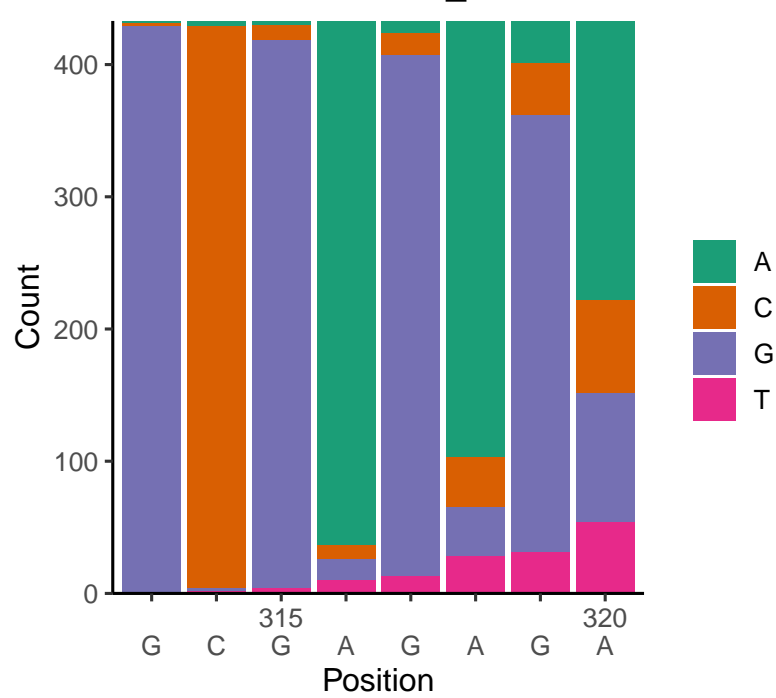
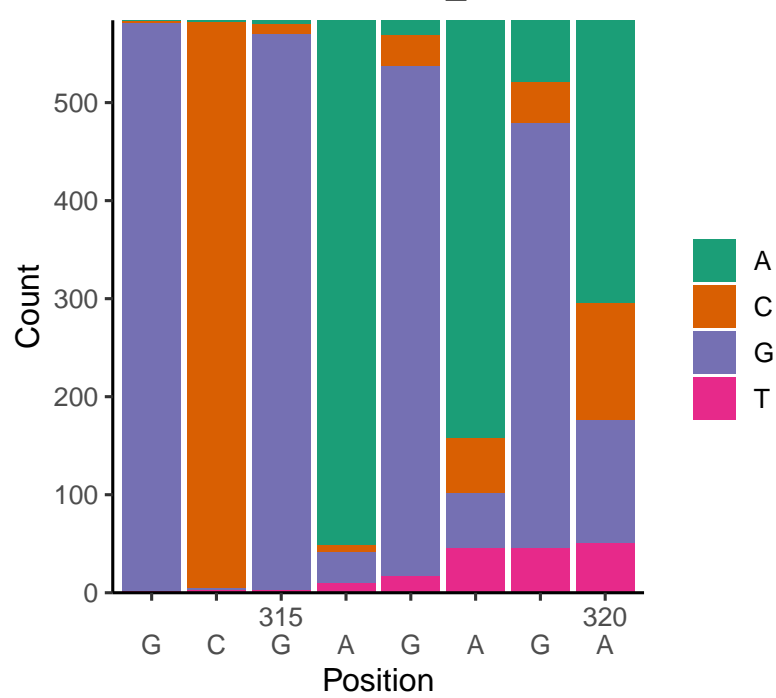


