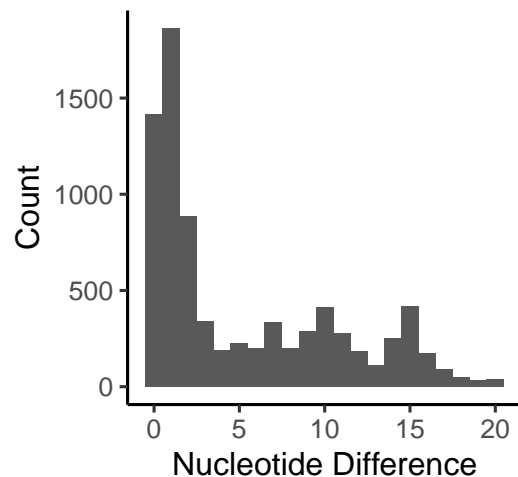


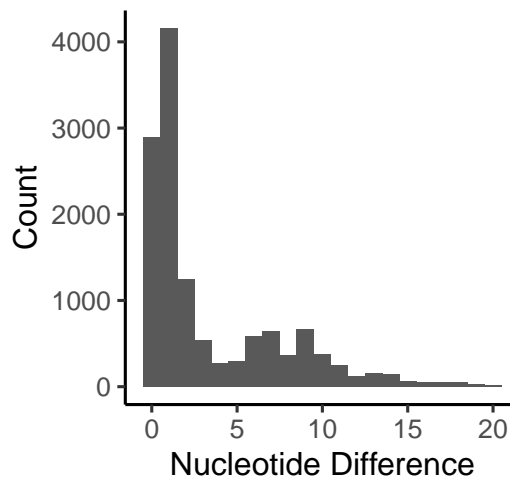
IGHV1-2*02

8684 sequences assigned
1418 (16.3%) exact matches, in which:
1139 unique CDR3
6 unique J



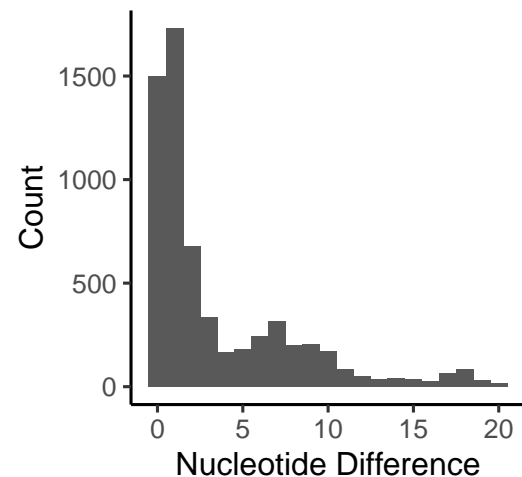
IGHV1-18*01

14929 sequences assigned
2891 (19.4%) exact matches, in which:
2206 unique CDR3
6 unique J



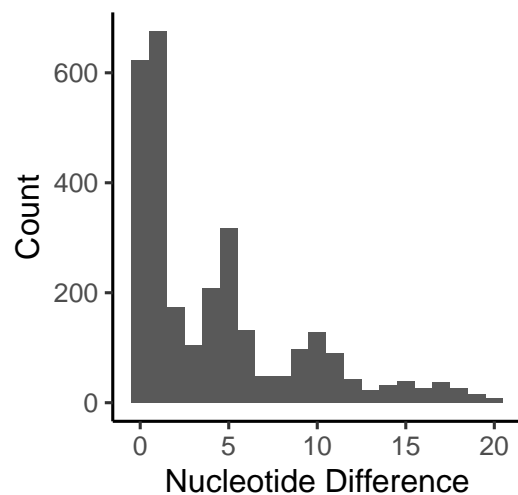
IGHV1-46*01

9089 sequences assigned
1500 (16.5%) exact matches, in which:
1249 unique CDR3
6 unique J



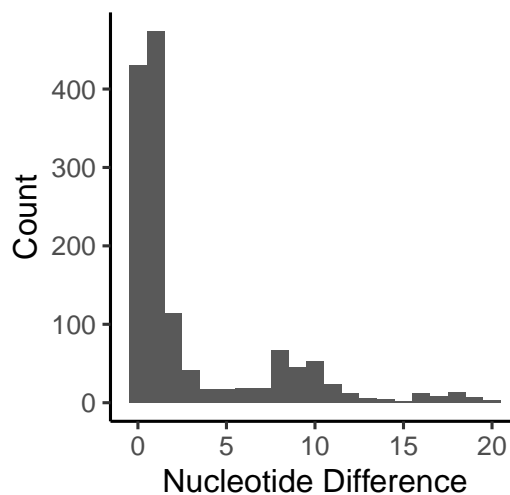
IGHV1-3*01_05

2944 sequences assigned
622 (21.1%) exact matches, in which:
502 unique CDR3
6 unique J



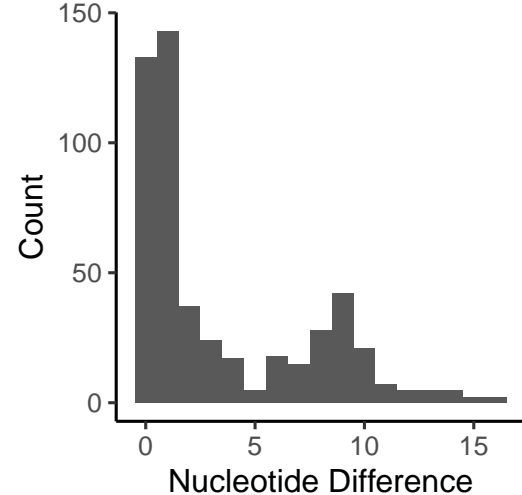
IGHV1-24*01

1430 sequences assigned
431 (30.1%) exact matches, in which:
357 unique CDR3
6 unique J



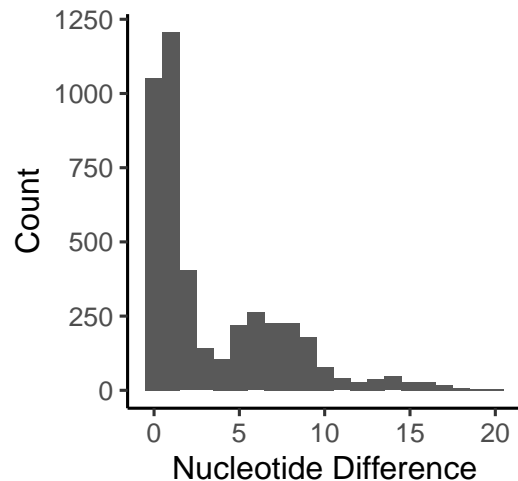
IGHV1-58*02

514 sequences assigned
133 (25.9%) exact matches, in which:
106 unique CDR3
5 unique J



