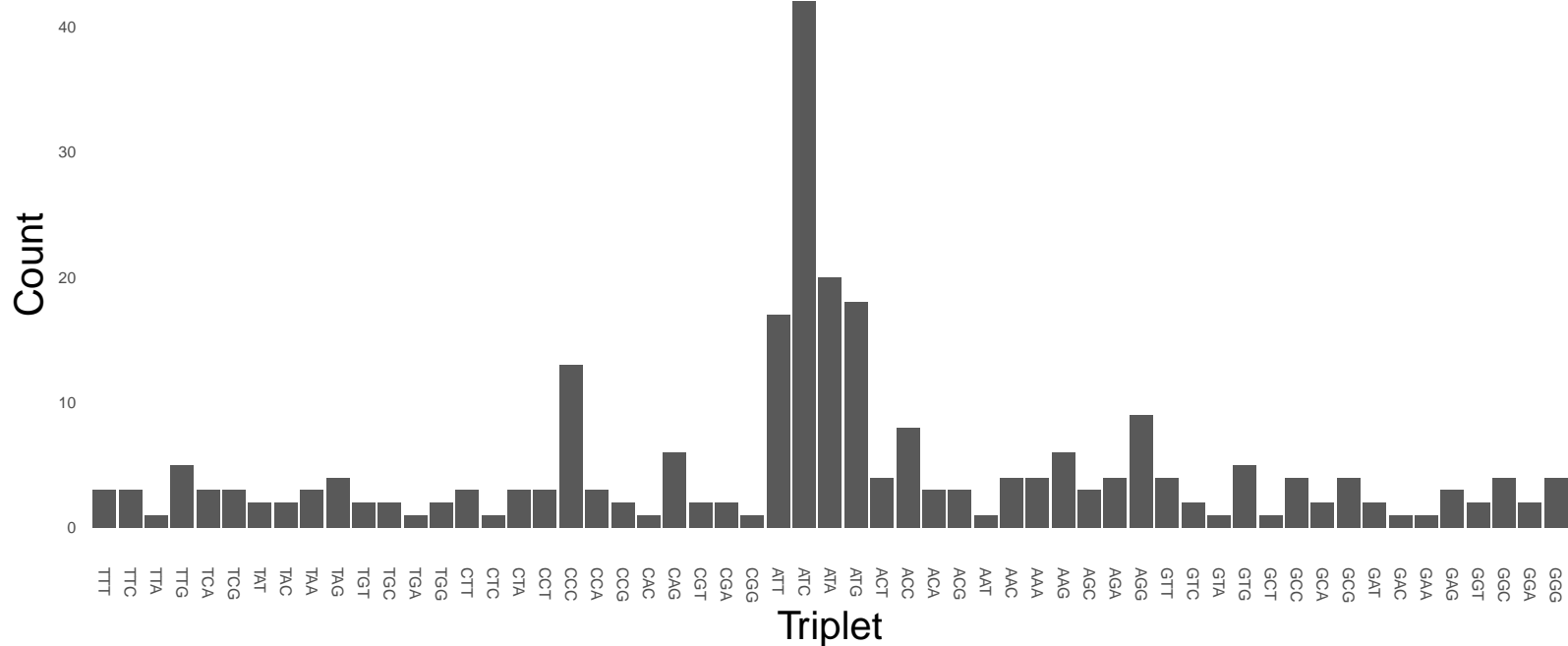
IGHV3-33\*05\_G75C\_T246C\_T247G\_A256T\_G258A- Final 3 nucleotides as a triplet



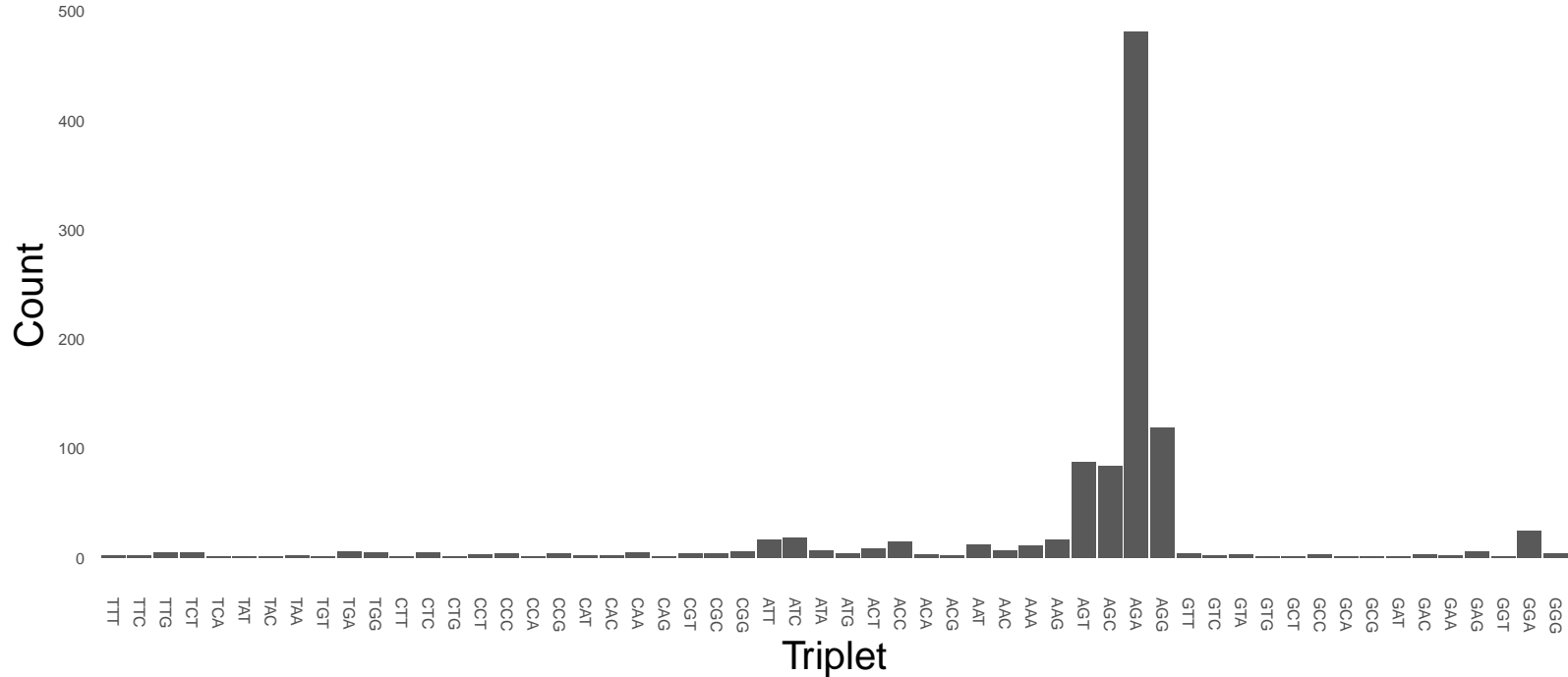
IGHV3-33\*06\_T300C\_G303A- Final 3 nucleotides as a triplet



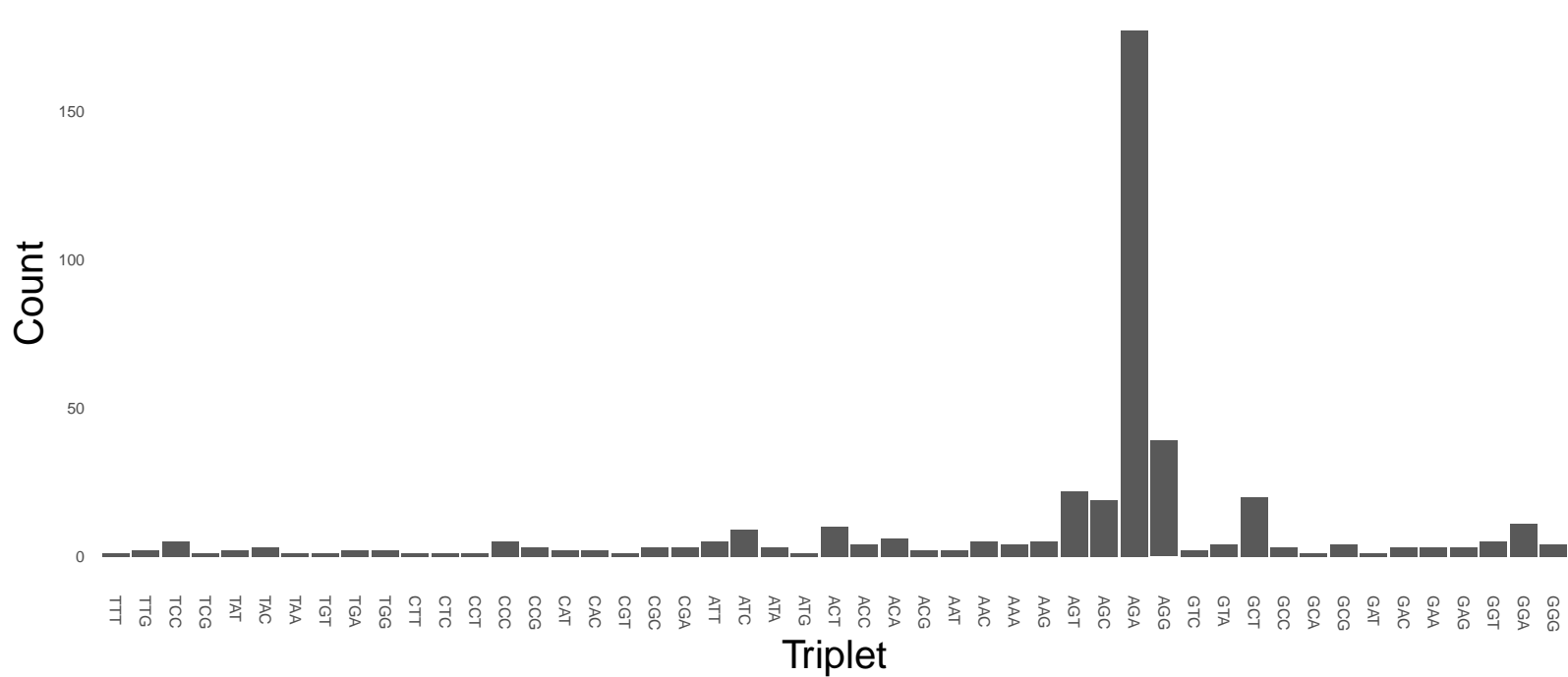
IGHV3-43\*01\_A315G- Final 3 nucleotides as a triplet



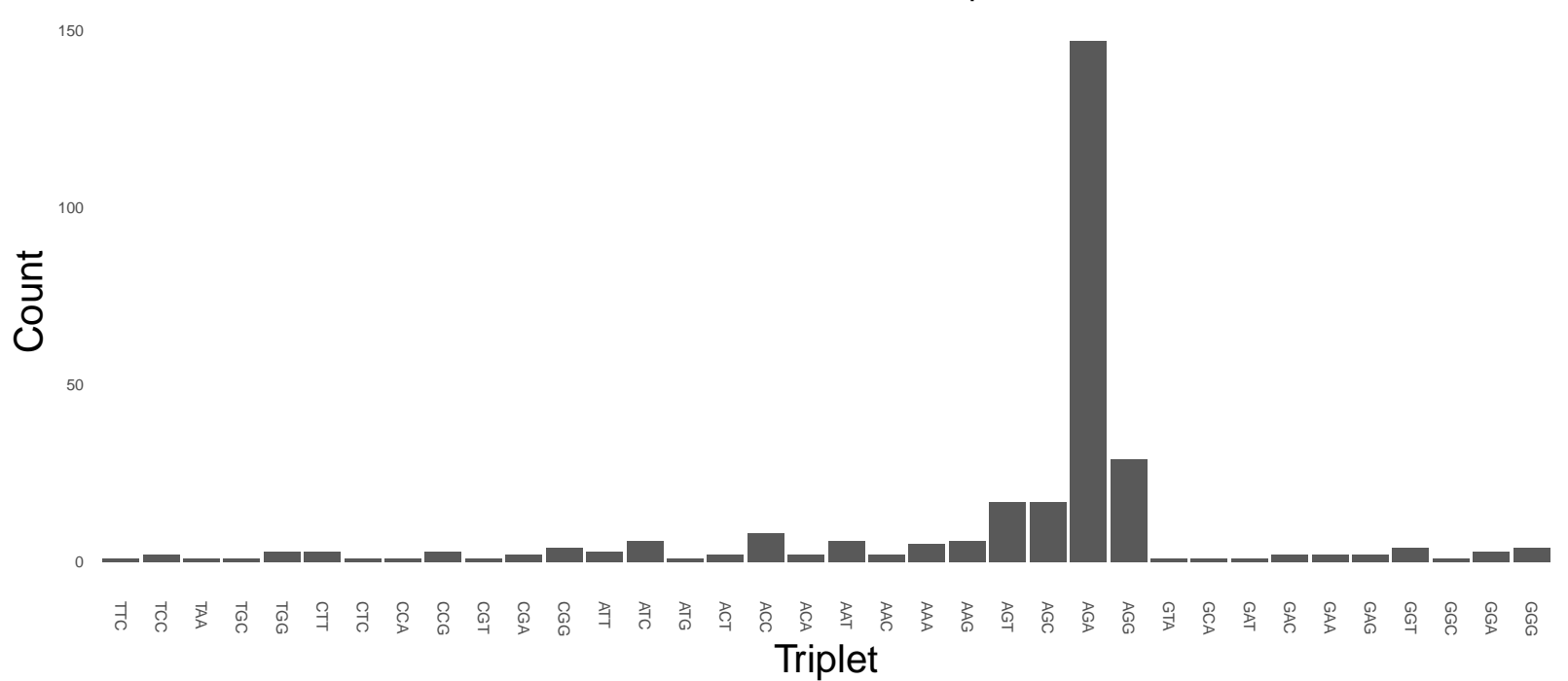
IGHV3-48\*01\_T300C- Final 3 nucleotides as a triplet



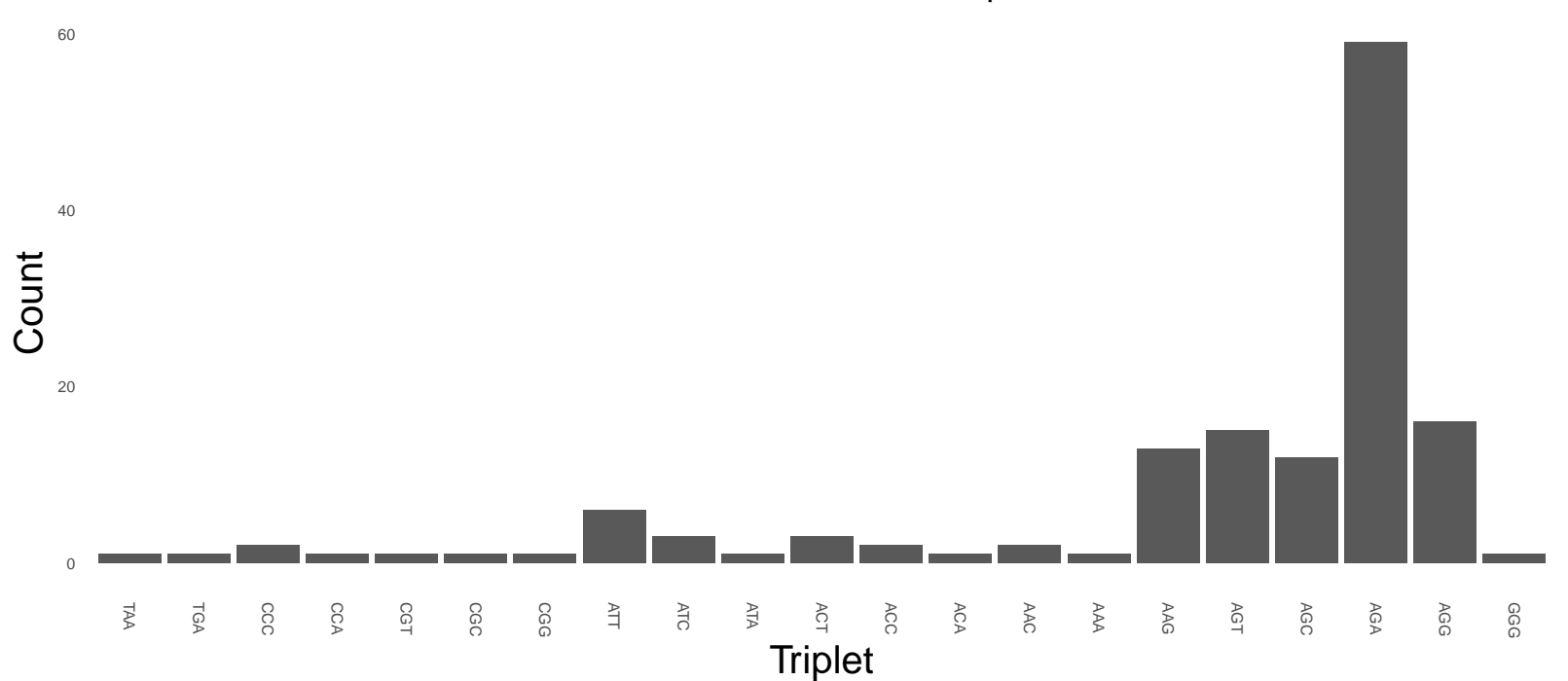
IGHV3-49\*05\_A313G\_T315G- Final 3 nucleotides as a triplet



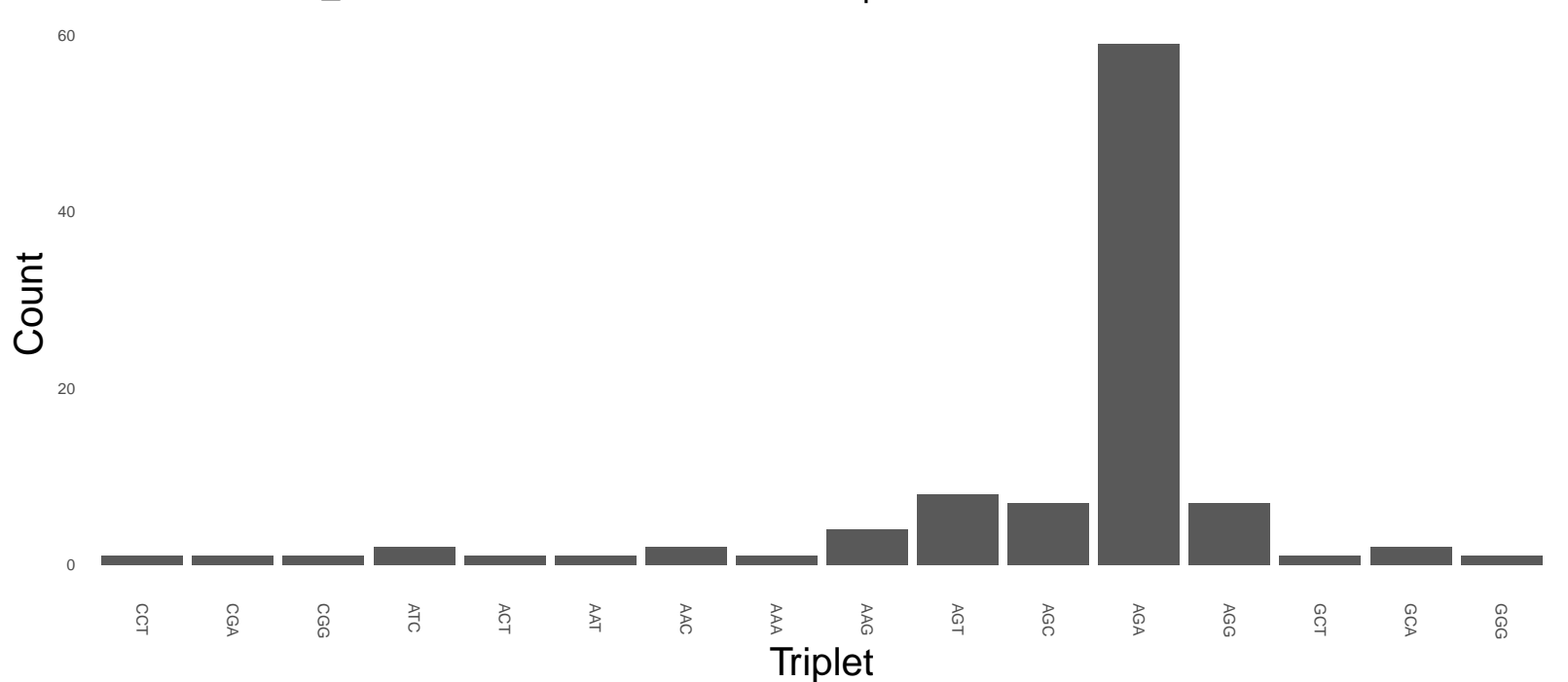
IGHV3-64\*04\_A210C\_T288C- Final 3 nucleotides as a triplet



