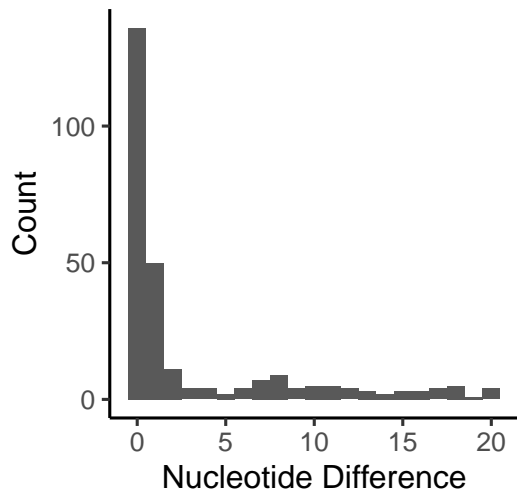


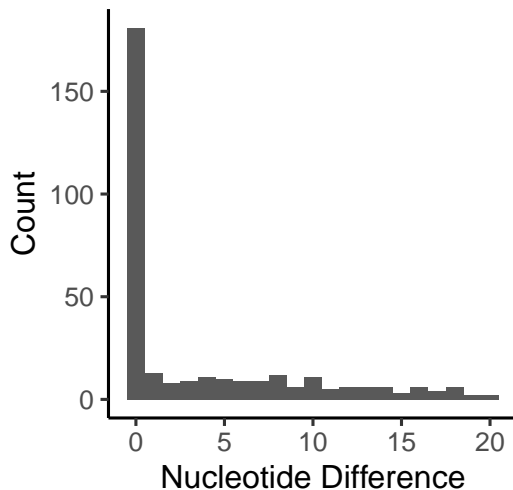
IGHV1-2*02

298 sequences assigned
136 (45.6%) exact matches, in which:
136 unique CDR3
6 unique J



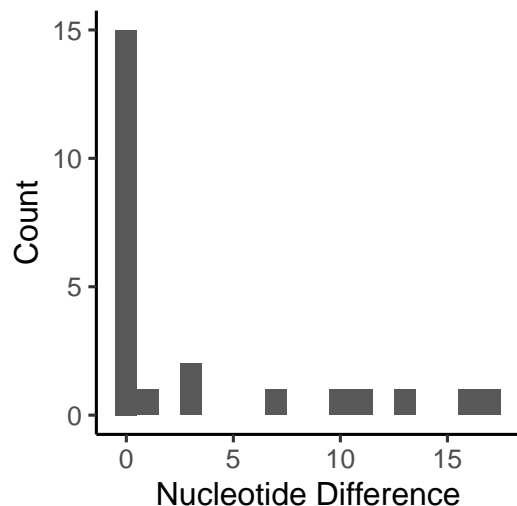
IGHV1-18*01

356 sequences assigned
181 (50.8%) exact matches, in which:
179 unique CDR3
5 unique J



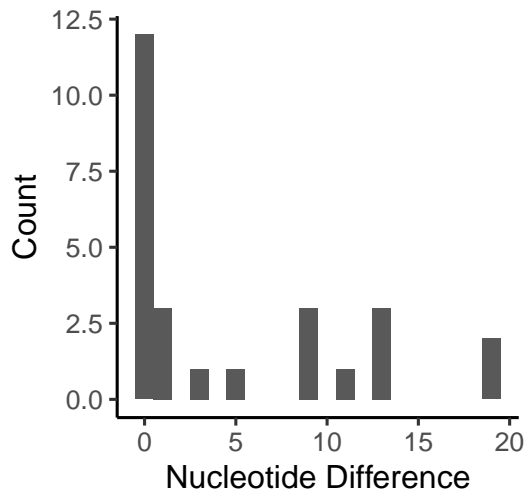
IGHV1-46*03

24 sequences assigned
15 (62.5%) exact matches, in which:
15 unique CDR3
4 unique J



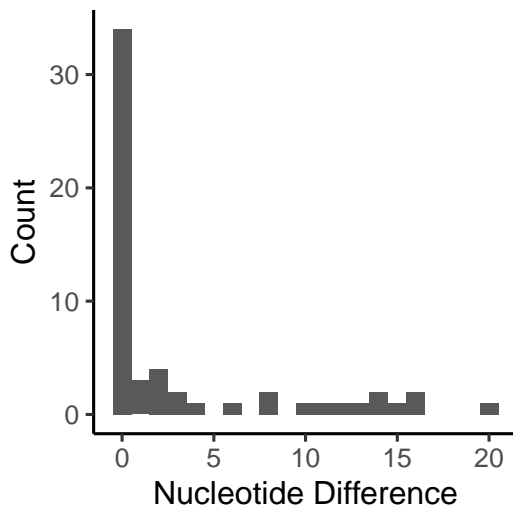
IGHV1-3*01_05

29 sequences assigned
12 (41.4%) exact matches, in which:
12 unique CDR3
4 unique J



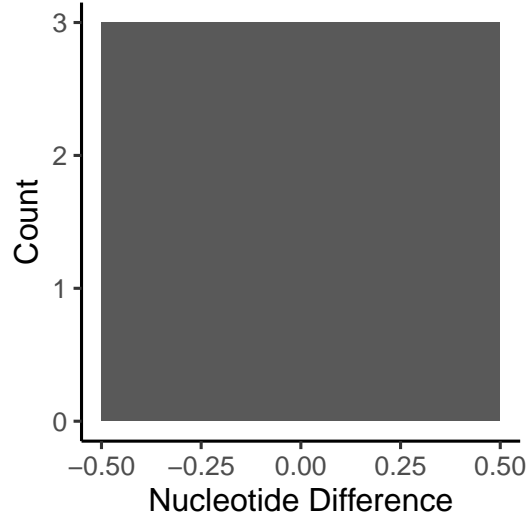
IGHV1-24*01

59 sequences assigned
34 (57.6%) exact matches, in which:
34 unique CDR3
5 unique J



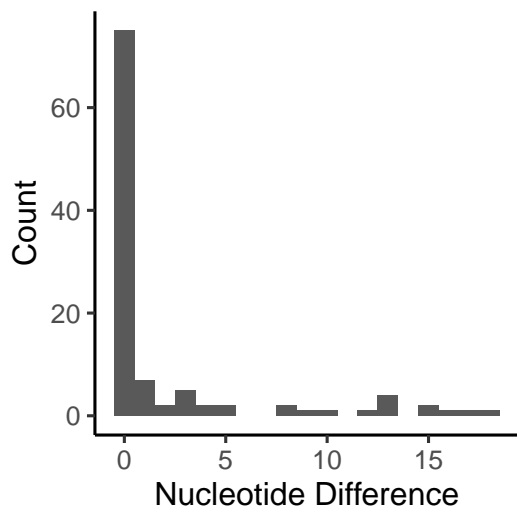
IGHV1-58*02

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



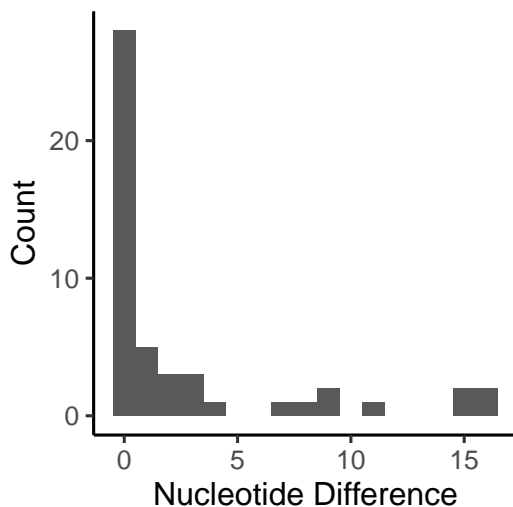
IGHV1-8*01

113 sequences assigned
75 (66.4%) exact matches, in which:
75 unique CDR3
5 unique J



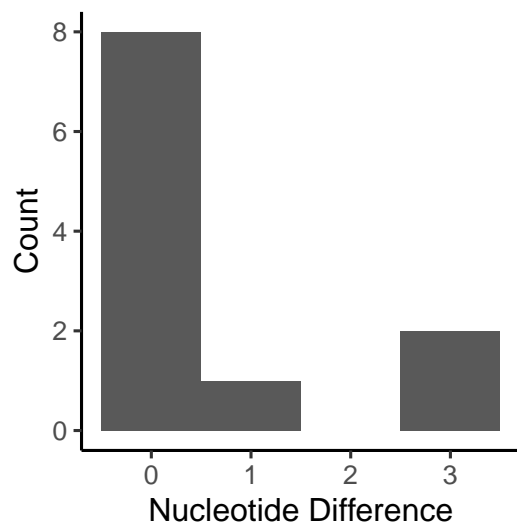
IGHV1-46*01

50 sequences assigned
28 (56%) exact matches, in which:
28 unique CDR3
5 unique J



