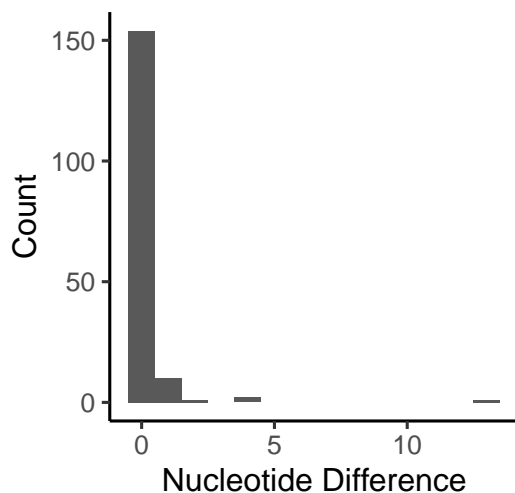


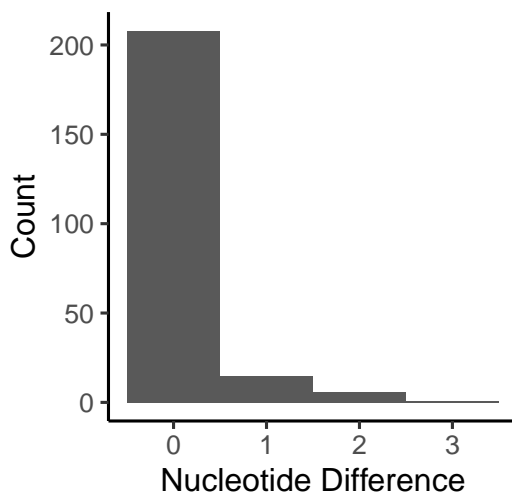
IGHV1-2*04

168 sequences assigned
154 (91.7%) exact matches, in which:
152 unique CDR3
6 unique J



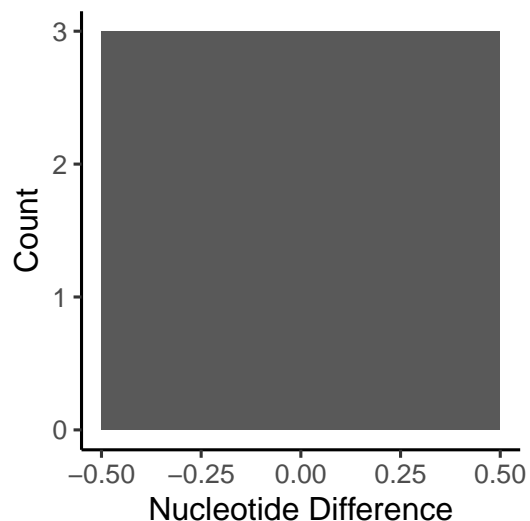
IGHV1-8*01

230 sequences assigned
208 (90.4%) exact matches, in which:
207 unique CDR3
6 unique J



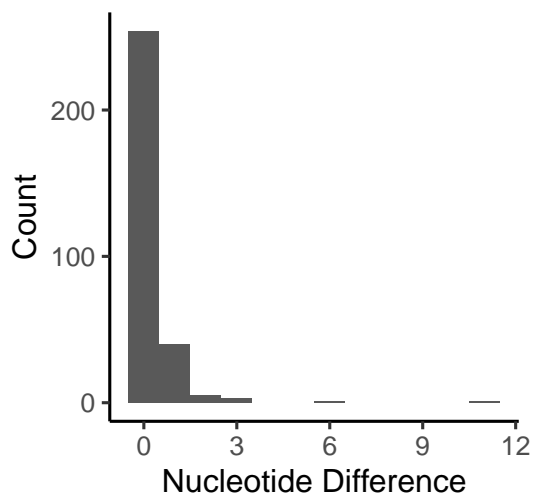
IGHV1-45*02

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



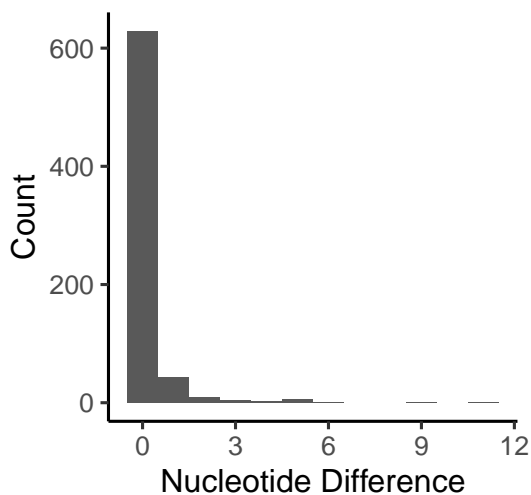
IGHV1-2*06

304 sequences assigned
254 (83.6%) exact matches, in which:
254 unique CDR3
6 unique J



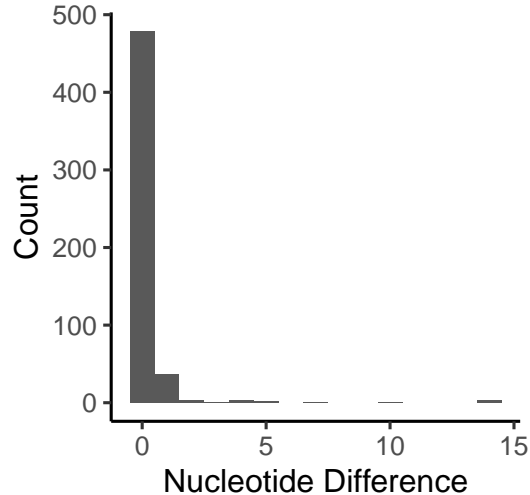
IGHV1-18*01

697 sequences assigned
629 (90.2%) exact matches, in which:
625 unique CDR3
6 unique J



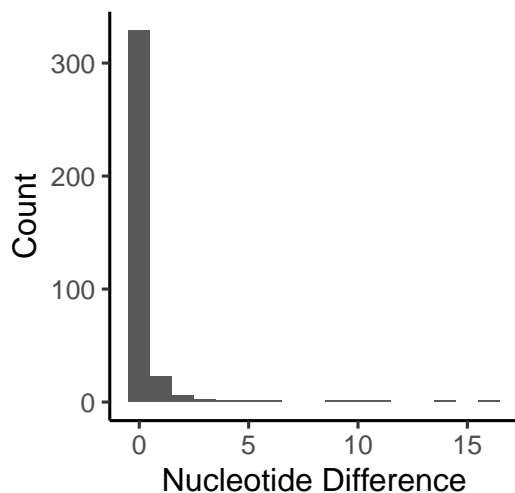
IGHV1-46*01

531 sequences assigned
479 (90.2%) exact matches, in which:
475 unique CDR3
6 unique J



