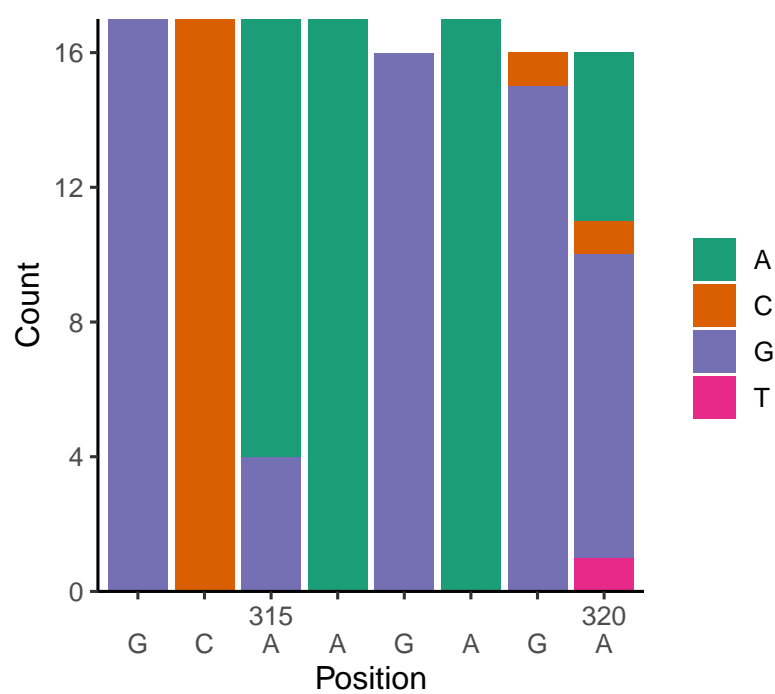
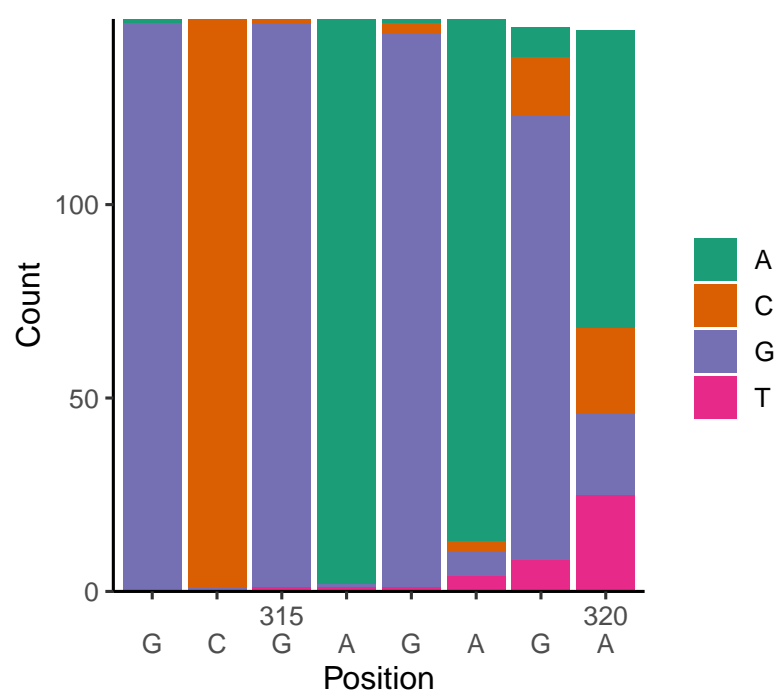


