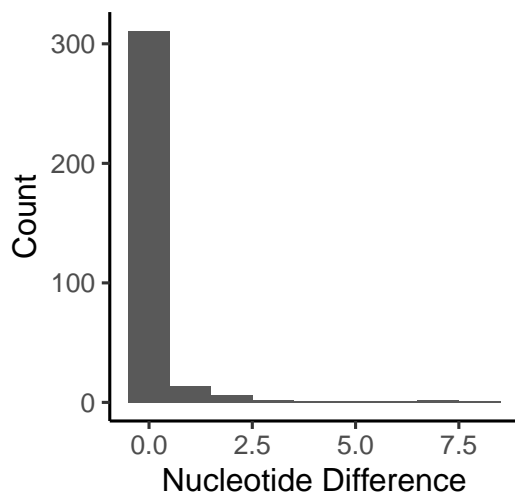


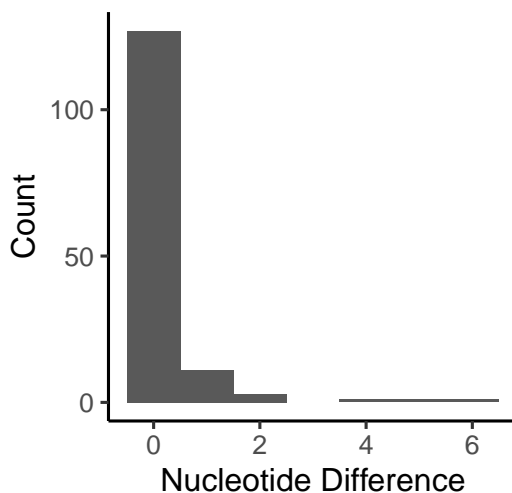
IGHV1-2*02

339 sequences assigned
311 (91.7%) exact matches, in which:
311 unique CDR3
7 unique J



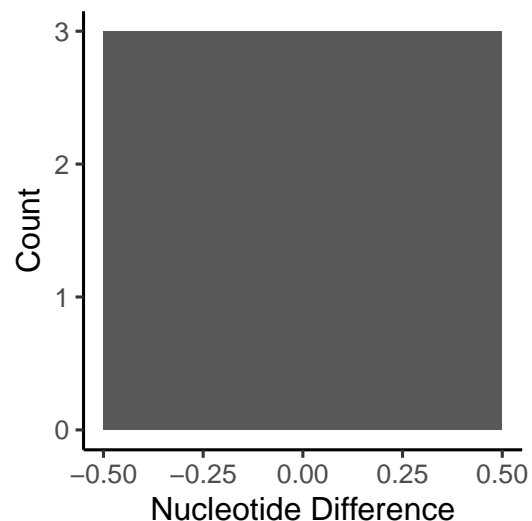
IGHV1-8*01

144 sequences assigned
127 (88.2%) exact matches, in which:
126 unique CDR3
6 unique J



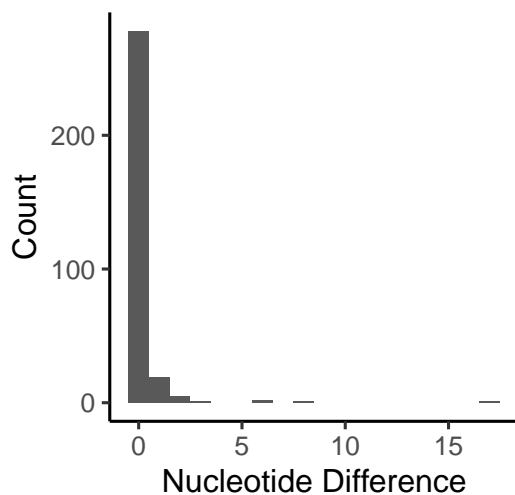
IGHV1-45*02

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



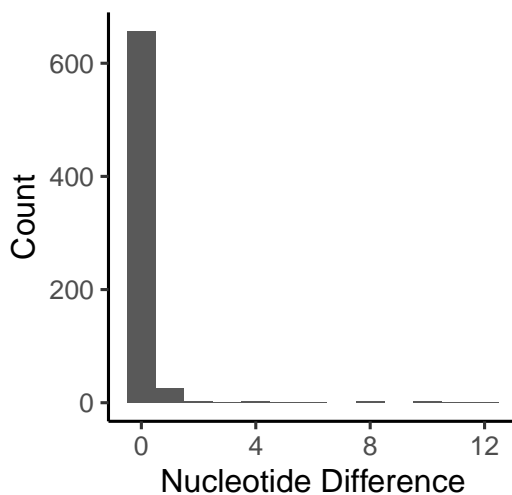
IGHV1-2*06

307 sequences assigned
278 (90.6%) exact matches, in which:
278 unique CDR3
7 unique J



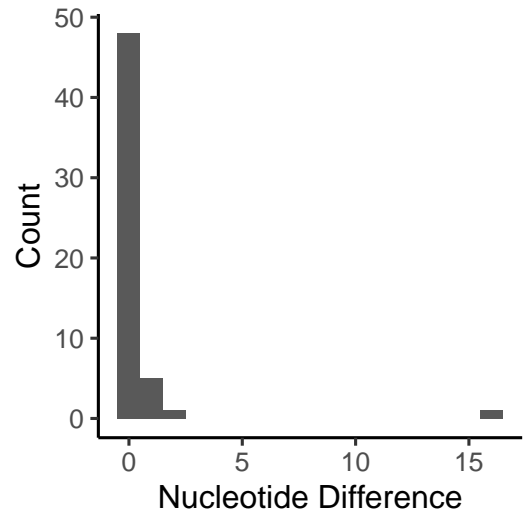
IGHV1-18*01

697 sequences assigned
657 (94.3%) exact matches, in which:
655 unique CDR3
7 unique J



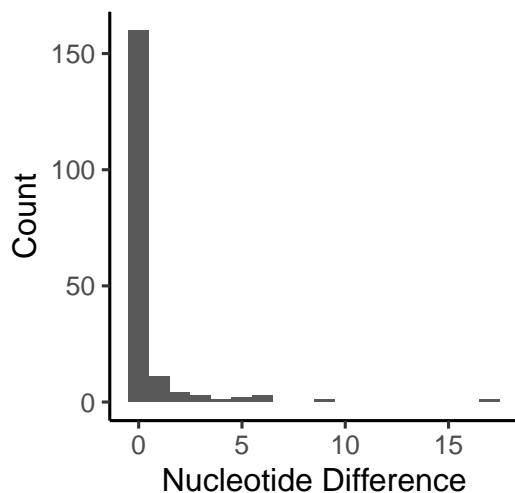
IGHV1-46*01

55 sequences assigned
48 (87.3%) exact matches, in which:
48 unique CDR3
5 unique J



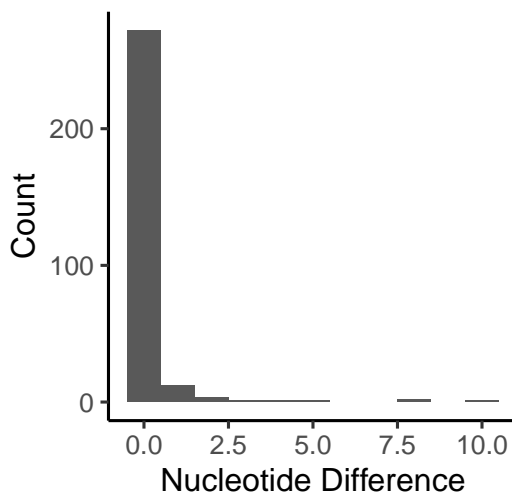
IGHV1-3*01

186 sequences assigned
160 (86%) exact matches, in which:
160 unique CDR3
6 unique J



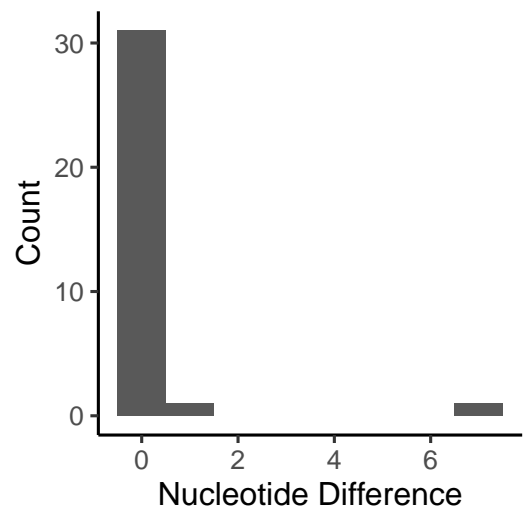
IGHV1-24*01

294 sequences assigned
272 (92.5%) exact matches, in which:
272 unique CDR3
7 unique J