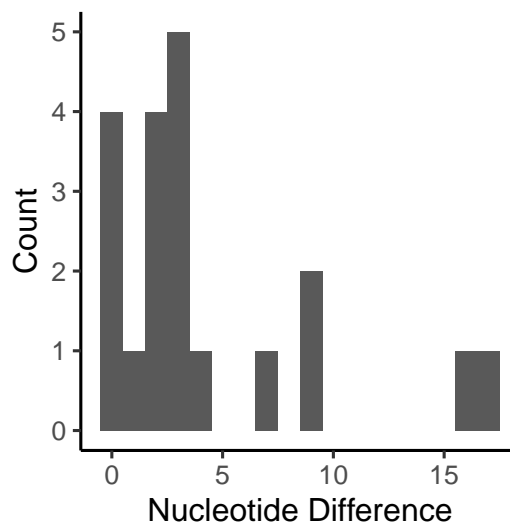
IGHV1-8*01

4460 sequences assigned
1053 (23.6%) exact matches, in which:
875 unique CDR3
6 unique J



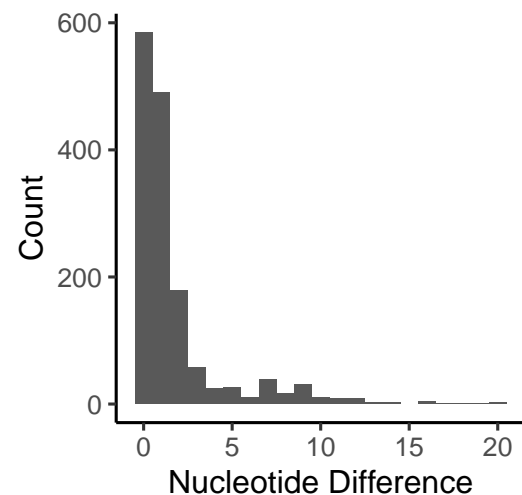
IGHV1-45*03

21 sequences assigned
4 (19%) exact matches, in which:
4 unique CDR3
2 unique J



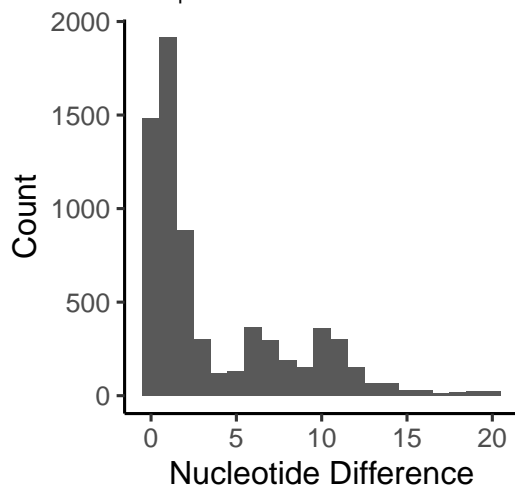
IGHV1-69*02

1605 sequences assigned
585 (36.4%) exact matches, in which:
518 unique CDR3
6 unique J



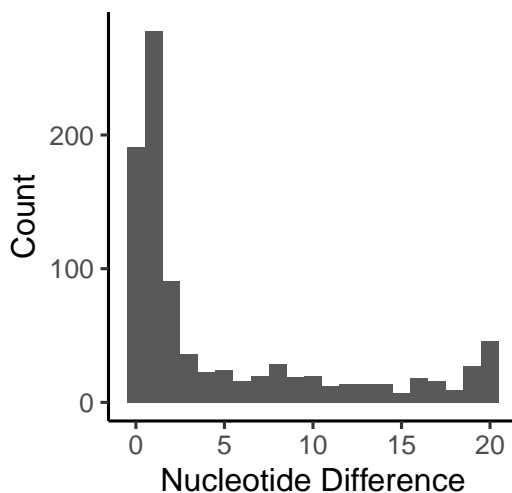
IGHV1-69*04_09

7048 sequences assigned
1484 (21.1%) exact matches, in which:
1248 unique CDR3
6 unique J



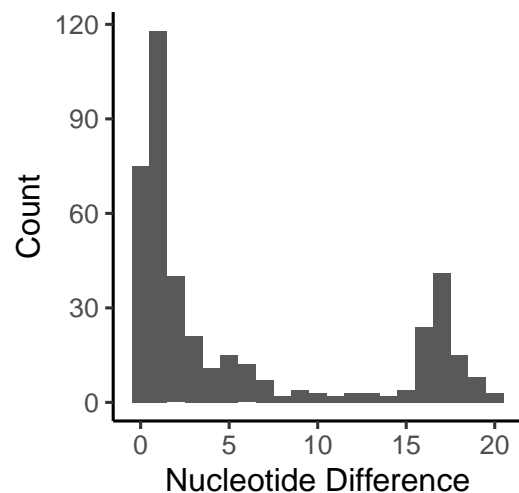
IGHV2-5*02

1187 sequences assigned
191 (16.1%) exact matches, in which:
145 unique CDR3
6 unique J



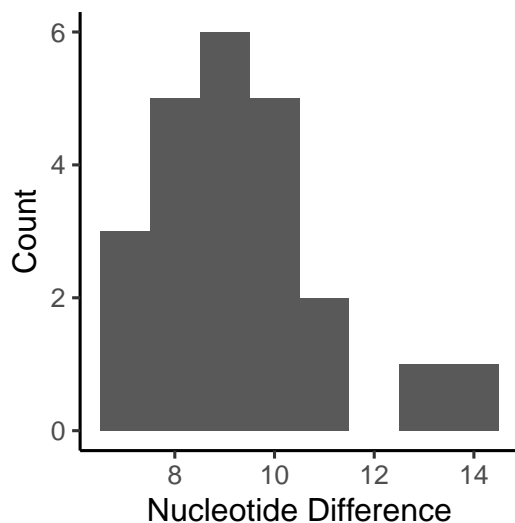
IGHV2-70*11_15

457 sequences assigned
75 (16.4%) exact matches, in which:
53 unique CDR3
4 unique J



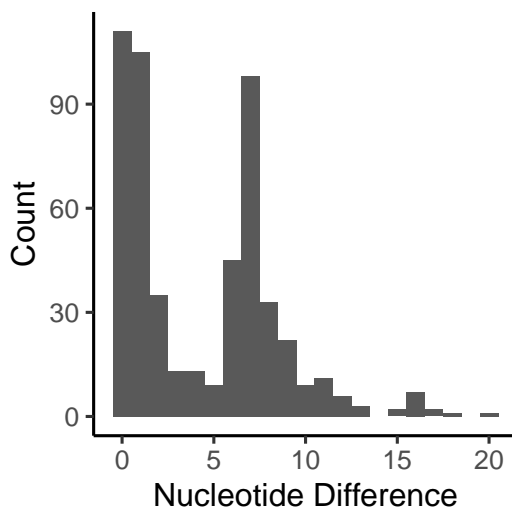
IGHV1-NL1*01

23 sequences assigned
No exact matches.



