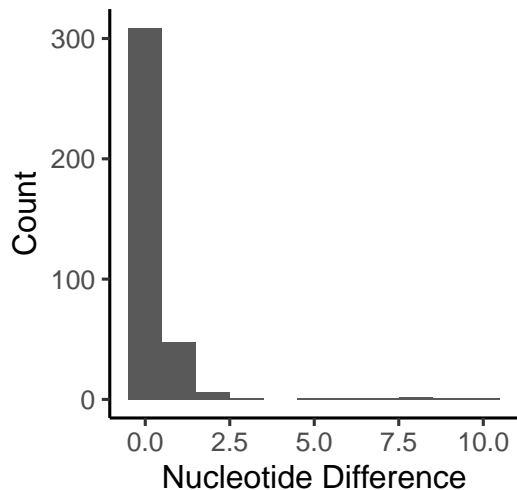


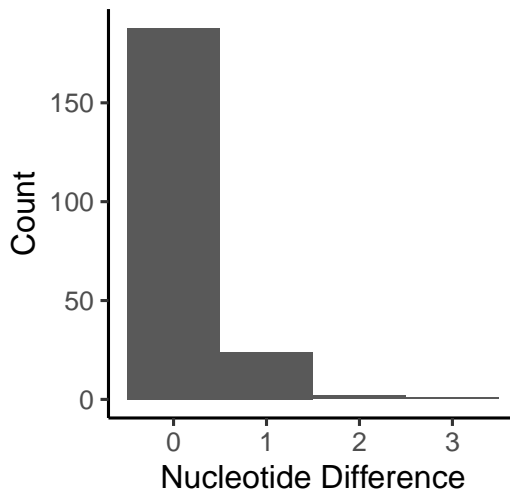
IGHV1-2*02

372 sequences assigned
309 (83.1%) exact matches, in which:
300 unique CDR3
6 unique J



IGHV1-8*01

215 sequences assigned
188 (87.4%) exact matches, in which:
185 unique CDR3
5 unique J



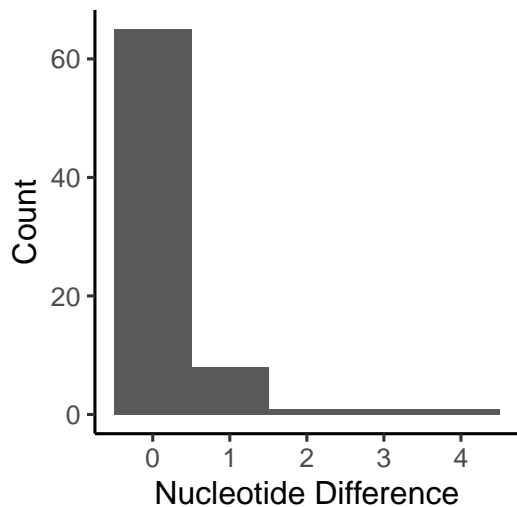
IGHV1-45*02

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



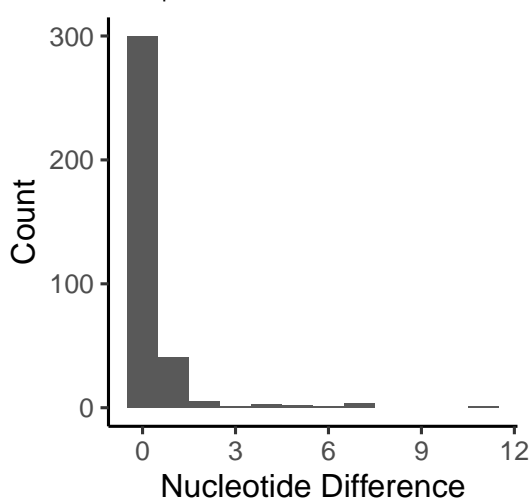
IGHV1-2*04

76 sequences assigned
65 (85.5%) exact matches, in which:
65 unique CDR3
4 unique J



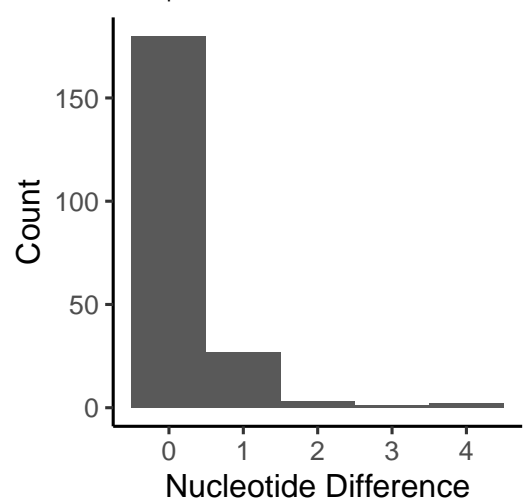
IGHV1-18*01

358 sequences assigned
300 (83.8%) exact matches, in which:
290 unique CDR3
6 unique J



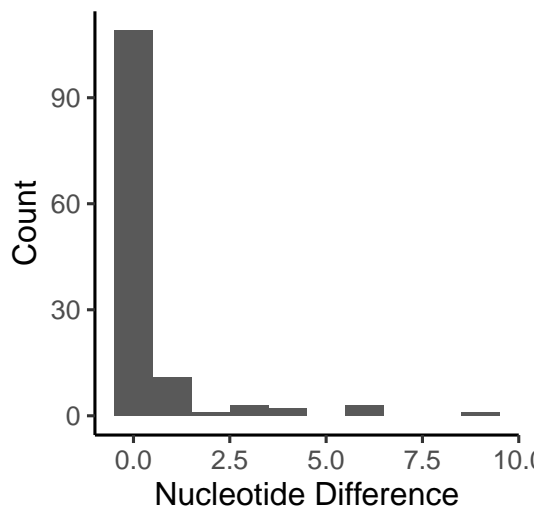
IGHV1-46*01

213 sequences assigned
180 (84.5%) exact matches, in which:
177 unique CDR3
6 unique J



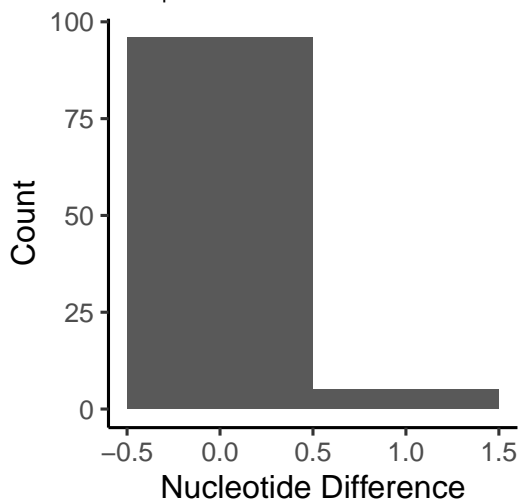
IGHV1-3*01

130 sequences assigned
109 (83.8%) exact matches, in which:
106 unique CDR3
5 unique J



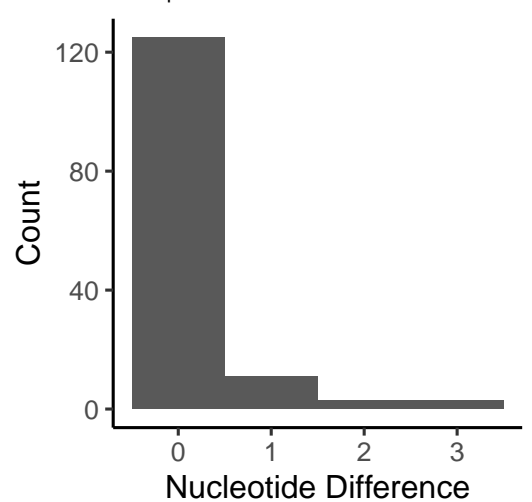
IGHV1-24*01

101 sequences assigned
96 (95%) exact matches, in which:
96 unique CDR3
5 unique J



