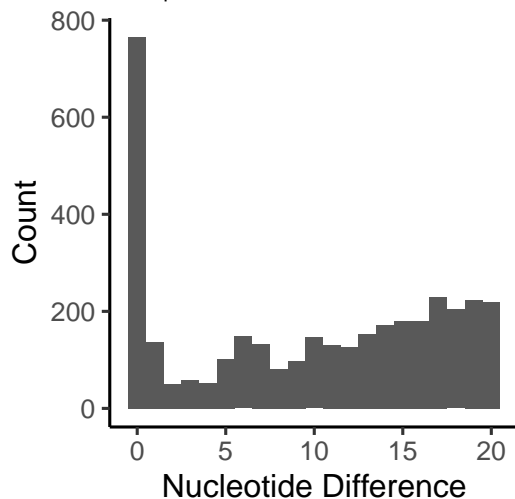


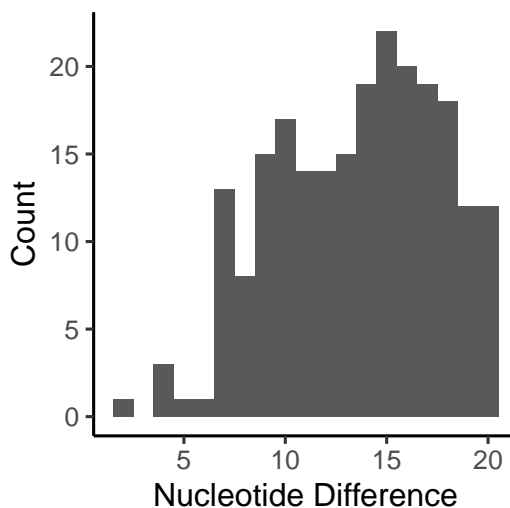
IGHV1-2*02

5953 sequences assigned
766 (12.9%) exact matches, in which:
729 unique CDR3
6 unique J



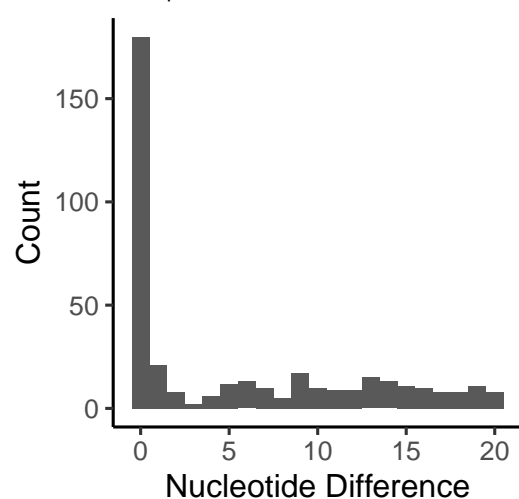
IGHV1-3*04

362 sequences assigned
No exact matches.



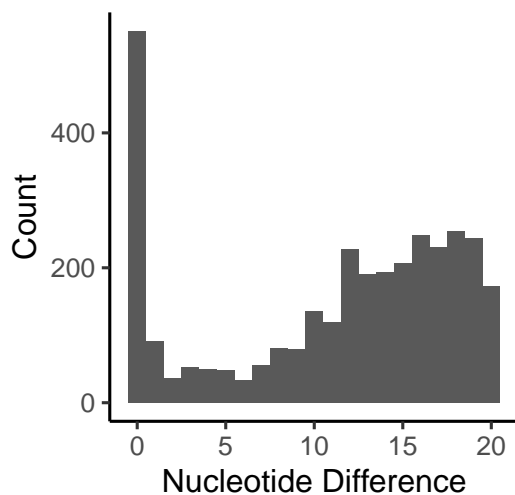
IGHV1-24*01

521 sequences assigned
180 (34.5%) exact matches, in which:
179 unique CDR3
7 unique J



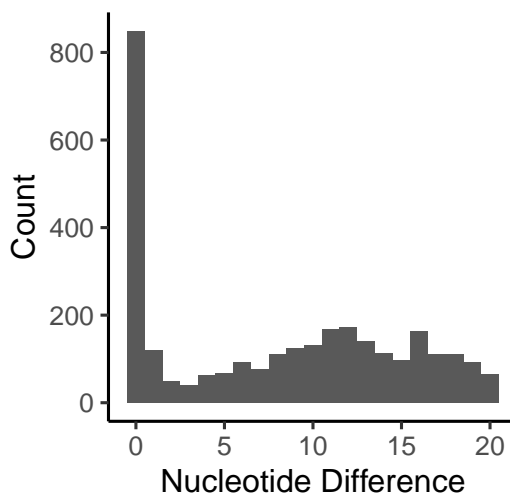
IGHV1-2*06

5663 sequences assigned
551 (9.7%) exact matches, in which:
533 unique CDR3
6 unique J



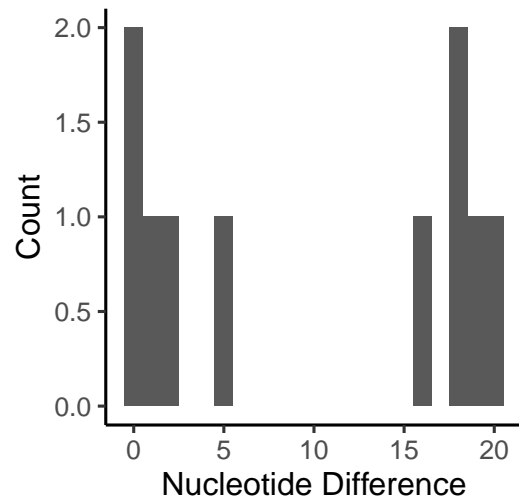
IGHV1-8*01

3787 sequences assigned
849 (22.4%) exact matches, in which:
817 unique CDR3
7 unique J



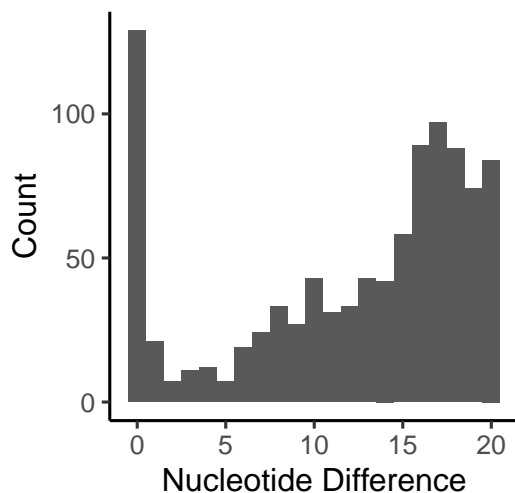
IGHV1-45*02

454 sequences assigned
2 (0.4%) exact matches, in which:
2 unique CDR3
2 unique J



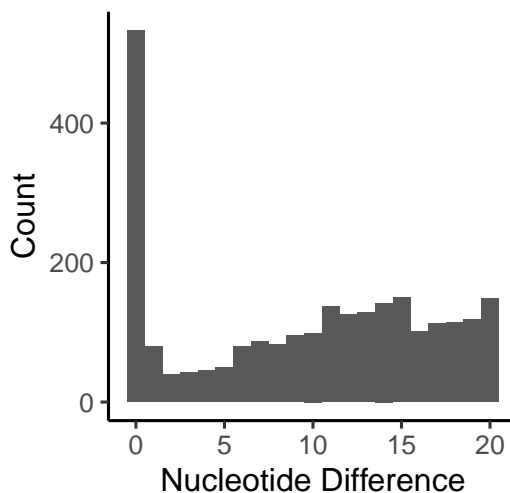
IGHV1-3*01

1738 sequences assigned
129 (7.4%) exact matches, in which:
121 unique CDR3
7 unique J



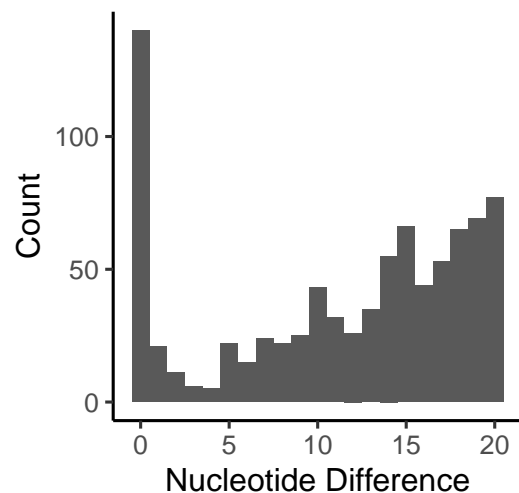
IGHV1-18*01

4275 sequences assigned
533 (12.5%) exact matches, in which:
508 unique CDR3
7 unique J



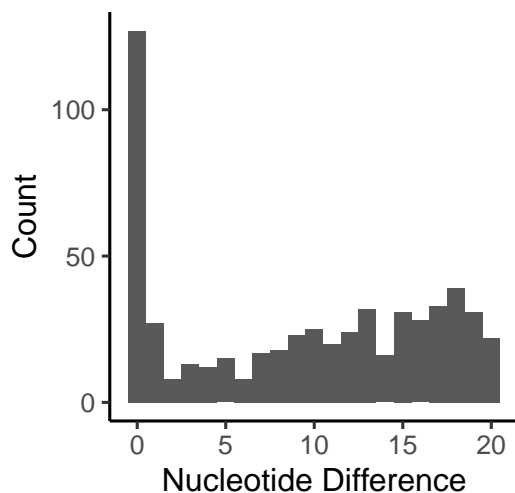
IGHV1-46*01

1713 sequences assigned
140 (8.2%) exact matches, in which:
128 unique CDR3
6 unique J



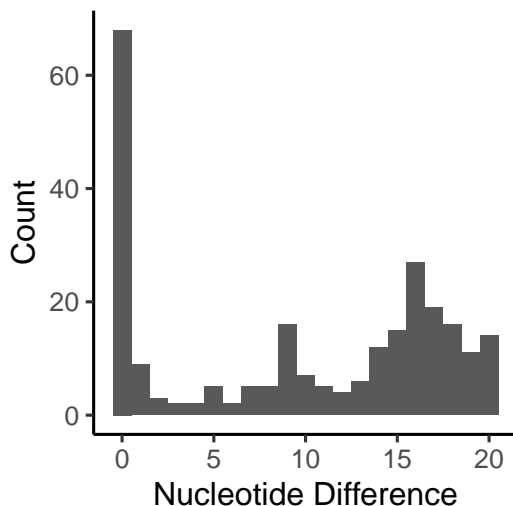
IGHV1-46*03

987 sequences assigned
127 (12.9%) exact matches, in which:
123 unique CDR3
7 unique J