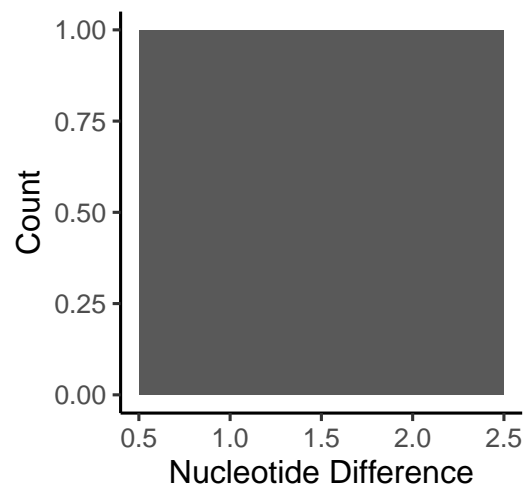
IGHV2-26*01

528 sequences assigned
111 (21%) exact matches, in which:
95 unique CDR3
5 unique J



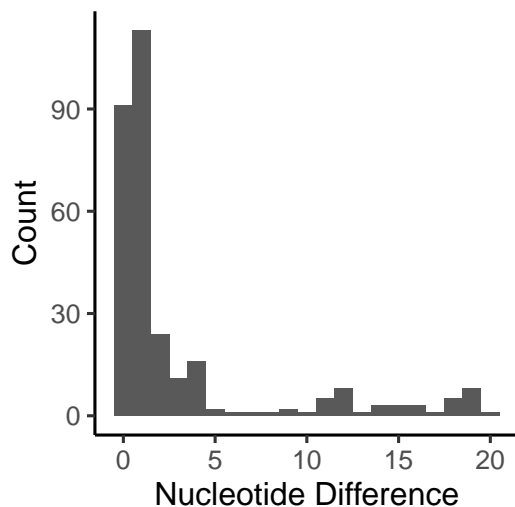
IGHV2-70D*04

2 sequences assigned
No exact matches.



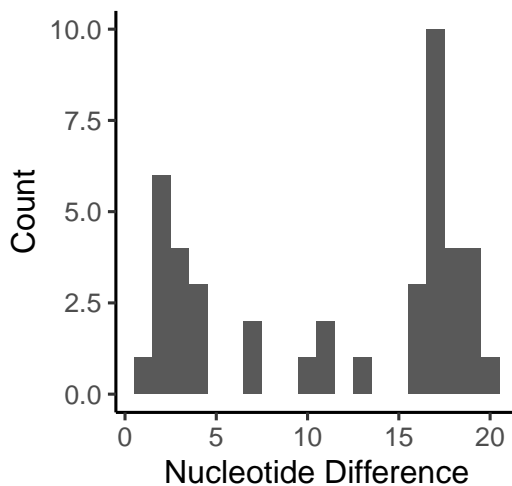
IGHV2-5*01

312 sequences assigned
91 (29.2%) exact matches, in which:
72 unique CDR3
6 unique J



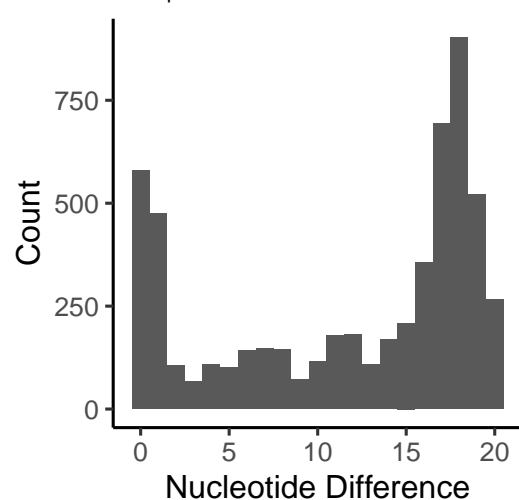
IGHV2-70*12

782 sequences assigned
No exact matches.



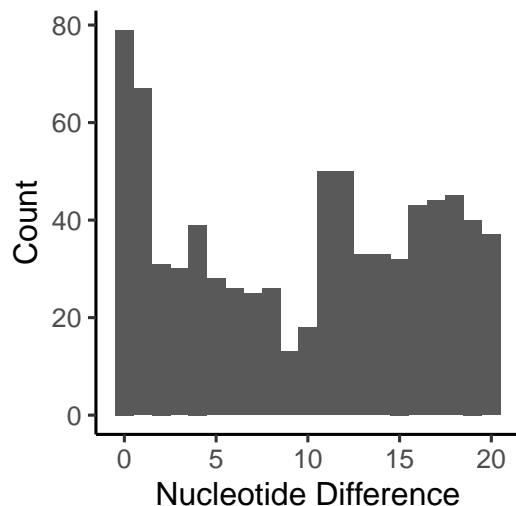
IGHV3-7*01

8500 sequences assigned
579 (6.8%) exact matches, in which:
411 unique CDR3
6 unique J



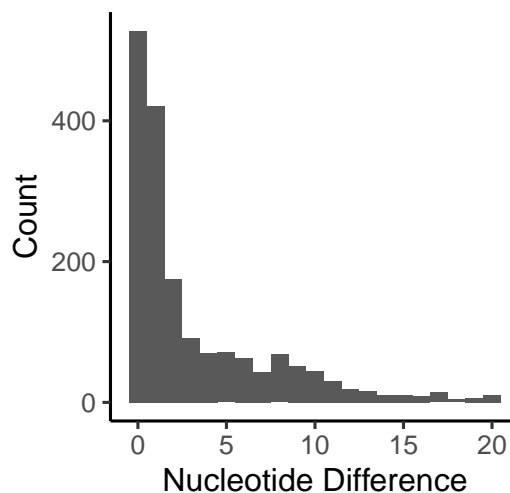
IGHV3-7*03

1147 sequences assigned
79 (6.9%) exact matches, in which:
67 unique CDR3
6 unique J



