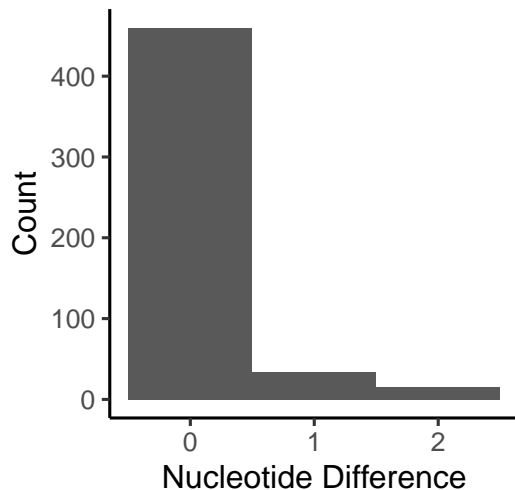


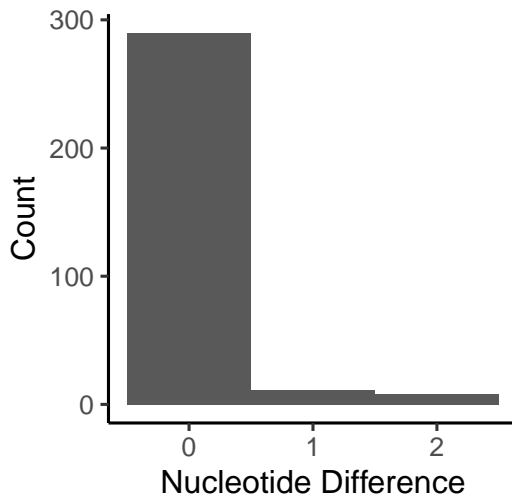
IGHV1–2*02

509 sequences assigned
460 (90.4%) exact matches, in which:
458 unique CDR3
6 unique J



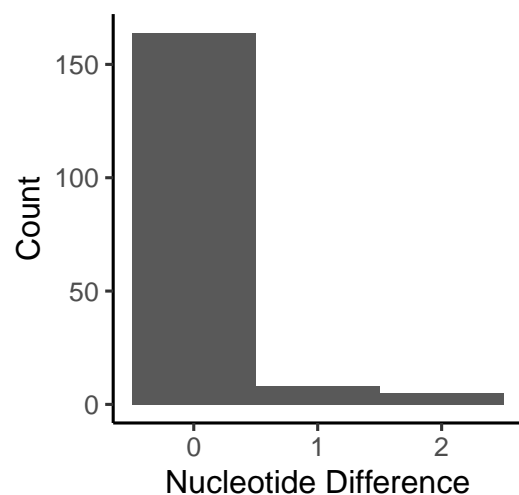
IGHV1–8*01

309 sequences assigned
290 (93.9%) exact matches, in which:
289 unique CDR3
6 unique J



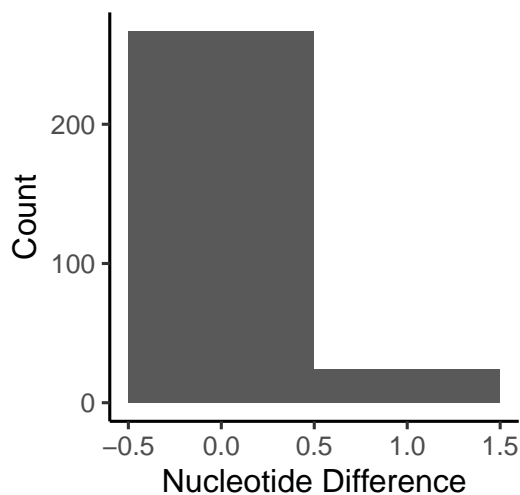
IGHV1–46*01

177 sequences assigned
164 (92.7%) exact matches, in which:
164 unique CDR3
5 unique J



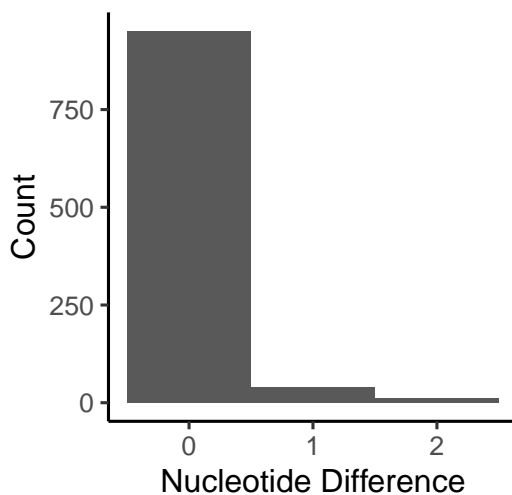
IGHV1–2*06

291 sequences assigned
267 (91.8%) exact matches, in which:
263 unique CDR3
6 unique J



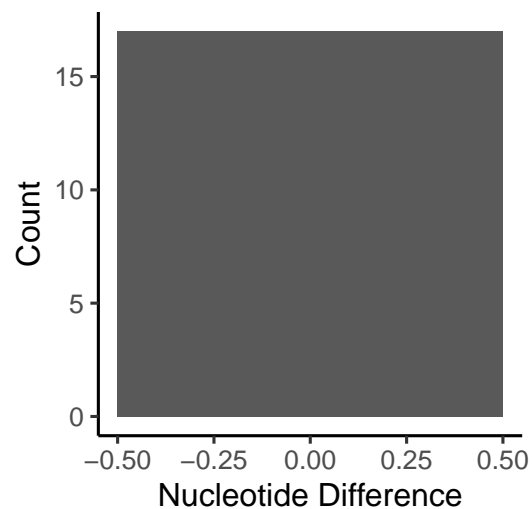
IGHV1–18*01

1001 sequences assigned
951 (95%) exact matches, in which:
947 unique CDR3
6 unique J



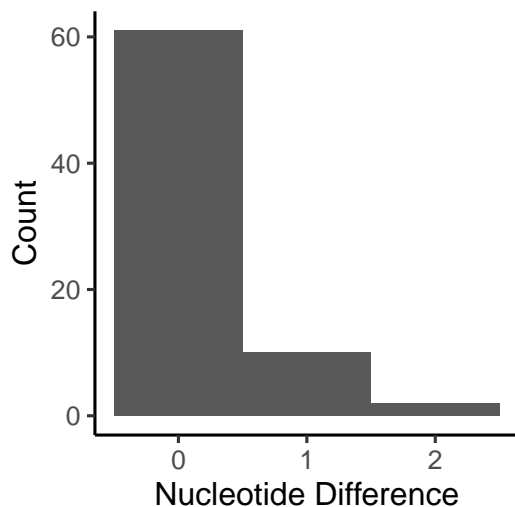
IGHV1–58*02

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



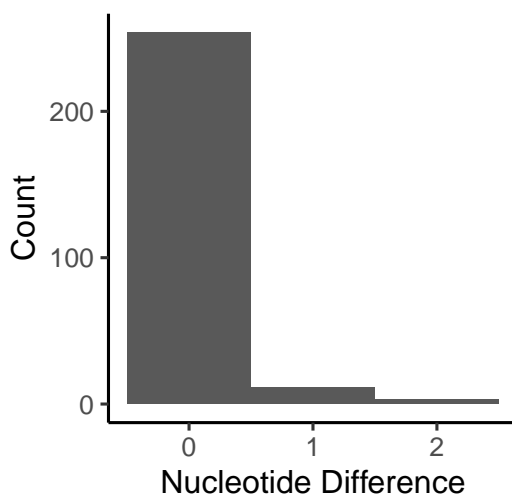
IGHV1–3*01_05

73 sequences assigned
61 (83.6%) exact matches, in which:
61 unique CDR3
6 unique J



