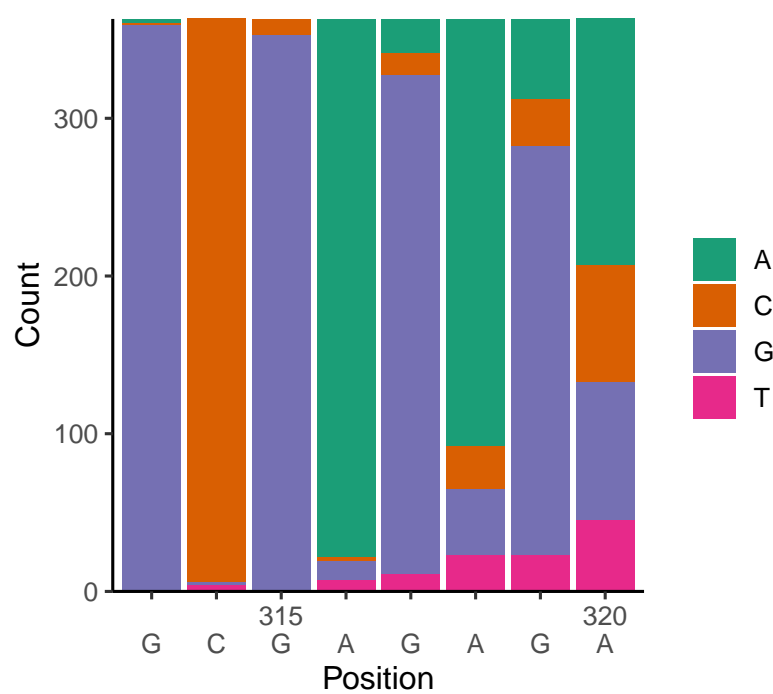
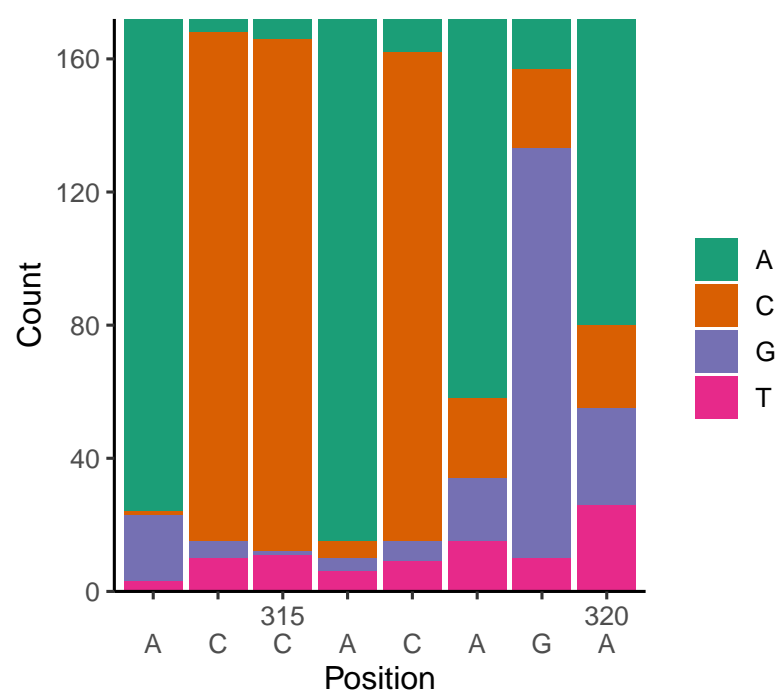