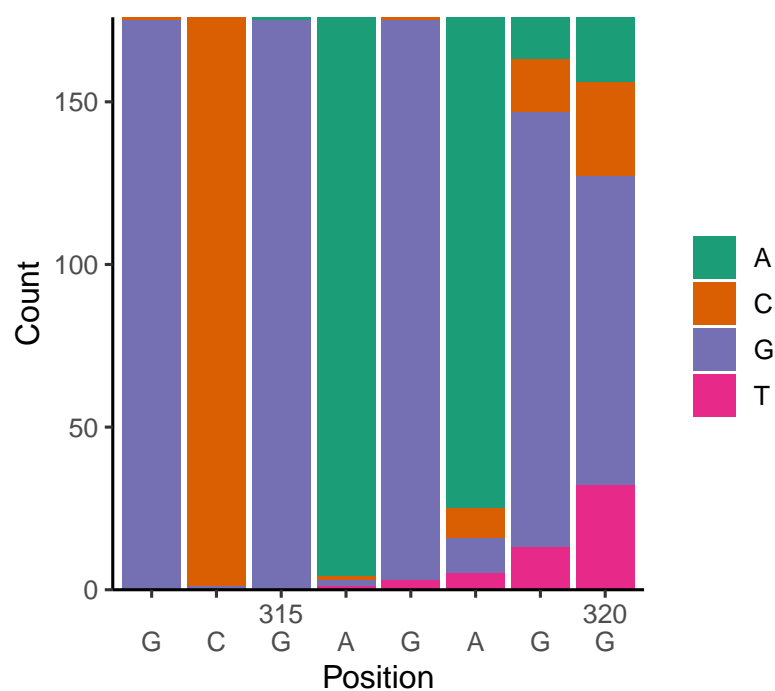
Gene IGHV3-13*01_G290A_T300C



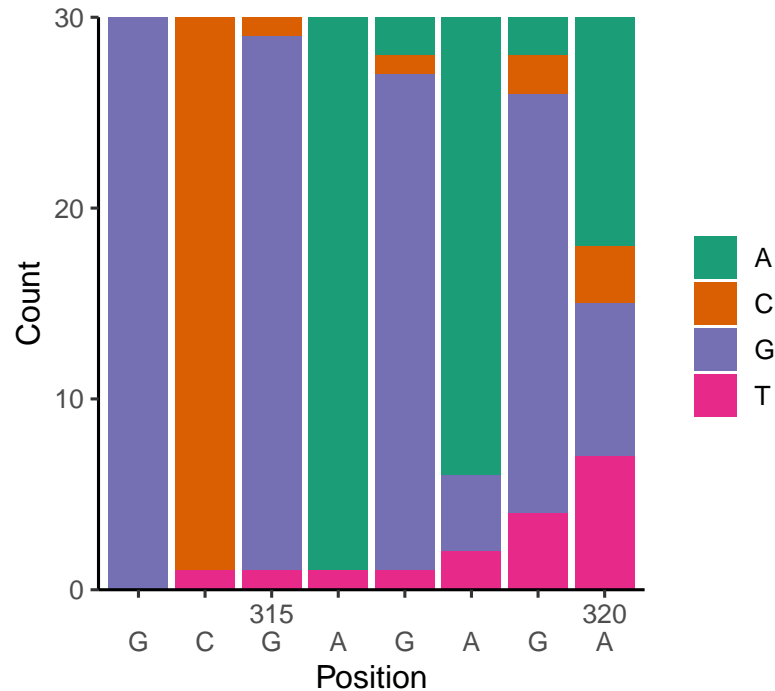
Gene IGHV4-39*07_A220G_A225G



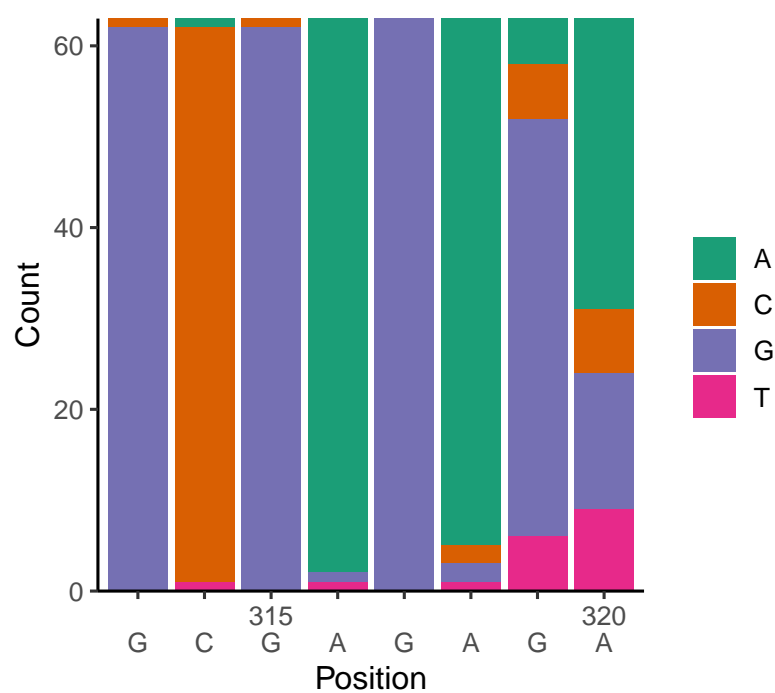
Gene IGHV4-34*01_A220G_A225G



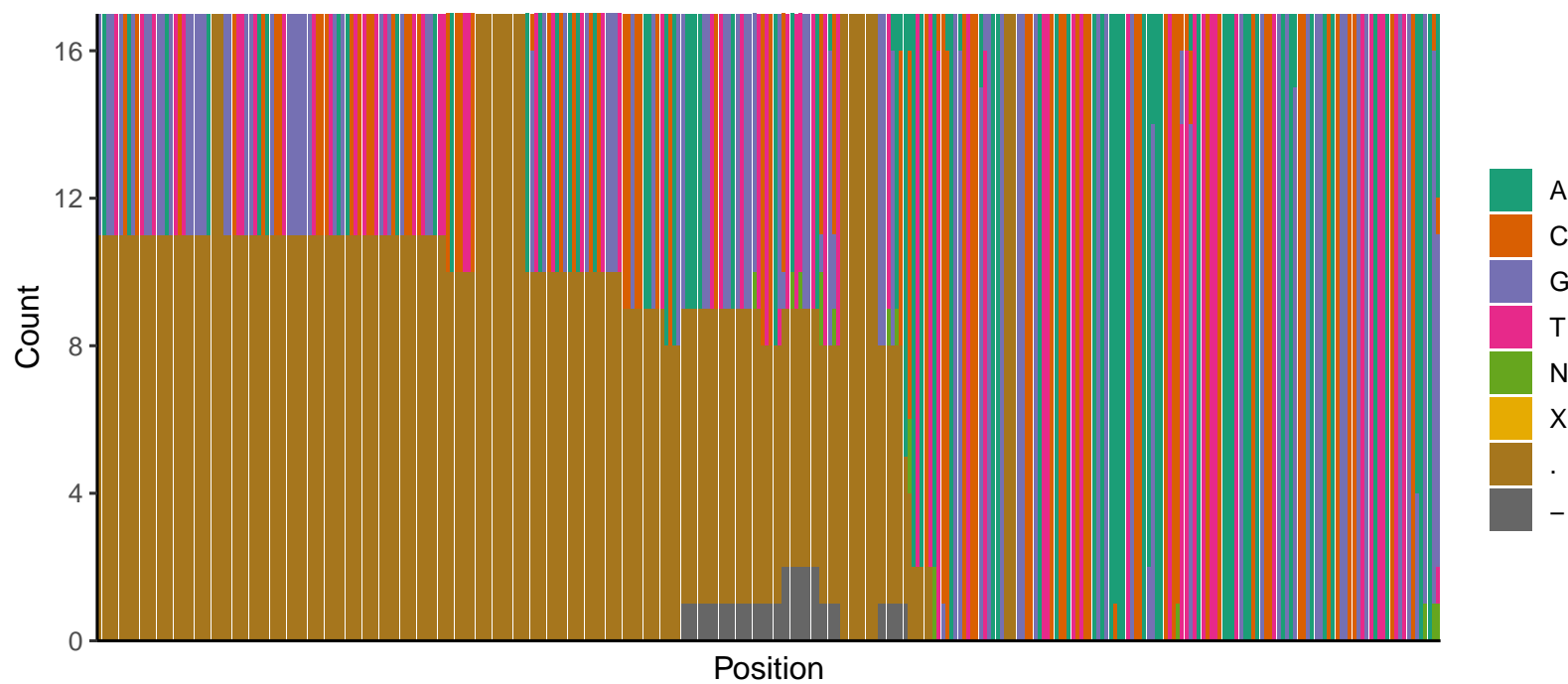
Gene IGHV7-4-1*02_A200T



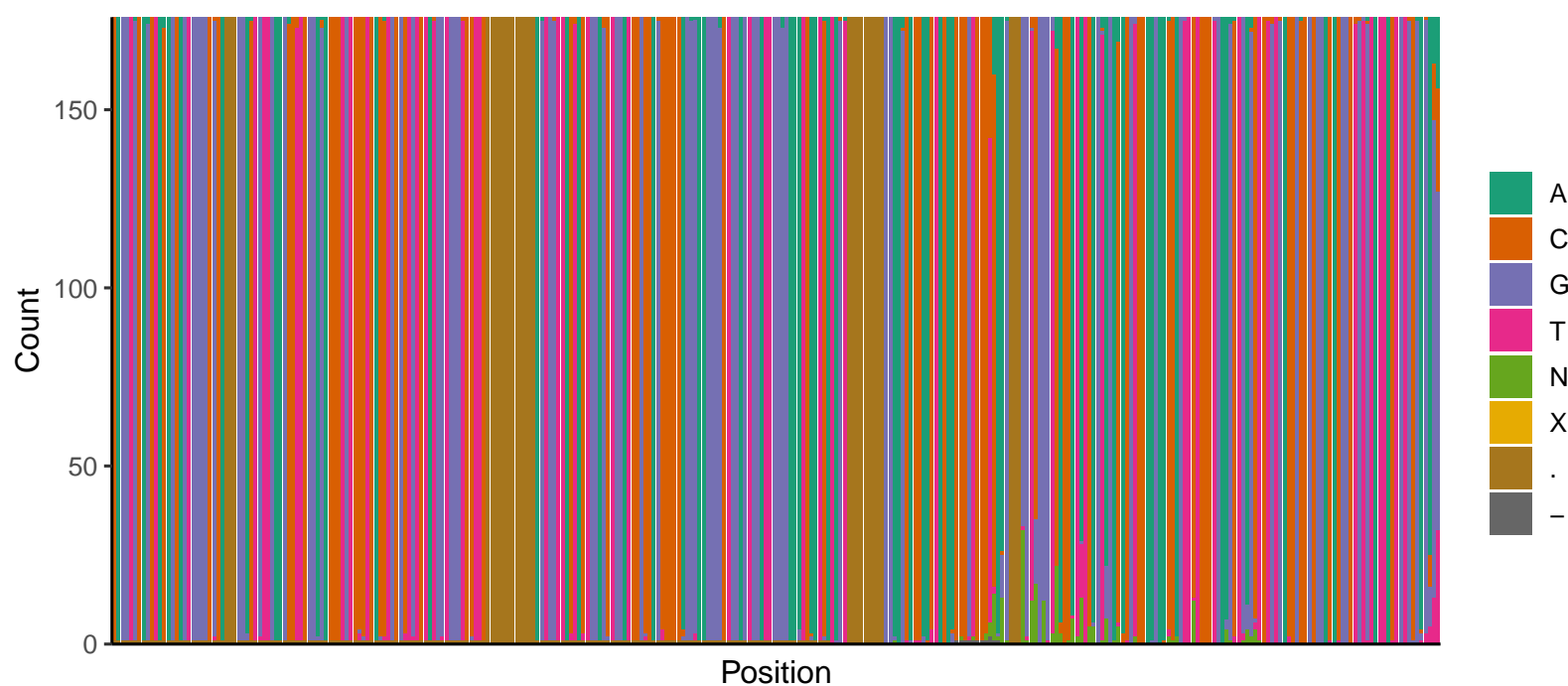
Gene IGHV4-38-2*02_A220G



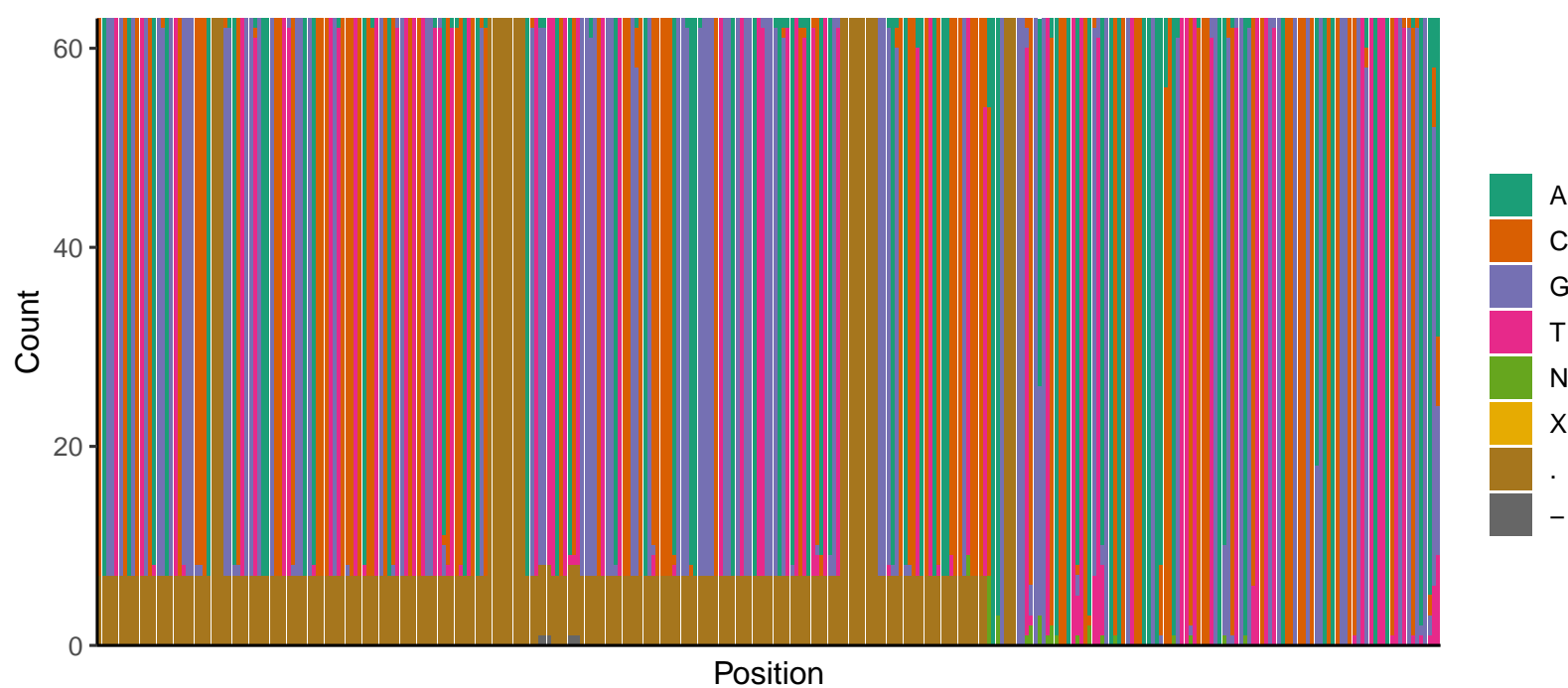
Gene IGHV3-13*01_G290A_T300C



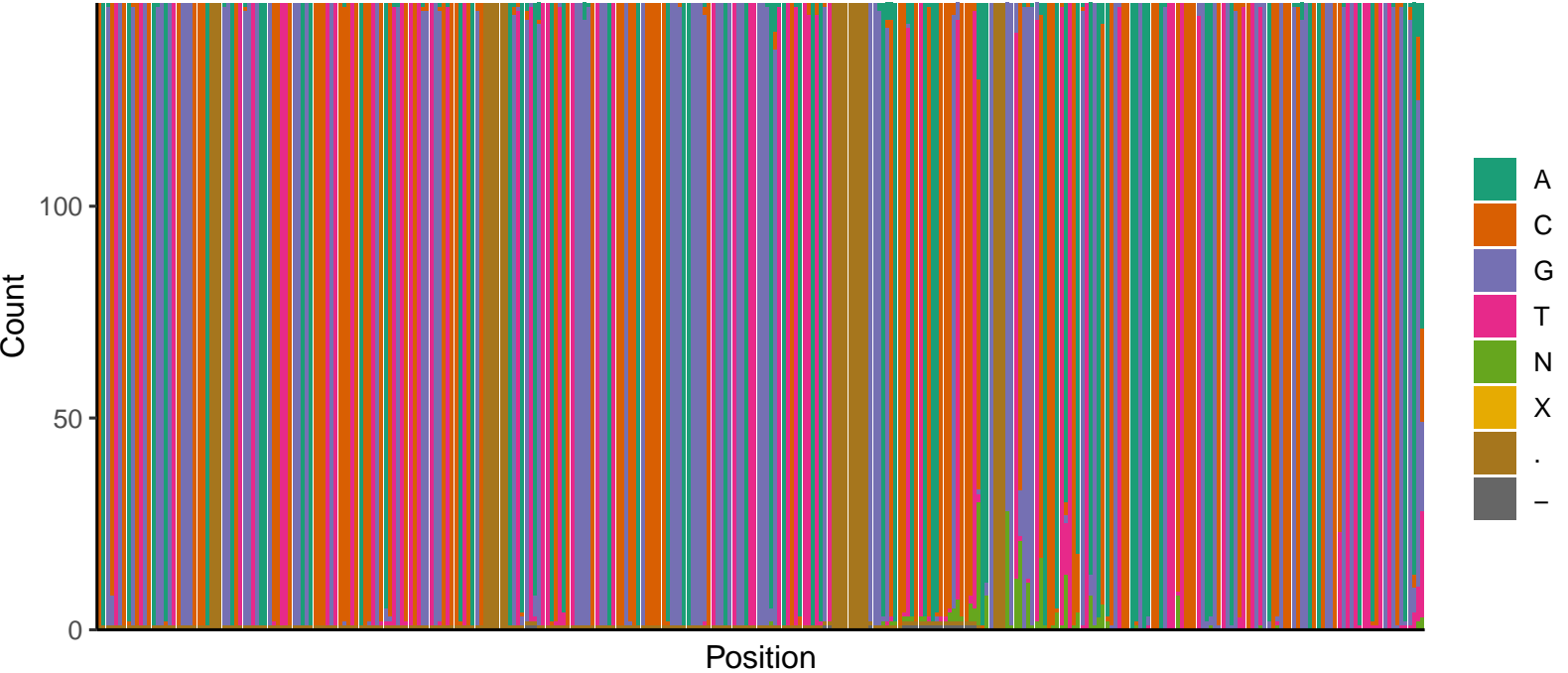
Gene IGHV4-34*01_A220G_A225G



Gene IGHV4-38-2*02_A220G



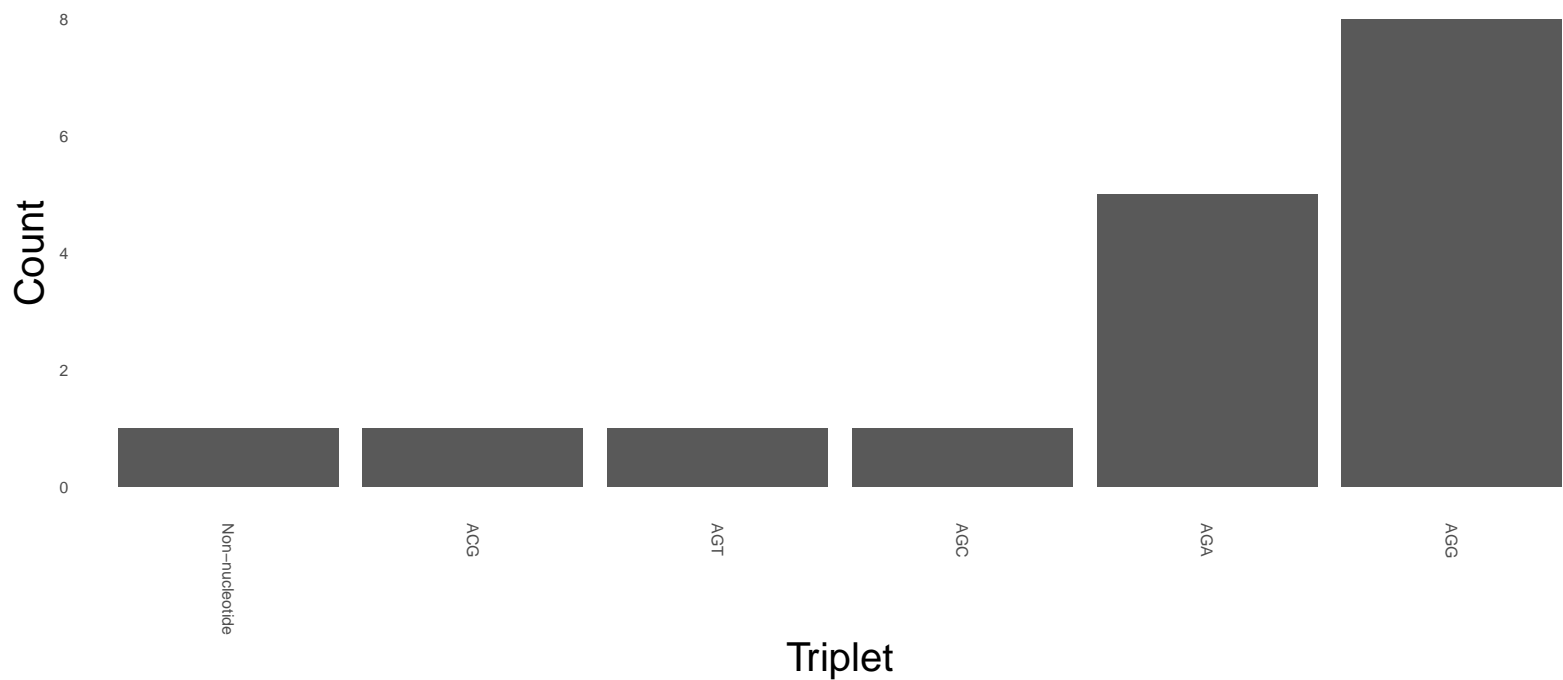
Gene IGHV4-39*07_A220G_A225G



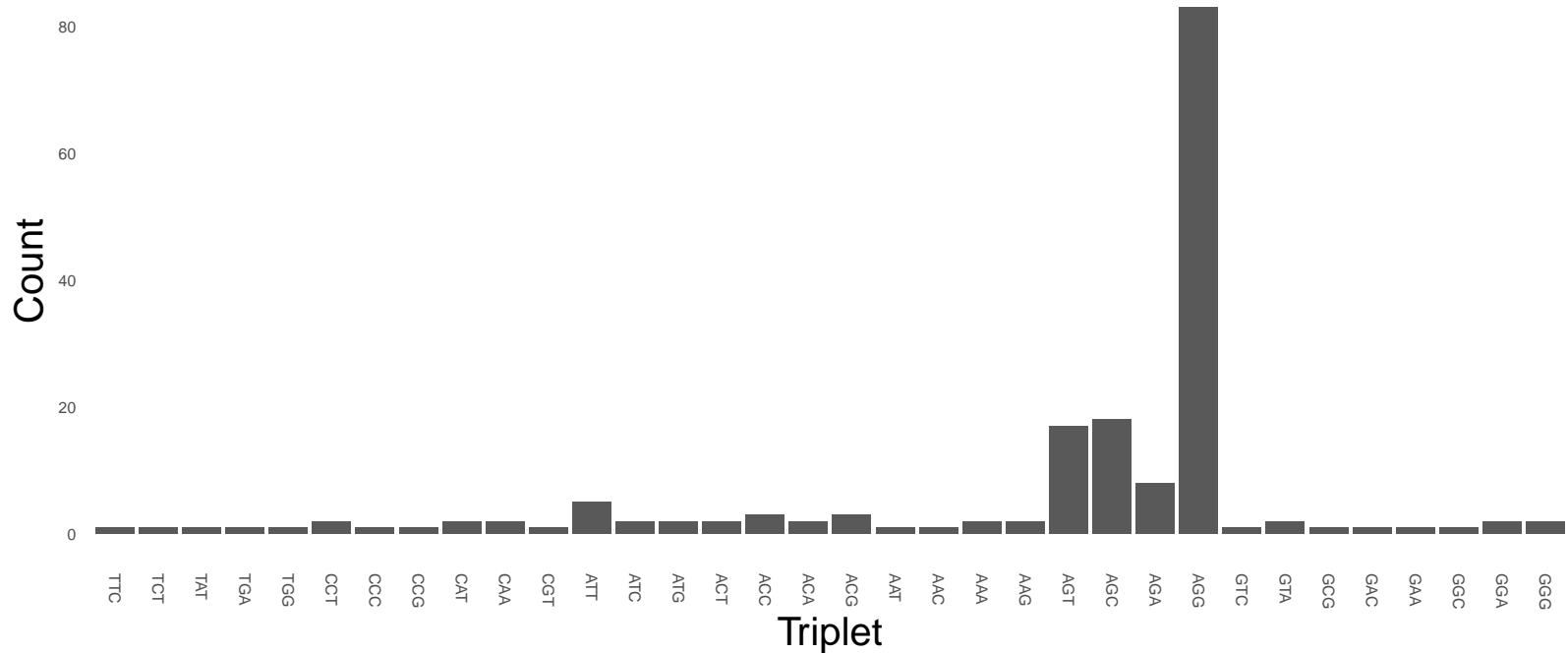
Gene IGHV7-4-1*02_A200T



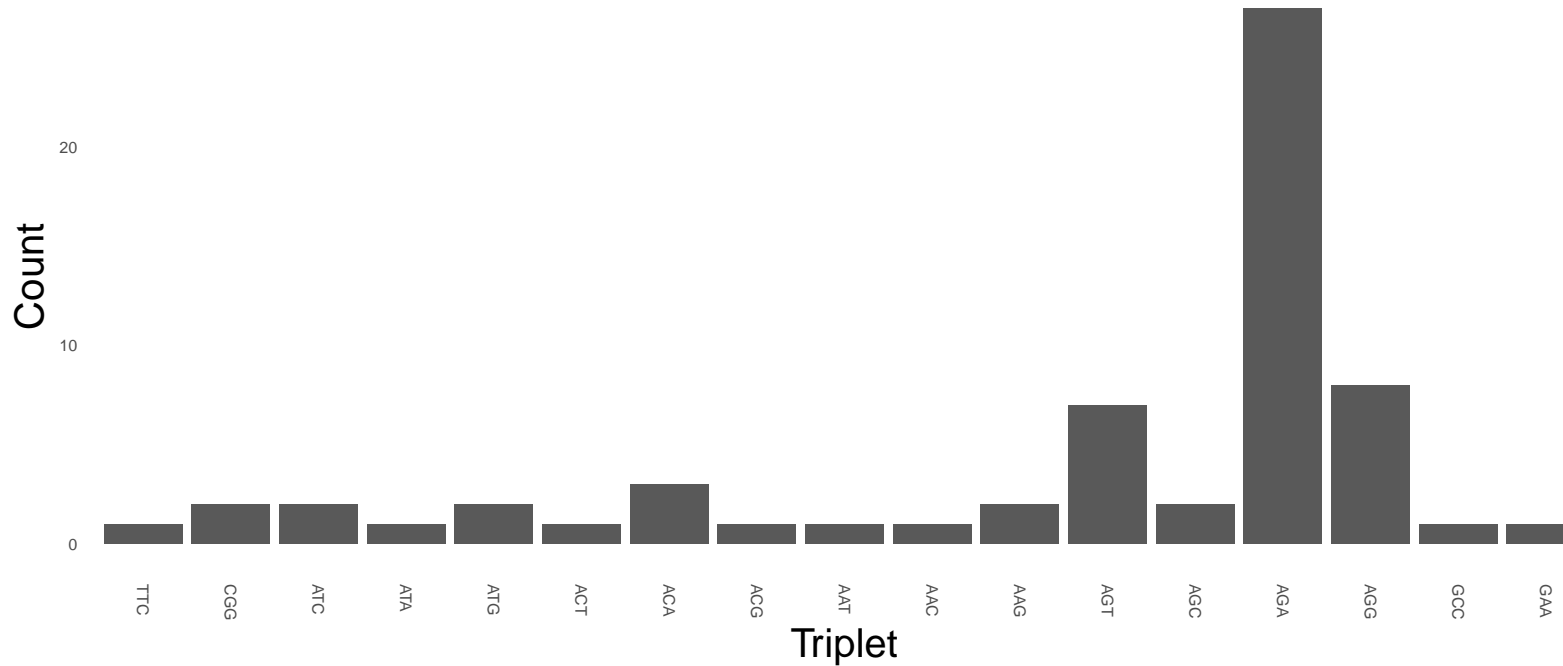
IGHV3-13*01_G290A_T300C- Final 3 nucleotides as a triplet