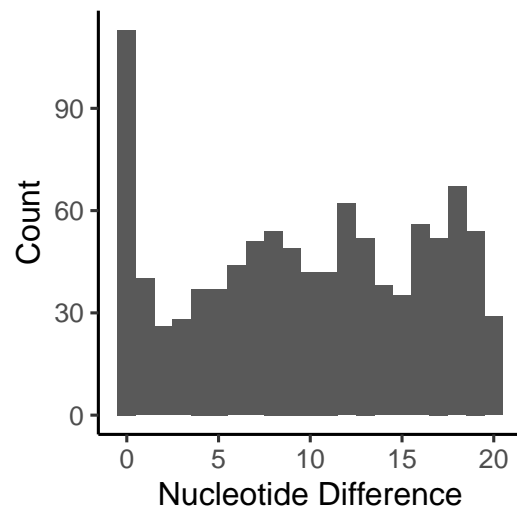
IGHV1-69-2*01

500 sequences assigned
68 (13.6%) exact matches, in which:
67 unique CDR3
6 unique J



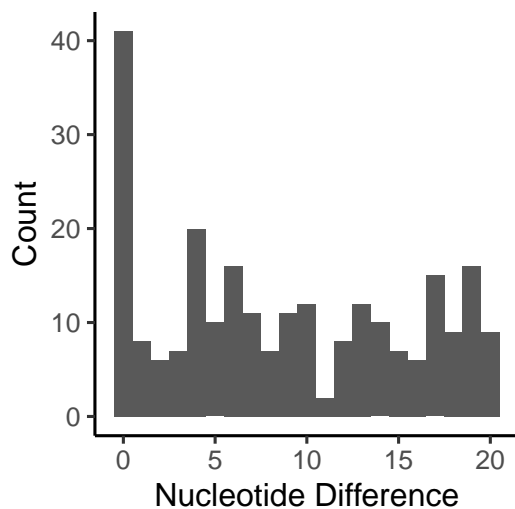
IGHV2-5*02

1408 sequences assigned
113 (8%) exact matches, in which:
112 unique CDR3
6 unique J



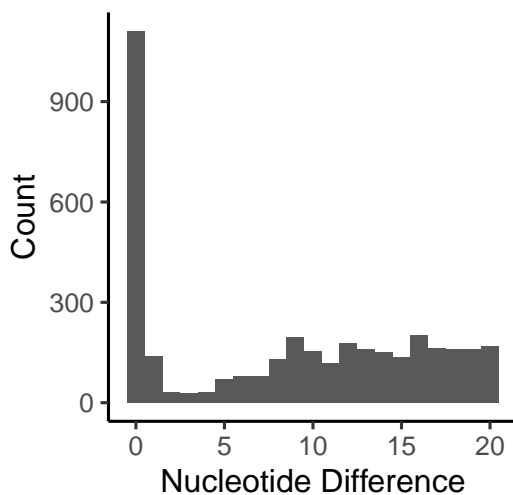
IGHV1-58*01

331 sequences assigned
41 (12.4%) exact matches, in which:
40 unique CDR3
4 unique J



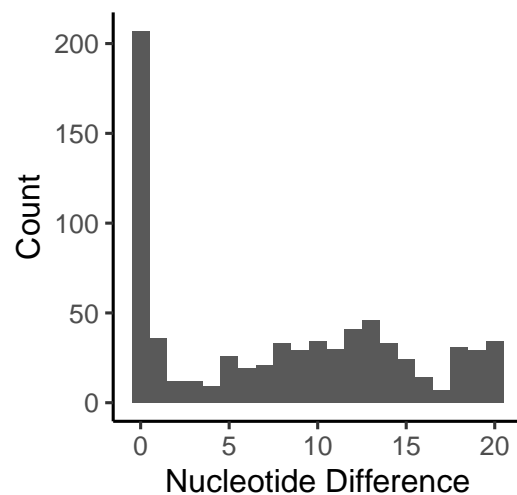
IGHV1-69*06

6063 sequences assigned
1111 (18.3%) exact matches, in which:
1106 unique CDR3
7 unique J



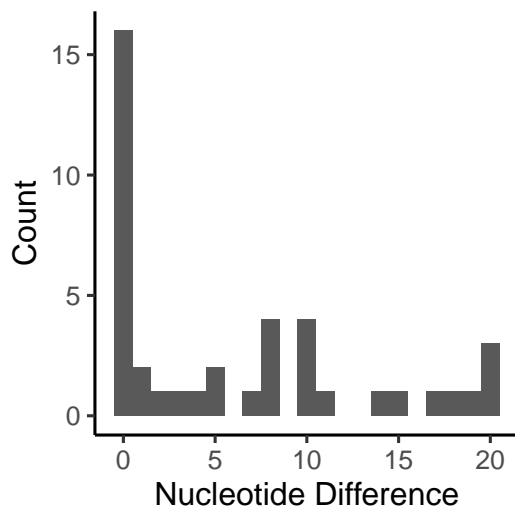
IGHV2-26*01

866 sequences assigned
207 (23.9%) exact matches, in which:
204 unique CDR3
6 unique J



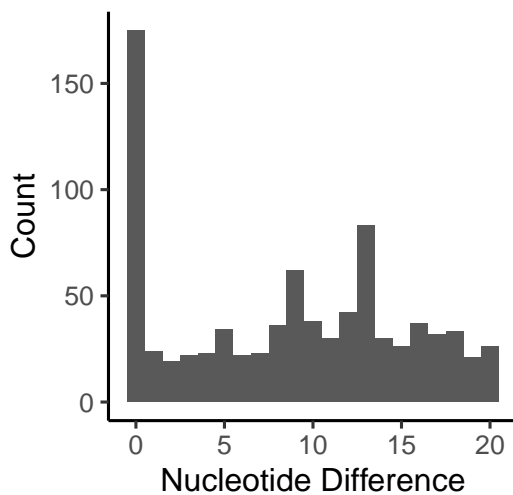
IGHV1-58*02

62 sequences assigned
16 (25.8%) exact matches, in which:
16 unique CDR3
5 unique J



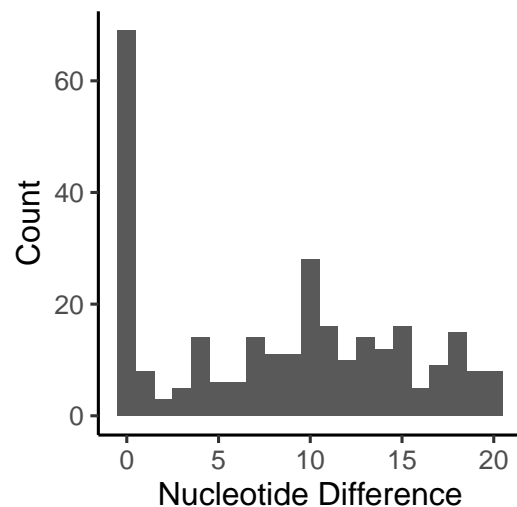
IGHV2-5*01

1101 sequences assigned
175 (15.9%) exact matches, in which:
173 unique CDR3
6 unique J



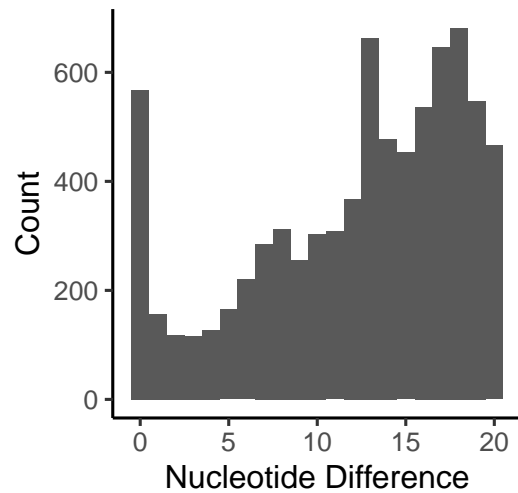
IGHV2-70*01

364 sequences assigned
69 (19%) exact matches, in which:
67 unique CDR3
6 unique J



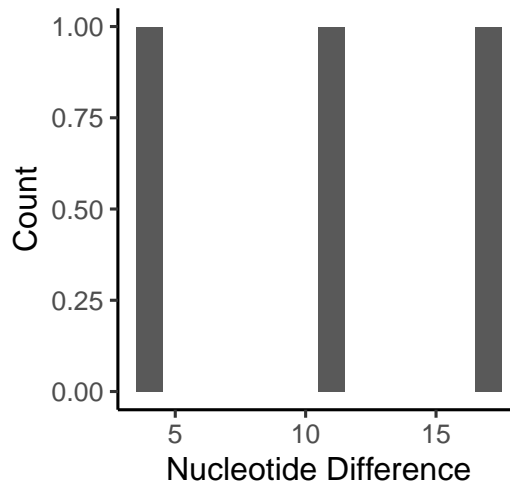
IGHV3-7*01

15813 sequences assigned
567 (3.6%) exact matches, in which:
523 unique CDR3
7 unique J



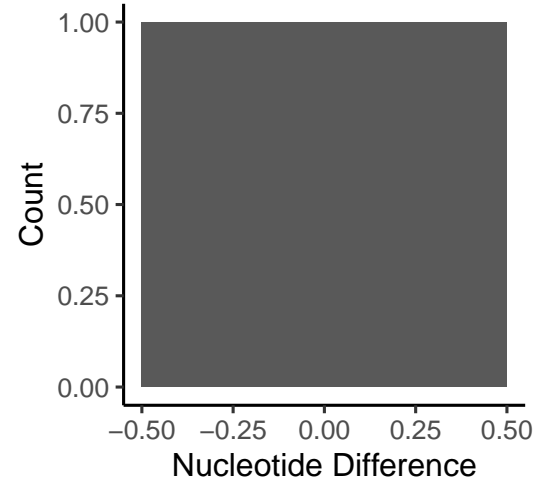
IGHV3-11*06

4 sequences assigned
No exact matches.



