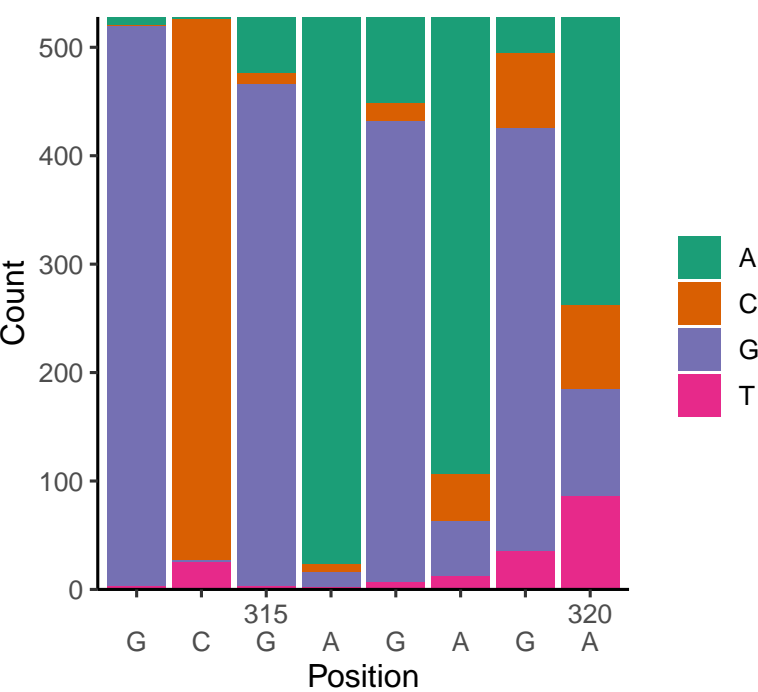
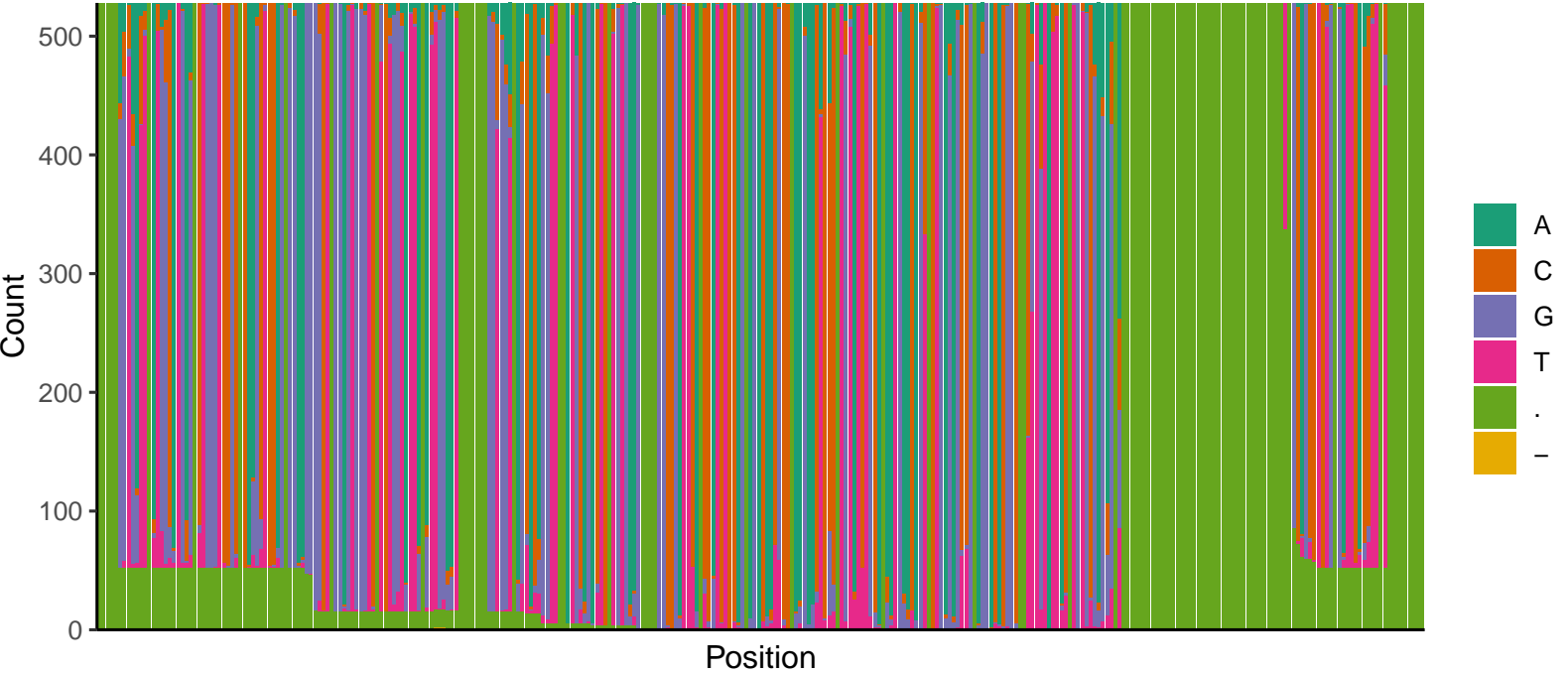


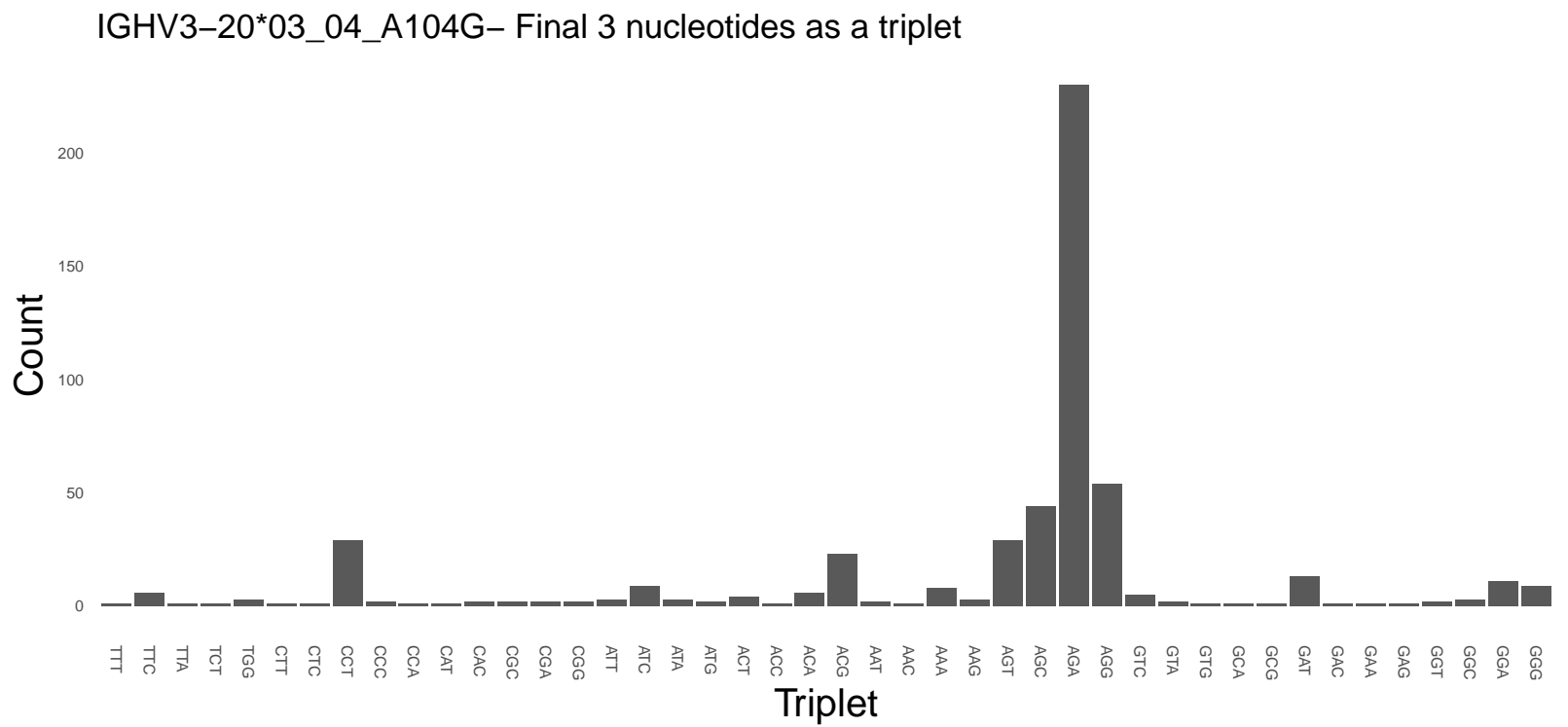
Gene IGHV3-20*03_04_A104G



Gene IGHV3-20*03_04_A104G

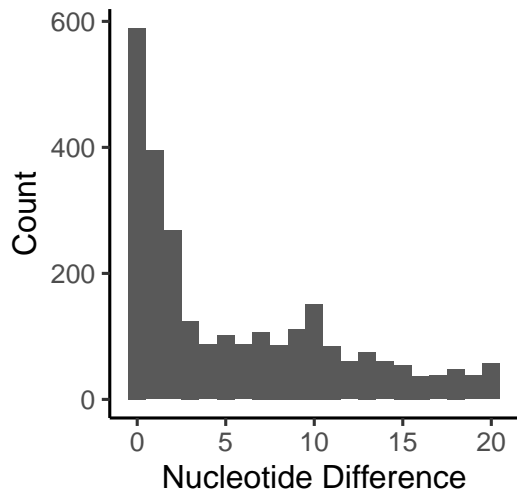


IGHV3–20*03_04_A104G– Final 3 nucleotides as a triplet



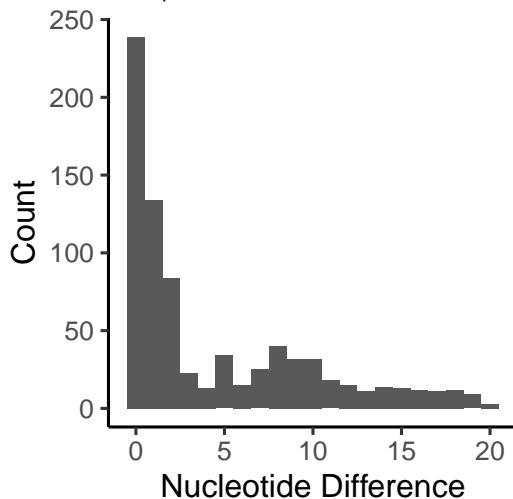
IGHV1-2*02

3119 sequences assigned
590 (18.9%) exact matches, in which:
572 unique CDR3
6 unique J



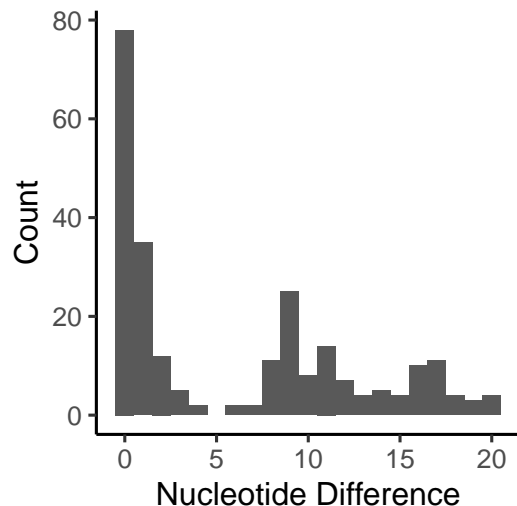
IGHV1-8*01

961 sequences assigned
239 (24.9%) exact matches, in which:
234 unique CDR3
5 unique J



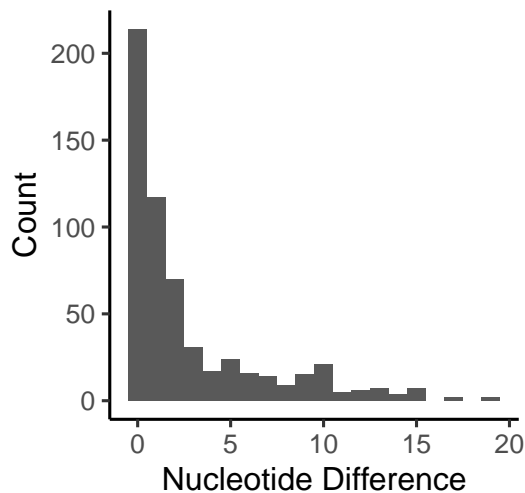
IGHV1-24*01

273 sequences assigned
78 (28.6%) exact matches, in which:
77 unique CDR3
5 unique J



