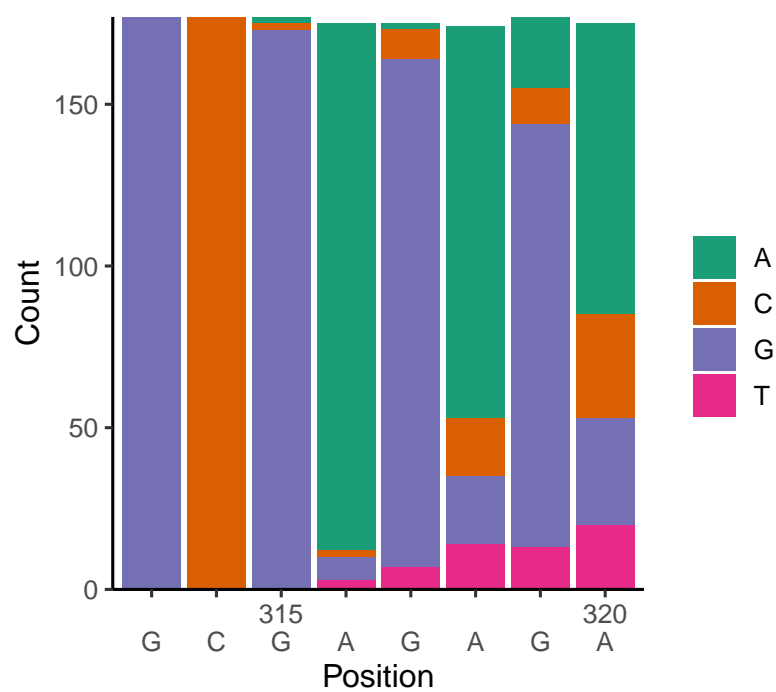
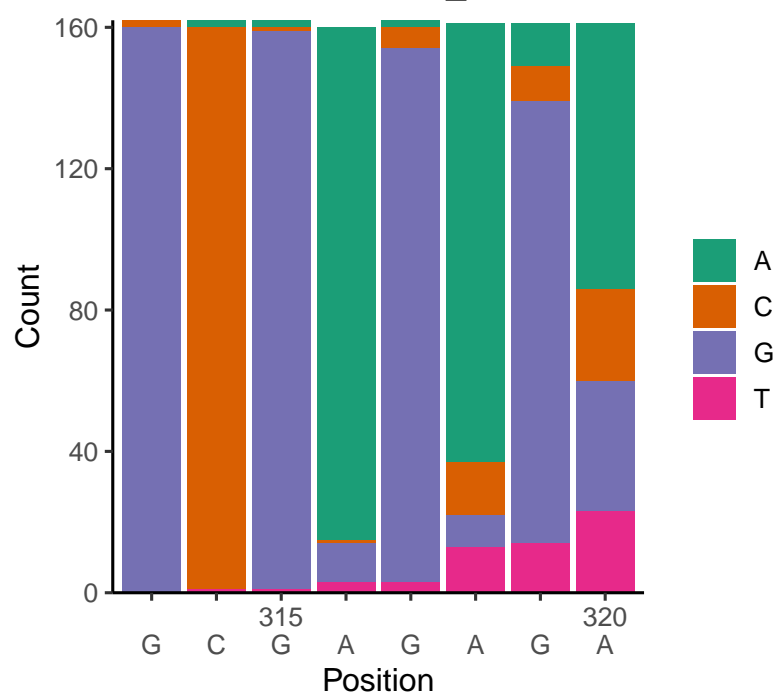