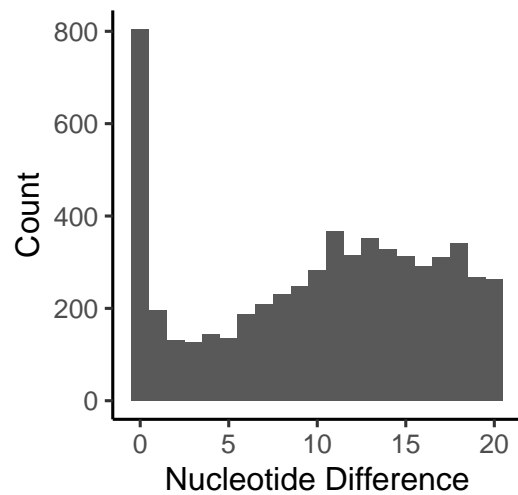
IGHV3-19*01

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



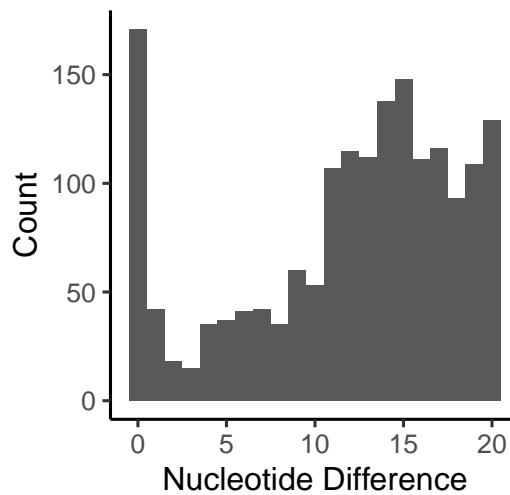
IGHV3-9*01

8752 sequences assigned
805 (9.2%) exact matches, in which:
759 unique CDR3
7 unique J



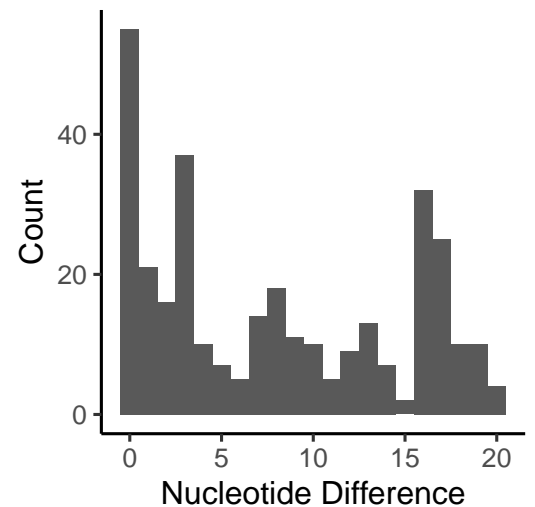
IGHV3-13*01

2613 sequences assigned
171 (6.5%) exact matches, in which:
124 unique CDR3
6 unique J



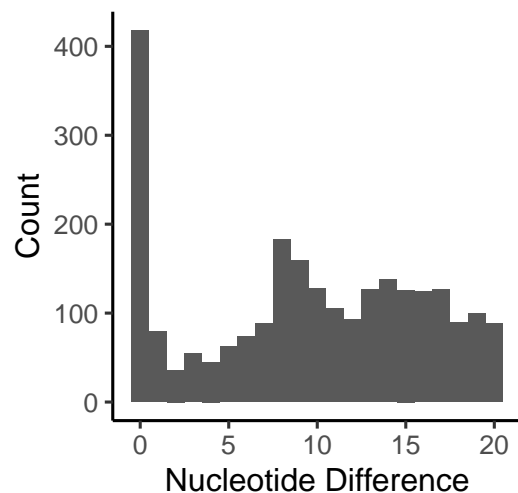
IGHV3-20*01

405 sequences assigned
55 (13.6%) exact matches, in which:
52 unique CDR3
6 unique J



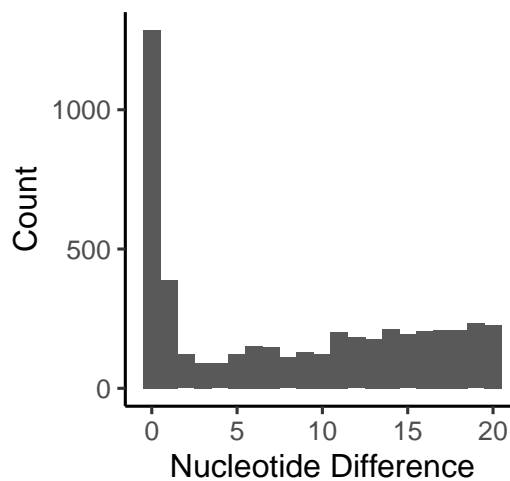
IGHV3-11*01

4785 sequences assigned
418 (8.7%) exact matches, in which:
393 unique CDR3
7 unique J



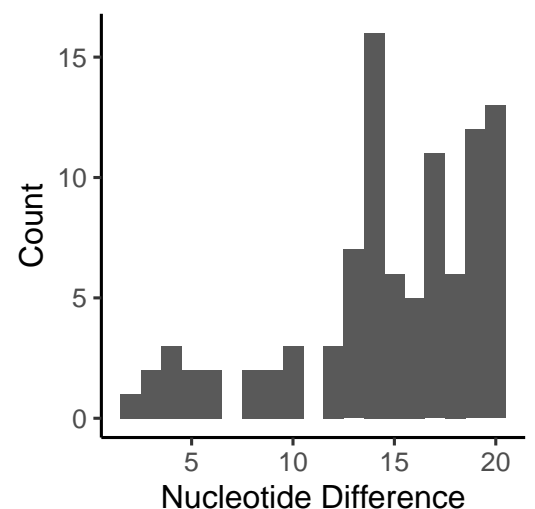
IGHV3-15*01

7927 sequences assigned
1286 (16.2%) exact matches, in which:
488 unique CDR3
7 unique J



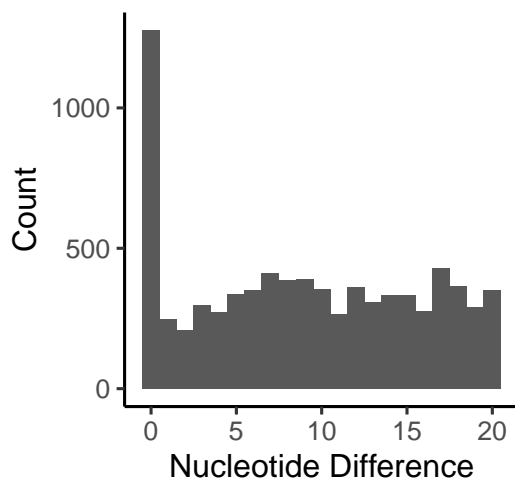
IGHV3-20*04

213 sequences assigned
No exact matches.



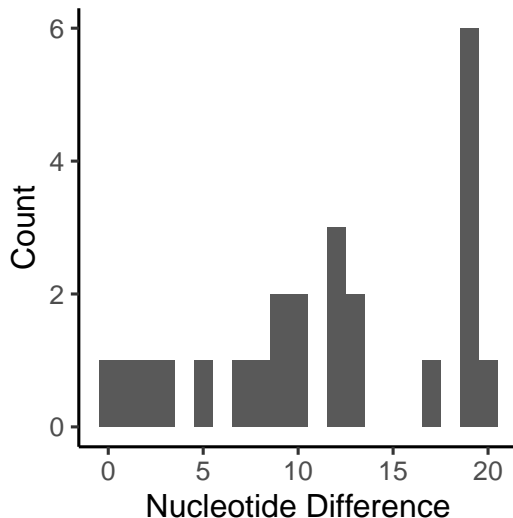
IGHV3-21*01

10900 sequences assigned
1276 (11.7%) exact matches, in which:
1153 unique CDR3
7 unique J



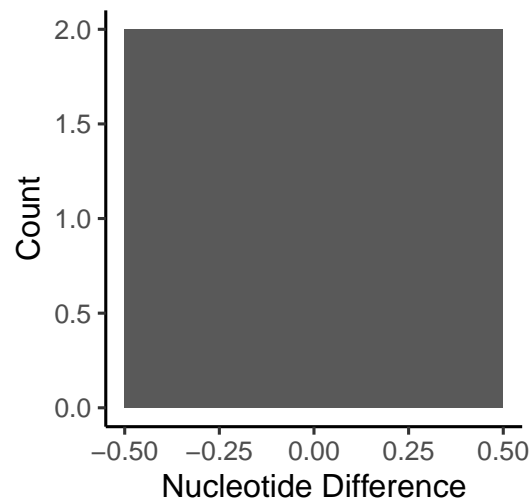
IGHV3-30-3*02

74 sequences assigned
1 (1.4%) exact matches, in which:
1 unique CDR3
1 unique J



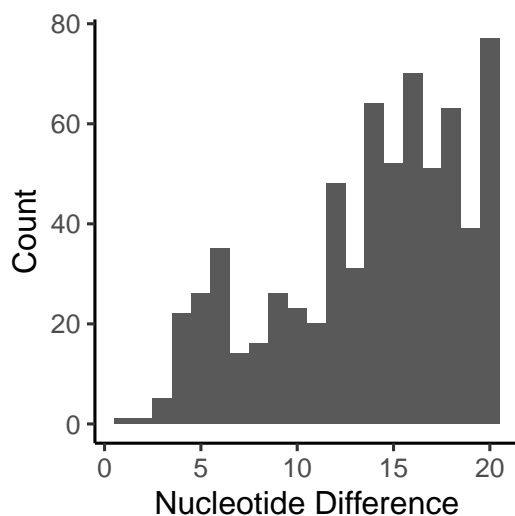
IGHV3-41*02

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



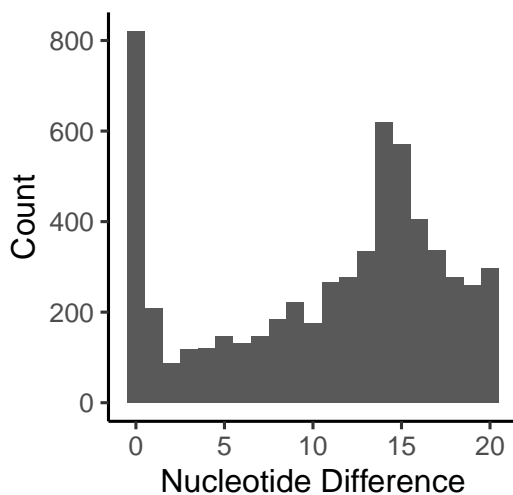
IGHV3-21*02

2352 sequences assigned
No exact matches.



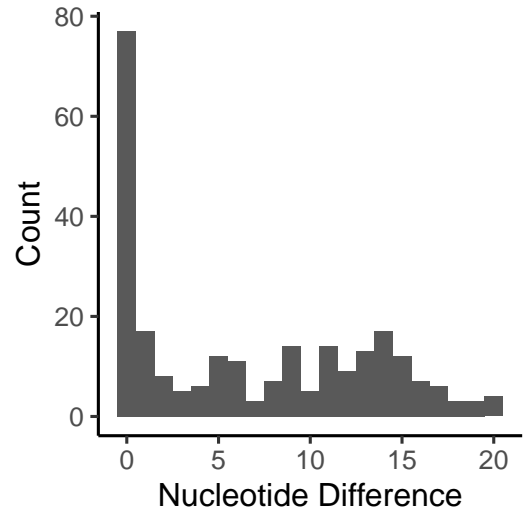
IGHV3-33*01

8535 sequences assigned
821 (9.6%) exact matches, in which:
734 unique CDR3
7 unique J



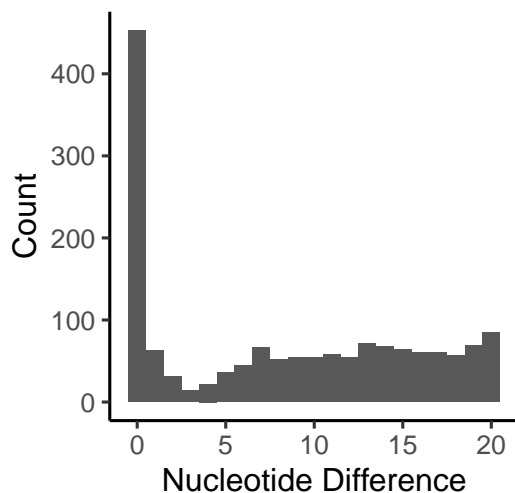
IGHV3-43*01

380 sequences assigned
77 (20.3%) exact matches, in which:
47 unique CDR3
6 unique J