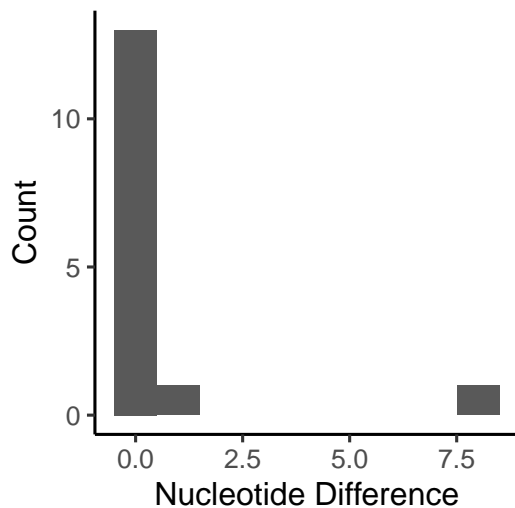
IGHV1-46*03

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



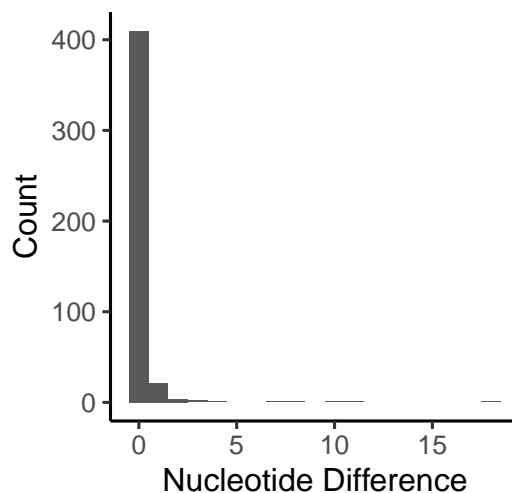
IGHV1-58*01

15 sequences assigned
13 (86.7%) exact matches, in which:
13 unique CDR3
4 unique J



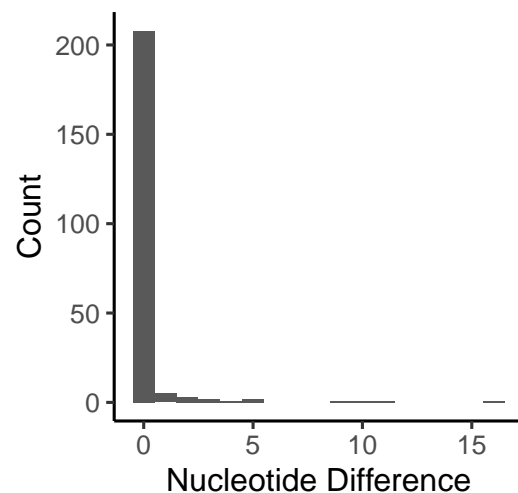
IGHV1-69*04

444 sequences assigned
410 (92.3%) exact matches, in which:
410 unique CDR3
7 unique J



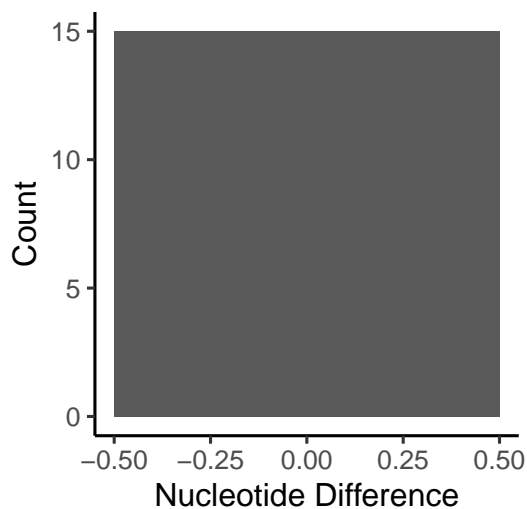
IGHV2-5*02

225 sequences assigned
208 (92.4%) exact matches, in which:
208 unique CDR3
6 unique J



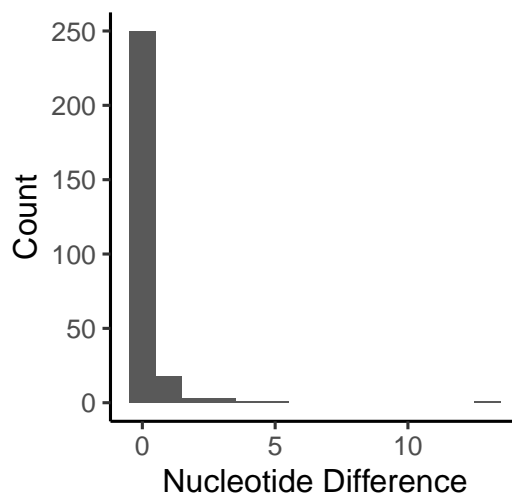
IGHV1-58*02

15 sequences assigned
15 (100%) exact matches, in which:
15 unique CDR3
4 unique J



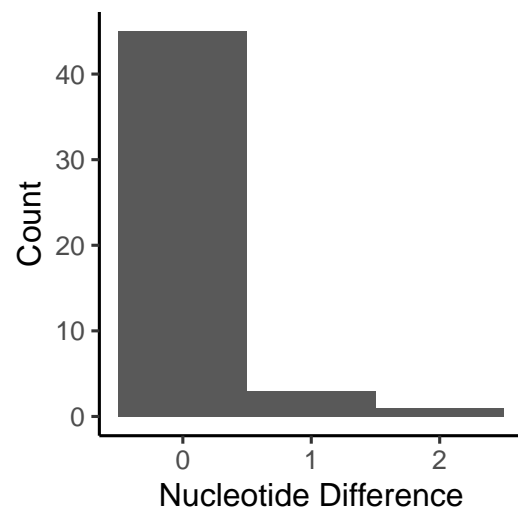
IGHV1-69*06

277 sequences assigned
250 (90.3%) exact matches, in which:
250 unique CDR3
7 unique J



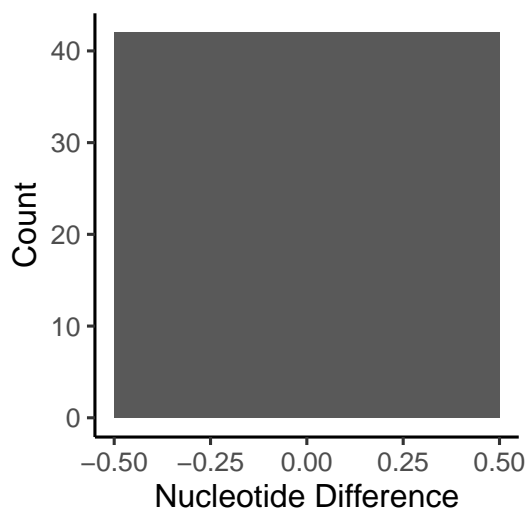
IGHV2-26*01

49 sequences assigned
45 (91.8%) exact matches, in which:
45 unique CDR3
6 unique J



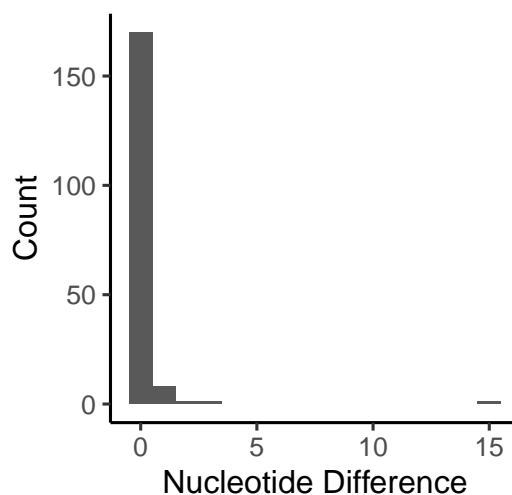
IGHV1-69-2*01

42 sequences assigned
42 (100%) exact matches, in which:
42 unique CDR3
5 unique J