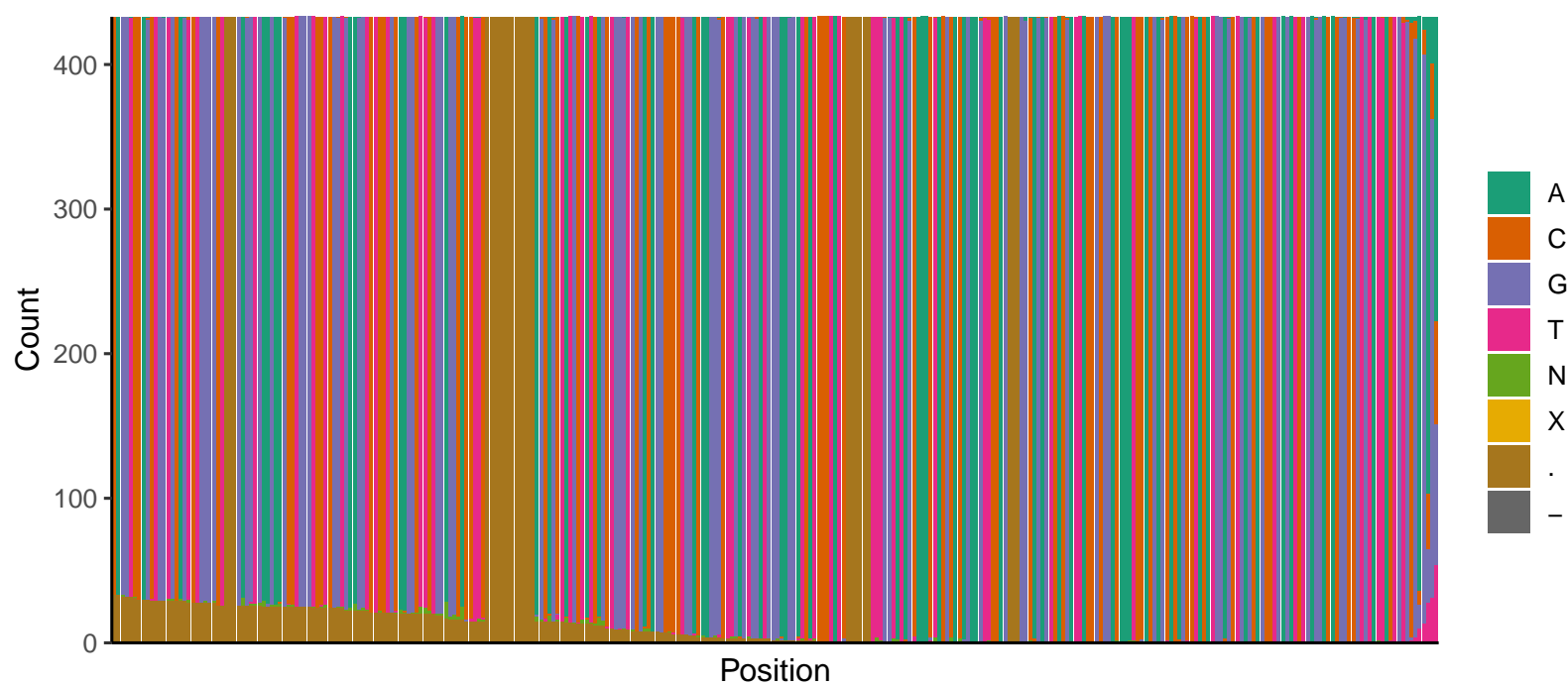
Gene IGHV1-69*04_C184T



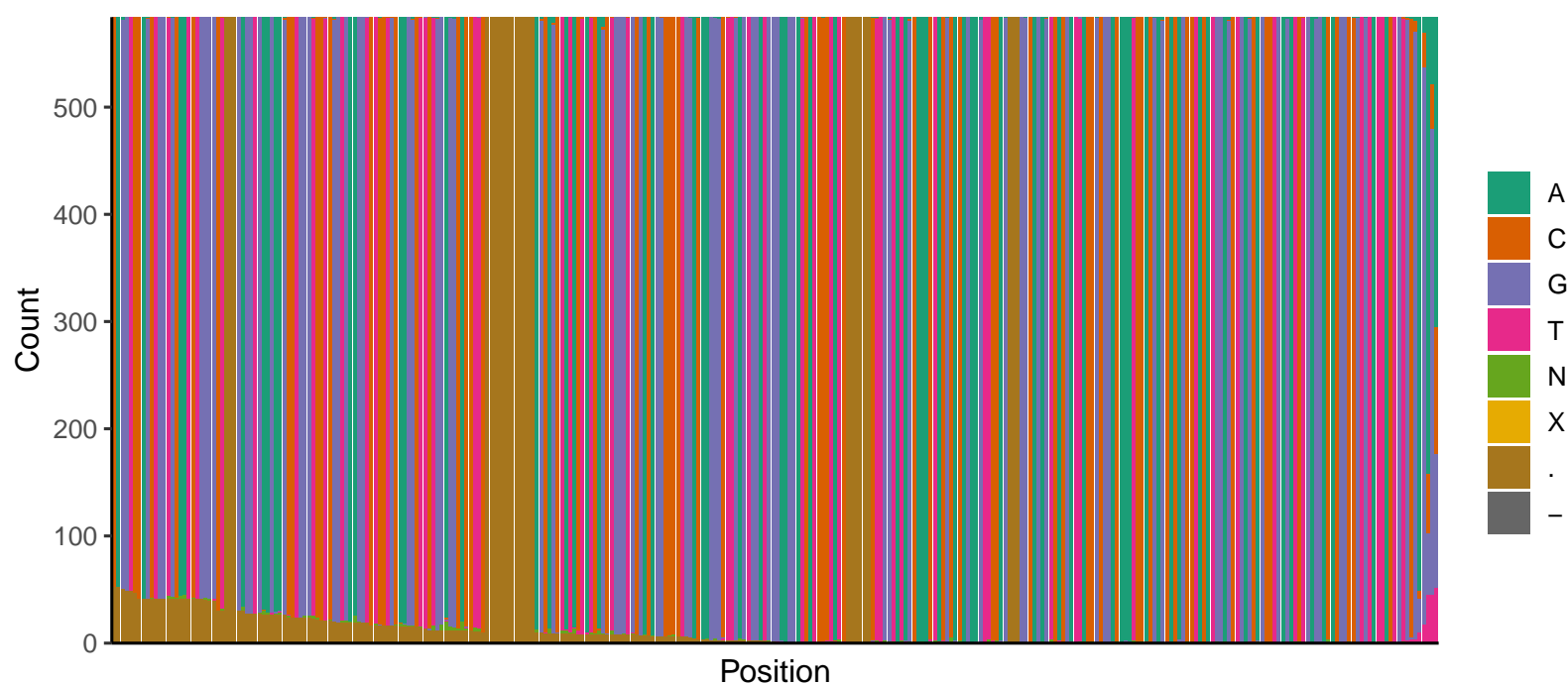
Gene IGHV1-69*08_C191T



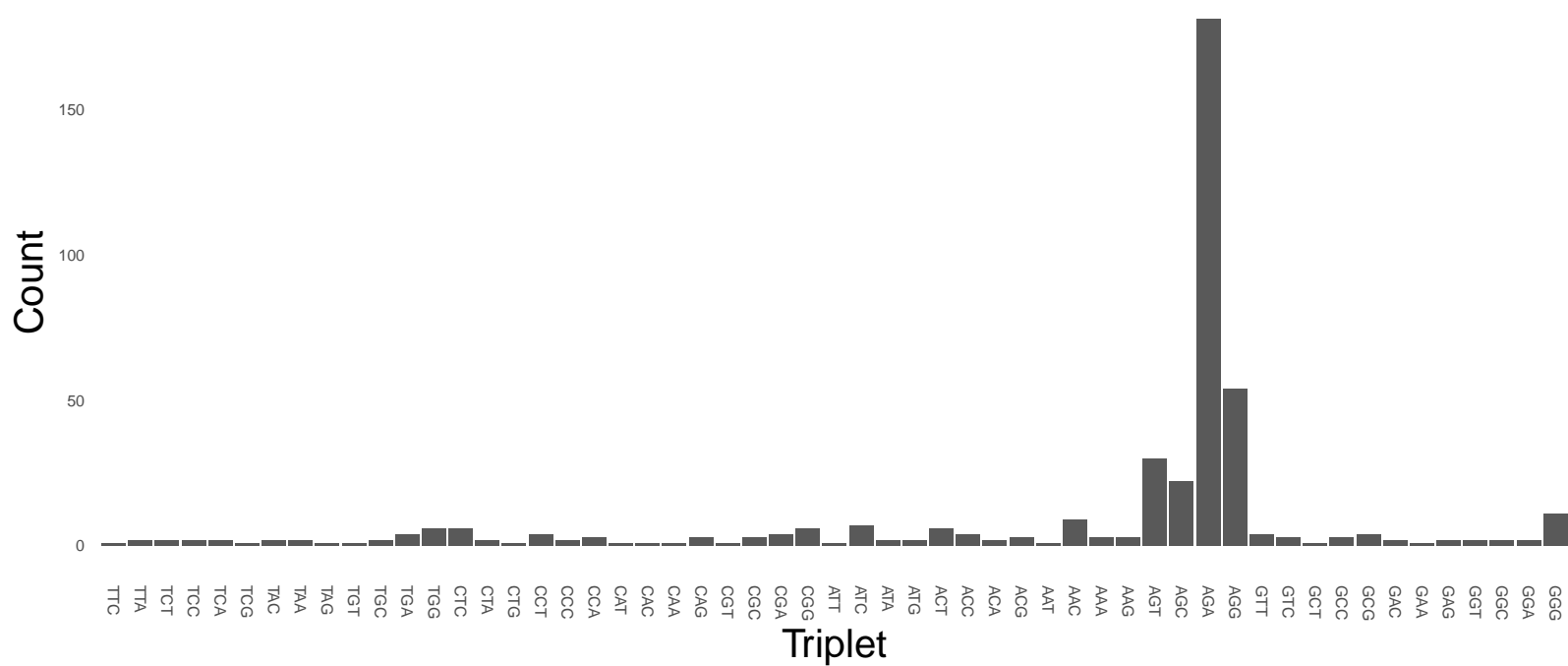
Gene IGHV1-69*04_C184T



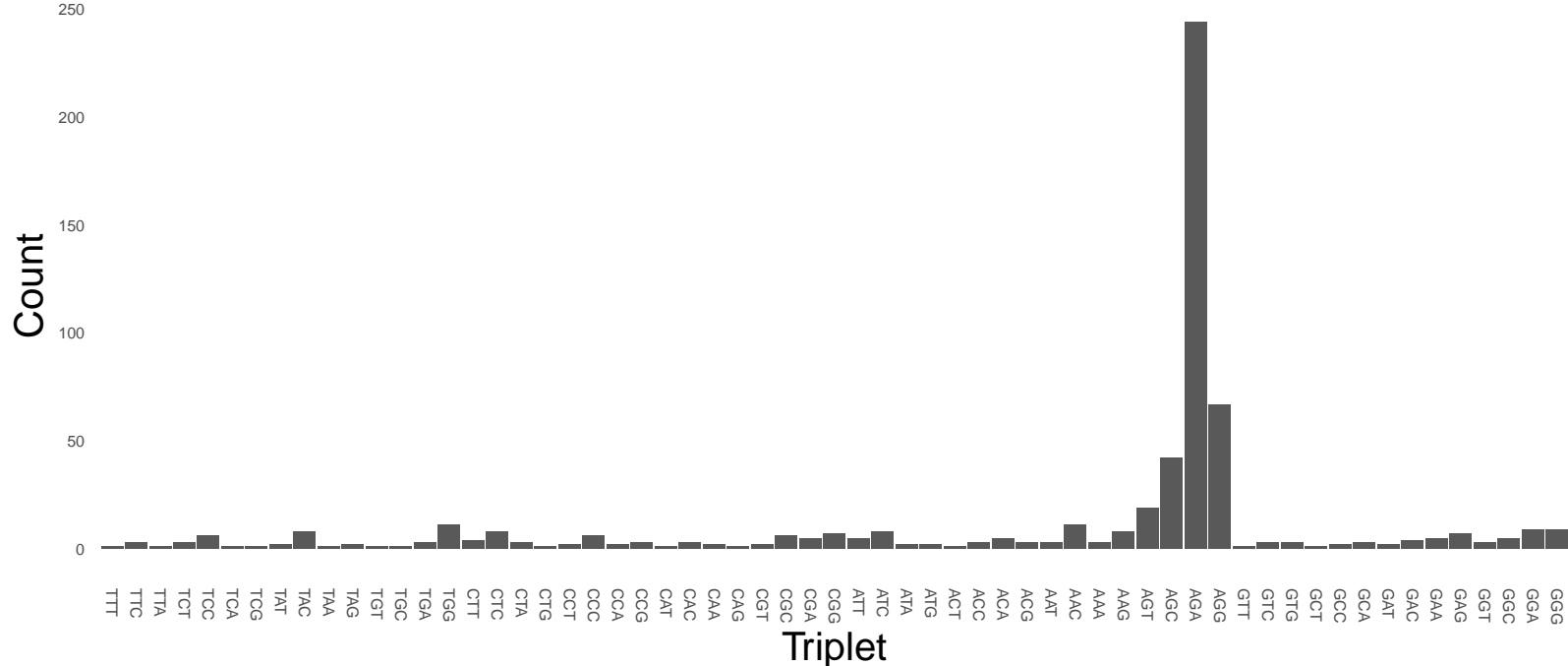
Gene IGHV1-69*08_C191T



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

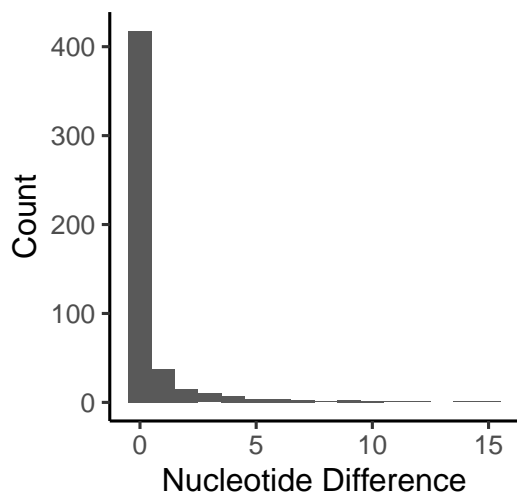


IGHV1-69*08_C191T- Final 3 nucleotides as a triplet



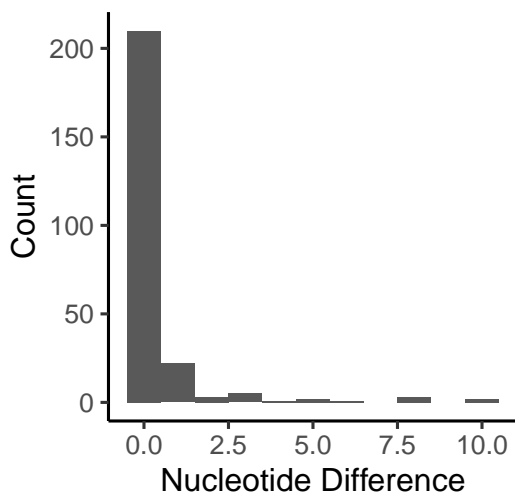
IGHV1-2*02

511 sequences assigned
418 (81.8%) exact matches, in which:
405 unique CDR3
6 unique J



