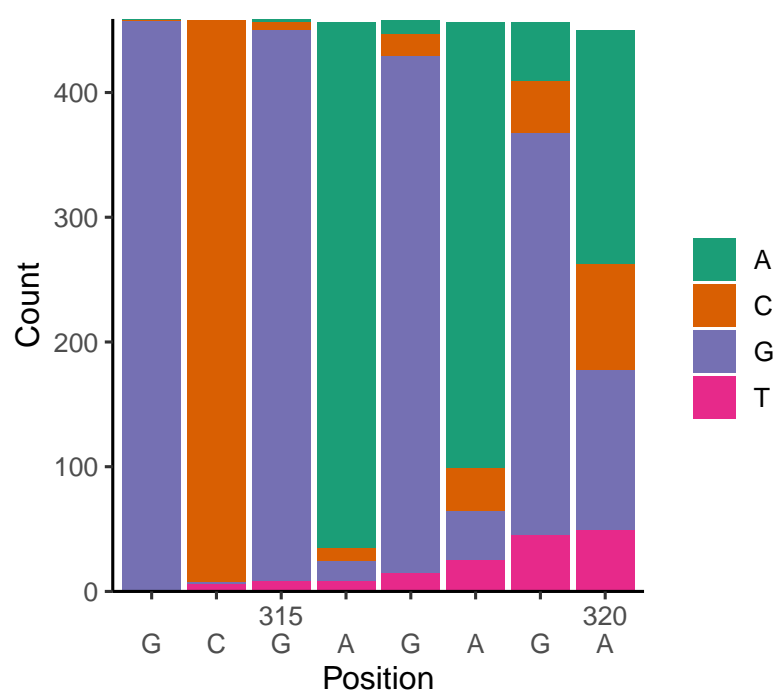
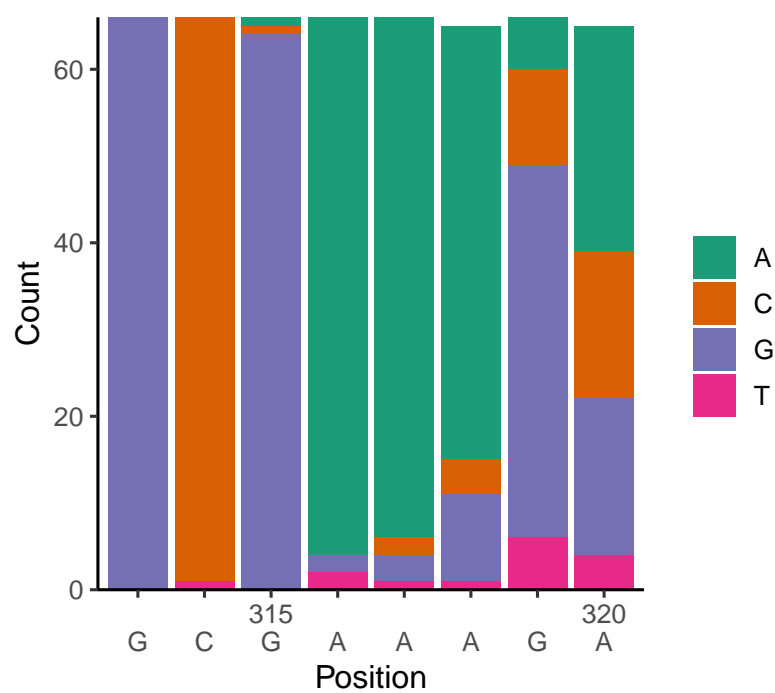