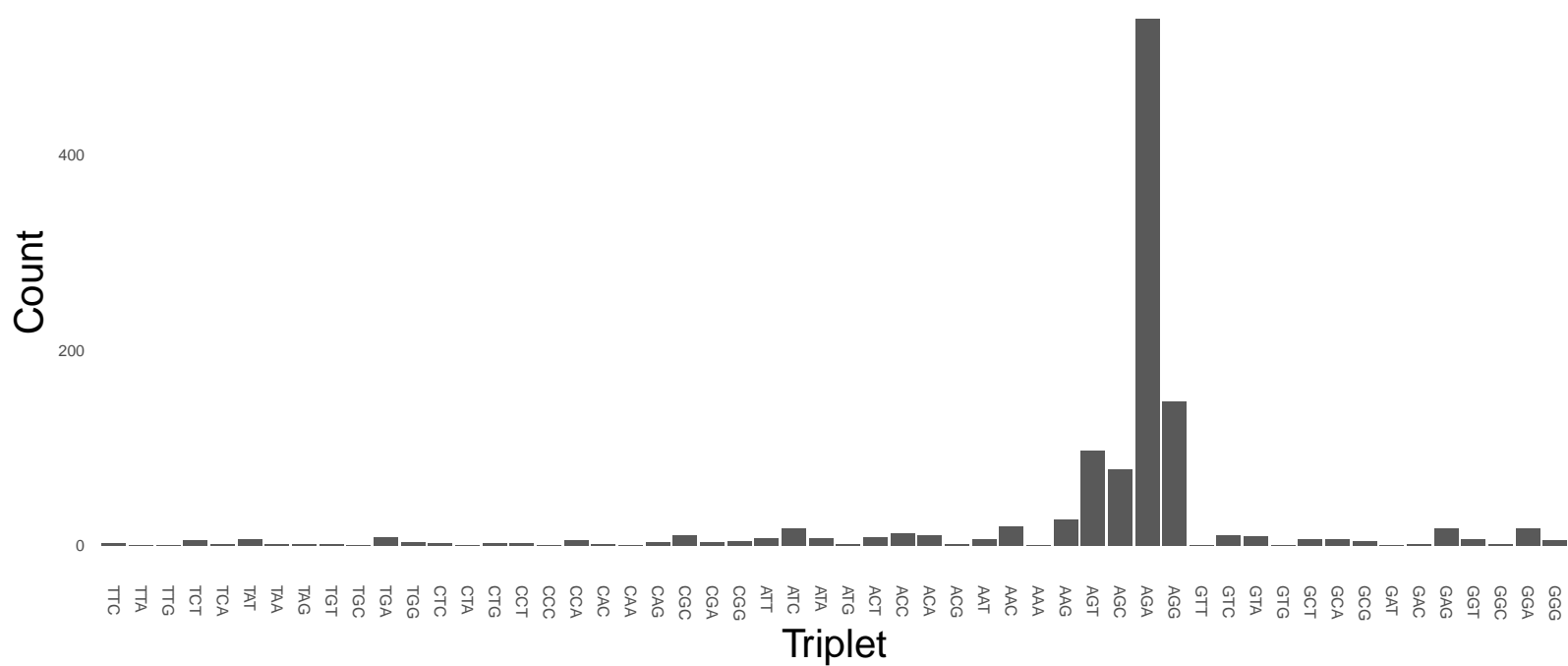
IGHV3-64D\*06\_T314C\_A317G- Final 3 nucleotides as a triplet



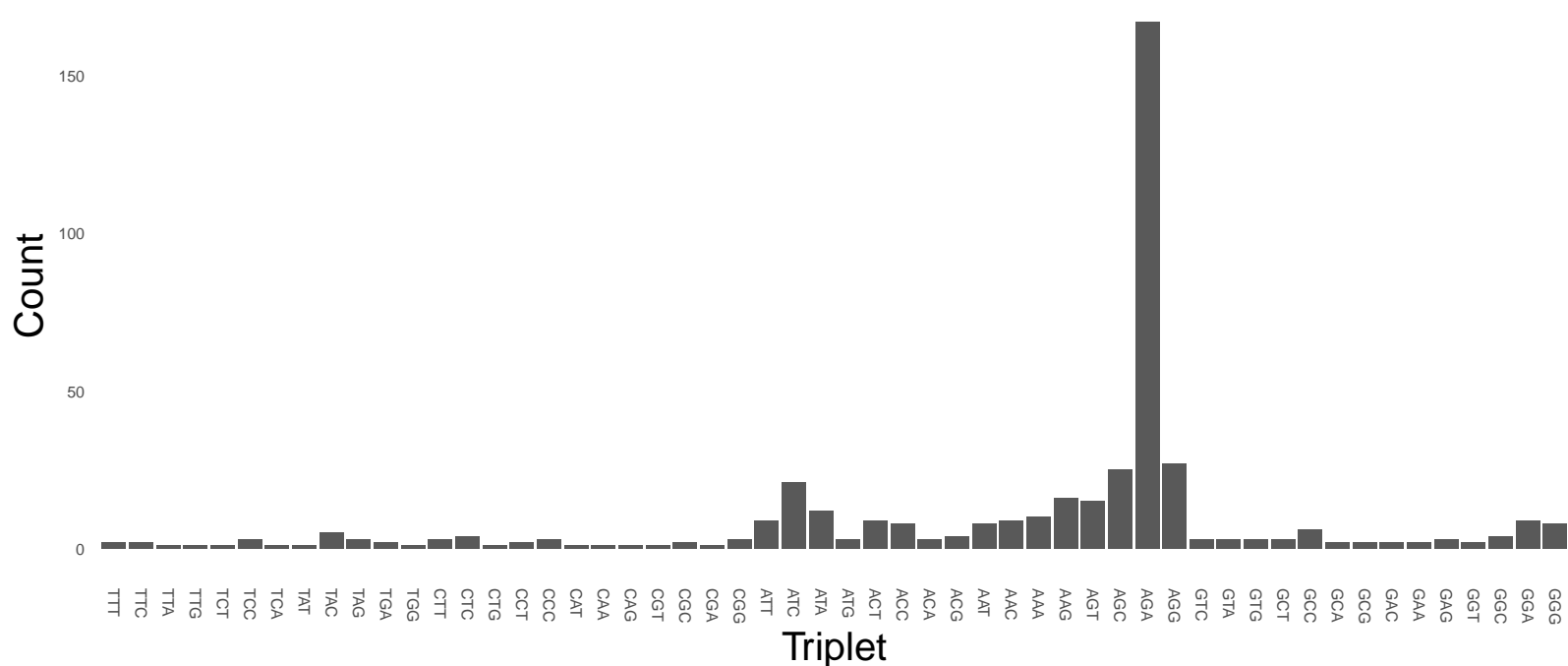
IGHV3-64D\*06\_T314C- Final 3 nucleotides as a triplet



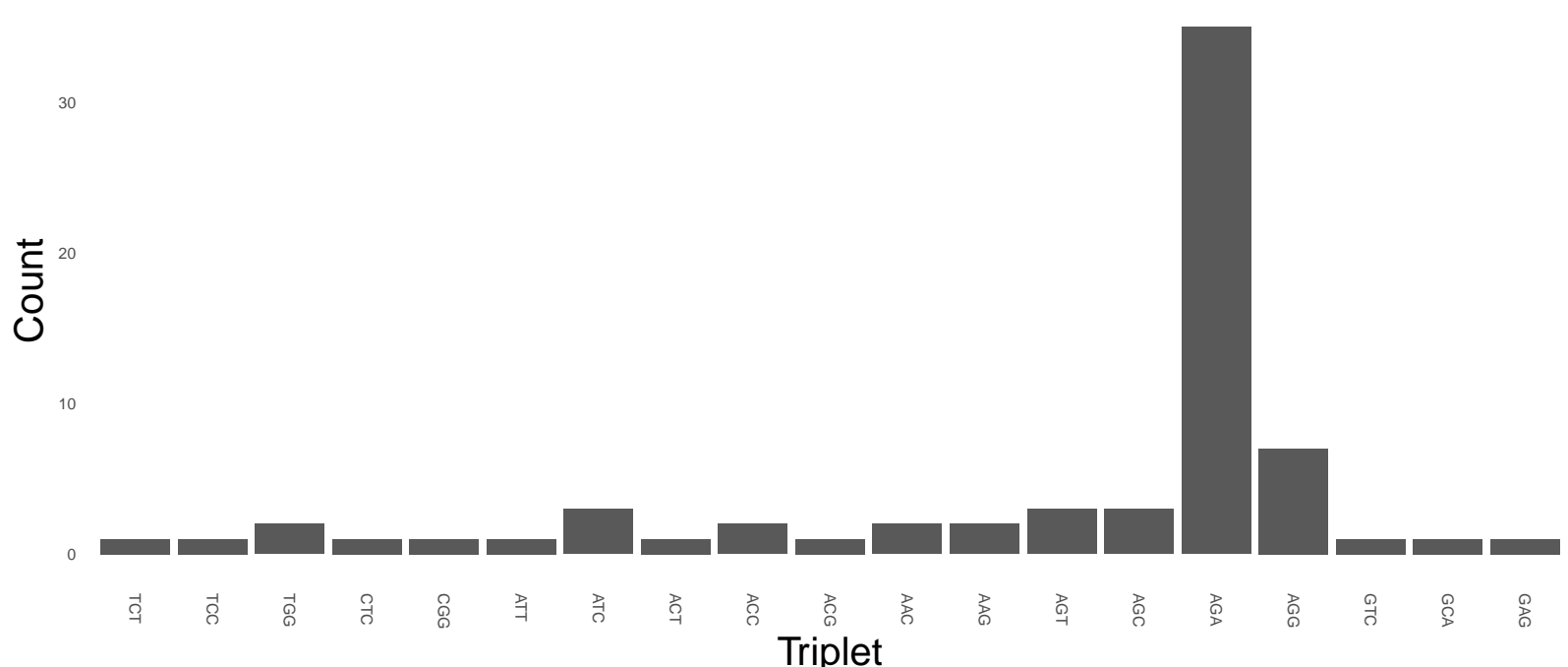
IGHV3-66\*01\_G13T\_C39A\_A223C\_T300C- Final 3 nucleotides as a triplet



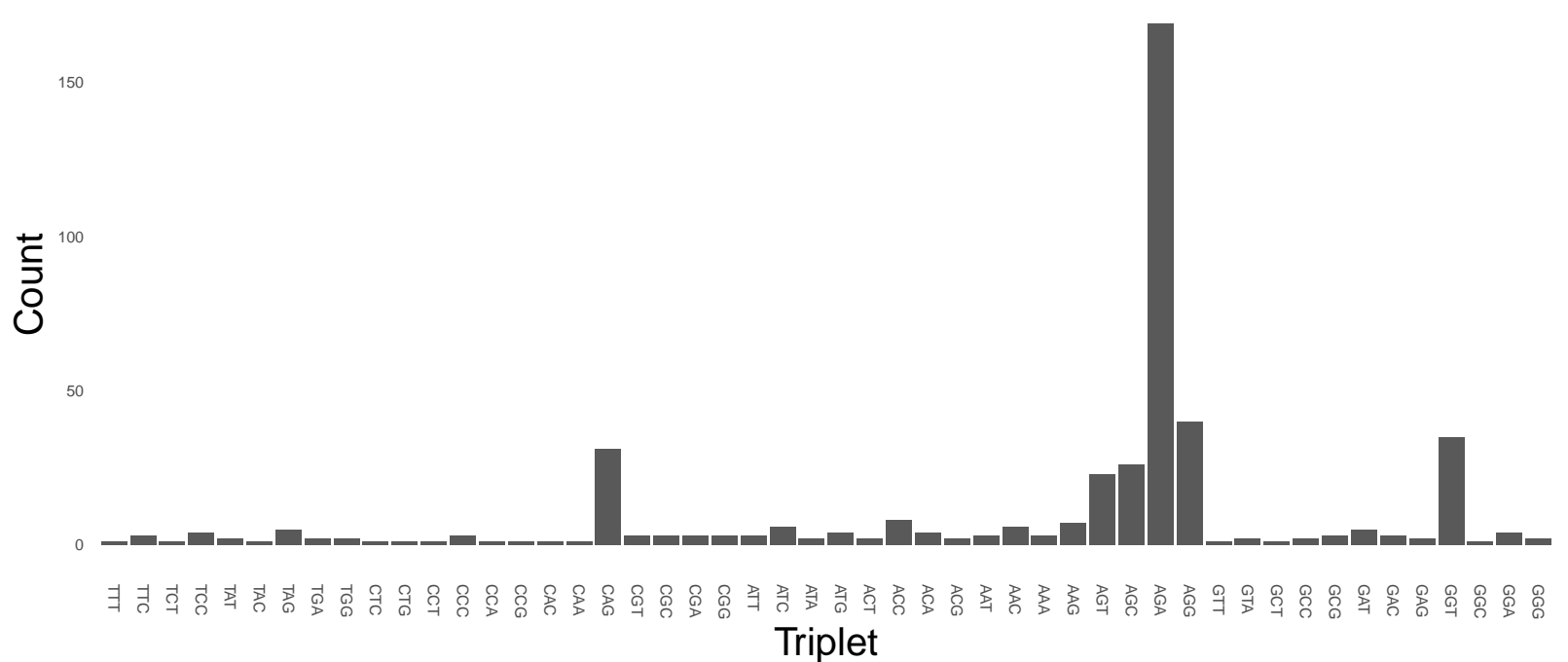
IGHV3-66\*03\_T175G\_T267G\_G317A- Final 3 nucleotides as a triplet



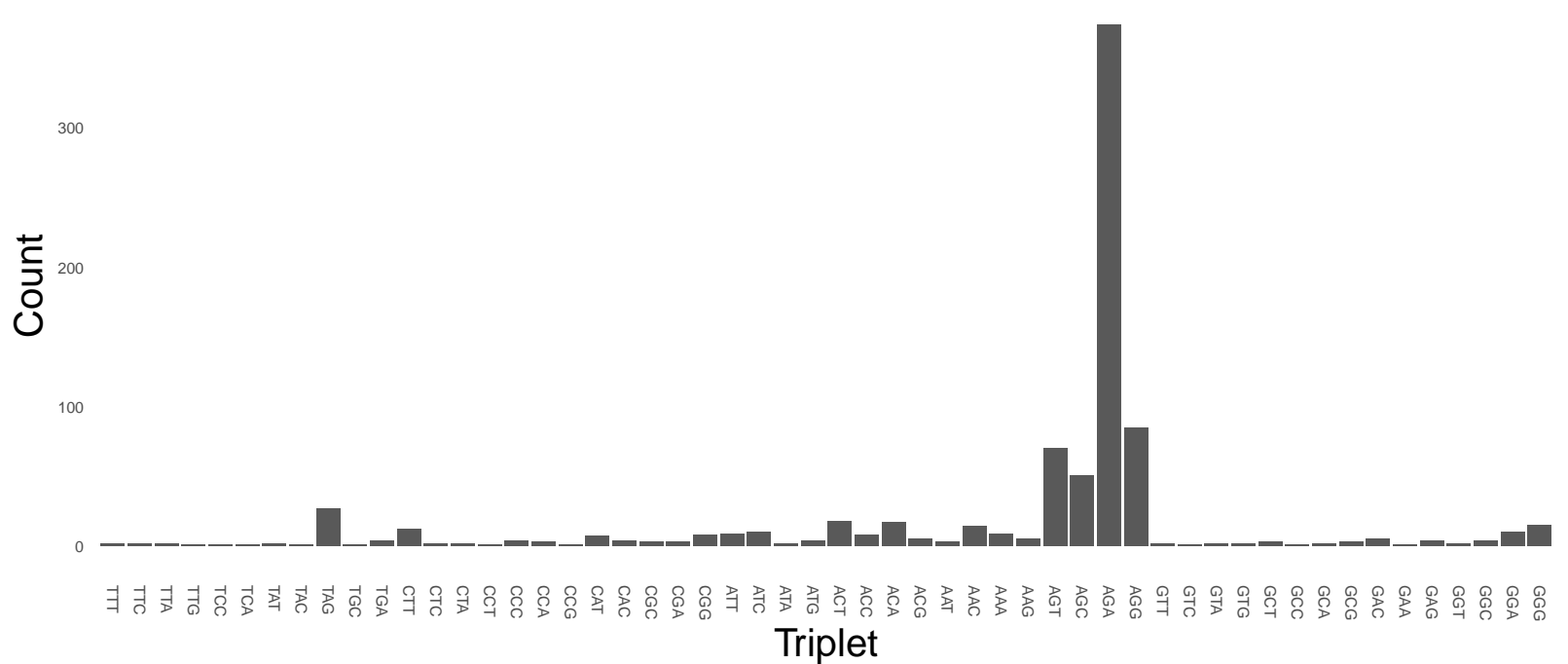
IGHV3-72\*01\_T315G- Final 3 nucleotides as a triplet



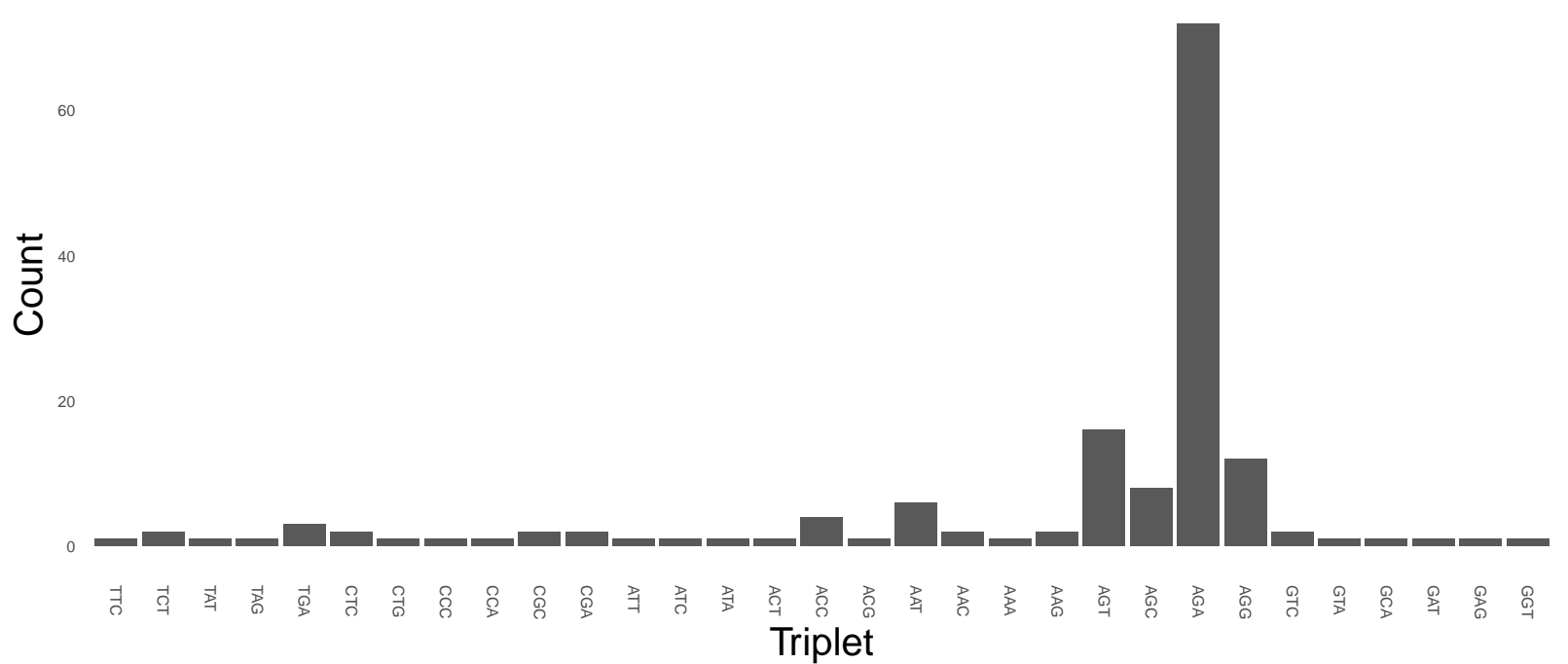
IGHV3-73\*02\_A313G-T315G- Final 3 nucleotides as a triplet