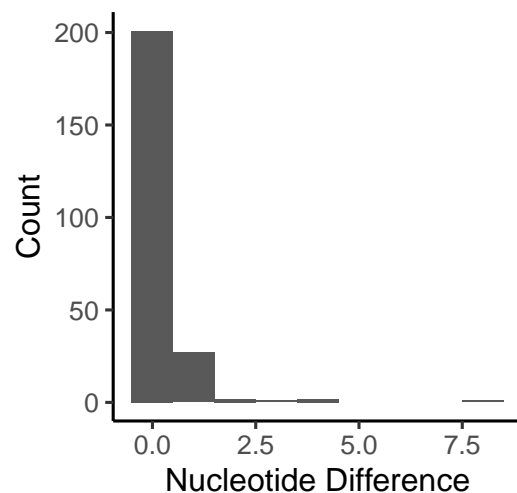
IGHV1-8*01

250 sequences assigned
210 (84%) exact matches, in which:
202 unique CDR3
6 unique J



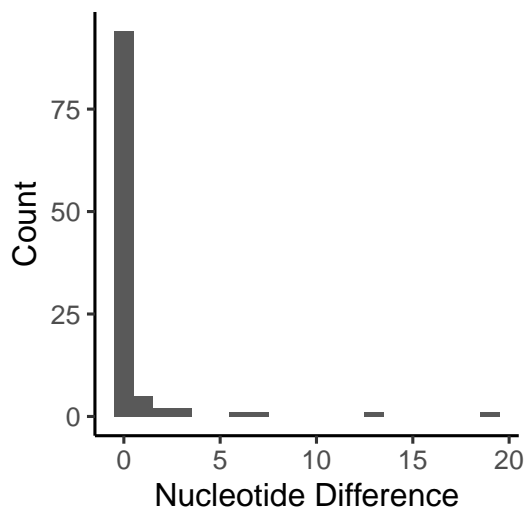
IGHV1-24*01

234 sequences assigned
201 (85.9%) exact matches, in which:
196 unique CDR3
6 unique J



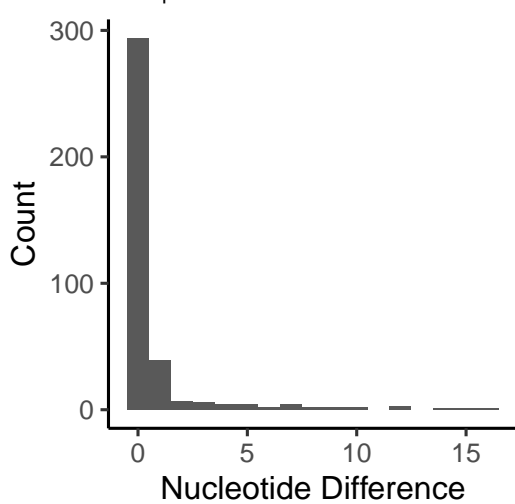
IGHV1-2*04

107 sequences assigned
94 (87.9%) exact matches, in which:
91 unique CDR3
5 unique J



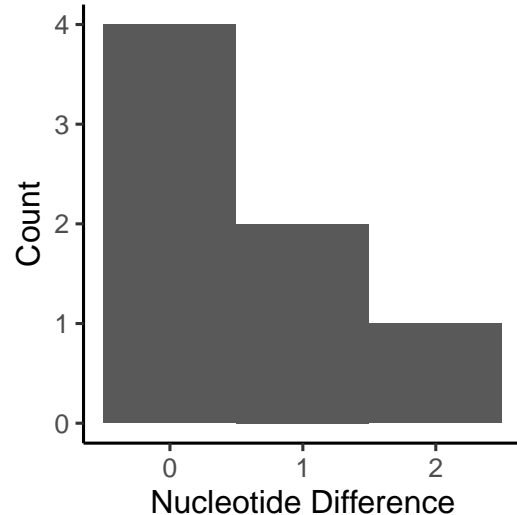
IGHV1-18*01

372 sequences assigned
294 (79%) exact matches, in which:
290 unique CDR3
5 unique J



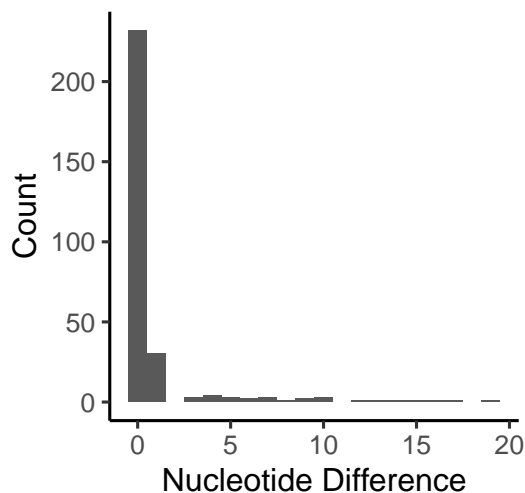
IGHV1-45*02

7 sequences assigned
4 (57.1%) exact matches, in which:
4 unique CDR3
3 unique J



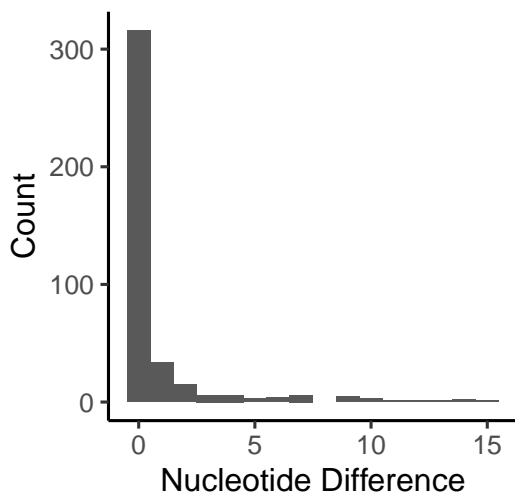
IGHV1-3*01

290 sequences assigned
232 (80%) exact matches, in which:
232 unique CDR3
6 unique J



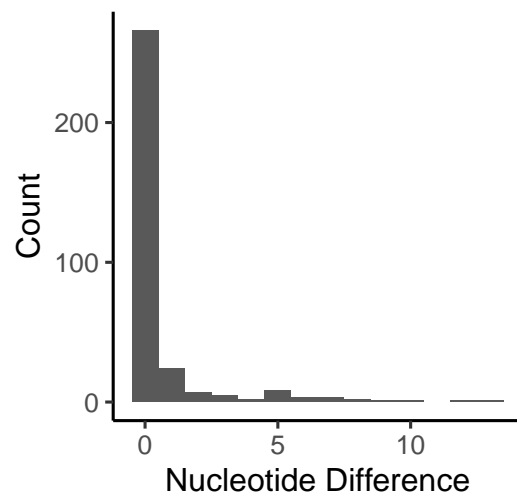
IGHV1-18*04

405 sequences assigned
316 (78%) exact matches, in which:
312 unique CDR3
6 unique J



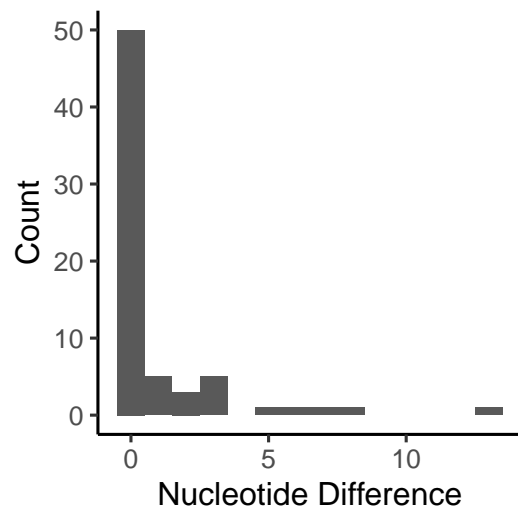
IGHV1-46*03

326 sequences assigned
266 (81.6%) exact matches, in which:
260 unique CDR3
6 unique J



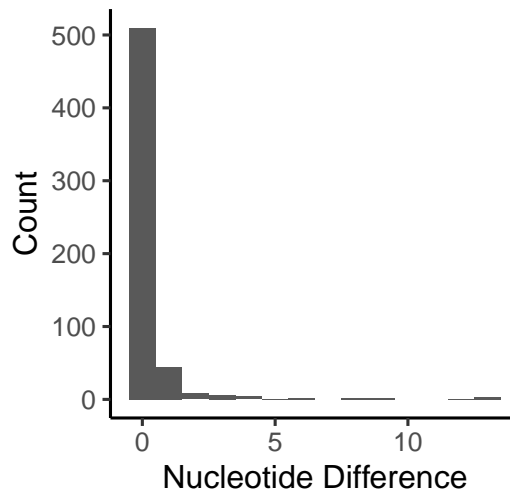
IGHV1-58*02

68 sequences assigned
50 (73.5%) exact matches, in which:
48 unique CDR3
4 unique J



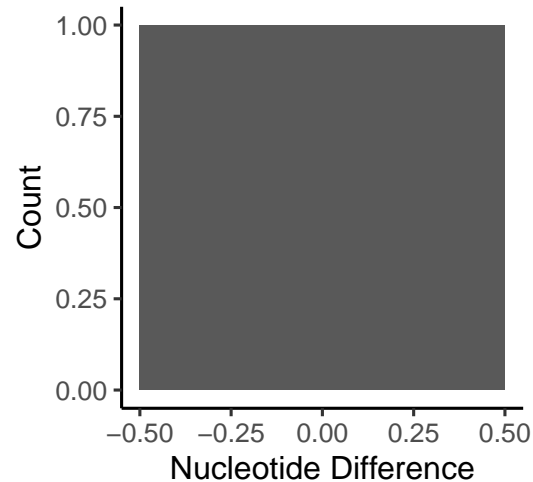
IGHV1-69*08_C191T

584 sequences assigned
510 (87.3%) exact matches, in which:
498 unique CDR3
6 unique J