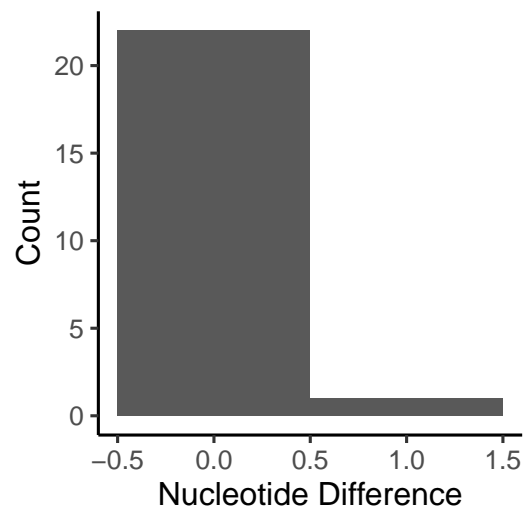
IGHV1–24*01

268 sequences assigned
254 (94.8%) exact matches, in which:
253 unique CDR3
6 unique J



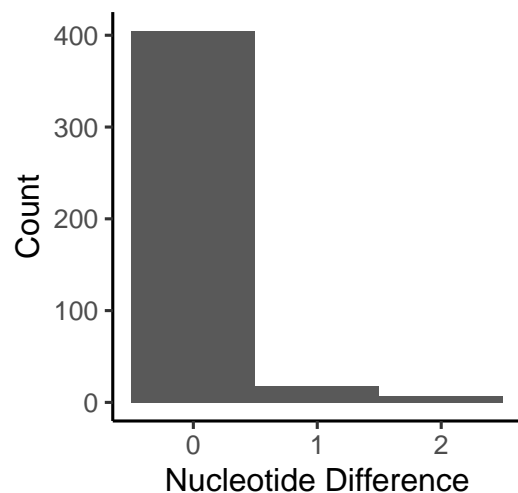
IGHV1–58*01_03

23 sequences assigned
22 (95.7%) exact matches, in which:
22 unique CDR3
4 unique J



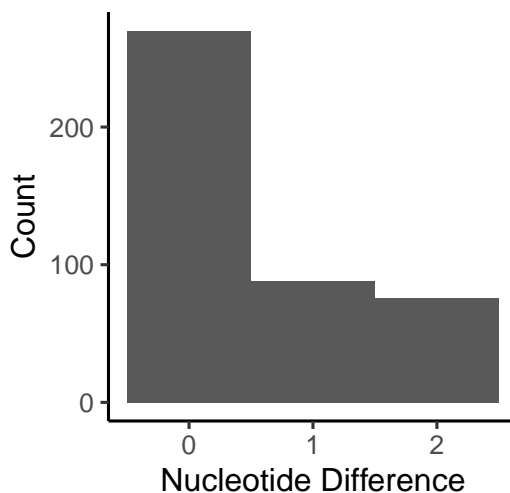
IGHV1–69*01_12_13

430 sequences assigned
405 (94.2%) exact matches, in which:
405 unique CDR3
6 unique J



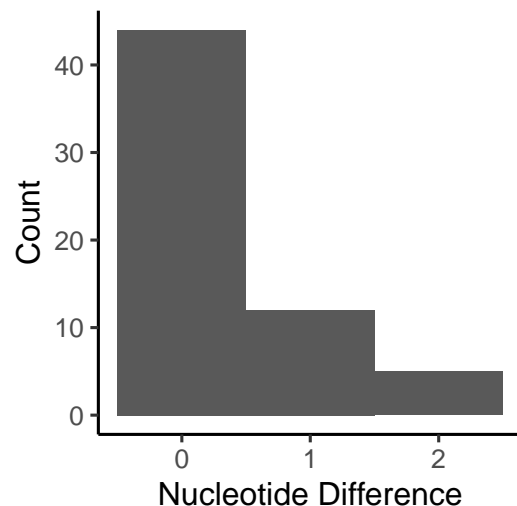
IGHV2–5*02

434 sequences assigned
270 (62.2%) exact matches, in which:
243 unique CDR3
6 unique J



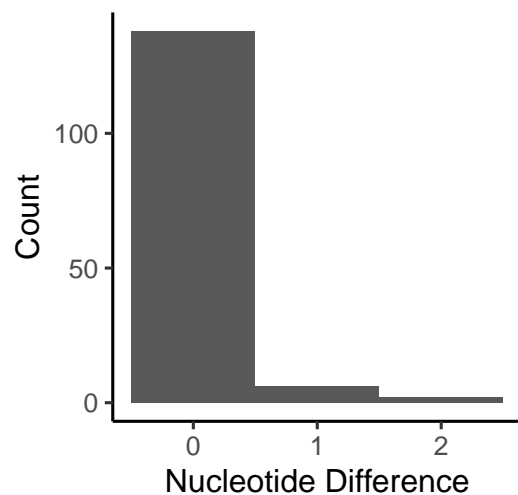
IGHV2–70*11_15

61 sequences assigned
44 (72.1%) exact matches, in which:
44 unique CDR3
5 unique J



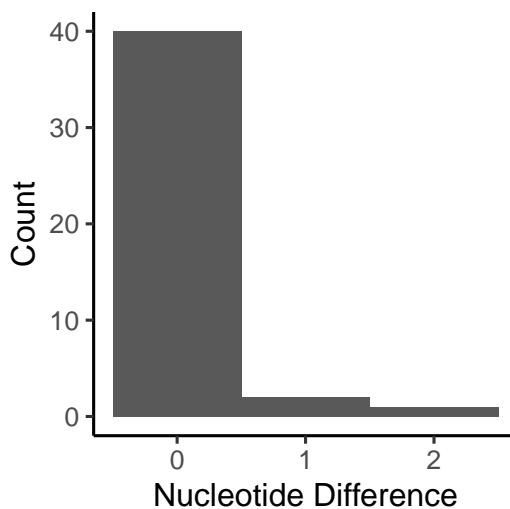
IGHV1–69*04_09

146 sequences assigned
138 (94.5%) exact matches, in which:
138 unique CDR3
6 unique J



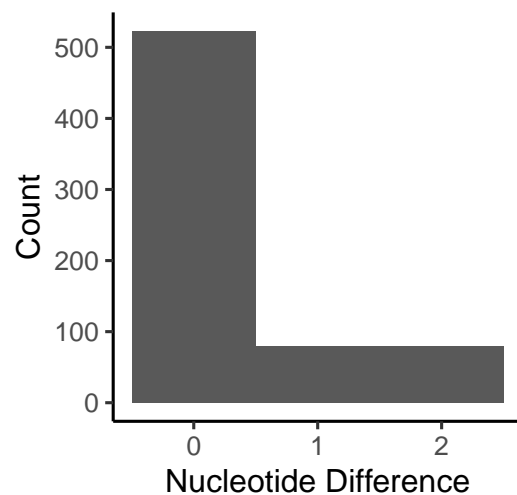
IGHV2–26*01

43 sequences assigned
40 (93%) exact matches, in which:
40 unique CDR3
6 unique J