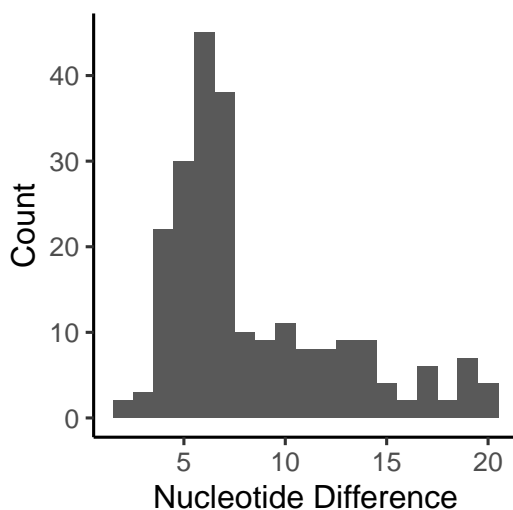
IGHV1-2*04

584 sequences assigned
214 (36.6%) exact matches, in which:
209 unique CDR3
6 unique J



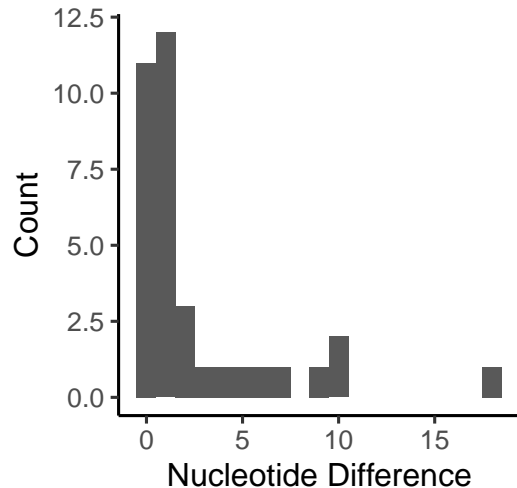
IGHV1-8*02

259 sequences assigned
No exact matches.



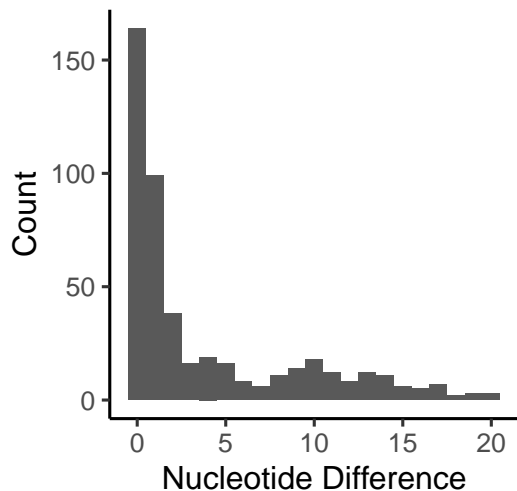
IGHV1-45*02

35 sequences assigned
11 (31.4%) exact matches, in which:
10 unique CDR3
2 unique J



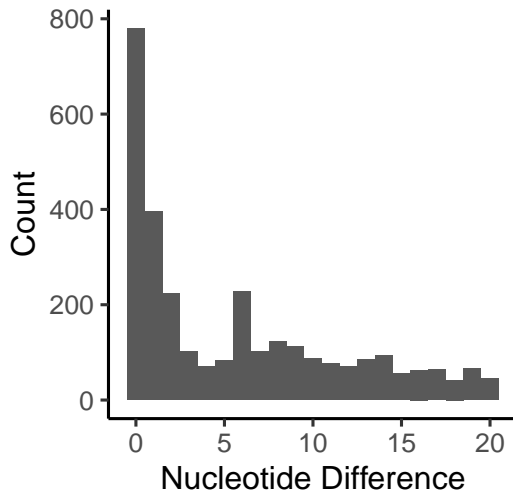
IGHV1-3*01_05

532 sequences assigned
164 (30.8%) exact matches, in which:
155 unique CDR3
5 unique J



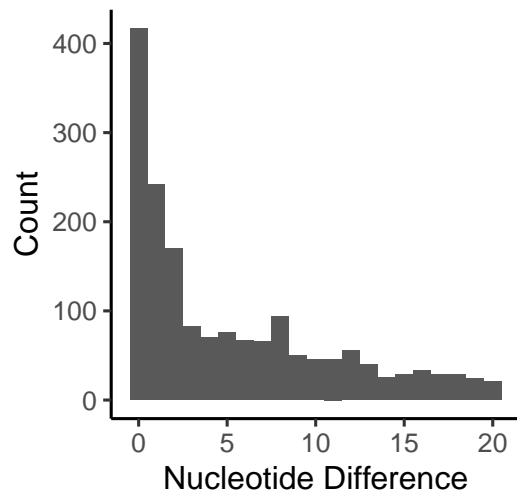
IGHV1-18*01

3524 sequences assigned
780 (22.1%) exact matches, in which:
765 unique CDR3
6 unique J



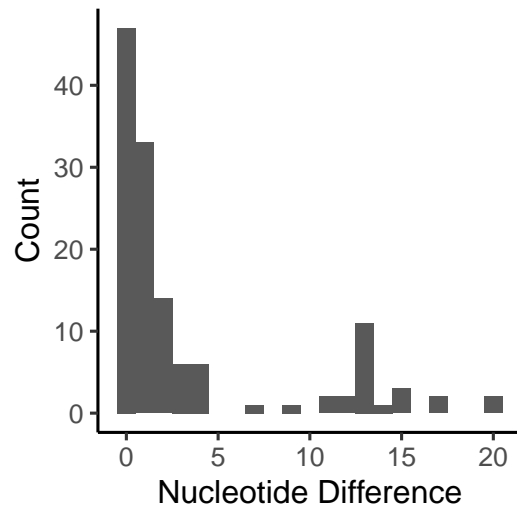
IGHV1-46*01

1865 sequences assigned
417 (22.4%) exact matches, in which:
408 unique CDR3
6 unique J



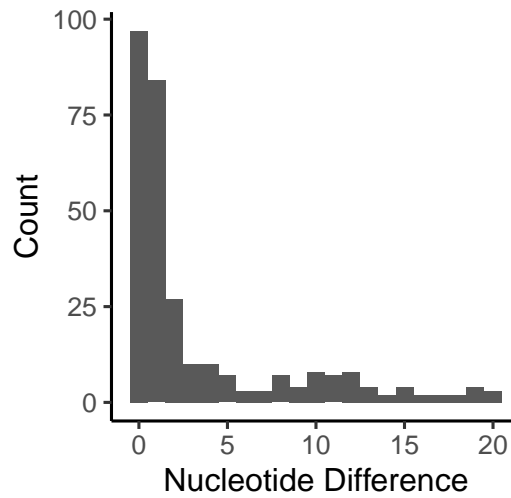
IGHV1-58*01_03

142 sequences assigned
47 (33.1%) exact matches, in which:
45 unique CDR3
5 unique J



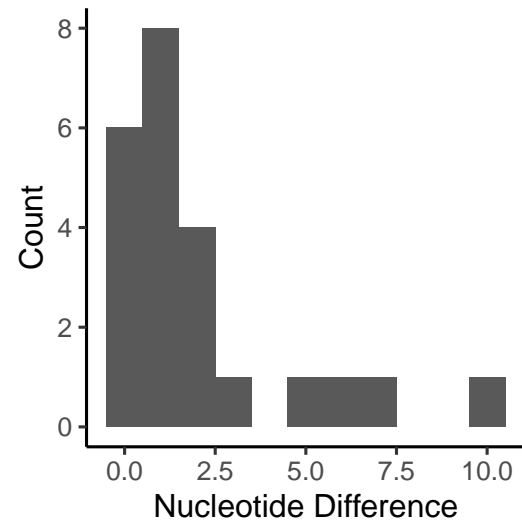
IGHV2-5*02

337 sequences assigned
97 (28.8%) exact matches, in which:
88 unique CDR3
4 unique J



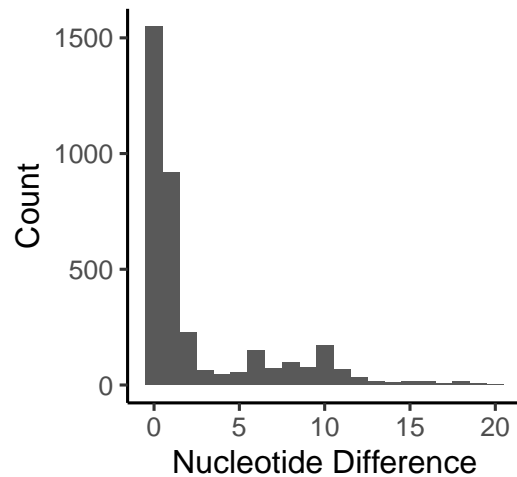
IGHV2-70*12

26 sequences assigned
6 (23.1%) exact matches, in which:
6 unique CDR3
4 unique J



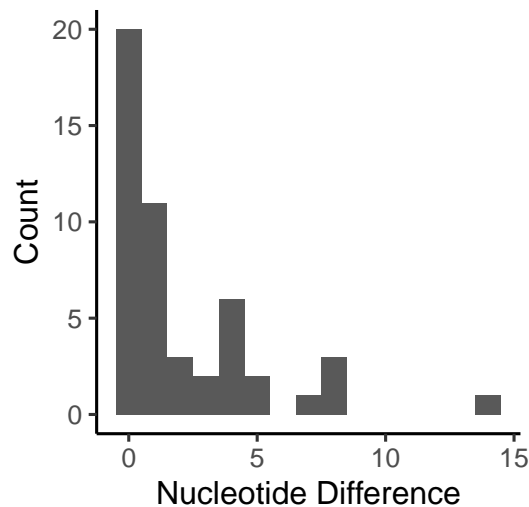
IGHV1-69*01_12_13

3737 sequences assigned
1548 (41.4%) exact matches, in which:
1495 unique CDR3
6 unique J



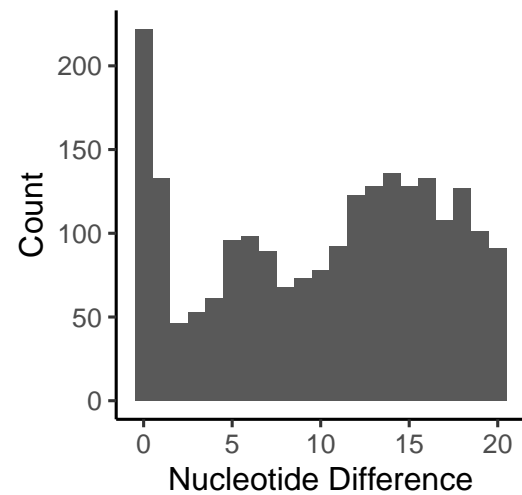
IGHV2-26*01

52 sequences assigned
20 (38.5%) exact matches, in which:
19 unique CDR3
4 unique J



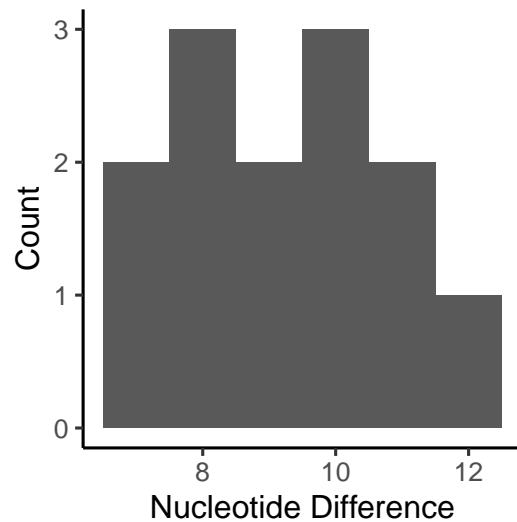
IGHV3-7*01

2767 sequences assigned
222 (8%) exact matches, in which:
185 unique CDR3
6 unique J



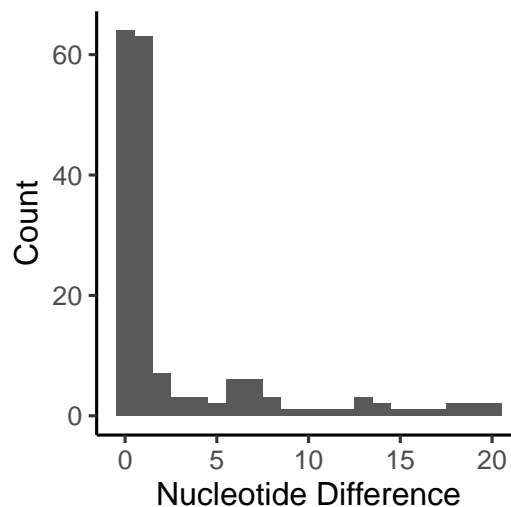
IGHV1-NL1*01

13 sequences assigned
No exact matches.



