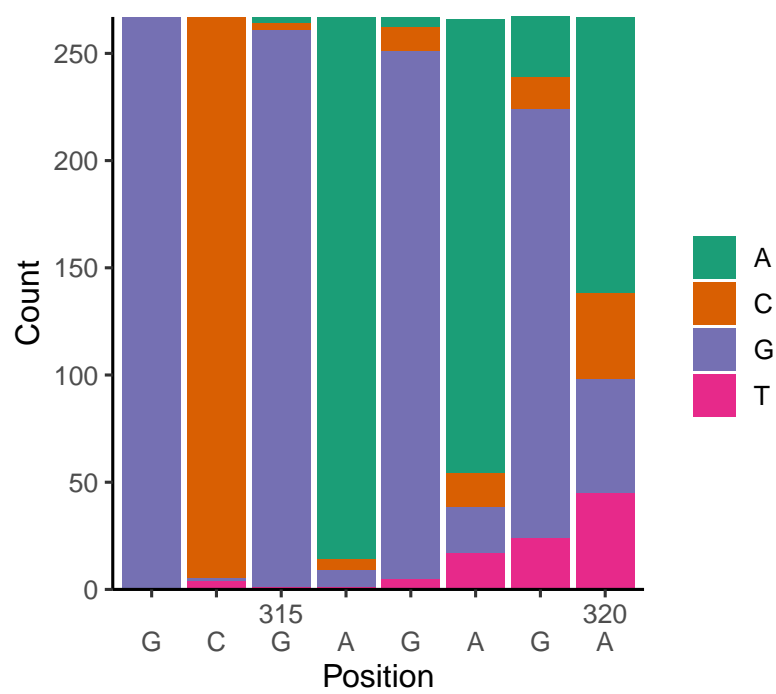
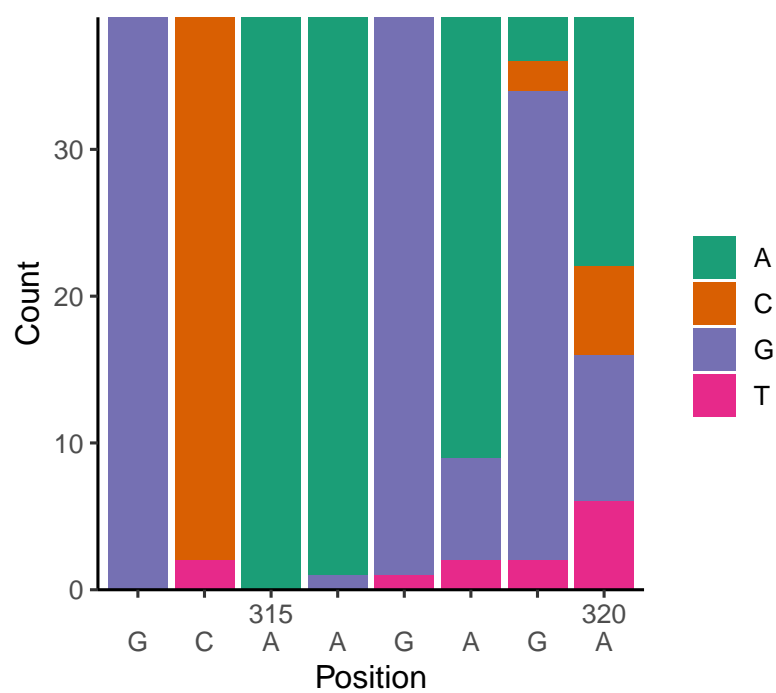