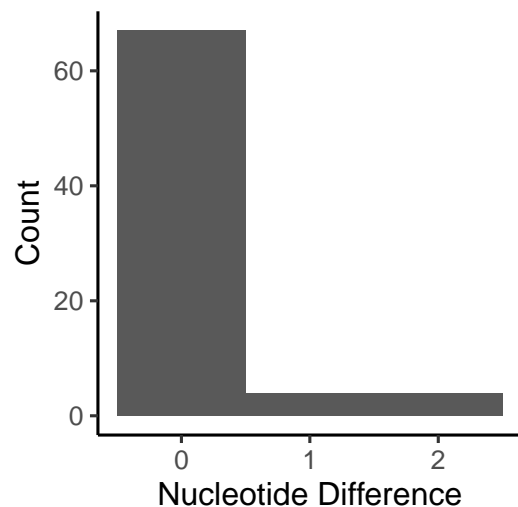
IGHV3–7*01

682 sequences assigned
523 (76.7%) exact matches, in which:
455 unique CDR3
6 unique J



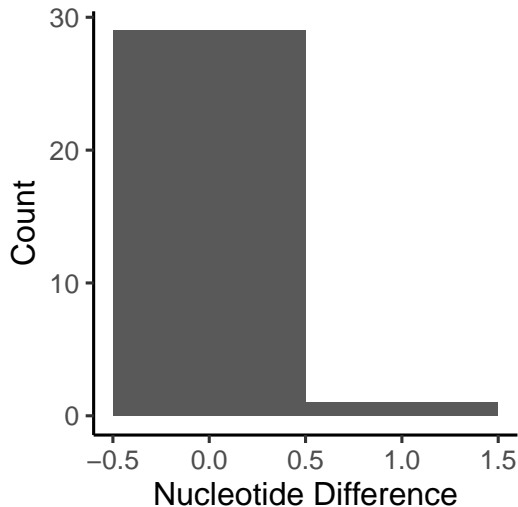
IGHV2–5*01

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



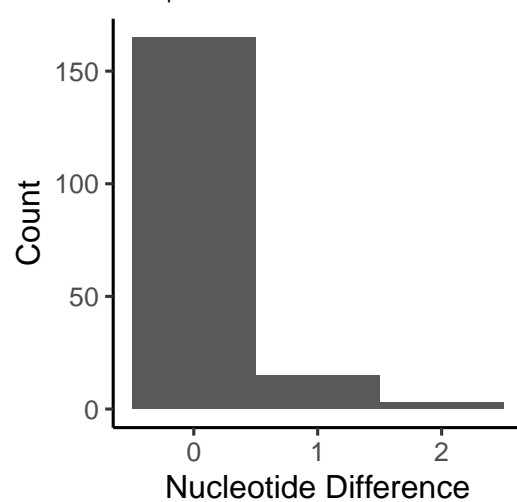
IGHV2–70*01

30 sequences assigned
29 (96.7%) exact matches, in which:
29 unique CDR3
5 unique J



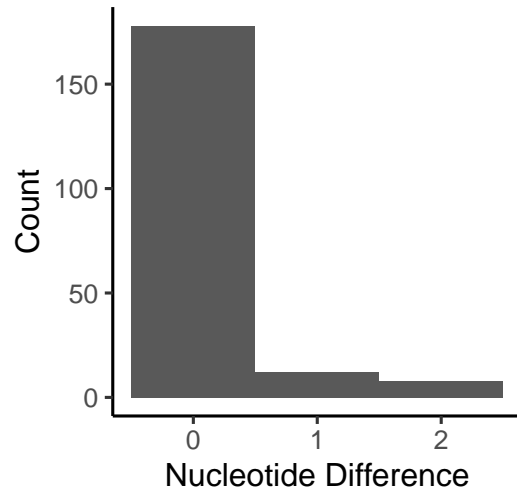
IGHV3–9*01

183 sequences assigned
165 (90.2%) exact matches, in which:
157 unique CDR3
6 unique J



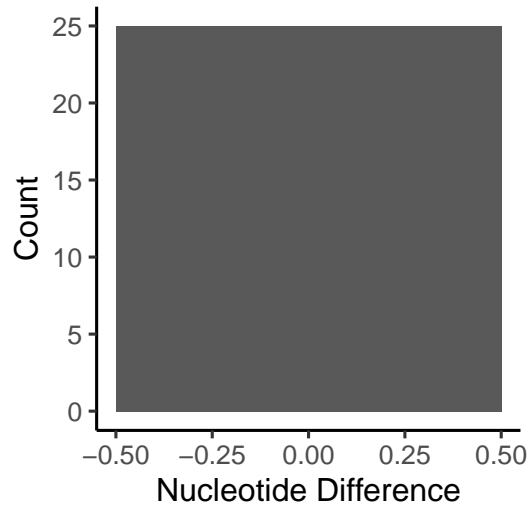
IGHV3-11*01

198 sequences assigned
178 (89.9%) exact matches, in which:
164 unique CDR3
6 unique J



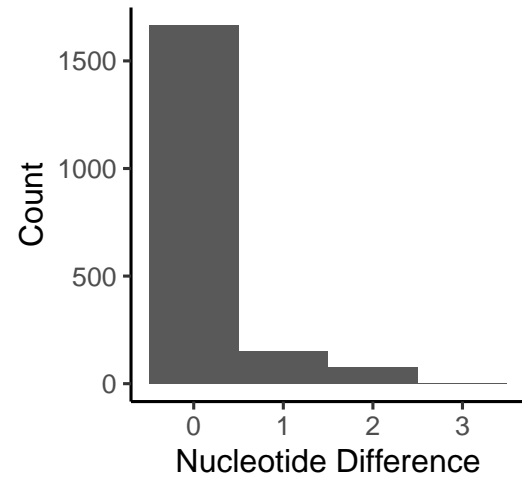
IGHV3-13*05

25 sequences assigned
25 (100%) exact matches, in which:
25 unique CDR3
5 unique J



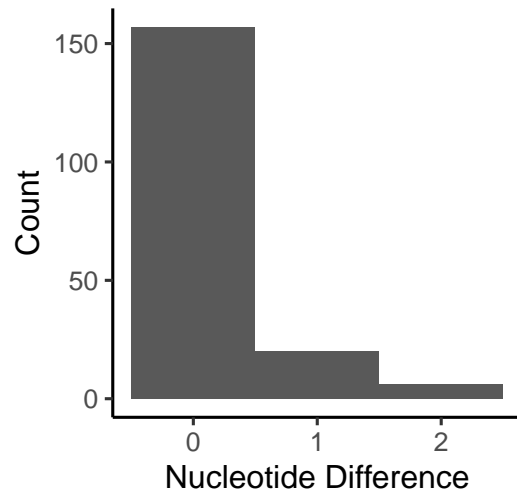
IGHV3-21*01_02

1899 sequences assigned
1665 (87.7%) exact matches, in which:
1385 unique CDR3
6 unique J



