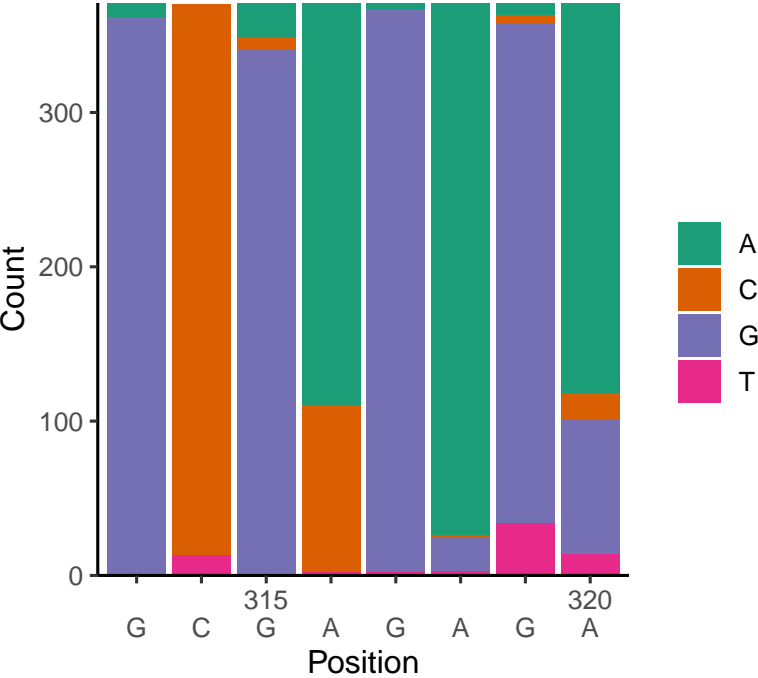
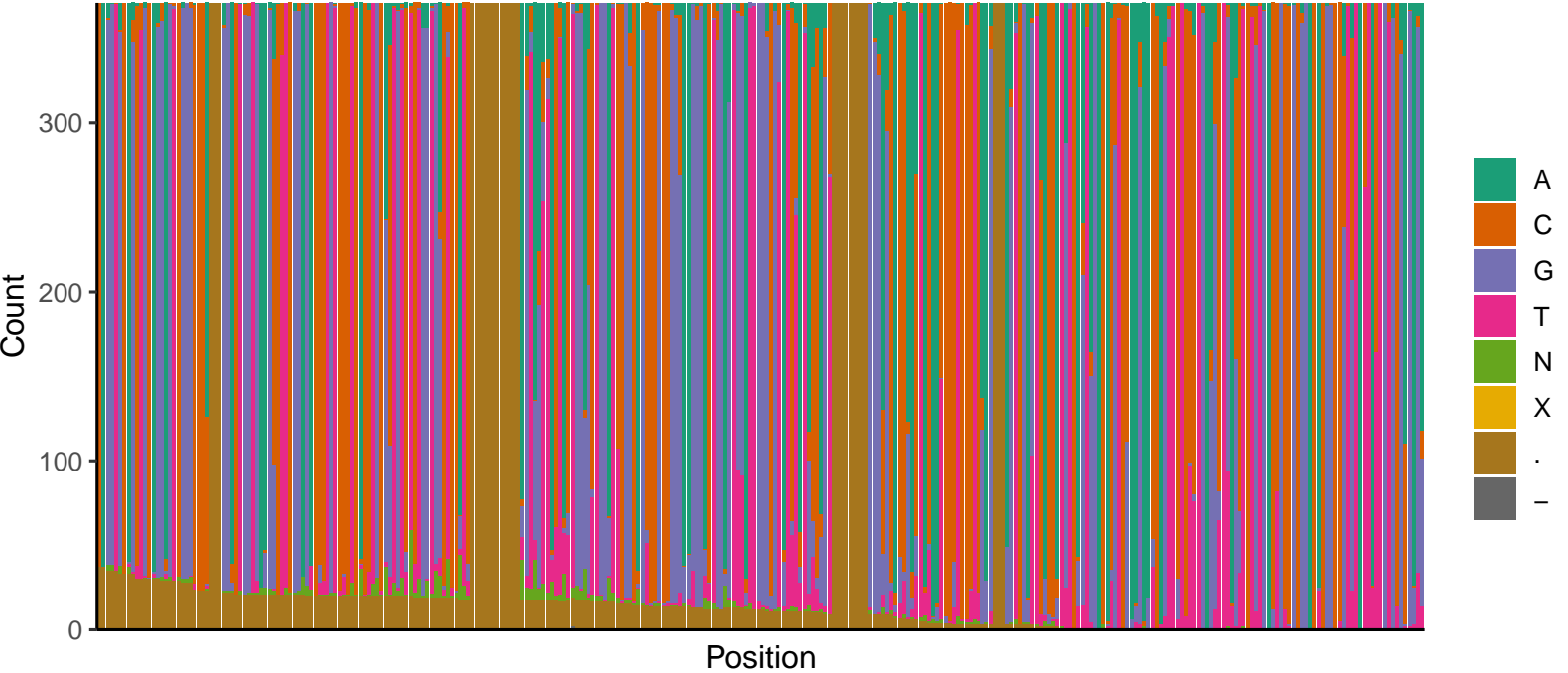


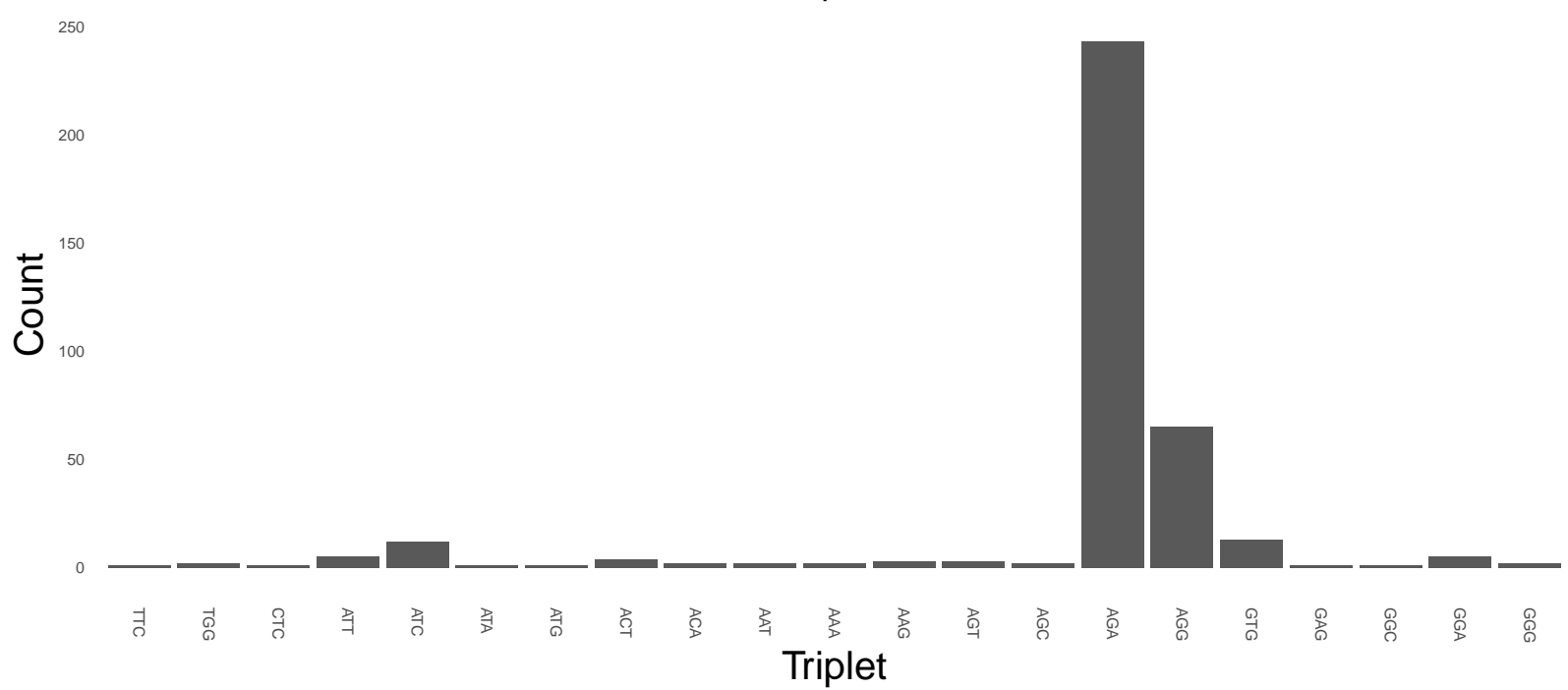
Gene IGHV4-4*07_A70G



Gene IGHV4-4*07_A70G

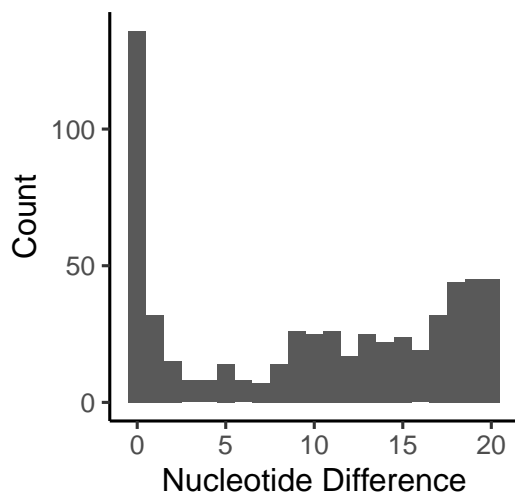


IGHV4-4*07_A70G- Final 3 nucleotides as a triplet



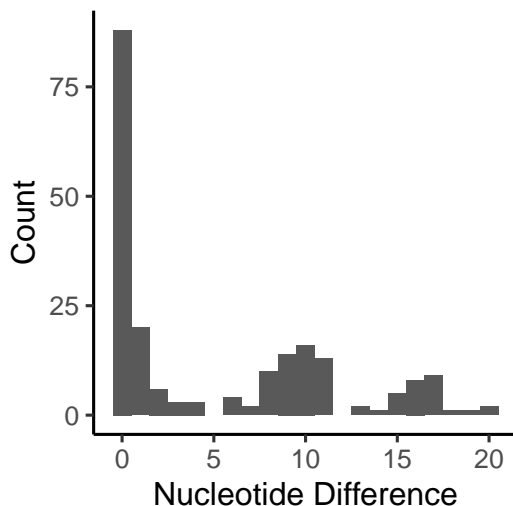
IGHV1-2*02

1037 sequences assigned
136 (13.1%) exact matches, in which:
133 unique CDR3
6 unique J