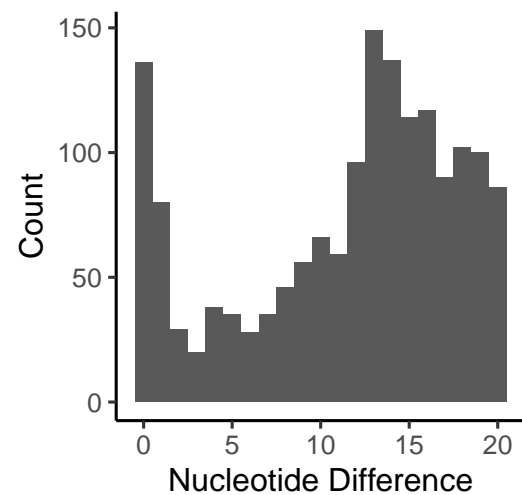
IGHV2-70*01

211 sequences assigned
64 (30.3%) exact matches, in which:
57 unique CDR3
4 unique J



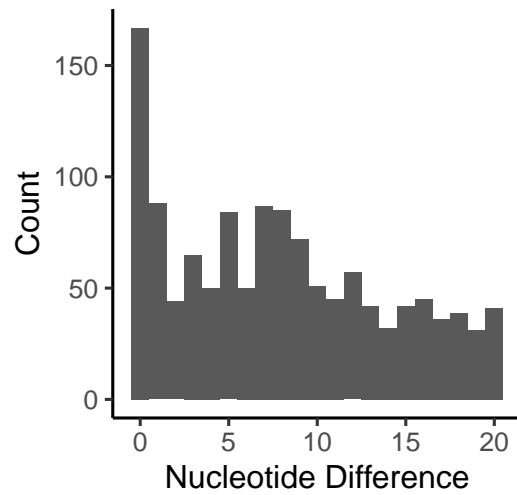
IGHV3-7*03

2128 sequences assigned
136 (6.4%) exact matches, in which:
115 unique CDR3
5 unique J



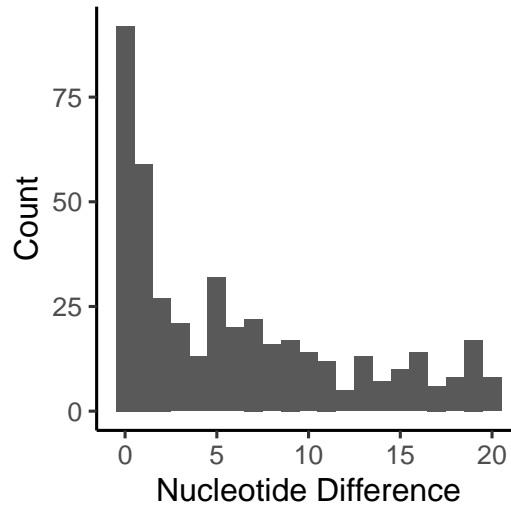
IGHV3-9*01

1542 sequences assigned
167 (10.8%) exact matches, in which:
134 unique CDR3
4 unique J



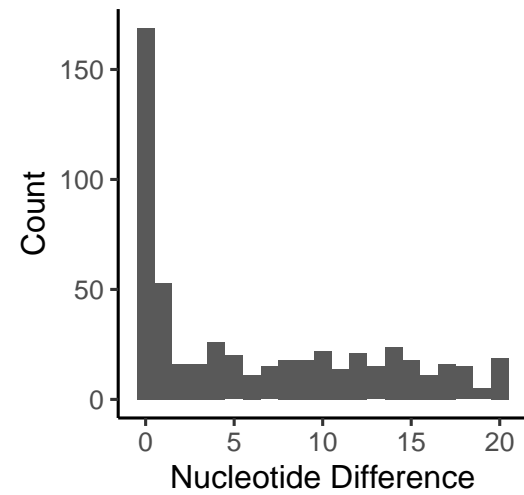
IGHV3-11*06

583 sequences assigned
92 (15.8%) exact matches, in which:
77 unique CDR3
4 unique J



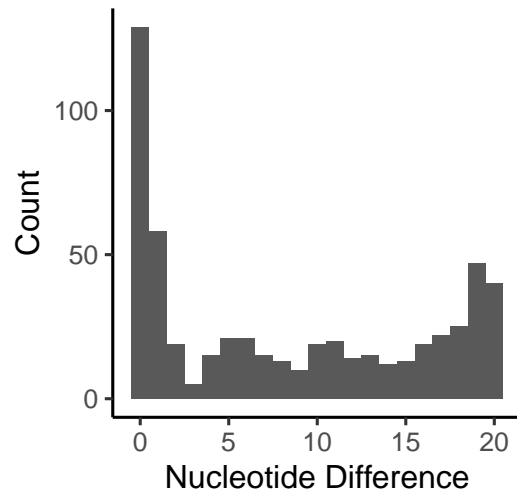
IGHV3-15*01_02

677 sequences assigned
169 (25%) exact matches, in which:
122 unique CDR3
5 unique J



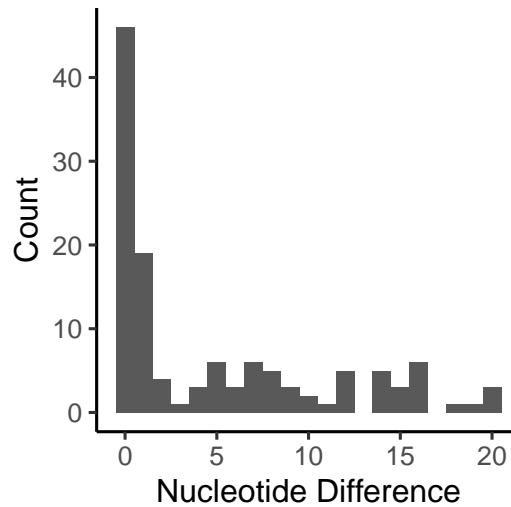
IGHV3-11*01

811 sequences assigned
129 (15.9%) exact matches, in which:
100 unique CDR3
6 unique J



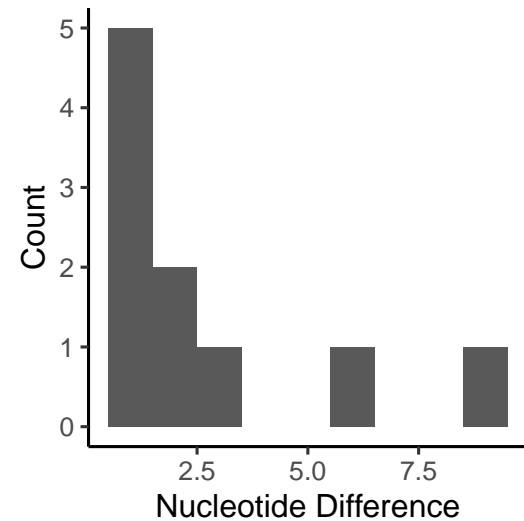
IGHV3-13*01

164 sequences assigned
46 (28%) exact matches, in which:
36 unique CDR3
5 unique J



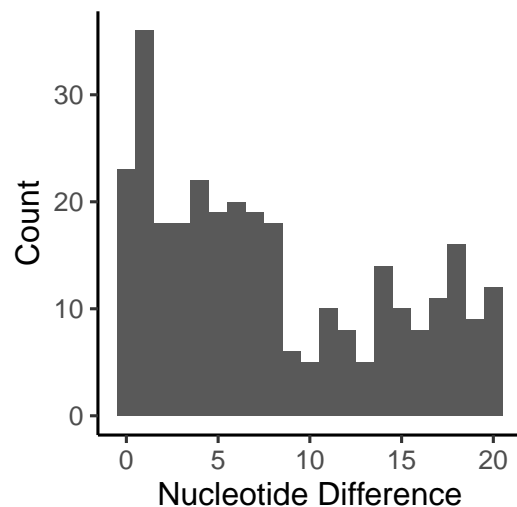
IGHV3-19*01

10 sequences assigned
No exact matches.



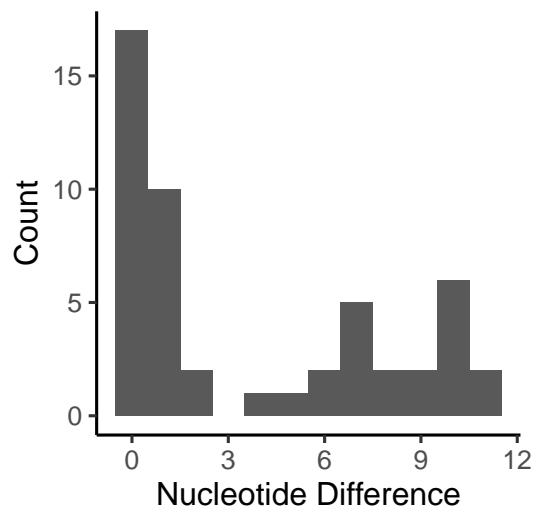
IGHV3-11*04

369 sequences assigned
23 (6.2%) exact matches, in which:
23 unique CDR3
4 unique J



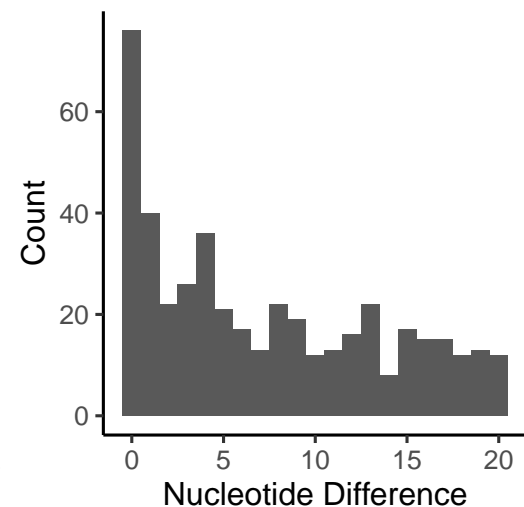
IGHV3-13*05

50 sequences assigned
17 (34%) exact matches, in which:
14 unique CDR3
4 unique J



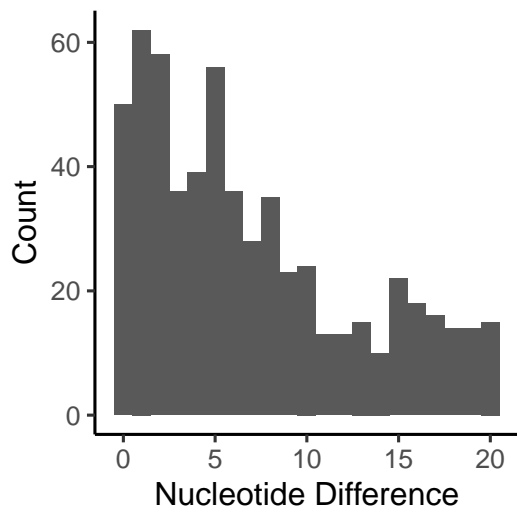
IGHV3-20*03_04_A104G

528 sequences assigned
76 (14.4%) exact matches, in which:
56 unique CDR3
4 unique J