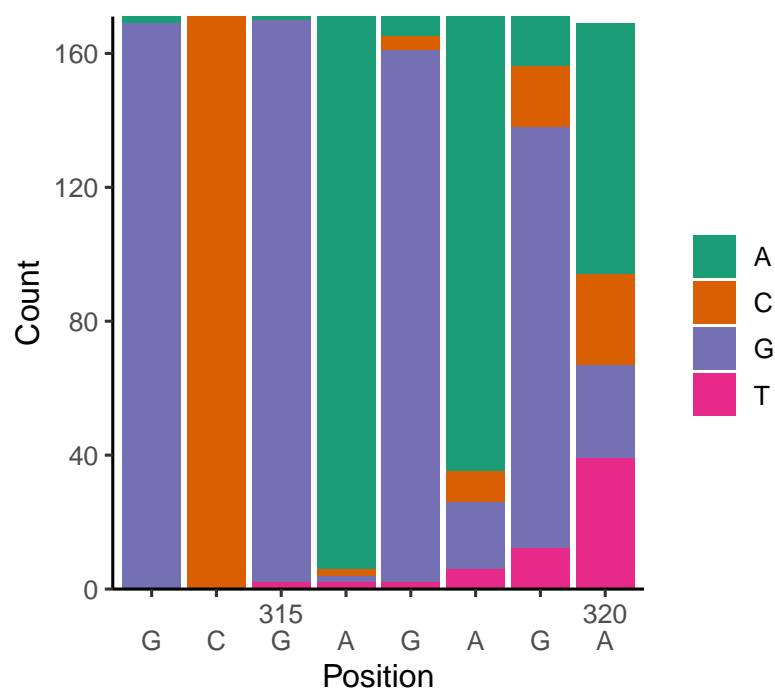
Gene IGHV1-69*04_A163G



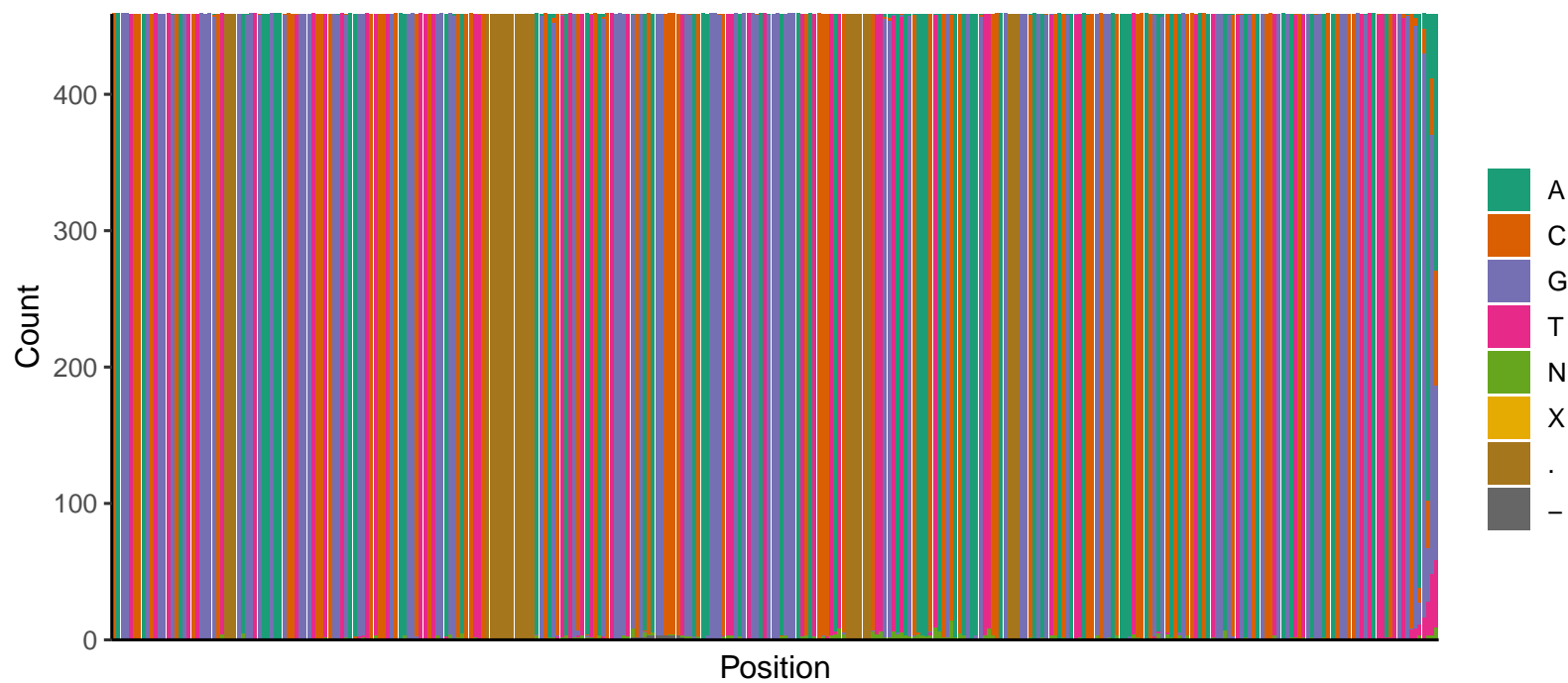
Gene IGHV3-23*01_G239T



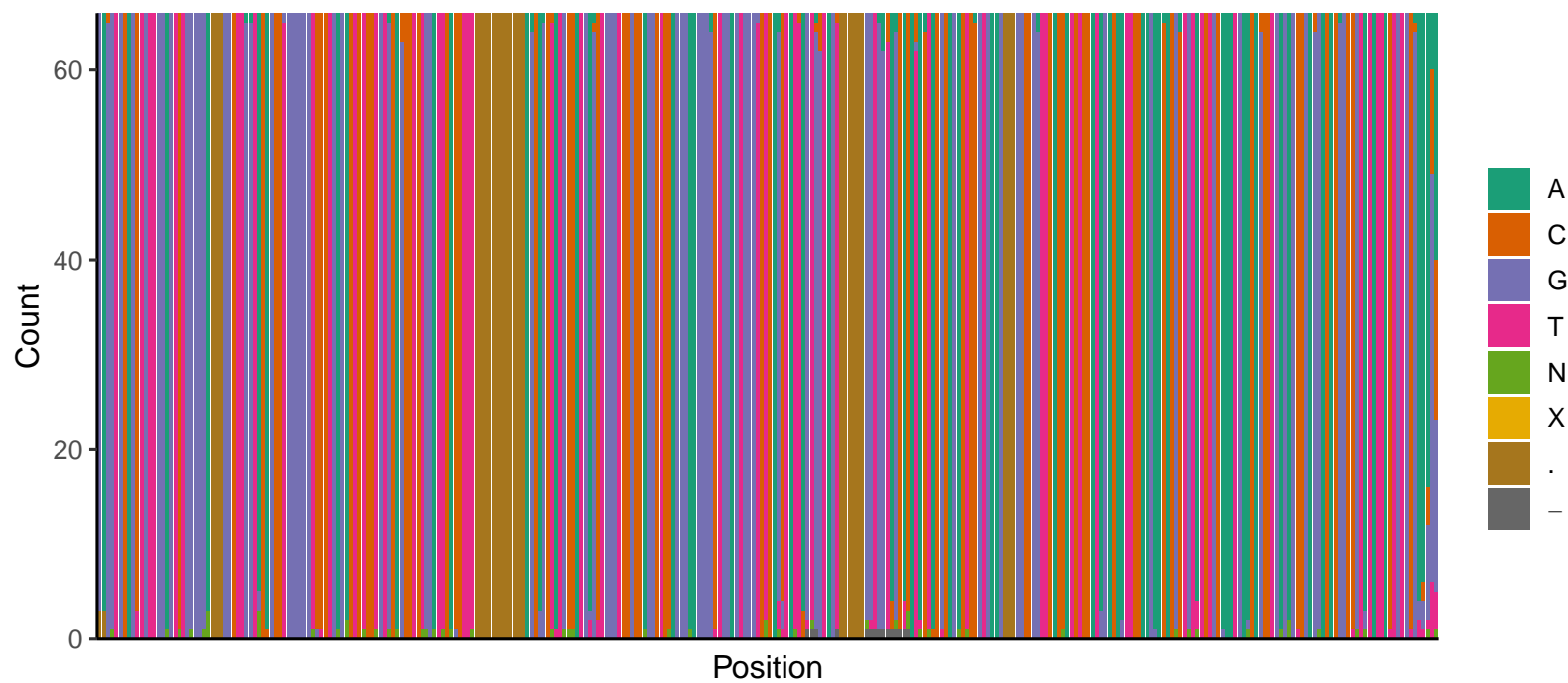
Gene IGHV4-38-2*02_G246A



Gene IGHV1-69*04_A163G



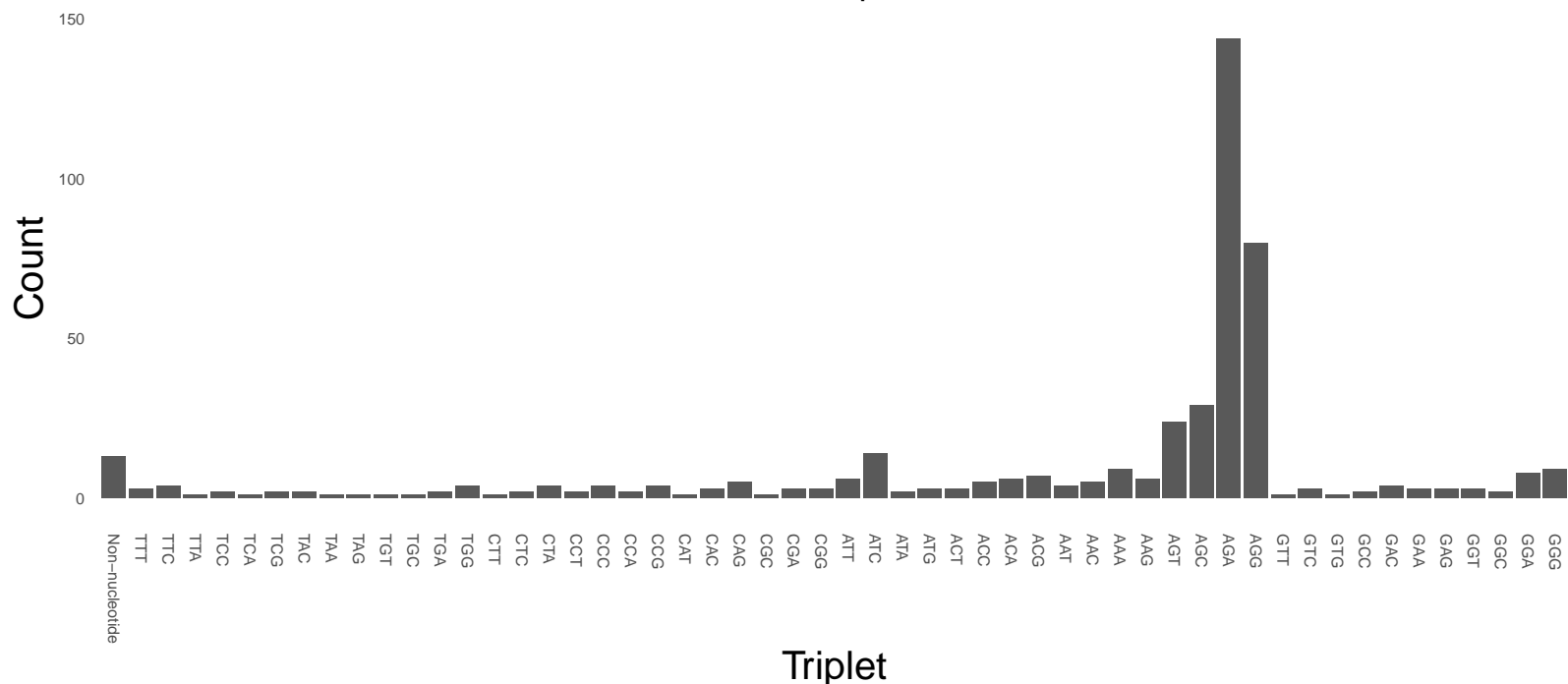
Gene IGHV3-23*01_G239T



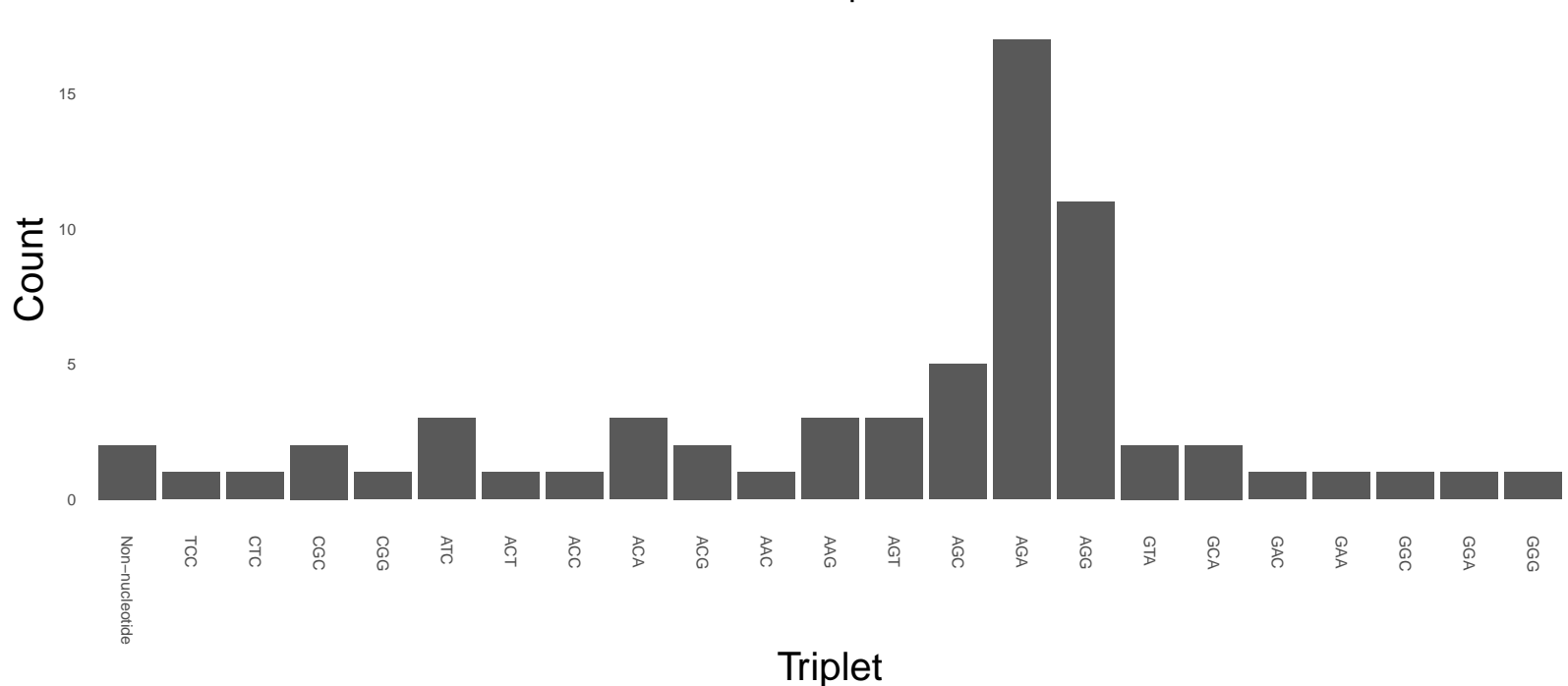
Gene IGHV4-38-2*02_G246A



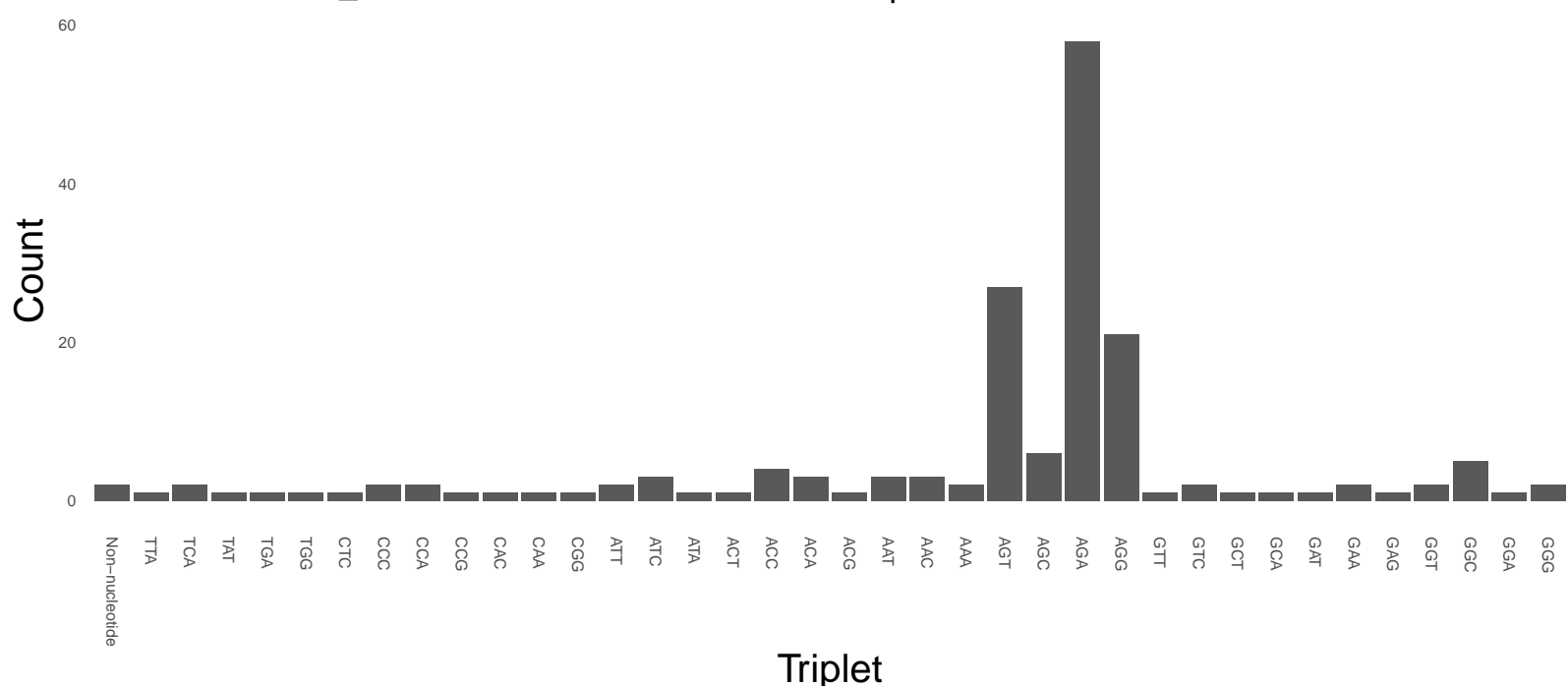
IGHV1-69*04_A163G- Final 3 nucleotides as a triplet



IGHV3-23*01_G239T- Final 3 nucleotides as a triplet

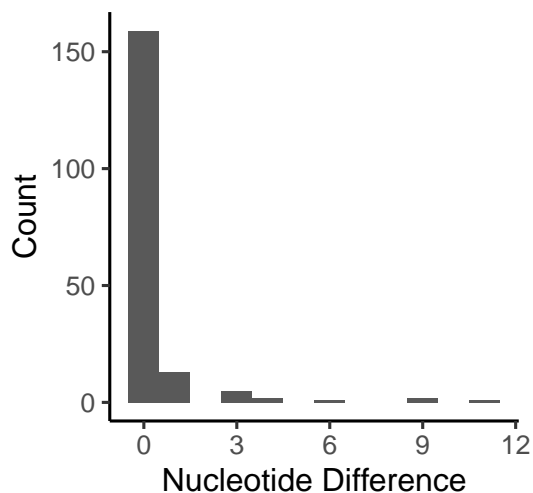


IGHV4-38-2*02_G246A- Final 3 nucleotides as a triplet



