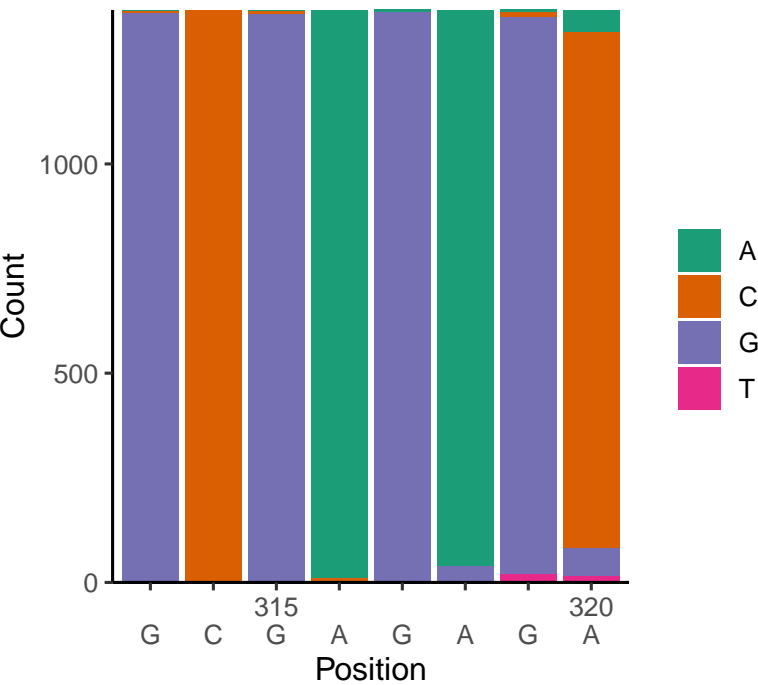
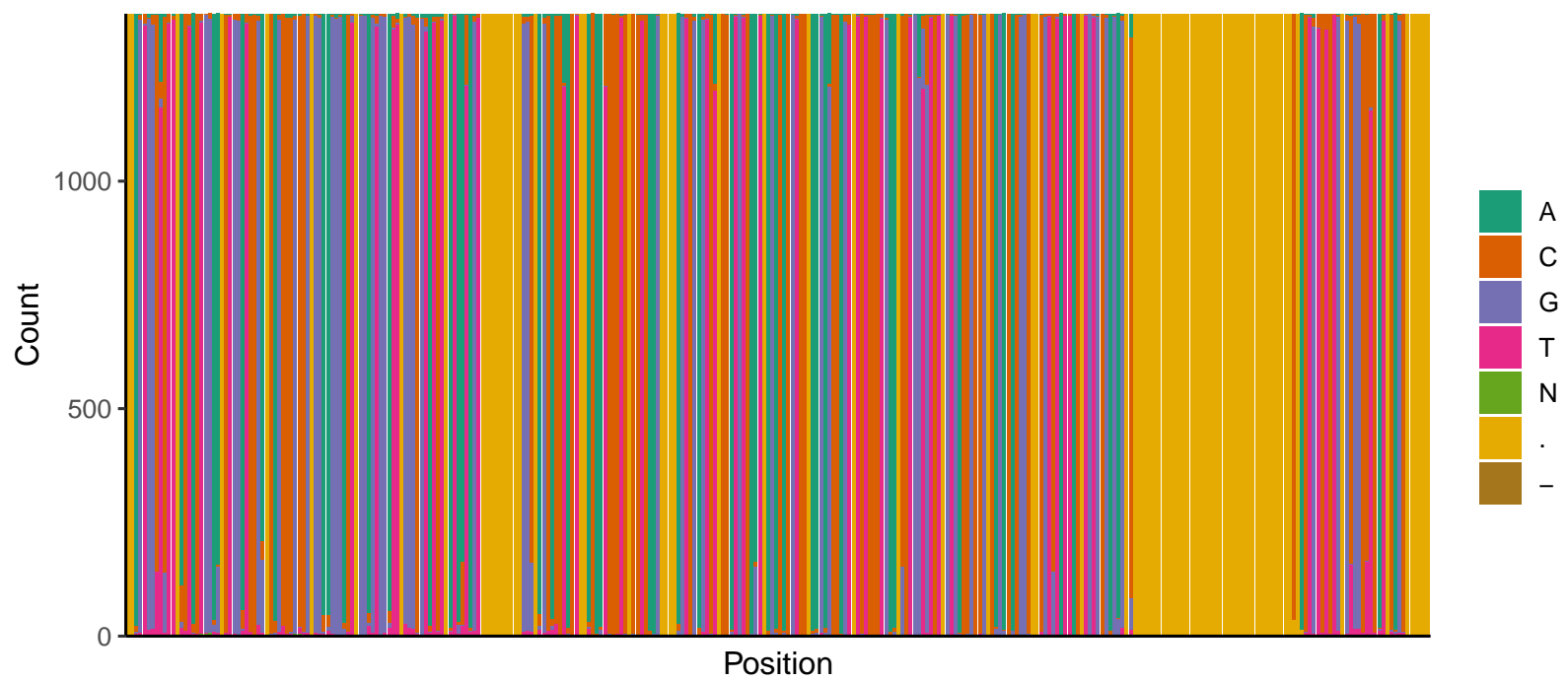


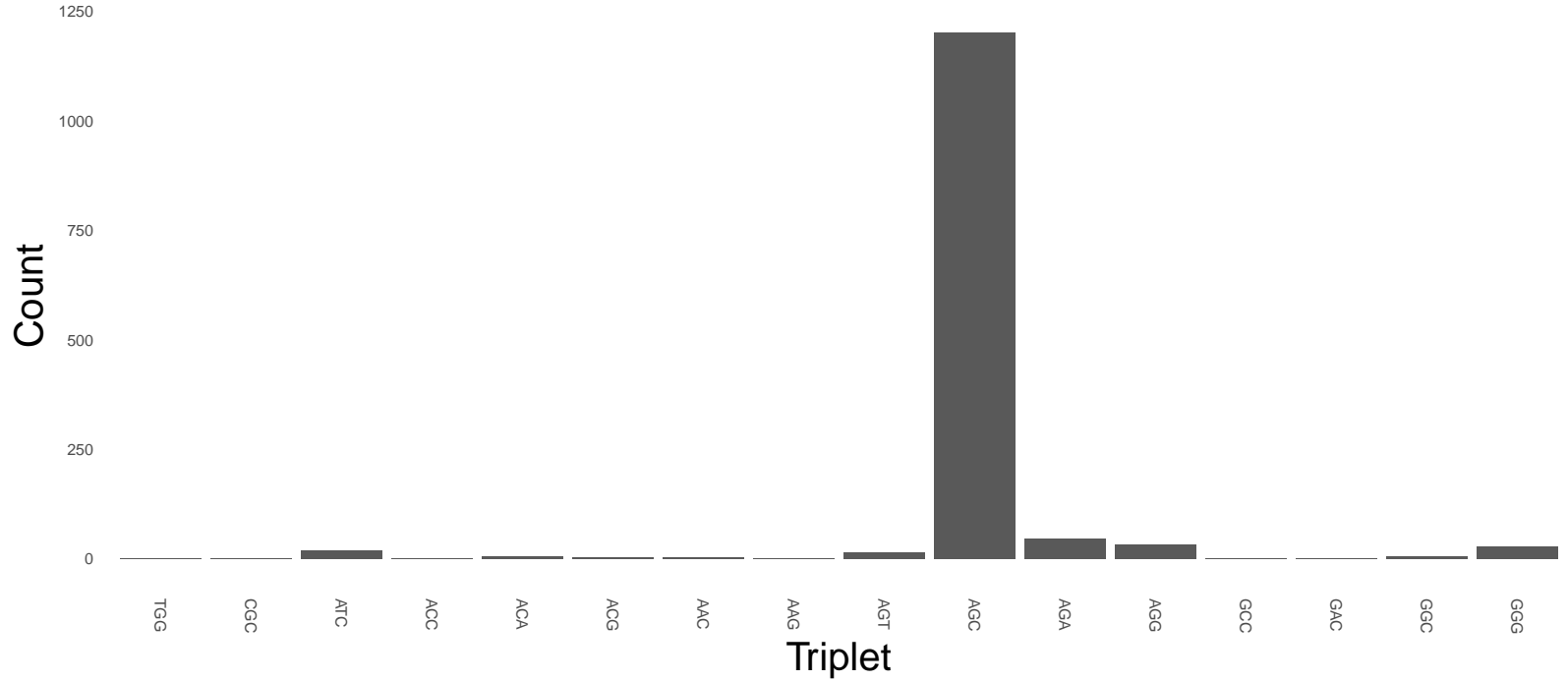
Gene IGHV4-61*02_A234G



Gene IGHV4-61*02_A234G

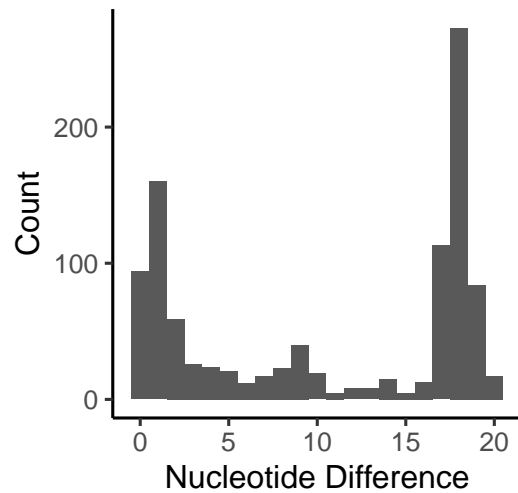


IGHV4-61*02_A234G- Final 3 nucleotides as a triplet



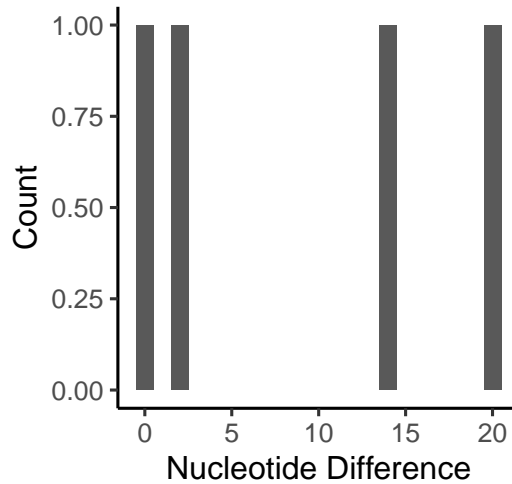
IGHV1-2*02

1065 sequences assigned
94 (8.8%) exact matches, in which:
81 unique CDR3
5 unique J



