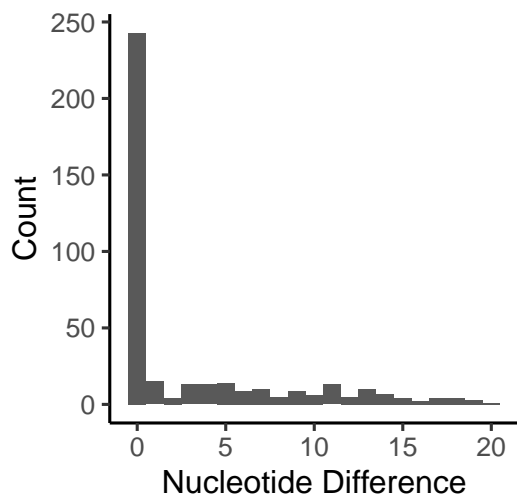


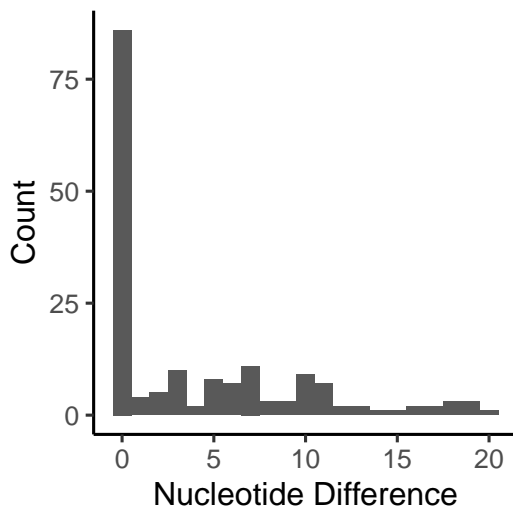
IGHV1-2*02

403 sequences assigned
243 (60.3%) exact matches, in which:
241 unique CDR3
7 unique J



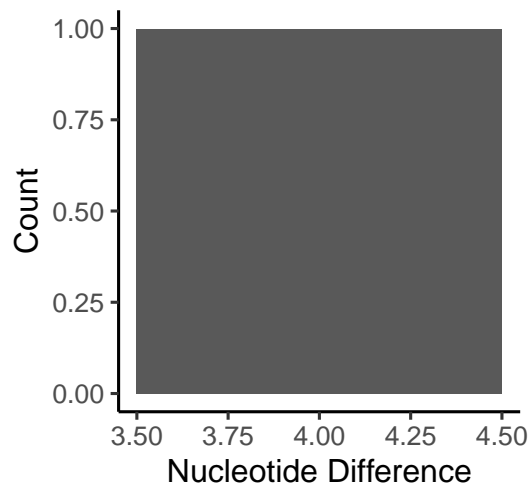
IGHV1-8*03

177 sequences assigned
86 (48.6%) exact matches, in which:
86 unique CDR3
5 unique J



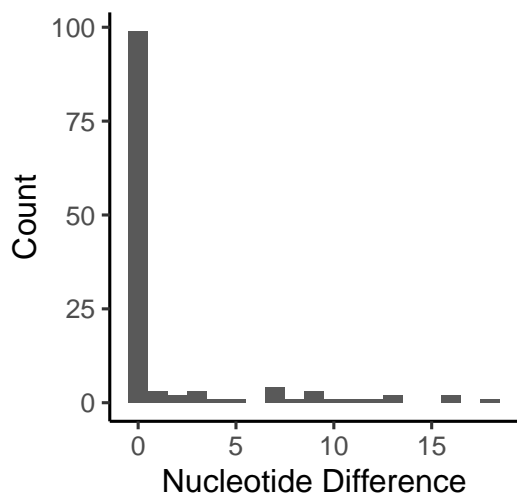
IGHV1-38-4*01

1 sequences assigned
No exact matches.



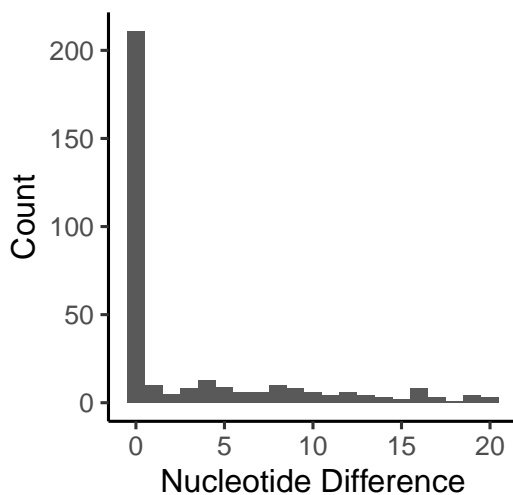
IGHV1-2*04

129 sequences assigned
99 (76.7%) exact matches, in which:
99 unique CDR3
6 unique J



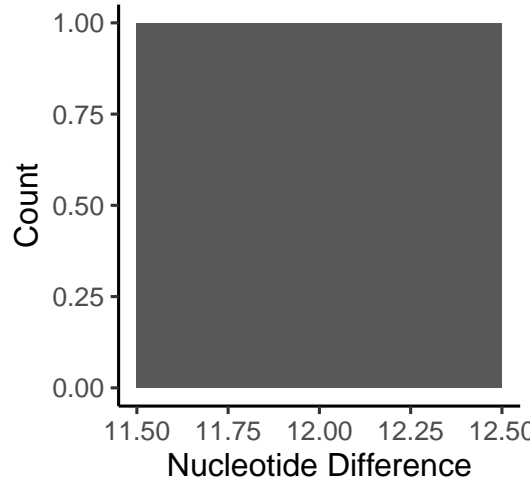
IGHV1-18*01

359 sequences assigned
211 (58.8%) exact matches, in which:
211 unique CDR3
6 unique J



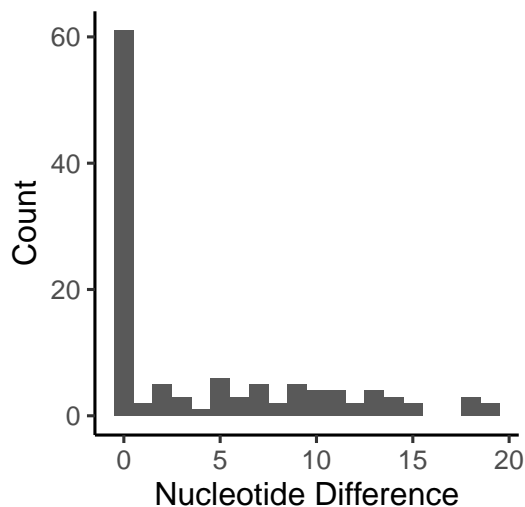
IGHV1-45*02

1 sequences assigned
No exact matches.



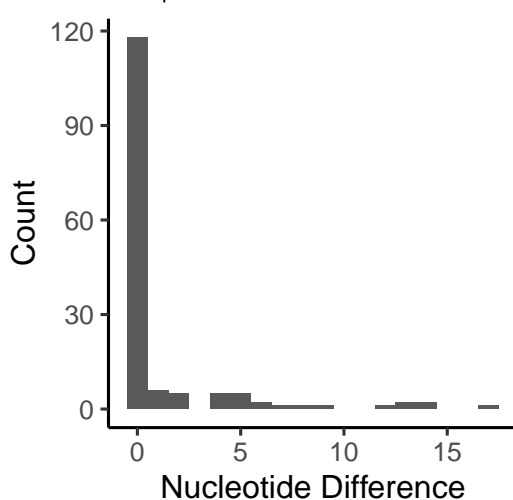
IGHV1-3*01_05

128 sequences assigned
61 (47.7%) exact matches, in which:
61 unique CDR3
5 unique J



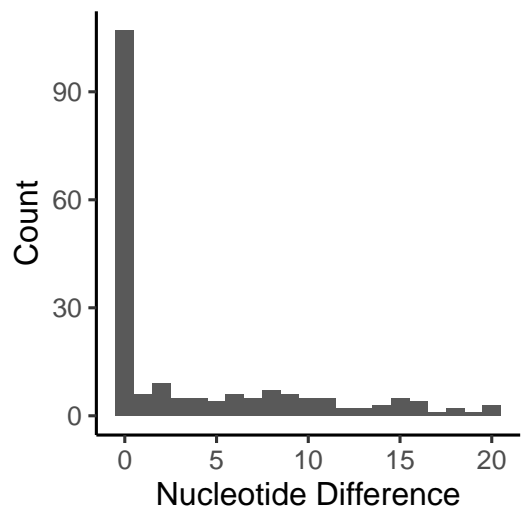
IGHV1-24*01

152 sequences assigned
118 (77.6%) exact matches, in which:
118 unique CDR3
5 unique J



