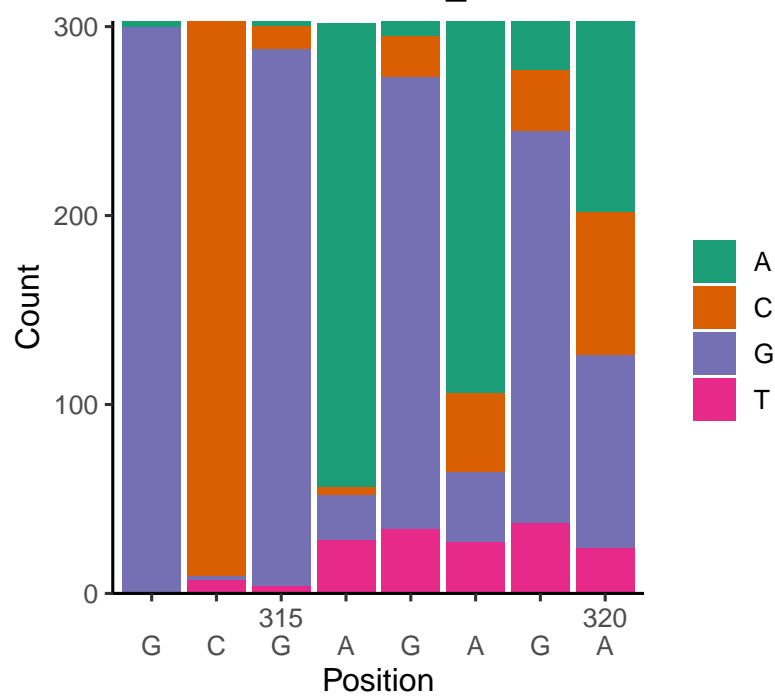
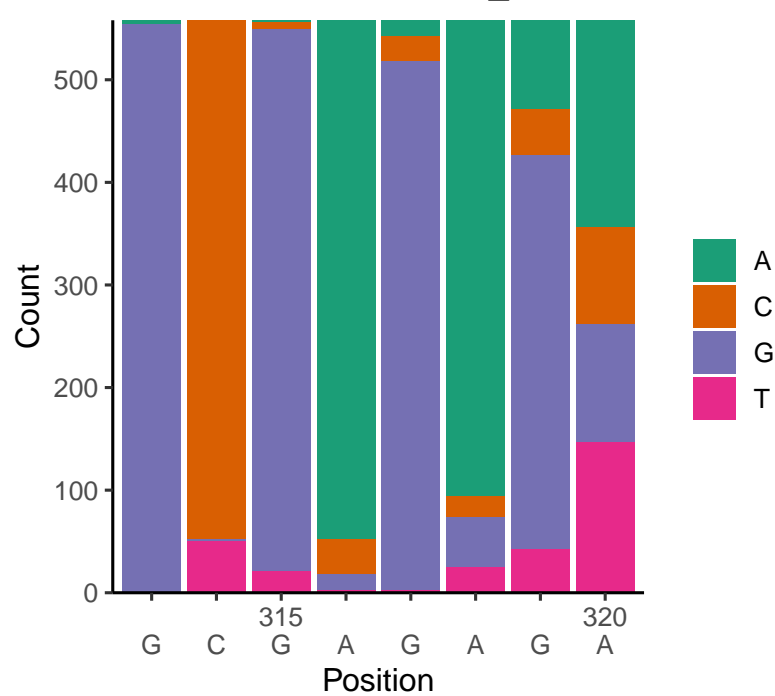