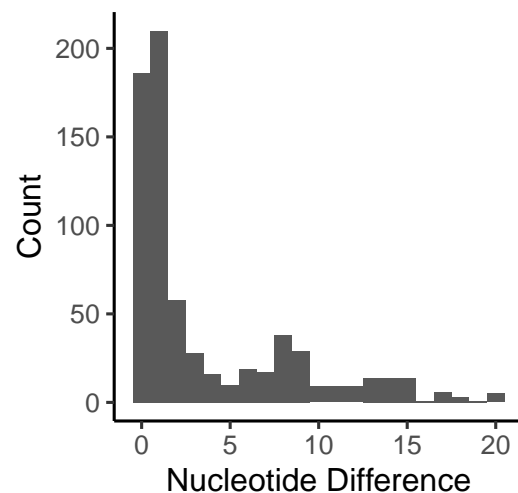
IGHV3-11*01

2630 sequences assigned
528 (20.1%) exact matches, in which:
370 unique CDR3
6 unique J



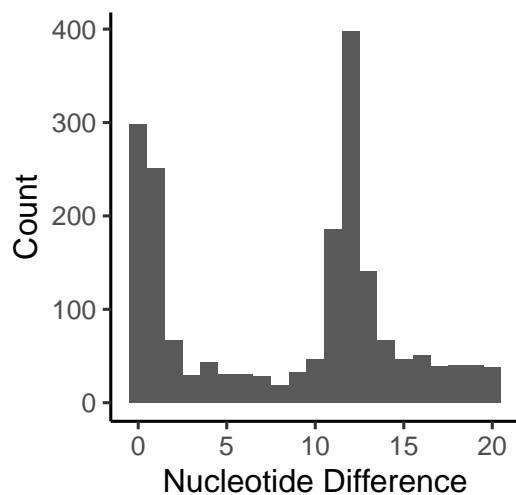
IGHV3-13*01

1112 sequences assigned
186 (16.7%) exact matches, in which:
123 unique CDR3
6 unique J



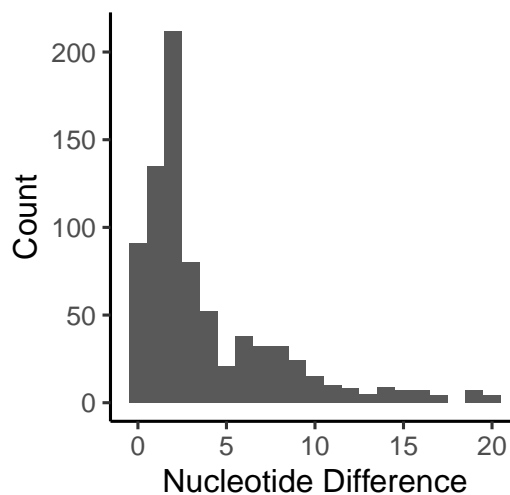
IGHV3-7*05

2116 sequences assigned
298 (14.1%) exact matches, in which:
205 unique CDR3
6 unique J



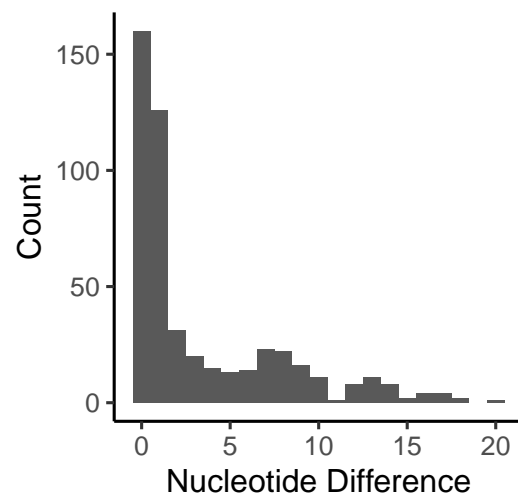
IGHV3-11*04

864 sequences assigned
91 (10.5%) exact matches, in which:
88 unique CDR3
5 unique J



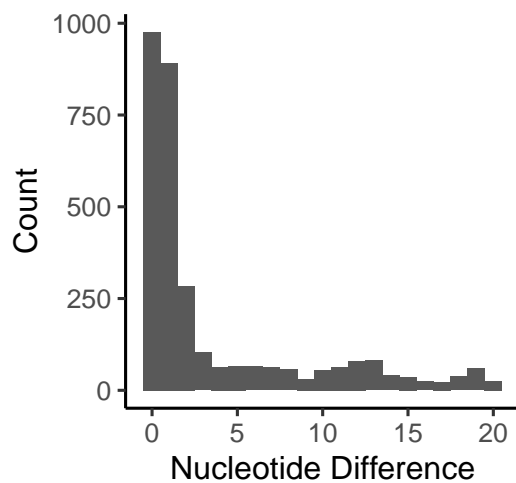
IGHV3-13*04

508 sequences assigned
160 (31.5%) exact matches, in which:
109 unique CDR3
6 unique J



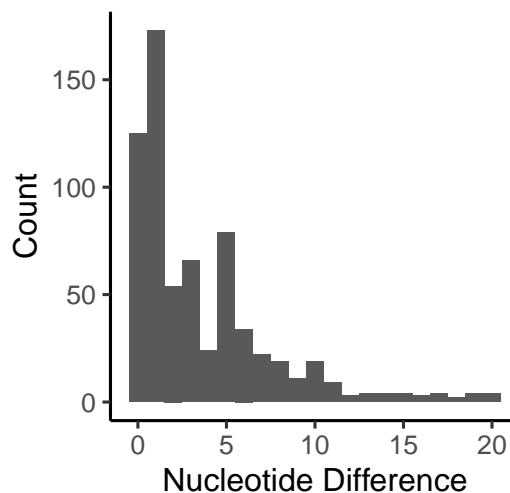
IGHV3-9*01

3399 sequences assigned
976 (28.7%) exact matches, in which:
580 unique CDR3
6 unique J