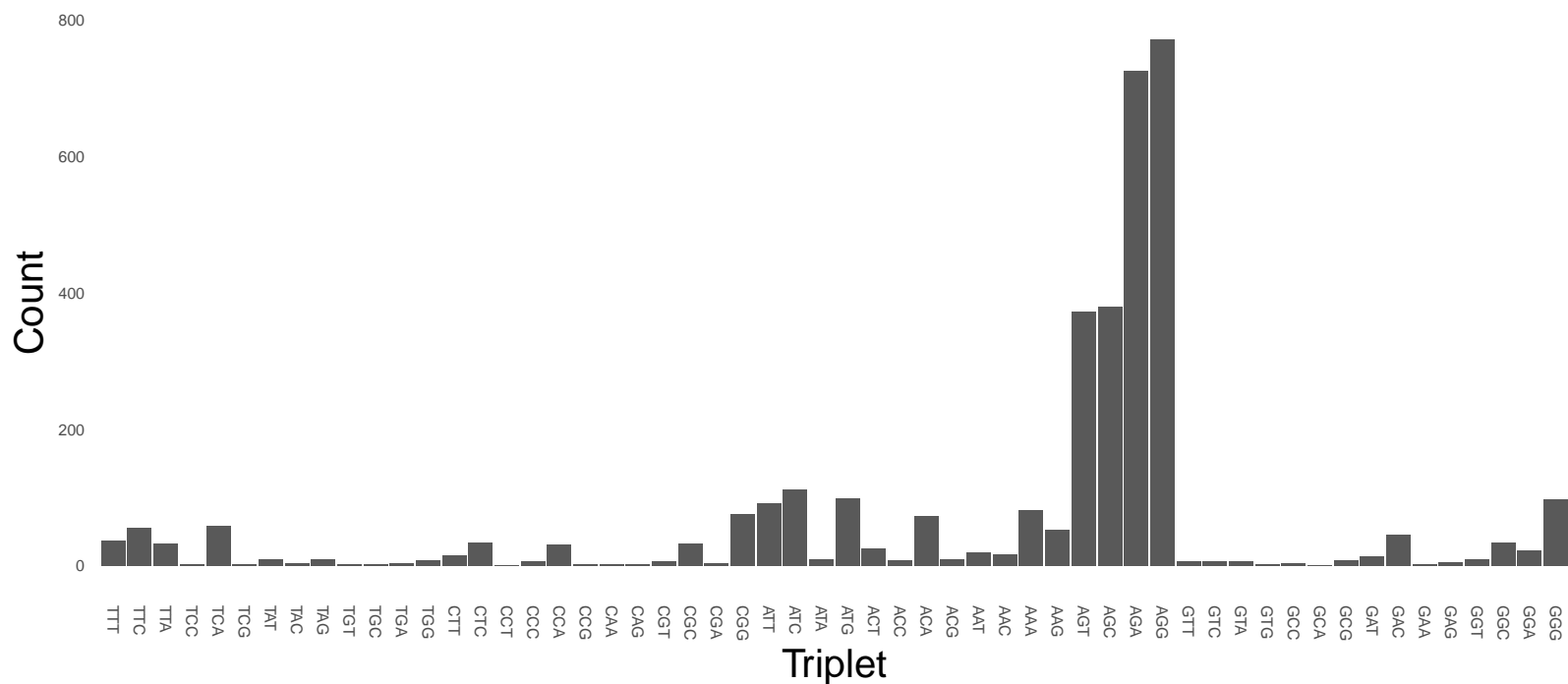
IGHV3-74\*01\_A315G- Final 3 nucleotides as a triplet



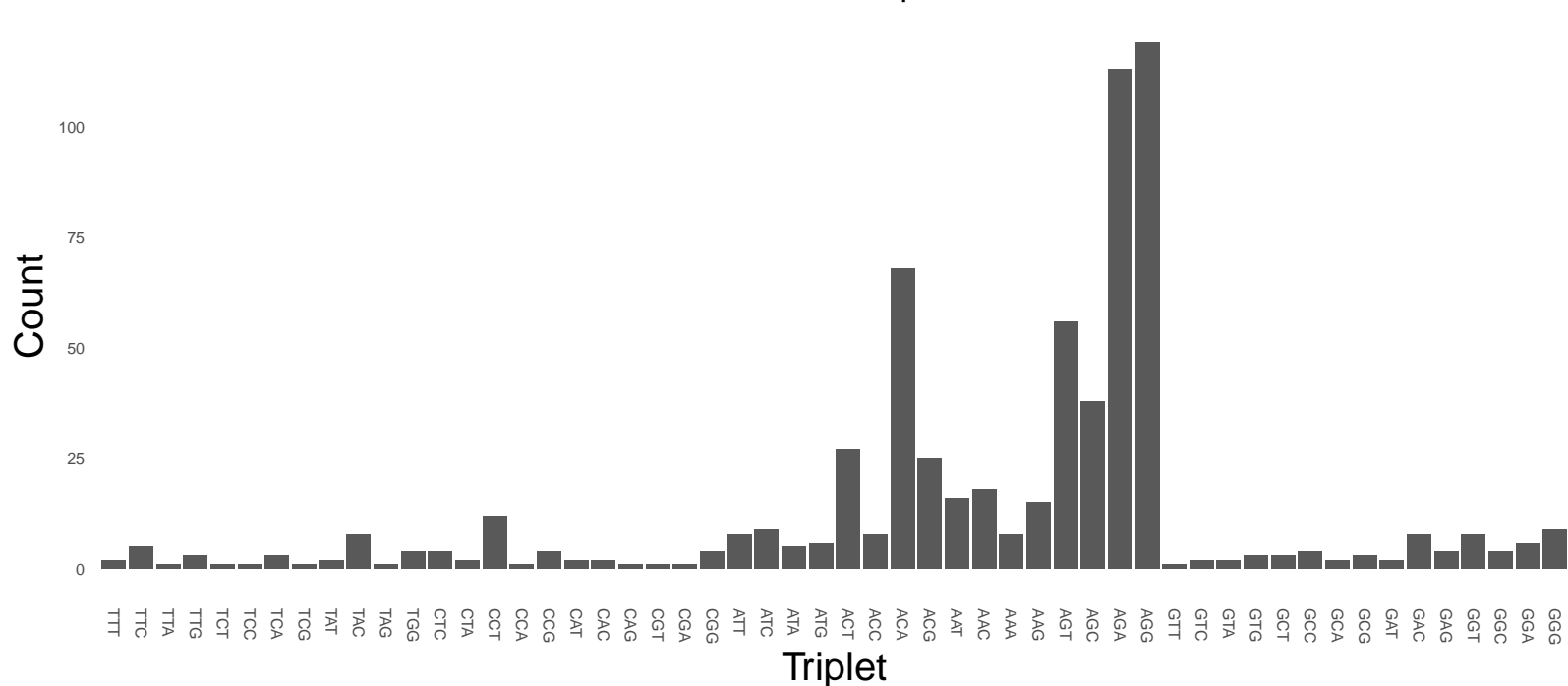
IGHV3-NL1\*01\_G49A\_G75C\_C159G\_T160G\_T201C\_G267T\_T288C\_T300C\_A317G- Final 3 nucleotides as a triplet



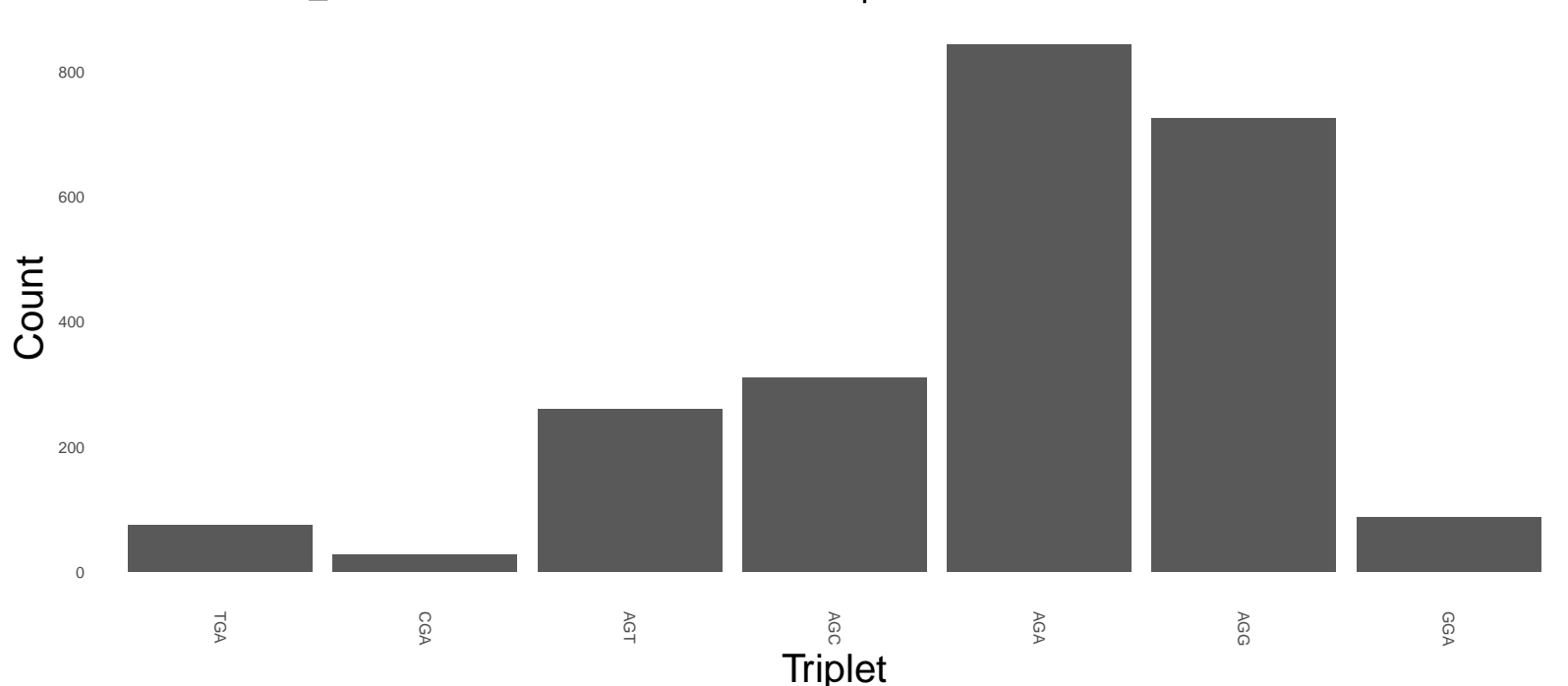
IGHV4-30-2\*01\_C285T\_C315G- Final 3 nucleotides as a triplet



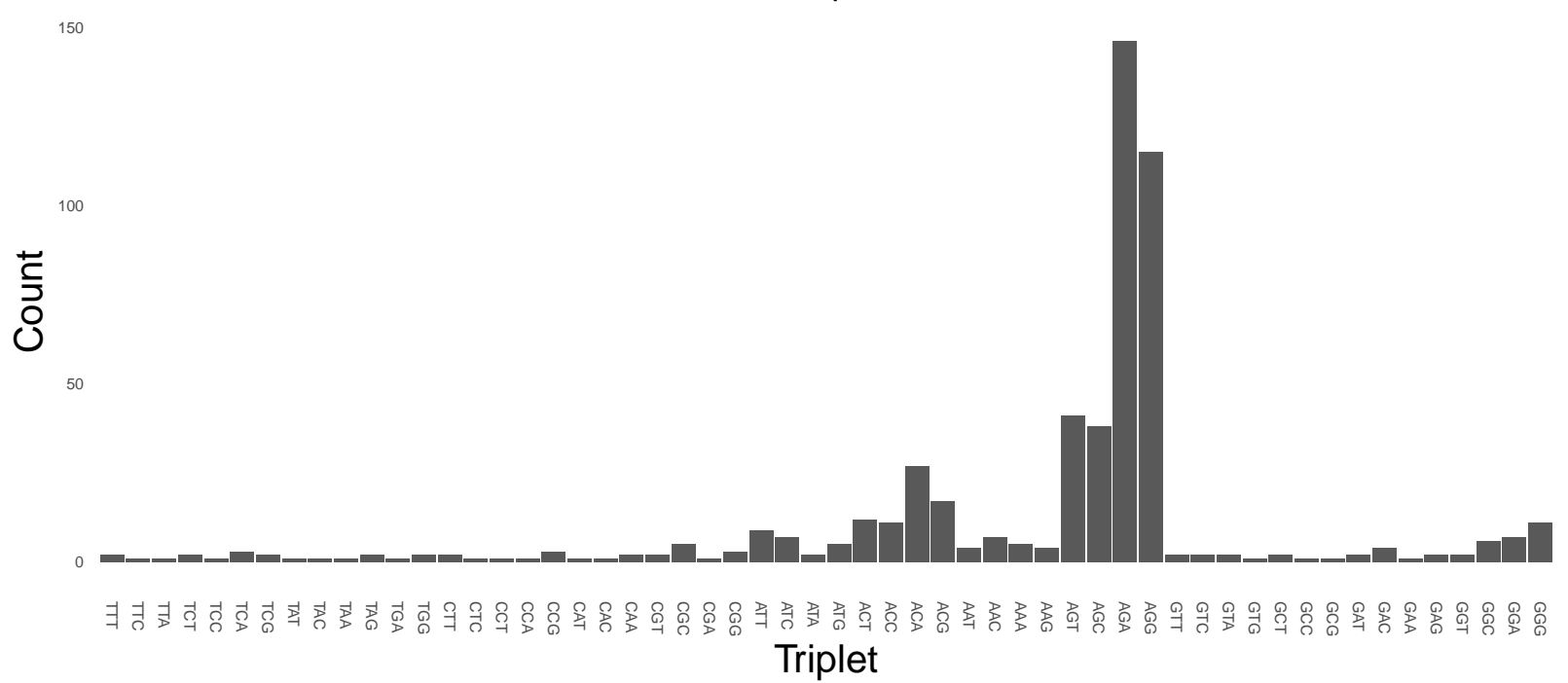
IGHV4-30-2\*01\_C315G- Final 3 nucleotides as a triplet



IGHV4-39\*02\_C258G- Final 3 nucleotides as a triplet

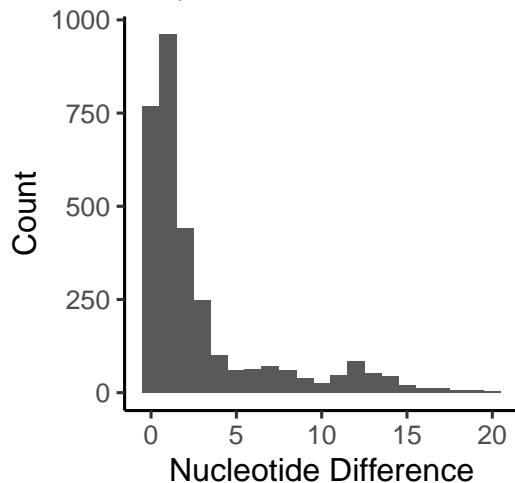


IGHV6-1\*01\_A315G- Final 3 nucleotides as a triplet



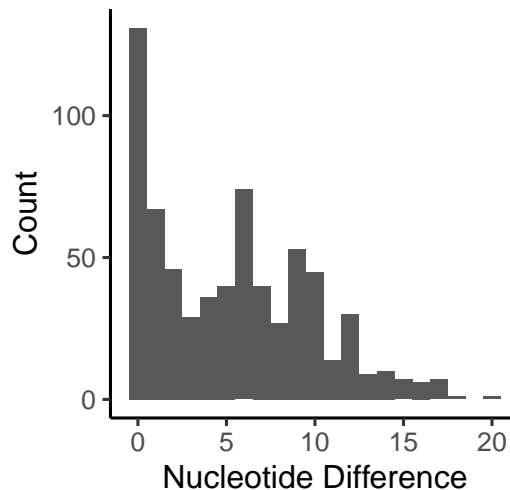
### IGHV1-2\*04

3144 sequences assigned  
769 (24.5%) exact matches, in which:  
660 unique CDR3  
6 unique J



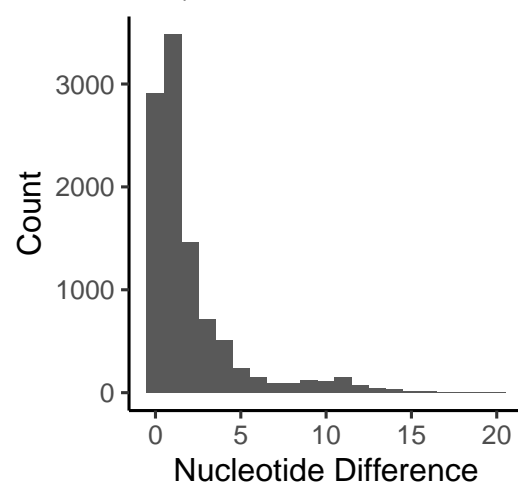
### IGHV1-3\*01\_A291G\_T3C

678 sequences assigned  
131 (19.3%) exact matches, in which:  
131 unique CDR3  
6 unique J



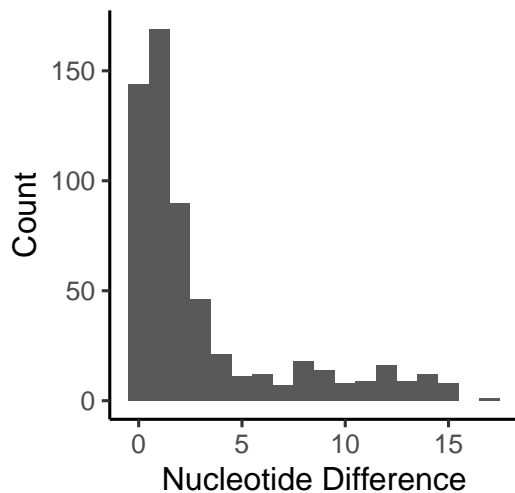
### IGHV1-18\*04

10251 sequences assigned  
2908 (28.4%) exact matches, in which:  
2487 unique CDR3  
6 unique J



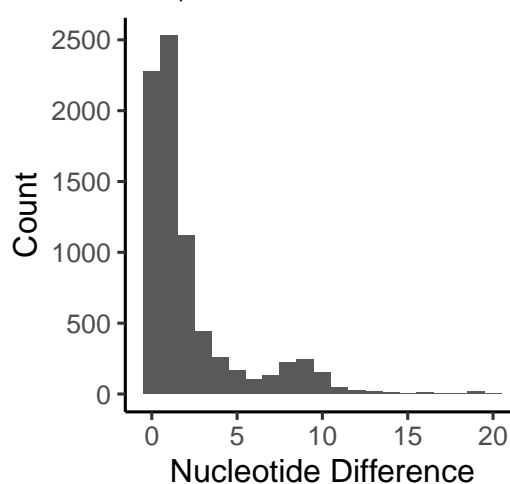
### IGHV1-2\*05

596 sequences assigned  
144 (24.2%) exact matches, in which:  
129 unique CDR3  
4 unique J



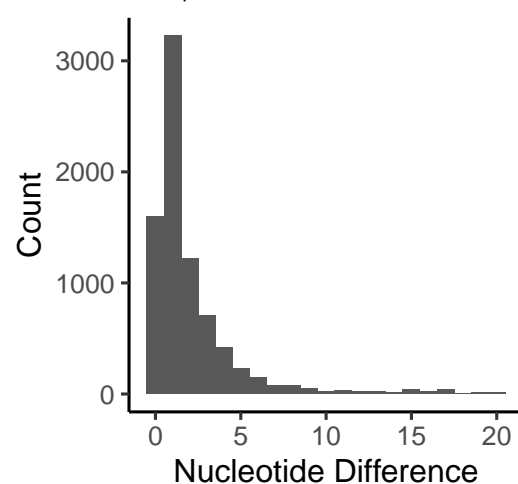
### IGHV1-8\*01

7795 sequences assigned  
2279 (29.2%) exact matches, in which:  
1966 unique CDR3  
6 unique J



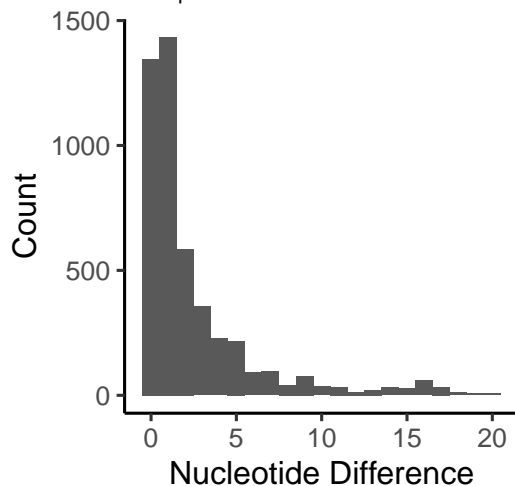
### IGHV1-24\*01

8271 sequences assigned  
1599 (19.3%) exact matches, in which:  
1242 unique CDR3  
6 unique J



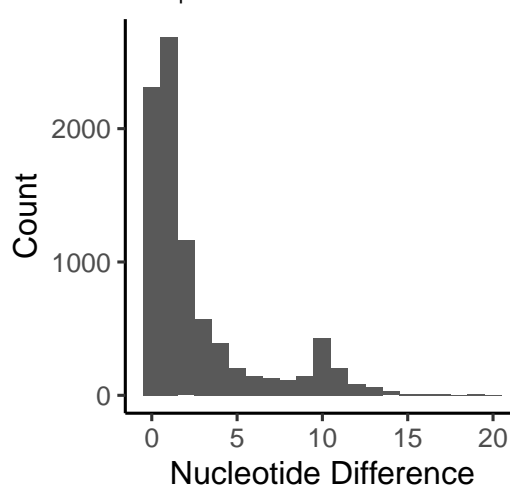
### IGHV1-3\*01

4784 sequences assigned  
1347 (28.2%) exact matches, in which:  
1199 unique CDR3  
6 unique J



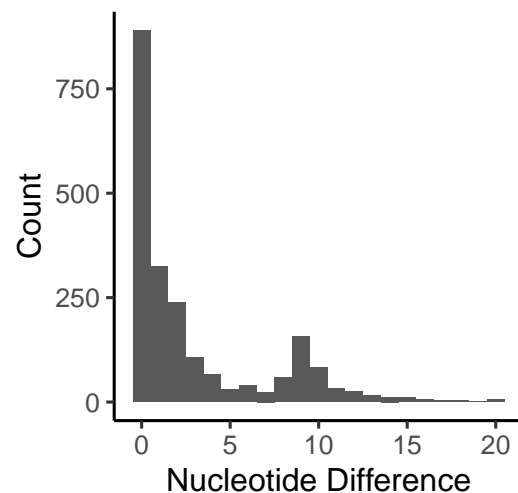
### IGHV1-18\*01

8767 sequences assigned  
2311 (26.4%) exact matches, in which:  
1998 unique CDR3  
6 unique J