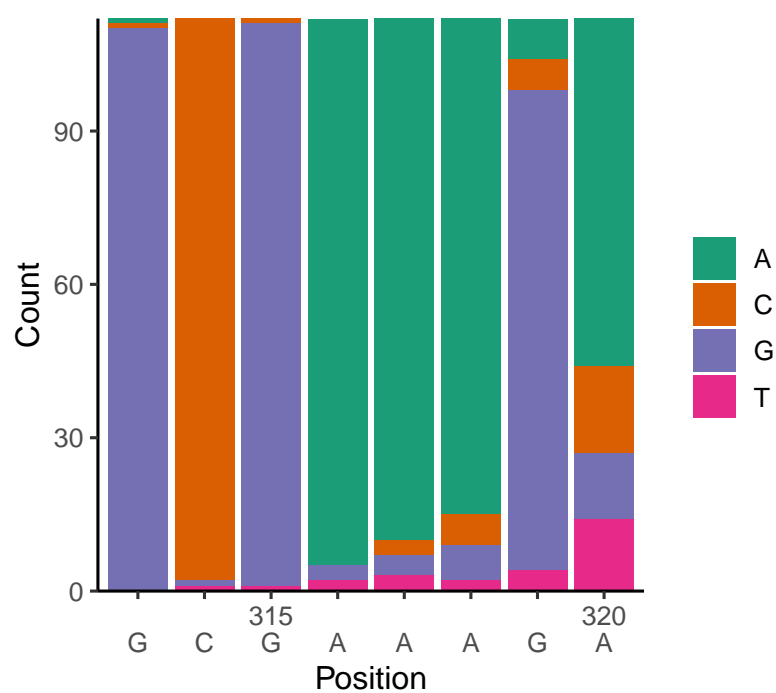
Gene IGHV1-69*04_T191C



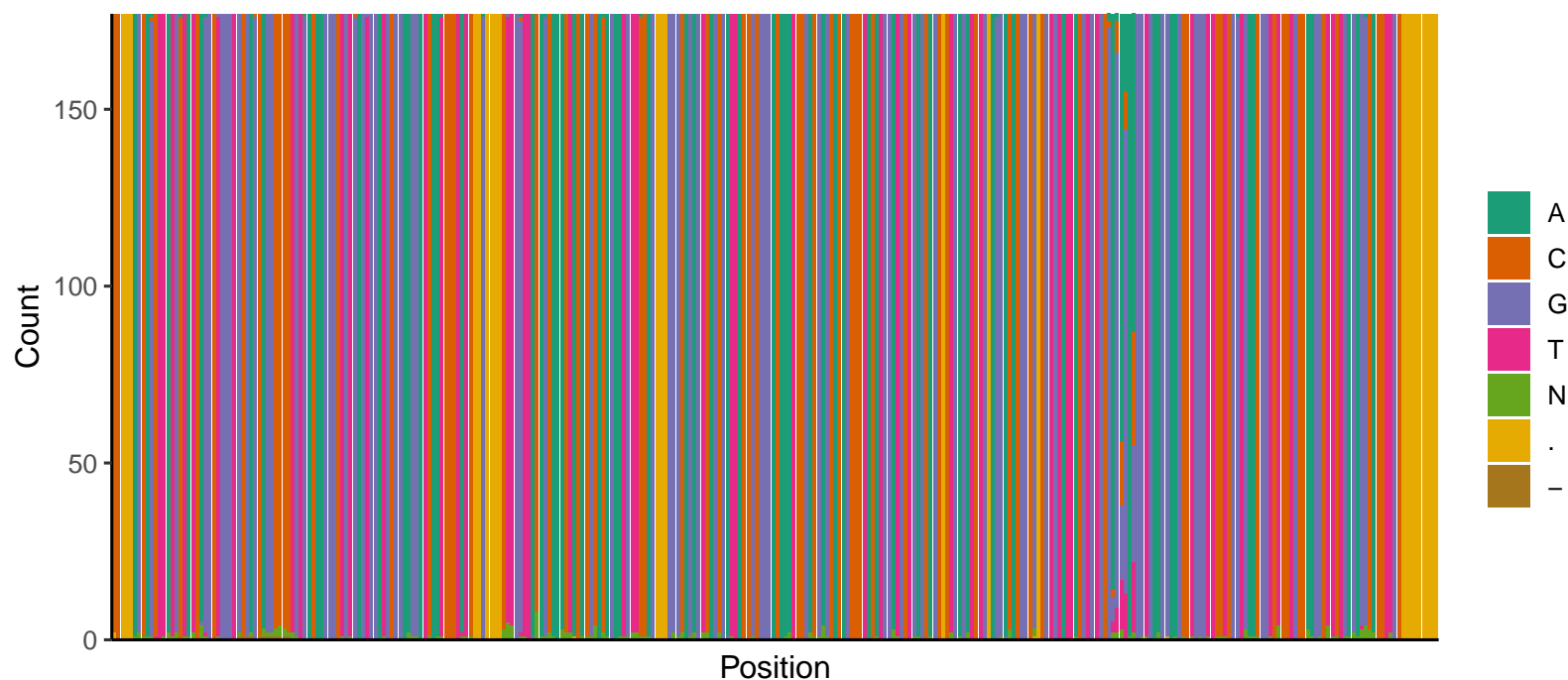
Gene IGHV1-69*08_C191T



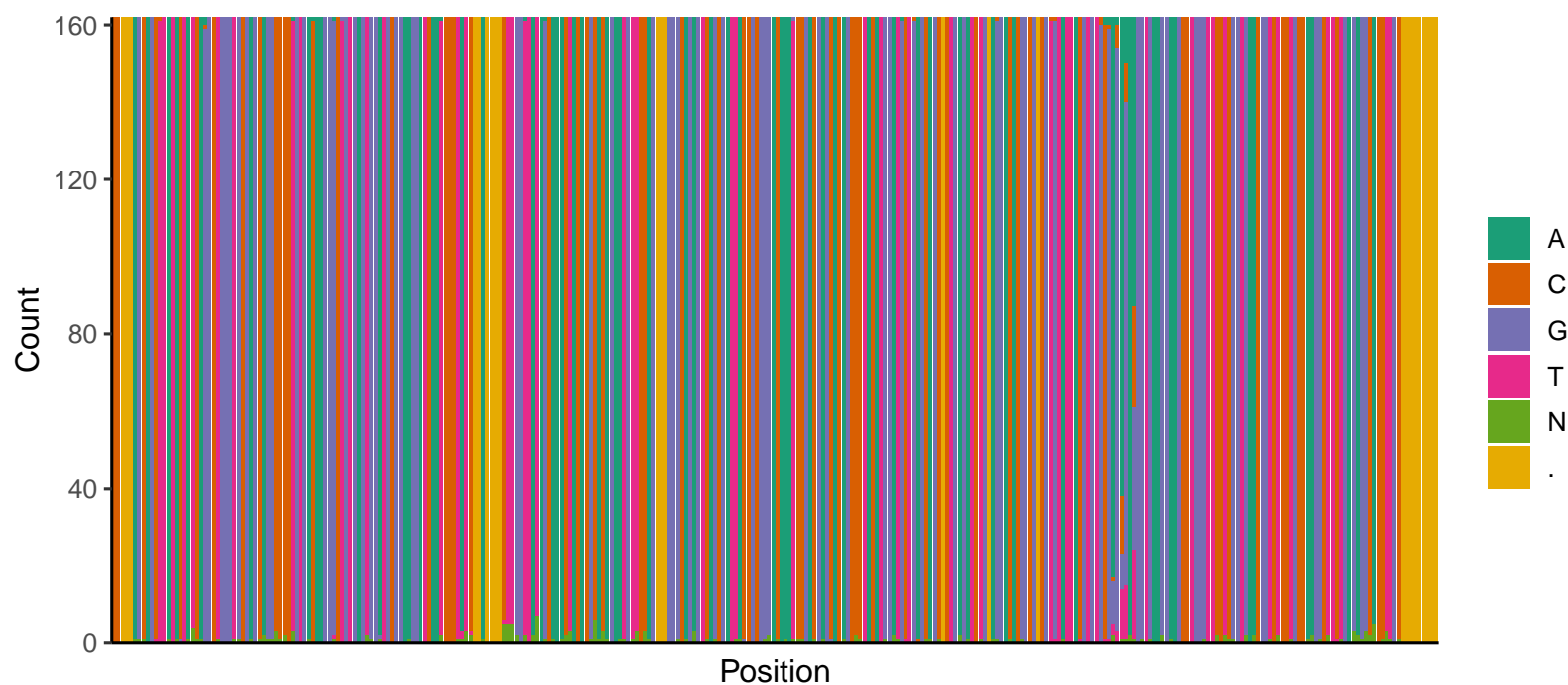
Gene IGHV3-30*02_A275G



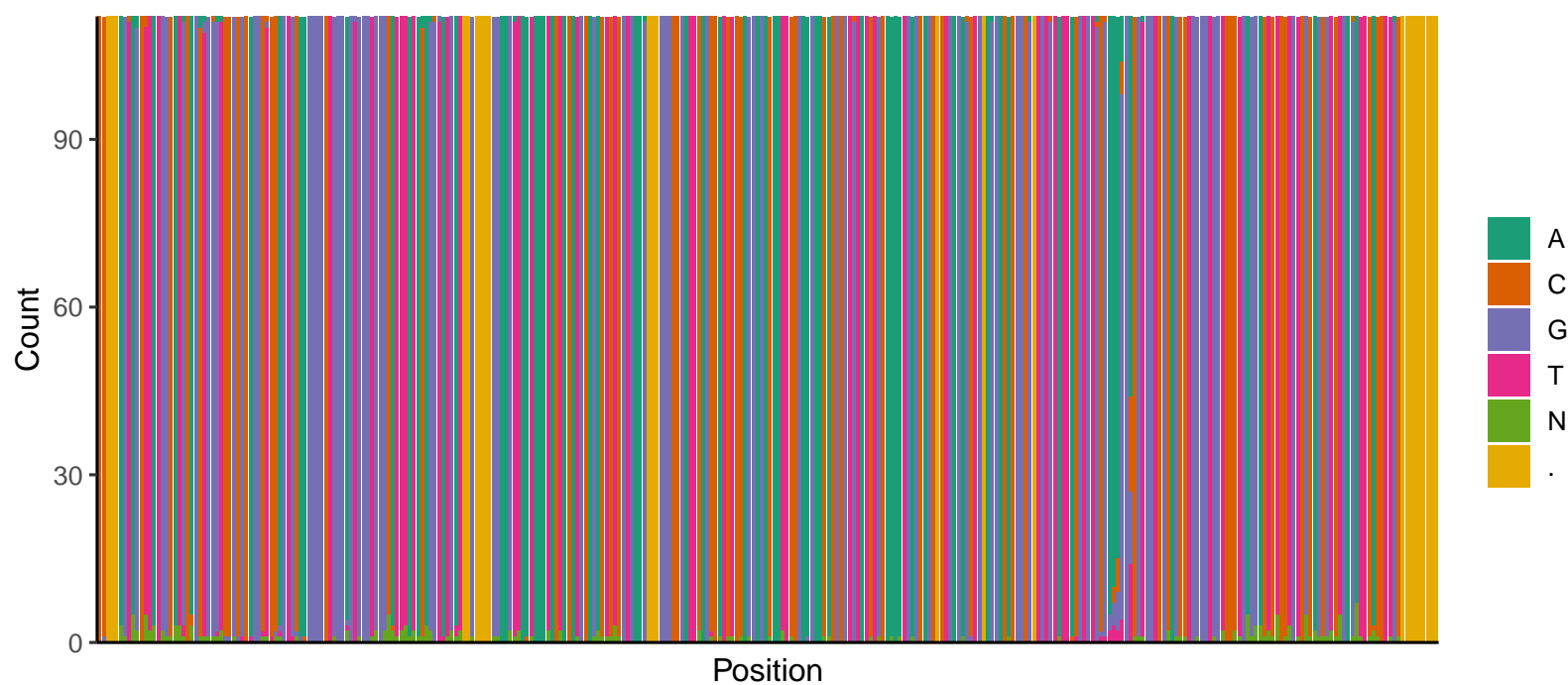
Gene IGHV1-69*04_T191C



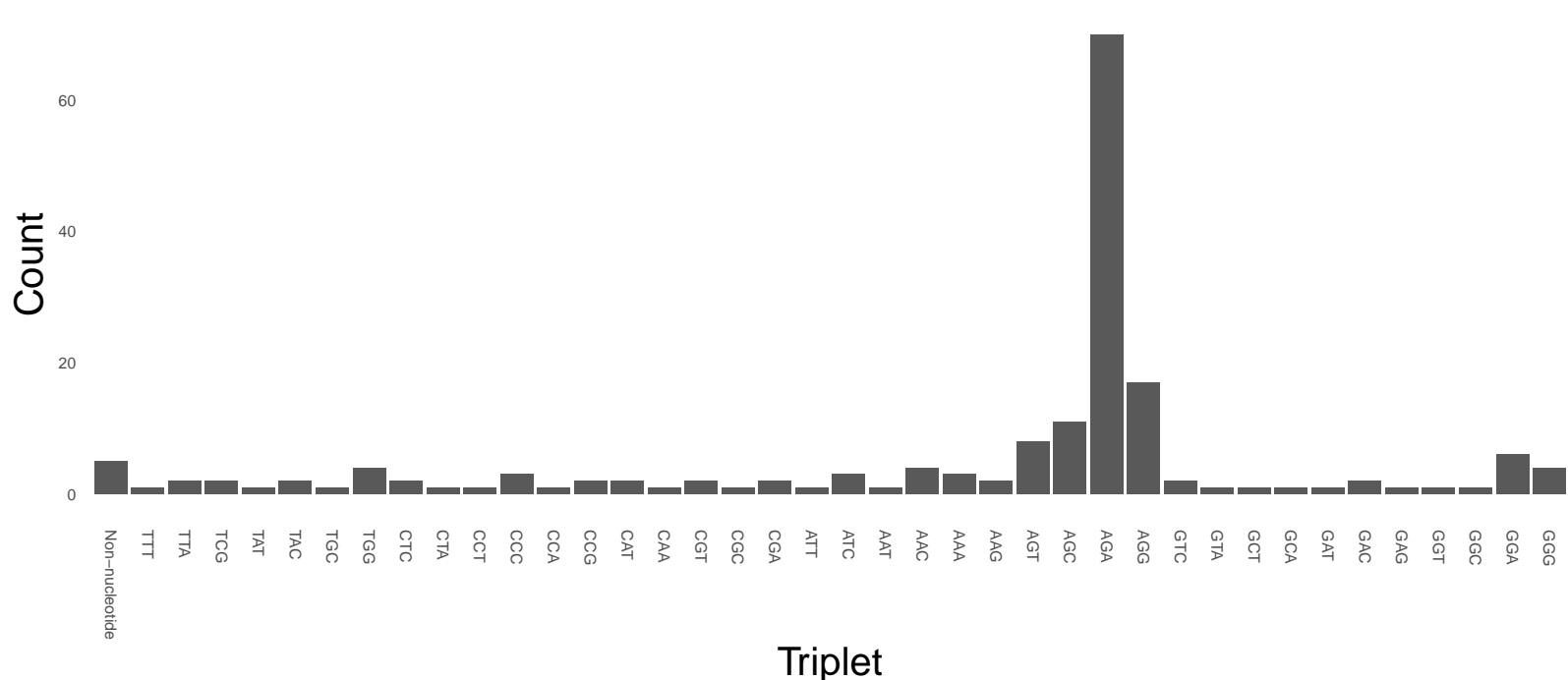
Gene IGHV1-69*08_C191T



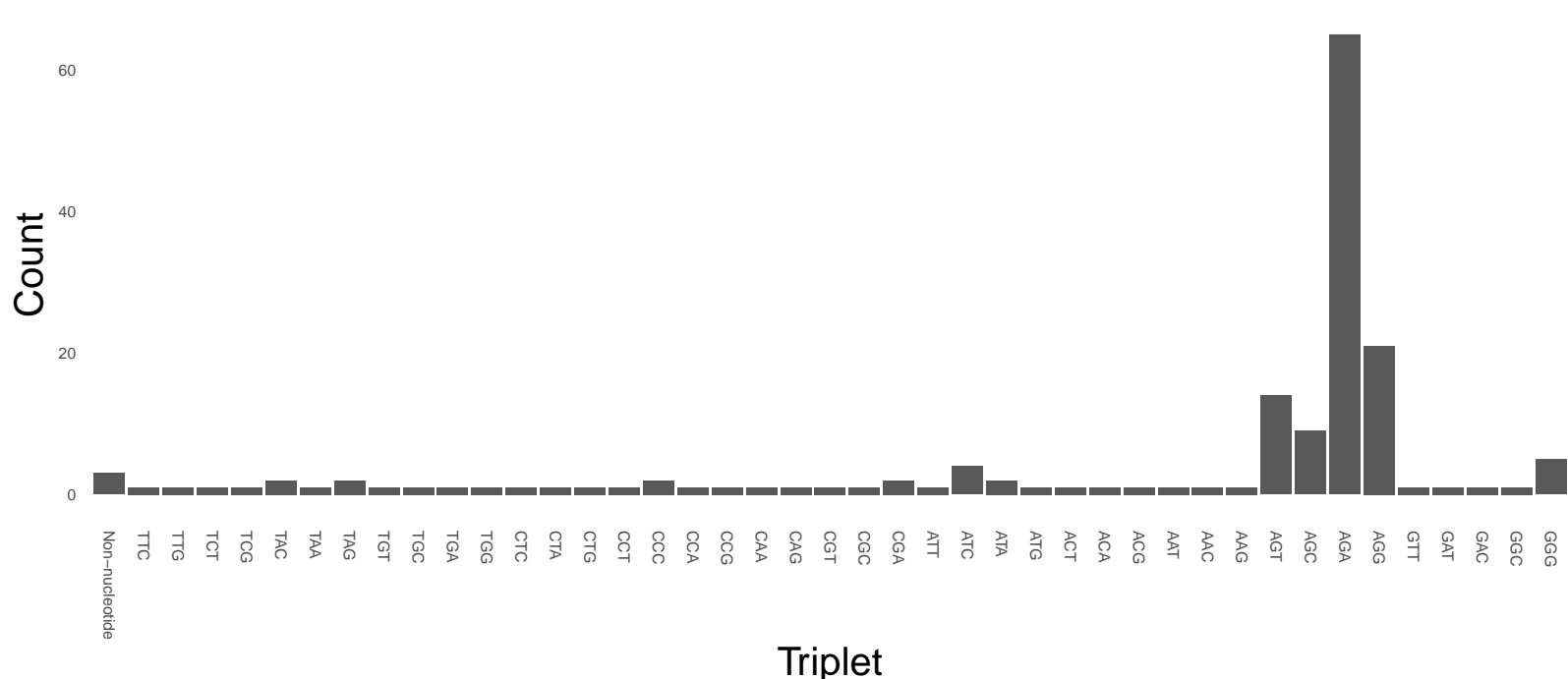
Gene IGHV3-30*02_A275G



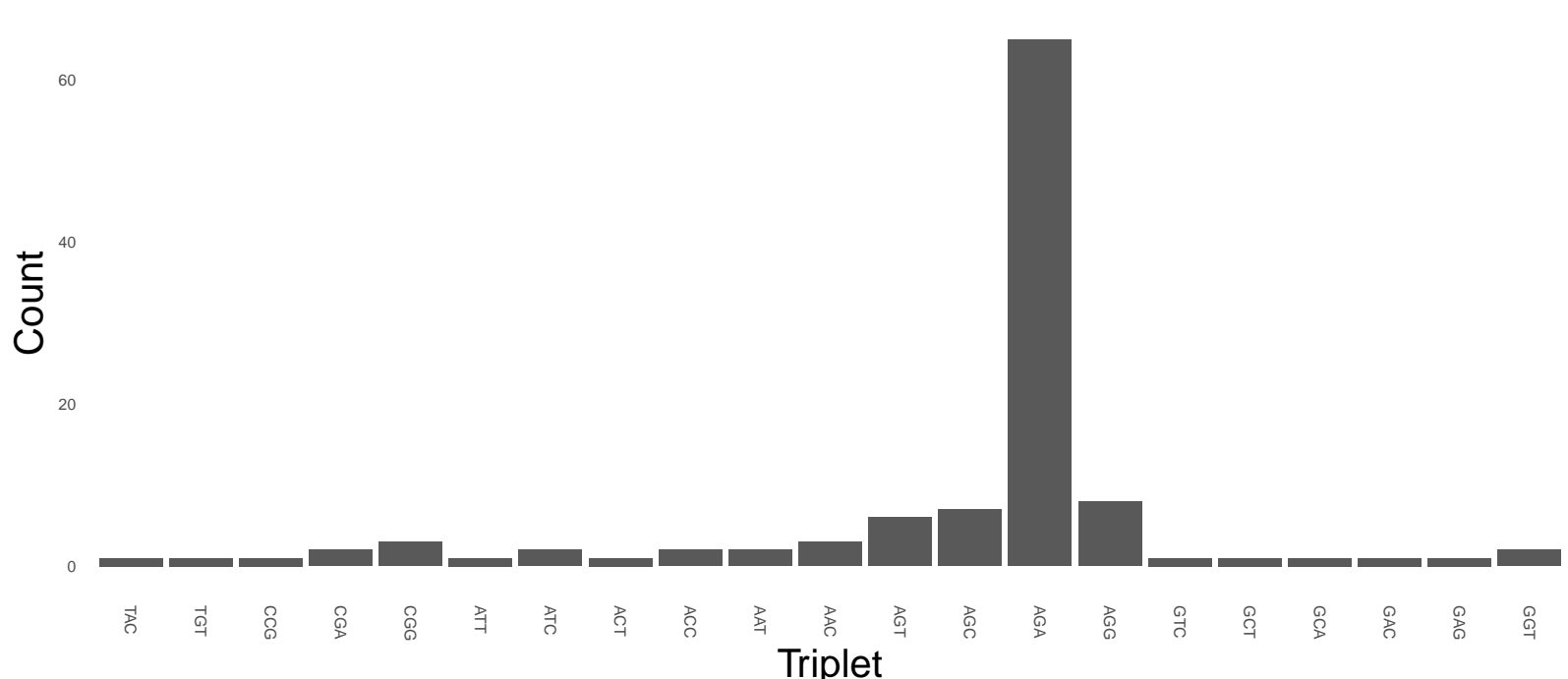
IGHV1-69*04_T191C- Final 3 nucleotides as a triplet



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

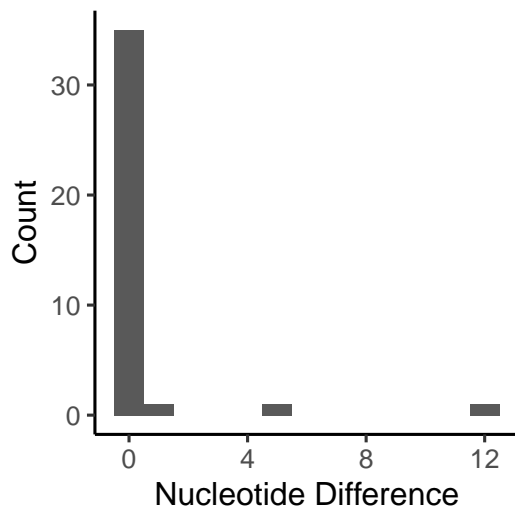


IGHV3-30*02_A275G- Final 3 nucleotides as a triplet



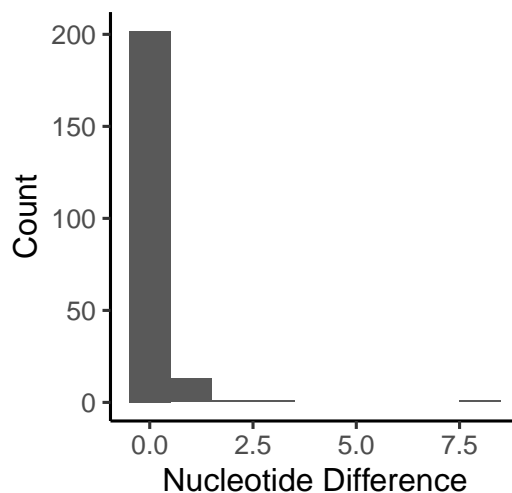
IGHV1-2*04

38 sequences assigned