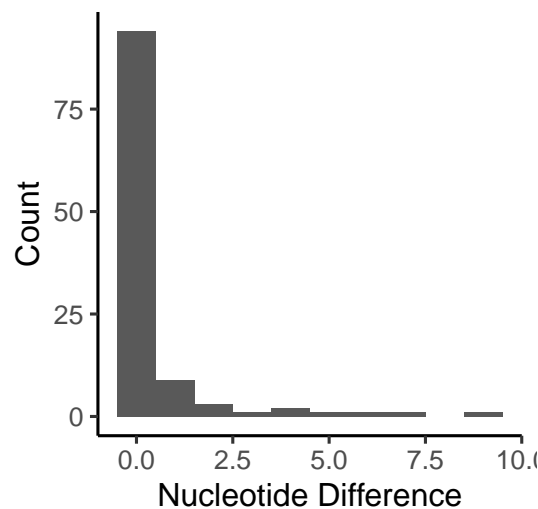
IGHV2-70D*14

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



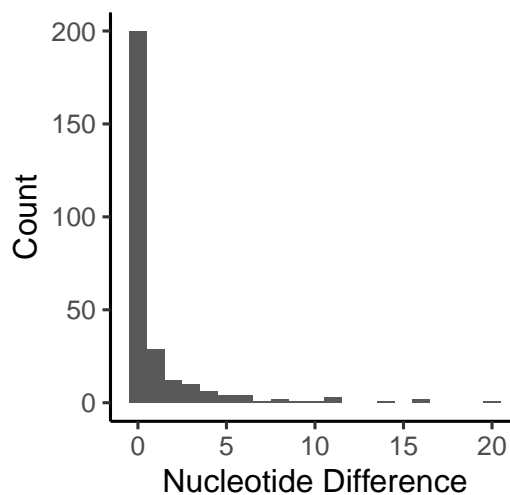
IGHV1-69-2*01

113 sequences assigned
94 (83.2%) exact matches, in which:
91 unique CDR3
5 unique J



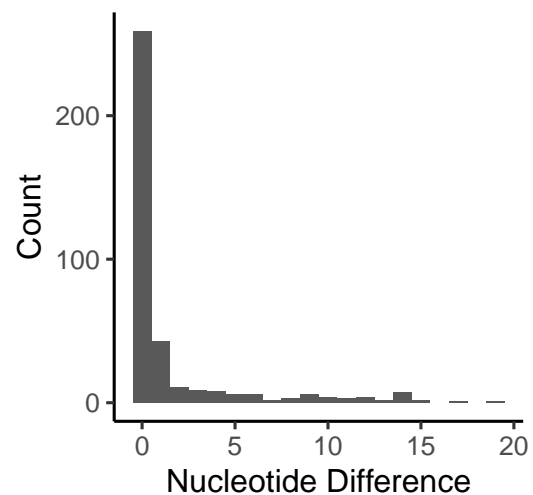
IGHV2-5*02

278 sequences assigned
200 (71.9%) exact matches, in which:
197 unique CDR3
6 unique J



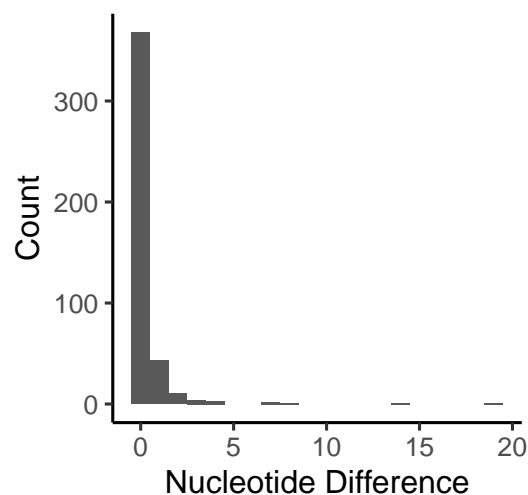
IGHV3-7*01

384 sequences assigned
259 (67.4%) exact matches, in which:
247 unique CDR3
6 unique J



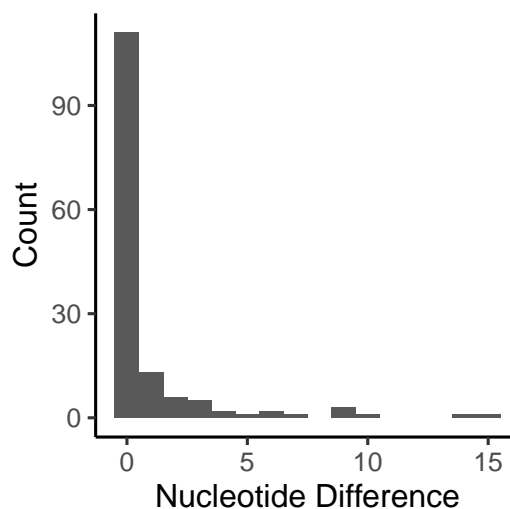
IGHV1-69*04_C184T

433 sequences assigned
368 (85%) exact matches, in which:
355 unique CDR3
6 unique J



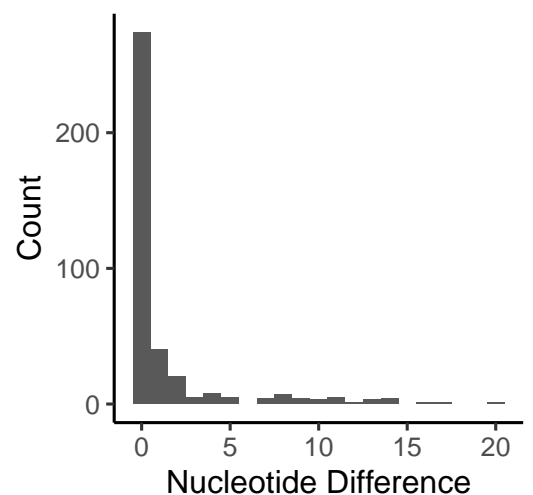
IGHV2-26*01

147 sequences assigned
111 (75.5%) exact matches, in which:
110 unique CDR3
5 unique J



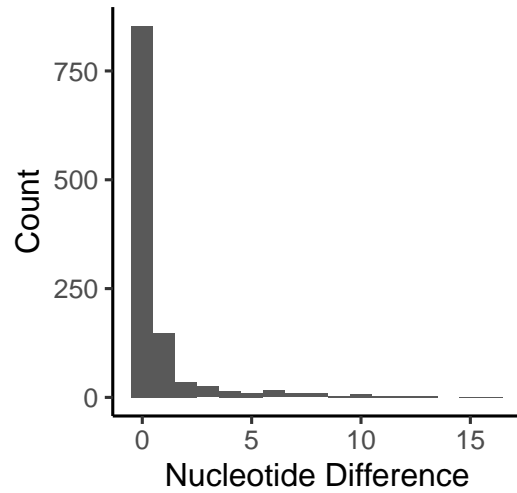
IGHV3-7*03

394 sequences assigned
274 (69.5%) exact matches, in which:
268 unique CDR3
6 unique J



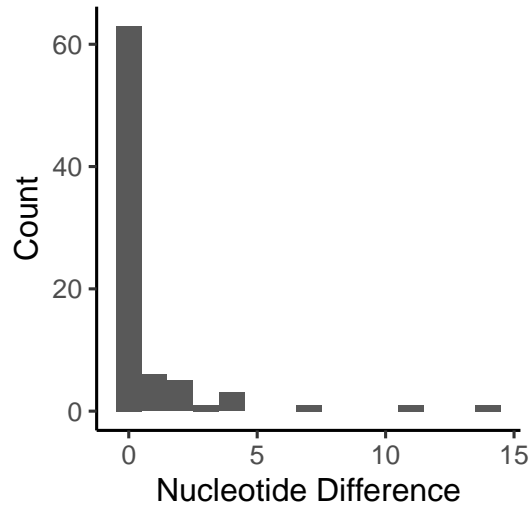
IGHV3-9*01

1150 sequences assigned
854 (74.3%) exact matches, in which:
811 unique CDR3
6 unique J



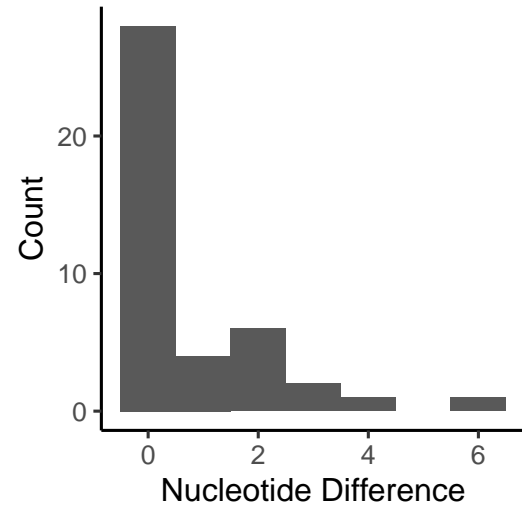
IGHV3-13*01

81 sequences assigned
63 (77.8%) exact matches, in which:
60 unique CDR3
5 unique J



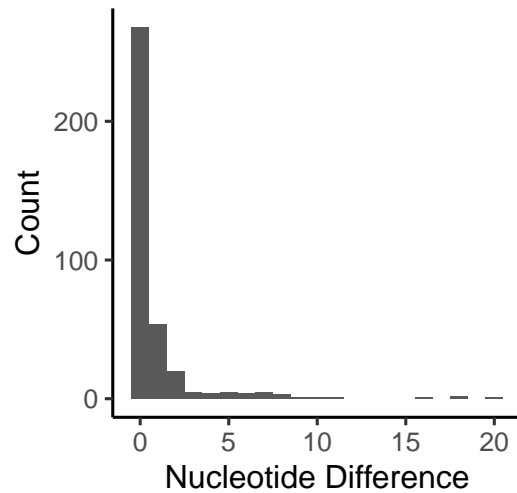
IGHV3-20*01

42 sequences assigned
28 (66.7%) exact matches, in which:
28 unique CDR3
4 unique J