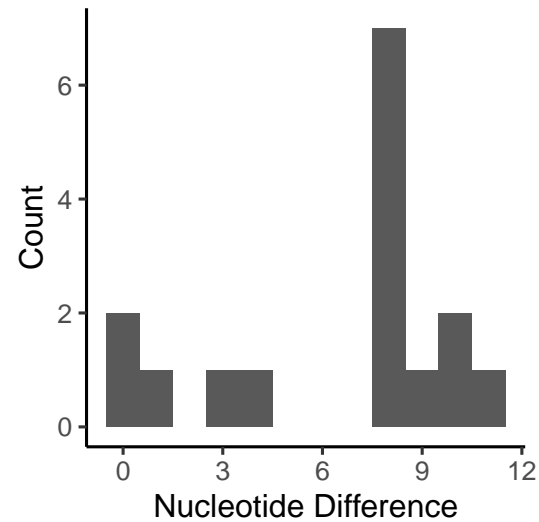
IGHV1-3*01_05

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



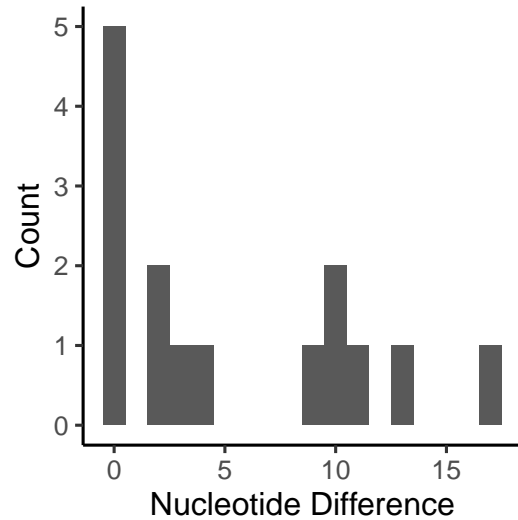
IGHV1-18*04

925 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
2 unique J



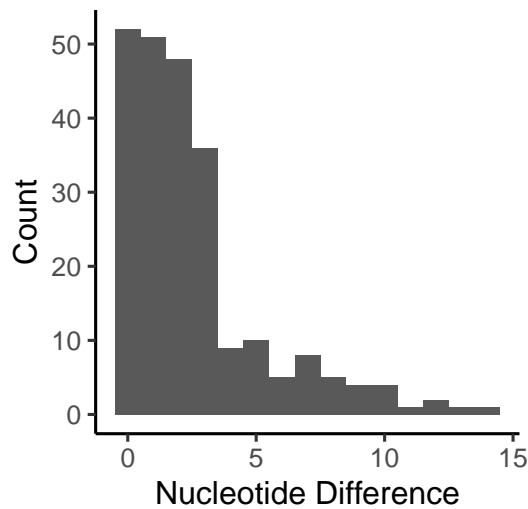
IGHV1-3*02

15 sequences assigned
5 (33.3%) exact matches, in which:
4 unique CDR3
2 unique J



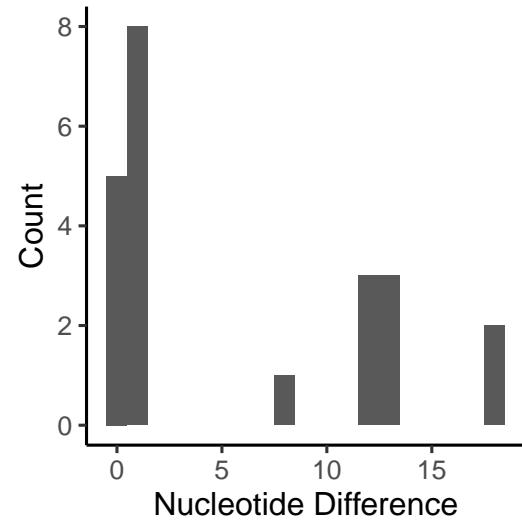
IGHV1-8*01

238 sequences assigned
52 (21.8%) exact matches, in which:
49 unique CDR3
4 unique J



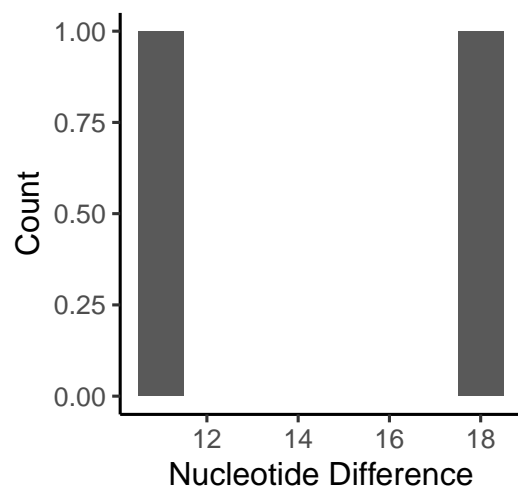
IGHV1-24*01

22 sequences assigned
5 (22.7%) exact matches, in which:
5 unique CDR3
3 unique J



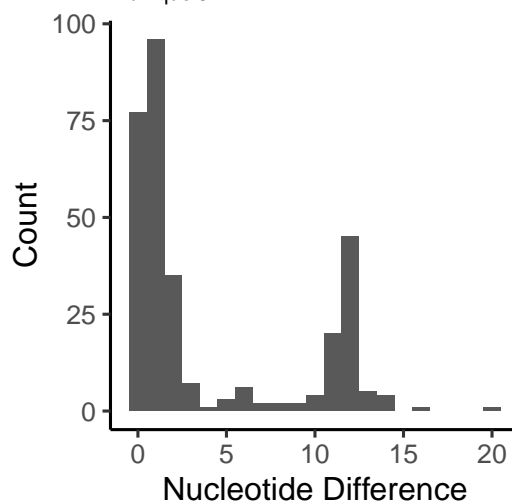
IGHV1-3*04

2 sequences assigned
No exact matches.



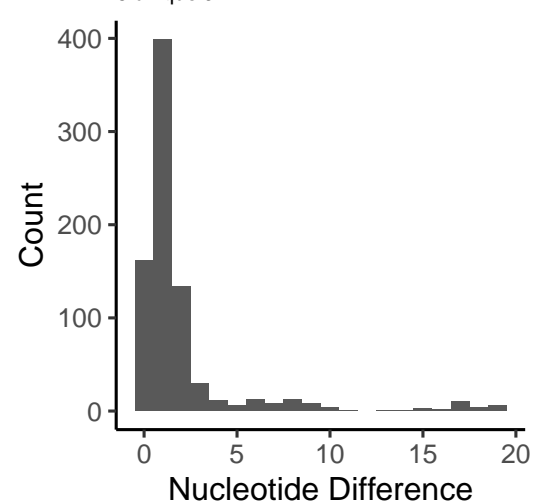
IGHV1-18*01

334 sequences assigned
77 (23.1%) exact matches, in which:
64 unique CDR3
7 unique J



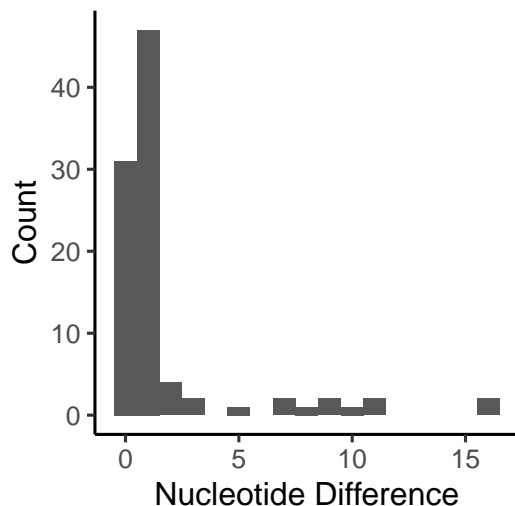
IGHV1-46*01

823 sequences assigned
162 (19.7%) exact matches, in which:
97 unique CDR3
6 unique J



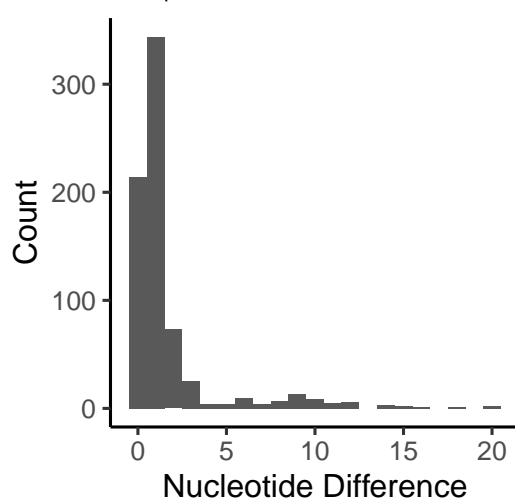
IGHV1-46*03

97 sequences assigned
31 (32%) exact matches, in which:
20 unique CDR3
4 unique J



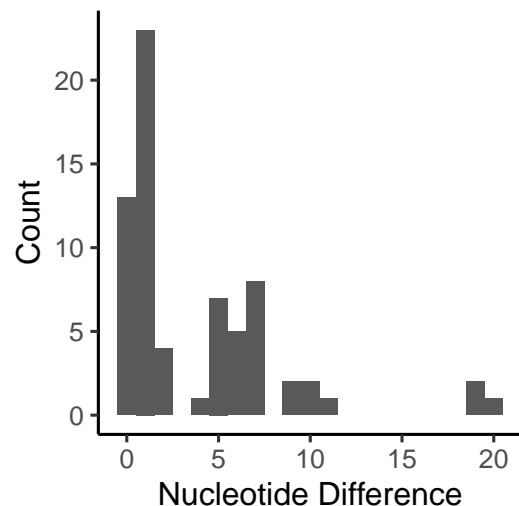
IGHV1-69*01_12_13

729 sequences assigned
214 (29.4%) exact matches, in which:
164 unique CDR3
6 unique J



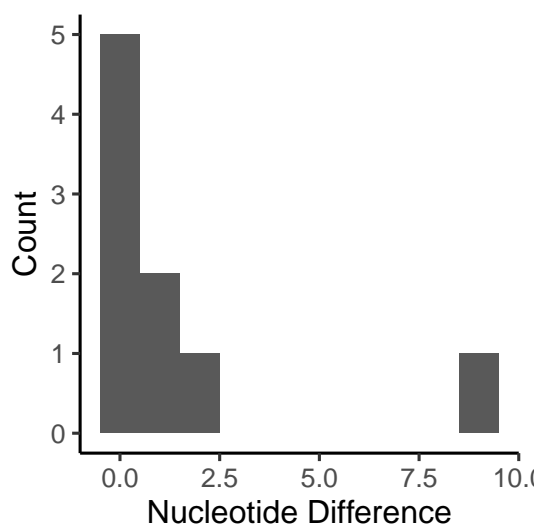
IGHV2-5*02

78 sequences assigned
13 (16.7%) exact matches, in which:
11 unique CDR3
2 unique J



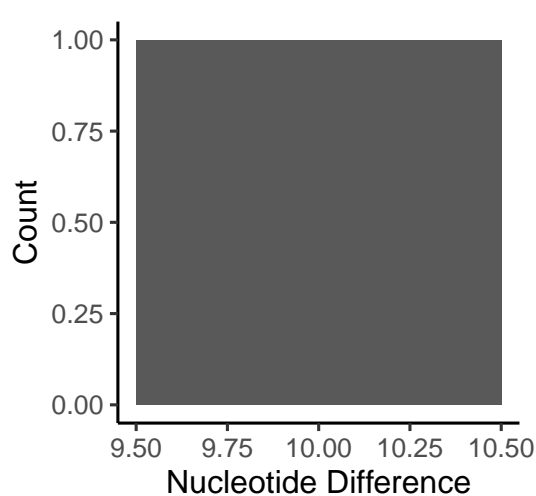
IGHV1-58*02

10 sequences assigned
5 (50%) exact matches, in which:
4 unique CDR3
2 unique J



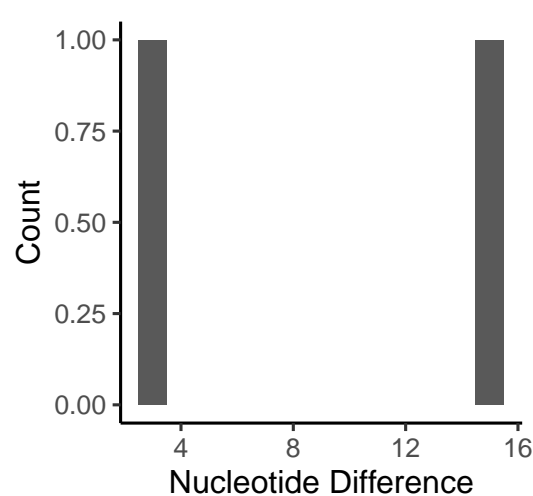
IGHV1-NL1*01

1 sequences assigned
No exact matches.



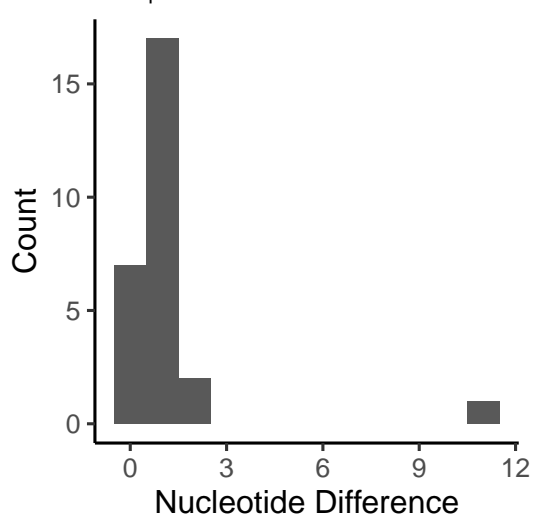
IGHV2-26*01

2 sequences assigned
No exact matches.