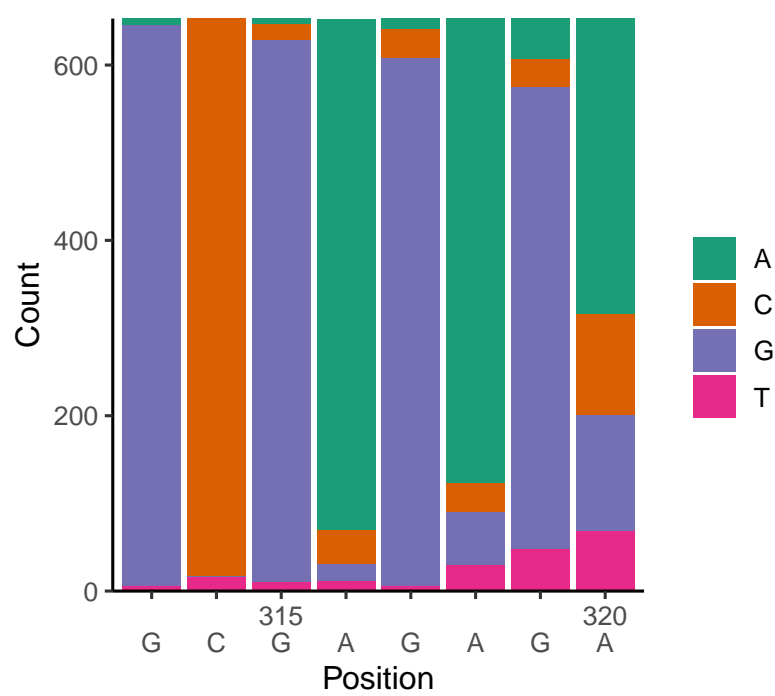
Gene IGHV1-69*08_C191T



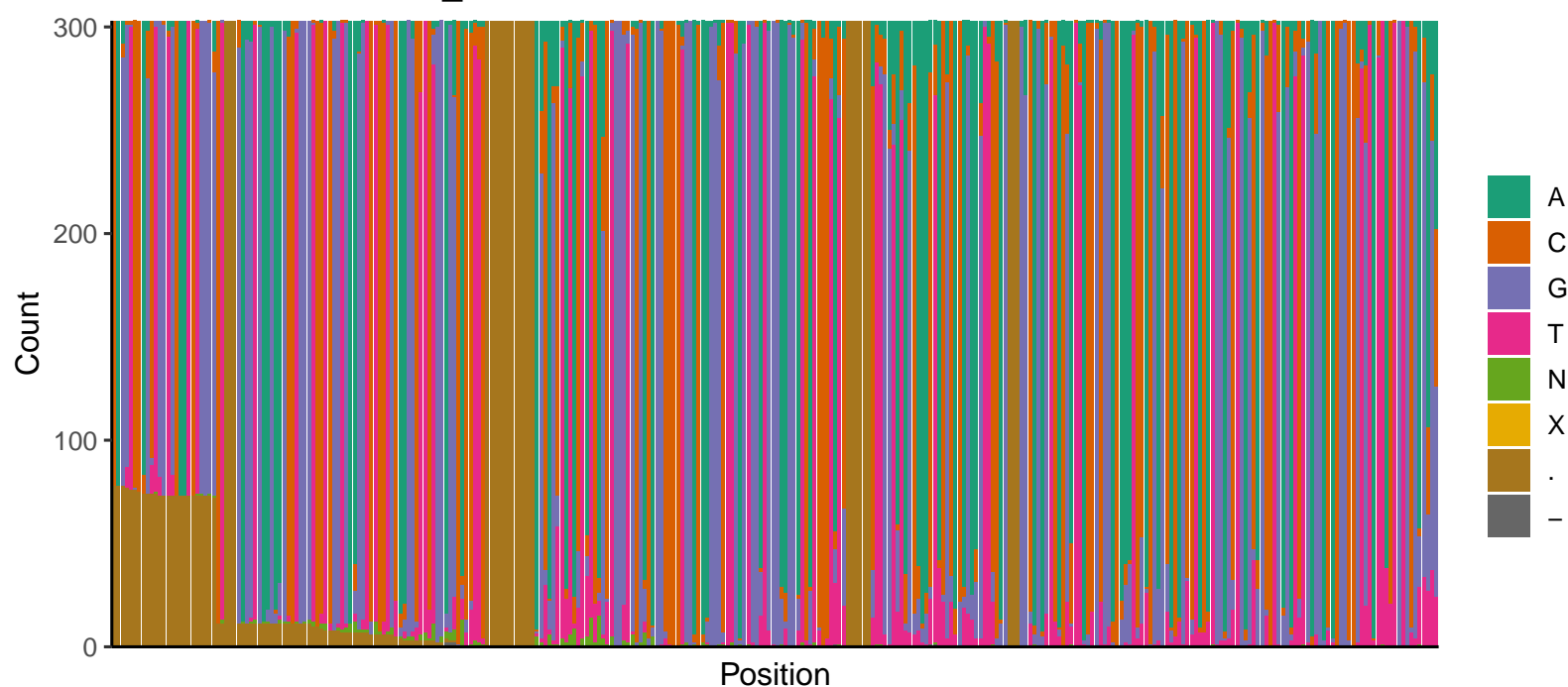
Gene IGHV4-38-2*02_A70G



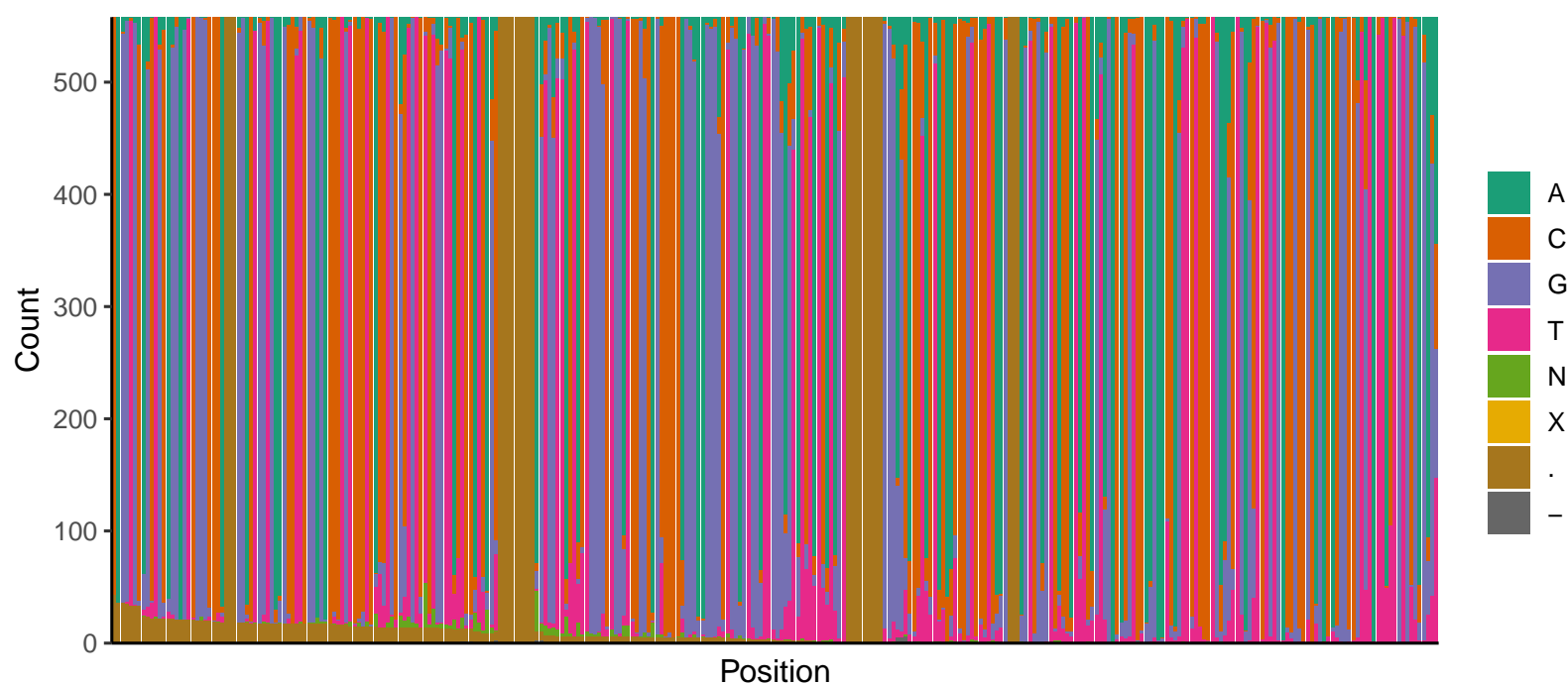
Gene IGHV4-61*02_A291G



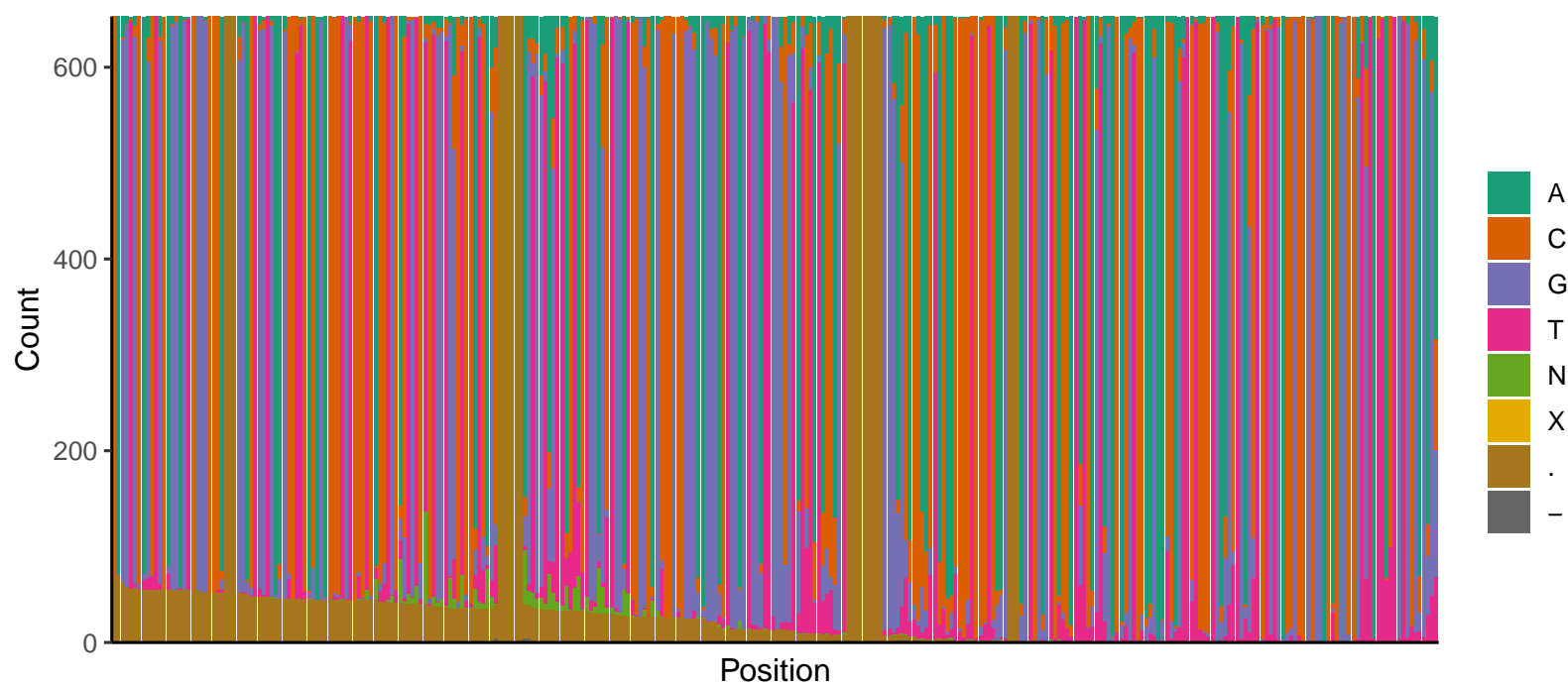
Gene IGHV1-69*08_C191T



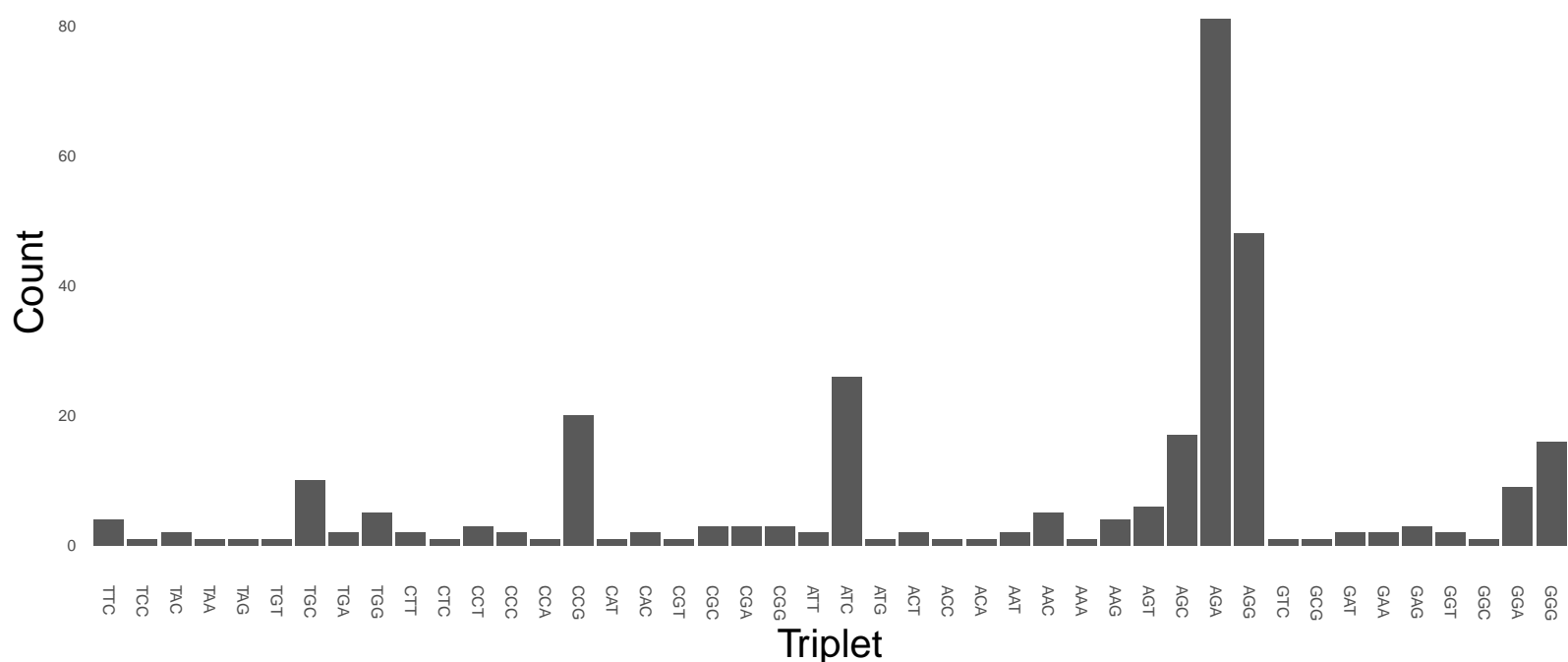
Gene IGHV4-38-2*02_A70G



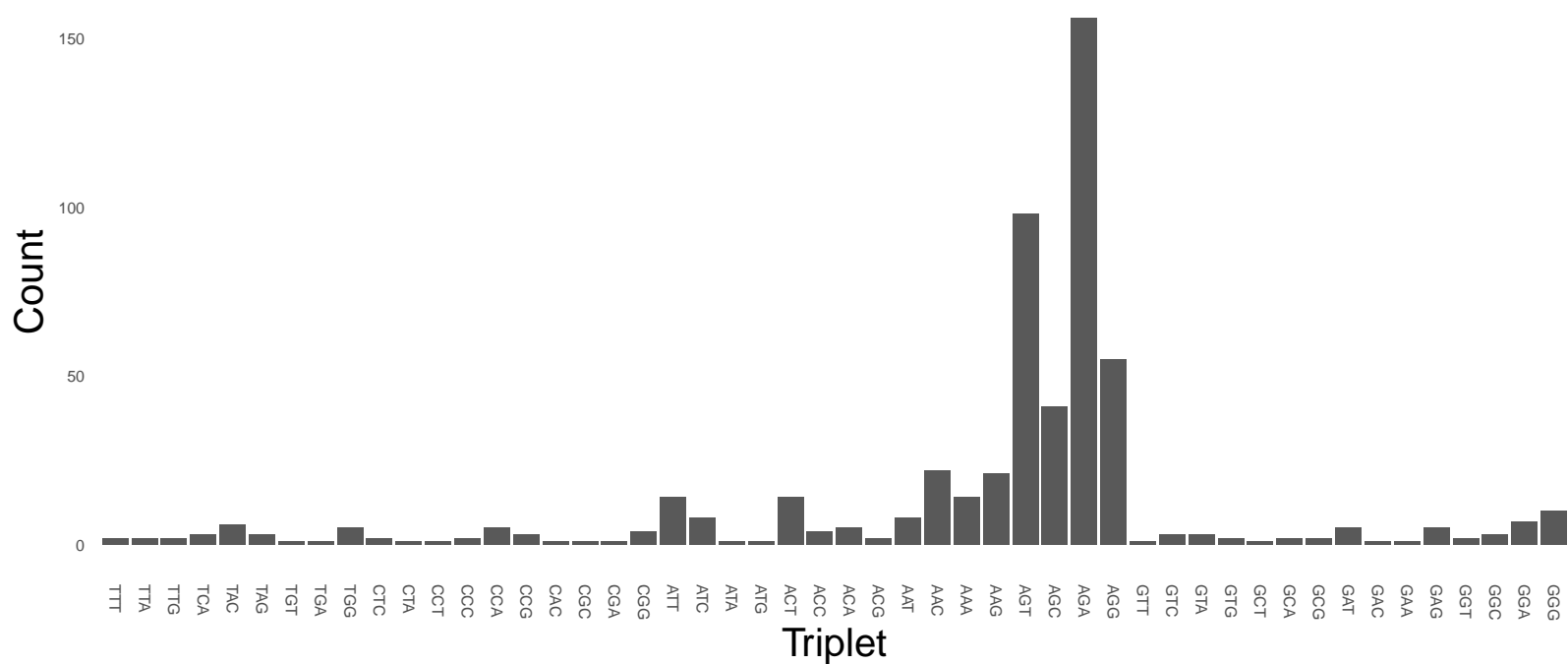
Gene IGHV4-61*02_A291G



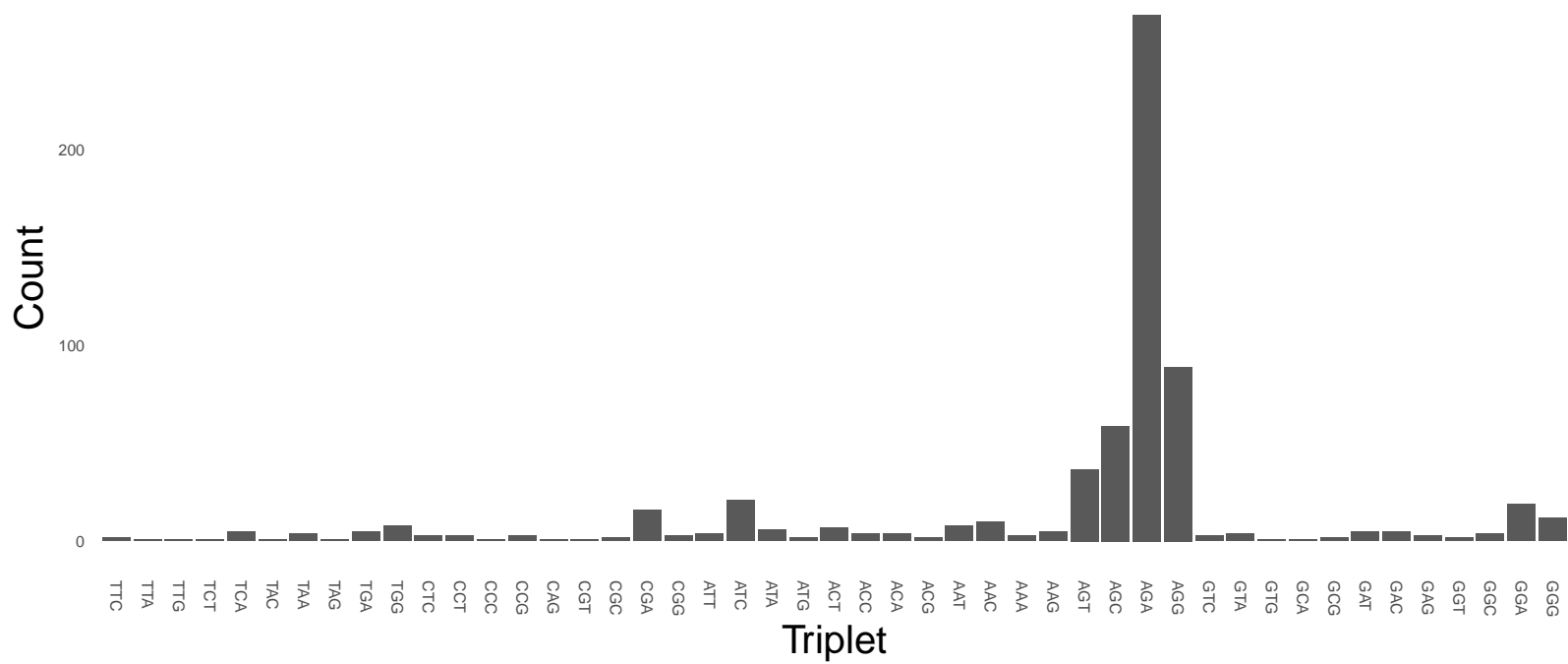
IGHV1-69*08_C191T- Final 3 nucleotides as a triplet