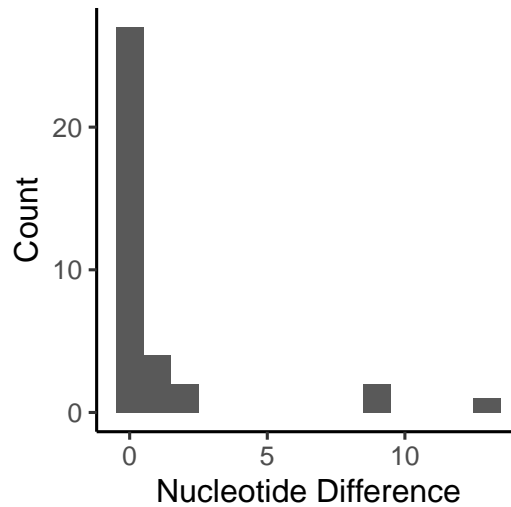
IGHV3-11*01

377 sequences assigned
268 (71.1%) exact matches, in which:
261 unique CDR3
6 unique J



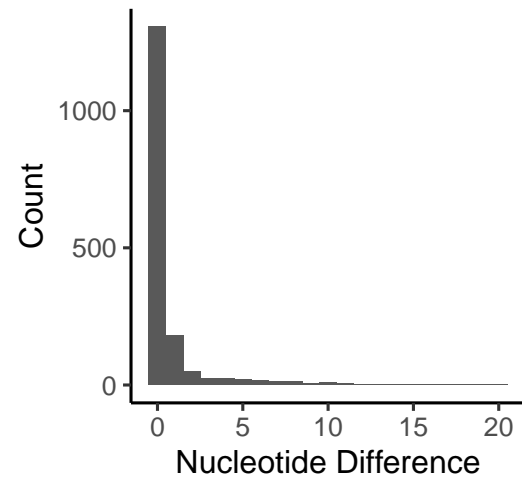
IGHV3-13*05

36 sequences assigned
27 (75%) exact matches, in which:
25 unique CDR3
5 unique J



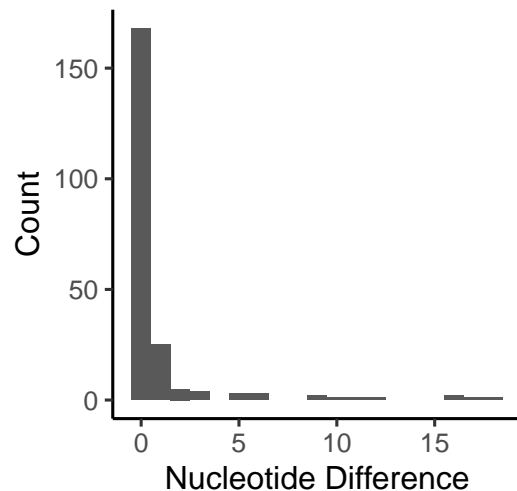
IGHV3-21*01

1695 sequences assigned
1306 (77.1%) exact matches, in which:
1260 unique CDR3
6 unique J



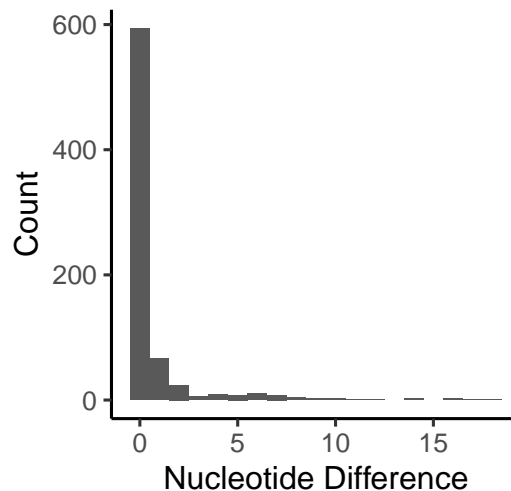
IGHV3-11*06

218 sequences assigned
168 (77.1%) exact matches, in which:
165 unique CDR3
6 unique J



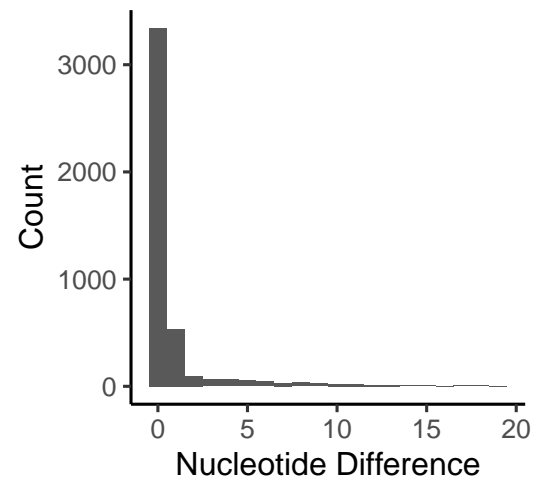
IGHV3-15*01

747 sequences assigned
594 (79.5%) exact matches, in which:
579 unique CDR3
6 unique J



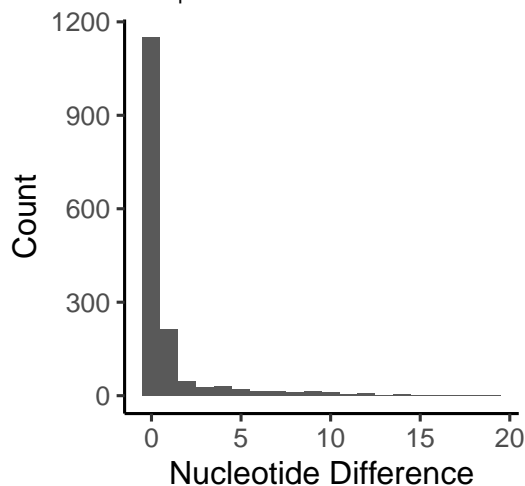
IGHV3-23*01

4401 sequences assigned
3342 (75.9%) exact matches, in which:
3207 unique CDR3
6 unique J



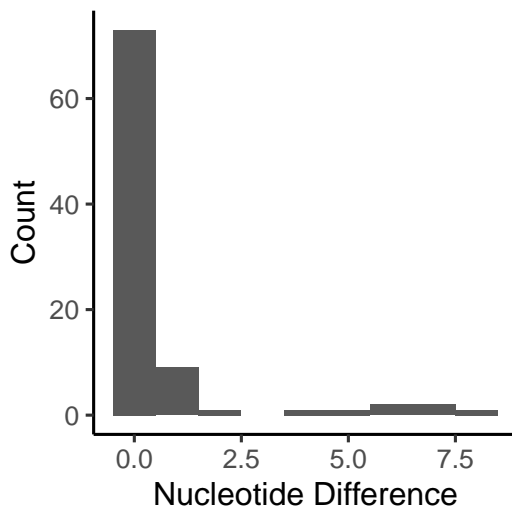
IGHV3-30-3*01

1583 sequences assigned
1150 (72.6%) exact matches, in which:
1116 unique CDR3
6 unique J



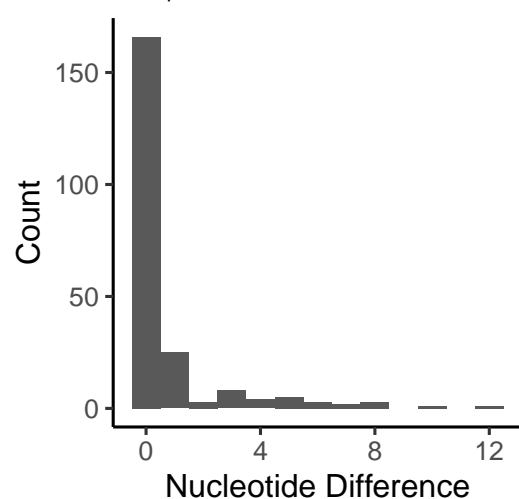
IGHV3-43*01

90 sequences assigned
73 (81.1%) exact matches, in which:
71 unique CDR3
6 unique J



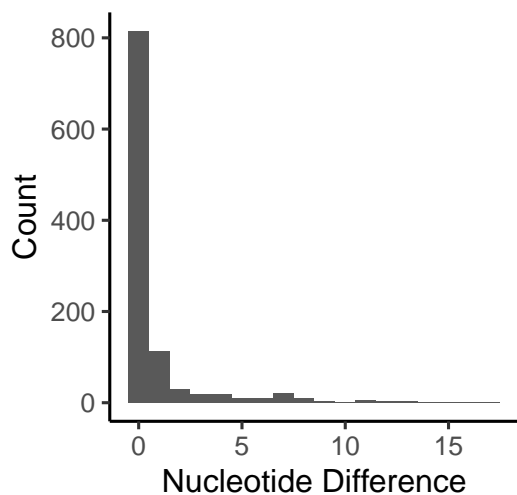
IGHV3-53*01

221 sequences assigned
166 (75.1%) exact matches, in which:
163 unique CDR3
6 unique J



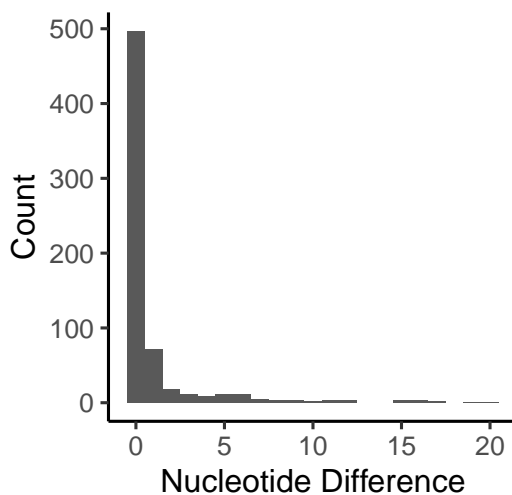
IGHV3-30*18

1069 sequences assigned
815 (76.2%) exact matches, in which:
788 unique CDR3
6 unique J