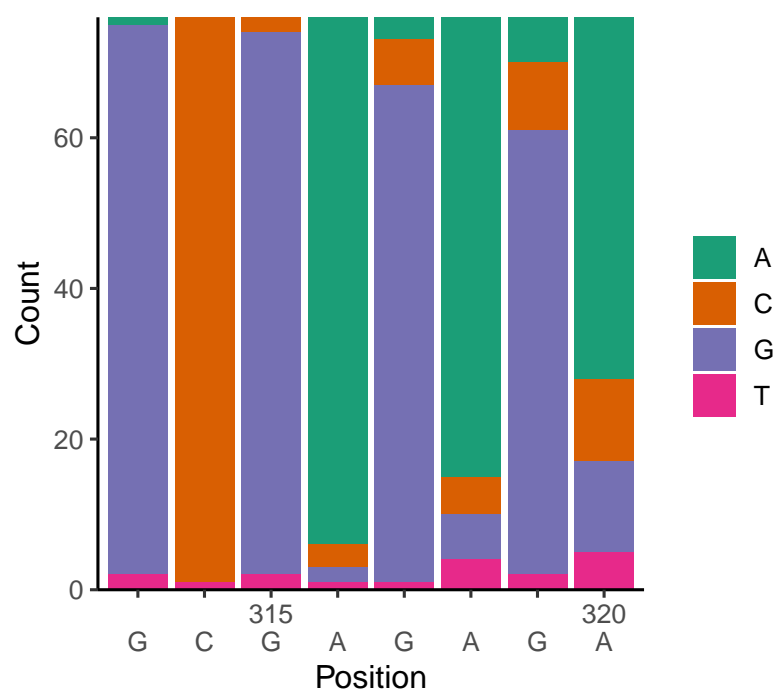
Gene IGHV1-69*08_C191T



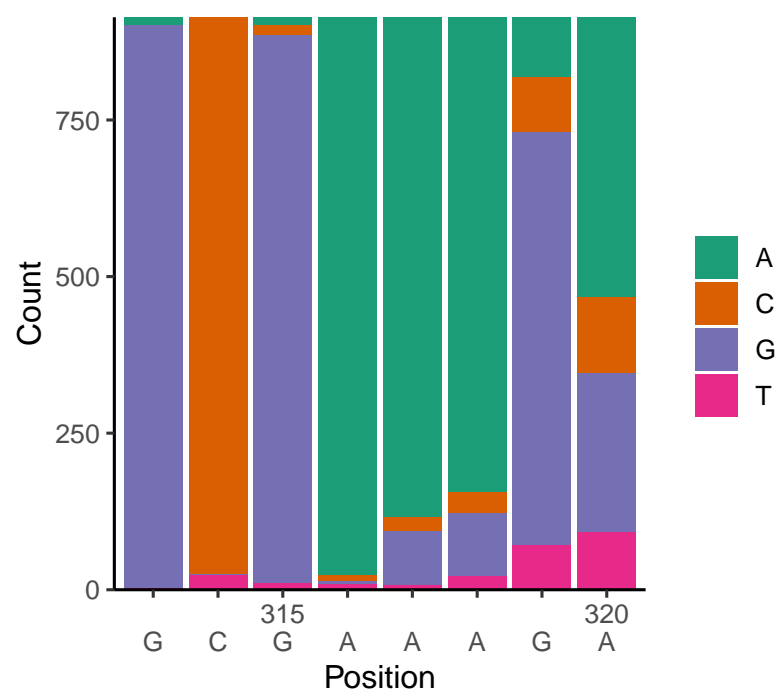
Gene IGHV3-15*01_A152G



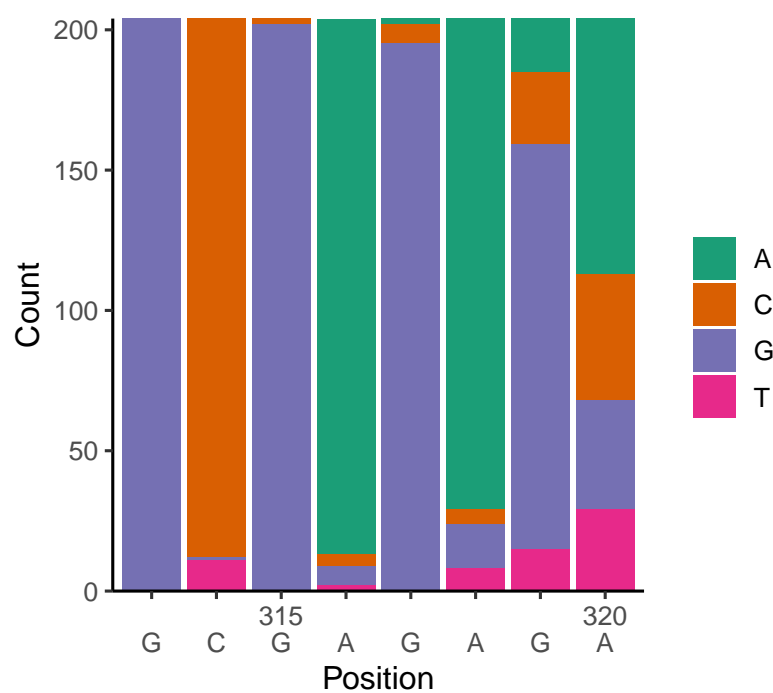
Gene IGHV1-69*17_G163A



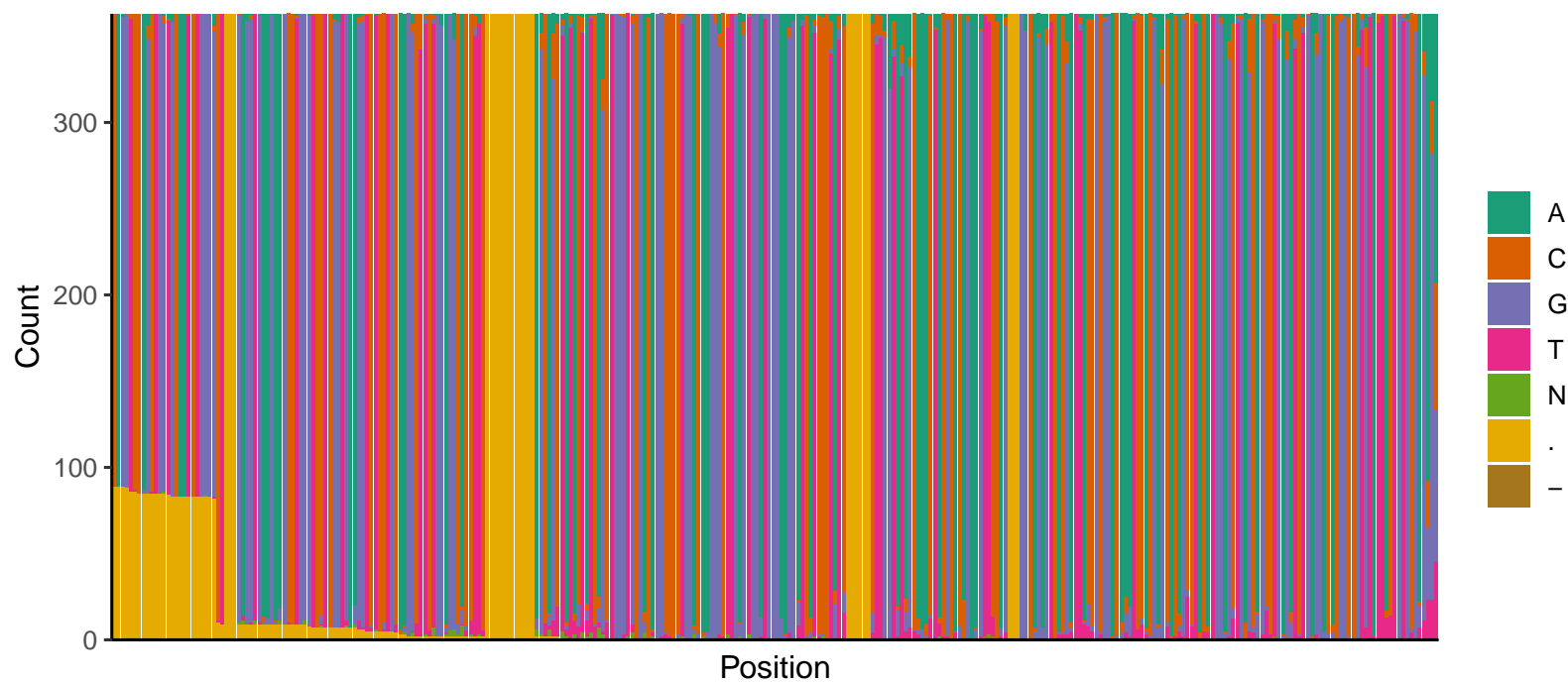
Gene IGHV3-23*01_A152G



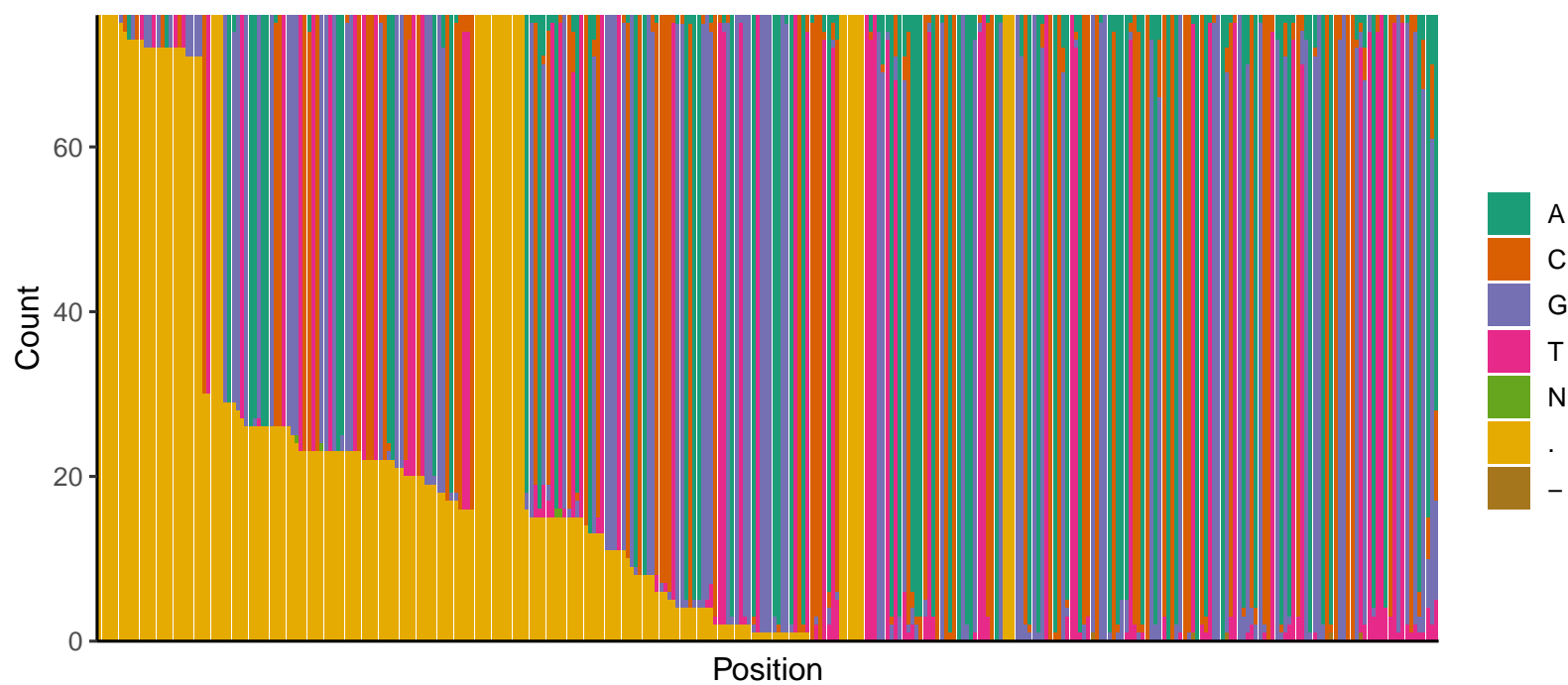
Gene IGHV3-11*01_A152G



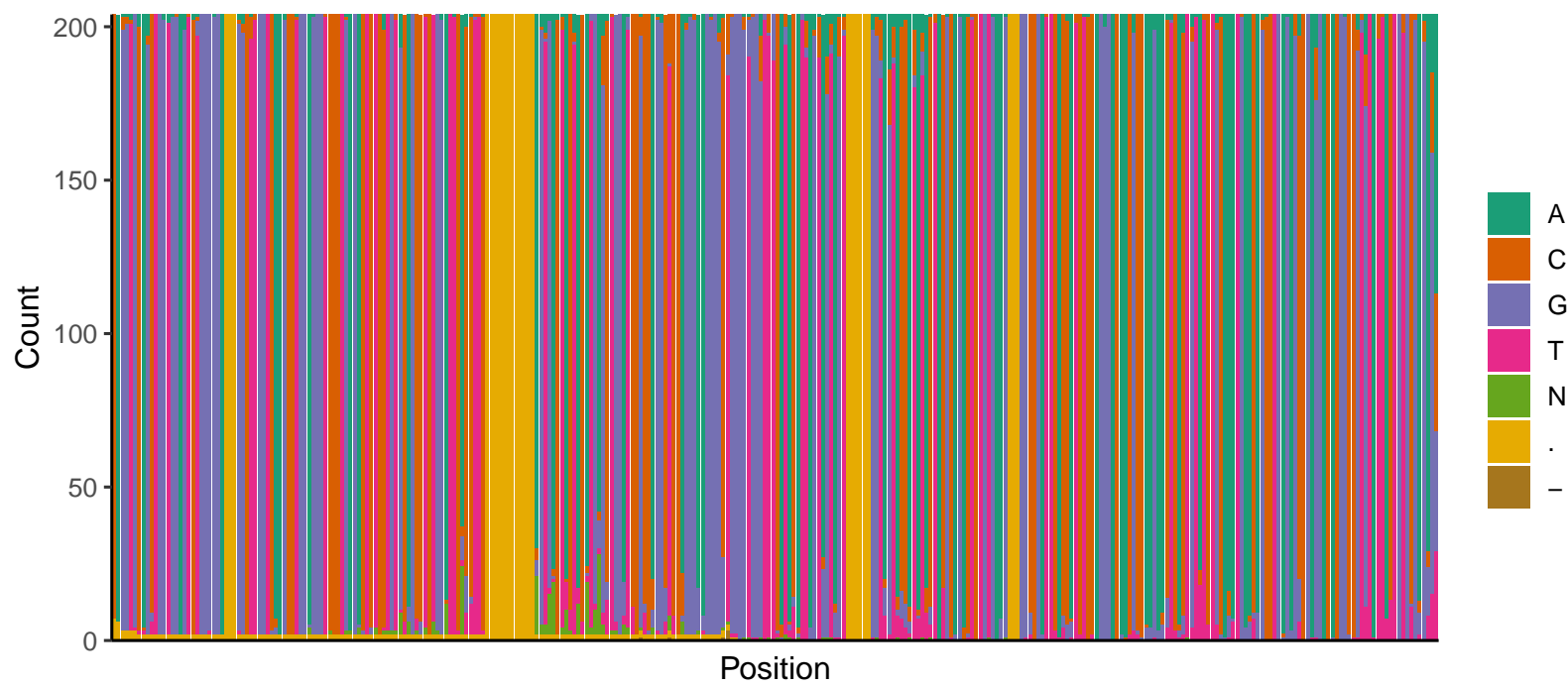
Gene IGHV1-69*08_C191T



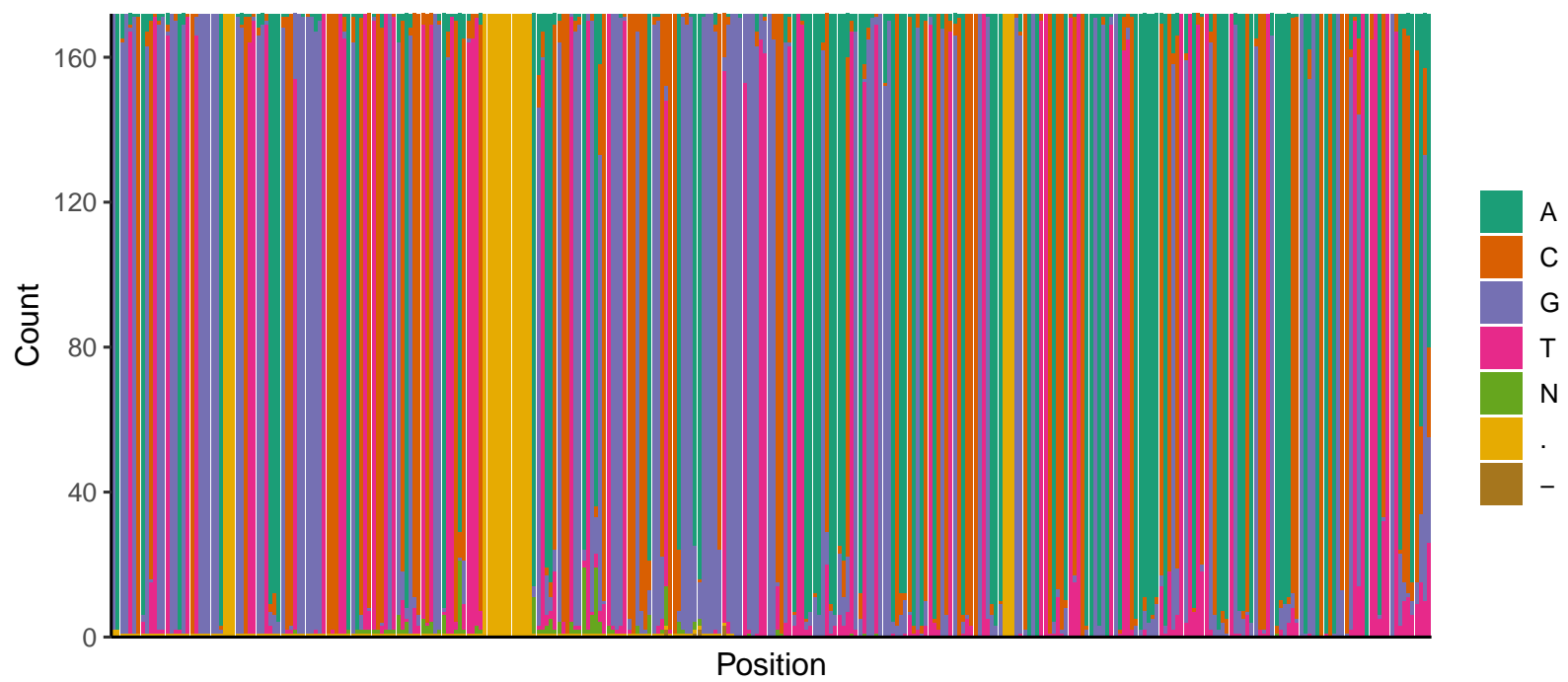