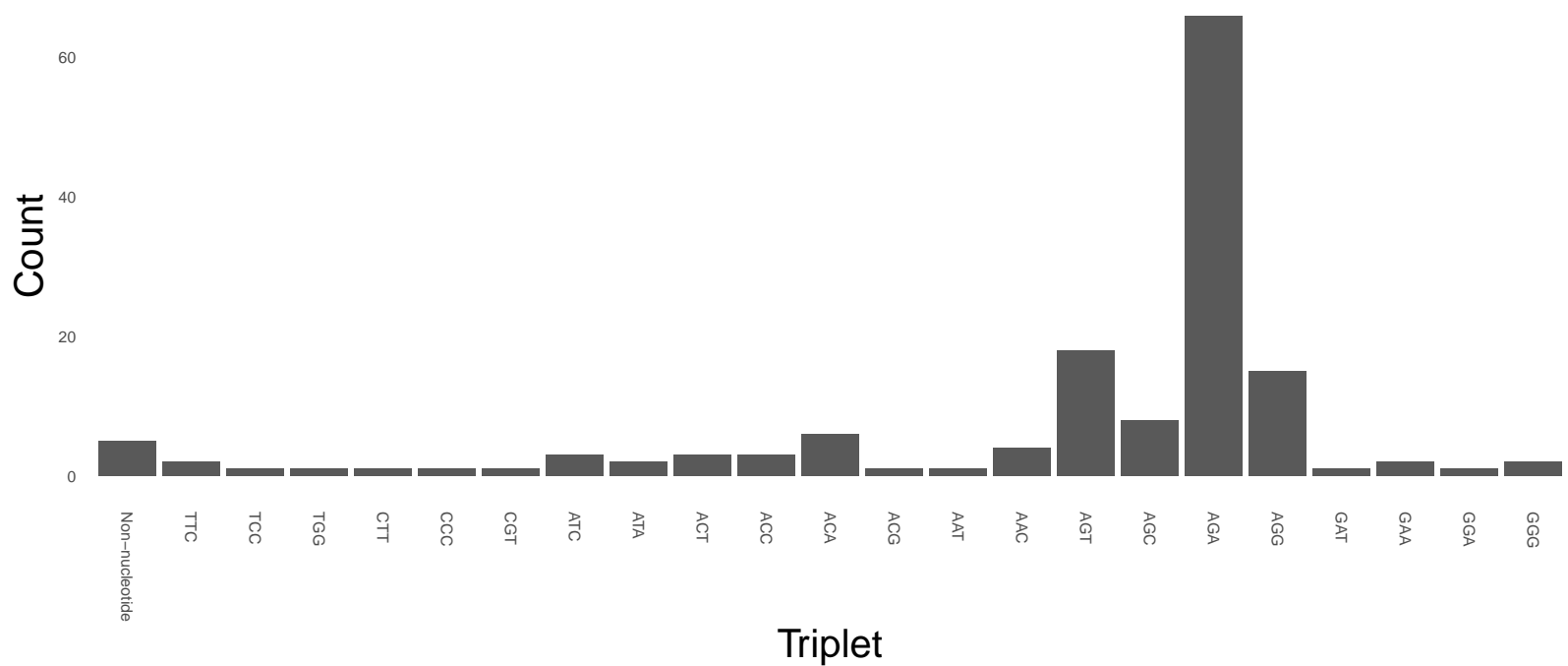
IGHV4-34*01_A220G_A225G- Final 3 nucleotides as a triplet



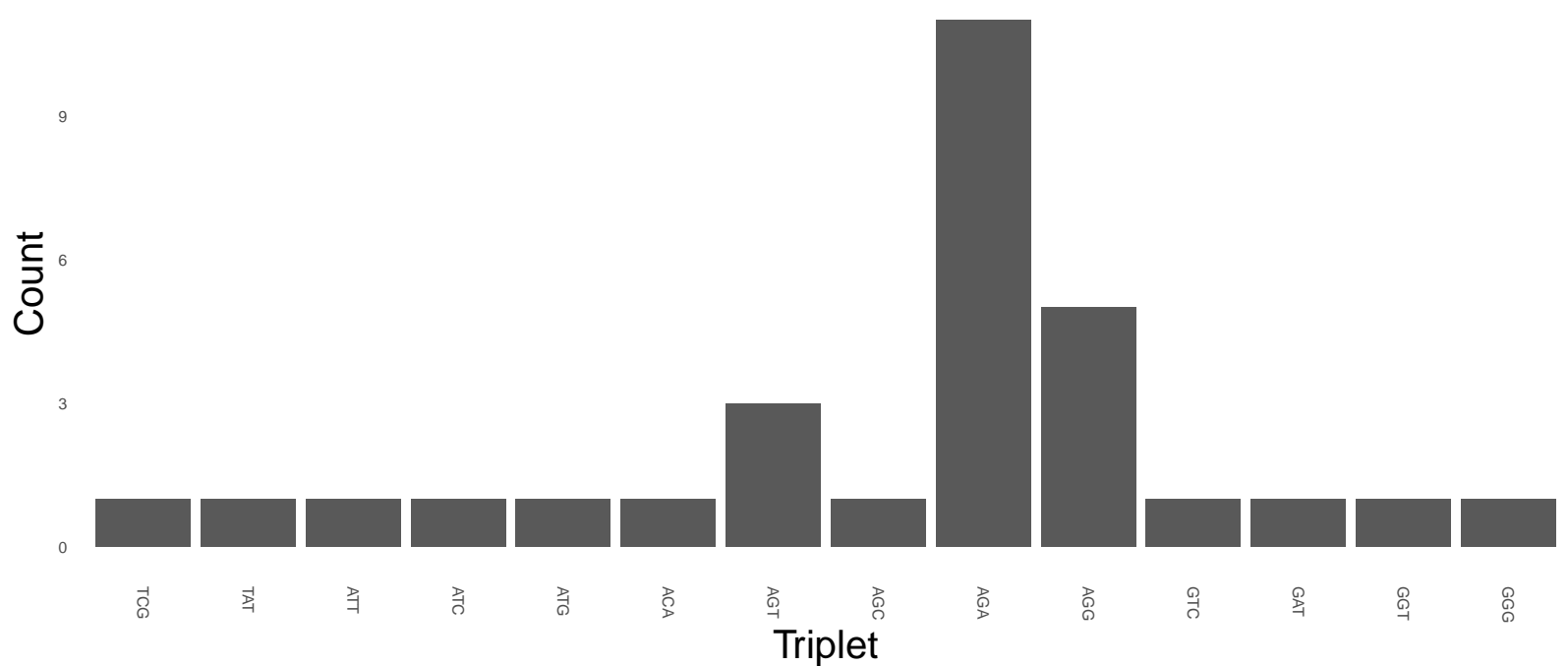
IGHV4-38-2*02_A220G- Final 3 nucleotides as a triplet



IGHV4-39*07_A220G_A225G- Final 3 nucleotides as a triplet

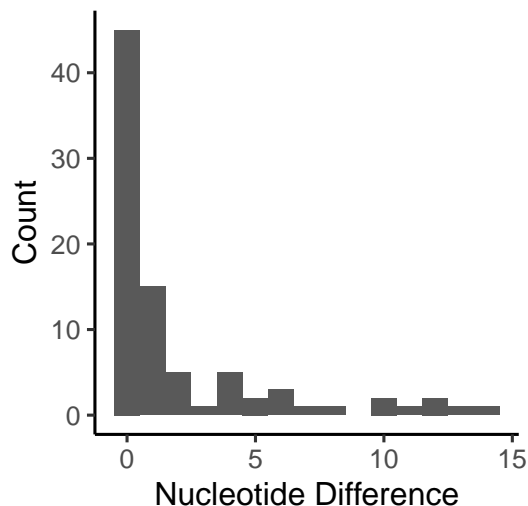


IGHV7-4-1*02_A200T- Final 3 nucleotides as a triplet



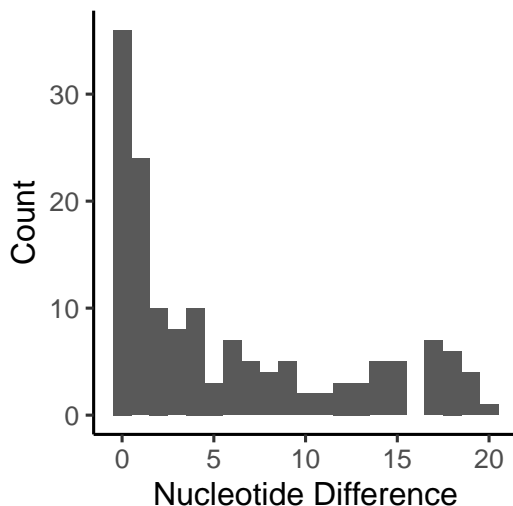
IGHV1-2*04

85 sequences assigned
45 (52.9%) exact matches, in which:
44 unique CDR3
5 unique J



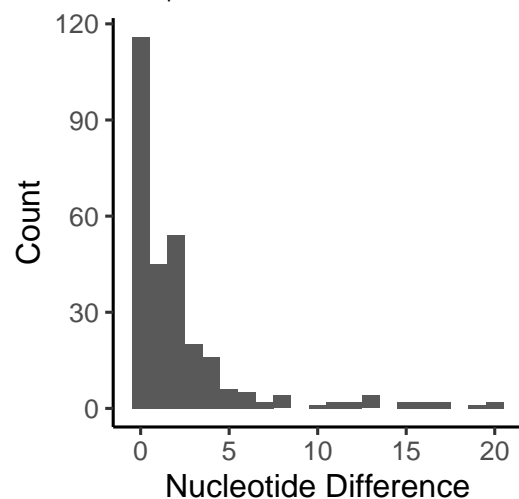
IGHV1-8*01

155 sequences assigned
36 (23.2%) exact matches, in which:
36 unique CDR3
4 unique J



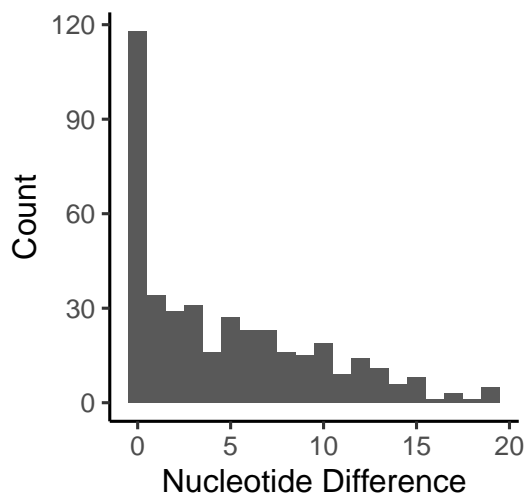
IGHV1-24*01

290 sequences assigned
116 (40%) exact matches, in which:
115 unique CDR3
5 unique J



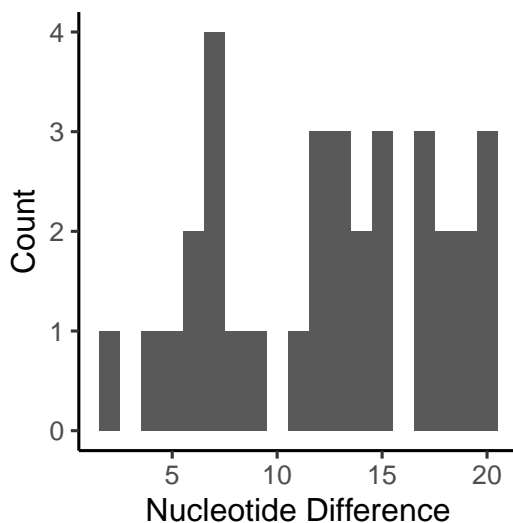
IGHV1-2*06

419 sequences assigned
118 (28.2%) exact matches, in which:
115 unique CDR3
5 unique J



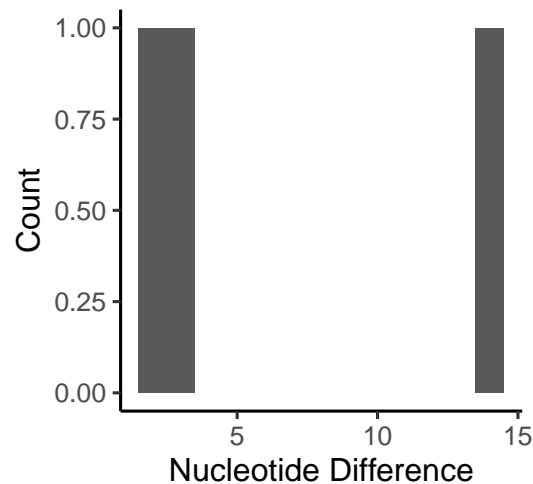
IGHV1-8*02

37 sequences assigned
No exact matches.



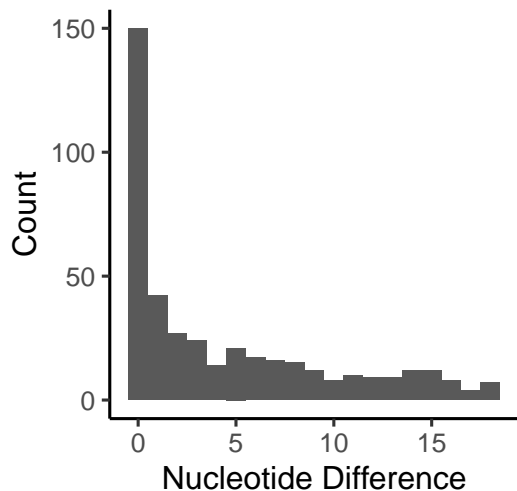
IGHV1-45*02

3 sequences assigned
No exact matches.