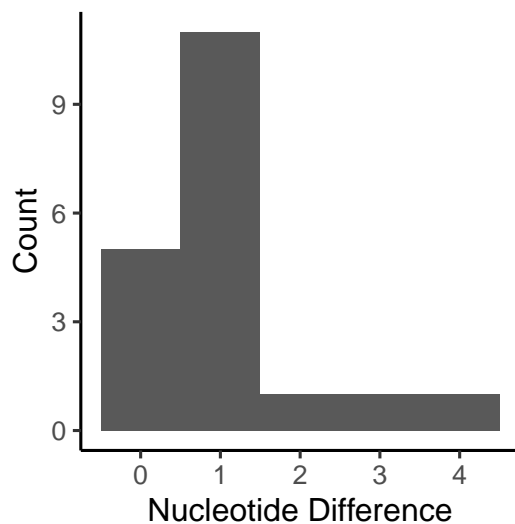
IGHV1-58*01_03

27 sequences assigned
7 (25.9%) exact matches, in which:
7 unique CDR3
4 unique J



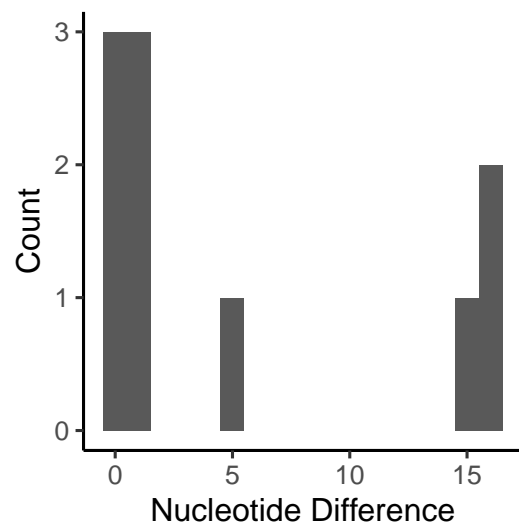
IGHV2-5*01

19 sequences assigned
5 (26.3%) exact matches, in which:
3 unique CDR3
3 unique J



IGHV2-70*01

10 sequences assigned
3 (30%) exact matches, in which:
3 unique CDR3
1 unique J



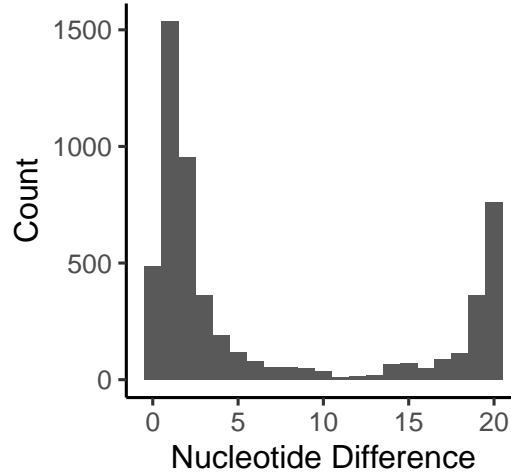
IGHV2-70*12

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



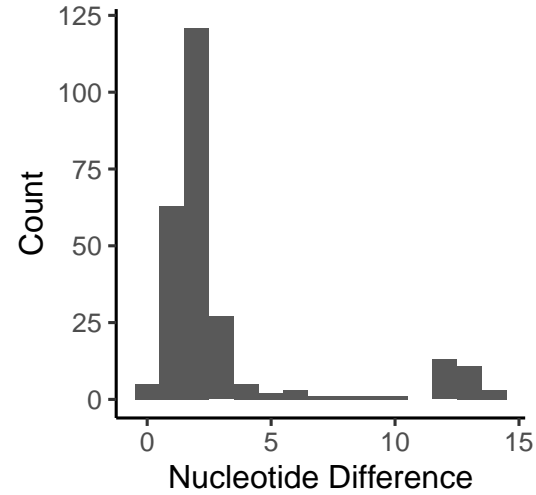
IGHV3-7*03

11533 sequences assigned
485 (4.2%) exact matches, in which:
210 unique CDR3
3 unique J



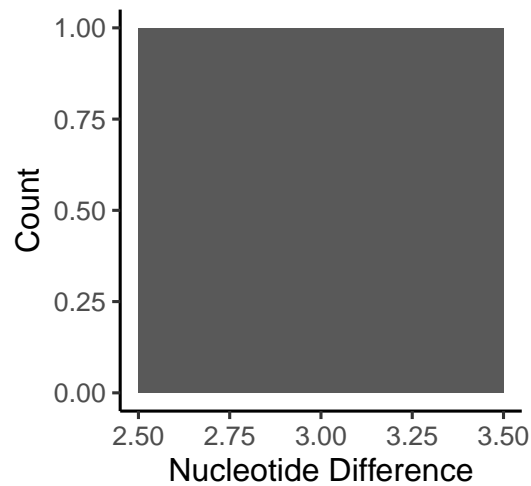
IGHV3-11*06

257 sequences assigned
5 (1.9%) exact matches, in which:
5 unique CDR3
2 unique J



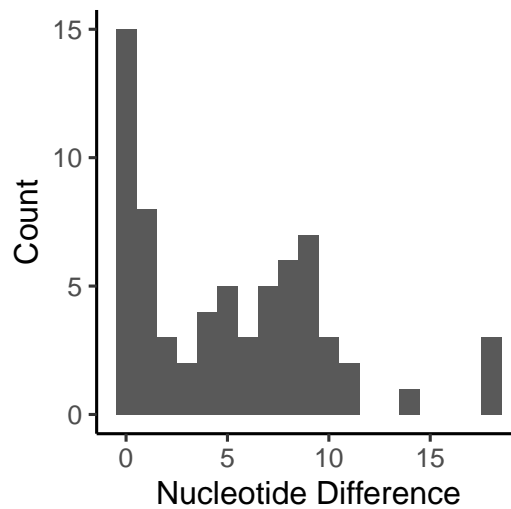
IGHV2-70*20

1 sequences assigned
No exact matches.



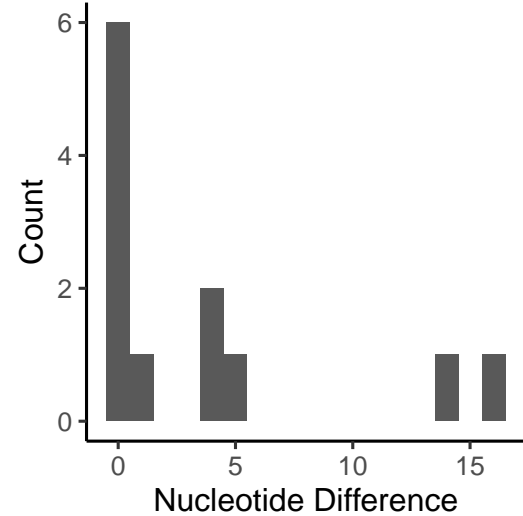
IGHV3-9*01

69 sequences assigned
15 (21.7%) exact matches, in which:
8 unique CDR3
4 unique J



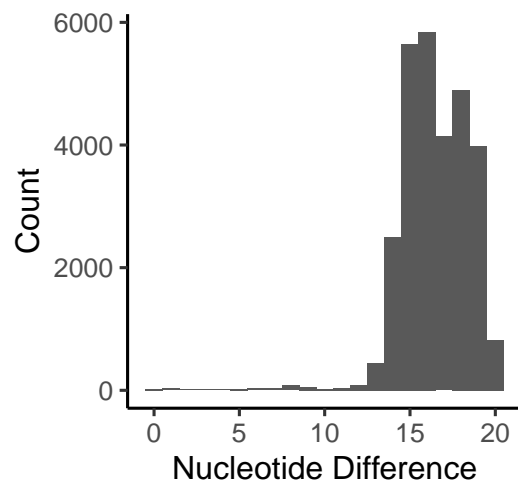
IGHV3-11*03_05

12 sequences assigned
6 (50%) exact matches, in which:
5 unique CDR3
3 unique J



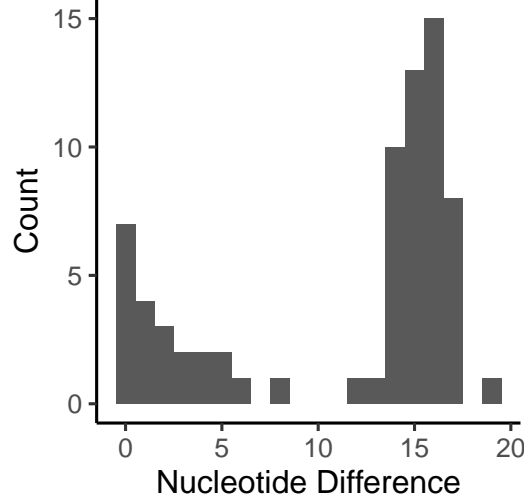
IGHV3-7*01

29429 sequences assigned
23 (0.1%) exact matches, in which:
15 unique CDR3
4 unique J



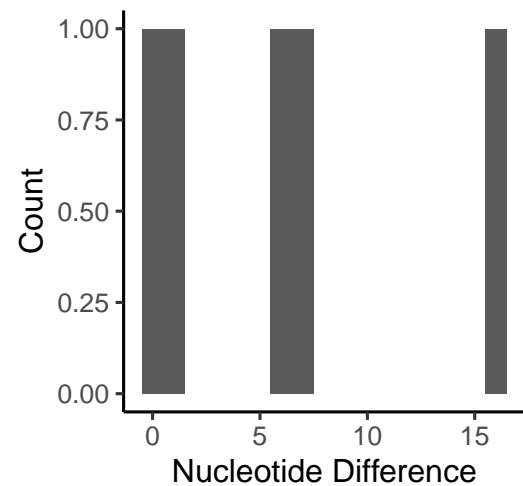
IGHV3-11*01

74 sequences assigned
7 (9.5%) exact matches, in which:
6 unique CDR3
2 unique J



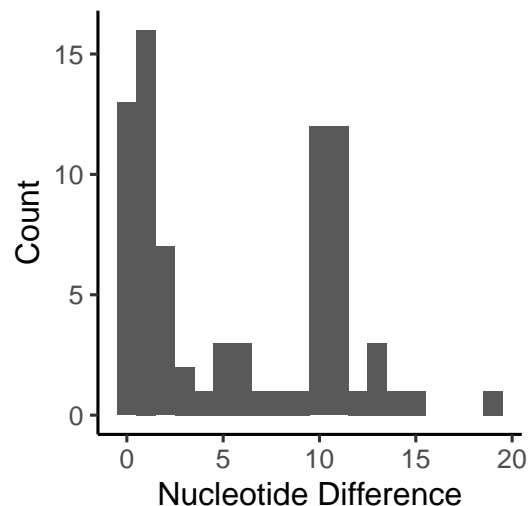
IGHV3-13*01

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



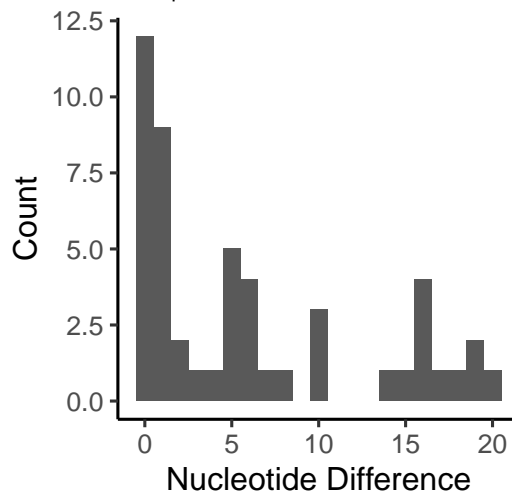
IGHV3-13*04

80 sequences assigned
13 (16.2%) exact matches, in which:
8 unique CDR3
4 unique J