35 (92.1%) exact matches, in which:
35 unique CDR3
5 unique J



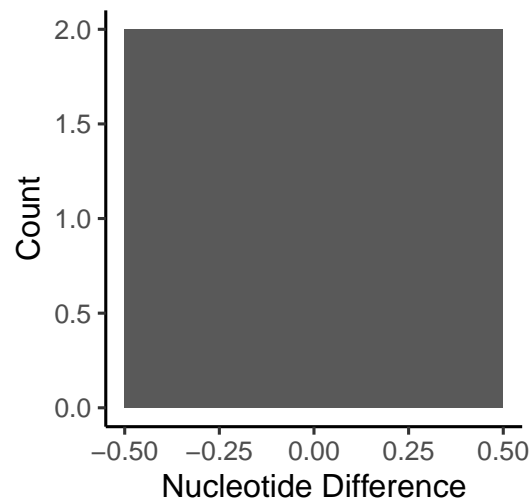
IGHV1-8*01

218 sequences assigned
202 (92.7%) exact matches, in which:
202 unique CDR3
7 unique J



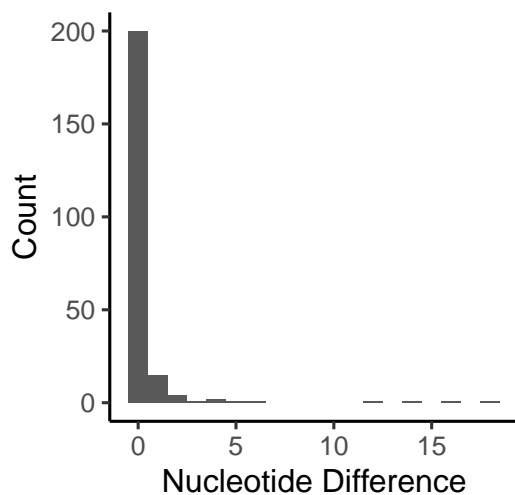
IGHV1-45*02

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



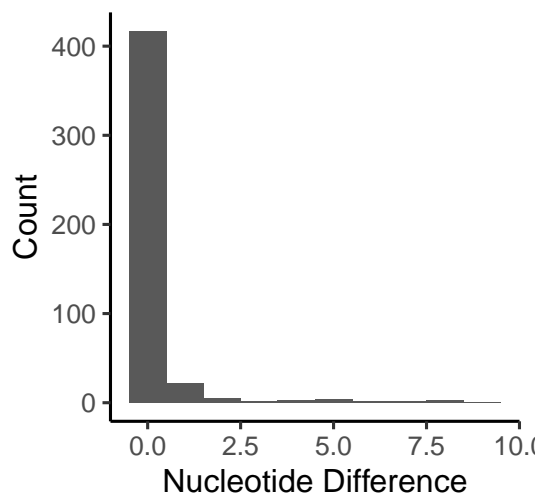
IGHV1-2*06

228 sequences assigned
200 (87.7%) exact matches, in which:
200 unique CDR3
7 unique J



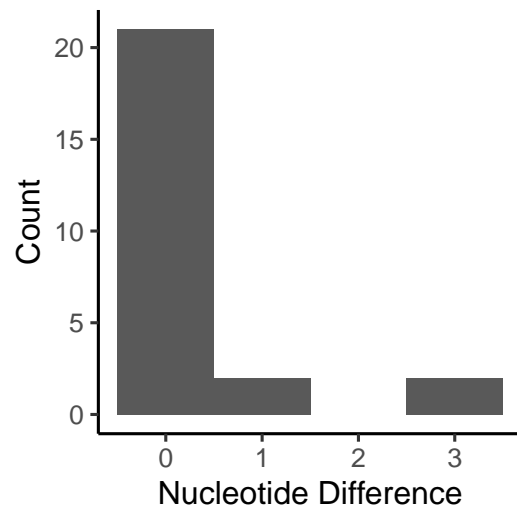
IGHV1-18*01

463 sequences assigned
417 (90.1%) exact matches, in which:
416 unique CDR3
7 unique J



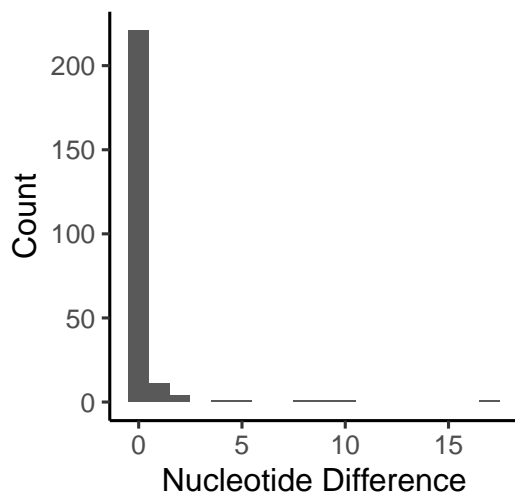
IGHV1-46*01

25 sequences assigned
21 (84%) exact matches, in which:
21 unique CDR3
4 unique J