### IGHV1-24\*01\_A315G\_C3

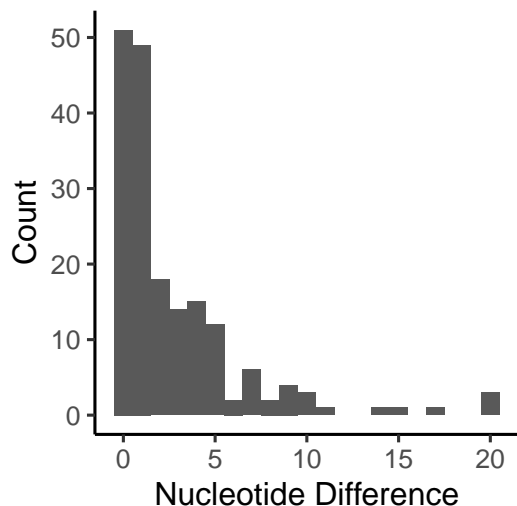
2173 sequences assigned  
890 (41%) exact matches, in which:  
876 unique CDR3  
6 unique J





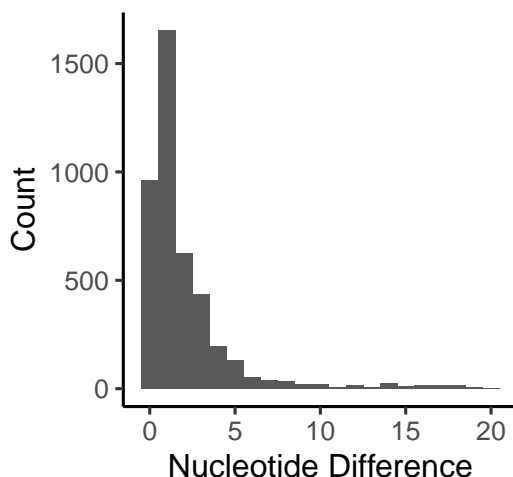
## IGHV1-45\*02

186 sequences assigned  
51 (27.4%) exact matches, in which:  
46 unique CDR3  
4 unique J



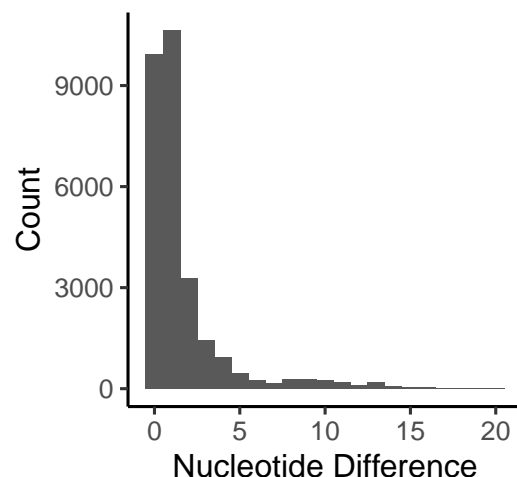
## IGHV1-58\*01

4322 sequences assigned  
962 (22.3%) exact matches, in which:  
653 unique CDR3  
5 unique J



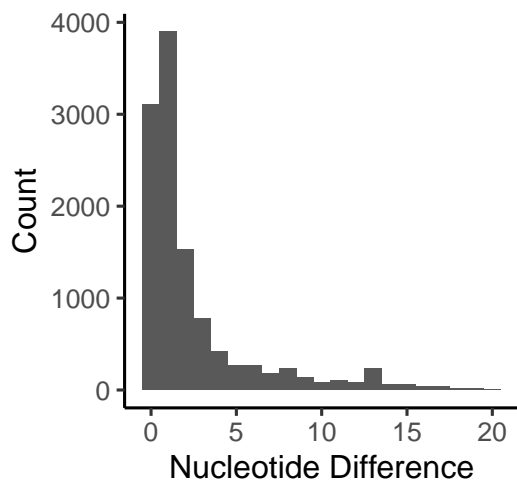
## IGHV1-69\*18

28812 sequences assigned  
9942 (34.5%) exact matches, in which:  
8403 unique CDR3  
6 unique J



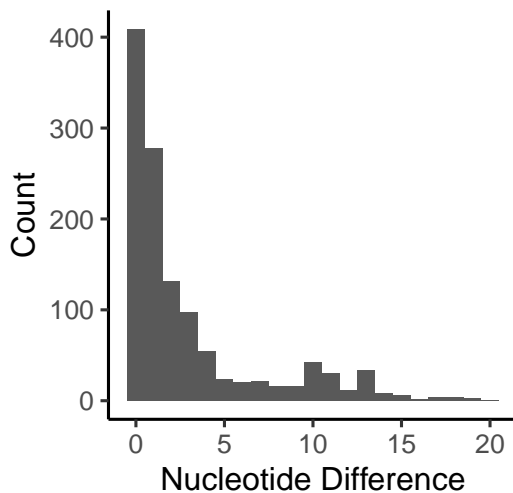
## IGHV1-46\*01

11634 sequences assigned  
3108 (26.7%) exact matches, in which:  
2684 unique CDR3  
6 unique J



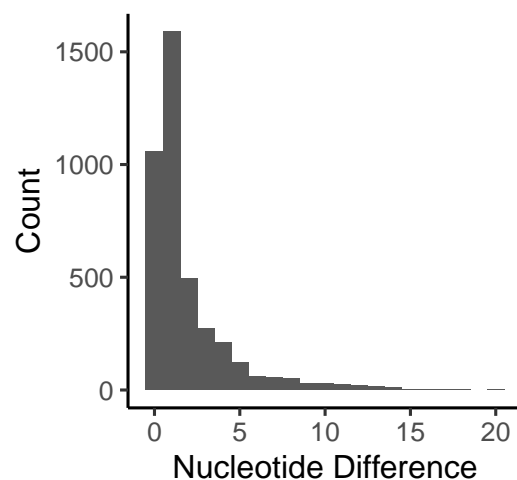
## IGHV1-58\*01\_G316A\_CD

1218 sequences assigned  
409 (33.6%) exact matches, in which:  
404 unique CDR3  
6 unique J



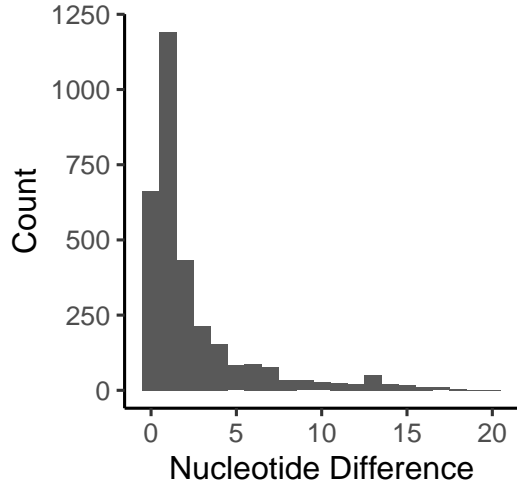
## IGHV2-5\*01

4091 sequences assigned  
1059 (25.9%) exact matches, in which:  
874 unique CDR3  
6 unique J



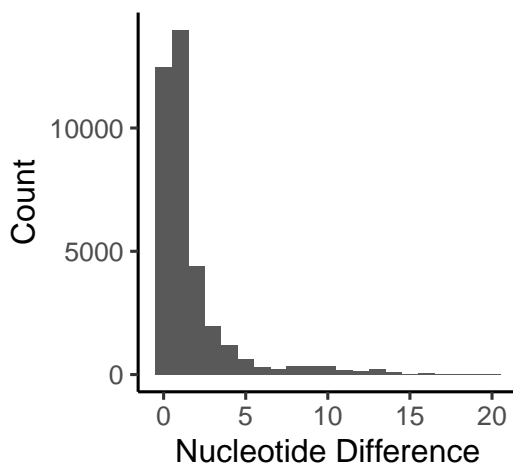
## IGHV1-46\*03

3173 sequences assigned  
662 (20.9%) exact matches, in which:  
521 unique CDR3  
6 unique J



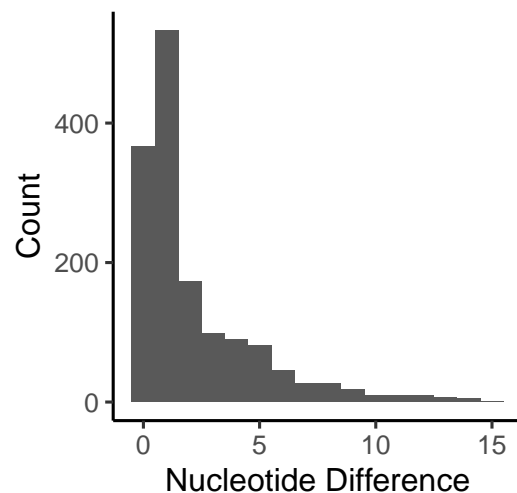
## IGHV1-69\*01

37242 sequences assigned  
12460 (33.5%) exact matches, in which:  
10456 unique CDR3  
6 unique J



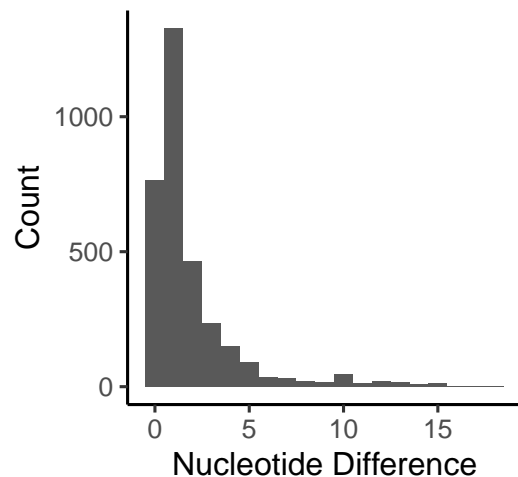
## IGHV2-5\*02

1514 sequences assigned  
367 (24.2%) exact matches, in which:  
309 unique CDR3  
6 unique J



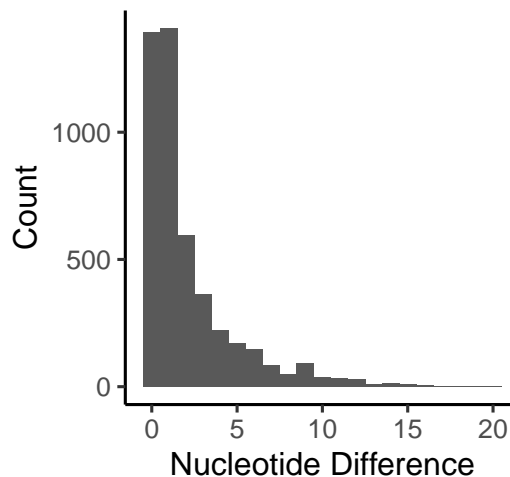
### IGHV2-26\*01

3328 sequences assigned  
765 (23%) exact matches, in which:  
626 unique CDR3  
6 unique J



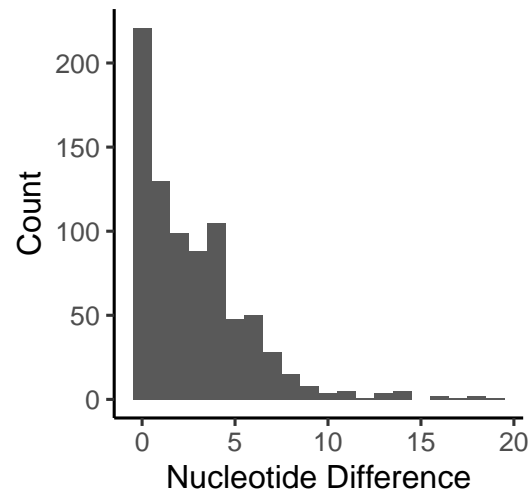
### IGHV3-7\*03

4698 sequences assigned  
1395 (29.7%) exact matches, in which:  
1217 unique CDR3  
6 unique J



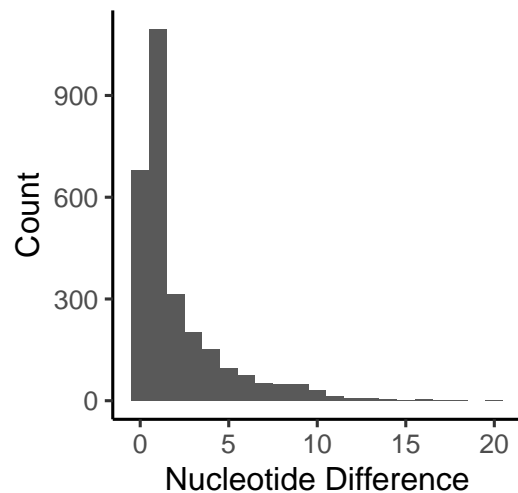
### IGHV3-11\*04

834 sequences assigned  
221 (26.5%) exact matches, in which:  
220 unique CDR3  
6 unique J



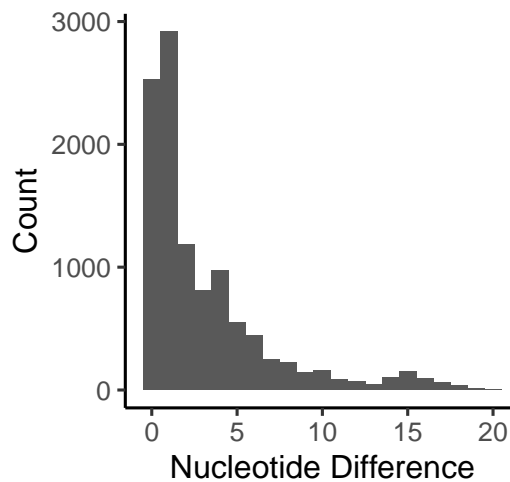
### IGHV2-70\*01

2886 sequences assigned  
680 (23.6%) exact matches, in which:  
581 unique CDR3  
6 unique J



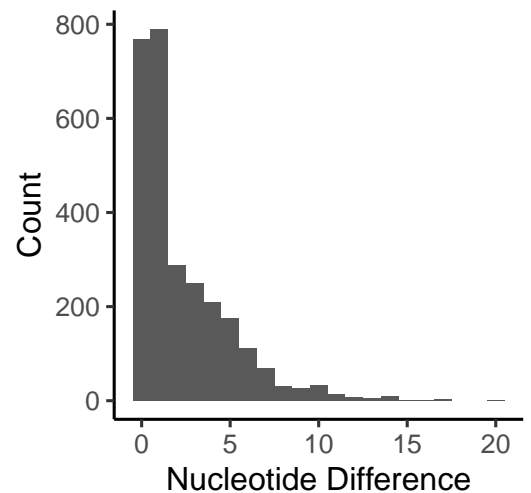
### IGHV3-9\*01

10952 sequences assigned  
2526 (23.1%) exact matches, in which:  
2080 unique CDR3  
6 unique J



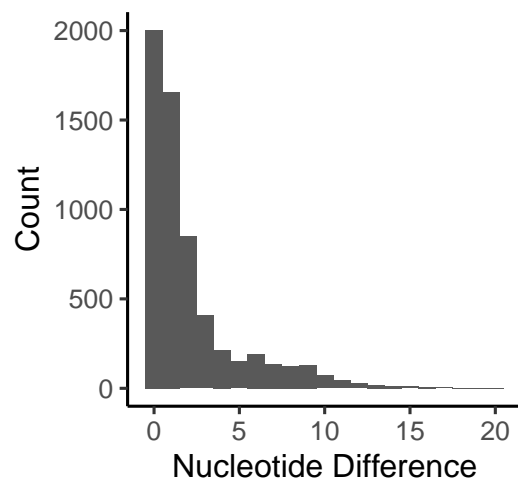
### IGHV3-11\*06

2815 sequences assigned  
769 (27.3%) exact matches, in which:  
642 unique CDR3  
6 unique J



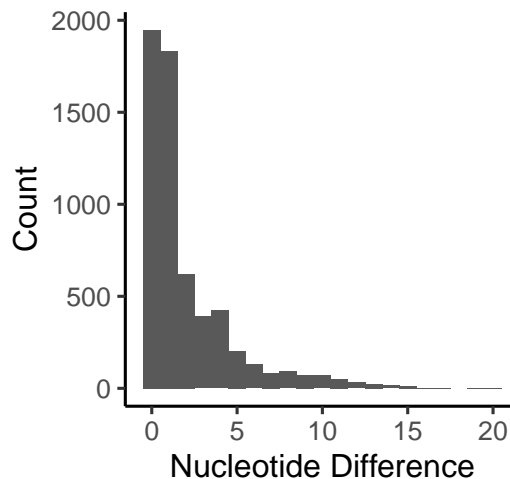
### IGHV3-7\*01

6115 sequences assigned  
2003 (32.8%) exact matches, in which:  
1753 unique CDR3  
6 unique J



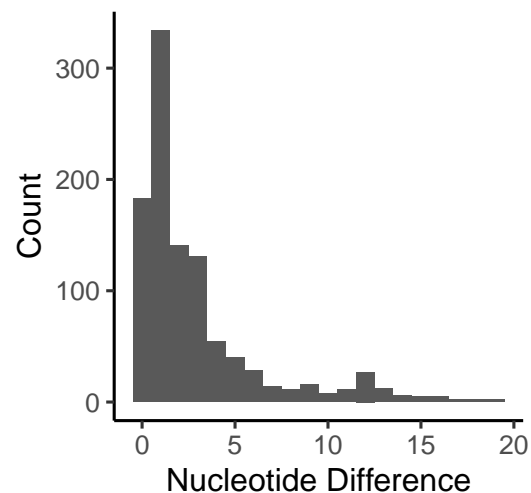
### IGHV3-11\*01

6058 sequences assigned  
1947 (32.1%) exact matches, in which:  
1589 unique CDR3  
6 unique J



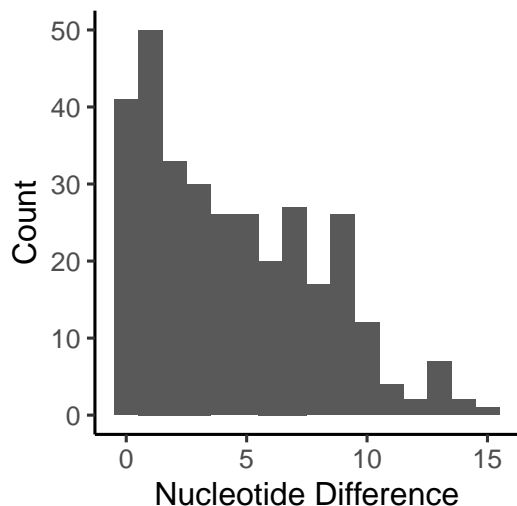
### IGHV3-13\*01

1042 sequences assigned  
183 (17.6%) exact matches, in which:  
147 unique CDR3  
6 unique J



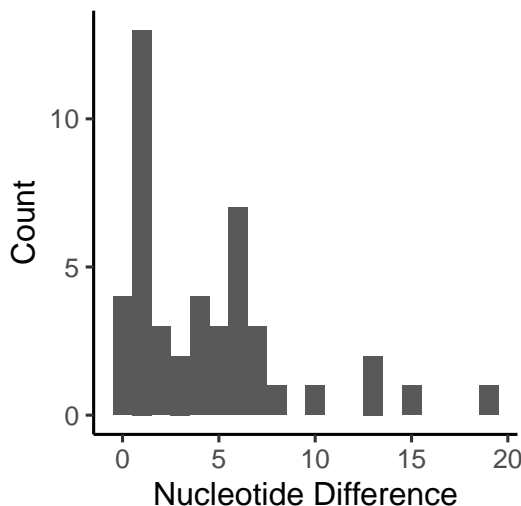
### IGHV3-13\*01\_A315G

324 sequences assigned  
41 (12.7%) exact matches, in which:  
41 unique CDR3  
5 unique J



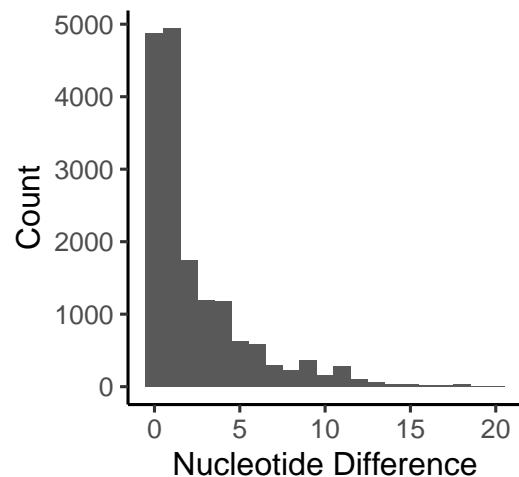
### IGHV3-20\*04

45 sequences assigned  
4 (8.9%) exact matches, in which:  
4 unique CDR3  
3 unique J



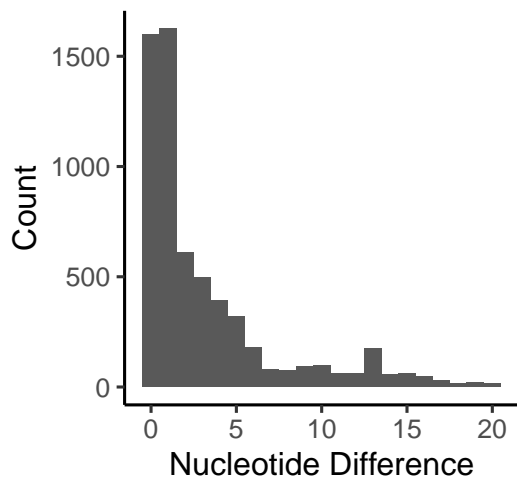
### IGHV3-21\*01

16901 sequences assigned  
4882 (28.9%) exact matches, in which:  
4079 unique CDR3  
6 unique J