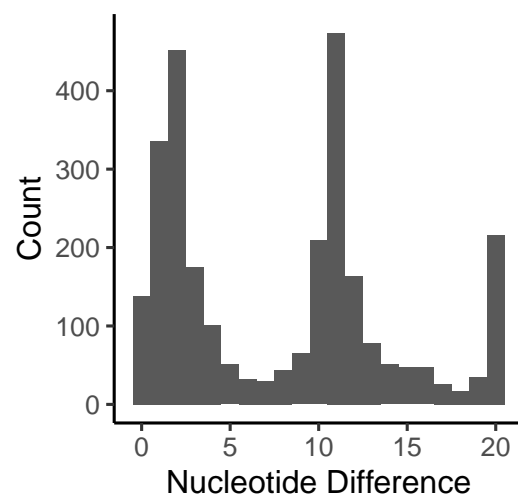
IGHV3-20*03_04

51 sequences assigned
12 (23.5%) exact matches, in which:
6 unique CDR3
2 unique J



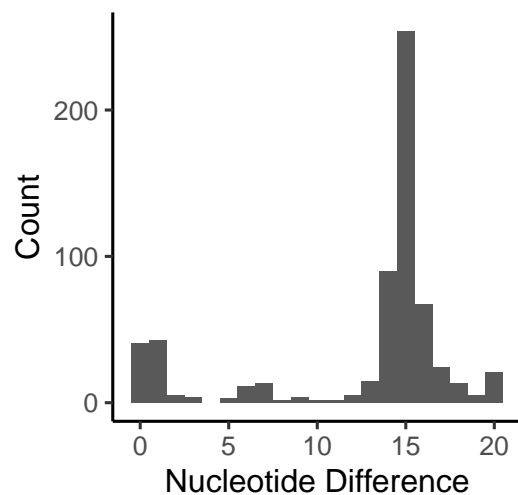
IGHV3-23*01_04

4387 sequences assigned
138 (3.1%) exact matches, in which:
88 unique CDR3
6 unique J



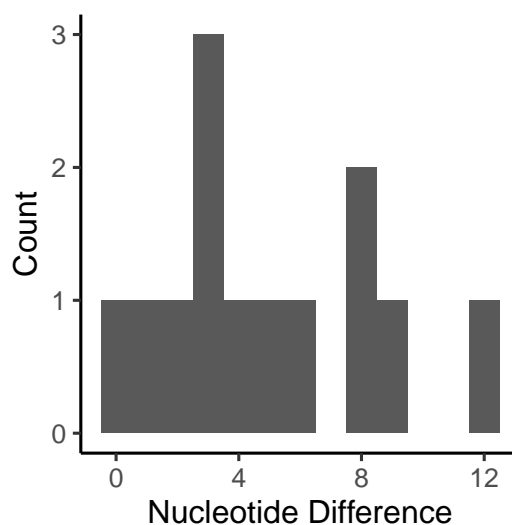
IGHV3-15*01_02

2515 sequences assigned
41 (1.6%) exact matches, in which:
27 unique CDR3
4 unique J



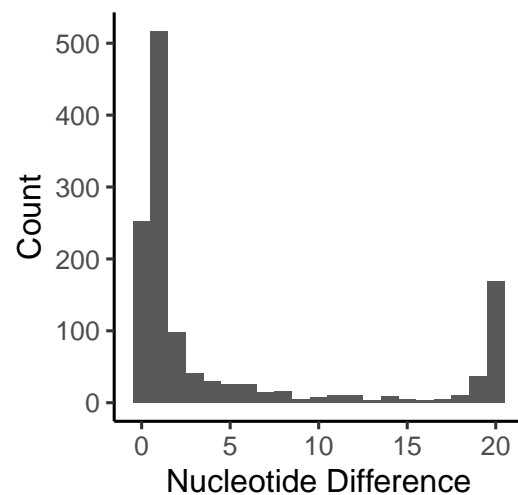
IGHV3-21*04

13 sequences assigned
1 (7.7%) exact matches, in which:
1 unique CDR3
0 unique J



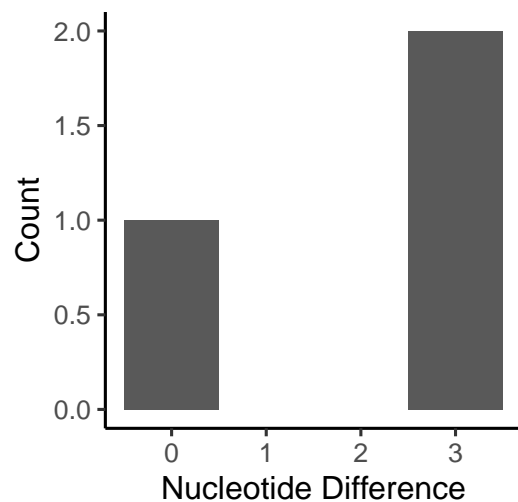
IGHV3-30-3*01

3826 sequences assigned
252 (6.6%) exact matches, in which:
118 unique CDR3
6 unique J



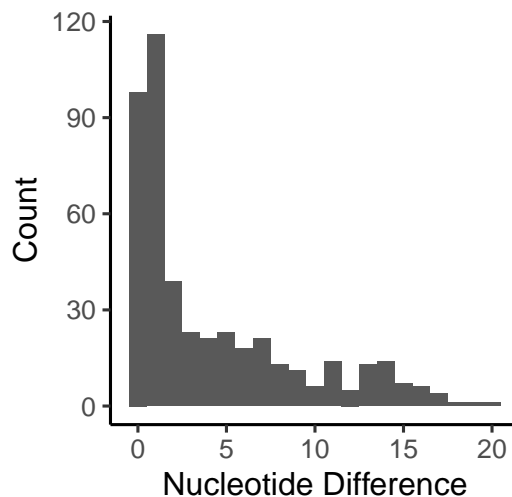
IGHV3-20*01_02

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



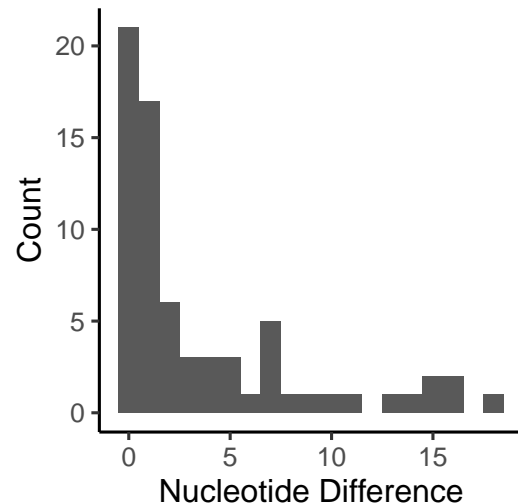
IGHV3-21*01_02

932 sequences assigned
98 (10.5%) exact matches, in which:
57 unique CDR3
5 unique J



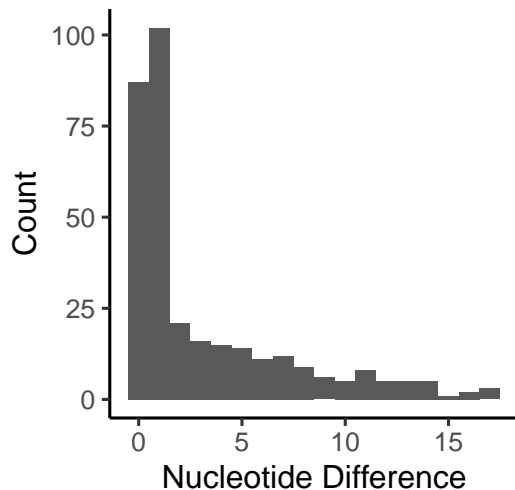
IGHV3-30*03

86 sequences assigned
21 (24.4%) exact matches, in which:
17 unique CDR3
5 unique J



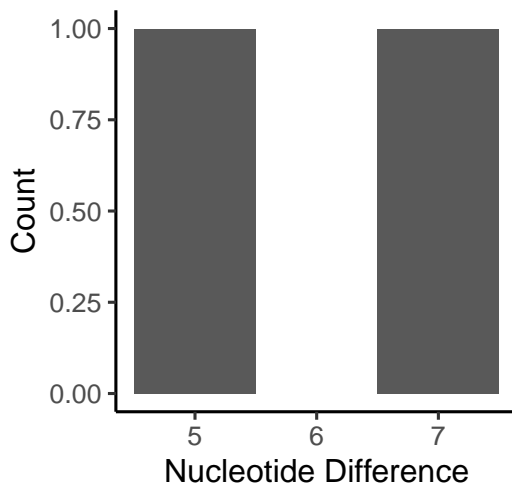
IGHV3–33*01

334 sequences assigned
87 (26%) exact matches, in which:
53 unique CDR3
5 unique J



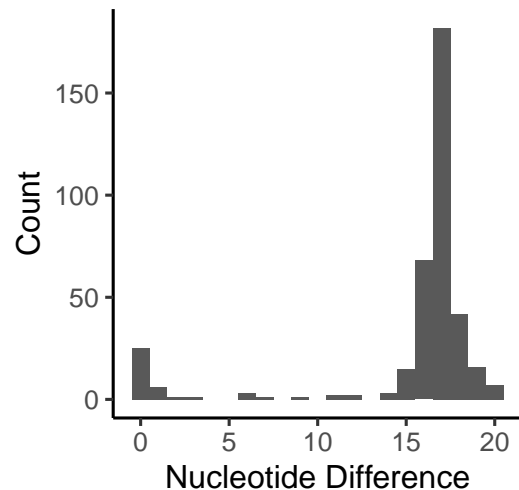
IGHV3–43*01

12 sequences assigned
No exact matches.



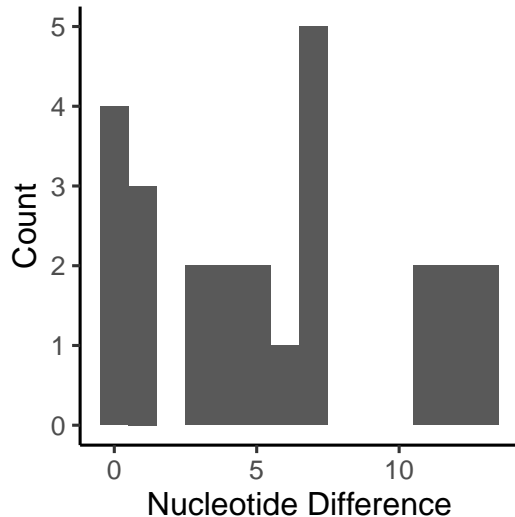
IGHV3–48*02

390 sequences assigned
25 (6.4%) exact matches, in which:
15 unique CDR3
4 unique J



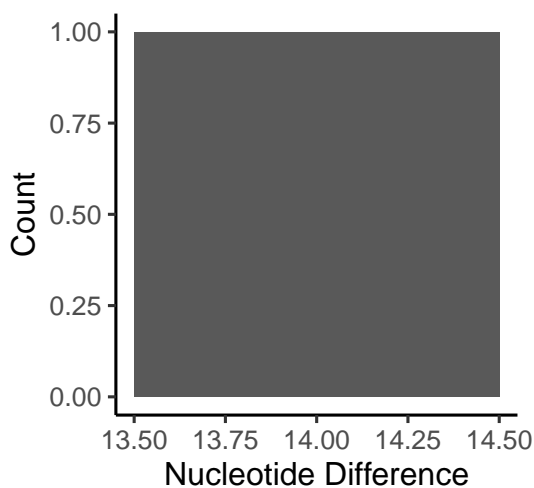
IGHV3–33*05

26 sequences assigned
4 (15.4%) exact matches, in which:
4 unique CDR3
2 unique J



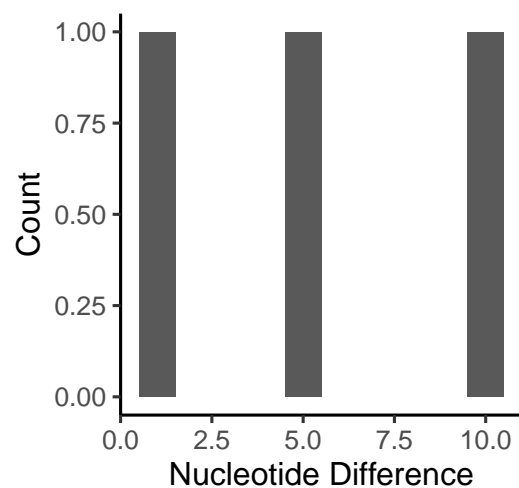
IGHV3–43*02

1 sequences assigned
No exact matches.