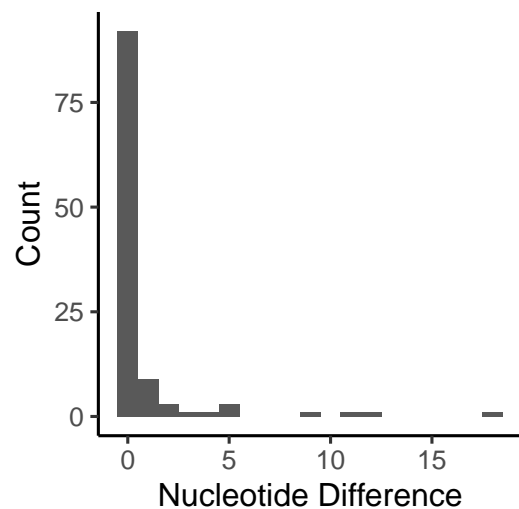
IGHV3-48*01

660 sequences assigned
497 (75.3%) exact matches, in which:
484 unique CDR3
6 unique J



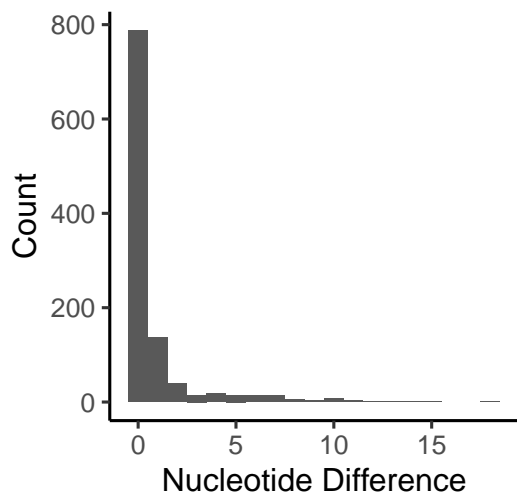
IGHV3-53*02

113 sequences assigned
92 (81.4%) exact matches, in which:
91 unique CDR3
6 unique J



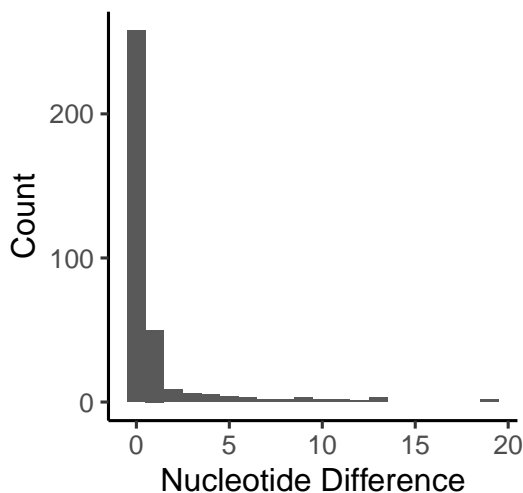
IGHV3-33*01

1071 sequences assigned
788 (73.6%) exact matches, in which:
754 unique CDR3
6 unique J



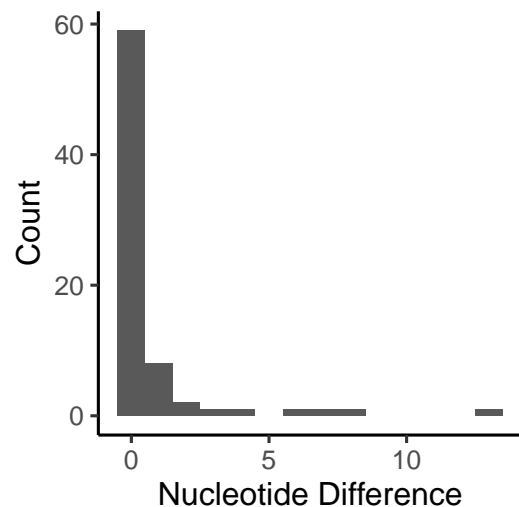
IGHV3-49*03

353 sequences assigned
258 (73.1%) exact matches, in which:
242 unique CDR3
5 unique J



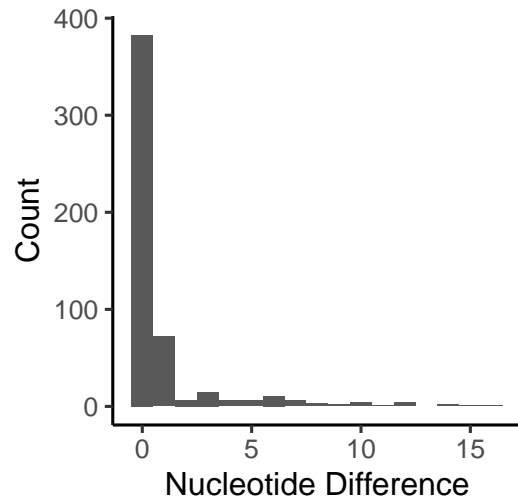
IGHV3-64*01

75 sequences assigned
59 (78.7%) exact matches, in which:
58 unique CDR3
5 unique J



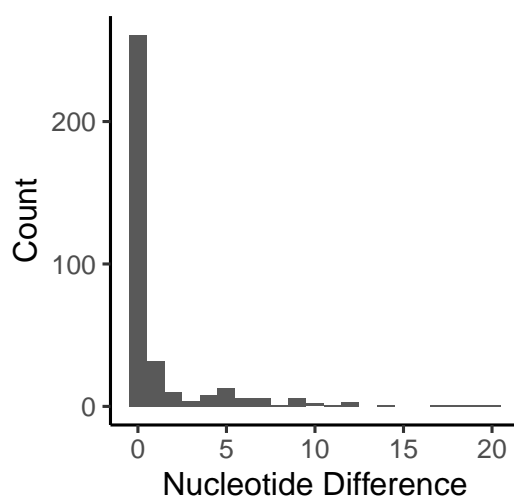
IGHV3–66*02

525 sequences assigned
383 (73%) exact matches, in which:
374 unique CDR3
6 unique J



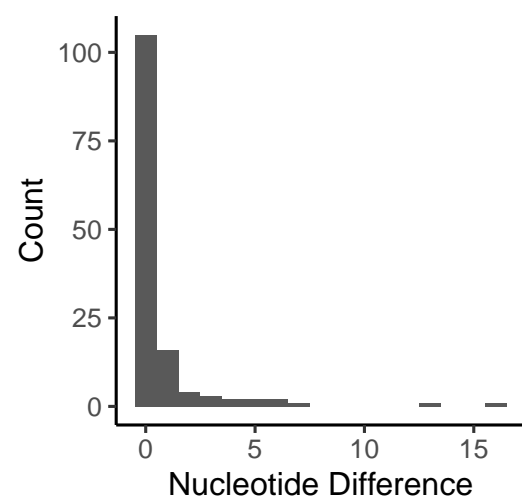
IGHV3–74*01

362 sequences assigned
261 (72.1%) exact matches, in which:
254 unique CDR3
6 unique J



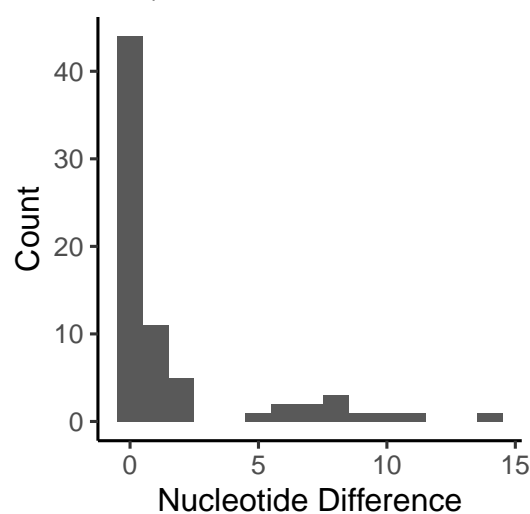
IGHV4–4*07

137 sequences assigned
105 (76.6%) exact matches, in which:
102 unique CDR3
5 unique J



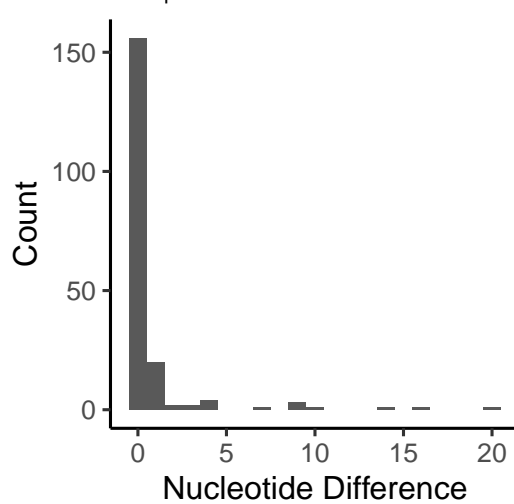
IGHV3–72*01

72 sequences assigned
44 (61.1%) exact matches, in which:
42 unique CDR3
5 unique J



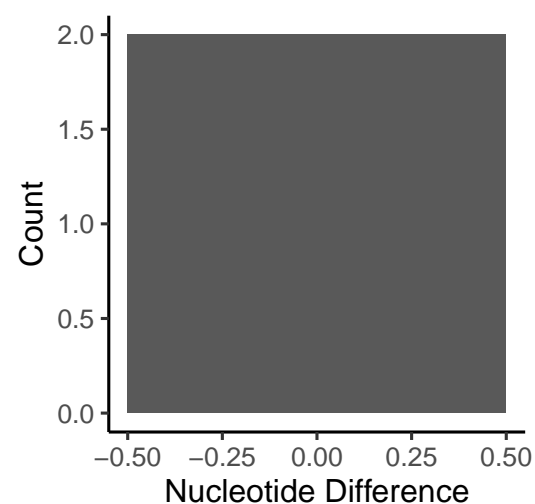
IGHV3–64D*06

193 sequences assigned
156 (80.8%) exact matches, in which:
148 unique CDR3
6 unique J