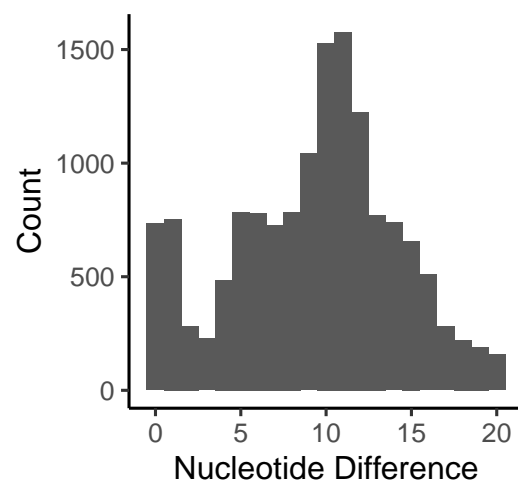
IGHV3-11*06

727 sequences assigned
125 (17.2%) exact matches, in which:
118 unique CDR3
4 unique J



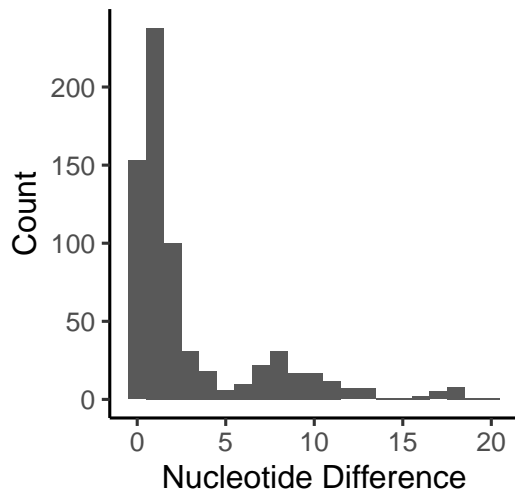
IGHV3-15*01_02

15448 sequences assigned
734 (4.8%) exact matches, in which:
420 unique CDR3
6 unique J



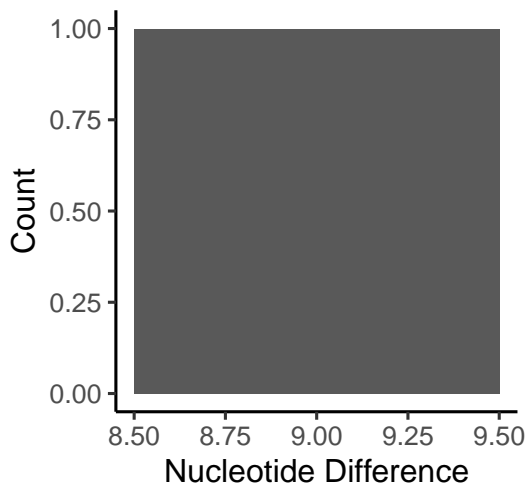
IGHV3-20*03_04

947 sequences assigned
153 (16.2%) exact matches, in which:
87 unique CDR3
5 unique J



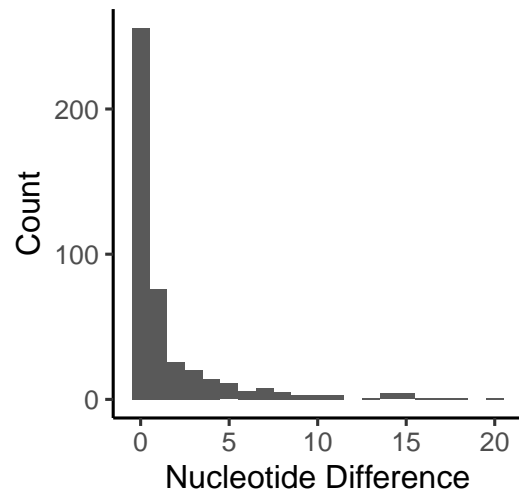
IGHV3-22*01_02

1 sequences assigned
No exact matches.



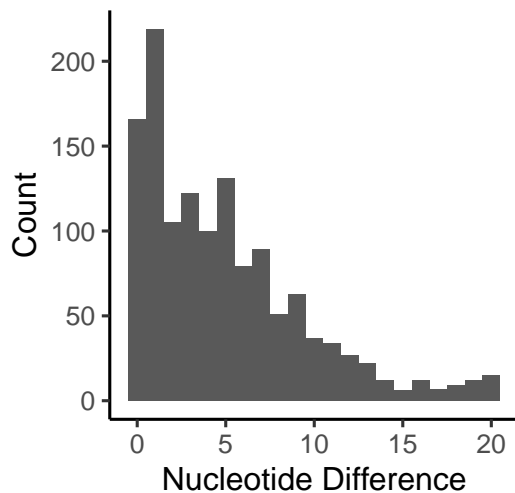
IGHV3-30*03

547 sequences assigned
256 (46.8%) exact matches, in which:
238 unique CDR3
6 unique J



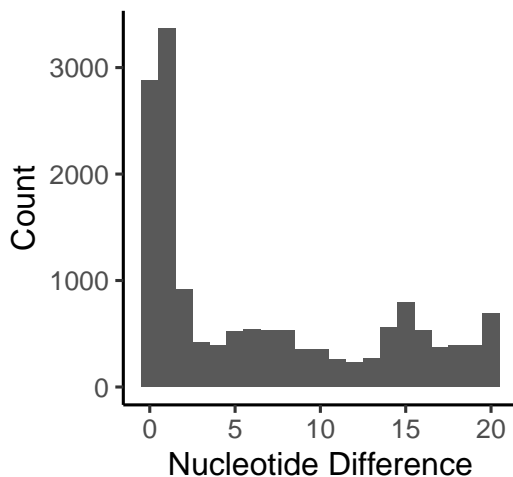
IGHV3-21*04

1422 sequences assigned
166 (11.7%) exact matches, in which:
144 unique CDR3
6 unique J



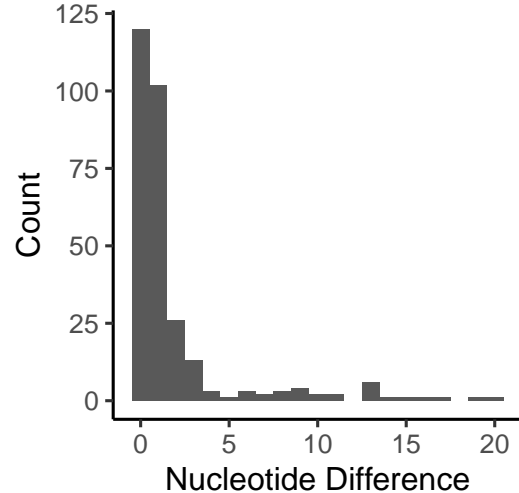
IGHV3-23*01_04

20608 sequences assigned
2881 (14%) exact matches, in which:
1653 unique CDR3
6 unique J