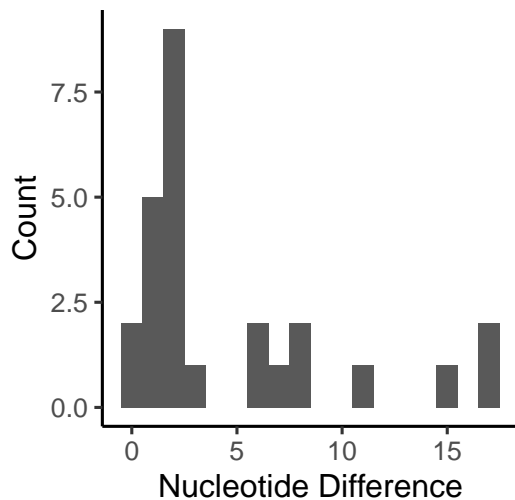
IGHV3–48*03

6 sequences assigned
No exact matches.



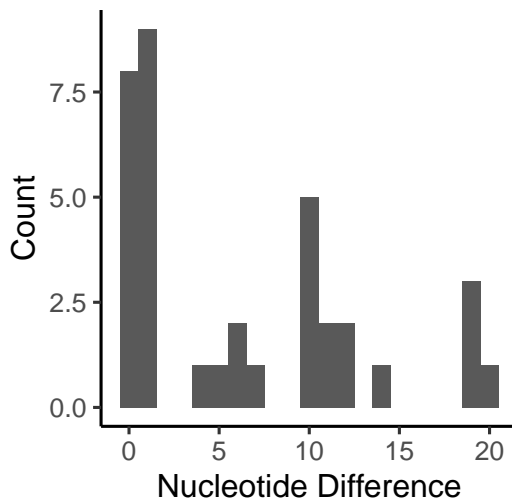
IGHV3–33*06

26 sequences assigned
2 (7.7%) exact matches, in which:
2 unique CDR3
1 unique J



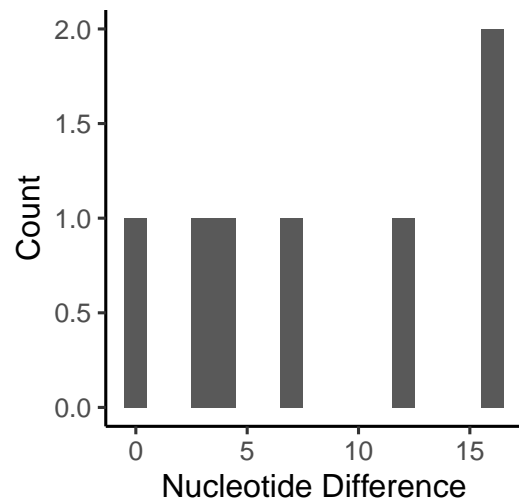
IGHV3–48*01

593 sequences assigned
8 (1.3%) exact matches, in which:
5 unique CDR3
1 unique J



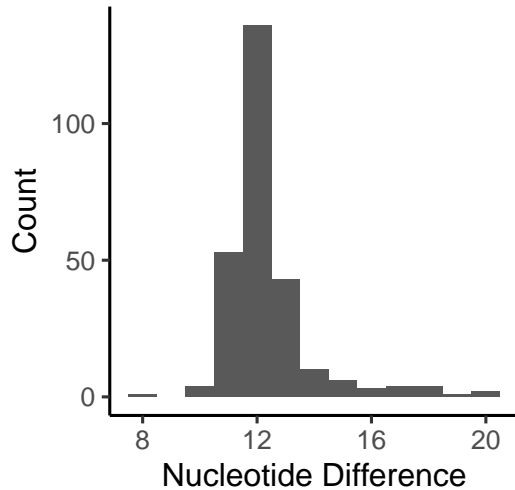
IGHV3–48*04

10 sequences assigned
1 (10%) exact matches, in which:
1 unique CDR3
1 unique J



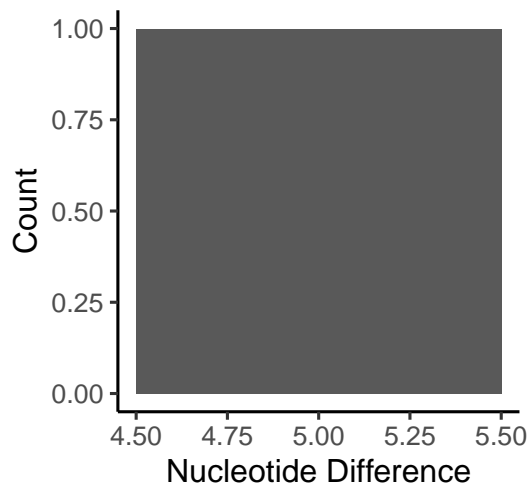
IGHV3-49*04

271 sequences assigned
No exact matches.



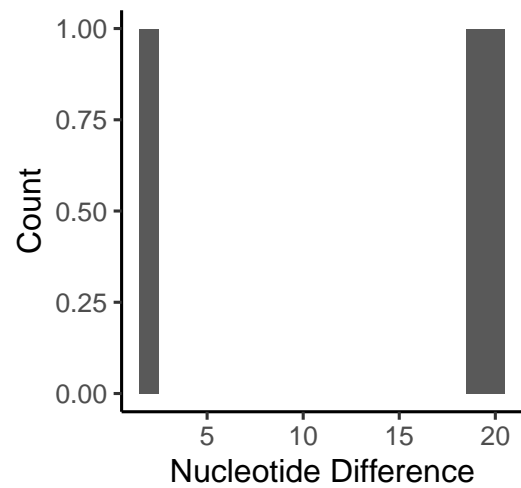
IGHV3-53*05

1 sequences assigned
No exact matches.



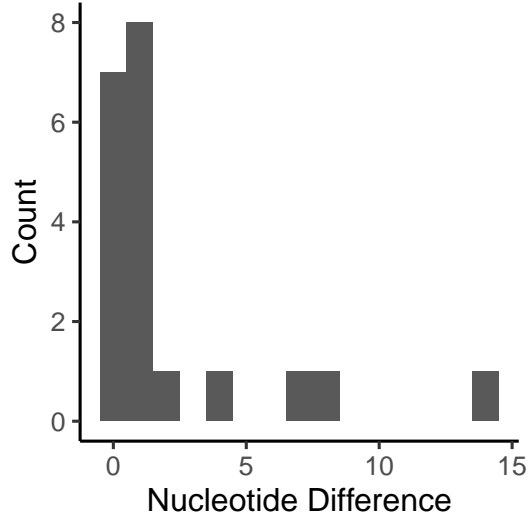
IGHV3-66*01

4 sequences assigned
No exact matches.



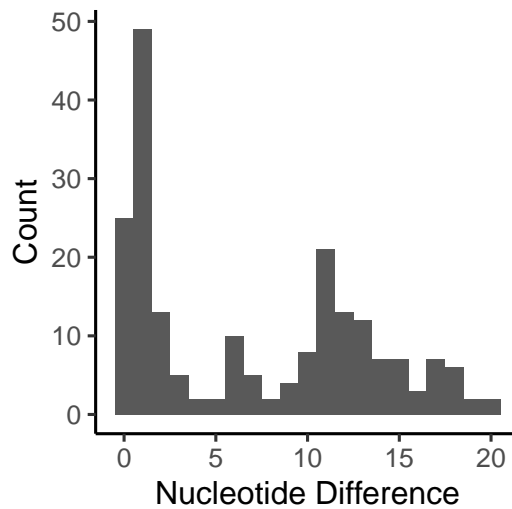
IGHV3-49*03_05

20 sequences assigned
7 (35%) exact matches, in which:
5 unique CDR3
2 unique J



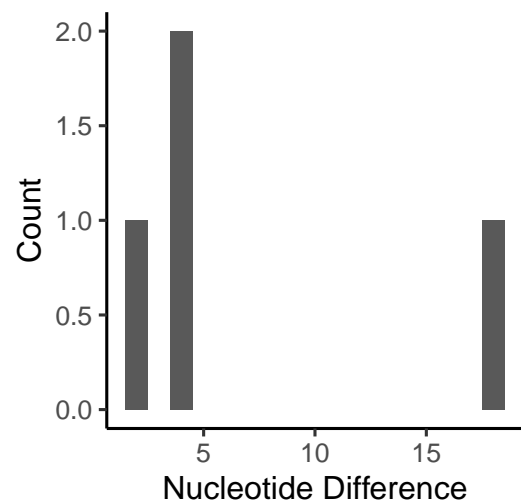
IGHV3-53*01_02

220 sequences assigned
25 (11.4%) exact matches, in which:
12 unique CDR3
3 unique J



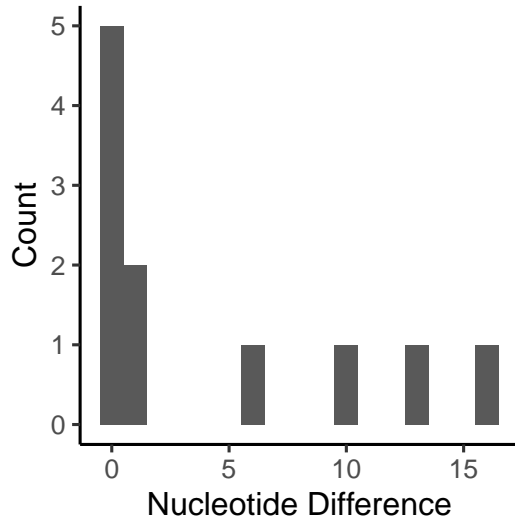
IGHV3-66*02

5 sequences assigned
No exact matches.



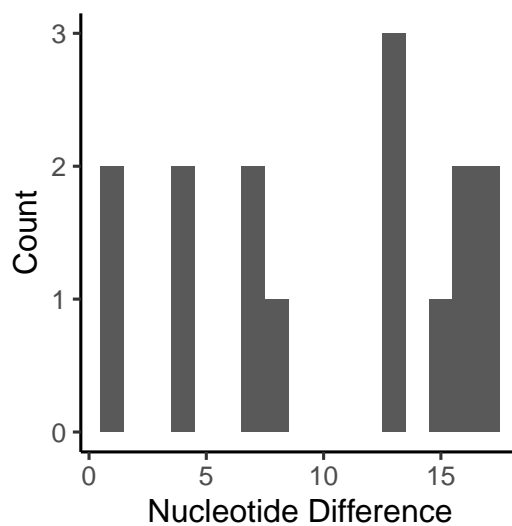
IGHV3-52*01_03

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



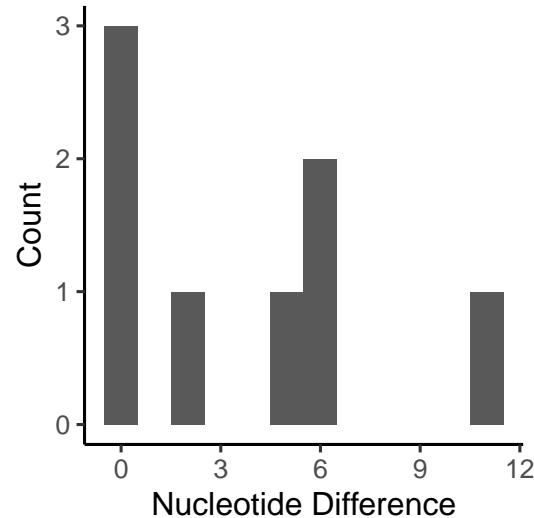
IGHV3-64*04

16 sequences assigned
No exact matches.