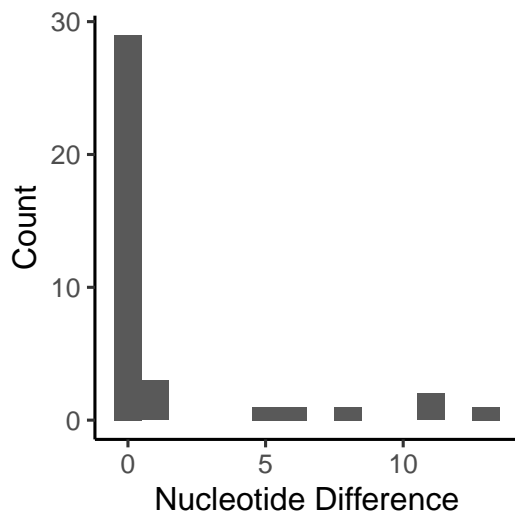
IGHV1-46*01

203 sequences assigned
107 (52.7%) exact matches, in which:
107 unique CDR3
7 unique J



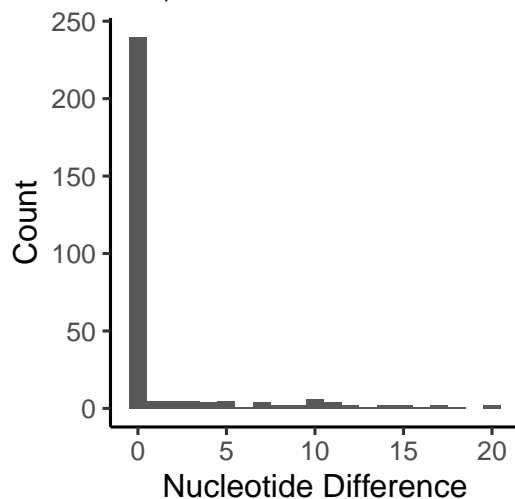
IGHV1-58*01_03

38 sequences assigned
29 (76.3%) exact matches, in which:
29 unique CDR3
6 unique J



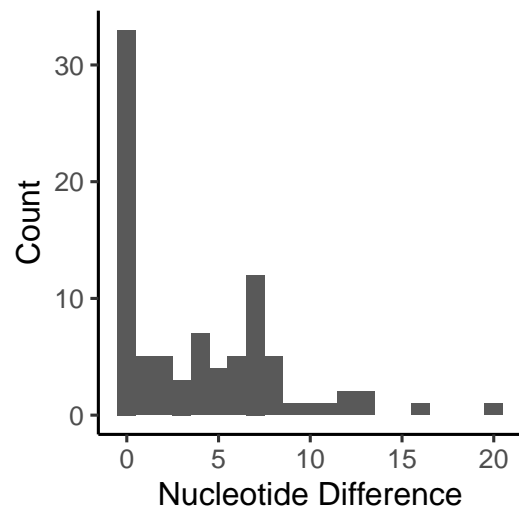
IGHV1-69*06_14

308 sequences assigned
240 (77.9%) exact matches, in which:
240 unique CDR3
6 unique J



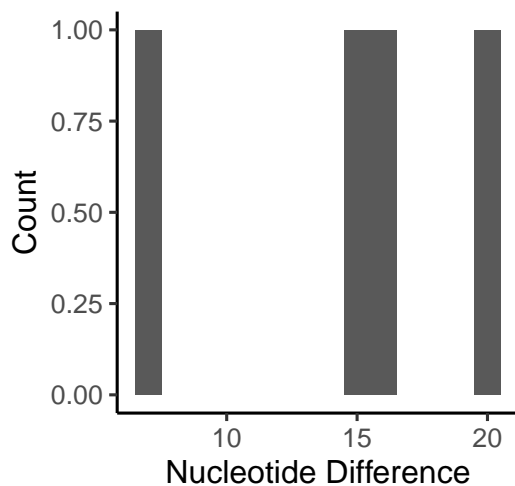
IGHV2-5*02

91 sequences assigned
33 (36.3%) exact matches, in which:
33 unique CDR3
4 unique J



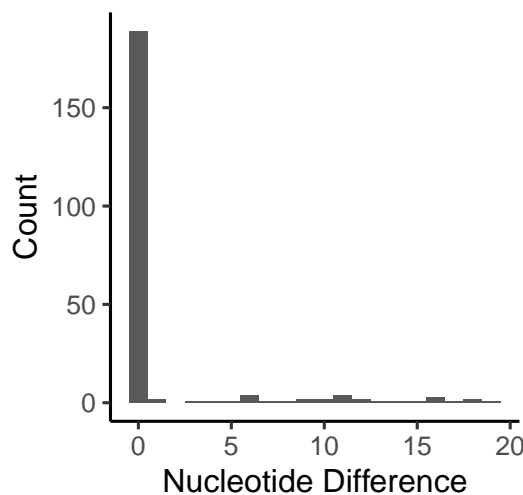
IGHV1-69-2*01

6 sequences assigned
No exact matches.



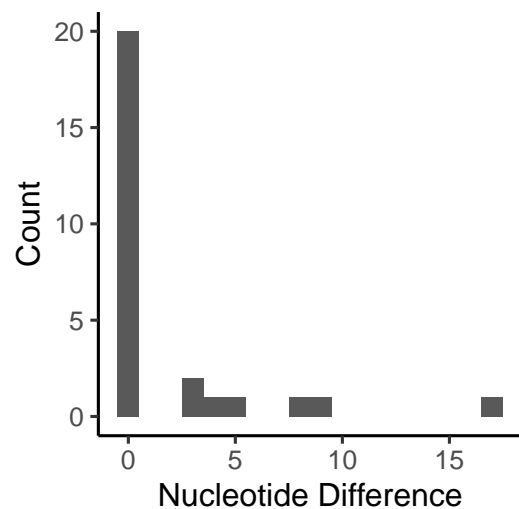
IGHV1-69*15_18

226 sequences assigned
189 (83.6%) exact matches, in which:
189 unique CDR3
7 unique J



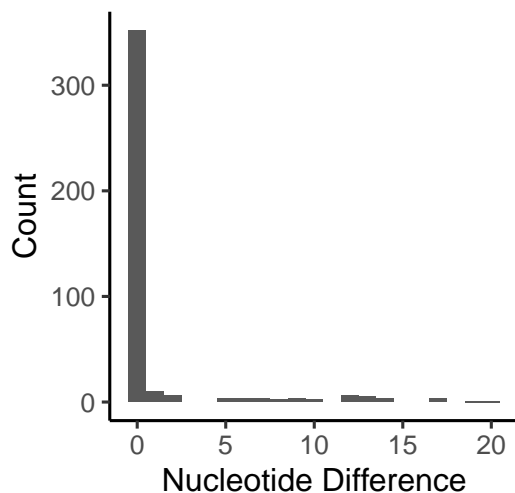
IGHV2-26*01

27 sequences assigned
20 (74.1%) exact matches, in which:
20 unique CDR3
5 unique J



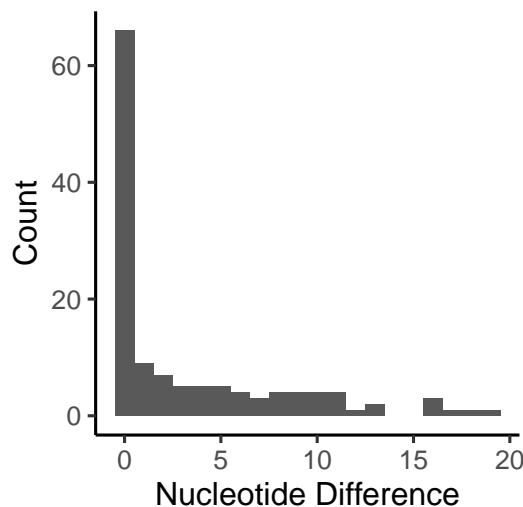
IGHV1-69*01_12_13

418 sequences assigned
352 (84.2%) exact matches, in which:
352 unique CDR3
6 unique J



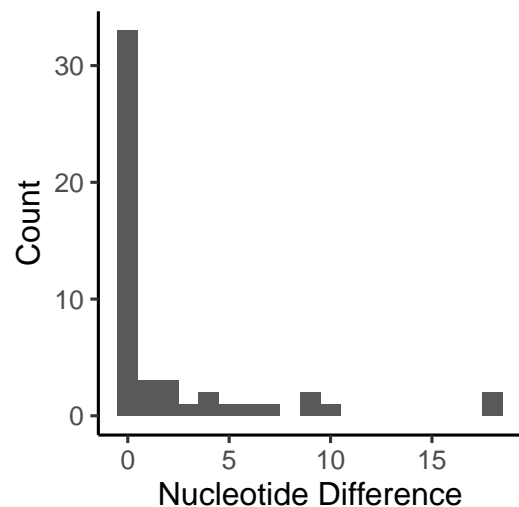
IGHV2-5*01

136 sequences assigned
66 (48.5%) exact matches, in which:
66 unique CDR3
6 unique J