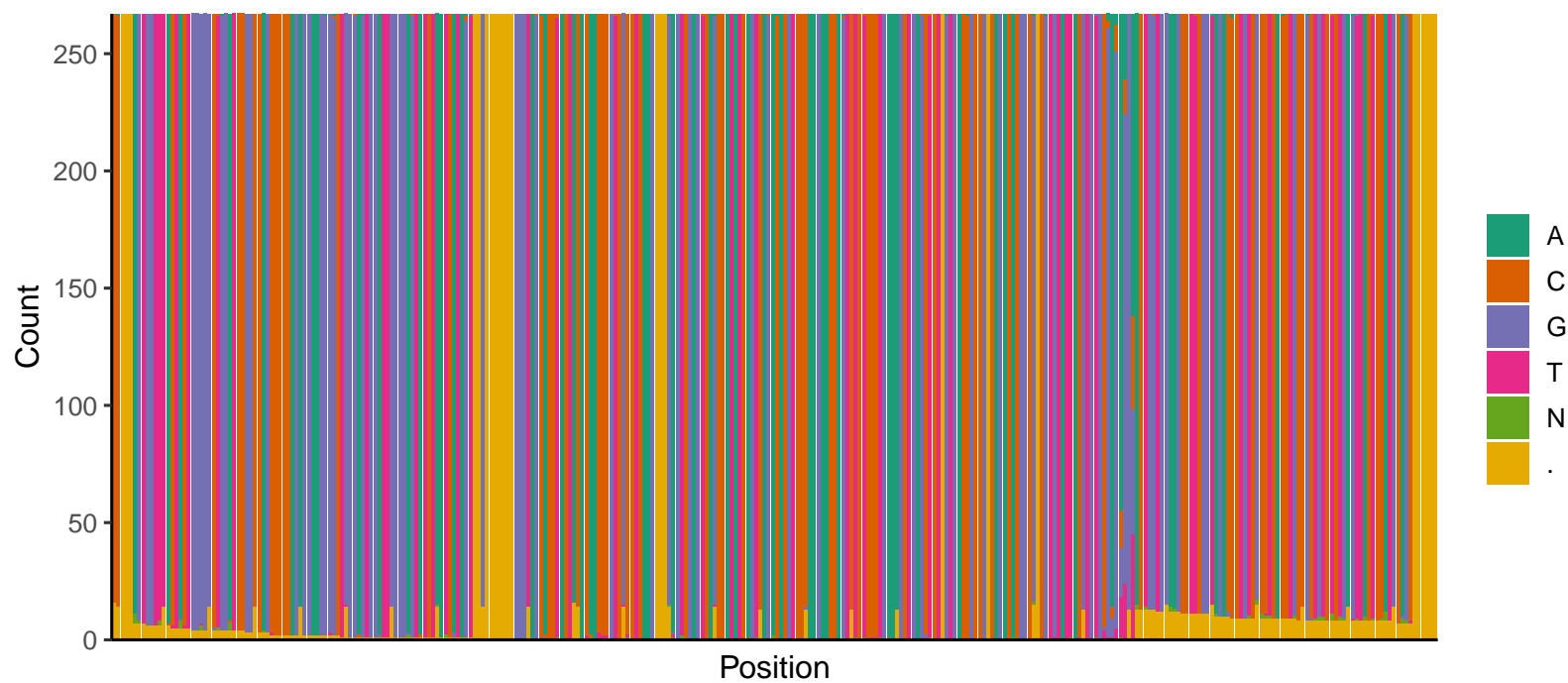
Gene IGHV4-38-2*02_A70G



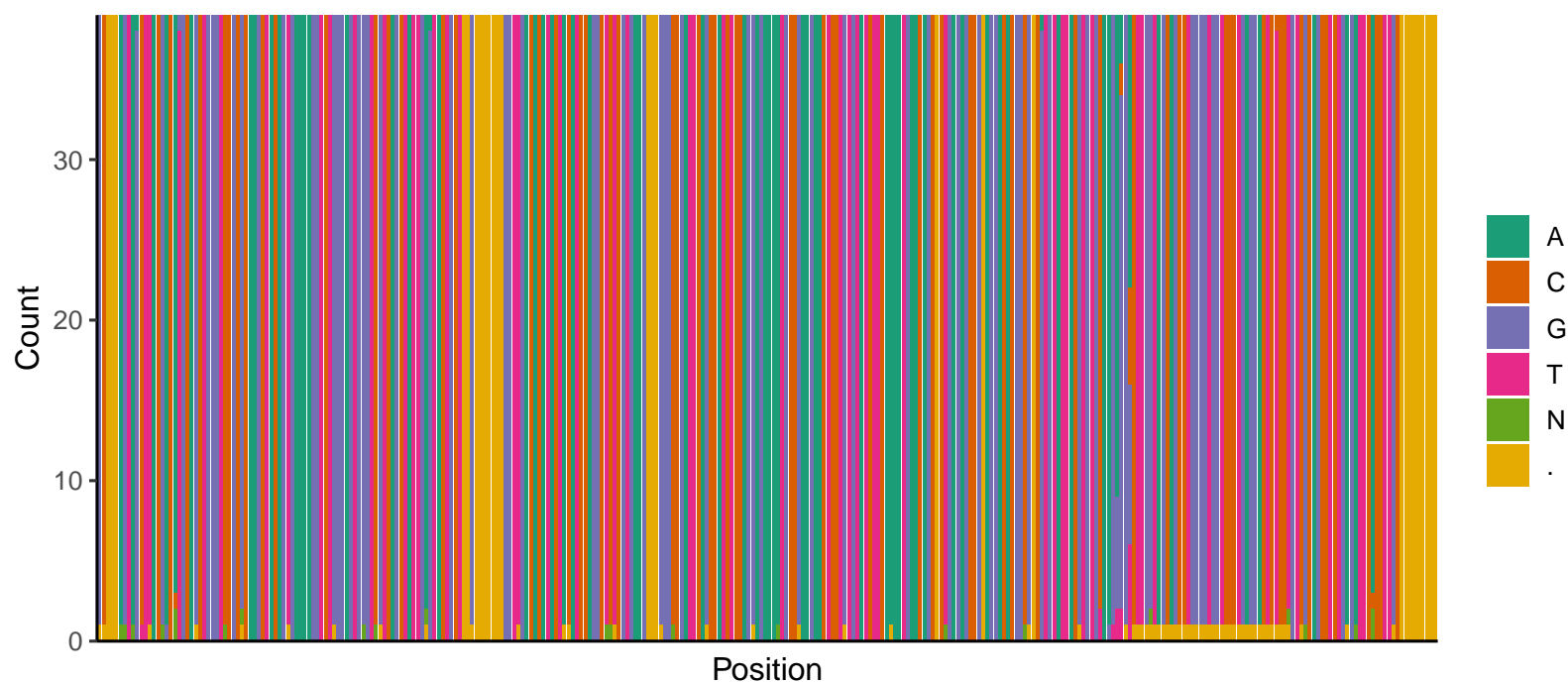
Gene IGHV3-13*01_G290A_T300C



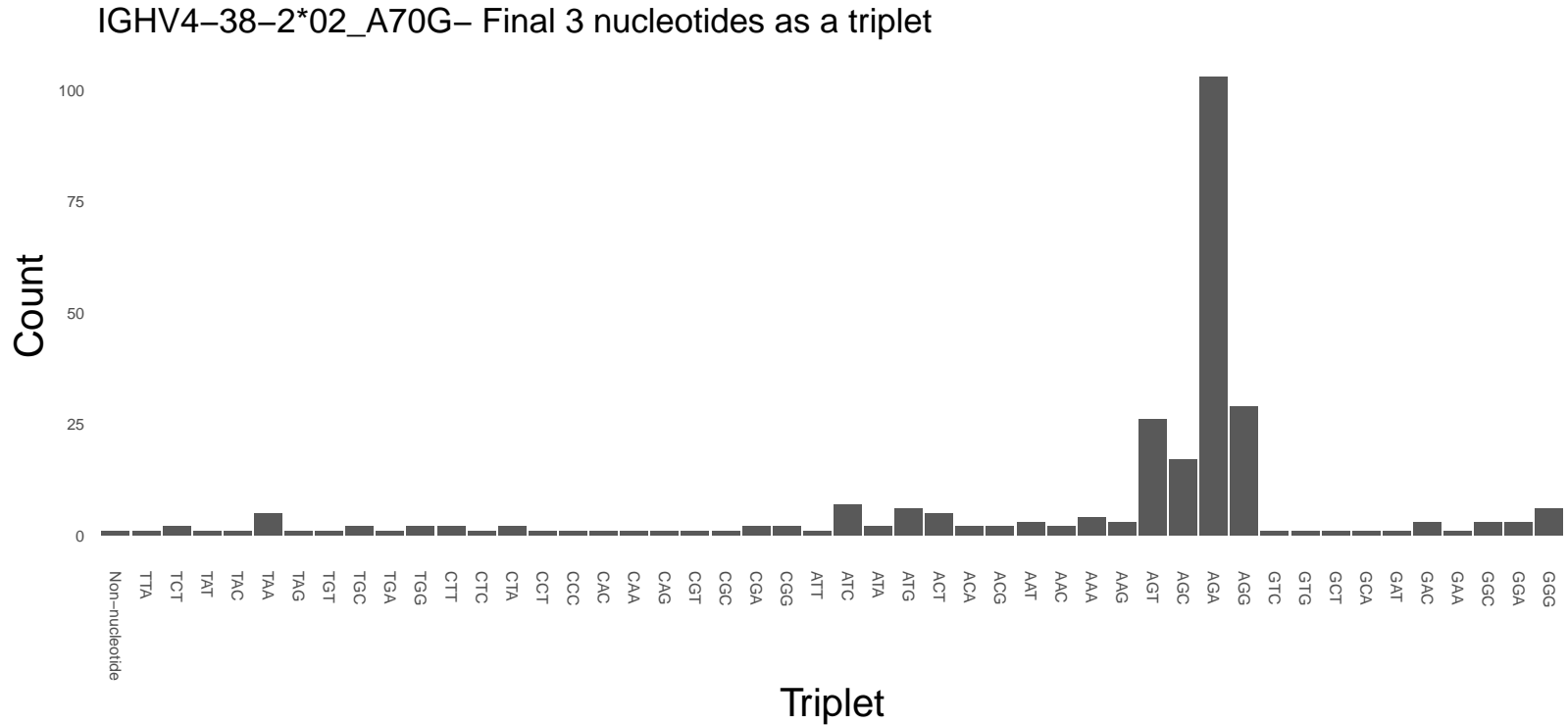
Gene IGHV4-38-2*02_A70G



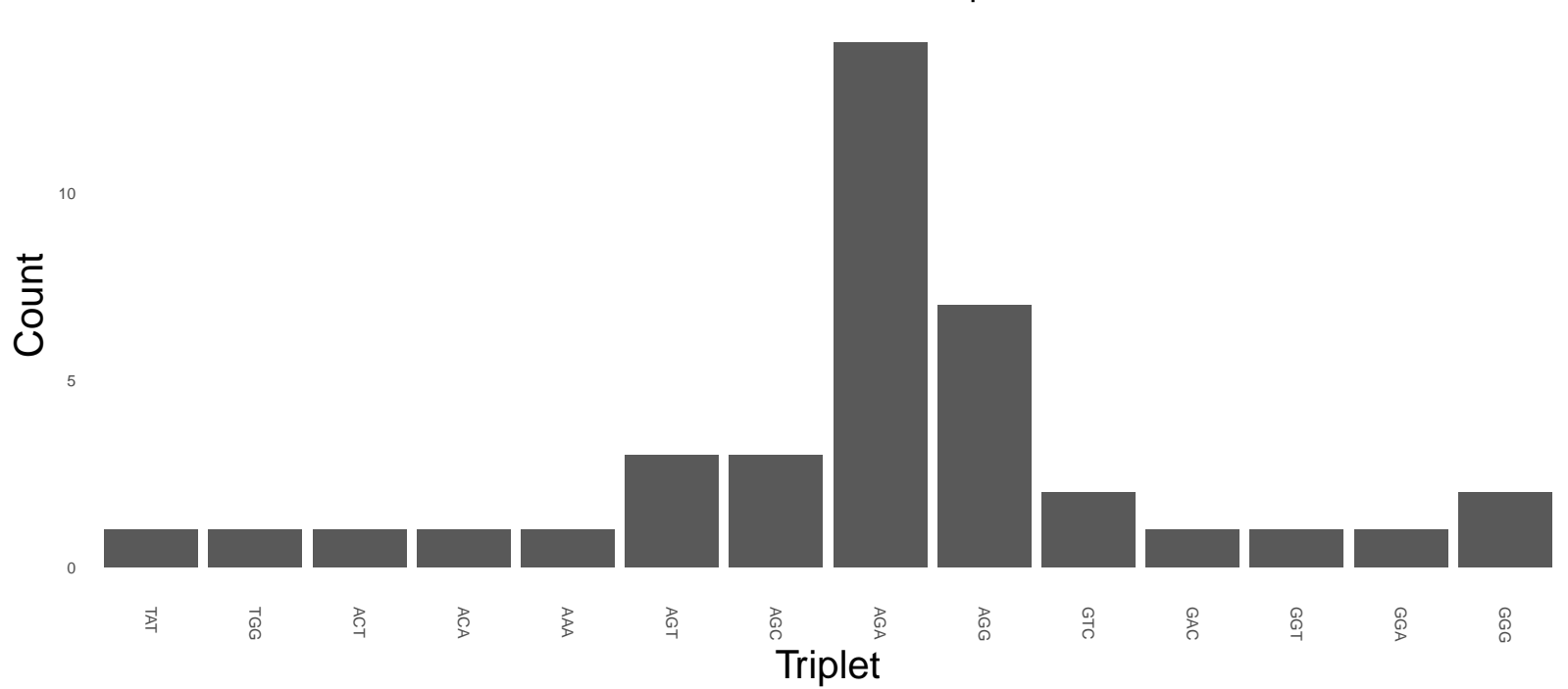
Gene IGHV3-13*01_G290A_T300C



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

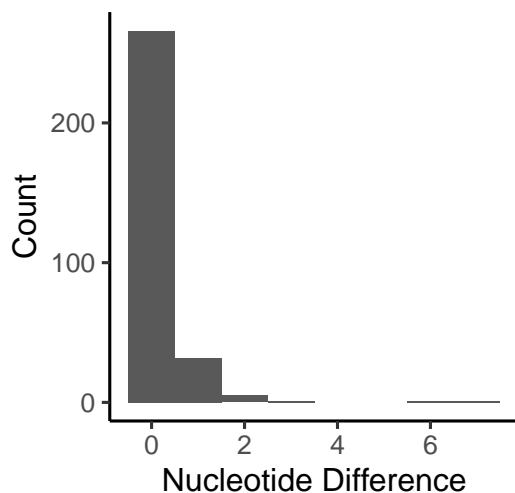


IGHV3–13*01_G290A_T300C– Final 3 nucleotides as a triplet



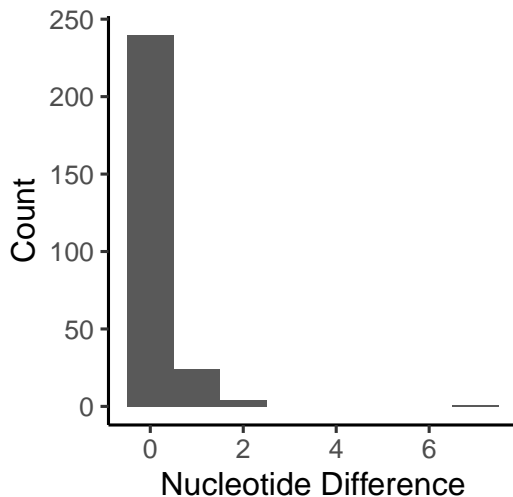
IGHV1-2*02

306 sequences assigned
266 (86.9%) exact matches, in which:
259 unique CDR3
5 unique J



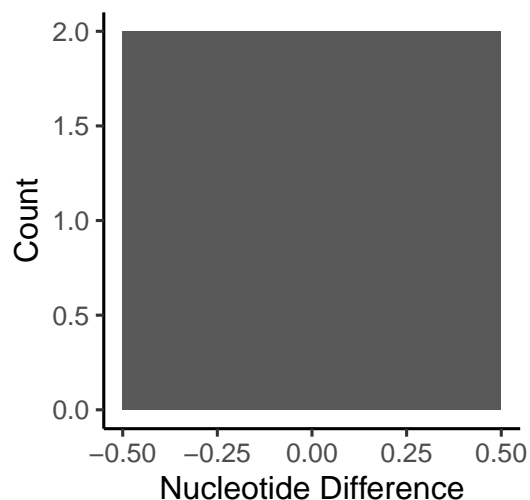
IGHV1-8*01

269 sequences assigned
240 (89.2%) exact matches, in which:
235 unique CDR3
6 unique J