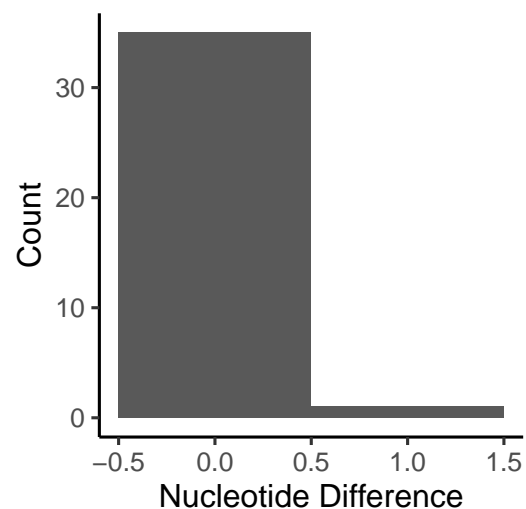
IGHV2-5*01

181 sequences assigned
170 (93.9%) exact matches, in which:
169 unique CDR3
6 unique J



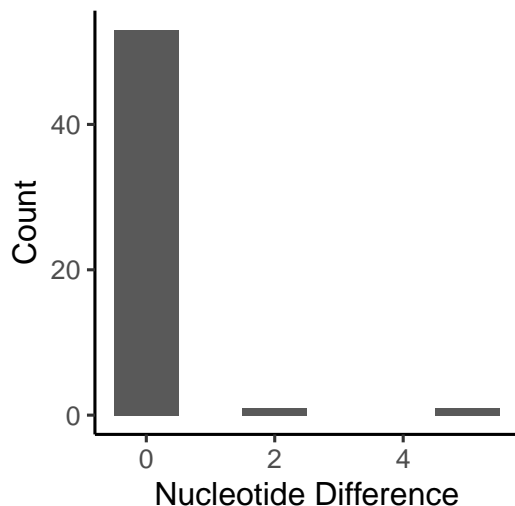
IGHV2-70*01

36 sequences assigned
35 (97.2%) exact matches, in which:
35 unique CDR3
6 unique J



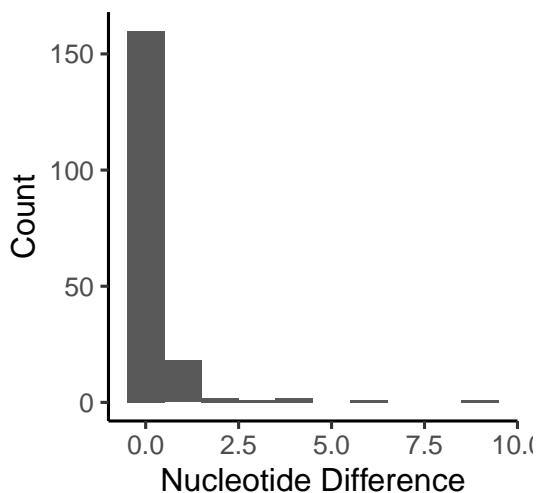
IGHV2-70*15

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



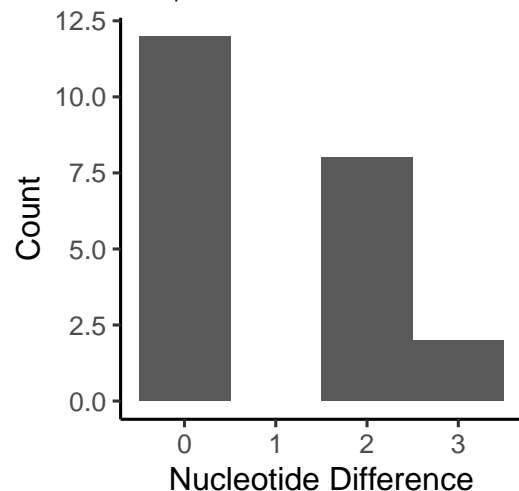
IGHV3-9*01

185 sequences assigned
160 (86.5%) exact matches, in which:
160 unique CDR3
7 unique J



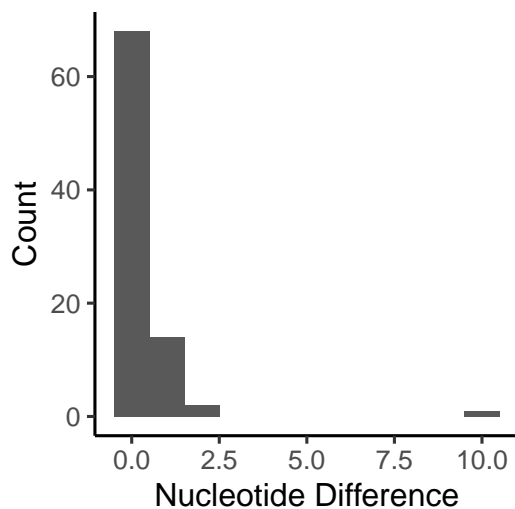
IGHV3-13*01

22 sequences assigned
12 (54.5%) exact matches, in which:
12 unique CDR3
4 unique J



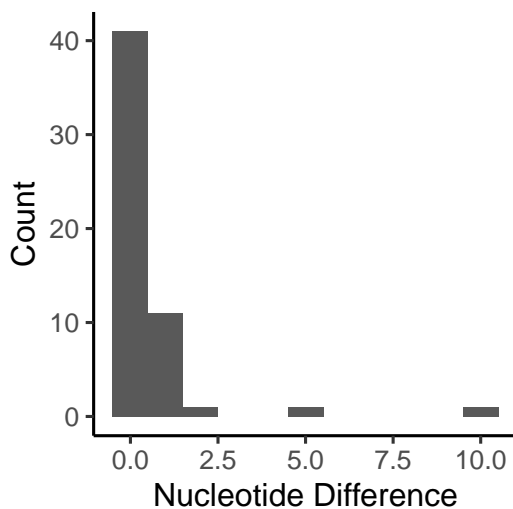
IGHV3-7*01

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



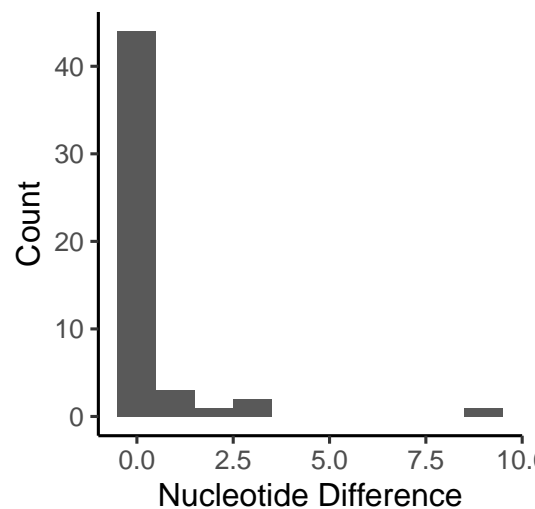
IGHV3-11*01

55 sequences assigned
41 (74.5%) exact matches, in which:
41 unique CDR3
6 unique J



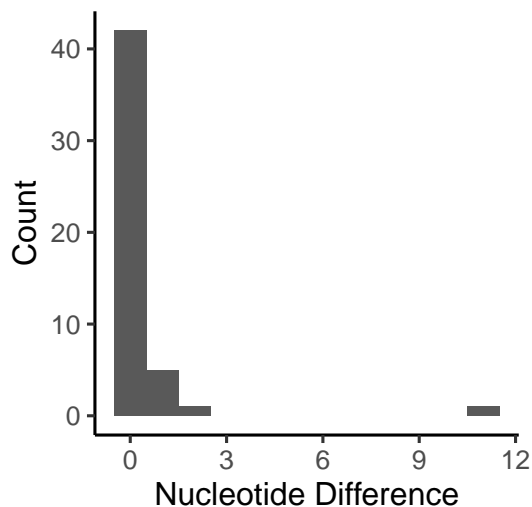
IGHV3-15*01

51 sequences assigned
44 (86.3%) exact matches, in which:
44 unique CDR3
6 unique J



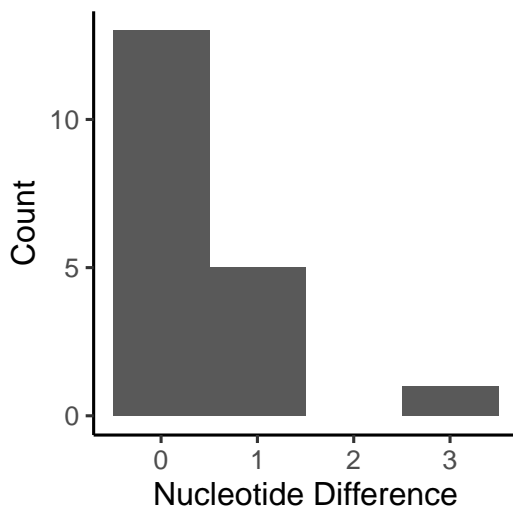
IGHV3-7*04

49 sequences assigned
42 (85.7%) exact matches, in which:
42 unique CDR3
6 unique J