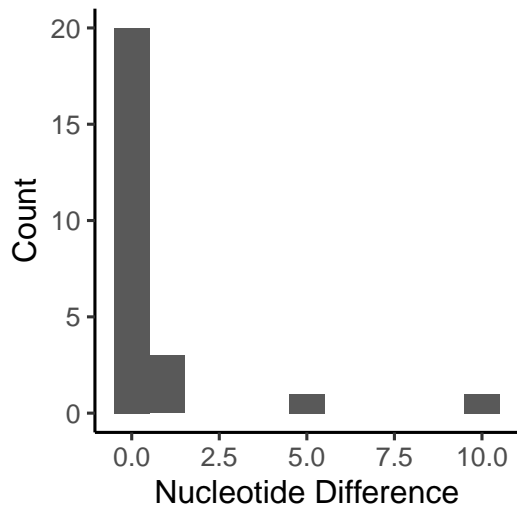
IGHV1-58*01_03

12 sequences assigned
8 (66.7%) exact matches, in which:
8 unique CDR3
5 unique J



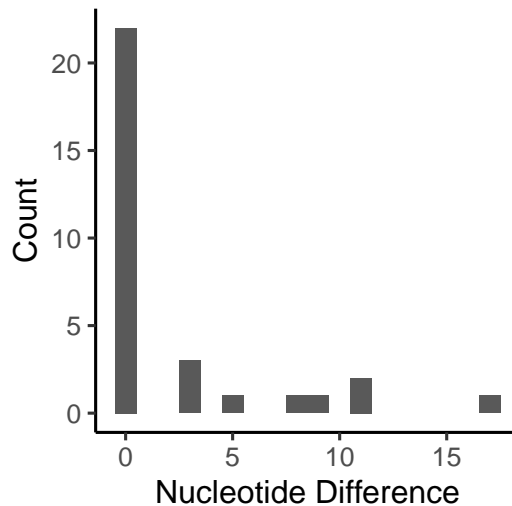
IGHV1-69*02

27 sequences assigned
20 (74.1%) exact matches, in which:
20 unique CDR3
5 unique J



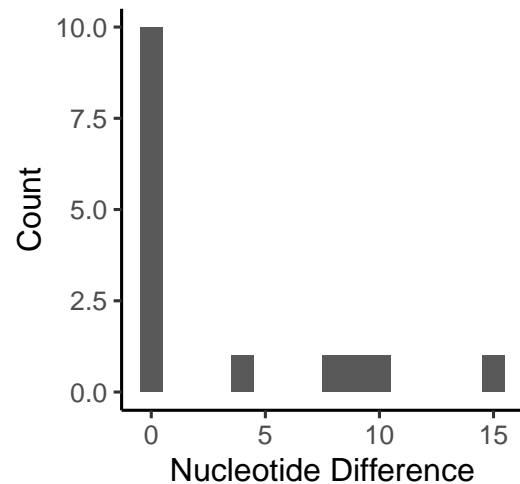
IGHV2-5*01

31 sequences assigned
22 (71%) exact matches, in which:
22 unique CDR3
4 unique J



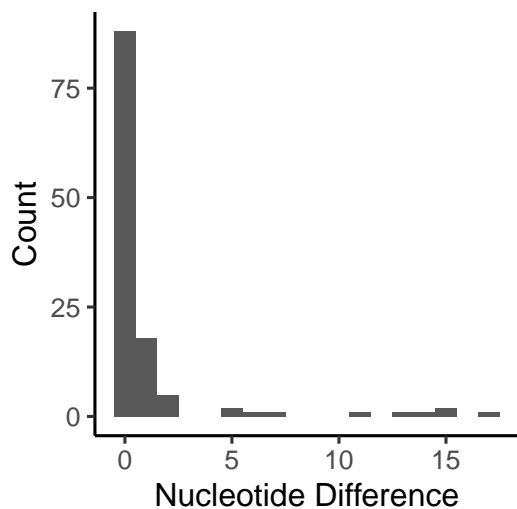
IGHV2-70*01

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



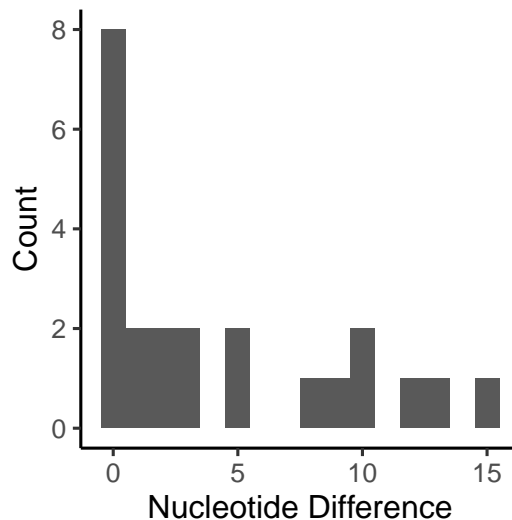
IGHV1-69*01_12_13

126 sequences assigned
88 (69.8%) exact matches, in which:
88 unique CDR3
6 unique J



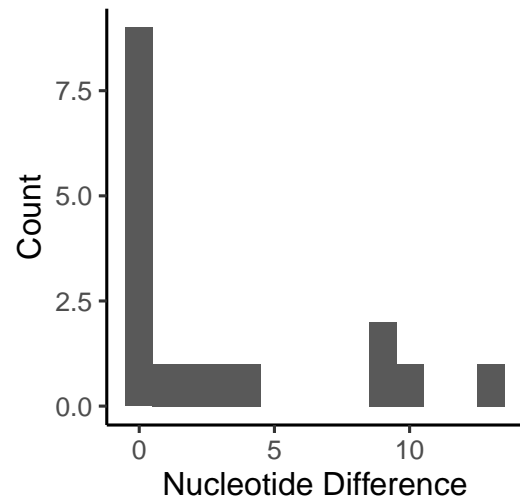
IGHV2-5*02

28 sequences assigned
8 (28.6%) exact matches, in which:
8 unique CDR3
4 unique J



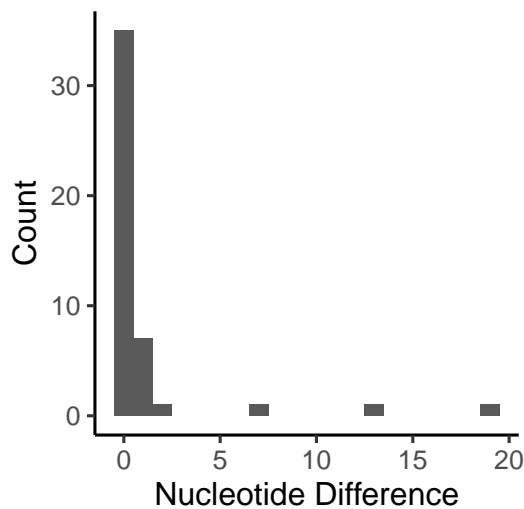
IGHV2-70*11_15

17 sequences assigned
9 (52.9%) exact matches, in which:
9 unique CDR3
4 unique J



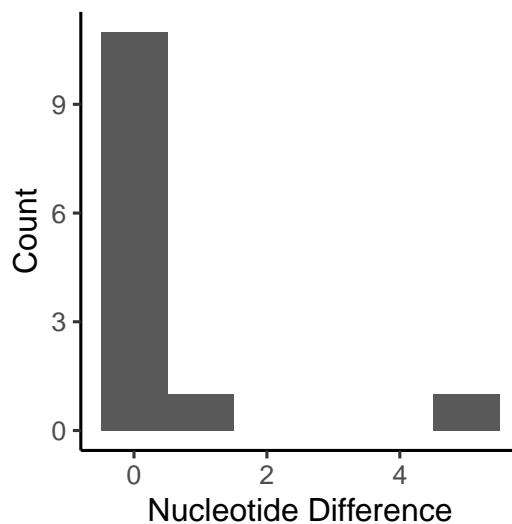
IGHV1-69*06_14

54 sequences assigned
35 (64.8%) exact matches, in which:
35 unique CDR3
5 unique J