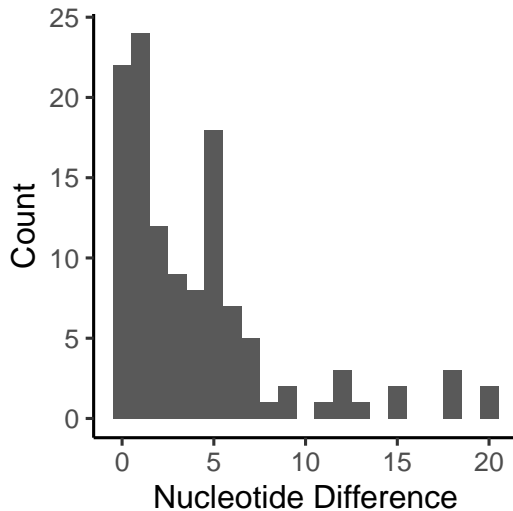
### IGHV3-15\*01

6176 sequences assigned  
1597 (25.9%) exact matches, in which:  
1312 unique CDR3  
6 unique J



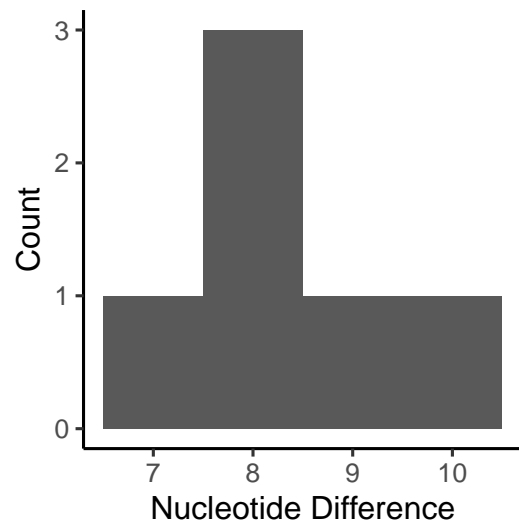
### IGHV3-20\*04\_T279C\_C30

121 sequences assigned  
22 (18.2%) exact matches, in which:  
22 unique CDR3  
5 unique J



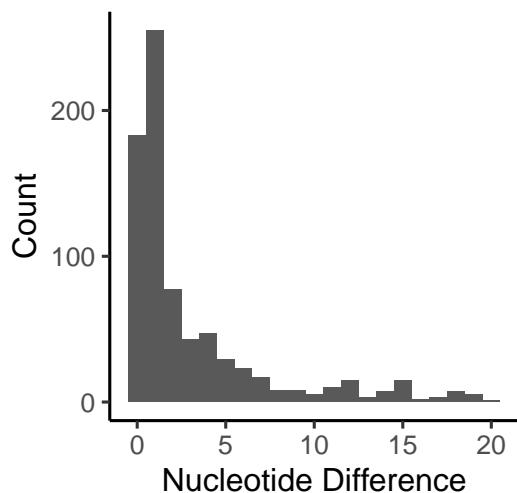
### IGHV3-22\*02

6 sequences assigned  
No exact matches.



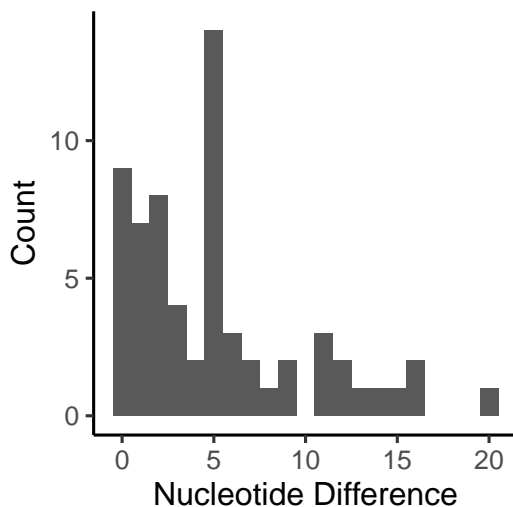
### IGHV3-20\*01

767 sequences assigned  
183 (23.9%) exact matches, in which:  
159 unique CDR3  
5 unique J



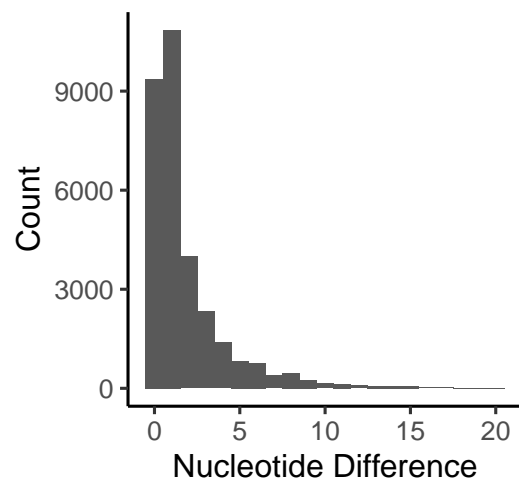
### IGHV3-20\*04\_T279C\_T30

66 sequences assigned  
9 (13.6%) exact matches, in which:  
9 unique CDR3  
4 unique J



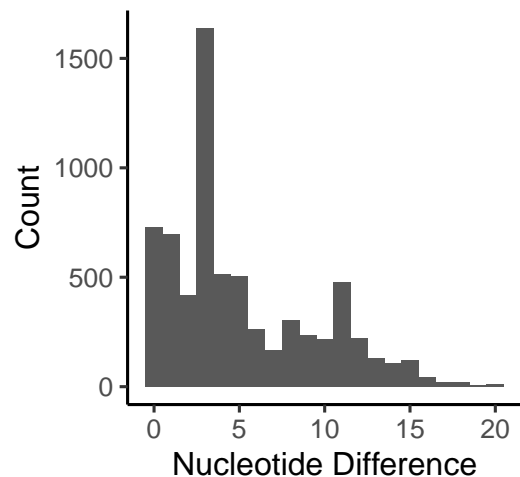
### IGHV3-23\*01

31302 sequences assigned  
9365 (29.9%) exact matches, in which:  
7888 unique CDR3  
6 unique J



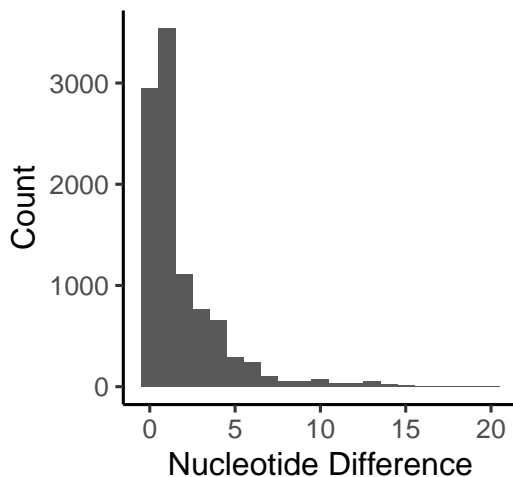
### IGHV3-23\*04

7038 sequences assigned  
727 (10.3%) exact matches, in which:  
653 unique CDR3  
6 unique J



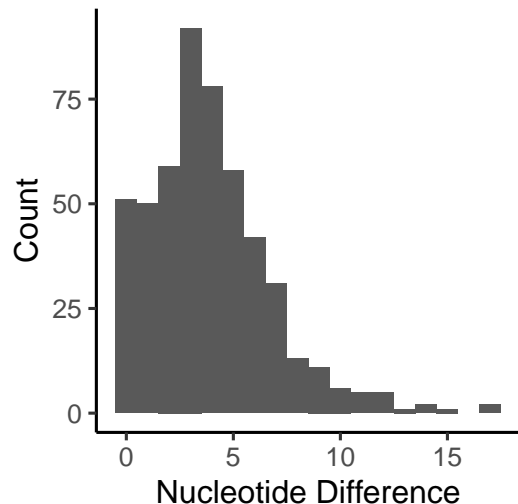
### IGHV3-30\*18

10082 sequences assigned  
2946 (29.2%) exact matches, in which:  
2302 unique CDR3  
6 unique J



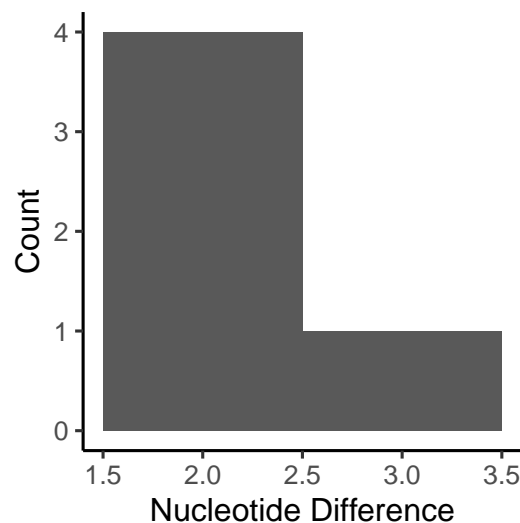
### IGHV3-33\*05\_G75C\_T24

511 sequences assigned  
51 (10%) exact matches, in which:  
51 unique CDR3  
6 unique J



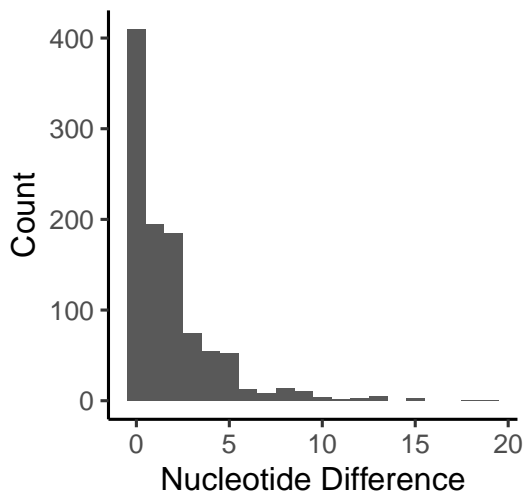
### IGHV3-30-3\*01

5 sequences assigned  
No exact matches.



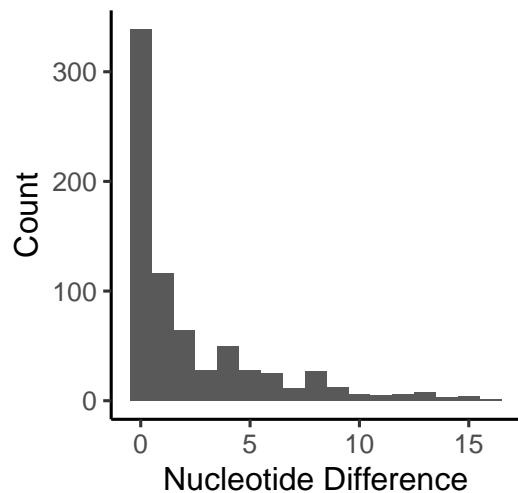
### IGHV3-30\*03\_T288C

1040 sequences assigned  
410 (39.4%) exact matches, in which:  
400 unique CDR3  
5 unique J



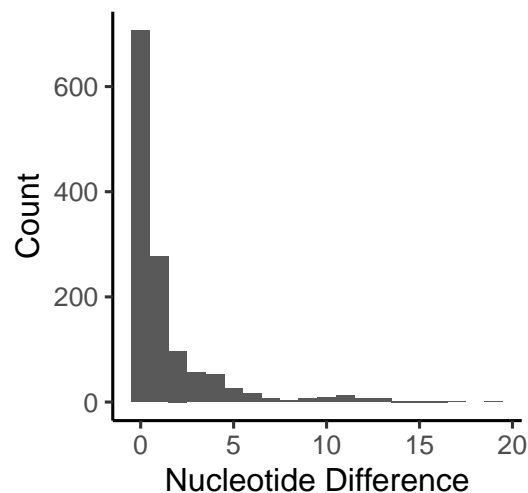
### IGHV3-33\*06\_T300C\_G3

735 sequences assigned  
339 (46.1%) exact matches, in which:  
332 unique CDR3  
6 unique J



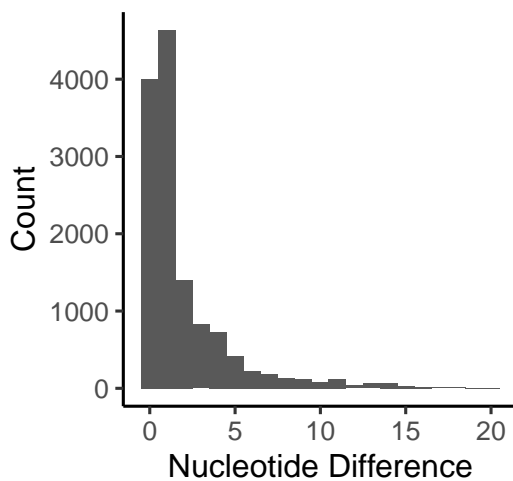
### IGHV3-30\*03

1293 sequences assigned  
707 (54.7%) exact matches, in which:  
696 unique CDR3  
6 unique J



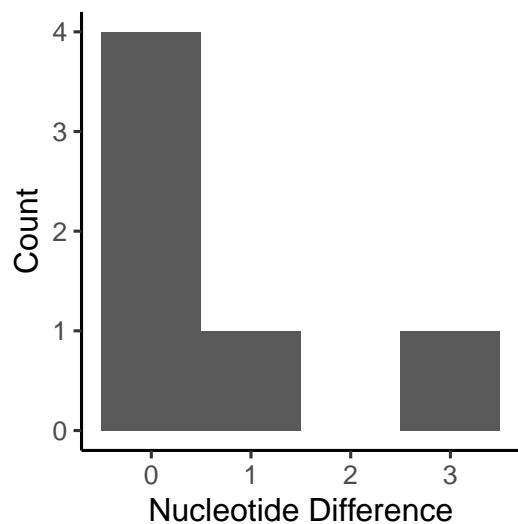
### IGHV3-33\*01

13198 sequences assigned  
4006 (30.4%) exact matches, in which:  
3291 unique CDR3  
6 unique J



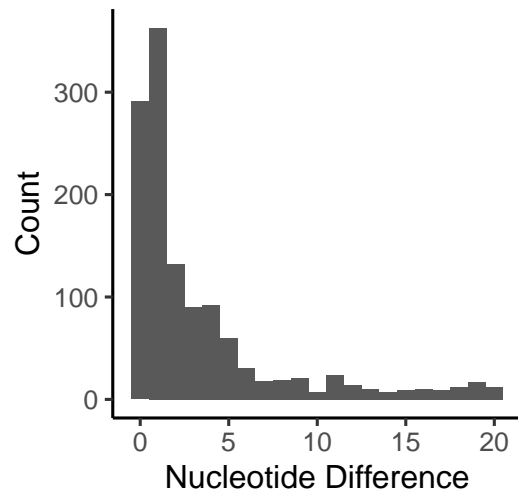
### IGHV3-35\*01

6 sequences assigned  
4 (66.7%) exact matches, in which:  
4 unique CDR3  
2 unique J



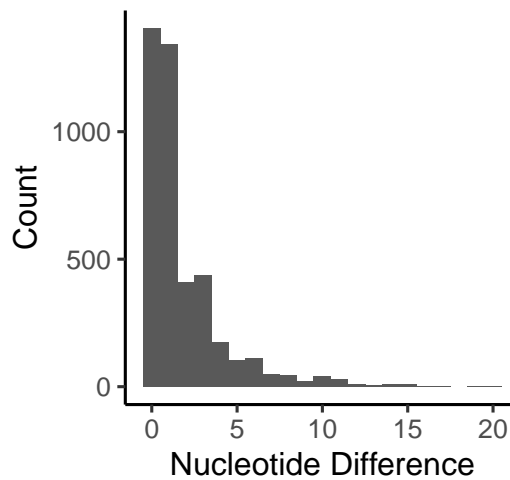
### IGHV3-43\*01

1278 sequences assigned  
291 (22.8%) exact matches, in which:  
234 unique CDR3  
6 unique J



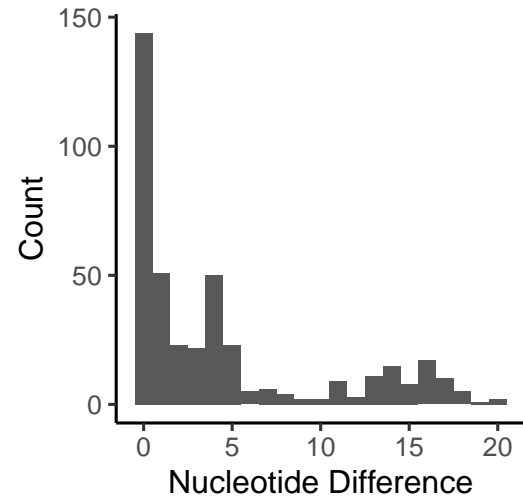
### IGHV3-48\*02

4233 sequences assigned  
1405 (33.2%) exact matches, in which:  
1173 unique CDR3  
6 unique J



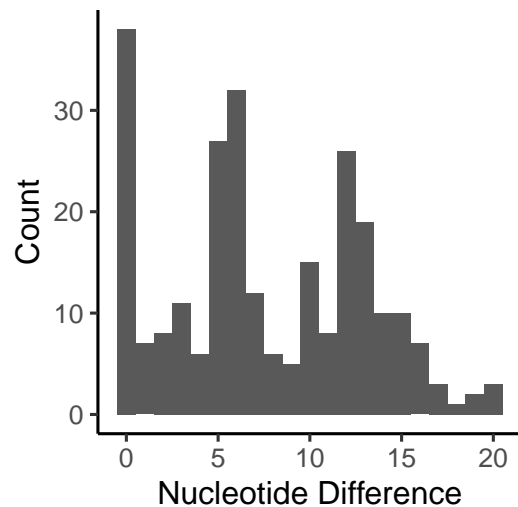
### IGHV3-49\*05\_A313G\_T3

419 sequences assigned  
144 (34.4%) exact matches, in which:  
140 unique CDR3  
5 unique J



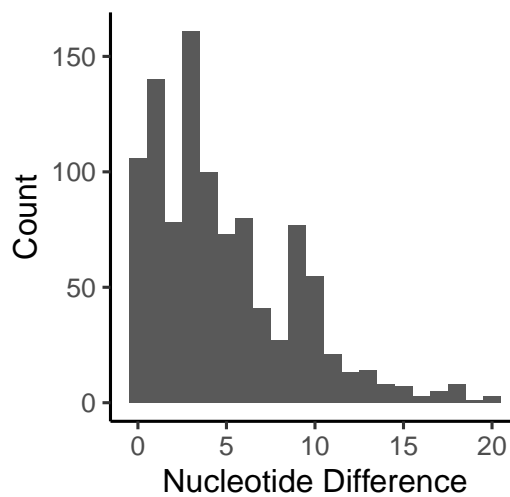
### IGHV3-43\*01\_A315G

264 sequences assigned  
38 (14.4%) exact matches, in which:  
37 unique CDR3  
6 unique J



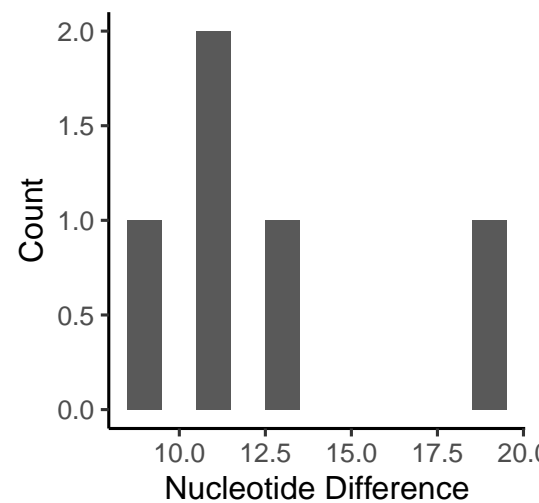
### IGHV3-48\*01\_T300C

1026 sequences assigned  
106 (10.3%) exact matches, in which:  
104 unique CDR3  
6 unique J



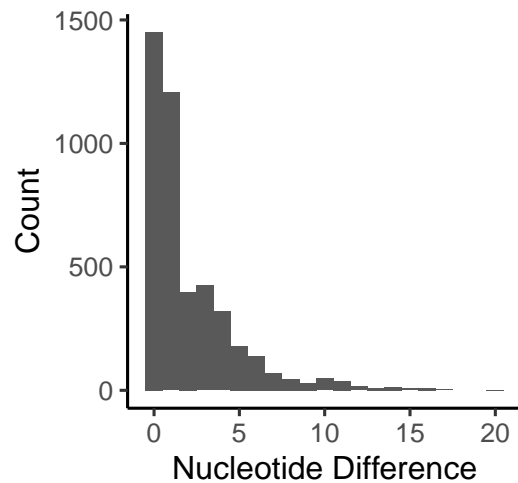
### IGHV3-52\*01

5 sequences assigned  
No exact matches.