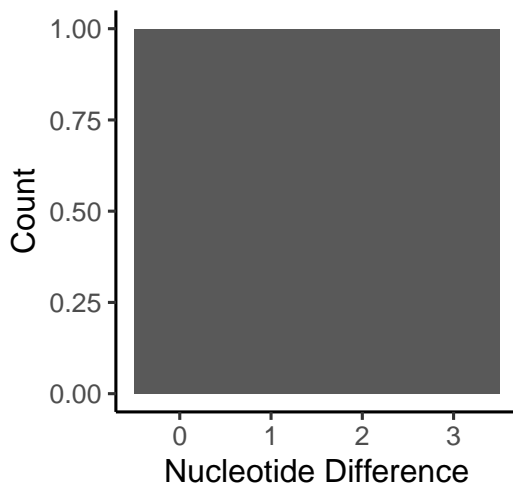
IGHV3-30-3*01

2574 sequences assigned
453 (17.6%) exact matches, in which:
450 unique CDR3
7 unique J



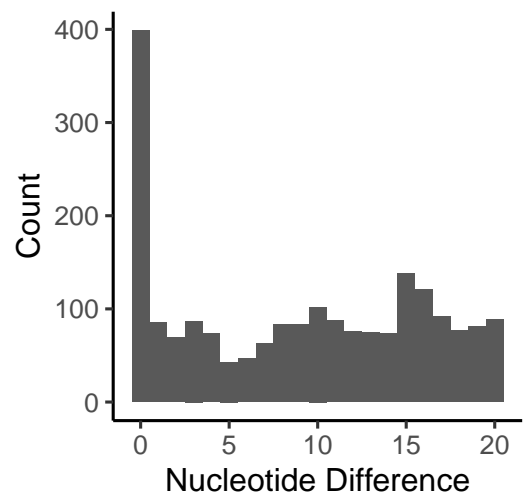
IGHV3-35*01

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



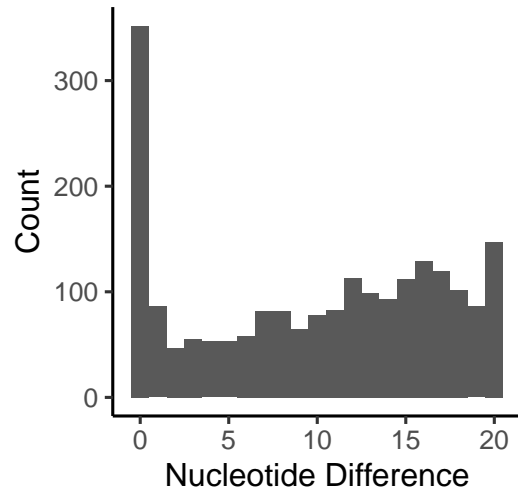
IGHV3-48*01

3104 sequences assigned
399 (12.9%) exact matches, in which:
360 unique CDR3
6 unique J



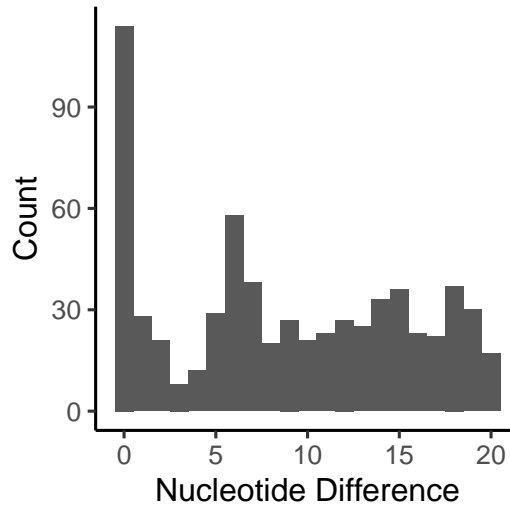
IGHV3-48*03

3300 sequences assigned
352 (10.7%) exact matches, in which:
337 unique CDR3
6 unique J



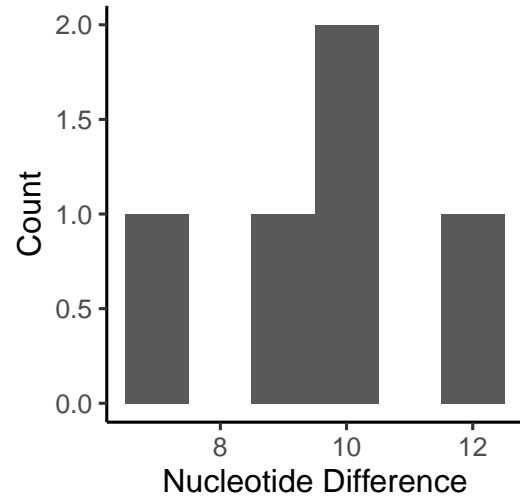
IGHV3-49*04

1150 sequences assigned
114 (9.9%) exact matches, in which:
95 unique CDR3
6 unique J



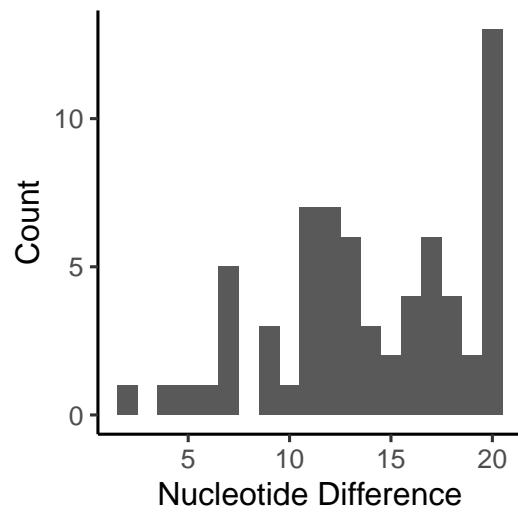
IGHV3-62*03

5 sequences assigned
No exact matches.



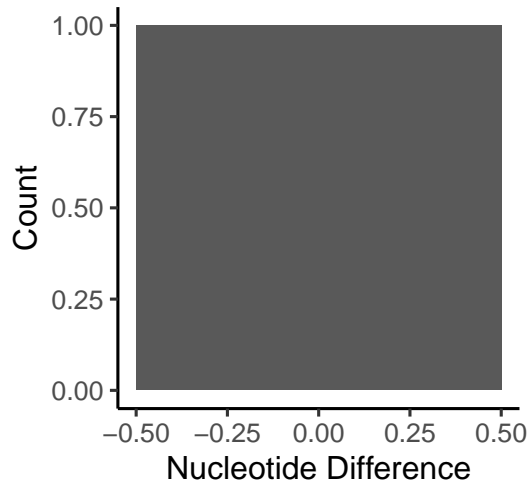
IGHV3-48*04

178 sequences assigned
No exact matches.



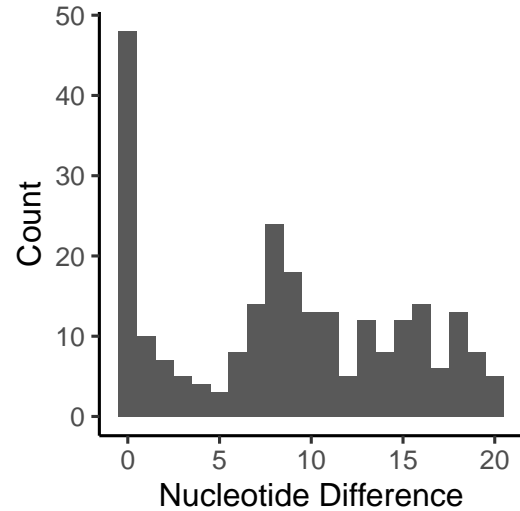
IGHV3-52*01

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



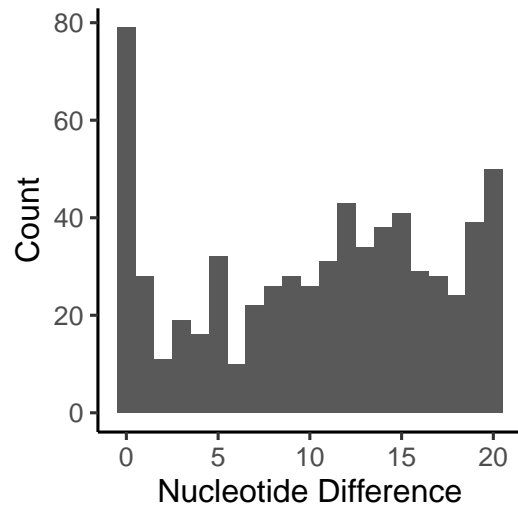
IGHV3-64*01

447 sequences assigned
48 (10.7%) exact matches, in which:
48 unique CDR3
6 unique J



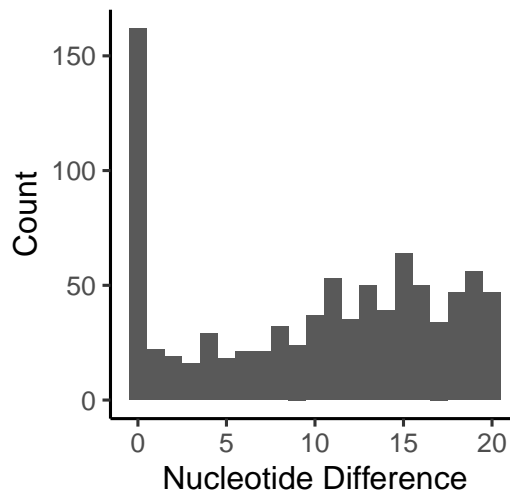
IGHV3-49*03

1113 sequences assigned
79 (7.1%) exact matches, in which:
74 unique CDR3
5 unique J



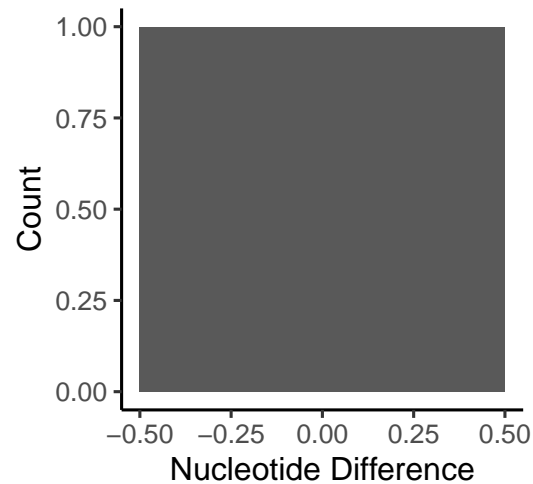
IGHV3-53*01

1674 sequences assigned
162 (9.7%) exact matches, in which:
156 unique CDR3
5 unique J