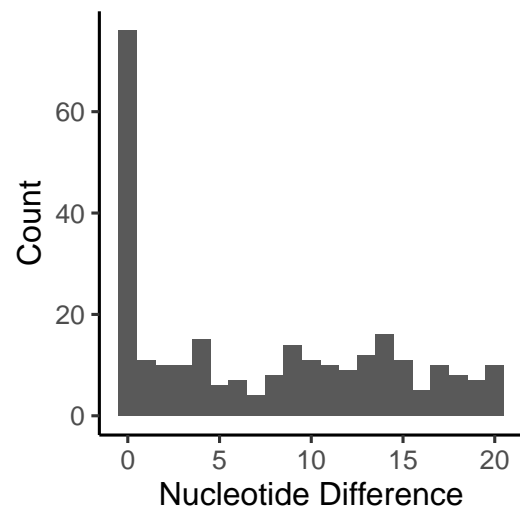
IGHV2-26*01

13 sequences assigned
11 (84.6%) exact matches, in which:
11 unique CDR3
4 unique J



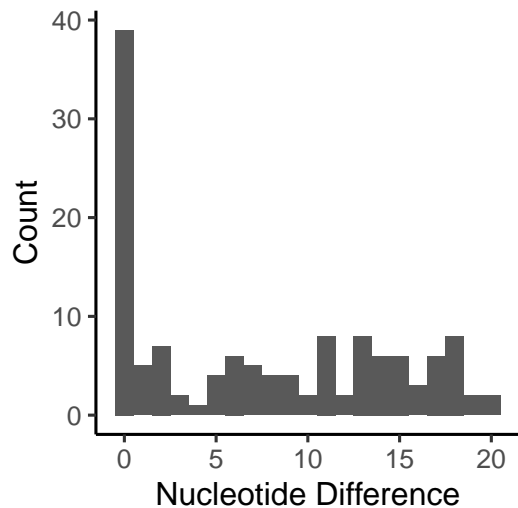
IGHV3-7*01

300 sequences assigned
76 (25.3%) exact matches, in which:
76 unique CDR3
5 unique J



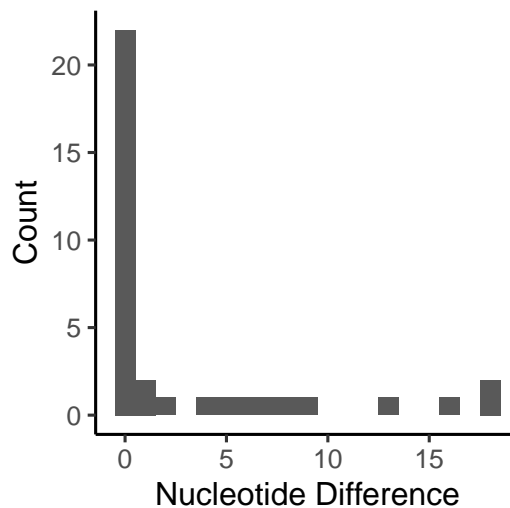
IGHV3-7*03

146 sequences assigned
39 (26.7%) exact matches, in which:
39 unique CDR3
5 unique J



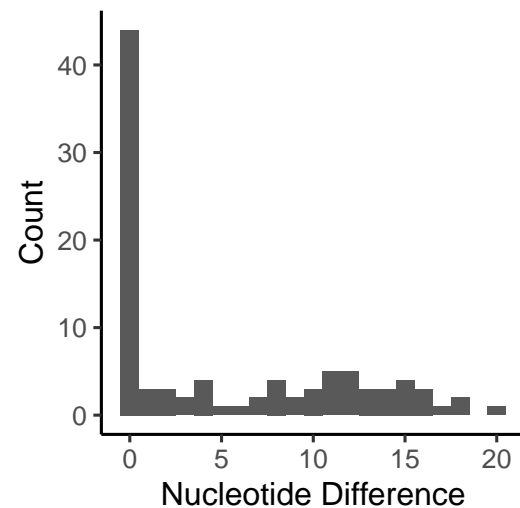
IGHV3-11*06

38 sequences assigned
22 (57.9%) exact matches, in which:
22 unique CDR3
4 unique J



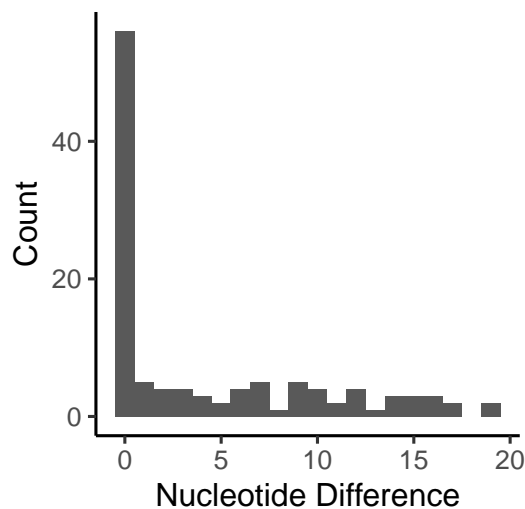
IGHV3-15*01_02

101 sequences assigned
44 (43.6%) exact matches, in which:
43 unique CDR3
4 unique J



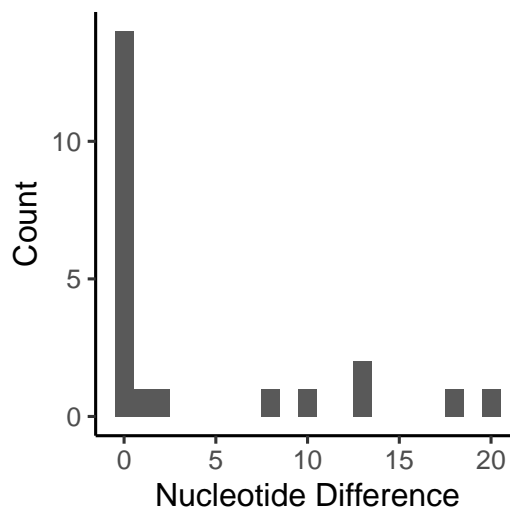
IGHV3-9*01

117 sequences assigned
56 (47.9%) exact matches, in which:
55 unique CDR3
6 unique J



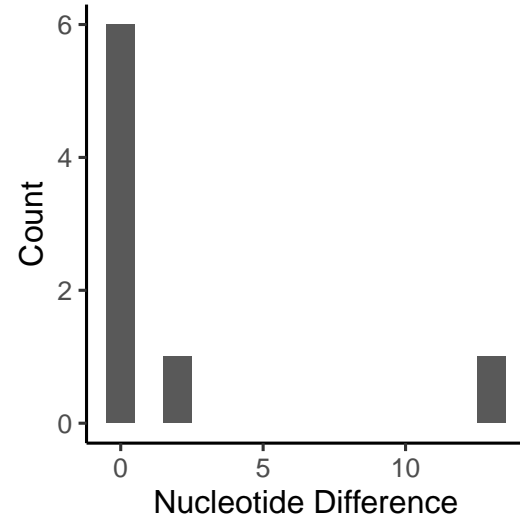
IGHV3-13*01

24 sequences assigned
14 (58.3%) exact matches, in which:
14 unique CDR3
4 unique J



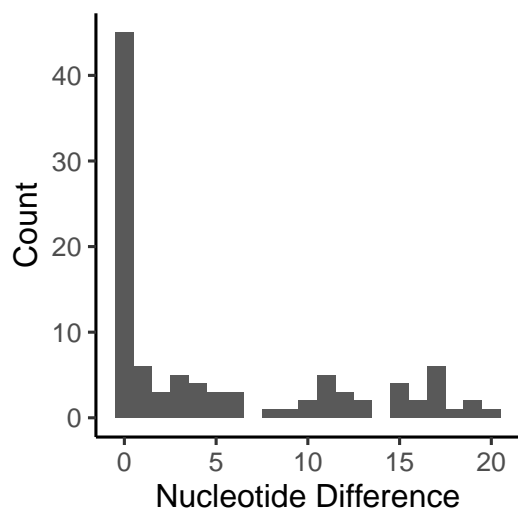
IGHV3-20*01_02

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



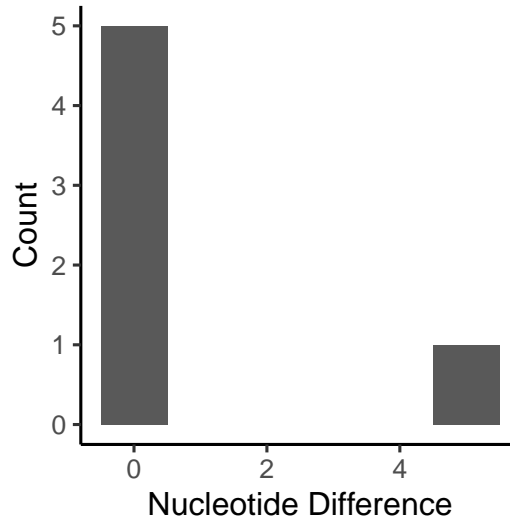
IGHV3-11*01

110 sequences assigned
45 (40.9%) exact matches, in which:
44 unique CDR3
5 unique J



