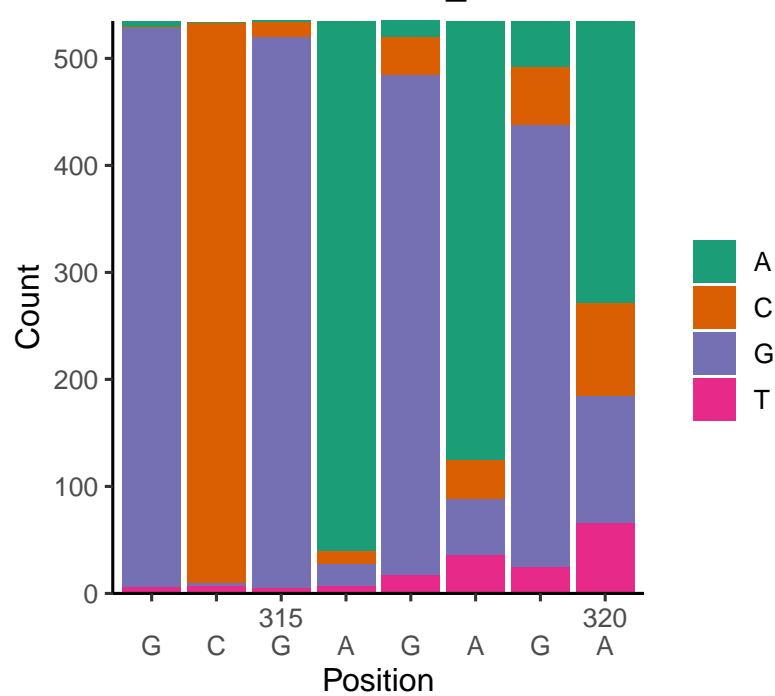
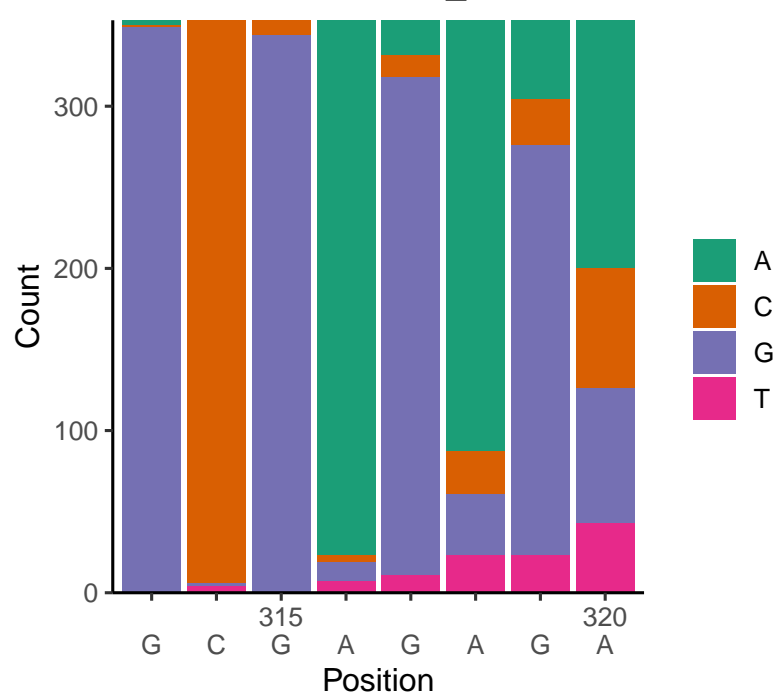