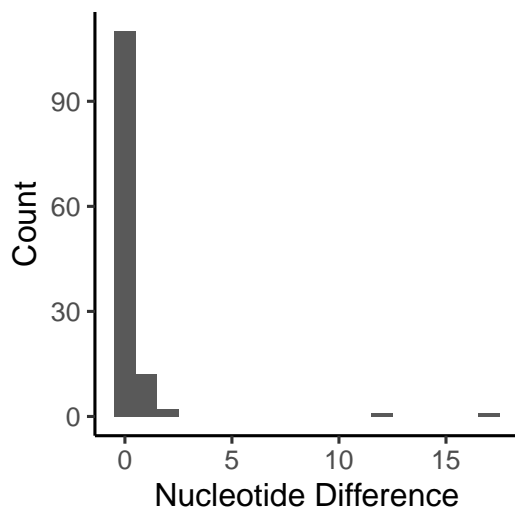
IGHV1-45*02

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



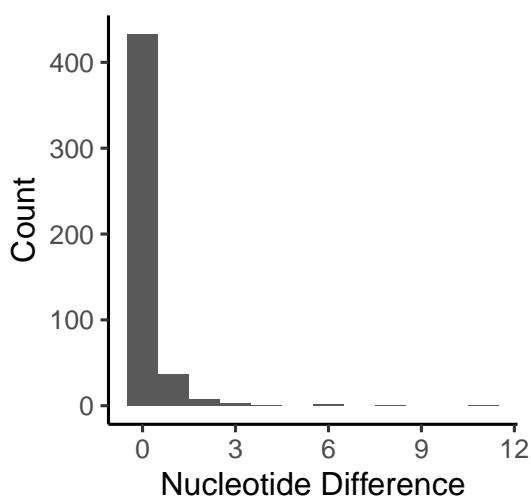
IGHV1-2*04

126 sequences assigned
110 (87.3%) exact matches, in which:
107 unique CDR3
6 unique J



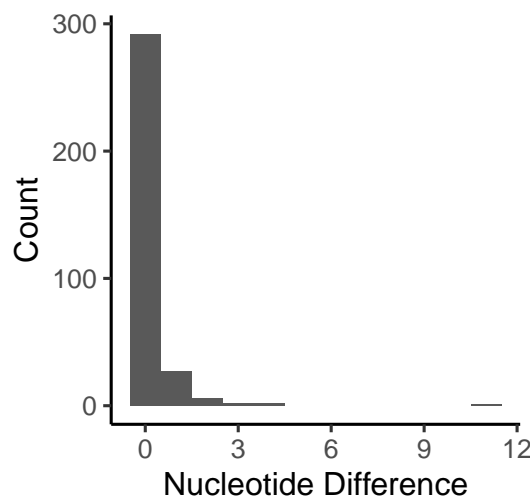
IGHV1-18*01

488 sequences assigned
433 (88.7%) exact matches, in which:
427 unique CDR3
6 unique J



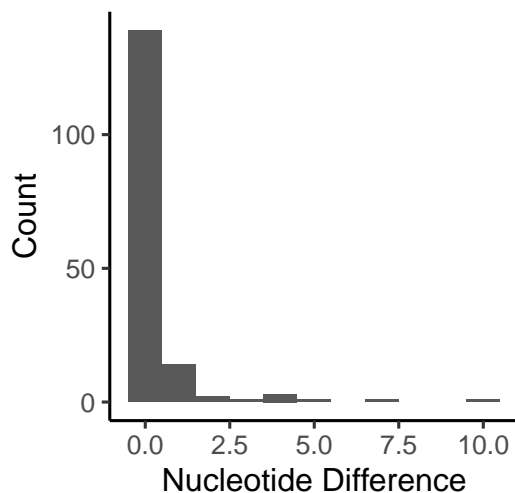
IGHV1-46*01

330 sequences assigned
292 (88.5%) exact matches, in which:
286 unique CDR3
6 unique J



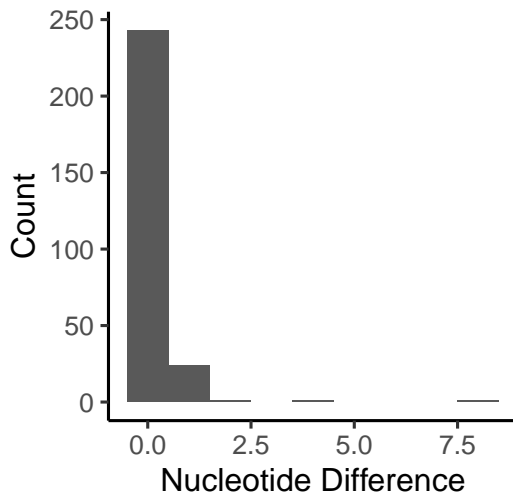
IGHV1-3*01

162 sequences assigned
139 (85.8%) exact matches, in which:
135 unique CDR3
5 unique J



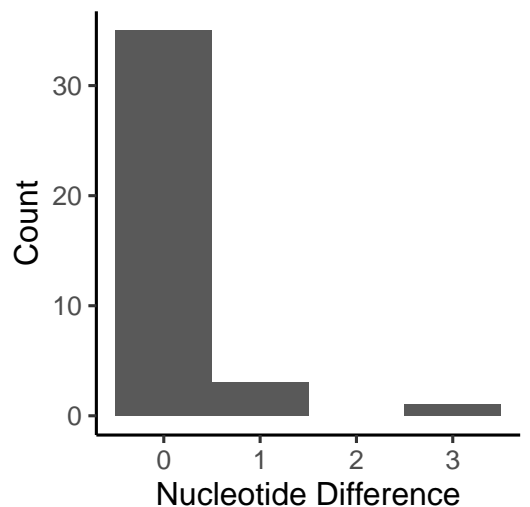
IGHV1-24*01

270 sequences assigned
243 (90%) exact matches, in which:
238 unique CDR3
6 unique J



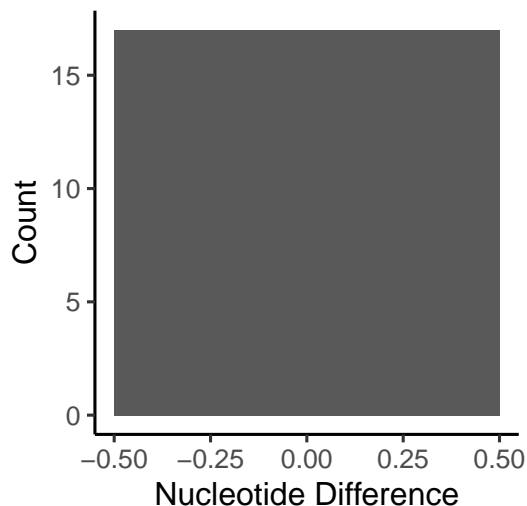
IGHV1-58*01

39 sequences assigned
35 (89.7%) exact matches, in which:
33 unique CDR3
5 unique J



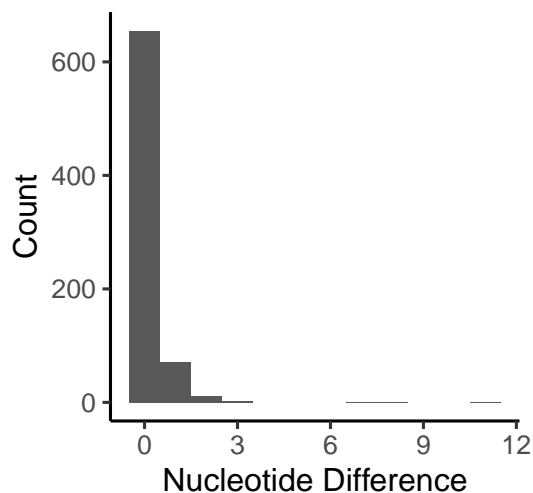
IGHV1-58*02

17 sequences assigned
17 (100%) exact matches, in which:
17 unique CDR3
3 unique J



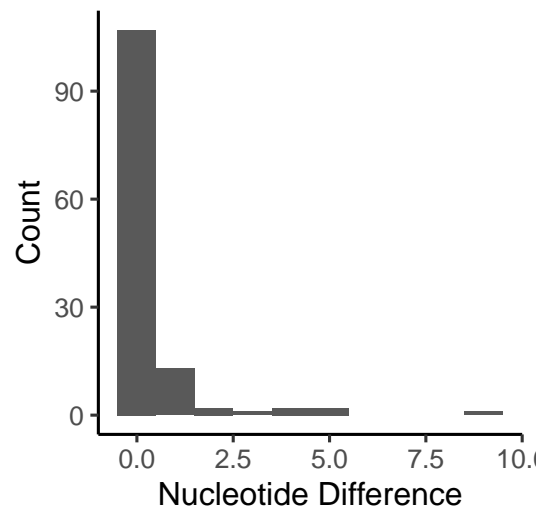
IGHV1-69*19

742 sequences assigned
655 (88.3%) exact matches, in which:
632 unique CDR3
6 unique J



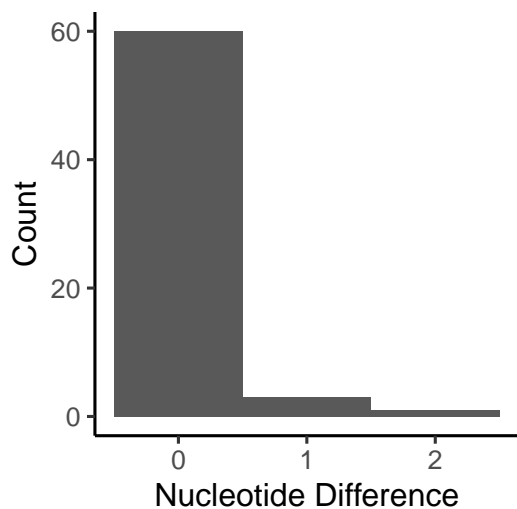
IGHV2-26*01

128 sequences assigned
107 (83.6%) exact matches, in which:
106 unique CDR3
6 unique J



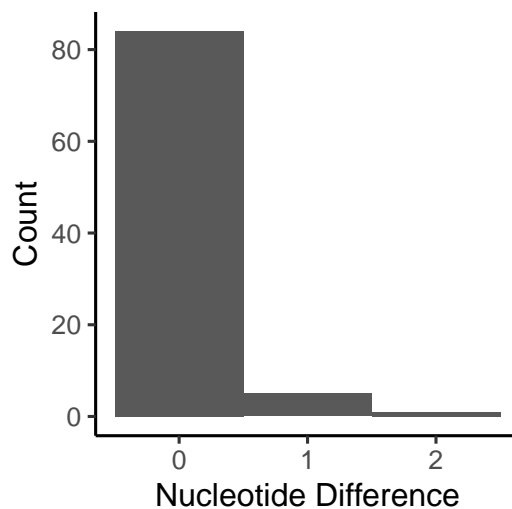
IGHV1-69-2*01

65 sequences assigned
60 (92.3%) exact matches, in which:
59 unique CDR3
5 unique J