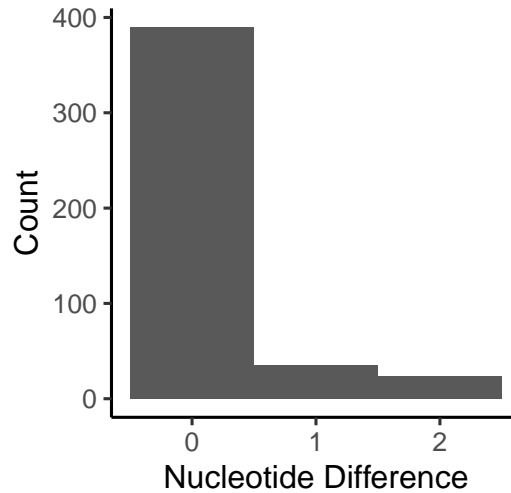
IGHV3-11*06

183 sequences assigned
157 (85.8%) exact matches, in which:
143 unique CDR3
6 unique J



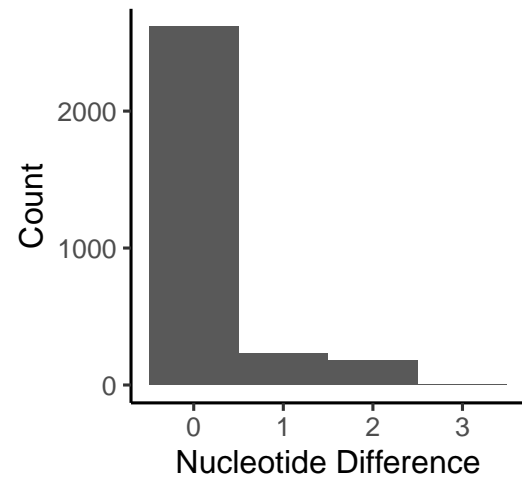
IGHV3-15*01_02

449 sequences assigned
390 (86.9%) exact matches, in which:
334 unique CDR3
6 unique J



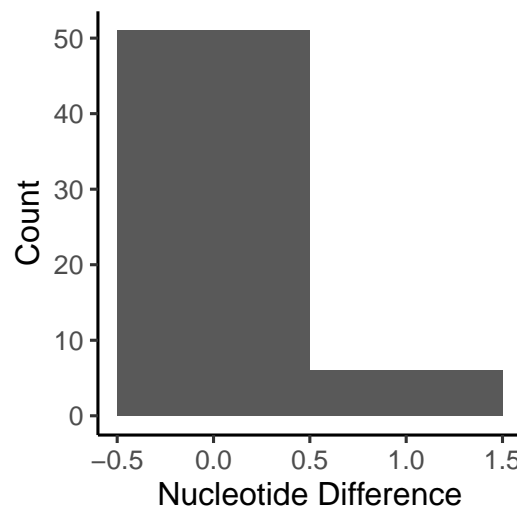
IGHV3-23*01_04

3024 sequences assigned
2616 (86.5%) exact matches, in which:
2380 unique CDR3
6 unique J



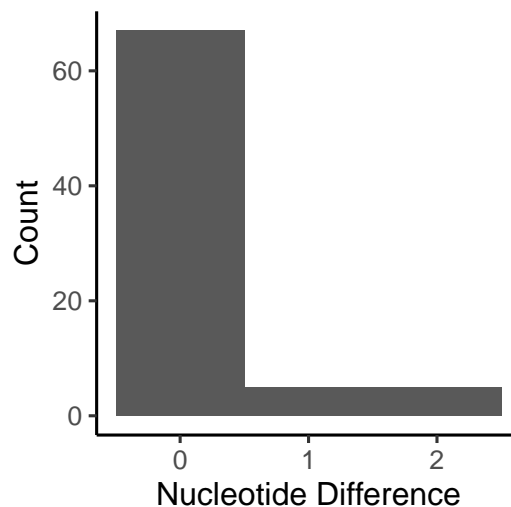
IGHV3-13*01

57 sequences assigned
51 (89.5%) exact matches, in which:
44 unique CDR3
5 unique J



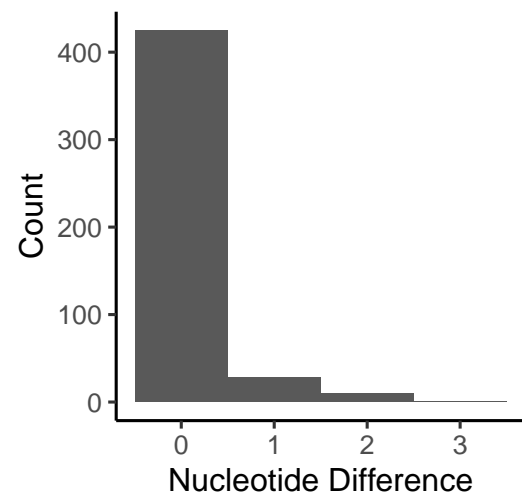
IGHV3-20*01_02

77 sequences assigned
67 (87%) exact matches, in which:
64 unique CDR3
5 unique J



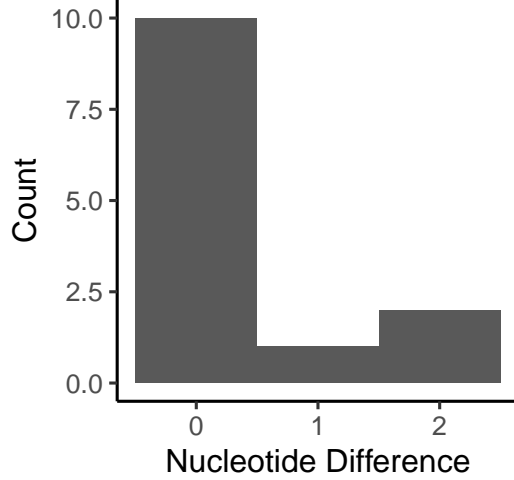
IGHV3-30-3*01

464 sequences assigned
425 (91.6%) exact matches, in which:
409 unique CDR3
6 unique J



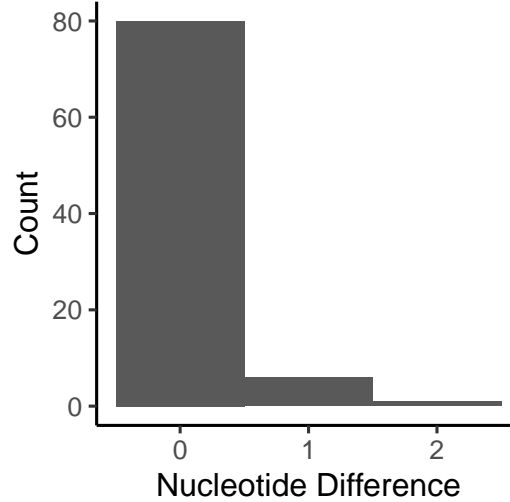
IGHV3-30*03

13 sequences assigned
10 (76.9%) exact matches, in which:
9 unique CDR3
3 unique J