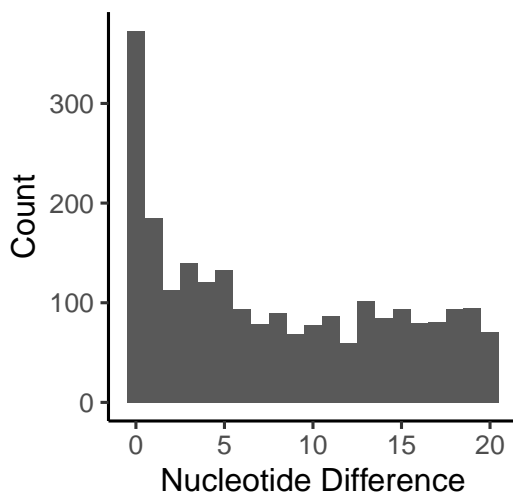
IGHV3-21*04

740 sequences assigned
50 (6.8%) exact matches, in which:
49 unique CDR3
6 unique J



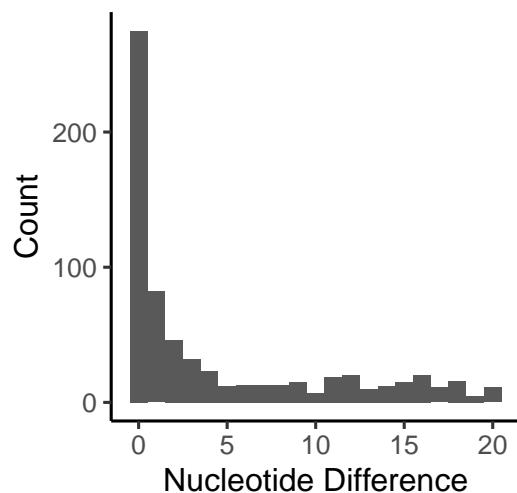
IGHV3-23*03

2922 sequences assigned
373 (12.8%) exact matches, in which:
287 unique CDR3
5 unique J



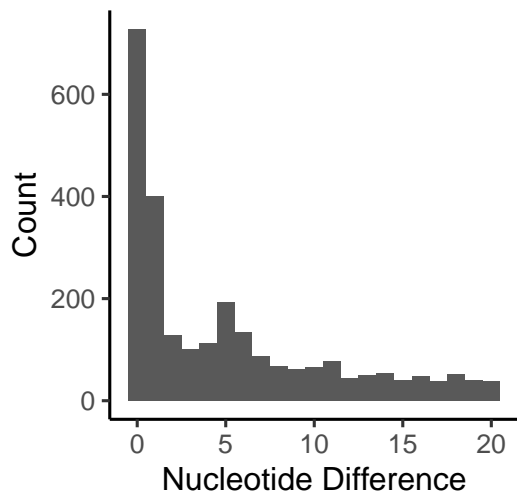
IGHV3-30*03

755 sequences assigned
275 (36.4%) exact matches, in which:
264 unique CDR3
6 unique J



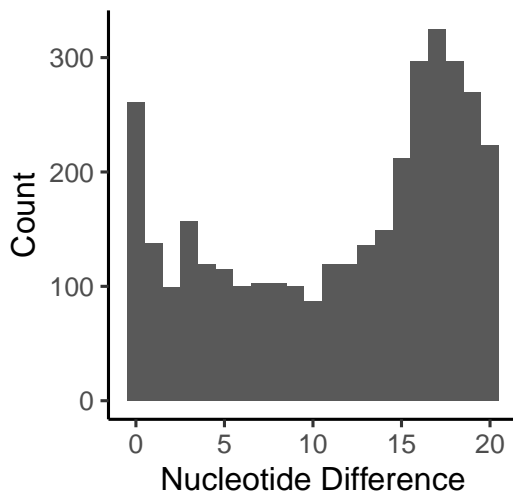
IGHV3-21*01_02

2860 sequences assigned
728 (25.5%) exact matches, in which:
586 unique CDR3
6 unique J



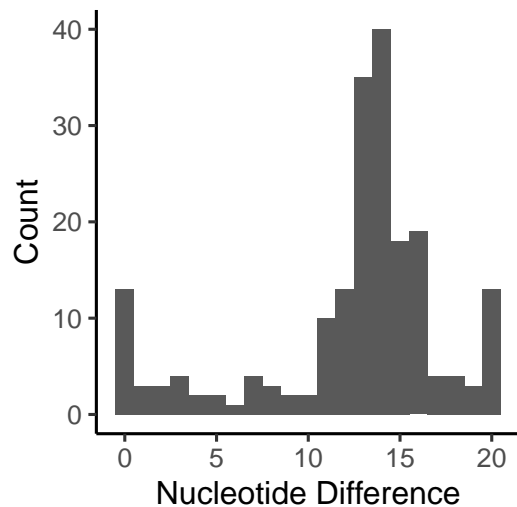
IGHV3-23*01_04

5078 sequences assigned
261 (5.1%) exact matches, in which:
206 unique CDR3
6 unique J



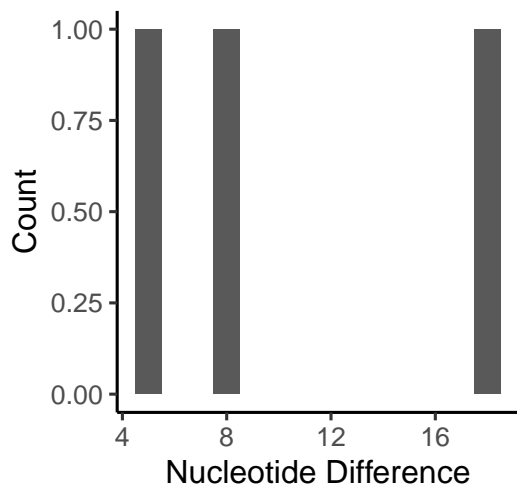
IGHV3-30*04

239 sequences assigned
13 (5.4%) exact matches, in which:
13 unique CDR3
3 unique J



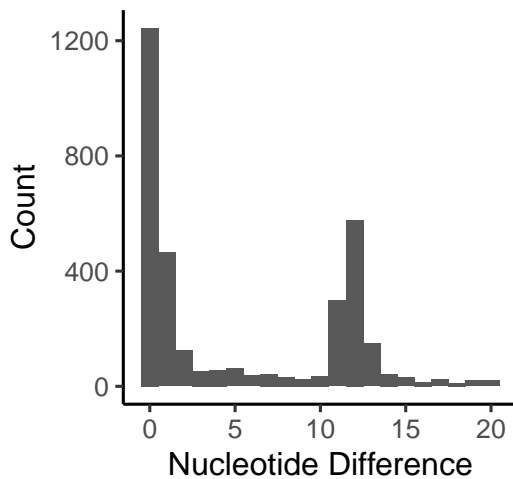
IGHV3-22*01_02

3 sequences assigned
No exact matches.



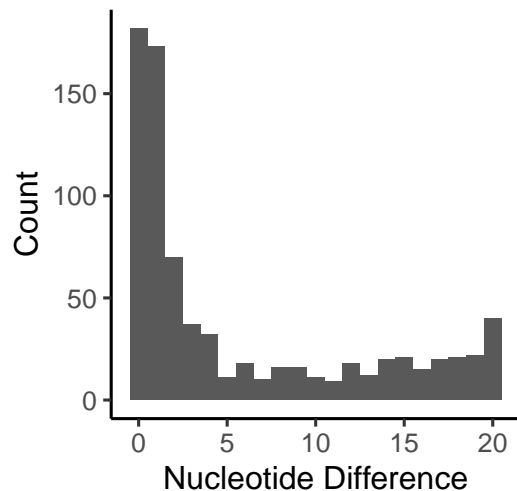
IGHV3-30-3*01

3588 sequences assigned
1244 (34.7%) exact matches, in which:
1058 unique CDR3
6 unique J



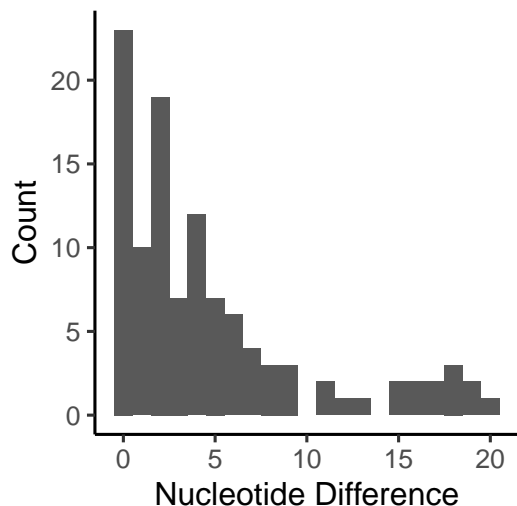
IGHV3-33*01

1016 sequences assigned
182 (17.9%) exact matches, in which:
146 unique CDR3
6 unique J



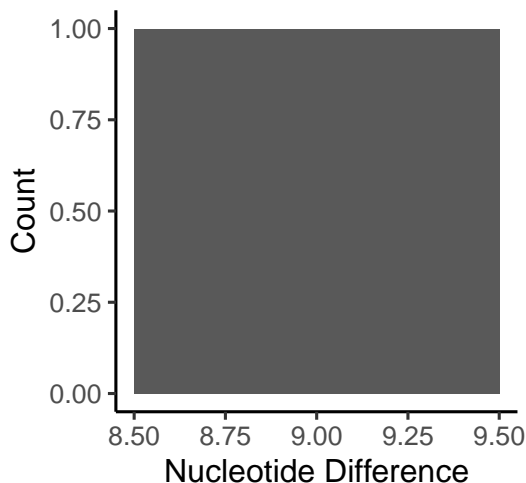
IGHV3-33*05

139 sequences assigned
23 (16.5%) exact matches, in which:
22 unique CDR3
4 unique J



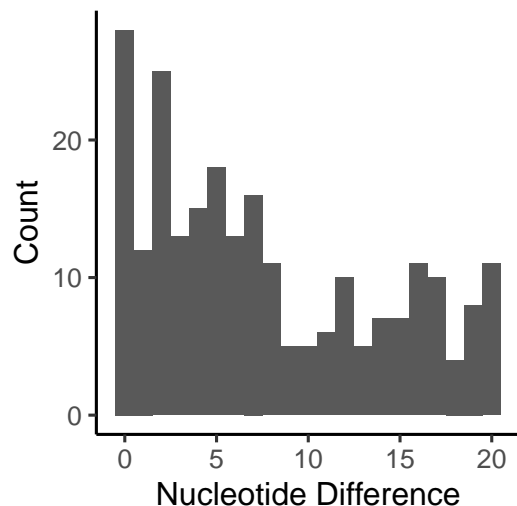
IGHV3-35*01

1 sequences assigned
No exact matches.



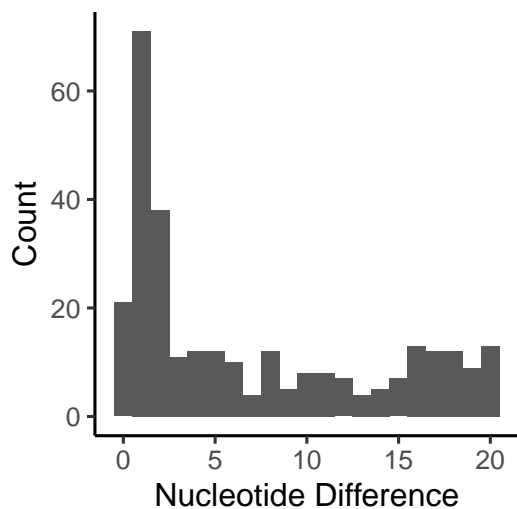
IGHV3-48*01

290 sequences assigned
28 (9.7%) exact matches, in which:
28 unique CDR3
5 unique J



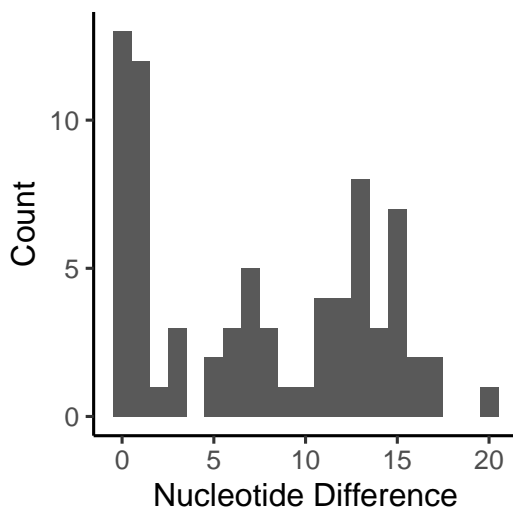
IGHV3-33*06

422 sequences assigned
21 (5%) exact matches, in which:
20 unique CDR3
4 unique J