IGHV4-38-2*02_A70G- Final 3 nucleotides as a triplet

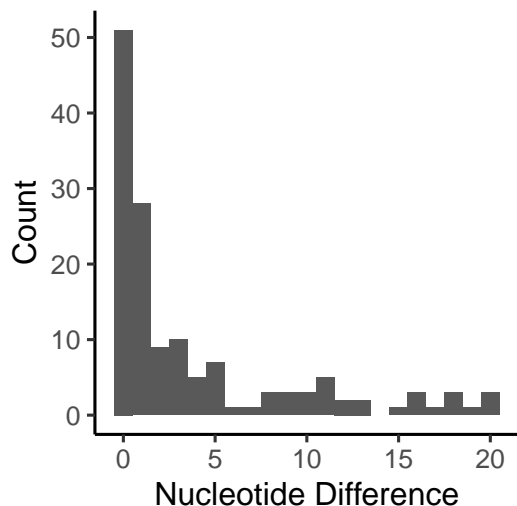


IGHV4-61*02_A291G- Final 3 nucleotides as a triplet



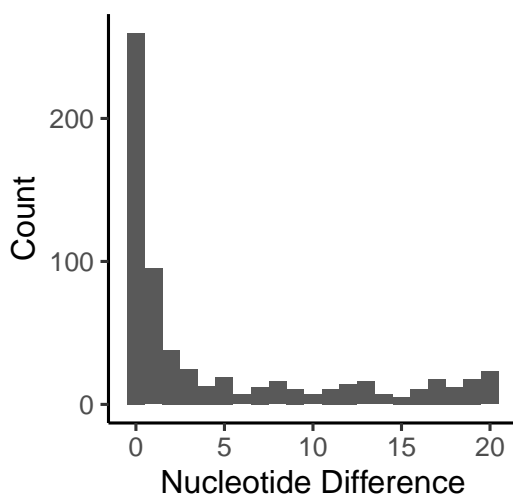
IGHV1-2*04

218 sequences assigned
51 (23.4%) exact matches, in which:
50 unique CDR3
6 unique J



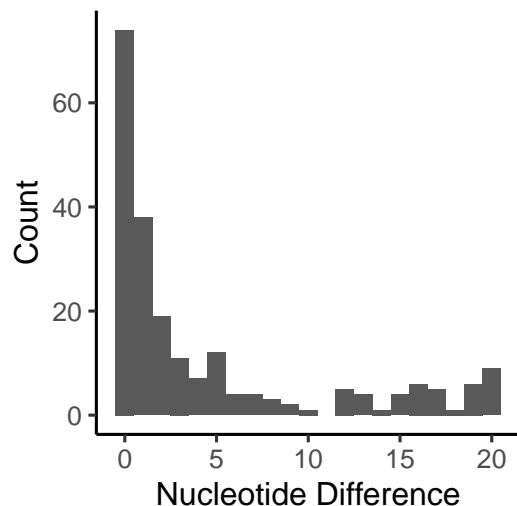
IGHV1-18*01

916 sequences assigned
260 (28.4%) exact matches, in which:
254 unique CDR3
6 unique J



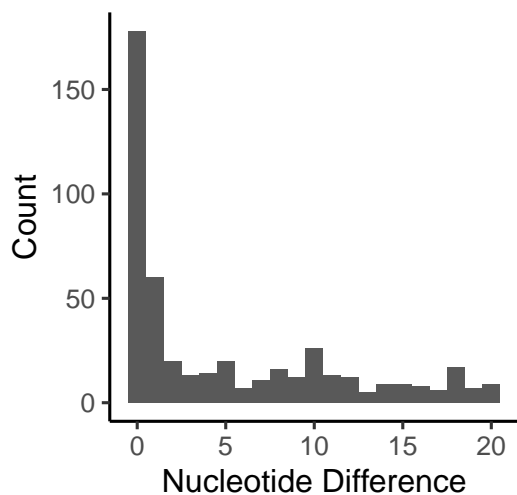
IGHV1-46*01

322 sequences assigned
74 (23%) exact matches, in which:
71 unique CDR3
5 unique J



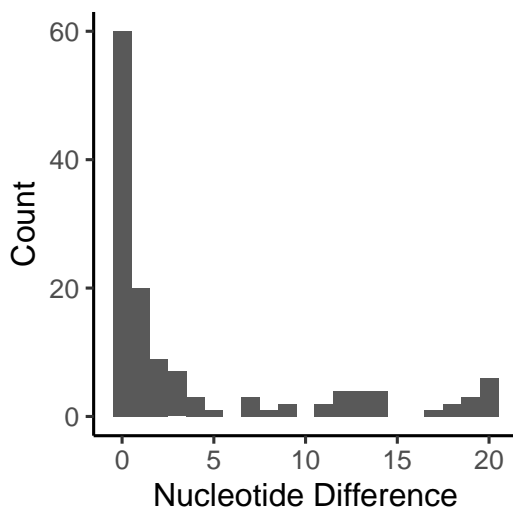
IGHV1-3*01

752 sequences assigned
178 (23.7%) exact matches, in which:
178 unique CDR3
7 unique J



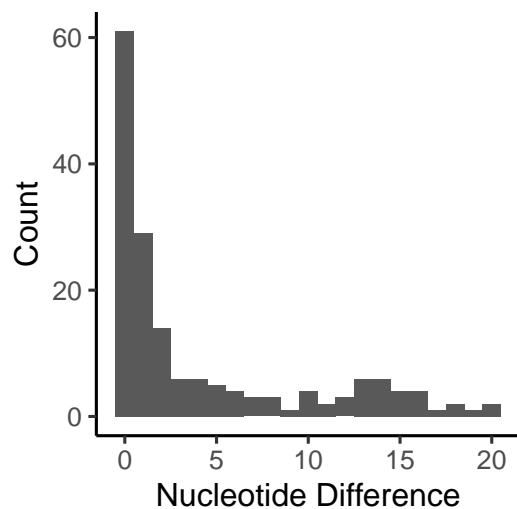
IGHV1-24*01

177 sequences assigned
60 (33.9%) exact matches, in which:
59 unique CDR3
7 unique J



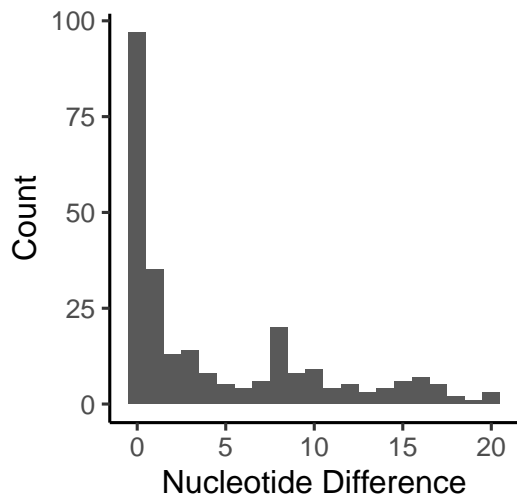
IGHV1-46*03

249 sequences assigned
61 (24.5%) exact matches, in which:
59 unique CDR3
5 unique J



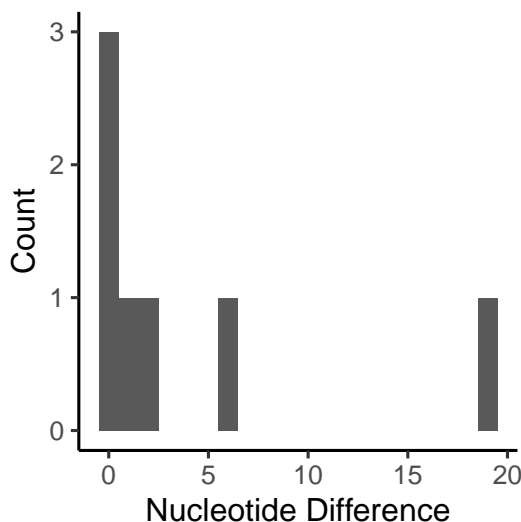
IGHV1-8*01

305 sequences assigned
97 (31.8%) exact matches, in which:
97 unique CDR3
6 unique J



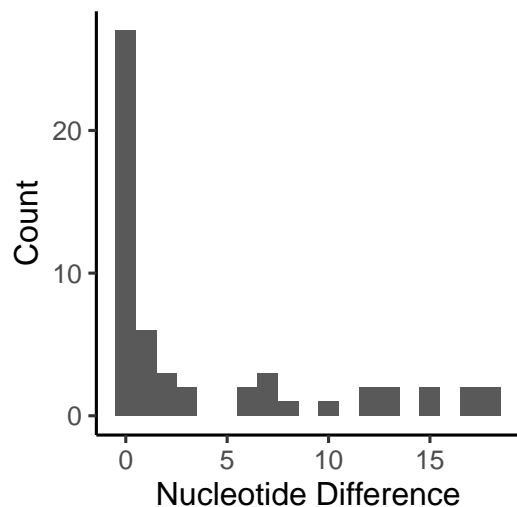
IGHV1-45*02

51 sequences assigned
3 (5.9%) exact matches, in which:
3 unique CDR3
2 unique J



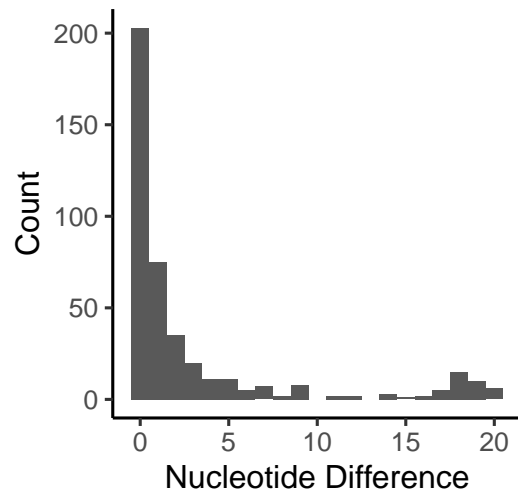
IGHV1-58*02

74 sequences assigned
27 (36.5%) exact matches, in which:
27 unique CDR3
7 unique J



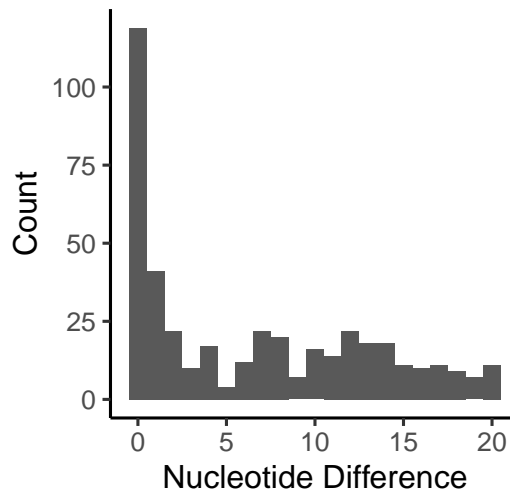
IGHV1–69*04

647 sequences assigned
203 (31.4%) exact matches, in which:
199 unique CDR3
7 unique J



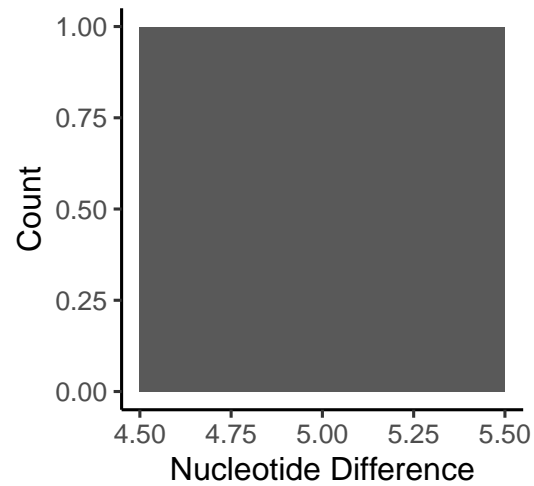
IGHV2–5*02

559 sequences assigned
119 (21.3%) exact matches, in which:
117 unique CDR3
5 unique J



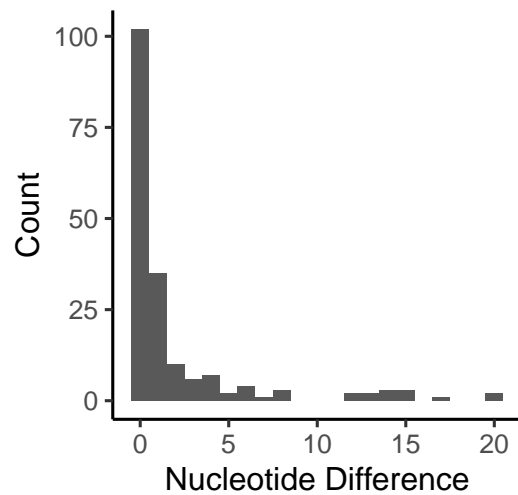
IGHV2–70D*14

1 sequences assigned
No exact matches.



