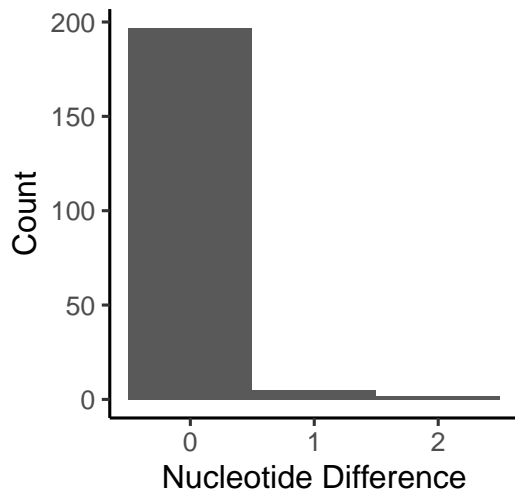


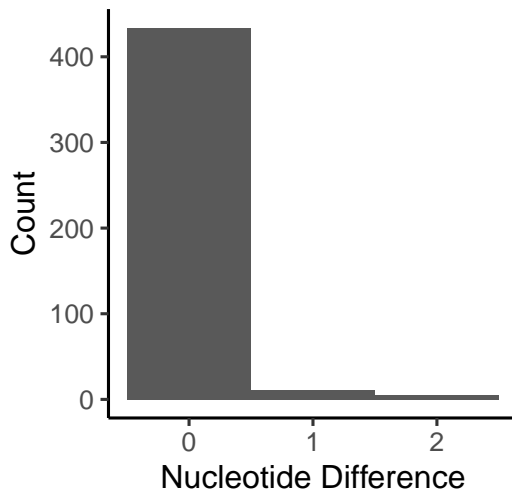
IGHV1-2*04

204 sequences assigned
197 (96.6%) exact matches, in which:
197 unique CDR3
7 unique J



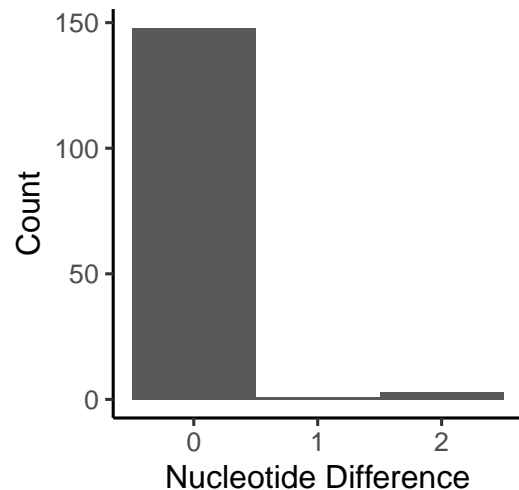
IGHV1-18*04

450 sequences assigned
434 (96.4%) exact matches, in which:
434 unique CDR3
7 unique J



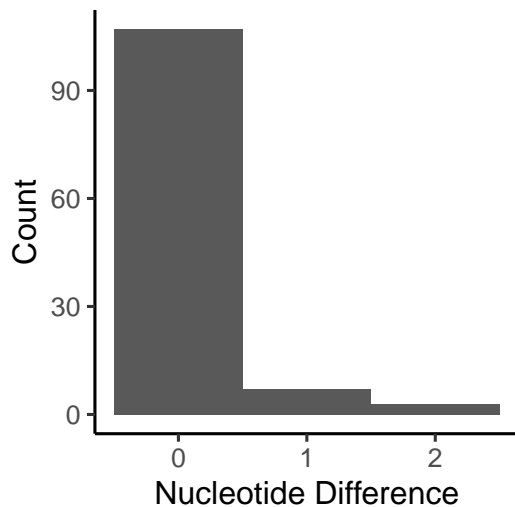
IGHV1-46*01

152 sequences assigned
148 (97.4%) exact matches, in which:
148 unique CDR3
5 unique J



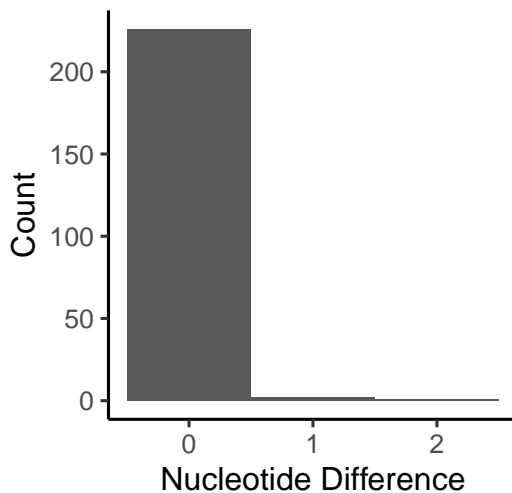
IGHV1-3*01_05

117 sequences assigned
107 (91.5%) exact matches, in which:
107 unique CDR3
6 unique J



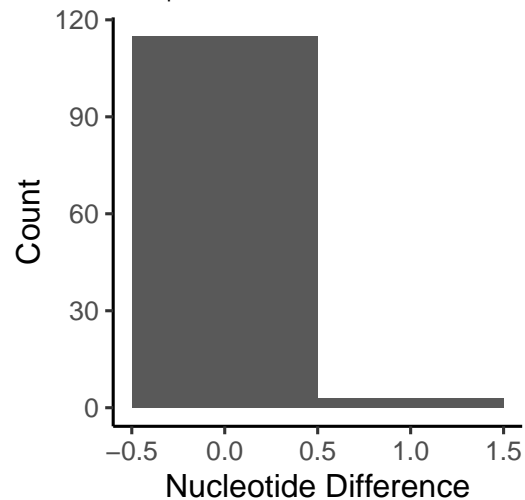
IGHV1-24*01

229 sequences assigned
226 (98.7%) exact matches, in which:
226 unique CDR3
7 unique J



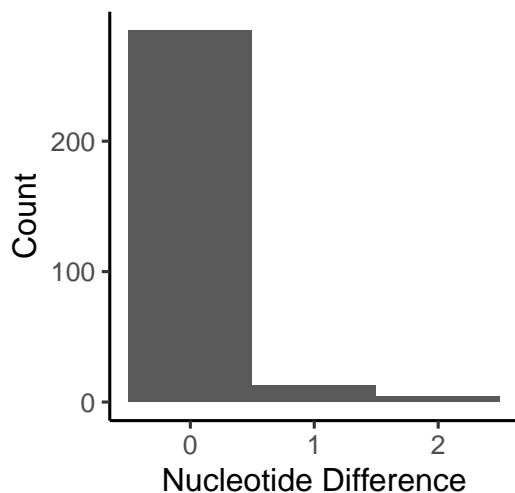
IGHV1-46*04

118 sequences assigned
115 (97.5%) exact matches, in which:
115 unique CDR3
4 unique J



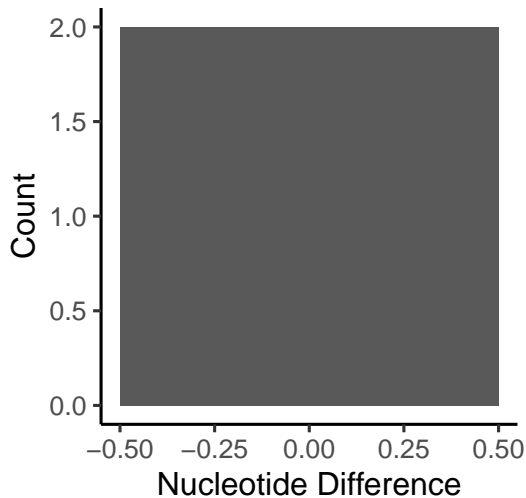
IGHV1-18*01

302 sequences assigned
285 (94.4%) exact matches, in which:
284 unique CDR3
6 unique J