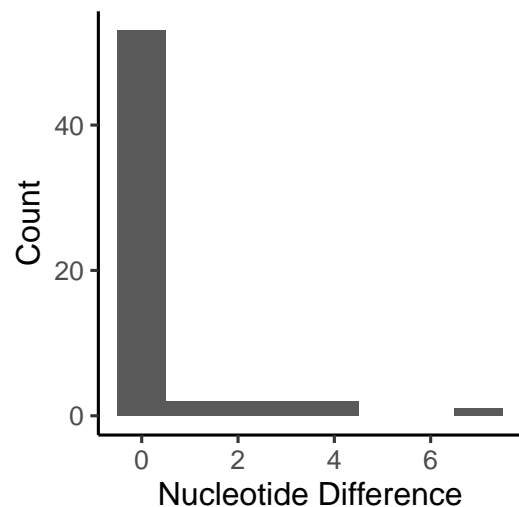
IGHV3-11*06

19 sequences assigned
13 (68.4%) exact matches, in which:
13 unique CDR3
4 unique J



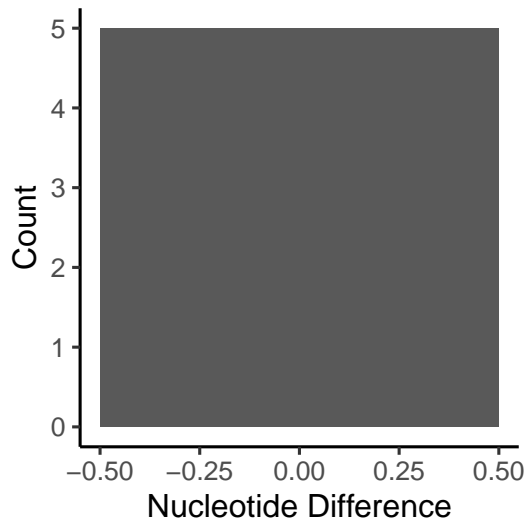
IGHV3-15*07

62 sequences assigned
53 (85.5%) exact matches, in which:
53 unique CDR3
4 unique J



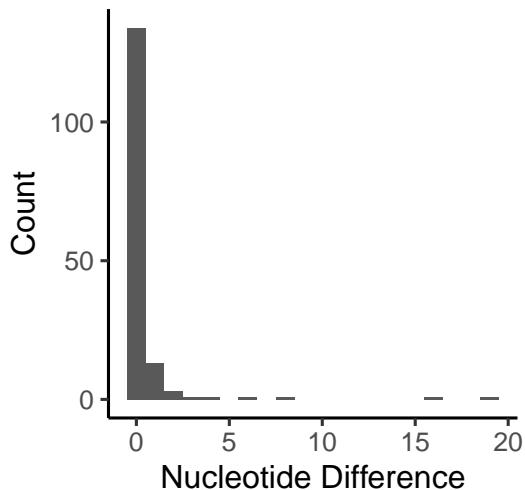
IGHV3–20*01

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



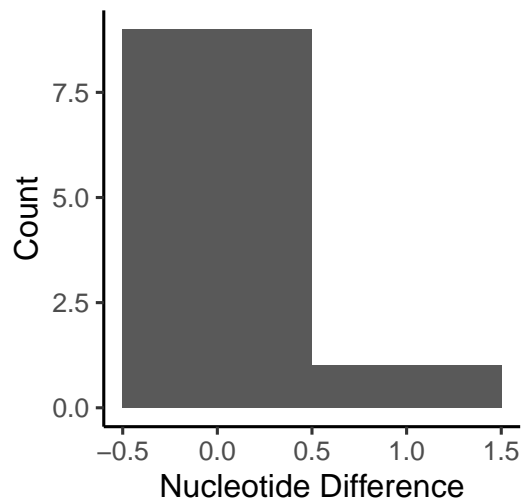
IGHV3–30*01

156 sequences assigned
134 (85.9%) exact matches, in which:
134 unique CDR3
7 unique J



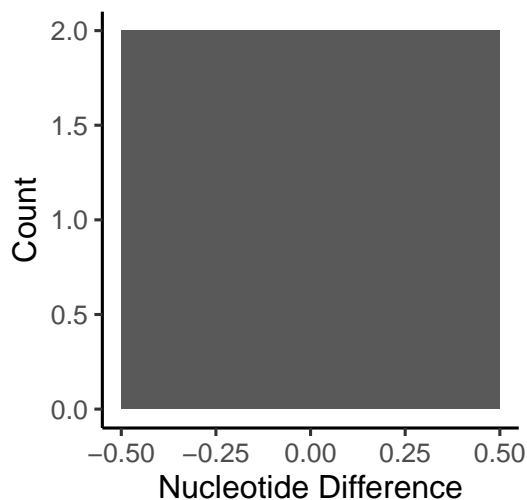
IGHV3–43*01

10 sequences assigned
9 (90%) exact matches, in which:
9 unique CDR3
4 unique J



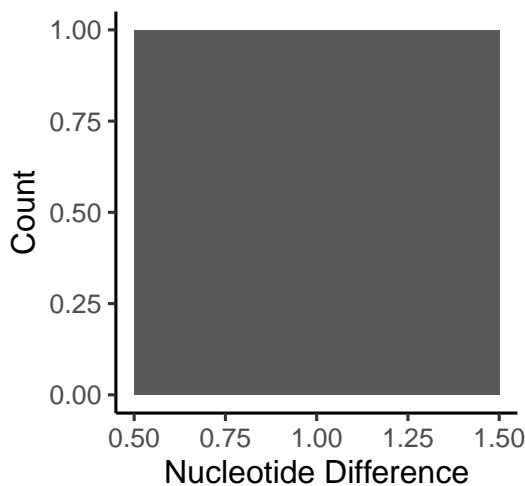
IGHV3–20*04

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



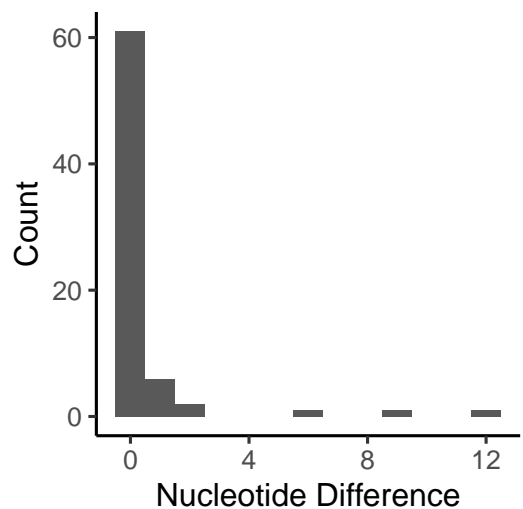
IGHV3–30–3*03

1 sequences assigned
No exact matches.



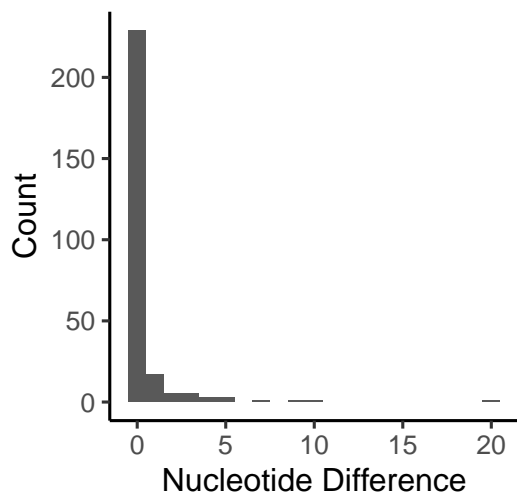
IGHV3–43*02

72 sequences assigned
61 (84.7%) exact matches, in which:
61 unique CDR3
6 unique J



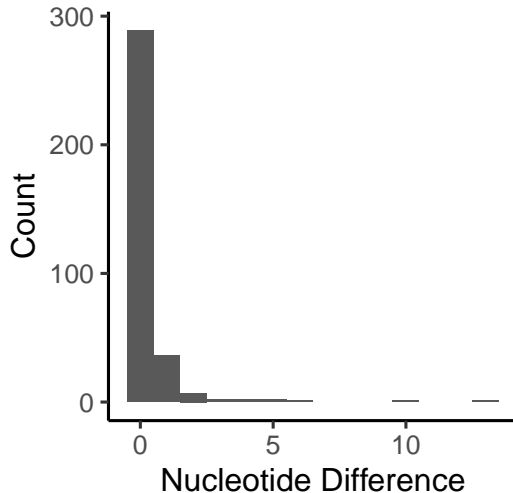
IGHV3–21*01

266 sequences assigned
229 (86.1%) exact matches, in which:
229 unique CDR3
7 unique J