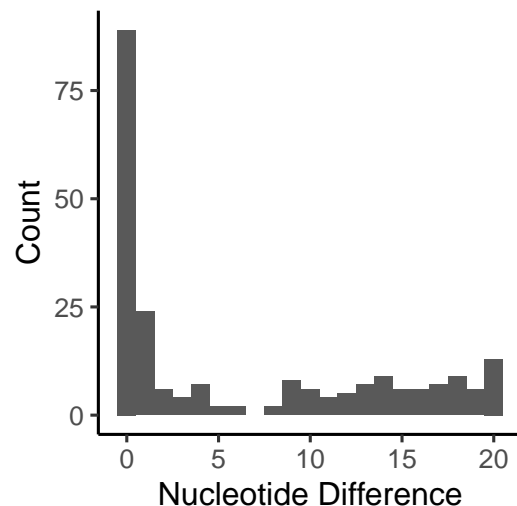
IGHV1-8*01

267 sequences assigned
88 (33%) exact matches, in which:
85 unique CDR3
5 unique J



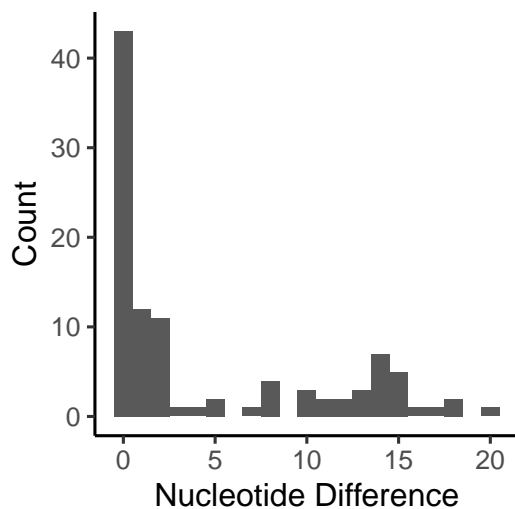
IGHV1-24*01

299 sequences assigned
89 (29.8%) exact matches, in which:
89 unique CDR3
5 unique J



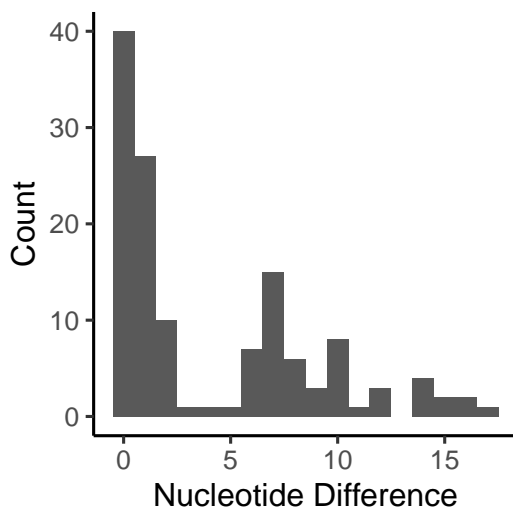
IGHV1-2*04

141 sequences assigned
43 (30.5%) exact matches, in which:
41 unique CDR3
4 unique J



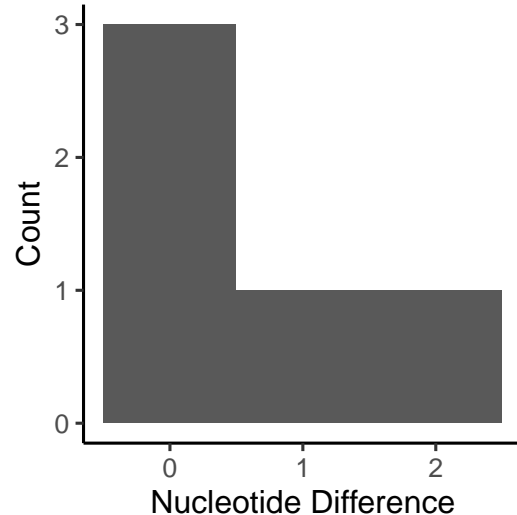
IGHV1-8*03

187 sequences assigned
40 (21.4%) exact matches, in which:
36 unique CDR3
6 unique J



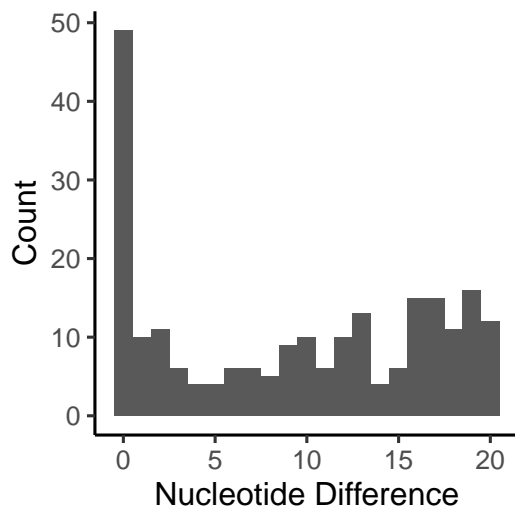
IGHV1-45*02

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



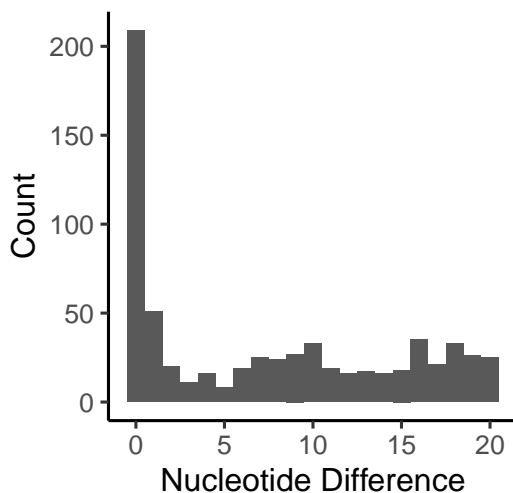
IGHV1-3*01

697 sequences assigned
49 (7%) exact matches, in which:
48 unique CDR3
5 unique J



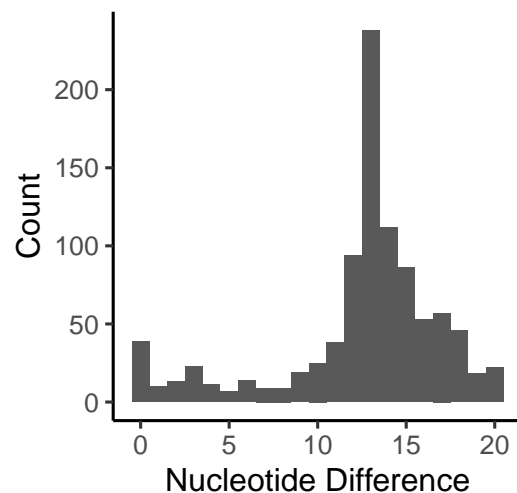
IGHV1-18*01

1109 sequences assigned
209 (18.8%) exact matches, in which:
200 unique CDR3
5 unique J



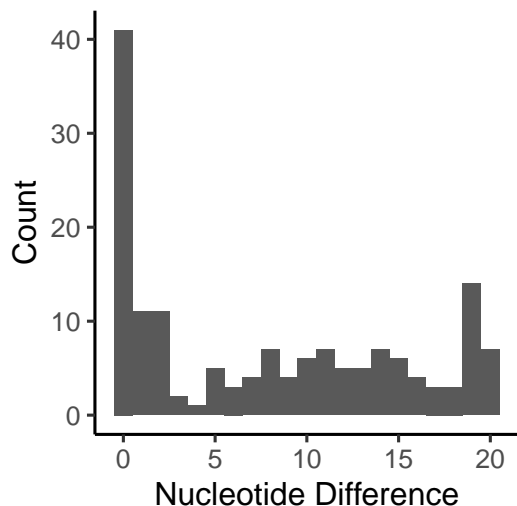
IGHV1-46*01

2041 sequences assigned
39 (1.9%) exact matches, in which:
39 unique CDR3
5 unique J



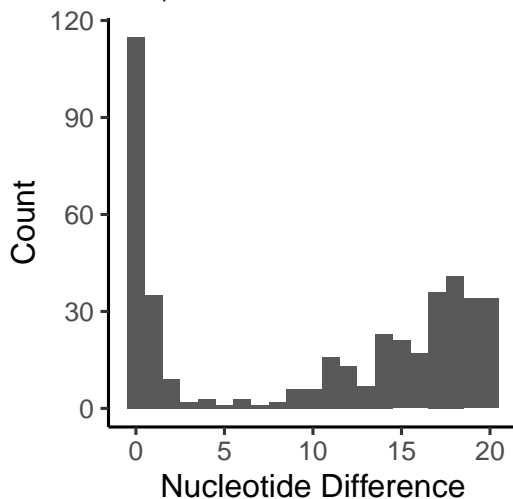
IGHV1-46*03

347 sequences assigned
41 (11.8%) exact matches, in which:
37 unique CDR3
4 unique J



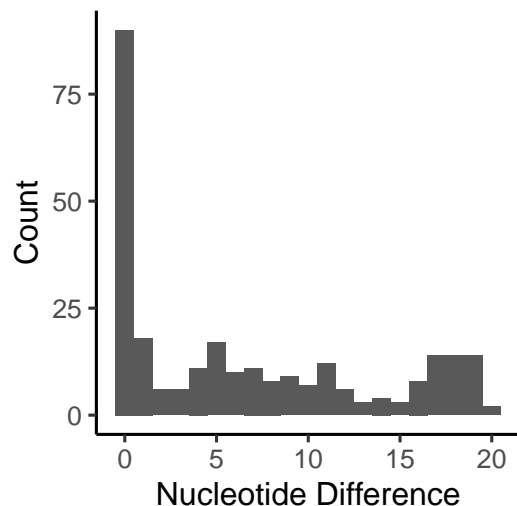
IGHV1-69*04

706 sequences assigned
115 (16.3%) exact matches, in which:
114 unique CDR3
4 unique J



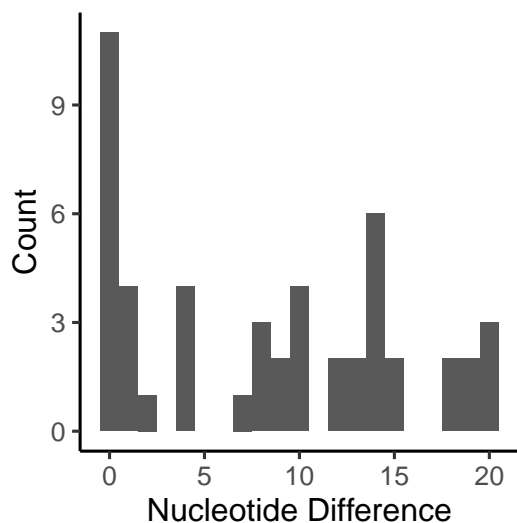
IGHV2-26*01

312 sequences assigned
90 (28.8%) exact matches, in which:
87 unique CDR3
5 unique J