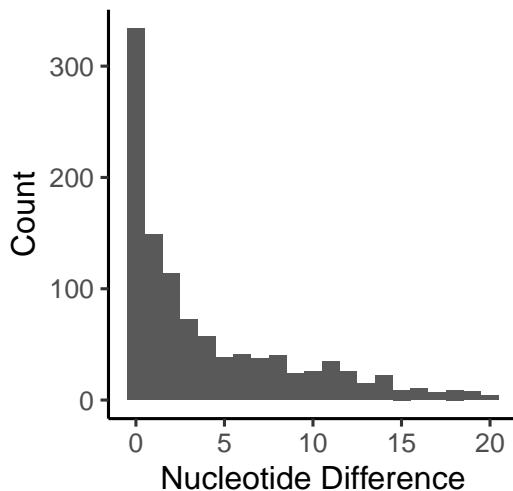
IGHV1-3*01

429 sequences assigned
150 (35%) exact matches, in which:
142 unique CDR3
6 unique J



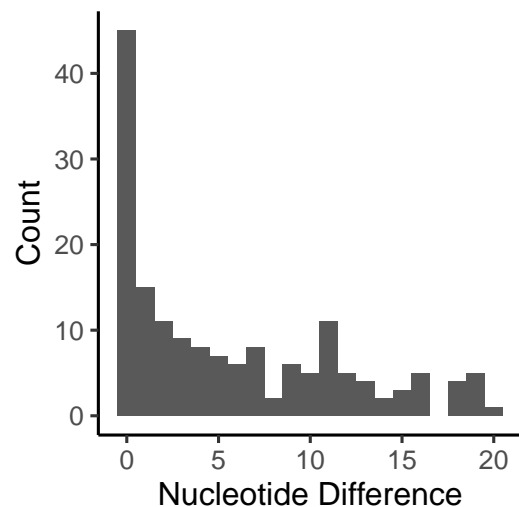
IGHV1-18*01

1101 sequences assigned
334 (30.3%) exact matches, in which:
323 unique CDR3
6 unique J



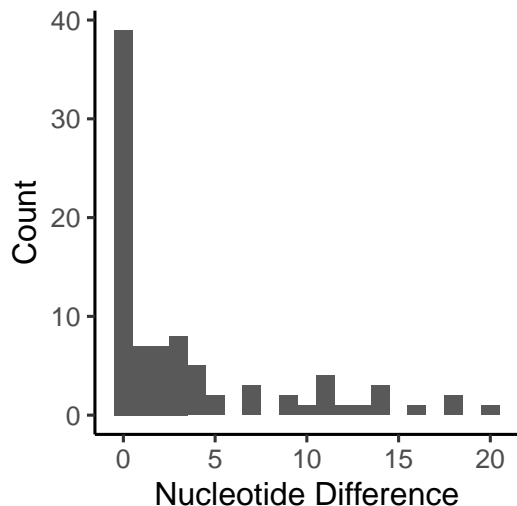
IGHV1-46*01

179 sequences assigned
45 (25.1%) exact matches, in which:
41 unique CDR3
5 unique J



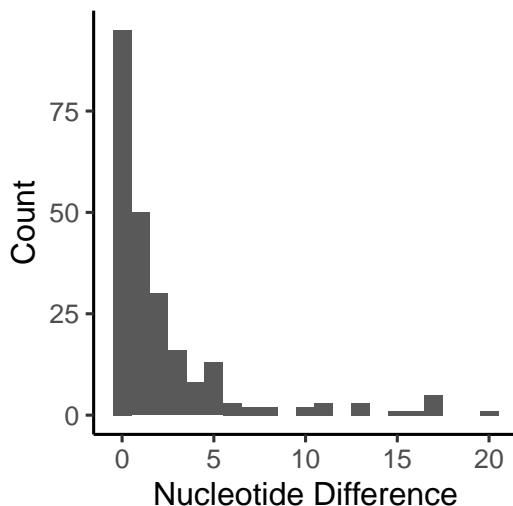
IGHV1-46*03

89 sequences assigned
39 (43.8%) exact matches, in which:
37 unique CDR3
4 unique J



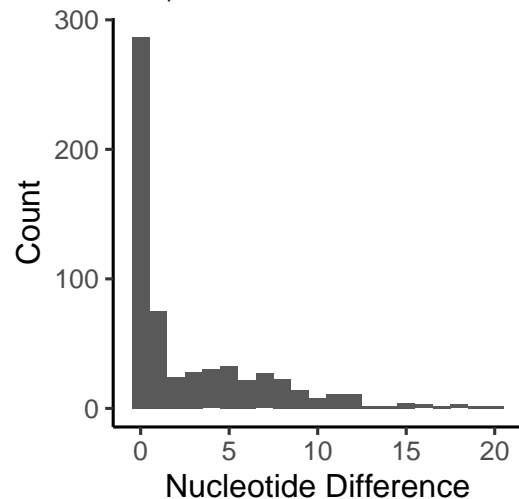
IGHV1-69*04

239 sequences assigned
95 (39.7%) exact matches, in which:
93 unique CDR3
6 unique J



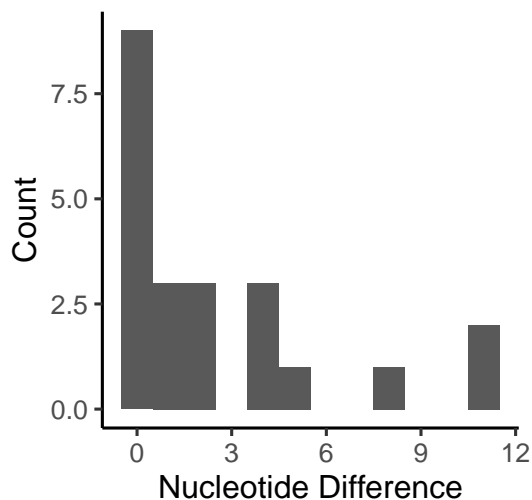
IGHV2-5*02

626 sequences assigned
287 (45.8%) exact matches, in which:
276 unique CDR3
6 unique J



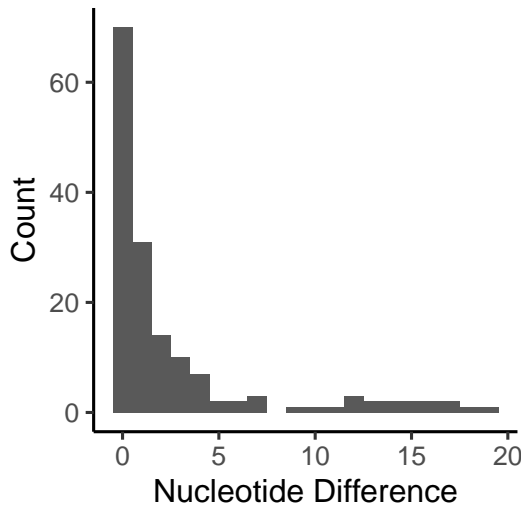
IGHV1-58*02

33 sequences assigned
9 (27.3%) exact matches, in which:
9 unique CDR3
2 unique J



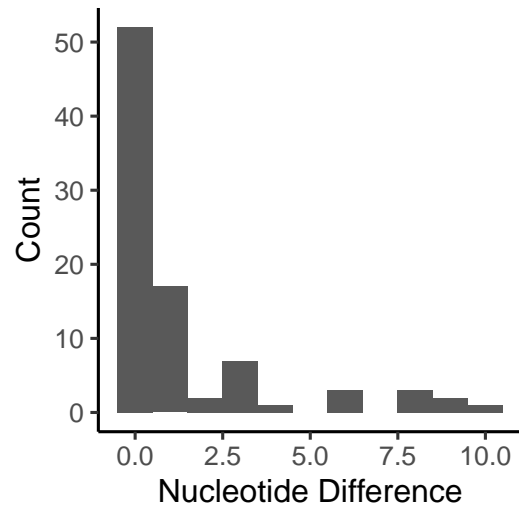
IGHV1-69*10

168 sequences assigned
70 (41.7%) exact matches, in which:
69 unique CDR3
6 unique J



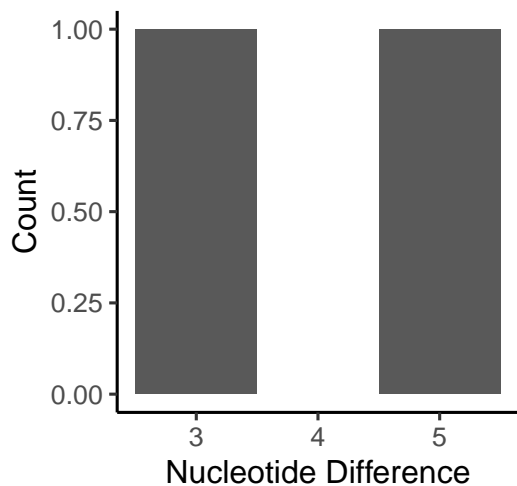
IGHV2-26*01

89 sequences assigned
52 (58.4%) exact matches, in which:
51 unique CDR3
6 unique J



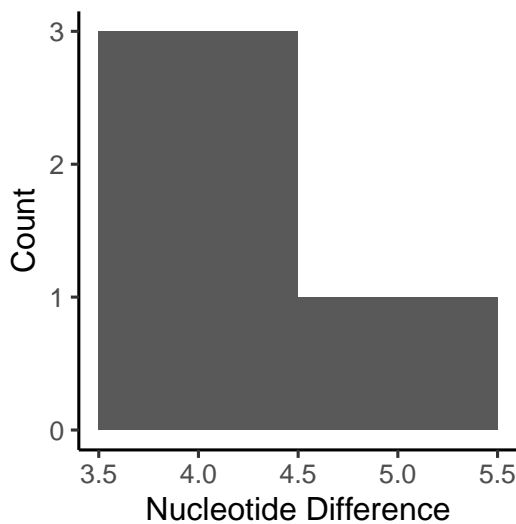
IGHV1-68*02

2 sequences assigned
No exact matches.



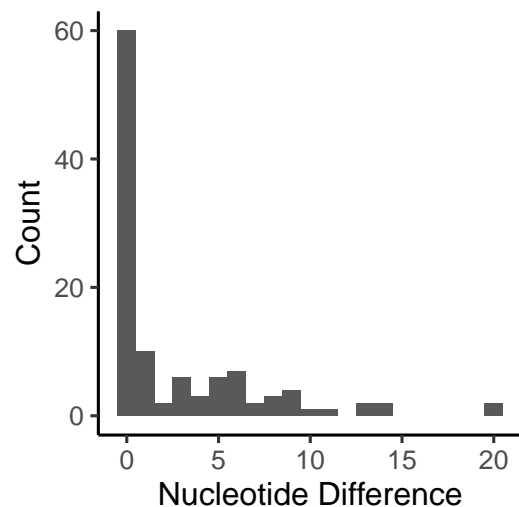
IGHV1-NL1*01

4 sequences assigned
No exact matches.



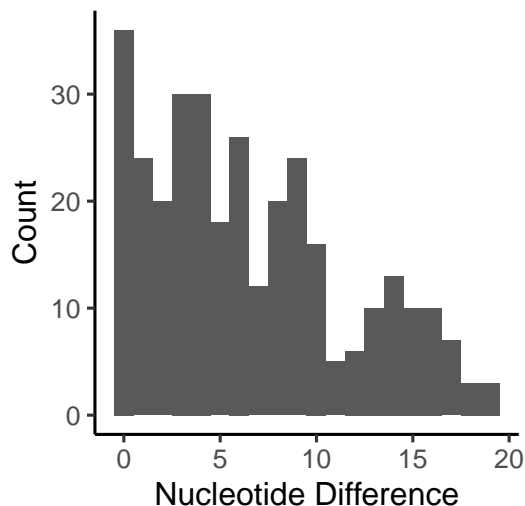
IGHV2-70*15

113 sequences assigned
60 (53.1%) exact matches, in which:
60 unique CDR3
4 unique J



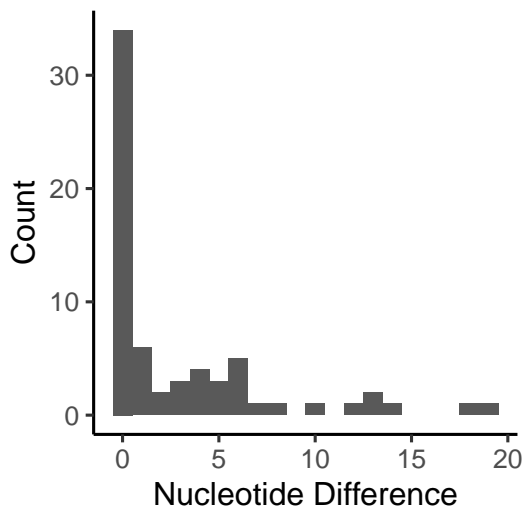
IGHV3-7*01

342 sequences assigned
36 (10.5%) exact matches, in which:
36 unique CDR3
4 unique J



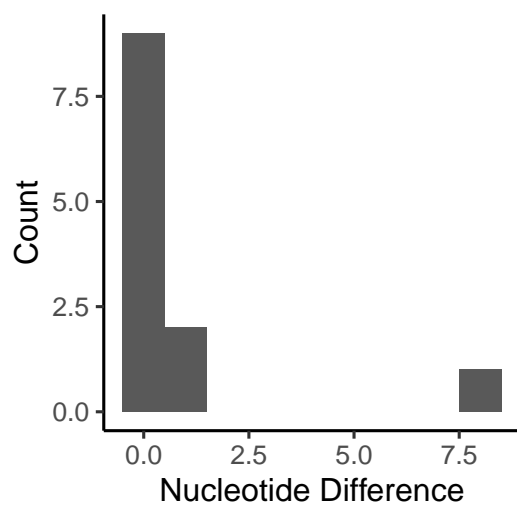
IGHV3-11*01

67 sequences assigned
34 (50.7%) exact matches, in which:
33 unique CDR3
5 unique J



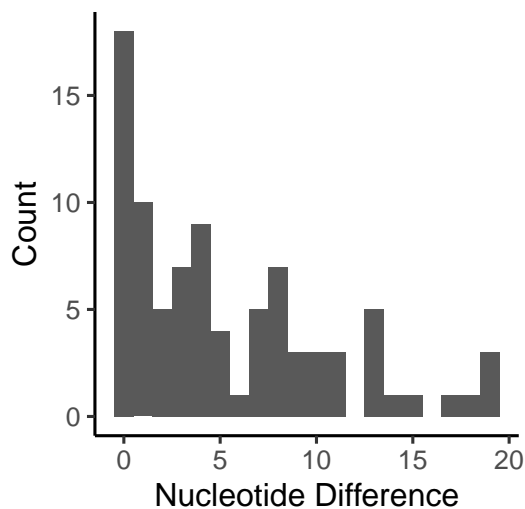
IGHV3-13*01

13 sequences assigned
9 (69.2%) exact matches, in which:
9 unique CDR3
4 unique J



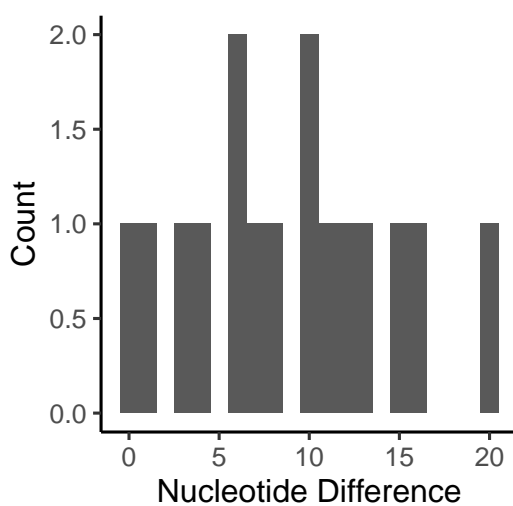
IGHV3-7*04

95 sequences assigned
18 (18.9%) exact matches, in which:
17 unique CDR3
5 unique J