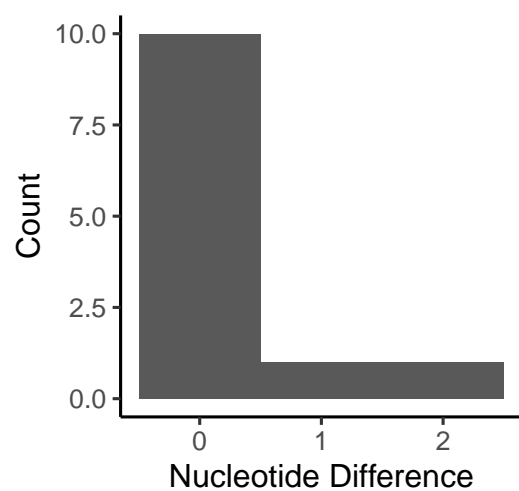
IGHV1-45*02

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



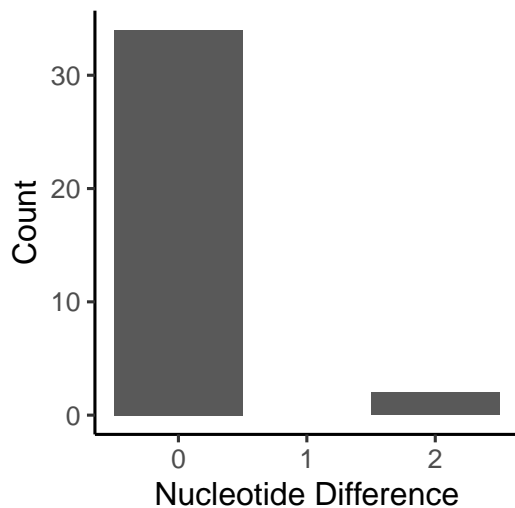
IGHV1-58*02

12 sequences assigned
10 (83.3%) exact matches, in which:
10 unique CDR3
3 unique J



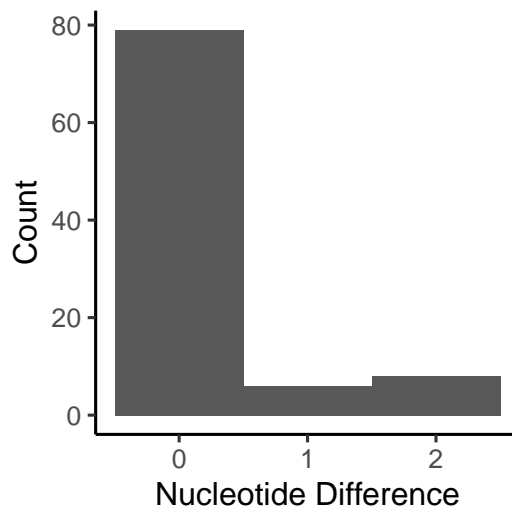
IGHV1-58*01_03

36 sequences assigned
34 (94.4%) exact matches, in which:
34 unique CDR3
5 unique J



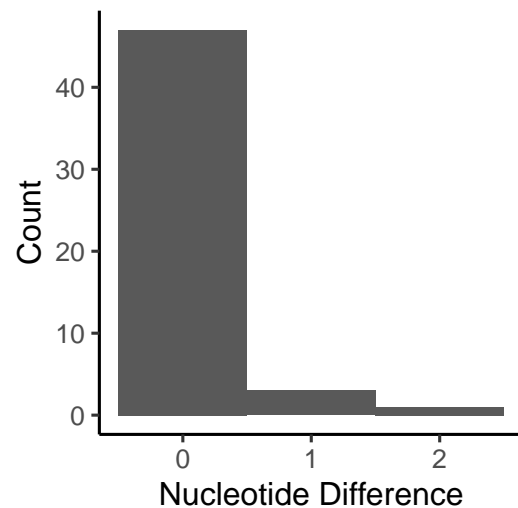
IGHV2-5*02

93 sequences assigned
79 (84.9%) exact matches, in which:
79 unique CDR3
7 unique J



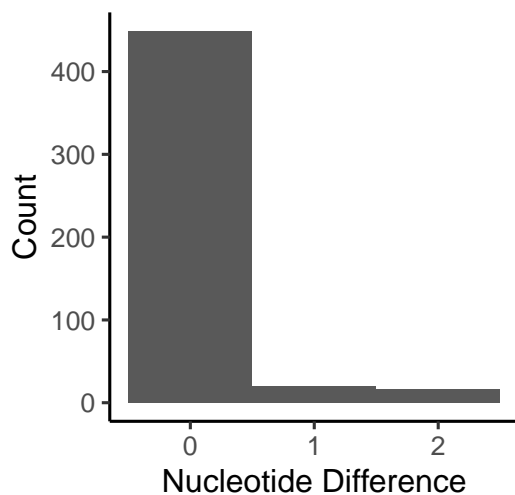
IGHV2-70*01

51 sequences assigned
47 (92.2%) exact matches, in which:
47 unique CDR3
5 unique J



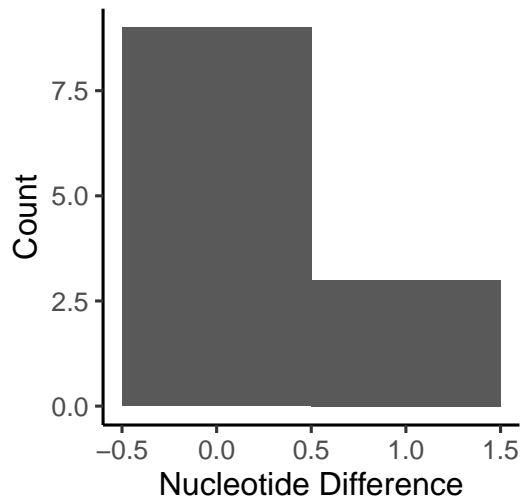
IGHV1-69*01_12_13

485 sequences assigned
449 (92.6%) exact matches, in which:
449 unique CDR3
7 unique J



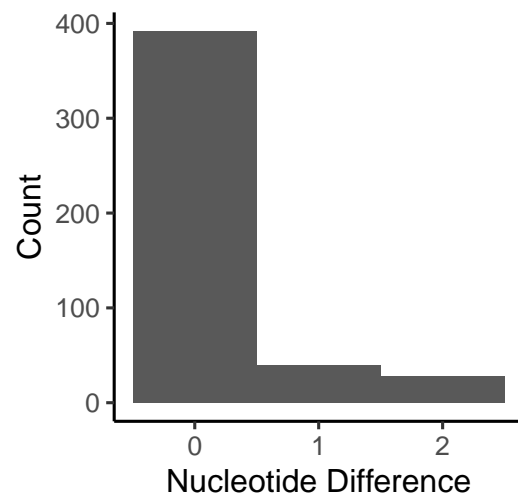
IGHV2-26*01

12 sequences assigned
9 (75%) exact matches, in which:
9 unique CDR3
4 unique J



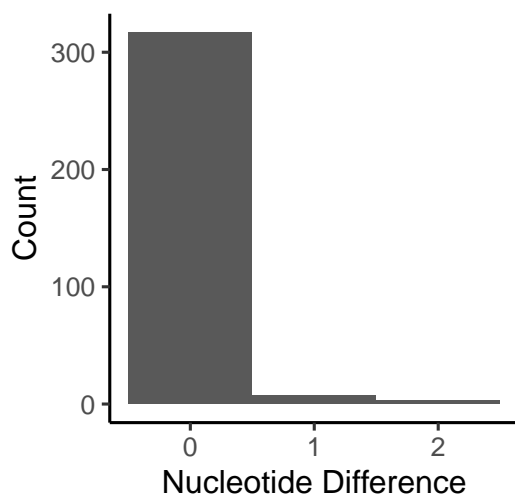
IGHV3-7*03

460 sequences assigned
392 (85.2%) exact matches, in which:
388 unique CDR3
7 unique J