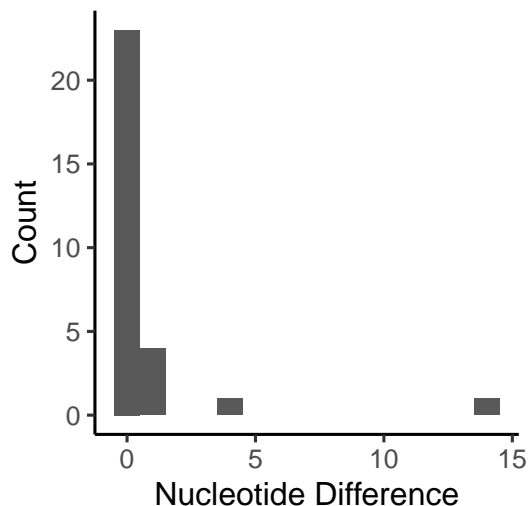
IGHV1-46*03

142 sequences assigned
125 (88%) exact matches, in which:
124 unique CDR3
4 unique J



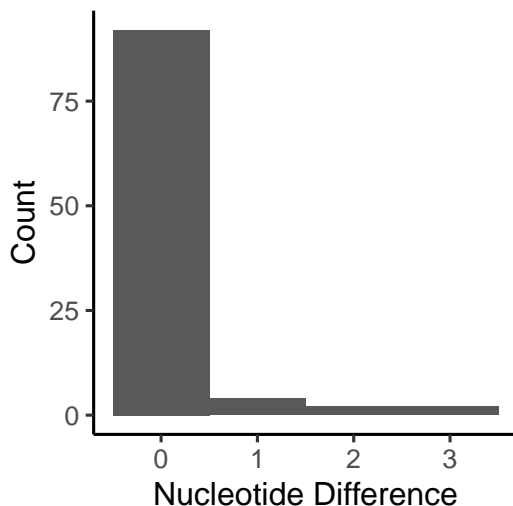
IGHV1–58*01

29 sequences assigned
23 (79.3%) exact matches, in which:
23 unique CDR3
4 unique J



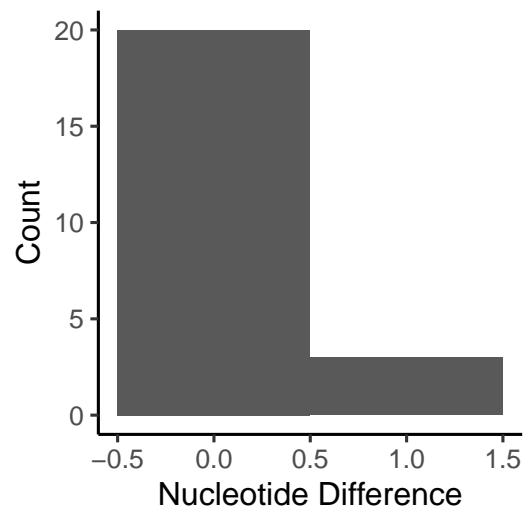
IGHV2–5*01

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



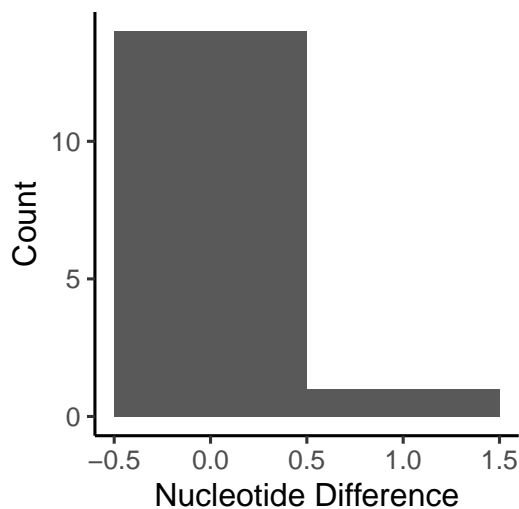
IGHV2–70*01

23 sequences assigned
20 (87%) exact matches, in which:
20 unique CDR3
4 unique J



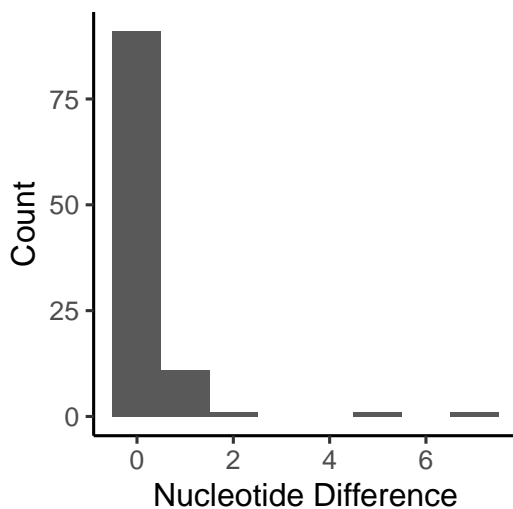
IGHV1–58*02

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



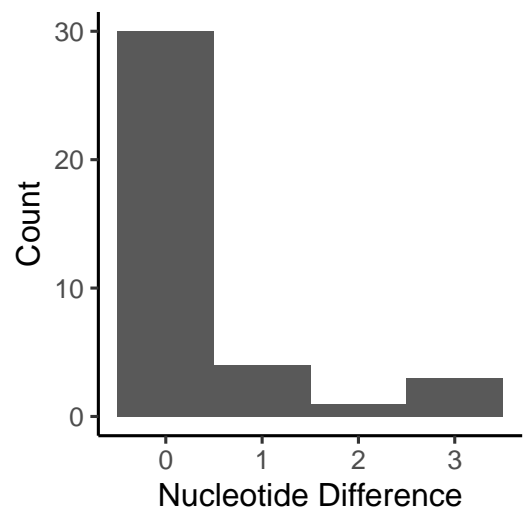
IGHV2–5*02

105 sequences assigned
91 (86.7%) exact matches, in which:
90 unique CDR3
6 unique J



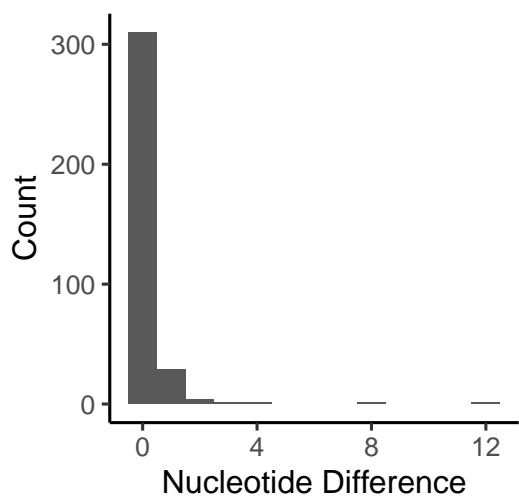
IGHV2–70*15

38 sequences assigned
30 (78.9%) exact matches, in which:
30 unique CDR3
4 unique J



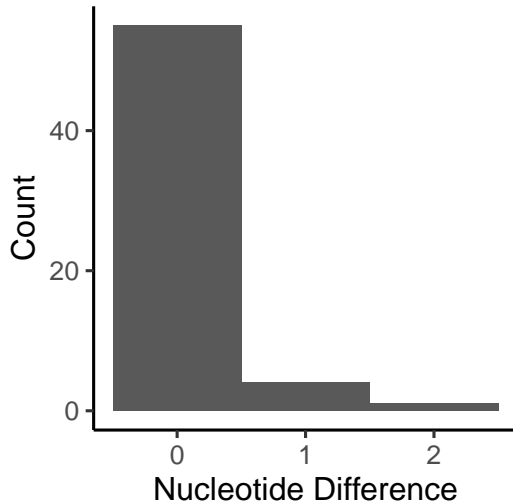
IGHV1–69*02

347 sequences assigned
310 (89.3%) exact matches, in which:
303 unique CDR3
6 unique J