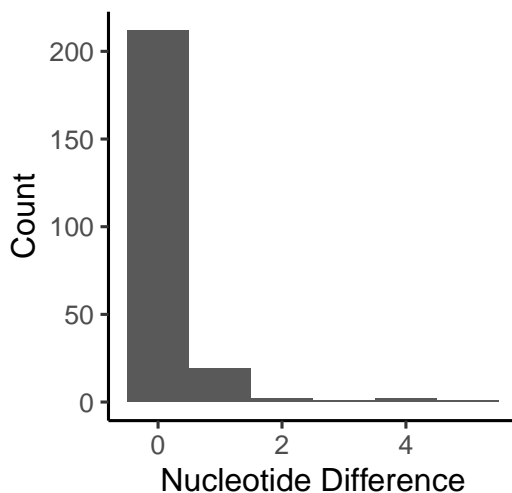
IGHV1-3*01

369 sequences assigned
329 (89.2%) exact matches, in which:
326 unique CDR3
6 unique J



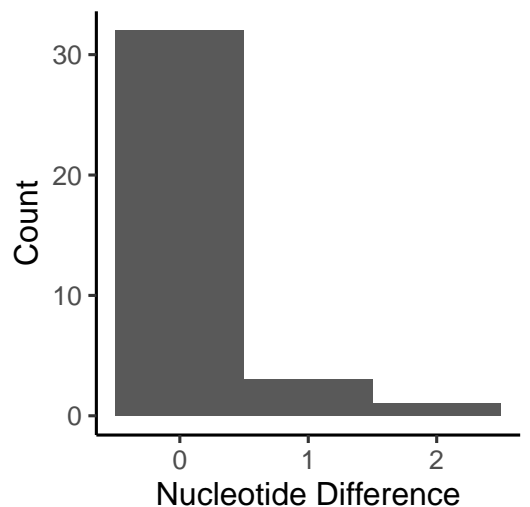
IGHV1-24*01

237 sequences assigned
212 (89.5%) exact matches, in which:
208 unique CDR3
5 unique J



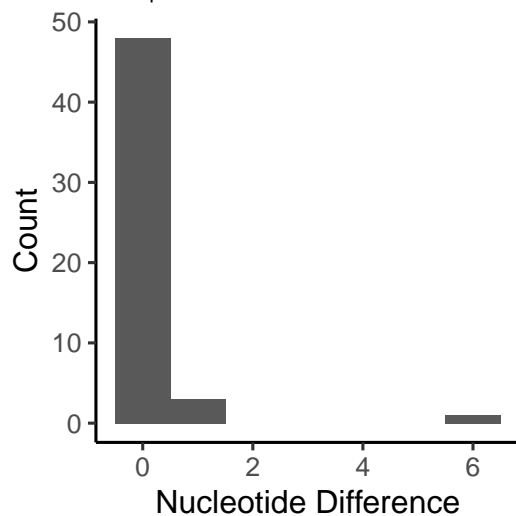
IGHV1-58*01

36 sequences assigned
32 (88.9%) exact matches, in which:
32 unique CDR3
6 unique J



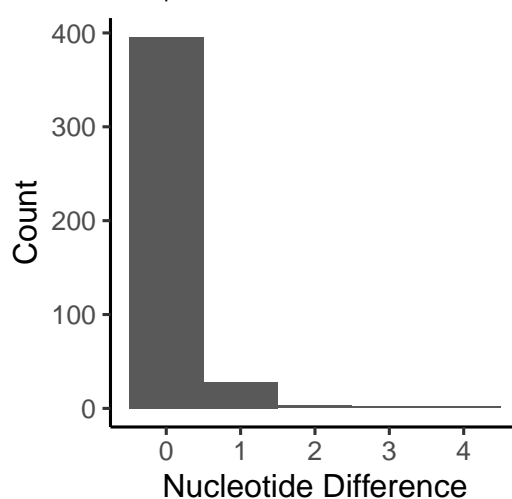
IGHV1–58*02

52 sequences assigned
48 (92.3%) exact matches, in which:
48 unique CDR3
5 unique J



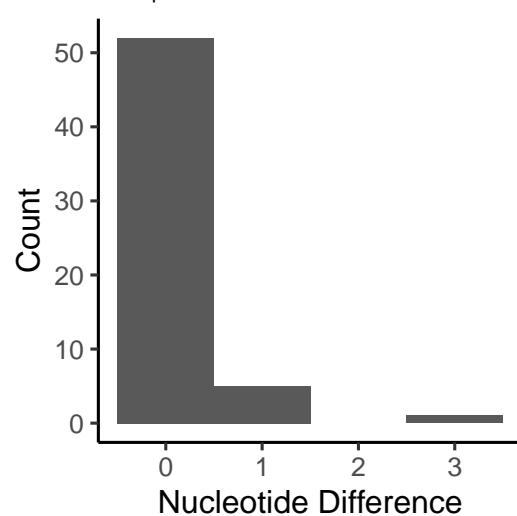
IGHV1–69*06

431 sequences assigned
396 (91.9%) exact matches, in which:
390 unique CDR3
6 unique J



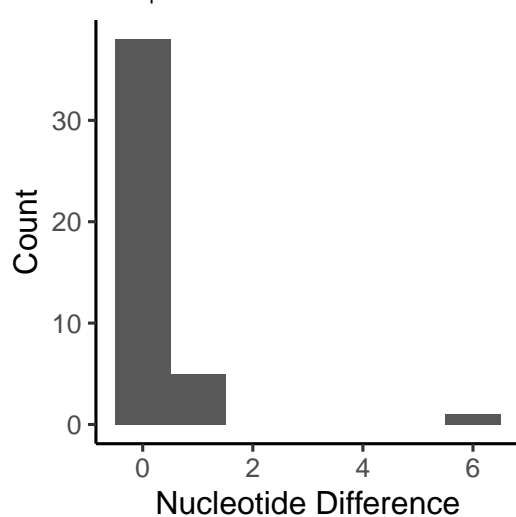
IGHV2–70*01

58 sequences assigned
52 (89.7%) exact matches, in which:
52 unique CDR3
5 unique J



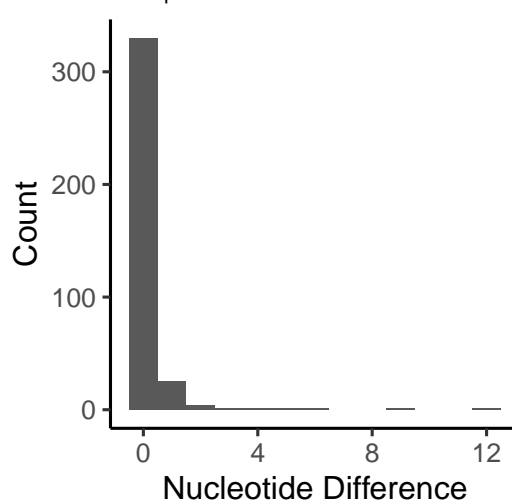
IGHV1–69–2*01

44 sequences assigned
38 (86.4%) exact matches, in which:
38 unique CDR3
4 unique J



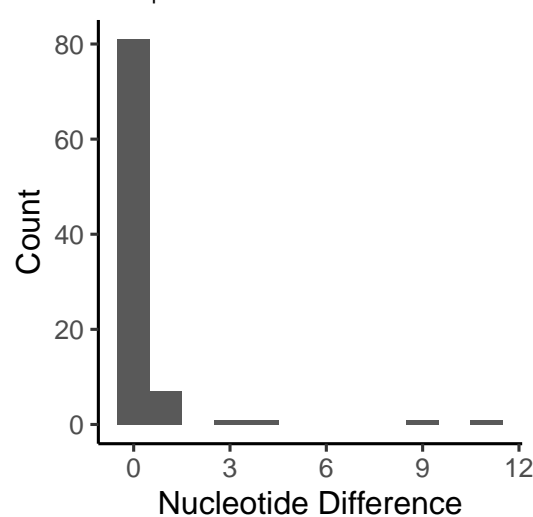
IGHV2–5*02

365 sequences assigned
330 (90.4%) exact matches, in which:
328 unique CDR3
6 unique J