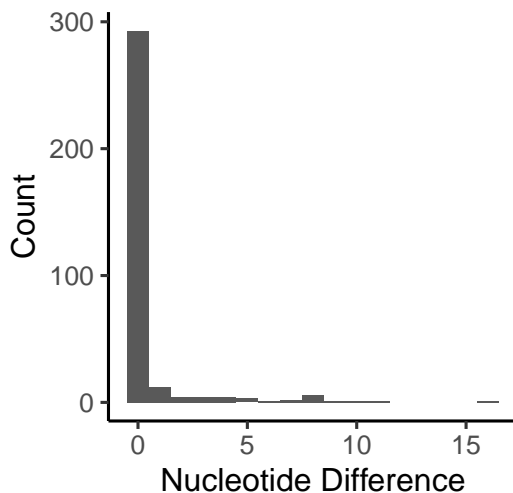
IGHV1-2*04

183 sequences assigned
159 (86.9%) exact matches, in which:
159 unique CDR3
6 unique J



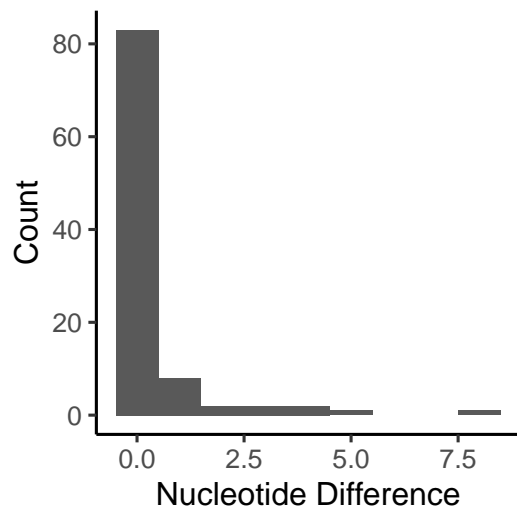
IGHV1-18*04

335 sequences assigned
293 (87.5%) exact matches, in which:
293 unique CDR3
6 unique J



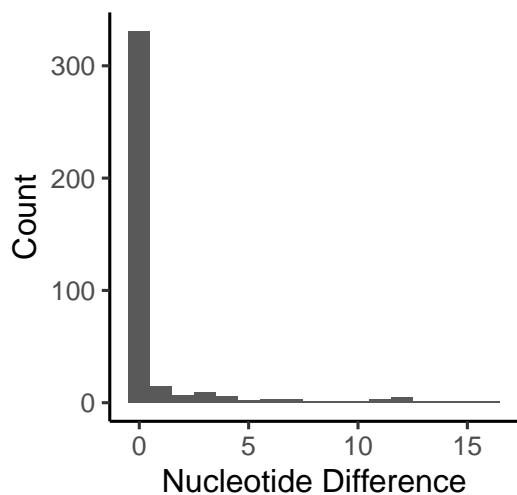
IGHV1-46*01

100 sequences assigned
83 (83%) exact matches, in which:
83 unique CDR3
6 unique J



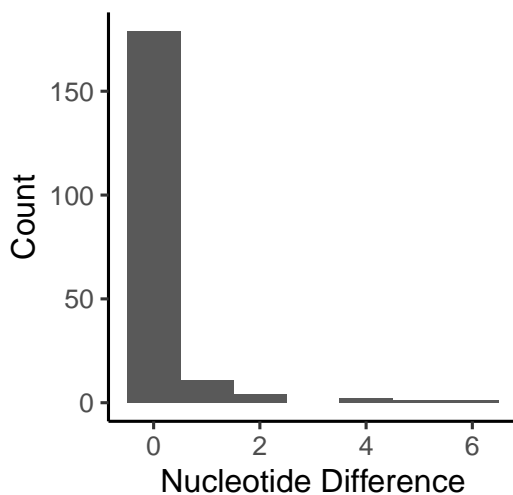
IGHV1-3*01

391 sequences assigned
331 (84.7%) exact matches, in which:
330 unique CDR3
6 unique J