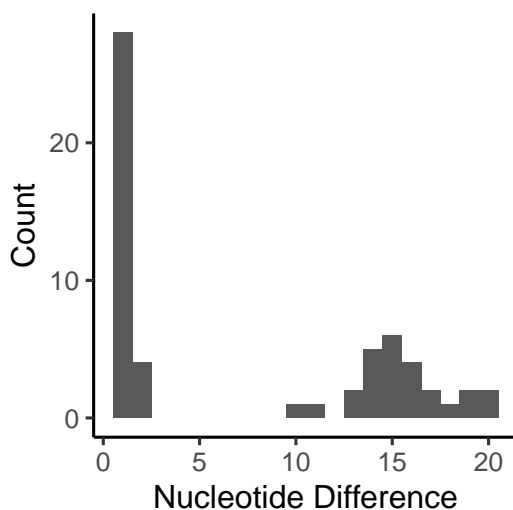
IGHV1-58*02

70 sequences assigned
11 (15.7%) exact matches, in which:
11 unique CDR3
4 unique J



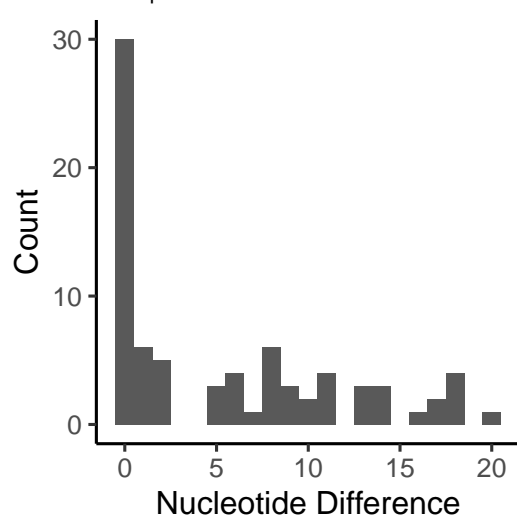
IGHV1-69*08

129 sequences assigned
No exact matches.



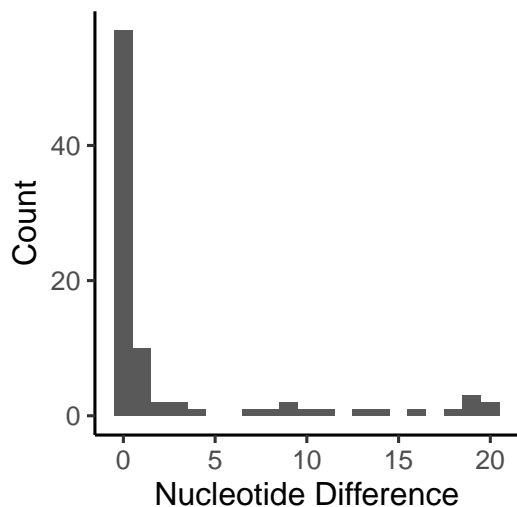
IGHV2-70*15

93 sequences assigned
30 (32.3%) exact matches, in which:
30 unique CDR3
5 unique J



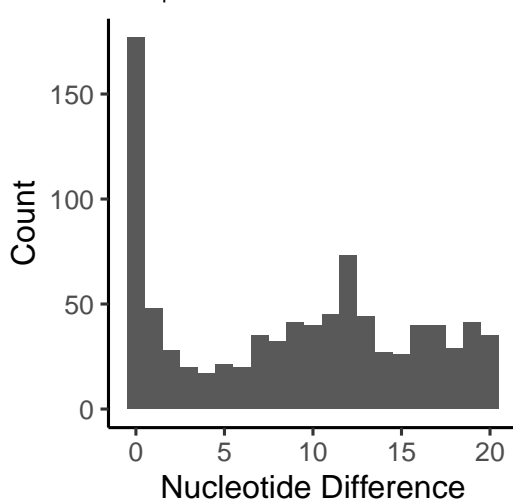
IGHV1-69*02

162 sequences assigned
57 (35.2%) exact matches, in which:
57 unique CDR3
5 unique J



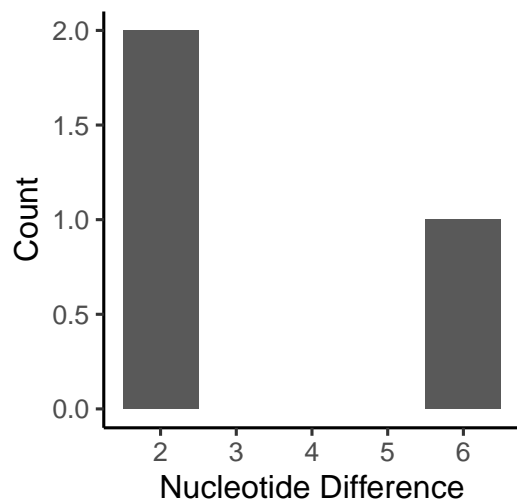
IGHV2-5*01

1120 sequences assigned
177 (15.8%) exact matches, in which:
172 unique CDR3
6 unique J



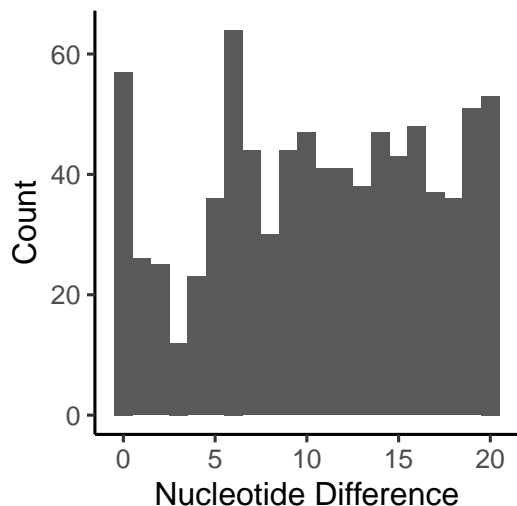
IGHV2-70D*14

3 sequences assigned
No exact matches.



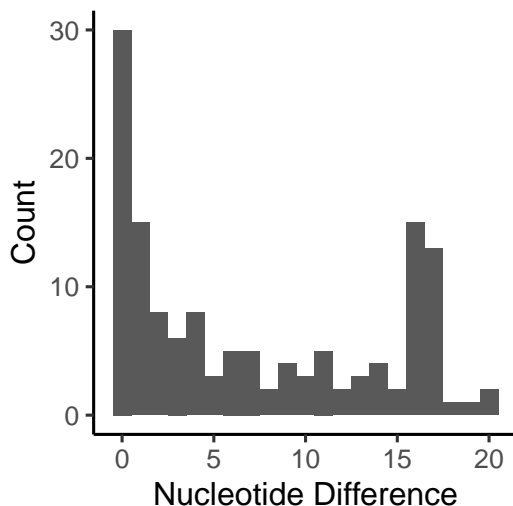
IGHV3-7*01

1259 sequences assigned
57 (4.5%) exact matches, in which:
55 unique CDR3
5 unique J



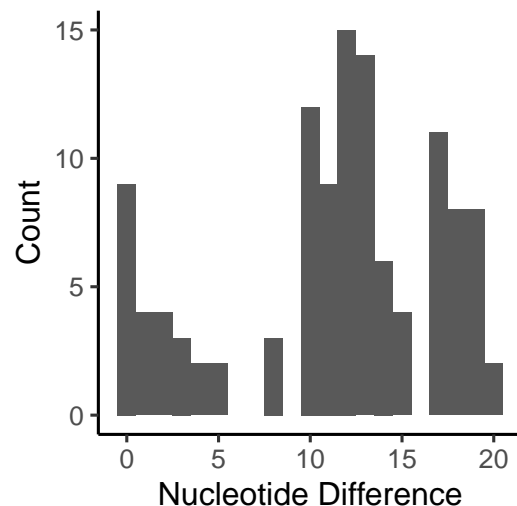
IGHV3-9*03

159 sequences assigned
30 (18.9%) exact matches, in which:
26 unique CDR3
5 unique J



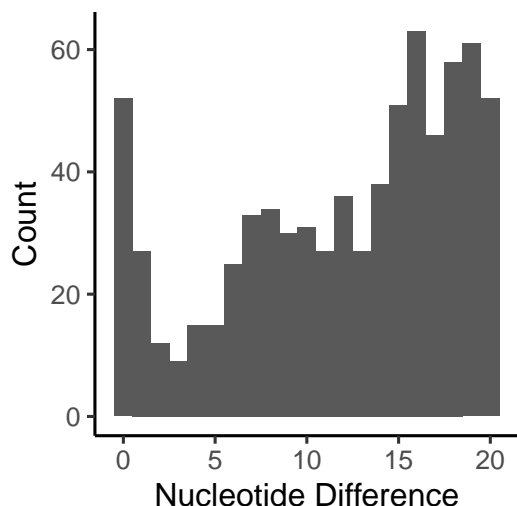
IGHV3-13*01

160 sequences assigned
9 (5.6%) exact matches, in which:
9 unique CDR3
4 unique J



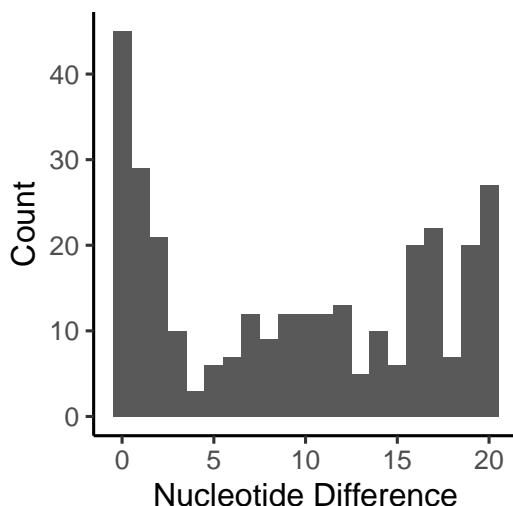
IGHV3-7*03

1152 sequences assigned
52 (4.5%) exact matches, in which:
52 unique CDR3
5 unique J