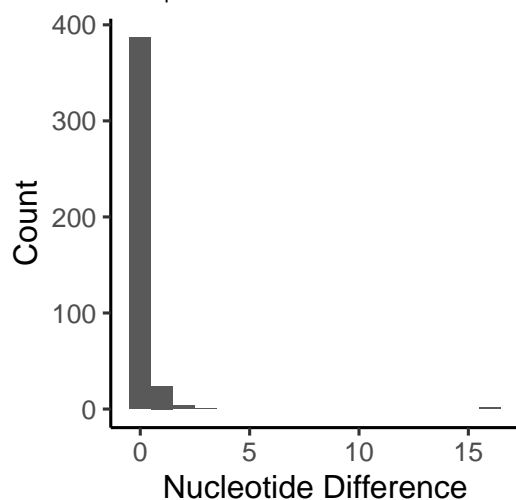
IGHV2–70*15

92 sequences assigned
81 (88%) exact matches, in which:
80 unique CDR3
5 unique J



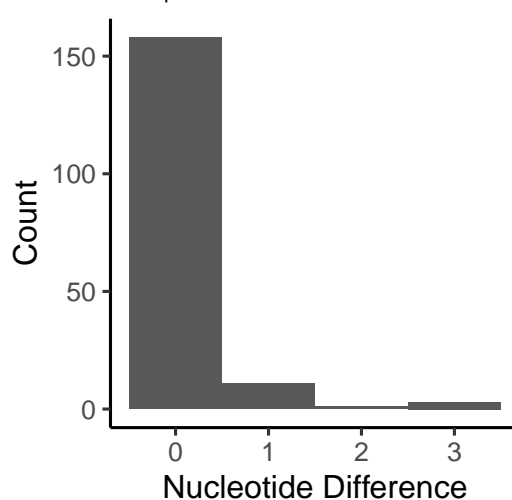
IGHV1–69*04

419 sequences assigned
387 (92.4%) exact matches, in which:
384 unique CDR3
6 unique J



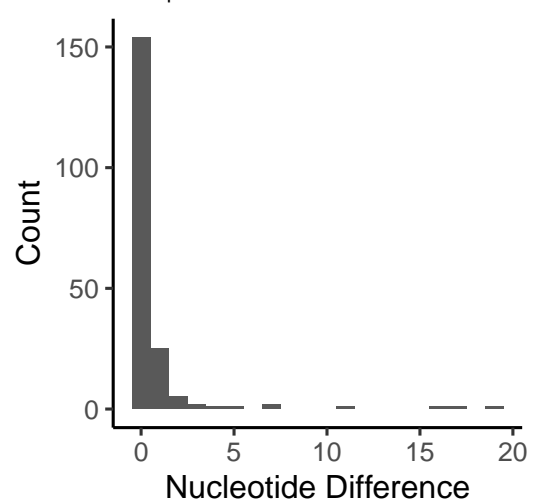
IGHV2–26*01

173 sequences assigned
158 (91.3%) exact matches, in which:
157 unique CDR3
5 unique J



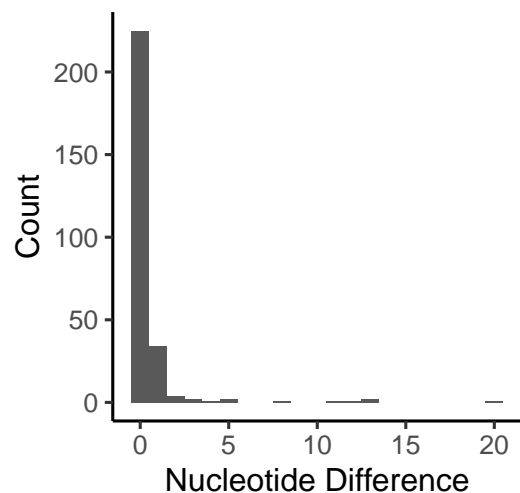
IGHV3–7*01

194 sequences assigned
154 (79.4%) exact matches, in which:
151 unique CDR3
6 unique J



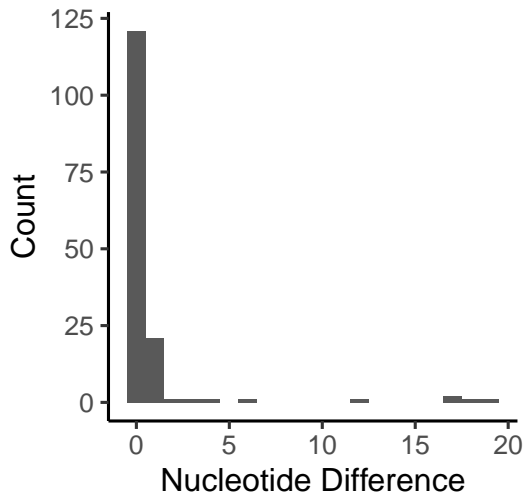
IGHV3-7*03

274 sequences assigned
225 (82.1%) exact matches, in which:
221 unique CDR3
6 unique J



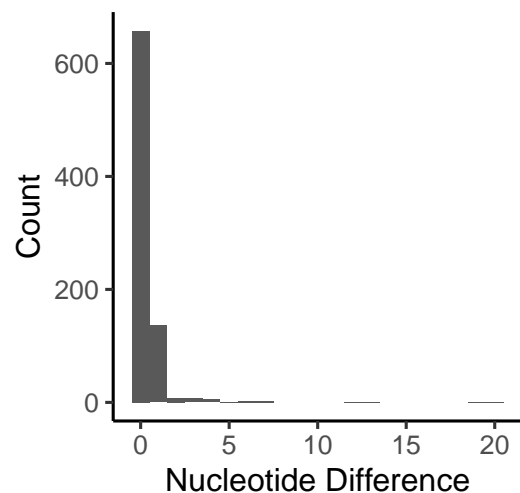
IGHV3-11*06

151 sequences assigned
121 (80.1%) exact matches, in which:
120 unique CDR3
6 unique J



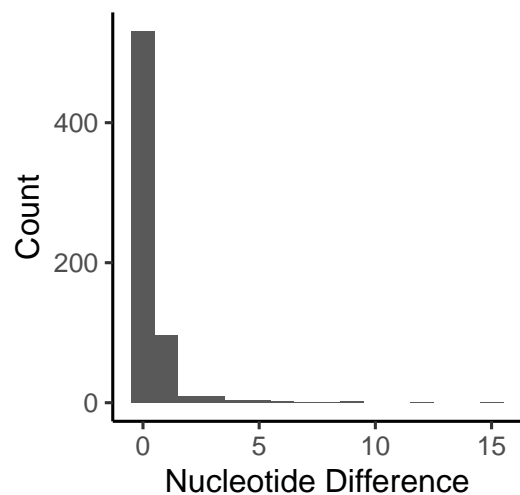
IGHV3-15*01

824 sequences assigned
658 (79.9%) exact matches, in which:
649 unique CDR3
6 unique J