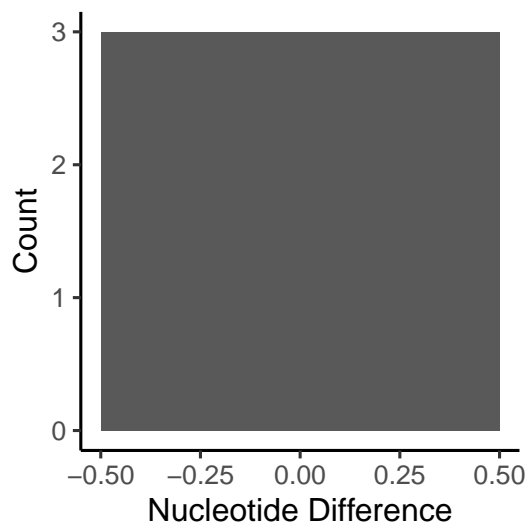
IGHV1-69*10

327 sequences assigned
317 (96.9%) exact matches, in which:
317 unique CDR3
7 unique J



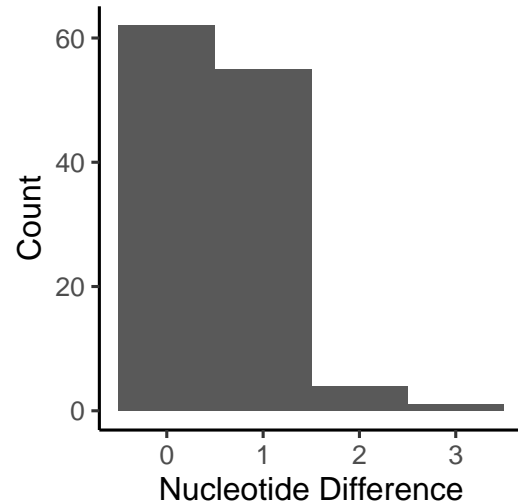
IGHV2-26*04

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



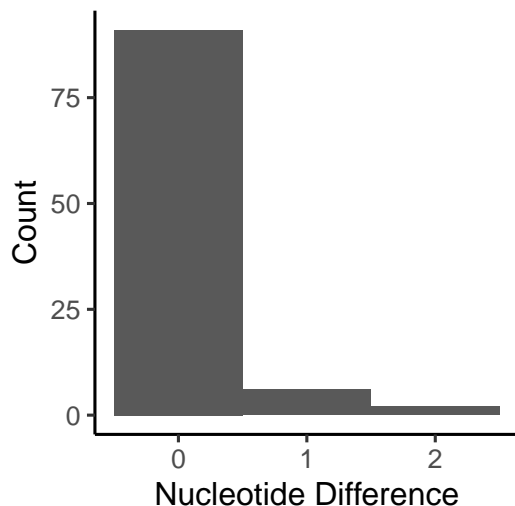
IGHV3-11*06

122 sequences assigned
62 (50.8%) exact matches, in which:
62 unique CDR3
5 unique J



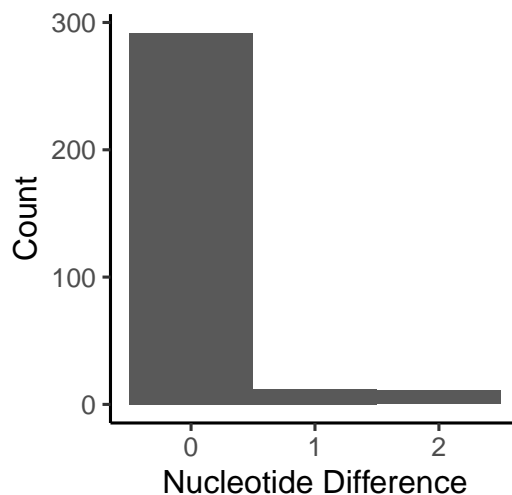
IGHV3-11*03_05

99 sequences assigned
91 (91.9%) exact matches, in which:
91 unique CDR3
6 unique J



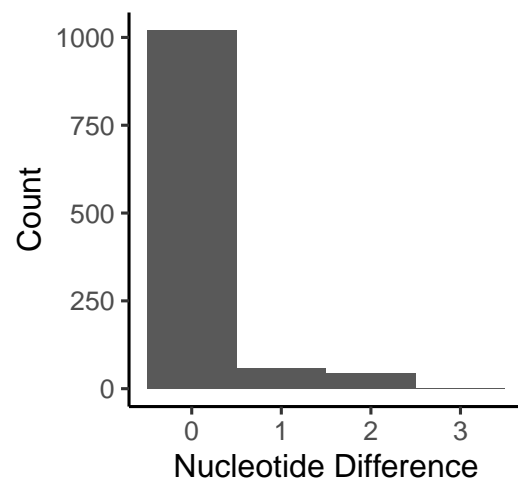
IGHV3-15*01_02

315 sequences assigned
292 (92.7%) exact matches, in which:
291 unique CDR3
7 unique J



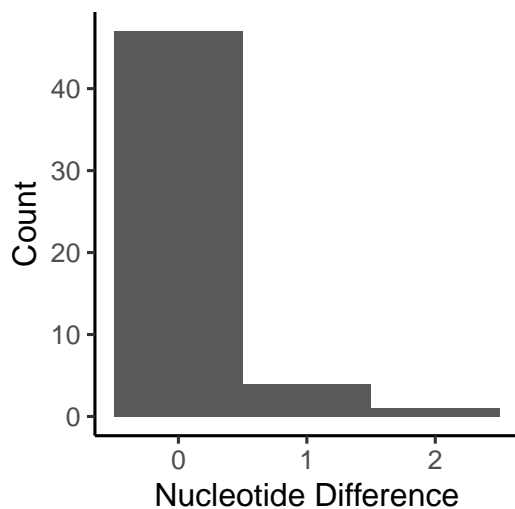
IGHV3-23*01_04

1123 sequences assigned
1020 (90.8%) exact matches, in which:
1005 unique CDR3
7 unique J



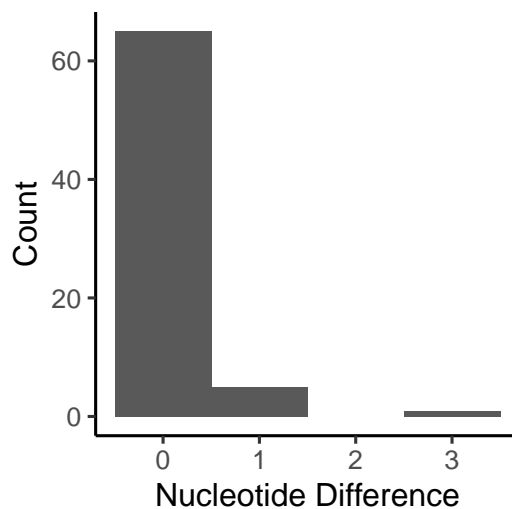
IGHV3-13*04

52 sequences assigned
47 (90.4%) exact matches, in which:
47 unique CDR3
5 unique J



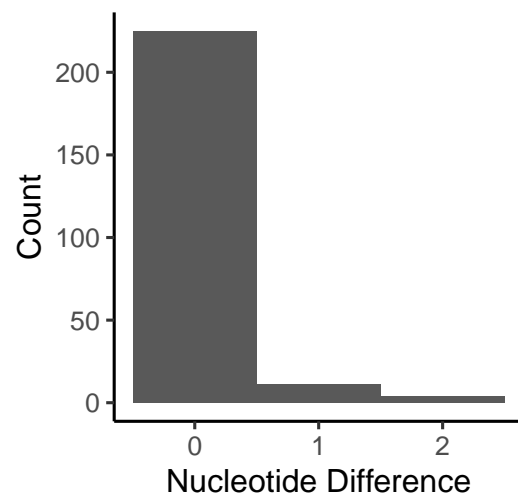
IGHV3-20*03_04

71 sequences assigned
65 (91.5%) exact matches, in which:
65 unique CDR3
6 unique J