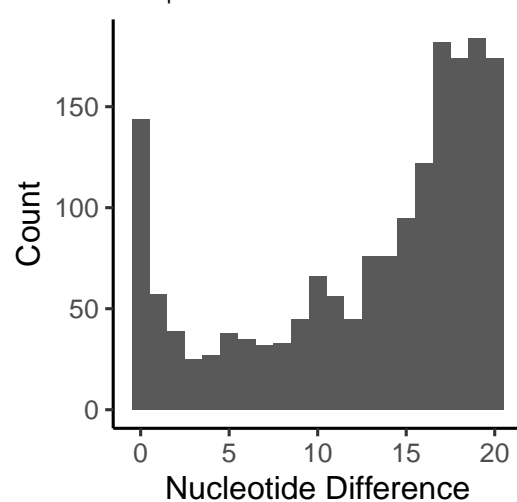
IGHV3-11*01

759 sequences assigned
45 (5.9%) exact matches, in which:
42 unique CDR3
5 unique J



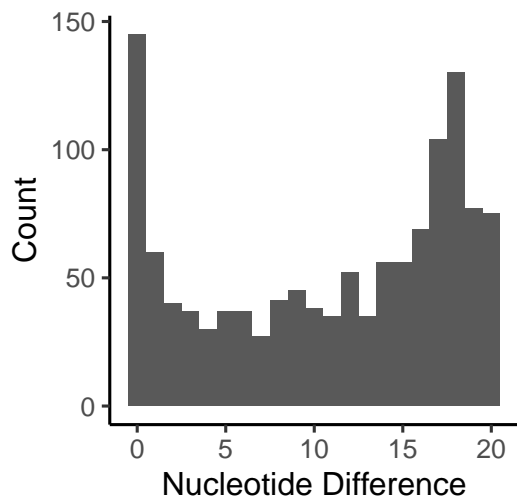
IGHV3-15*01

3336 sequences assigned
144 (4.3%) exact matches, in which:
138 unique CDR3
4 unique J



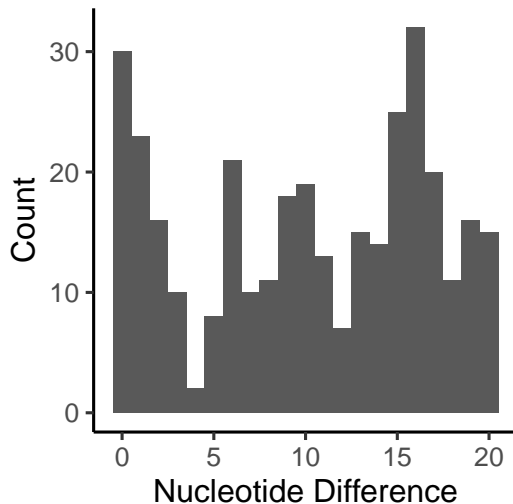
IGHV3-9*01

2750 sequences assigned
145 (5.3%) exact matches, in which:
136 unique CDR3
6 unique J



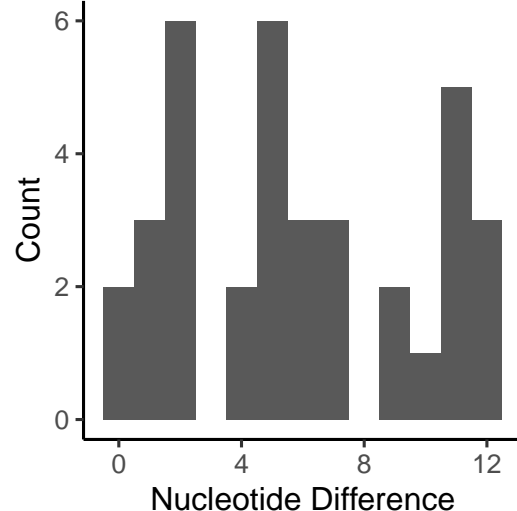
IGHV3-11*04

620 sequences assigned
30 (4.8%) exact matches, in which:
30 unique CDR3
5 unique J



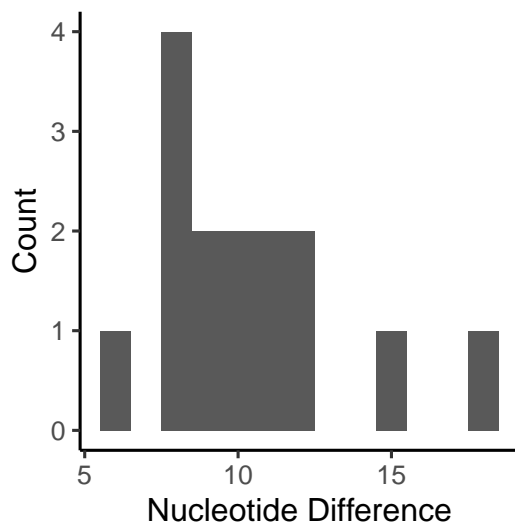
IGHV3-20*01

36 sequences assigned
2 (5.6%) exact matches, in which:
2 unique CDR3
2 unique J



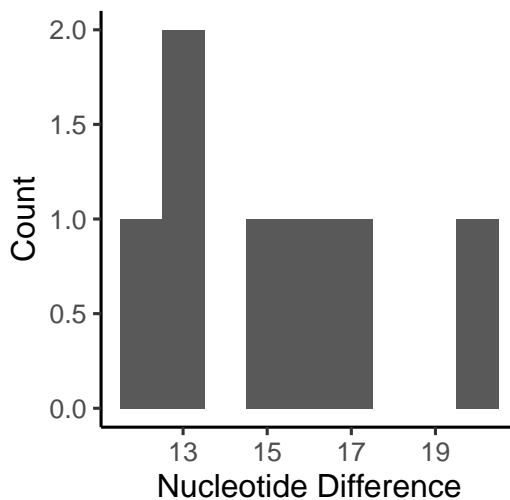
IGHV3-20*04

20 sequences assigned
No exact matches.



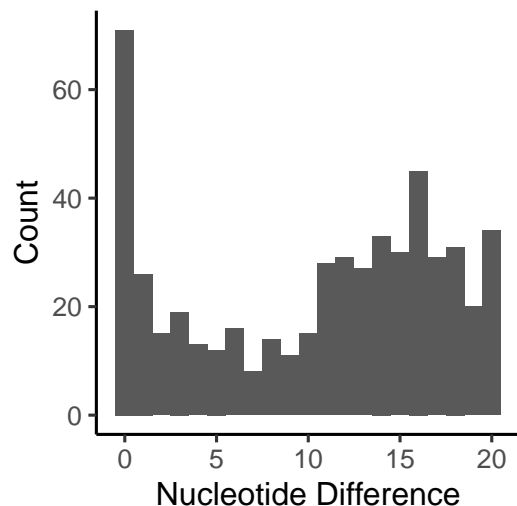
IGHV3-30-3*01

44 sequences assigned
No exact matches.



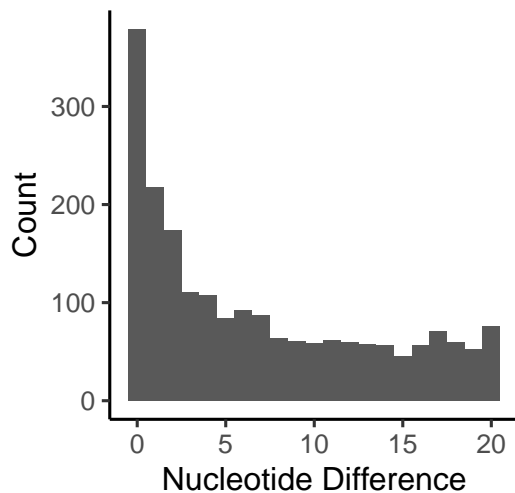
IGHV3-30*18

977 sequences assigned
71 (7.3%) exact matches, in which:
67 unique CDR3
4 unique J



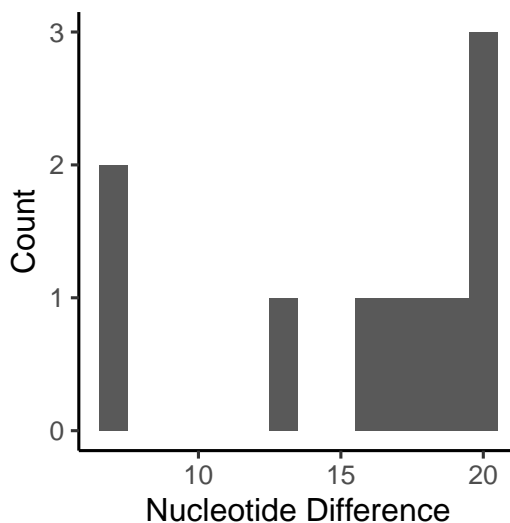
IGHV3-21*01

3008 sequences assigned
379 (12.6%) exact matches, in which:
292 unique CDR3
6 unique J



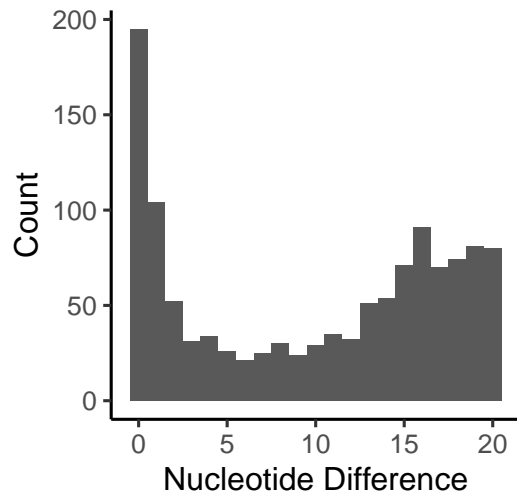
IGHV3-30-3*02

56 sequences assigned
No exact matches.