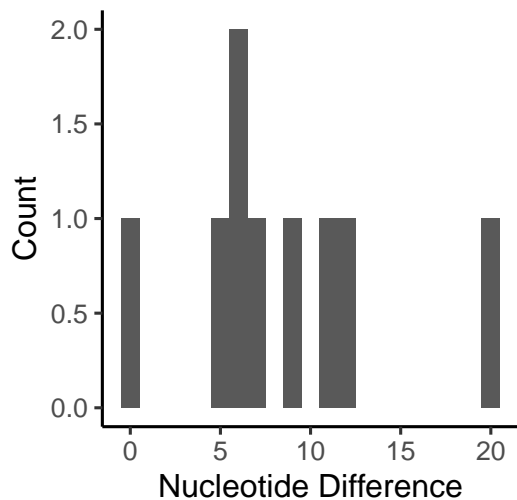
IGHV3-66*01

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



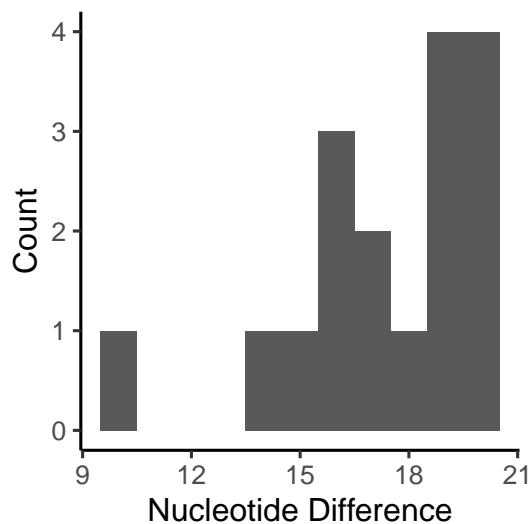
IGHV3-66*03

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



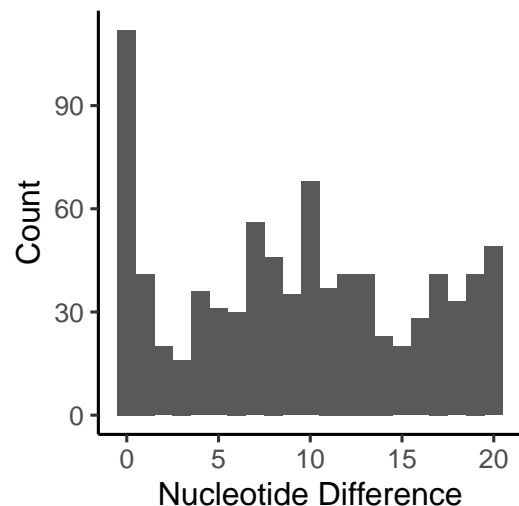
IGHV3-69-1*02

123 sequences assigned
No exact matches.



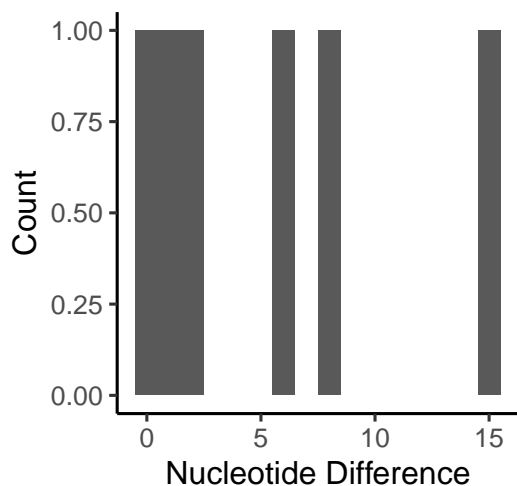
IGHV3-73*02

1538 sequences assigned
112 (7.3%) exact matches, in which:
97 unique CDR3
6 unique J



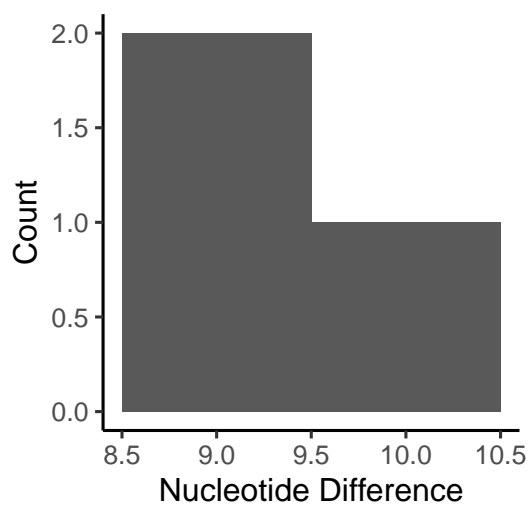
IGHV3-66*04

6 sequences assigned
1 (16.7%) exact matches, in which:
1 unique CDR3
1 unique J



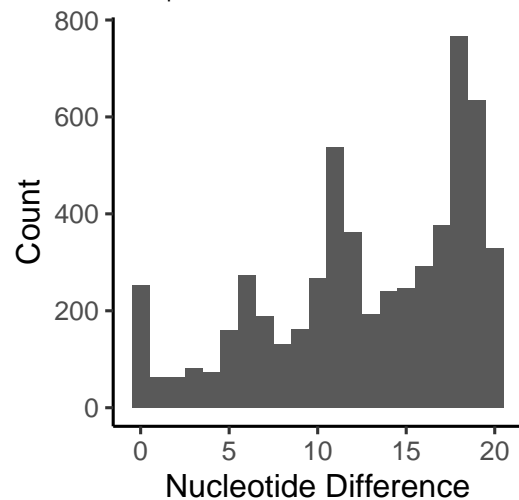
IGHV3-71*01

3 sequences assigned
No exact matches.



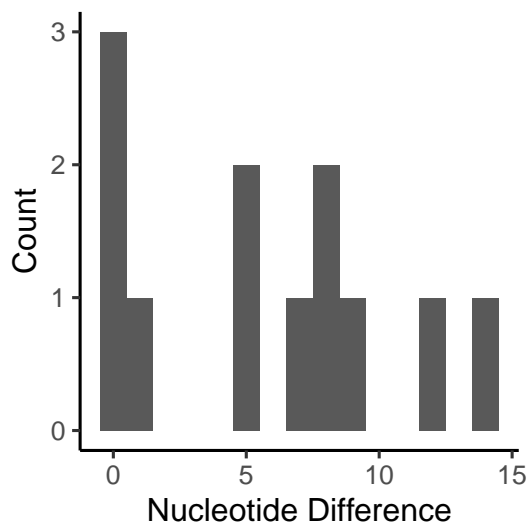
IGHV3-74*01

7528 sequences assigned
253 (3.4%) exact matches, in which:
224 unique CDR3
7 unique J



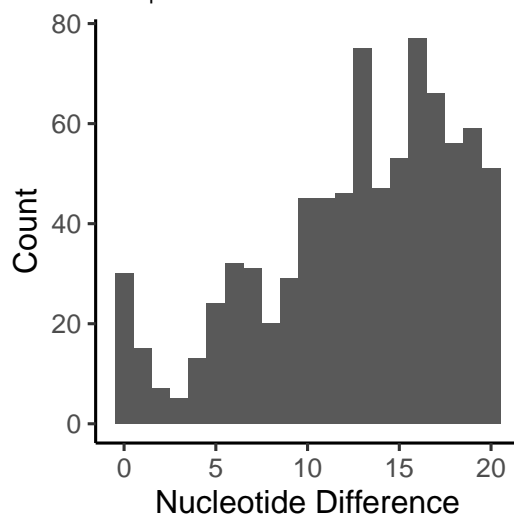
IGHV3-69-1*01

17 sequences assigned
3 (17.6%) exact matches, in which:
3 unique CDR3
2 unique J



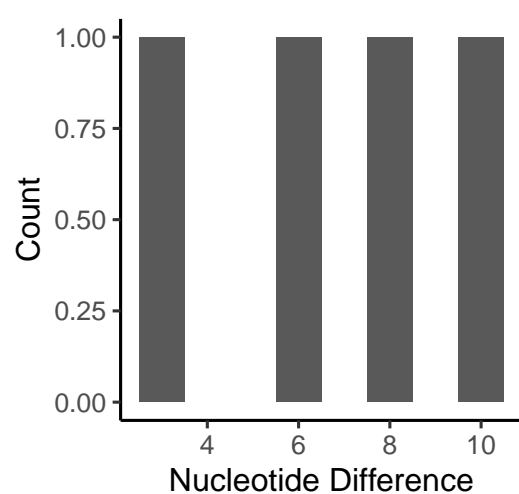
IGHV3-72*01

1260 sequences assigned
30 (2.4%) exact matches, in which:
28 unique CDR3
5 unique J



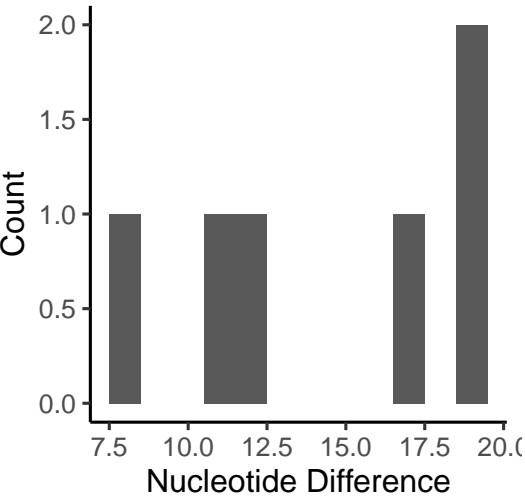
IGHV3-64D*08

4 sequences assigned
No exact matches.



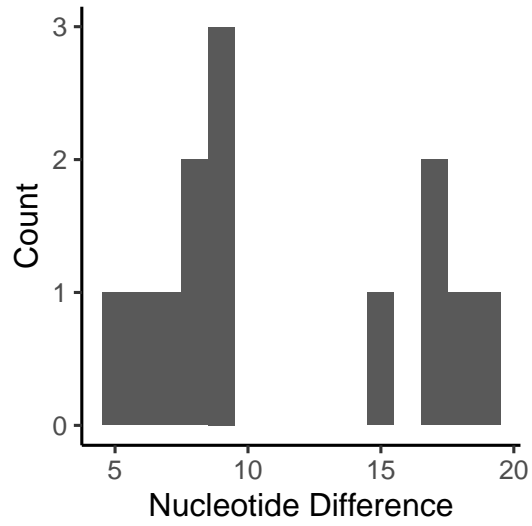
IGHV3–NL1*01

6 sequences assigned
No exact matches.



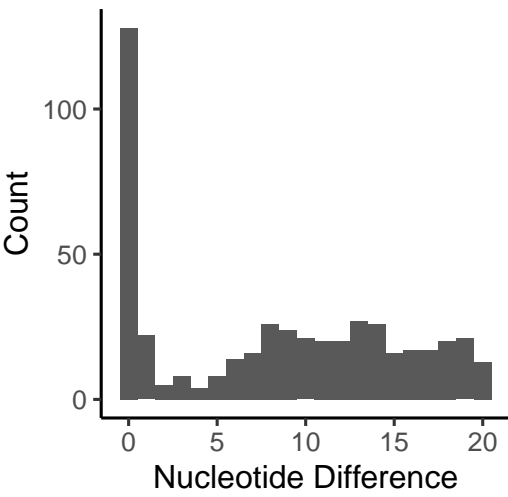
IGHV4–28*01

18 sequences assigned
No exact matches.