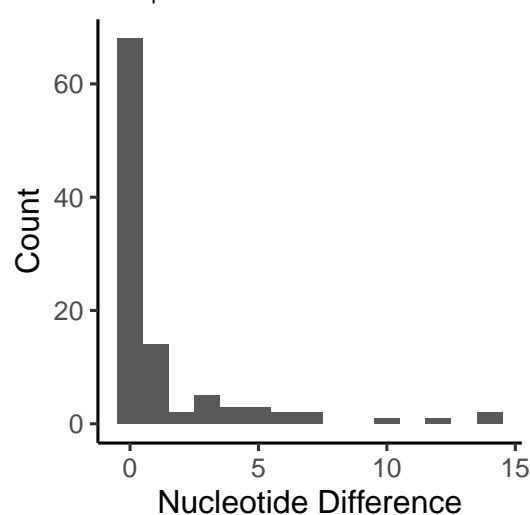
IGHV4–28*01

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



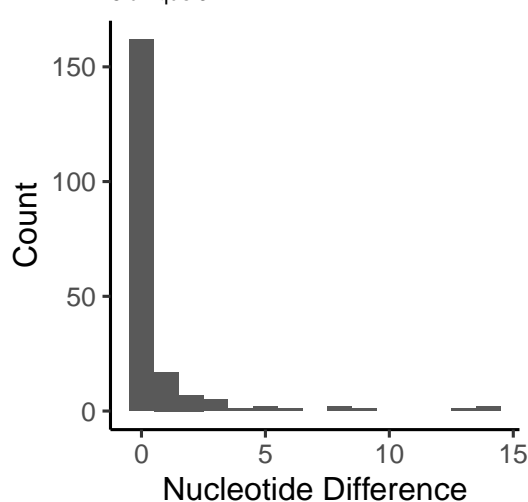
IGHV3–73*01

103 sequences assigned
68 (66%) exact matches, in which:
64 unique CDR3
4 unique J



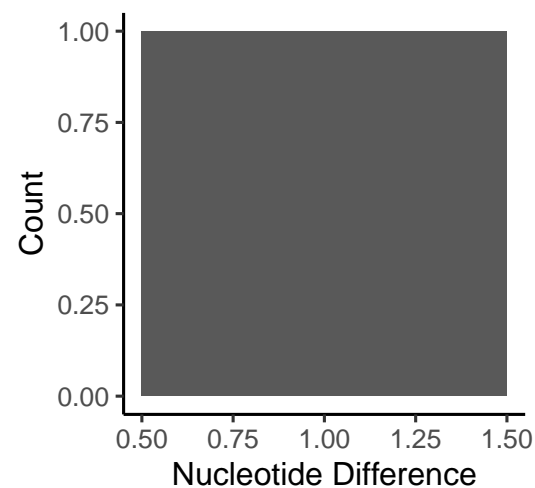
IGHV4–4*02

202 sequences assigned
162 (80.2%) exact matches, in which:
159 unique CDR3
6 unique J



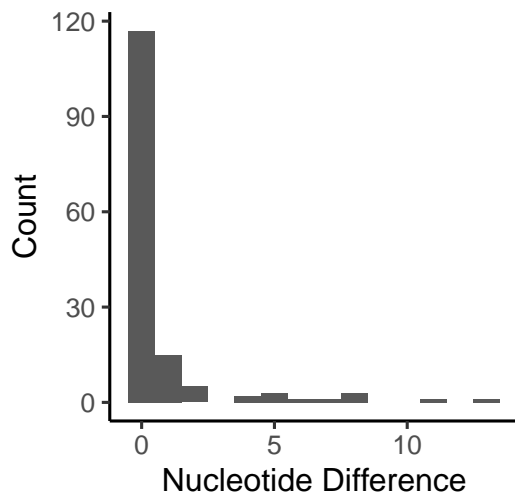
IGHV4–28*04

1 sequences assigned
No exact matches.



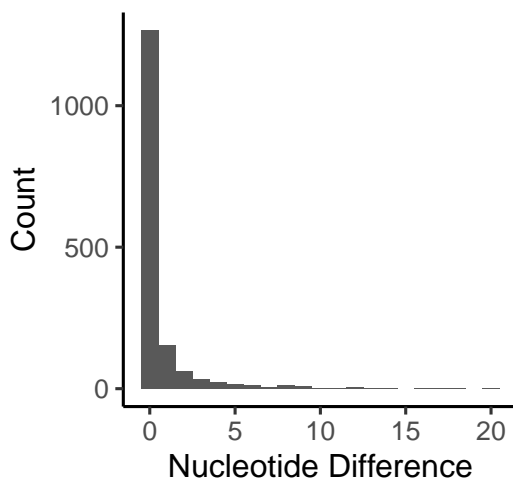
IGHV4-30-4*01

150 sequences assigned
117 (78%) exact matches, in which:
111 unique CDR3
6 unique J



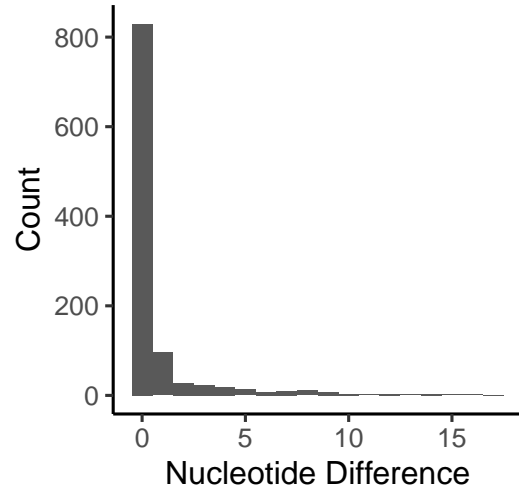
IGHV4-34*01

1618 sequences assigned
1266 (78.2%) exact matches, in which:
1220 unique CDR3
6 unique J



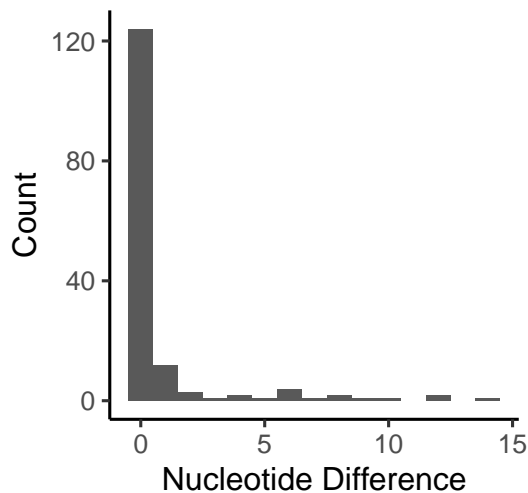
IGHV4-61*02

1068 sequences assigned
830 (77.7%) exact matches, in which:
820 unique CDR3
6 unique J



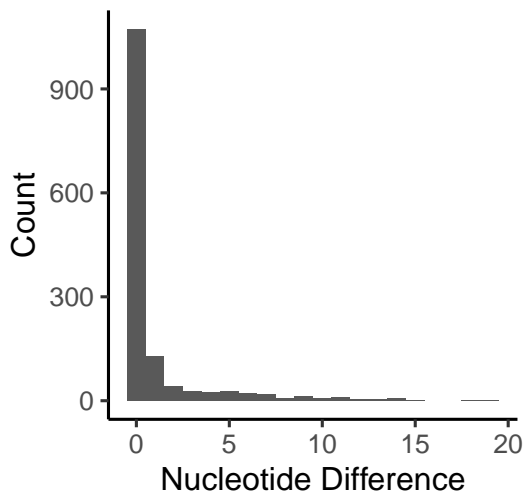
IGHV4-30-2*01

156 sequences assigned
124 (79.5%) exact matches, in which:
124 unique CDR3
6 unique J



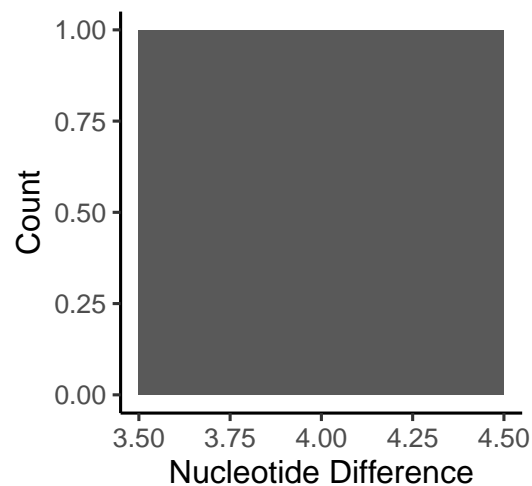
IGHV4-39*01

1425 sequences assigned
1073 (75.3%) exact matches, in which:
1048 unique CDR3
6 unique J



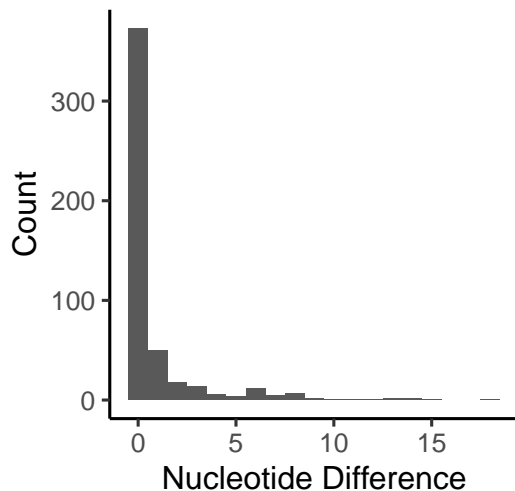
IGHV4/OR15-8*01

1 sequences assigned
No exact matches.