Gene IGHV1-69*17_G163A



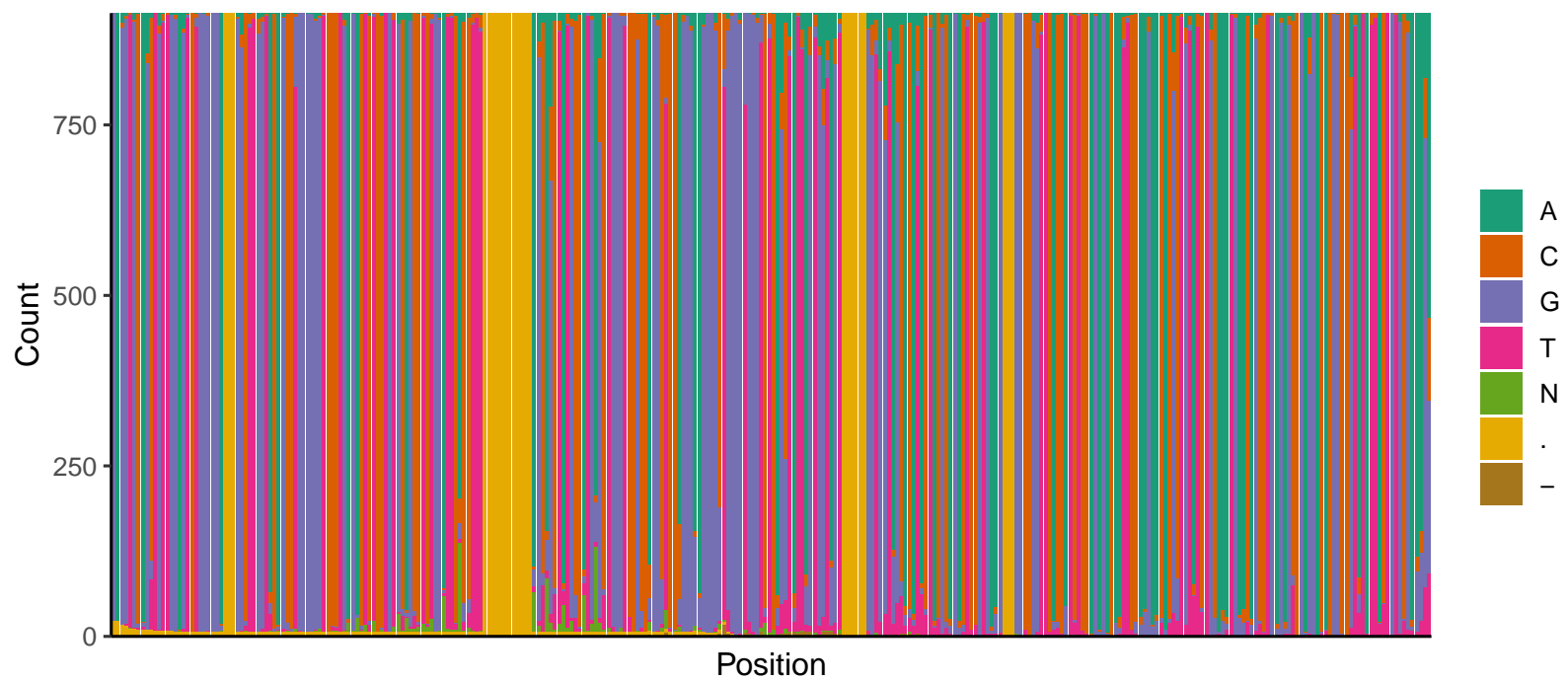
Gene IGHV3-11*01_A152G



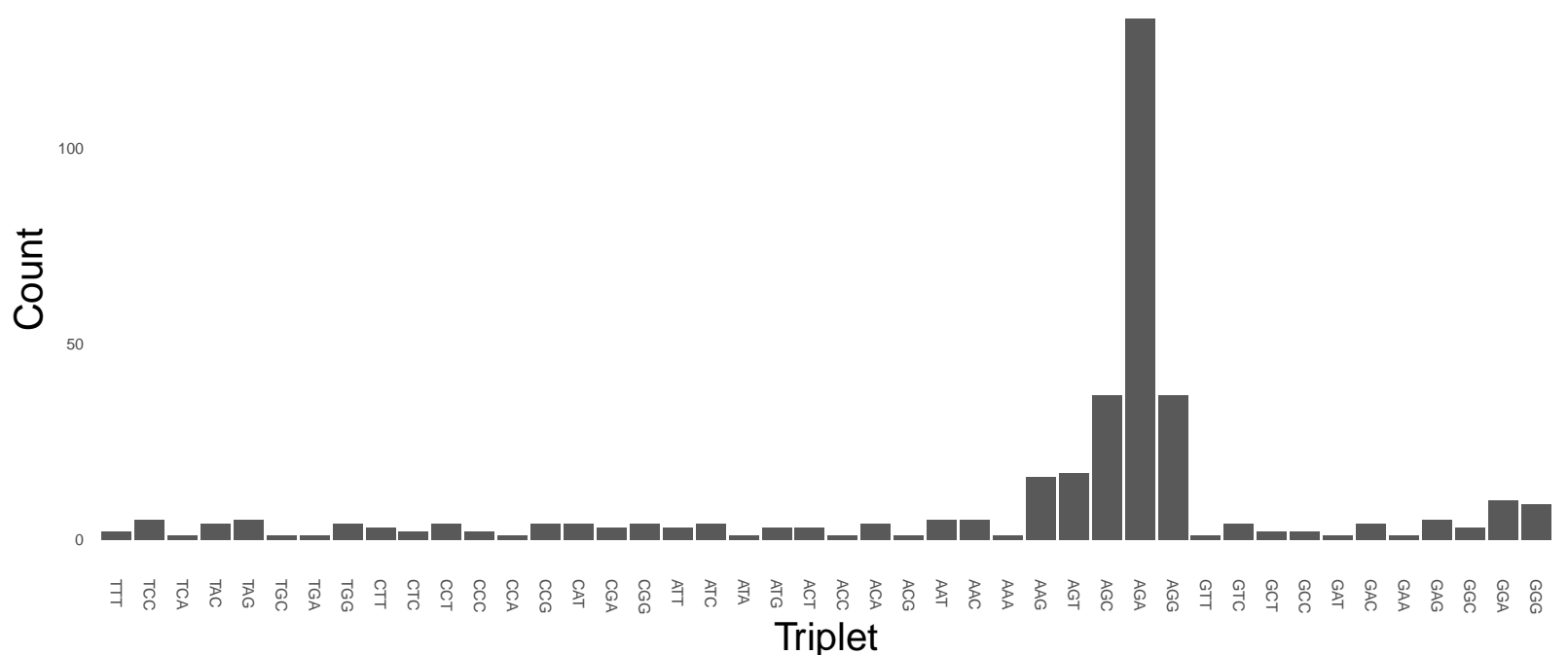
Gene IGHV3-15*01_A152G



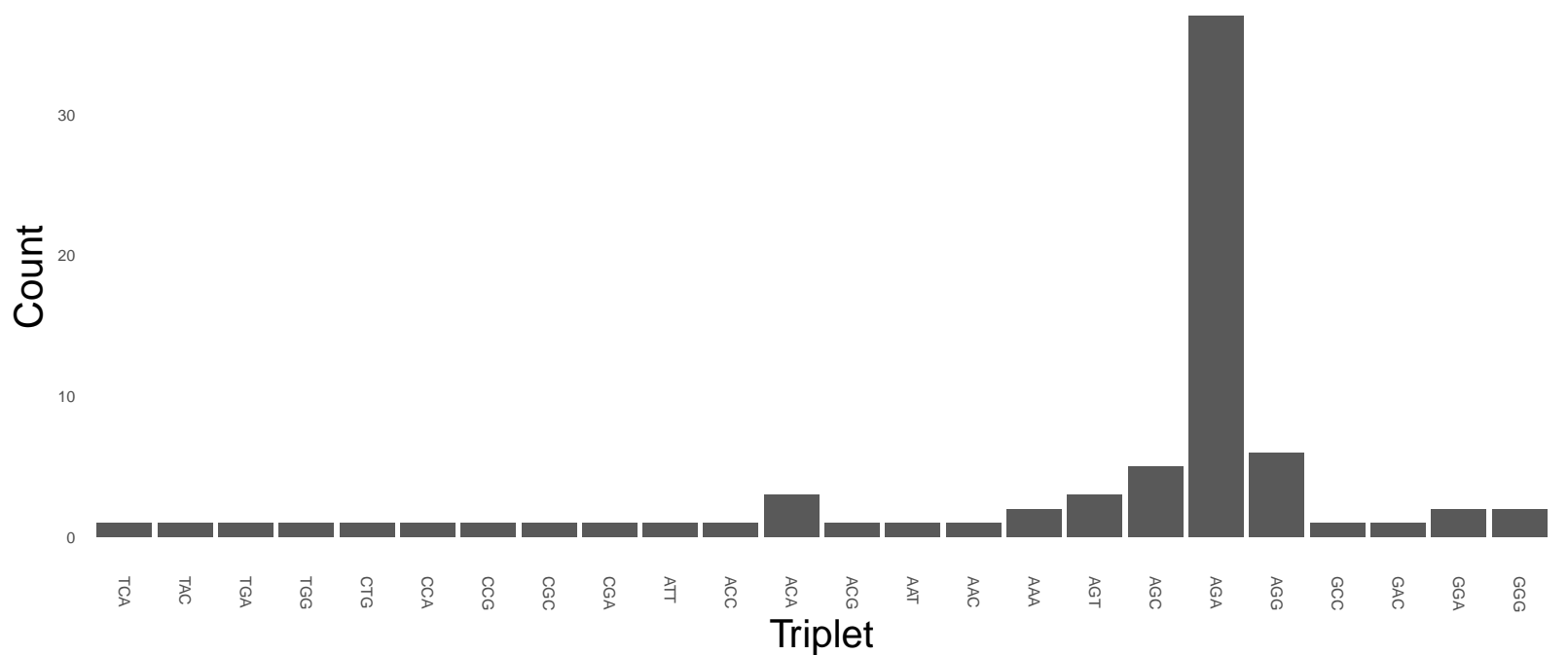
Gene IGHV3-23*01_A152G



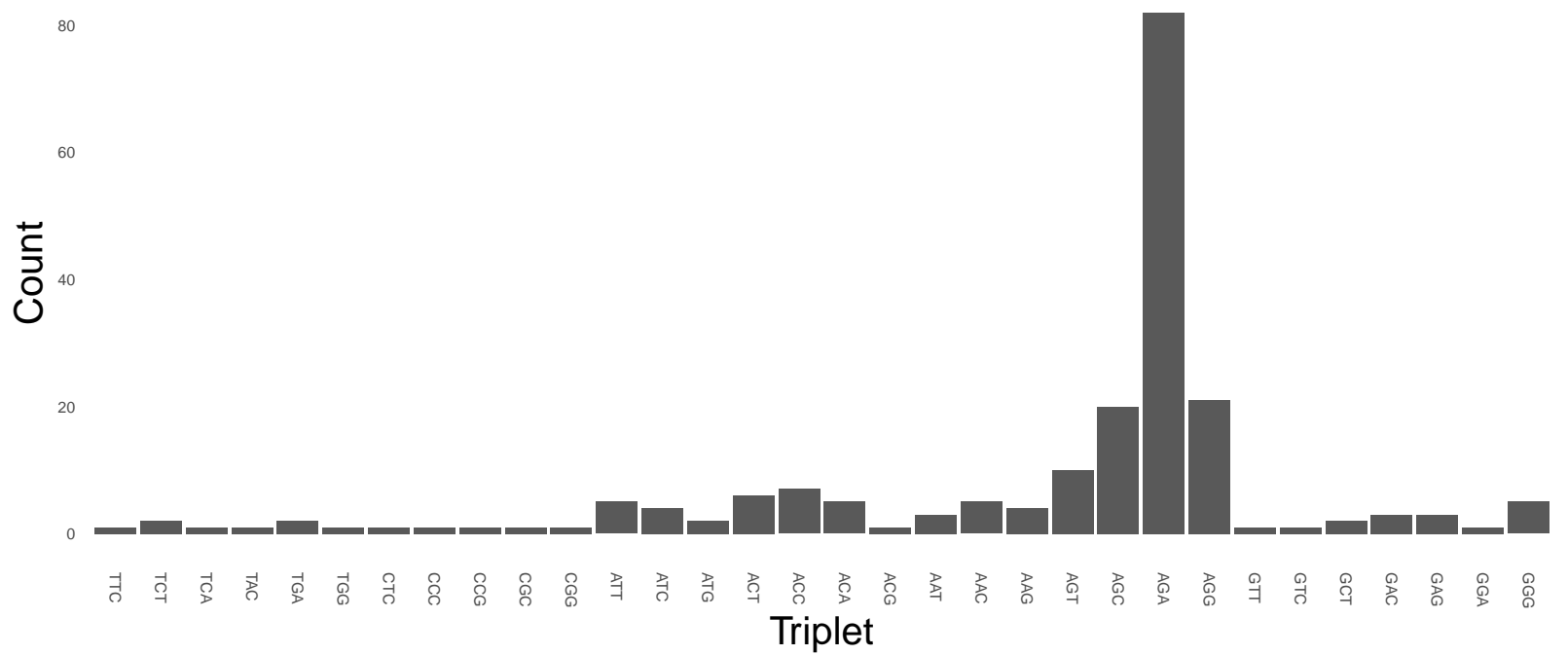
IGHV1-69*08_C191T- Final 3 nucleotides as a triplet



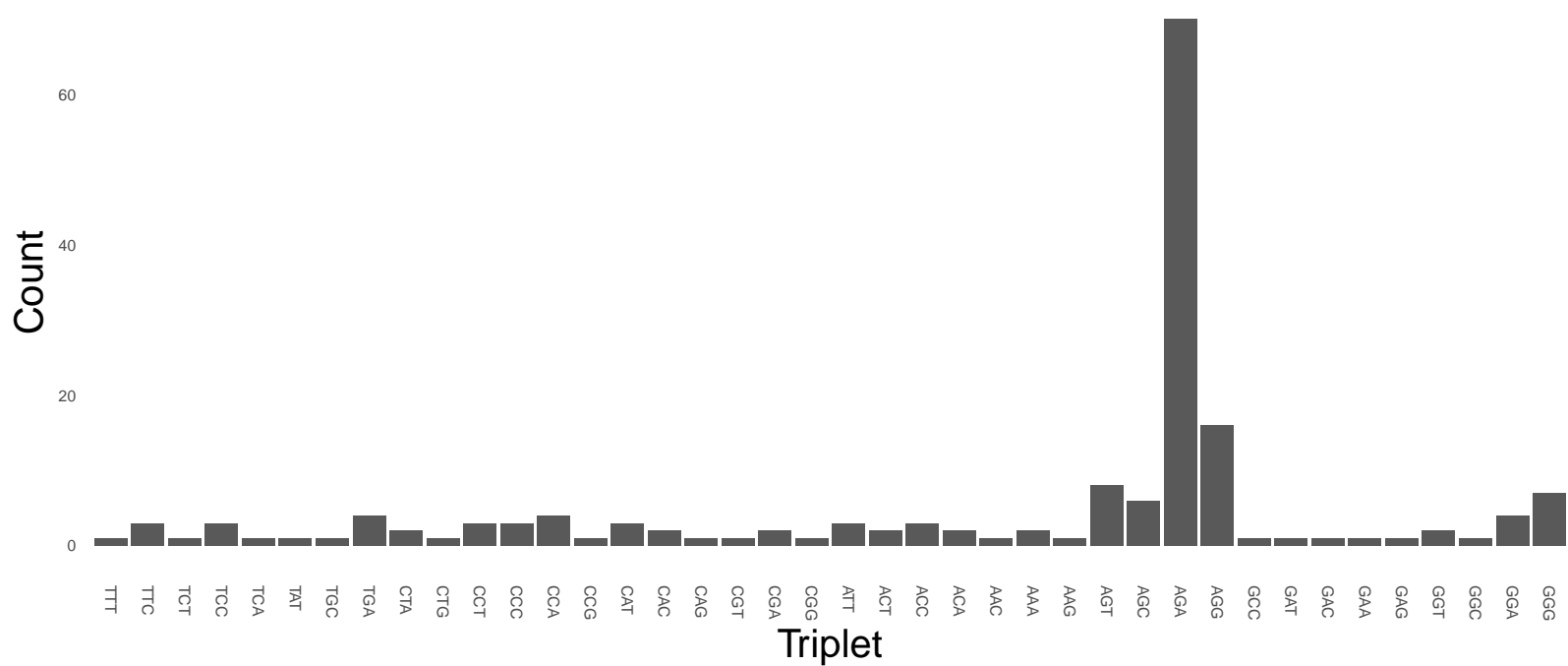
IGHV1-69*17_G163A- Final 3 nucleotides as a triplet