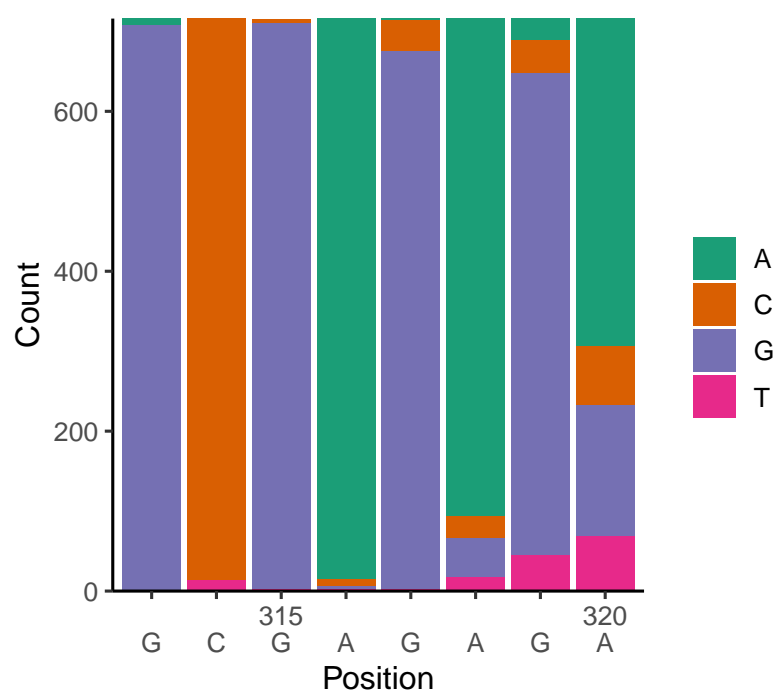
Gene IGHV1-69*04_C184T



Gene IGHV1-69*08_C191T



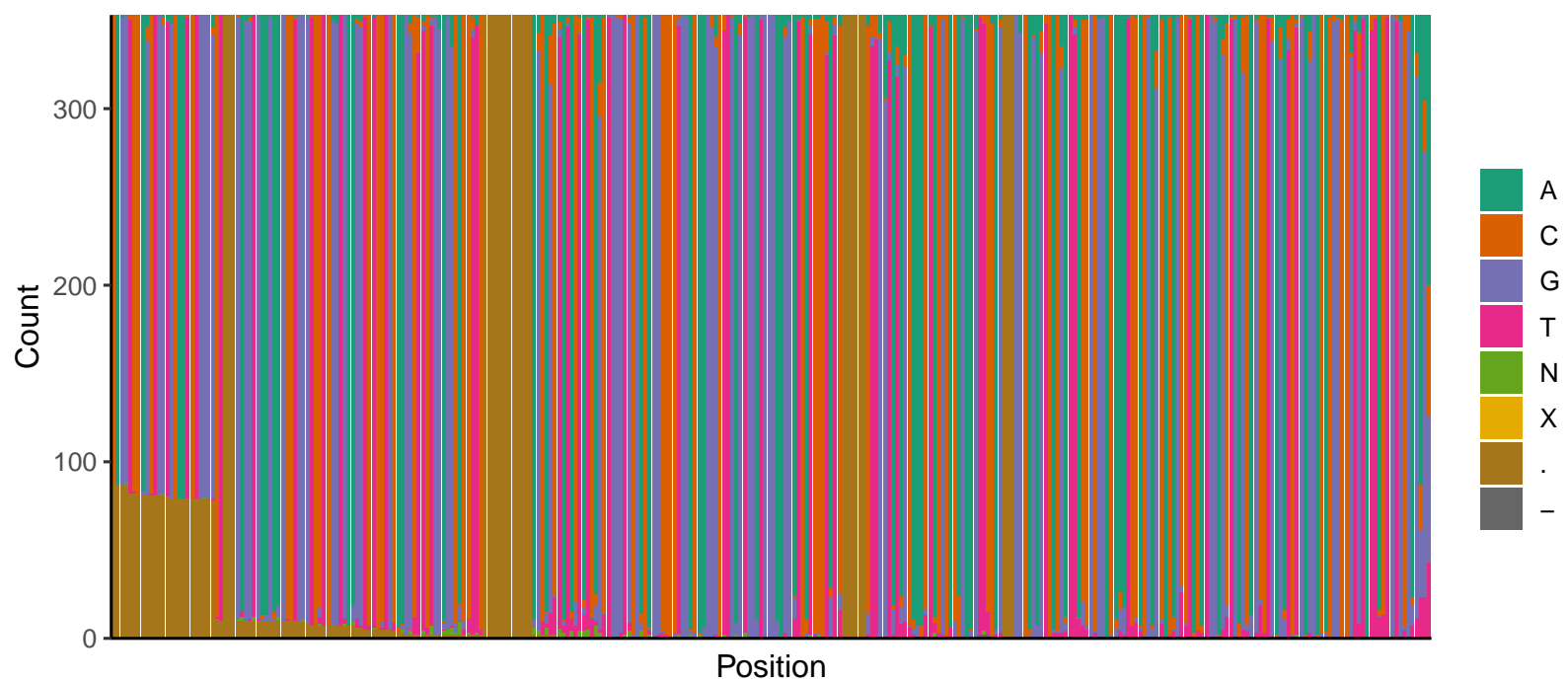
Gene IGHV3-21*01_G278C



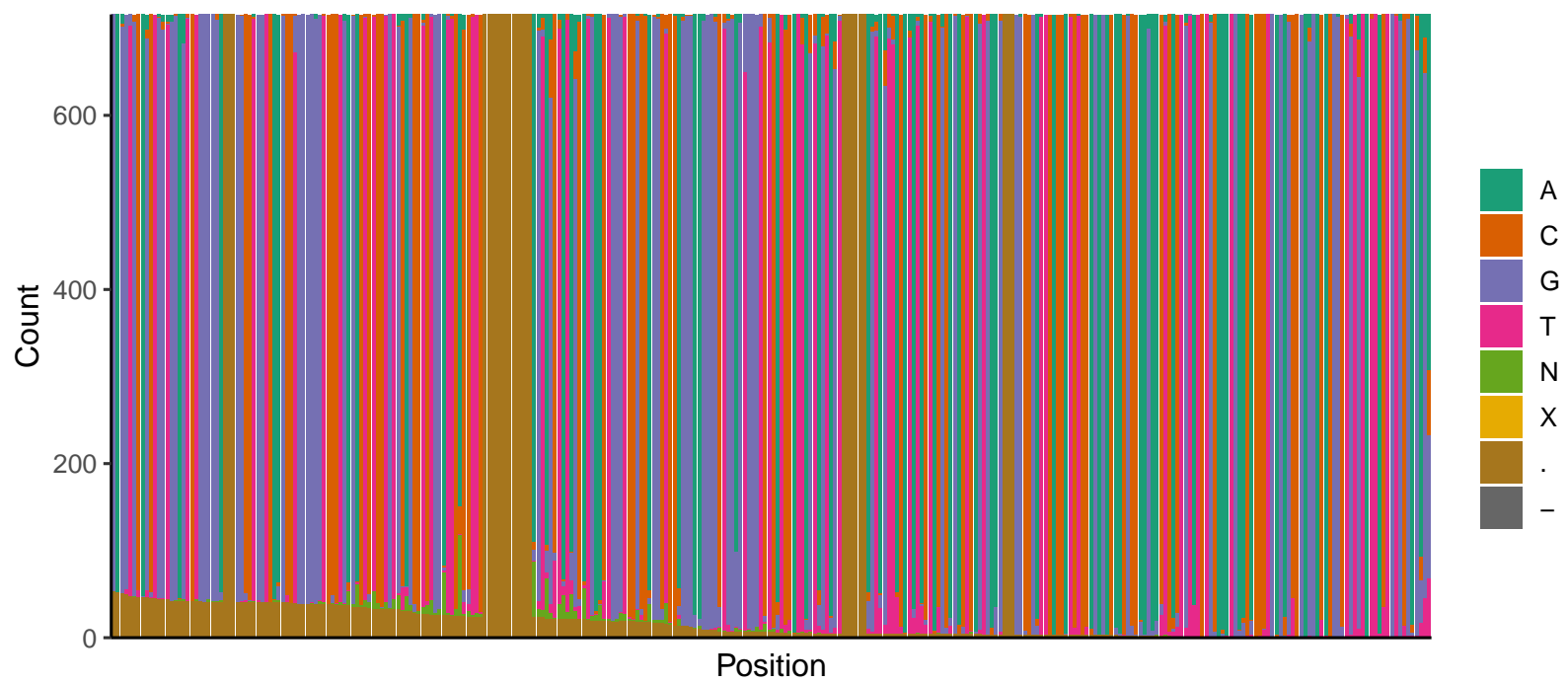
Gene IGHV1-69*04_C184T



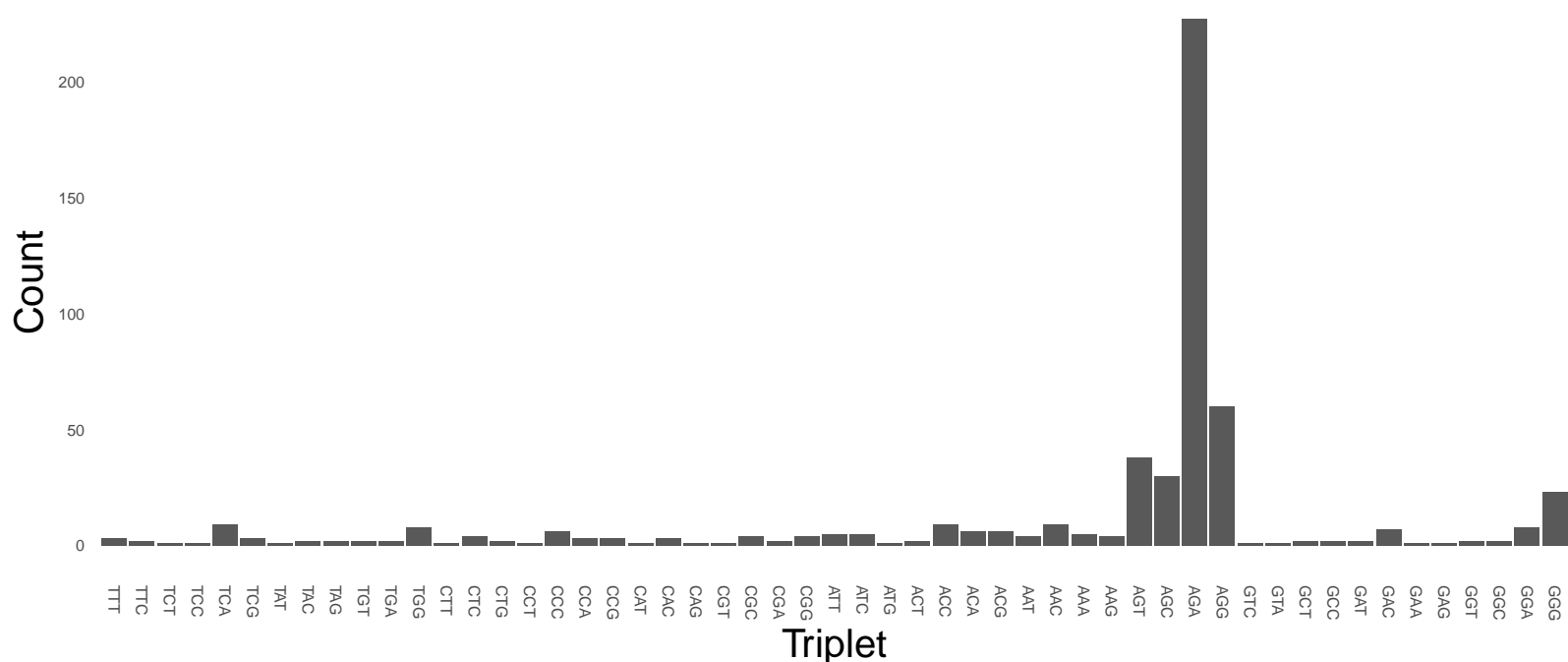
Gene IGHV1-69*08_C191T



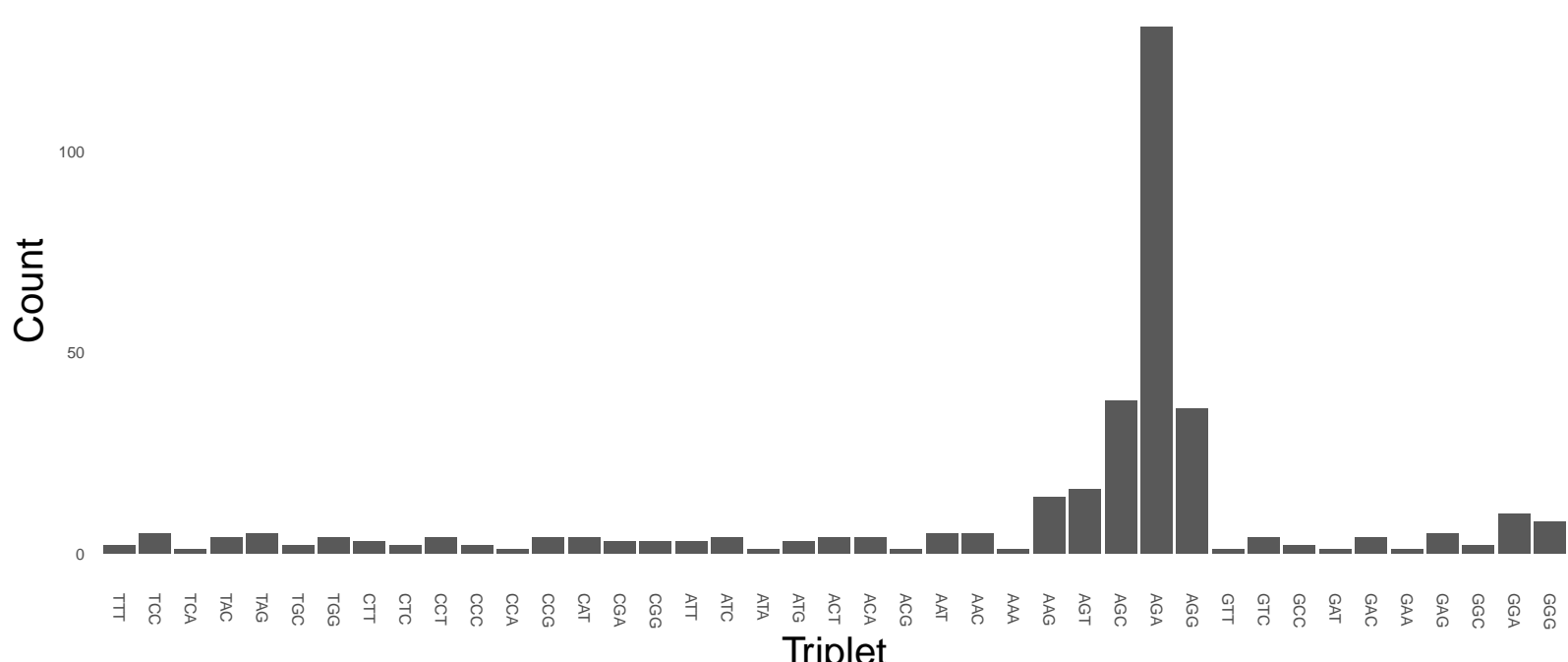
Gene IGHV3-21*01_G278C



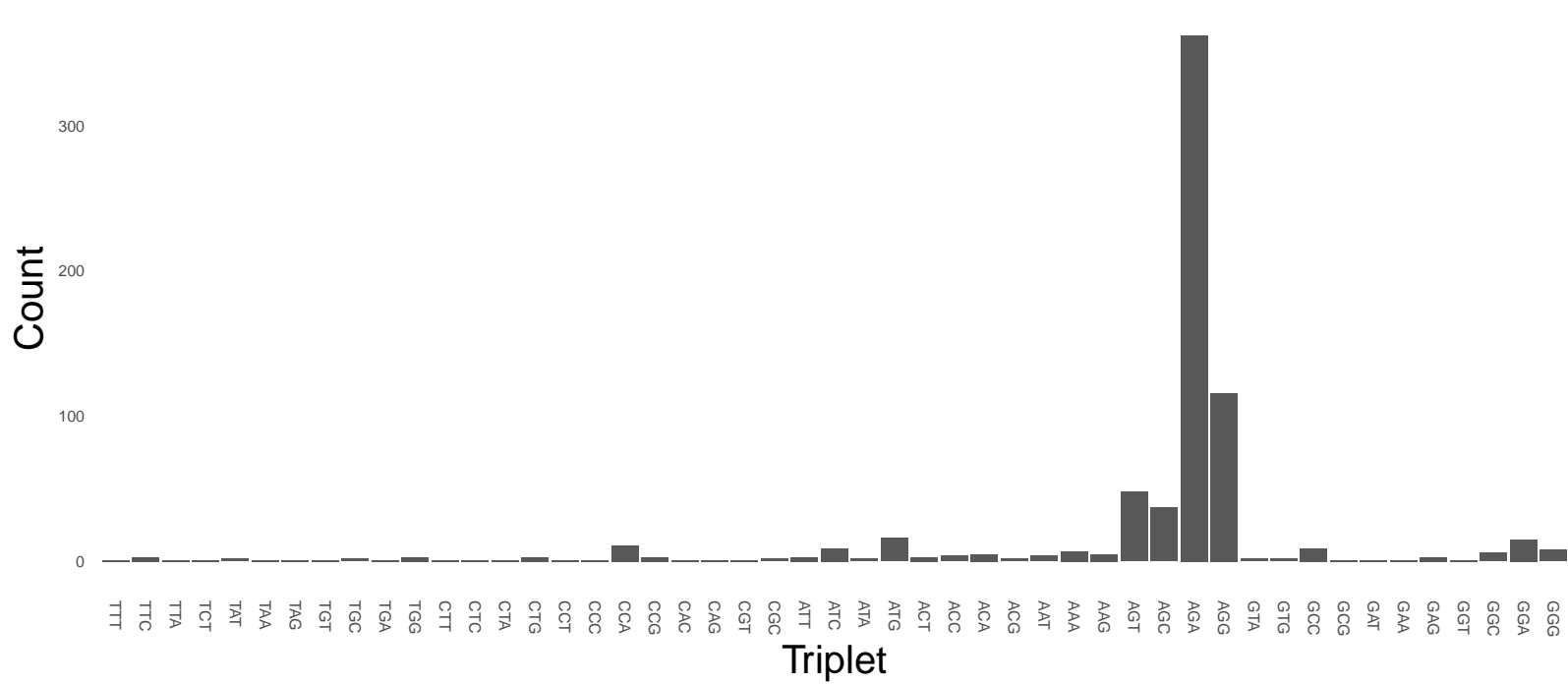
IGHV1-69*04_C184T- Final 3 nucleotides as a triplet



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

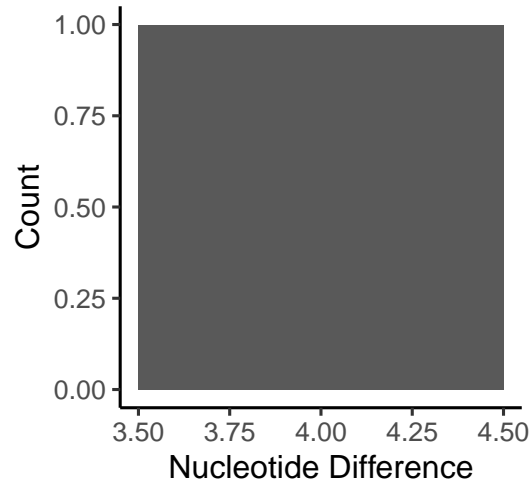


IGHV3-21*01_G278C- Final 3 nucleotides as a triplet



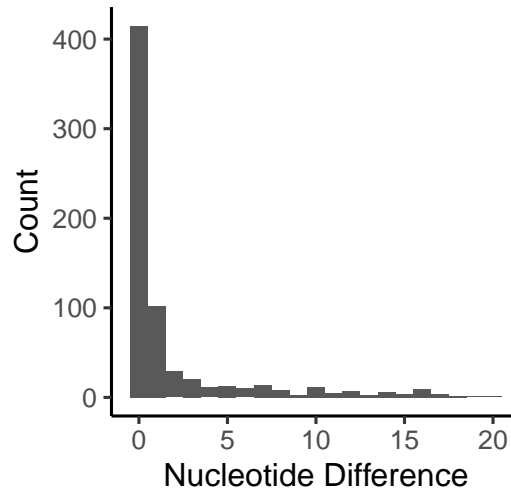
IGHV1/OR21-1*01

1 sequences assigned
No exact matches.