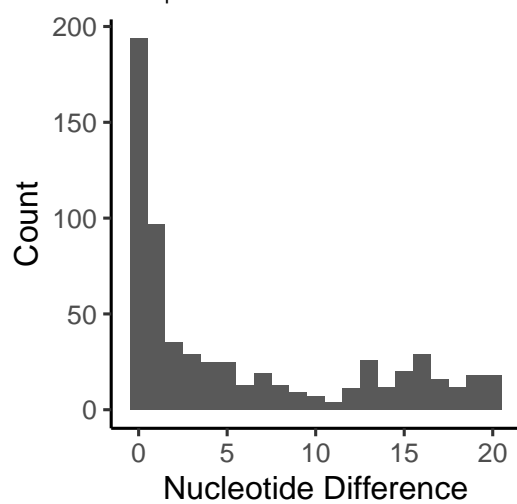
IGHV3-43*01

112 sequences assigned
13 (11.6%) exact matches, in which:
11 unique CDR3
4 unique J



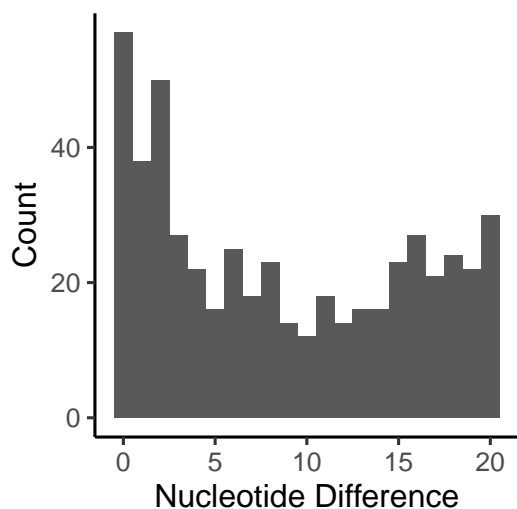
IGHV3-48*02

809 sequences assigned
194 (24%) exact matches, in which:
148 unique CDR3
5 unique J



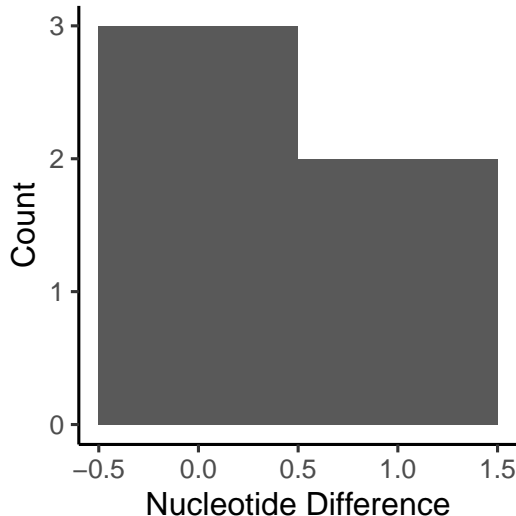
IGHV3-33*08

695 sequences assigned
57 (8.2%) exact matches, in which:
51 unique CDR3
5 unique J



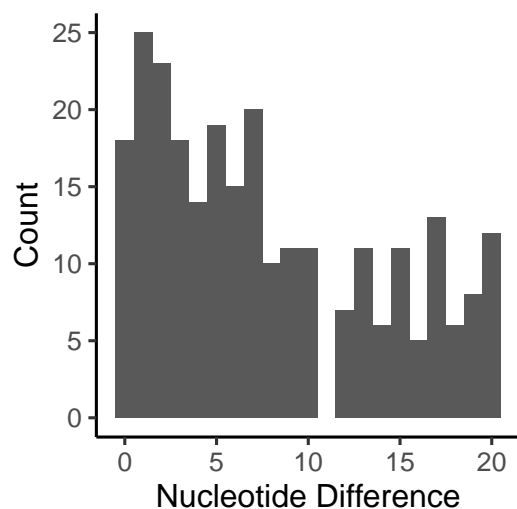
IGHV3-47*02

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



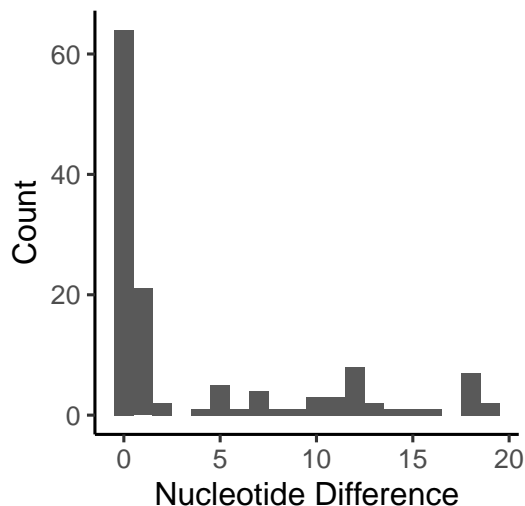
IGHV3-48*04

328 sequences assigned
18 (5.5%) exact matches, in which:
17 unique CDR3
4 unique J



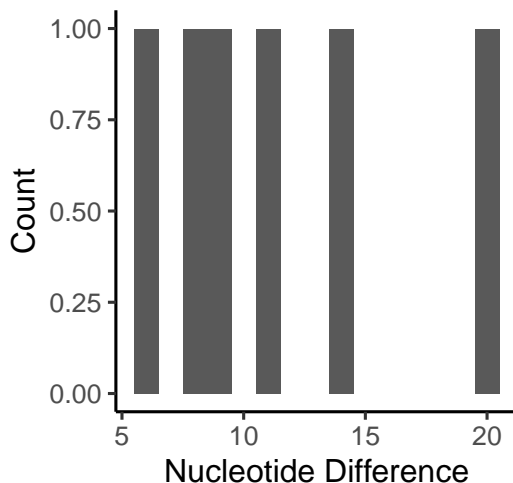
IGHV3-49*03_05

159 sequences assigned
64 (40.3%) exact matches, in which:
43 unique CDR3
6 unique J



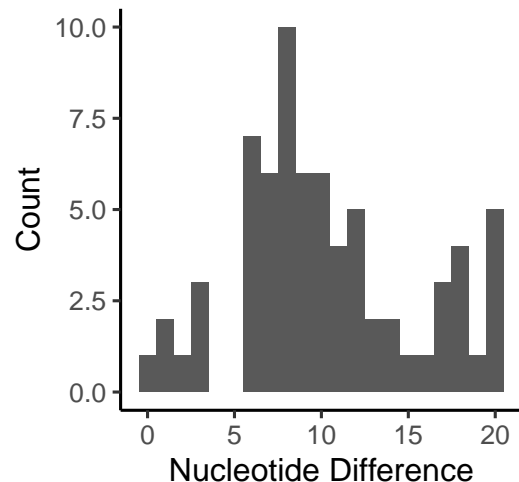
IGHV3-64*04

7 sequences assigned
No exact matches.



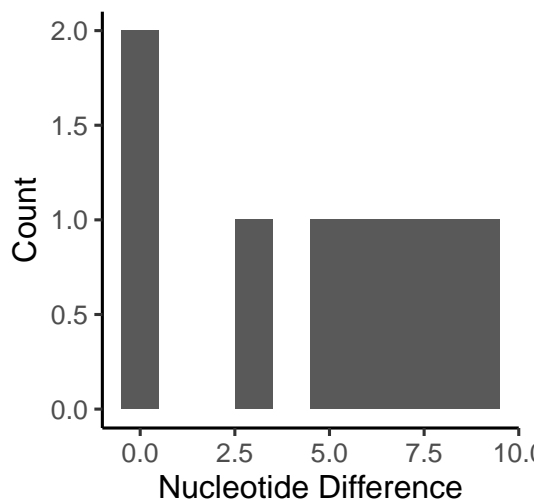
IGHV3-66*02

95 sequences assigned
1 (1.1%) exact matches, in which:
1 unique CDR3
1 unique J



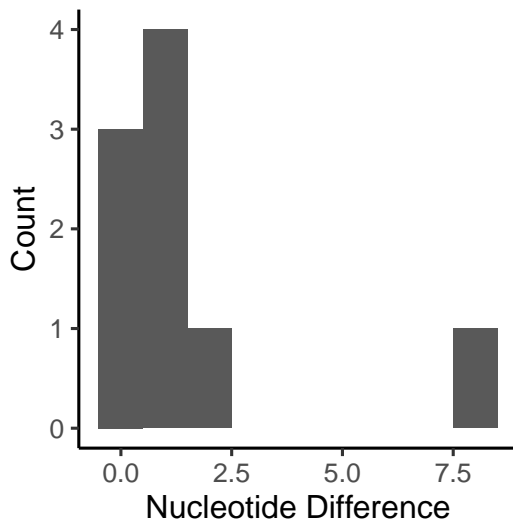
IGHV3-52*01_03

8 sequences assigned
2 (25%) exact matches, in which:
1 unique CDR3
1 unique J



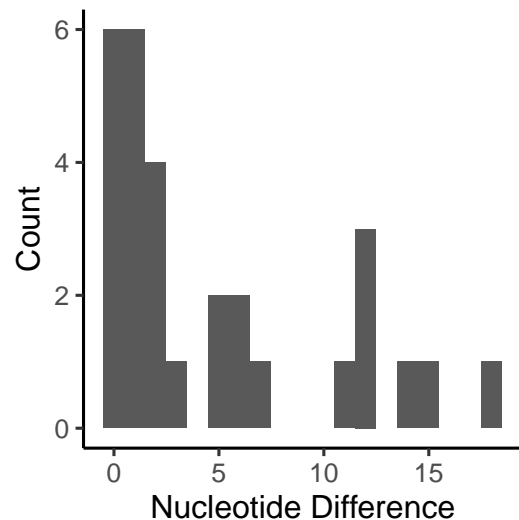
IGHV3-64*02_07

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



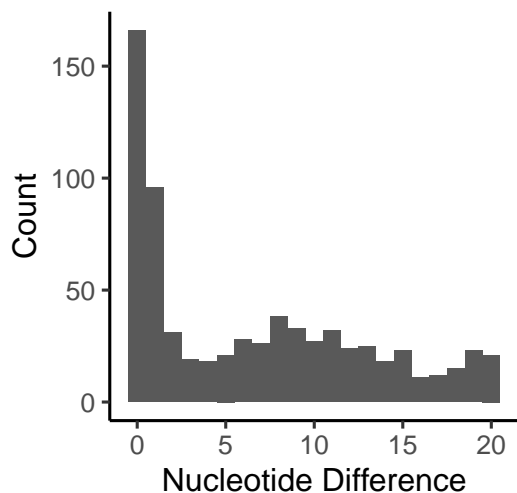
IGHV3-66*03

34 sequences assigned
6 (17.6%) exact matches, in which:
6 unique CDR3
2 unique J



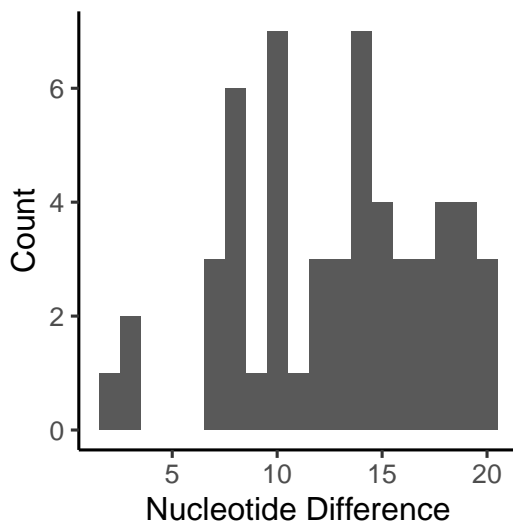
IGHV3-53*01_02

827 sequences assigned
166 (20.1%) exact matches, in which:
132 unique CDR3
6 unique J



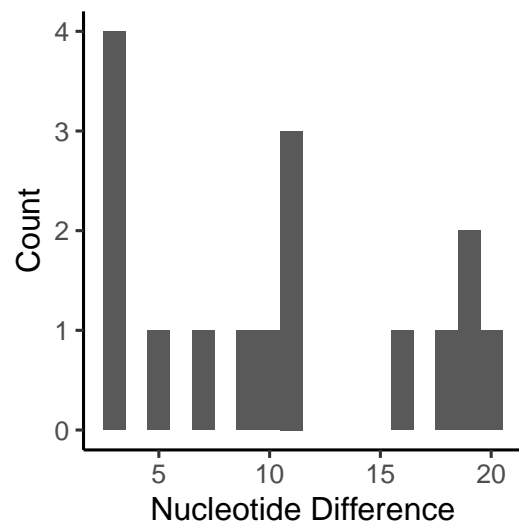
IGHV3-66*01

82 sequences assigned
No exact matches.