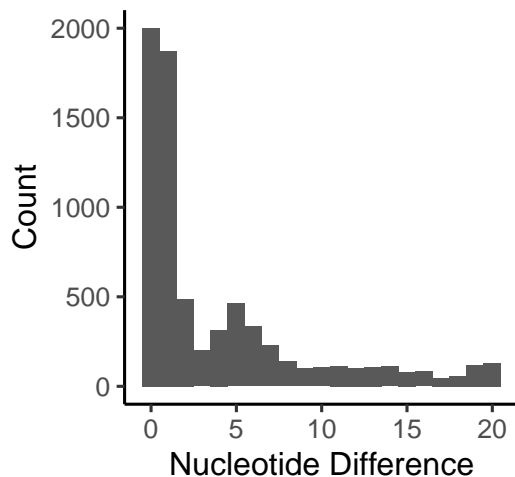
IGHV3-30*19

326 sequences assigned
120 (36.8%) exact matches, in which:
110 unique CDR3
6 unique J



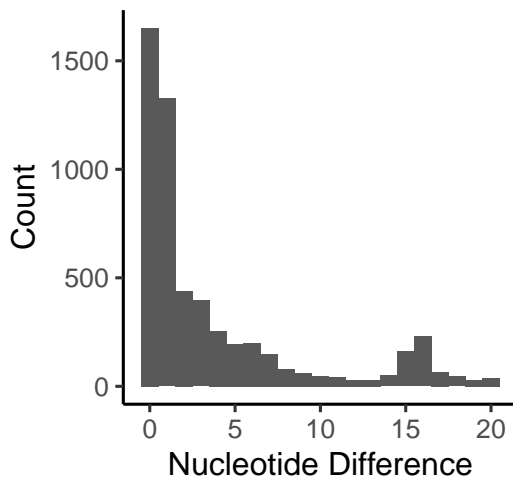
IGHV3-21*01_02

8832 sequences assigned
2001 (22.7%) exact matches, in which:
1253 unique CDR3
6 unique J



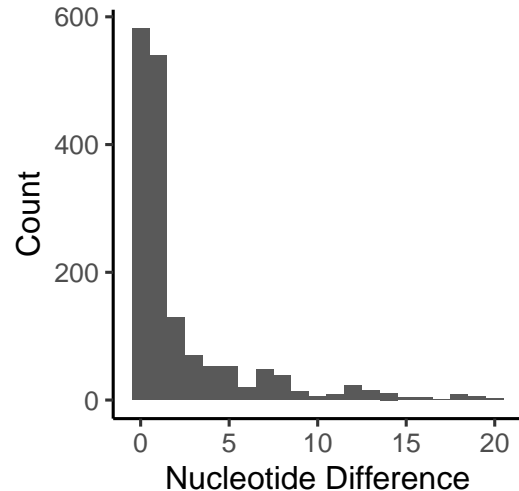
IGHV3-30-3*01

5752 sequences assigned
1651 (28.7%) exact matches, in which:
1139 unique CDR3
6 unique J



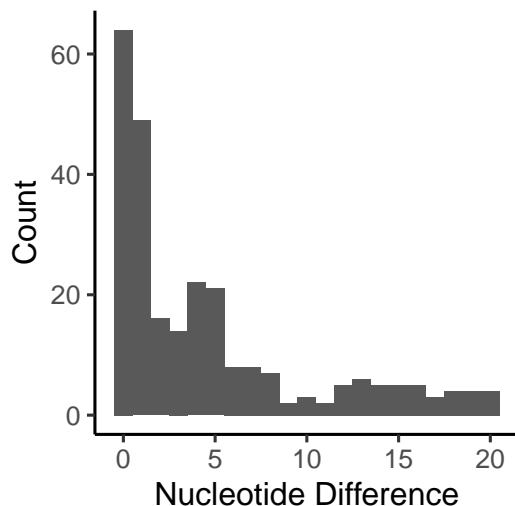
IGHV3-33*01

2098 sequences assigned
582 (27.7%) exact matches, in which:
398 unique CDR3
6 unique J



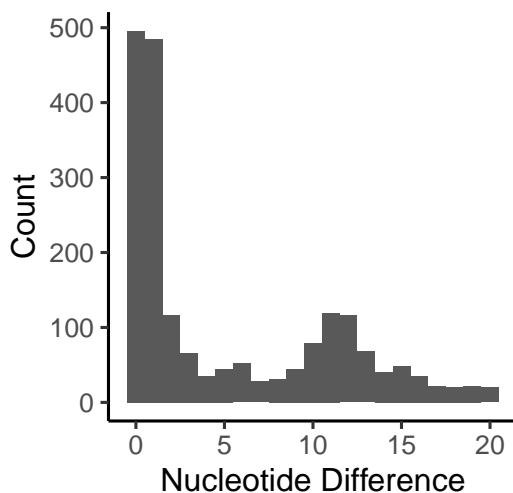
IGHV3-33*05

284 sequences assigned
64 (22.5%) exact matches, in which:
61 unique CDR3
5 unique J



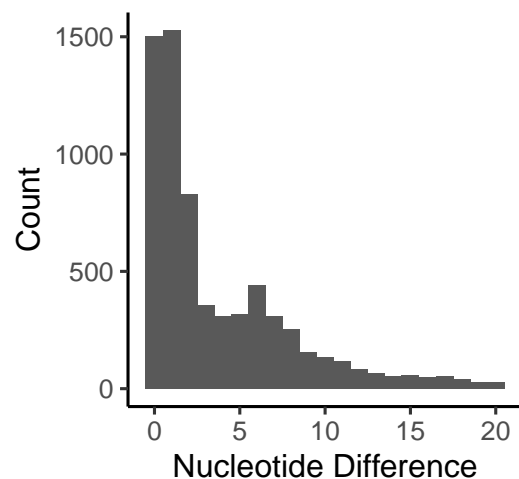
IGHV3-43*02

2239 sequences assigned
496 (22.2%) exact matches, in which:
284 unique CDR3
6 unique J



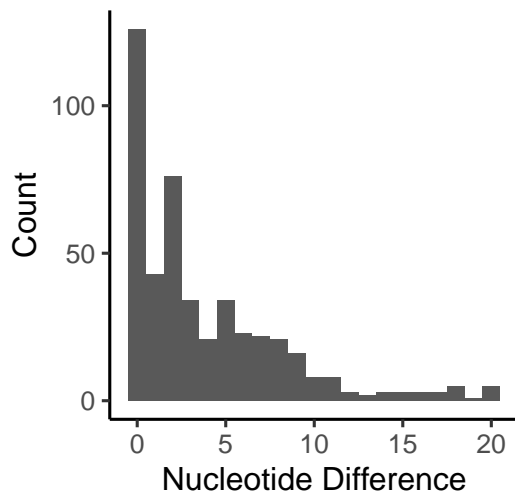
IGHV3-48*03

7692 sequences assigned
1501 (19.5%) exact matches, in which:
895 unique CDR3
6 unique J