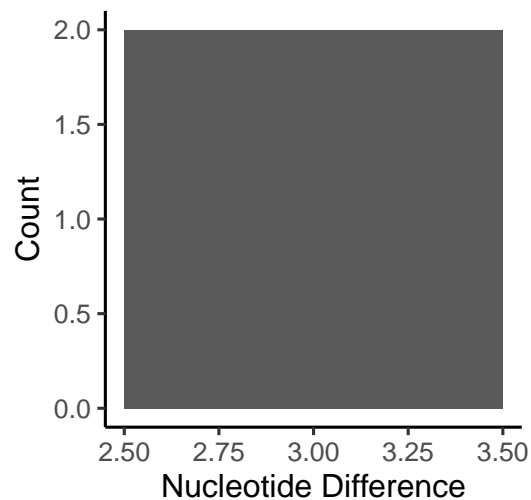
IGHV3-66*03

8 sequences assigned
3 (37.5%) exact matches, in which:
3 unique CDR3
2 unique J



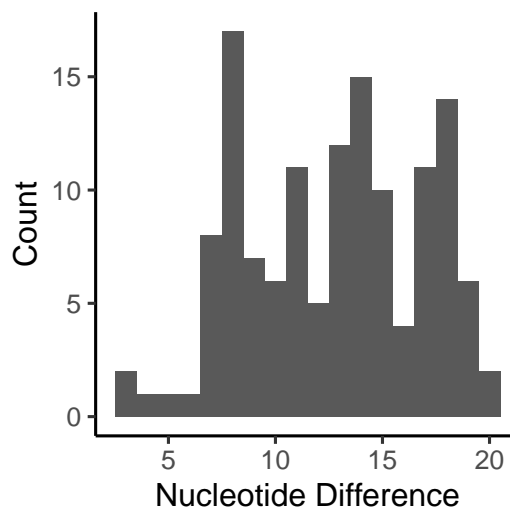
IGHV3-69-1*01

33 sequences assigned
No exact matches.



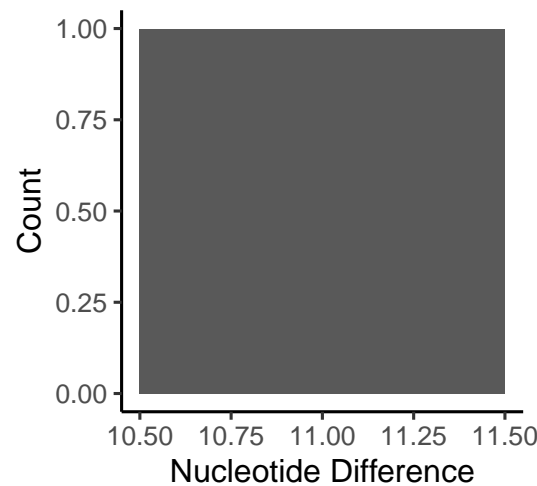
IGHV3-74*03

198 sequences assigned
No exact matches.



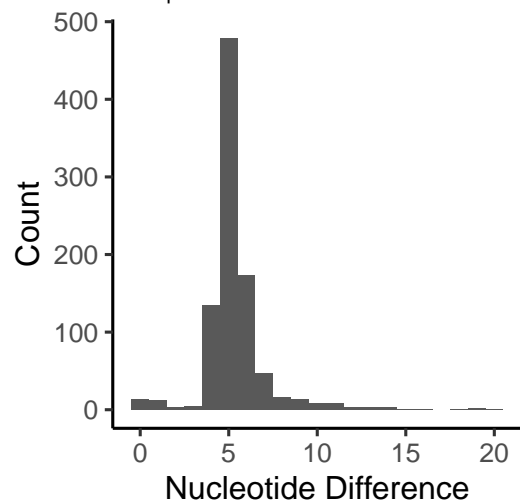
IGHV3-NL1*01

1 sequences assigned
No exact matches.



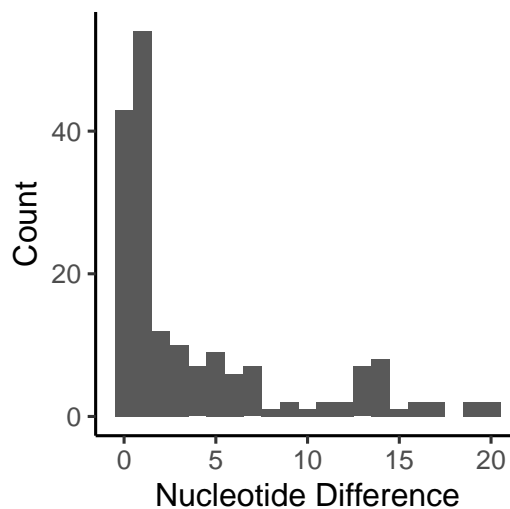
IGHV3-72*01

938 sequences assigned
13 (1.4%) exact matches, in which:
7 unique CDR3
2 unique J



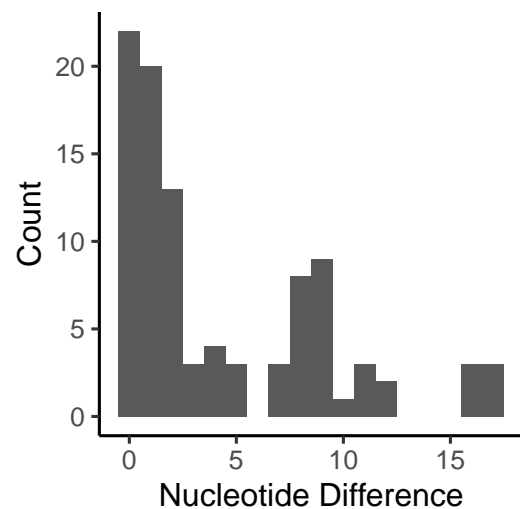
IGHV3-74*01_02

187 sequences assigned
43 (23%) exact matches, in which:
27 unique CDR3
4 unique J



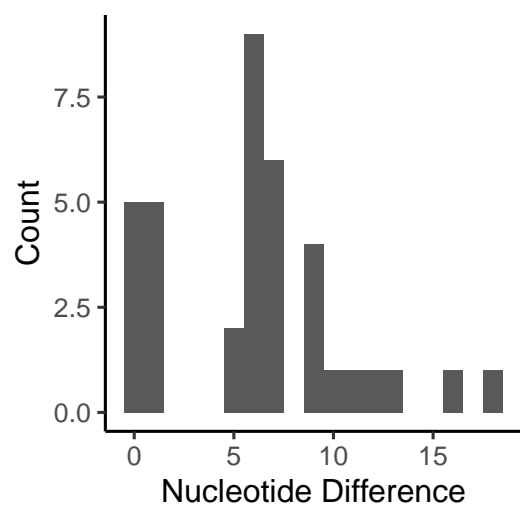
IGHV4-4*07

99 sequences assigned
22 (22.2%) exact matches, in which:
20 unique CDR3
4 unique J



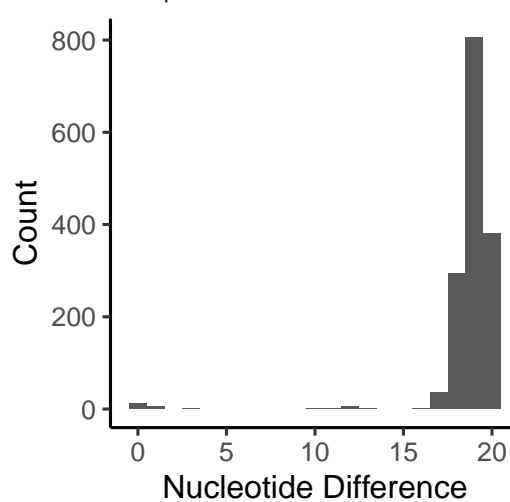
IGHV3-73*01_02

414 sequences assigned
5 (1.2%) exact matches, in which:
2 unique CDR3
2 unique J



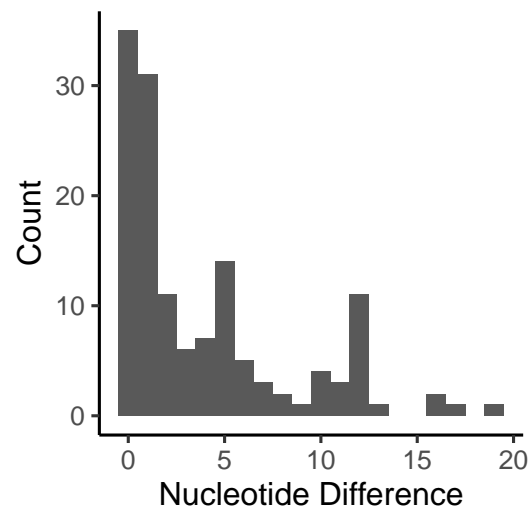
IGHV3-64D*06

2416 sequences assigned
13 (0.5%) exact matches, in which:
8 unique CDR3
3 unique J



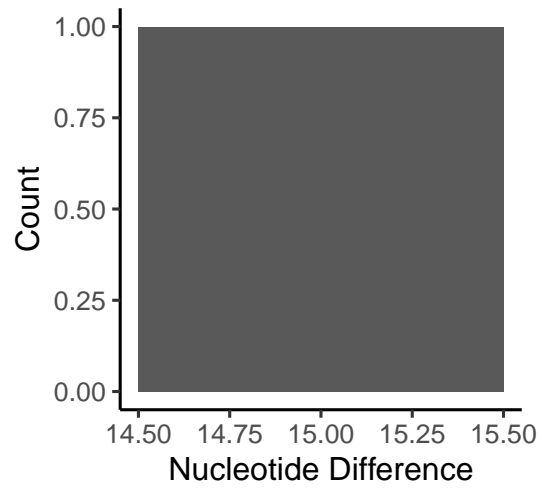
IGHV4-4*02_03

139 sequences assigned
35 (25.2%) exact matches, in which:
23 unique CDR3
6 unique J



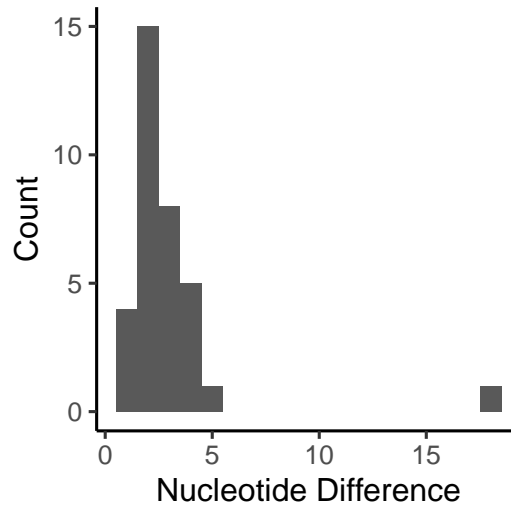
IGHV4-28*01_07

3 sequences assigned
No exact matches.



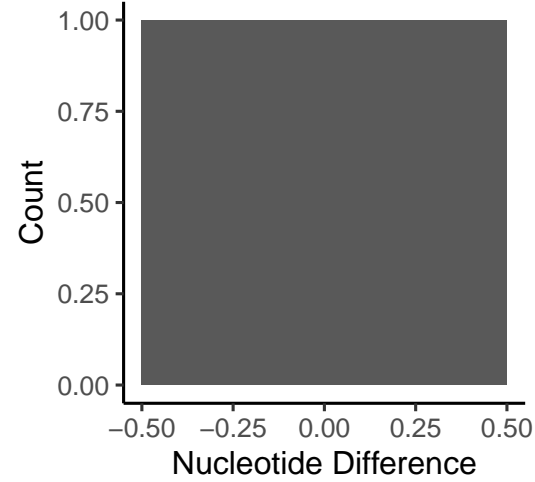
IGHV4-30-2*03

36 sequences assigned
No exact matches.