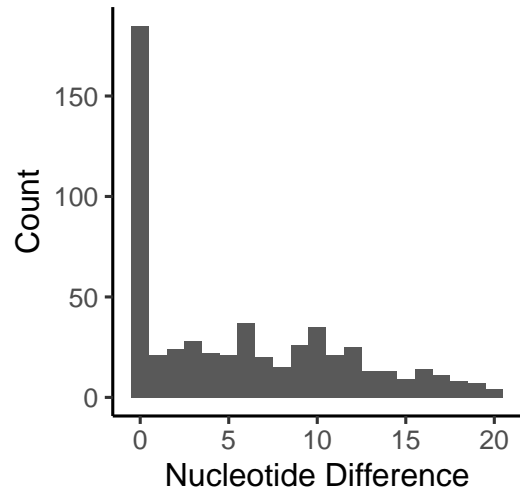
IGHV2-70*01

52 sequences assigned
33 (63.5%) exact matches, in which:
32 unique CDR3
4 unique J



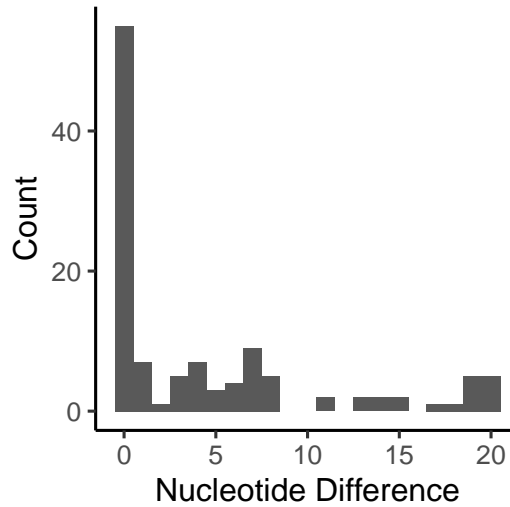
IGHV3-7*01

602 sequences assigned
185 (30.7%) exact matches, in which:
182 unique CDR3
6 unique J



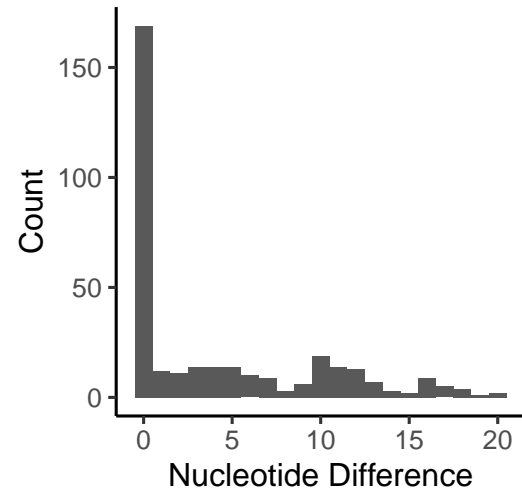
IGHV3-11*04

131 sequences assigned
55 (42%) exact matches, in which:
54 unique CDR3
6 unique J



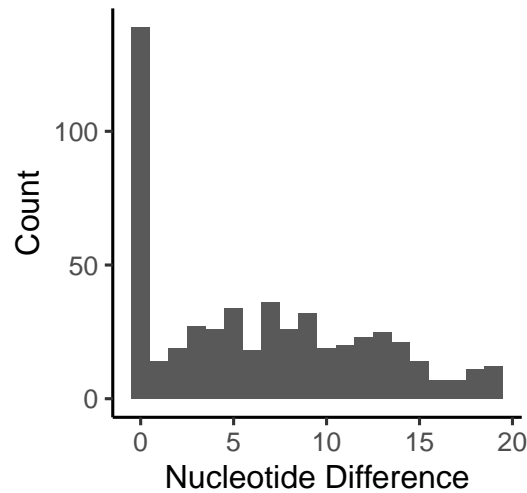
IGHV3-21*01_02

360 sequences assigned
169 (46.9%) exact matches, in which:
162 unique CDR3
7 unique J



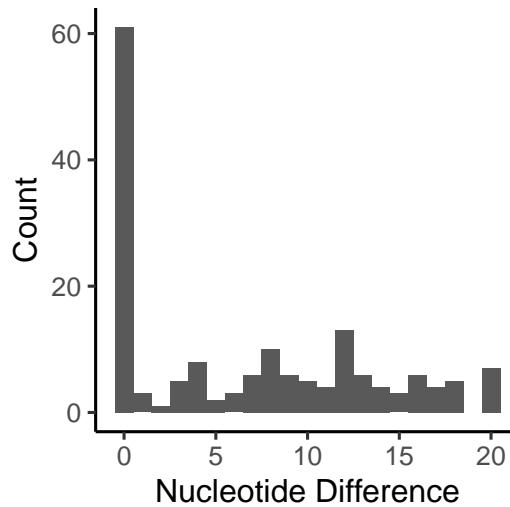
IGHV3-7*03

541 sequences assigned
139 (25.7%) exact matches, in which:
133 unique CDR3
5 unique J



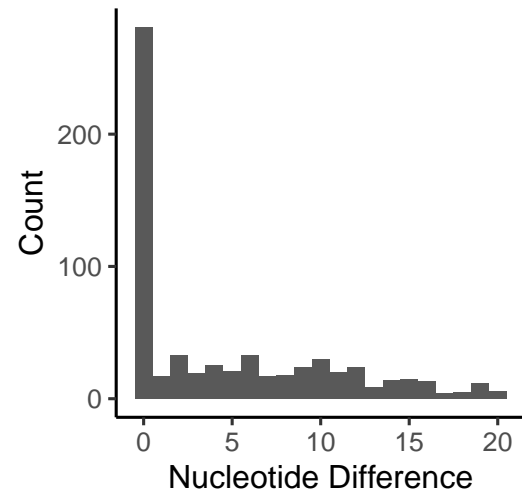
IGHV3-15*01_02

174 sequences assigned
61 (35.1%) exact matches, in which:
58 unique CDR3
6 unique J



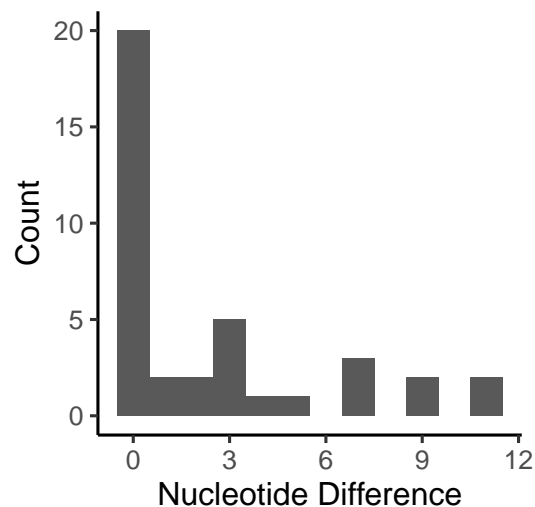
IGHV3-23*01_04

672 sequences assigned
281 (41.8%) exact matches, in which:
273 unique CDR3
7 unique J



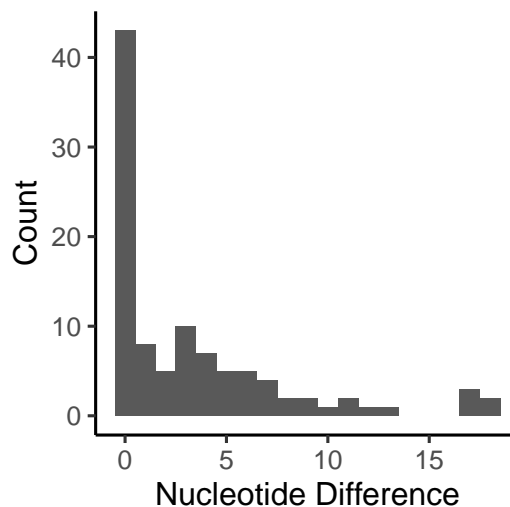
IGHV3-9*03

38 sequences assigned
20 (52.6%) exact matches, in which:
19 unique CDR3
4 unique J



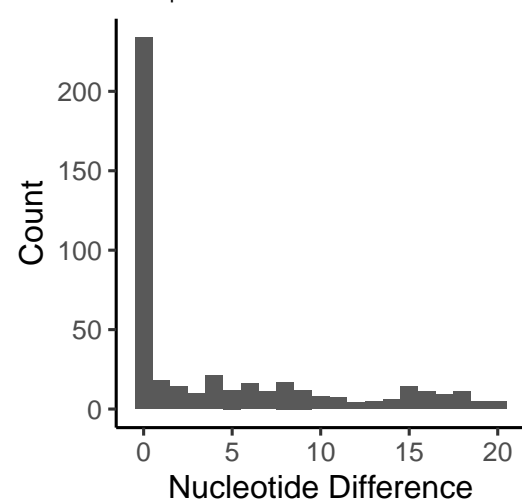
IGHV3-20*03_04

102 sequences assigned
43 (42.2%) exact matches, in which:
42 unique CDR3
5 unique J