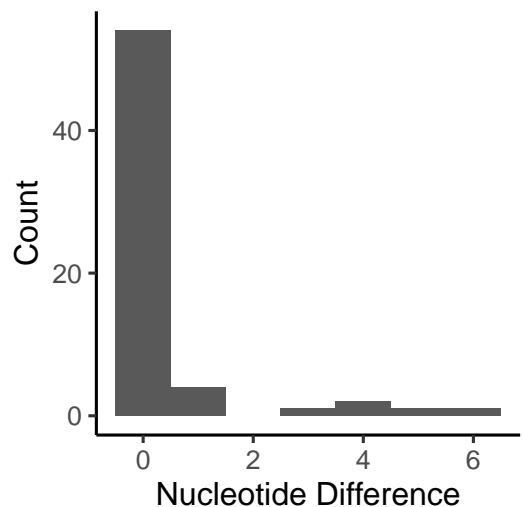
IGHV3–33*01

342 sequences assigned
289 (84.5%) exact matches, in which:
289 unique CDR3
7 unique J



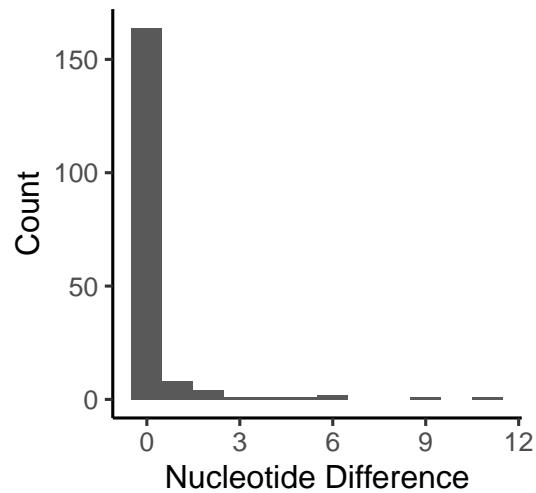
IGHV3–48*02

64 sequences assigned
54 (84.4%) exact matches, in which:
54 unique CDR3
6 unique J



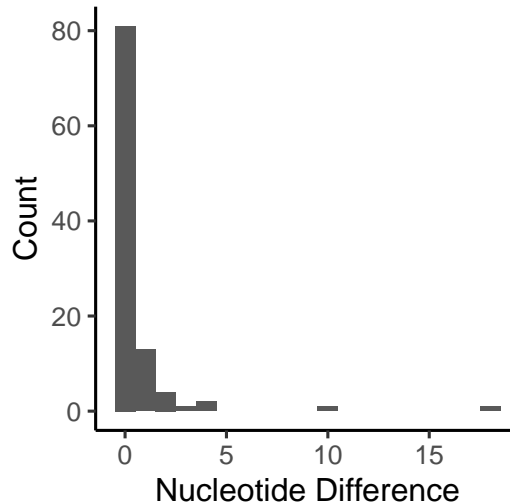
IGHV3-48*03

183 sequences assigned
164 (89.6%) exact matches, in which:
164 unique CDR3
6 unique J



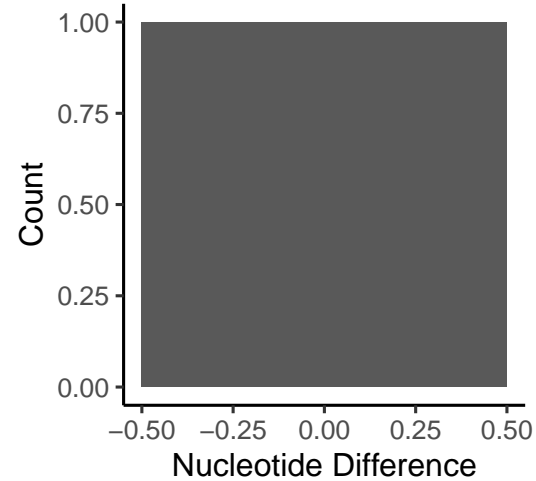
IGHV3-53*01

103 sequences assigned
81 (78.6%) exact matches, in which:
81 unique CDR3
6 unique J



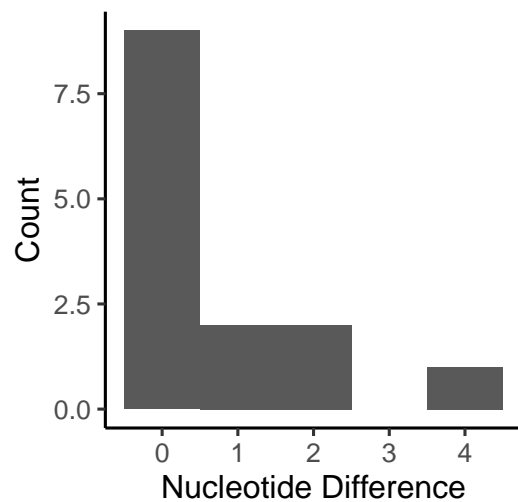
IGHV3-64*02

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



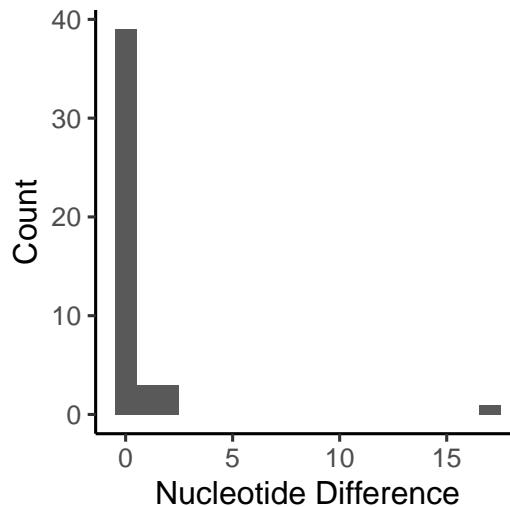
IGHV3-49*04

14 sequences assigned
9 (64.3%) exact matches, in which:
9 unique CDR3
2 unique J



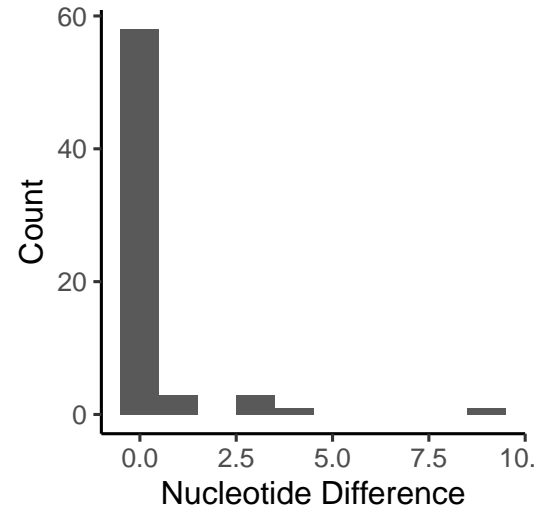
IGHV3-53*04

46 sequences assigned
39 (84.8%) exact matches, in which:
39 unique CDR3
6 unique J



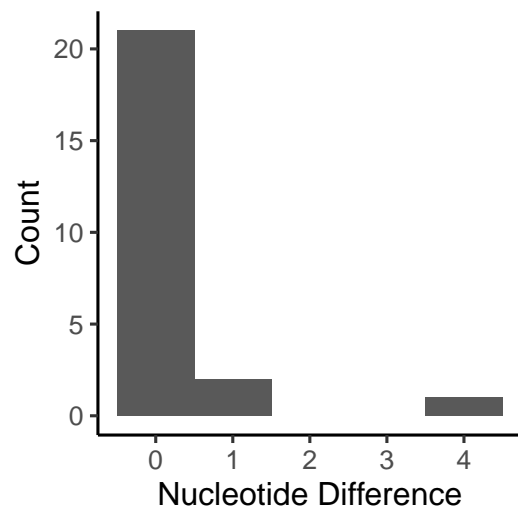
IGHV3-66*01

66 sequences assigned
58 (87.9%) exact matches, in which:
58 unique CDR3
5 unique J