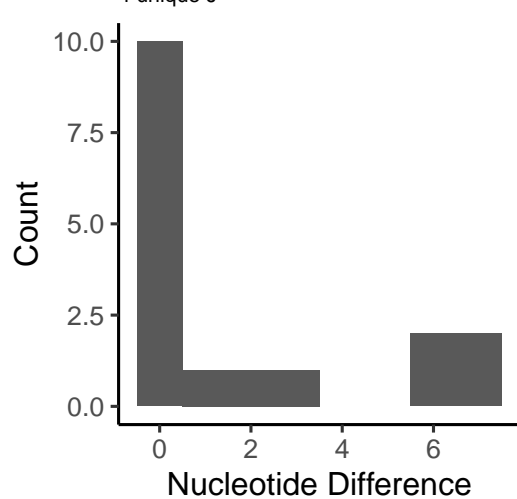
IGHV3-11*04

19 sequences assigned
1 (5.3%) exact matches, in which:
1 unique CDR3
1 unique J



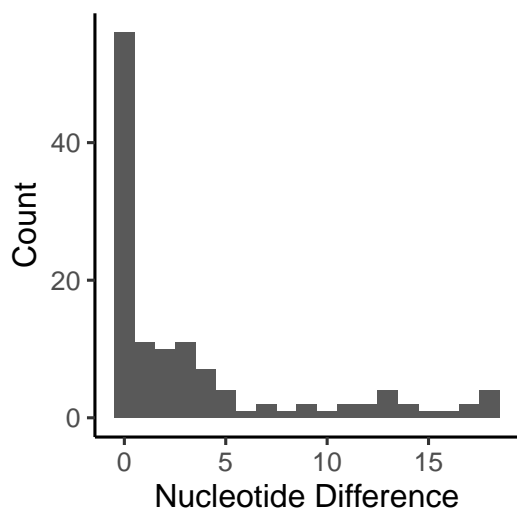
IGHV3-13*01_G290A_T

17 sequences assigned
10 (58.8%) exact matches, in which:
9 unique CDR3
4 unique J



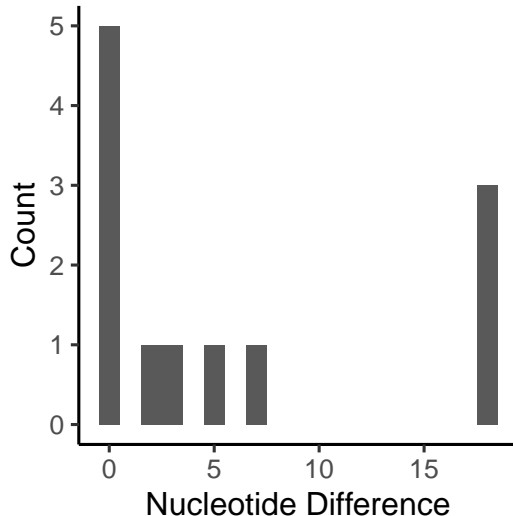
IGHV3-9*01

126 sequences assigned
56 (44.4%) exact matches, in which:
55 unique CDR3
6 unique J



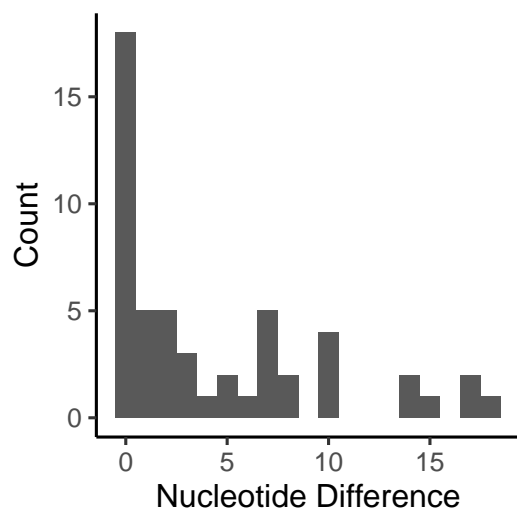
IGHV3-11*06

19 sequences assigned
5 (26.3%) exact matches, in which:
5 unique CDR3
3 unique J



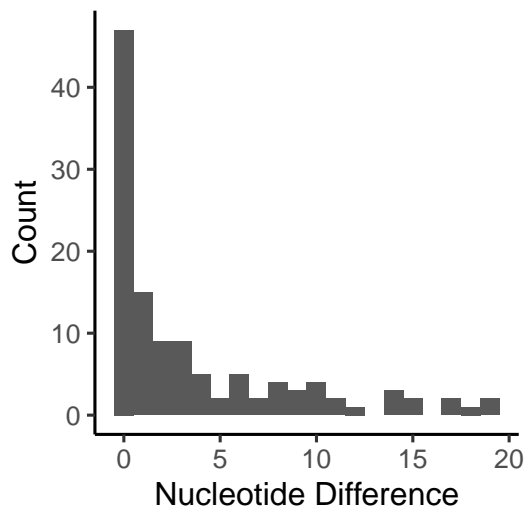
IGHV3-15*01

57 sequences assigned
18 (31.6%) exact matches, in which:
17 unique CDR3
4 unique J



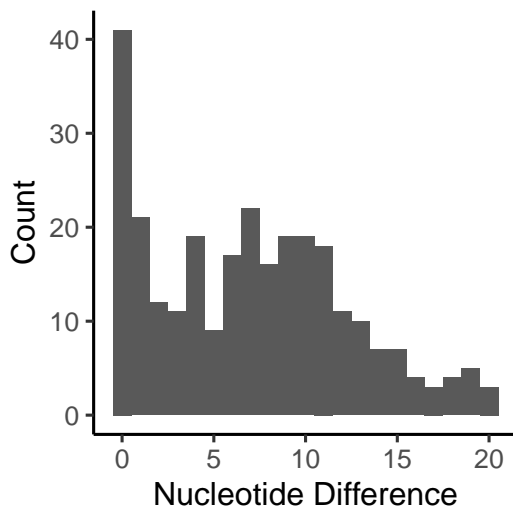
IGHV3-15*07

127 sequences assigned
47 (37%) exact matches, in which:
47 unique CDR3
4 unique J



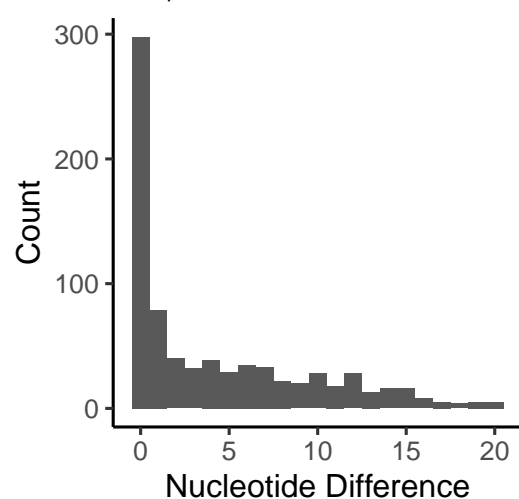
IGHV3-23*01

287 sequences assigned
41 (14.3%) exact matches, in which:
40 unique CDR3
4 unique J



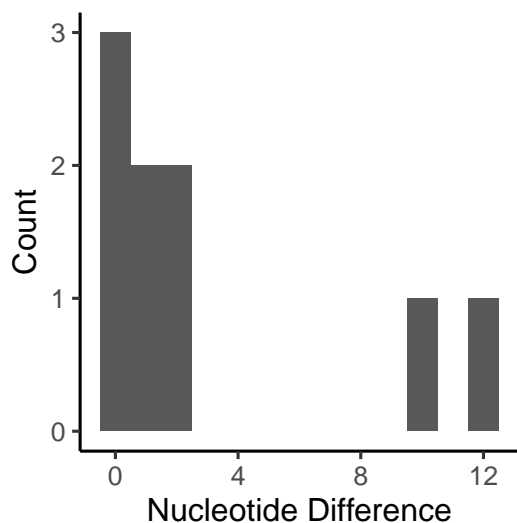
IGHV3-30*04

789 sequences assigned
298 (37.8%) exact matches, in which:
290 unique CDR3
6 unique J



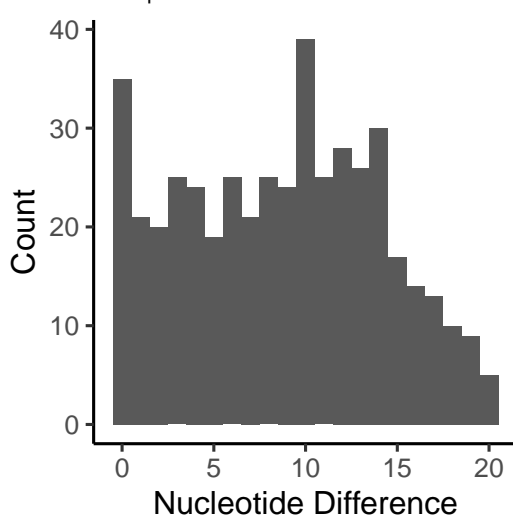
IGHV3-20*04

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



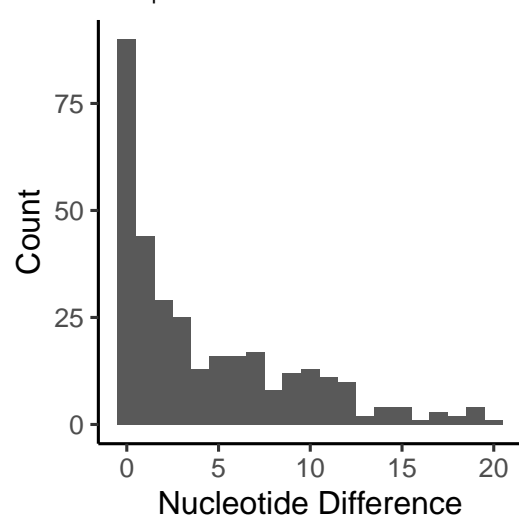
IGHV3-23*04

470 sequences assigned
35 (7.4%) exact matches, in which:
35 unique CDR3
4 unique J



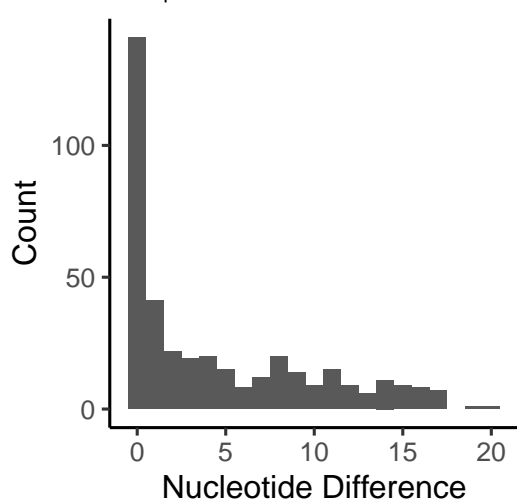
IGHV3-33*01

330 sequences assigned
90 (27.3%) exact matches, in which:
90 unique CDR3
5 unique J



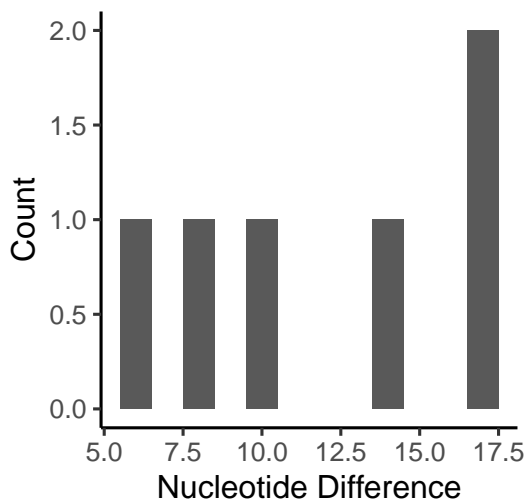
IGHV3-21*01

403 sequences assigned
141 (35%) exact matches, in which:
136 unique CDR3
6 unique J



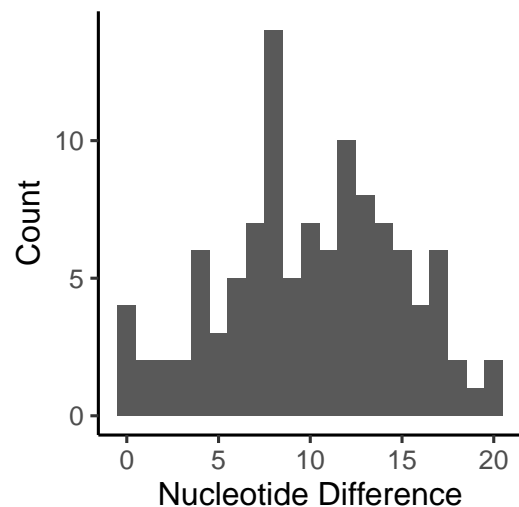
IGHV3-30-3*01

9 sequences assigned
No exact matches.



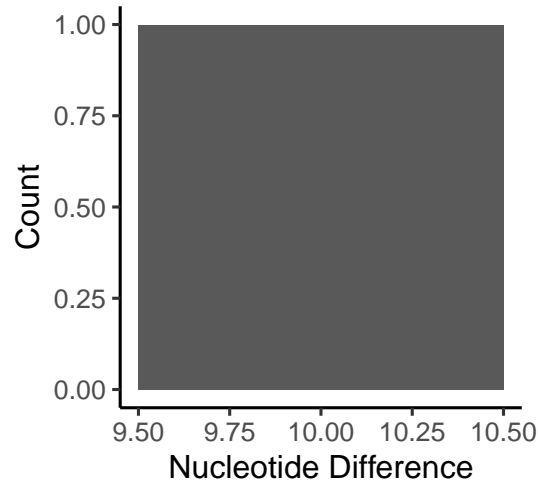
IGHV3-33*08

115 sequences assigned
4 (3.5%) exact matches, in which:
4 unique CDR3
2 unique J



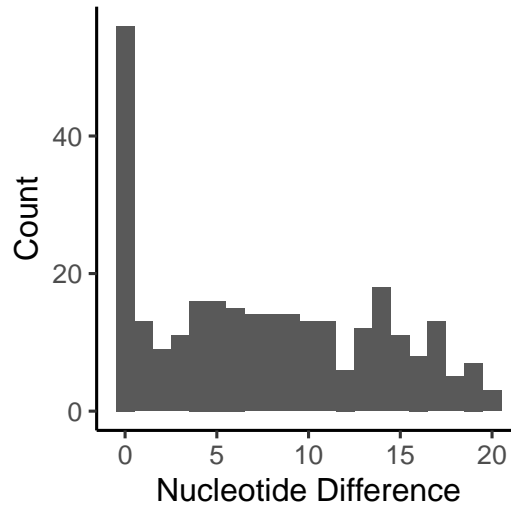
IGHV3-38-3*01

1 sequences assigned
No exact matches.