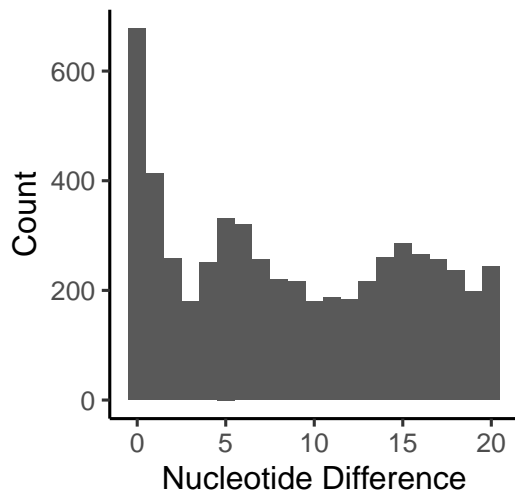
IGHV3-33*01

2148 sequences assigned
195 (9.1%) exact matches, in which:
192 unique CDR3
6 unique J



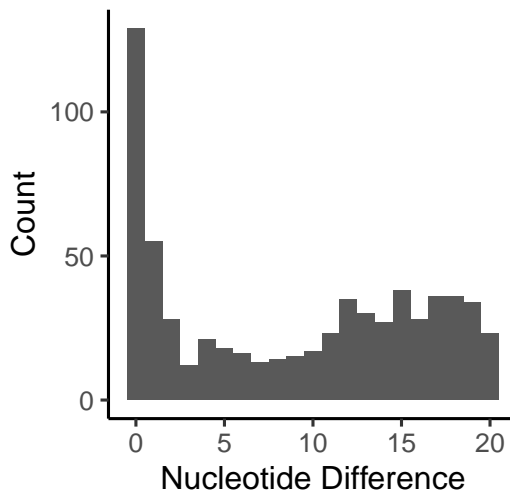
IGHV3-23*01

8943 sequences assigned
678 (7.6%) exact matches, in which:
501 unique CDR3
6 unique J



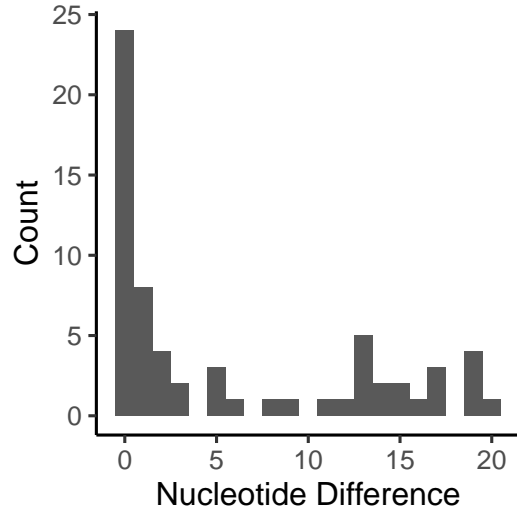
IGHV3-30*04

1014 sequences assigned
129 (12.7%) exact matches, in which:
116 unique CDR3
5 unique J



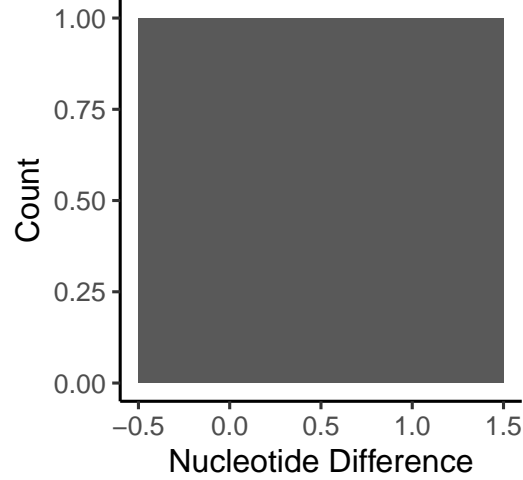
IGHV3-43*01

152 sequences assigned
24 (15.8%) exact matches, in which:
23 unique CDR3
3 unique J



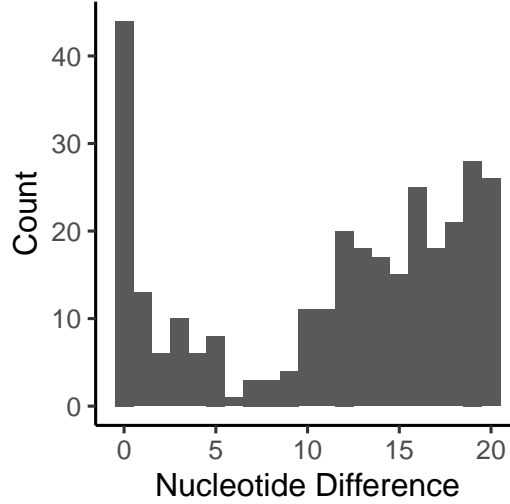
IGHV3-47*01

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



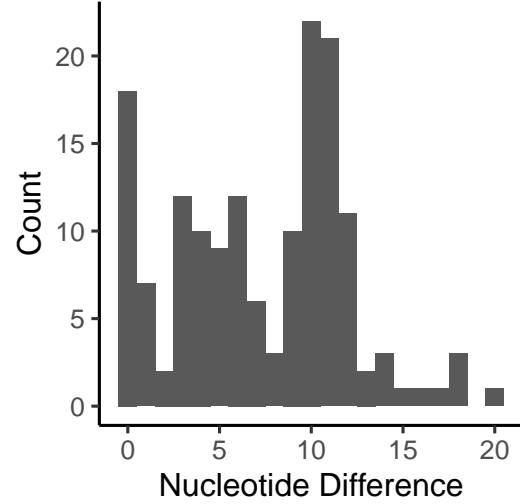
IGHV3-49*03

501 sequences assigned
44 (8.8%) exact matches, in which:
43 unique CDR3
6 unique J



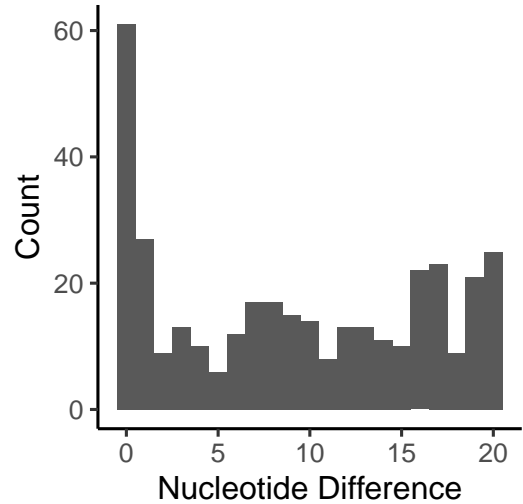
IGHV3-64*01

212 sequences assigned
18 (8.5%) exact matches, in which:
18 unique CDR3
4 unique J



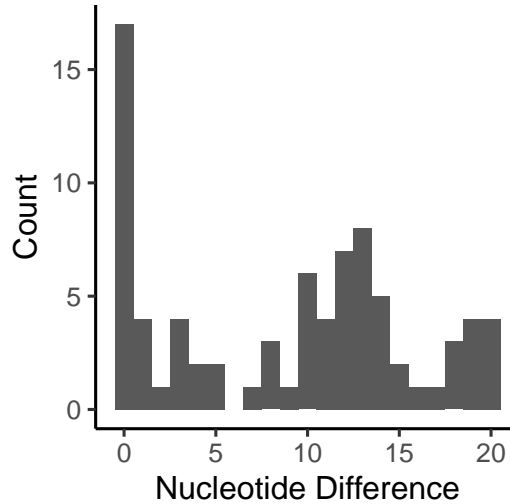
IGHV3-48*01

626 sequences assigned
61 (9.7%) exact matches, in which:
59 unique CDR3
5 unique J



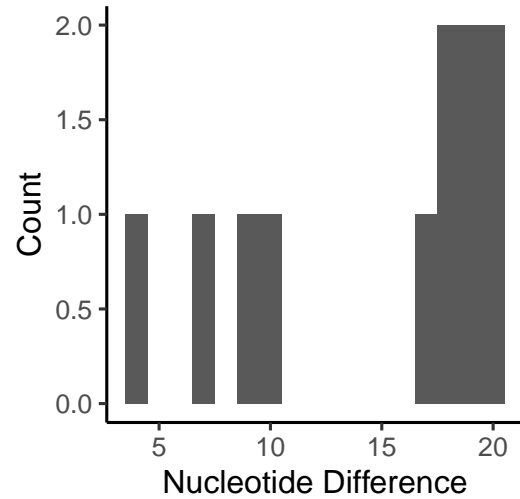
IGHV3-53*02

151 sequences assigned
17 (11.3%) exact matches, in which:
17 unique CDR3
3 unique J



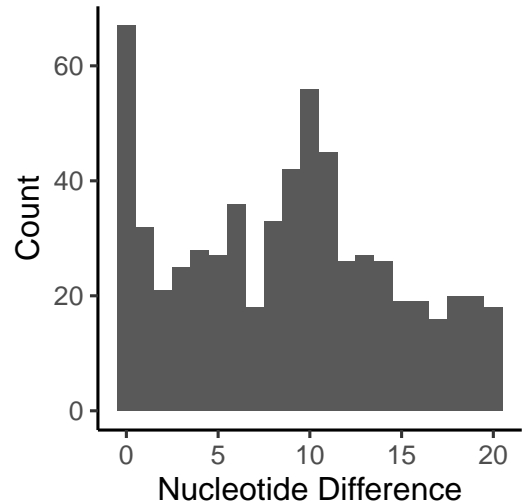
IGHV3-64*07

46 sequences assigned
No exact matches.



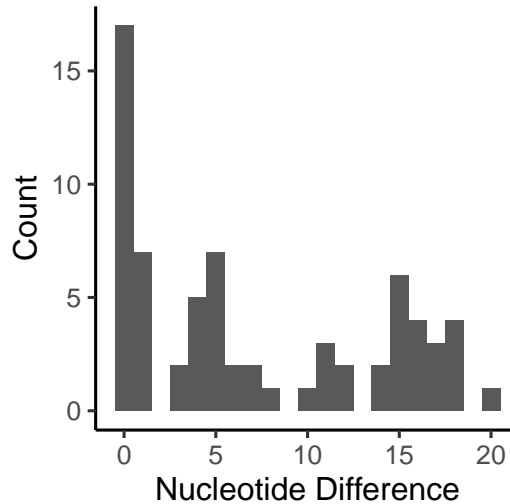
IGHV3-48*04

900 sequences assigned
67 (7.4%) exact matches, in which:
61 unique CDR3
5 unique J



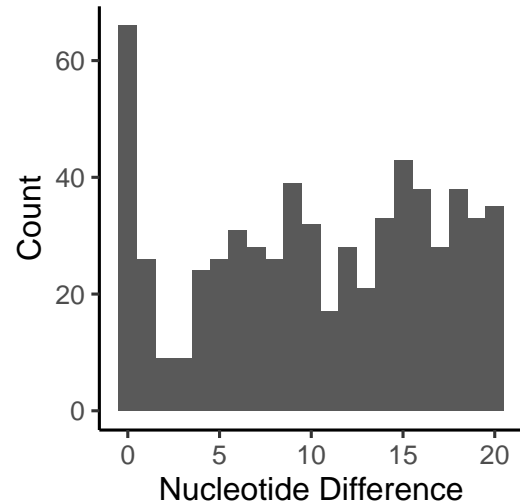
IGHV3-53*04

99 sequences assigned
17 (17.2%) exact matches, in which:
17 unique CDR3
4 unique J