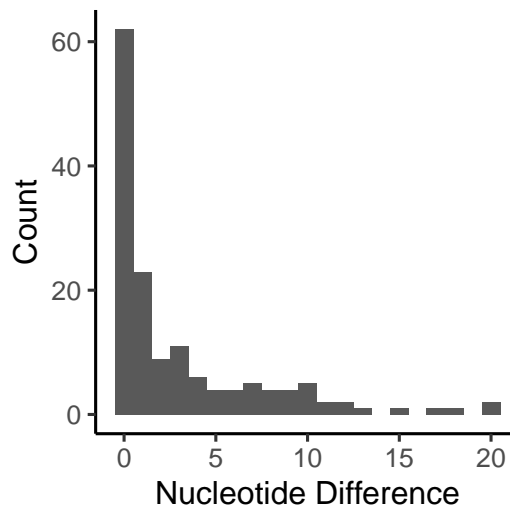
IGHV1–69*08_C191T

303 sequences assigned
102 (33.7%) exact matches, in which:
101 unique CDR3
6 unique J



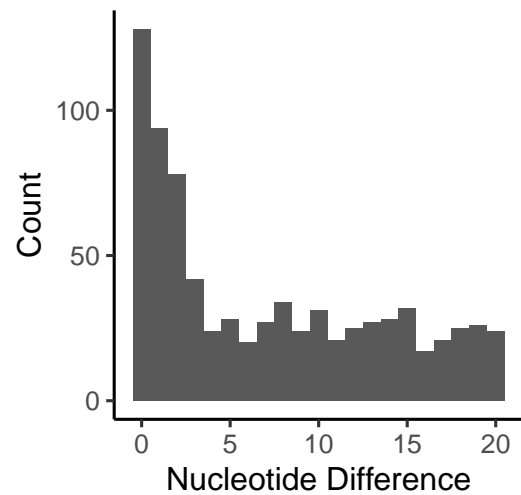
IGHV2–26*01

198 sequences assigned
62 (31.3%) exact matches, in which:
62 unique CDR3
6 unique J



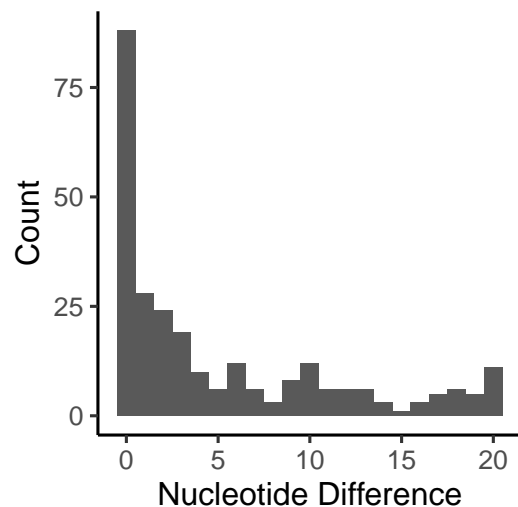
IGHV3–7*01

1010 sequences assigned
128 (12.7%) exact matches, in which:
126 unique CDR3
7 unique J



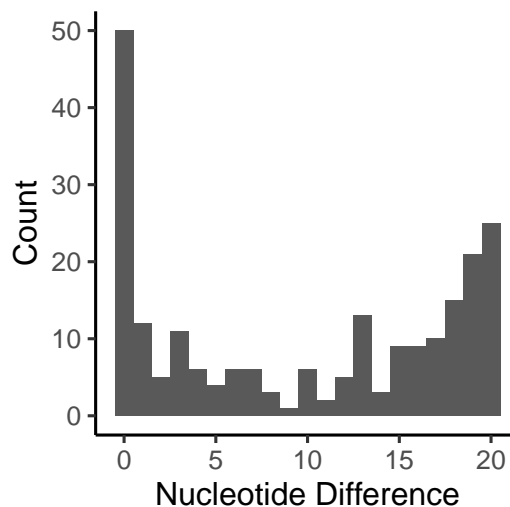
IGHV2–5*01

388 sequences assigned
88 (22.7%) exact matches, in which:
83 unique CDR3
6 unique J



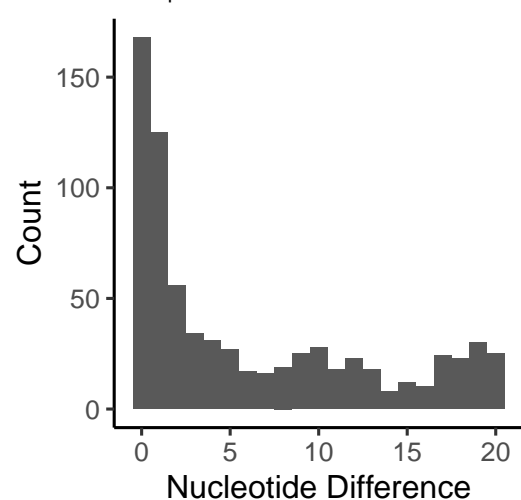
IGHV2–70*15

377 sequences assigned
50 (13.3%) exact matches, in which:
50 unique CDR3
5 unique J



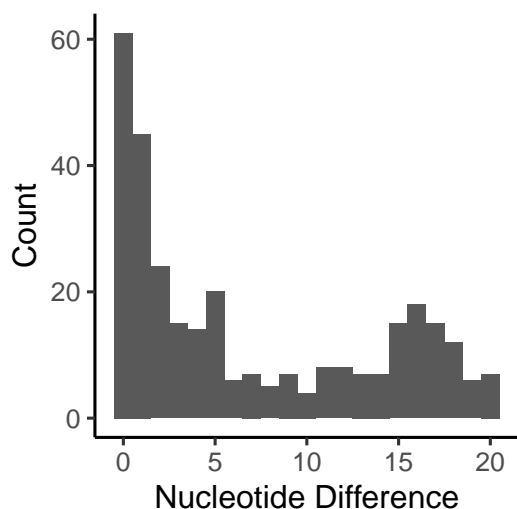
IGHV3–9*01

1162 sequences assigned
168 (14.5%) exact matches, in which:
165 unique CDR3
6 unique J



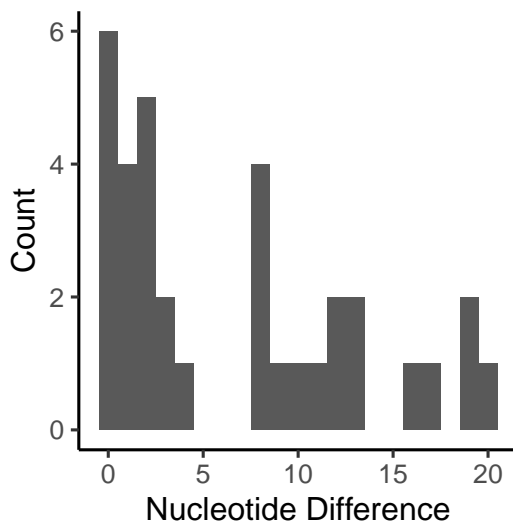
IGHV3-11*01

851 sequences assigned
61 (7.2%) exact matches, in which:
58 unique CDR3
6 unique J



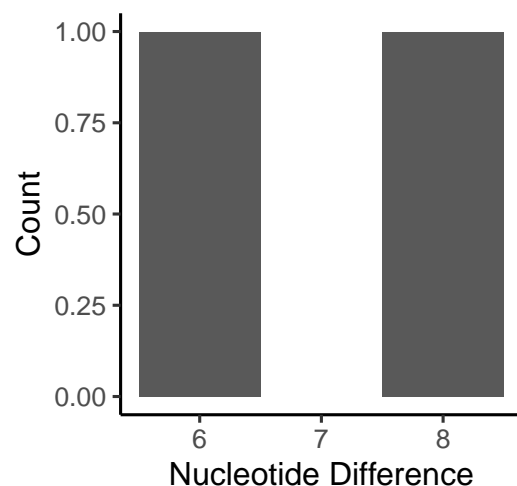
IGHV3-13*05

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



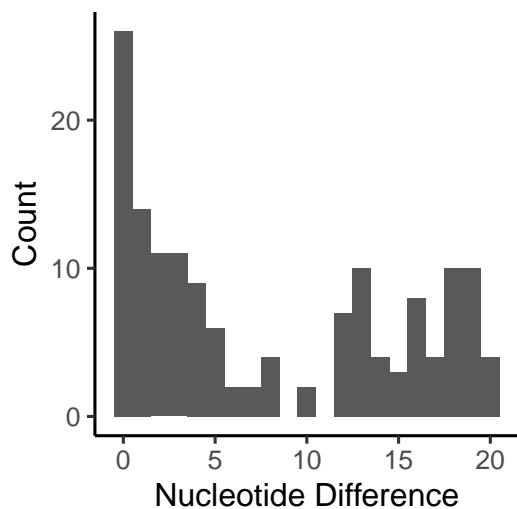
IGHV3-20*04

20 sequences assigned
No exact matches.



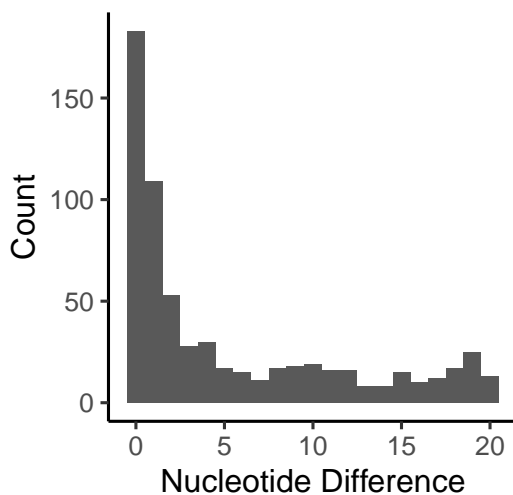
IGHV3-11*06

221 sequences assigned
26 (11.8%) exact matches, in which:
26 unique CDR3
4 unique J



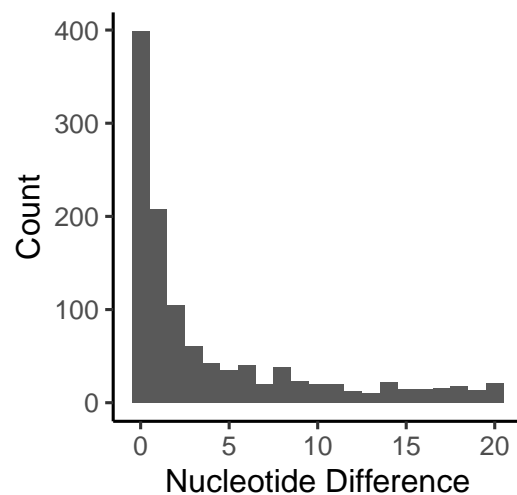
IGHV3-15*01

906 sequences assigned
183 (20.2%) exact matches, in which:
178 unique CDR3
7 unique J



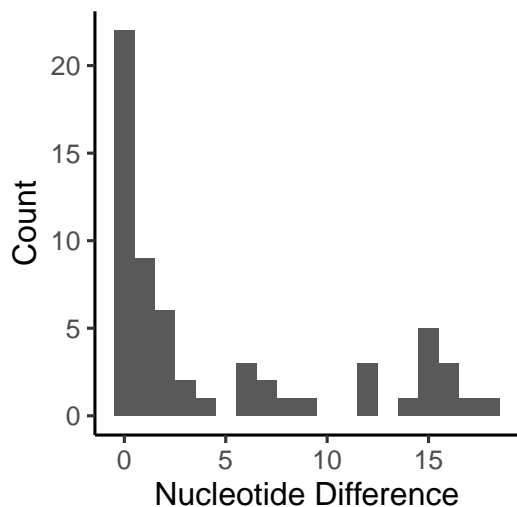
IGHV3-21*01

1431 sequences assigned
399 (27.9%) exact matches, in which:
392 unique CDR3
7 unique J