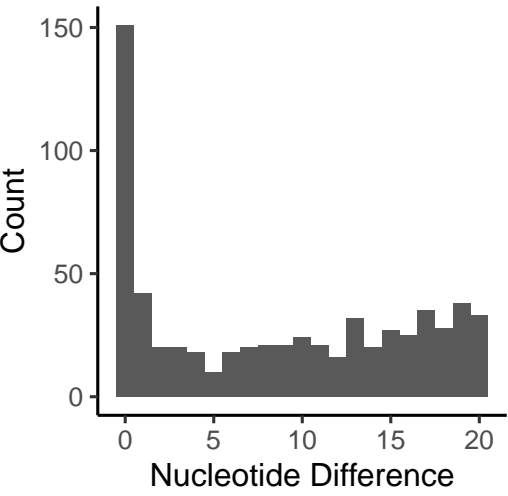
IGHV4–30–4*01

732 sequences assigned
128 (17.5%) exact matches, in which:
109 unique CDR3
5 unique J



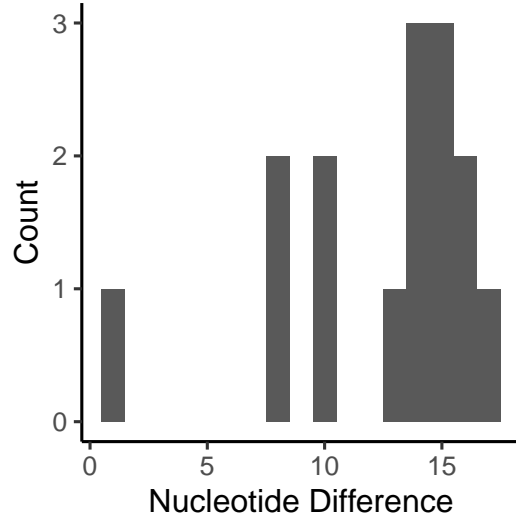
IGHV4–4*02

1142 sequences assigned
151 (13.2%) exact matches, in which:
147 unique CDR3
6 unique J



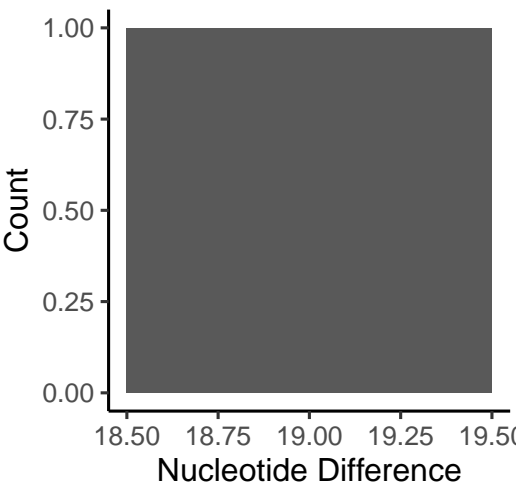
IGHV4–28*03

16 sequences assigned
No exact matches.



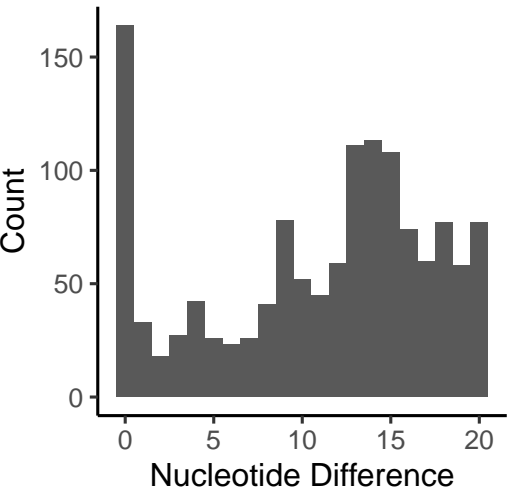
IGHV4–30–2*04

3 sequences assigned
No exact matches.



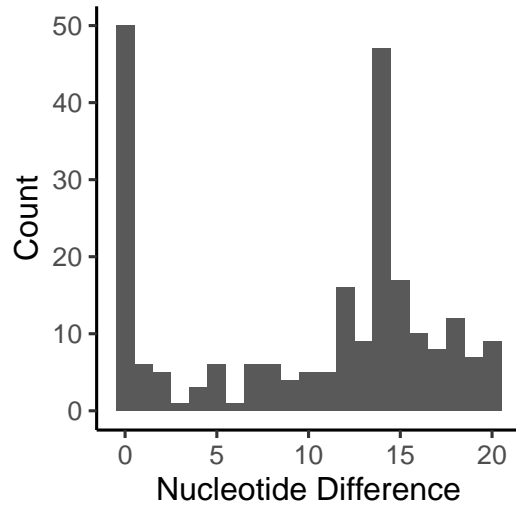
IGHV4–4*07

2137 sequences assigned
164 (7.7%) exact matches, in which:
152 unique CDR3
7 unique J



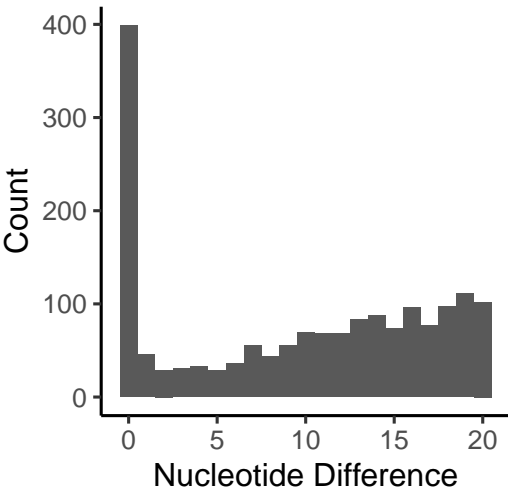
IGHV4–30–2*01

380 sequences assigned
50 (13.2%) exact matches, in which:
50 unique CDR3
5 unique J



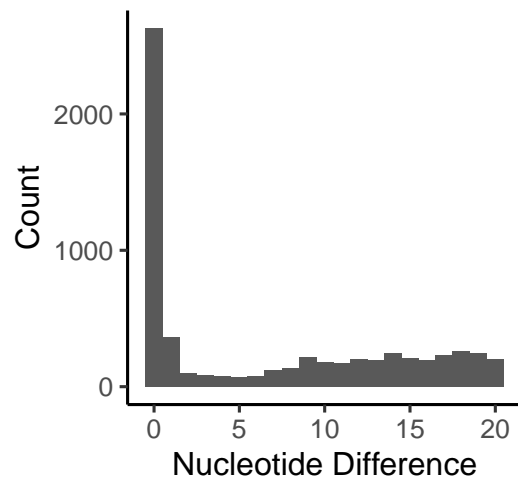
IGHV4–31*03

3393 sequences assigned
399 (11.8%) exact matches, in which:
388 unique CDR3
7 unique J



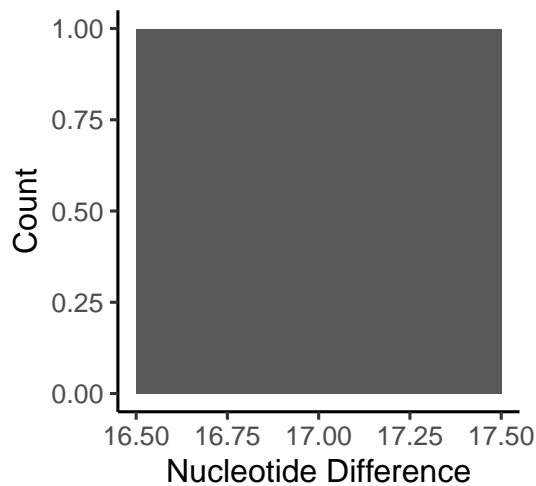
IGHV4-34*01

9155 sequences assigned
2627 (28.7%) exact matches, in which:
2583 unique CDR3
7 unique J



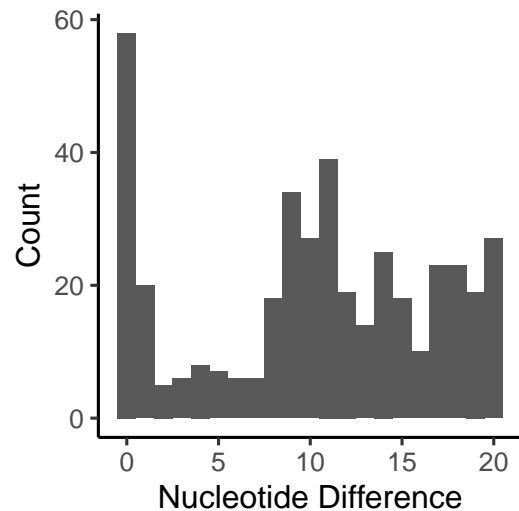
IGHV4-55*08

1 sequences assigned
No exact matches.



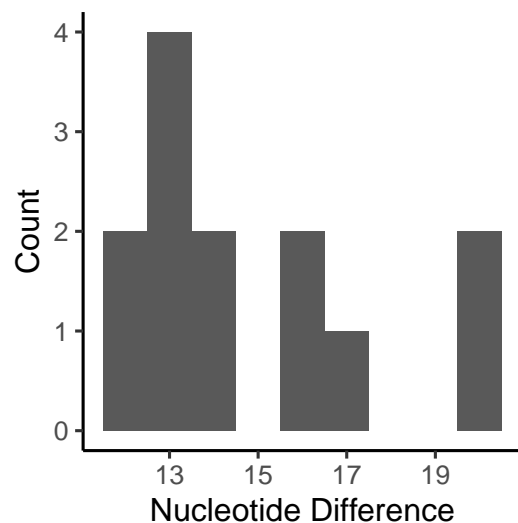
IGHV4-61*01

672 sequences assigned
58 (8.6%) exact matches, in which:
57 unique CDR3
6 unique J



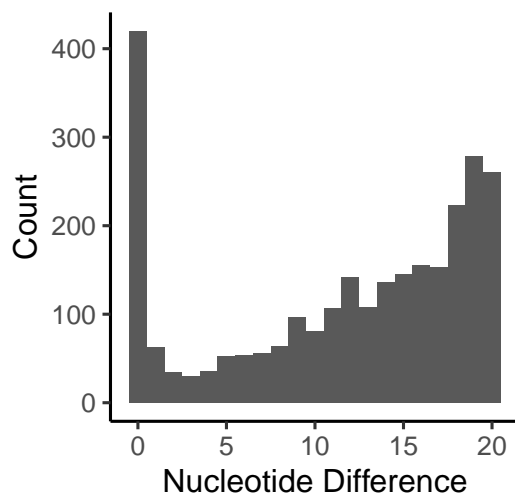
IGHV4-38-2*02

21 sequences assigned
No exact matches.