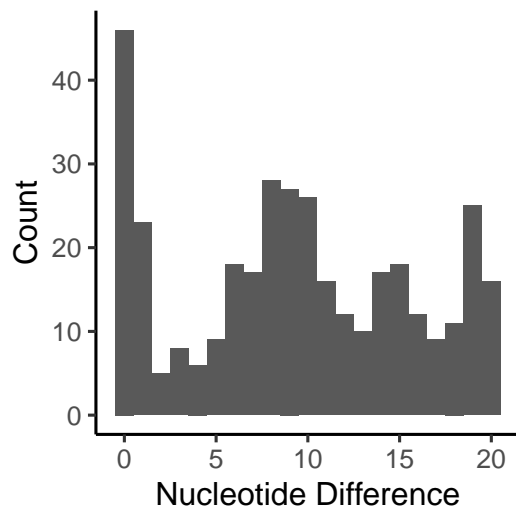
IGHV3-66*01

3171 sequences assigned
66 (2.1%) exact matches, in which:
61 unique CDR3
5 unique J



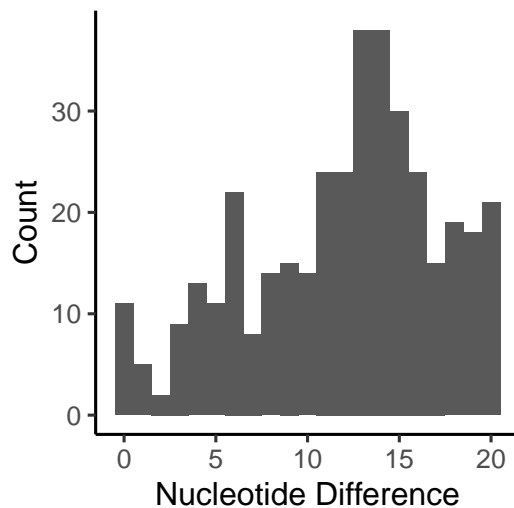
IGHV3-66*02

550 sequences assigned
46 (8.4%) exact matches, in which:
46 unique CDR3
6 unique J



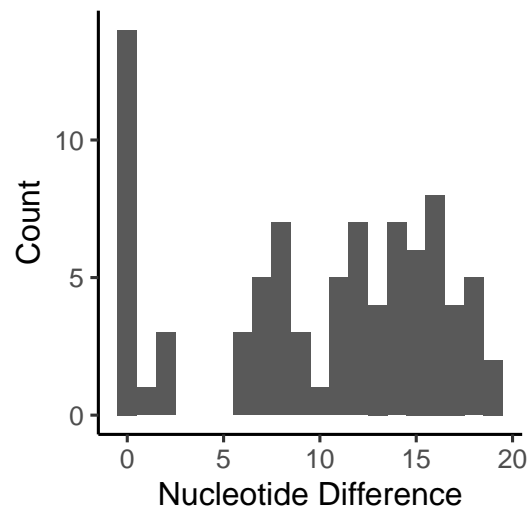
IGHV3-72*01

586 sequences assigned
11 (1.9%) exact matches, in which:
11 unique CDR3
3 unique J



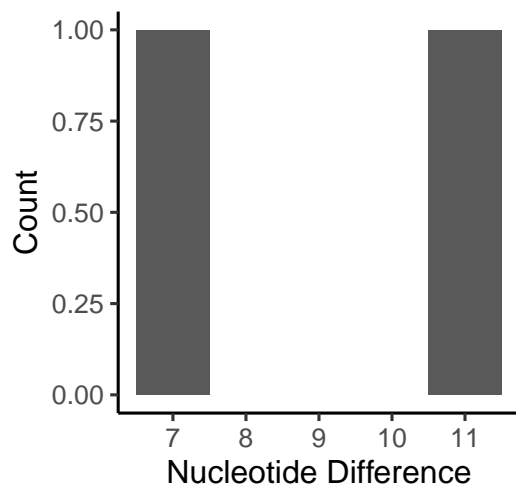
IGHV3-43D*03

116 sequences assigned
14 (12.1%) exact matches, in which:
14 unique CDR3
2 unique J



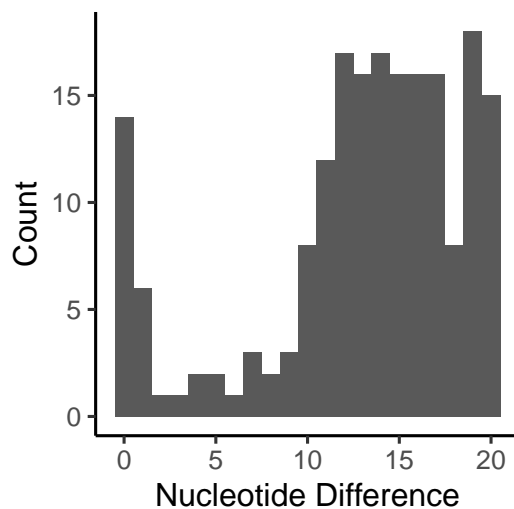
IGHV3-69-1*01

3 sequences assigned
No exact matches.



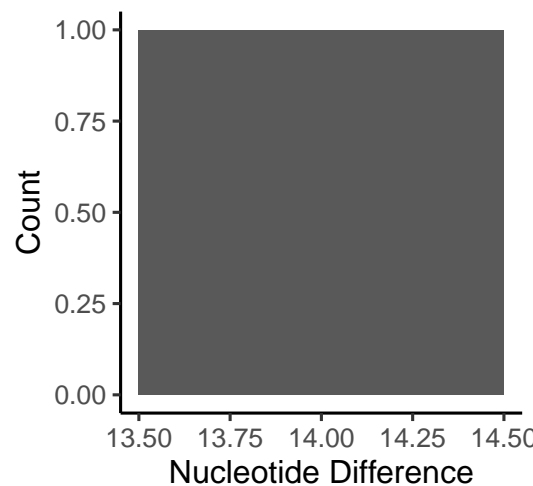
IGHV3-73*01

384 sequences assigned
14 (3.6%) exact matches, in which:
13 unique CDR3
5 unique J



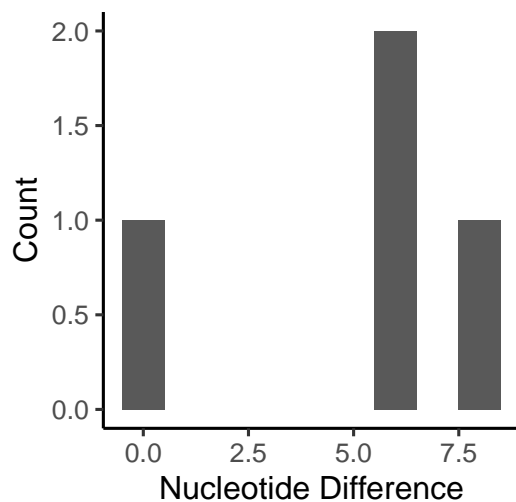
IGHV3-64D*06

1 sequences assigned
No exact matches.



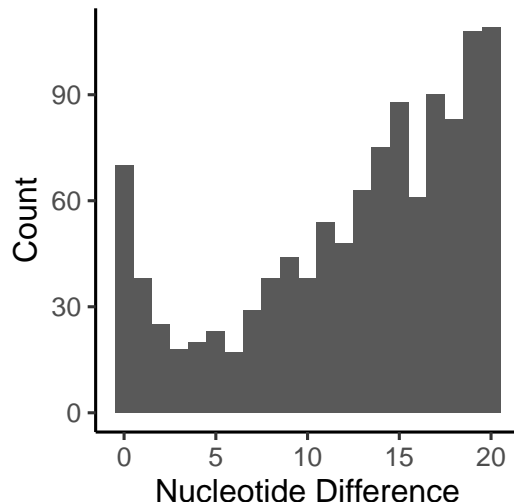
IGHV3-69-1*02

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



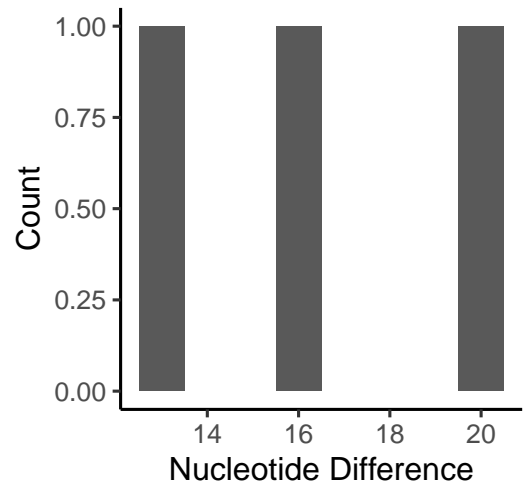
IGHV3-74*01

2022 sequences assigned
70 (3.5%) exact matches, in which:
64 unique CDR3
5 unique J



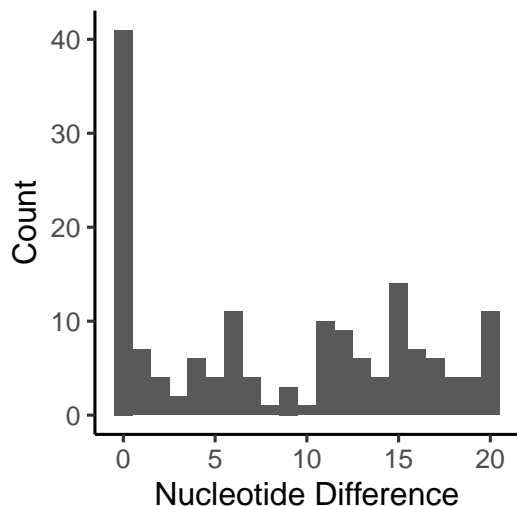
IGHV3-NL1*01

3 sequences assigned
No exact matches.