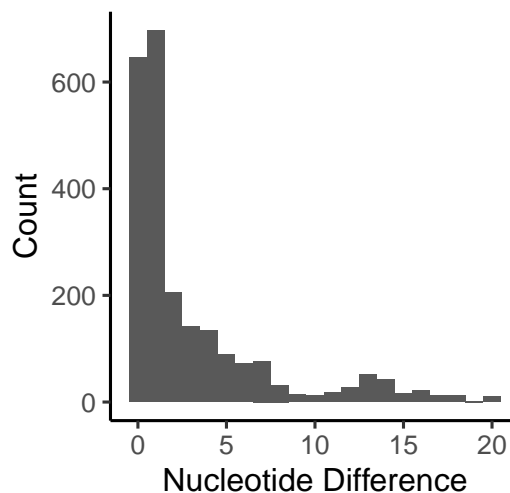
### IGHV3-48\*01

4429 sequences assigned  
1451 (32.8%) exact matches, in which:  
1218 unique CDR3  
6 unique J



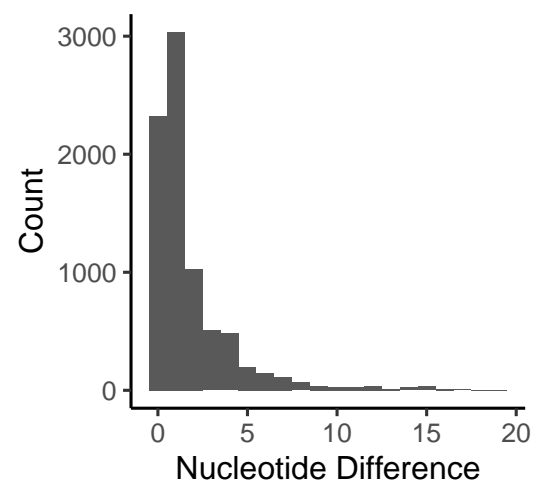
### IGHV3-49\*05

2366 sequences assigned  
646 (27.3%) exact matches, in which:  
507 unique CDR3  
6 unique J



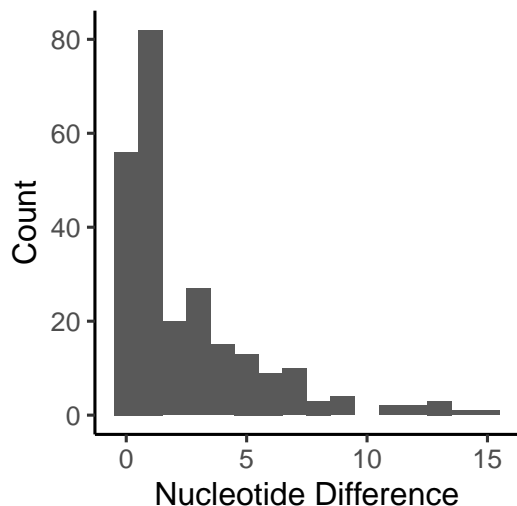
### IGHV3-53\*01

8123 sequences assigned  
2322 (28.6%) exact matches, in which:  
1904 unique CDR3  
6 unique J



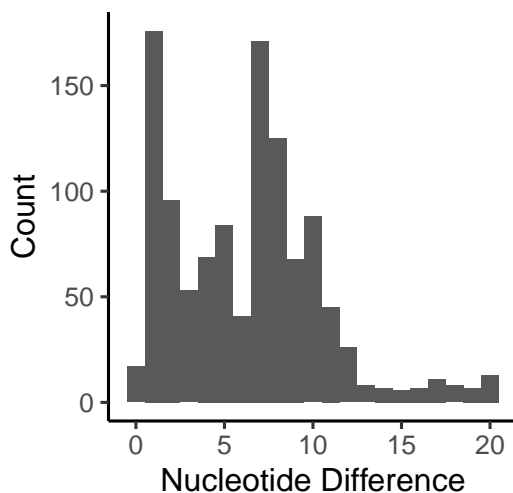
### IGHV3-64\*02

249 sequences assigned  
56 (22.5%) exact matches, in which:  
46 unique CDR3  
5 unique J



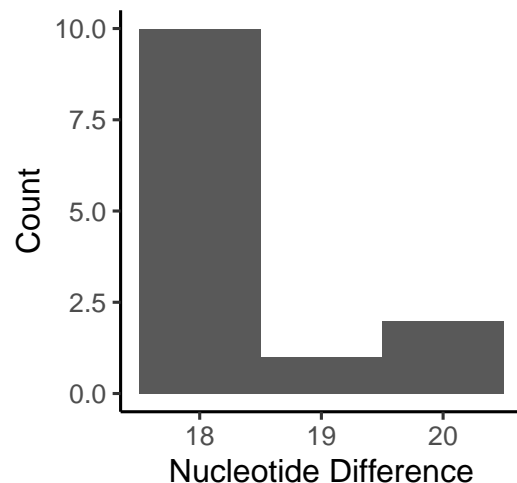
### IGHV3-66\*01\_G13T\_C35

1168 sequences assigned  
17 (1.5%) exact matches, in which:  
17 unique CDR3  
4 unique J



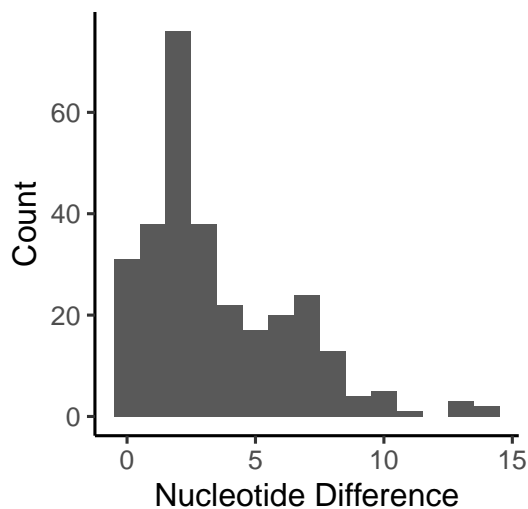
### IGHV3-71\*04

14 sequences assigned  
No exact matches.



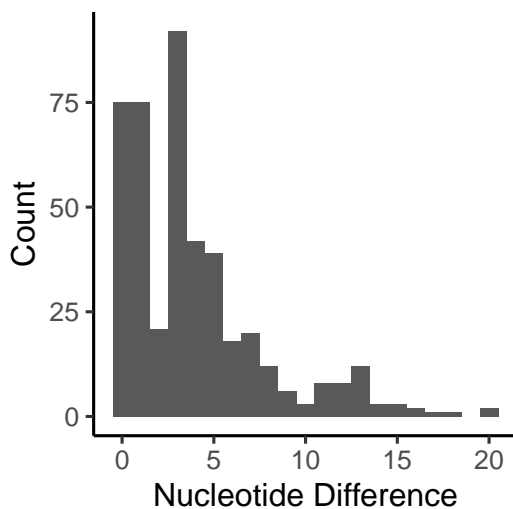
### IGHV3-64\*04\_A210C\_T25

295 sequences assigned  
31 (10.5%) exact matches, in which:  
30 unique CDR3  
5 unique J



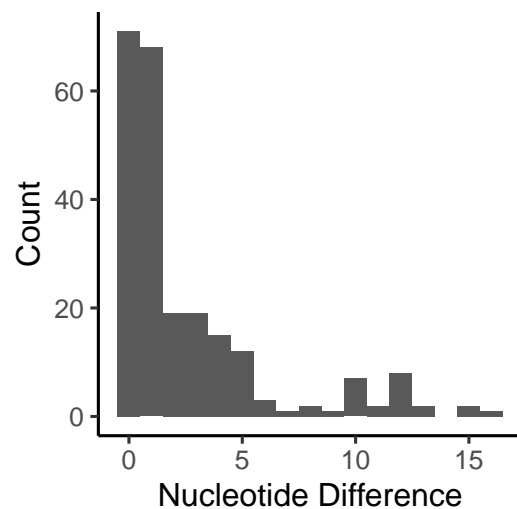
### IGHV3-66\*03\_T175G\_T25

444 sequences assigned  
75 (16.9%) exact matches, in which:  
75 unique CDR3  
5 unique J



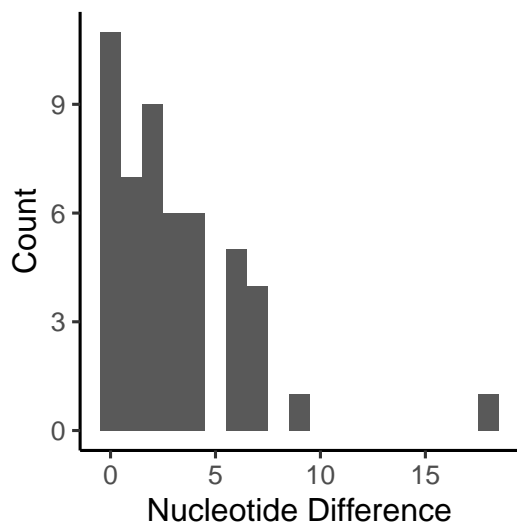
### IGHV3-72\*01

237 sequences assigned  
71 (30%) exact matches, in which:  
54 unique CDR3  
5 unique J



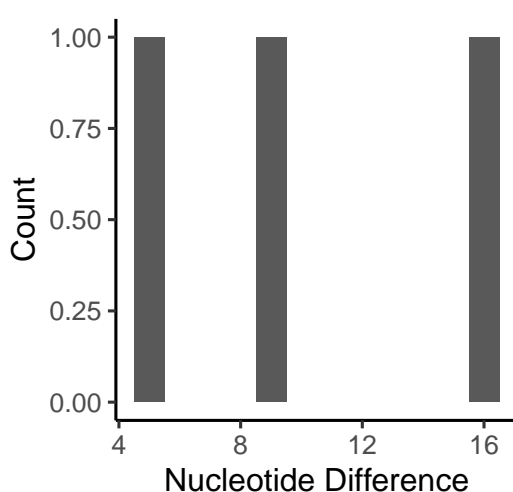
### IGHV3-66\*03

51 sequences assigned  
11 (21.6%) exact matches, in which:  
11 unique CDR3  
3 unique J



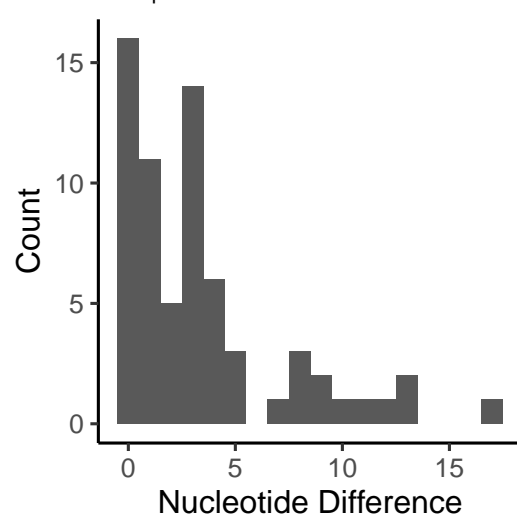
### IGHV3-69-1\*01

3 sequences assigned  
No exact matches.



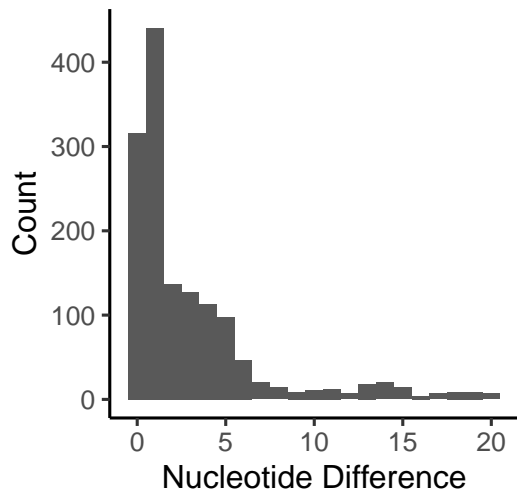
### IGHV3-72\*01\_T315G

69 sequences assigned  
16 (23.2%) exact matches, in which:  
16 unique CDR3  
6 unique J



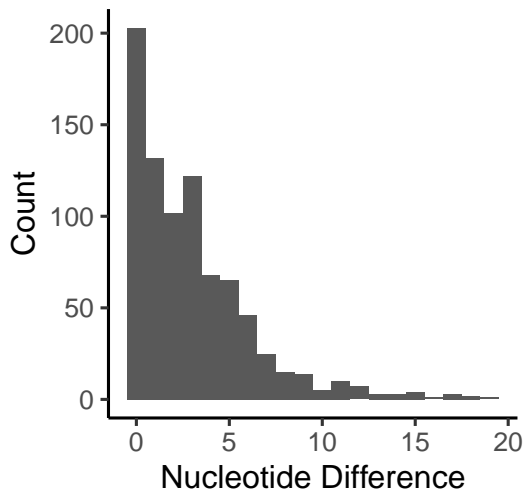
### IGHV3-73\*02

1454 sequences assigned  
316 (21.7%) exact matches, in which:  
250 unique CDR3  
5 unique J



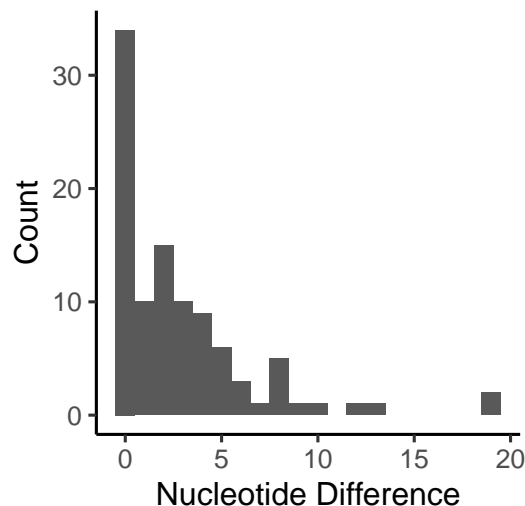
### IGHV3-74\*01\_A315G

835 sequences assigned  
203 (24.3%) exact matches, in which:  
199 unique CDR3  
5 unique J



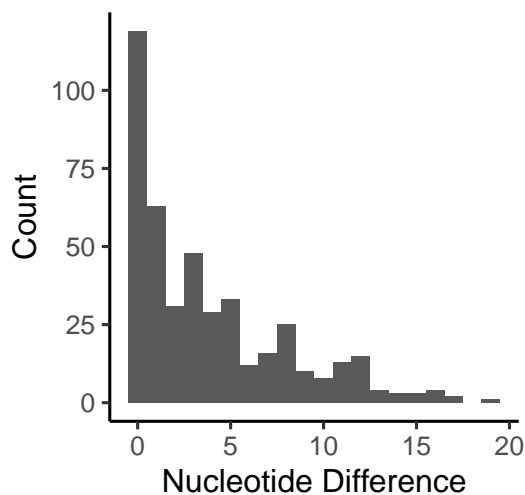
### IGHV3-64D\*06\_T314C

99 sequences assigned  
34 (34.3%) exact matches, in which:  
34 unique CDR3  
5 unique J



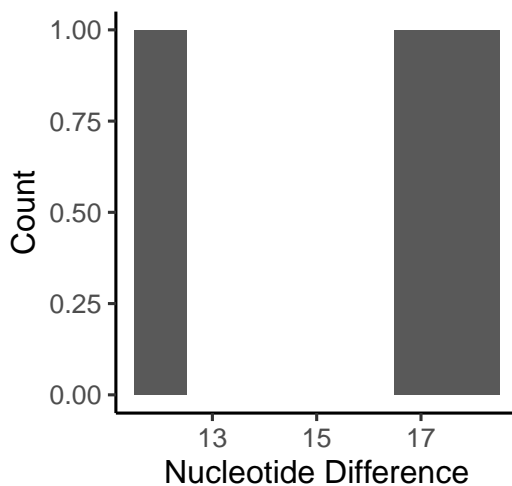
### IGHV3-73\*02\_A313G\_T314C

443 sequences assigned  
119 (26.9%) exact matches, in which:  
118 unique CDR3  
6 unique J



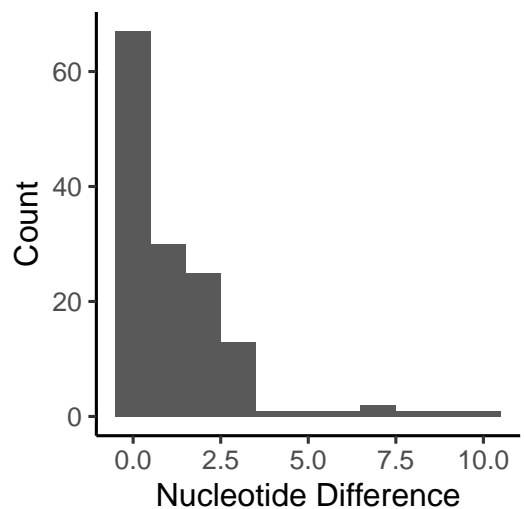
### IGHV3-43D\*04

3 sequences assigned  
No exact matches.



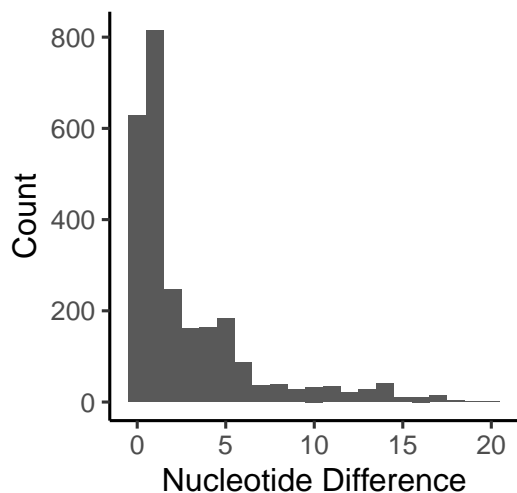
### IGHV3-64D\*06\_T314C\_A315G

143 sequences assigned  
67 (46.9%) exact matches, in which:  
65 unique CDR3  
5 unique J



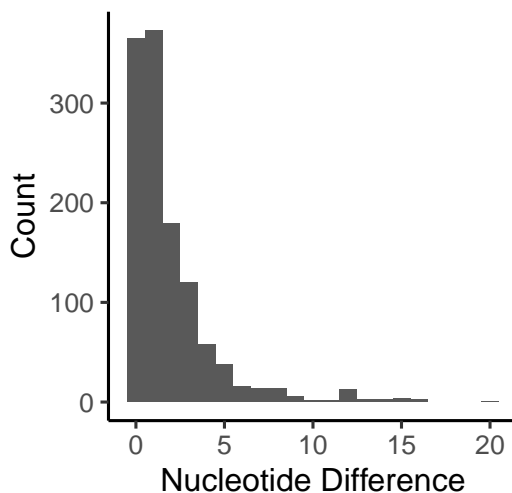
### IGHV3-74\*01

2605 sequences assigned  
628 (24.1%) exact matches, in which:  
513 unique CDR3  
6 unique J



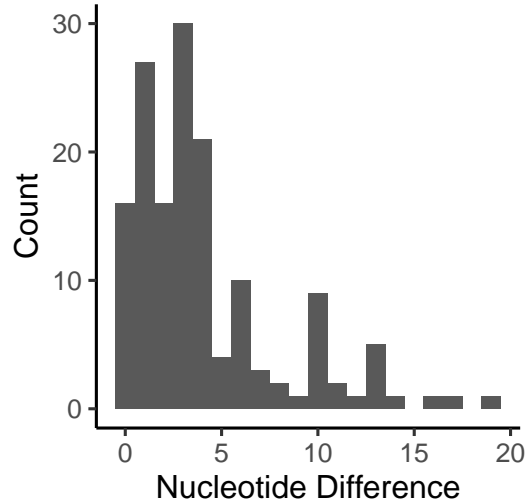
### IGHV3-64D\*06

1220 sequences assigned  
365 (29.9%) exact matches, in which:  
297 unique CDR3  
6 unique J



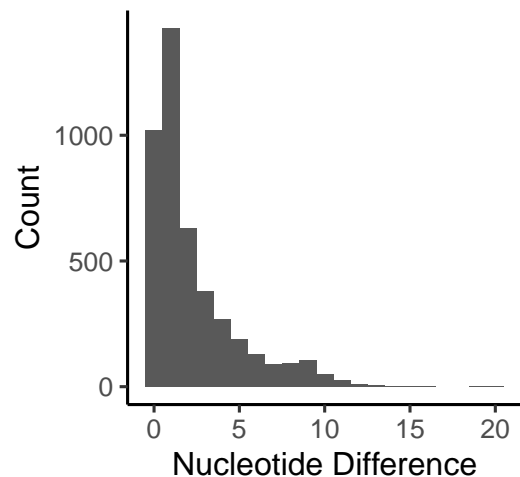
### IGHV3-NL1\*01\_G49A\_G74A

152 sequences assigned  
16 (10.5%) exact matches, in which:  
16 unique CDR3  
5 unique J



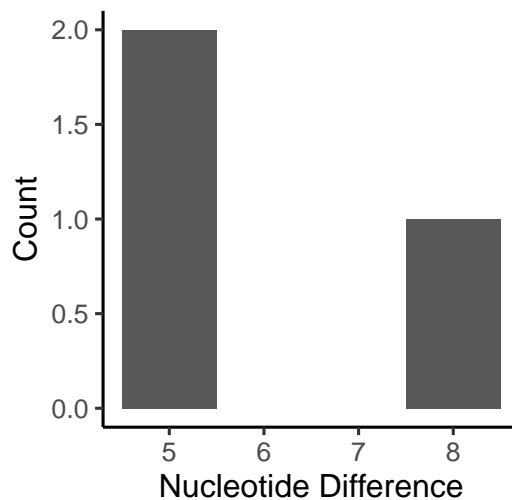
### IGHV4-4\*02

4475 sequences assigned  
1021 (22.8%) exact matches, in which:  
911 unique CDR3  
6 unique J



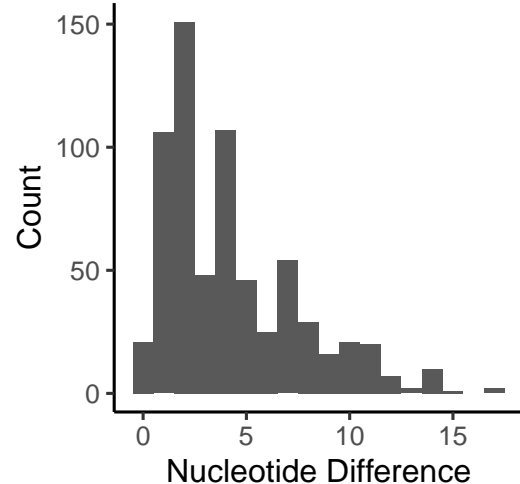
### IGHV4-30-4\*07

3 sequences assigned  
No exact matches.