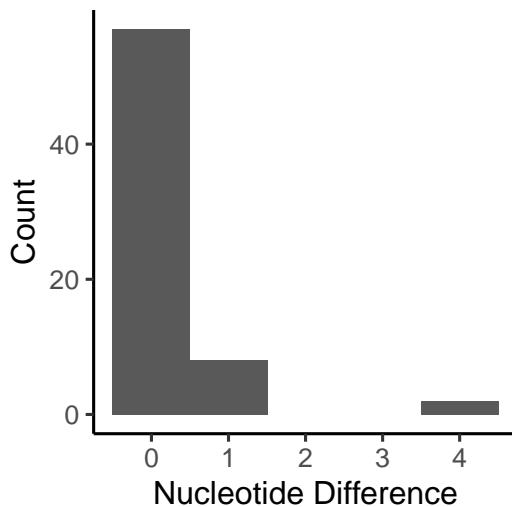
IGHV3-9*01

660 sequences assigned
531 (80.5%) exact matches, in which:
526 unique CDR3
6 unique J



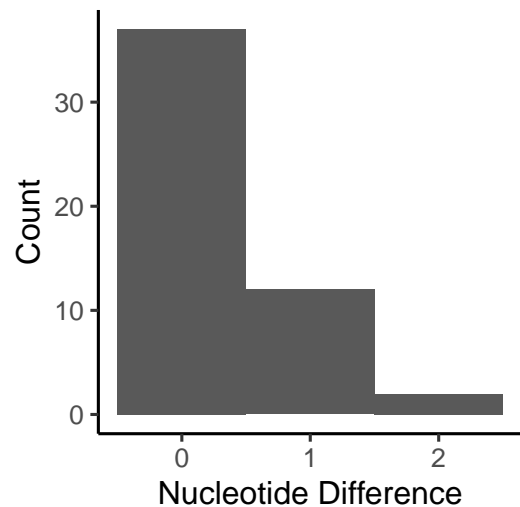
IGHV3-13*01

67 sequences assigned
57 (85.1%) exact matches, in which:
57 unique CDR3
5 unique J



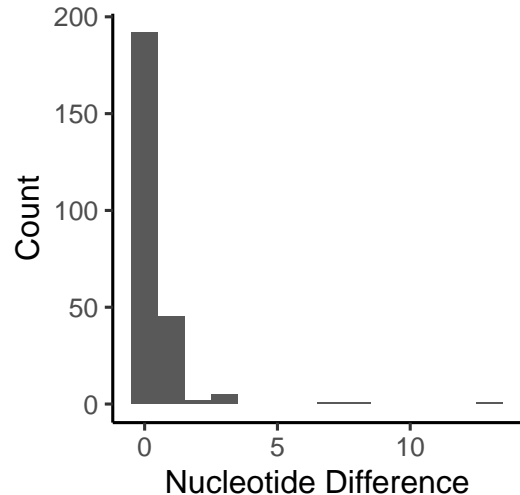
IGHV3-20*01

51 sequences assigned
37 (72.5%) exact matches, in which:
37 unique CDR3
5 unique J



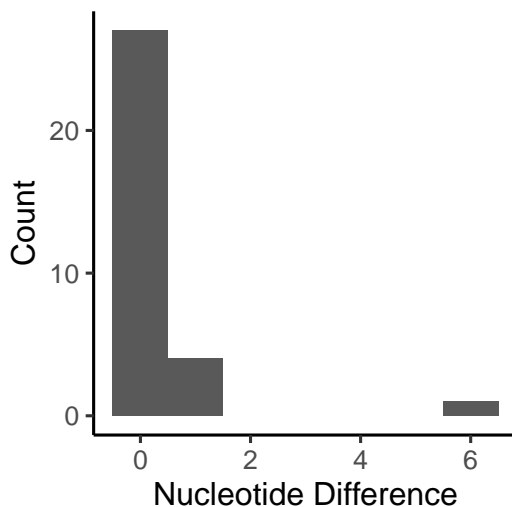
IGHV3-11*01

248 sequences assigned
192 (77.4%) exact matches, in which:
191 unique CDR3
6 unique J



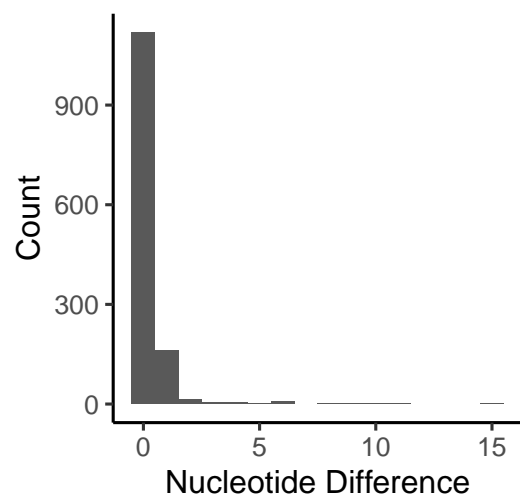
IGHV3-13*05

32 sequences assigned
27 (84.4%) exact matches, in which:
27 unique CDR3
4 unique J



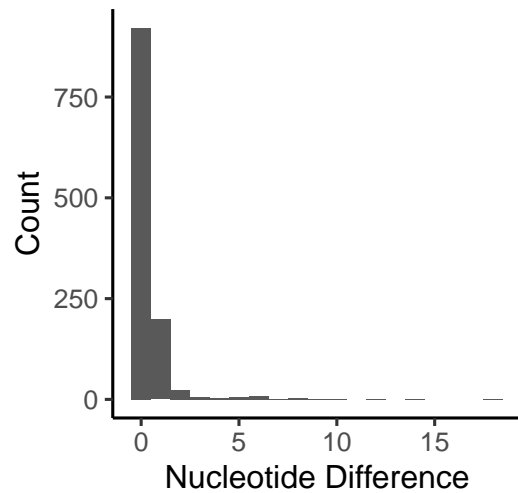
IGHV3-21*01

1323 sequences assigned
1119 (84.6%) exact matches, in which:
1106 unique CDR3
6 unique J



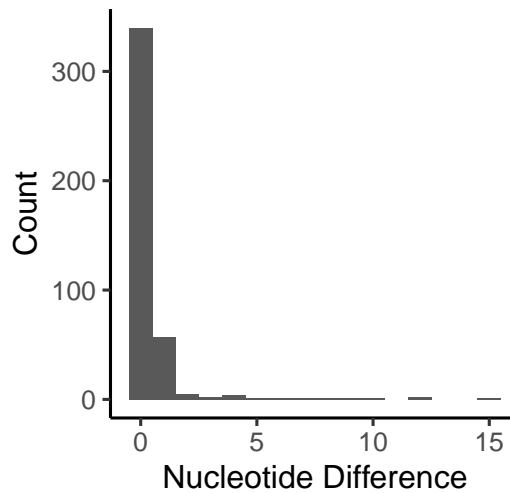
IGHV3–33*01

1179 sequences assigned
922 (78.2%) exact matches, in which:
899 unique CDR3
6 unique J