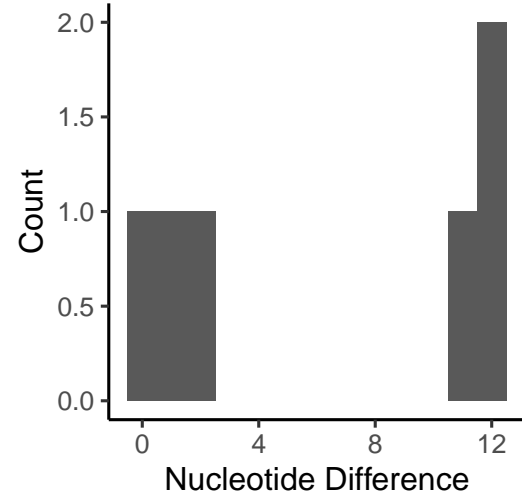
IGHV1-8*01

734 sequences assigned
415 (56.5%) exact matches, in which:
405 unique CDR3
7 unique J



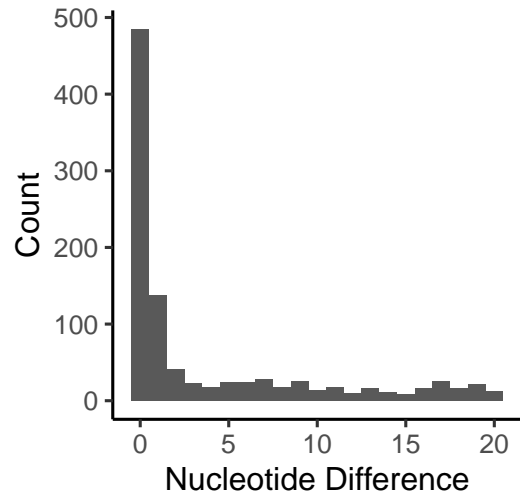
IGHV1-45*02

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



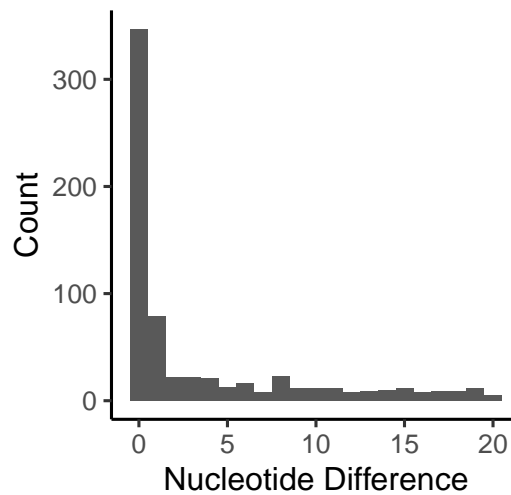
IGHV1-2*02

1155 sequences assigned
485 (42%) exact matches, in which:
478 unique CDR3
7 unique J



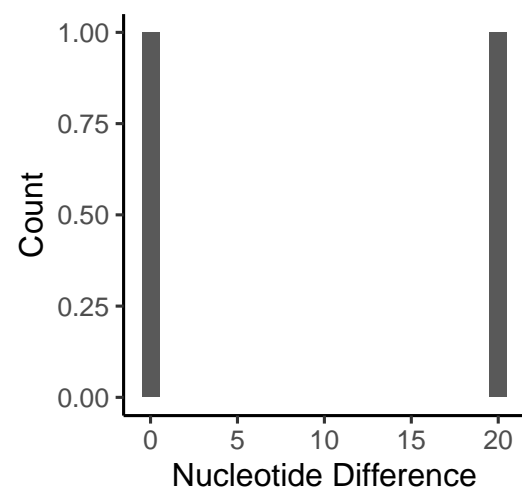
IGHV1-18*01

867 sequences assigned
347 (40%) exact matches, in which:
345 unique CDR3
7 unique J



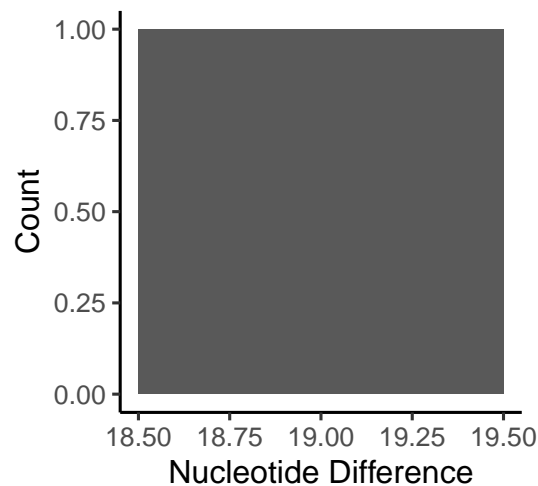
IGHV1-45*03

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



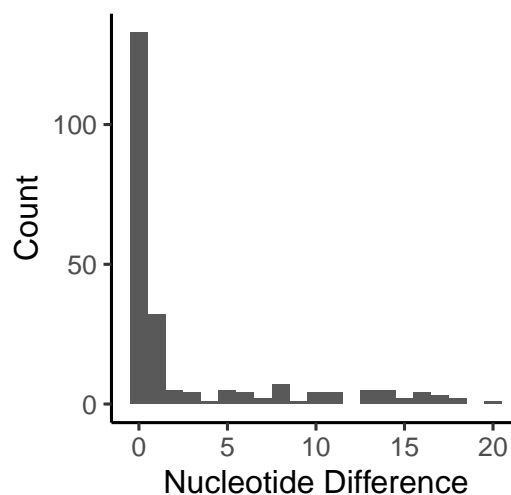
IGHV1-3*02

1 sequences assigned
No exact matches.



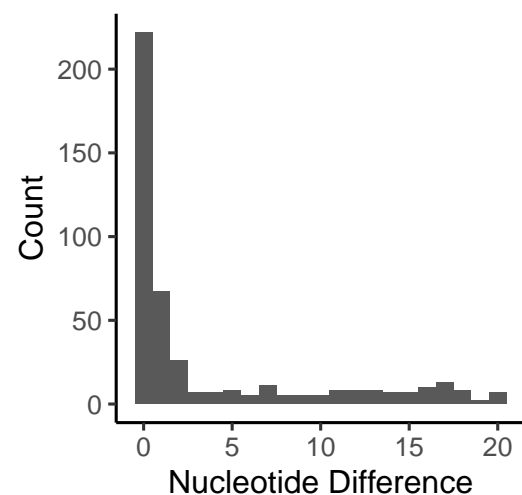
IGHV1-24*01

253 sequences assigned
133 (52.6%) exact matches, in which:
132 unique CDR3
7 unique J



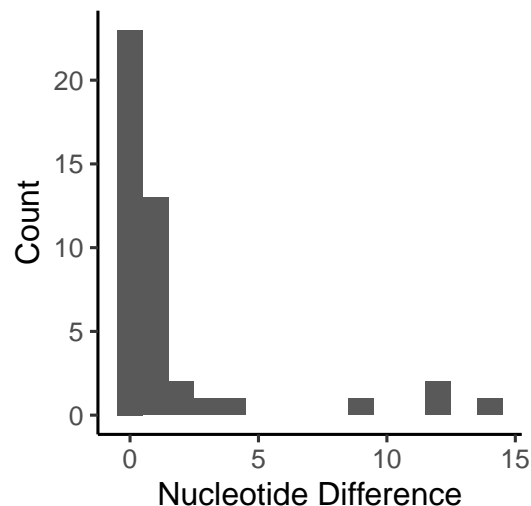
IGHV1-46*01

565 sequences assigned
222 (39.3%) exact matches, in which:
222 unique CDR3
7 unique J



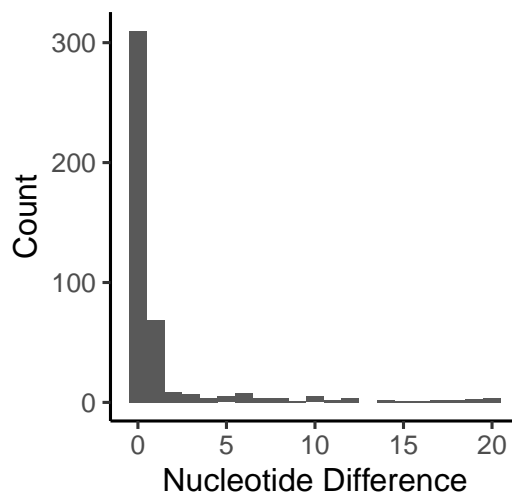
IGHV1-58*02

49 sequences assigned
23 (46.9%) exact matches, in which:
22 unique CDR3
6 unique J



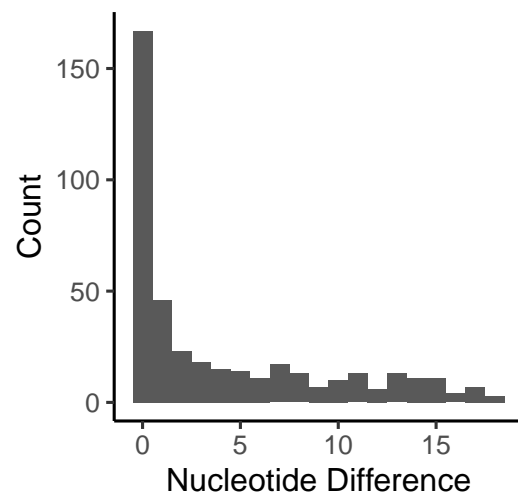
IGHV1-69*04_C184T

535 sequences assigned
310 (57.9%) exact matches, in which:
305 unique CDR3
6 unique J