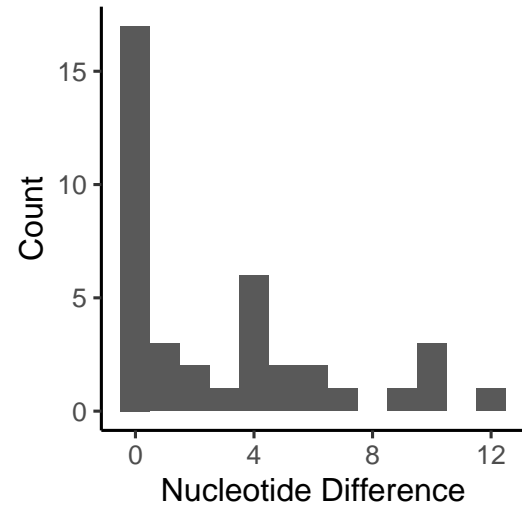
IGHV3-48*04

307 sequences assigned
56 (18.2%) exact matches, in which:
54 unique CDR3
5 unique J



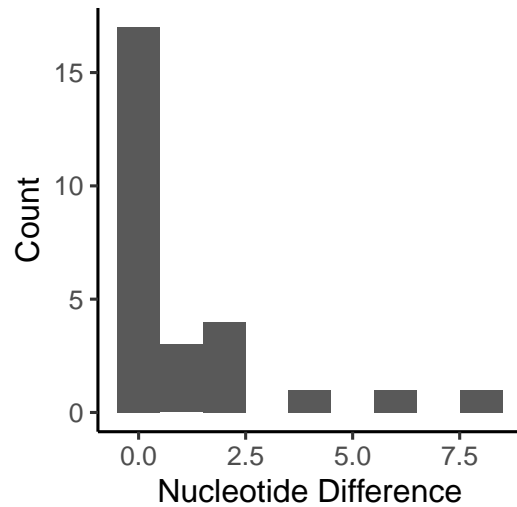
IGHV3-64*01

40 sequences assigned
17 (42.5%) exact matches, in which:
17 unique CDR3
5 unique J



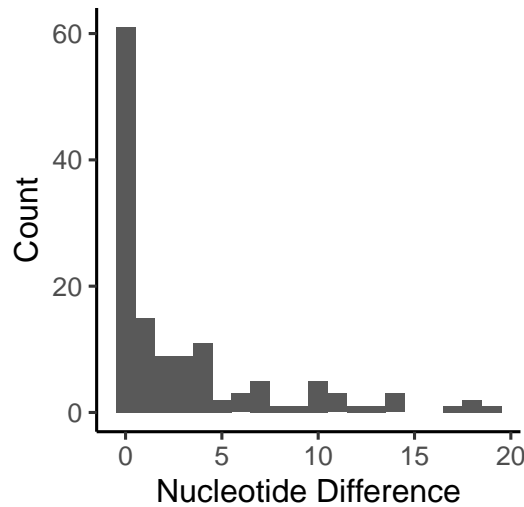
IGHV3-43*01

27 sequences assigned
17 (63%) exact matches, in which:
16 unique CDR3
3 unique J



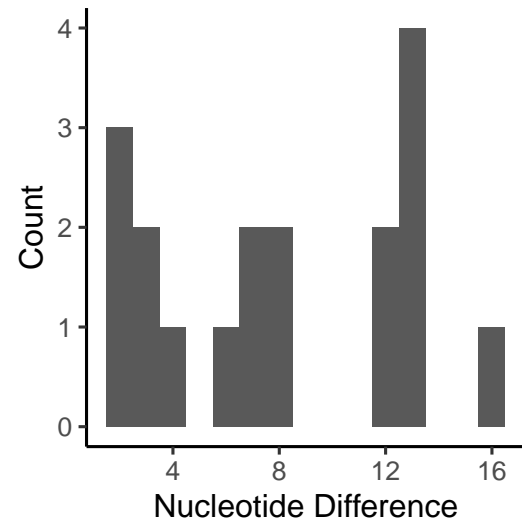
IGHV3-49*03

137 sequences assigned
61 (44.5%) exact matches, in which:
58 unique CDR3
5 unique J



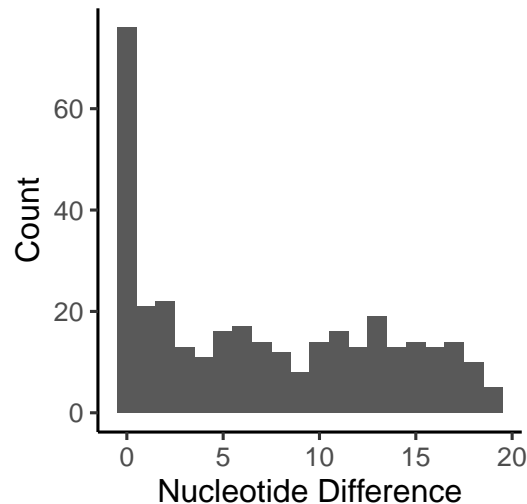
IGHV3-64*04

18 sequences assigned
No exact matches.



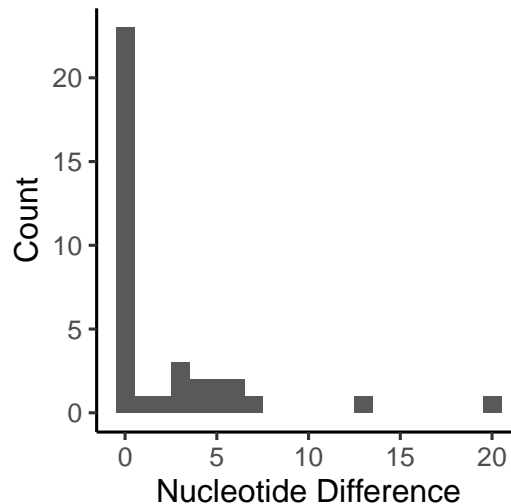
IGHV3-48*01

348 sequences assigned
76 (21.8%) exact matches, in which:
75 unique CDR3
6 unique J



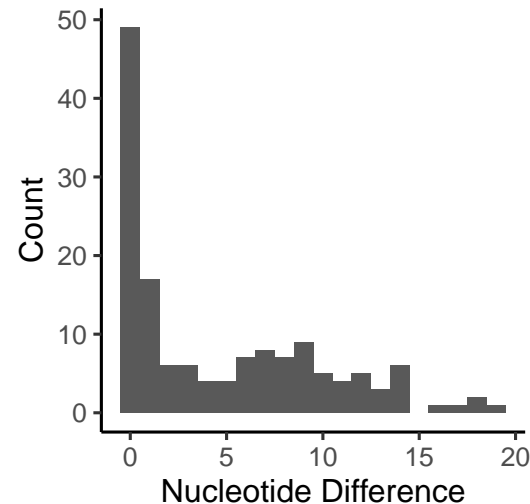
IGHV3-53*04

37 sequences assigned
23 (62.2%) exact matches, in which:
20 unique CDR3
4 unique J



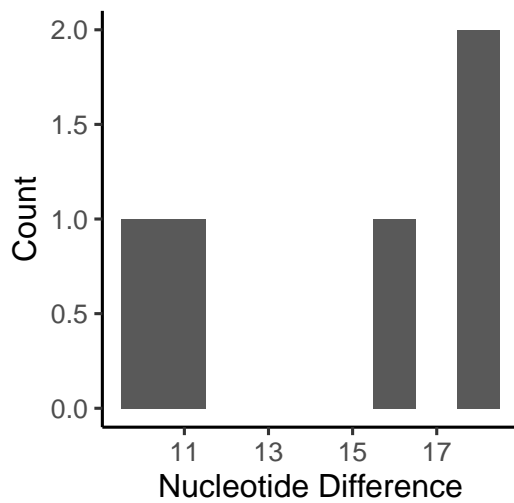
IGHV3-66*01

150 sequences assigned
49 (32.7%) exact matches, in which:
46 unique CDR3
5 unique J



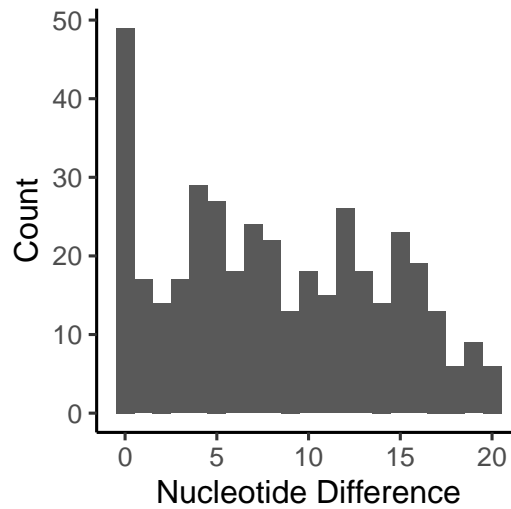
IGHV3-69-1*01

6 sequences assigned
No exact matches.



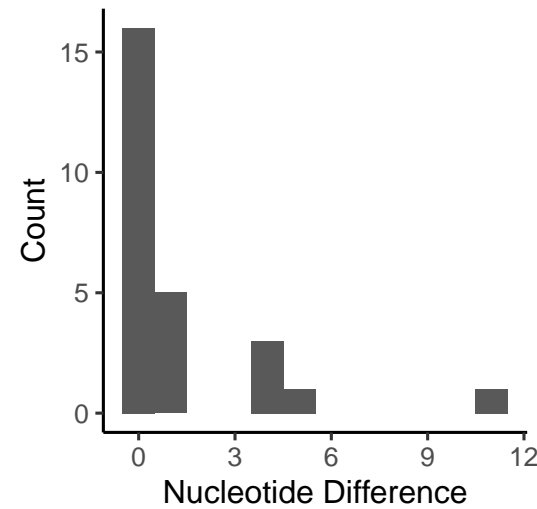
IGHV3-74*01

424 sequences assigned
49 (11.6%) exact matches, in which:
47 unique CDR3
6 unique J



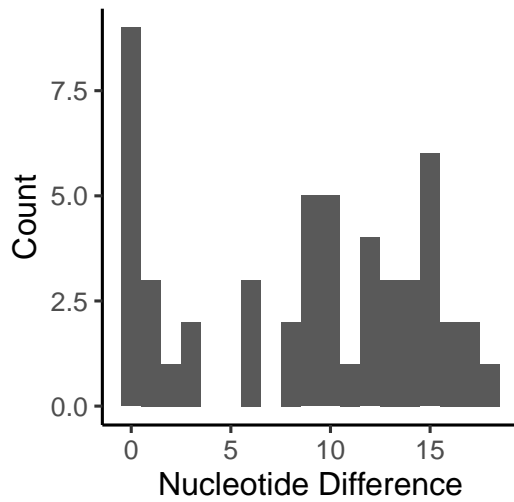
IGHV3-64D*06

29 sequences assigned
16 (55.2%) exact matches, in which:
15 unique CDR3
4 unique J



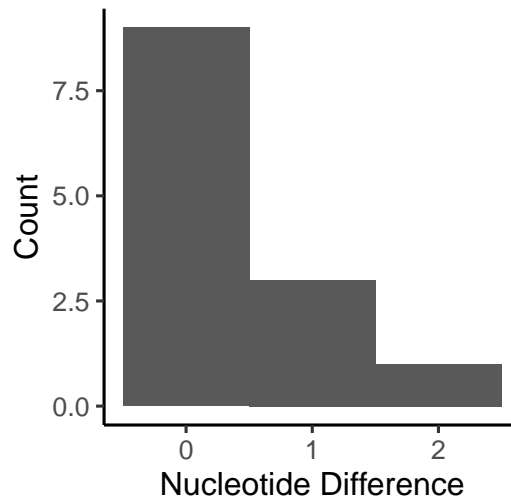
IGHV3-72*01

55 sequences assigned
9 (16.4%) exact matches, in which:
9 unique CDR3
2 unique J



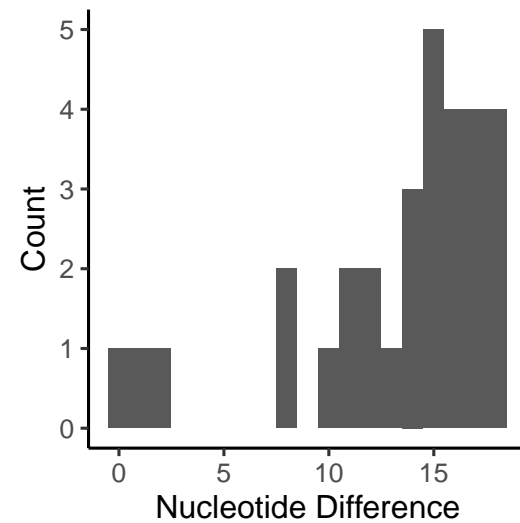
IGHV3-43D*03

13 sequences assigned
9 (69.2%) exact matches, in which:
9 unique CDR3
3 unique J



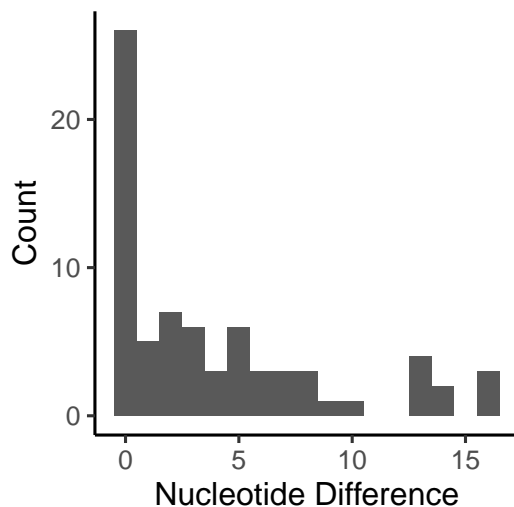
IGHV3-NL1*01

32 sequences assigned
1 (3.1%) exact matches, in which:
1 unique CDR3
1 unique J



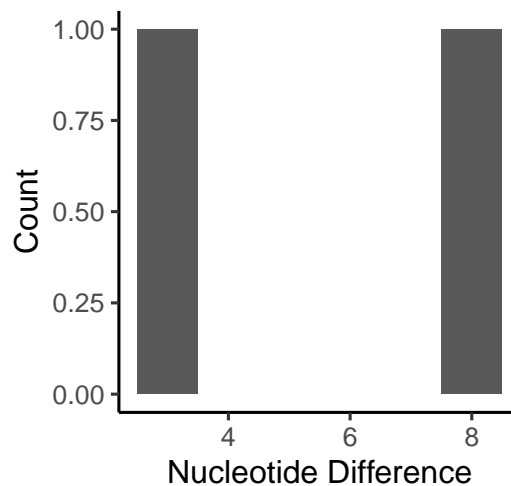
IGHV3-73*01

75 sequences assigned
26 (34.7%) exact matches, in which:
24 unique CDR3
4 unique J



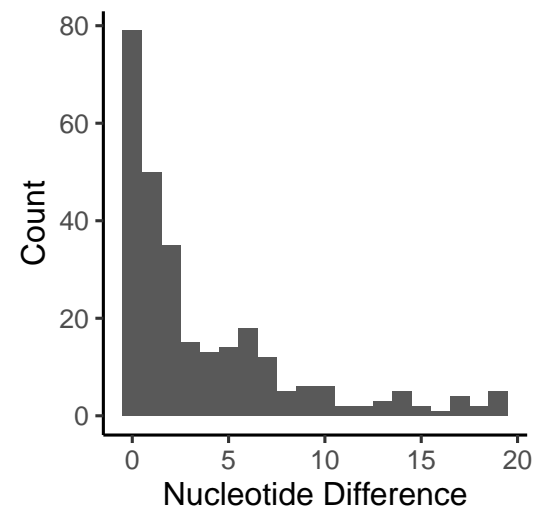
IGHV3-43D*04

2 sequences assigned
No exact matches.