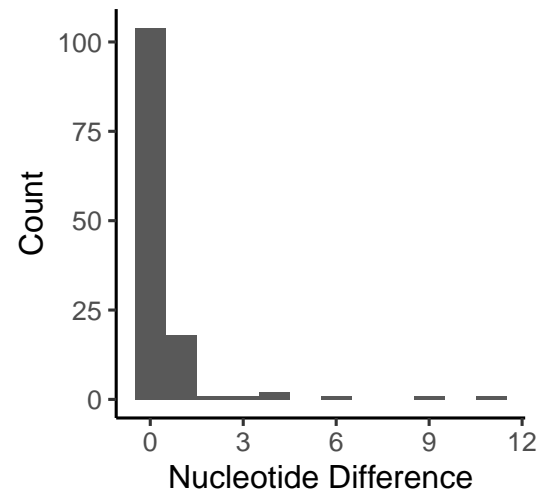
IGHV3–48*02

417 sequences assigned
340 (81.5%) exact matches, in which:
335 unique CDR3
6 unique J



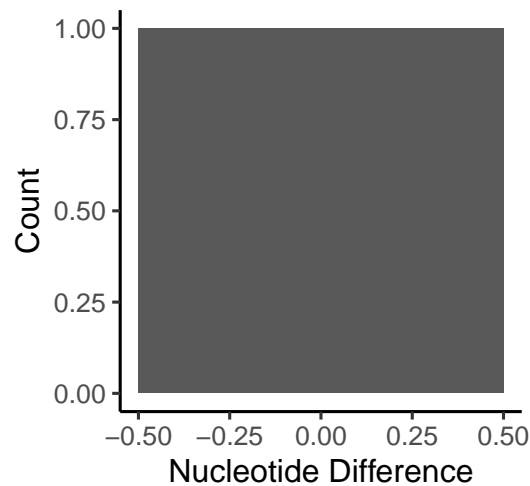
IGHV3–49*05

129 sequences assigned
104 (80.6%) exact matches, in which:
102 unique CDR3
4 unique J



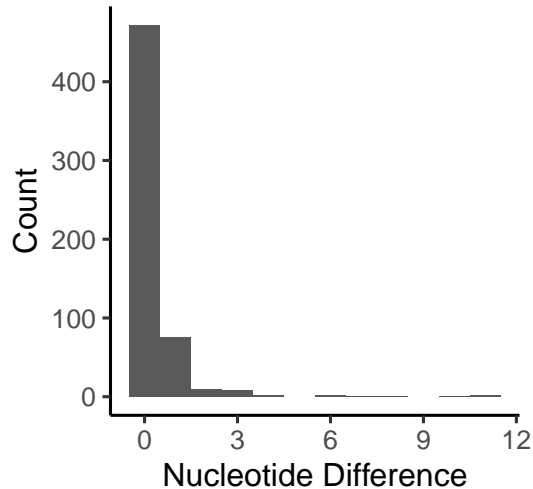
IGHV3–38–3*01

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



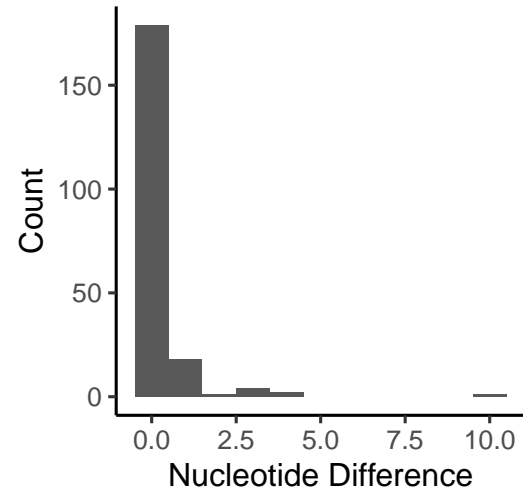
IGHV3–48*03

576 sequences assigned
472 (81.9%) exact matches, in which:
465 unique CDR3
6 unique J



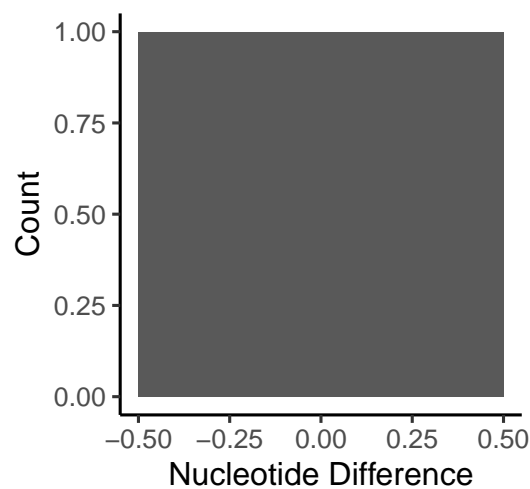
IGHV3–53*01

205 sequences assigned
179 (87.3%) exact matches, in which:
179 unique CDR3
6 unique J



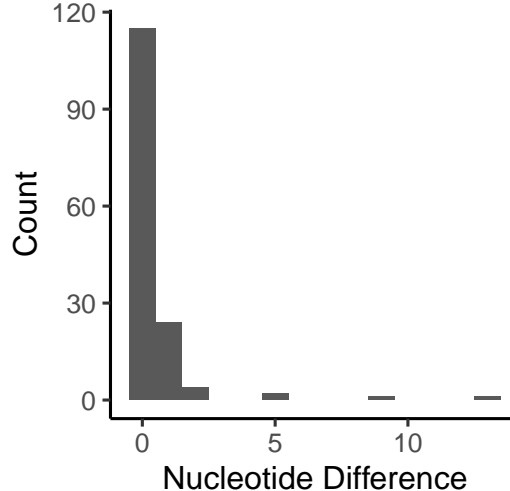
IGHV3–47*01

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



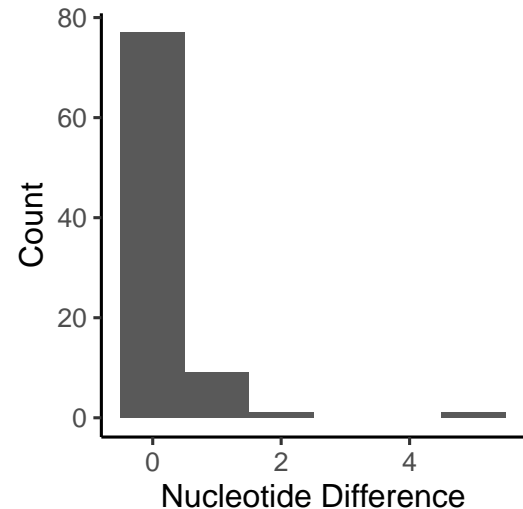
IGHV3–49*04

149 sequences assigned
115 (77.2%) exact matches, in which:
114 unique CDR3
4 unique J