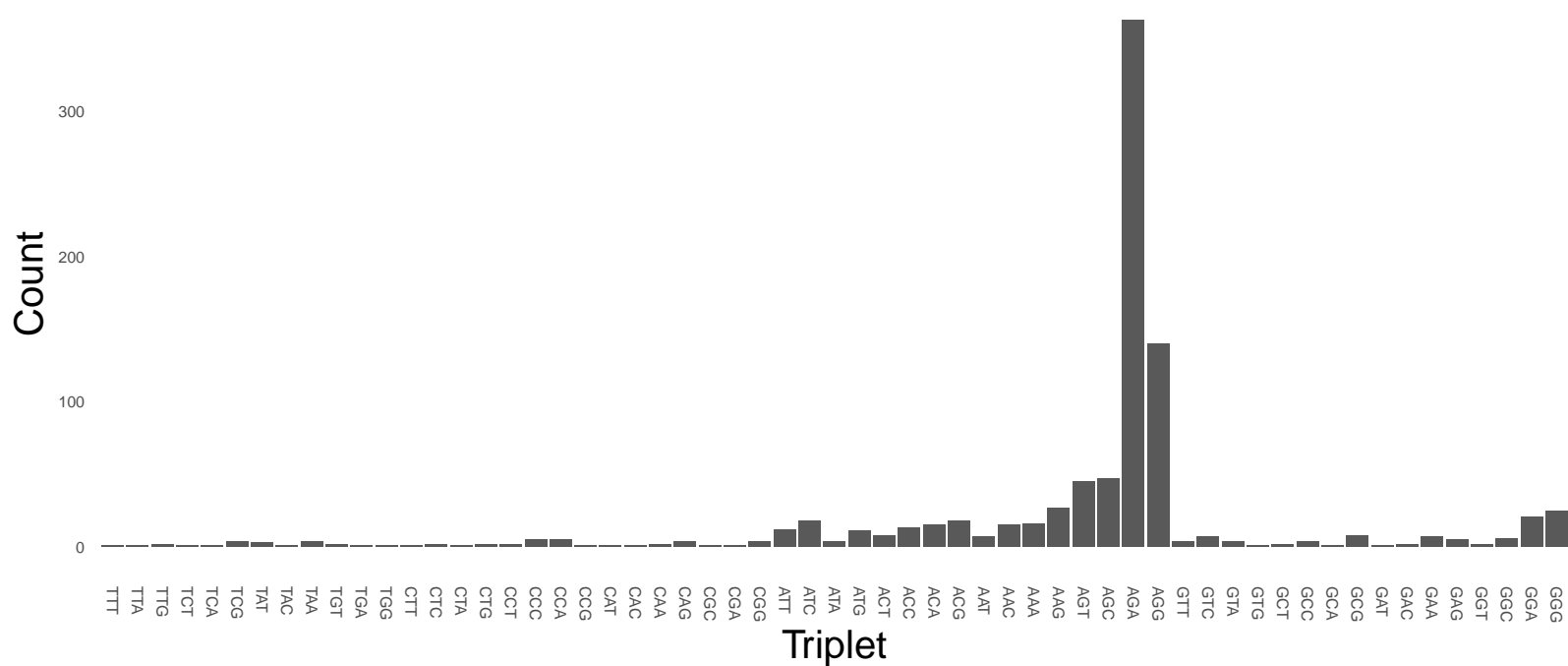
IGHV3-11*01_A152G- Final 3 nucleotides as a triplet



IGHV3-15*01_A152G- Final 3 nucleotides as a triplet

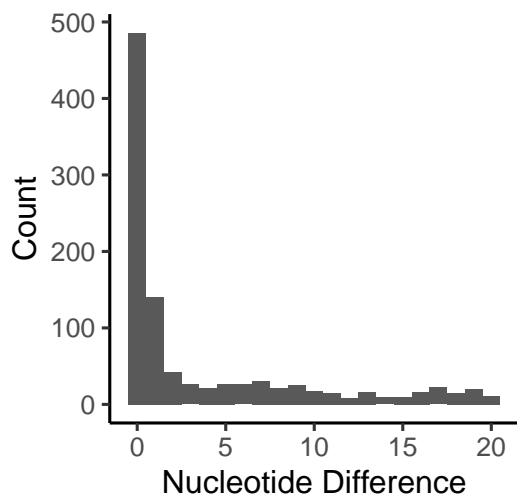


IGHV3-23*01_A152G- Final 3 nucleotides as a triplet



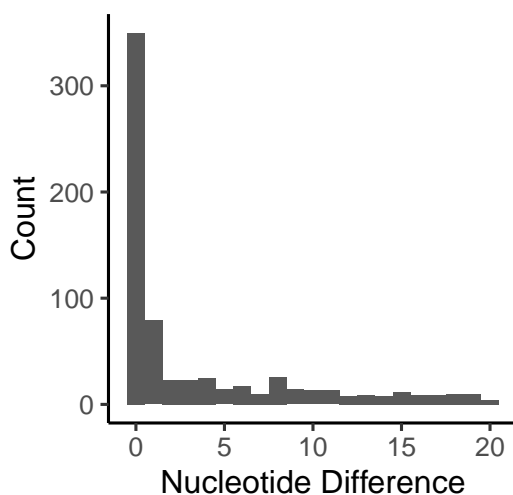
IGHV1-2*02

1156 sequences assigned
486 (42%) exact matches, in which:
483 unique CDR3
7 unique J



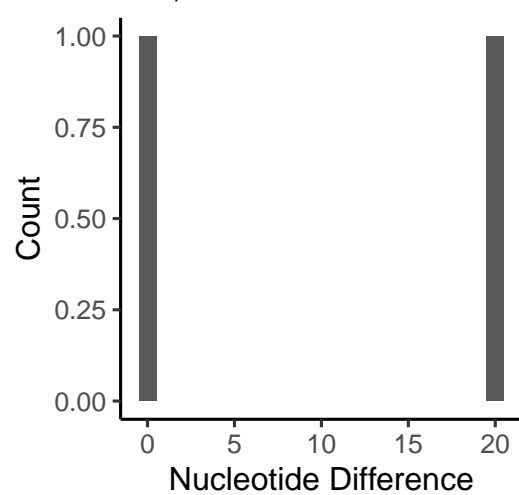
IGHV1-18*01

882 sequences assigned
350 (39.7%) exact matches, in which:
348 unique CDR3
7 unique J



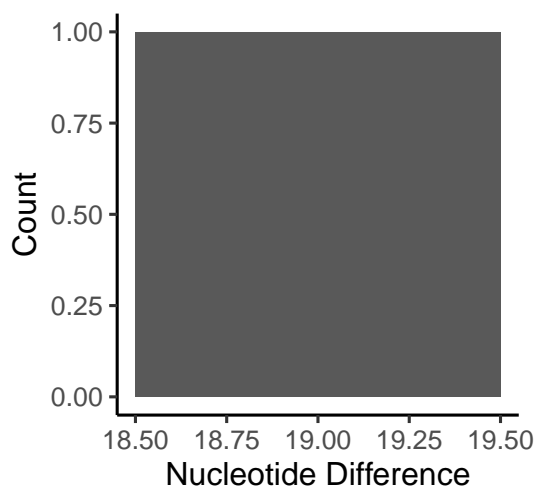
IGHV1-45*03

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



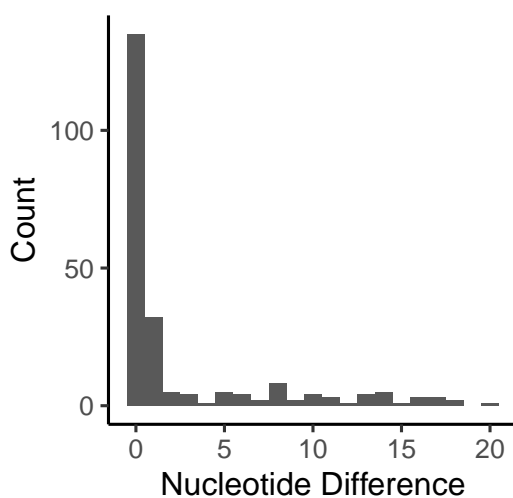
IGHV1-3*02

2 sequences assigned
No exact matches.



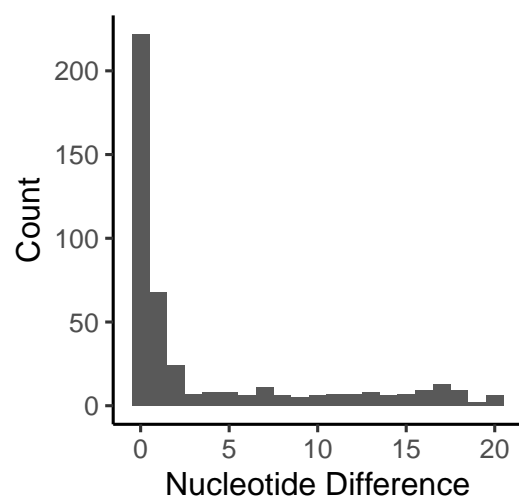
IGHV1-24*01

254 sequences assigned
135 (53.1%) exact matches, in which:
134 unique CDR3
7 unique J



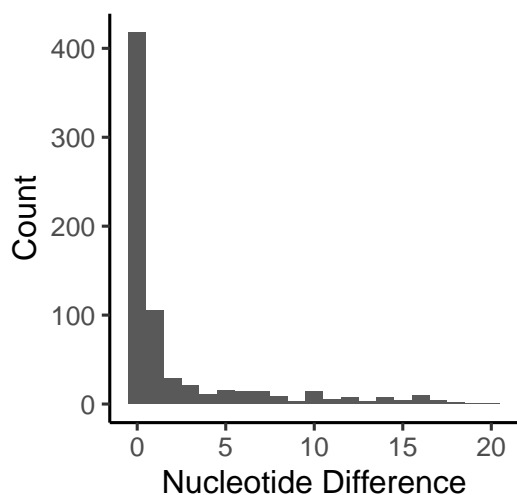
IGHV1-46*01

562 sequences assigned
222 (39.5%) exact matches, in which:
222 unique CDR3
7 unique J



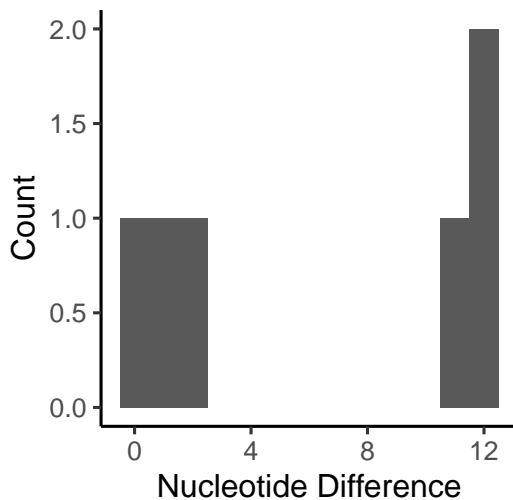
IGHV1-8*01

746 sequences assigned
418 (56%) exact matches, in which:
409 unique CDR3
7 unique J



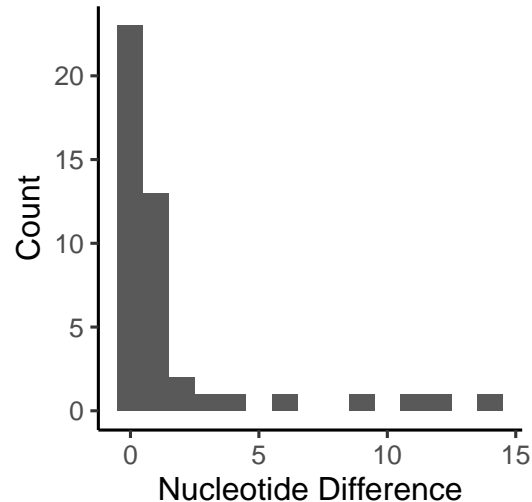
IGHV1-45*02

11 sequences assigned
1 (9.1%) exact matches, in which:
1 unique CDR3
1 unique J



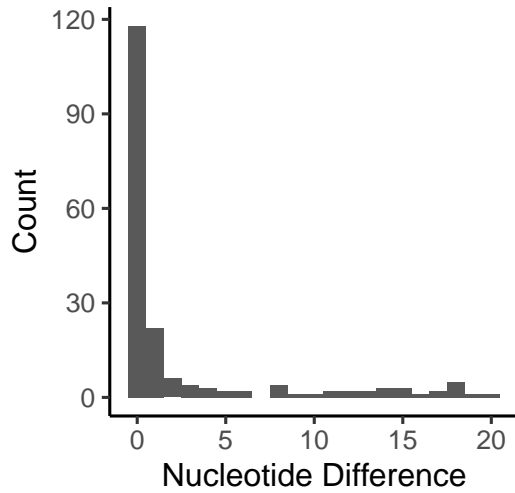
IGHV1-58*02

52 sequences assigned
23 (44.2%) exact matches, in which:
22 unique CDR3
6 unique J



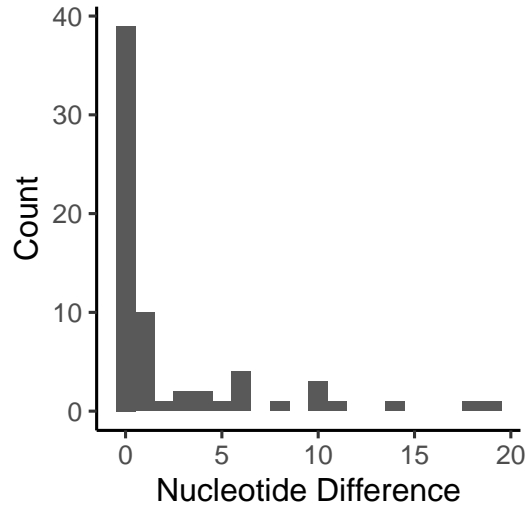
IGHV1-69-2*01

210 sequences assigned
118 (56.2%) exact matches, in which:
117 unique CDR3
6 unique J



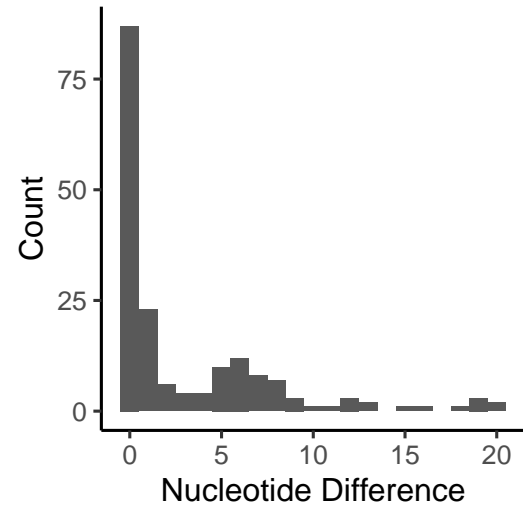
IGHV1-69*17_G163A

76 sequences assigned
39 (51.3%) exact matches, in which:
39 unique CDR3
5 unique J