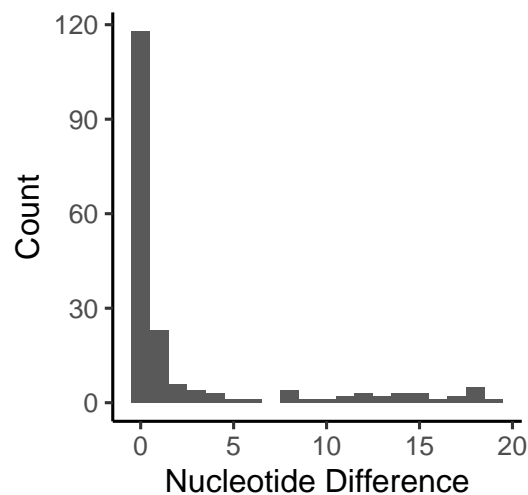
IGHV2-5*02

440 sequences assigned
167 (38%) exact matches, in which:
165 unique CDR3
6 unique J



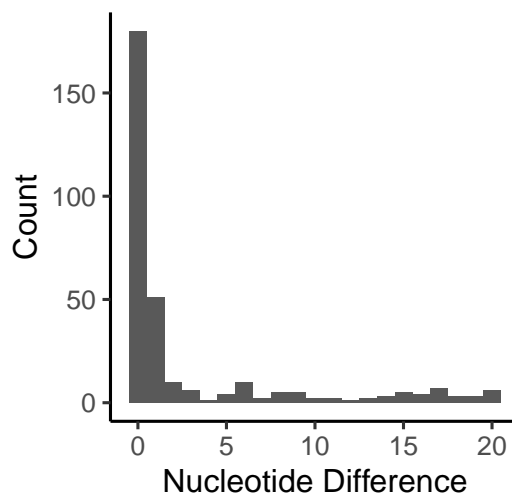
IGHV1-69-2*01

208 sequences assigned
118 (56.7%) exact matches, in which:
117 unique CDR3
6 unique J



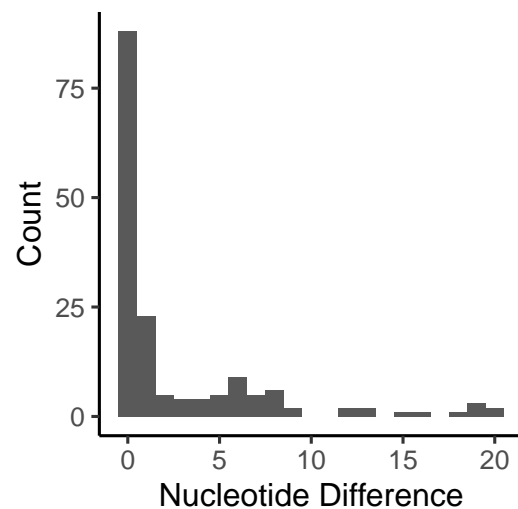
IGHV1-69*08_C191T

353 sequences assigned
180 (51%) exact matches, in which:
179 unique CDR3
6 unique J



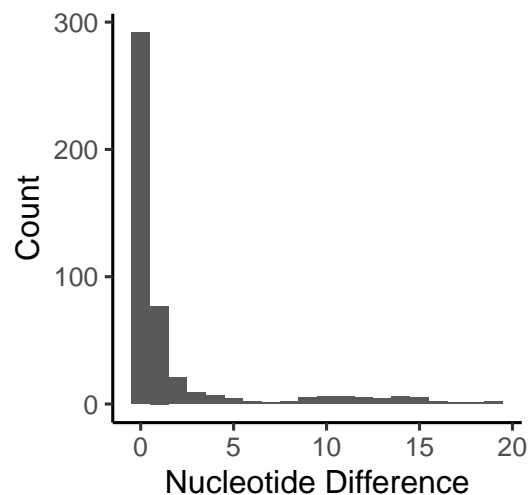
IGHV2-26*01

172 sequences assigned
88 (51.2%) exact matches, in which:
86 unique CDR3
7 unique J



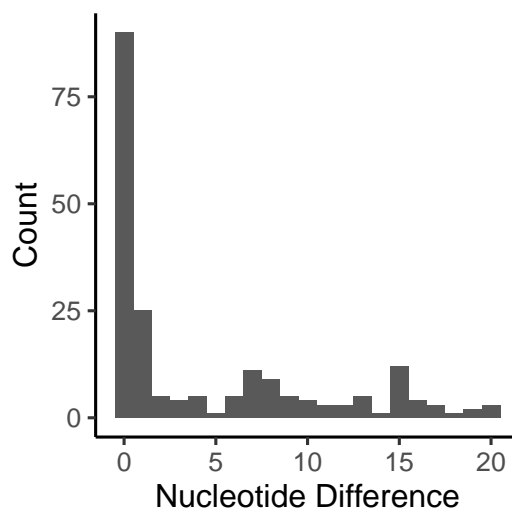
IGHV1-69*04

499 sequences assigned
292 (58.5%) exact matches, in which:
288 unique CDR3
7 unique J



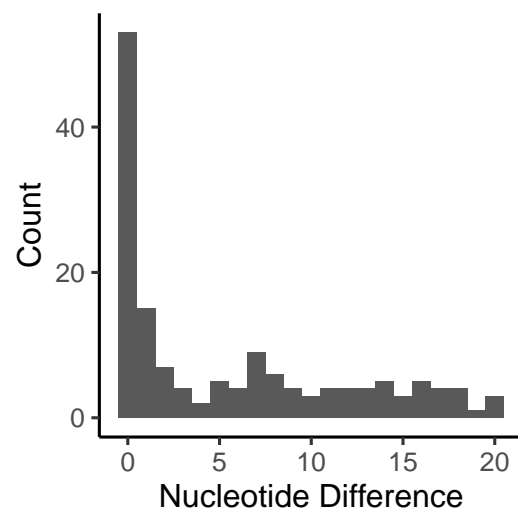
IGHV2-5*01

236 sequences assigned
90 (38.1%) exact matches, in which:
90 unique CDR3
5 unique J



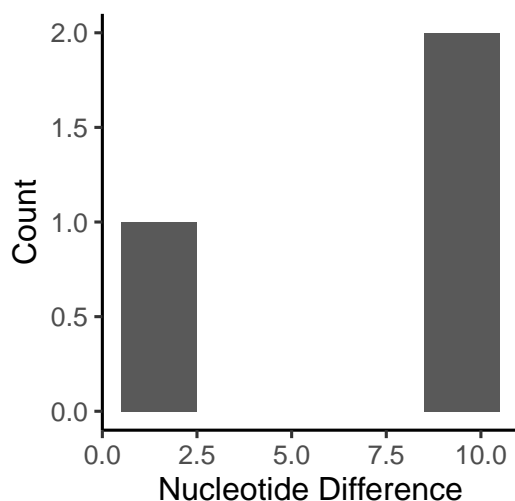
IGHV2-70*15

163 sequences assigned
53 (32.5%) exact matches, in which:
51 unique CDR3
5 unique J



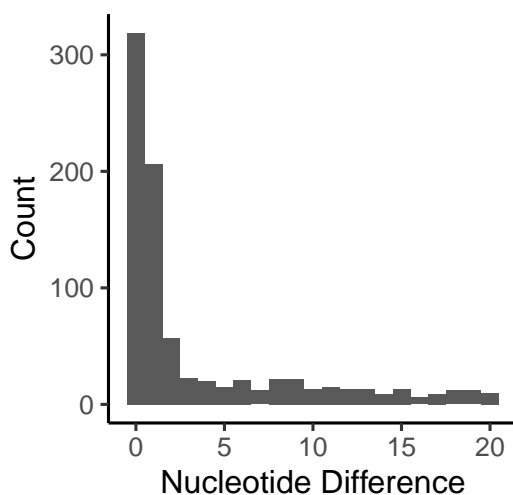
IGHV2-70D*14

6 sequences assigned
No exact matches.



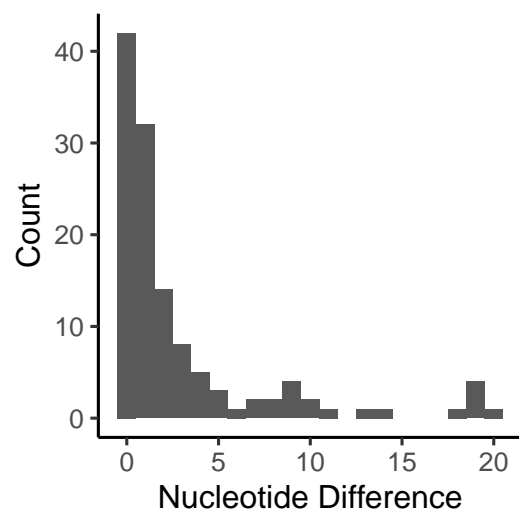
IGHV3-11*01

944 sequences assigned
319 (33.8%) exact matches, in which:
314 unique CDR3
7 unique J



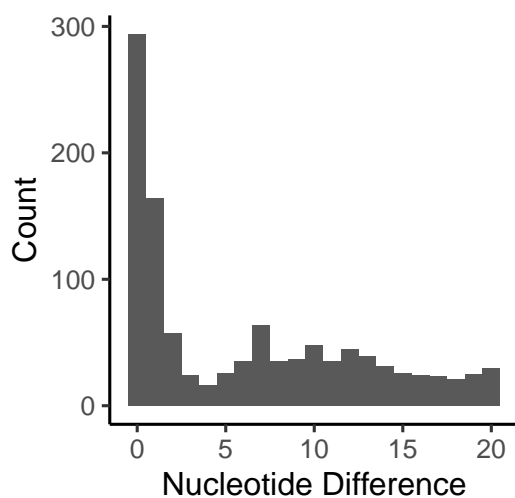
IGHV3-20*01

130 sequences assigned
42 (32.3%) exact matches, in which:
37 unique CDR3
5 unique J



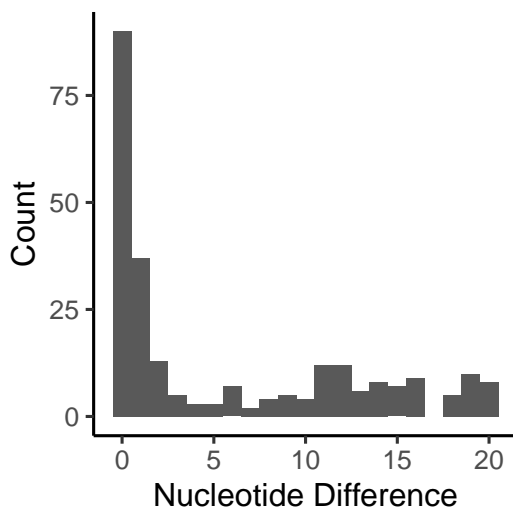
IGHV3-7*01

1312 sequences assigned
294 (22.4%) exact matches, in which:
285 unique CDR3
7 unique J



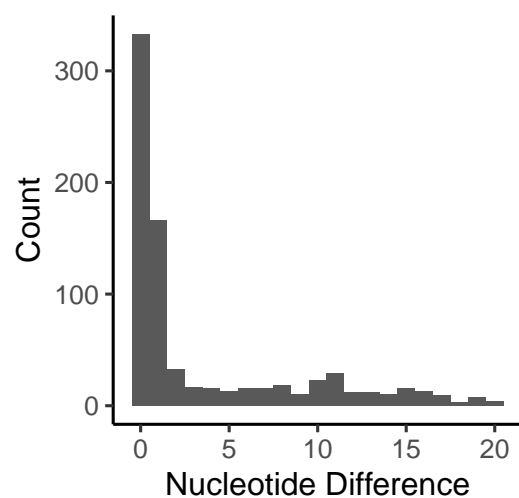
IGHV3-13*01

278 sequences assigned
90 (32.4%) exact matches, in which:
89 unique CDR3
6 unique J