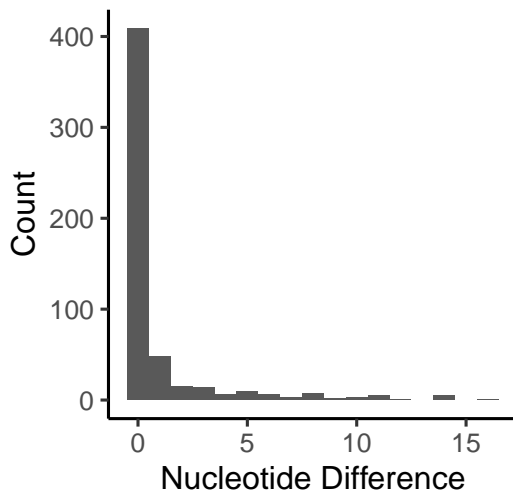
IGHV4-31*03

503 sequences assigned
373 (74.2%) exact matches, in which:
366 unique CDR3
6 unique J



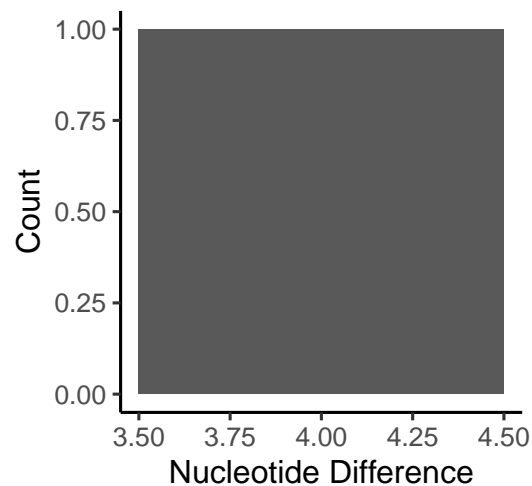
IGHV4-59*01

535 sequences assigned
409 (76.4%) exact matches, in which:
403 unique CDR3
6 unique J



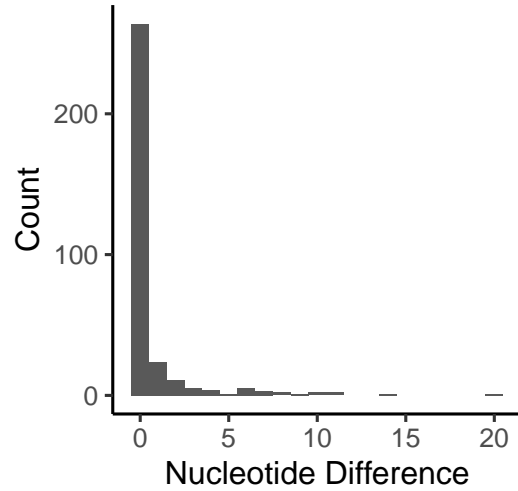
IGHV4/OR15-8*03

1 sequences assigned
No exact matches.



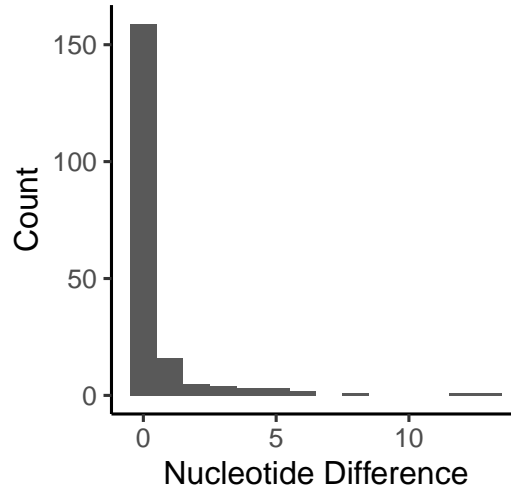
IGHV5-10-1*03

327 sequences assigned
264 (80.7%) exact matches, in which:
260 unique CDR3
6 unique J



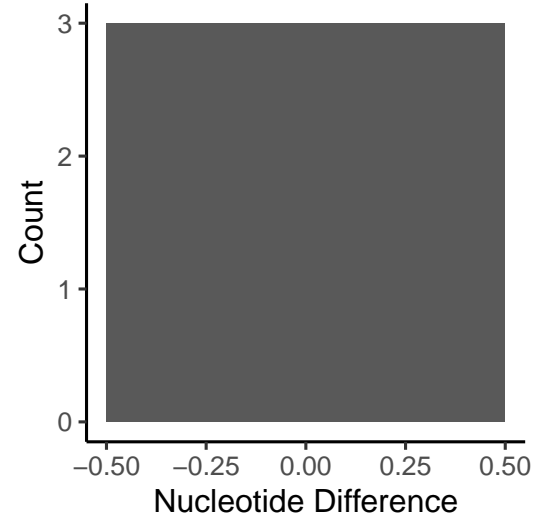
IGHV6-1*01

195 sequences assigned
159 (81.5%) exact matches, in which:
153 unique CDR3
5 unique J



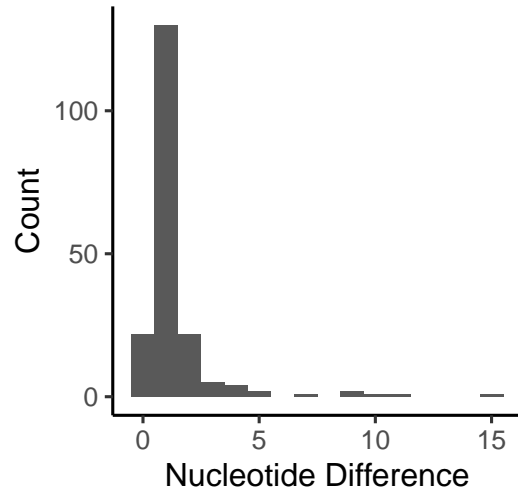
IGHV7-4-1*01

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



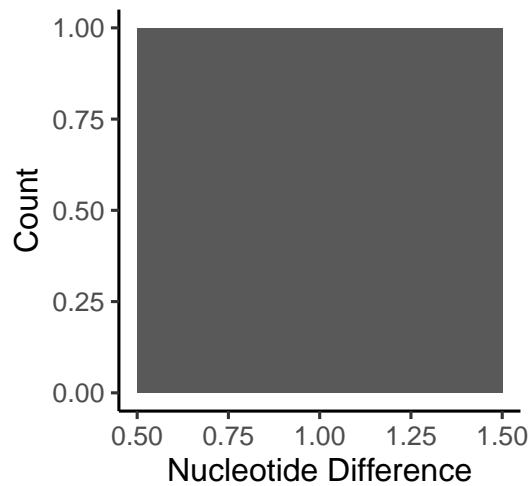
IGHV5-51*01

191 sequences assigned
22 (11.5%) exact matches, in which:
22 unique CDR3
6 unique J



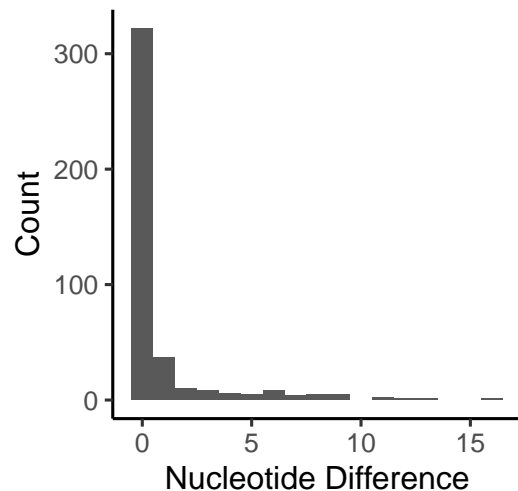
IGHV3/OR16-9*01

1 sequences assigned
No exact matches.



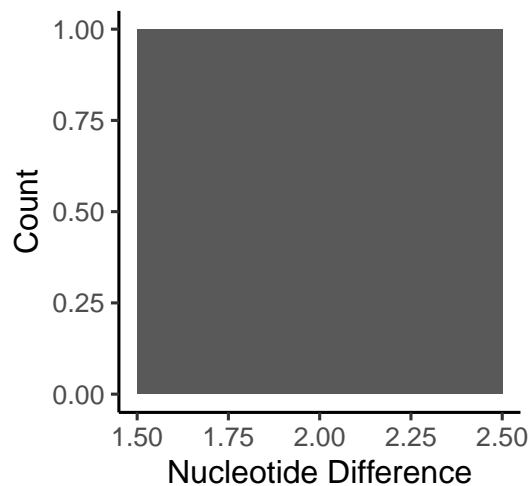
IGHV5-51*03

417 sequences assigned
322 (77.2%) exact matches, in which:
316 unique CDR3
6 unique J

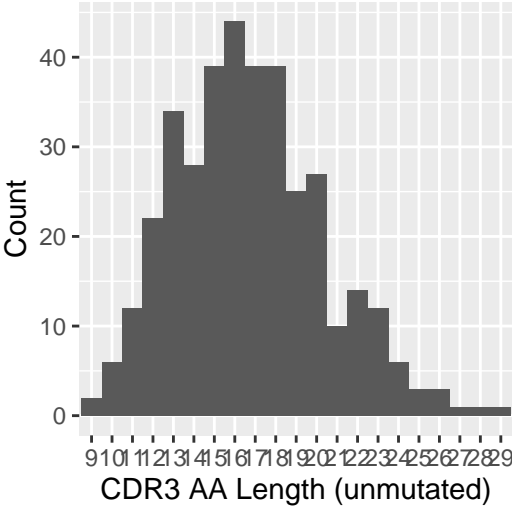


IGHV3/OR16-12*01

1 sequences assigned
No exact matches.



IGHV1-69*04_C184T



IGHV1-69*08_C191T