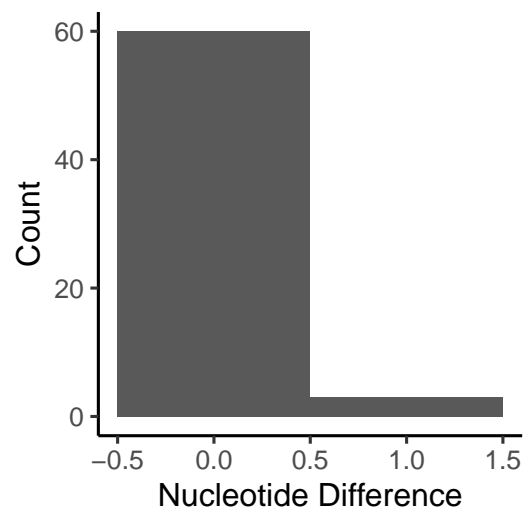
IGHV2-5*01

90 sequences assigned
84 (93.3%) exact matches, in which:
83 unique CDR3
5 unique J



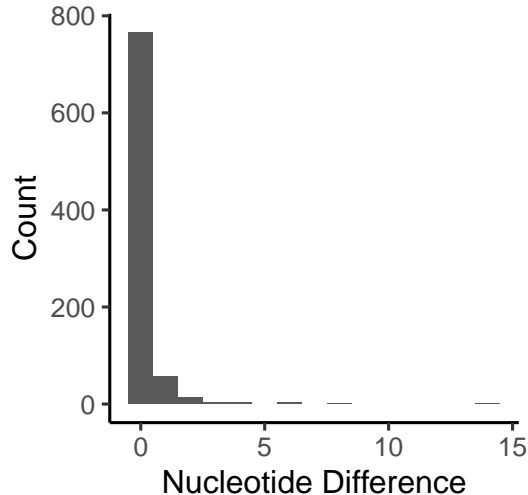
IGHV2-70*01

63 sequences assigned
60 (95.2%) exact matches, in which:
60 unique CDR3
4 unique J



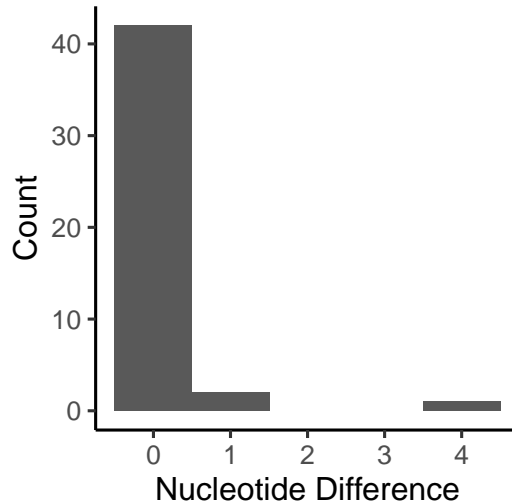
IGHV1-69*06

847 sequences assigned
766 (90.4%) exact matches, in which:
739 unique CDR3
6 unique J



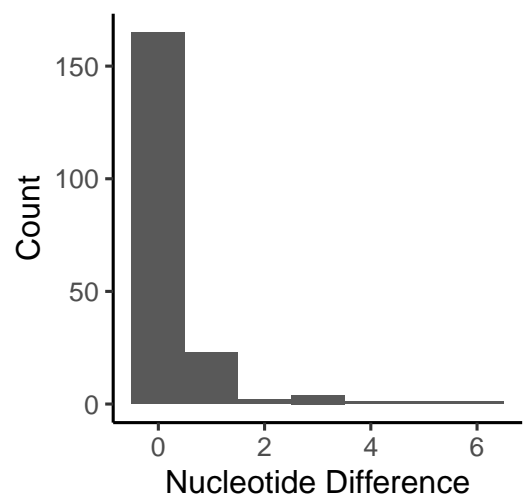
IGHV2-5*02

45 sequences assigned
42 (93.3%) exact matches, in which:
42 unique CDR3
6 unique J



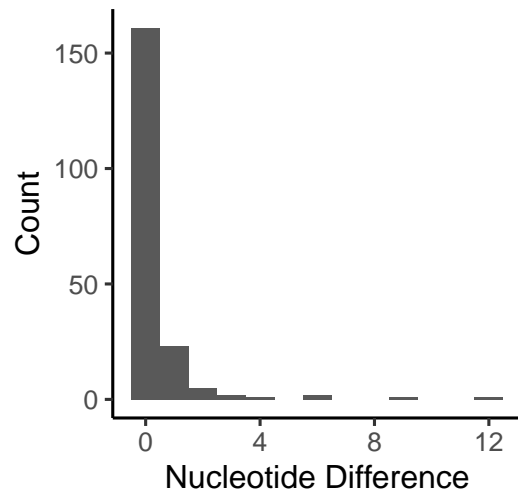
IGHV3-7*01

197 sequences assigned
165 (83.8%) exact matches, in which:
160 unique CDR3
6 unique J



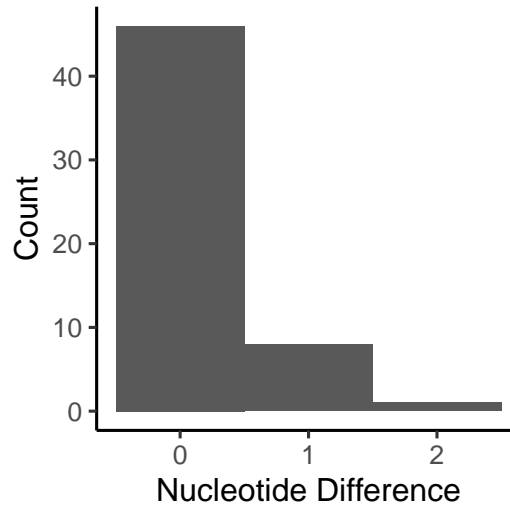
IGHV3-7*03

196 sequences assigned
161 (82.1%) exact matches, in which:
152 unique CDR3
6 unique J



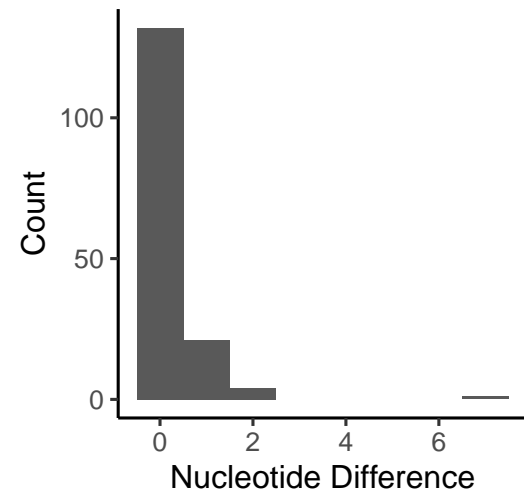
IGHV3-11*06

55 sequences assigned
46 (83.6%) exact matches, in which:
44 unique CDR3
6 unique J



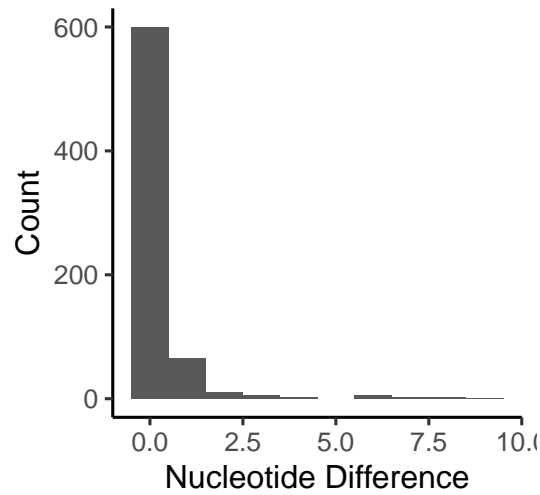
IGHV3-15*01

158 sequences assigned
132 (83.5%) exact matches, in which:
128 unique CDR3
6 unique J



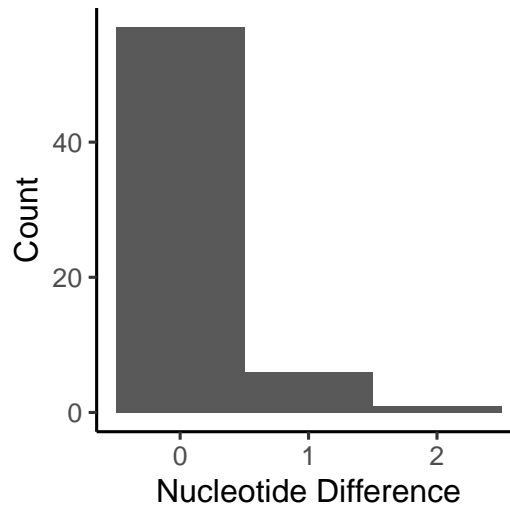
IGHV3-9*01

693 sequences assigned
600 (86.6%) exact matches, in which:
570 unique CDR3
6 unique J



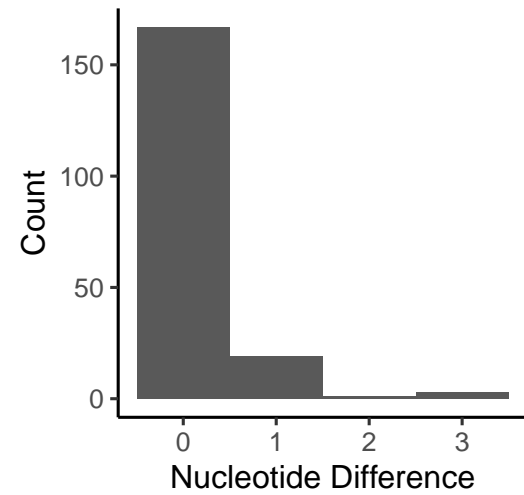
IGHV3-13*01

64 sequences assigned
57 (89.1%) exact matches, in which:
55 unique CDR3
5 unique J