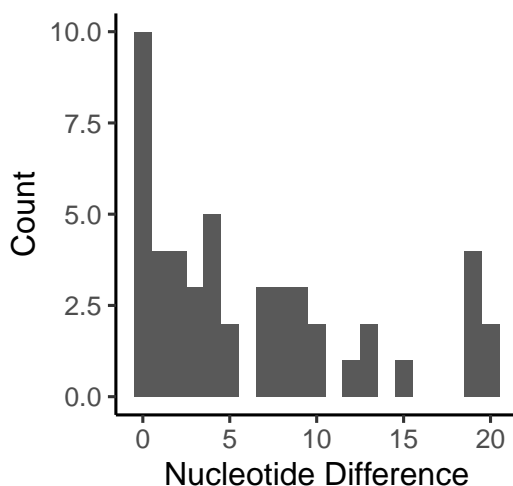
IGHV3-13*01

94 sequences assigned
22 (23.4%) exact matches, in which:
22 unique CDR3
4 unique J



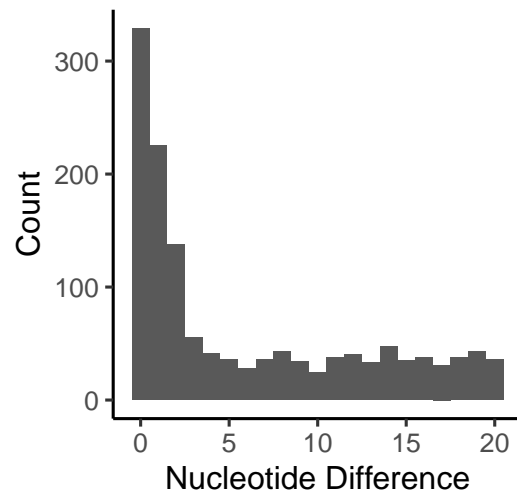
IGHV3-20*01

62 sequences assigned
10 (16.1%) exact matches, in which:
10 unique CDR3
5 unique J



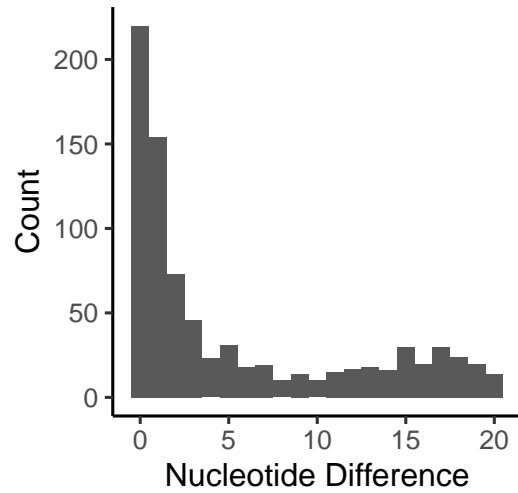
IGHV3-23*01

2135 sequences assigned
329 (15.4%) exact matches, in which:
322 unique CDR3
6 unique J



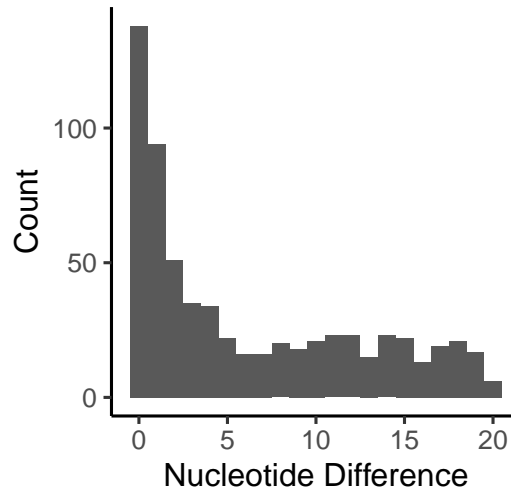
IGHV3-23*04

1194 sequences assigned
220 (18.4%) exact matches, in which:
208 unique CDR3
6 unique J



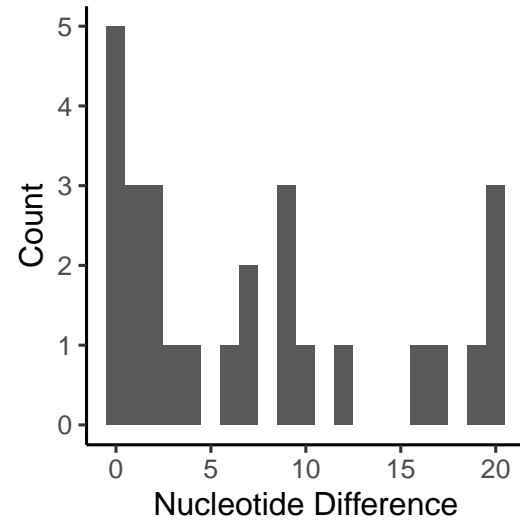
IGHV3-30*02

976 sequences assigned
138 (14.1%) exact matches, in which:
138 unique CDR3
6 unique J



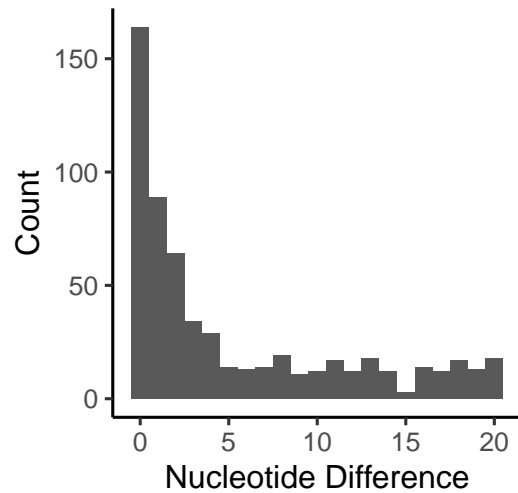
IGHV3-43*01

51 sequences assigned
5 (9.8%) exact matches, in which:
5 unique CDR3
2 unique J



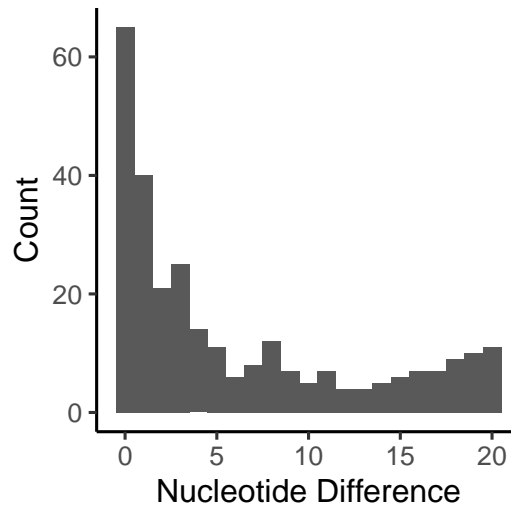
IGHV3-30*01

860 sequences assigned
164 (19.1%) exact matches, in which:
163 unique CDR3
6 unique J



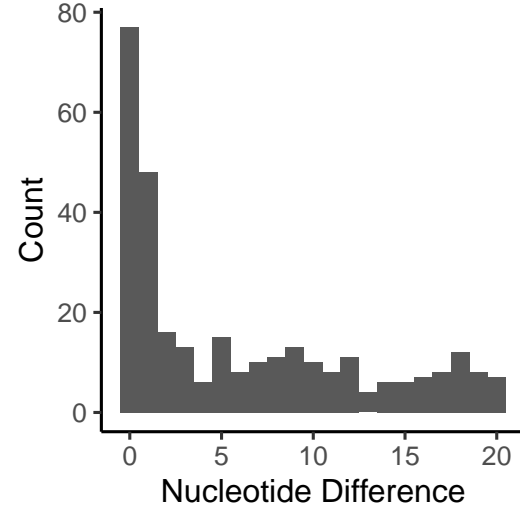
IGHV3-30*18

501 sequences assigned
65 (13%) exact matches, in which:
64 unique CDR3
6 unique J



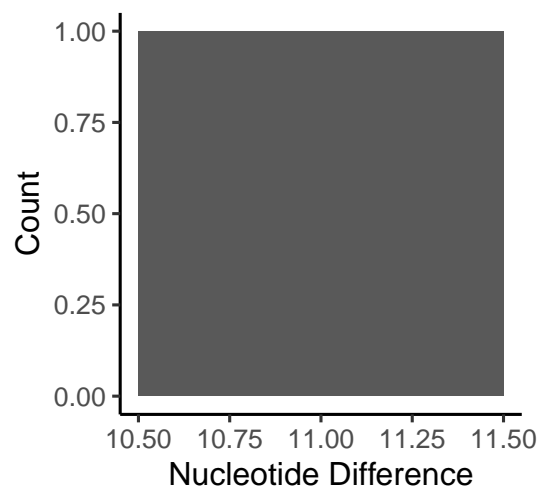
IGHV3-48*01

407 sequences assigned
77 (18.9%) exact matches, in which:
76 unique CDR3
6 unique J



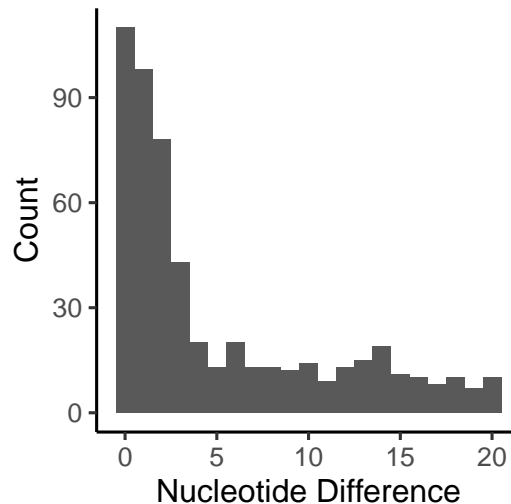
IGHV3-30-3*01

5 sequences assigned
No exact matches.



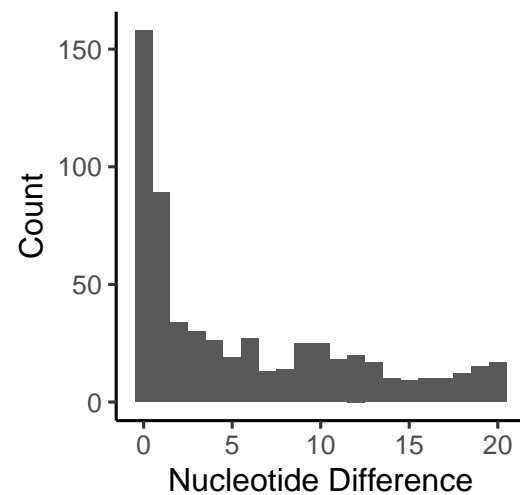
IGHV3-33*01

726 sequences assigned
110 (15.2%) exact matches, in which:
106 unique CDR3
6 unique J



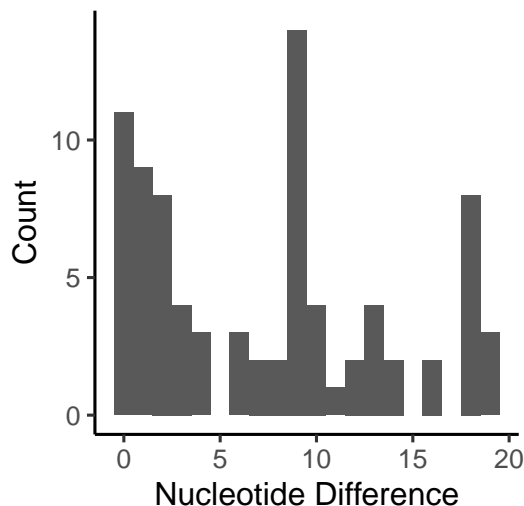
IGHV3-48*03

925 sequences assigned
158 (17.1%) exact matches, in which:
156 unique CDR3
7 unique J



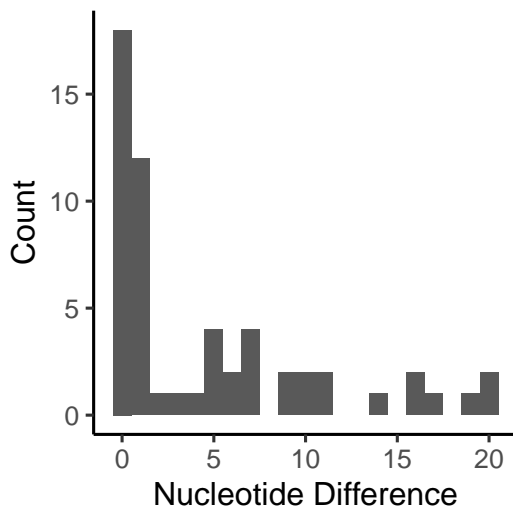
IGHV3-49*03

148 sequences assigned
11 (7.4%) exact matches, in which:
10 unique CDR3
4 unique J