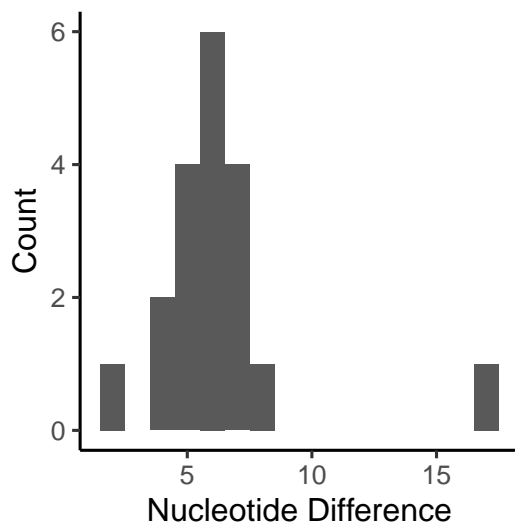
IGHV3-69-1*01

25 sequences assigned
No exact matches.



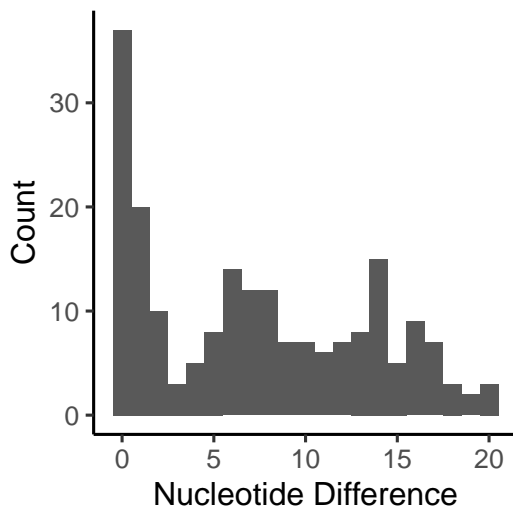
IGHV3-69-1*02

26 sequences assigned
No exact matches.



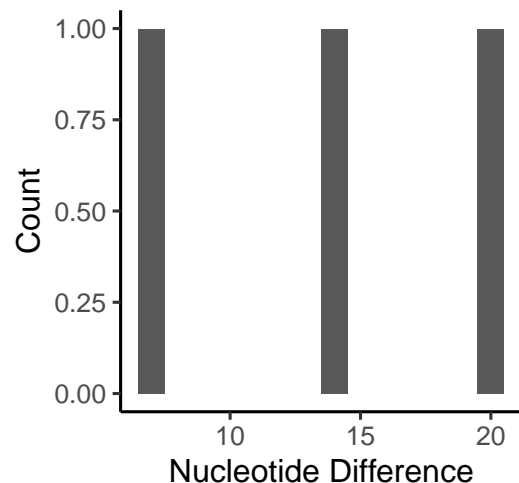
IGHV3-73*01_02

234 sequences assigned
37 (15.8%) exact matches, in which:
23 unique CDR3
4 unique J



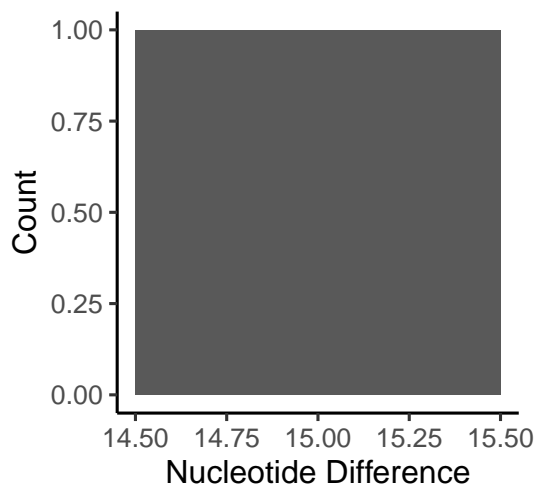
IGHV3-43D*04

5 sequences assigned
No exact matches.



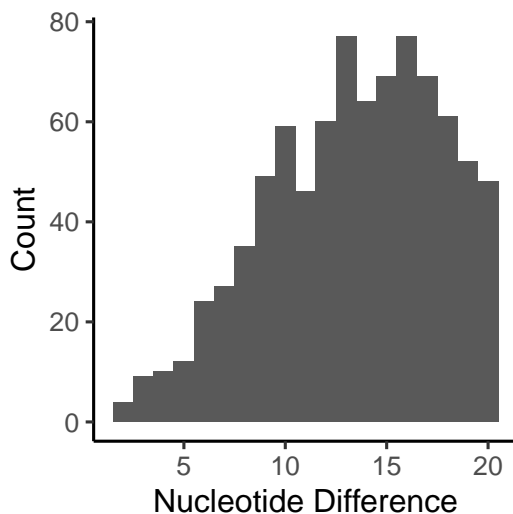
IGHV3-71*01_04

1 sequences assigned
No exact matches.



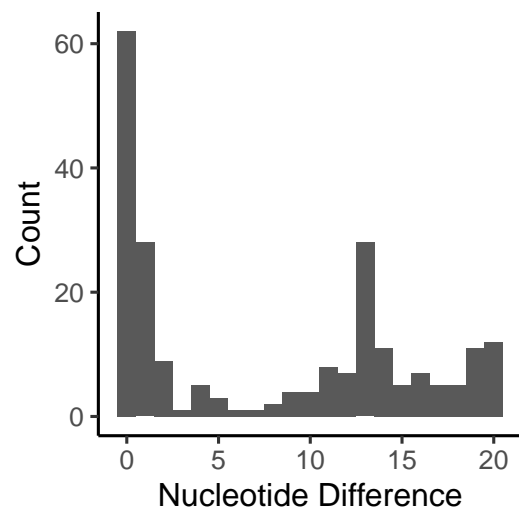
IGHV3-74*03

1182 sequences assigned
No exact matches.



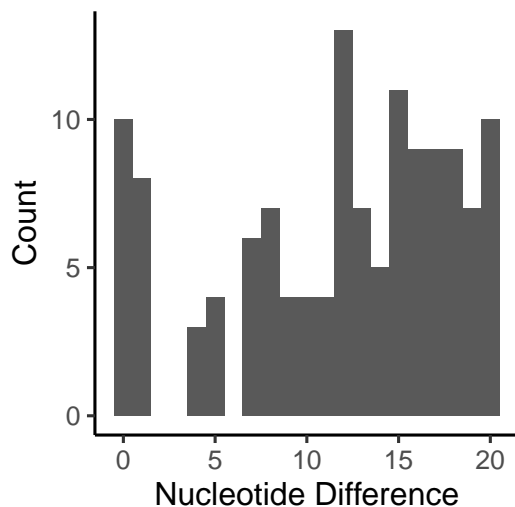
IGHV3-64D*06

326 sequences assigned
62 (19%) exact matches, in which:
48 unique CDR3
5 unique J



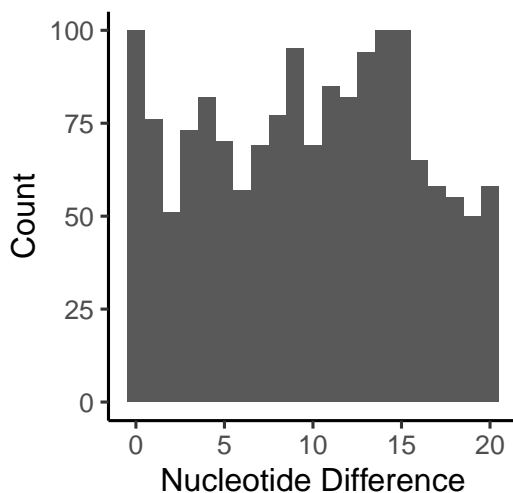
IGHV3-72*01

150 sequences assigned
10 (6.7%) exact matches, in which:
7 unique CDR3
3 unique J



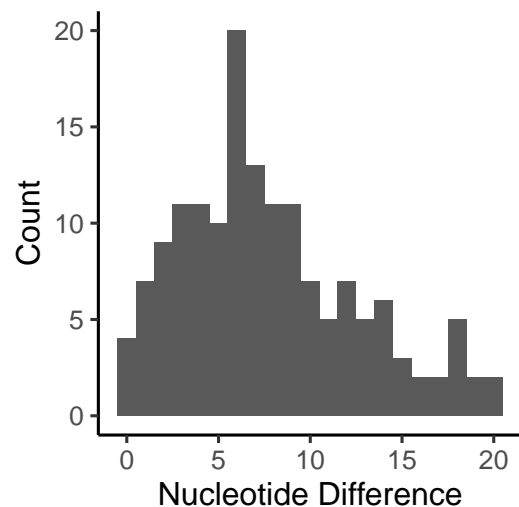
IGHV3-74*01_02

1927 sequences assigned
100 (5.2%) exact matches, in which:
81 unique CDR3
4 unique J



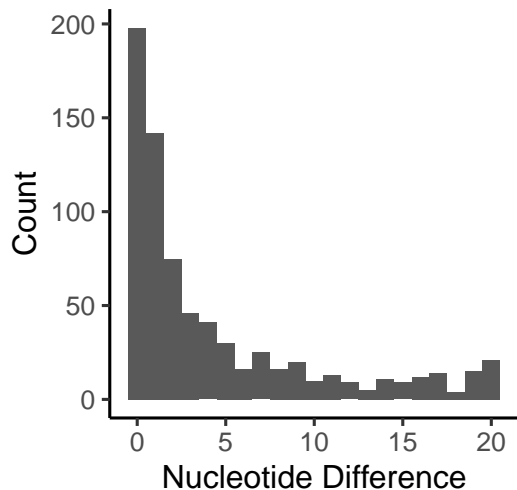
IGHV3-NL1*01

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



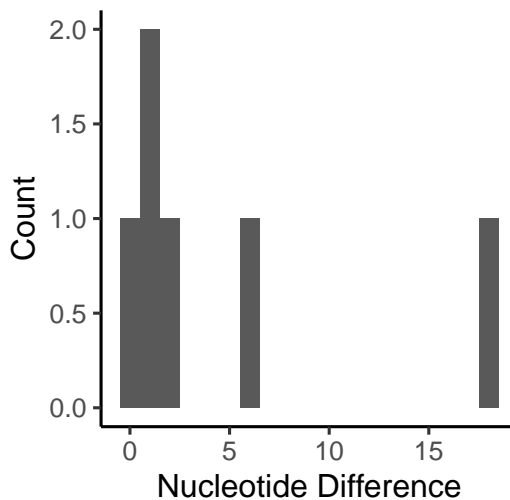
IGHV4-4*07

1268 sequences assigned
198 (15.6%) exact matches, in which:
187 unique CDR3
6 unique J