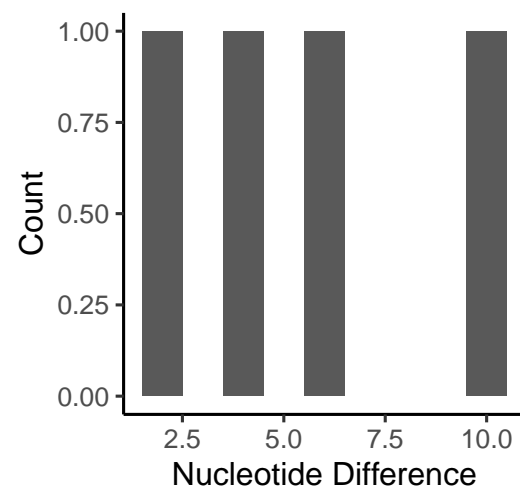
IGHV3-13*05

6 sequences assigned
5 (83.3%) exact matches, in which:
5 unique CDR3
3 unique J



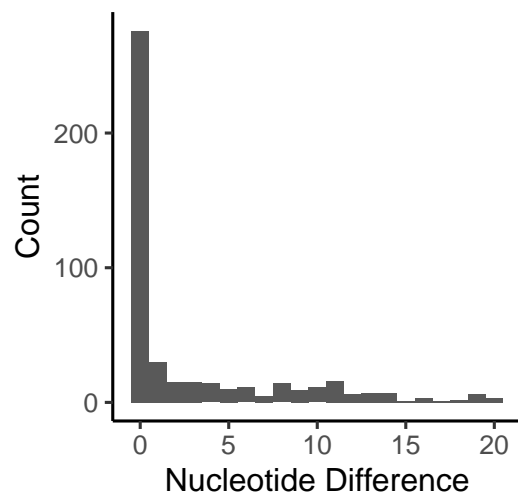
IGHV3-20*03_04

4 sequences assigned
No exact matches.



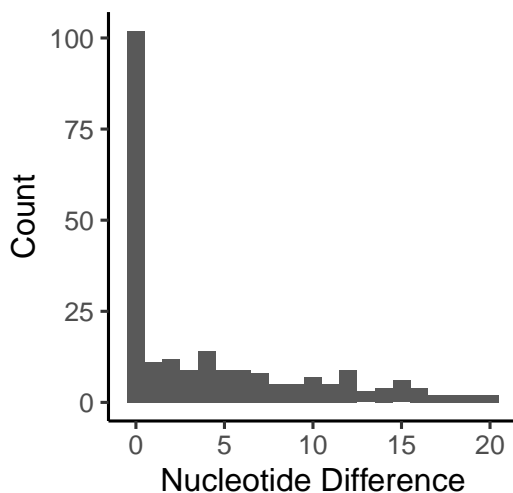
IGHV3–21*01_02

485 sequences assigned
276 (56.9%) exact matches, in which:
275 unique CDR3
6 unique J



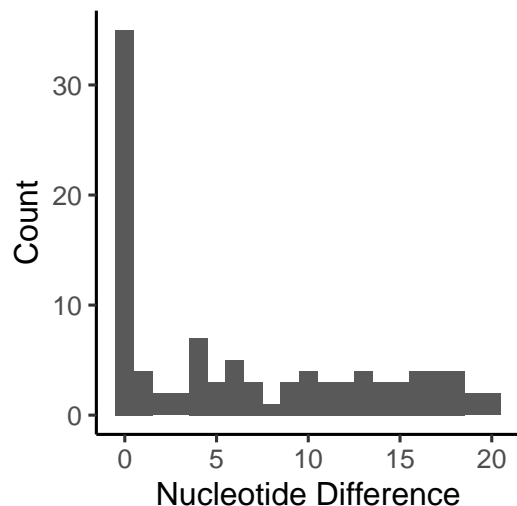
IGHV3–33*01

252 sequences assigned
102 (40.5%) exact matches, in which:
102 unique CDR3
4 unique J



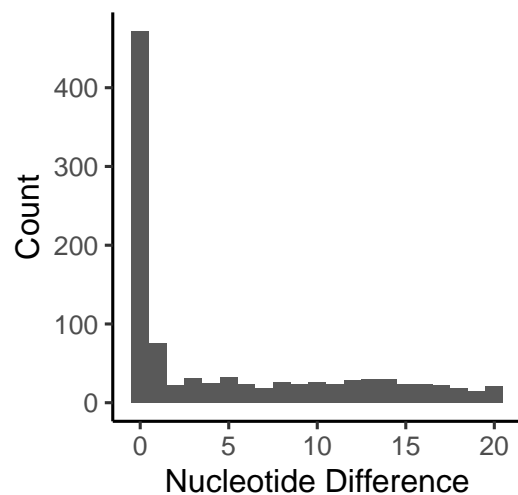
IGHV3–48*01

121 sequences assigned
35 (28.9%) exact matches, in which:
32 unique CDR3
6 unique J



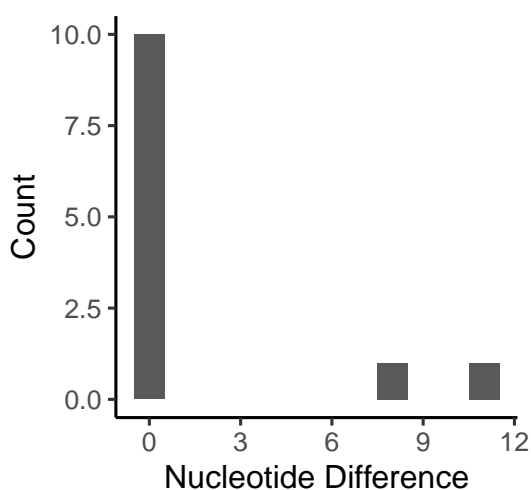
IGHV3–23*01_04

1109 sequences assigned
472 (42.6%) exact matches, in which:
470 unique CDR3
6 unique J



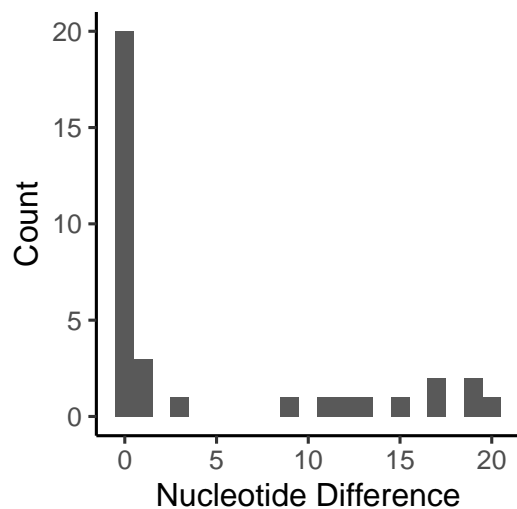
IGHV3–43*01

16 sequences assigned
10 (62.5%) exact matches, in which:
10 unique CDR3
3 unique J



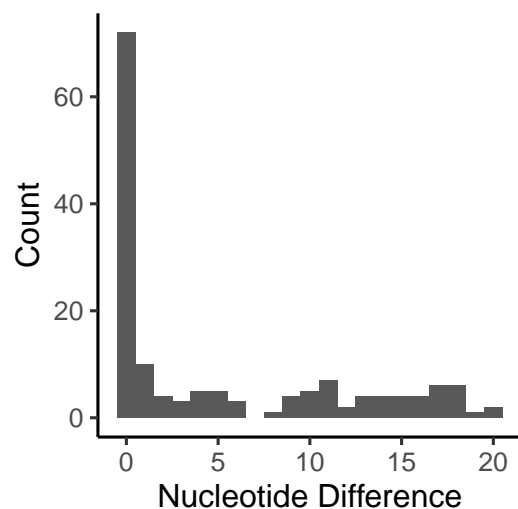
IGHV3–48*02

41 sequences assigned
20 (48.8%) exact matches, in which:
20 unique CDR3
4 unique J