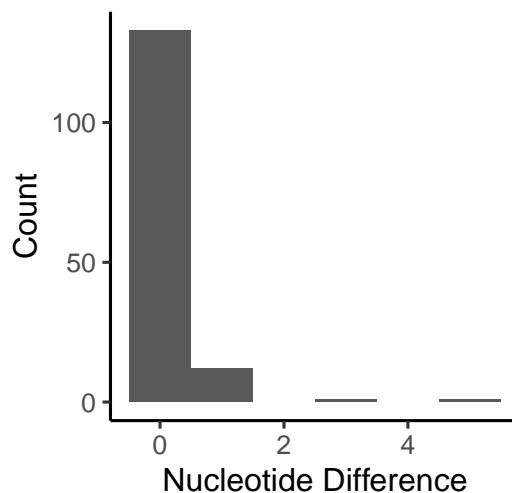
IGHV1-3*01

244 sequences assigned
221 (90.6%) exact matches, in which:
221 unique CDR3
7 unique J



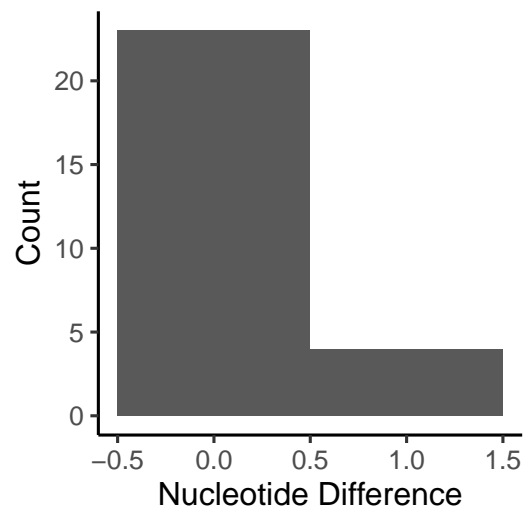
IGHV1-24*01

147 sequences assigned
133 (90.5%) exact matches, in which:
133 unique CDR3
6 unique J



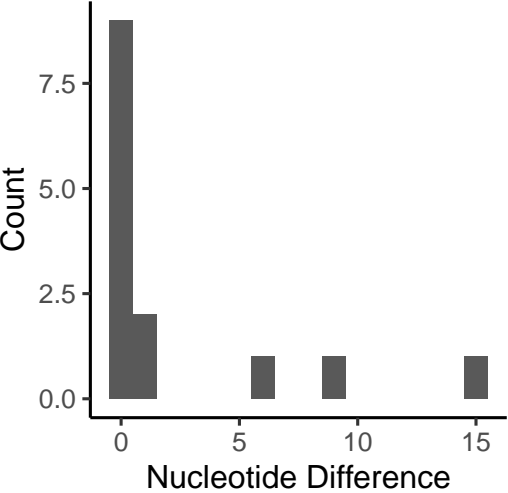
IGHV1-46*03

27 sequences assigned
23 (85.2%) exact matches, in which:
23 unique CDR3
6 unique J



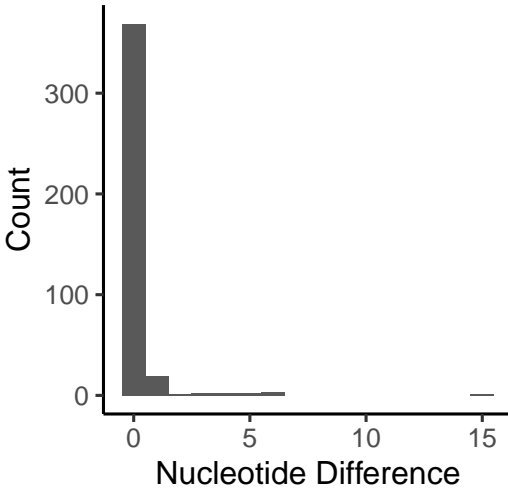
IGHV1-58*02

14 sequences assigned
9 (64.3%) exact matches, in which:
9 unique CDR3
2 unique J



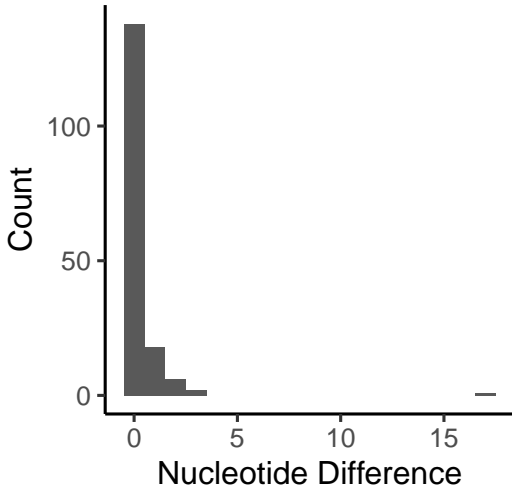
IGHV2-5*02

399 sequences assigned
369 (92.5%) exact matches, in which:
368 unique CDR3
7 unique J



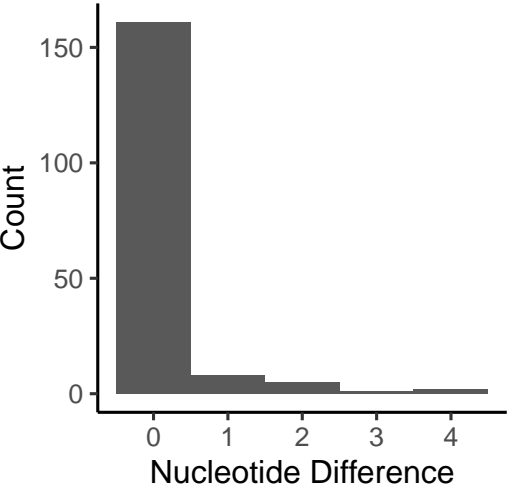
IGHV3-7*01

165 sequences assigned
138 (83.6%) exact matches, in which:
138 unique CDR3
6 unique J



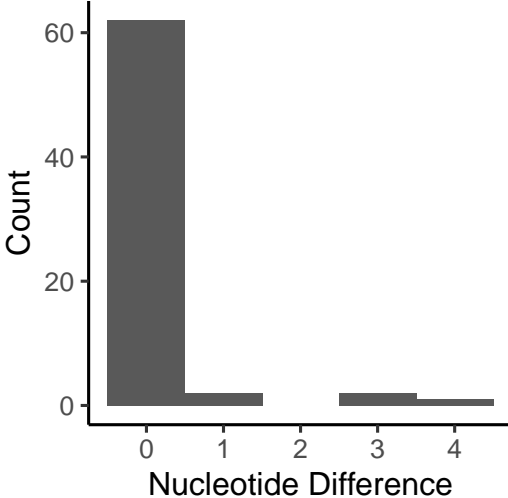
IGHV1-69*04_T191C

177 sequences assigned
161 (91%) exact matches, in which:
161 unique CDR3
6 unique J



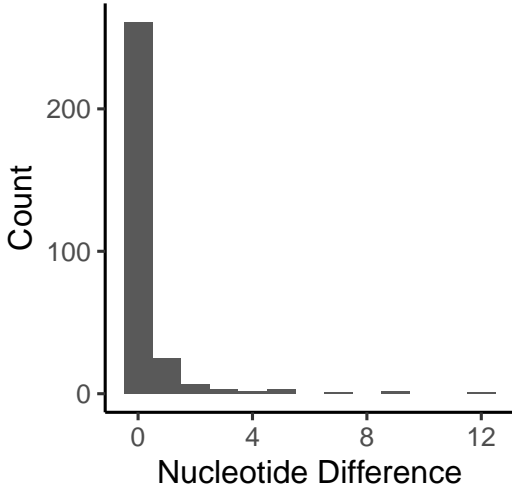
IGHV2-26*01

67 sequences assigned
62 (92.5%) exact matches, in which:
62 unique CDR3
6 unique J



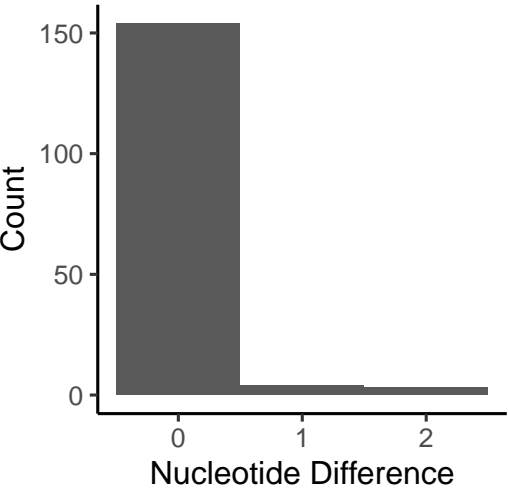
IGHV3-9*01

305 sequences assigned
261 (85.6%) exact matches, in which:
261 unique CDR3
7 unique J



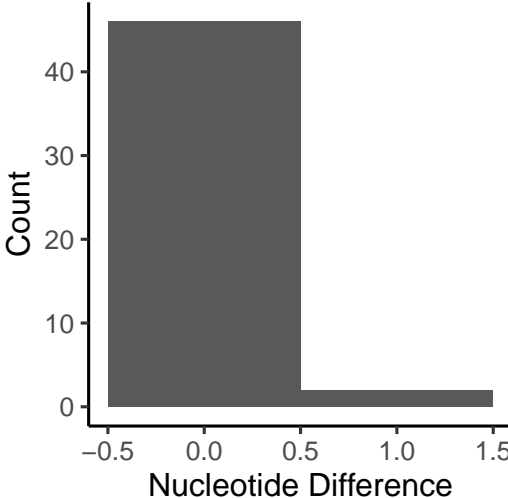
IGHV1-69*08_C191T

162 sequences assigned
154 (95.1%) exact matches, in which:
154 unique CDR3
7 unique J



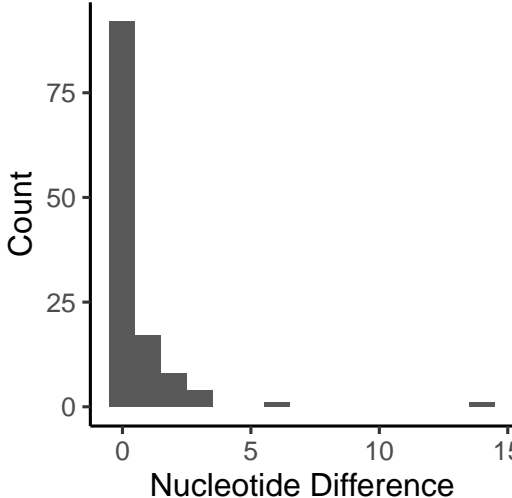
IGHV2-70*15

48 sequences assigned
46 (95.8%) exact matches, in which:
46 unique CDR3
6 unique J