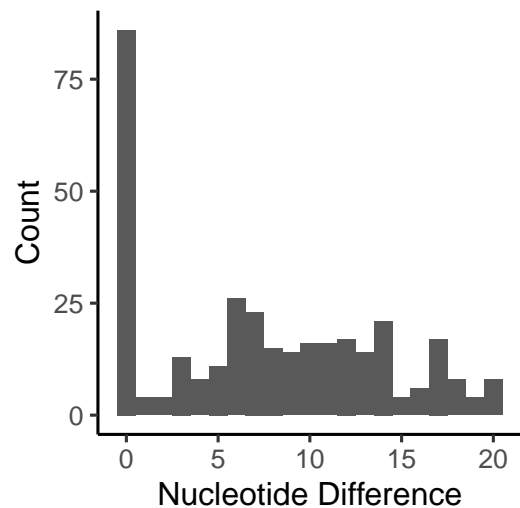
IGHV3-30-3*01

490 sequences assigned
234 (47.8%) exact matches, in which:
231 unique CDR3
7 unique J



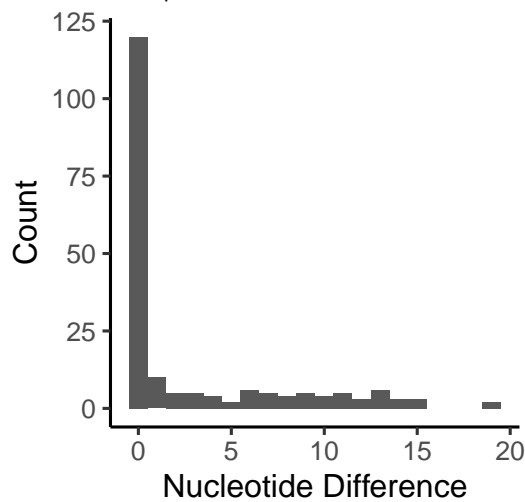
IGHV3-33*01

357 sequences assigned
86 (24.1%) exact matches, in which:
86 unique CDR3
5 unique J



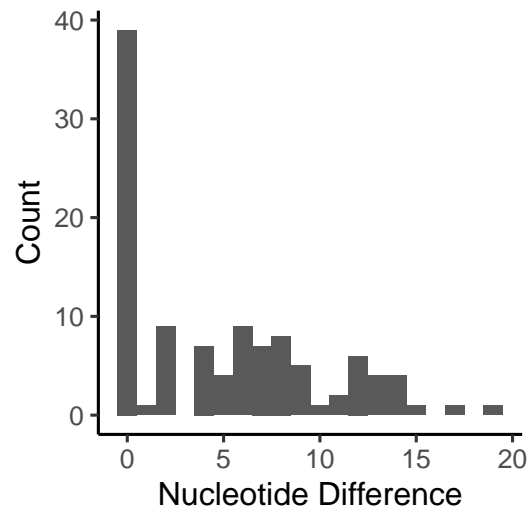
IGHV3-43*02

192 sequences assigned
120 (62.5%) exact matches, in which:
117 unique CDR3
6 unique J



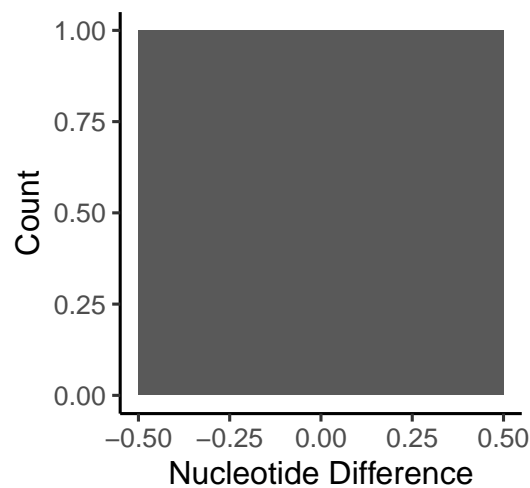
IGHV3-49*04

116 sequences assigned
39 (33.6%) exact matches, in which:
39 unique CDR3
6 unique J



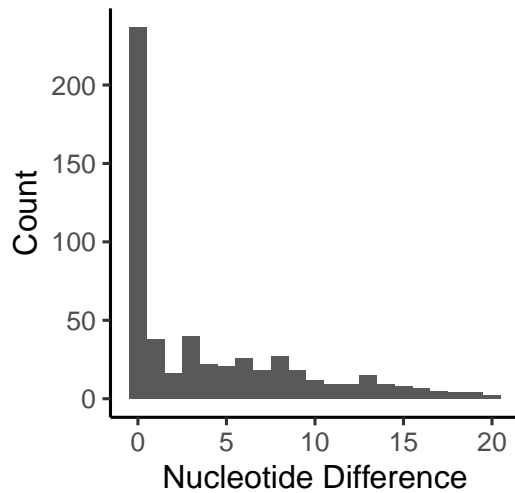
IGHV3-38-3*01

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



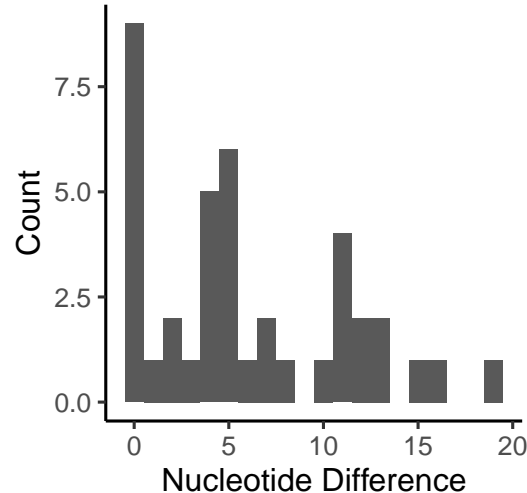
IGHV3-48*03

562 sequences assigned
237 (42.2%) exact matches, in which:
229 unique CDR3
6 unique J



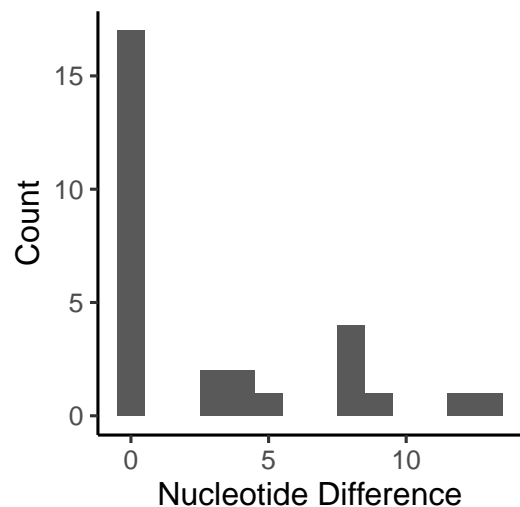
IGHV3-49*03_05

44 sequences assigned
9 (20.5%) exact matches, in which:
9 unique CDR3
4 unique J



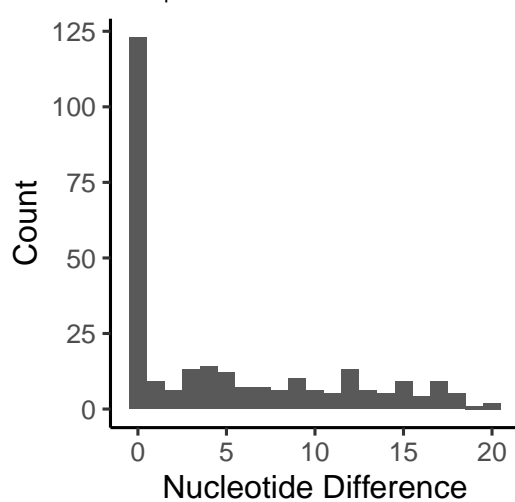
IGHV3-43*01

31 sequences assigned
17 (54.8%) exact matches, in which:
16 unique CDR3
4 unique J



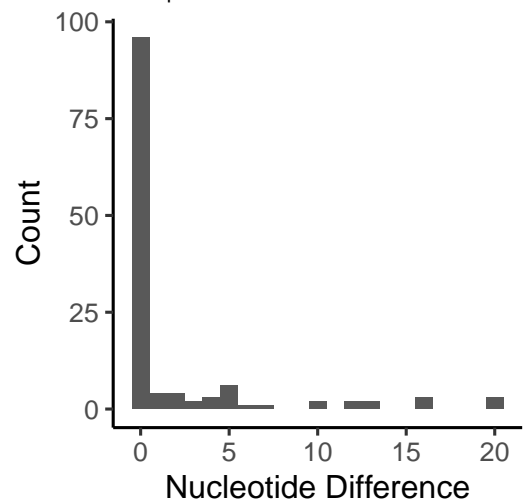
IGHV3-48*04

302 sequences assigned
123 (40.7%) exact matches, in which:
119 unique CDR3
6 unique J