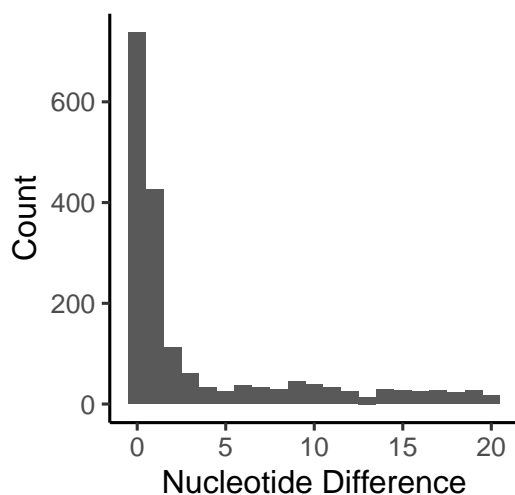
IGHV3-21*01

826 sequences assigned
333 (40.3%) exact matches, in which:
329 unique CDR3
7 unique J



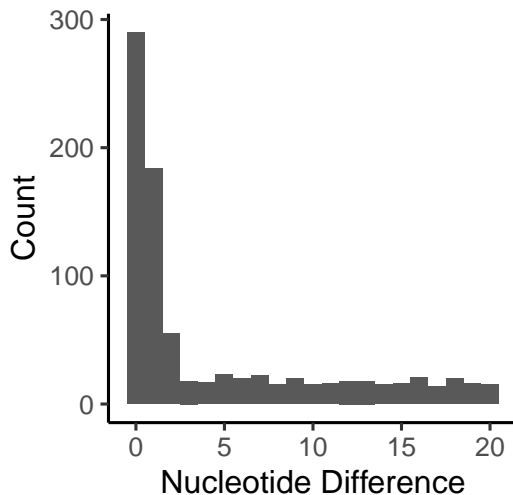
IGHV3-9*01

1959 sequences assigned
738 (37.7%) exact matches, in which:
718 unique CDR3
7 unique J



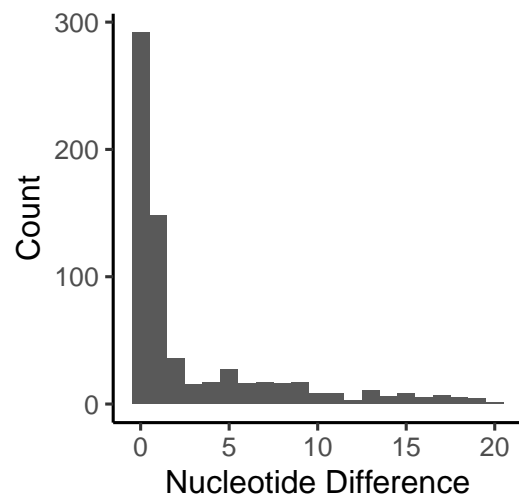
IGHV3-15*01

1012 sequences assigned
290 (28.7%) exact matches, in which:
281 unique CDR3
6 unique J



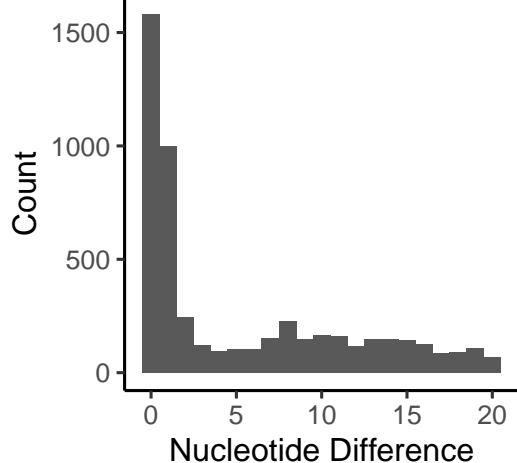
IGHV3-21*01_G278C

716 sequences assigned
292 (40.8%) exact matches, in which:
283 unique CDR3
7 unique J



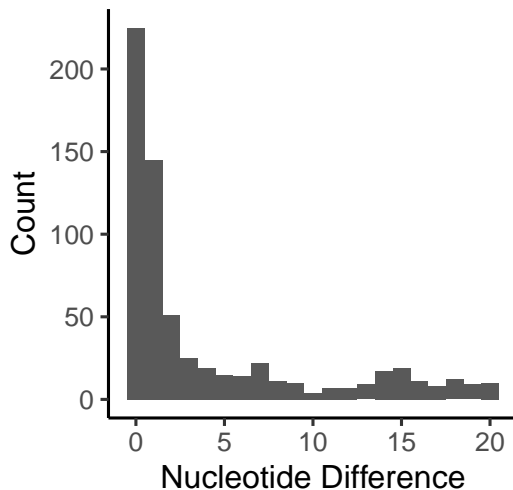
IGHV3-23*01

5980 sequences assigned
1580 (26.4%) exact matches, in which:
1513 unique CDR3
7 unique J



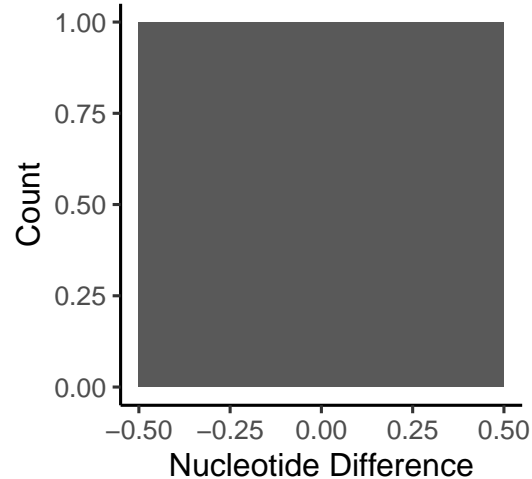
IGHV3-33*01

772 sequences assigned
225 (29.1%) exact matches, in which:
213 unique CDR3
6 unique J



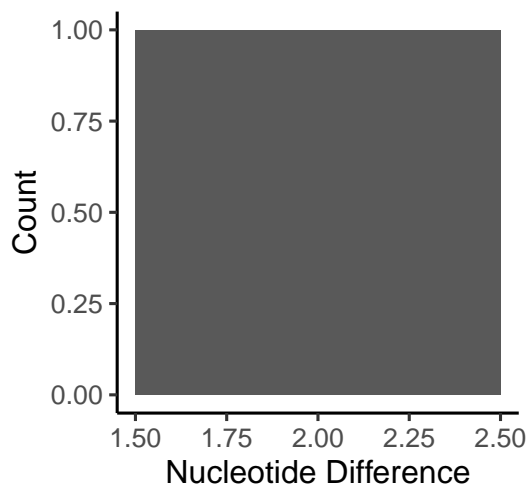
IGHV3-47*02

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



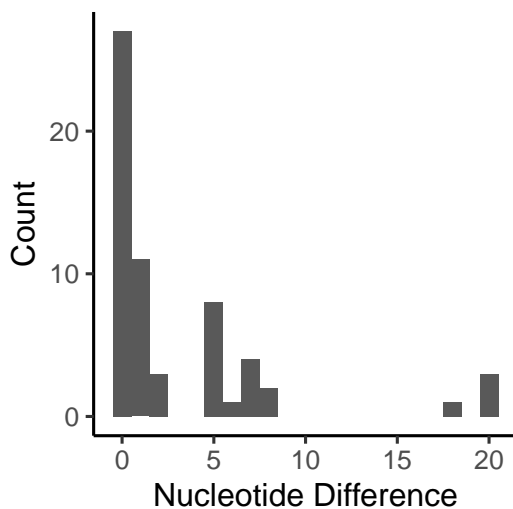
IGHV3-30-3*01

5 sequences assigned
No exact matches.



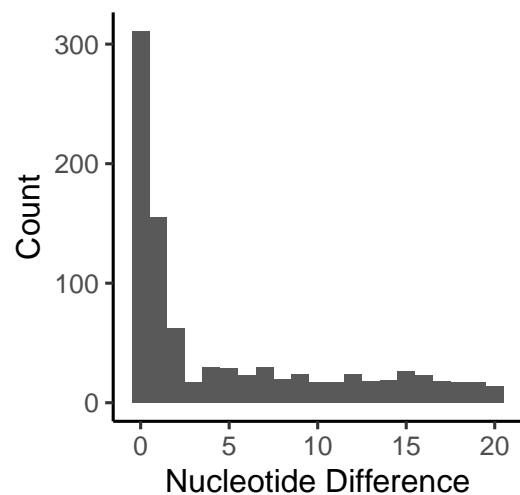
IGHV3-43*01

61 sequences assigned
27 (44.3%) exact matches, in which:
26 unique CDR3
5 unique J



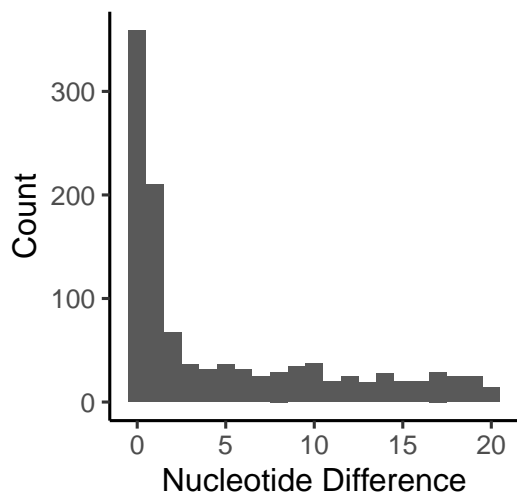
IGHV3-48*01

1068 sequences assigned
311 (29.1%) exact matches, in which:
305 unique CDR3
7 unique J



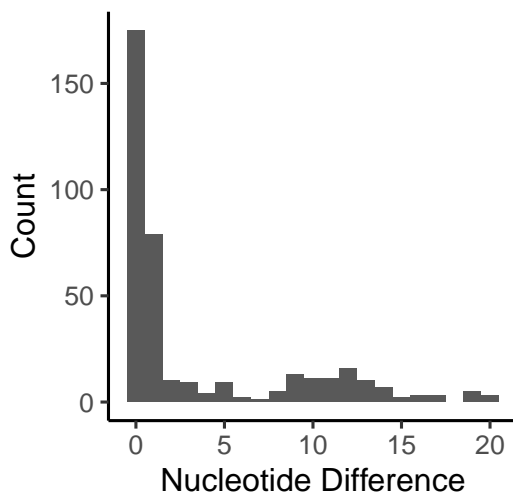
IGHV3-30*18

1304 sequences assigned
359 (27.5%) exact matches, in which:
337 unique CDR3
7 unique J



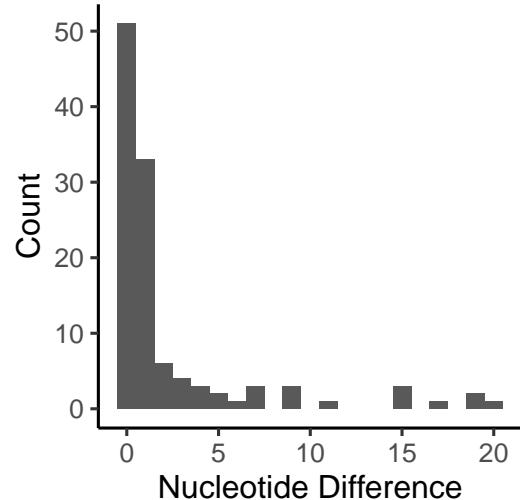
IGHV3-43*02

413 sequences assigned
175 (42.4%) exact matches, in which:
166 unique CDR3
6 unique J