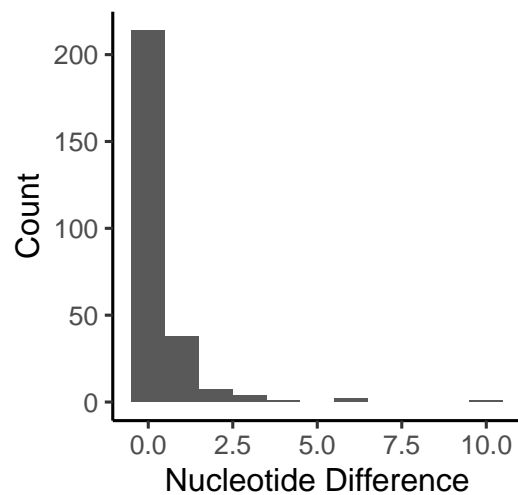
IGHV3-15*07

190 sequences assigned
167 (87.9%) exact matches, in which:
164 unique CDR3
6 unique J



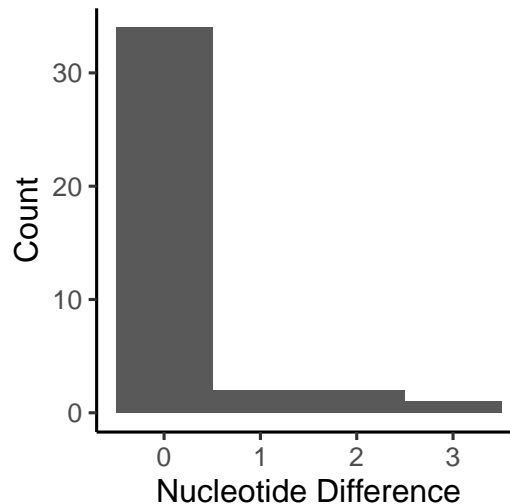
IGHV3-11*01

267 sequences assigned
214 (80.1%) exact matches, in which:
208 unique CDR3
6 unique J



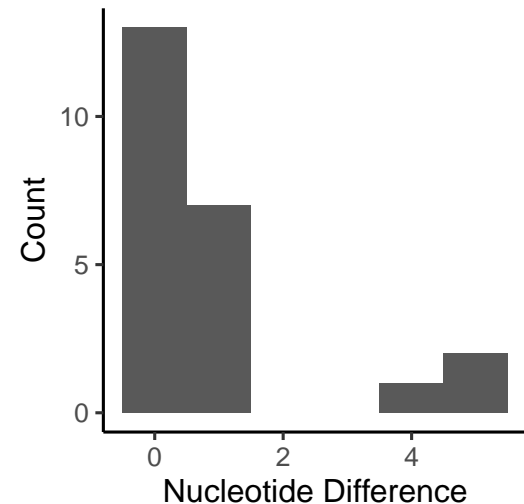
IGHV3-13*01_G290A_T30I

39 sequences assigned
34 (87.2%) exact matches, in which:
33 unique CDR3
5 unique J



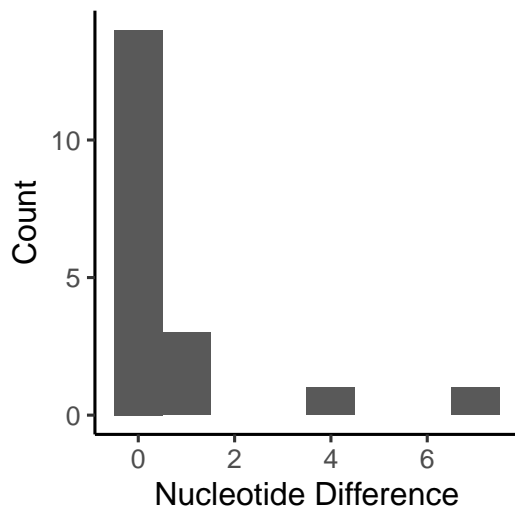
IGHV3-20*01

23 sequences assigned
13 (56.5%) exact matches, in which:
13 unique CDR3
5 unique J



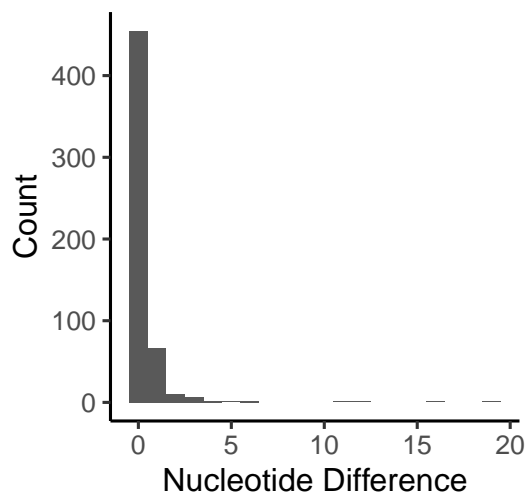
IGHV3-20*04

19 sequences assigned
14 (73.7%) exact matches, in which:
14 unique CDR3
4 unique J



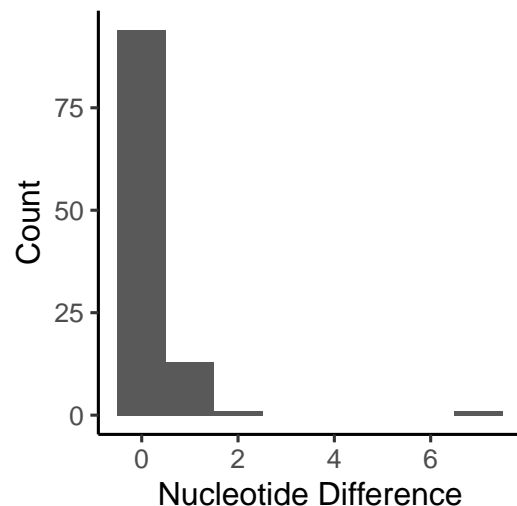
IGHV3-30-3*01

548 sequences assigned
455 (83%) exact matches, in which:
442 unique CDR3
6 unique J



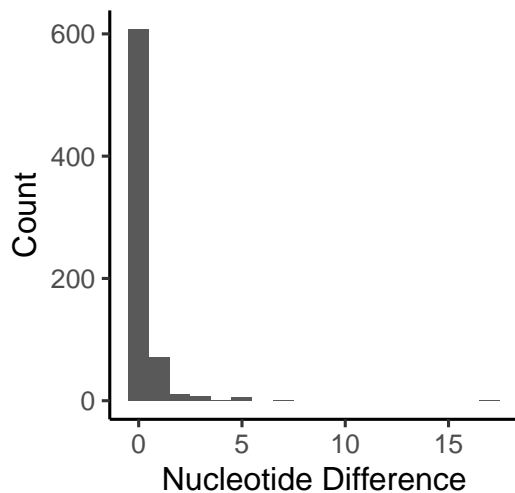
IGHV3-48*01

109 sequences assigned
94 (86.2%) exact matches, in which:
91 unique CDR3
6 unique J



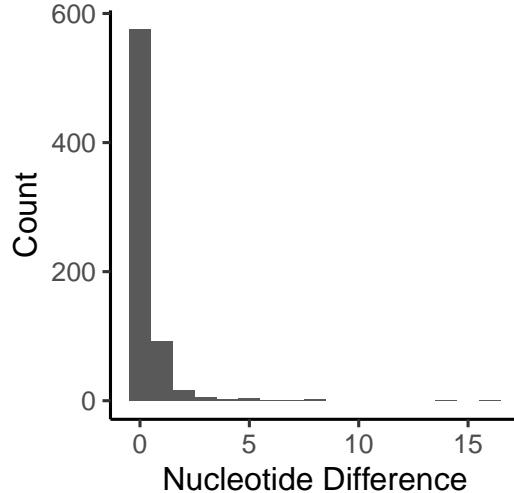
IGHV3-21*01

705 sequences assigned
608 (86.2%) exact matches, in which:
580 unique CDR3
6 unique J



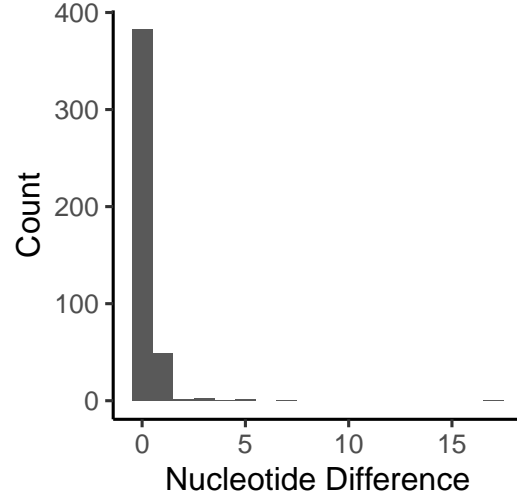
IGHV3-33*01

703 sequences assigned
576 (81.9%) exact matches, in which:
555 unique CDR3
6 unique J



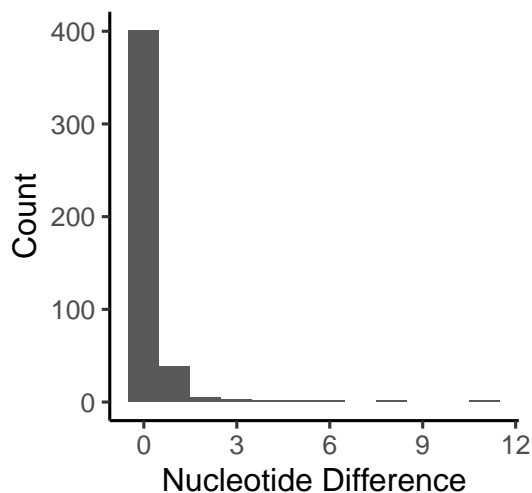
IGHV3-48*03

442 sequences assigned
383 (86.7%) exact matches, in which:
369 unique CDR3
6 unique J



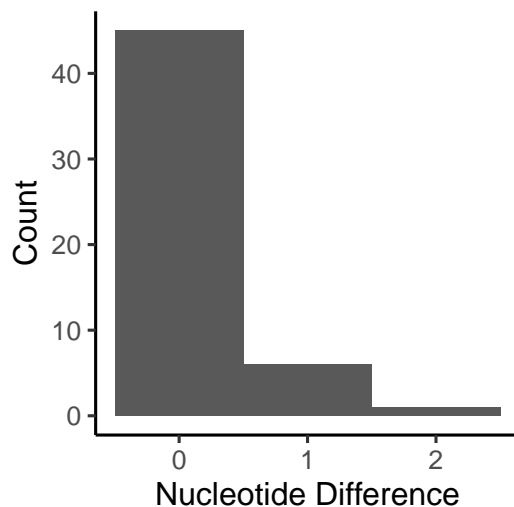
IGHV3-30*01

458 sequences assigned
401 (87.6%) exact matches, in which:
392 unique CDR3
6 unique J