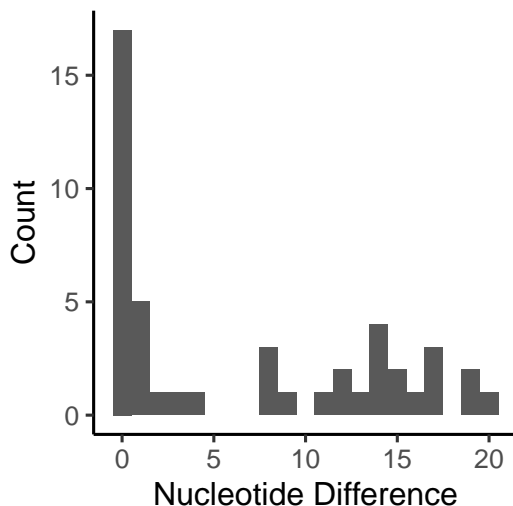
IGHV4-4*02

233 sequences assigned
41 (17.6%) exact matches, in which:
40 unique CDR3
5 unique J



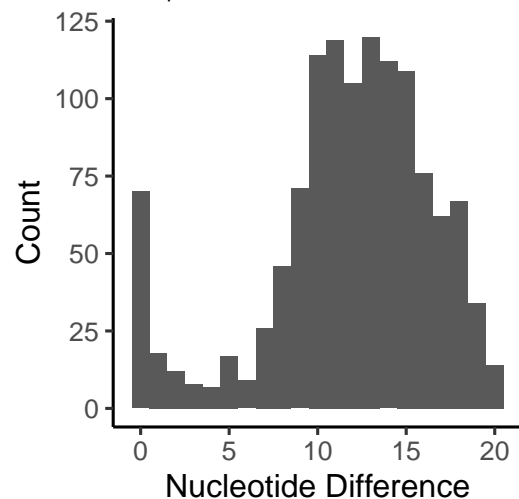
IGHV4-30-2*01

72 sequences assigned
17 (23.6%) exact matches, in which:
17 unique CDR3
4 unique J



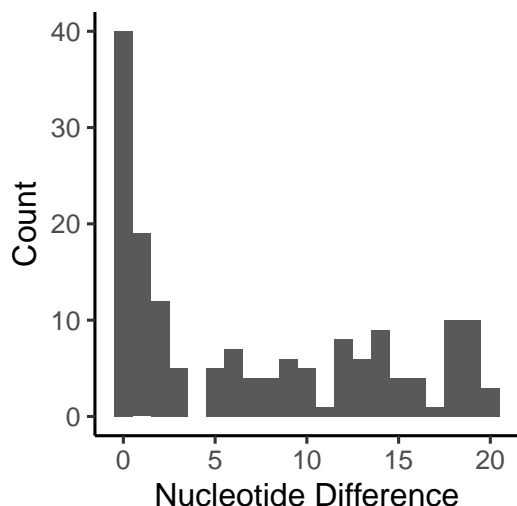
IGHV4-31*03

1735 sequences assigned
70 (4%) exact matches, in which:
66 unique CDR3
5 unique J



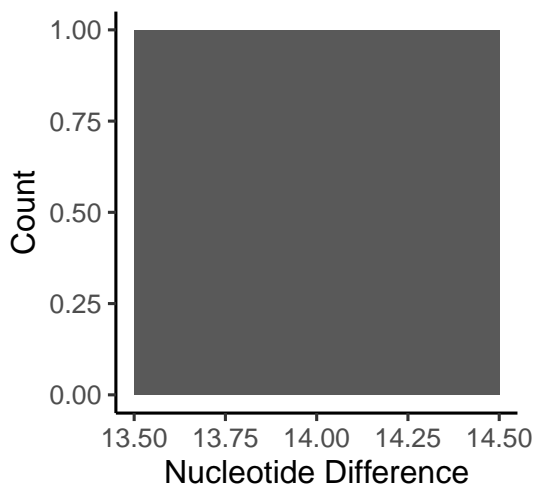
IGHV4-4*07_A70G

371 sequences assigned
40 (10.8%) exact matches, in which:
35 unique CDR3
5 unique J



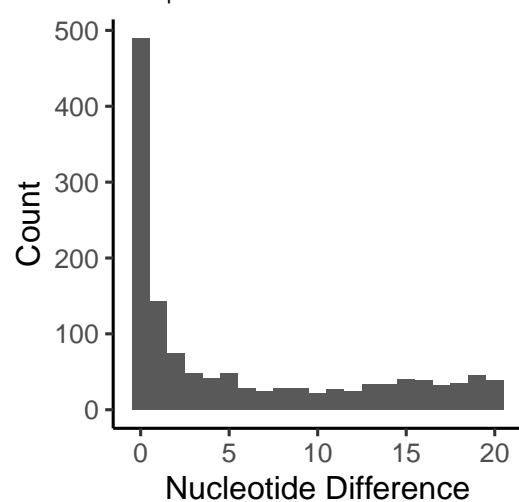
IGHV4-30-4*03

1 sequences assigned
No exact matches.



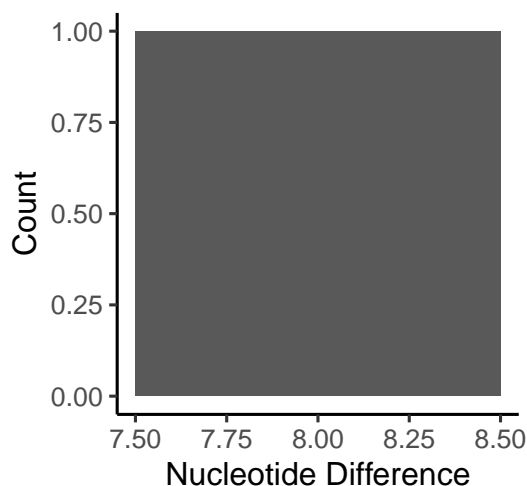
IGHV4-34*01

1808 sequences assigned
490 (27.1%) exact matches, in which:
464 unique CDR3
6 unique J



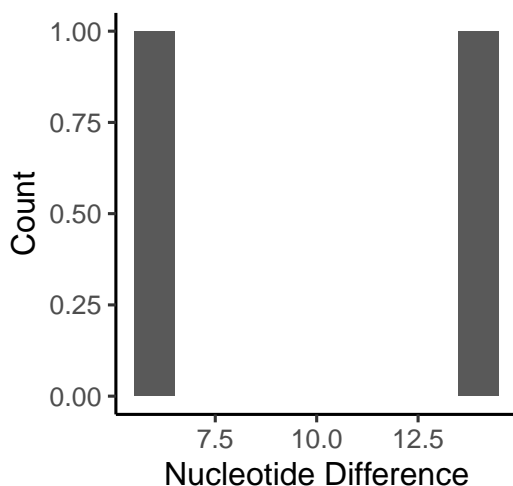
IGHV4-28*03

9 sequences assigned
No exact matches.



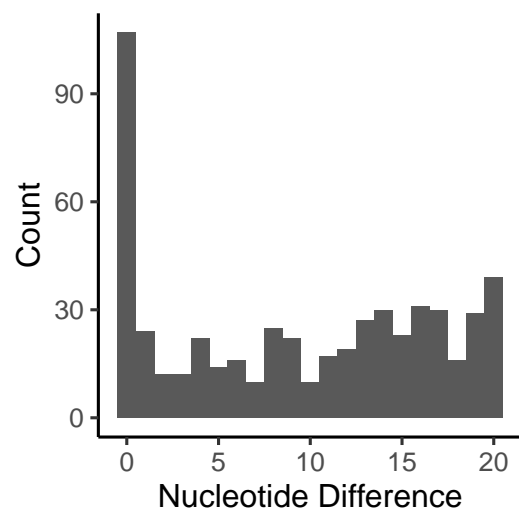
IGHV4-30-4*07

3 sequences assigned
No exact matches.



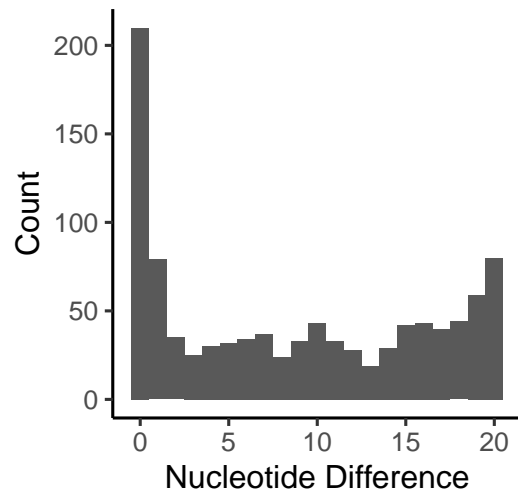
IGHV4-38-2*02

829 sequences assigned
107 (12.9%) exact matches, in which:
103 unique CDR3
6 unique J



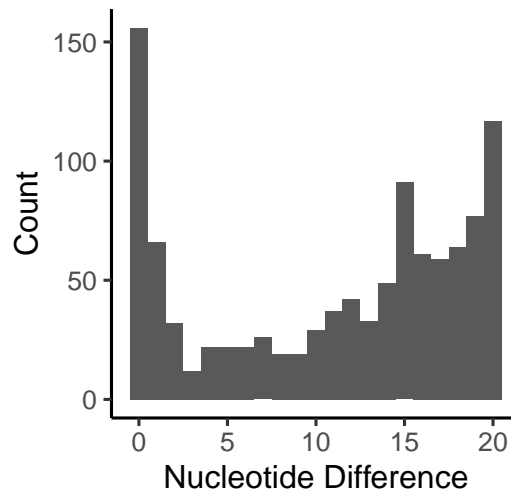
IGHV4–39*01

2591 sequences assigned
210 (8.1%) exact matches, in which:
206 unique CDR3
6 unique J



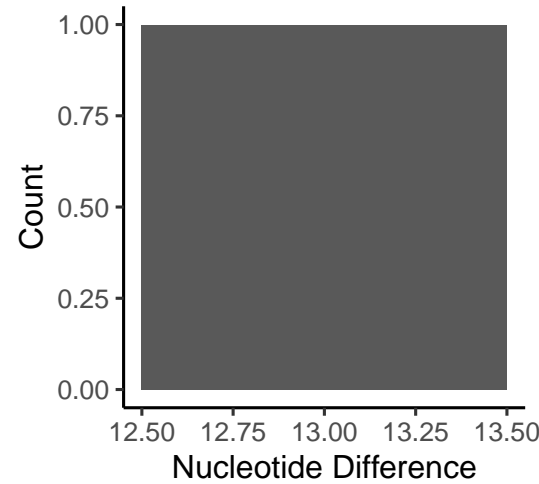
IGHV4–59*01

2270 sequences assigned
156 (6.9%) exact matches, in which:
151 unique CDR3
6 unique J



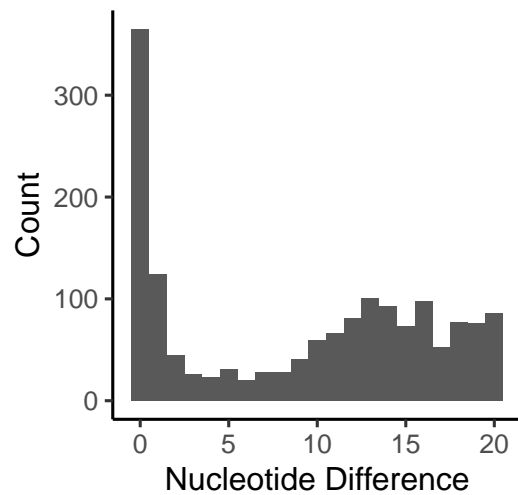
IGHV1/OR15–1*04

3 sequences assigned
No exact matches.