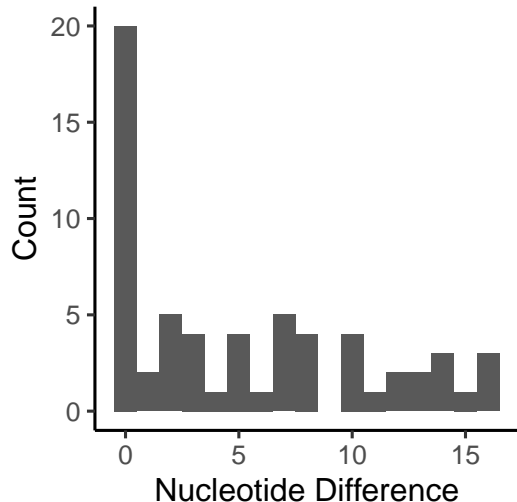
IGHV3-53*04

146 sequences assigned
96 (65.8%) exact matches, in which:
96 unique CDR3
6 unique J



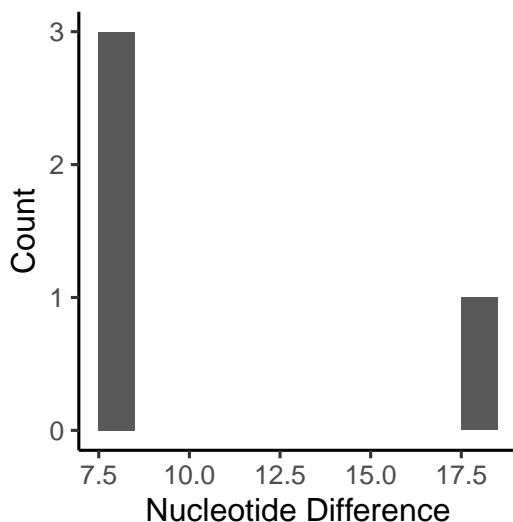
IGHV3-64*01

62 sequences assigned
20 (32.3%) exact matches, in which:
18 unique CDR3
4 unique J



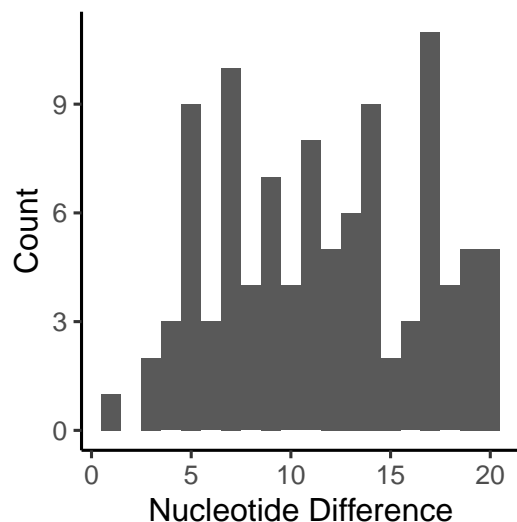
IGHV3-69-1*01

5 sequences assigned
No exact matches.



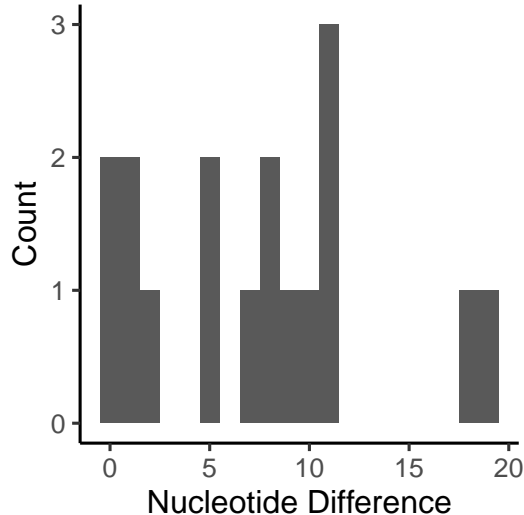
IGHV3-74*03

119 sequences assigned
No exact matches.



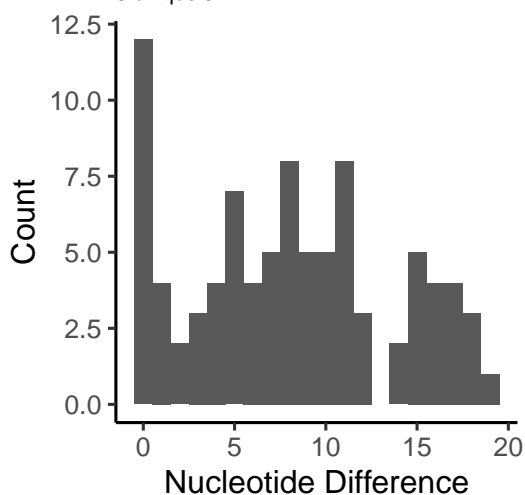
IGHV3-64*02_07

18 sequences assigned
2 (11.1%) exact matches, in which:
2 unique CDR3
2 unique J



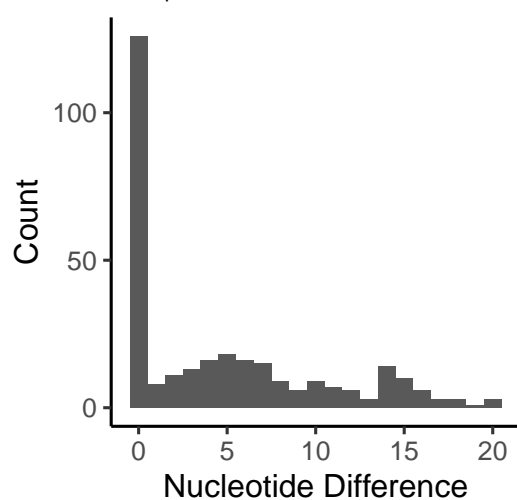
IGHV3-72*01

100 sequences assigned
12 (12%) exact matches, in which:
12 unique CDR3
3 unique J



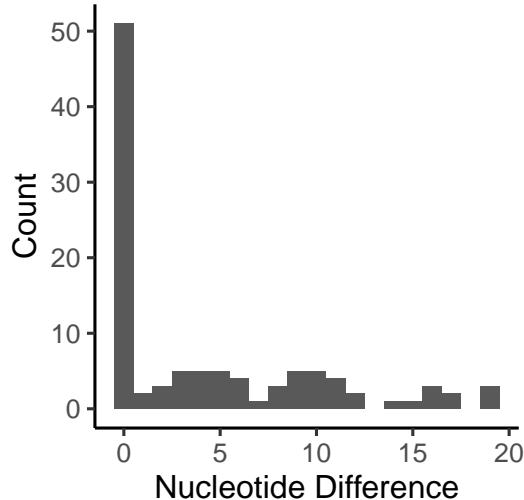
IGHV3-74*01_02

312 sequences assigned
126 (40.4%) exact matches, in which:
119 unique CDR3
7 unique J



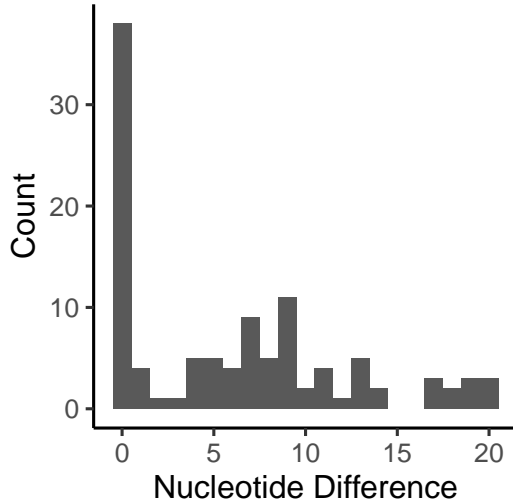
IGHV3-66*02

109 sequences assigned
51 (46.8%) exact matches, in which:
47 unique CDR3
5 unique J