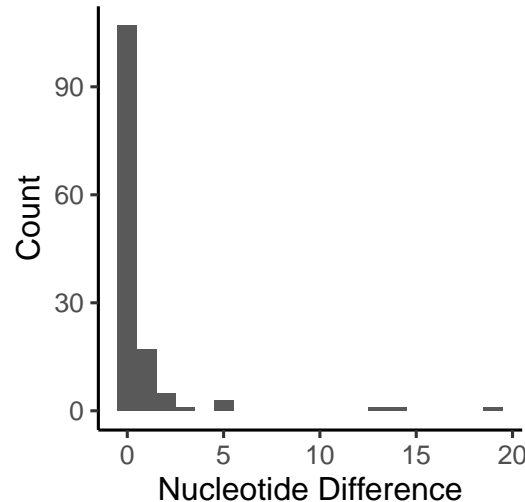
IGHV2–26*01

60 sequences assigned
55 (91.7%) exact matches, in which:
55 unique CDR3
5 unique J



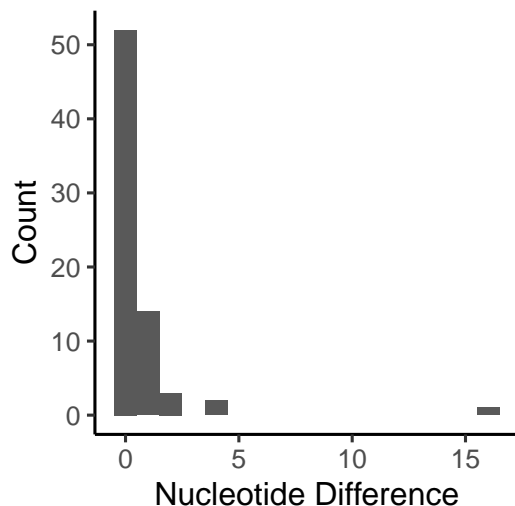
IGHV3–7*01

136 sequences assigned
107 (78.7%) exact matches, in which:
103 unique CDR3
6 unique J



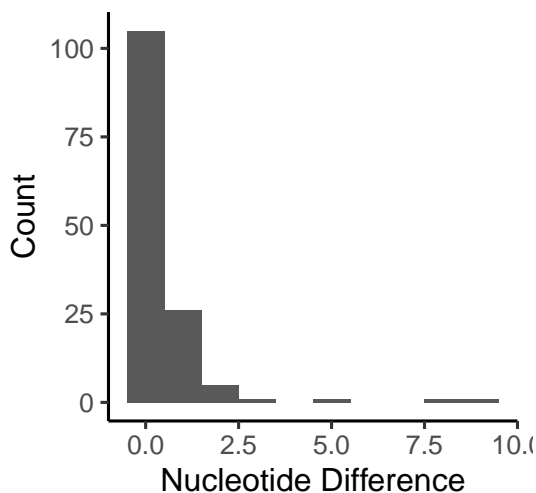
IGHV3-7*04

72 sequences assigned
52 (72.2%) exact matches, in which:
52 unique CDR3
5 unique J



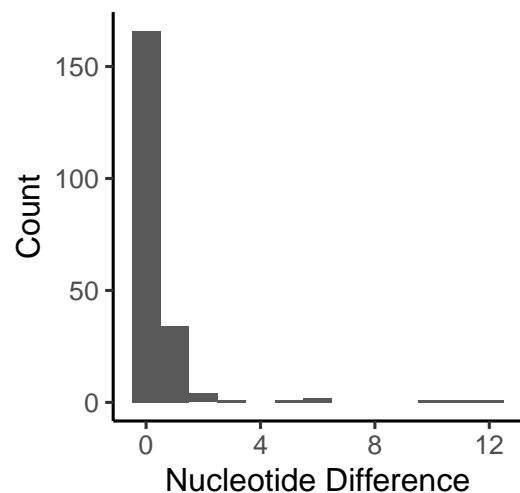
IGHV3-11*05

140 sequences assigned
105 (75%) exact matches, in which:
104 unique CDR3
6 unique J



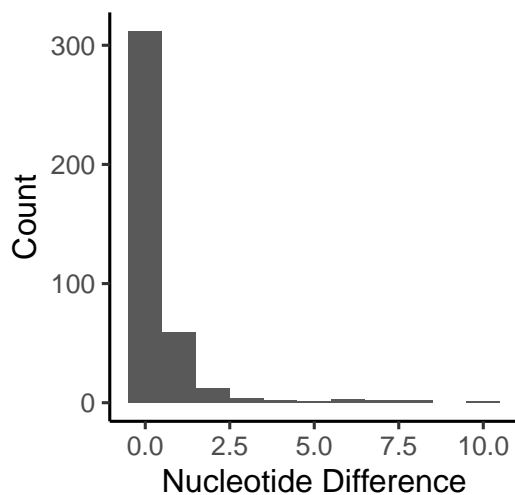
IGHV3-15*01

211 sequences assigned
166 (78.7%) exact matches, in which:
165 unique CDR3
6 unique J



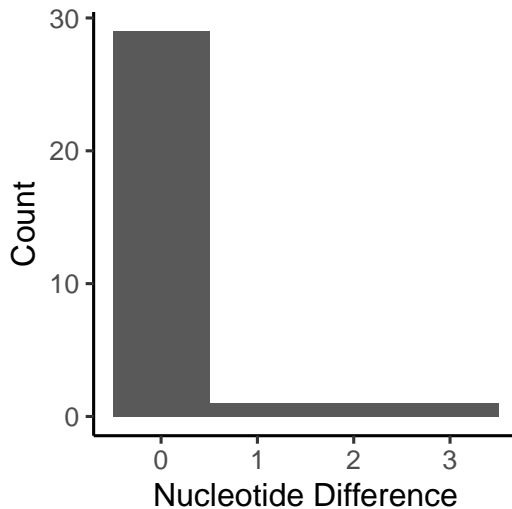
IGHV3-9*01

398 sequences assigned
312 (78.4%) exact matches, in which:
305 unique CDR3
6 unique J



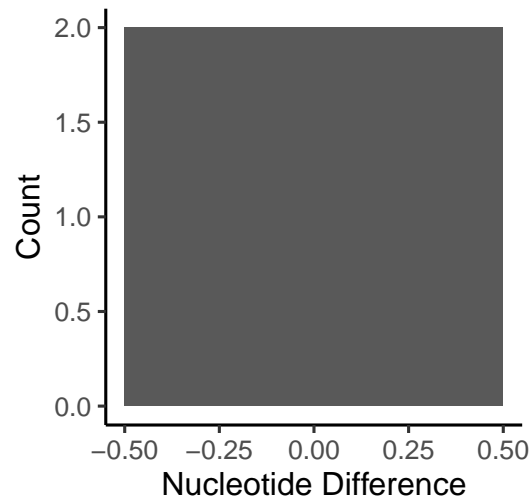
IGHV3-13*01

32 sequences assigned
29 (90.6%) exact matches, in which:
29 unique CDR3
5 unique J