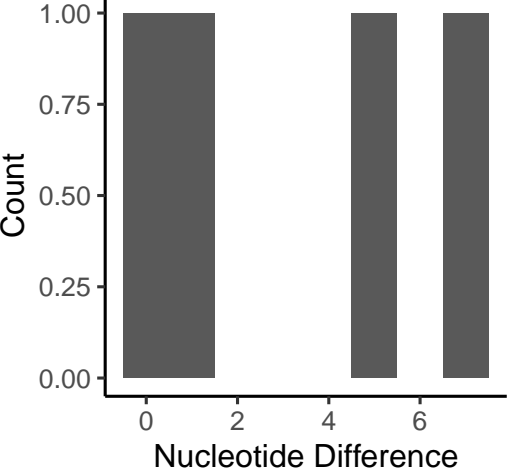
IGHV4-4*02

284 sequences assigned
79 (27.8%) exact matches, in which:
78 unique CDR3
6 unique J



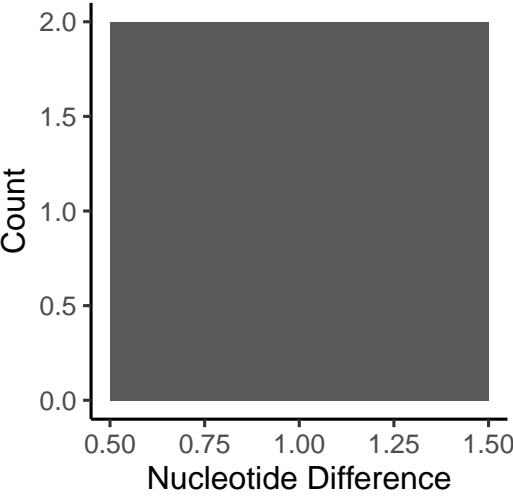
IGHV4-28*03

4 sequences assigned
1 (25%) exact matches, in which:
1 unique CDR3
1 unique J



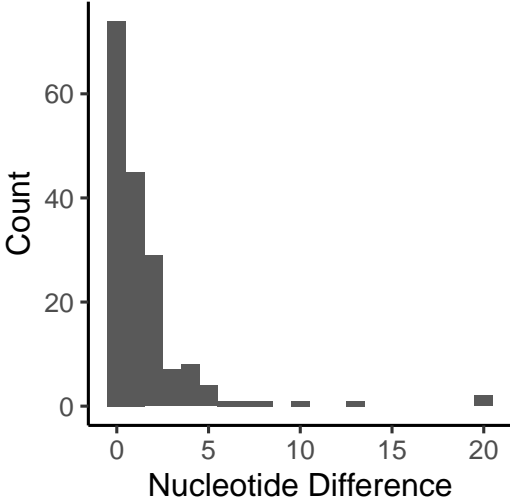
IGHV4-30-4*07

2 sequences assigned
No exact matches.



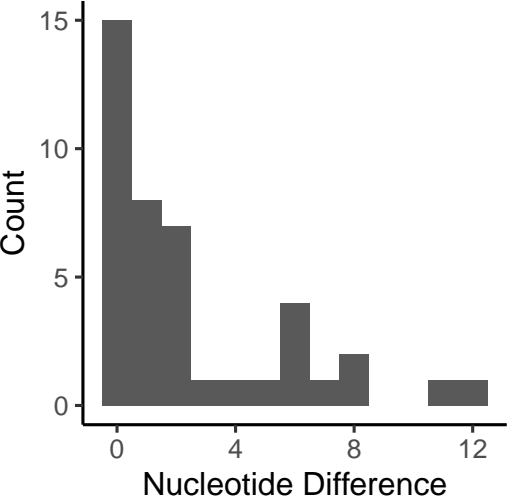
IGHV4-34*01_A220G_A2

176 sequences assigned
74 (42%) exact matches, in which:
73 unique CDR3
5 unique J



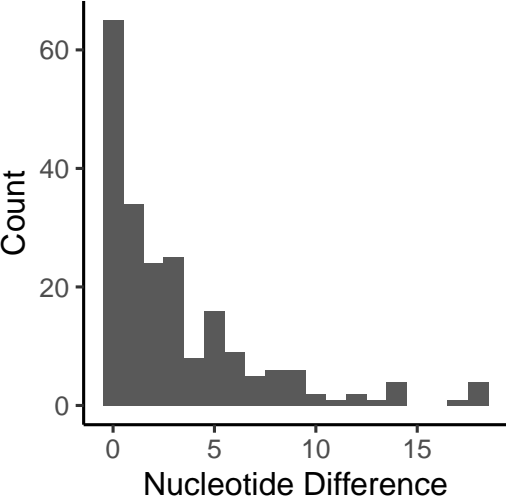
IGHV4-30-2*01

43 sequences assigned
15 (34.9%) exact matches, in which:
14 unique CDR3
5 unique J



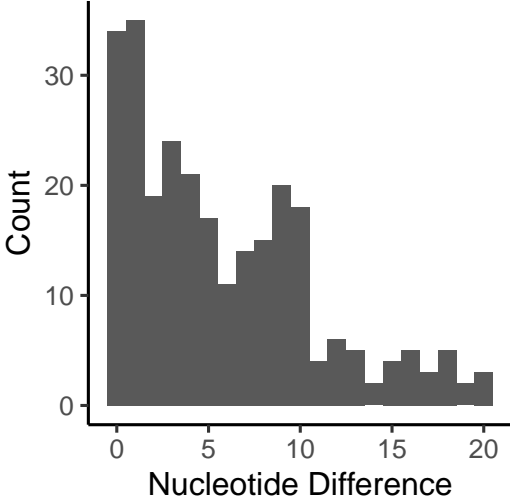
IGHV4-31*03

215 sequences assigned
65 (30.2%) exact matches, in which:
64 unique CDR3
4 unique J



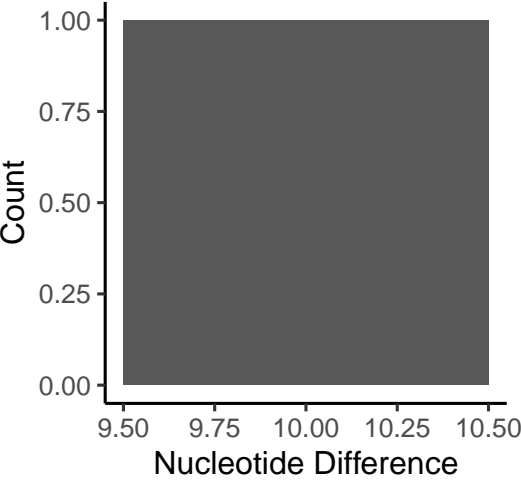
IGHV4-38-2*02

276 sequences assigned
34 (12.3%) exact matches, in which:
34 unique CDR3
4 unique J



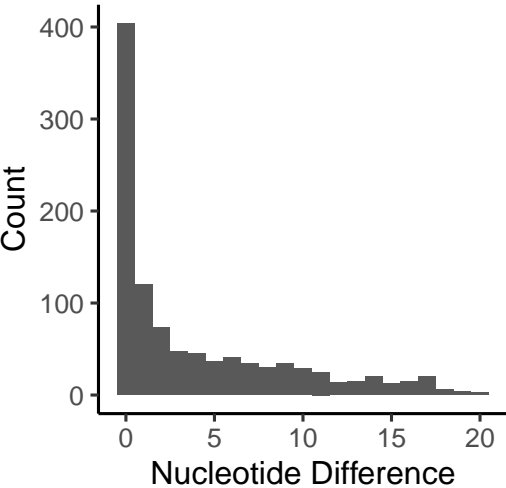
IGHV4-30-4*01

1 sequences assigned
No exact matches.



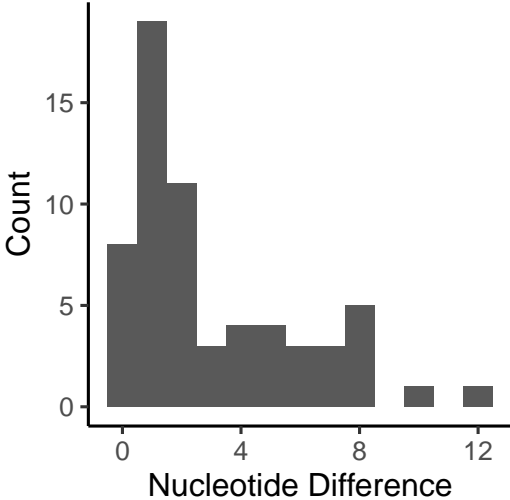
IGHV4-34*01

1069 sequences assigned
404 (37.8%) exact matches, in which:
401 unique CDR3
6 unique J



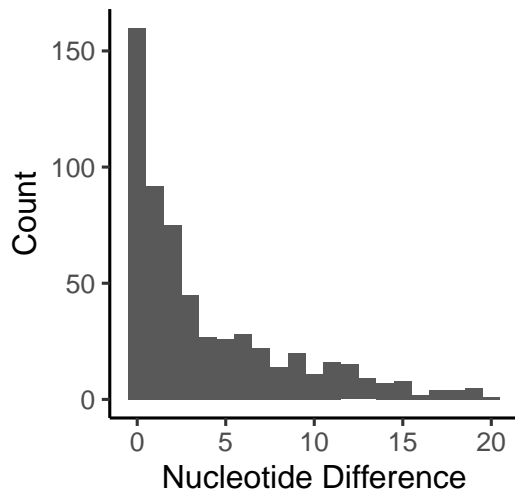
IGHV4-38-2*02_A220G

63 sequences assigned
8 (12.7%) exact matches, in which:
8 unique CDR3
3 unique J



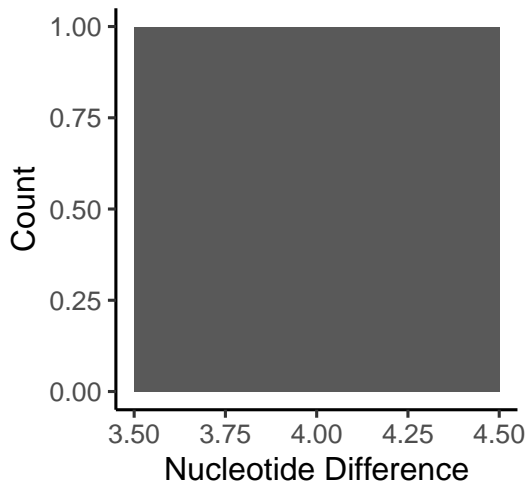
IGHV4-39*01

618 sequences assigned
160 (25.9%) exact matches, in which:
151 unique CDR3
6 unique J



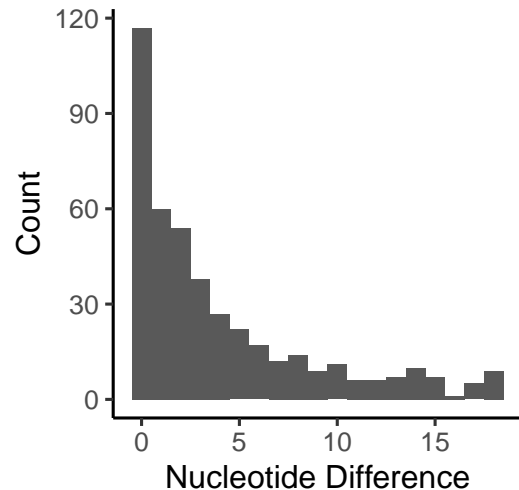
IGHV4-55*08

1 sequences assigned
No exact matches.



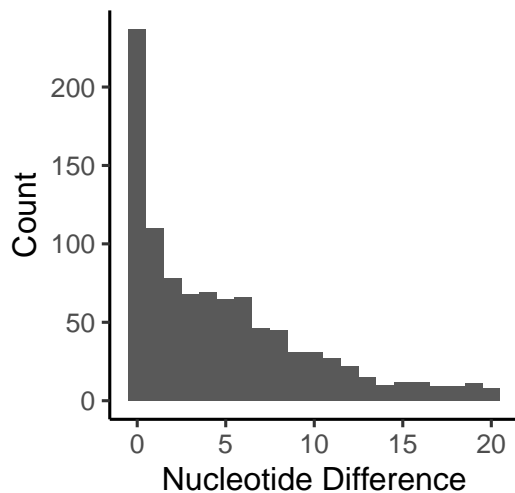
IGHV4-59*08

441 sequences assigned
117 (26.5%) exact matches, in which:
112 unique CDR3
5 unique J



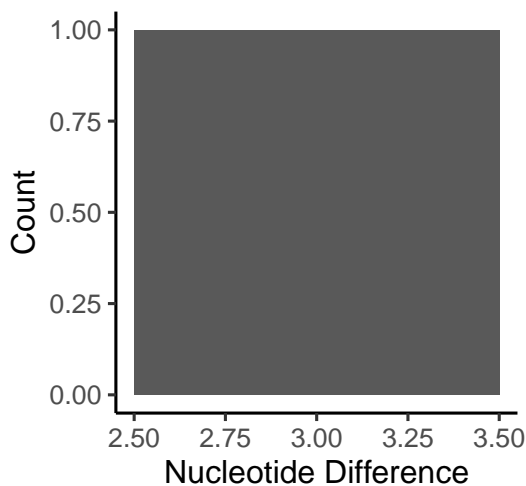
IGHV4-39*07

1021 sequences assigned
237 (23.2%) exact matches, in which:
235 unique CDR3
6 unique J



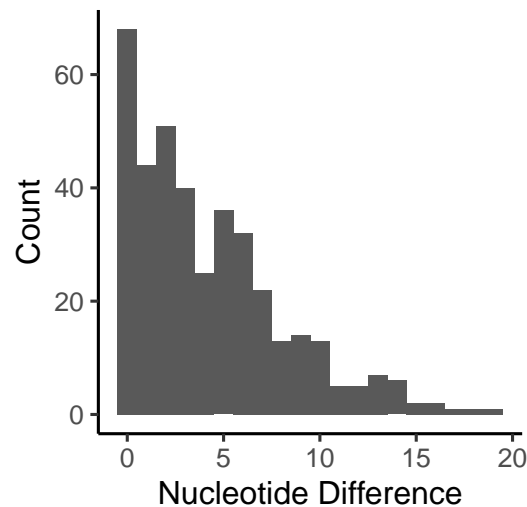
IGHV4-55*09

1 sequences assigned
No exact matches.