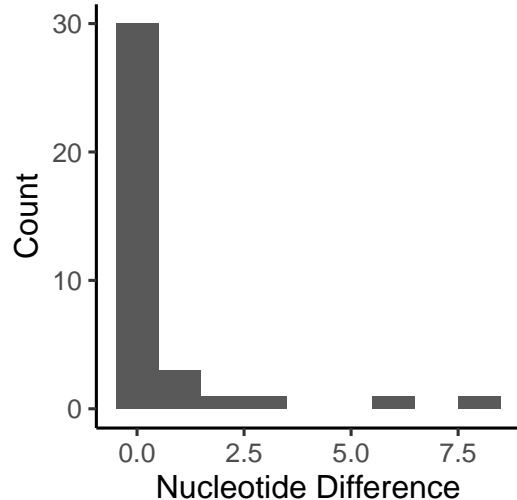
IGHV3-73*01_02

112 sequences assigned
38 (33.9%) exact matches, in which:
38 unique CDR3
5 unique J



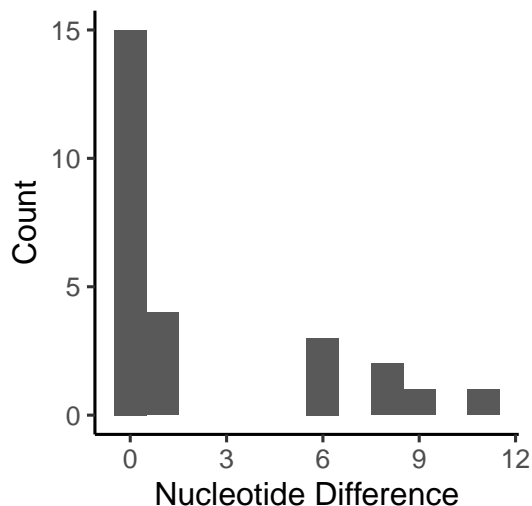
IGHV3-43D*03

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



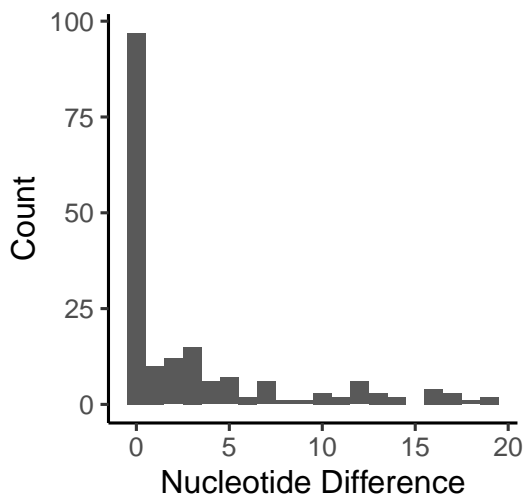
IGHV3-43D*04

26 sequences assigned
15 (57.7%) exact matches, in which:
15 unique CDR3
3 unique J



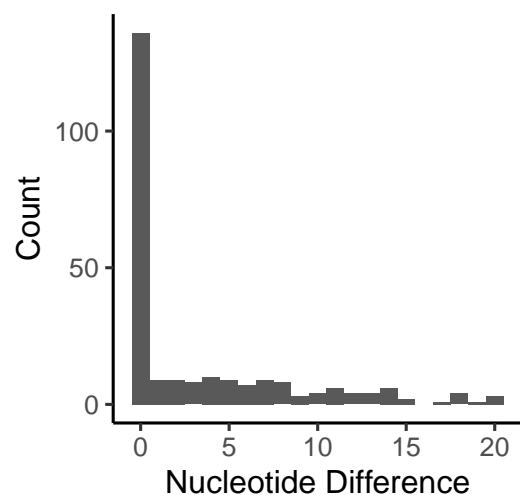
IGHV4-30-4*01

201 sequences assigned
97 (48.3%) exact matches, in which:
96 unique CDR3
6 unique J



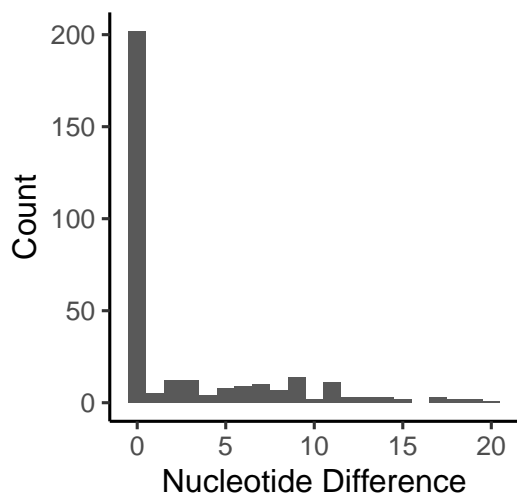
IGHV4-31*02

261 sequences assigned
136 (52.1%) exact matches, in which:
133 unique CDR3
6 unique J



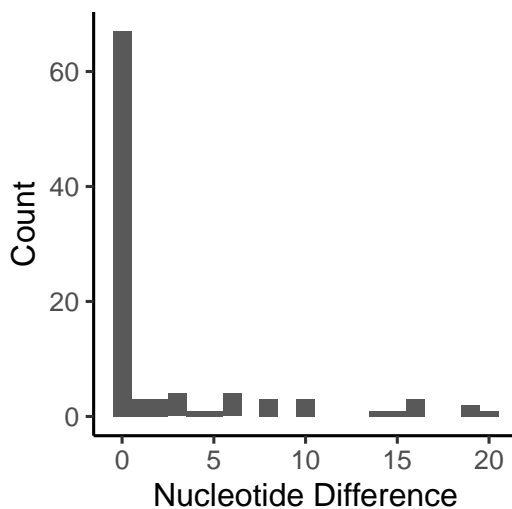
IGHV4-4*07

322 sequences assigned
202 (62.7%) exact matches, in which:
195 unique CDR3
7 unique J



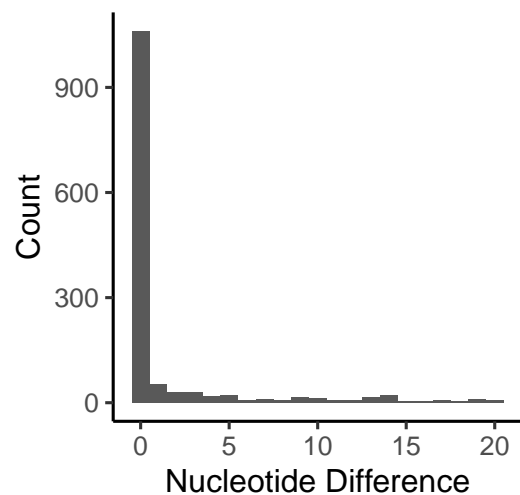
IGHV4-30-2*01

106 sequences assigned
67 (63.2%) exact matches, in which:
63 unique CDR3
5 unique J



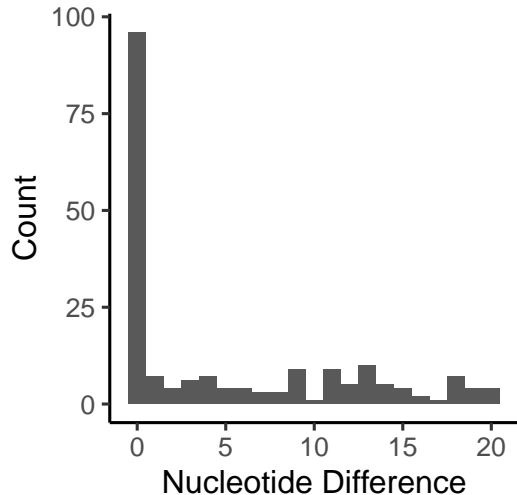
IGHV4-34*01_02

1388 sequences assigned
1061 (76.4%) exact matches, in which:
1020 unique CDR3
7 unique J



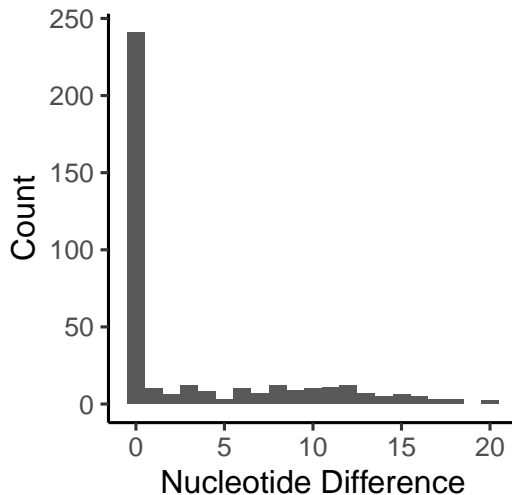
IGHV4-4*02_03

207 sequences assigned
96 (46.4%) exact matches, in which:
95 unique CDR3
5 unique J