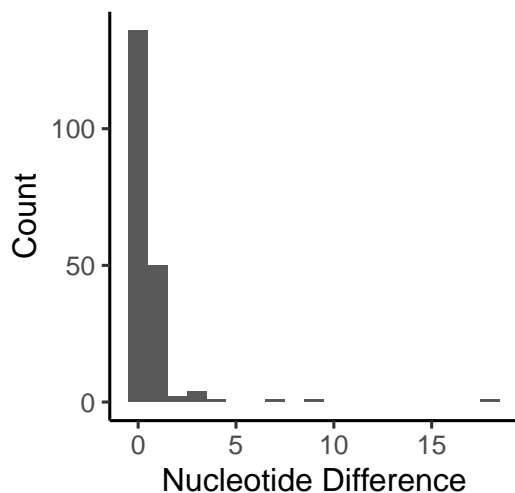
IGHV3-19*01

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



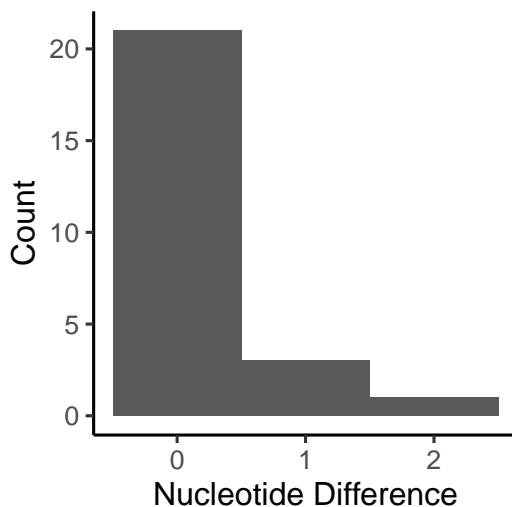
IGHV3-11*01

196 sequences assigned
136 (69.4%) exact matches, in which:
135 unique CDR3
6 unique J



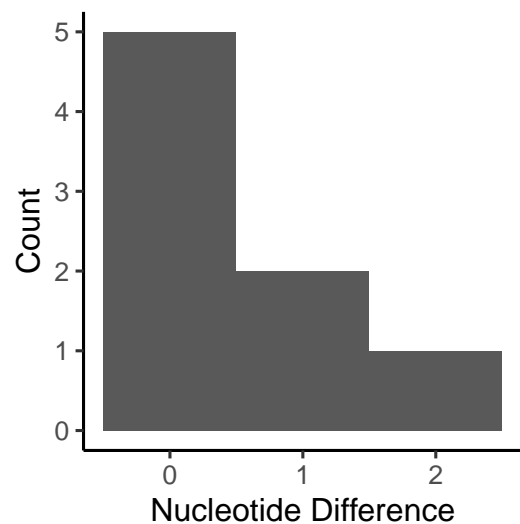
IGHV3-13*04

25 sequences assigned
21 (84%) exact matches, in which:
19 unique CDR3
5 unique J



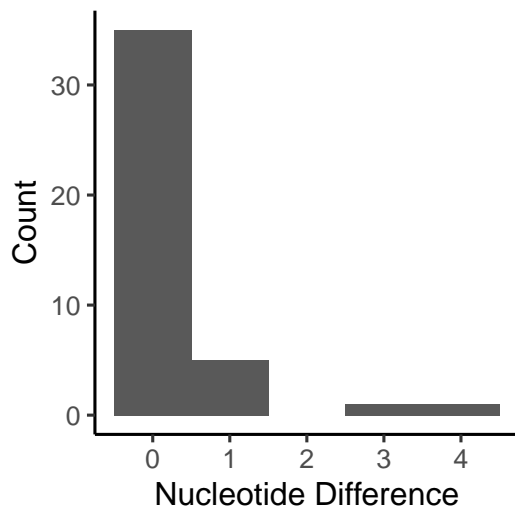
IGHV3-20*01

8 sequences assigned
5 (62.5%) exact matches, in which:
4 unique CDR3
2 unique J



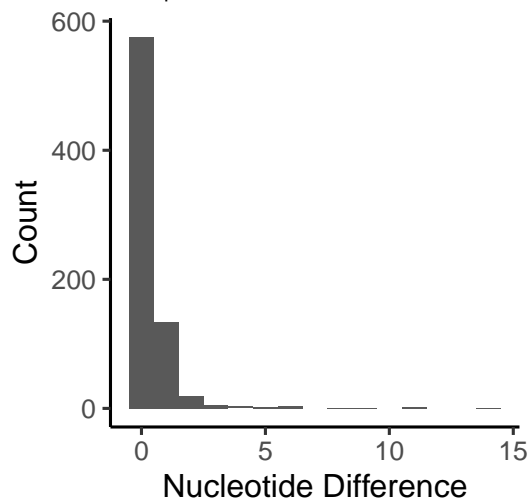
IGHV3–20*04

42 sequences assigned
35 (83.3%) exact matches, in which:
34 unique CDR3
4 unique J



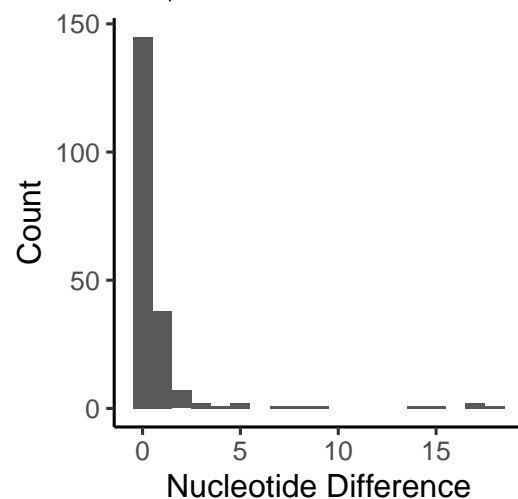
IGHV3–33*01

750 sequences assigned
576 (76.8%) exact matches, in which:
558 unique CDR3
6 unique J



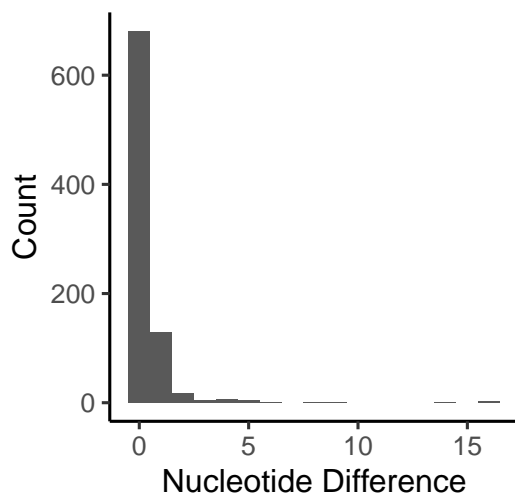
IGHV3–48*02

204 sequences assigned
145 (71.1%) exact matches, in which:
144 unique CDR3
6 unique J



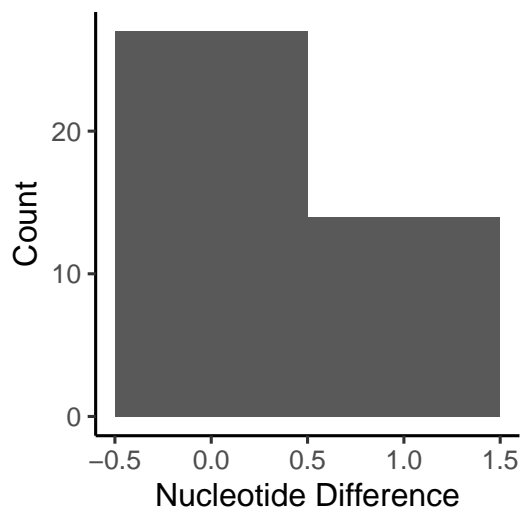
IGHV3–21*01

848 sequences assigned
681 (80.3%) exact matches, in which:
668 unique CDR3
6 unique J



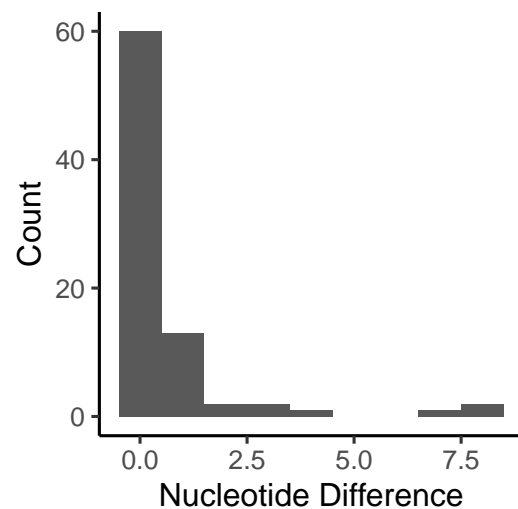
IGHV3–43*01

41 sequences assigned
27 (65.9%) exact matches, in which:
27 unique CDR3
5 unique J