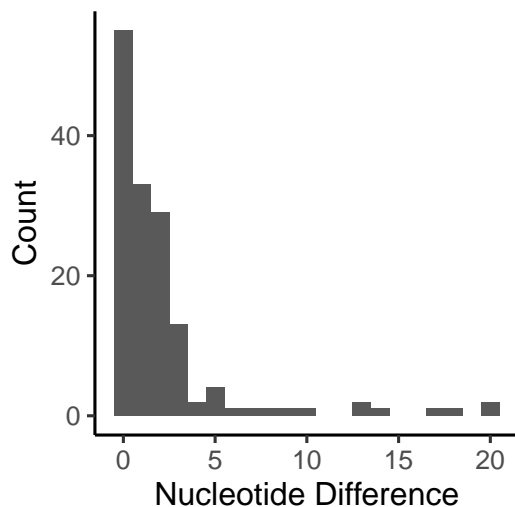
IGHV4-59*12

390 sequences assigned
68 (17.4%) exact matches, in which:
68 unique CDR3
5 unique J



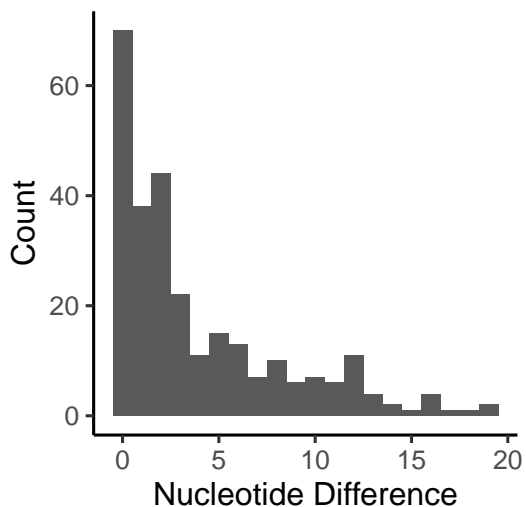
IGHV4-39*07_A220G_A2:

148 sequences assigned
55 (37.2%) exact matches, in which:
55 unique CDR3
6 unique J



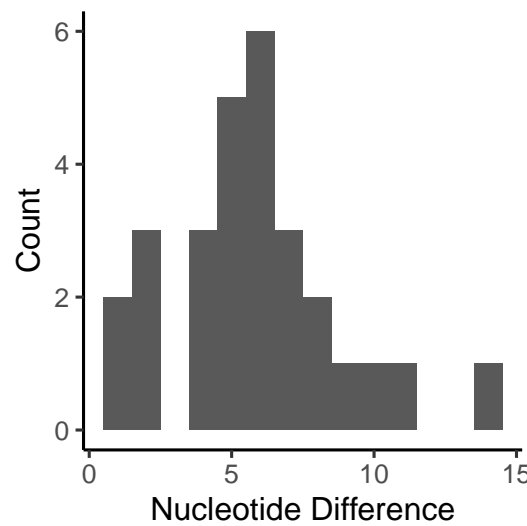
IGHV4-59*01

278 sequences assigned
70 (25.2%) exact matches, in which:
70 unique CDR3
5 unique J



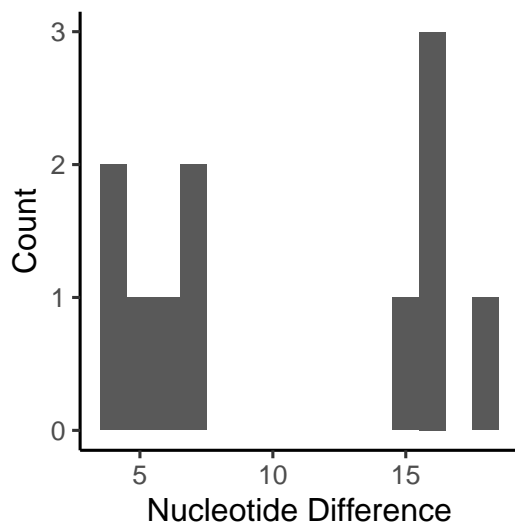
IGHV4-61*01

28 sequences assigned
No exact matches.



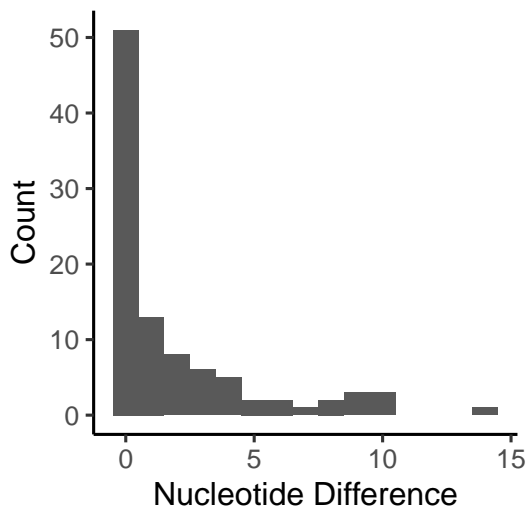
IGHV4-61*08

12 sequences assigned
No exact matches.



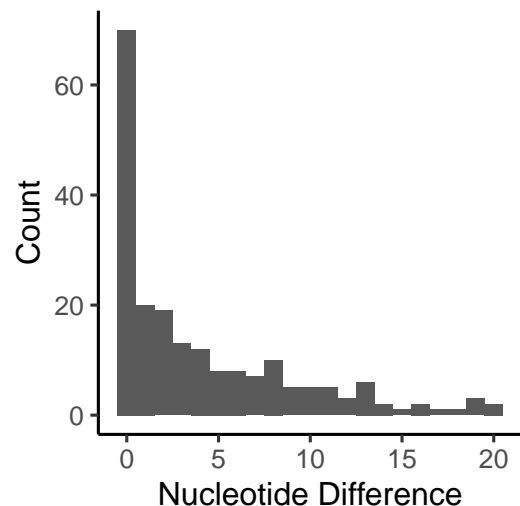
IGHV5-10-1*03

97 sequences assigned
51 (52.6%) exact matches, in which:
44 unique CDR3
4 unique J



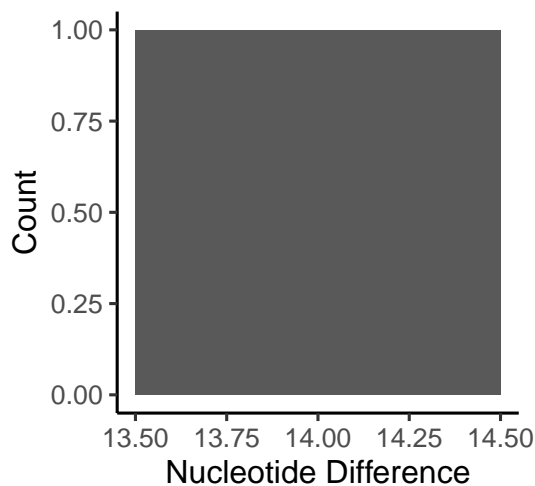
IGHV6-1*01

205 sequences assigned
70 (34.1%) exact matches, in which:
68 unique CDR3
5 unique J



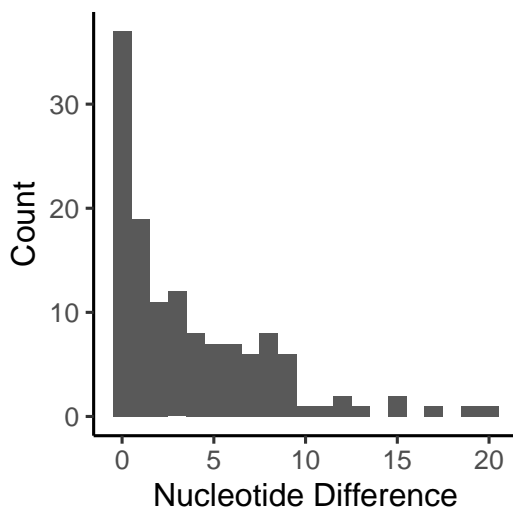
IGHV1/OR15-2*02

1 sequences assigned
No exact matches.



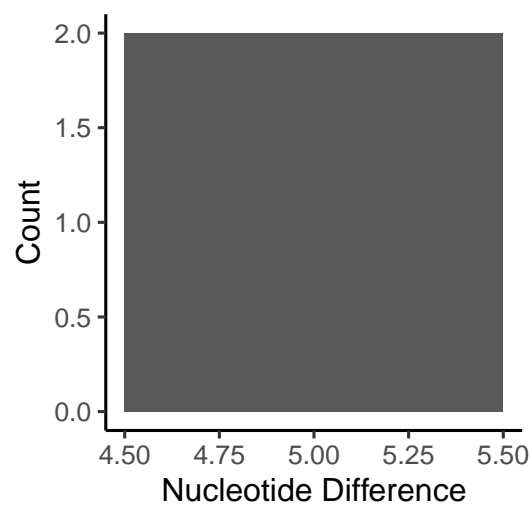
IGHV5-51*01

137 sequences assigned
37 (27%) exact matches, in which:
36 unique CDR3
5 unique J



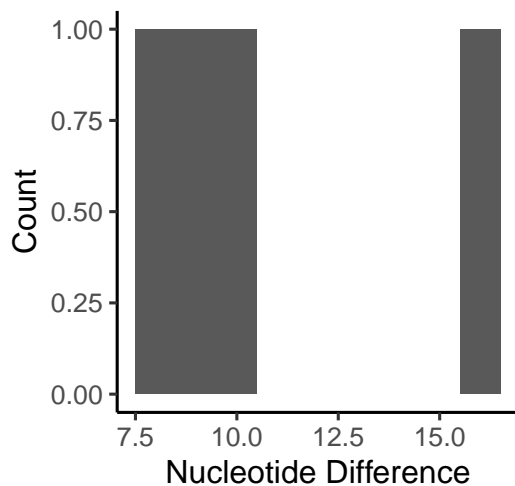
IGHV3/OR16-9*01

2 sequences assigned
No exact matches.



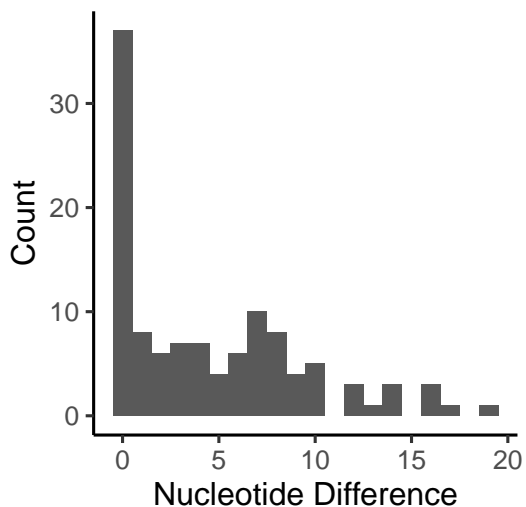
IGHV4/OR15-8*02

6 sequences assigned
No exact matches.



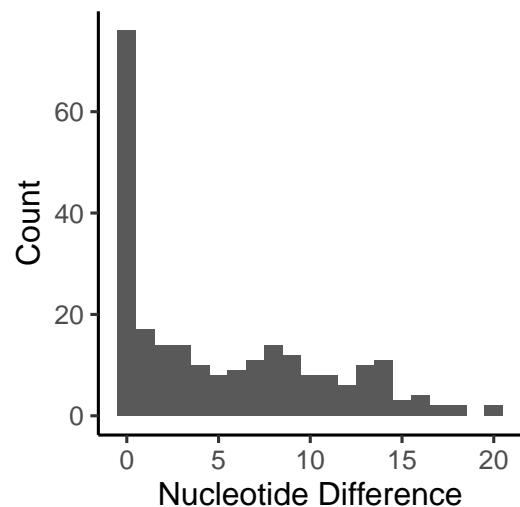
IGHV5-51*03

116 sequences assigned
37 (31.9%) exact matches, in which:
34 unique CDR3
6 unique J



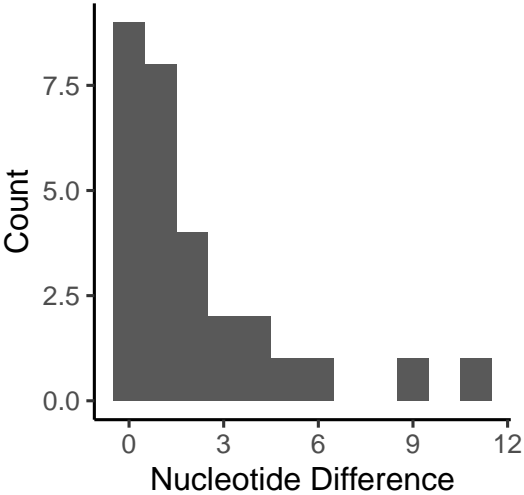
IGHV7-4-1*02

250 sequences assigned
76 (30.4%) exact matches, in which:
69 unique CDR3
5 unique J



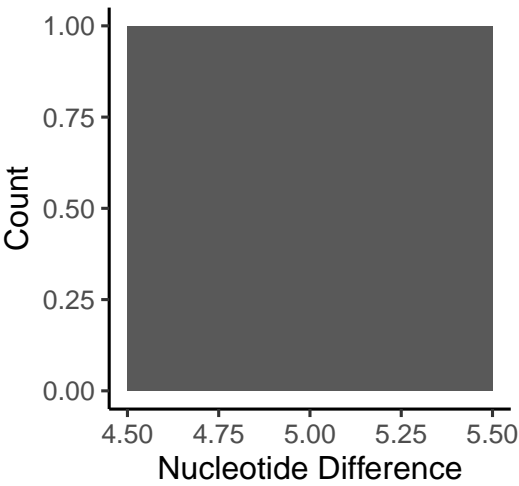
IGHV7-4-1*02_A200T

30 sequences assigned
9 (30%) exact matches, in which:
9 unique CDR3
4 unique J

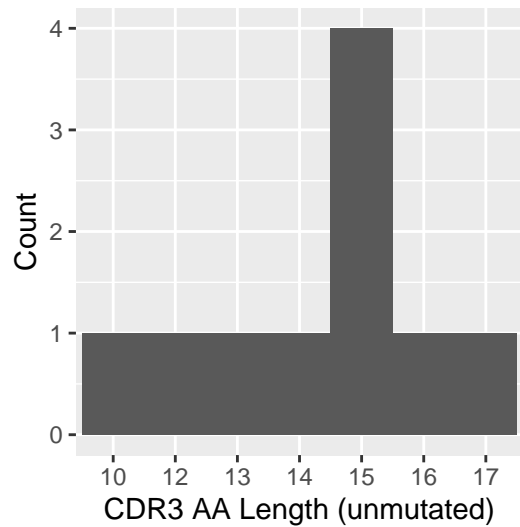


IGHV7-40*03

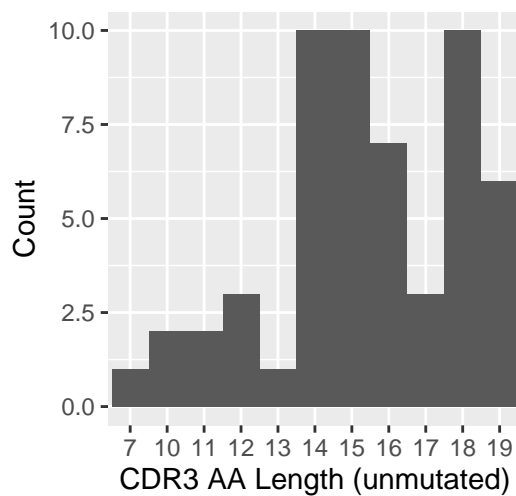
1 sequences assigned
No exact matches.



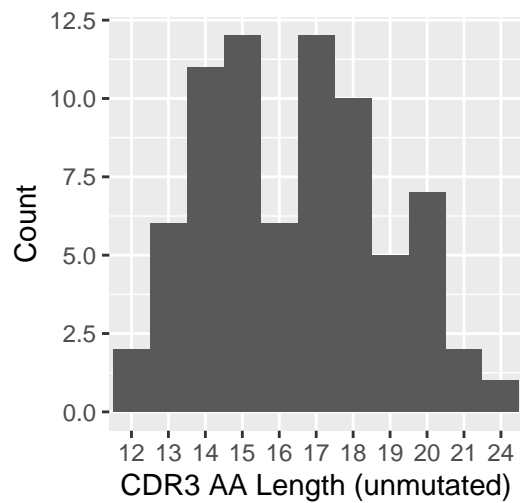
IGHV3-13*01_G290A_T300C



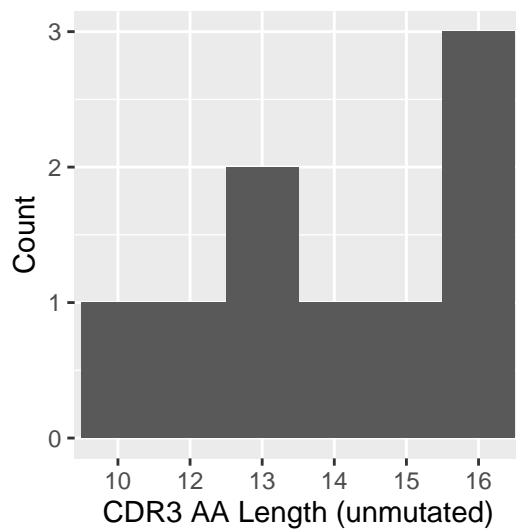
IGHV4-39*07_A220G_A225G



IGHV4-34*01_A220G_A225G



IGHV7-4-1*02_A200T



IGHV4-38-2*02_A220G