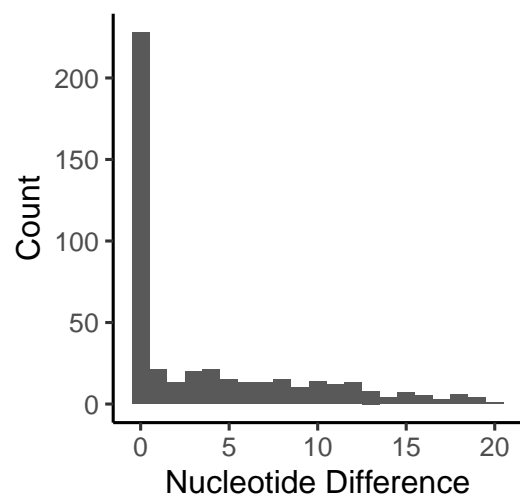
IGHV4-30-4*08

396 sequences assigned
241 (60.9%) exact matches, in which:
239 unique CDR3
6 unique J



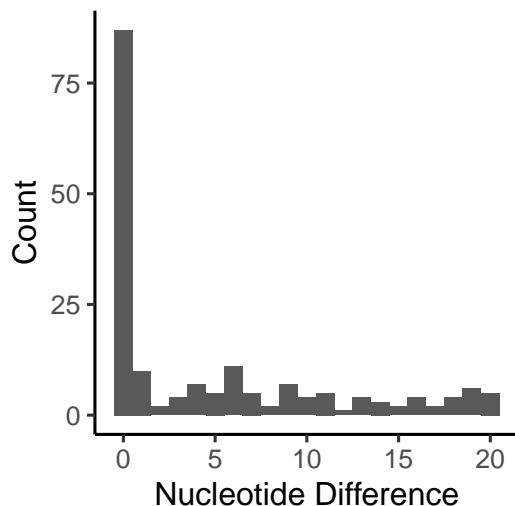
IGHV4-38-2*01

459 sequences assigned
228 (49.7%) exact matches, in which:
228 unique CDR3
6 unique J



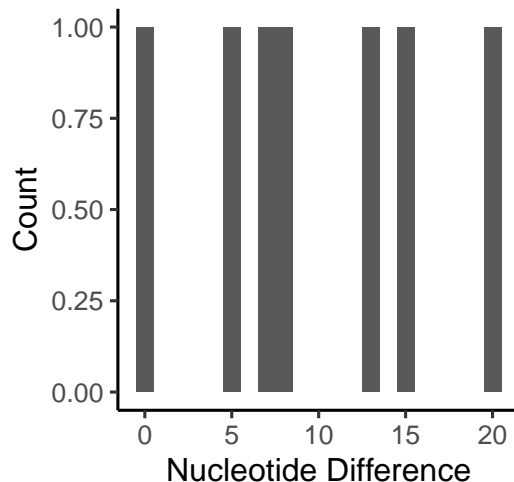
IGHV4-38-2*02

195 sequences assigned
87 (44.6%) exact matches, in which:
84 unique CDR3
5 unique J



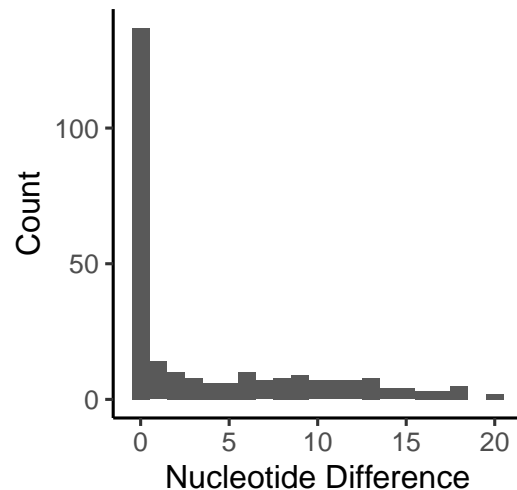
IGHV4-59*11

13 sequences assigned
1 (7.7%) exact matches, in which:
1 unique CDR3
1 unique J



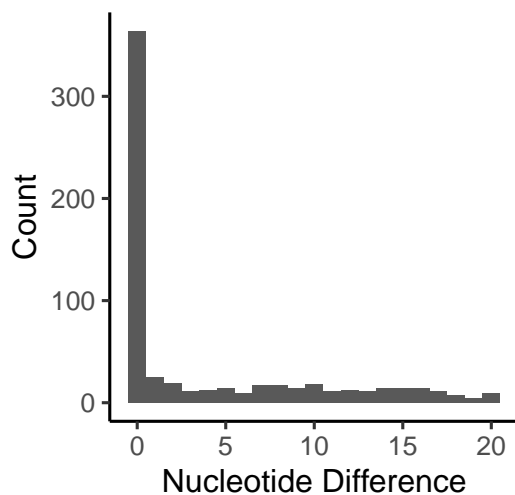
IGHV4-61*01

279 sequences assigned
137 (49.1%) exact matches, in which:
137 unique CDR3
5 unique J



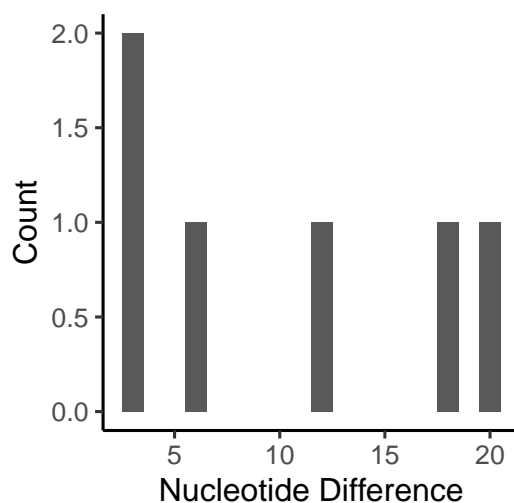
IGHV4-39*07

657 sequences assigned
364 (55.4%) exact matches, in which:
353 unique CDR3
6 unique J



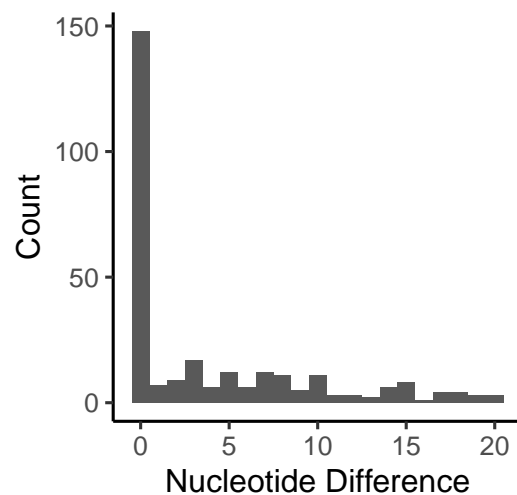
IGHV4-59*12

9 sequences assigned
No exact matches.



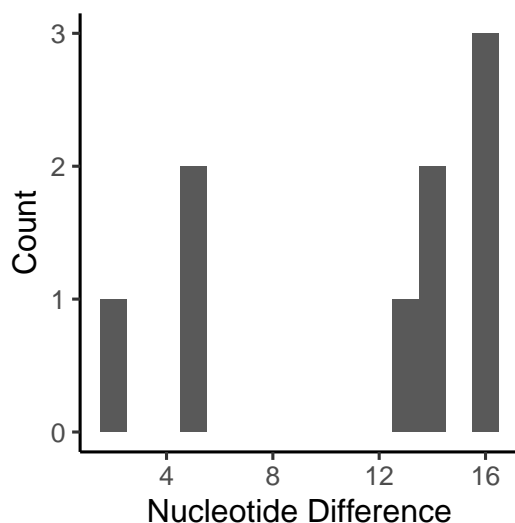
IGHV4-61*02

304 sequences assigned
148 (48.7%) exact matches, in which:
145 unique CDR3
6 unique J



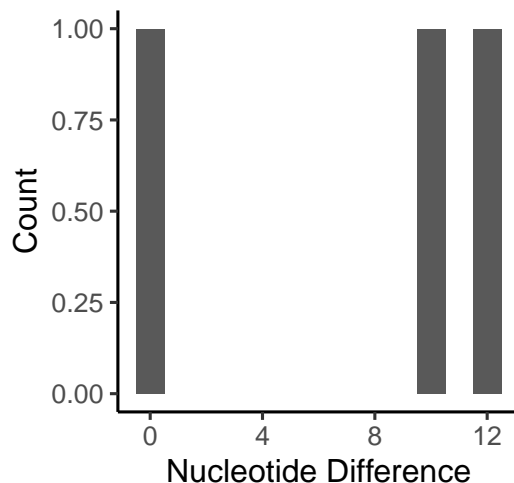
IGHV4-59*02

10 sequences assigned
No exact matches.