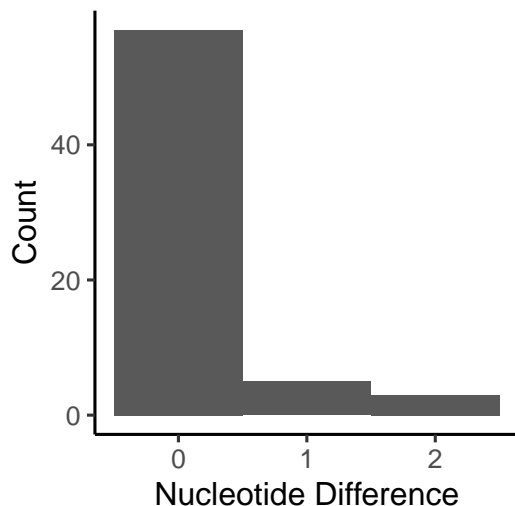
IGHV3–53*02

88 sequences assigned
77 (87.5%) exact matches, in which:
77 unique CDR3
5 unique J



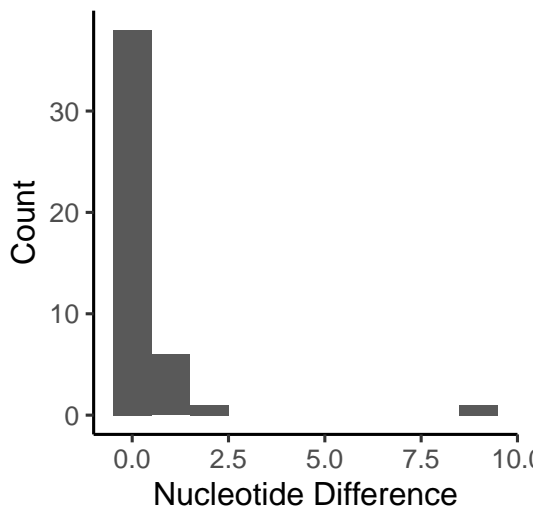
IGHV3-64*01

65 sequences assigned
57 (87.7%) exact matches, in which:
57 unique CDR3
4 unique J



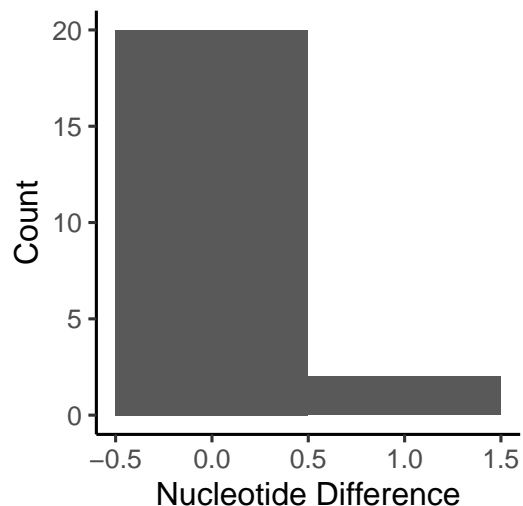
IGHV3-73*01

46 sequences assigned
38 (82.6%) exact matches, in which:
38 unique CDR3
3 unique J



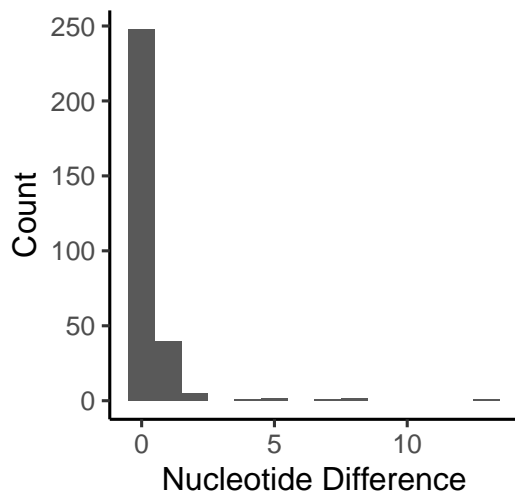
IGHV3-43D*04

22 sequences assigned
20 (90.9%) exact matches, in which:
20 unique CDR3
3 unique J



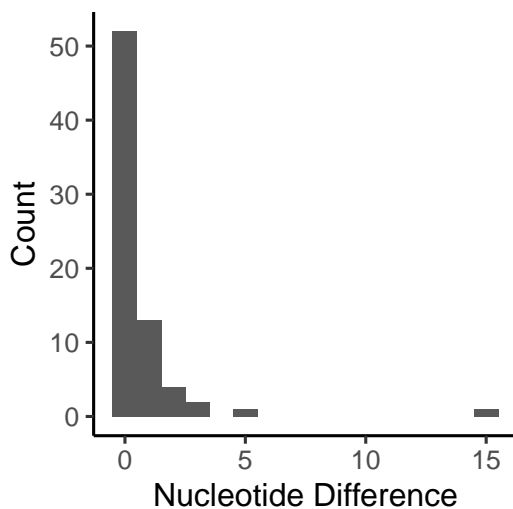
IGHV3-66*01

300 sequences assigned
248 (82.7%) exact matches, in which:
244 unique CDR3
6 unique J



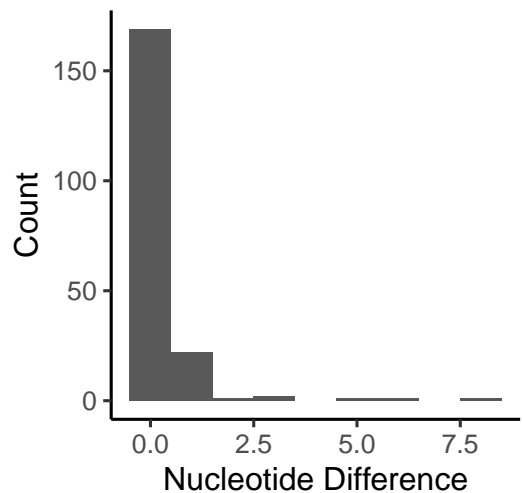
IGHV3-73*02

73 sequences assigned
52 (71.2%) exact matches, in which:
52 unique CDR3
4 unique J



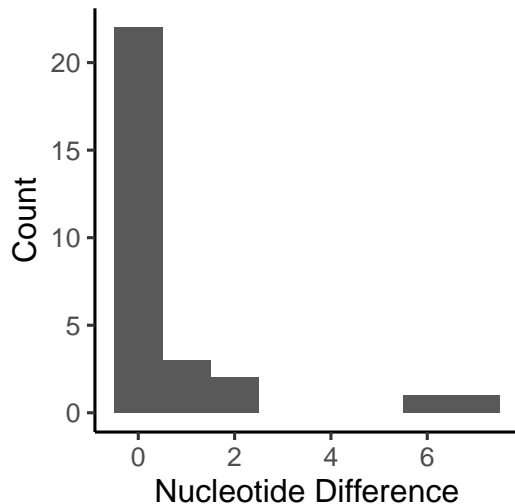
IGHV3-64D*06

197 sequences assigned
169 (85.8%) exact matches, in which:
161 unique CDR3
6 unique J



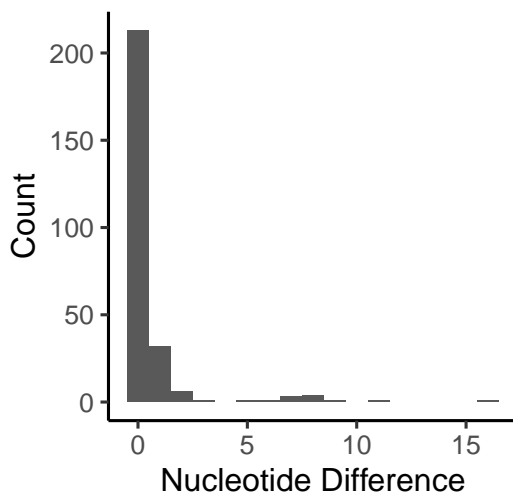
IGHV3-72*01

29 sequences assigned
22 (75.9%) exact matches, in which:
20 unique CDR3
3 unique J