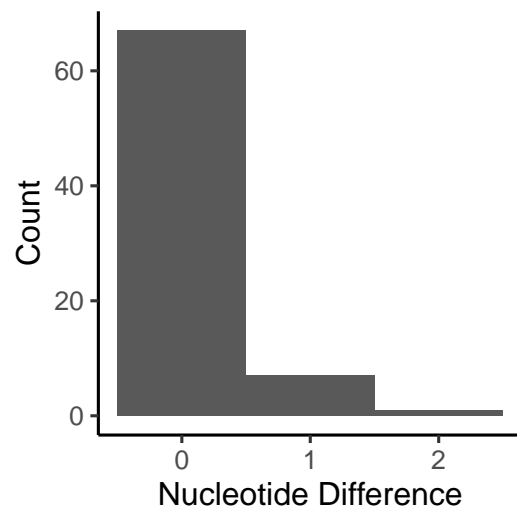
IGHV3-43*01

52 sequences assigned
45 (86.5%) exact matches, in which:
44 unique CDR3
4 unique J



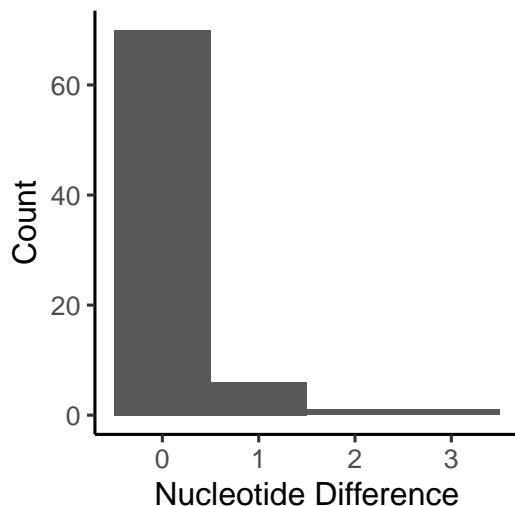
IGHV3-49*03

75 sequences assigned
67 (89.3%) exact matches, in which:
65 unique CDR3
6 unique J



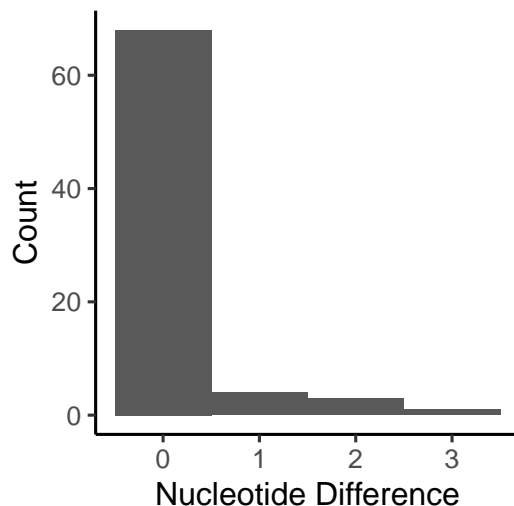
IGHV3-49*04

78 sequences assigned
70 (89.7%) exact matches, in which:
69 unique CDR3
6 unique J



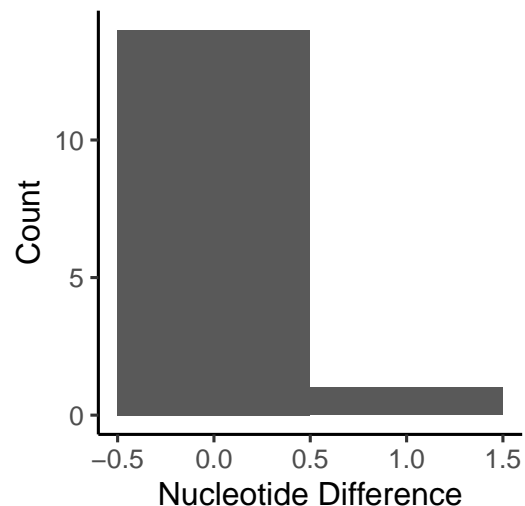
IGHV3-53*02

76 sequences assigned
68 (89.5%) exact matches, in which:
68 unique CDR3
5 unique J



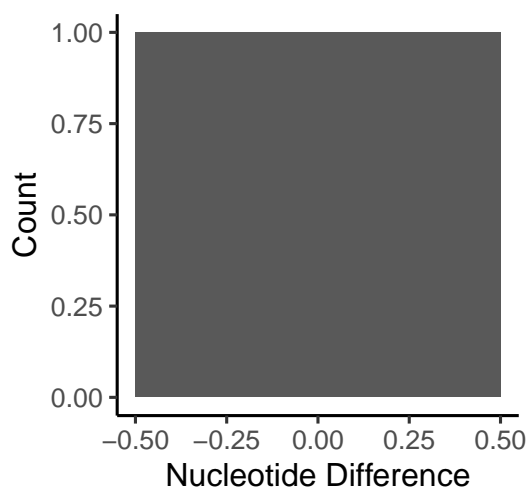
IGHV3-72*01

15 sequences assigned
14 (93.3%) exact matches, in which:
14 unique CDR3
5 unique J



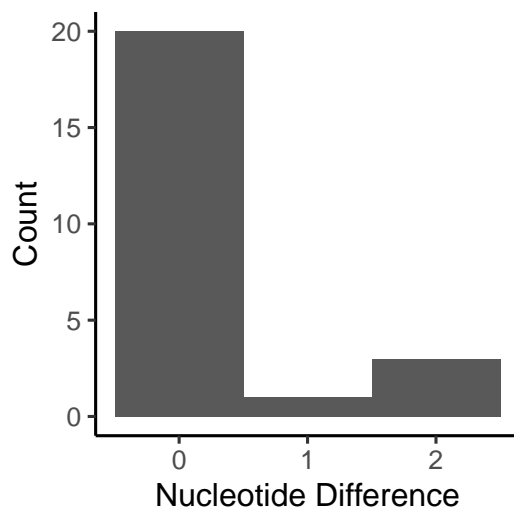
IGHV3-52*01

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



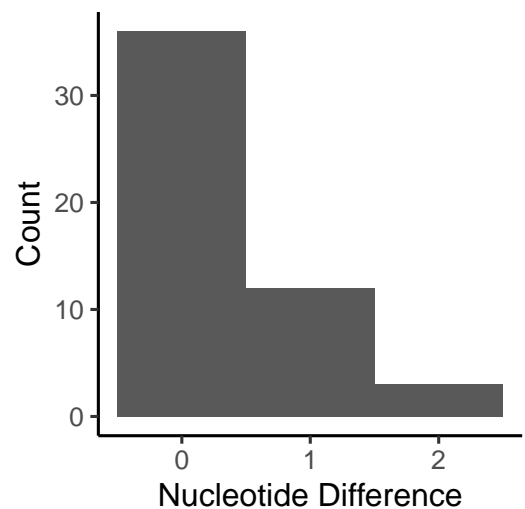
IGHV3-64*01

24 sequences assigned
20 (83.3%) exact matches, in which:
18 unique CDR3
3 unique J



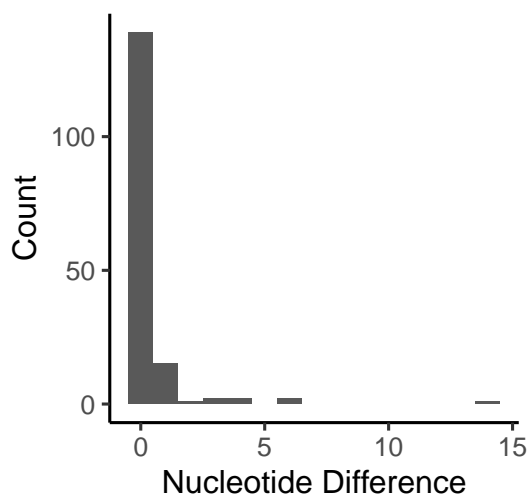
IGHV3-73*02

51 sequences assigned
36 (70.6%) exact matches, in which:
34 unique CDR3
5 unique J



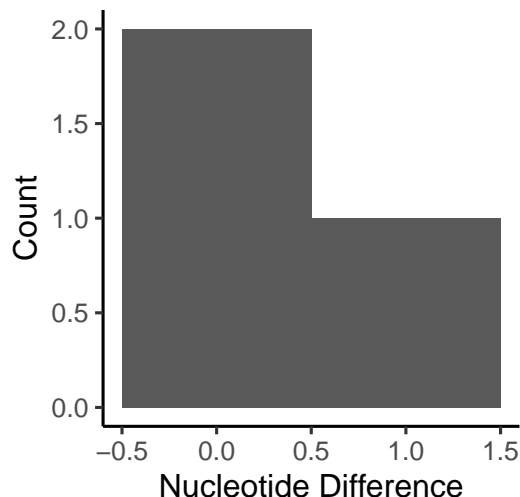
IGHV3-53*01

162 sequences assigned
139 (85.8%) exact matches, in which:
133 unique CDR3
5 unique J



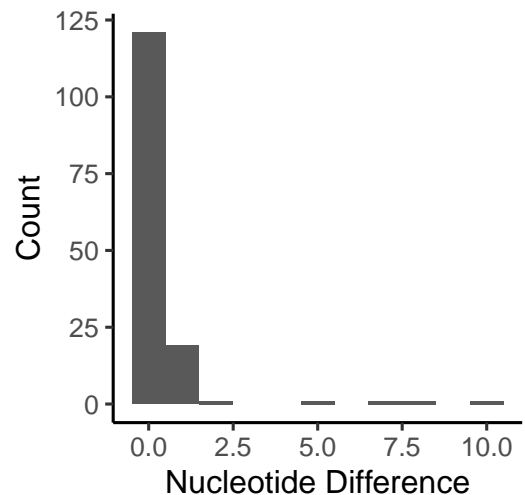
IGHV3-66*03

3 sequences assigned
2 (66.7%) exact matches, in which:
2 unique CDR3
1 unique J



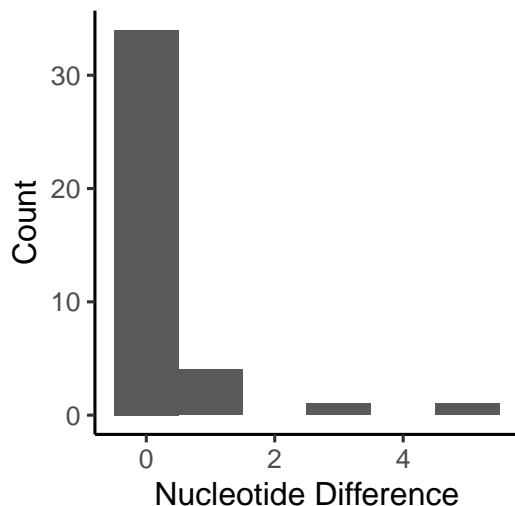
IGHV3-74*01

145 sequences assigned
121 (83.4%) exact matches, in which:
120 unique CDR3
6 unique J