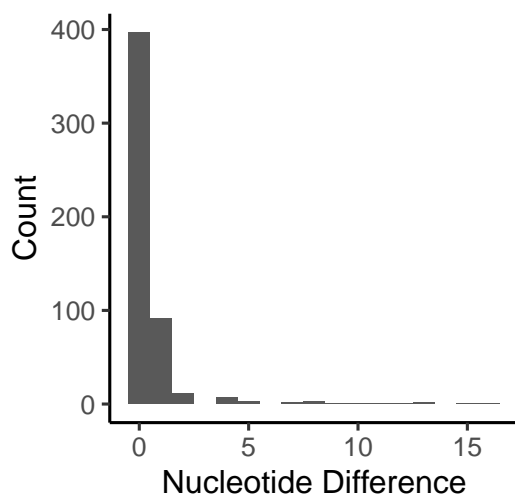
IGHV3–49*03

90 sequences assigned
60 (66.7%) exact matches, in which:
60 unique CDR3
6 unique J



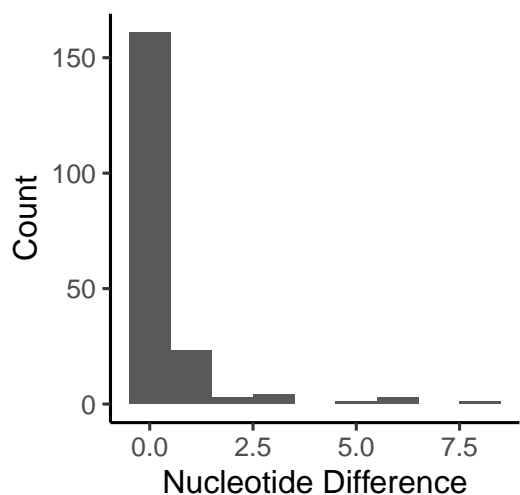
IGHV3–30–3*01

522 sequences assigned
397 (76.1%) exact matches, in which:
385 unique CDR3
6 unique J



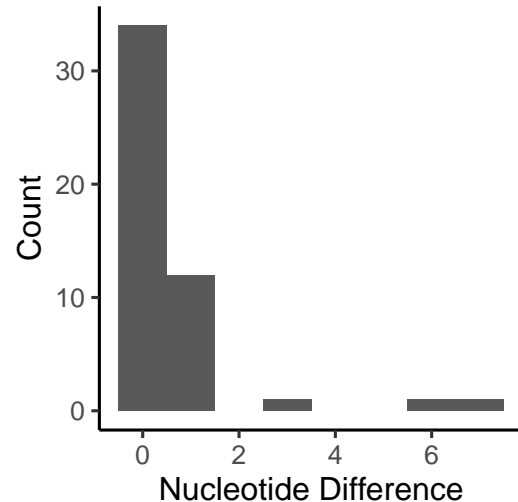
IGHV3–48*01

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



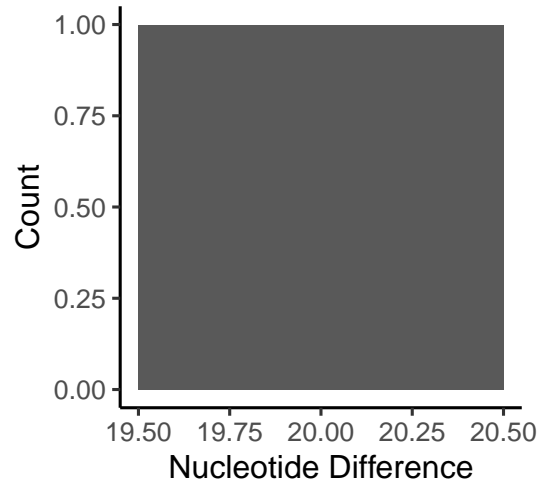
IGHV3–49*05

49 sequences assigned
34 (69.4%) exact matches, in which:
34 unique CDR3
4 unique J



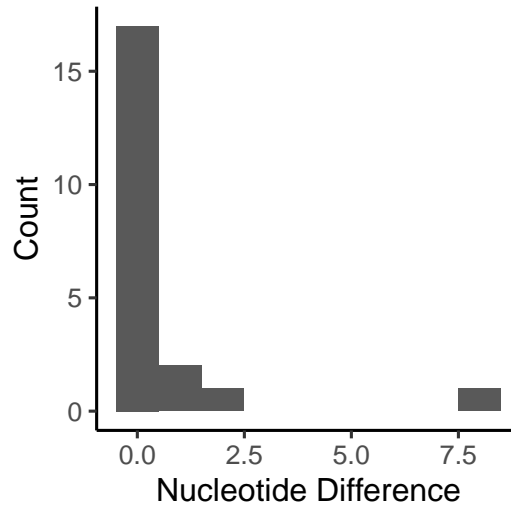
IGHV3-52*01

1 sequences assigned
No exact matches.



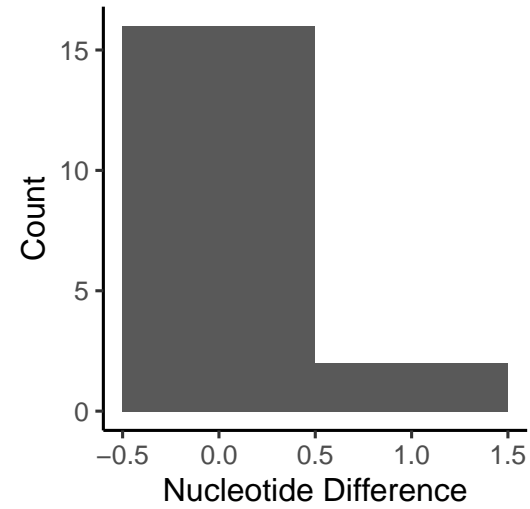
IGHV3-64*01

21 sequences assigned
17 (81%) exact matches, in which:
17 unique CDR3
4 unique J



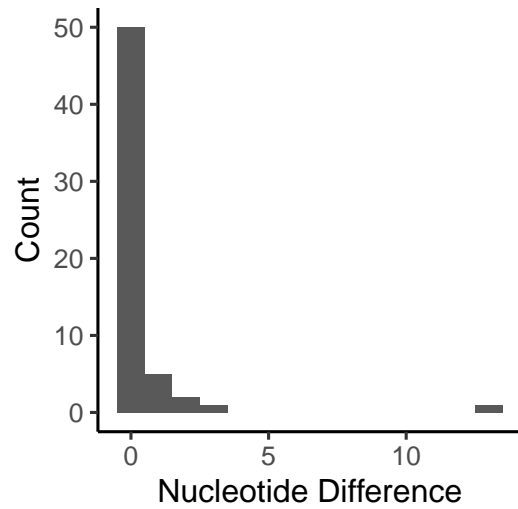
IGHV3-73*01

18 sequences assigned
16 (88.9%) exact matches, in which:
15 unique CDR3
4 unique J



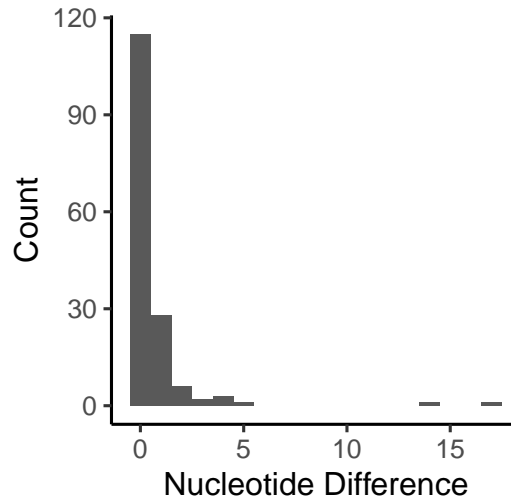
IGHV3-53*02

59 sequences assigned
50 (84.7%) exact matches, in which:
50 unique CDR3
5 unique J