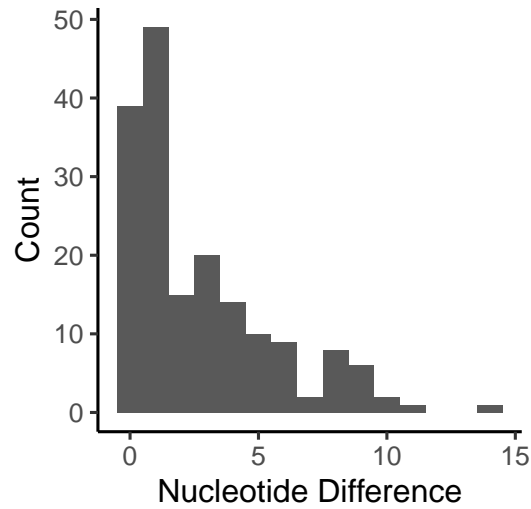
IGHV4-38-2*01

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



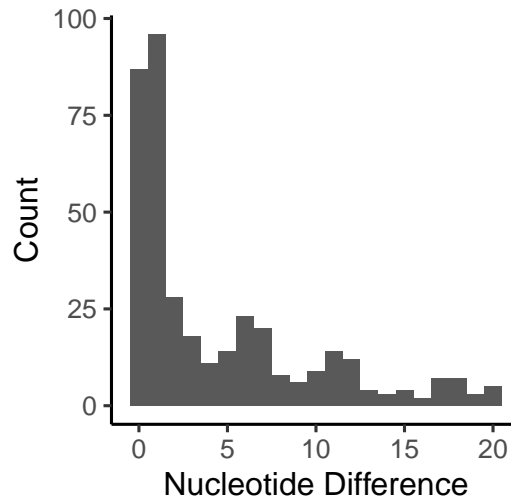
IGHV4-30-2*01

177 sequences assigned
39 (22%) exact matches, in which:
24 unique CDR3
7 unique J



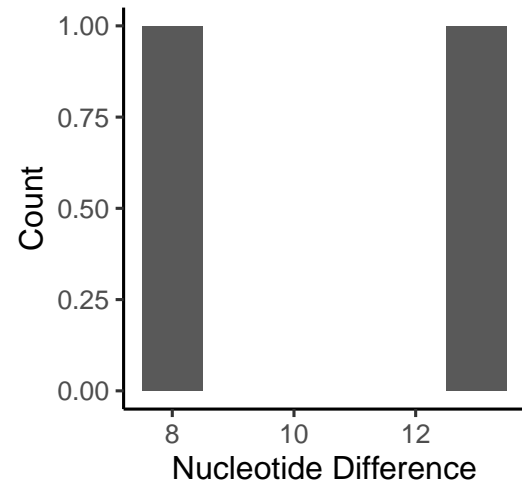
IGHV4-31*02

2135 sequences assigned
87 (4.1%) exact matches, in which:
66 unique CDR3
5 unique J



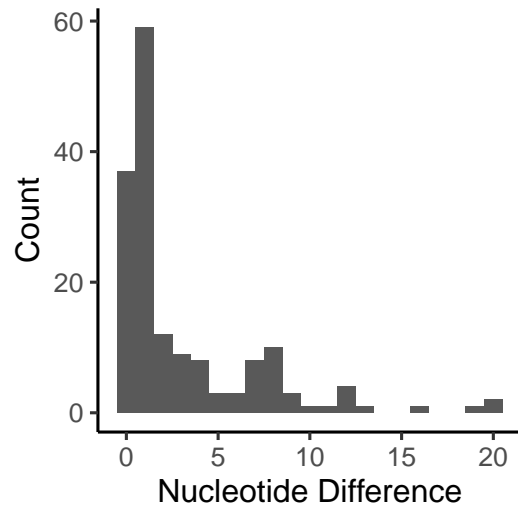
IGHV4-38-2*02

19 sequences assigned
No exact matches.



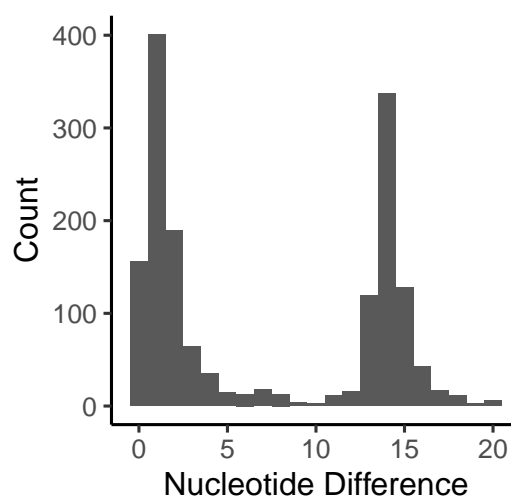
IGHV4-30-4*01

172 sequences assigned
37 (21.5%) exact matches, in which:
25 unique CDR3
5 unique J



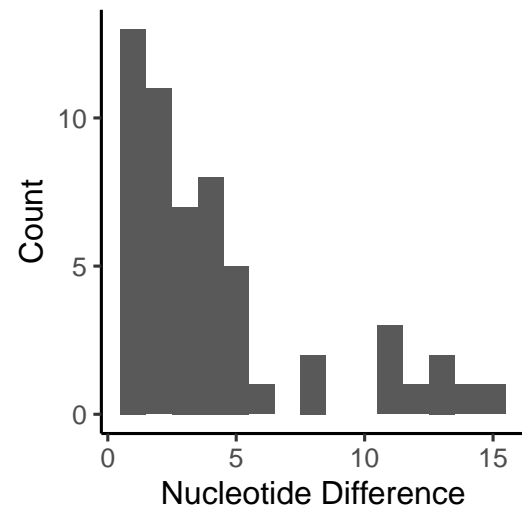
IGHV4-34*01_02

1627 sequences assigned
156 (9.6%) exact matches, in which:
87 unique CDR3
6 unique J



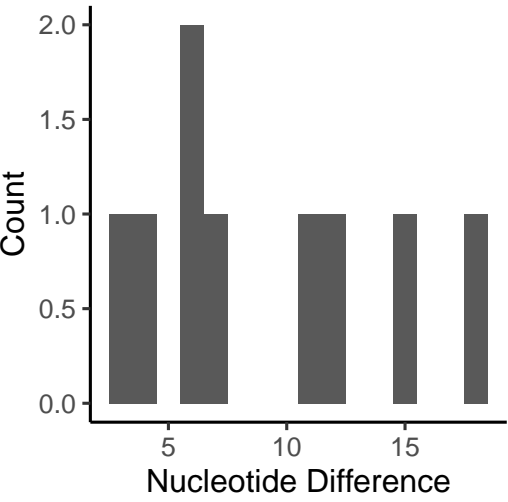
IGHV4-39*07

73 sequences assigned
No exact matches.



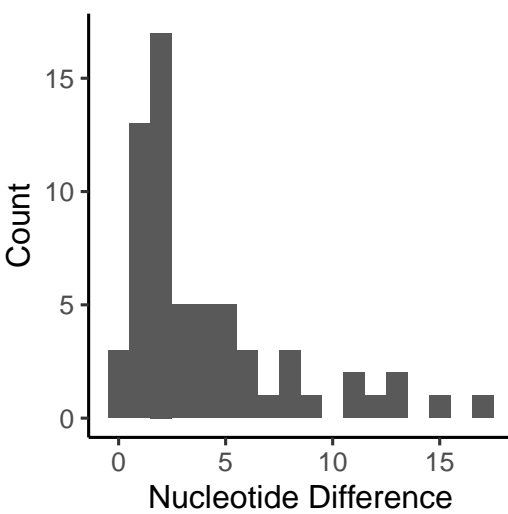
IGHV4-59*02

25 sequences assigned
No exact matches.



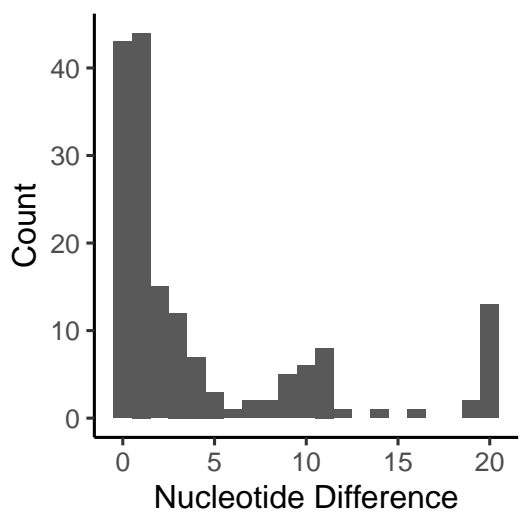
IGHV4-59*12

69 sequences assigned
3 (4.3%) exact matches, in which:
3 unique CDR3
2 unique J



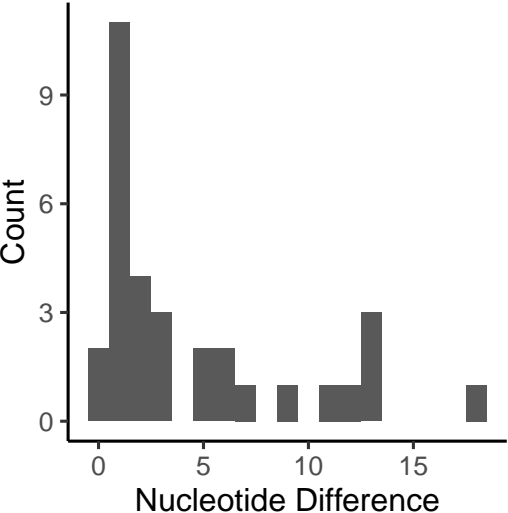
IGHV4-61*02_A234G

1368 sequences assigned
43 (3.1%) exact matches, in which:
40 unique CDR3
6 unique J



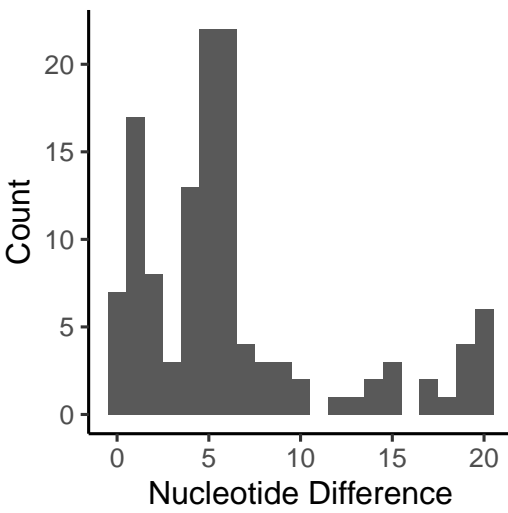
IGHV4-59*08

34 sequences assigned
2 (5.9%) exact matches, in which:
2 unique CDR3
1 unique J



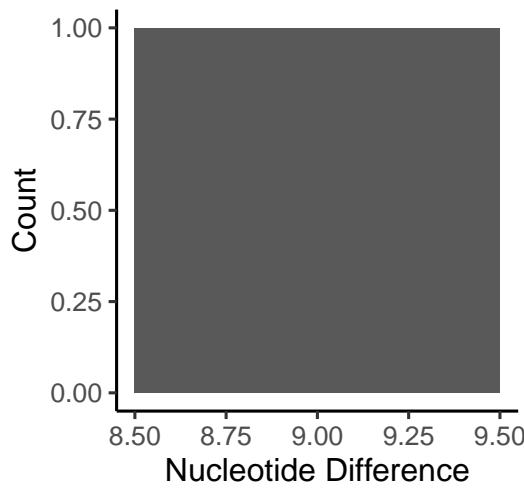
IGHV4-61*01

127 sequences assigned
7 (5.5%) exact matches, in which:
4 unique CDR3
2 unique J



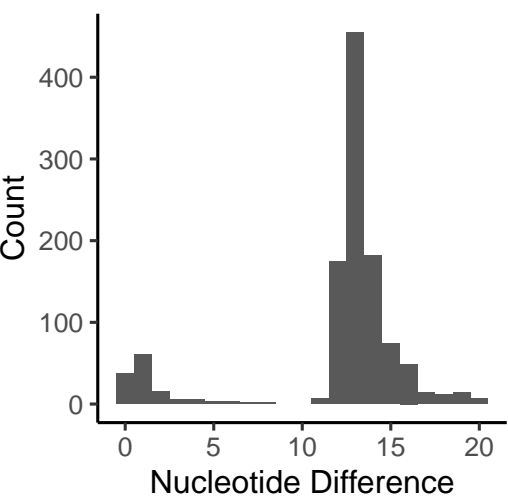
IGHV4/OR15-8*01

1 sequences assigned
No exact matches.