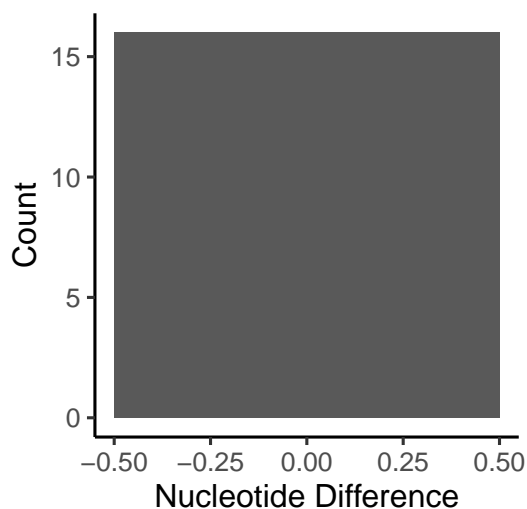
IGHV3-30*01

240 sequences assigned
225 (93.8%) exact matches, in which:
224 unique CDR3
6 unique J



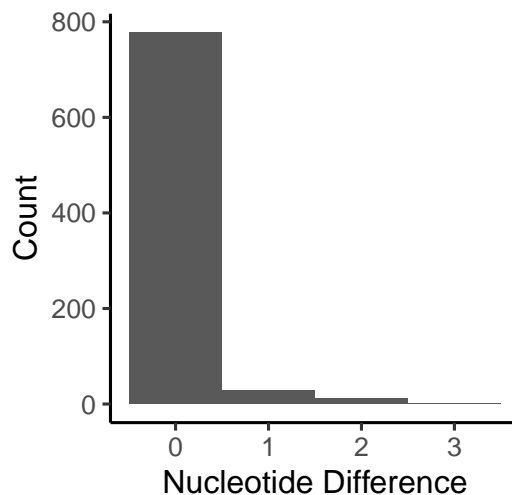
IGHV3-13*05

16 sequences assigned
16 (100%) exact matches, in which:
16 unique CDR3
5 unique J



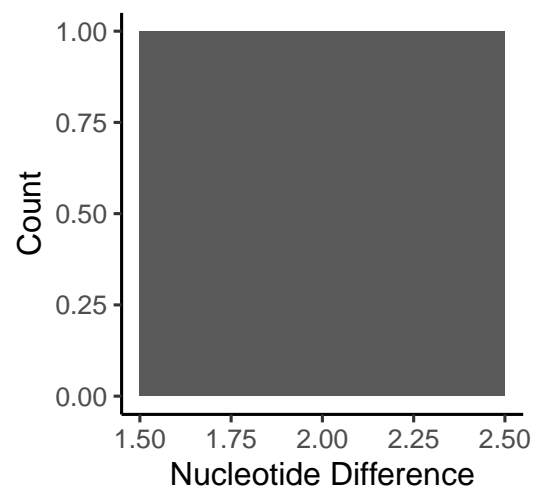
IGHV3-21*01_02

819 sequences assigned
778 (95%) exact matches, in which:
770 unique CDR3
7 unique J



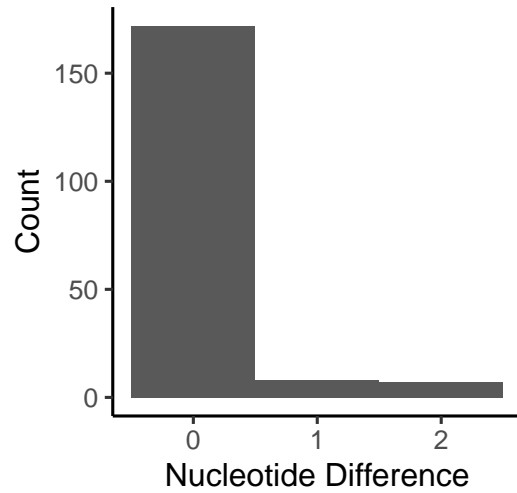
IGHV3-30-3*03

1 sequences assigned
No exact matches.



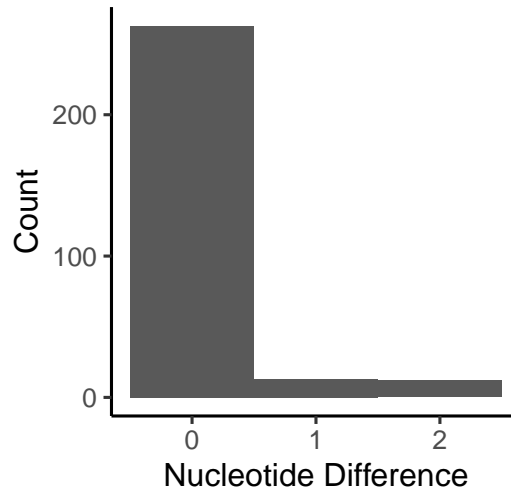
IGHV3–33*01

187 sequences assigned
172 (92%) exact matches, in which:
169 unique CDR3
6 unique J



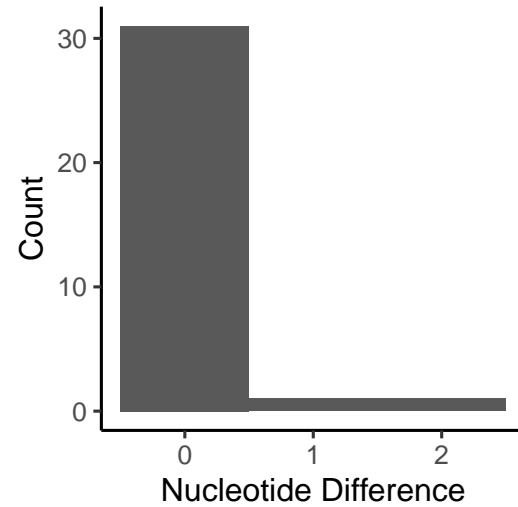
IGHV3–48*01

288 sequences assigned
263 (91.3%) exact matches, in which:
262 unique CDR3
6 unique J



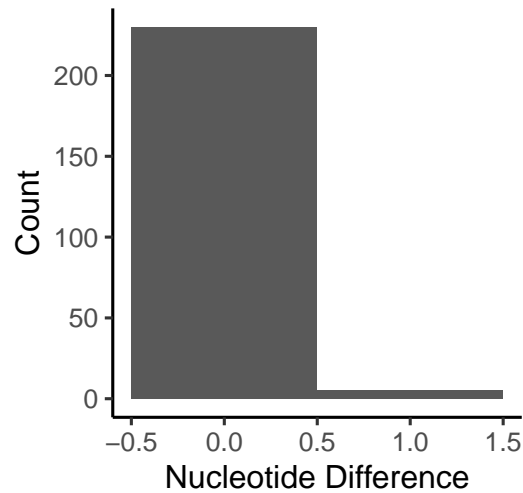
IGHV3–49*03_05

33 sequences assigned
31 (93.9%) exact matches, in which:
31 unique CDR3
5 unique J



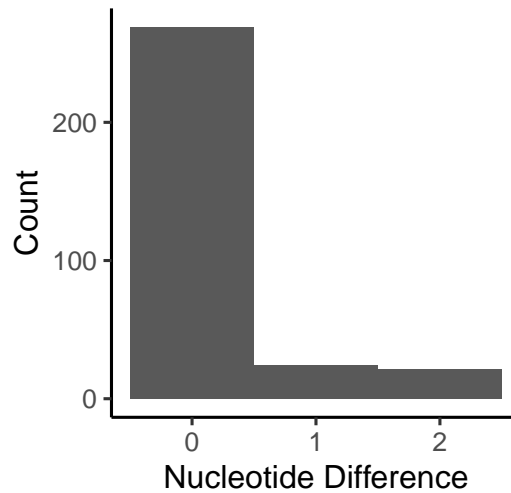
IGHV3–33*08

235 sequences assigned
230 (97.9%) exact matches, in which:
230 unique CDR3
6 unique J