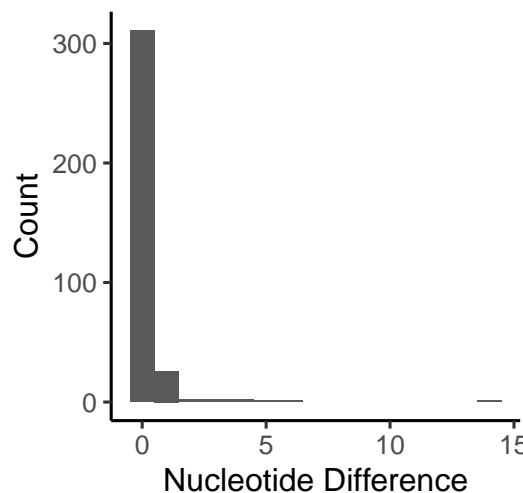
IGHV3-74*01

264 sequences assigned
213 (80.7%) exact matches, in which:
212 unique CDR3
5 unique J



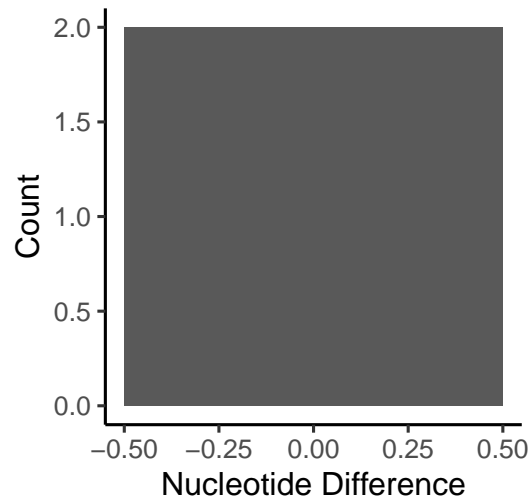
IGHV4-4*02

346 sequences assigned
311 (89.9%) exact matches, in which:
310 unique CDR3
6 unique J



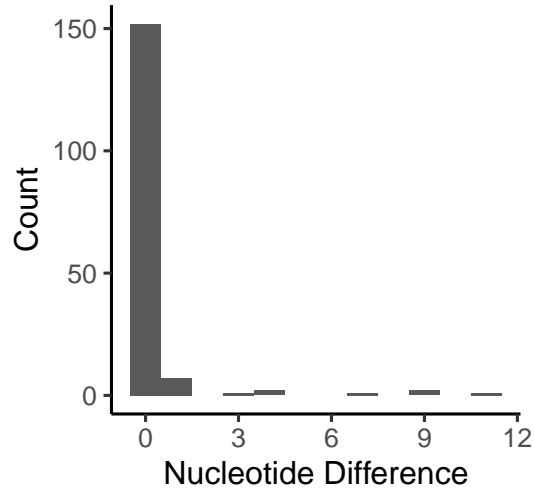
IGHV4-28*05

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



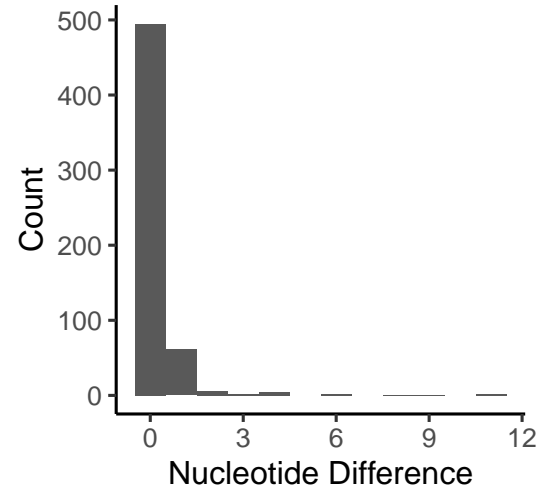
IGHV4-38-2*01

167 sequences assigned
152 (91%) exact matches, in which:
151 unique CDR3
6 unique J



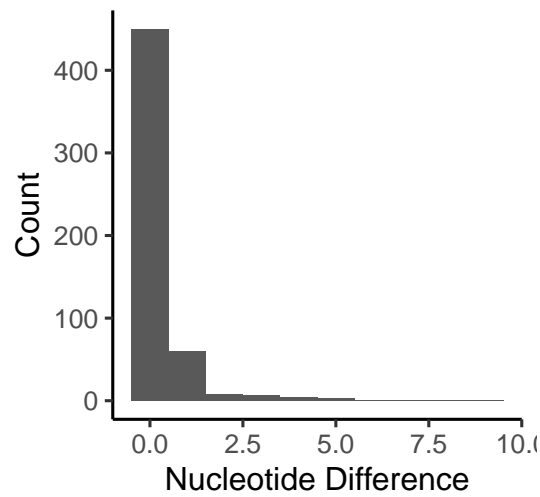
IGHV4-59*01

575 sequences assigned
495 (86.1%) exact matches, in which:
492 unique CDR3
6 unique J



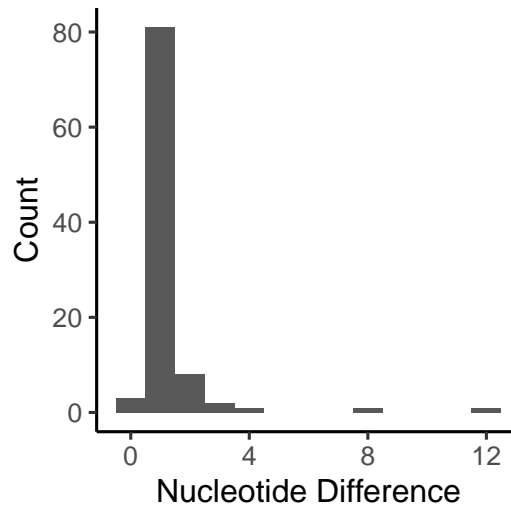
IGHV4-31*03

536 sequences assigned
450 (84%) exact matches, in which:
448 unique CDR3
6 unique J