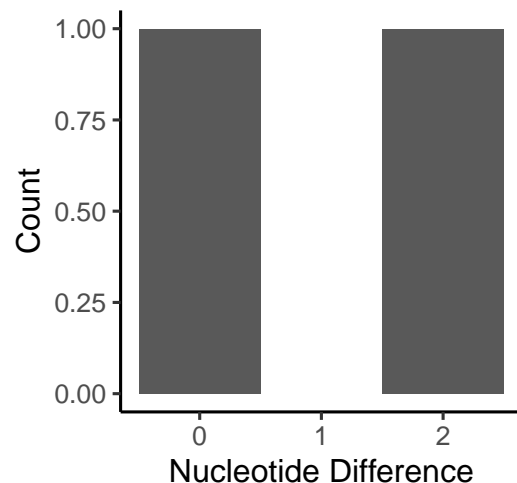
IGHV4-59*13

8 sequences assigned
1 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



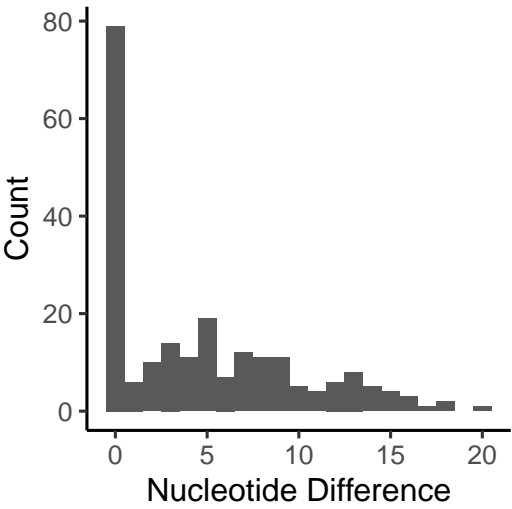
IGHV5-51*01_03

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



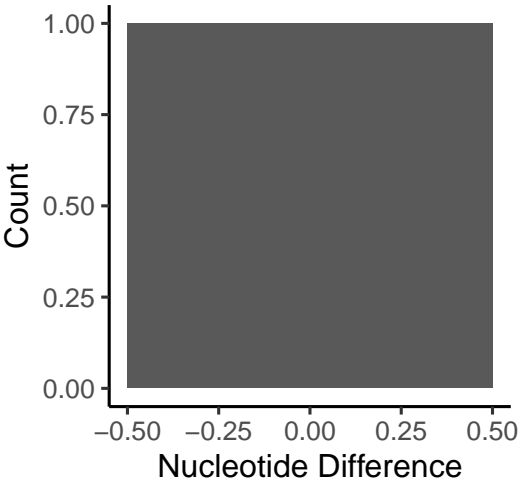
IGHV6-1*01_02

221 sequences assigned
79 (35.7%) exact matches, in which:
79 unique CDR3
7 unique J

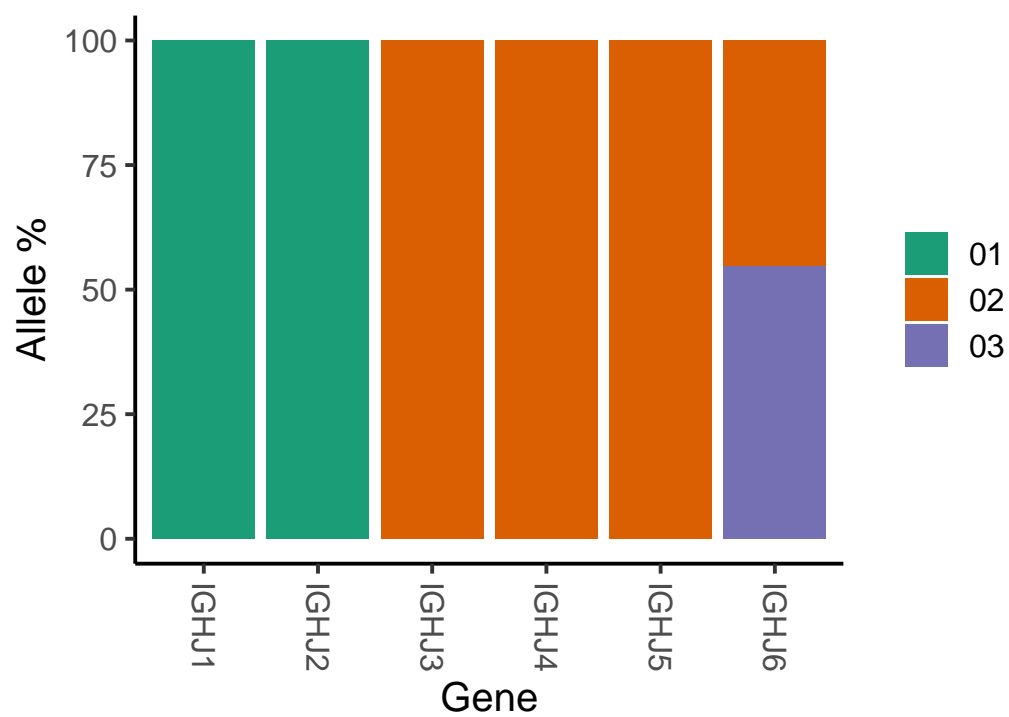


IGHV7-4-1*01

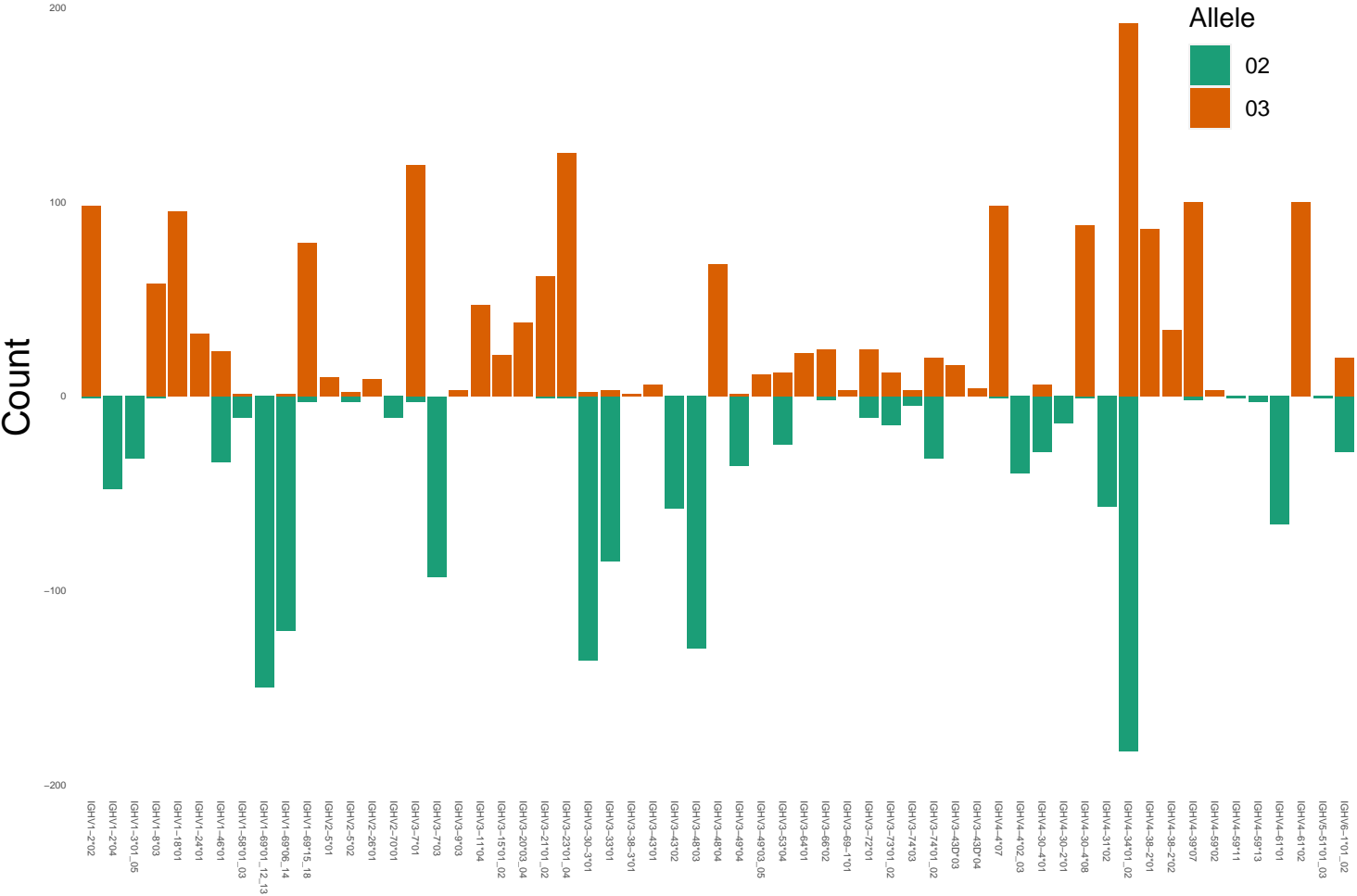
1 sequences assigned
1 (100%) exact matches, in which:
1 unique CDR3
1 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]