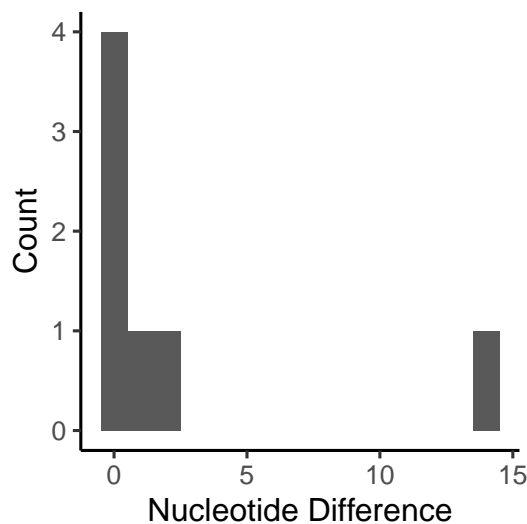
IGHV3-49*05

24 sequences assigned
21 (87.5%) exact matches, in which:
21 unique CDR3
5 unique J



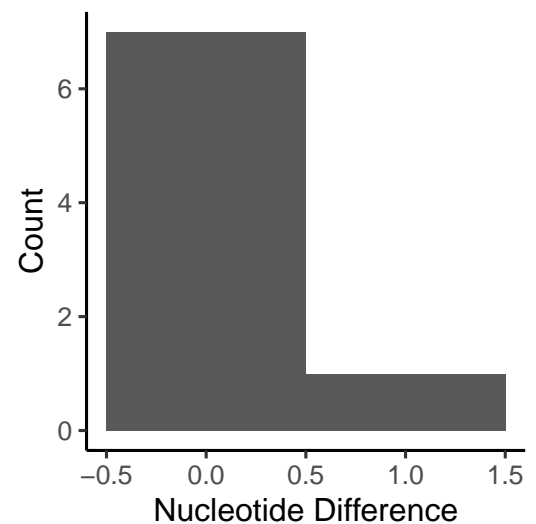
IGHV3-64*01

7 sequences assigned
4 (57.1%) exact matches, in which:
4 unique CDR3
2 unique J



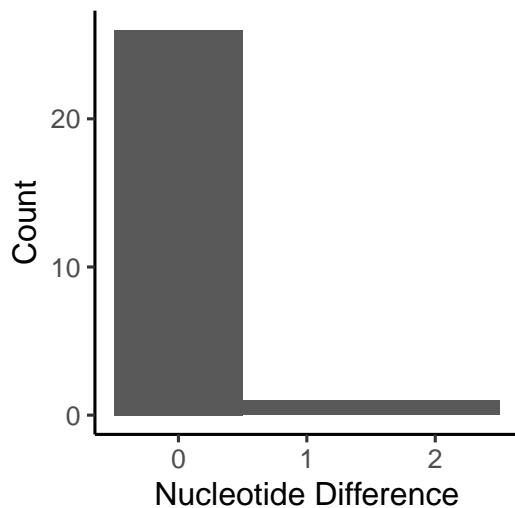
IGHV3-72*01

8 sequences assigned
7 (87.5%) exact matches, in which:
7 unique CDR3
3 unique J



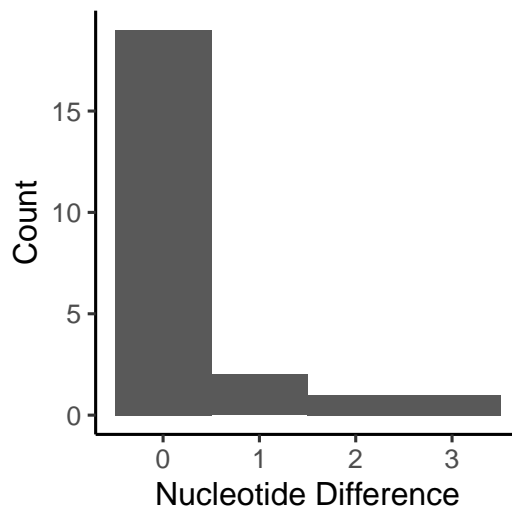
IGHV3-73*01

28 sequences assigned
26 (92.9%) exact matches, in which:
26 unique CDR3
4 unique J



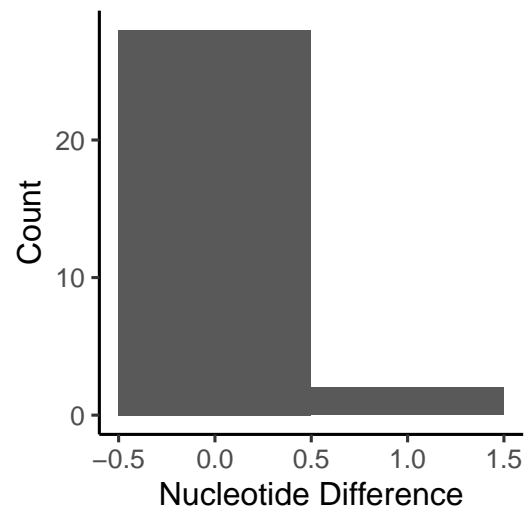
IGHV3-64D*06

23 sequences assigned
19 (82.6%) exact matches, in which:
19 unique CDR3
7 unique J



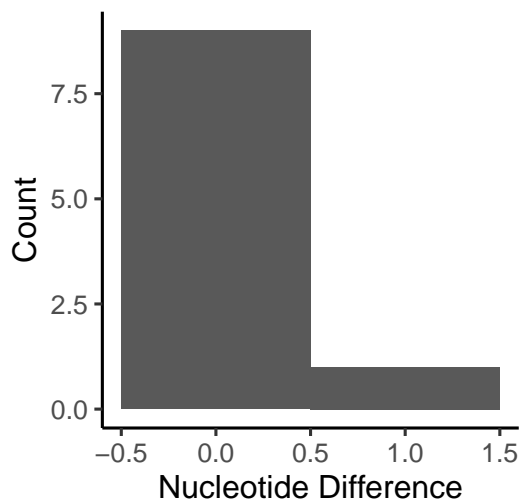
IGHV4-31*01

30 sequences assigned
28 (93.3%) exact matches, in which:
28 unique CDR3
4 unique J



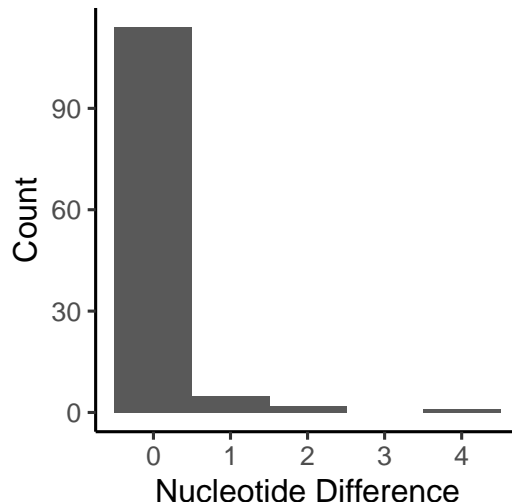
IGHV3-73*02

10 sequences assigned
9 (90%) exact matches, in which:
9 unique CDR3
3 unique J



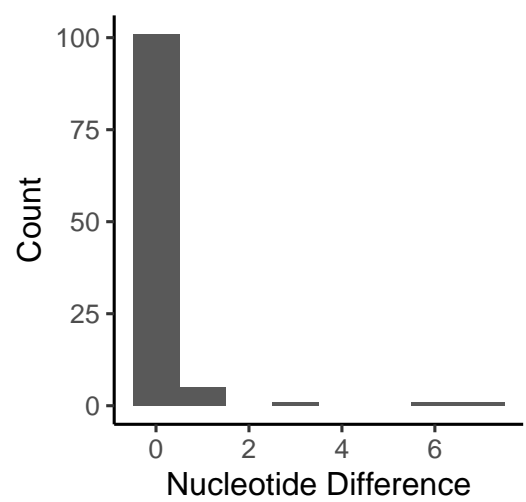
IGHV4-4*02

122 sequences assigned
114 (93.4%) exact matches, in which:
114 unique CDR3
6 unique J



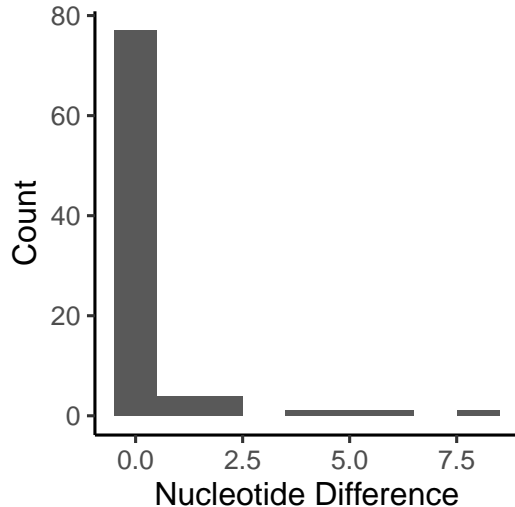
IGHV4-31*03

109 sequences assigned
101 (92.7%) exact matches, in which:
101 unique CDR3
7 unique J