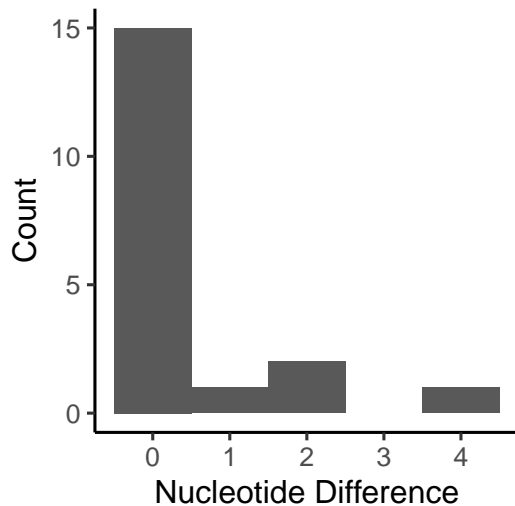
IGHV3-11*01

123 sequences assigned
92 (74.8%) exact matches, in which:
91 unique CDR3
6 unique J



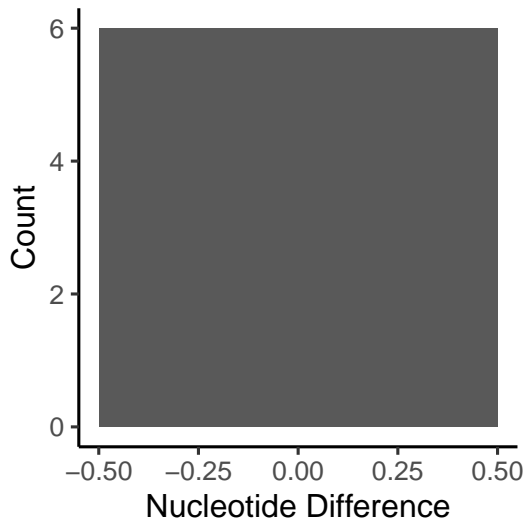
IGHV3-13*01

20 sequences assigned
15 (75%) exact matches, in which:
15 unique CDR3
5 unique J



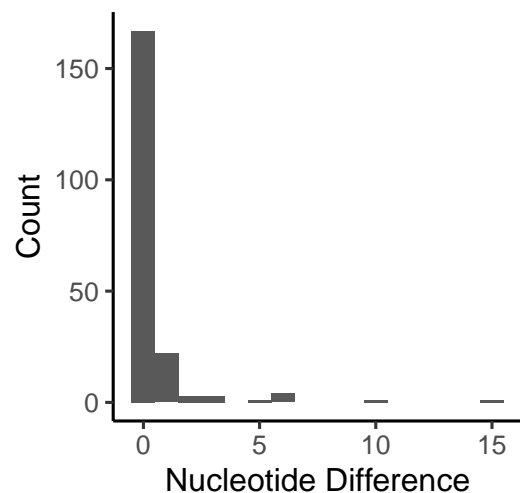
IGHV3-20*01

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



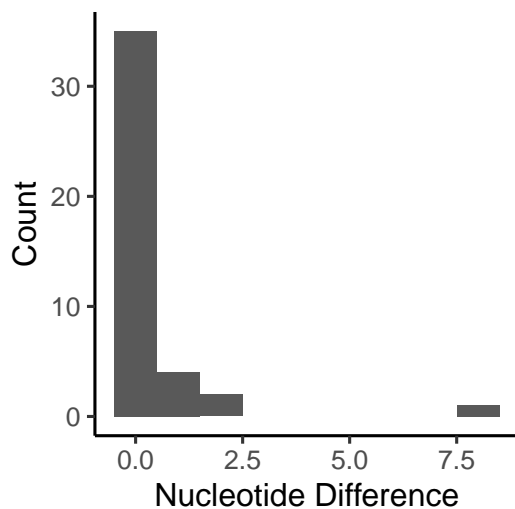
IGHV3-30-3*01

202 sequences assigned
167 (82.7%) exact matches, in which:
167 unique CDR3
7 unique J



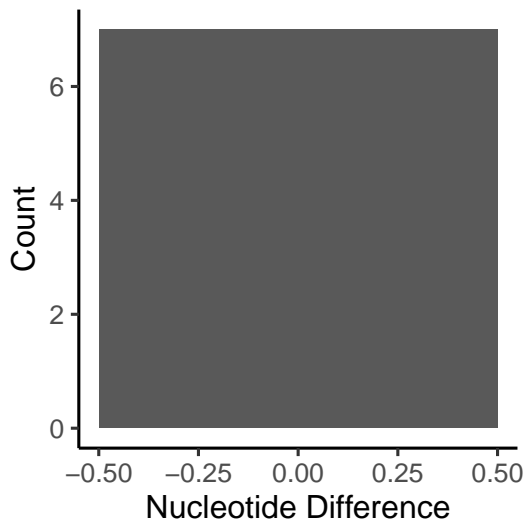
IGHV3-15*01

42 sequences assigned
35 (83.3%) exact matches, in which:
35 unique CDR3
5 unique J



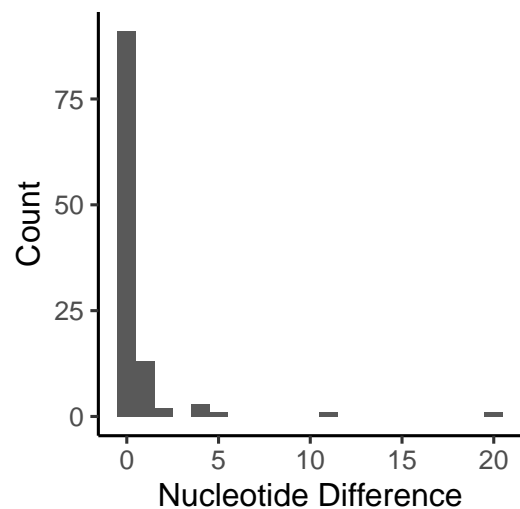
IGHV3-20*04

7 sequences assigned
7 (100%) exact matches, in which:
7 unique CDR3
2 unique J



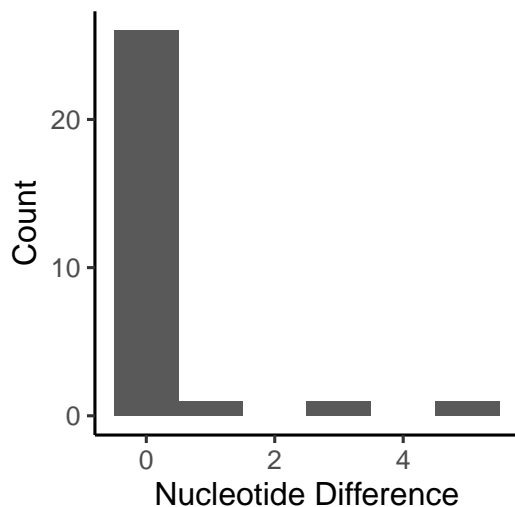
IGHV3-30*02_A275G

112 sequences assigned
91 (81.2%) exact matches, in which:
91 unique CDR3
7 unique J



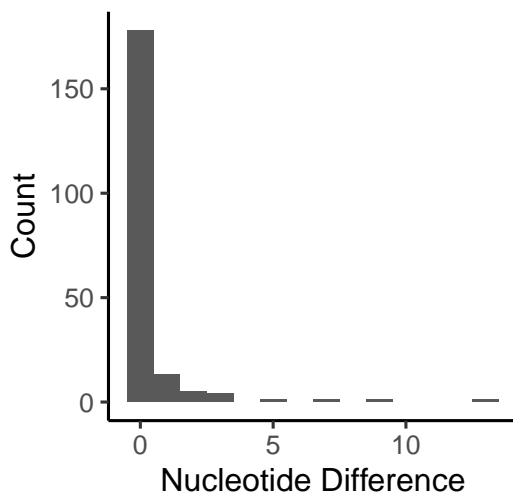
IGHV3-15*07

29 sequences assigned
26 (89.7%) exact matches, in which:
26 unique CDR3
5 unique J



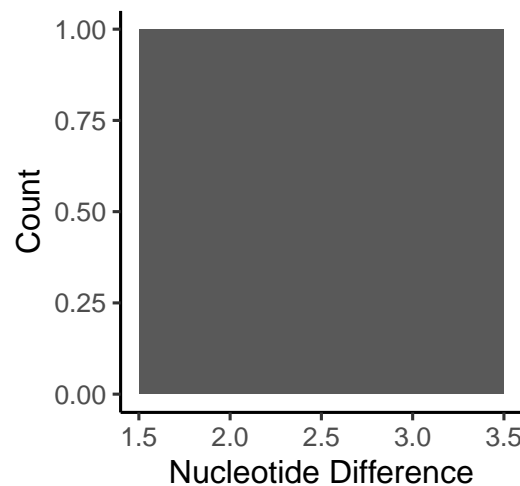
IGHV3-21*01

204 sequences assigned
178 (87.3%) exact matches, in which:
178 unique CDR3
7 unique J



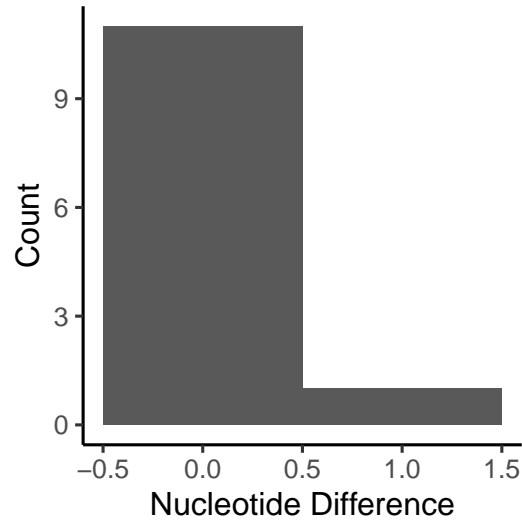
IGHV3-38-3*01

2 sequences assigned
No exact matches.