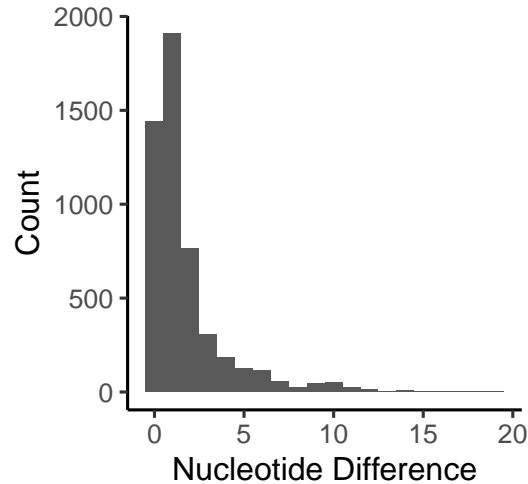
### IGHV4-30-2\*01\_C315G

666 sequences assigned  
21 (3.2%) exact matches, in which:  
21 unique CDR3  
5 unique J



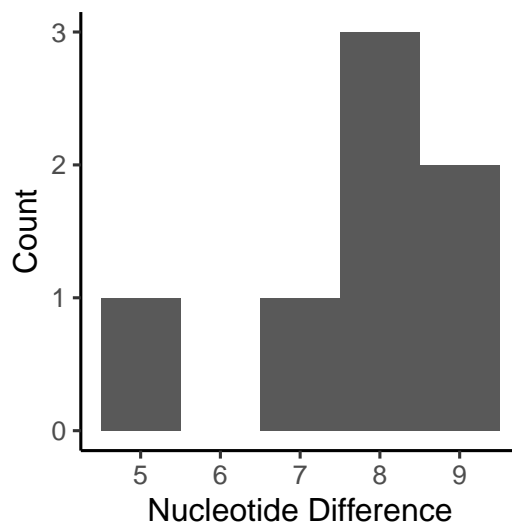
### IGHV4-4\*07

5096 sequences assigned  
1439 (28.2%) exact matches, in which:  
1218 unique CDR3  
6 unique J



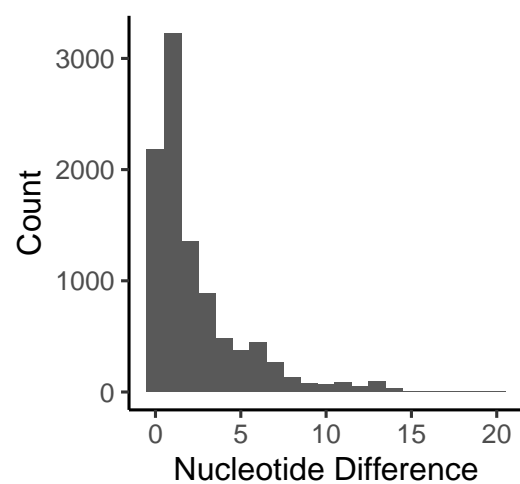
### IGHV4-30-4\*08

7 sequences assigned  
No exact matches.



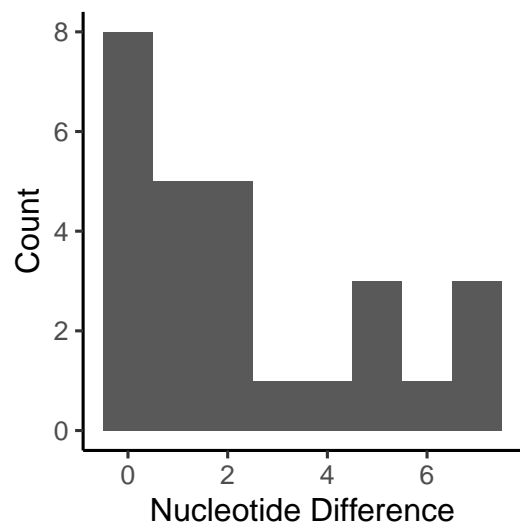
### IGHV4-31\*03

9808 sequences assigned  
2183 (22.3%) exact matches, in which:  
1851 unique CDR3  
6 unique J



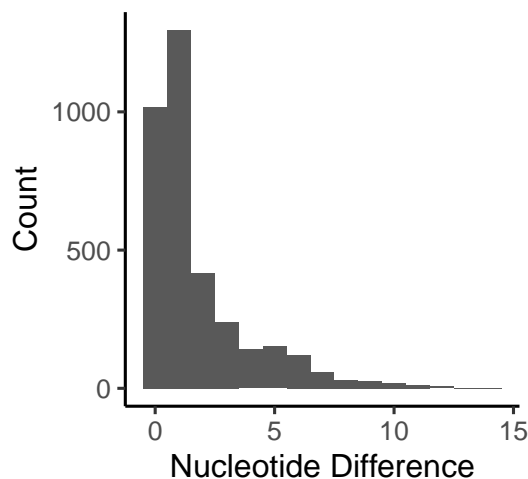
### IGHV4-28\*03

27 sequences assigned  
8 (29.6%) exact matches, in which:  
6 unique CDR3  
2 unique J



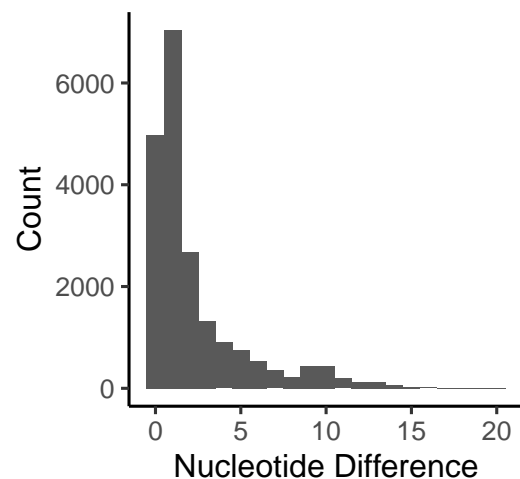
### IGHV4-30-2\*01\_C285T

3548 sequences assigned  
1017 (28.7%) exact matches, in which:  
864 unique CDR3  
6 unique J



### IGHV4-34\*01

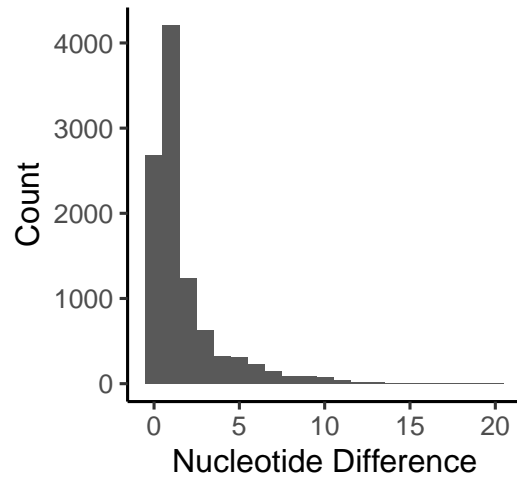
20396 sequences assigned  
4975 (24.4%) exact matches, in which:  
4175 unique CDR3  
6 unique J





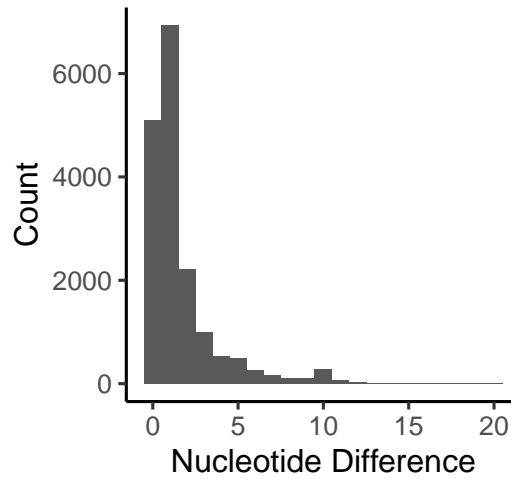
### IGHV4-39\*01

10205 sequences assigned  
2687 (26.3%) exact matches, in which:  
2208 unique CDR3  
6 unique J



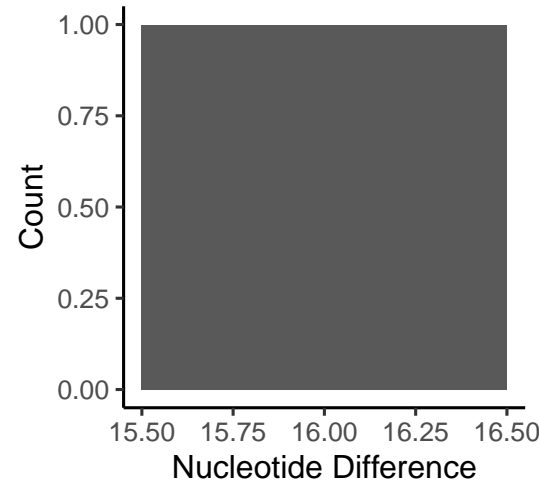
### IGHV4-59\*01

17432 sequences assigned  
5097 (29.2%) exact matches, in which:  
4185 unique CDR3  
6 unique J



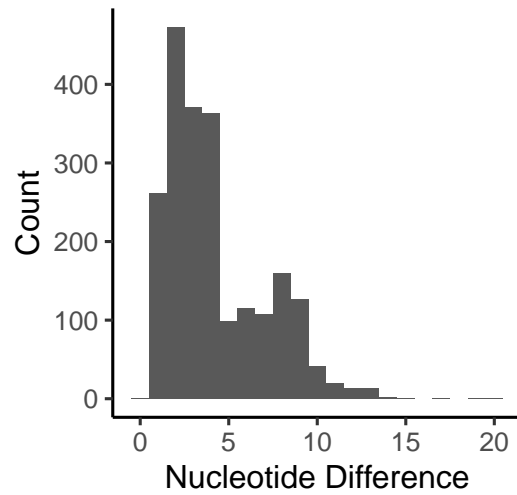
### IGHV1/OR15-1\*04

1 sequences assigned  
No exact matches.



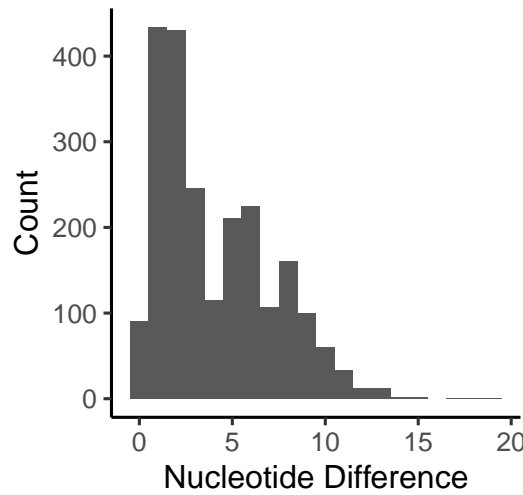
### IGHV4-39\*07

2194 sequences assigned  
1 (0%) exact matches, in which:  
1 unique CDR3  
1 unique J



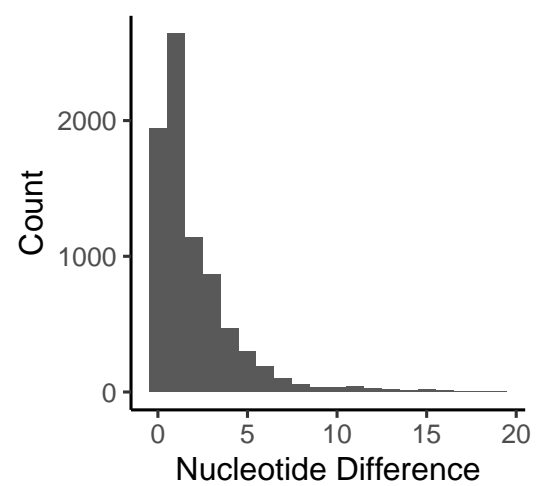
### IGHV4-59\*12

2269 sequences assigned  
91 (4%) exact matches, in which:  
91 unique CDR3  
6 unique J



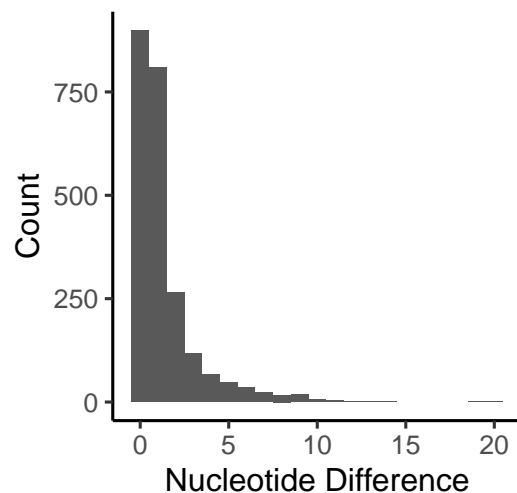
### IGHV5-10-1\*03

7972 sequences assigned  
1944 (24.4%) exact matches, in which:  
1645 unique CDR3  
6 unique J



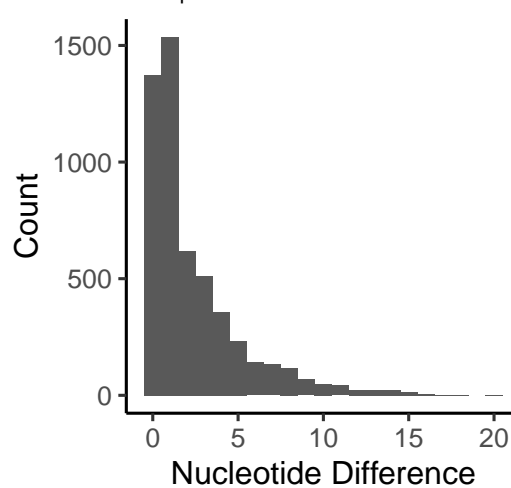
### IGHV4-39\*02\_C258G

2329 sequences assigned  
899 (38.6%) exact matches, in which:  
836 unique CDR3  
6 unique J



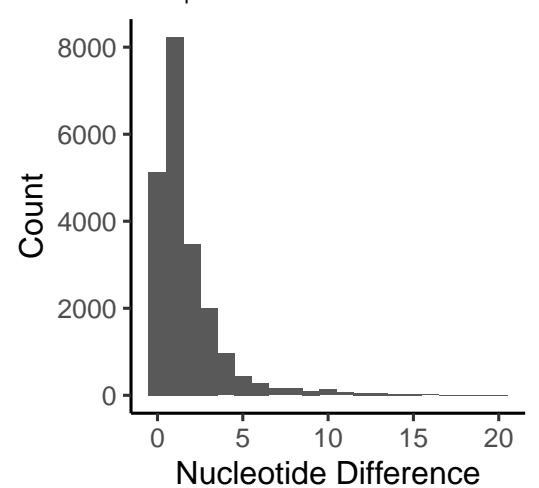
### IGHV4-61\*01

5290 sequences assigned  
1374 (26%) exact matches, in which:  
1229 unique CDR3  
6 unique J



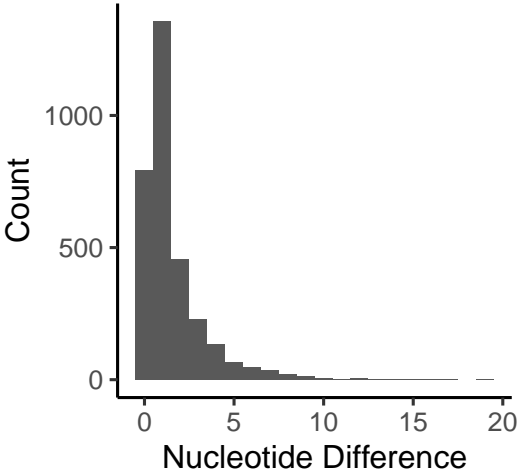
### IGHV5-51\*01

21490 sequences assigned  
5128 (23.9%) exact matches, in which:  
4093 unique CDR3  
6 unique J



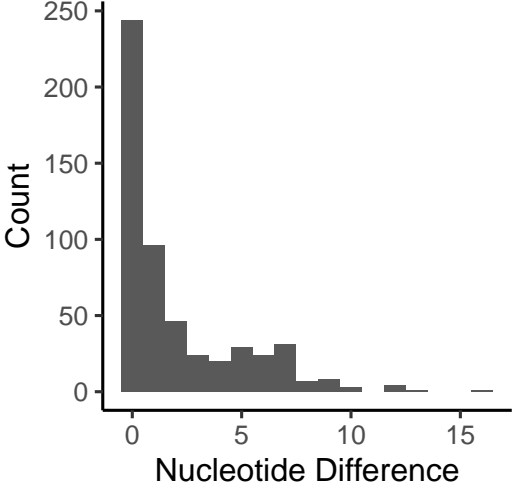
# IGHV6-1\*01

3177 sequences assigned  
794 (25%) exact matches, in which:  
604 unique CDR3  
6 unique J



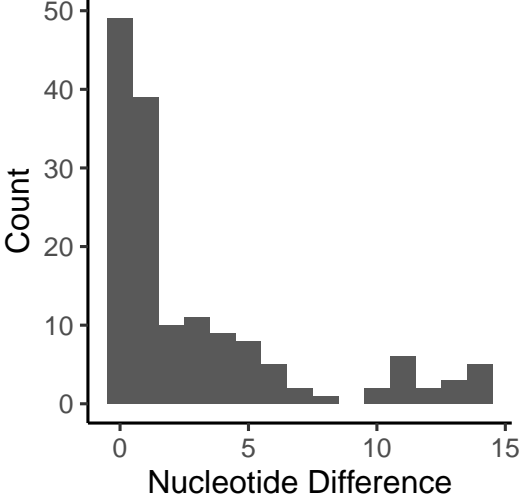
# IGHV6-1\*01\_A315G

539 sequences assigned  
244 (45.3%) exact matches, in which:  
244 unique CDR3  
6 unique J

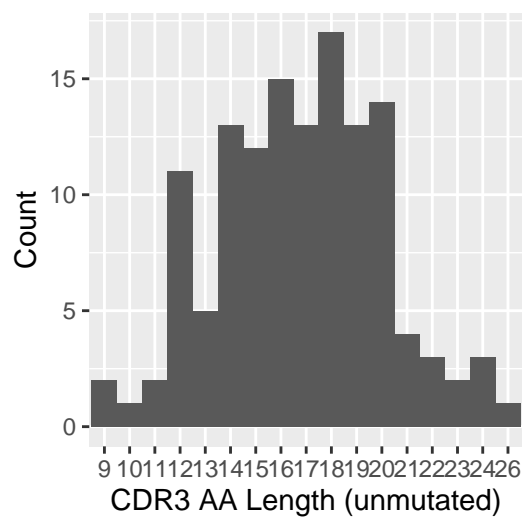


# IGHV7-4-1\*01

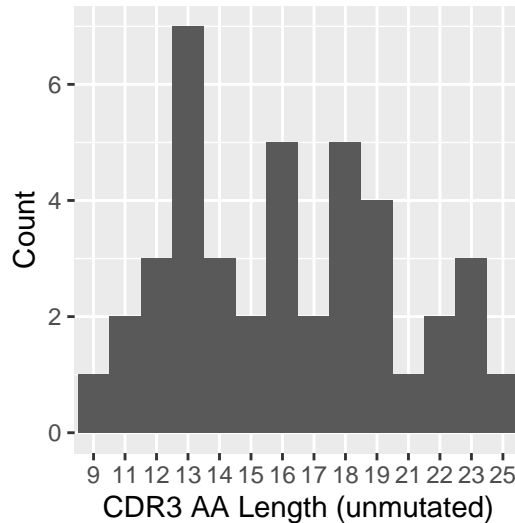
152 sequences assigned  
49 (32.2%) exact matches, in which:  
44 unique CDR3  
5 unique J