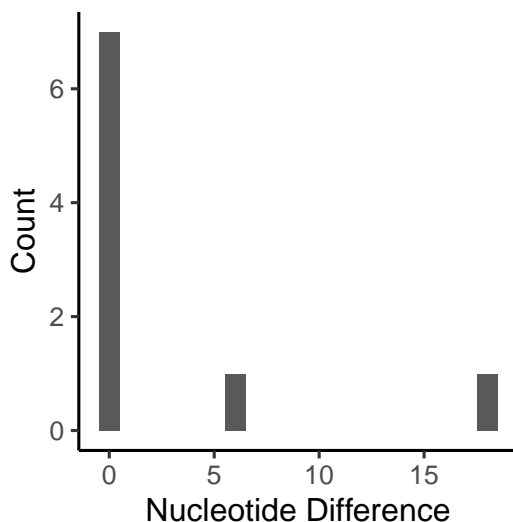
IGHV3–30–3*01

166 sequences assigned
72 (43.4%) exact matches, in which:
72 unique CDR3
5 unique J



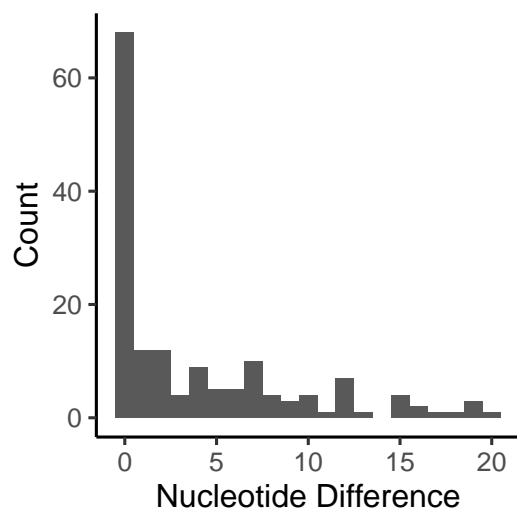
IGHV3–43*02

9 sequences assigned
7 (77.8%) exact matches, in which:
7 unique CDR3
2 unique J



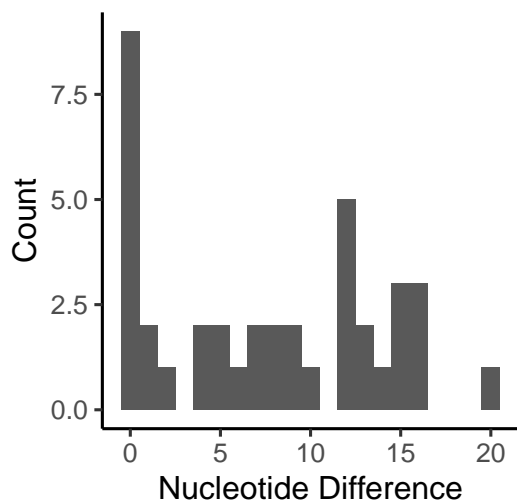
IGHV3–48*03

172 sequences assigned
68 (39.5%) exact matches, in which:
68 unique CDR3
6 unique J



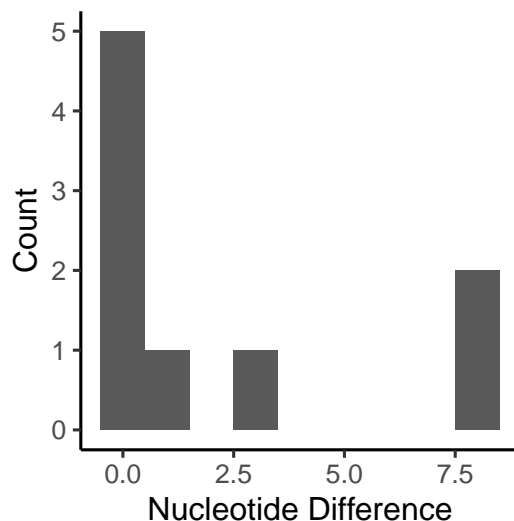
IGHV3-49*04

44 sequences assigned
9 (20.5%) exact matches, in which:
9 unique CDR3
3 unique J



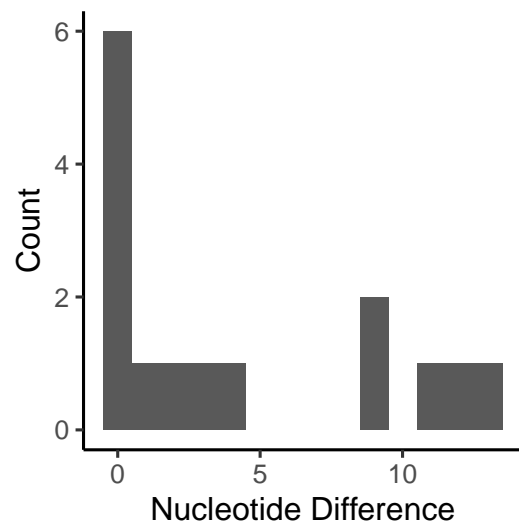
IGHV3-64*01

11 sequences assigned
5 (45.5%) exact matches, in which:
5 unique CDR3
2 unique J



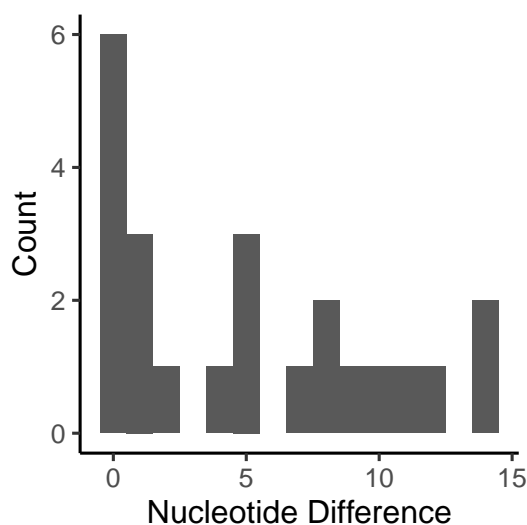
IGHV3-66*02

18 sequences assigned
6 (33.3%) exact matches, in which:
6 unique CDR3
2 unique J



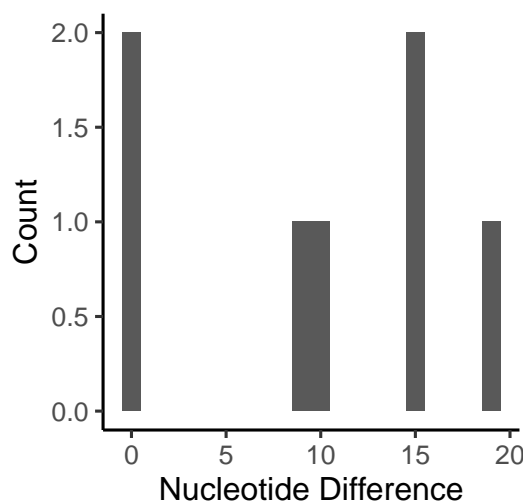
IGHV3-49*03_05

23 sequences assigned
6 (26.1%) exact matches, in which:
6 unique CDR3
4 unique J



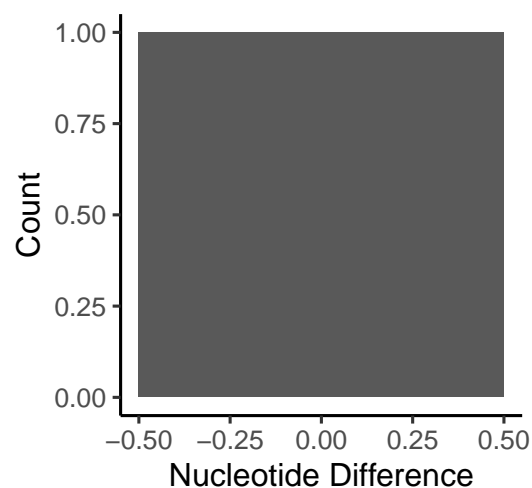
IGHV3-64*02_07

7 sequences assigned
2 (28.6%) exact matches, in which:
2 unique CDR3
2 unique J



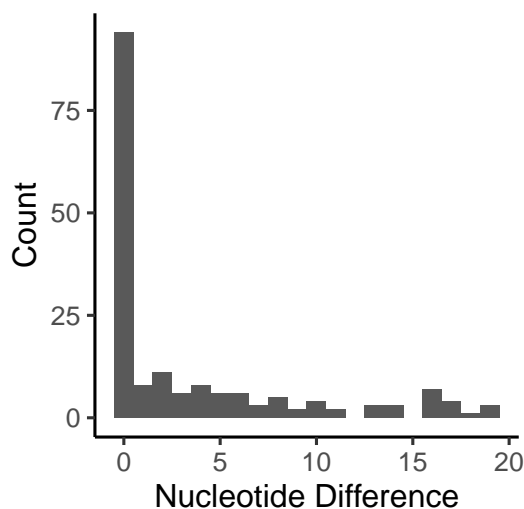
IGHV3-69-1*01

8 sequences assigned
1 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



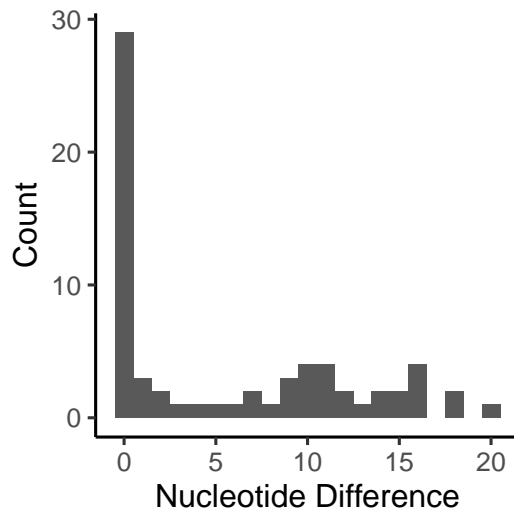
IGHV3-53*01_02

205 sequences assigned
94 (45.9%) exact matches, in which:
93 unique CDR3
6 unique J