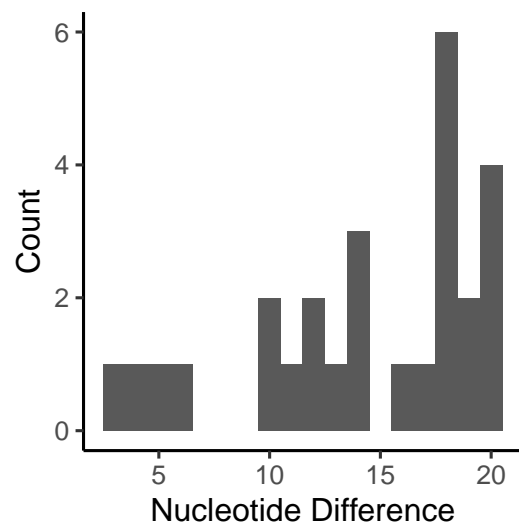
IGHV4-59*01

5290 sequences assigned
420 (7.9%) exact matches, in which:
405 unique CDR3
7 unique J



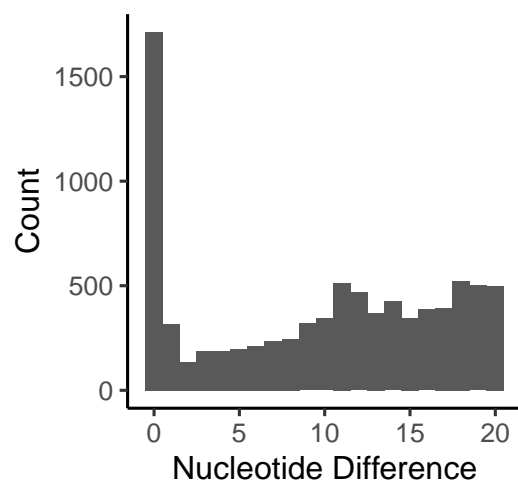
IGHV4-61*08

83 sequences assigned
No exact matches.



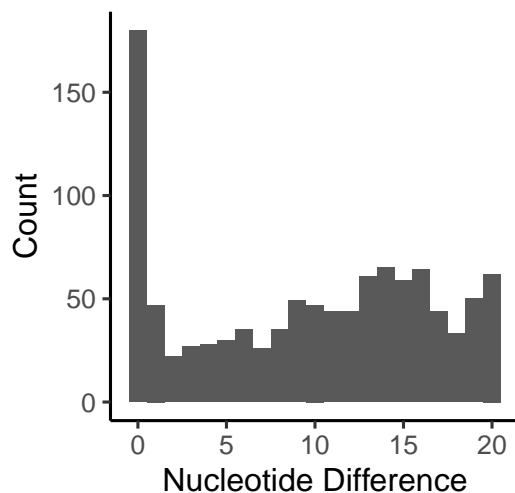
IGHV4-39*01

15695 sequences assigned
1713 (10.9%) exact matches, in which:
1622 unique CDR3
7 unique J



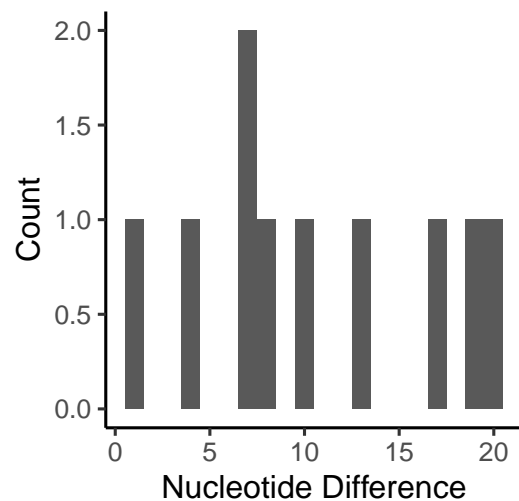
IGHV4-59*08

1948 sequences assigned
180 (9.2%) exact matches, in which:
173 unique CDR3
7 unique J



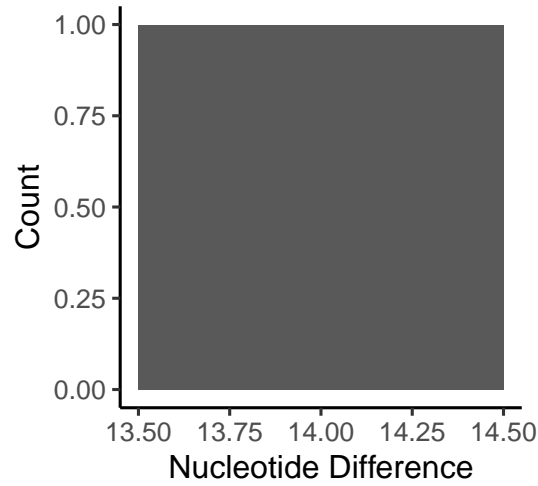
IGHV1/OR15-1*04

11 sequences assigned
No exact matches.



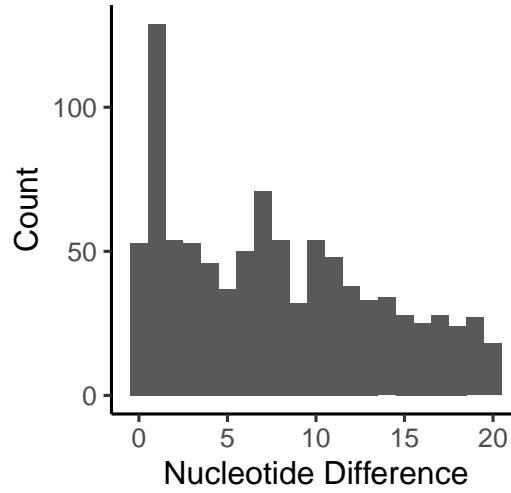
IGHV1/OR15-2*01

1 sequences assigned
No exact matches.



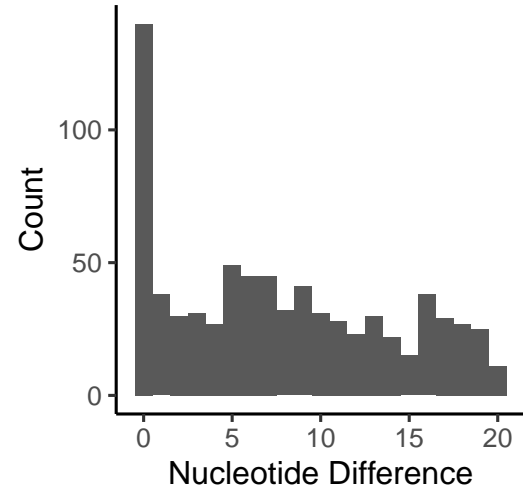
IGHV5-51*01

1142 sequences assigned
53 (4.6%) exact matches, in which:
50 unique CDR3
6 unique J



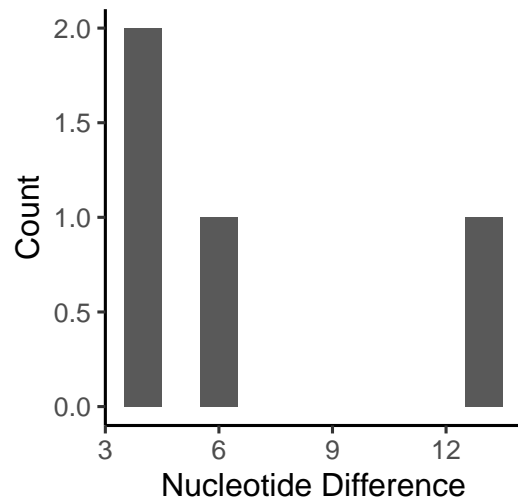
IGHV6-1*01

1182 sequences assigned
140 (11.8%) exact matches, in which:
124 unique CDR3
7 unique J



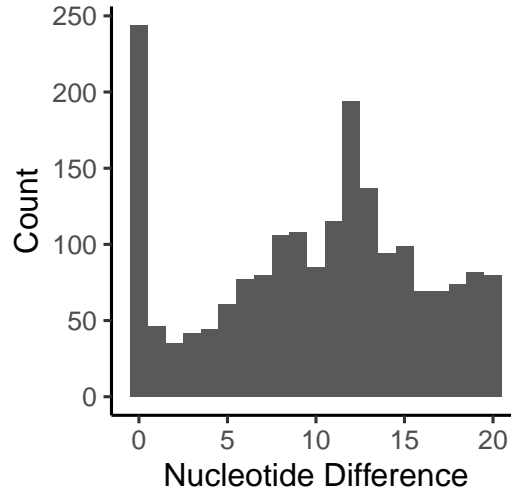
IGHV4/OR15-8*02

9 sequences assigned
No exact matches.



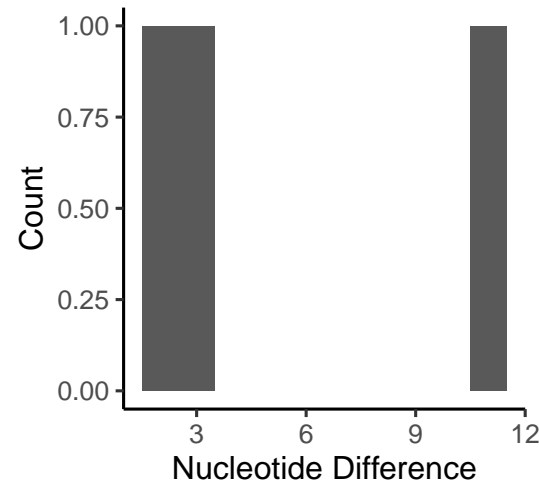
IGHV5-51*03

2840 sequences assigned
244 (8.6%) exact matches, in which:
241 unique CDR3
7 unique J



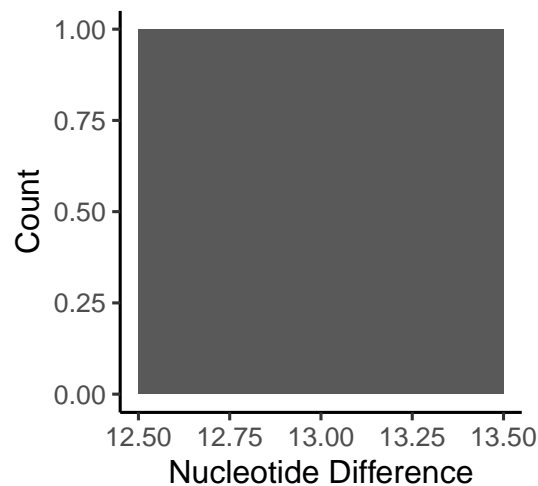
IGHV3/OR16-8*01

3 sequences assigned
No exact matches.