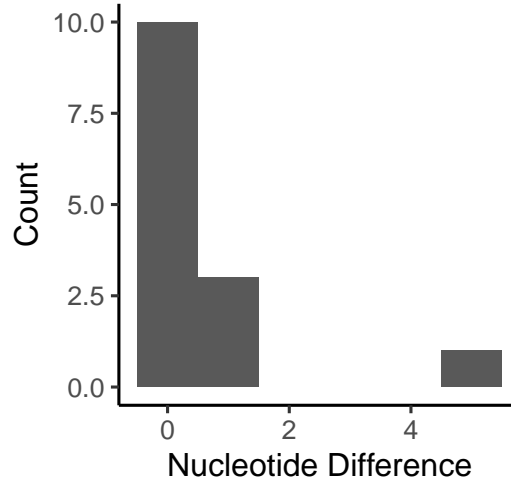
IGHV3-43*01

12 sequences assigned
11 (91.7%) exact matches, in which:
11 unique CDR3
5 unique J



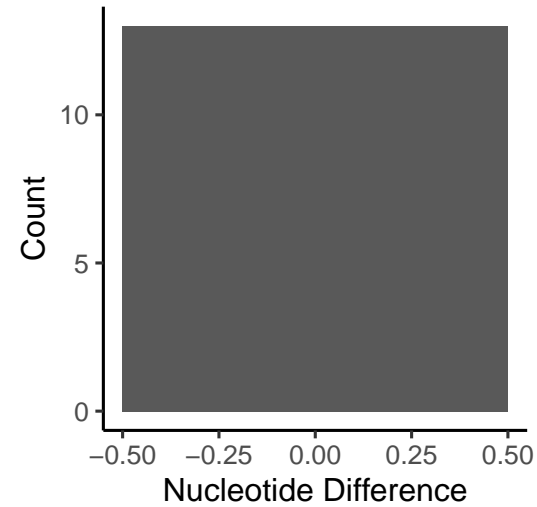
IGHV3-49*03

14 sequences assigned
10 (71.4%) exact matches, in which:
10 unique CDR3
4 unique J



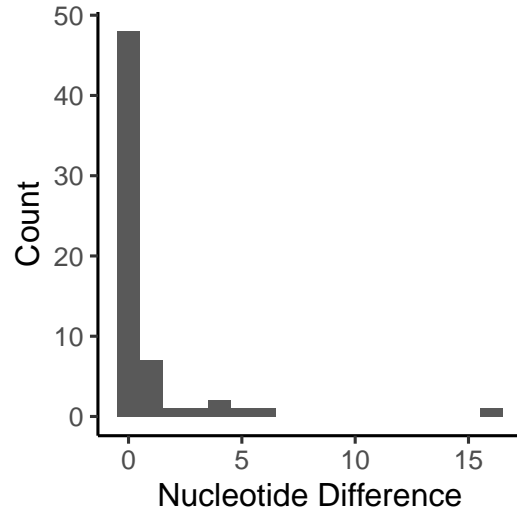
IGHV3-64*01

13 sequences assigned
13 (100%) exact matches, in which:
13 unique CDR3
5 unique J



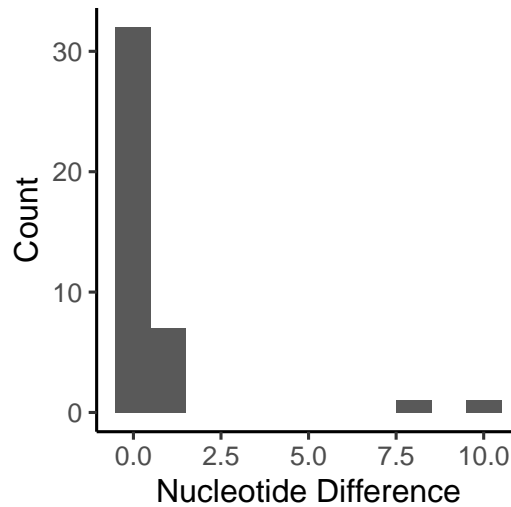
IGHV3-48*02

62 sequences assigned
48 (77.4%) exact matches, in which:
48 unique CDR3
5 unique J



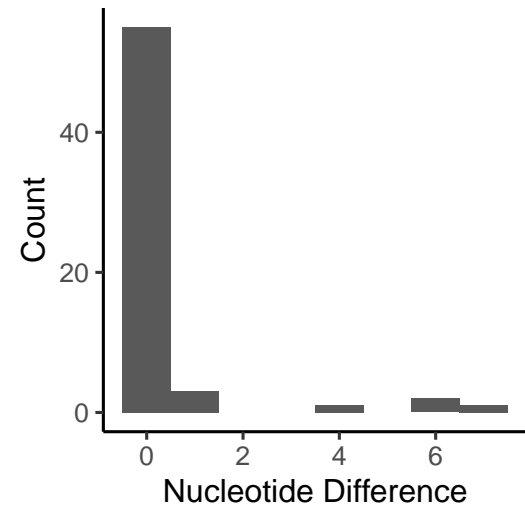
IGHV3-49*04

41 sequences assigned
32 (78%) exact matches, in which:
32 unique CDR3
5 unique J



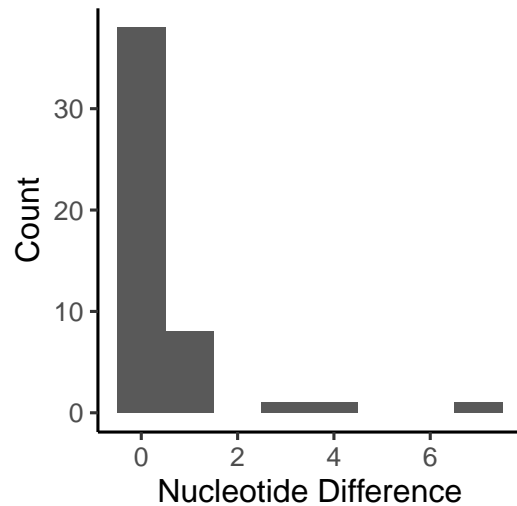
IGHV3-66*01

63 sequences assigned
55 (87.3%) exact matches, in which:
55 unique CDR3
6 unique J



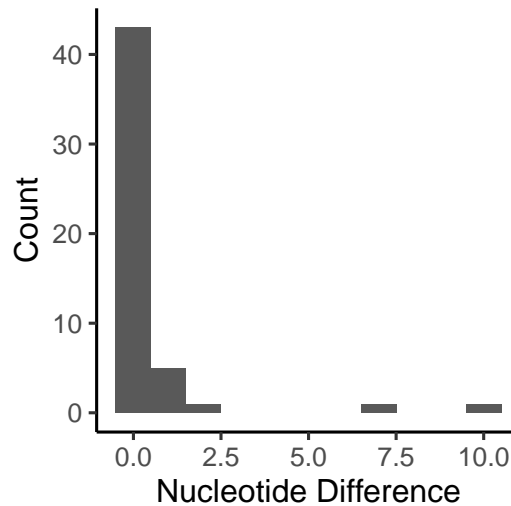
IGHV3-48*04

49 sequences assigned
38 (77.6%) exact matches, in which:
38 unique CDR3
5 unique J



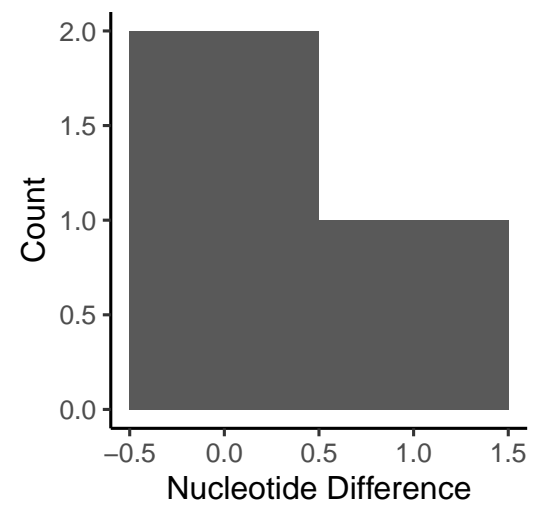
IGHV3-53*04

51 sequences assigned
43 (84.3%) exact matches, in which:
43 unique CDR3
6 unique J



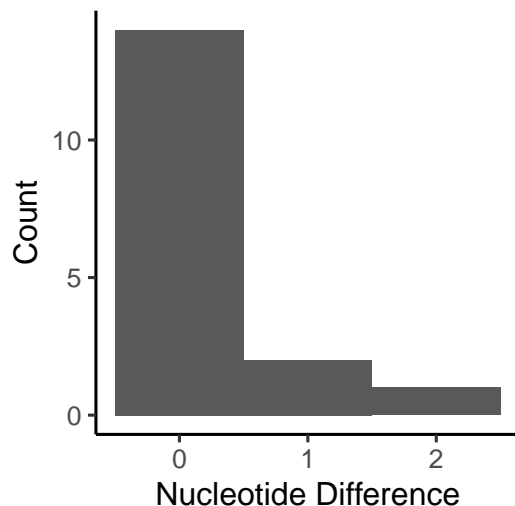
IGHV3-72*01

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



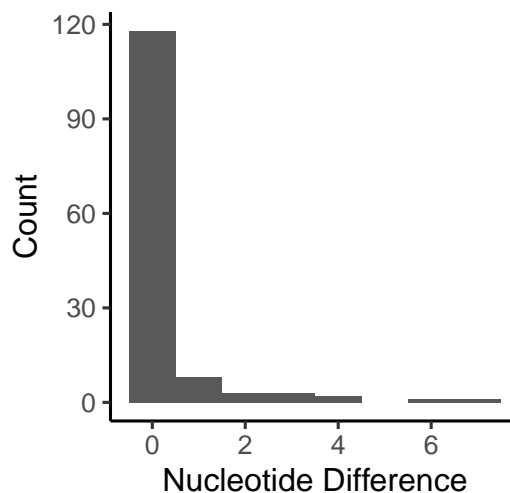
IGHV3-73*01

17 sequences assigned
14 (82.4%) exact matches, in which:
14 unique CDR3
4 unique J



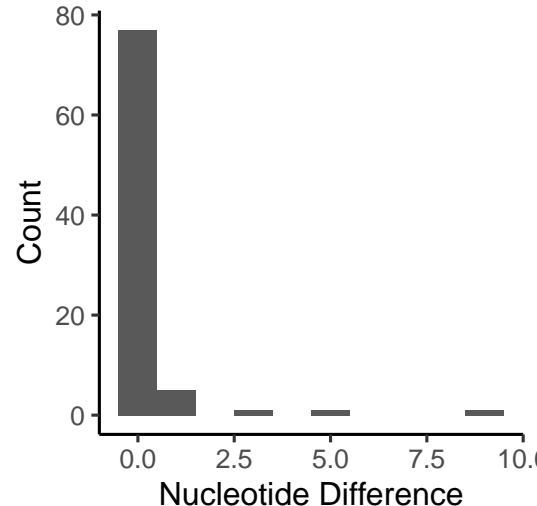
IGHV4-4*02

136 sequences assigned
118 (86.8%) exact matches, in which:
118 unique CDR3
7 unique J



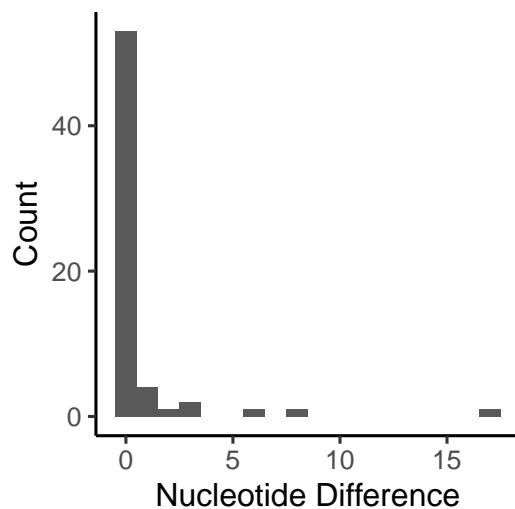
IGHV4-30-2*01

85 sequences assigned
77 (90.6%) exact matches, in which:
77 unique CDR3
6 unique J