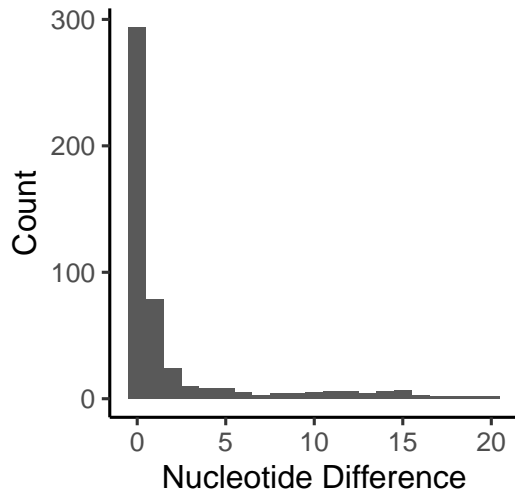
IGHV2-26*01

190 sequences assigned
87 (45.8%) exact matches, in which:
86 unique CDR3
7 unique J



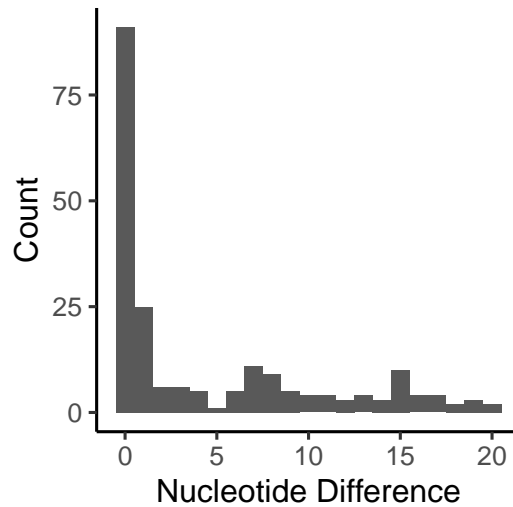
IGHV1-69*04

547 sequences assigned
294 (53.7%) exact matches, in which:
291 unique CDR3
7 unique J



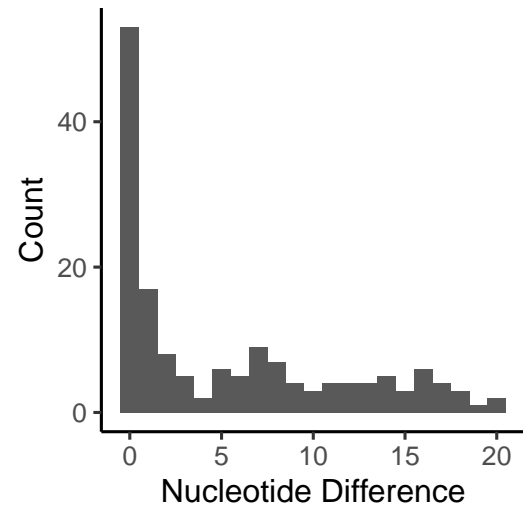
IGHV2-5*01

248 sequences assigned
91 (36.7%) exact matches, in which:
91 unique CDR3
5 unique J



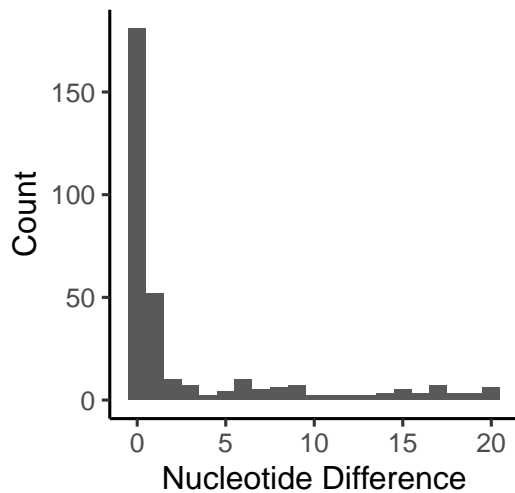
IGHV2-70*15

169 sequences assigned
53 (31.4%) exact matches, in which:
51 unique CDR3
5 unique J



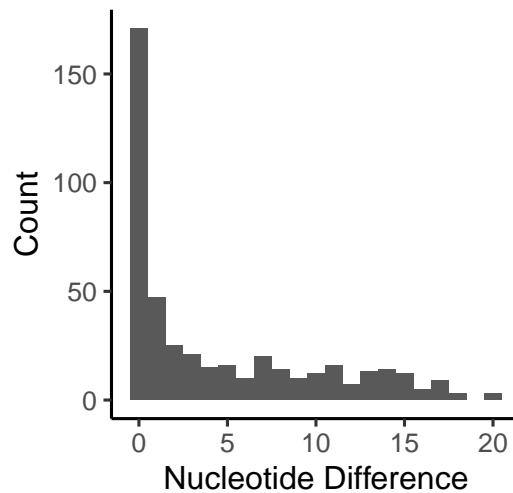
IGHV1-69*08_C191T

363 sequences assigned
181 (49.9%) exact matches, in which:
180 unique CDR3
6 unique J



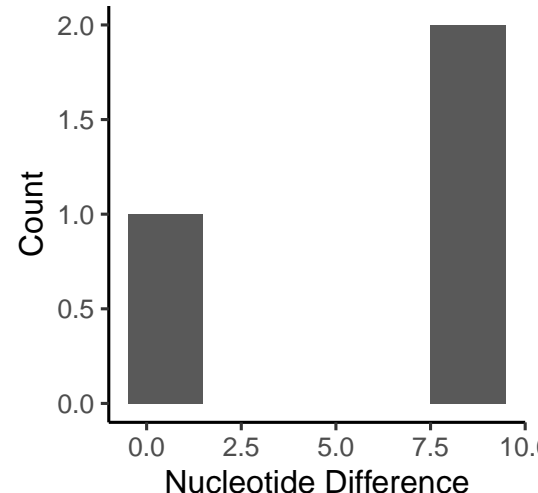
IGHV2-5*02

477 sequences assigned
171 (35.8%) exact matches, in which:
170 unique CDR3
6 unique J



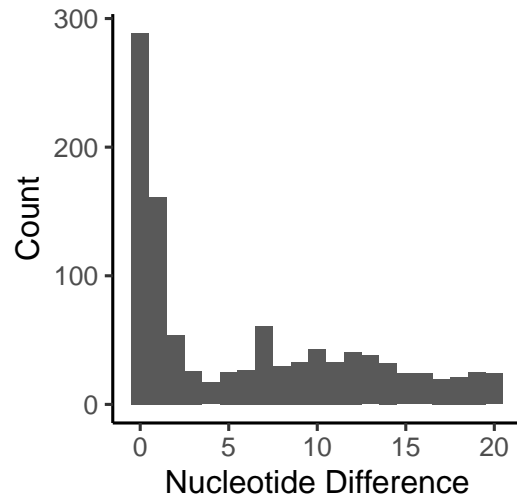
IGHV2-70D*04

6 sequences assigned
1 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



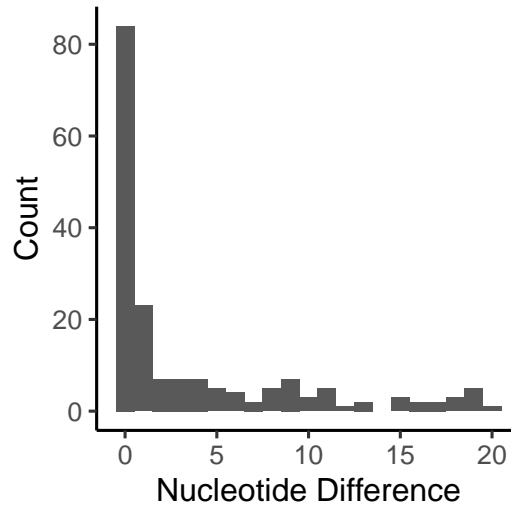
IGHV3-7*01

1244 sequences assigned
289 (23.2%) exact matches, in which:
287 unique CDR3
7 unique J



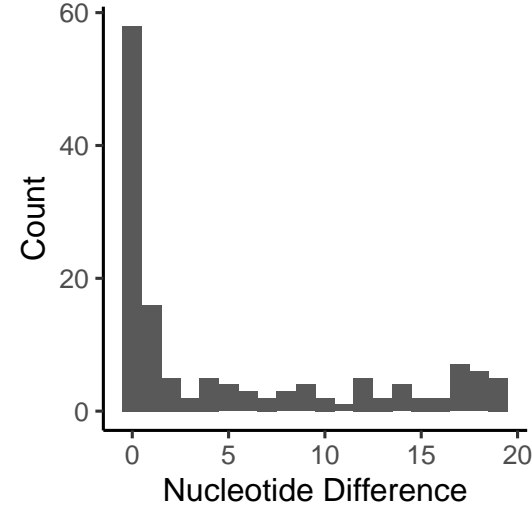
IGHV3-11*01_A152G

204 sequences assigned
84 (41.2%) exact matches, in which:
84 unique CDR3
7 unique J



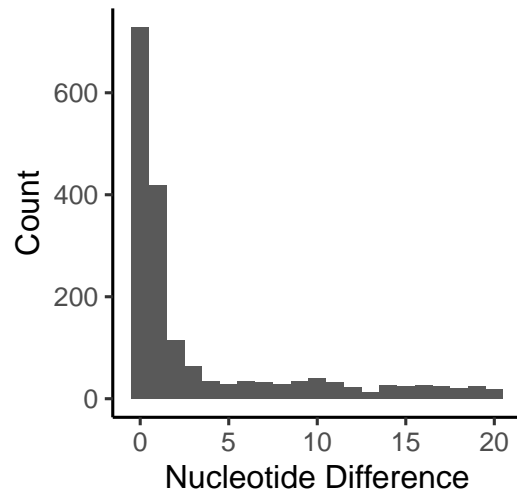
IGHV3-15*01_A152G

172 sequences assigned
58 (33.7%) exact matches, in which:
58 unique CDR3
6 unique J



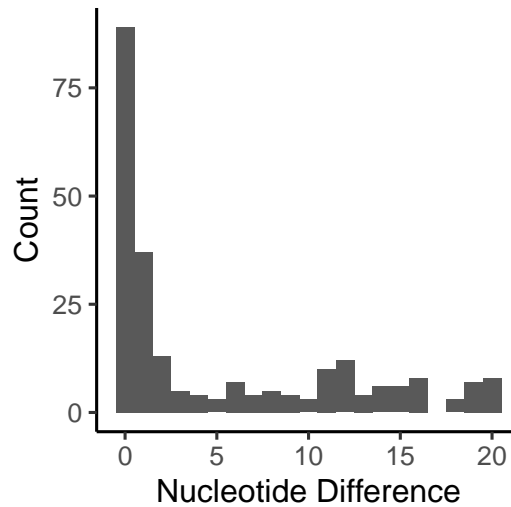
IGHV3-9*01

1917 sequences assigned
729 (38%) exact matches, in which:
722 unique CDR3
7 unique J



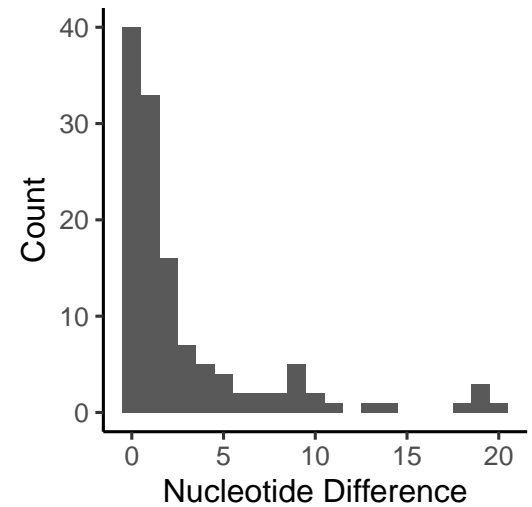
IGHV3-13*01

268 sequences assigned
89 (33.2%) exact matches, in which:
89 unique CDR3
6 unique J



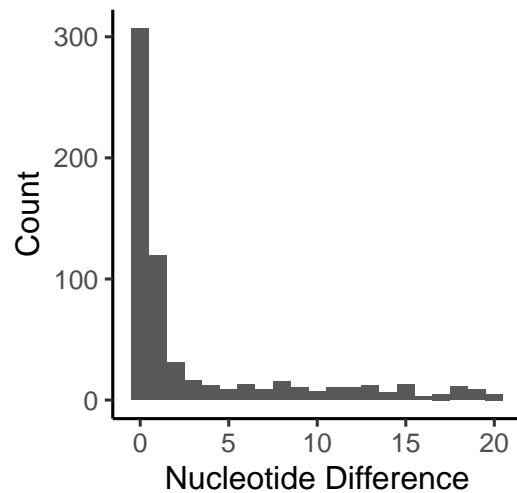
IGHV3-20*01

131 sequences assigned
40 (30.5%) exact matches, in which:
37 unique CDR3
5 unique J



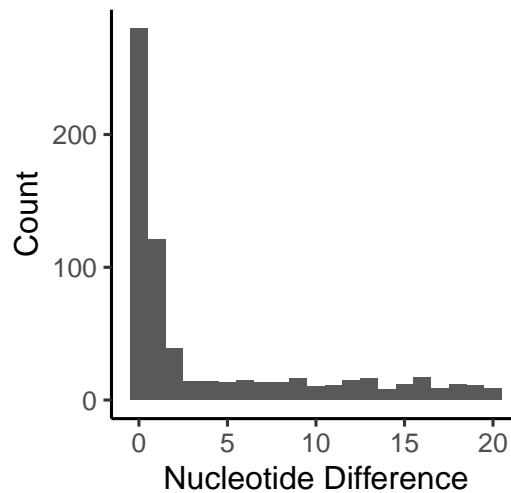
IGHV3-11*01

698 sequences assigned
307 (44%) exact matches, in which:
307 unique CDR3
7 unique J