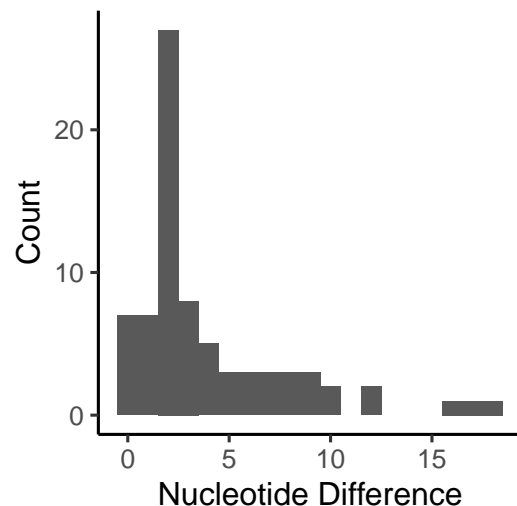
IGHV4-28*01_07

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



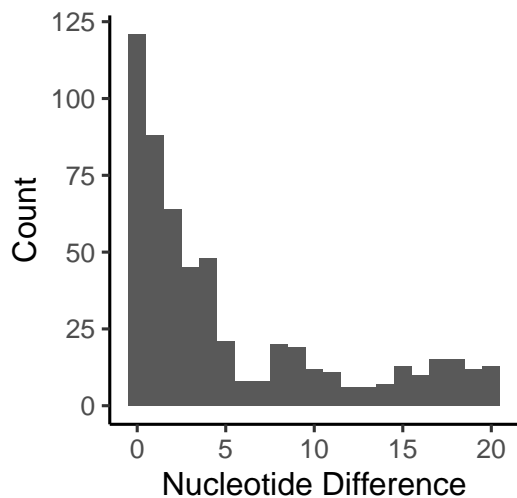
IGHV4-30-2*05

79 sequences assigned
7 (8.9%) exact matches, in which:
7 unique CDR3
3 unique J



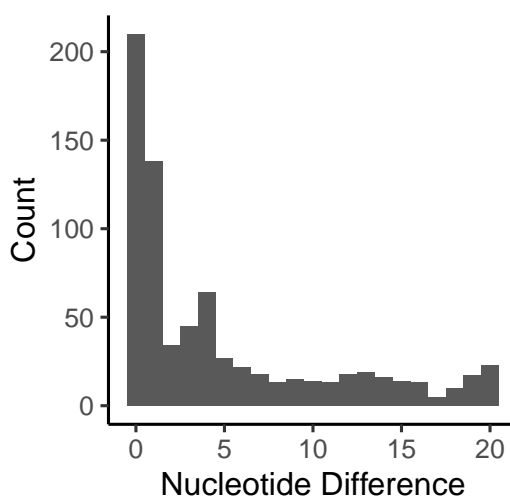
IGHV4-4*02_03

683 sequences assigned
121 (17.7%) exact matches, in which:
113 unique CDR3
6 unique J



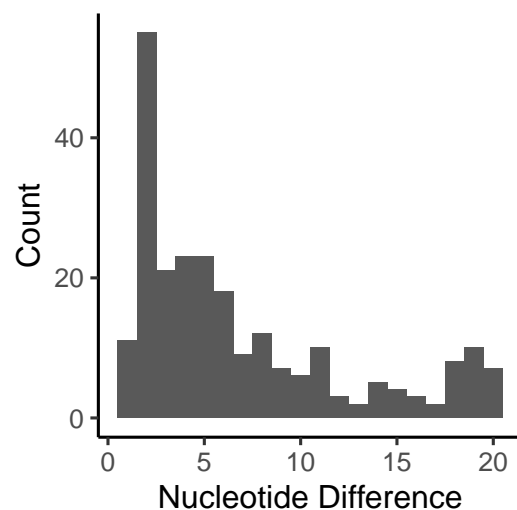
IGHV4-30-4*01

854 sequences assigned
210 (24.6%) exact matches, in which:
197 unique CDR3
6 unique J



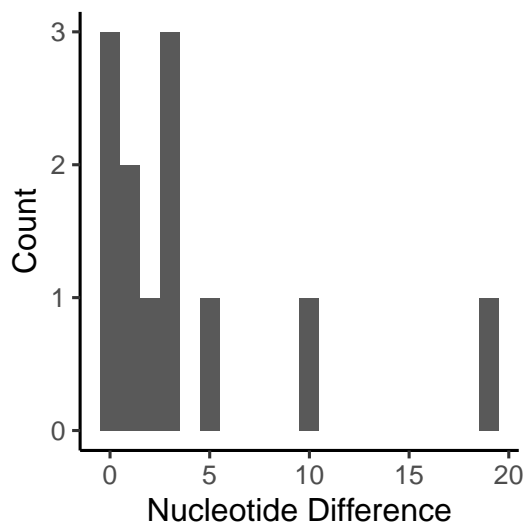
IGHV4-30-4*08

270 sequences assigned
No exact matches.



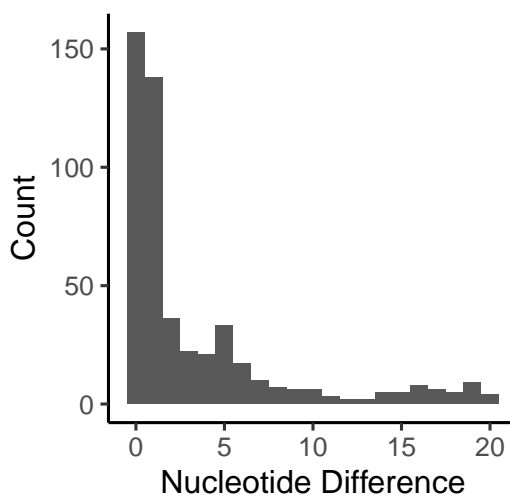
IGHV4-28*03

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



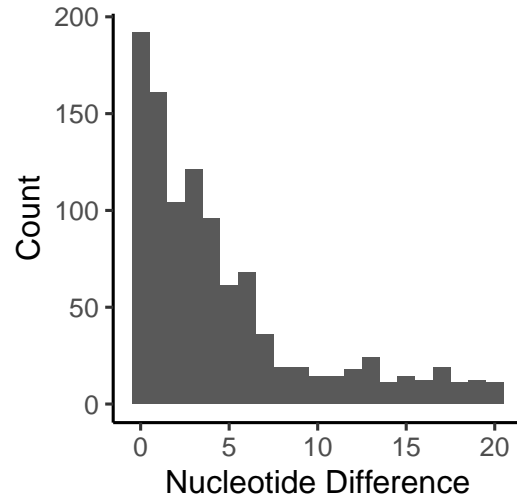
IGHV4-30-2*01

660 sequences assigned
157 (23.8%) exact matches, in which:
136 unique CDR3
5 unique J



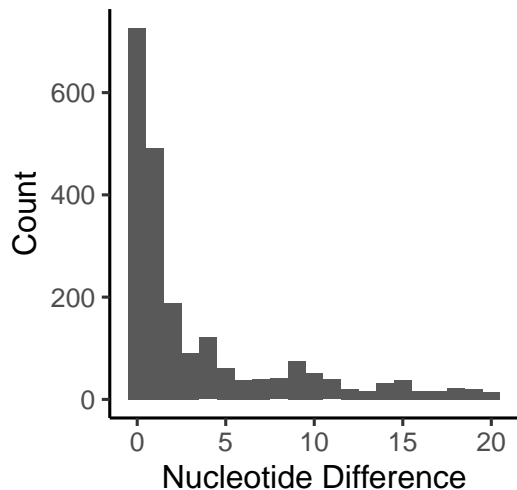
IGHV4-31*02

1275 sequences assigned
192 (15.1%) exact matches, in which:
174 unique CDR3
5 unique J



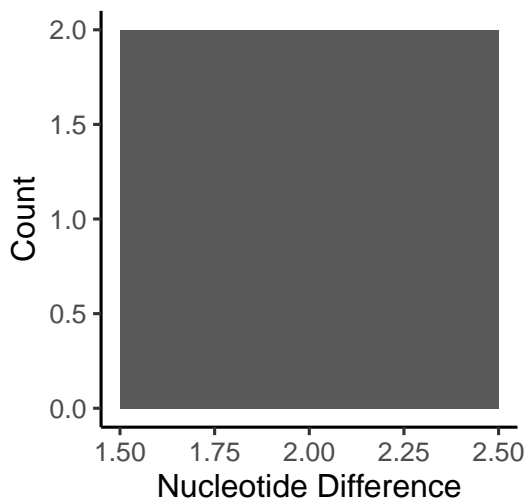
IGHV4-34*01_02

2269 sequences assigned
727 (32%) exact matches, in which:
671 unique CDR3
6 unique J



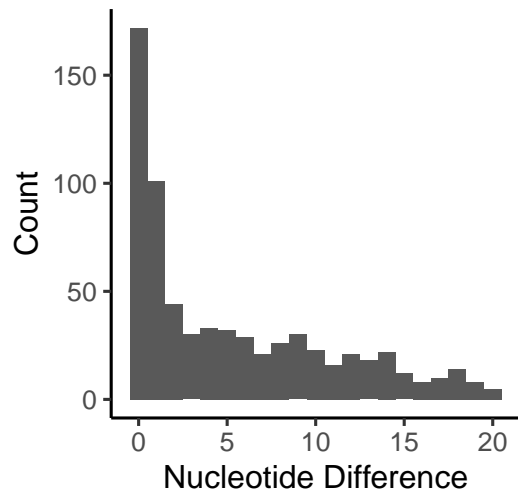
IGHV4-55*09

2 sequences assigned
No exact matches.



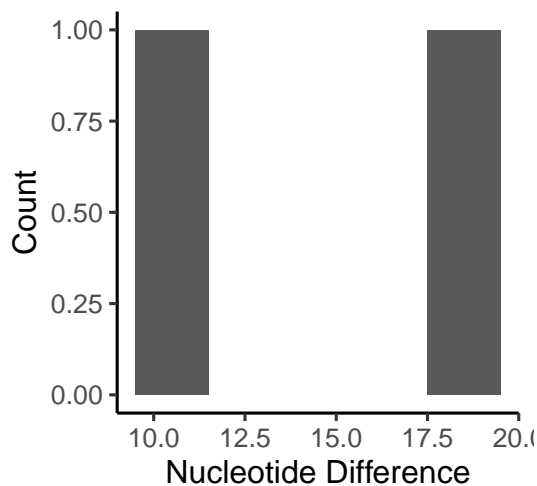
IGHV4-61*01

703 sequences assigned
172 (24.5%) exact matches, in which:
159 unique CDR3
6 unique J



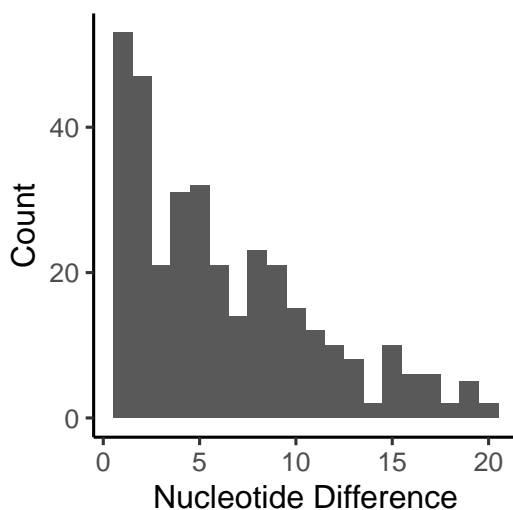
IGHV4-38-2*02

21 sequences assigned
No exact matches.



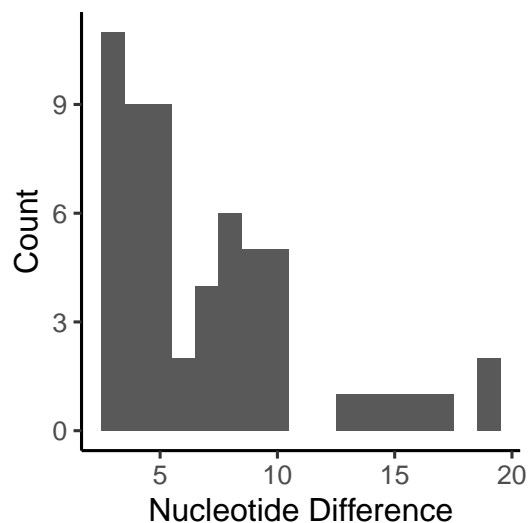
IGHV4-59*08

378 sequences assigned
No exact matches.



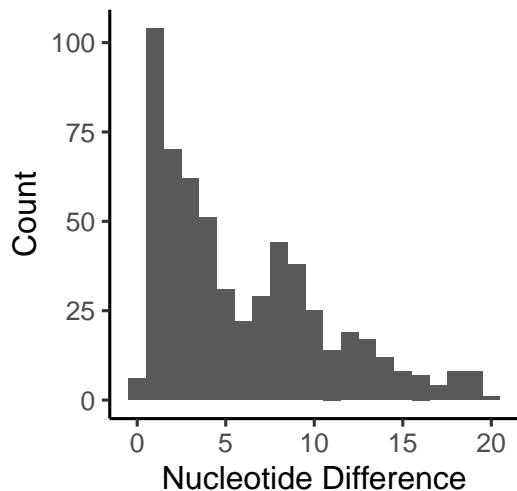
IGHV4-61*02

84 sequences assigned
No exact matches.