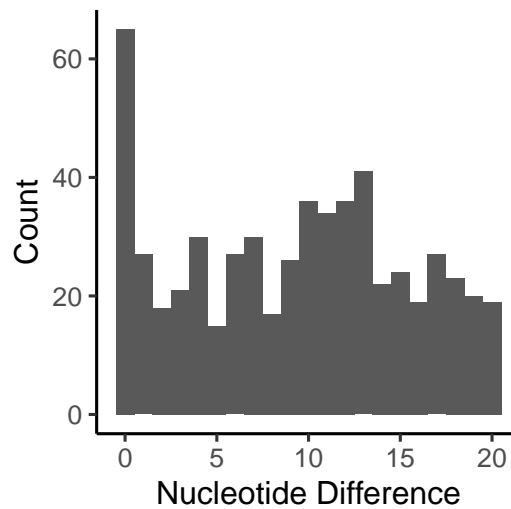
IGHV4–39*07

2432 sequences assigned
365 (15%) exact matches, in which:
340 unique CDR3
6 unique J



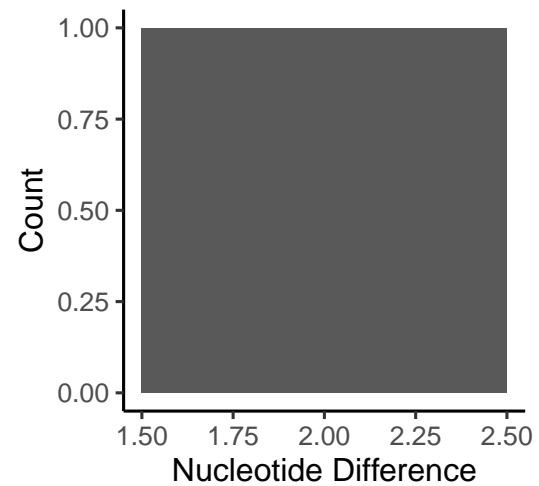
IGHV4–59*08

793 sequences assigned
65 (8.2%) exact matches, in which:
61 unique CDR3
5 unique J



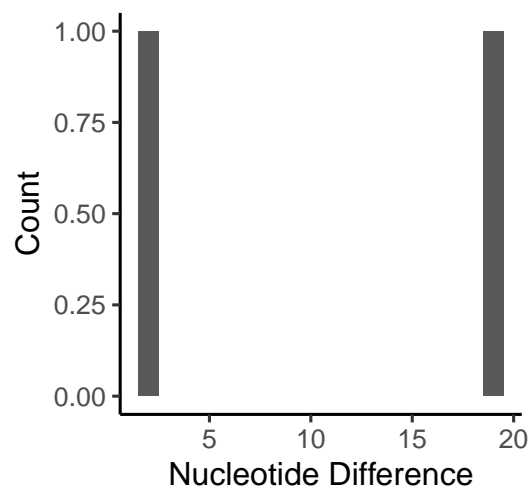
IGHV1/OR15–2*01

1 sequences assigned
No exact matches.



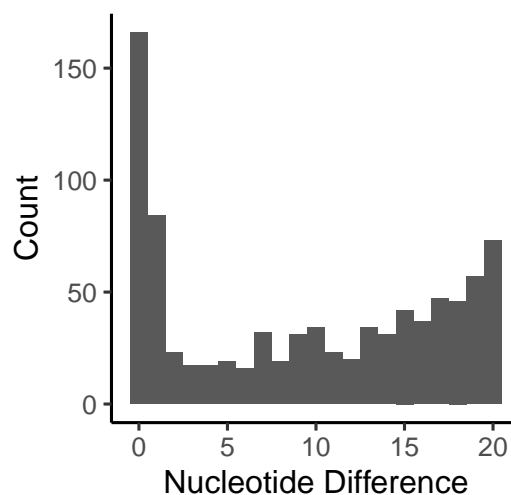
IGHV4–55*09

2 sequences assigned
No exact matches.



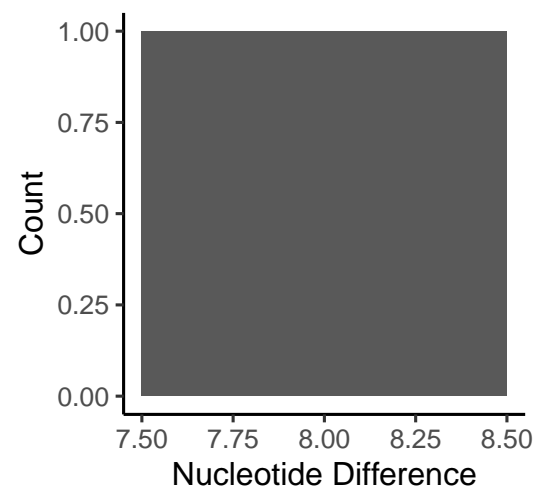
IGHV4–61*02

1478 sequences assigned
166 (11.2%) exact matches, in which:
146 unique CDR3
6 unique J



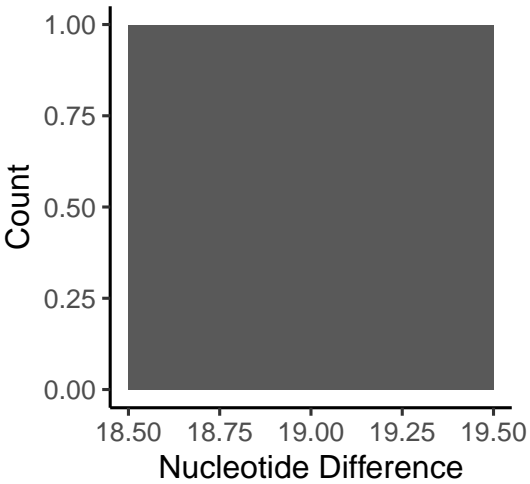
IGHV4/OR15–8*02

3 sequences assigned
No exact matches.



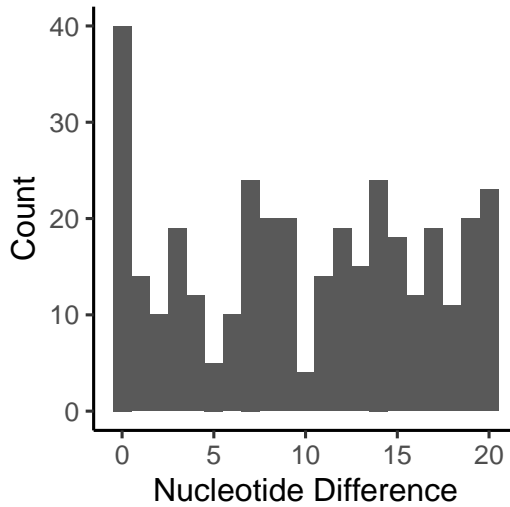
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



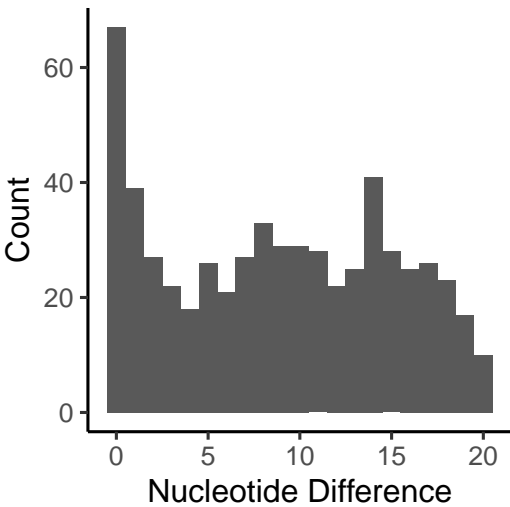
IGHV6-1*01

653 sequences assigned
40 (6.1%) exact matches, in which:
39 unique CDR3
5 unique J



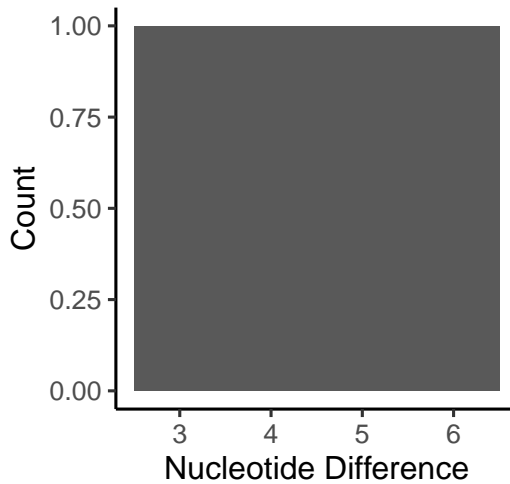
IGHV5-51*01

830 sequences assigned
67 (8.1%) exact matches, in which:
67 unique CDR3
5 unique J



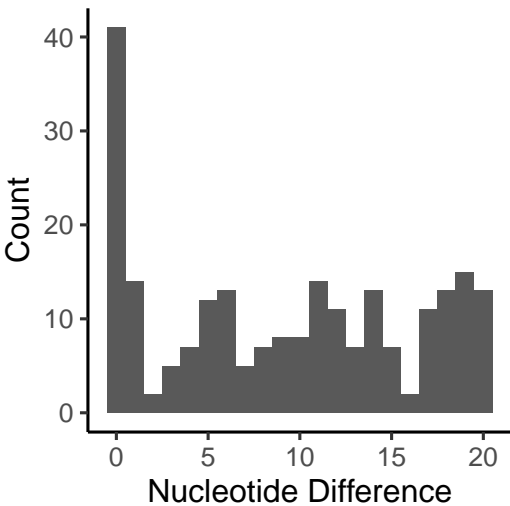
IGHV3/OR16-9*01

4 sequences assigned
No exact matches.



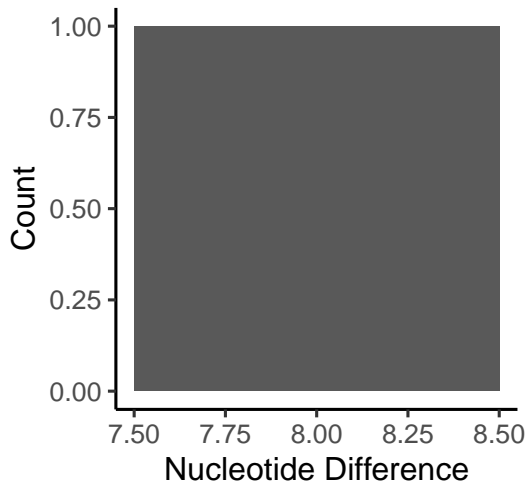
IGHV5-51*03

391 sequences assigned
41 (10.5%) exact matches, in which:
40 unique CDR3
5 unique J



IGHV3/OR16-12*01

1 sequences assigned
No exact matches.



IGHV4-4*07_A70G