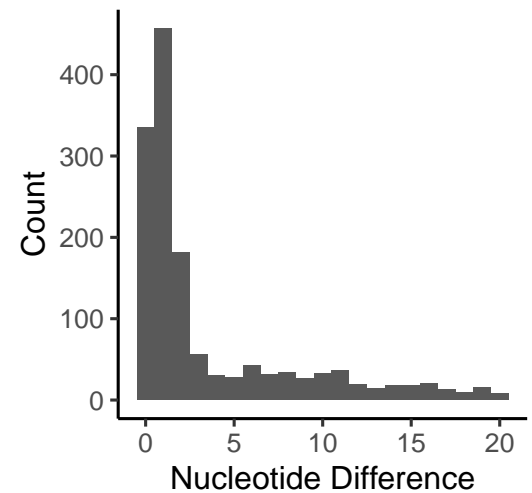
IGHV3-15*01

782 sequences assigned
280 (35.8%) exact matches, in which:
279 unique CDR3
6 unique J



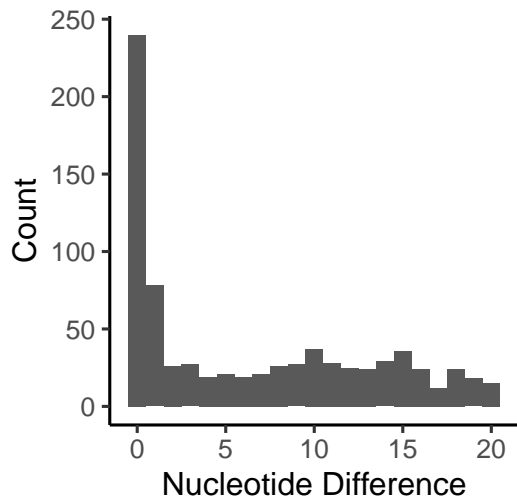
IGHV3-21*01

1522 sequences assigned
335 (22%) exact matches, in which:
333 unique CDR3
7 unique J



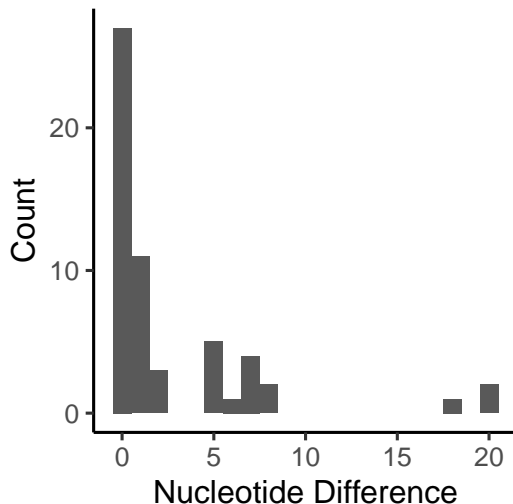
IGHV3-23*01_A152G

914 sequences assigned
240 (26.3%) exact matches, in which:
240 unique CDR3
7 unique J



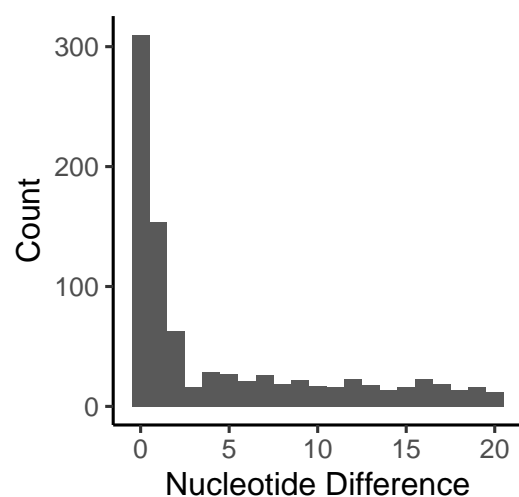
IGHV3-43*01

58 sequences assigned
27 (46.6%) exact matches, in which:
26 unique CDR3
5 unique J



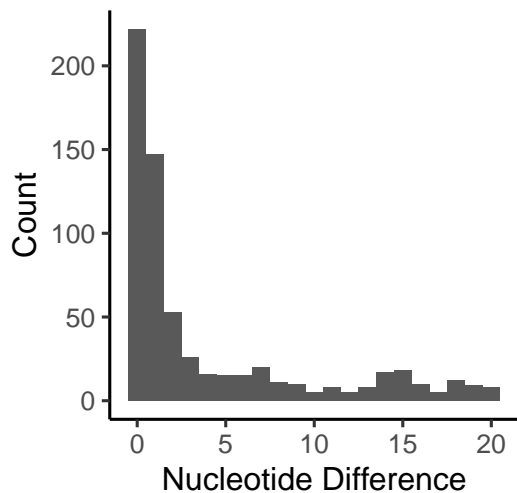
IGHV3-48*01

1025 sequences assigned
310 (30.2%) exact matches, in which:
309 unique CDR3
7 unique J



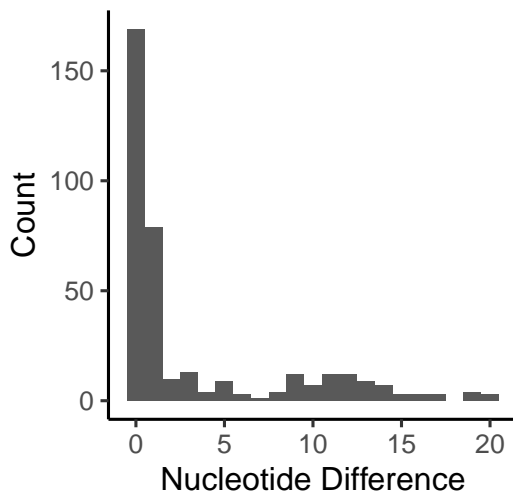
IGHV3-33*01

758 sequences assigned
222 (29.3%) exact matches, in which:
216 unique CDR3
6 unique J



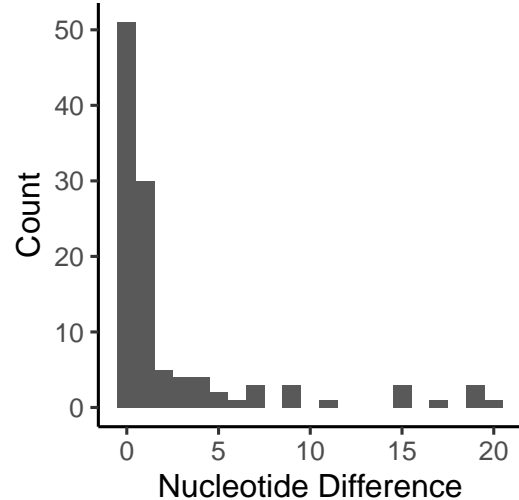
IGHV3-43*02

403 sequences assigned
169 (41.9%) exact matches, in which:
168 unique CDR3
6 unique J



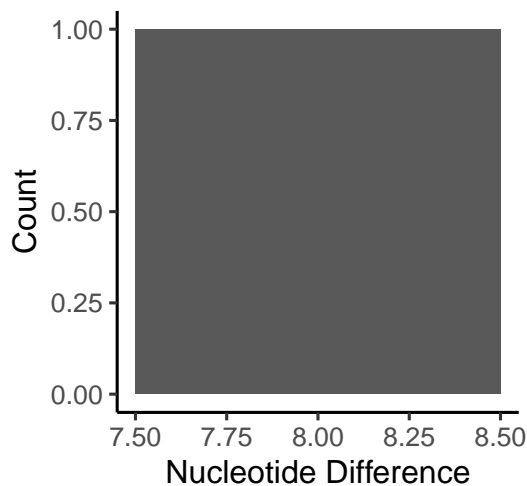
IGHV3-49*03

136 sequences assigned
51 (37.5%) exact matches, in which:
51 unique CDR3
5 unique J



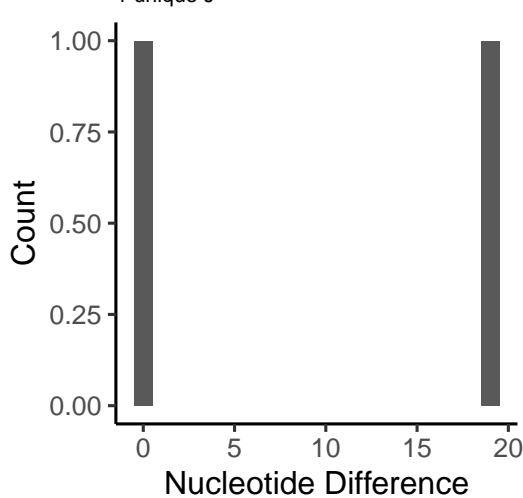
IGHV3-38*01

1 sequences assigned
No exact matches.



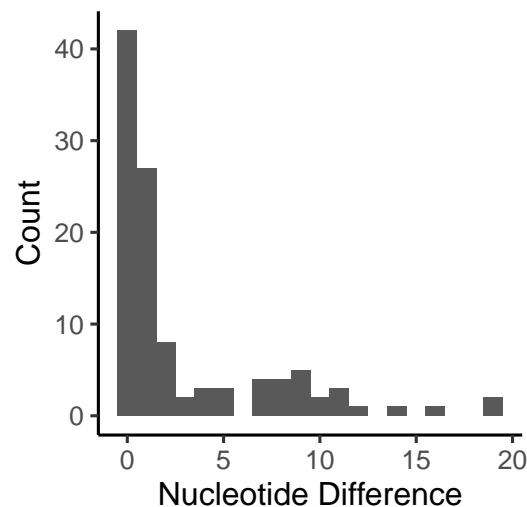
IGHV3-47*02

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



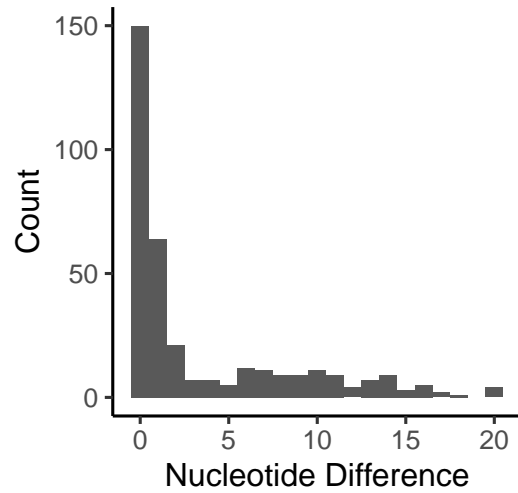
IGHV3-49*05

111 sequences assigned
42 (37.8%) exact matches, in which:
41 unique CDR3
5 unique J



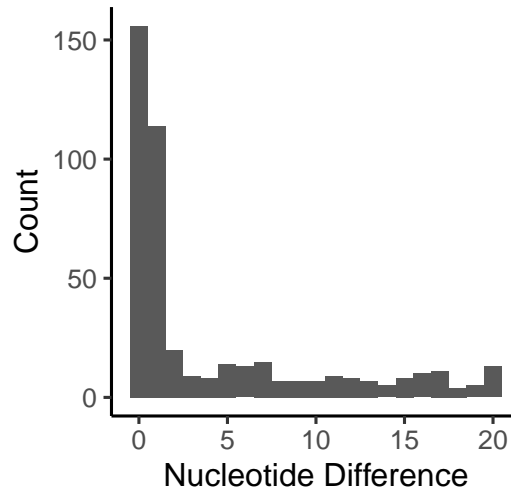
IGHV3-53*01

381 sequences assigned
150 (39.4%) exact matches, in which:
148 unique CDR3
6 unique J



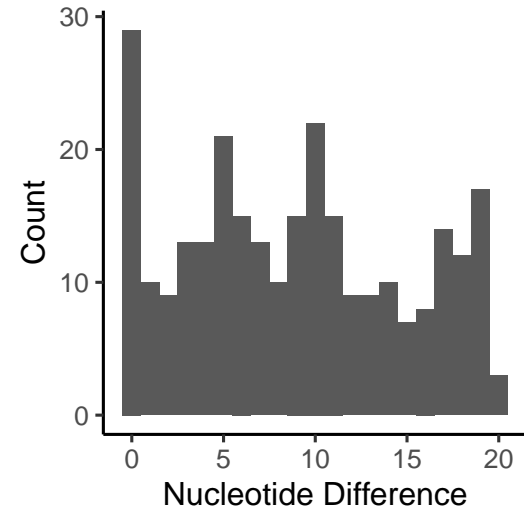
IGHV3-66*01

493 sequences assigned
156 (31.6%) exact matches, in which:
155 unique CDR3
7 unique J



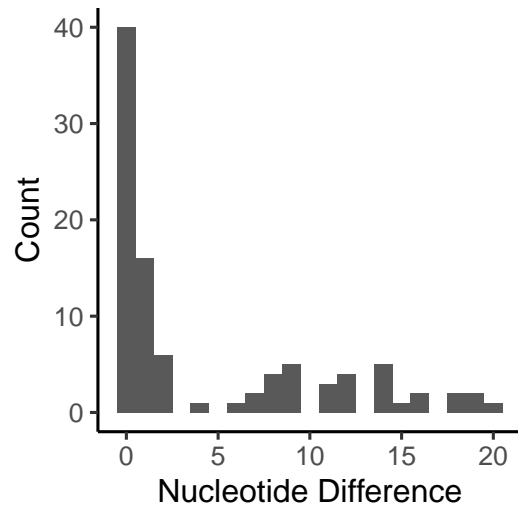
IGHV3-72*01

364 sequences assigned
29 (8%) exact matches, in which:
28 unique CDR3
5 unique J