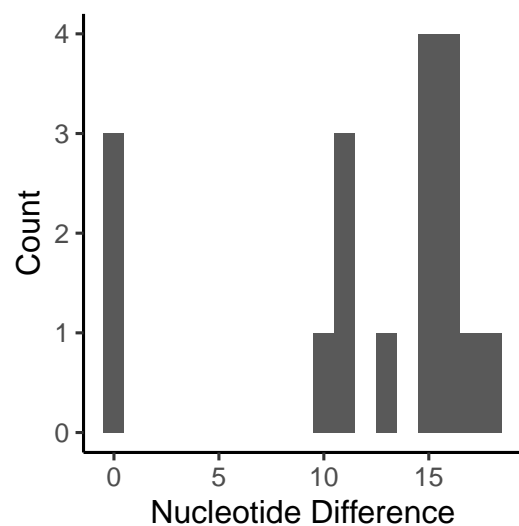
IGHV3-66*01

70 sequences assigned
29 (41.4%) exact matches, in which:
29 unique CDR3
4 unique J



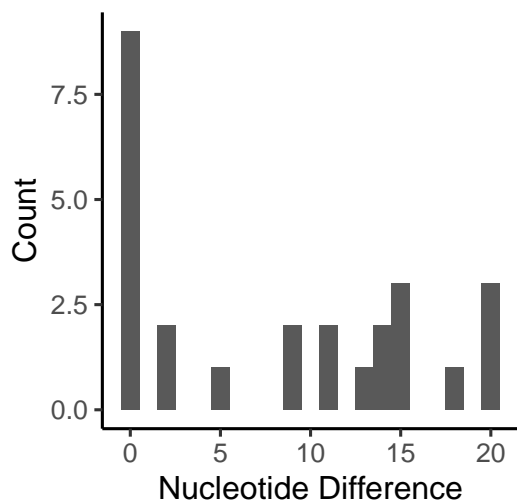
IGHV3-72*01

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



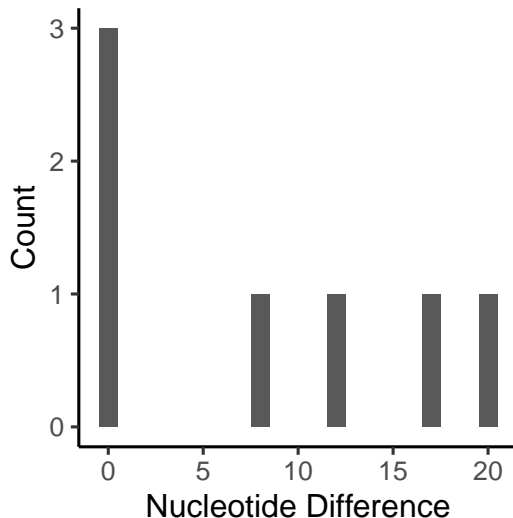
IGHV3-73*01_02

29 sequences assigned
9 (31%) exact matches, in which:
3 unique CDR3
3 unique J



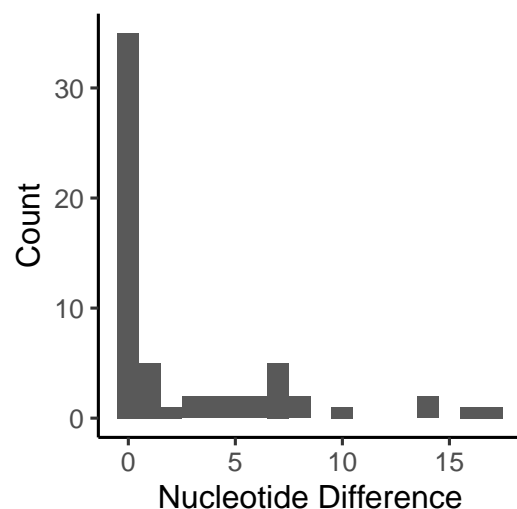
IGHV3-43D*04

7 sequences assigned
3 (42.9%) exact matches, in which:
3 unique CDR3
2 unique J



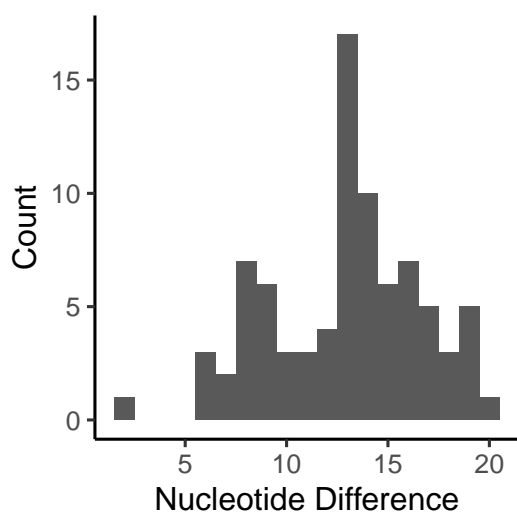
IGHV4-4*02_03

71 sequences assigned
35 (49.3%) exact matches, in which:
35 unique CDR3
4 unique J



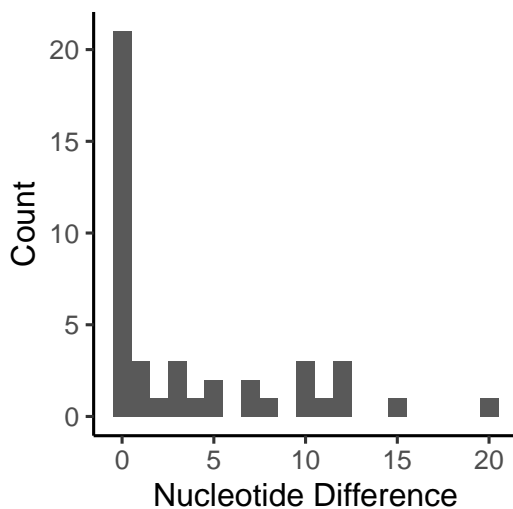
IGHV3-74*03

93 sequences assigned
No exact matches.



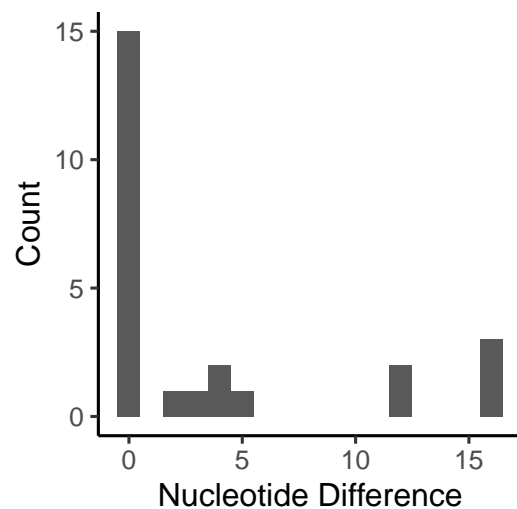
IGHV3-64D*06

49 sequences assigned
21 (42.9%) exact matches, in which:
21 unique CDR3
5 unique J



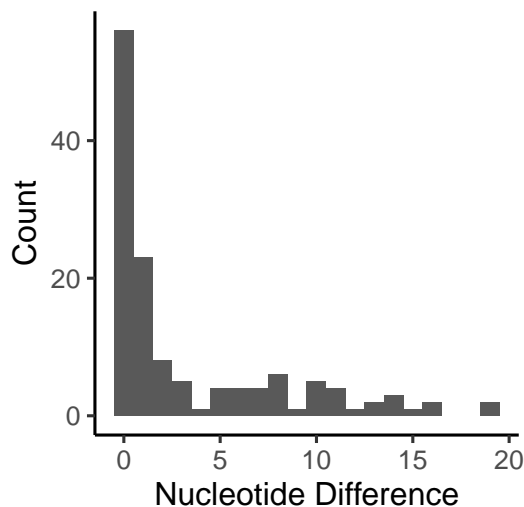
IGHV4-30-2*01

28 sequences assigned
15 (53.6%) exact matches, in which:
15 unique CDR3
4 unique J