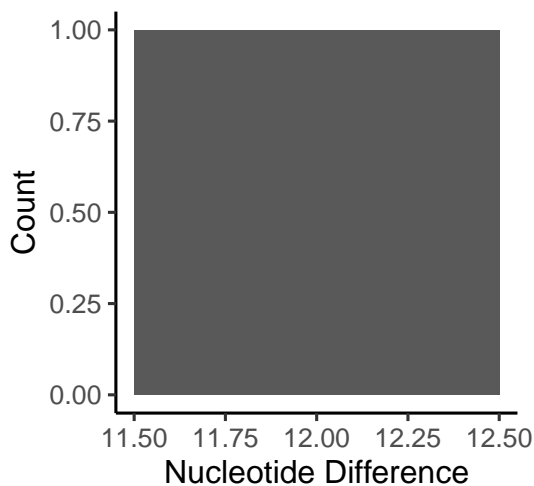
IGHV3-33*08

602 sequences assigned
126 (20.9%) exact matches, in which:
101 unique CDR3
4 unique J



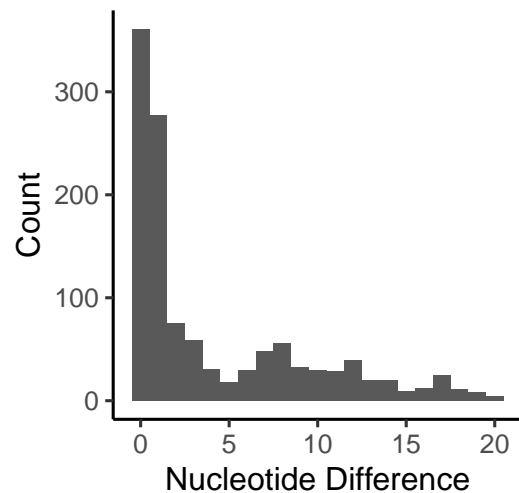
IGHV3-47*01

1 sequences assigned
No exact matches.



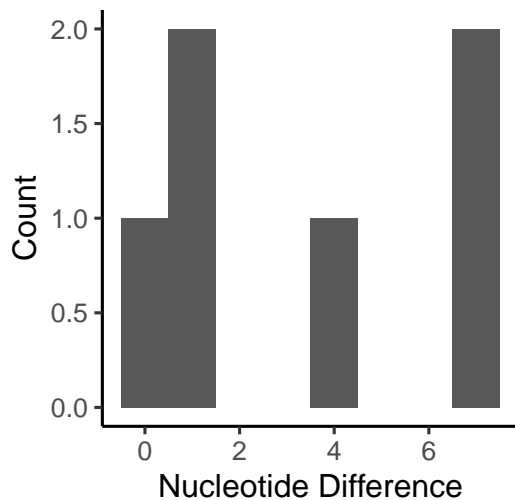
IGHV3-49*04

2049 sequences assigned
361 (17.6%) exact matches, in which:
223 unique CDR3
6 unique J



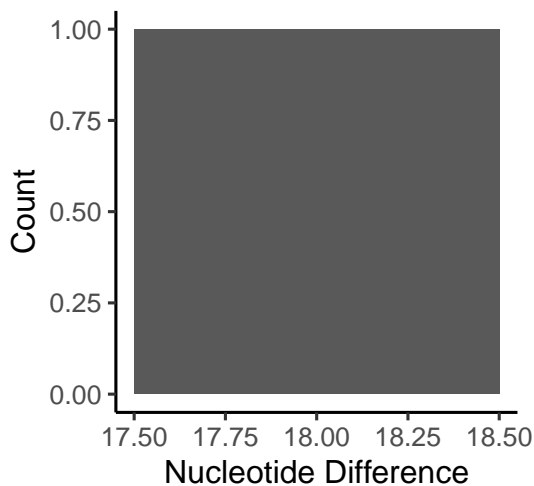
IGHV3-35*01

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



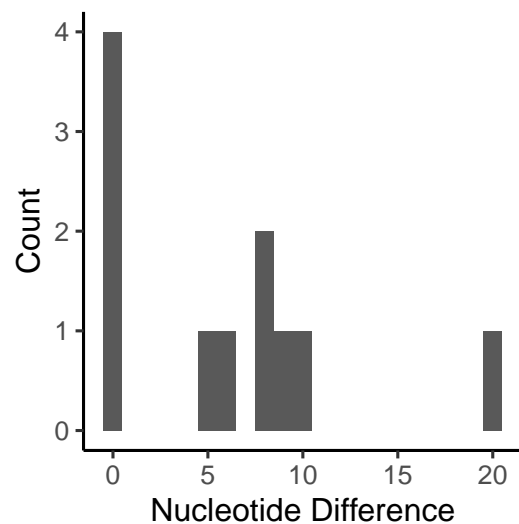
IGHV3-47*02

1 sequences assigned
No exact matches.



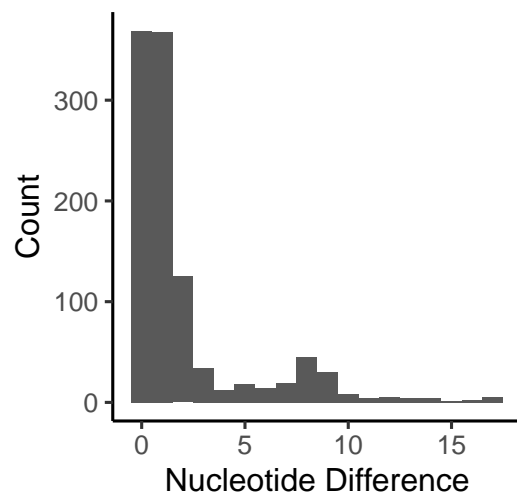
IGHV3-52*01_03

11 sequences assigned
4 (36.4%) exact matches, in which:
4 unique CDR3
4 unique J