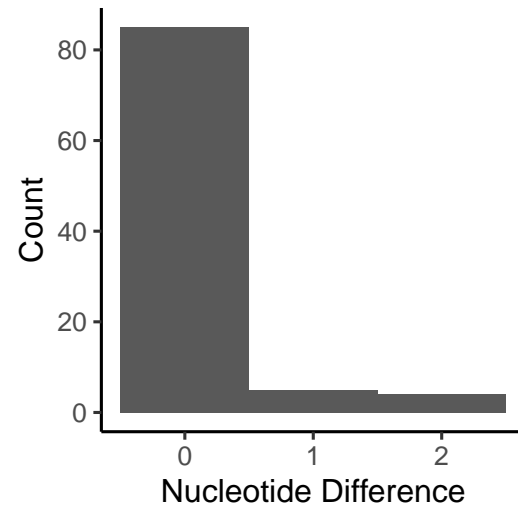
IGHV3–48*02

314 sequences assigned
269 (85.7%) exact matches, in which:
264 unique CDR3
6 unique J



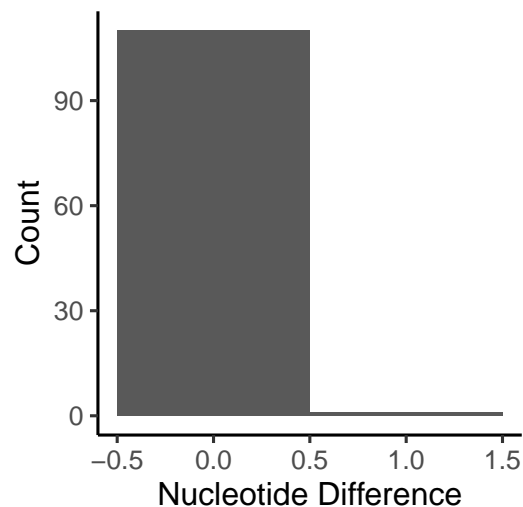
IGHV3–53*04

94 sequences assigned
85 (90.4%) exact matches, in which:
85 unique CDR3
5 unique J



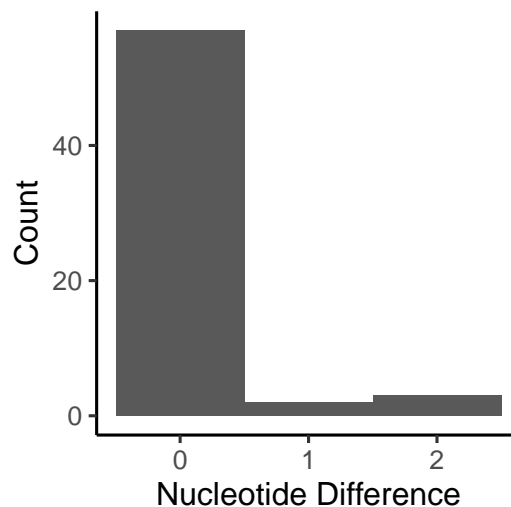
IGHV3–43*01

111 sequences assigned
110 (99.1%) exact matches, in which:
108 unique CDR3
6 unique J



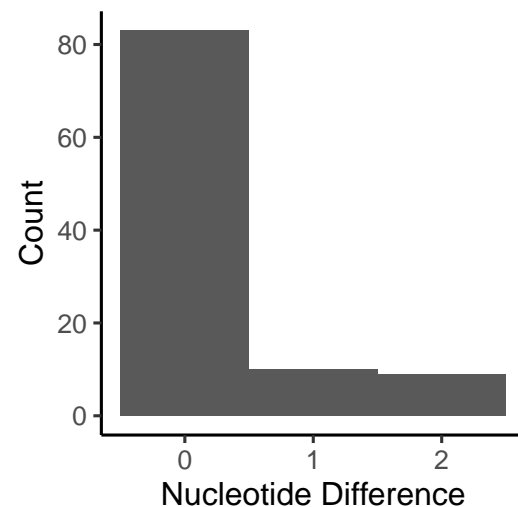
IGHV3–49*04

62 sequences assigned
57 (91.9%) exact matches, in which:
57 unique CDR3
5 unique J



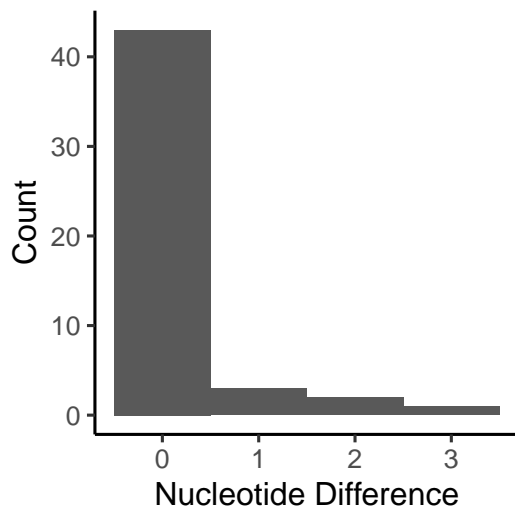
IGHV3–53*01_02

102 sequences assigned
83 (81.4%) exact matches, in which:
83 unique CDR3
6 unique J



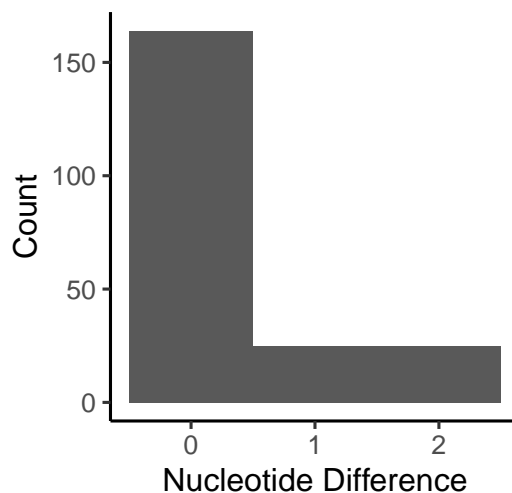
IGHV3-64*01

49 sequences assigned
43 (87.8%) exact matches, in which:
43 unique CDR3
6 unique J



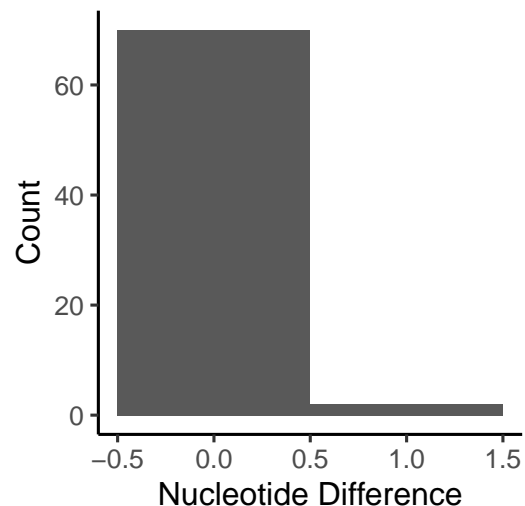
IGHV3-74*01_02

214 sequences assigned
164 (76.6%) exact matches, in which:
160 unique CDR3
6 unique J



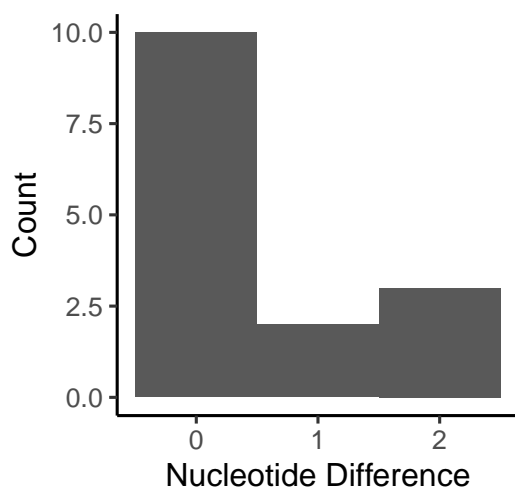
IGHV3-64D*09

72 sequences assigned
70 (97.2%) exact matches, in which:
69 unique CDR3
5 unique J