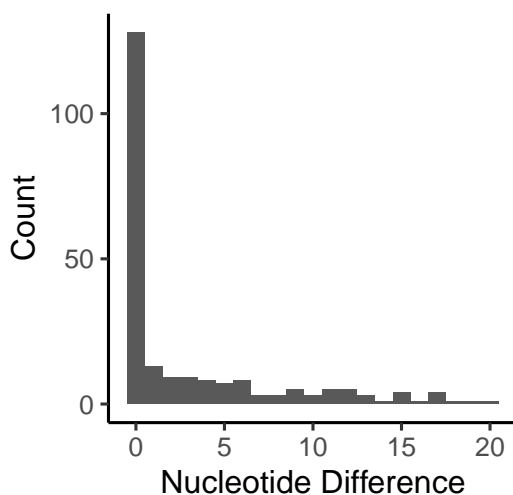
IGHV3-74*01_02

141 sequences assigned
56 (39.7%) exact matches, in which:
54 unique CDR3
6 unique J



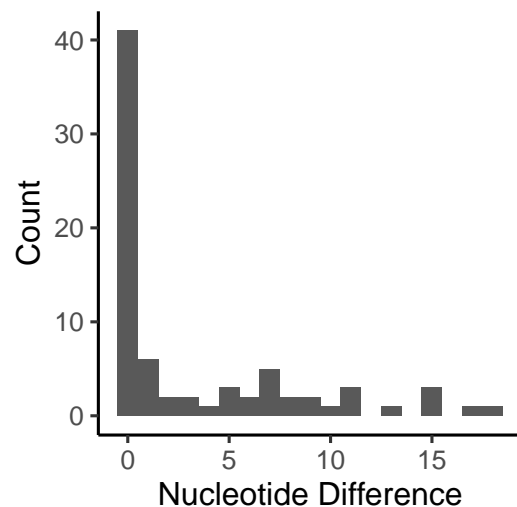
IGHV4-4*07

236 sequences assigned
128 (54.2%) exact matches, in which:
127 unique CDR3
6 unique J



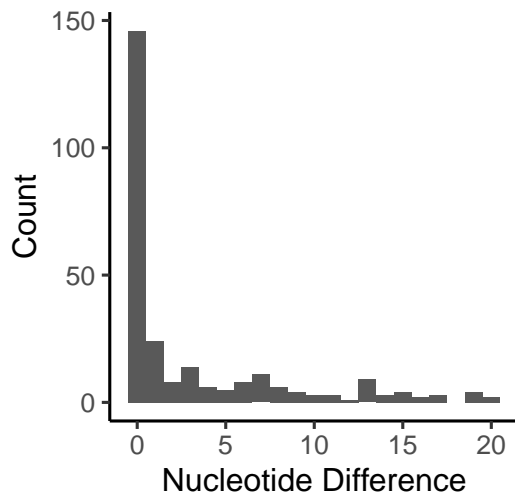
IGHV4-30-4*01

81 sequences assigned
41 (50.6%) exact matches, in which:
41 unique CDR3
5 unique J



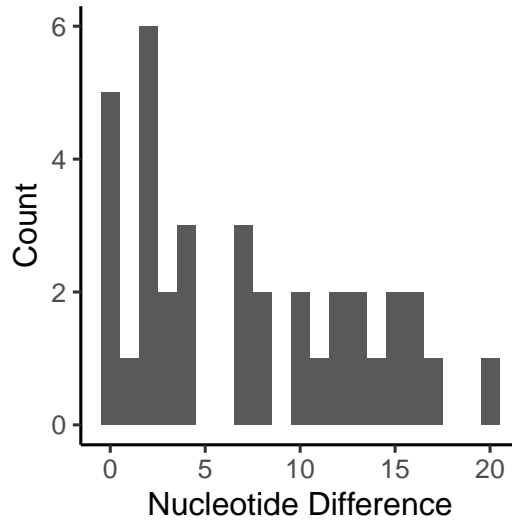
IGHV4-31*02

284 sequences assigned
146 (51.4%) exact matches, in which:
146 unique CDR3
6 unique J



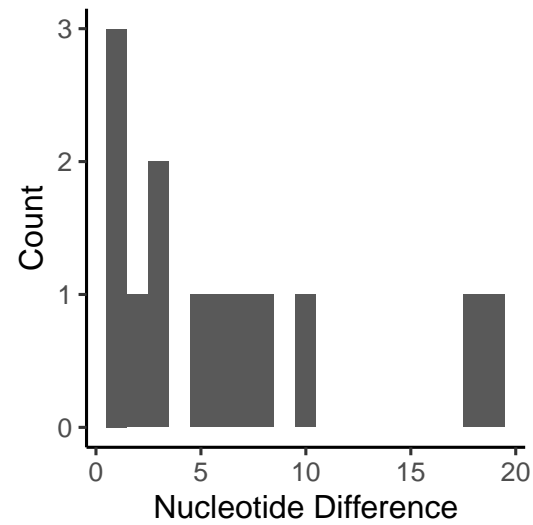
IGHV4-39*07

48 sequences assigned
5 (10.4%) exact matches, in which:
5 unique CDR3
3 unique J



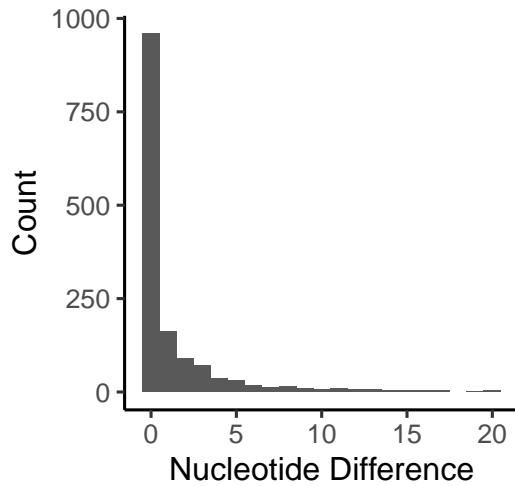
IGHV4-59*12

14 sequences assigned
No exact matches.



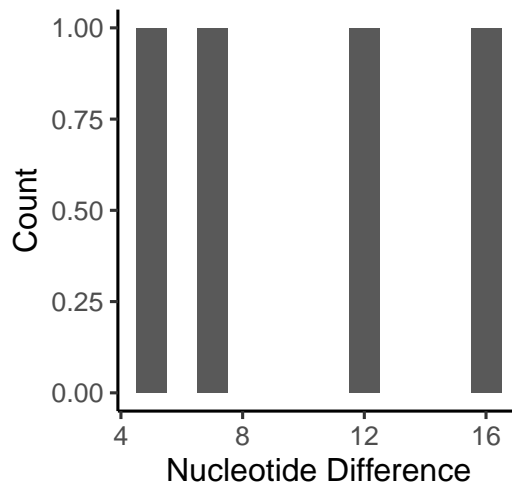
IGHV4-34*01_02

1486 sequences assigned
959 (64.5%) exact matches, in which:
952 unique CDR3
6 unique J



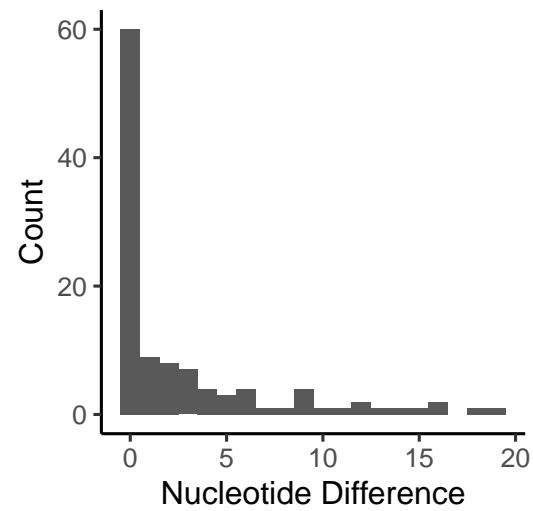
IGHV4-59*10

6 sequences assigned
No exact matches.