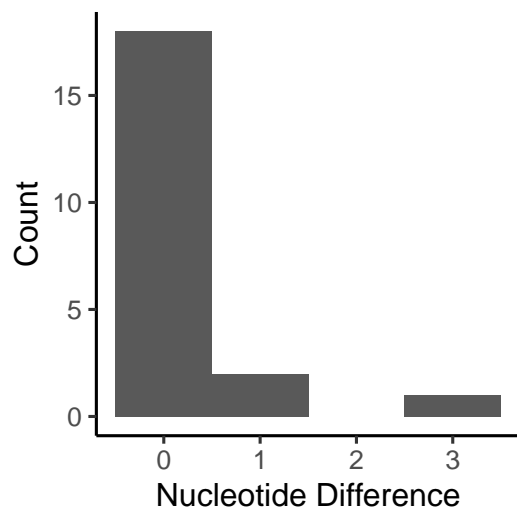
IGHV1-24*01

198 sequences assigned
179 (90.4%) exact matches, in which:
179 unique CDR3
6 unique J



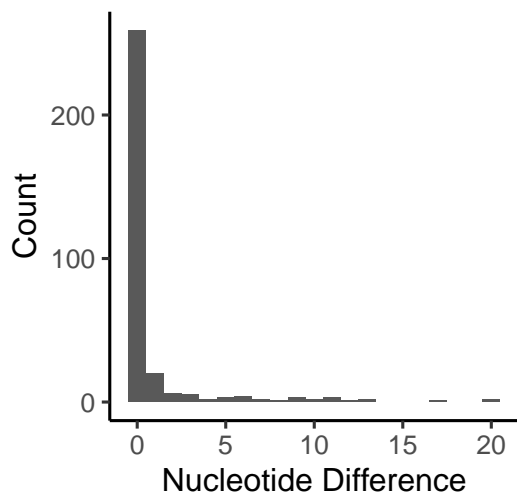
IGHV1-58*02

21 sequences assigned
18 (85.7%) exact matches, in which:
18 unique CDR3
4 unique J



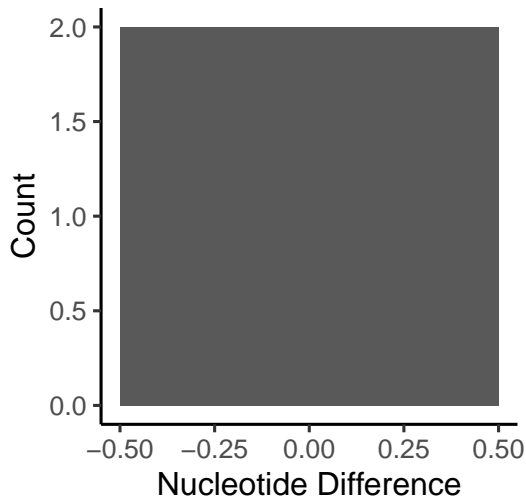
IGHV1-18*01

317 sequences assigned
259 (81.7%) exact matches, in which:
259 unique CDR3
4 unique J



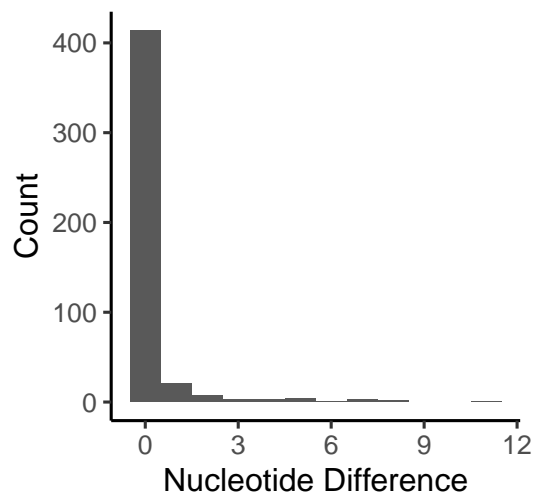
IGHV1-45*02

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



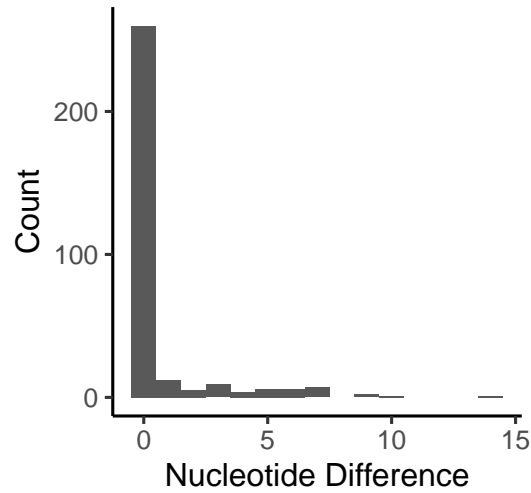
IGHV1-69*04_A163G

459 sequences assigned
414 (90.2%) exact matches, in which:
413 unique CDR3
5 unique J



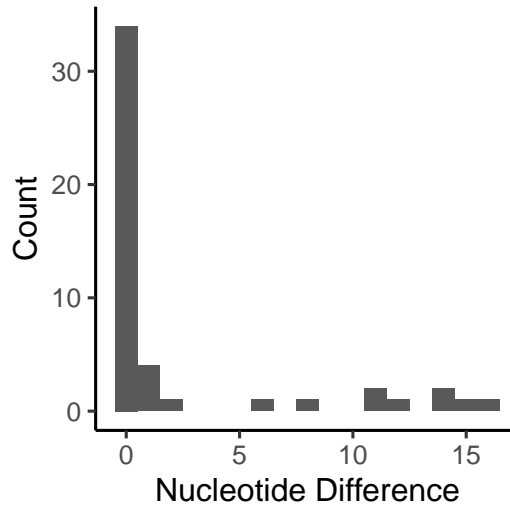
IGHV2-5*02

314 sequences assigned
260 (82.8%) exact matches, in which:
260 unique CDR3
6 unique J



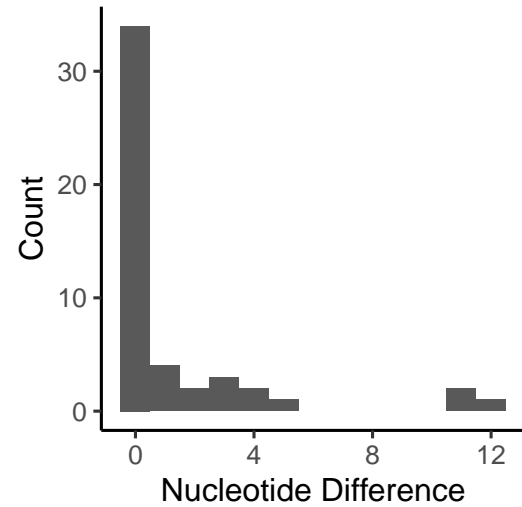
IGHV3-7*04

48 sequences assigned
34 (70.8%) exact matches, in which:
34 unique CDR3
5 unique J



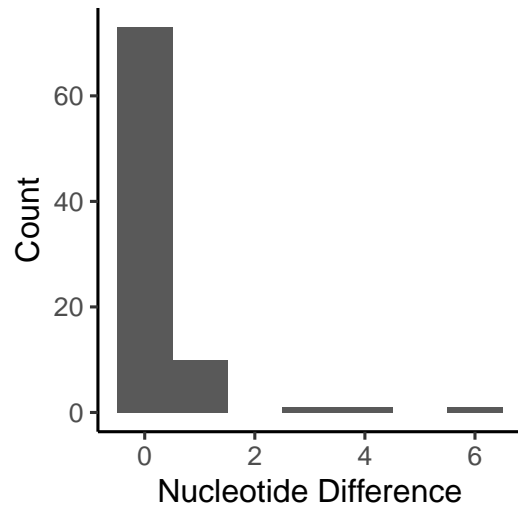
IGHV3-13*04

49 sequences assigned
34 (69.4%) exact matches, in which:
34 unique CDR3
5 unique J



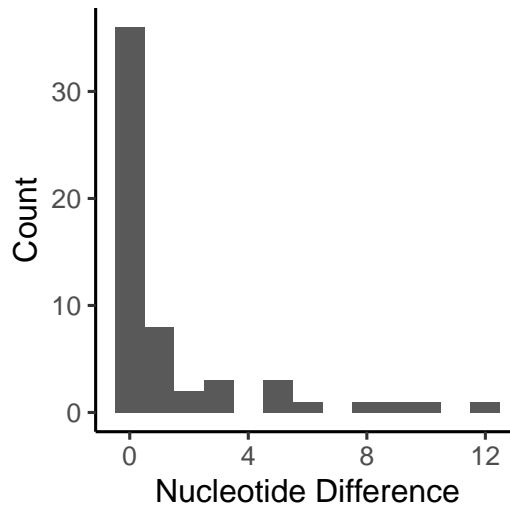
IGHV2-26*01

86 sequences assigned
73 (84.9%) exact matches, in which:
73 unique CDR3
5 unique J



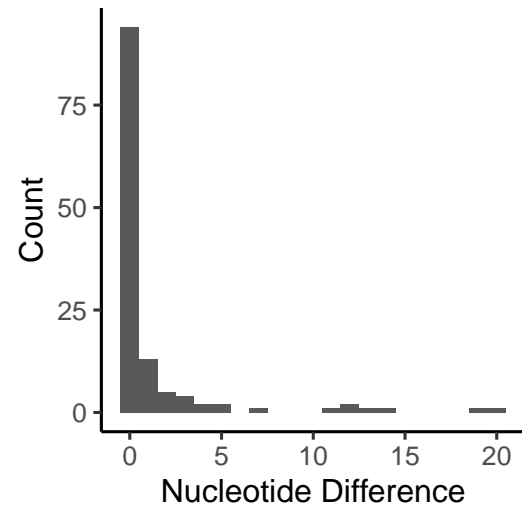
IGHV3-7*05

57 sequences assigned
36 (63.2%) exact matches, in which:
36 unique CDR3
6 unique J