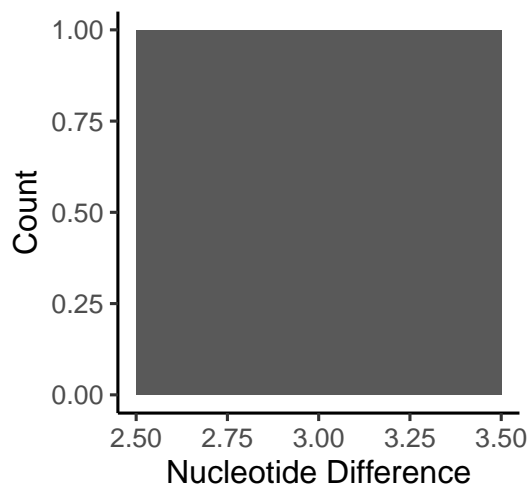
IGHV3-74*01

65 sequences assigned
53 (81.5%) exact matches, in which:
53 unique CDR3
7 unique J



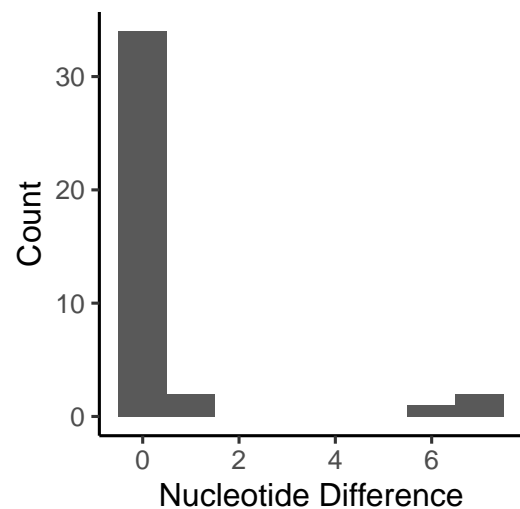
IGHV4-28*01

1 sequences assigned
No exact matches.



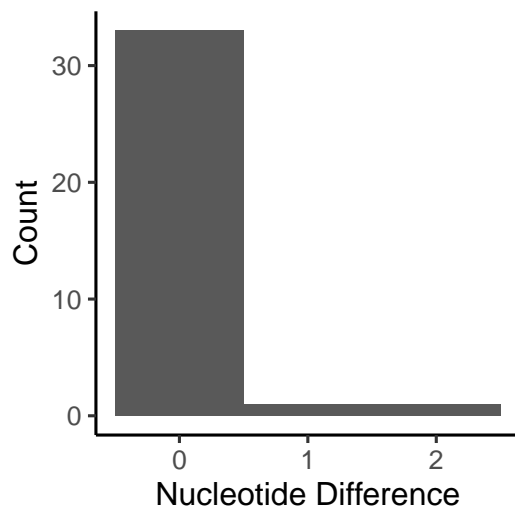
IGHV4-30-4*07

39 sequences assigned
34 (87.2%) exact matches, in which:
34 unique CDR3
5 unique J



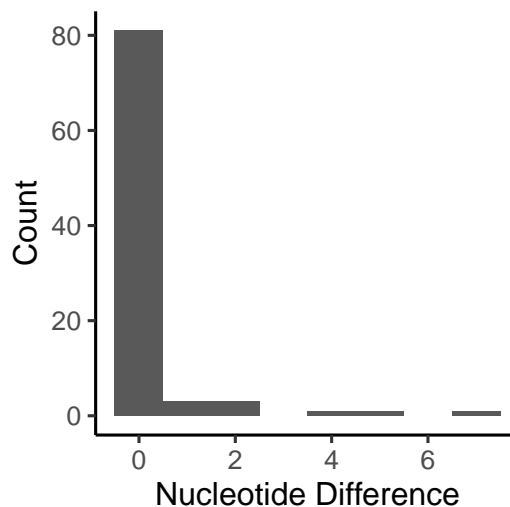
IGHV3-43D*03

35 sequences assigned
33 (94.3%) exact matches, in which:
33 unique CDR3
6 unique J



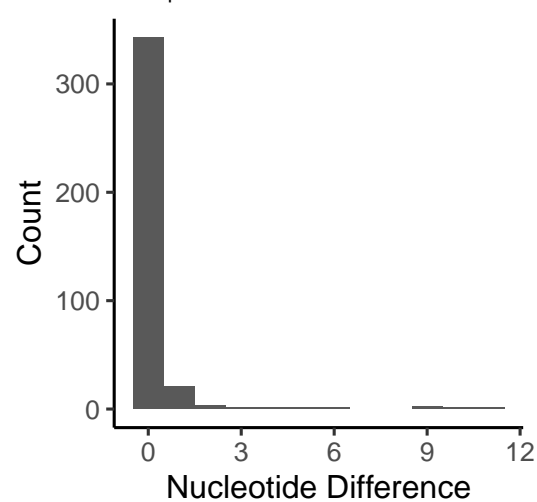
IGHV4-30-4*01

90 sequences assigned
81 (90%) exact matches, in which:
80 unique CDR3
6 unique J



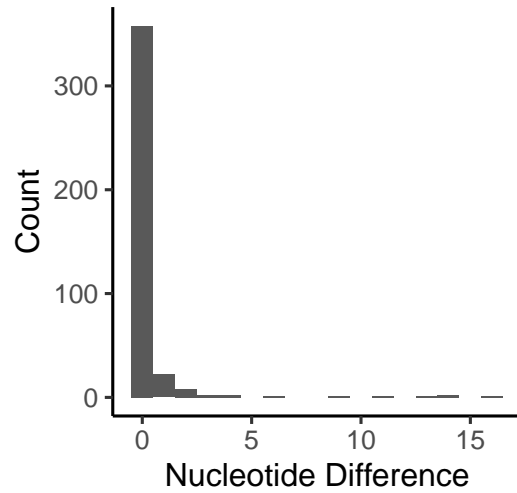
IGHV4-34*01

375 sequences assigned
343 (91.5%) exact matches, in which:
342 unique CDR3
7 unique J



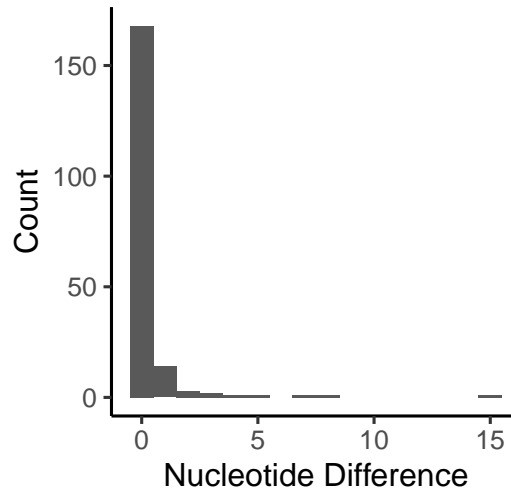
IGHV4-38-2*02

399 sequences assigned
358 (89.7%) exact matches, in which:
357 unique CDR3
7 unique J



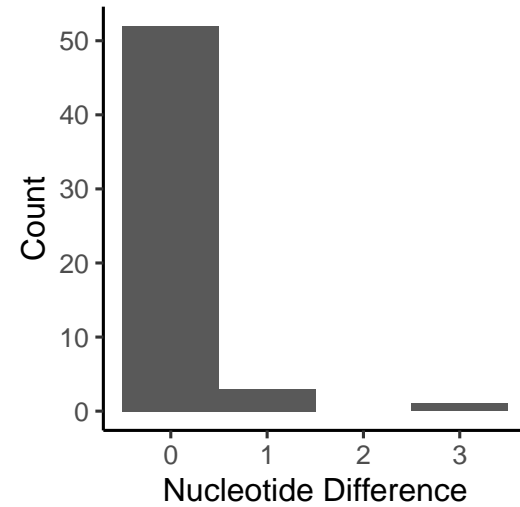
IGHV4-59*01

192 sequences assigned
168 (87.5%) exact matches, in which:
168 unique CDR3
7 unique J



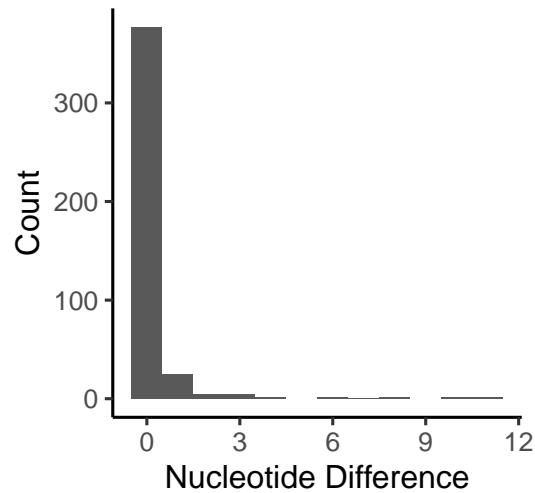
IGHV6-1*01

56 sequences assigned
52 (92.9%) exact matches, in which:
52 unique CDR3
6 unique J



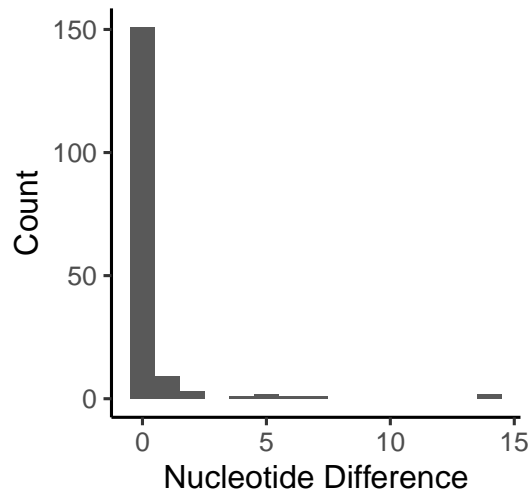
IGHV4-39*01

423 sequences assigned
377 (89.1%) exact matches, in which:
376 unique CDR3
7 unique J



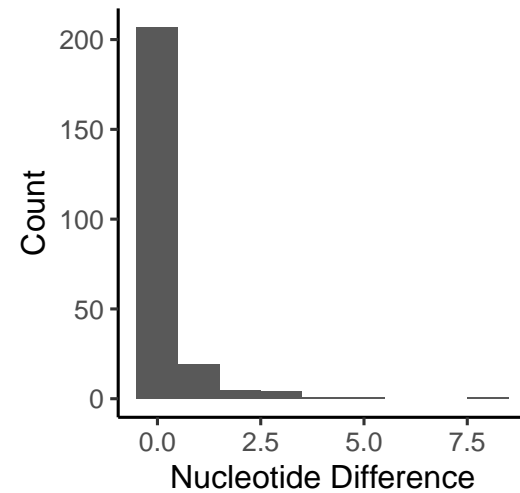
IGHV4-59*08

170 sequences assigned
151 (88.8%) exact matches, in which:
151 unique CDR3
7 unique J