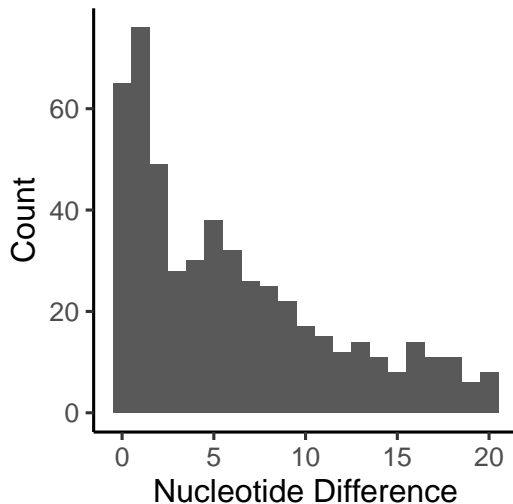
IGHV4-39*07

628 sequences assigned
6 (1%) exact matches, in which:
6 unique CDR3
4 unique J



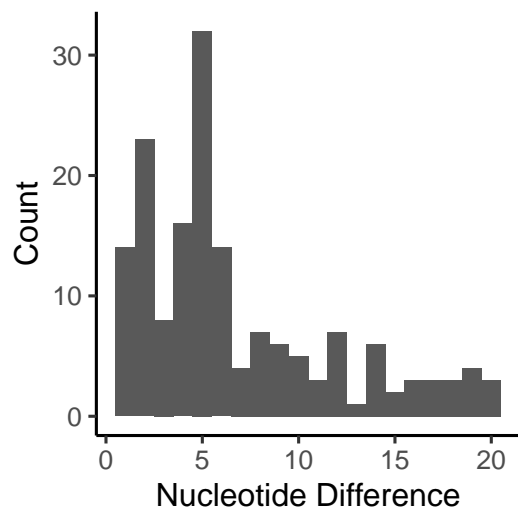
IGHV4-59*12

707 sequences assigned
65 (9.2%) exact matches, in which:
65 unique CDR3
5 unique J



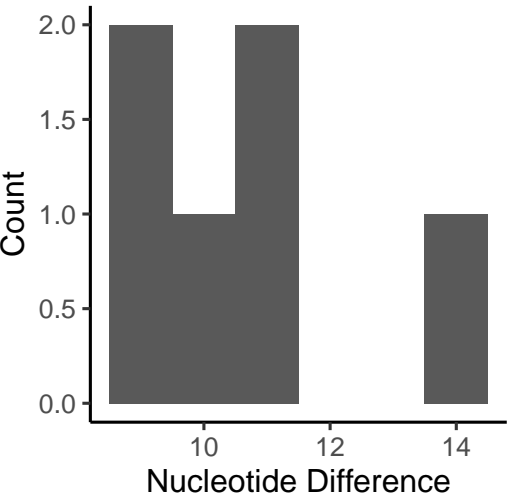
IGHV4-61*08

200 sequences assigned
No exact matches.



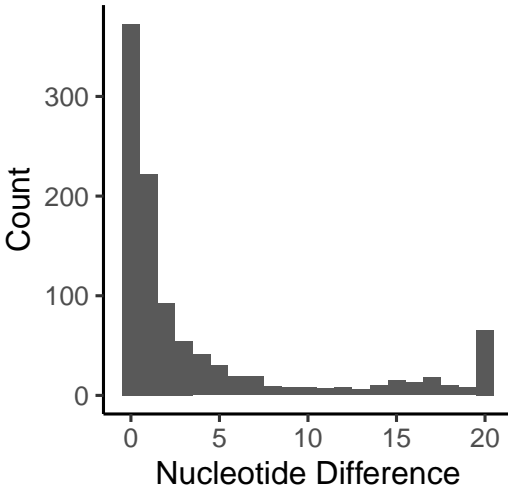
IGHV1/OR15-3*02

6 sequences assigned
No exact matches.



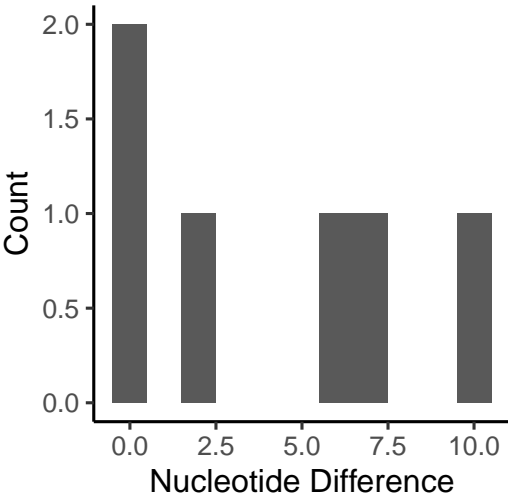
IGHV5-10-1*01_03

2553 sequences assigned
373 (14.6%) exact matches, in which:
336 unique CDR3
6 unique J



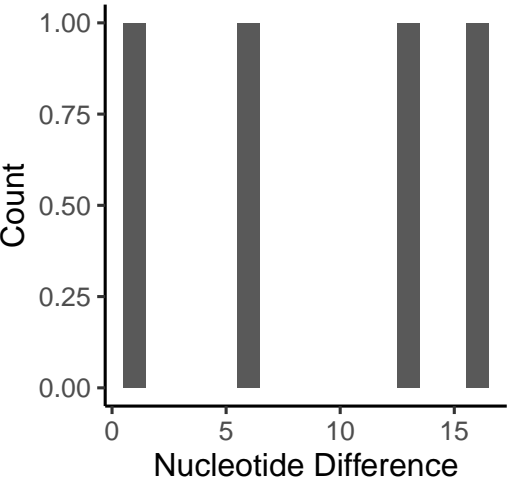
IGHV5-51*07

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



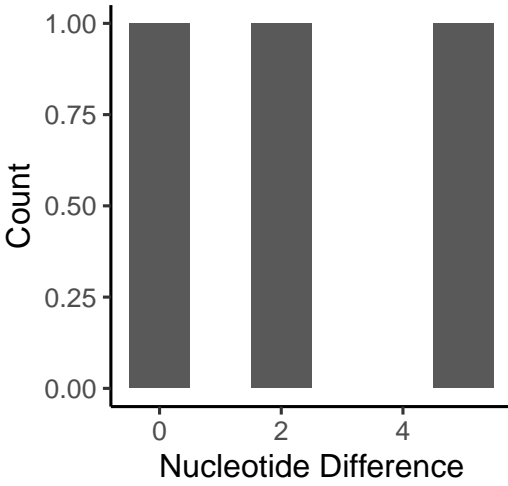
IGHV4/OR15-8*01

6 sequences assigned
No exact matches.



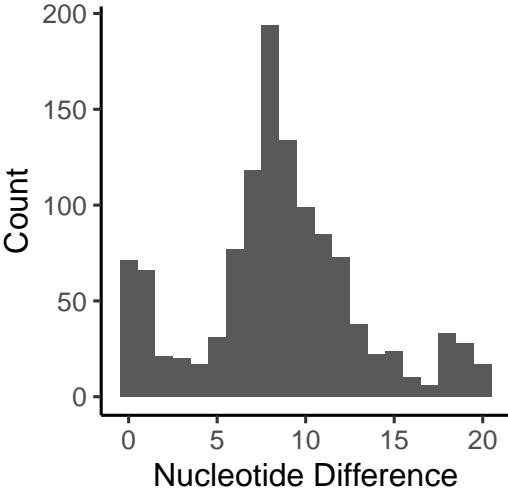
IGHV5-51*04

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



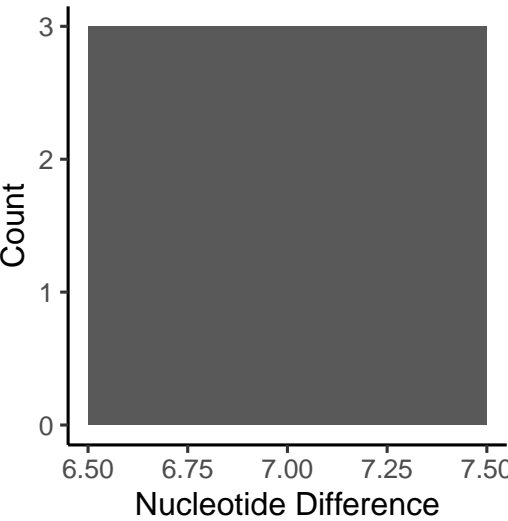
IGHV6-1*01_02

1272 sequences assigned
71 (5.6%) exact matches, in which:
65 unique CDR3
6 unique J



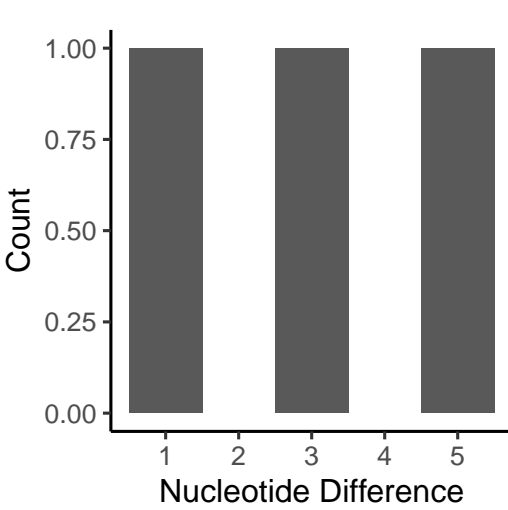
IGHV4/OR15-8*02

6 sequences assigned
No exact matches.



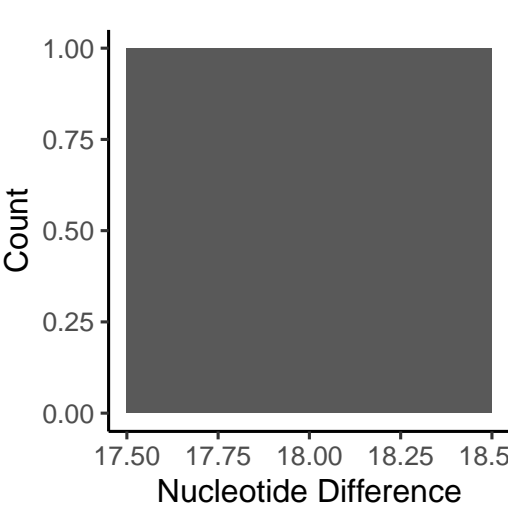
IGHV5-51*06

4 sequences assigned
No exact matches.



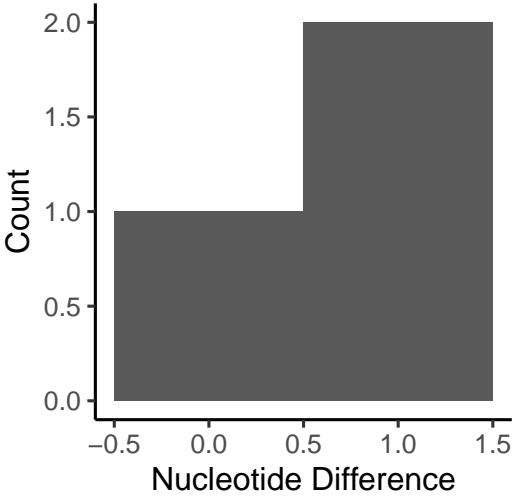
IGHV3/OR16-13*01

1 sequences assigned
No exact matches.

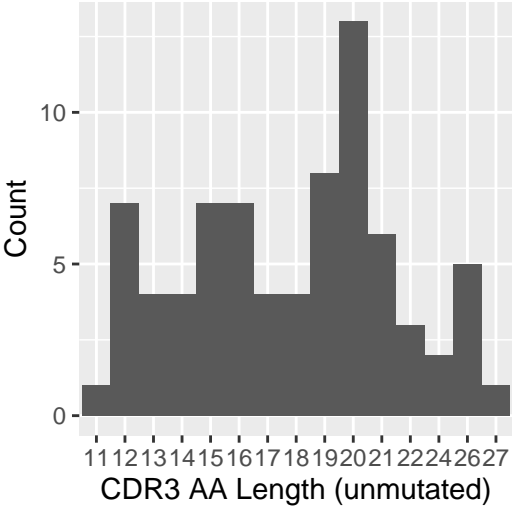


IGHV7-4-1*01

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



IGHV3-20*03_04_A104G





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