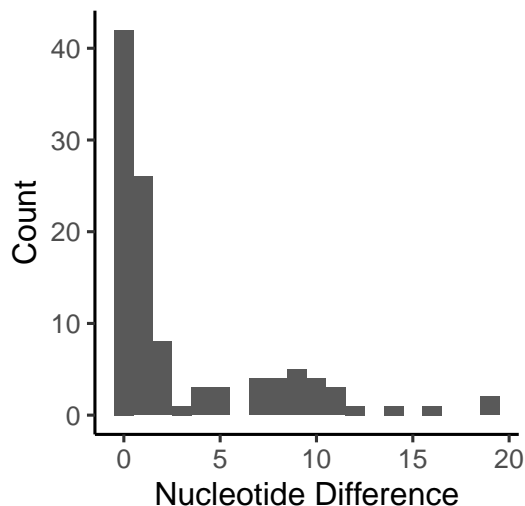
IGHV3-49*03

137 sequences assigned
51 (37.2%) exact matches, in which:
51 unique CDR3
5 unique J



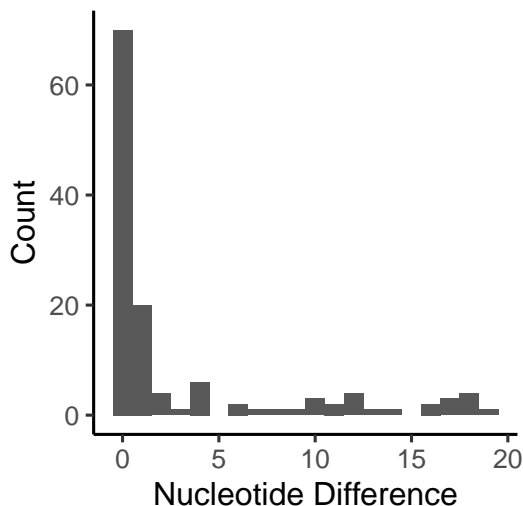
IGHV3-49*05

110 sequences assigned
42 (38.2%) exact matches, in which:
40 unique CDR3
5 unique J



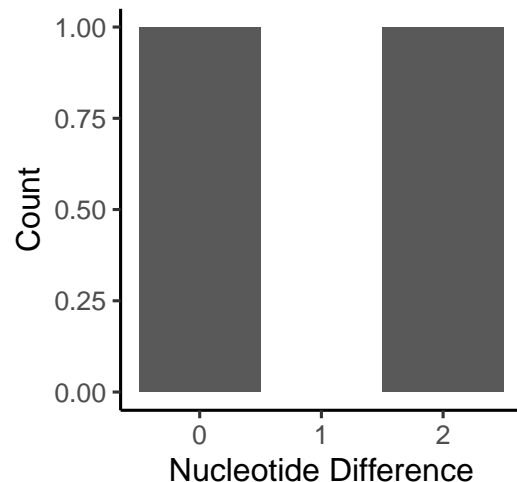
IGHV3-64*01

144 sequences assigned
70 (48.6%) exact matches, in which:
69 unique CDR3
6 unique J



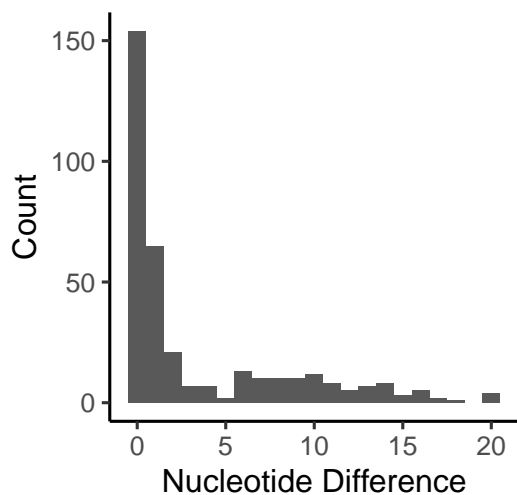
IGHV3-69-1*02

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



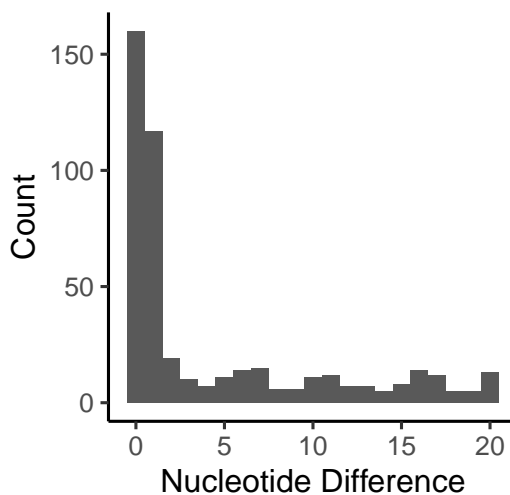
IGHV3-53*01

389 sequences assigned
154 (39.6%) exact matches, in which:
147 unique CDR3
6 unique J



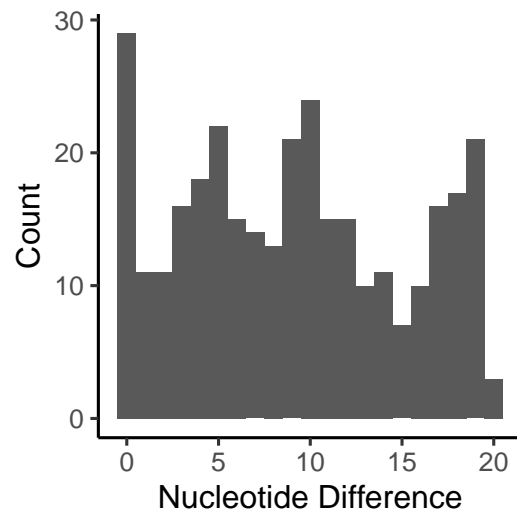
IGHV3-66*01

513 sequences assigned
160 (31.2%) exact matches, in which:
154 unique CDR3
7 unique J



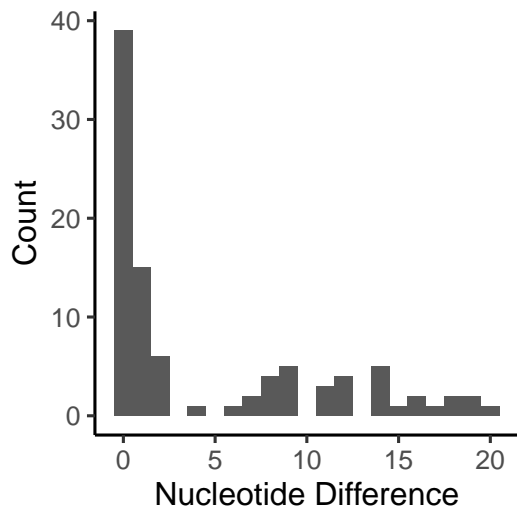
IGHV3-72*01

424 sequences assigned
29 (6.8%) exact matches, in which:
28 unique CDR3
5 unique J



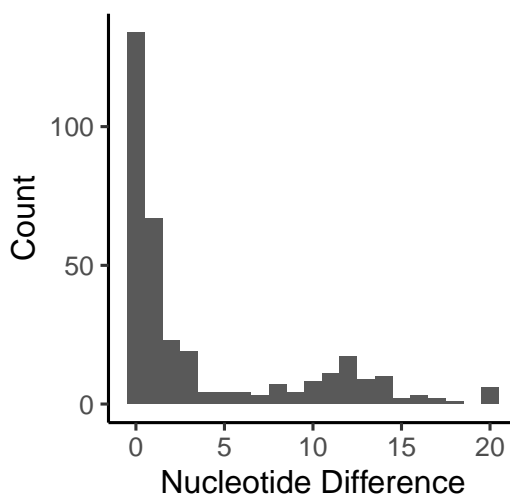
IGHV3-53*02

105 sequences assigned
39 (37.1%) exact matches, in which:
39 unique CDR3
7 unique J



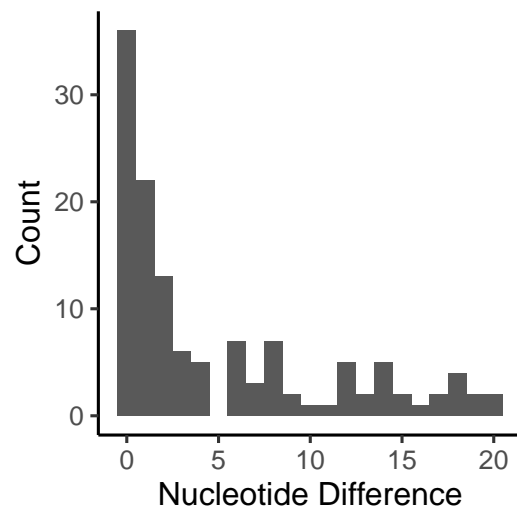
IGHV3-66*02

390 sequences assigned
134 (34.4%) exact matches, in which:
129 unique CDR3
5 unique J



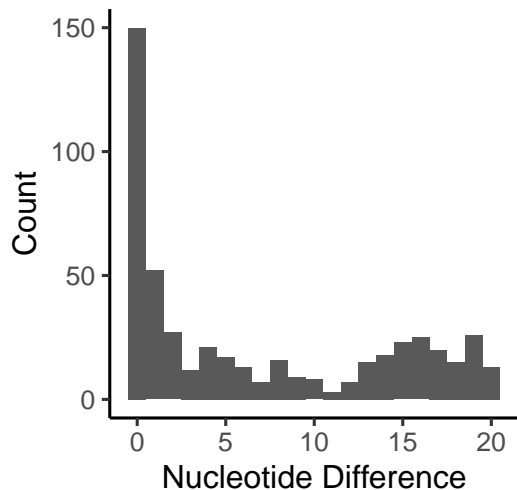
IGHV3-73*01

158 sequences assigned
36 (22.8%) exact matches, in which:
36 unique CDR3
6 unique J



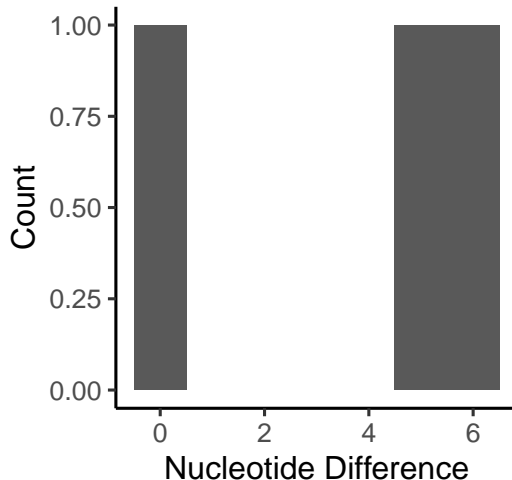
IGHV3–74*01

606 sequences assigned
150 (24.8%) exact matches, in which:
141 unique CDR3
7 unique J



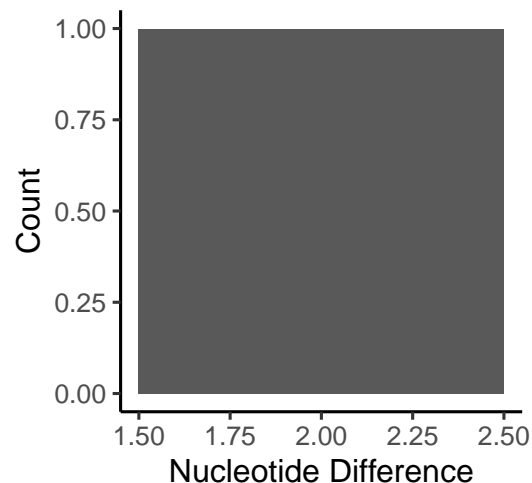
IGHV4–28*01

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



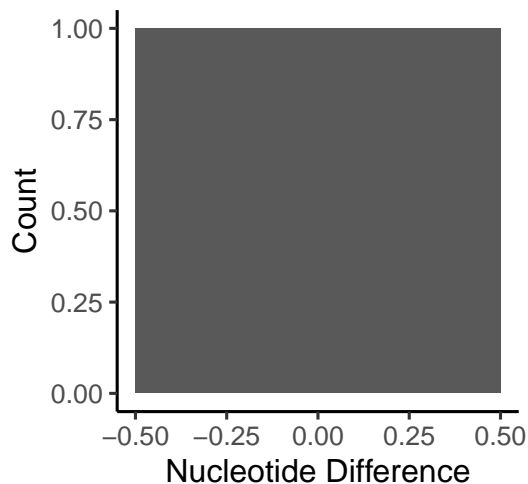
IGHV4–28*06

1 sequences assigned
No exact matches.