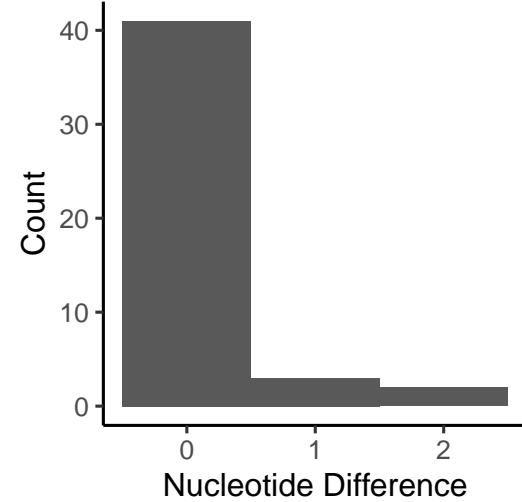
IGHV3-43*02

87 sequences assigned
80 (92%) exact matches, in which:
78 unique CDR3
4 unique J



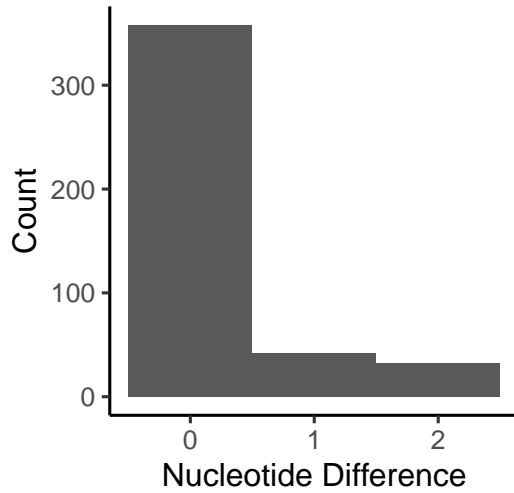
IGHV3-49*04

46 sequences assigned
41 (89.1%) exact matches, in which:
39 unique CDR3
4 unique J



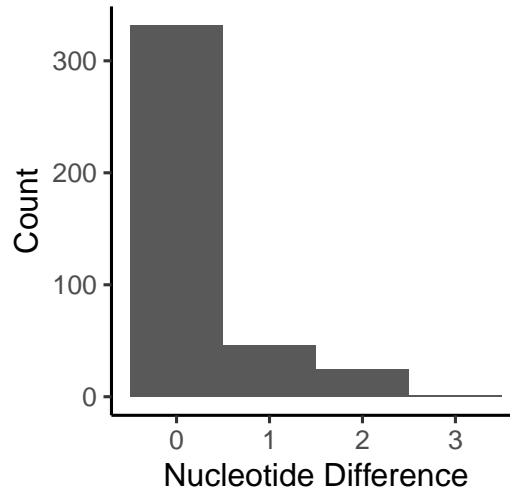
IGHV3-33*01

432 sequences assigned
358 (82.9%) exact matches, in which:
325 unique CDR3
6 unique J



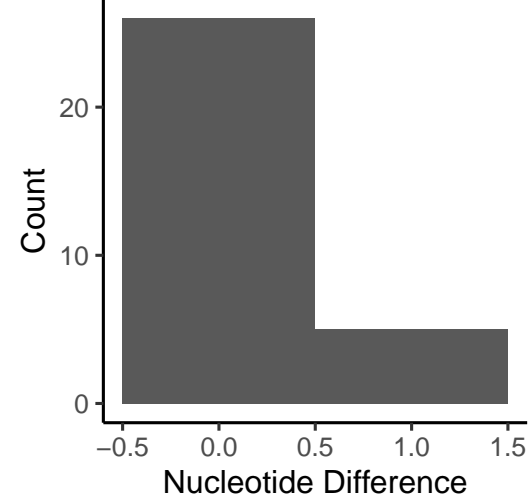
IGHV3-48*02

404 sequences assigned
332 (82.2%) exact matches, in which:
287 unique CDR3
6 unique J



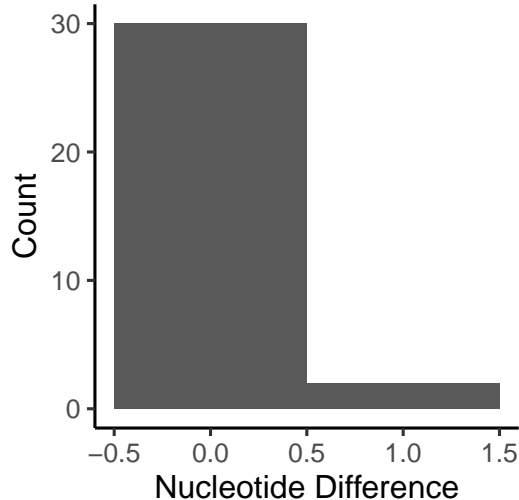
IGHV3-49*03_05

31 sequences assigned
26 (83.9%) exact matches, in which:
25 unique CDR3
5 unique J



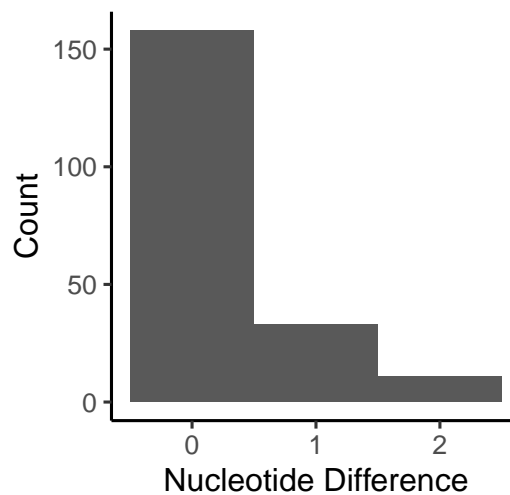
IGHV3-43*01

32 sequences assigned
30 (93.8%) exact matches, in which:
29 unique CDR3
5 unique J



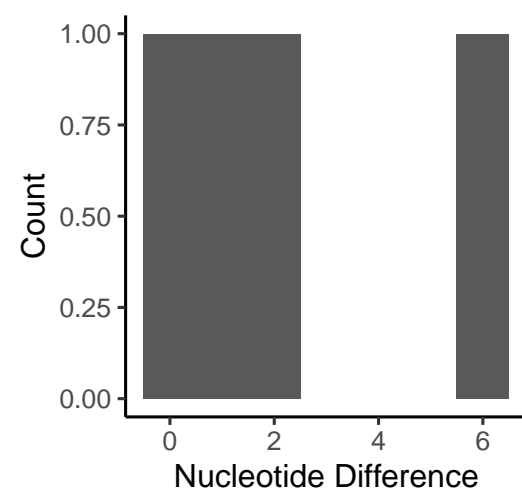
IGHV3-48*03

202 sequences assigned
158 (78.2%) exact matches, in which:
147 unique CDR3
6 unique J