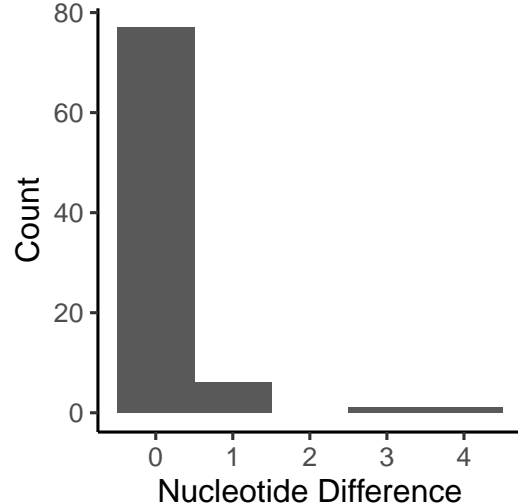
IGHV3-15*01

128 sequences assigned
94 (73.4%) exact matches, in which:
93 unique CDR3
6 unique J



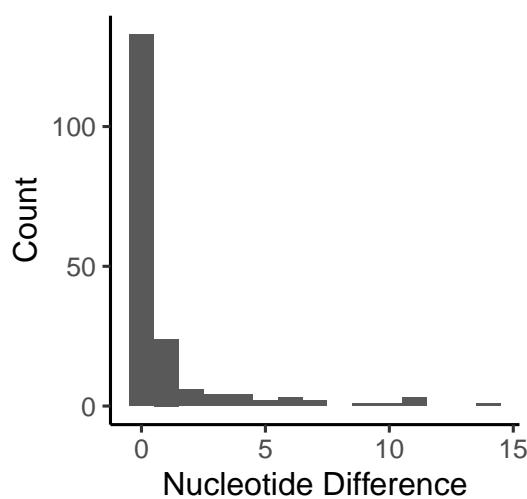
IGHV2-70*15

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



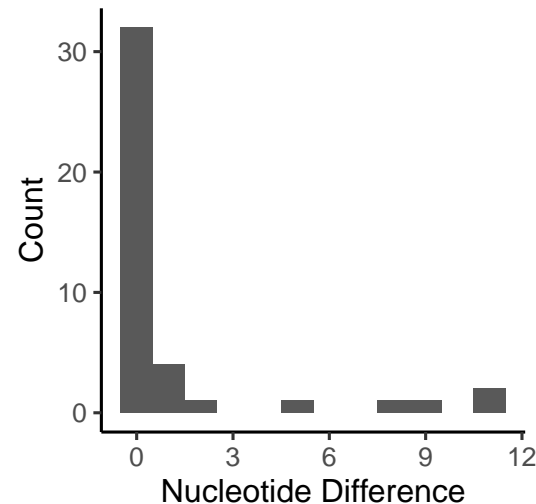
IGHV3-11*05

184 sequences assigned
133 (72.3%) exact matches, in which:
133 unique CDR3
6 unique J



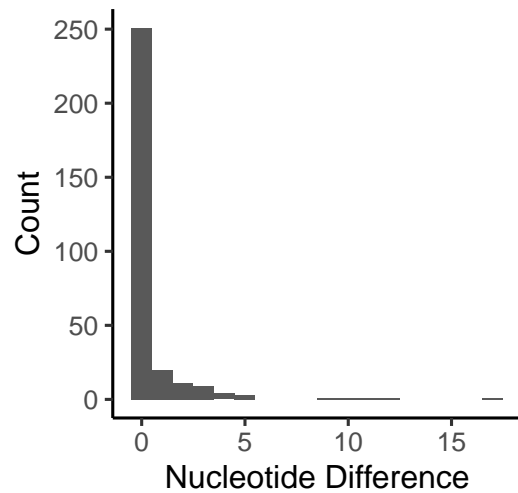
IGHV3-20*04

42 sequences assigned
32 (76.2%) exact matches, in which:
32 unique CDR3
4 unique J



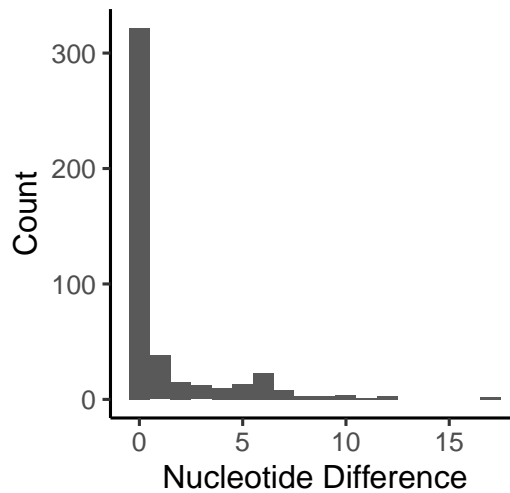
IGHV3-21*01

303 sequences assigned
251 (82.8%) exact matches, in which:
251 unique CDR3
6 unique J



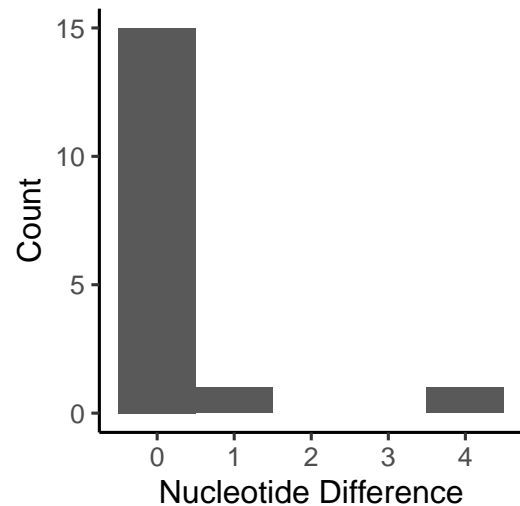
IGHV3-30-3*01

459 sequences assigned
322 (70.2%) exact matches, in which:
322 unique CDR3
6 unique J



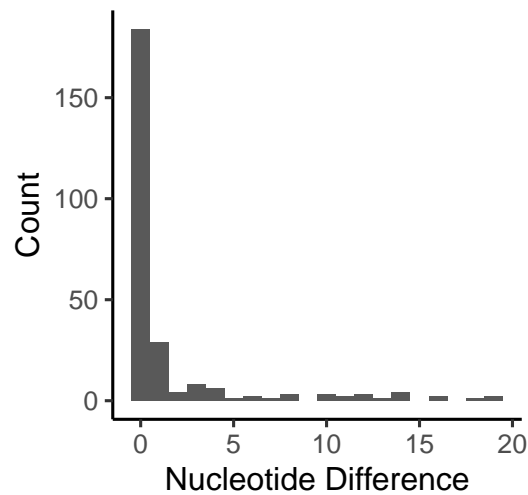
IGHV3-43*01

17 sequences assigned
15 (88.2%) exact matches, in which:
15 unique CDR3
5 unique J



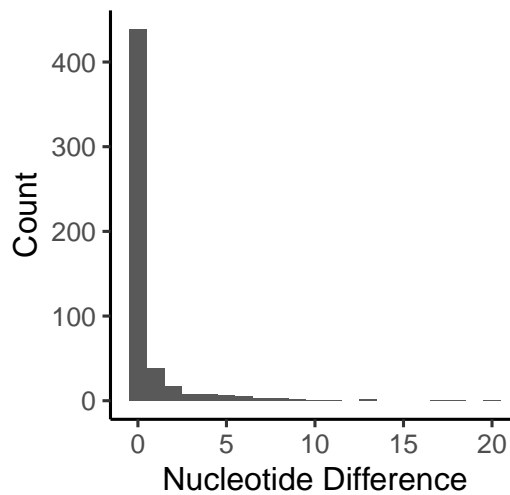
IGHV3-23*01

259 sequences assigned
184 (71%) exact matches, in which:
184 unique CDR3
6 unique J



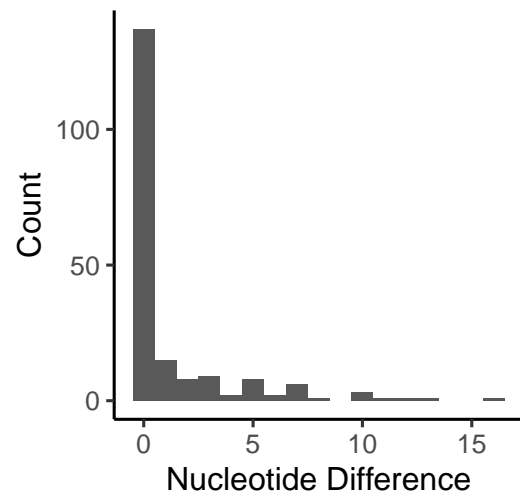
IGHV3-30*18

540 sequences assigned
439 (81.3%) exact matches, in which:
439 unique CDR3
6 unique J



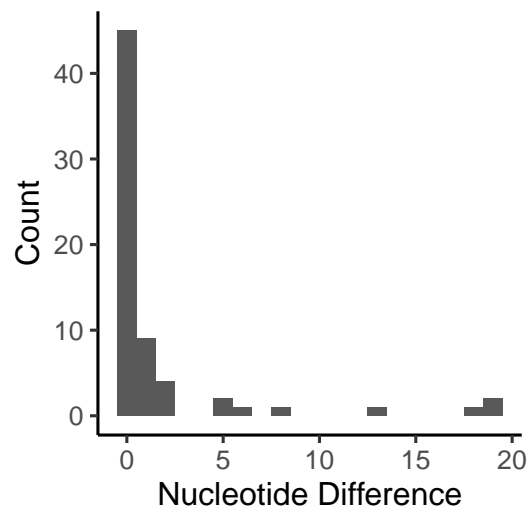
IGHV3-48*04

198 sequences assigned
137 (69.2%) exact matches, in which:
137 unique CDR3
6 unique J