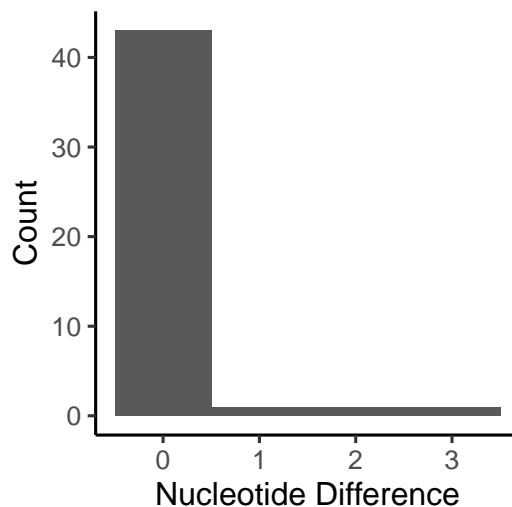
IGHV3-74*01

89 sequences assigned
77 (86.5%) exact matches, in which:
77 unique CDR3
5 unique J



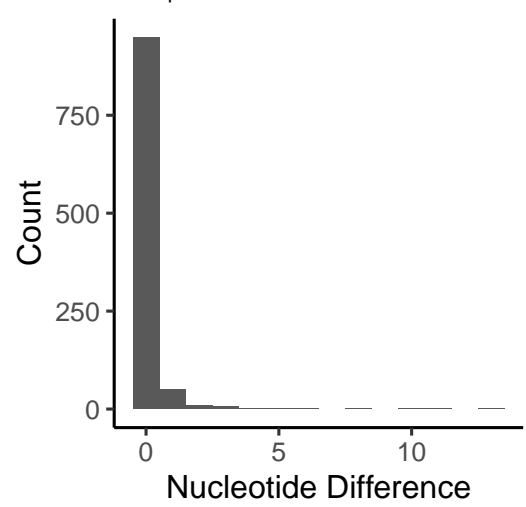
IGHV4-4*07

46 sequences assigned
43 (93.5%) exact matches, in which:
43 unique CDR3
5 unique J



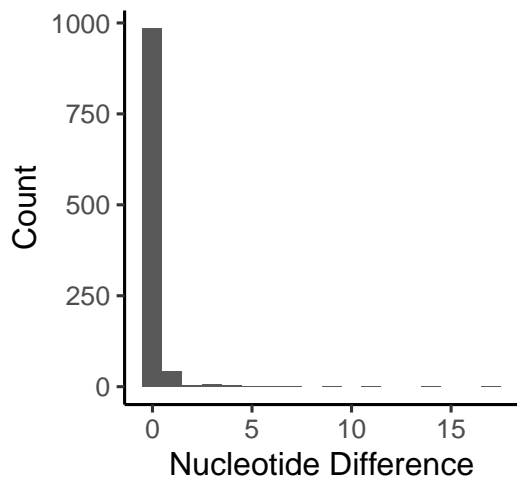
IGHV4-34*01

1025 sequences assigned
949 (92.6%) exact matches, in which:
949 unique CDR3
7 unique J



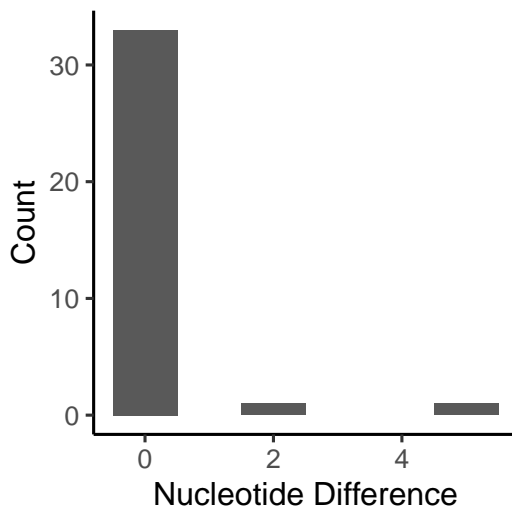
IGHV4-39*01

1052 sequences assigned
985 (93.6%) exact matches, in which:
984 unique CDR3
7 unique J



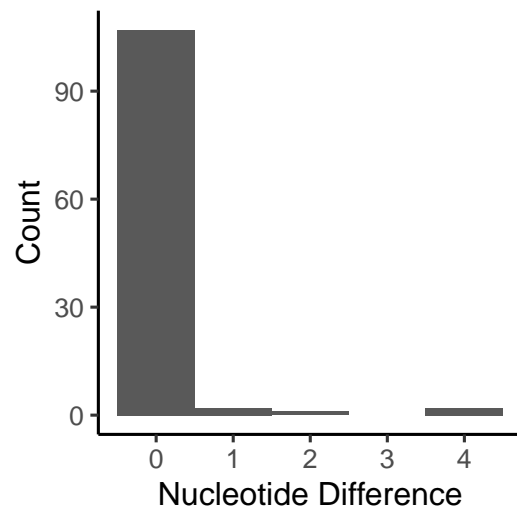
IGHV4-61*01

35 sequences assigned
33 (94.3%) exact matches, in which:
33 unique CDR3
5 unique J



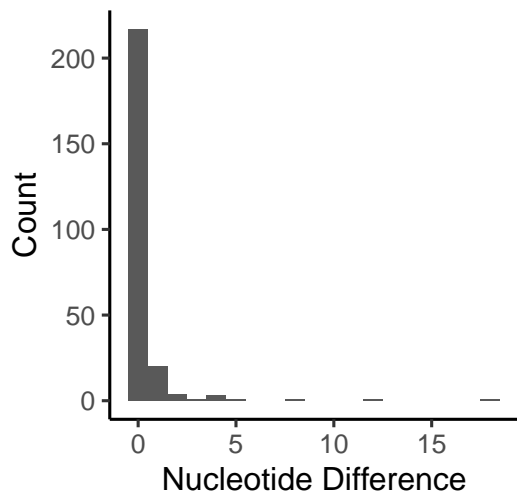
IGHV6-1*01

112 sequences assigned
107 (95.5%) exact matches, in which:
107 unique CDR3
6 unique J



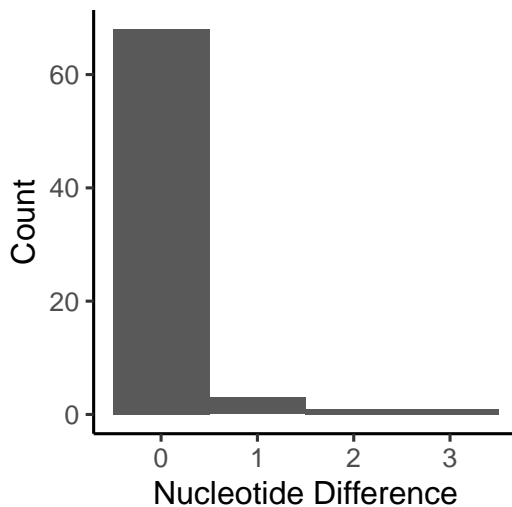
IGHV4-59*01

249 sequences assigned
217 (87.1%) exact matches, in which:
217 unique CDR3
7 unique J



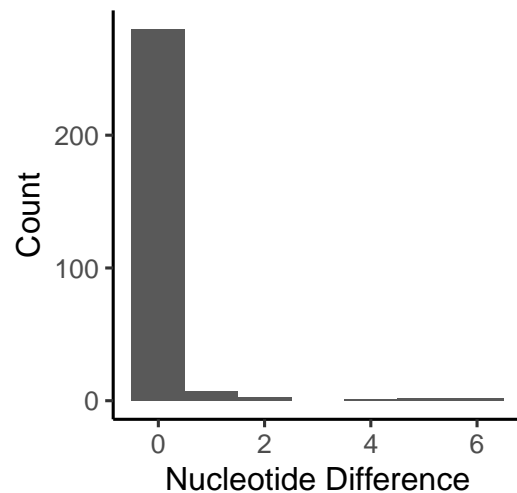
IGHV5-10-1*03

73 sequences assigned
68 (93.2%) exact matches, in which:
68 unique CDR3
5 unique J