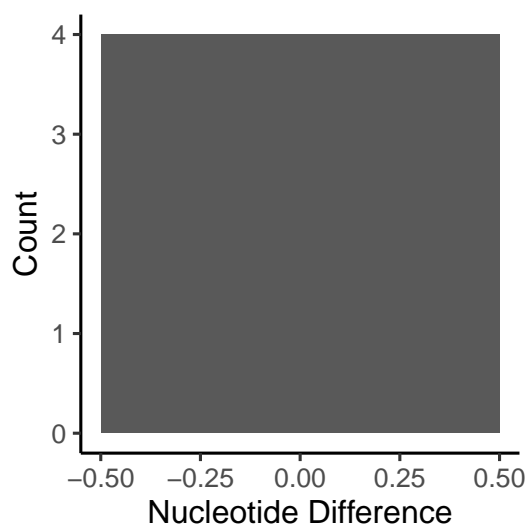
IGHV3-72*01

15 sequences assigned
10 (66.7%) exact matches, in which:
10 unique CDR3
4 unique J



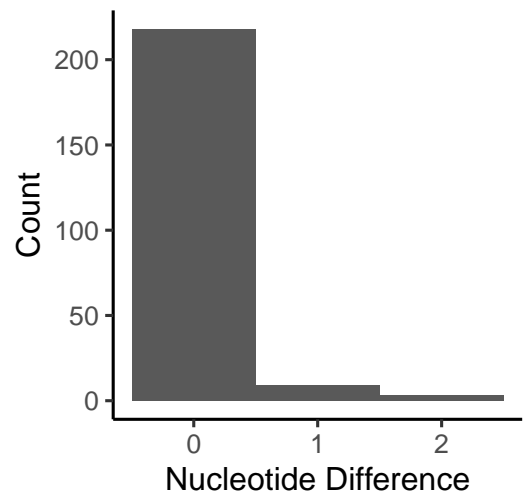
IGHV3-43D*04

4 sequences assigned
4 (100%) exact matches, in which:
4 unique CDR3
2 unique J



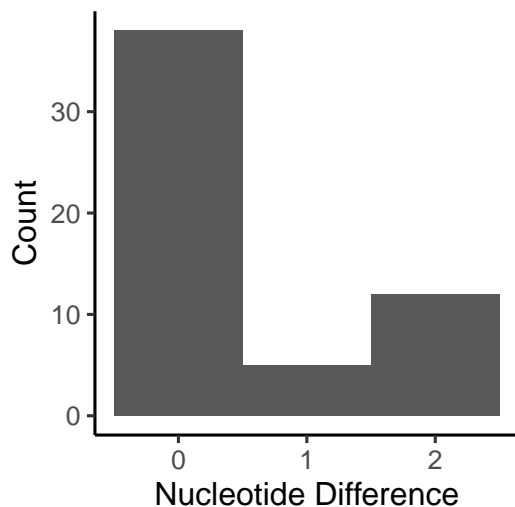
IGHV4-4*02_03

230 sequences assigned
218 (94.8%) exact matches, in which:
216 unique CDR3
7 unique J



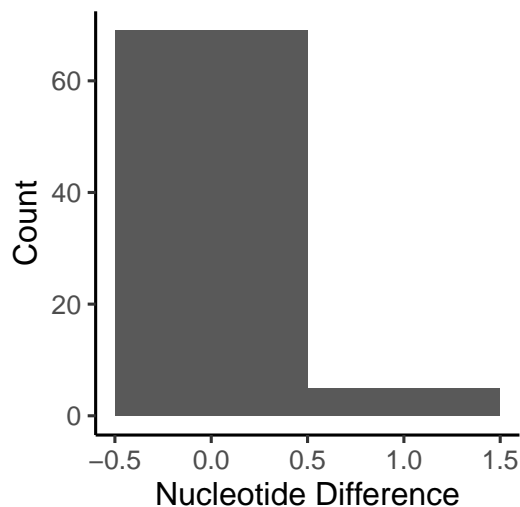
IGHV3-73*01_02

55 sequences assigned
38 (69.1%) exact matches, in which:
38 unique CDR3
6 unique J



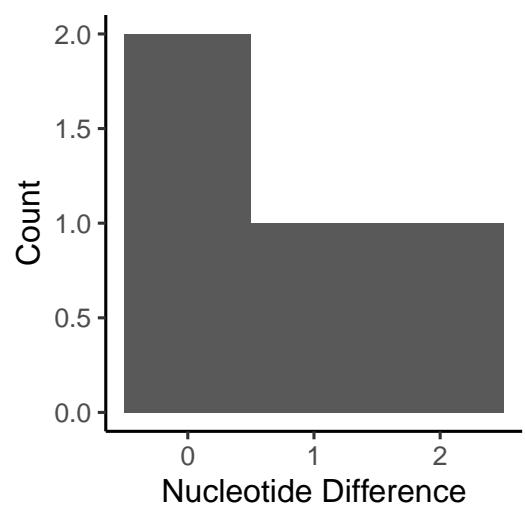
IGHV3-64D*06

74 sequences assigned
69 (93.2%) exact matches, in which:
69 unique CDR3
6 unique J



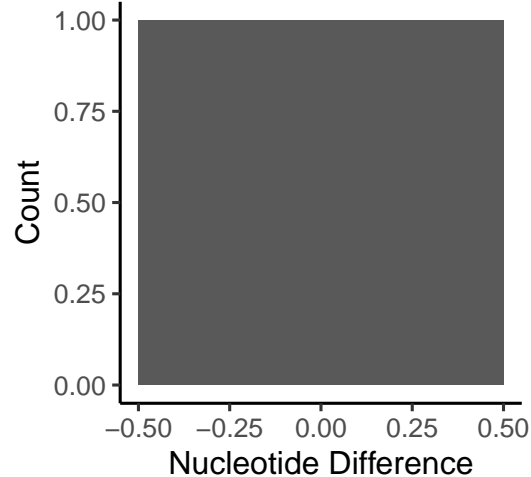
IGHV4-28*01_07

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



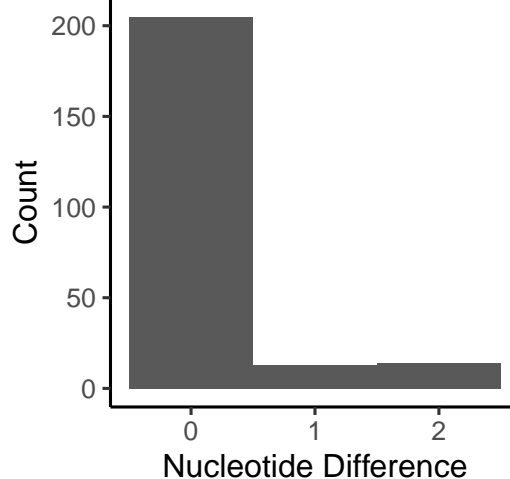
IGHV4-28*02_05

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



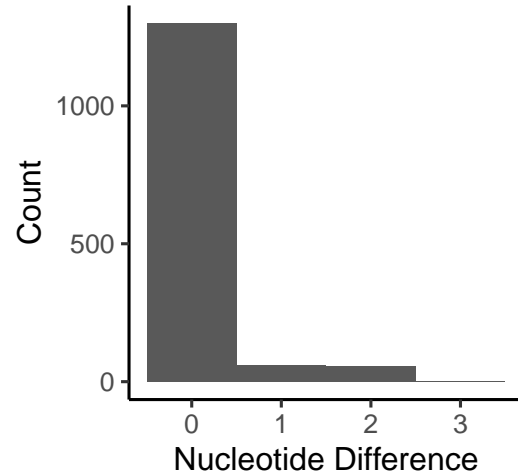
IGHV4-38-2*02_A70G

232 sequences assigned
205 (88.4%) exact matches, in which:
204 unique CDR3
6 unique J