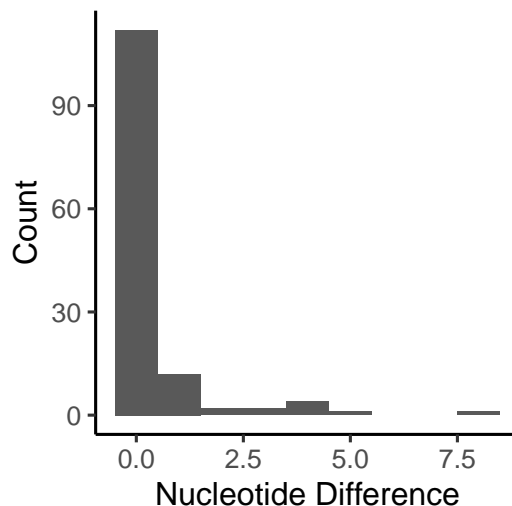
IGHV3-43D*04

40 sequences assigned
34 (85%) exact matches, in which:
33 unique CDR3
3 unique J



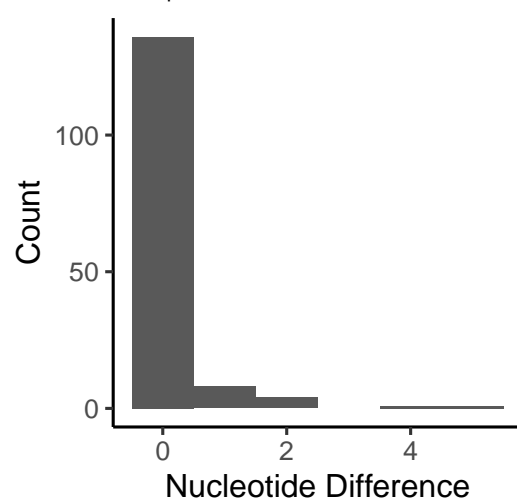
IGHV4-4*07

134 sequences assigned
112 (83.6%) exact matches, in which:
111 unique CDR3
6 unique J



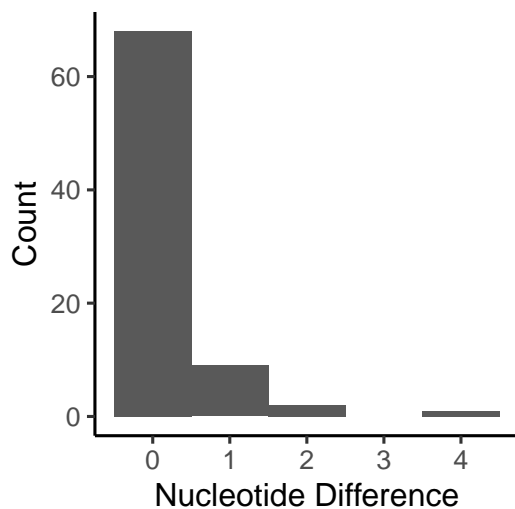
IGHV4-30-4*01

150 sequences assigned
136 (90.7%) exact matches, in which:
133 unique CDR3
5 unique J



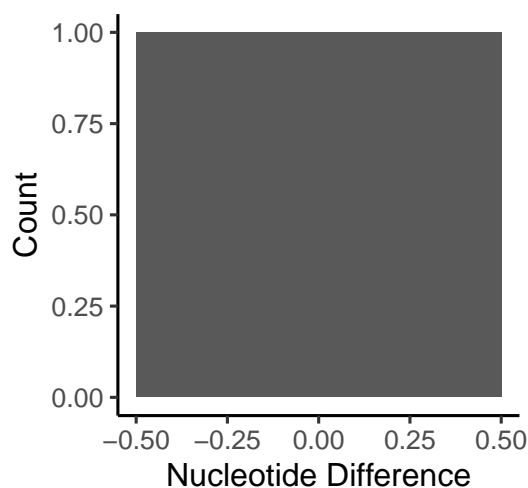
IGHV3-64D*08

80 sequences assigned
68 (85%) exact matches, in which:
65 unique CDR3
5 unique J



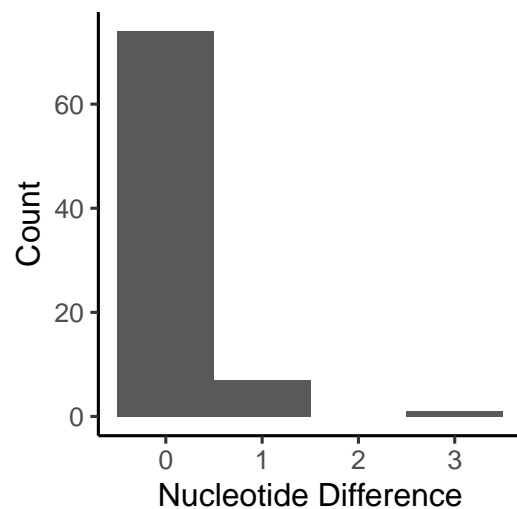
IGHV4-28*03

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



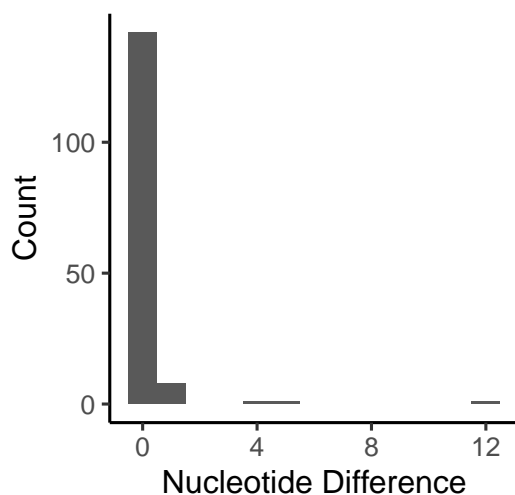
IGHV4-30-2*01

82 sequences assigned
74 (90.2%) exact matches, in which:
72 unique CDR3
6 unique J



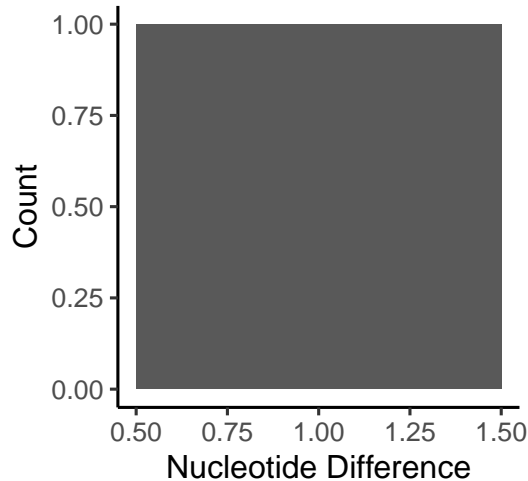
IGHV4-4*02

153 sequences assigned
142 (92.8%) exact matches, in which:
138 unique CDR3
6 unique J



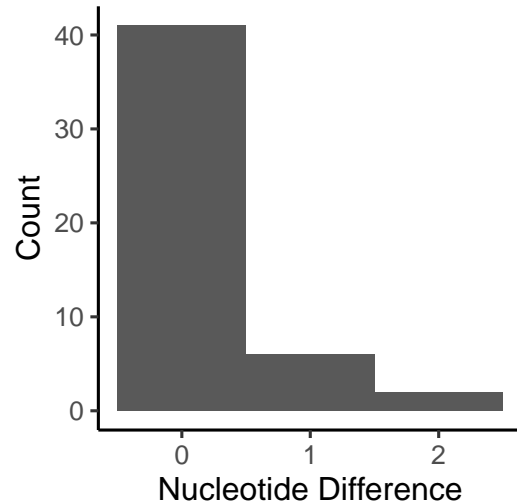
IGHV4-28*04

1 sequences assigned
No exact matches.



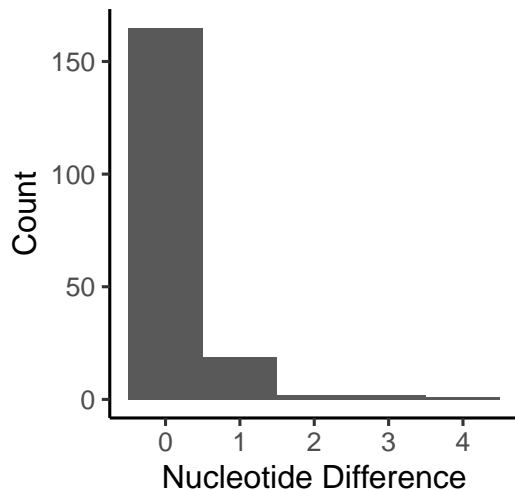
IGHV4-31*01

49 sequences assigned
41 (83.7%) exact matches, in which:
41 unique CDR3
5 unique J



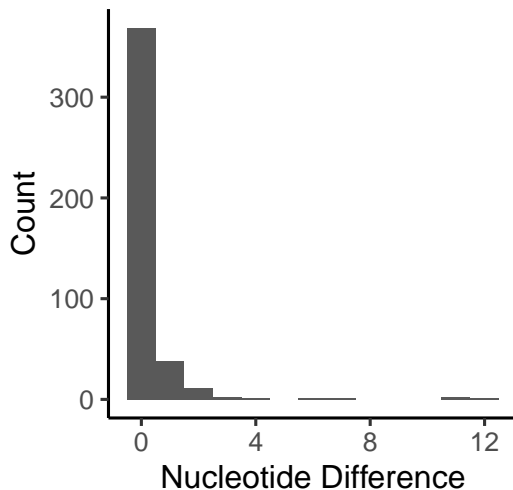
IGHV4-31*03

189 sequences assigned
165 (87.3%) exact matches, in which:
161 unique CDR3
6 unique J