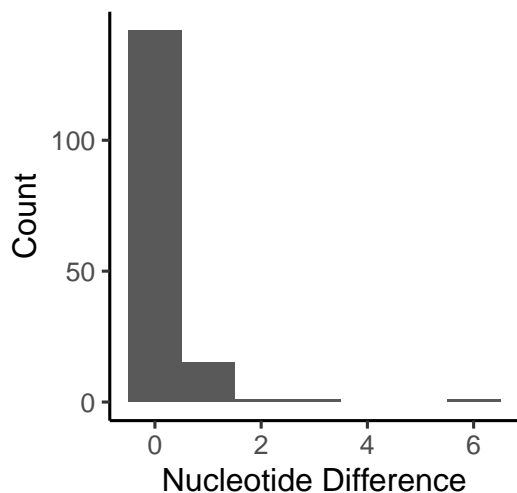
IGHV7-4-1*02

295 sequences assigned
280 (94.9%) exact matches, in which:
280 unique CDR3
7 unique J



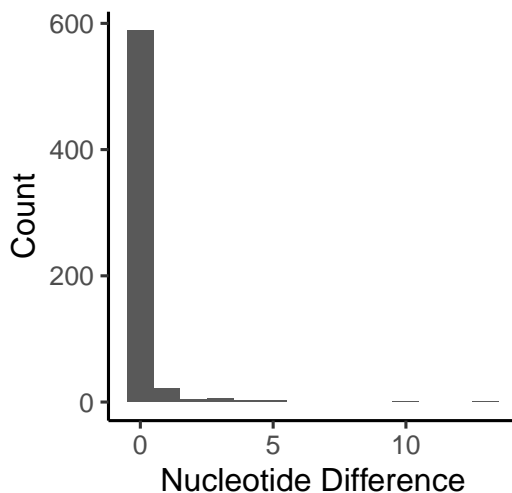
IGHV4-59*08

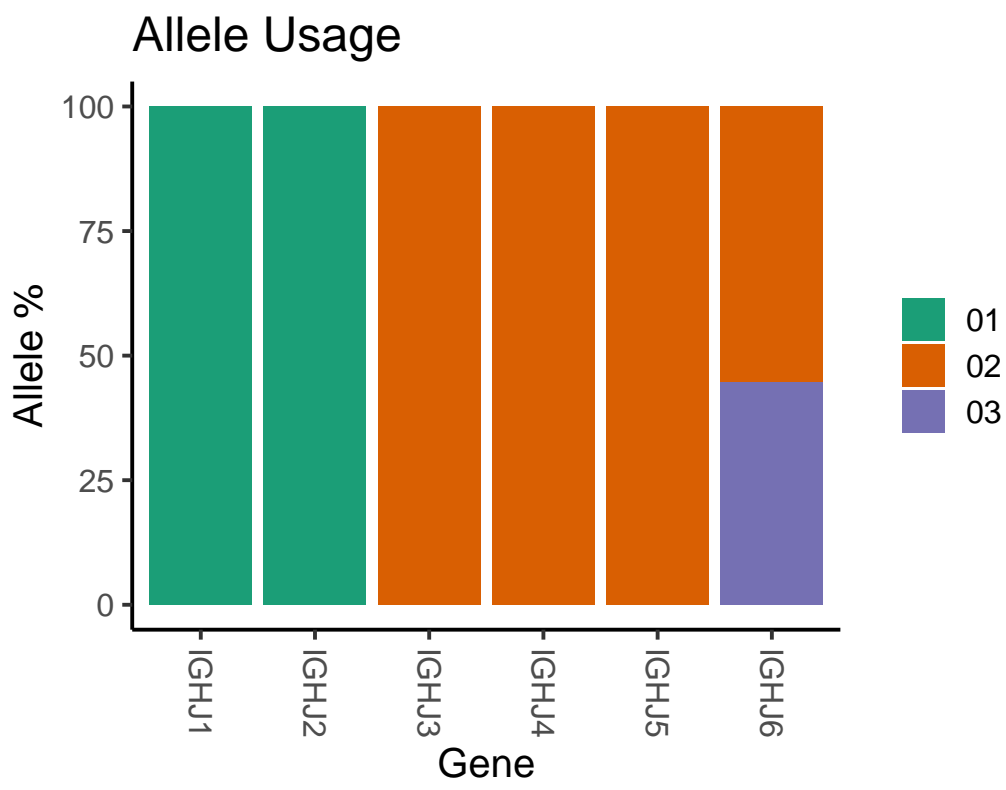
160 sequences assigned
142 (88.8%) exact matches, in which:
142 unique CDR3
5 unique J



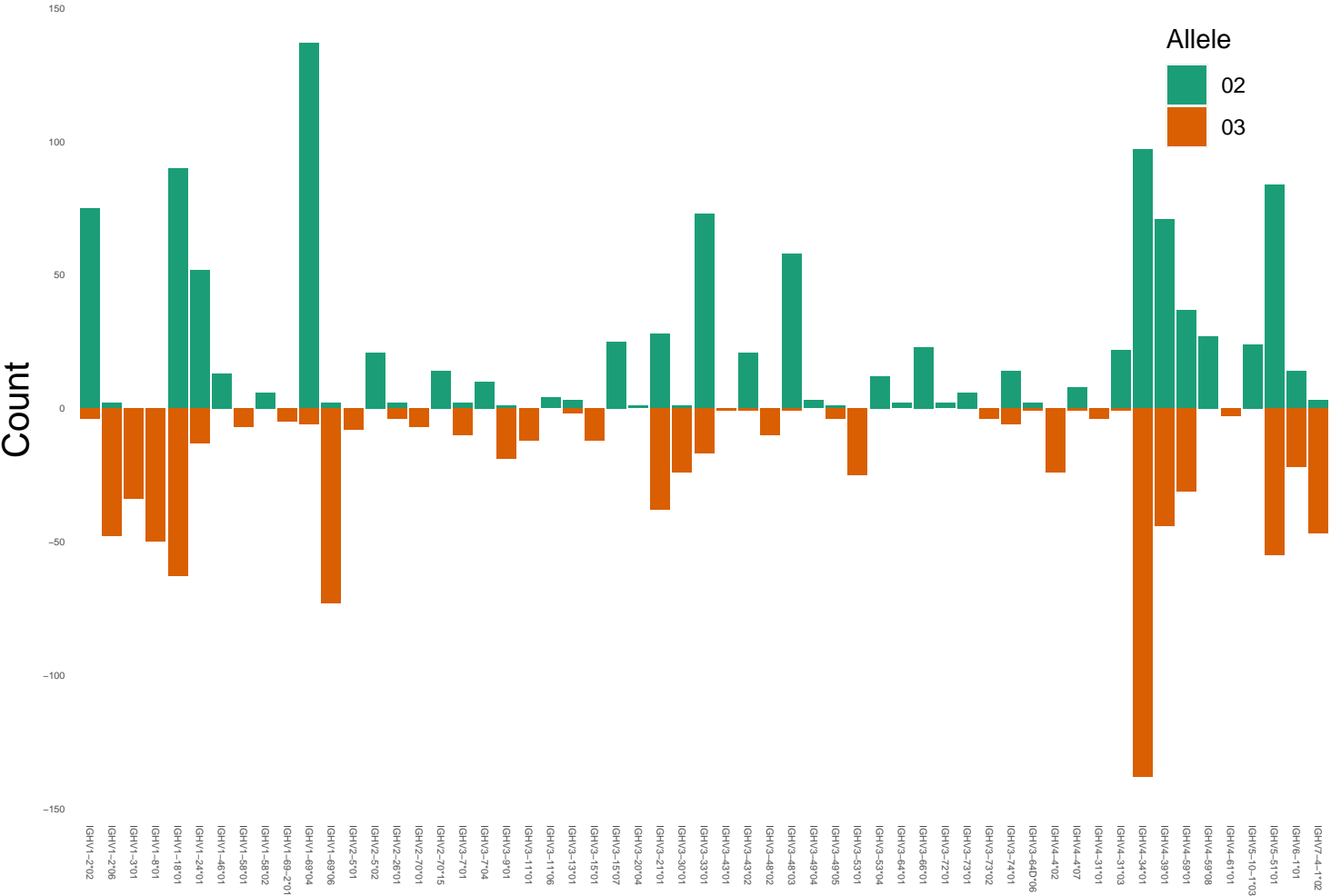
IGHV5-51*01

627 sequences assigned
589 (93.9%) exact matches, in which:
589 unique CDR3
7 unique J





Sequence Count by IGHJ6 allele usage



[illegible]