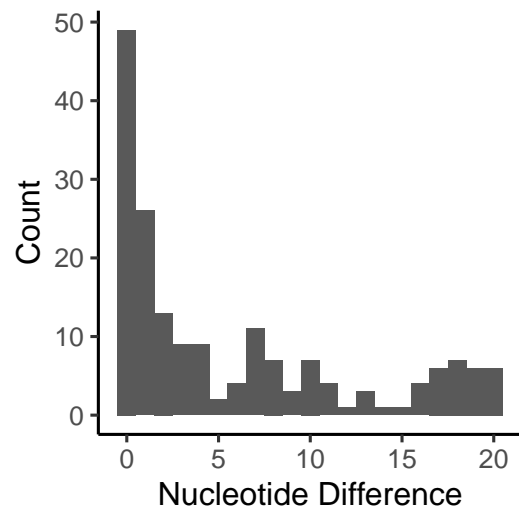
IGHV3-53*02

65 sequences assigned
18 (27.7%) exact matches, in which:
18 unique CDR3
5 unique J



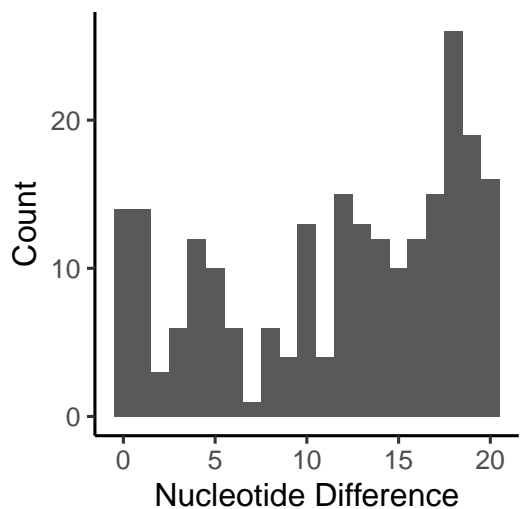
IGHV3-66*02

252 sequences assigned
49 (19.4%) exact matches, in which:
48 unique CDR3
5 unique J



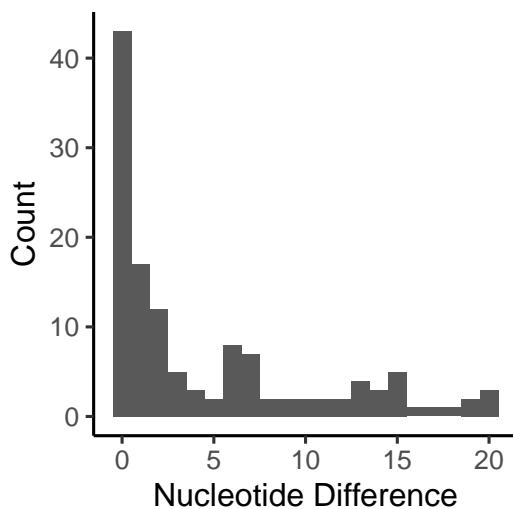
IGHV3-49*04

358 sequences assigned
14 (3.9%) exact matches, in which:
14 unique CDR3
4 unique J



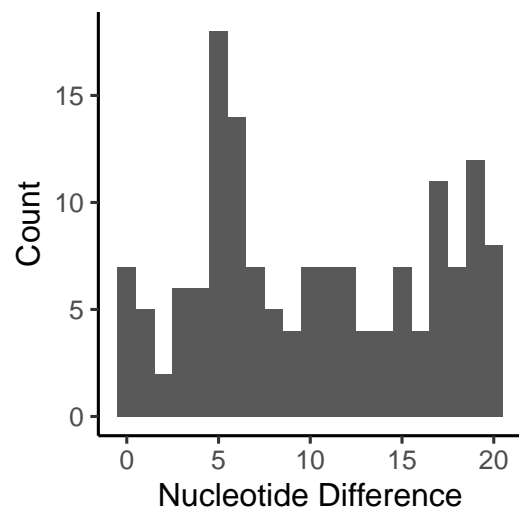
IGHV3-64*01

155 sequences assigned
43 (27.7%) exact matches, in which:
43 unique CDR3
7 unique J



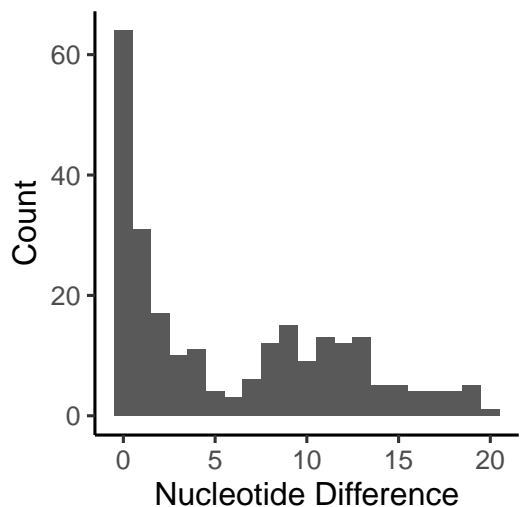
IGHV3-72*01

217 sequences assigned
7 (3.2%) exact matches, in which:
7 unique CDR3
3 unique J



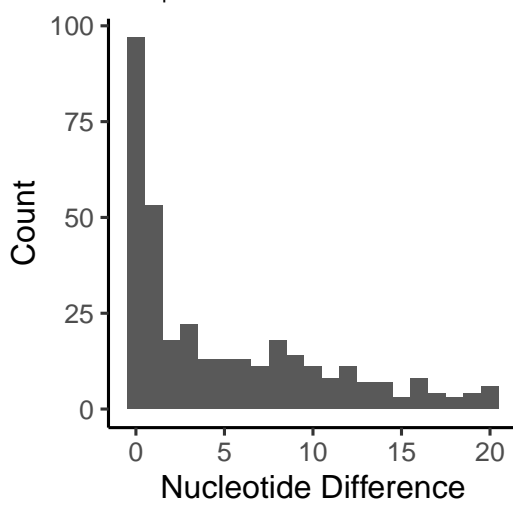
IGHV3-53*01

322 sequences assigned
64 (19.9%) exact matches, in which:
63 unique CDR3
6 unique J



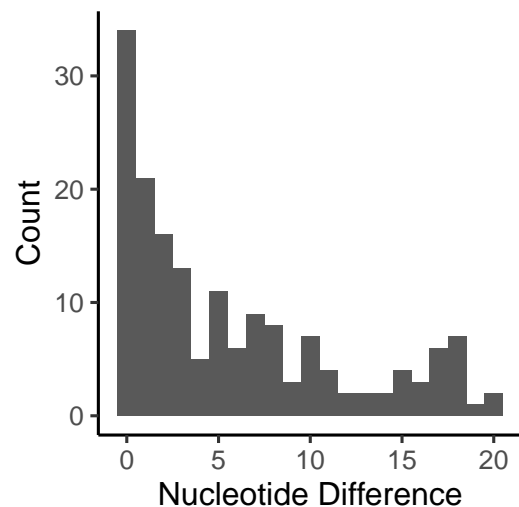
IGHV3-66*01

487 sequences assigned
97 (19.9%) exact matches, in which:
92 unique CDR3
6 unique J



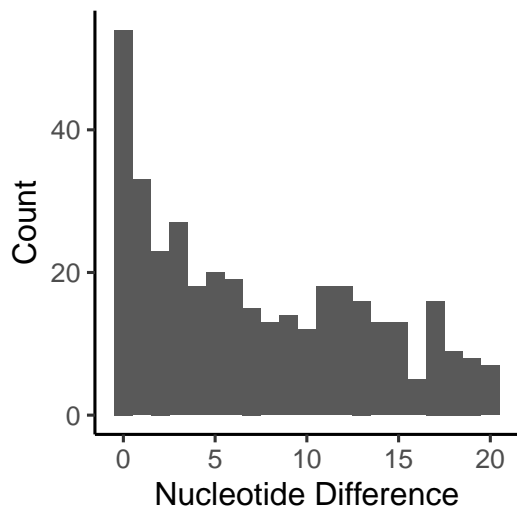
IGHV3-73*01

204 sequences assigned
34 (16.7%) exact matches, in which:
33 unique CDR3
6 unique J



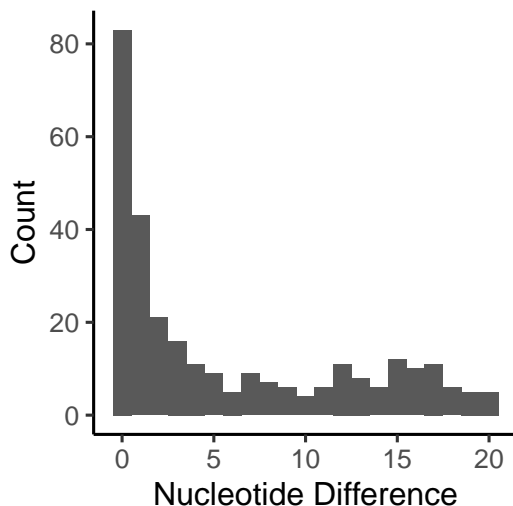
IGHV3-74*01

573 sequences assigned
54 (9.4%) exact matches, in which:
52 unique CDR3
5 unique J



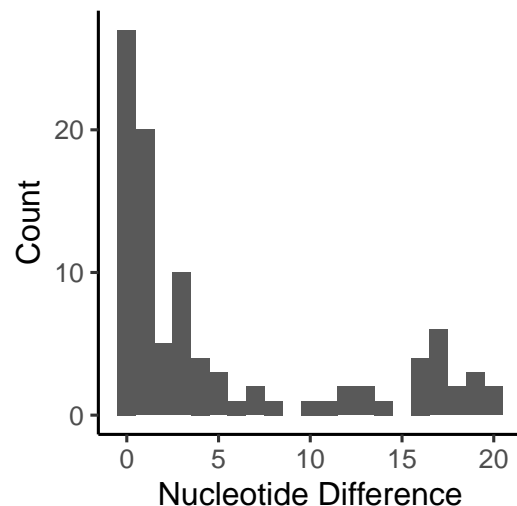
IGHV4-4*02

422 sequences assigned
83 (19.7%) exact matches, in which:
82 unique CDR3
6 unique J



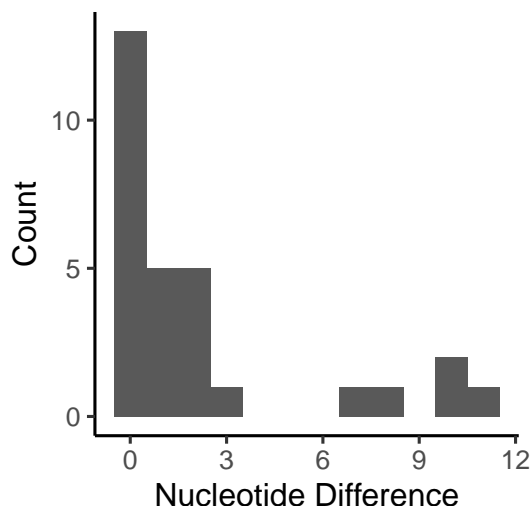
IGHV4-30-2*01

173 sequences assigned
27 (15.6%) exact matches, in which:
27 unique CDR3
5 unique J



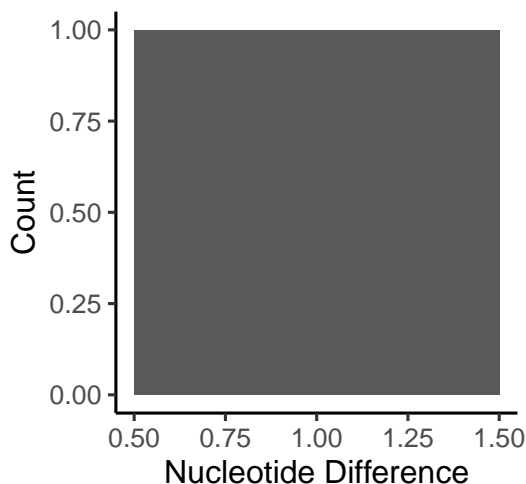
IGHV3-43D*04

47 sequences assigned
13 (27.7%) exact matches, in which:
8 unique CDR3
2 unique J



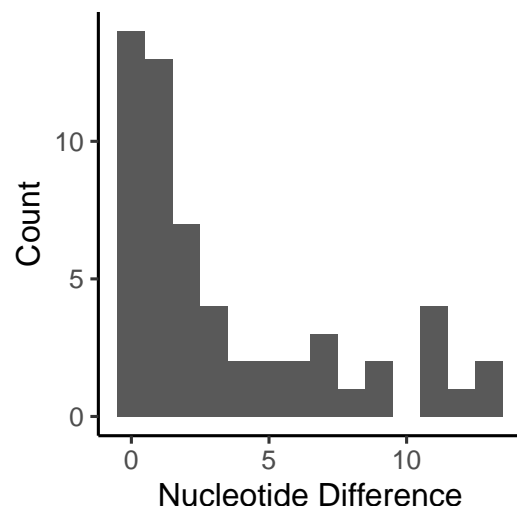
IGHV4-28*04

1 sequences assigned
No exact matches.