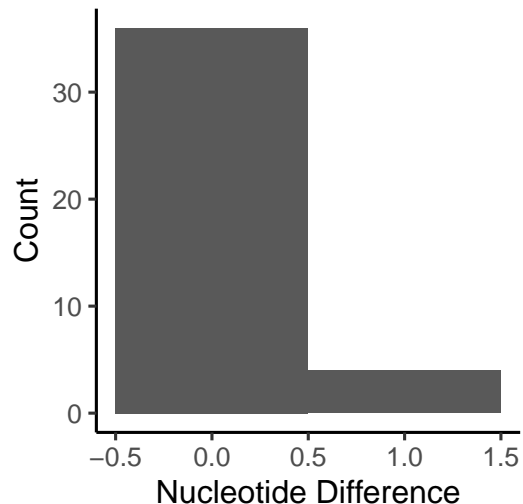
IGHV4-39*01

427 sequences assigned
369 (86.4%) exact matches, in which:
366 unique CDR3
6 unique J



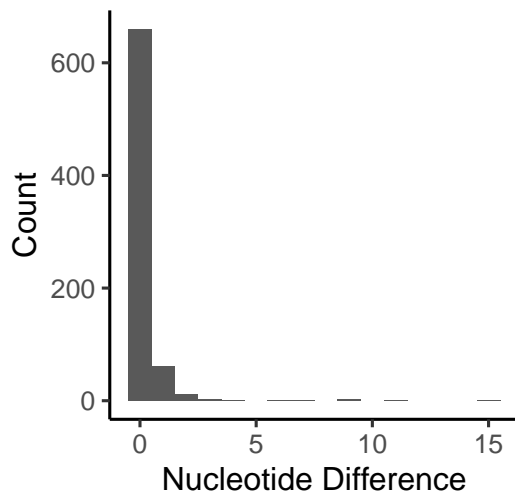
IGHV4-61*01

40 sequences assigned
36 (90%) exact matches, in which:
36 unique CDR3
5 unique J



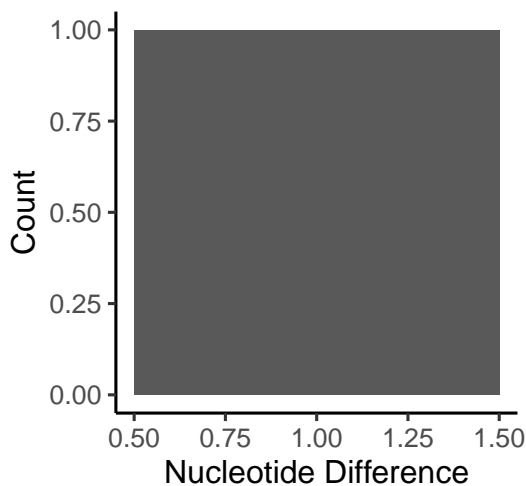
IGHV4-34*01

747 sequences assigned
660 (88.4%) exact matches, in which:
645 unique CDR3
6 unique J



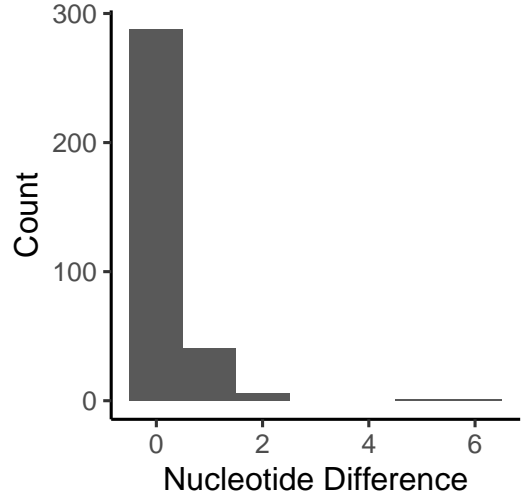
IGHV4-55*09

1 sequences assigned
No exact matches.



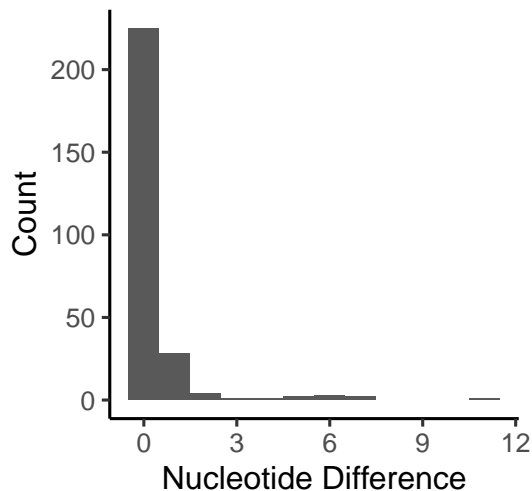
IGHV4-61*02

337 sequences assigned
288 (85.5%) exact matches, in which:
281 unique CDR3
6 unique J



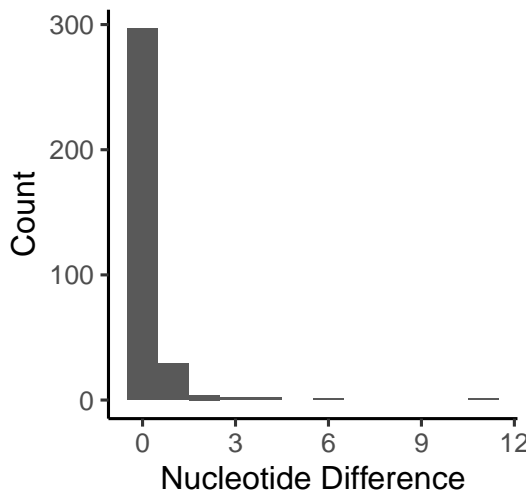
IGHV4-38-2*02_A70G

267 sequences assigned
225 (84.3%) exact matches, in which:
217 unique CDR3
6 unique J



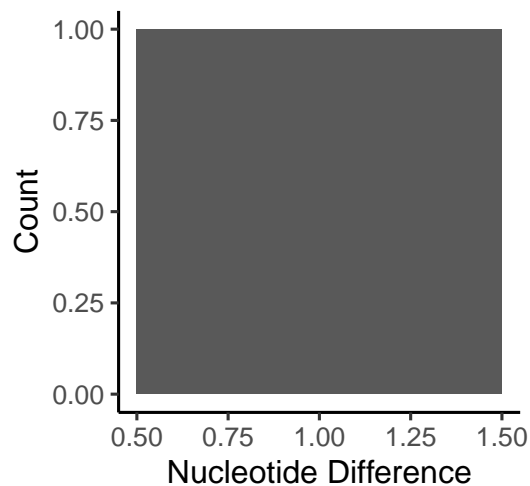
IGHV4-59*01

336 sequences assigned
297 (88.4%) exact matches, in which:
294 unique CDR3
6 unique J



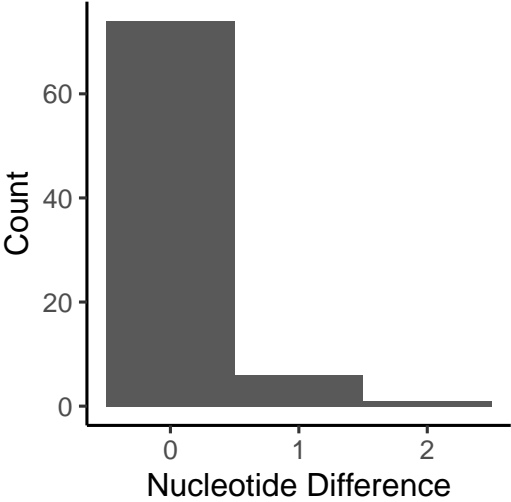
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



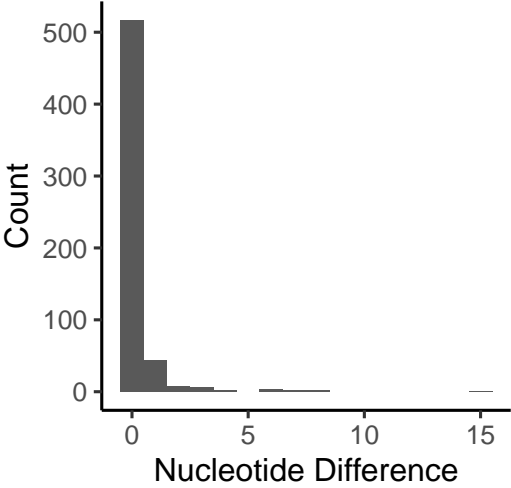
IGHV5-10-1*03

81 sequences assigned
74 (91.4%) exact matches, in which:
73 unique CDR3
4 unique J



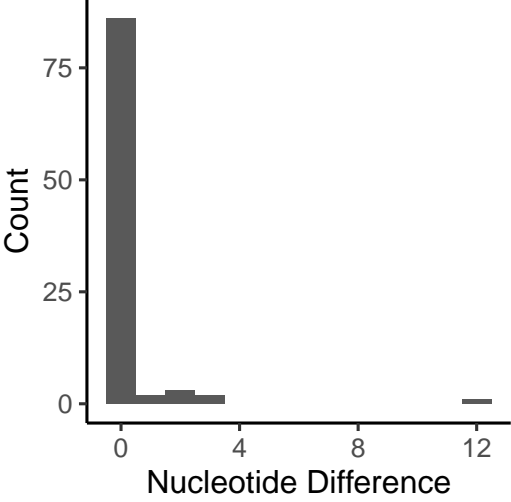
IGHV5-51*01

586 sequences assigned
517 (88.2%) exact matches, in which:
507 unique CDR3
6 unique J

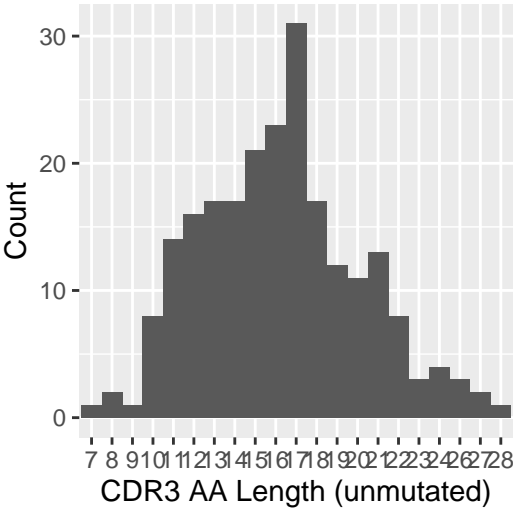


IGHV6-1*01

94 sequences assigned
86 (91.5%) exact matches, in which:
83 unique CDR3
5 unique J



IGHV4-38-2*02_A70G



IGHV3-13*01_G290A_T300C