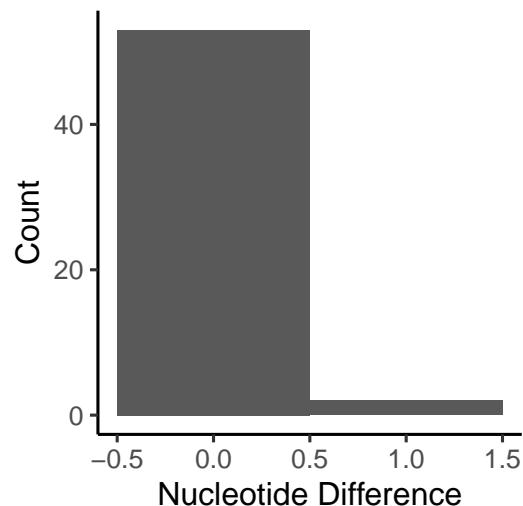
IGHV3-52*01_03

4 sequences assigned
1 (25%) exact matches, in which:
1 unique CDR3
1 unique J



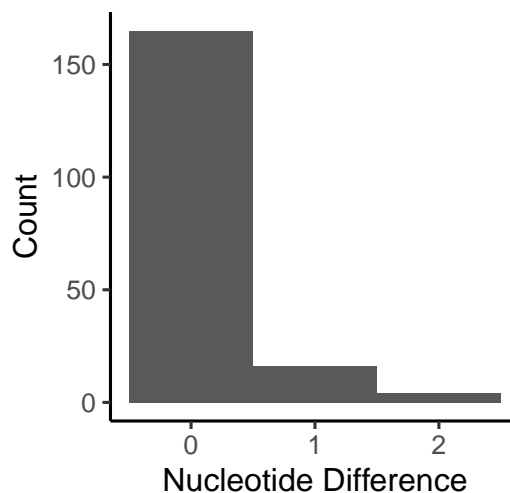
IGHV3-53*04

55 sequences assigned
53 (96.4%) exact matches, in which:
52 unique CDR3
5 unique J



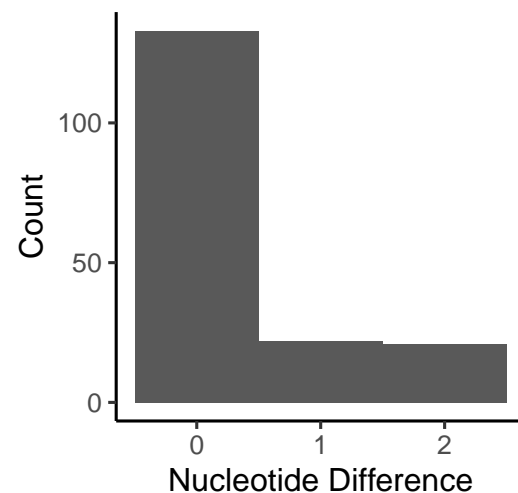
IGHV3-66*01

185 sequences assigned
165 (89.2%) exact matches, in which:
153 unique CDR3
5 unique J



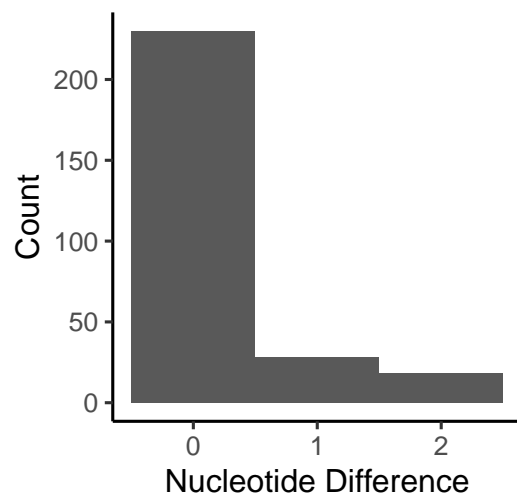
IGHV3-74*01_02

176 sequences assigned
133 (75.6%) exact matches, in which:
112 unique CDR3
6 unique J



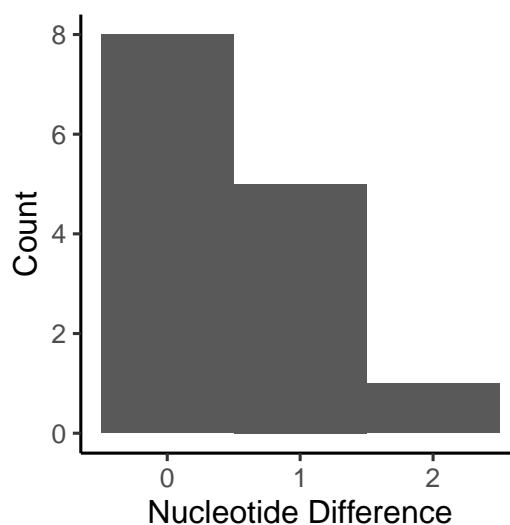
IGHV3-53*01_02

276 sequences assigned
230 (83.3%) exact matches, in which:
209 unique CDR3
6 unique J



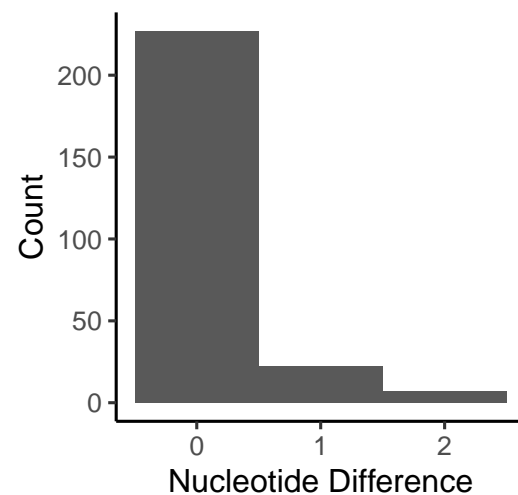
IGHV3-72*01

14 sequences assigned
8 (57.1%) exact matches, in which:
7 unique CDR3
3 unique J



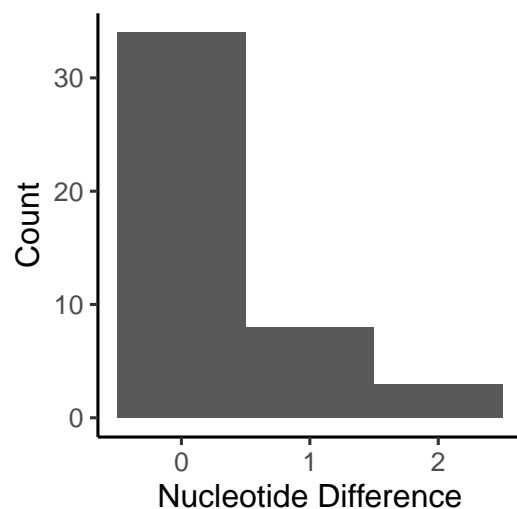
IGHV3-64D*06

256 sequences assigned
227 (88.7%) exact matches, in which:
220 unique CDR3
6 unique J