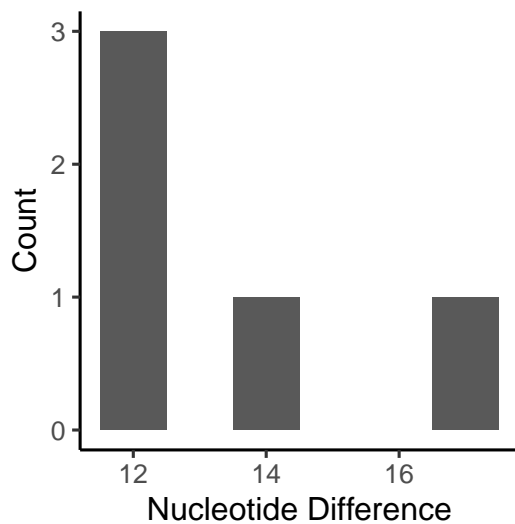
IGHV4-61*01

116 sequences assigned
60 (51.7%) exact matches, in which:
60 unique CDR3
6 unique J



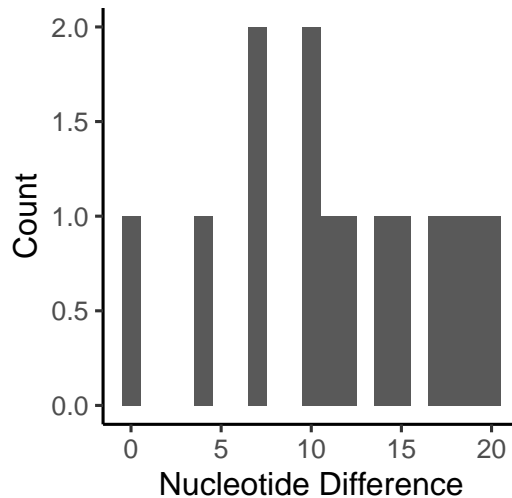
IGHV4-38-2*02

11 sequences assigned
No exact matches.



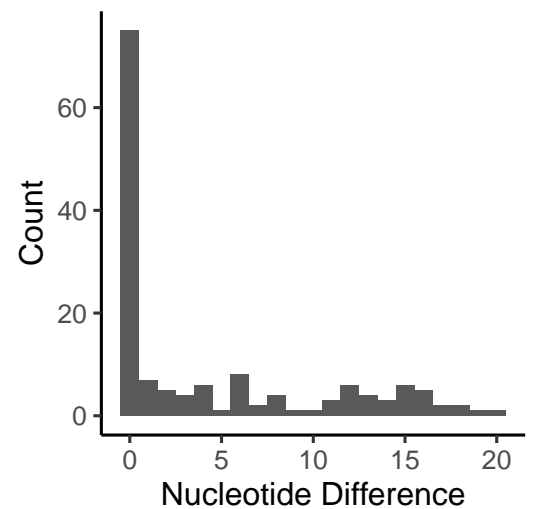
IGHV4-59*11

17 sequences assigned
1 (5.9%) exact matches, in which:
1 unique CDR3
1 unique J



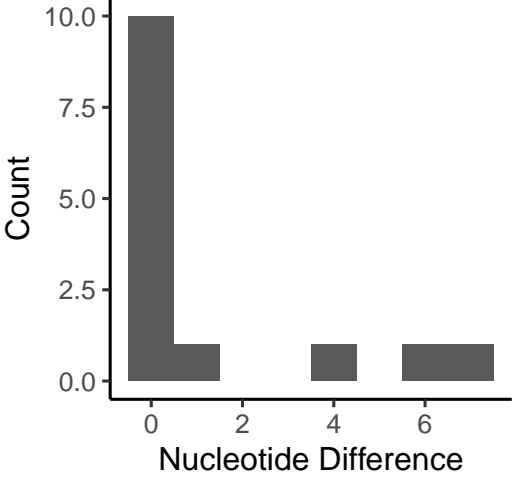
IGHV4-61*02

164 sequences assigned
75 (45.7%) exact matches, in which:
75 unique CDR3
5 unique J



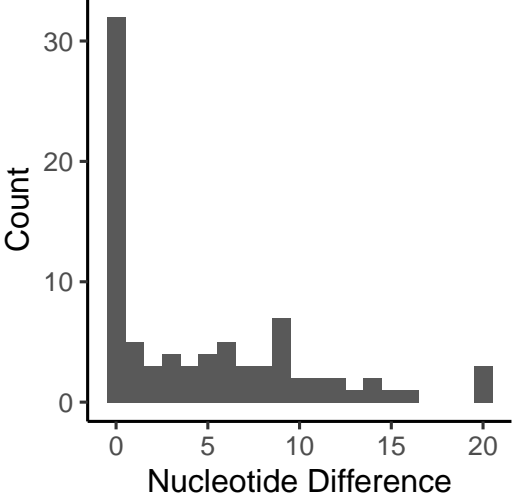
IGHV5-10-1*01_03

17 sequences assigned
10 (58.8%) exact matches, in which:
10 unique CDR3
3 unique J



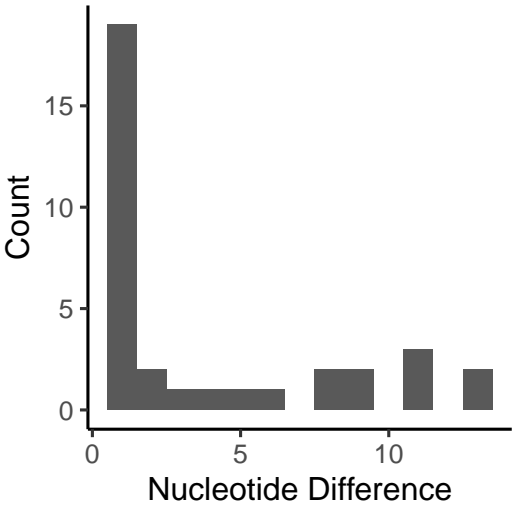
IGHV6-1*01_02

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



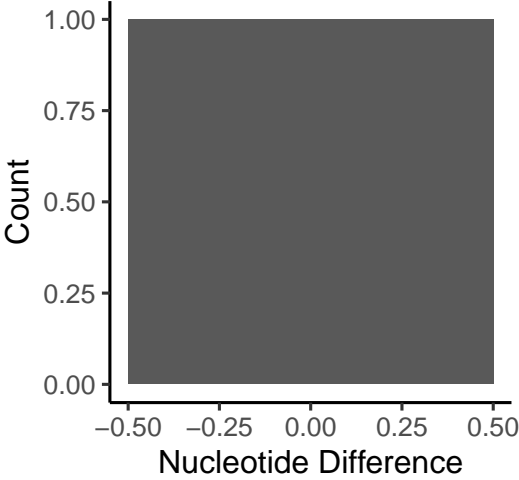
IGHV5-51*07

35 sequences assigned
No exact matches.



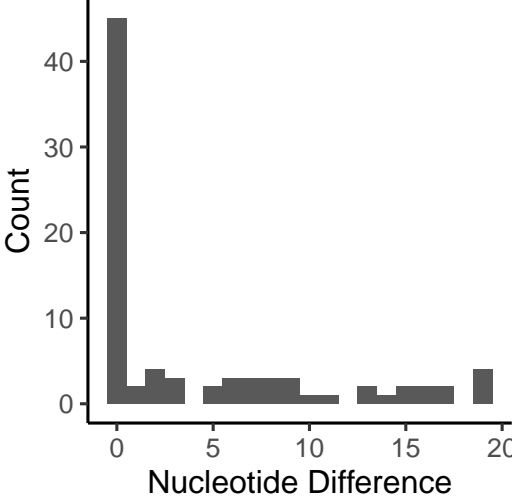
IGHV7-4-1*01

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



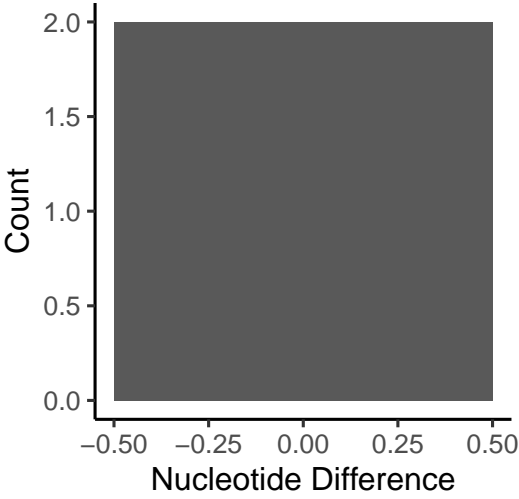
IGHV5-51*01_03

85 sequences assigned
45 (52.9%) exact matches, in which:
45 unique CDR3
4 unique J



IGHV7-4-1*02

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





[illegible]