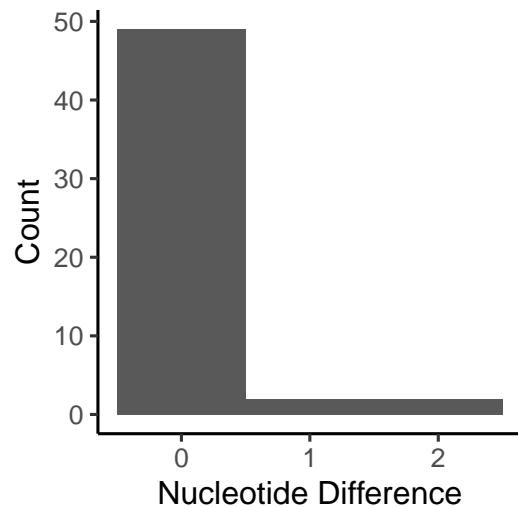
IGHV4-59*02_G88A

1418 sequences assigned
1299 (91.6%) exact matches, in which:
1287 unique CDR3
7 unique J



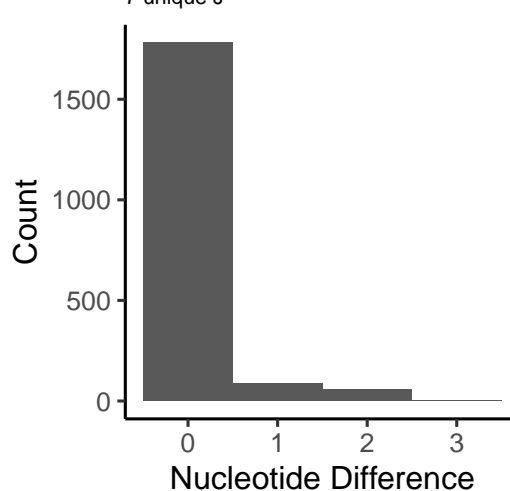
IGHV4-31*01

53 sequences assigned
49 (92.5%) exact matches, in which:
48 unique CDR3
5 unique J



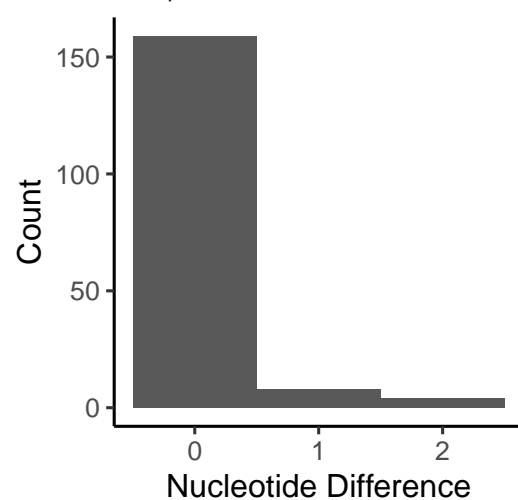
IGHV4-39*02_C258G

1924 sequences assigned
1781 (92.6%) exact matches, in which:
1759 unique CDR3
7 unique J



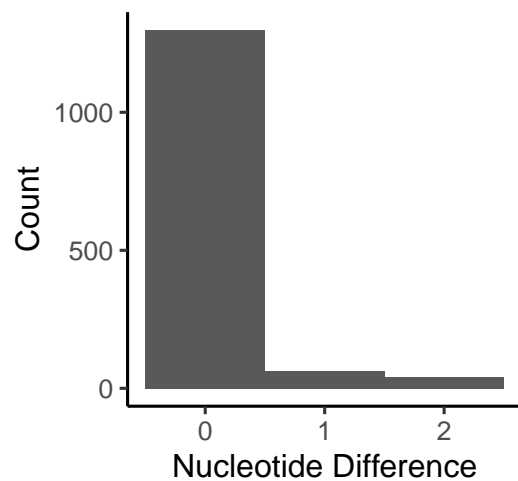
IGHV4-61*01

171 sequences assigned
159 (93%) exact matches, in which:
158 unique CDR3
6 unique J



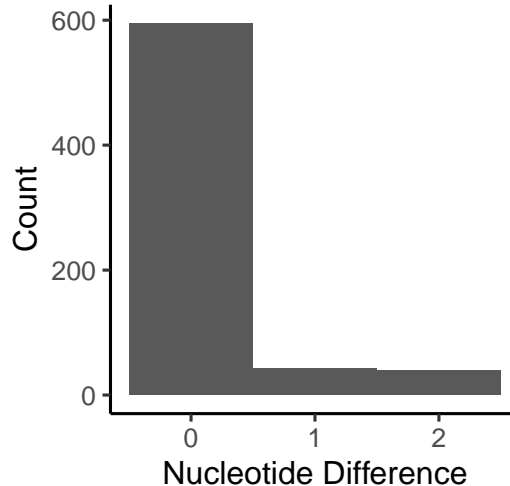
IGHV4-34*01_02

1402 sequences assigned
1298 (92.6%) exact matches, in which:
1287 unique CDR3
7 unique J



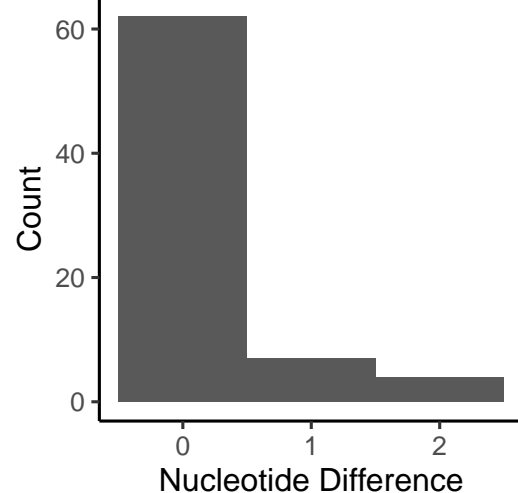
IGHV4-59*08

678 sequences assigned
595 (87.8%) exact matches, in which:
591 unique CDR3
7 unique J



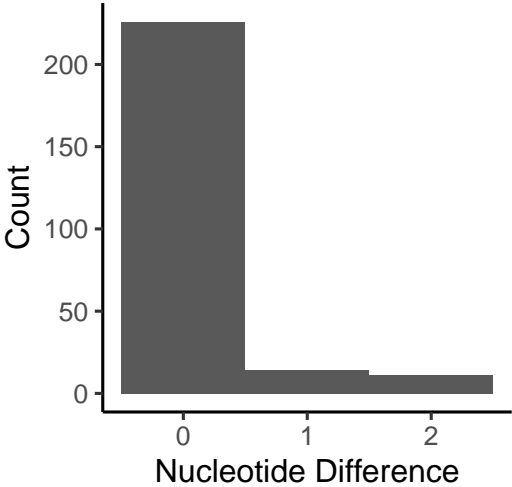
IGHV5-10-1*01_03

73 sequences assigned
62 (84.9%) exact matches, in which:
62 unique CDR3
6 unique J



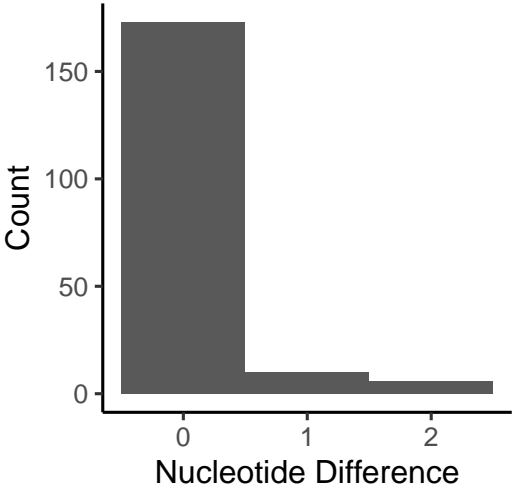
IGHV5–51*07_A128G

251 sequences assigned
226 (90%) exact matches, in which:
226 unique CDR3
7 unique J