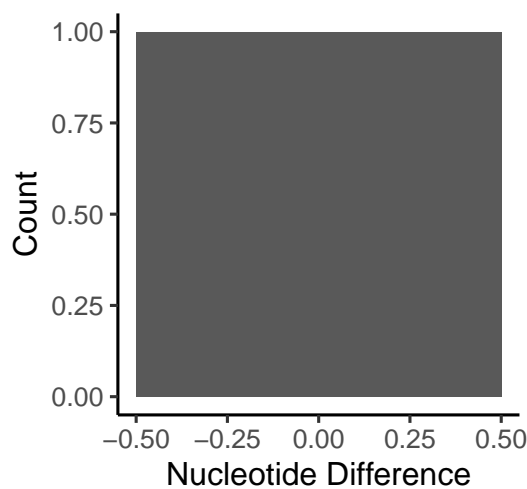
IGHV3-23*01_G239T

66 sequences assigned
45 (68.2%) exact matches, in which:
45 unique CDR3
5 unique J



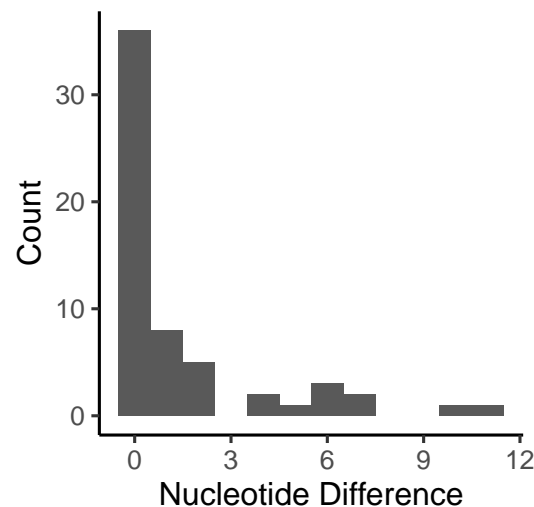
IGHV3-38-3*01

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



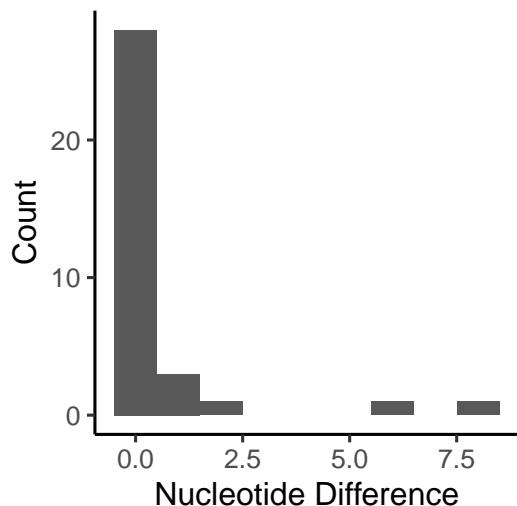
IGHV3-49*03

59 sequences assigned
36 (61%) exact matches, in which:
36 unique CDR3
5 unique J



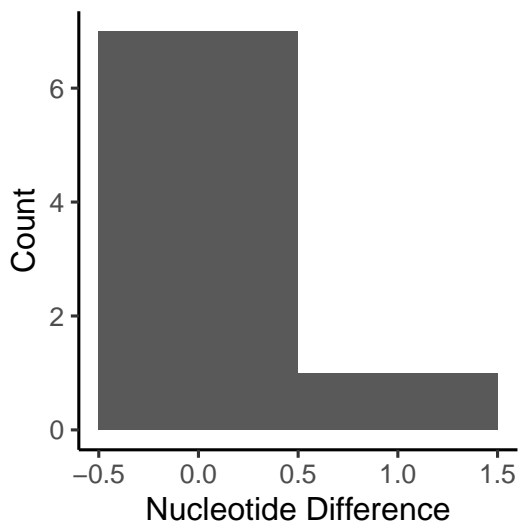
IGHV3-53*04

34 sequences assigned
28 (82.4%) exact matches, in which:
28 unique CDR3
6 unique J



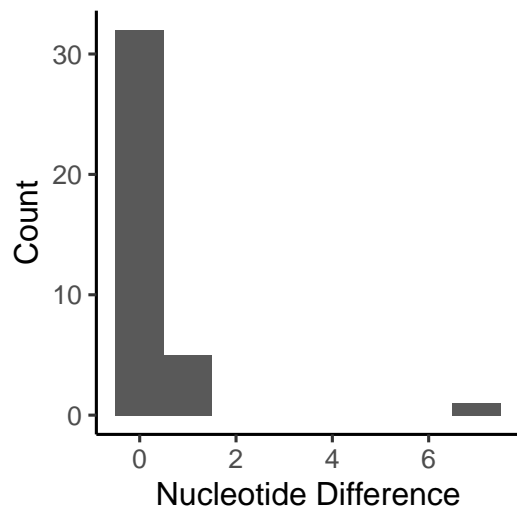
IGHV3-72*01

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



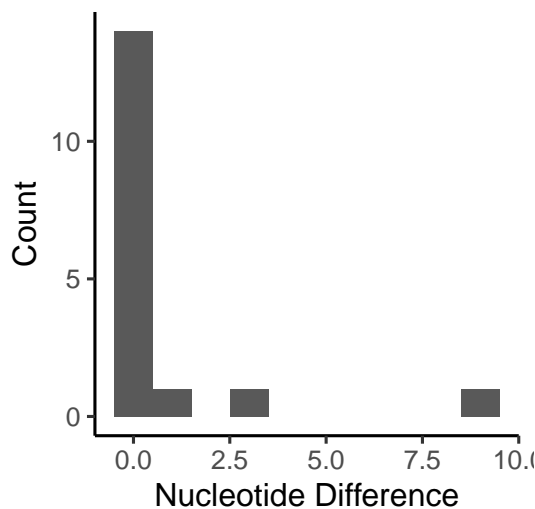
IGHV3-43D*03

38 sequences assigned
32 (84.2%) exact matches, in which:
32 unique CDR3
5 unique J



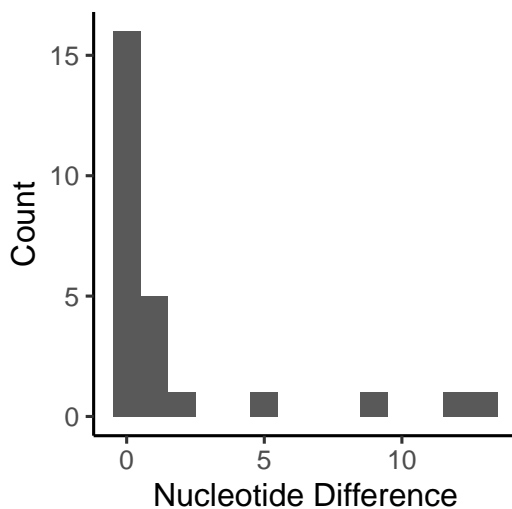
IGHV3-64*01

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



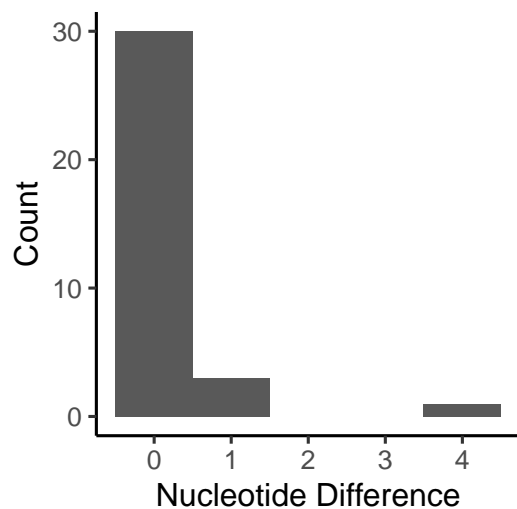
IGHV3-73*01

26 sequences assigned
16 (61.5%) exact matches, in which:
16 unique CDR3
3 unique J



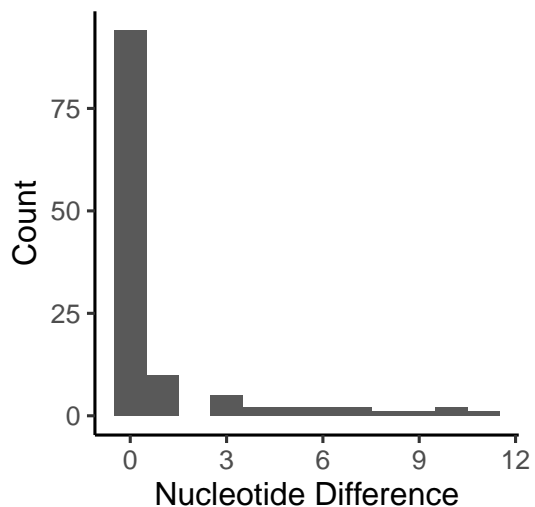
IGHV3-64D*06

34 sequences assigned
30 (88.2%) exact matches, in which:
30 unique CDR3
5 unique J