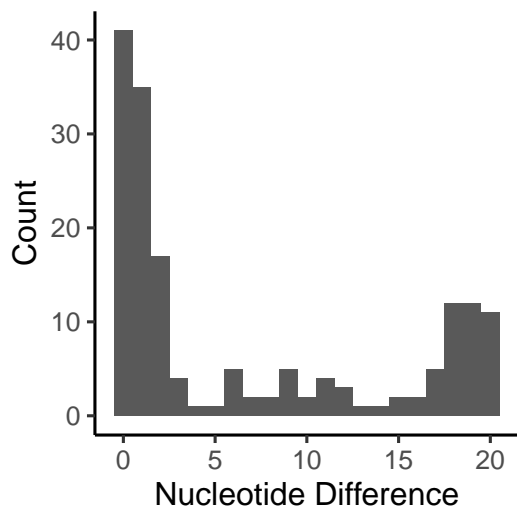
IGHV4-31*01

63 sequences assigned
14 (22.2%) exact matches, in which:
12 unique CDR3
5 unique J



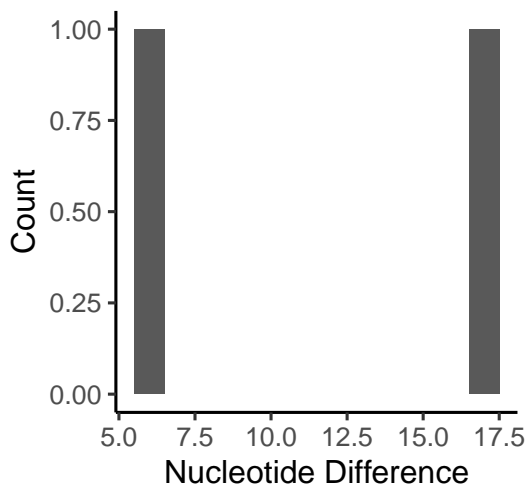
IGHV3-64D*06

265 sequences assigned
41 (15.5%) exact matches, in which:
37 unique CDR3
5 unique J



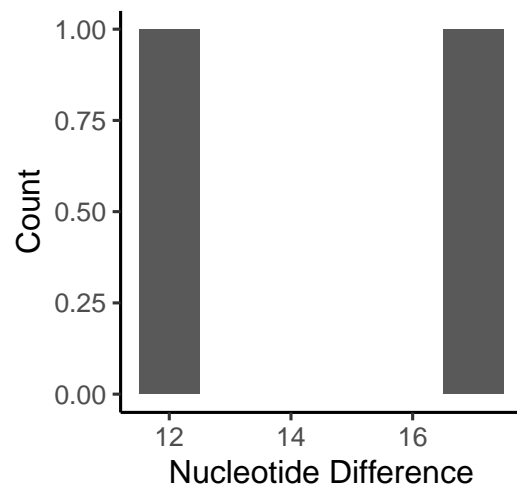
IGHV4-28*07

3 sequences assigned
No exact matches.



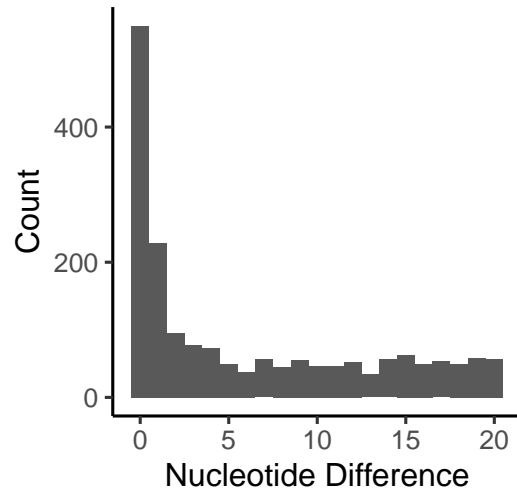
IGHV4-31*03

19 sequences assigned
No exact matches.



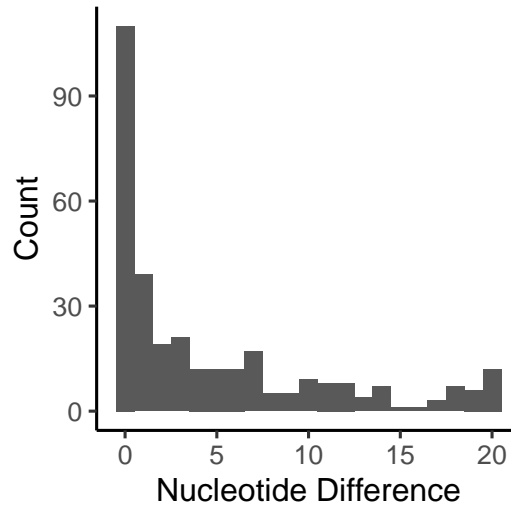
IGHV4–34*01

2899 sequences assigned
550 (19%) exact matches, in which:
543 unique CDR3
7 unique J



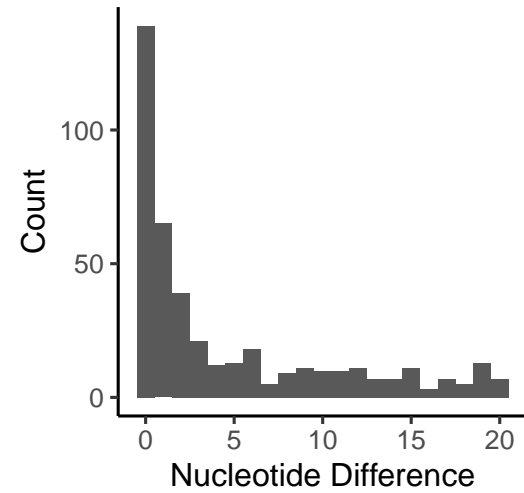
IGHV4–59*01

503 sequences assigned
110 (21.9%) exact matches, in which:
110 unique CDR3
5 unique J



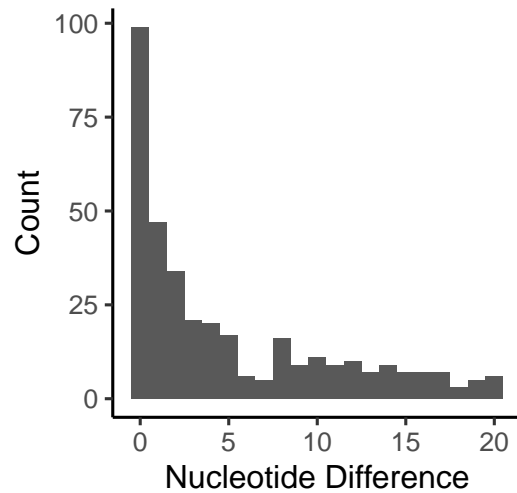
IGHV4–61*02_A291G

653 sequences assigned
139 (21.3%) exact matches, in which:
136 unique CDR3
5 unique J



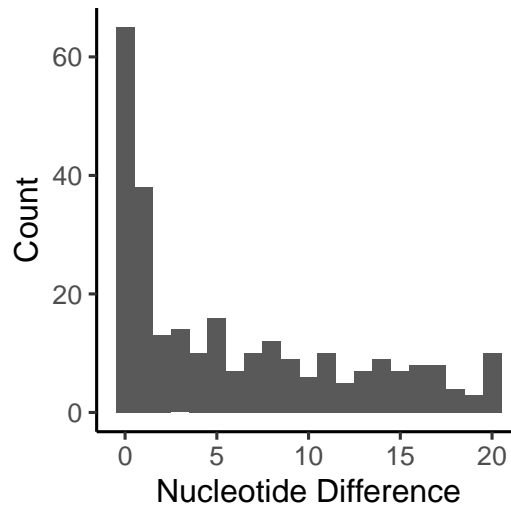
IGHV4–38–2*02_A70G

558 sequences assigned
99 (17.7%) exact matches, in which:
97 unique CDR3
5 unique J



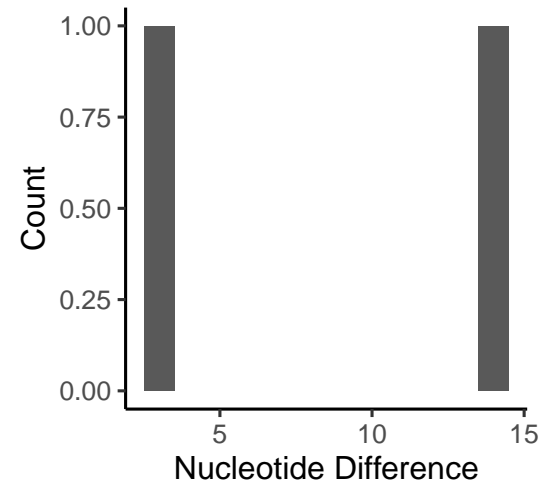
IGHV4–59*08

374 sequences assigned
65 (17.4%) exact matches, in which:
65 unique CDR3
6 unique J



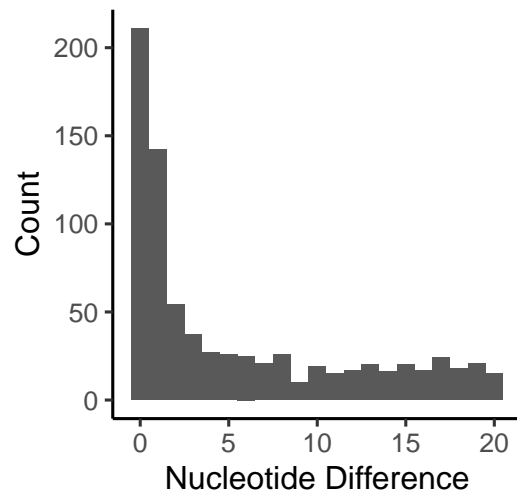
IGHV1/OR15–1*04

3 sequences assigned
No exact matches.



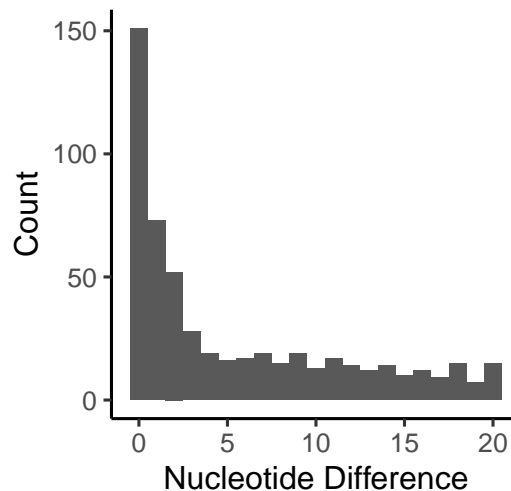
IGHV4–39*01

1274 sequences assigned
211 (16.6%) exact matches, in which:
211 unique CDR3
6 unique J



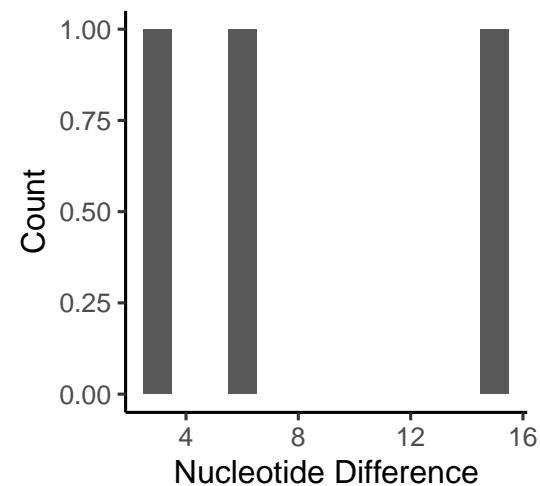
IGHV4–61*02

797 sequences assigned
151 (18.9%) exact matches, in which:
150 unique CDR3
6 unique J



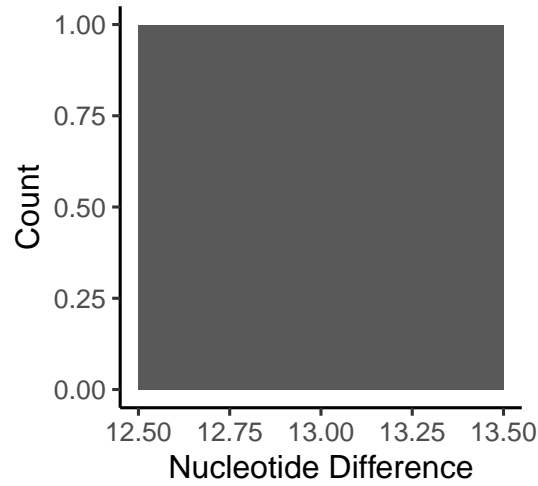
IGHV4/OR15–8*02

3 sequences assigned
No exact matches.