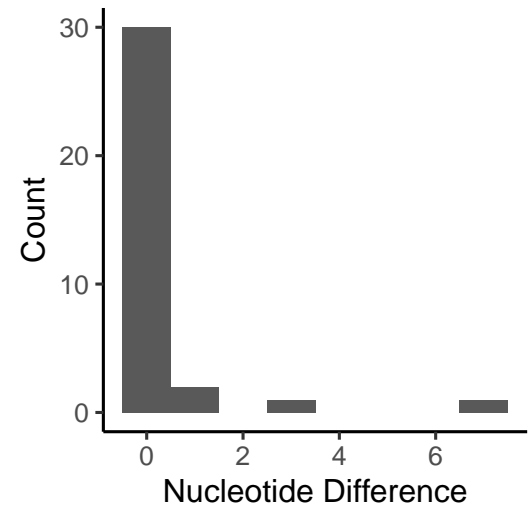
IGHV3-66*01

158 sequences assigned
115 (72.8%) exact matches, in which:
111 unique CDR3
6 unique J



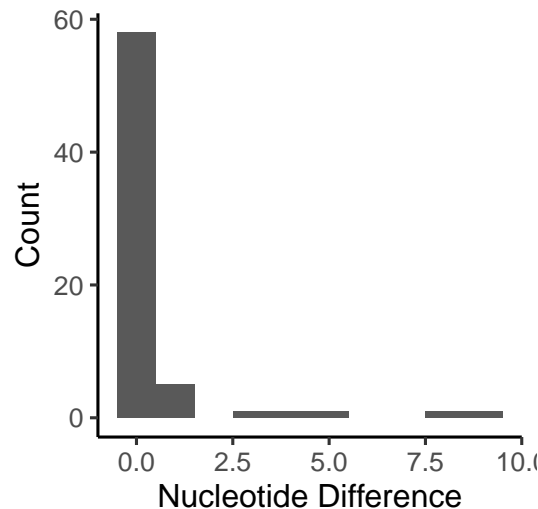
IGHV3-73*02

34 sequences assigned
30 (88.2%) exact matches, in which:
30 unique CDR3
5 unique J



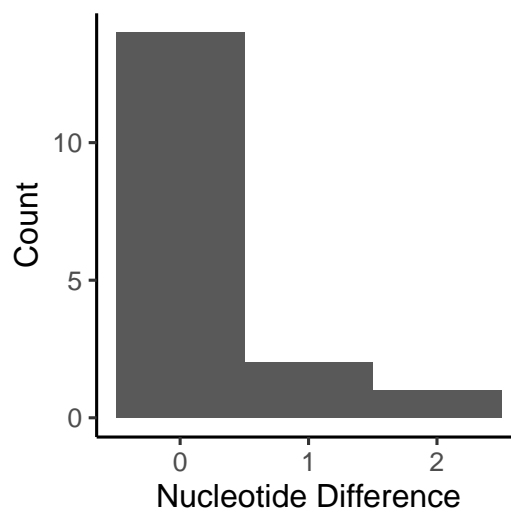
IGHV3-53*04

68 sequences assigned
58 (85.3%) exact matches, in which:
56 unique CDR3
5 unique J



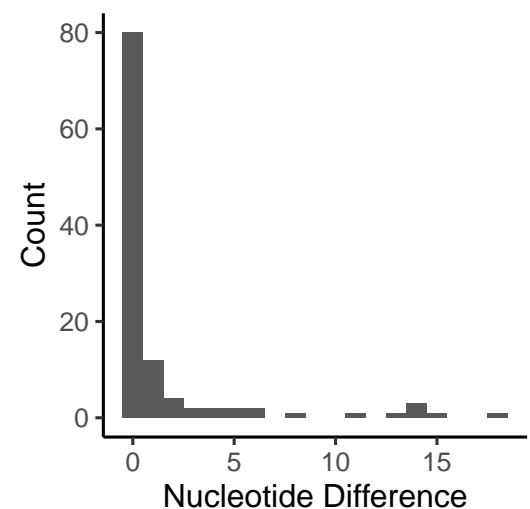
IGHV3-72*01

17 sequences assigned
14 (82.4%) exact matches, in which:
14 unique CDR3
4 unique J



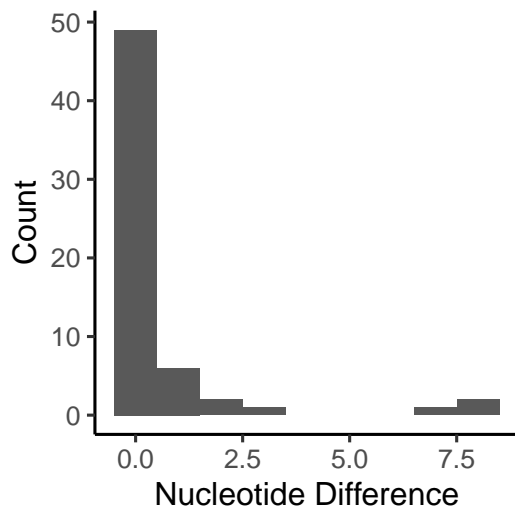
IGHV3-74*01

112 sequences assigned
80 (71.4%) exact matches, in which:
79 unique CDR3
6 unique J



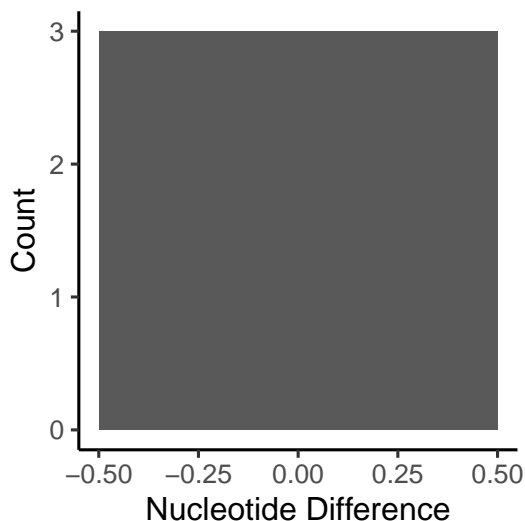
IGHV3-64D*06

61 sequences assigned
49 (80.3%) exact matches, in which:
44 unique CDR3
4 unique J



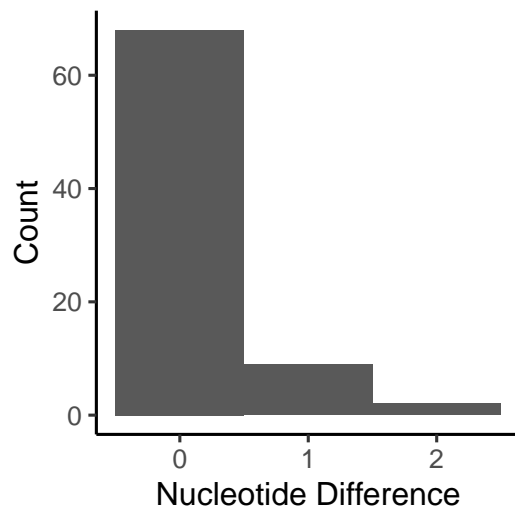
IGHV4-28*01

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



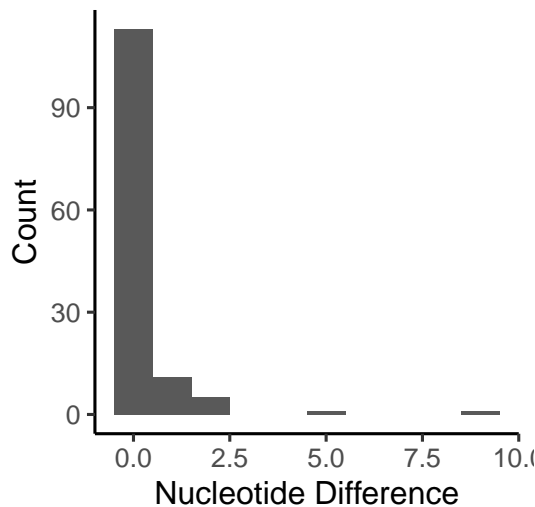
IGHV4-30-2*01

79 sequences assigned
68 (86.1%) exact matches, in which:
65 unique CDR3
5 unique J