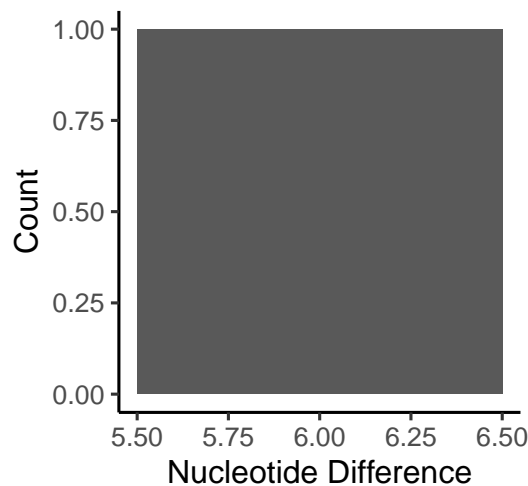
IGHV5-10-1*04

1 sequences assigned
No exact matches.



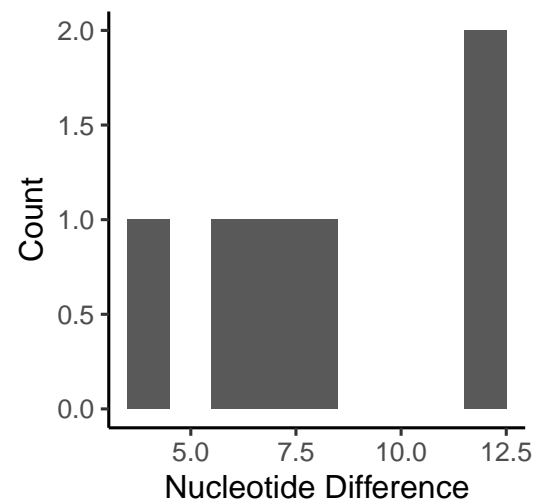
IGHV5-78*01

1 sequences assigned
No exact matches.



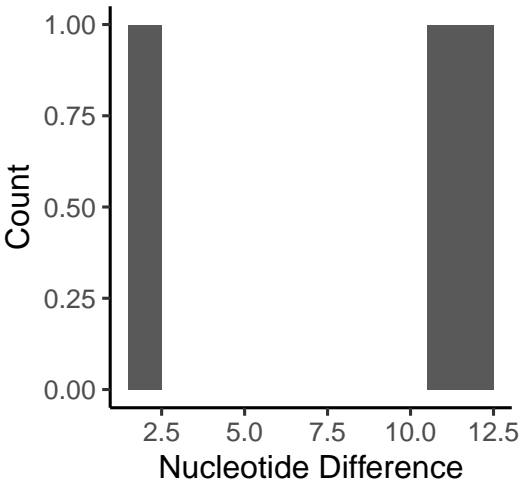
IGHV3/OR16-9*01

6 sequences assigned
No exact matches.



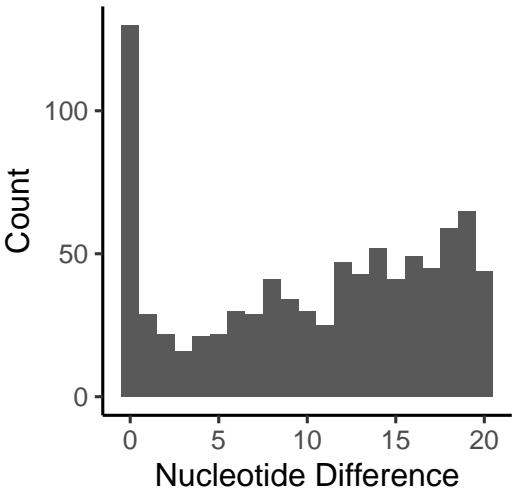
IGHV3/OR16-12*01

3 sequences assigned
No exact matches.



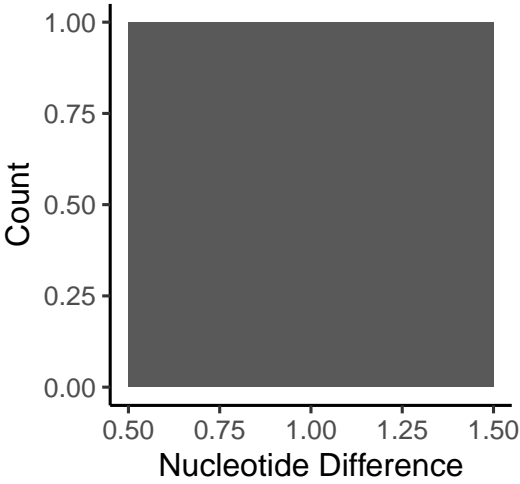
IGHV7-4-1*02

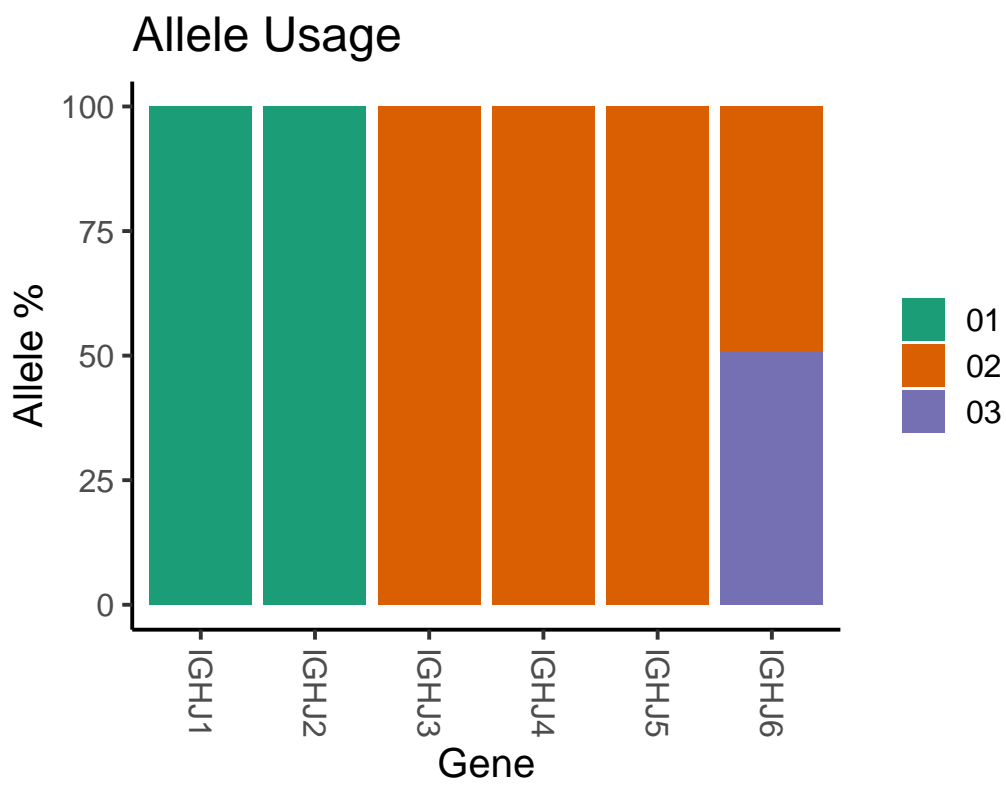
1351 sequences assigned
130 (9.6%) exact matches, in which:
129 unique CDR3
5 unique J



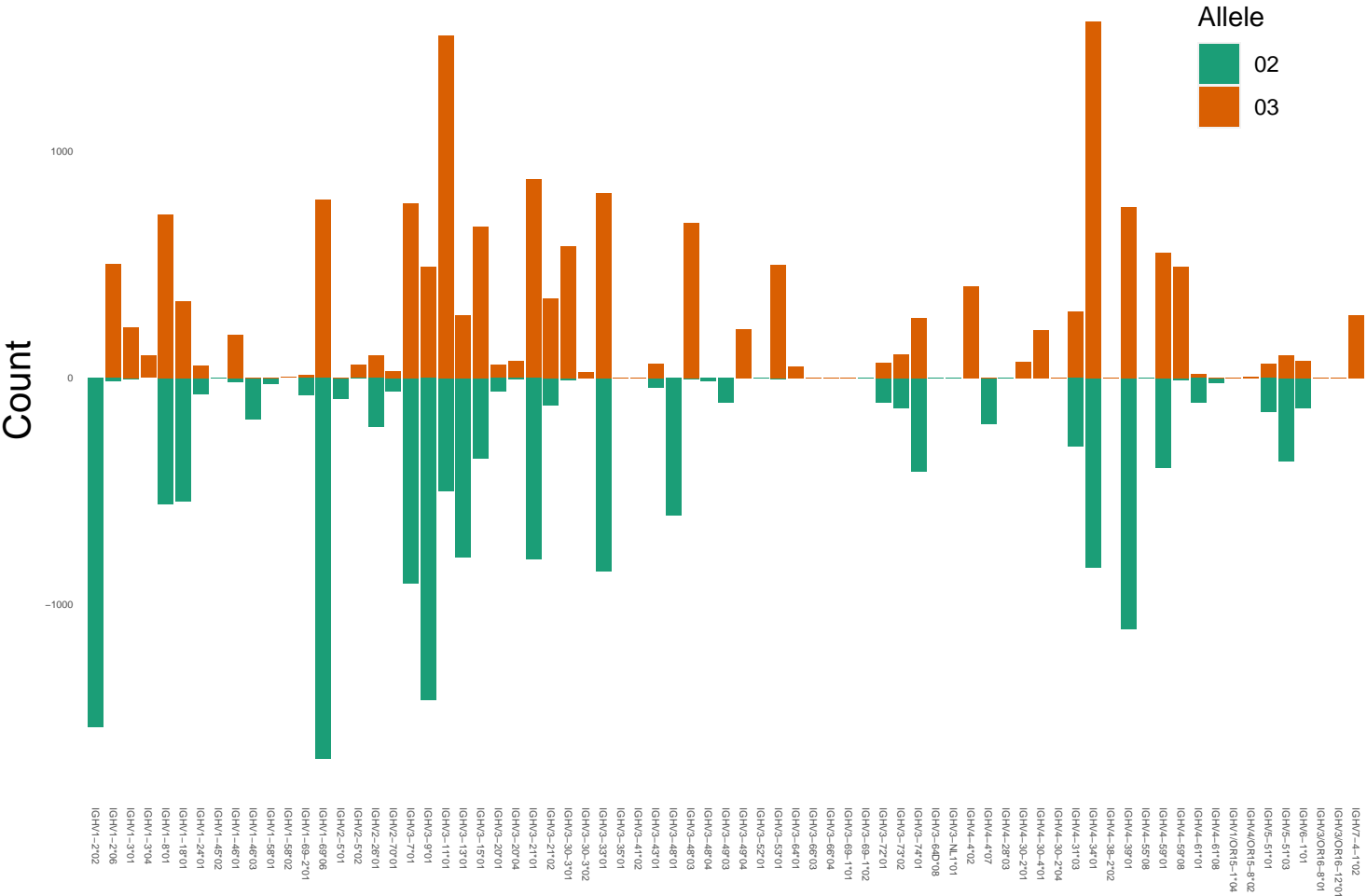
IGHV7-81*01

1 sequences assigned
No exact matches.





Sequence Count by IGHJ6 allele usage



[illegible]