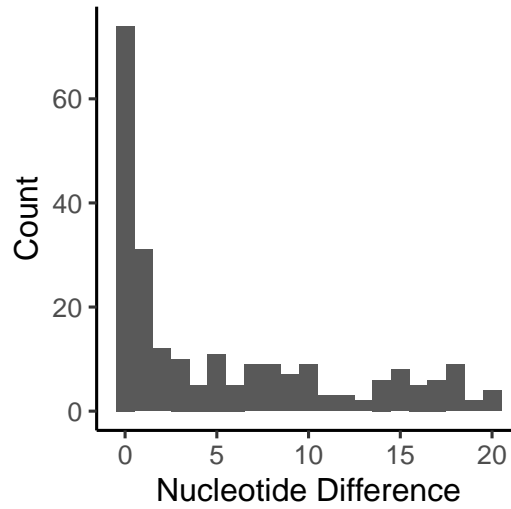
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



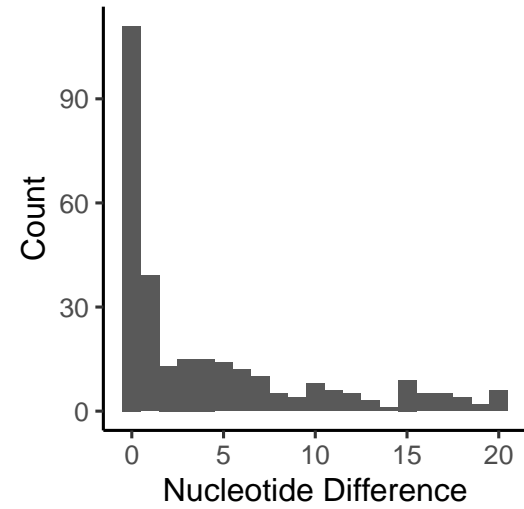
IGHV5-51*03

347 sequences assigned
74 (21.3%) exact matches, in which:
71 unique CDR3
5 unique J



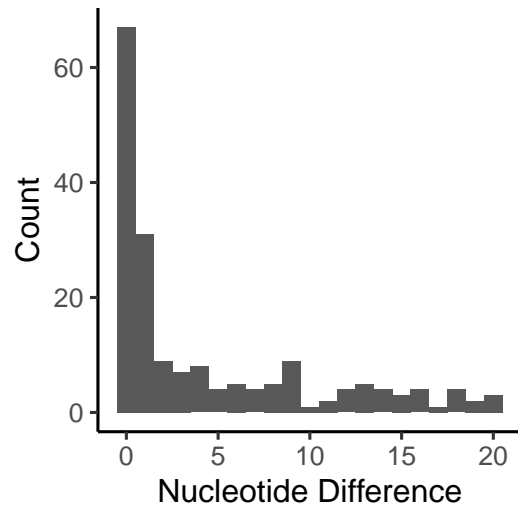
IGHV7-4-1*02

378 sequences assigned
111 (29.4%) exact matches, in which:
108 unique CDR3
6 unique J



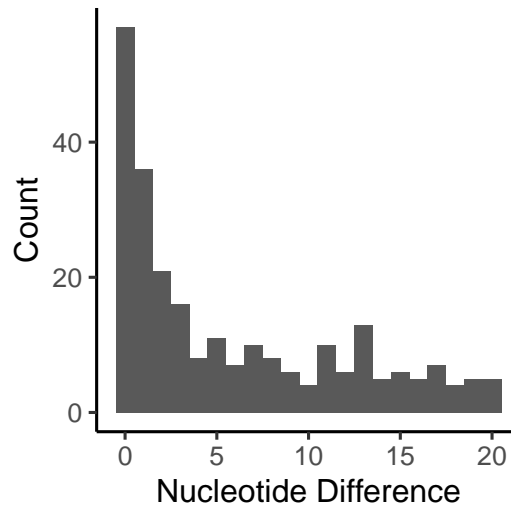
IGHV5-10-1*03

301 sequences assigned
67 (22.3%) exact matches, in which:
67 unique CDR3
5 unique J



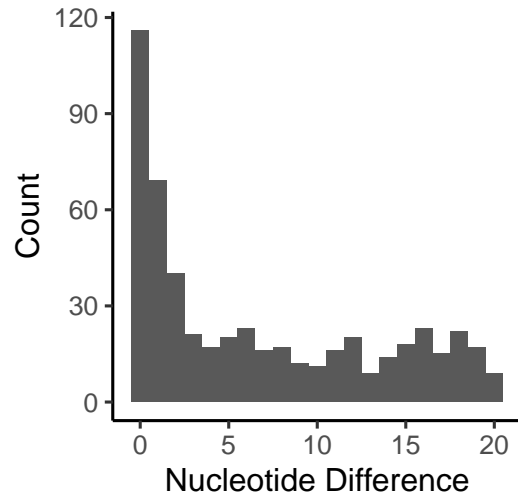
IGHV6-1*01

350 sequences assigned
57 (16.3%) exact matches, in which:
50 unique CDR3
5 unique J



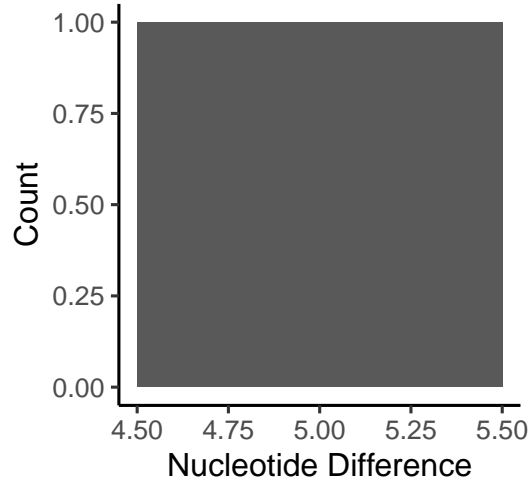
IGHV5-51*01

771 sequences assigned
116 (15%) exact matches, in which:
116 unique CDR3
7 unique J

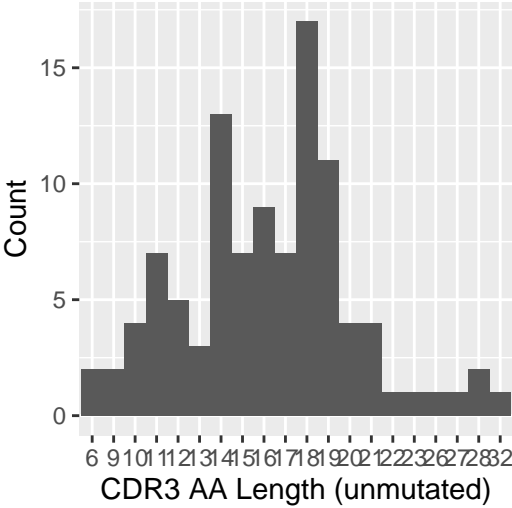


IGHV3/OR16-15*02

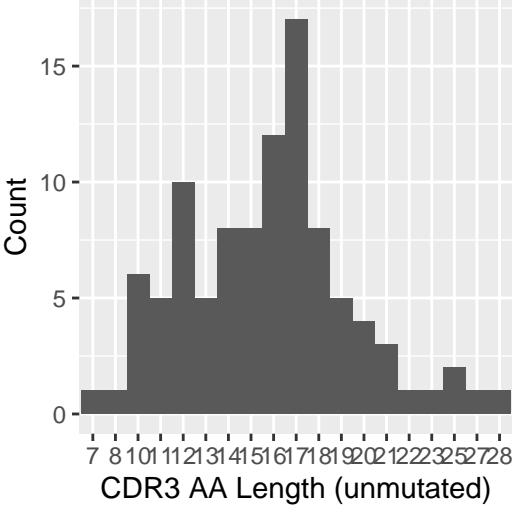
1 sequences assigned
No exact matches.



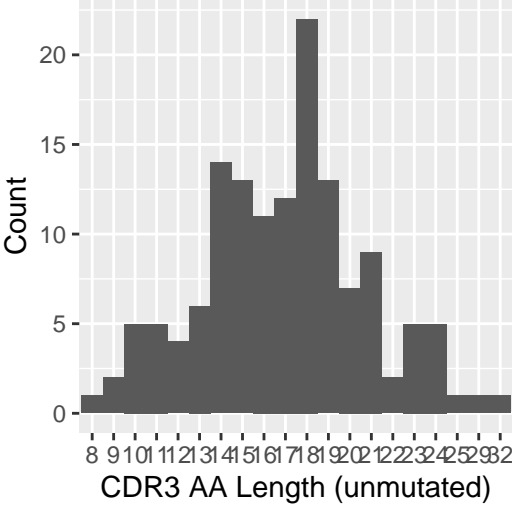
IGHV1-69*08_C191T

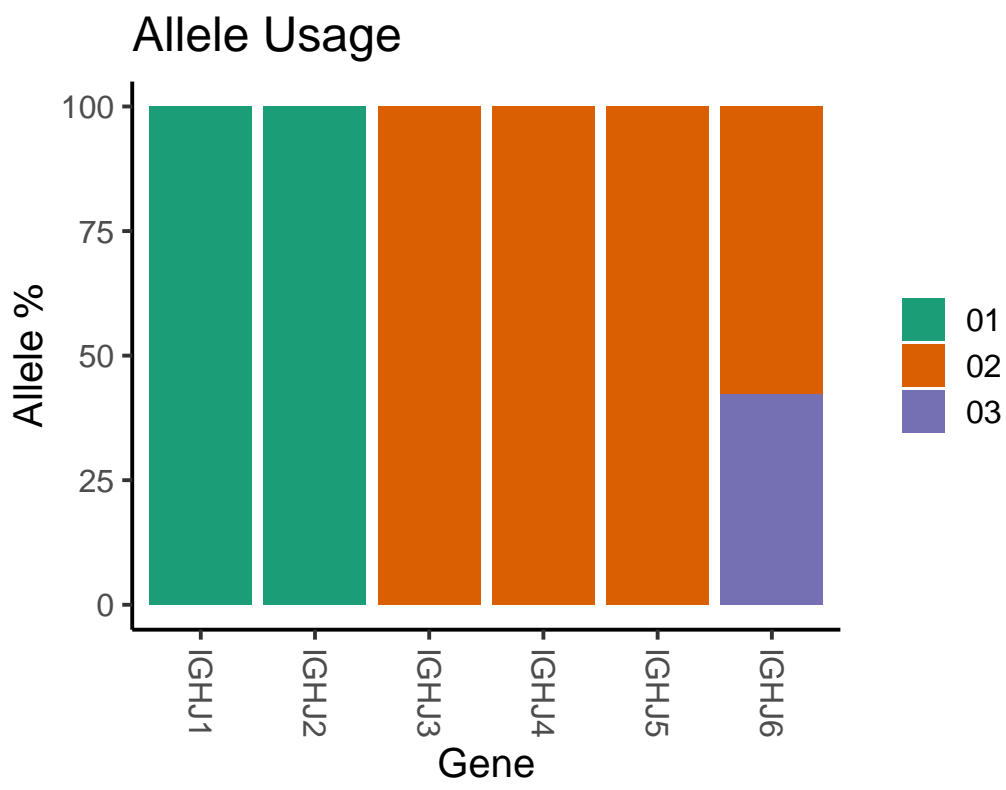


IGHV4-38-2*02_A70G



IGHV4-61*02_A291G





Sequence Count byIGHJ6 allele usage