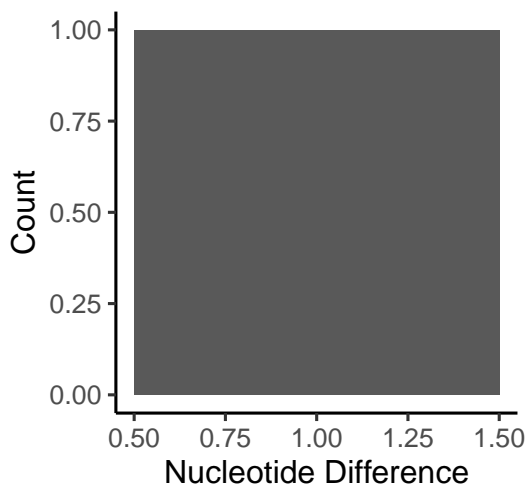
IGHV4-4*02

131 sequences assigned
113 (86.3%) exact matches, in which:
113 unique CDR3
6 unique J



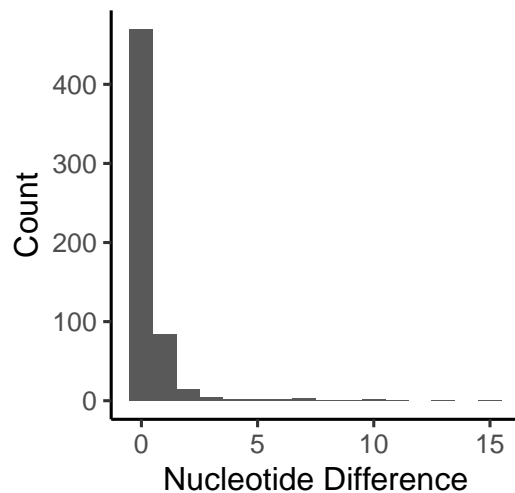
IGHV4-28*04

1 sequences assigned
No exact matches.



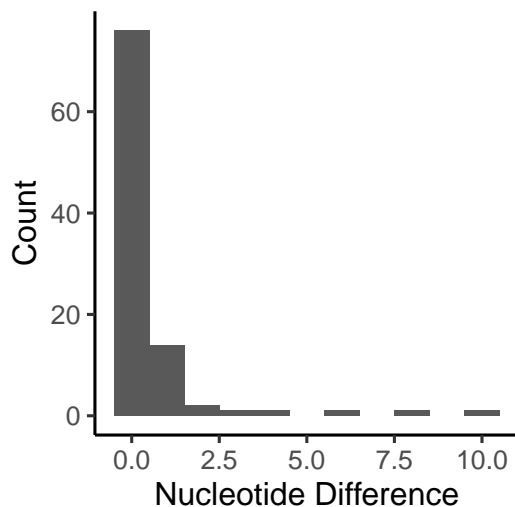
IGHV4-31*03

591 sequences assigned
470 (79.5%) exact matches, in which:
466 unique CDR3
6 unique J



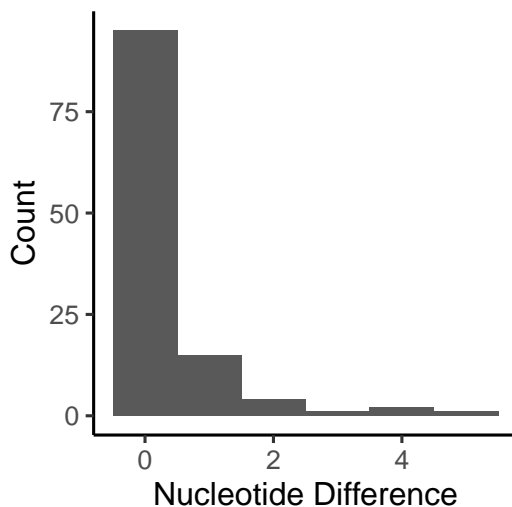
IGHV4-4*07

97 sequences assigned
76 (78.4%) exact matches, in which:
74 unique CDR3
5 unique J



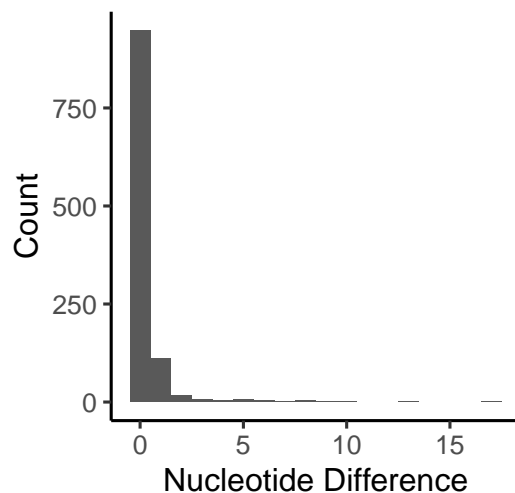
IGHV4-30-4*01

118 sequences assigned
95 (80.5%) exact matches, in which:
92 unique CDR3
5 unique J



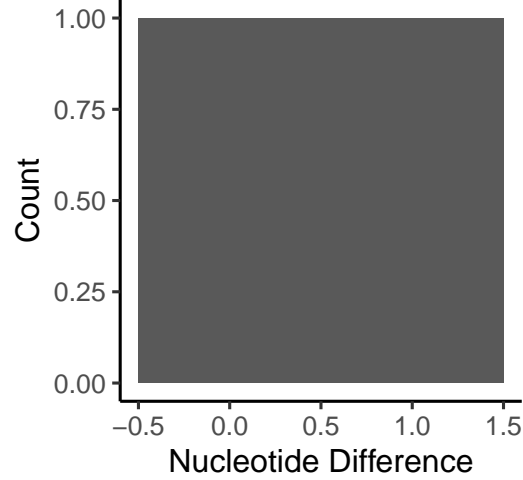
IGHV4-34*01

1104 sequences assigned
948 (85.9%) exact matches, in which:
935 unique CDR3
6 unique J



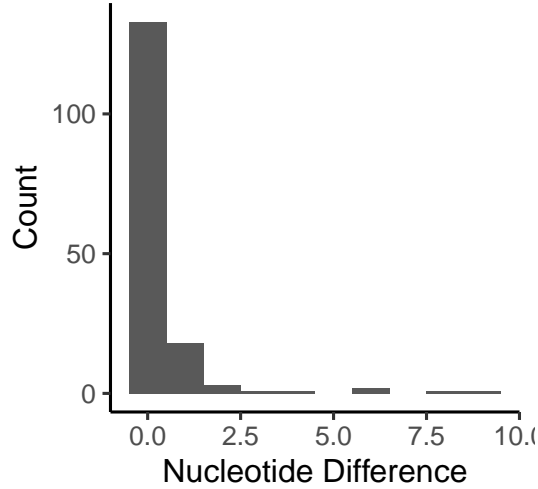
IGHV4-38-2*02

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



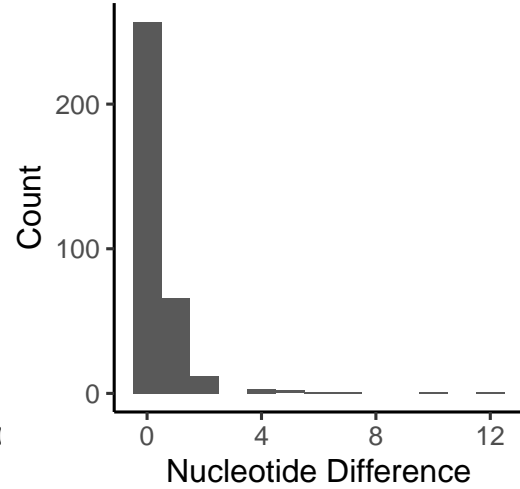
IGHV4-59*08

160 sequences assigned
133 (83.1%) exact matches, in which:
133 unique CDR3
6 unique J