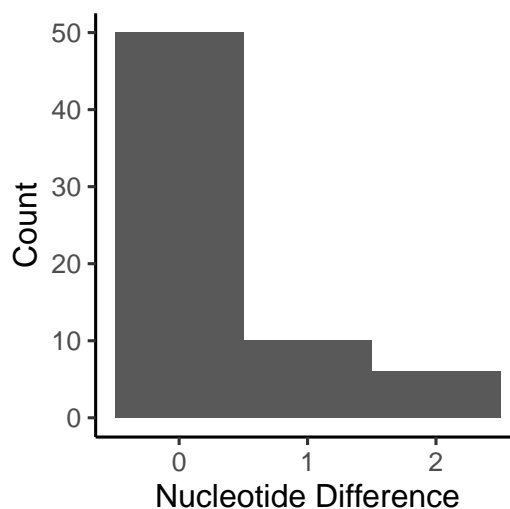
IGHV3-64*01

45 sequences assigned
34 (75.6%) exact matches, in which:
32 unique CDR3
5 unique J



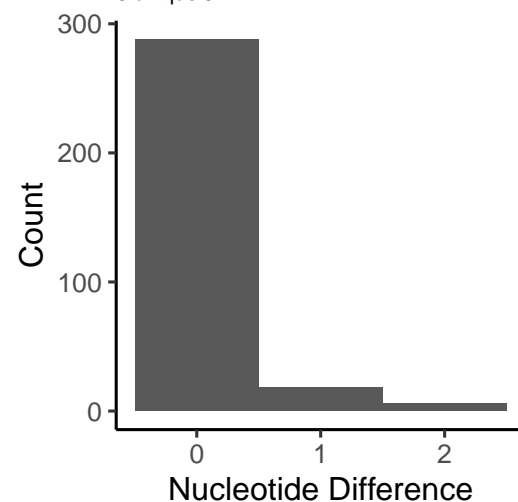
IGHV3-73*01_02

66 sequences assigned
50 (75.8%) exact matches, in which:
37 unique CDR3
4 unique J



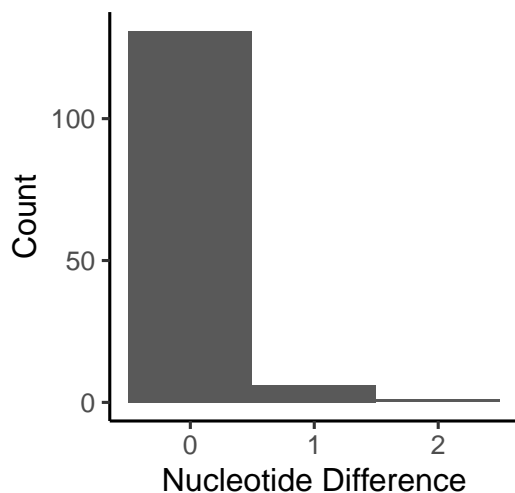
IGHV4-4*07

312 sequences assigned
288 (92.3%) exact matches, in which:
279 unique CDR3
6 unique J



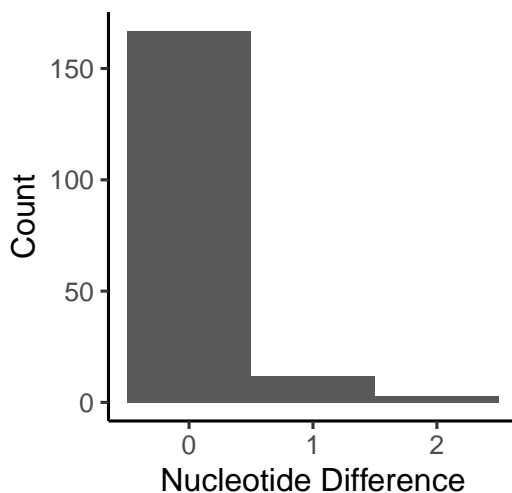
IGHV4-4*02_03

138 sequences assigned
131 (94.9%) exact matches, in which:
127 unique CDR3
6 unique J



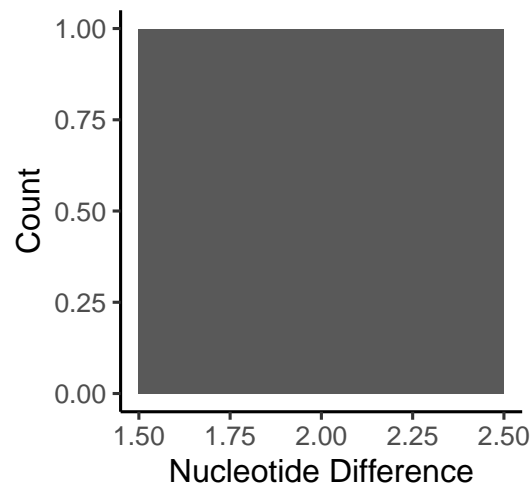
IGHV4-30-4*01

182 sequences assigned
167 (91.8%) exact matches, in which:
163 unique CDR3
6 unique J



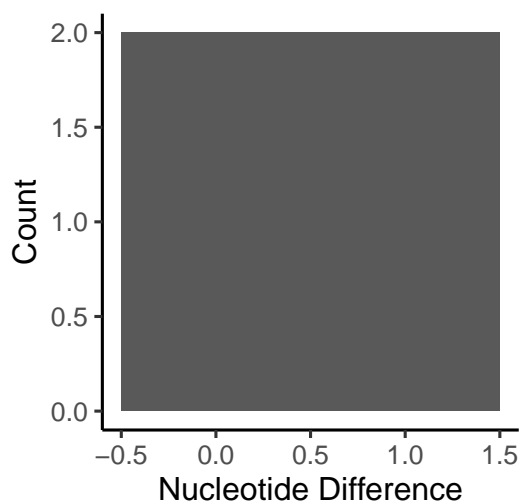
IGHV4-39*02

1 sequences assigned
No exact matches.



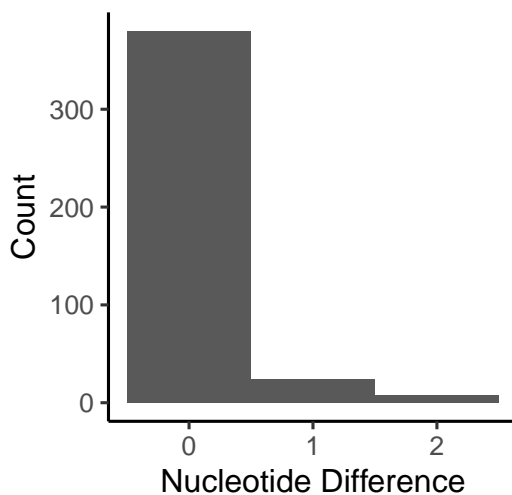
IGHV4-28*01_07

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



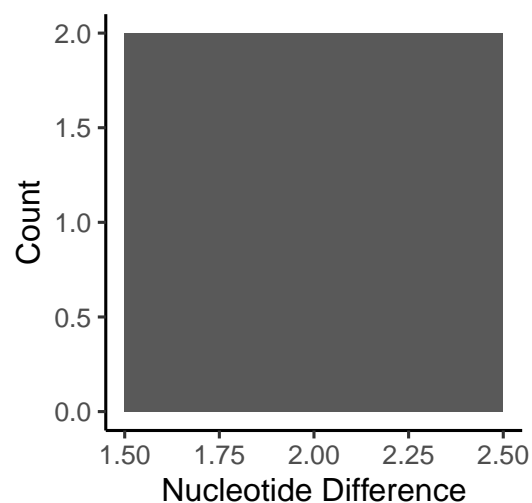
IGHV4-31*02

412 sequences assigned
380 (92.2%) exact matches, in which:
371 unique CDR3
6 unique J



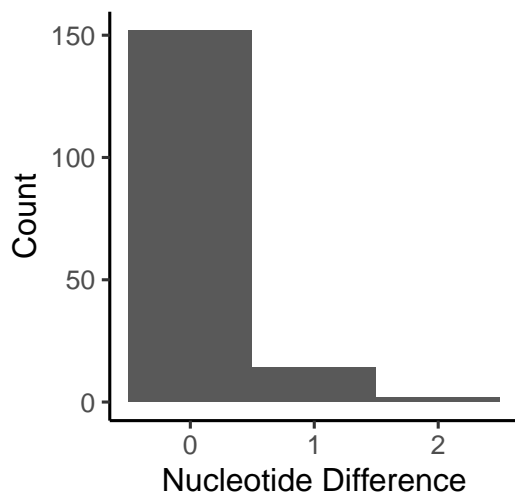
IGHV4-39*07

2 sequences assigned
No exact matches.