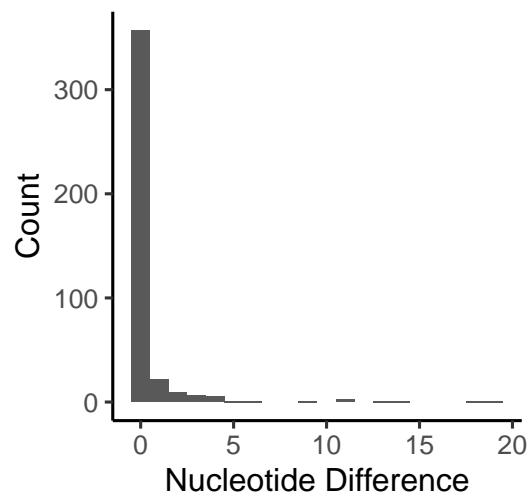
IGHV7-4-1*02

238 sequences assigned
207 (87%) exact matches, in which:
207 unique CDR3
7 unique J



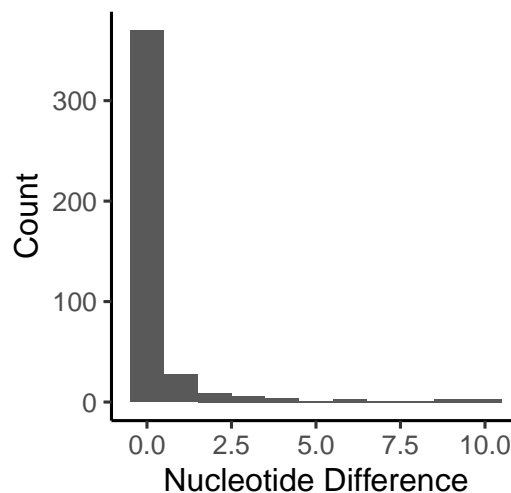
IGHV4-39*07

408 sequences assigned
357 (87.5%) exact matches, in which:
356 unique CDR3
6 unique J

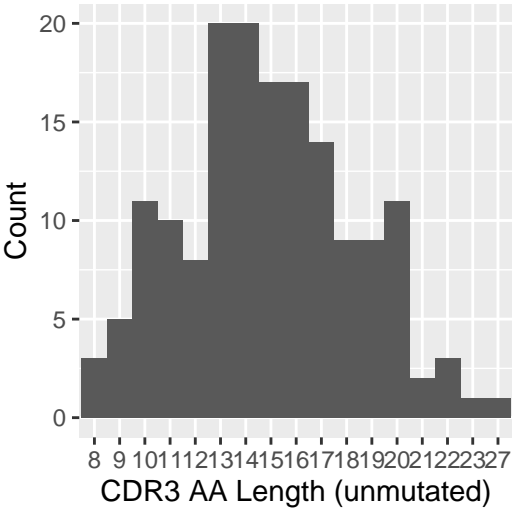


IGHV5-51*01

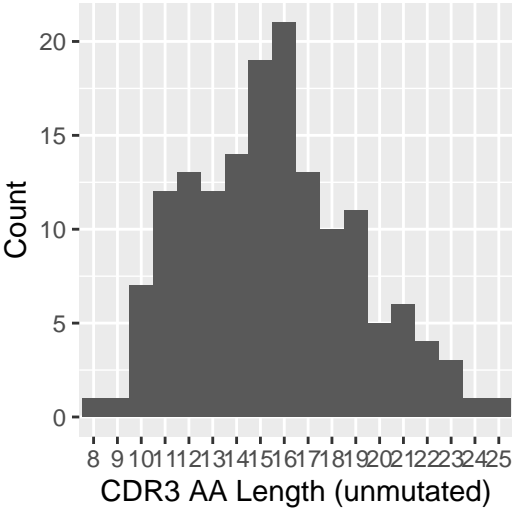
428 sequences assigned
370 (86.4%) exact matches, in which:
370 unique CDR3
7 unique J



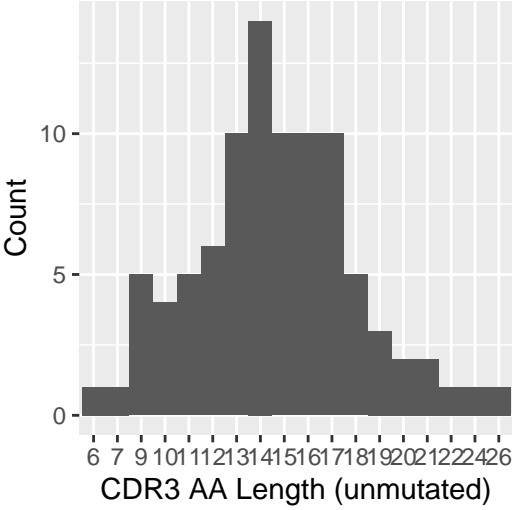
IGHV1-69*04_T191C

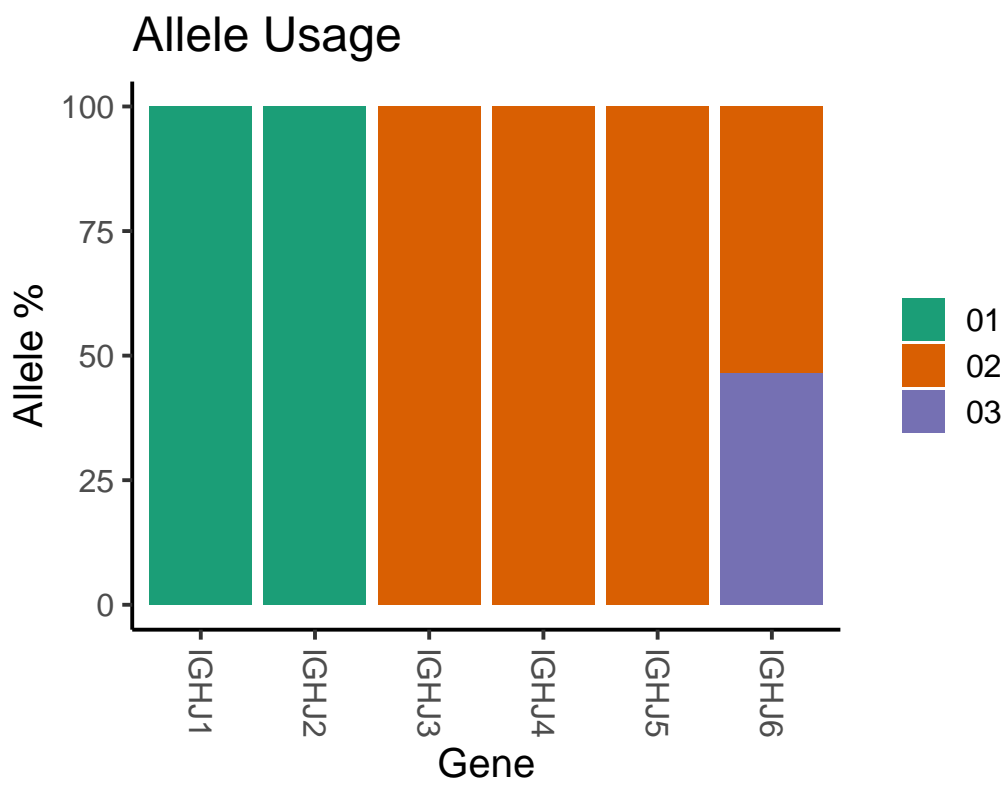


IGHV1-69*08_C191T

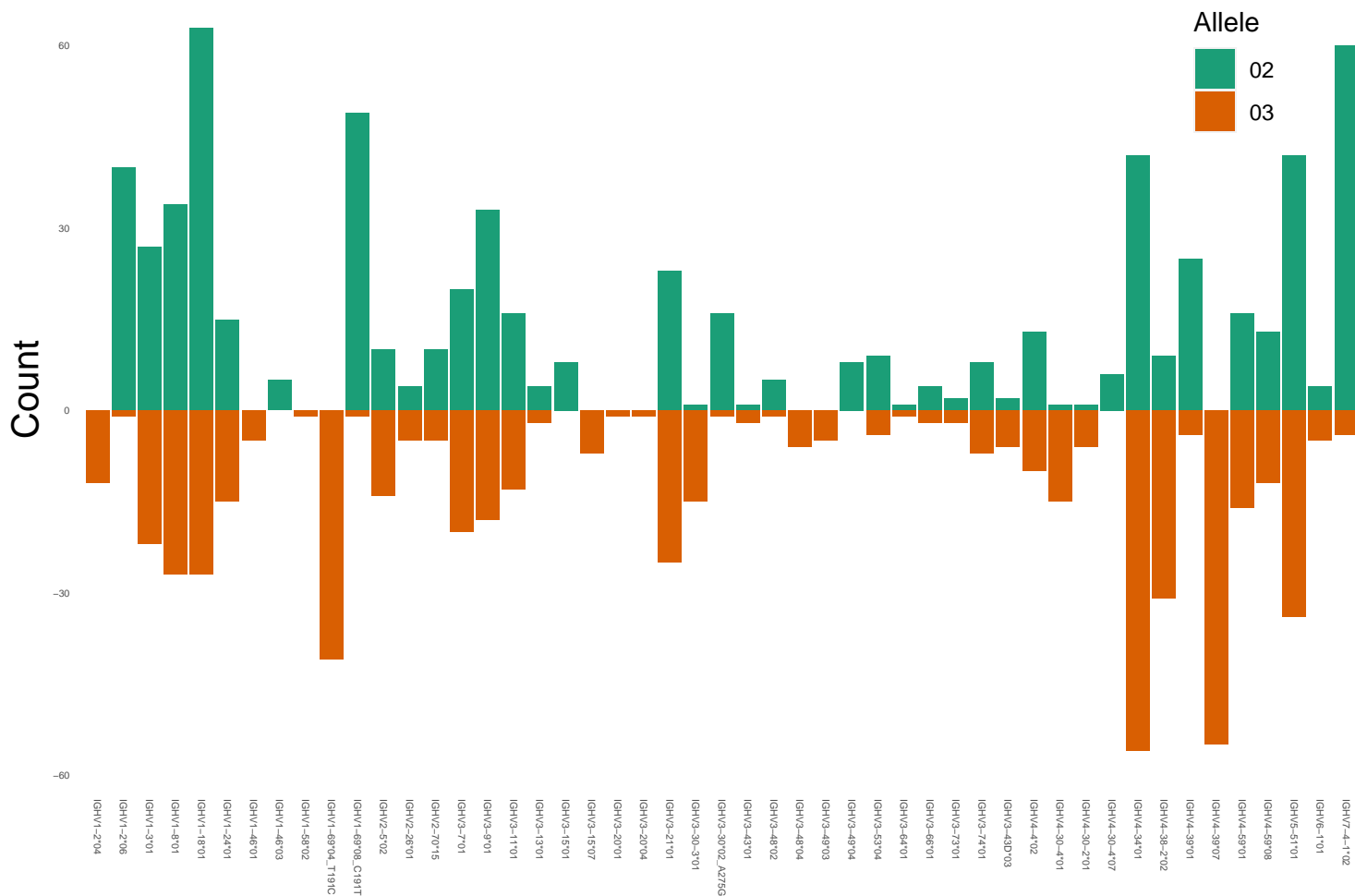


IGHV3-30*02_A275G





Sequence Count by IGHJ6 allele usage



[illegible]