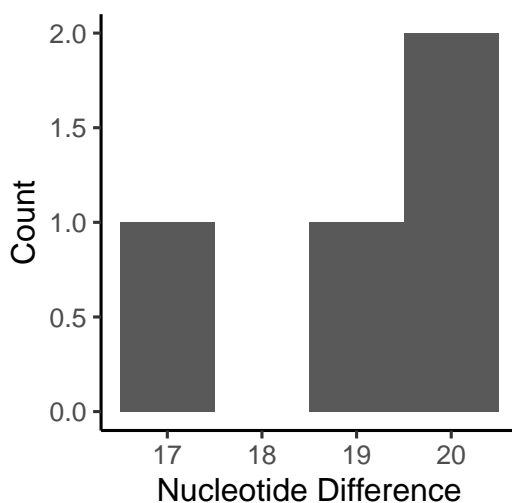
IGHV3–64D*06

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



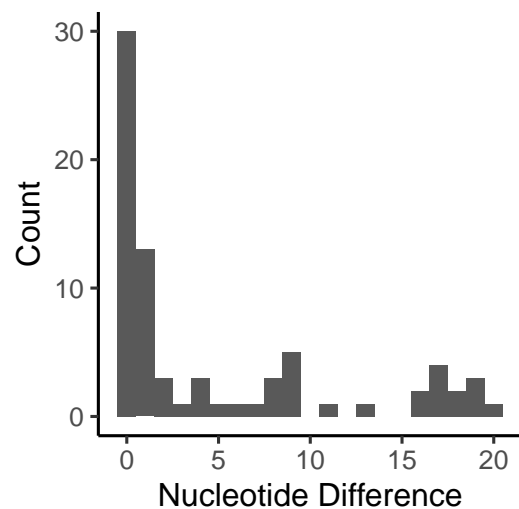
IGHV4–28*03

6 sequences assigned
No exact matches.



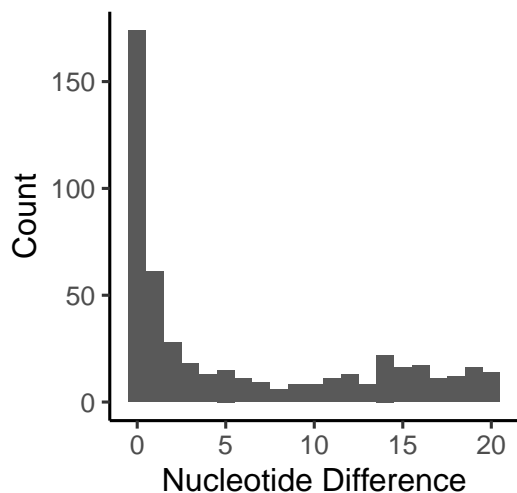
IGHV4–30–2*01

83 sequences assigned
30 (36.1%) exact matches, in which:
30 unique CDR3
5 unique J



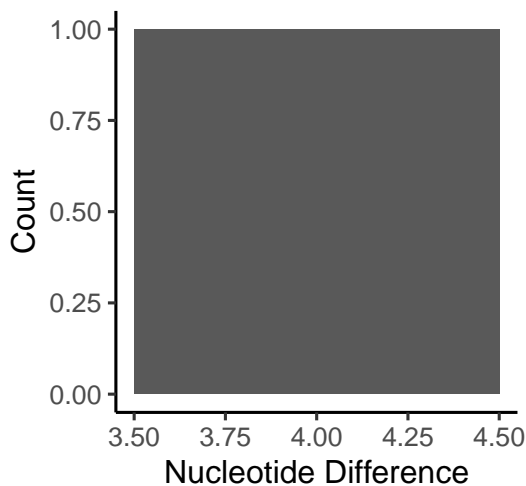
IGHV4–4*07

598 sequences assigned
174 (29.1%) exact matches, in which:
171 unique CDR3
7 unique J



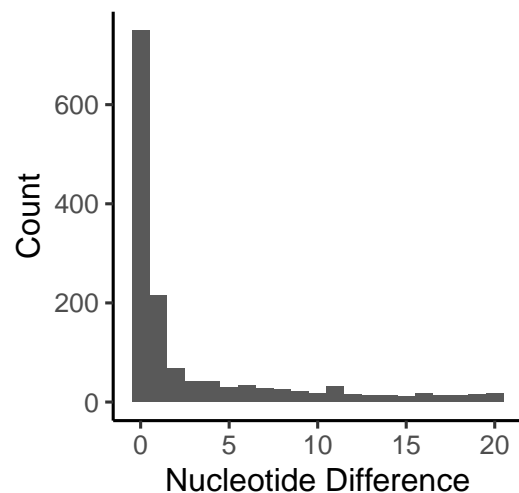
IGHV4–28*04

1 sequences assigned
No exact matches.



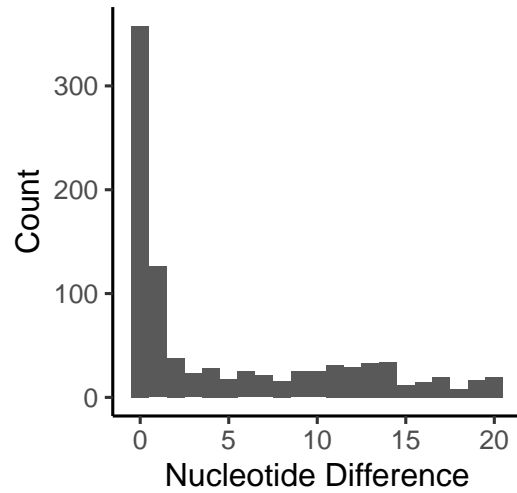
IGHV4–34*01

1624 sequences assigned
750 (46.2%) exact matches, in which:
726 unique CDR3
7 unique J



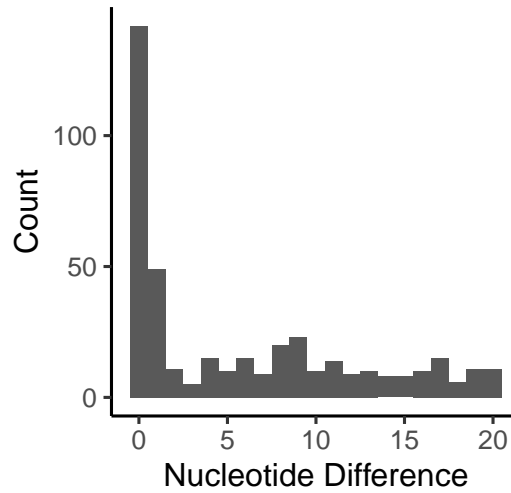
IGHV4–39*01

1121 sequences assigned
358 (31.9%) exact matches, in which:
348 unique CDR3
7 unique J



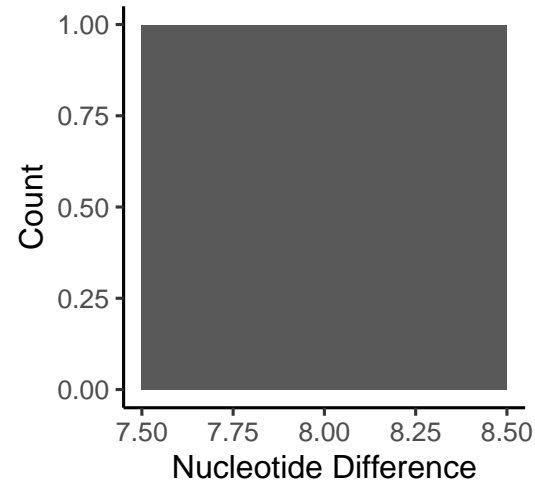
IGHV4–59*08

488 sequences assigned
142 (29.1%) exact matches, in which:
142 unique CDR3
6 unique J



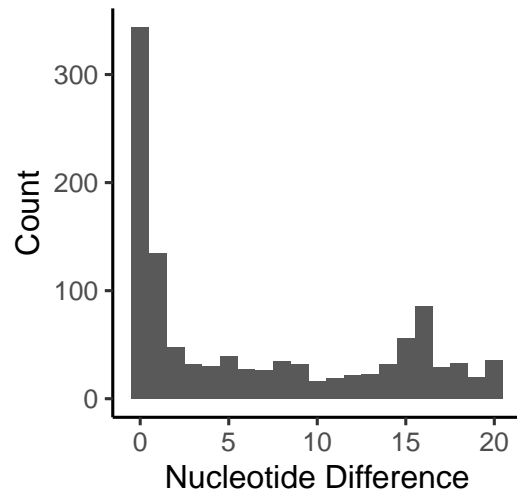
IGHV1/OR15–2*01

1 sequences assigned
No exact matches.