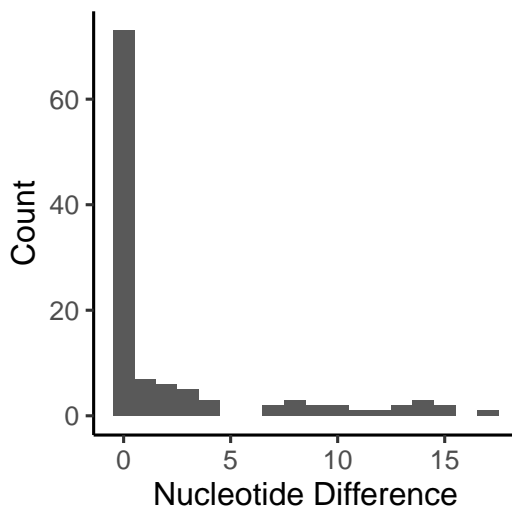
IGHV3-66*01

123 sequences assigned
94 (76.4%) exact matches, in which:
94 unique CDR3
6 unique J



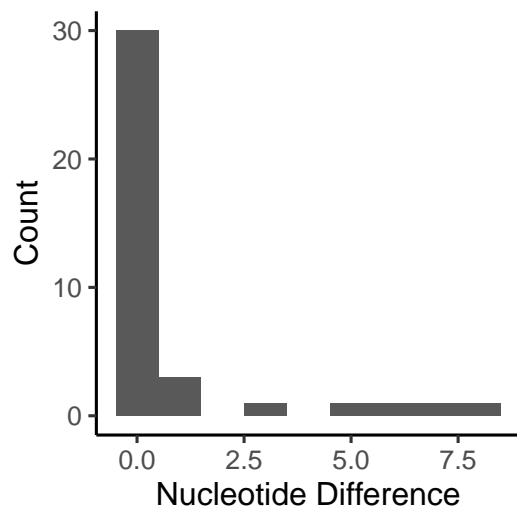
IGHV3-74*01

114 sequences assigned
73 (64%) exact matches, in which:
73 unique CDR3
5 unique J



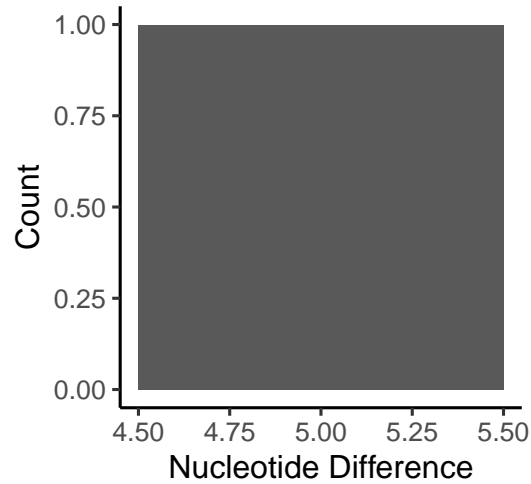
IGHV3-64D*09

38 sequences assigned
30 (78.9%) exact matches, in which:
30 unique CDR3
5 unique J



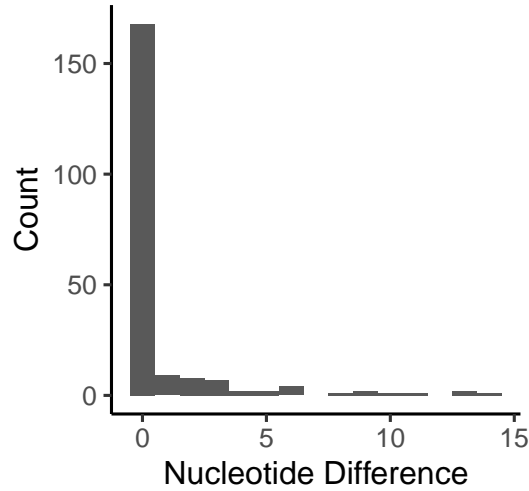
IGHV3–NL1*01

1 sequences assigned
No exact matches.



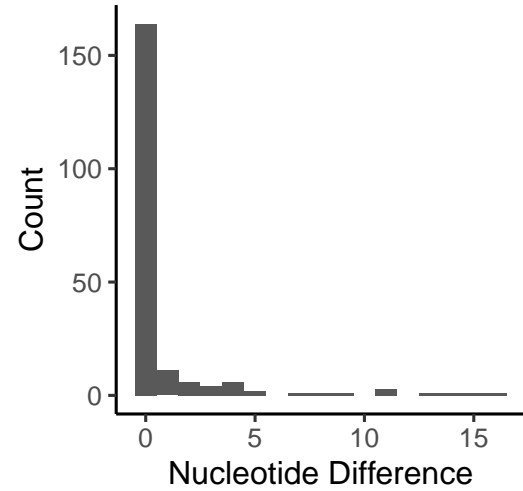
IGHV4–30–4*01

209 sequences assigned
168 (80.4%) exact matches, in which:
168 unique CDR3
6 unique J



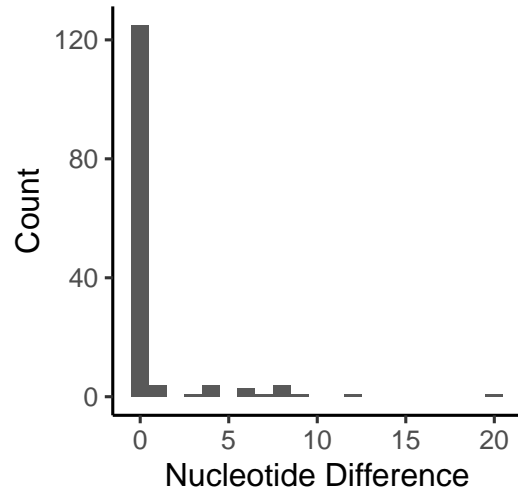
IGHV4–38–2*02

203 sequences assigned
164 (80.8%) exact matches, in which:
164 unique CDR3
6 unique J



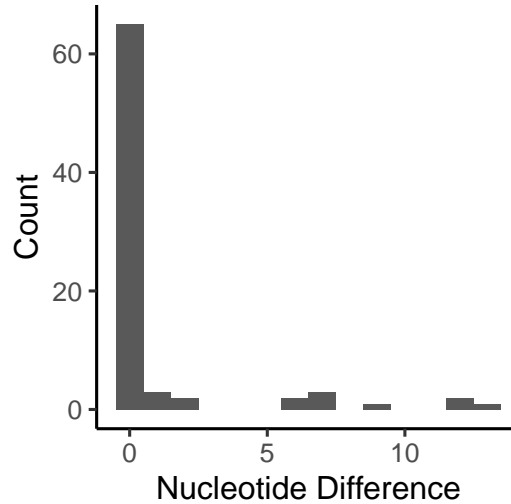
IGHV4–4*02

145 sequences assigned
125 (86.2%) exact matches, in which:
125 unique CDR3
6 unique J



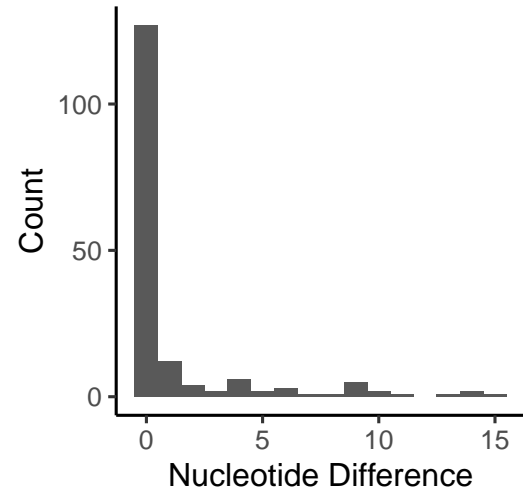
IGHV4–30–2*01

79 sequences assigned
65 (82.3%) exact matches, in which:
64 unique CDR3
5 unique J



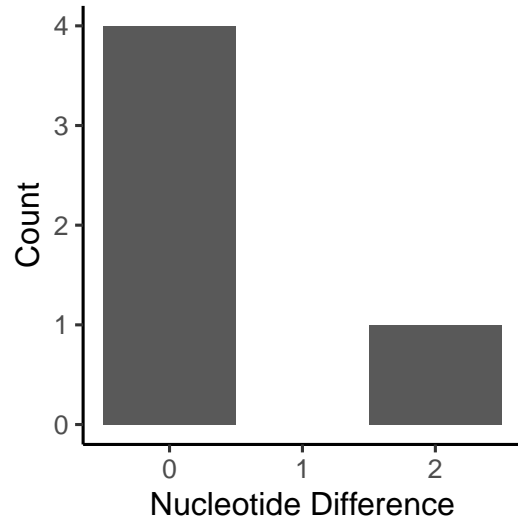
IGHV4–38–2*02_G246A

171 sequences assigned
127 (74.3%) exact matches, in which:
127 unique CDR3
6 unique J