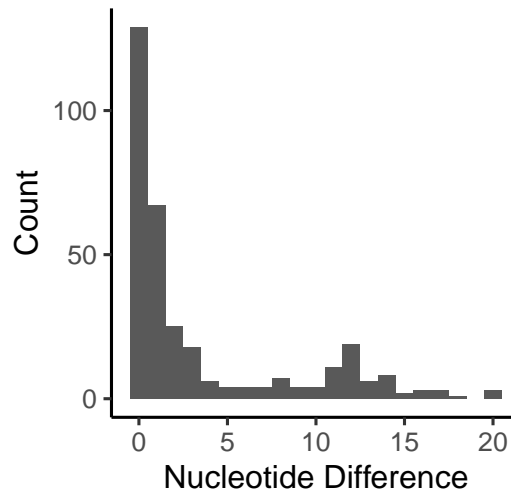
IGHV3-53*02

105 sequences assigned
40 (38.1%) exact matches, in which:
40 unique CDR3
7 unique J



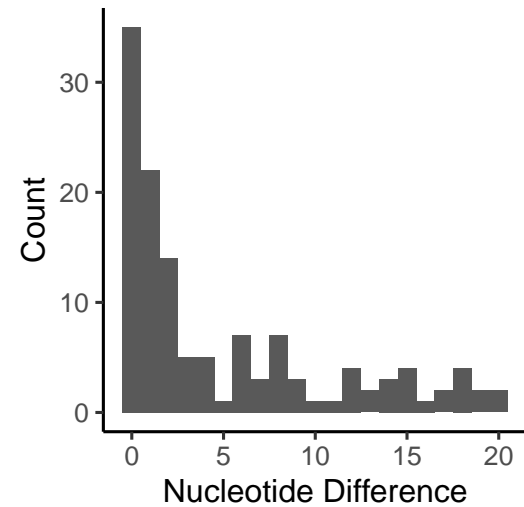
IGHV3-66*02

378 sequences assigned
129 (34.1%) exact matches, in which:
128 unique CDR3
5 unique J



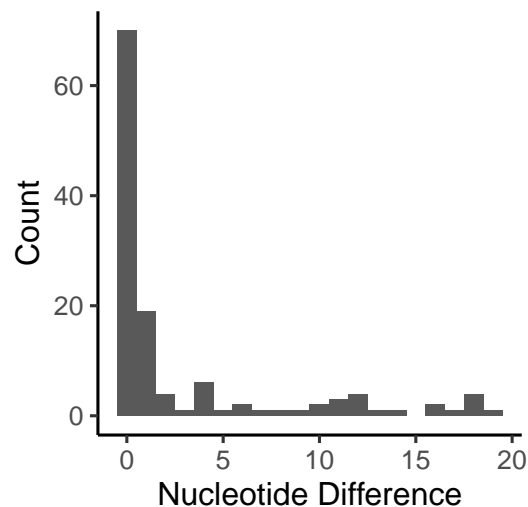
IGHV3-73*01

153 sequences assigned
35 (22.9%) exact matches, in which:
35 unique CDR3
6 unique J



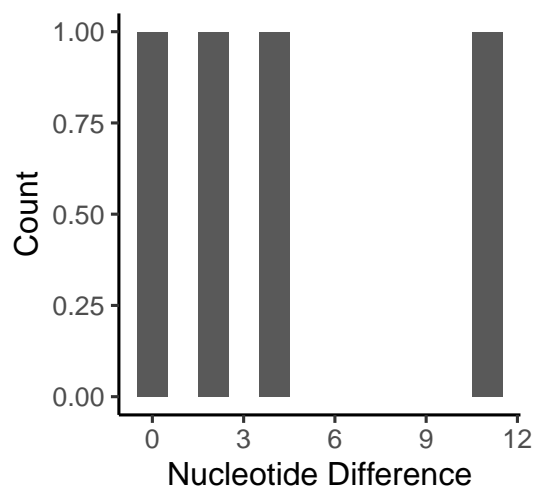
IGHV3-64*01

142 sequences assigned
70 (49.3%) exact matches, in which:
70 unique CDR3
6 unique J



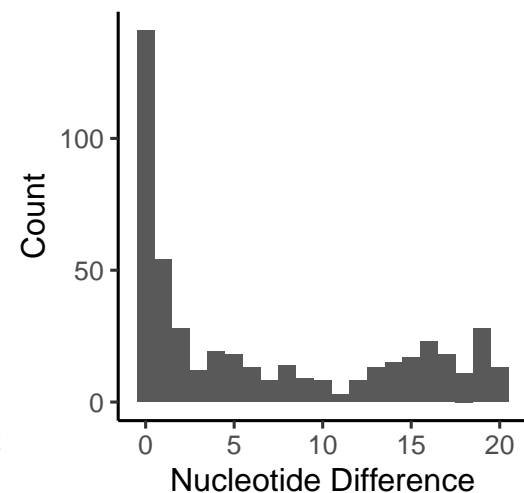
IGHV3-69-1*02

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



IGHV3-74*01

584 sequences assigned
141 (24.1%) exact matches, in which:
139 unique CDR3
7 unique J



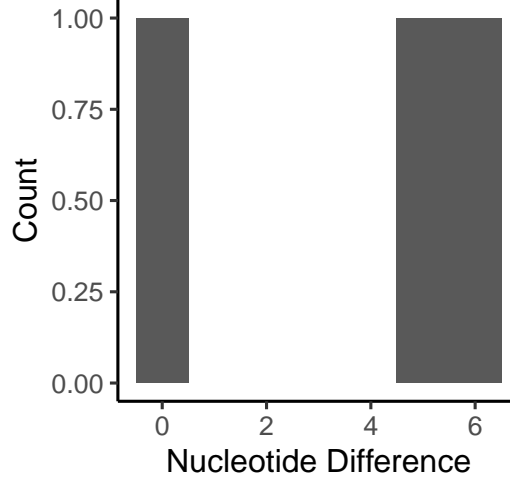
IGHV3-64D*06

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



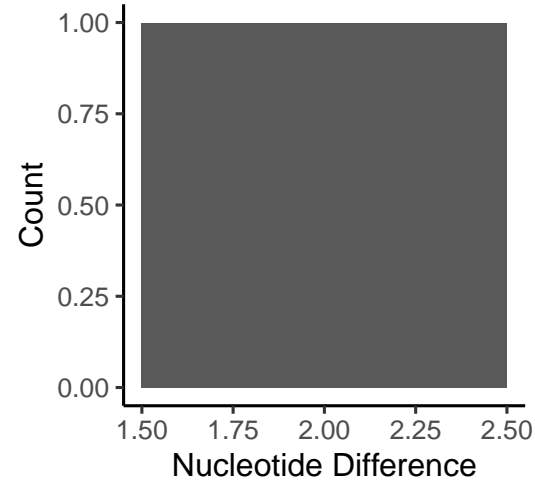
IGHV4-28*01

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



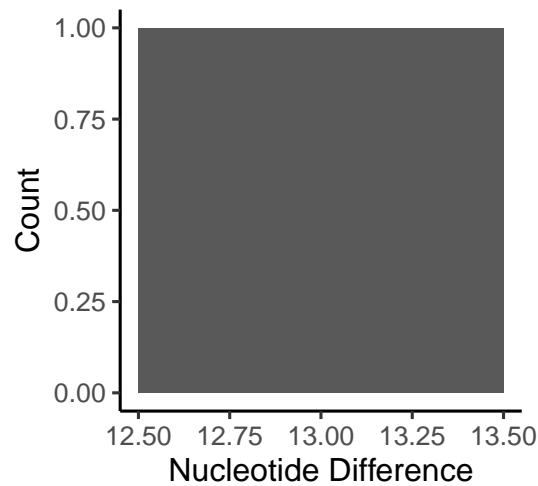
IGHV4-28*06

1 sequences assigned
No exact matches.



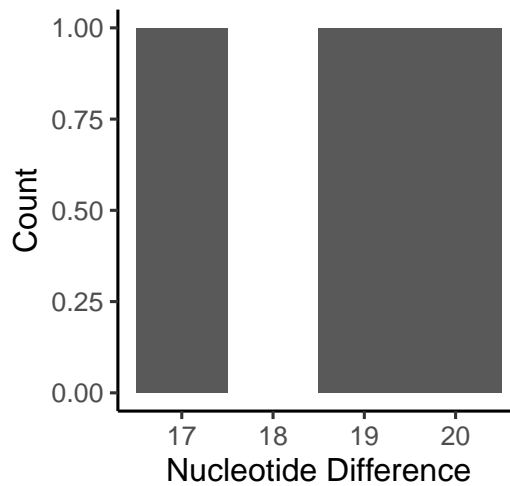
IGHV3-NL1*01

1 sequences assigned
No exact matches.



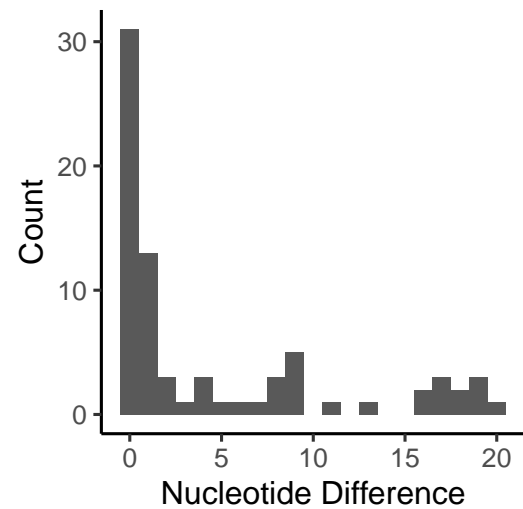
IGHV4-28*03

5 sequences assigned
No exact matches.



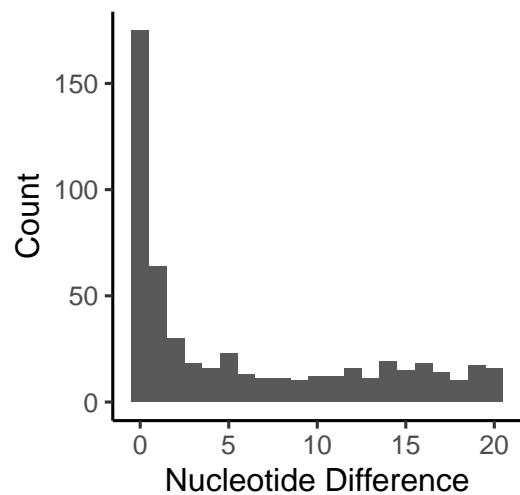
IGHV4-30-2*01

85 sequences assigned
31 (36.5%) exact matches, in which:
31 unique CDR3
5 unique J



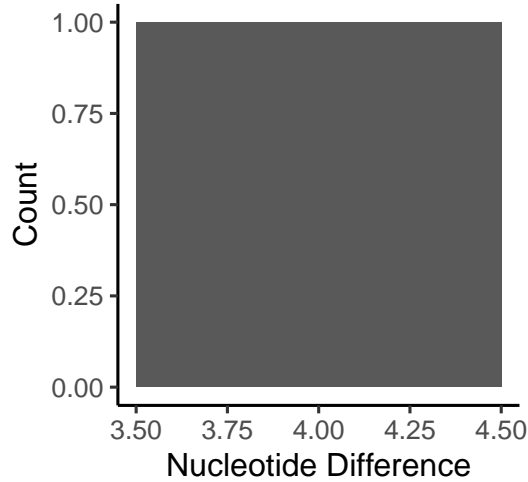
IGHV4-4*07

653 sequences assigned
175 (26.8%) exact matches, in which:
173 unique CDR3
7 unique J



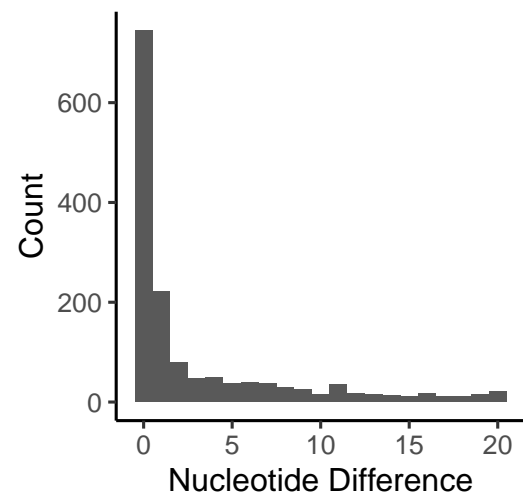
IGHV4-28*04

1 sequences assigned
No exact matches.