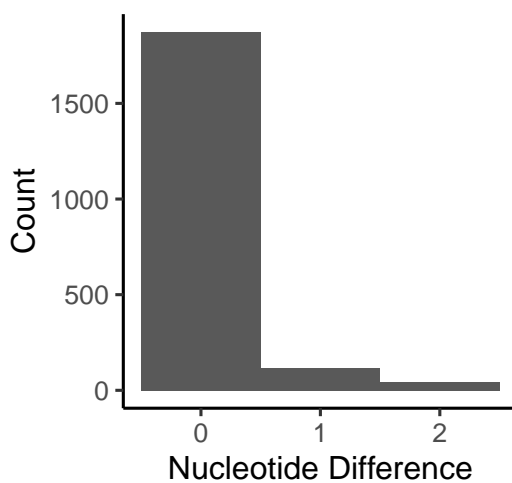
IGHV4-30-2*01

168 sequences assigned
152 (90.5%) exact matches, in which:
151 unique CDR3
6 unique J



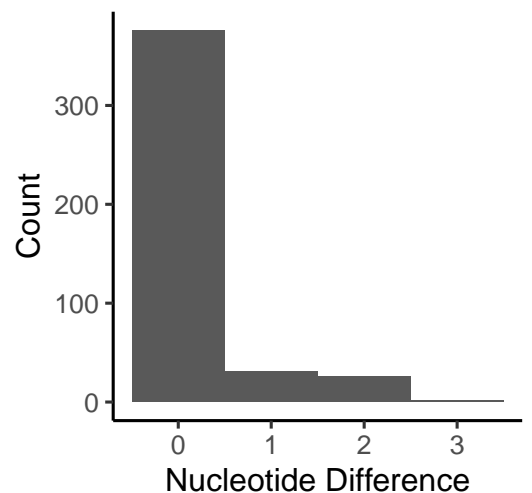
IGHV4-34*01_02

2036 sequences assigned
1873 (92%) exact matches, in which:
1840 unique CDR3
6 unique J



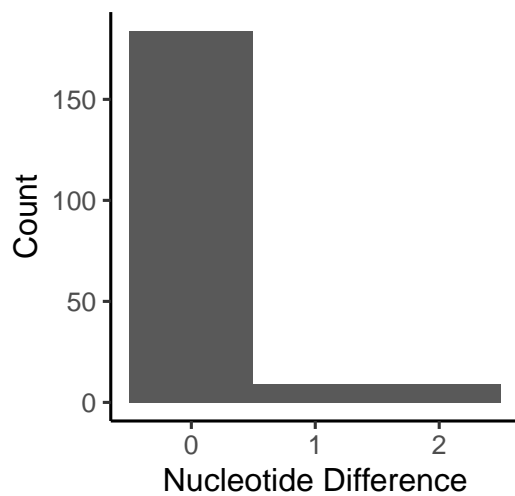
IGHV4-59*08

435 sequences assigned
376 (86.4%) exact matches, in which:
368 unique CDR3
6 unique J



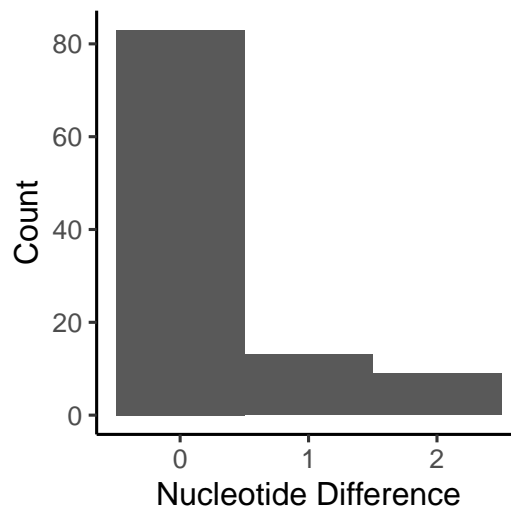
IGHV4–61*01

202 sequences assigned
184 (91.1%) exact matches, in which:
176 unique CDR3
6 unique J



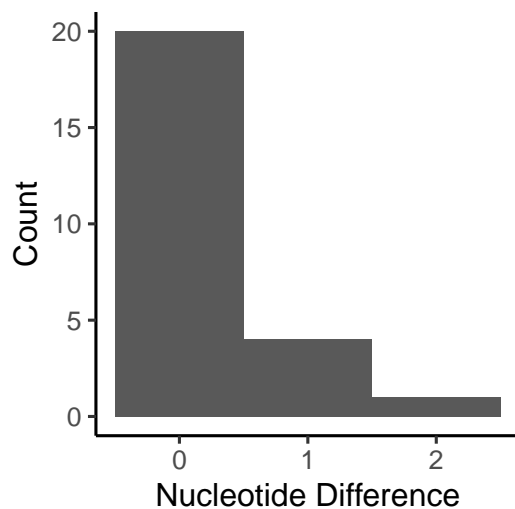
IGHV7–4–1*02

105 sequences assigned
83 (79%) exact matches, in which:
82 unique CDR3
5 unique J



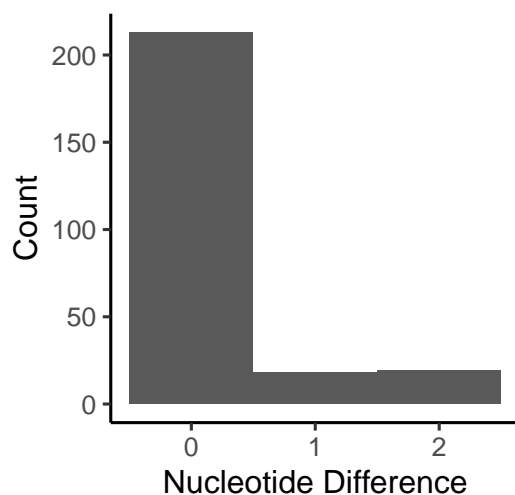
IGHV5–10–1*01_03

25 sequences assigned
20 (80%) exact matches, in which:
20 unique CDR3
4 unique J



IGHV6–1*01_02

250 sequences assigned
213 (85.2%) exact matches, in which:
212 unique CDR3
6 unique J



Allele Usage



[illegible]