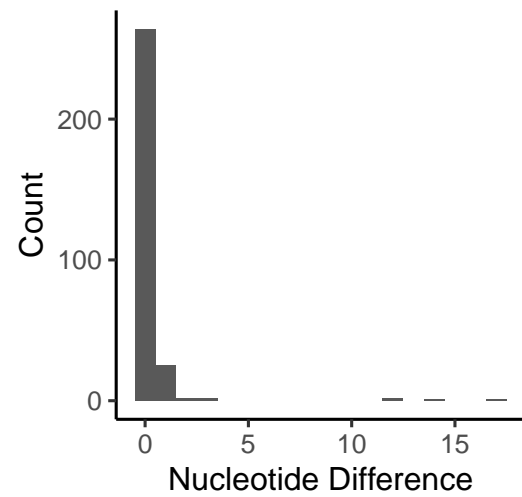
IGHV4-38-2*02

97 sequences assigned
3 (3.1%) exact matches, in which:
3 unique CDR3
3 unique J



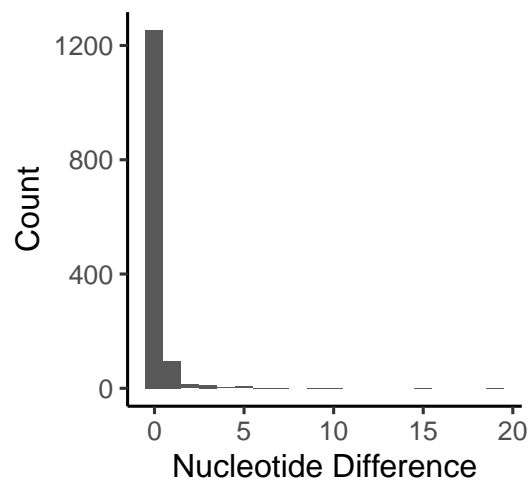
IGHV4-59*08

300 sequences assigned
264 (88%) exact matches, in which:
263 unique CDR3
6 unique J



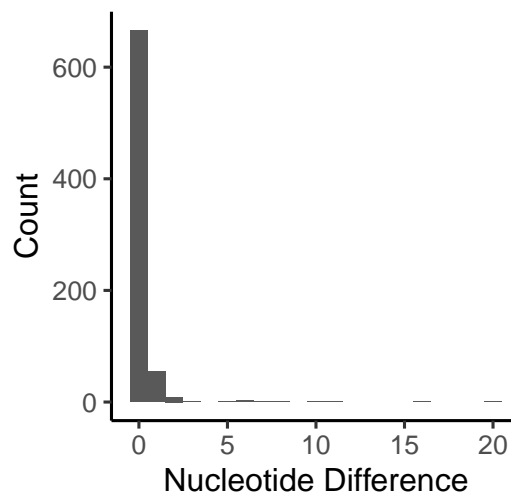
IGHV4-34*01

1393 sequences assigned
1254 (90%) exact matches, in which:
1247 unique CDR3
6 unique J



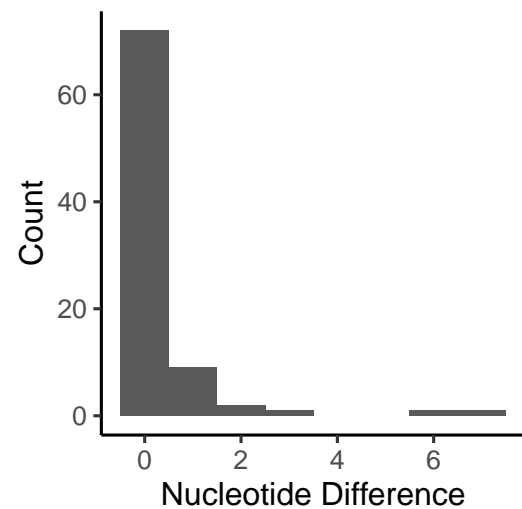
IGHV4-39*01

742 sequences assigned
666 (89.8%) exact matches, in which:
662 unique CDR3
6 unique J



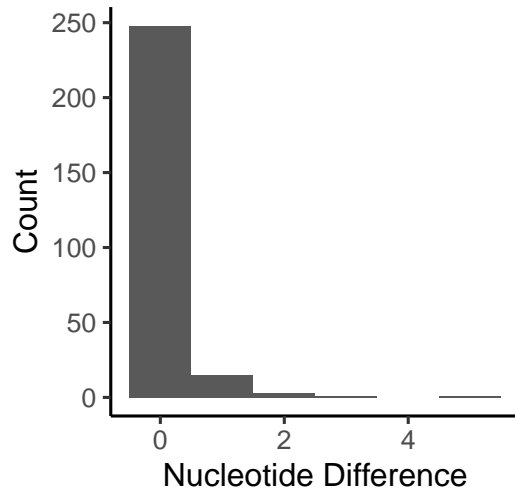
IGHV4-61*01

86 sequences assigned
72 (83.7%) exact matches, in which:
72 unique CDR3
4 unique J



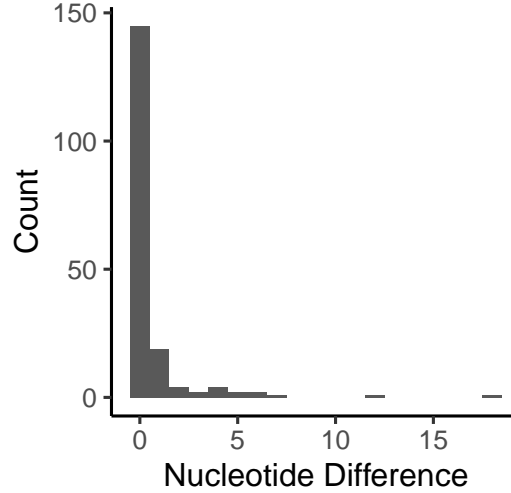
IGHV5-10-1*03

271 sequences assigned
248 (91.5%) exact matches, in which:
247 unique CDR3
6 unique J



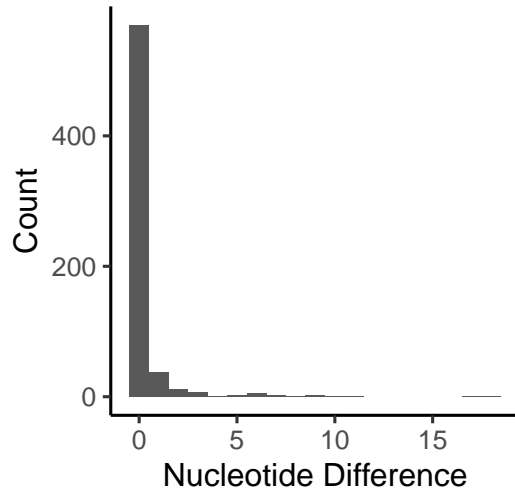
IGHV7-4-1*02

181 sequences assigned
145 (80.1%) exact matches, in which:
145 unique CDR3
6 unique J



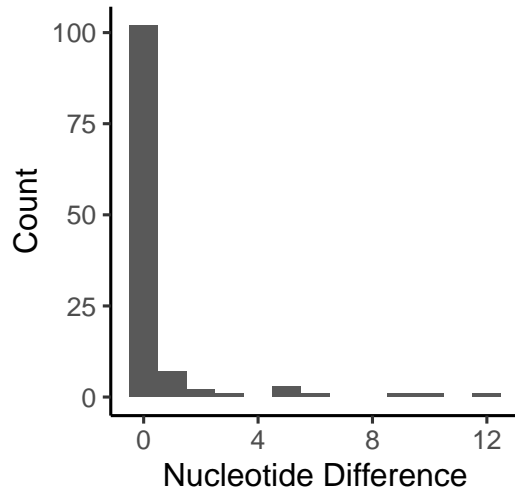
IGHV5-51*01

644 sequences assigned
570 (88.5%) exact matches, in which:
565 unique CDR3
6 unique J



IGHV6-1*01

119 sequences assigned
102 (85.7%) exact matches, in which:
102 unique CDR3
4 unique J





[illegible]