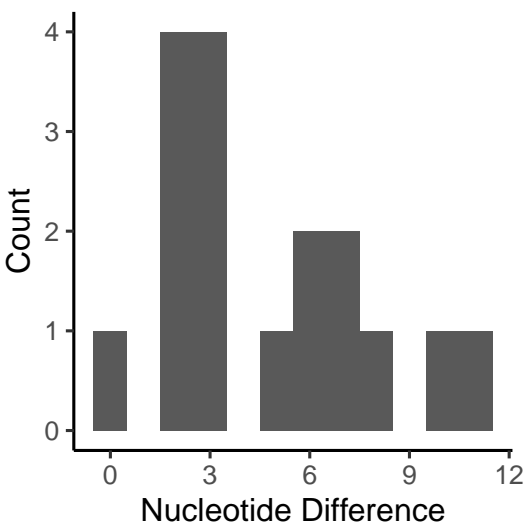
IGHV4-59*01_07

1615 sequences assigned
37 (2.3%) exact matches, in which:
22 unique CDR3
6 unique J



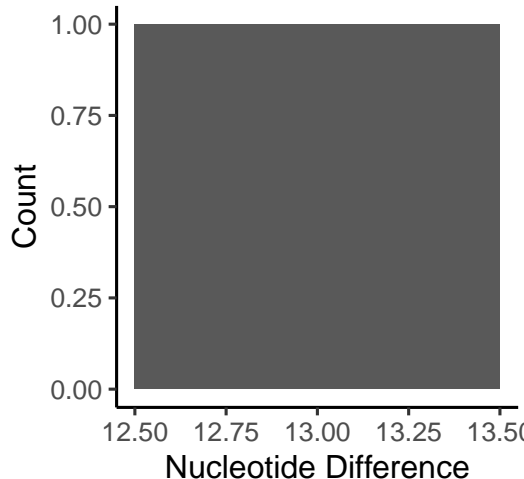
IGHV4-61*02

21 sequences assigned
1 (4.8%) exact matches, in which:
1 unique CDR3
1 unique J



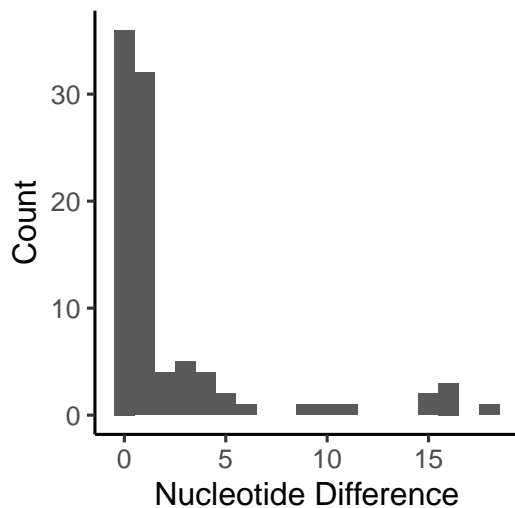
IGHV4/OR15-8*02

1 sequences assigned
No exact matches.



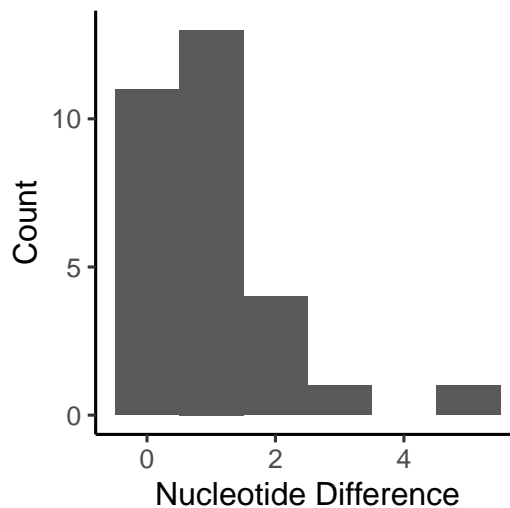
IGHV5-10-1*01_03

93 sequences assigned
36 (38.7%) exact matches, in which:
25 unique CDR3
5 unique J



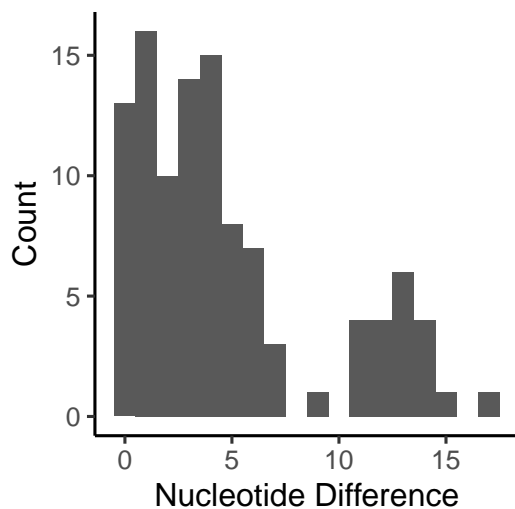
IGHV6-1*01_02

41 sequences assigned
11 (26.8%) exact matches, in which:
11 unique CDR3
4 unique J



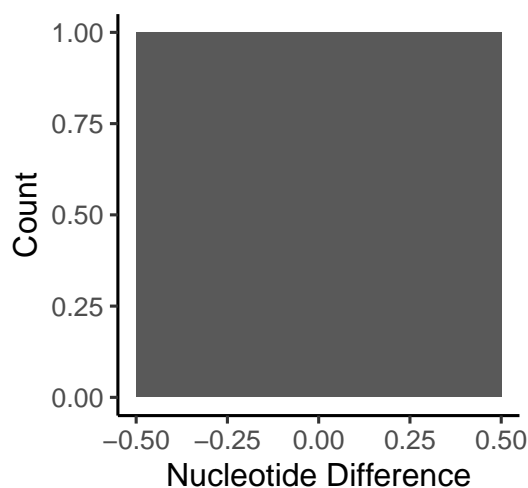
IGHV5-51*07

107 sequences assigned
13 (12.1%) exact matches, in which:
9 unique CDR3
4 unique J



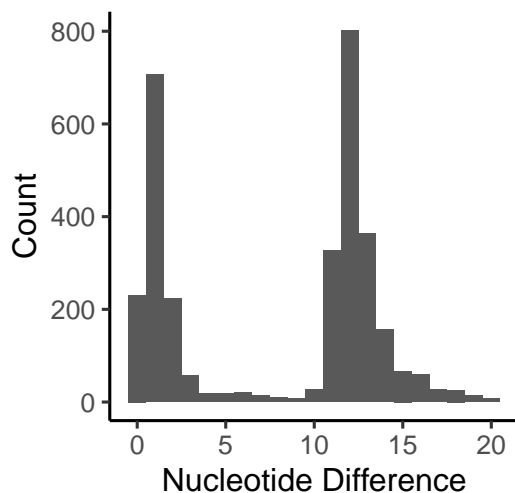
IGHV7-4-1*01

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



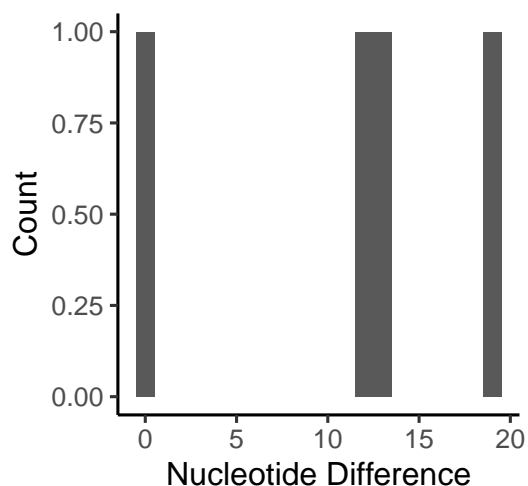
IGHV5-51*01_03

3872 sequences assigned
231 (6%) exact matches, in which:
80 unique CDR3
6 unique J

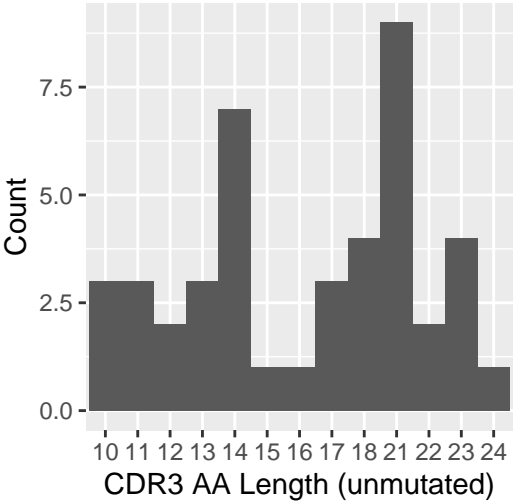


IGHV7-4-1*02

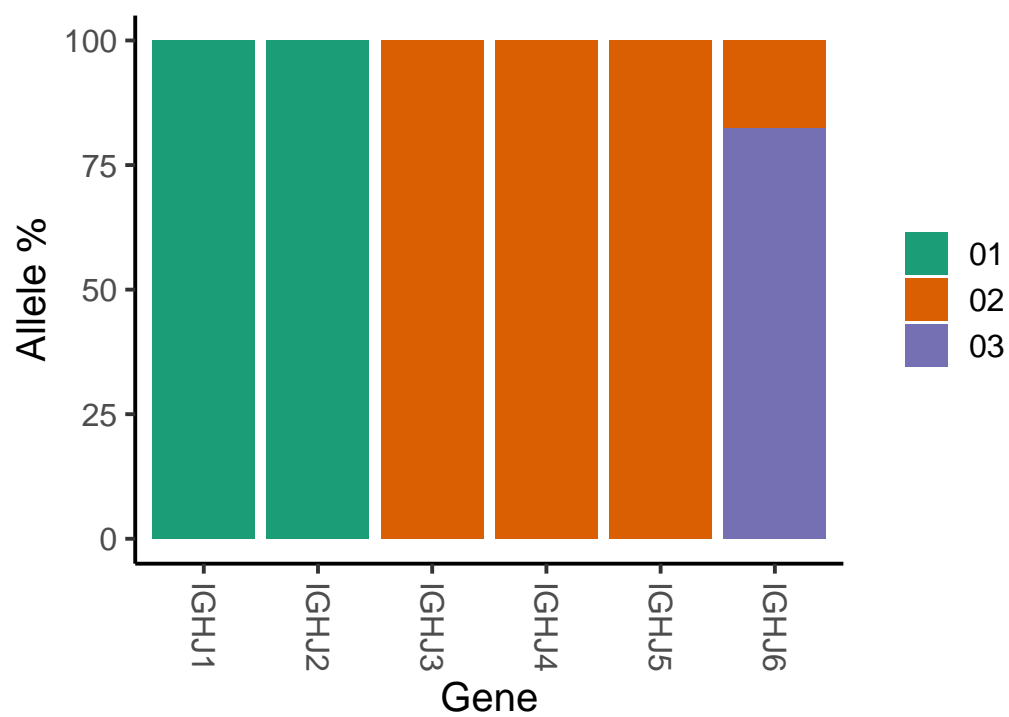
4 sequences assigned
1 (25%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV4-61*02_A234G



Allele Usage



[illegible]