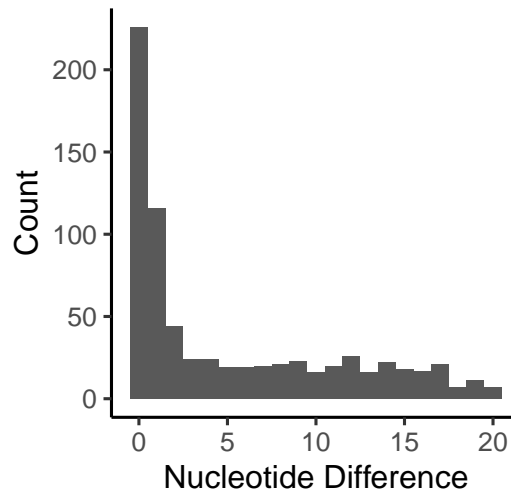
IGHV4–39*07

1421 sequences assigned
344 (24.2%) exact matches, in which:
335 unique CDR3
7 unique J



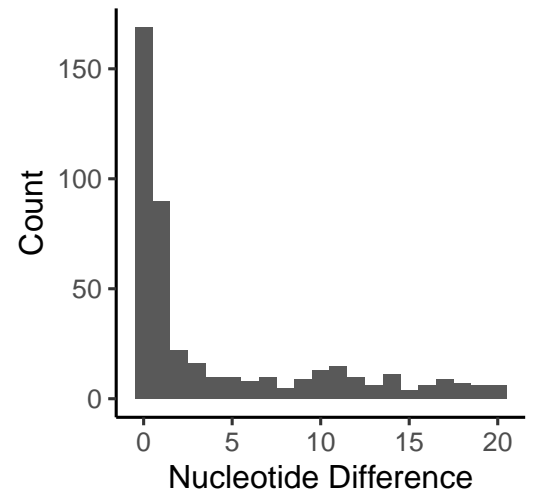
IGHV4–61*02

785 sequences assigned
226 (28.8%) exact matches, in which:
223 unique CDR3
7 unique J



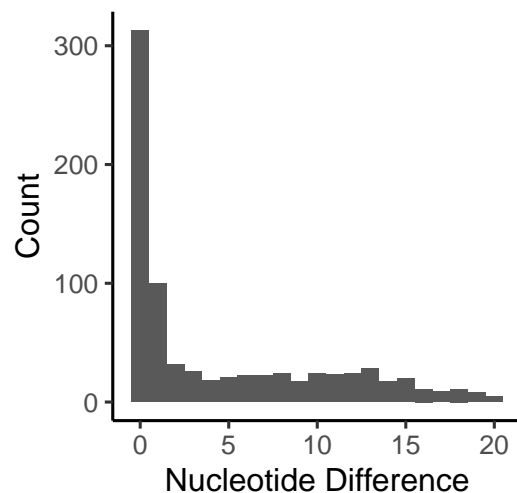
IGHV5–51*01

503 sequences assigned
169 (33.6%) exact matches, in which:
165 unique CDR3
6 unique J



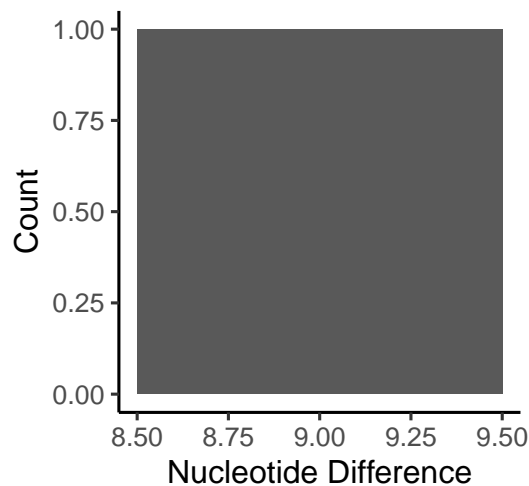
IGHV4–59*01

876 sequences assigned
313 (35.7%) exact matches, in which:
302 unique CDR3
7 unique J



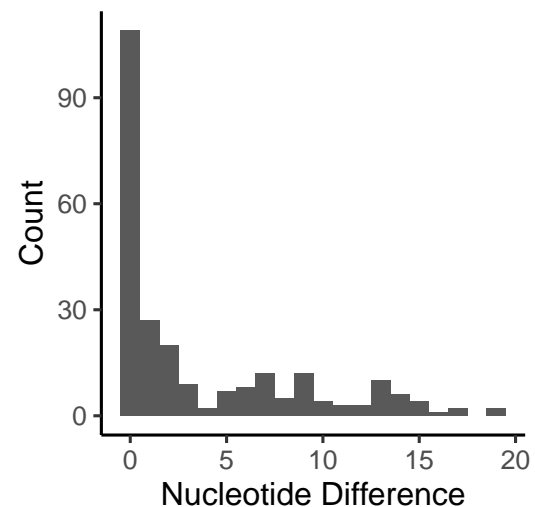
IGHV1/OR15–1*04

1 sequences assigned
No exact matches.



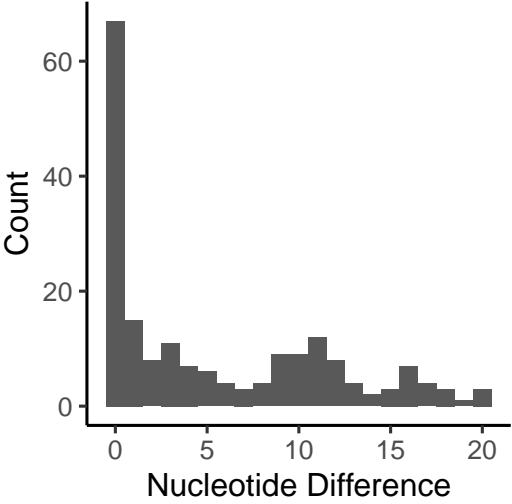
IGHV5–51*03

272 sequences assigned
109 (40.1%) exact matches, in which:
107 unique CDR3
5 unique J



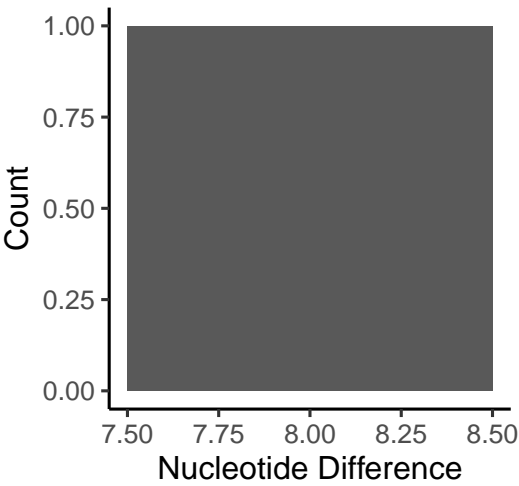
IGHV6-1*01

214 sequences assigned
67 (31.3%) exact matches, in which:
65 unique CDR3
7 unique J



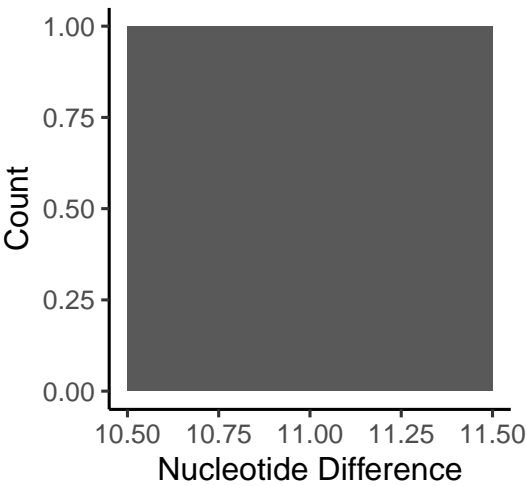
IGHV3/OR16-8*01

1 sequences assigned
No exact matches.

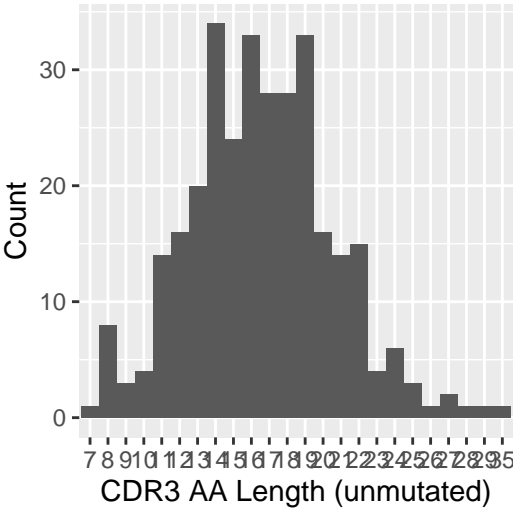


IGHV3/OR16-9*01

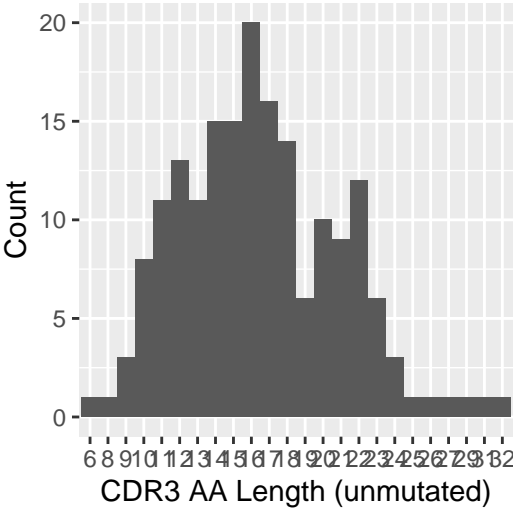
1 sequences assigned
No exact matches.



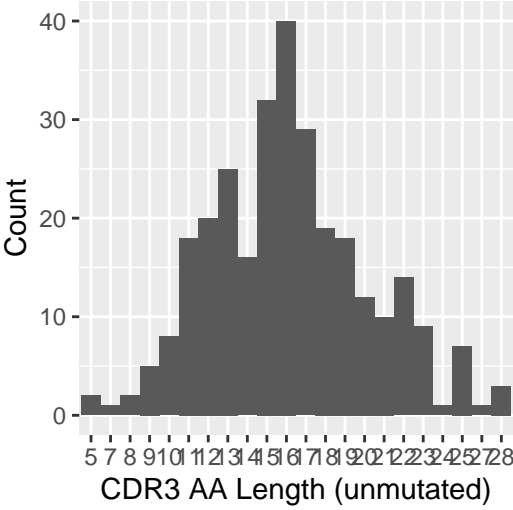
IGHV1-69*04_C184T



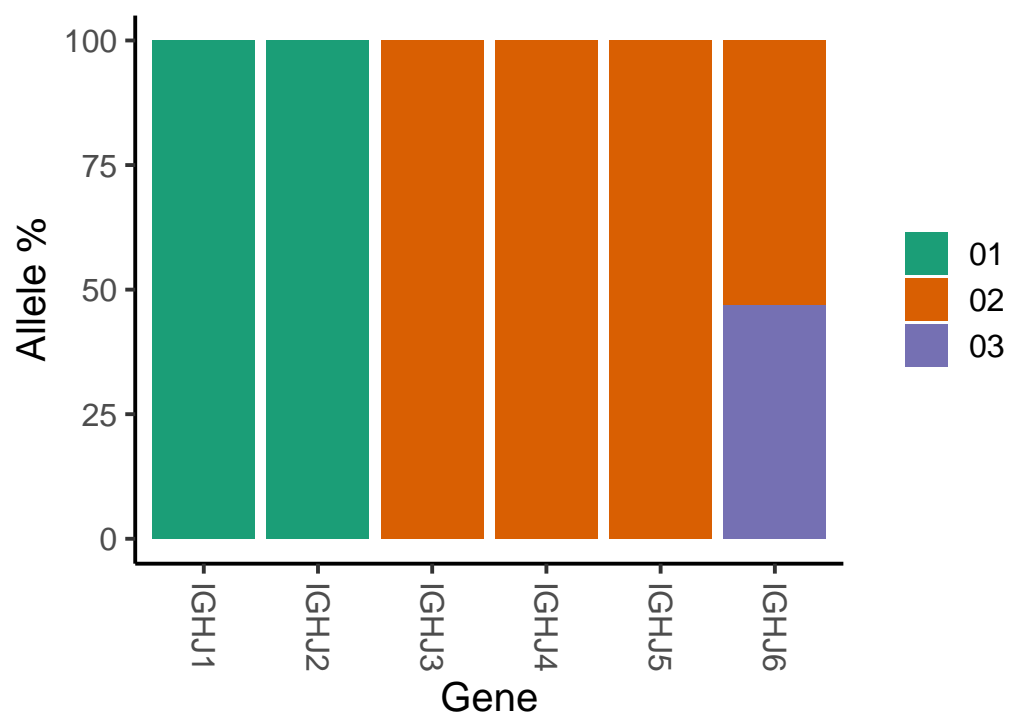
IGHV1-69*08_C191T



IGHV3-21*01_G278C



Allele Usage



Sequence Count by IGHJ6 allele usage