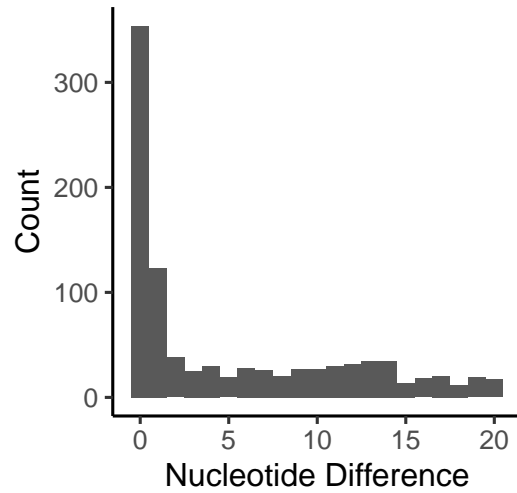
IGHV4-34*01

1708 sequences assigned
745 (43.6%) exact matches, in which:
734 unique CDR3
7 unique J



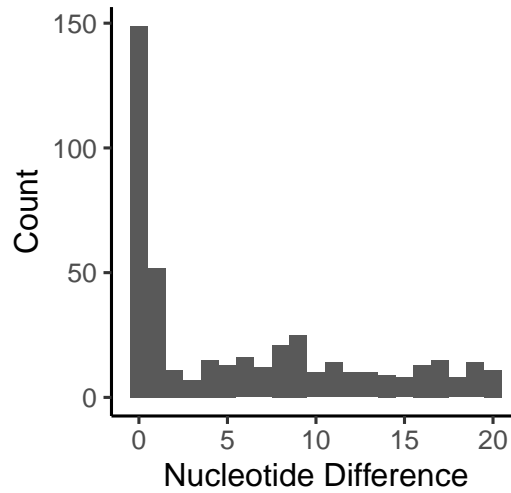
IGHV4–39*01

1155 sequences assigned
354 (30.6%) exact matches, in which:
349 unique CDR3
7 unique J



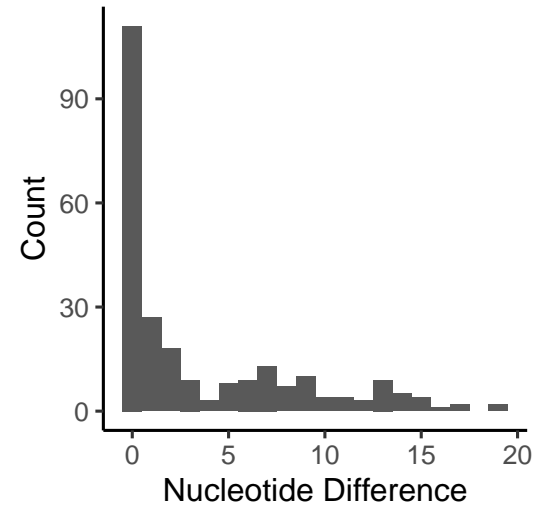
IGHV4–59*08

520 sequences assigned
149 (28.7%) exact matches, in which:
148 unique CDR3
6 unique J



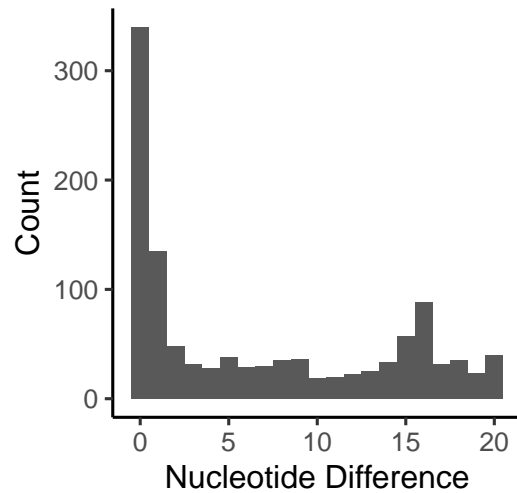
IGHV5–51*03

279 sequences assigned
111 (39.8%) exact matches, in which:
109 unique CDR3
5 unique J



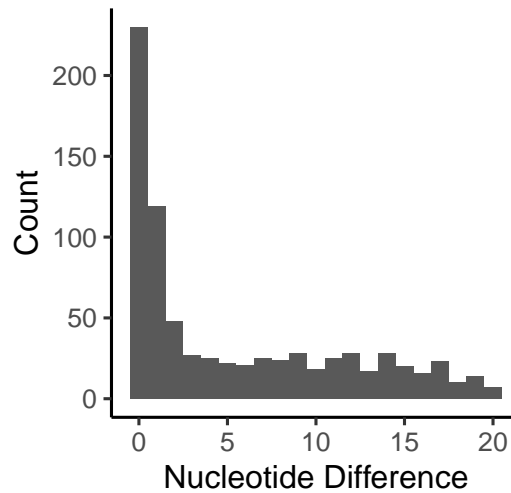
IGHV4–39*07

1473 sequences assigned
340 (23.1%) exact matches, in which:
339 unique CDR3
7 unique J



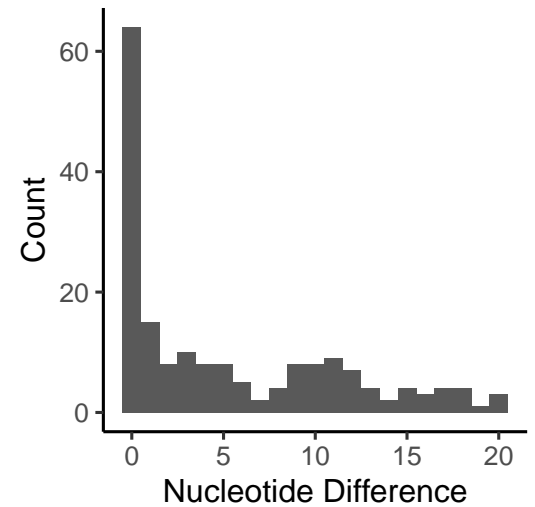
IGHV4–61*02

847 sequences assigned
230 (27.2%) exact matches, in which:
227 unique CDR3
7 unique J



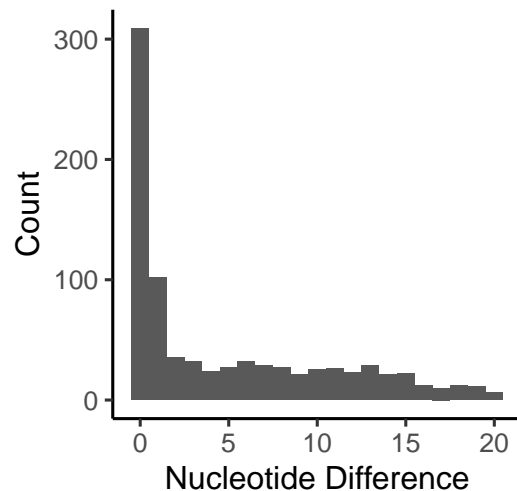
IGHV6–1*01

202 sequences assigned
64 (31.7%) exact matches, in which:
64 unique CDR3
7 unique J



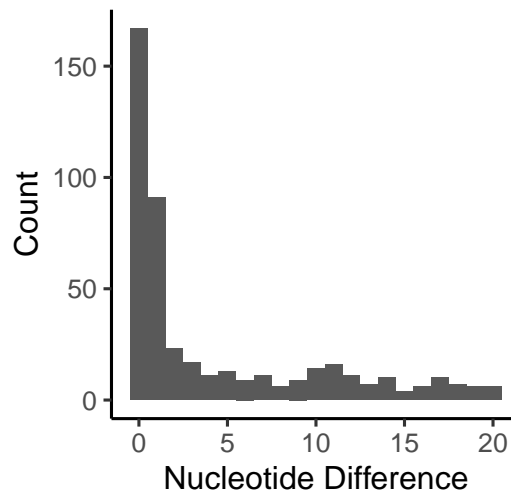
IGHV4–59*01

934 sequences assigned
309 (33.1%) exact matches, in which:
306 unique CDR3
7 unique J

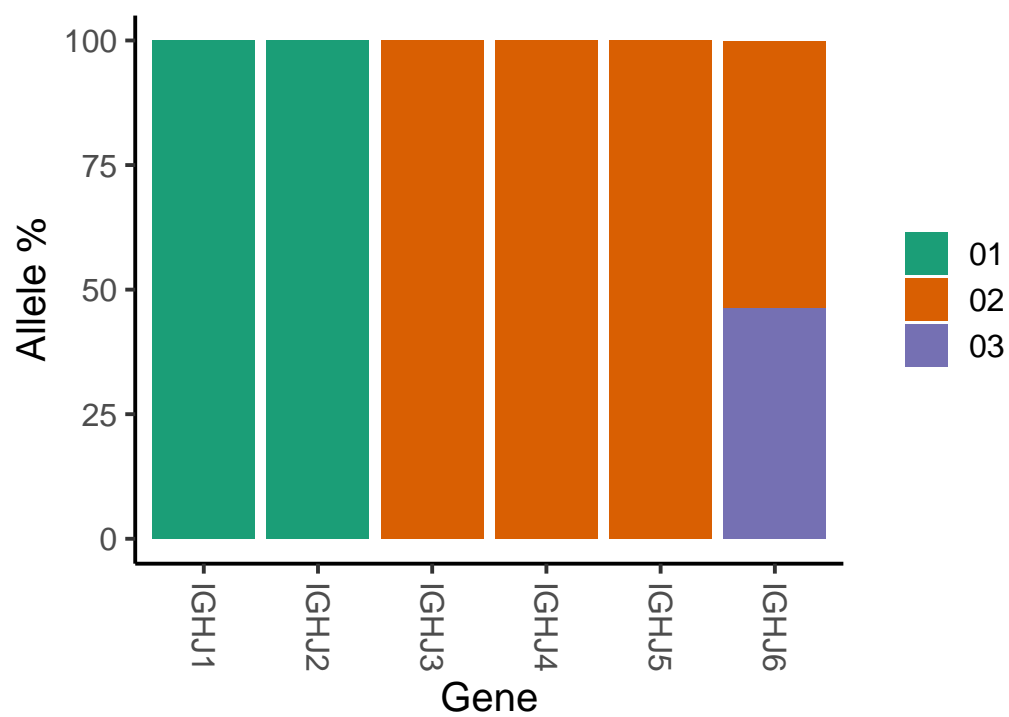


IGHV5–51*01

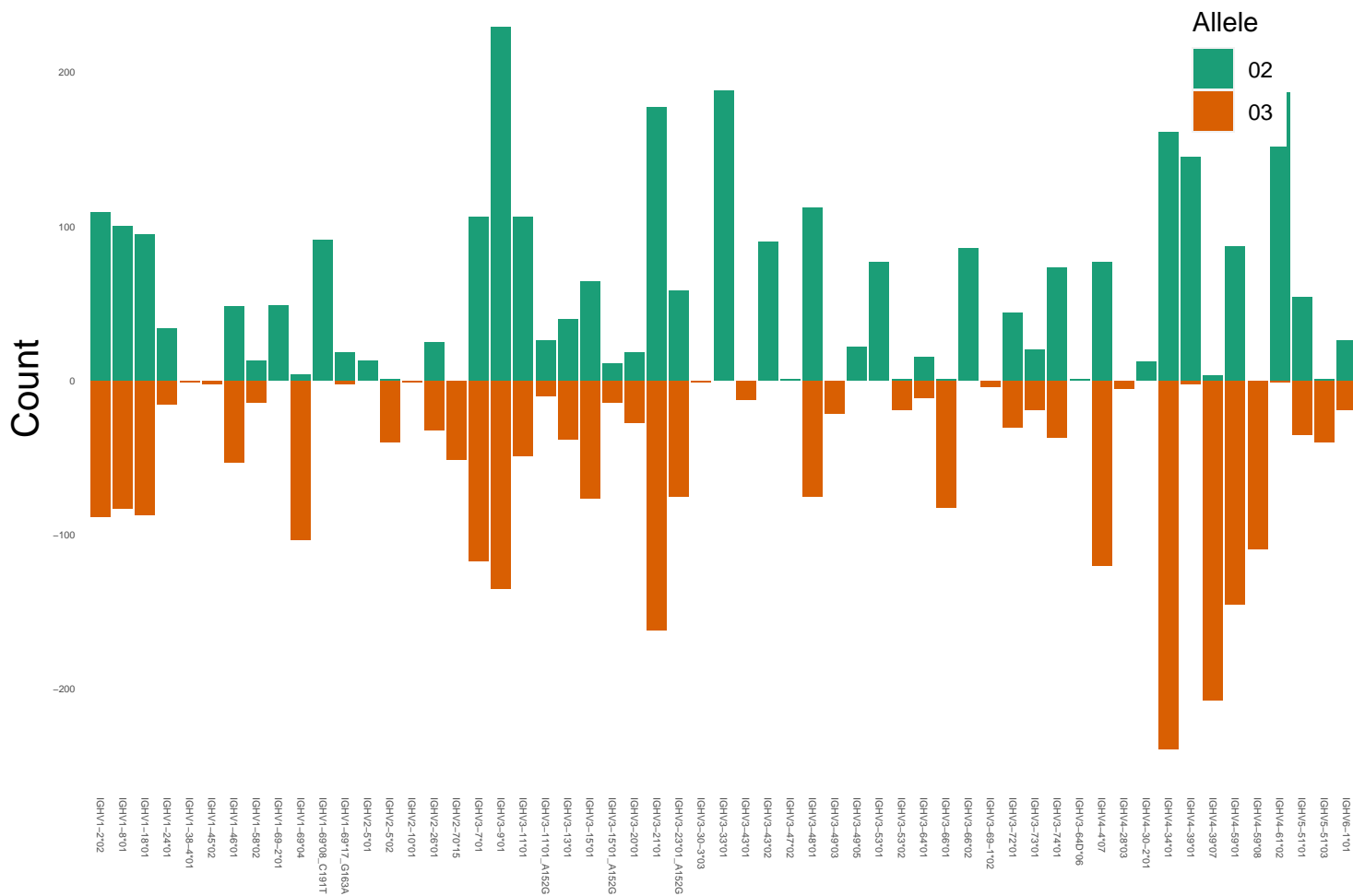
515 sequences assigned
167 (32.4%) exact matches, in which:
165 unique CDR3
6 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.