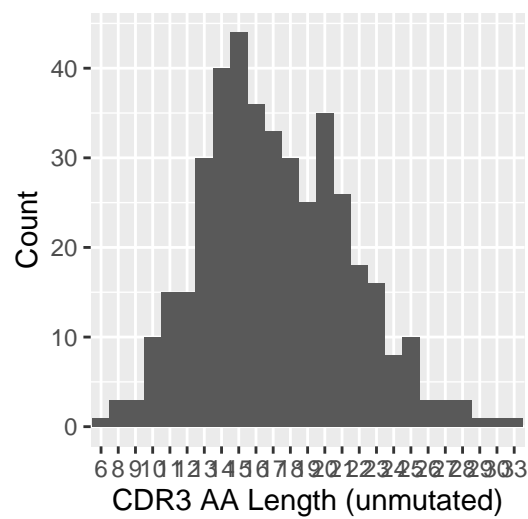
IGHV1-3\*01\_A291G\_T300C



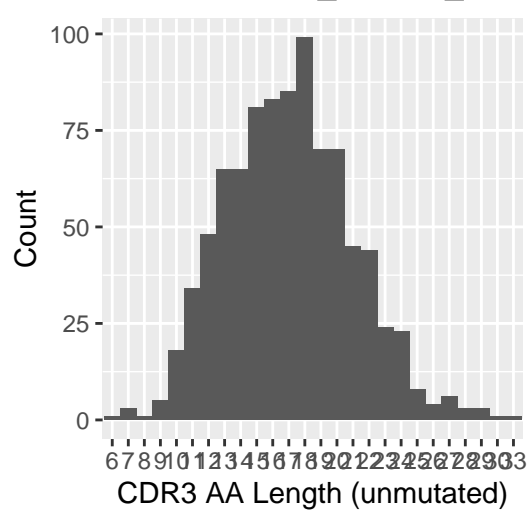
IGHV3-13\*01\_A315G



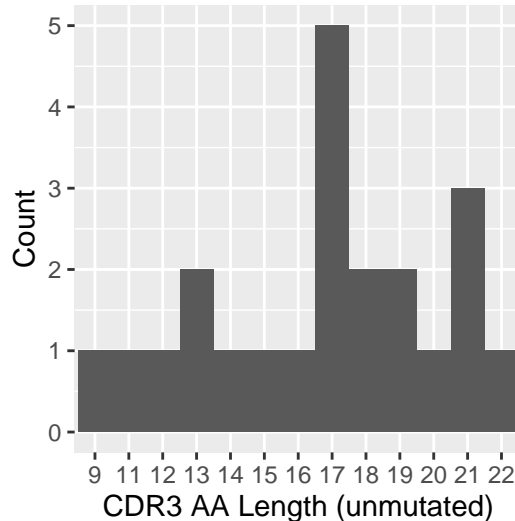
IGHV3-30\*03\_T288C



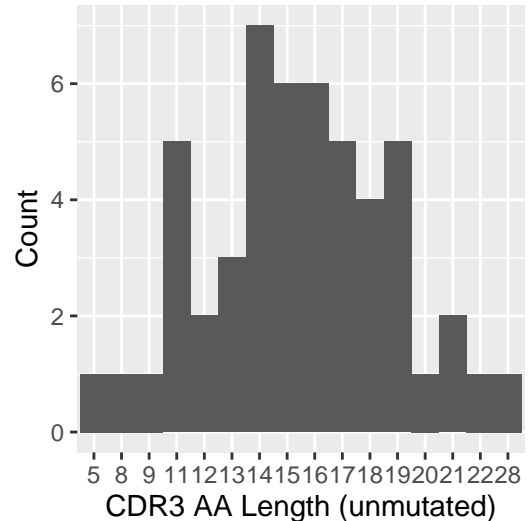
IGHV1-24\*01\_A315G\_C317



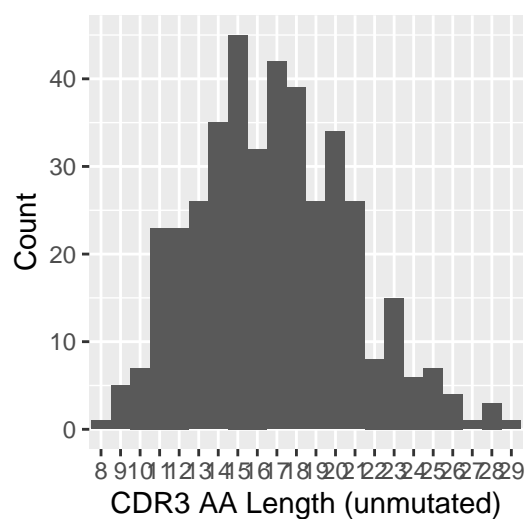
IGHV3-20\*04\_T279C\_C300T



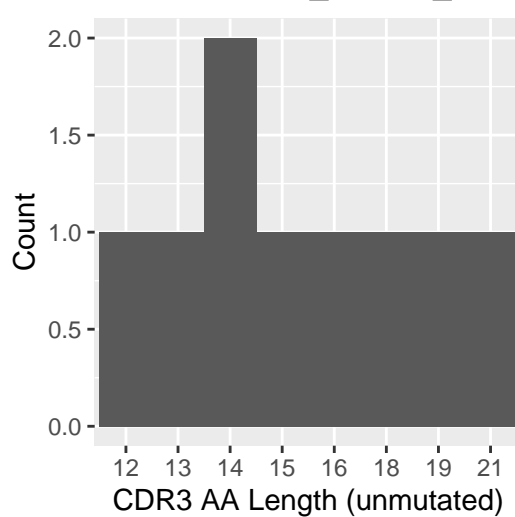
IGHV3-33\*05\_G75C\_T246C



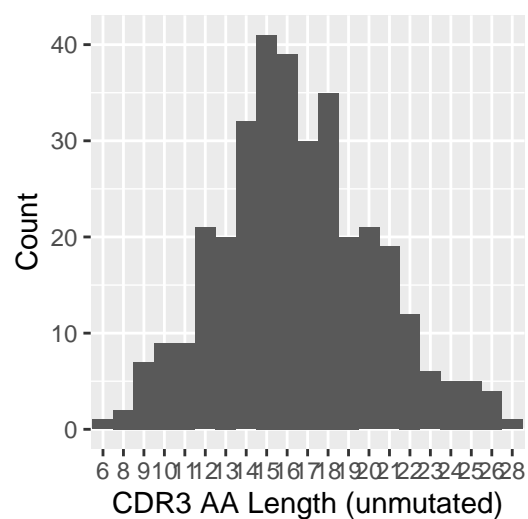
IGHV1-58\*01\_G316A\_C317



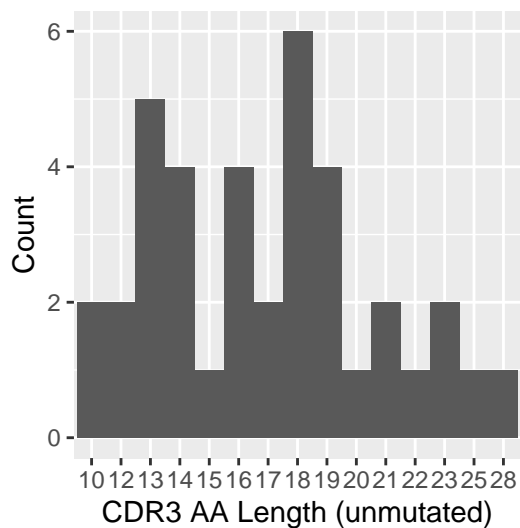
IGHV3-20\*04\_T279C\_T301



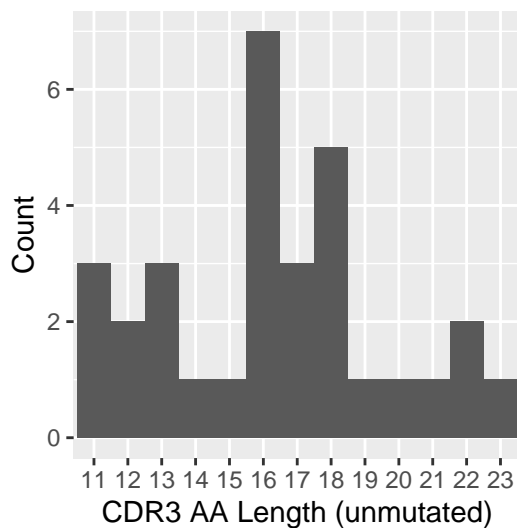
IGHV3-33\*06\_T300C\_G303



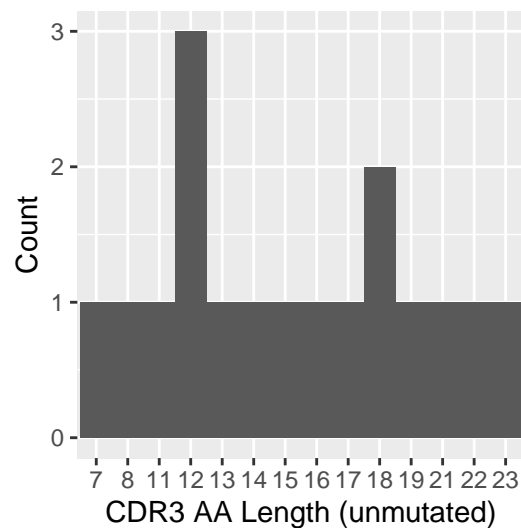
IGHV3-43\*01\_A315G



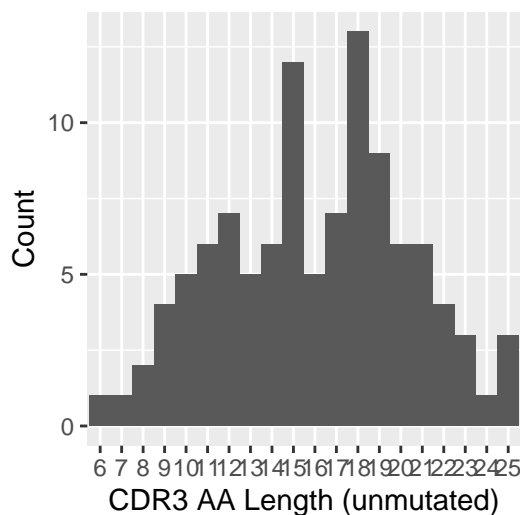
IGHV3-64\*04\_A210C\_T288C



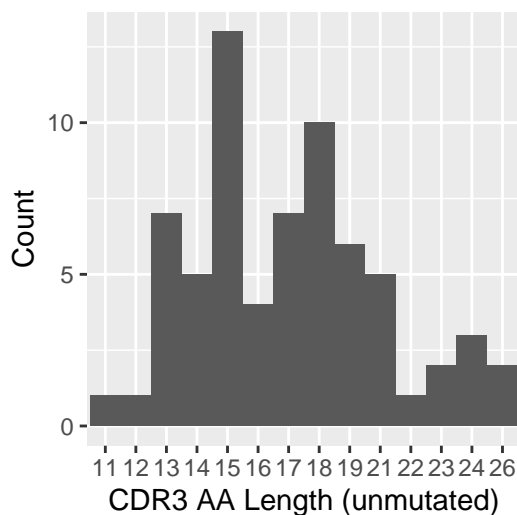
IGHV3-66\*01\_G13T\_C39A\_A



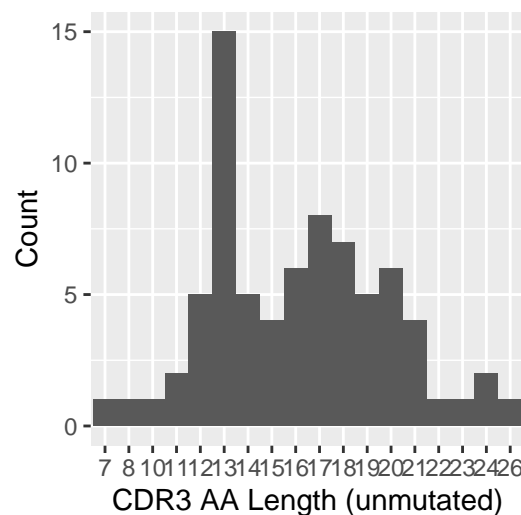
IGHV3-48\*01\_T300C



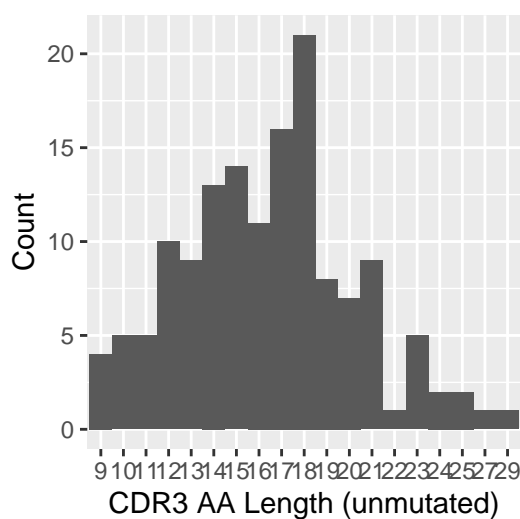
IGHV3-64D\*06\_T314C\_A31



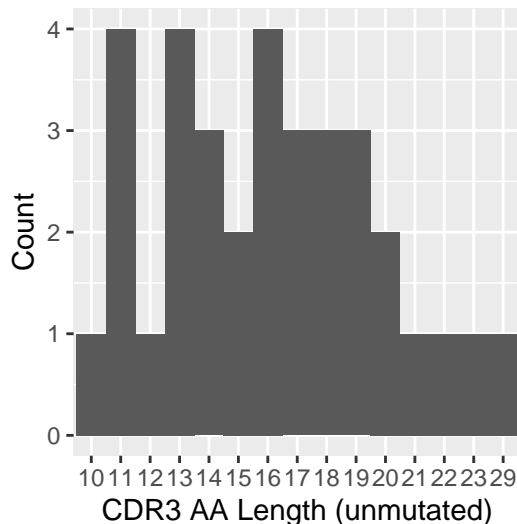
IGHV3-66\*03\_T175G\_T267C



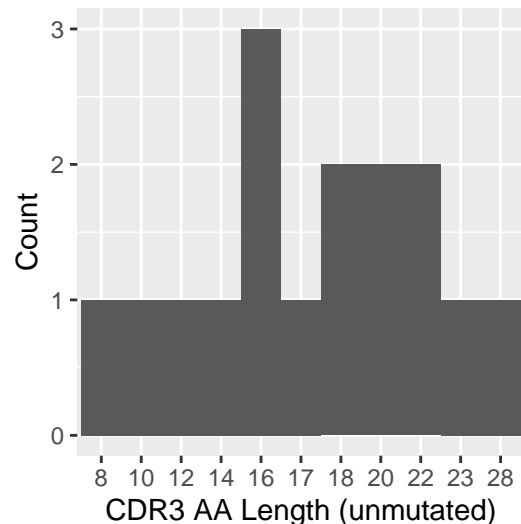
IGHV3-49\*05\_A313G\_T315G



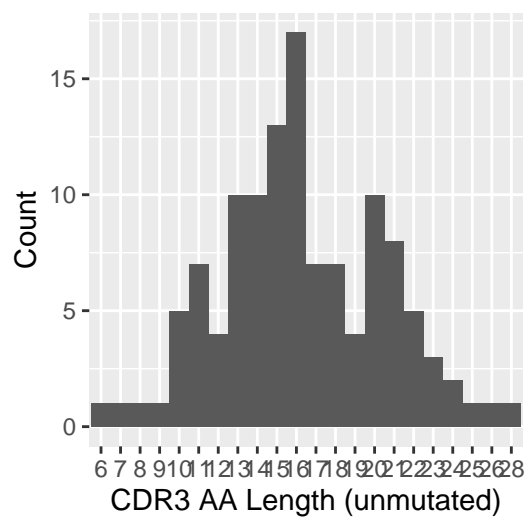
IGHV3-64D\*06\_T314C



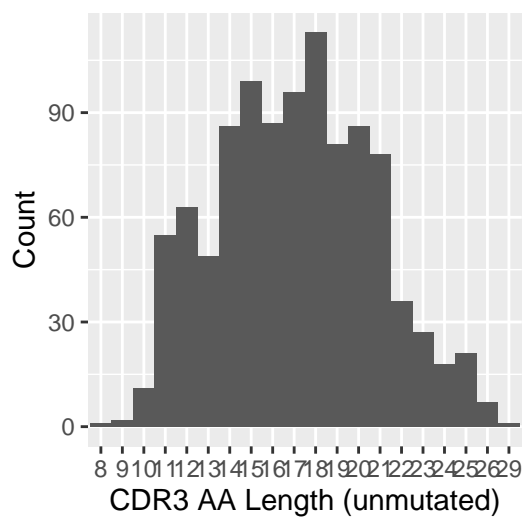
IGHV3-72\*01\_T315G



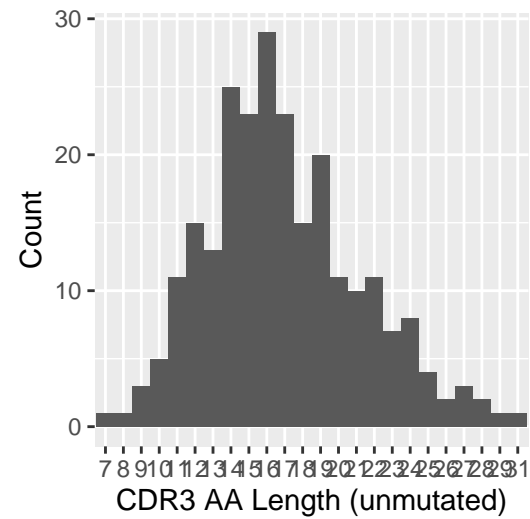
IGHV3-73\*02\_A313G\_T315G



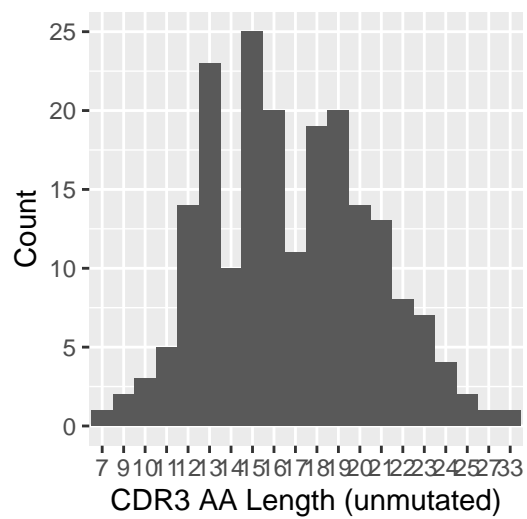
IGHV4-30-2\*01\_C285T\_C315G



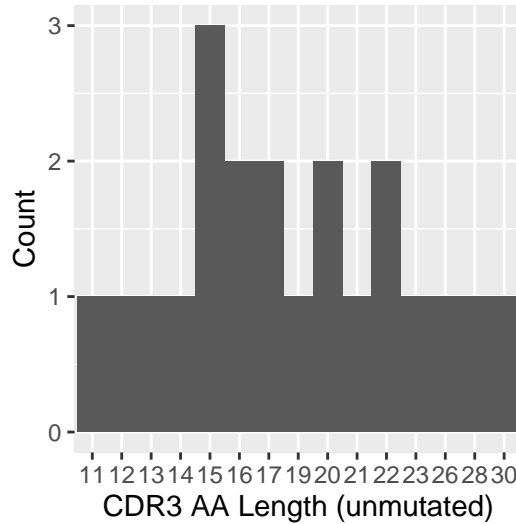
IGHV6-1\*01\_A315G



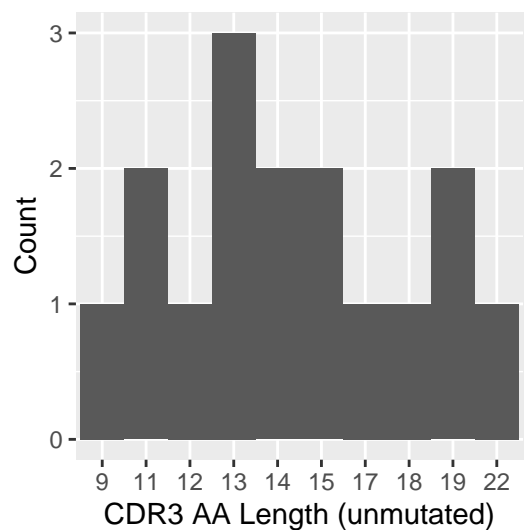
IGHV3-74\*01\_A315G



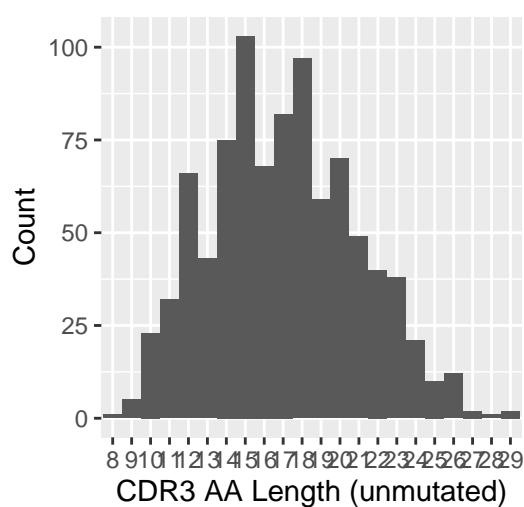
IGHV4-30-2\*01\_C315G



IGHV3-NL1\*01\_G49A\_G75C



IGHV4-39\*02\_C258G



288C\_T300C\_A317G