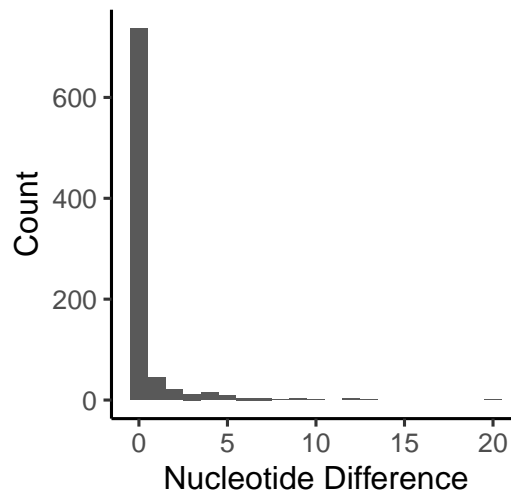
IGHV4–28*01

5 sequences assigned
4 (80%) exact matches, in which:
4 unique CDR3
3 unique J



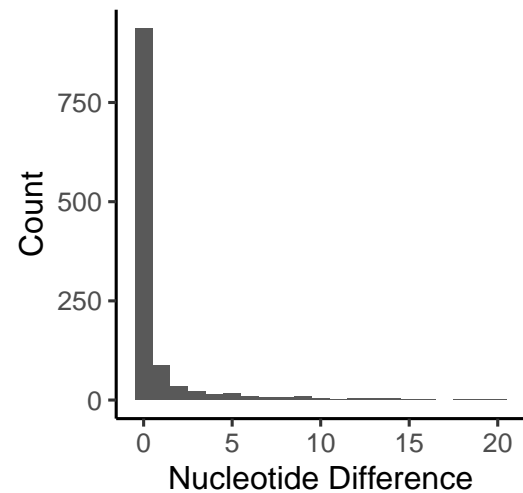
IGHV4–34*01

860 sequences assigned
737 (85.7%) exact matches, in which:
737 unique CDR3
6 unique J



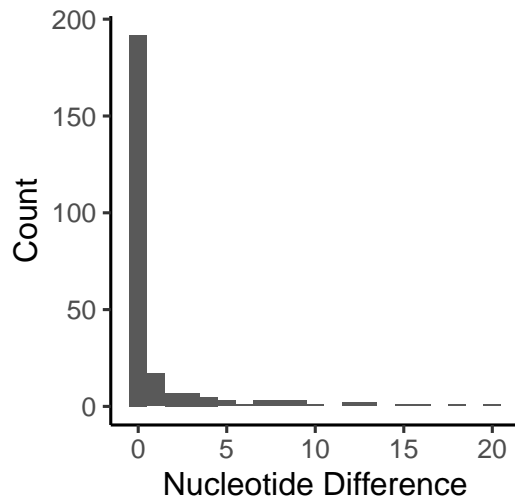
IGHV4–39*07

1169 sequences assigned
937 (80.2%) exact matches, in which:
936 unique CDR3
6 unique J



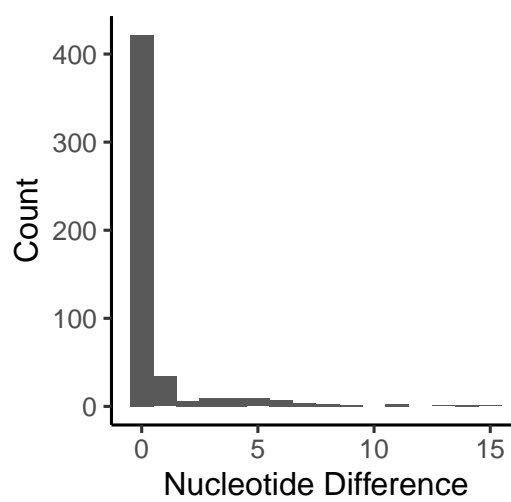
IGHV4–59*01

256 sequences assigned
192 (75%) exact matches, in which:
192 unique CDR3
5 unique J



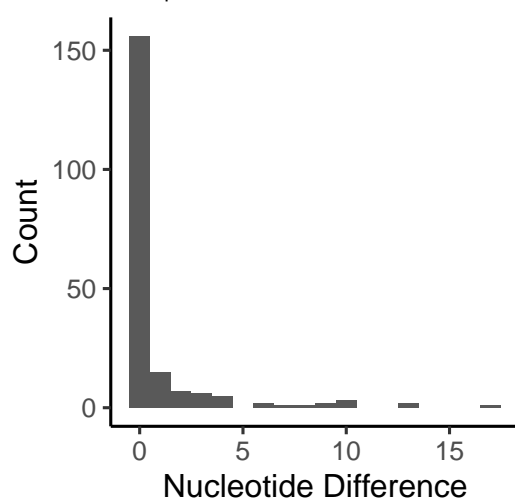
IGHV5–51*01

514 sequences assigned
422 (82.1%) exact matches, in which:
422 unique CDR3
6 unique J



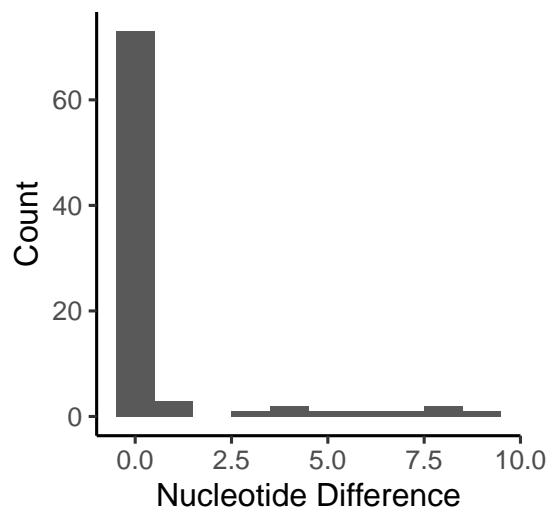
IGHV4–59*08

201 sequences assigned
156 (77.6%) exact matches, in which:
156 unique CDR3
6 unique J



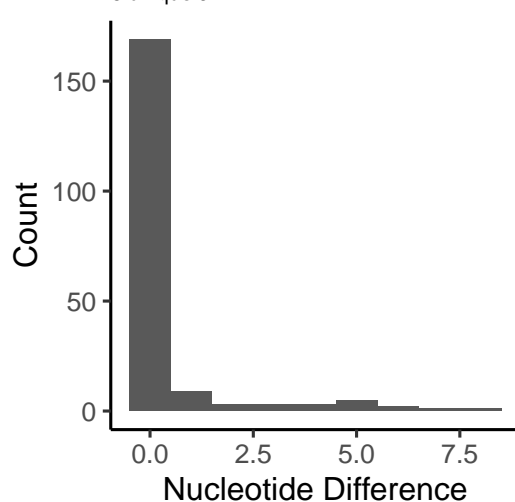
IGHV6–1*01

85 sequences assigned
73 (85.9%) exact matches, in which:
73 unique CDR3
6 unique J



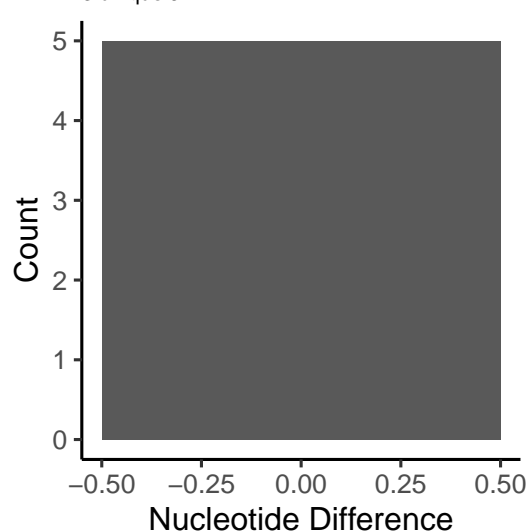
IGHV5–10–1*01

196 sequences assigned
169 (86.2%) exact matches, in which:
169 unique CDR3
6 unique J

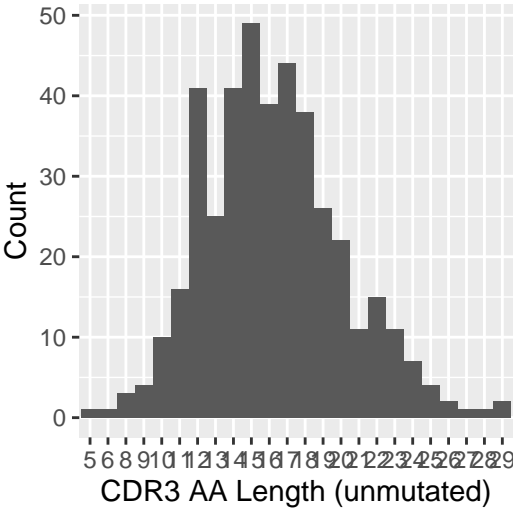


IGHV7–4–1*01

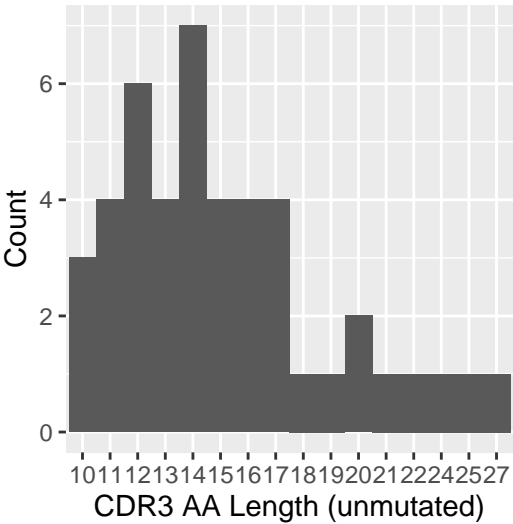
5 sequences assigned
5 (100%) exact matches, in which:
5 unique CDR3
3 unique J



IGHV1-69*04_A163G



IGHV3-23*01_G239T



IGHV4-38-2*02_G246A