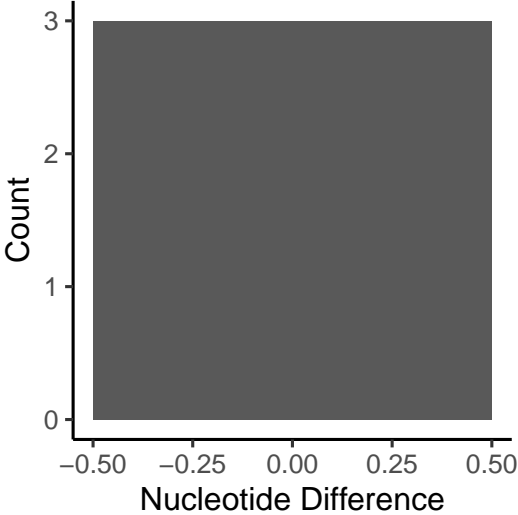
IGHV6–1*01_02

189 sequences assigned
173 (91.5%) exact matches, in which:
173 unique CDR3
7 unique J

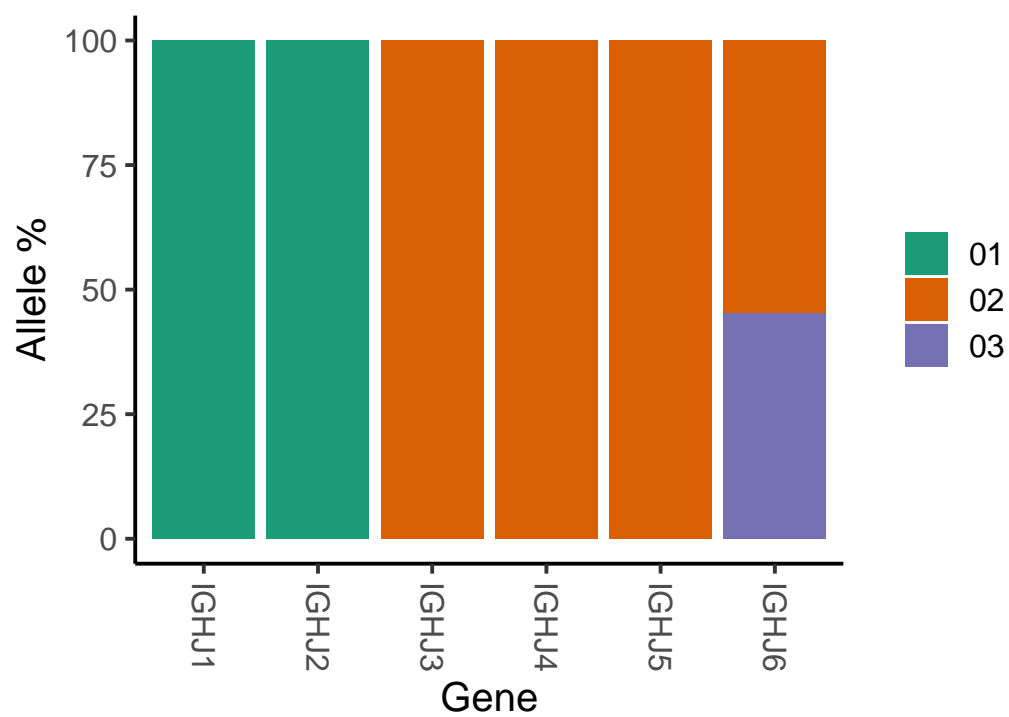


IGHV7–4–1*01

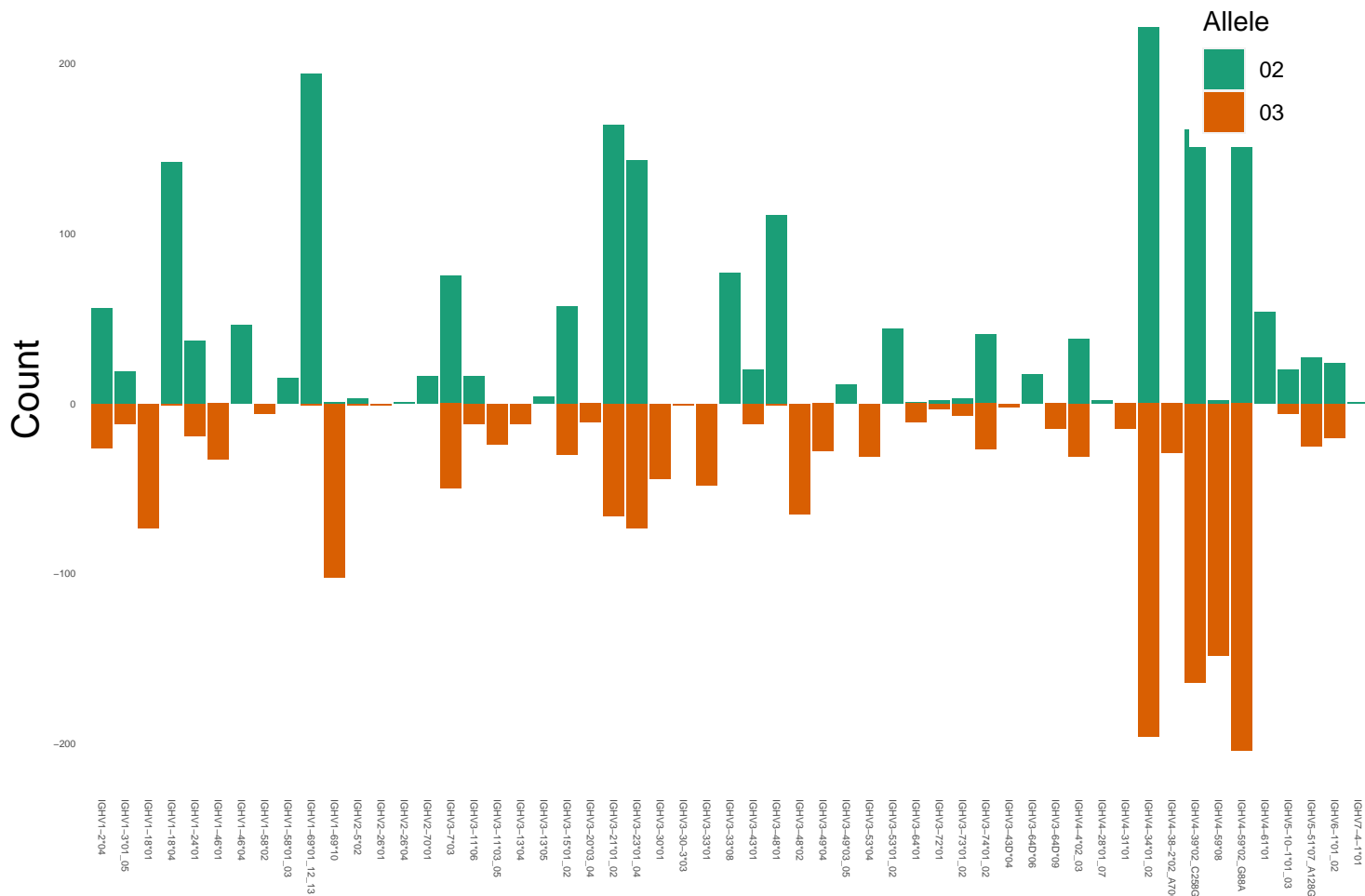
3 sequences assigned
3 (100%) exact matches, in which:
3 unique CDR3
3 unique J



Allele Usage



Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.