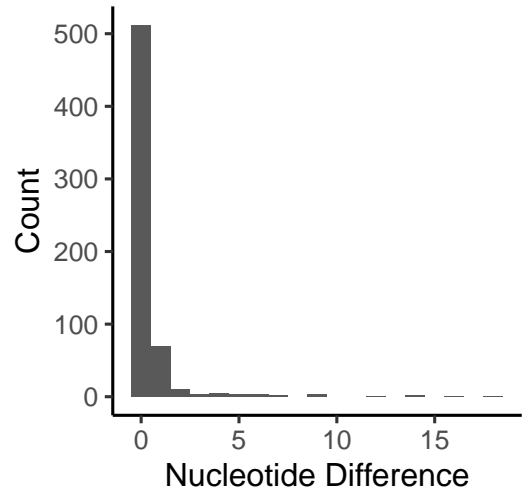
IGHV5-51*01

344 sequences assigned
257 (74.7%) exact matches, in which:
254 unique CDR3
6 unique J



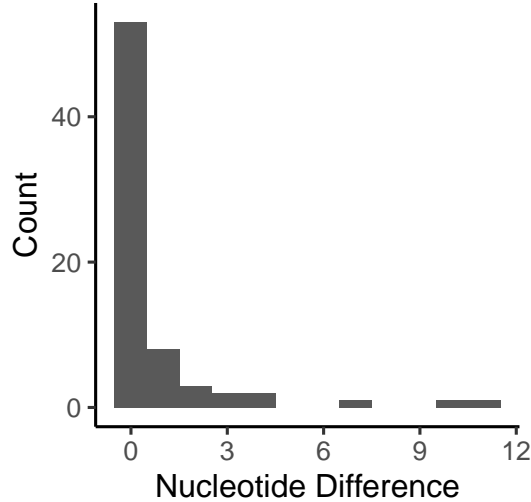
IGHV4-39*01

618 sequences assigned
512 (82.8%) exact matches, in which:
503 unique CDR3
6 unique J



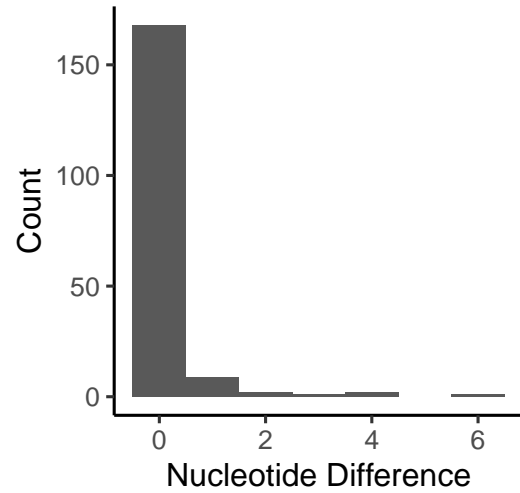
IGHV4-61*01

71 sequences assigned
53 (74.6%) exact matches, in which:
52 unique CDR3
5 unique J



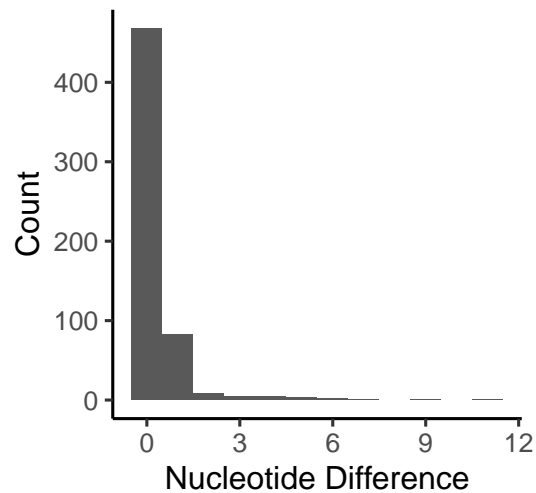
IGHV5-51*03

183 sequences assigned
168 (91.8%) exact matches, in which:
164 unique CDR3
6 unique J



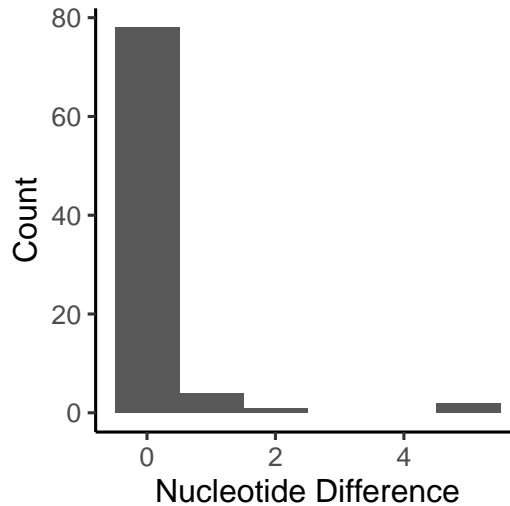
IGHV4-59*01

575 sequences assigned
468 (81.4%) exact matches, in which:
462 unique CDR3
6 unique J



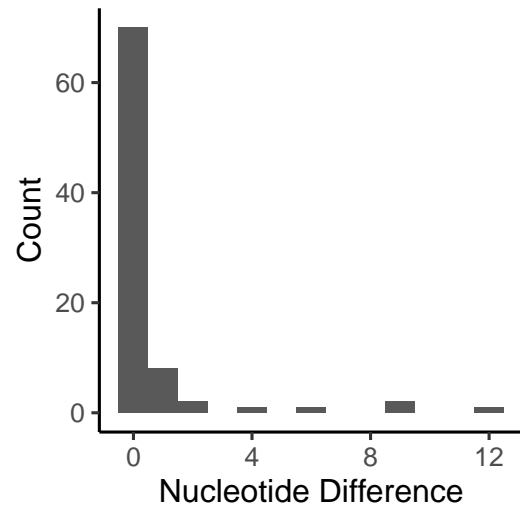
IGHV5-10-1*01

85 sequences assigned
78 (91.8%) exact matches, in which:
77 unique CDR3
6 unique J



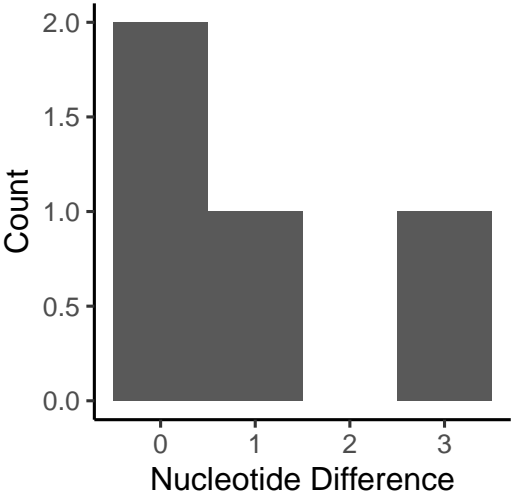
IGHV6-1*01

85 sequences assigned
70 (82.4%) exact matches, in which:
70 unique CDR3
5 unique J



IGHV7-4-1*01

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





[illegible]