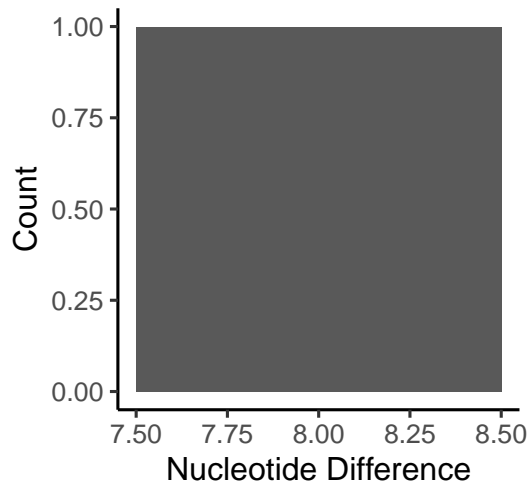
IGHV3-53*04

1125 sequences assigned
369 (32.8%) exact matches, in which:
247 unique CDR3
5 unique J



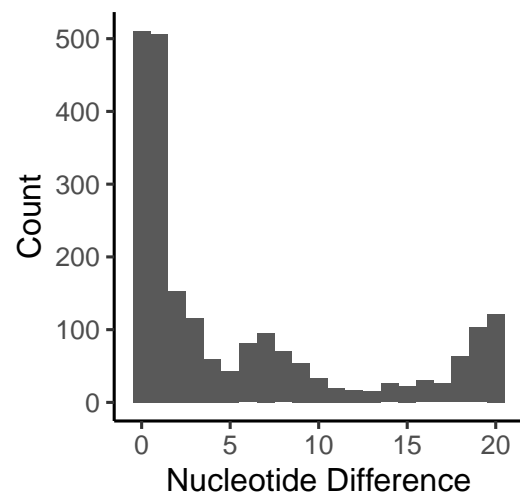
IGHV3-62*04

1 sequences assigned
No exact matches.



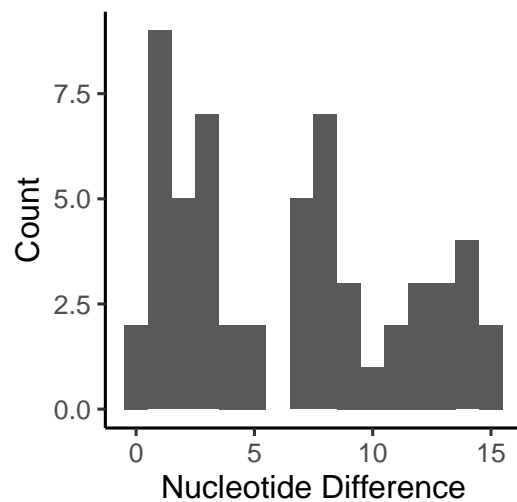
IGHV3-66*01

5644 sequences assigned
511 (9.1%) exact matches, in which:
373 unique CDR3
5 unique J



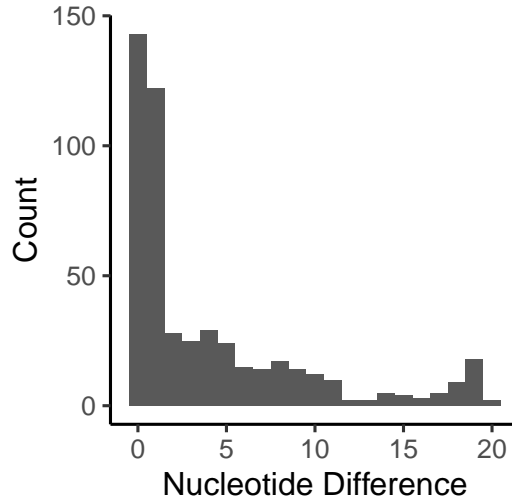
IGHV3-53*05

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



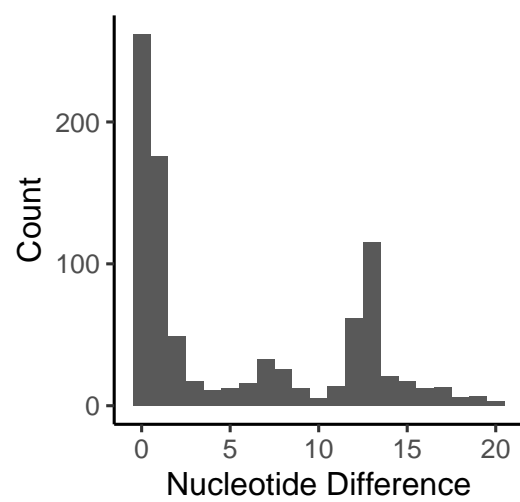
IGHV3-64*01

523 sequences assigned
143 (27.3%) exact matches, in which:
88 unique CDR3
5 unique J



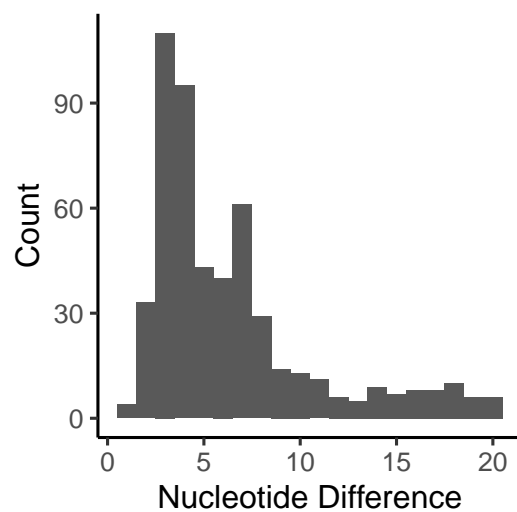
IGHV3-66*02

1072 sequences assigned
262 (24.4%) exact matches, in which:
184 unique CDR3
5 unique J



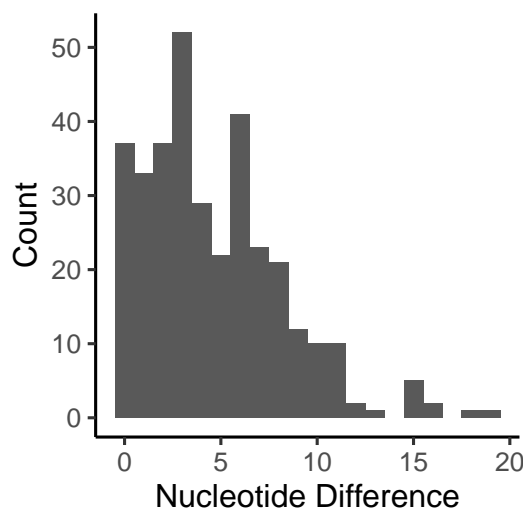
IGHV3-53*01_02

635 sequences assigned
No exact matches.



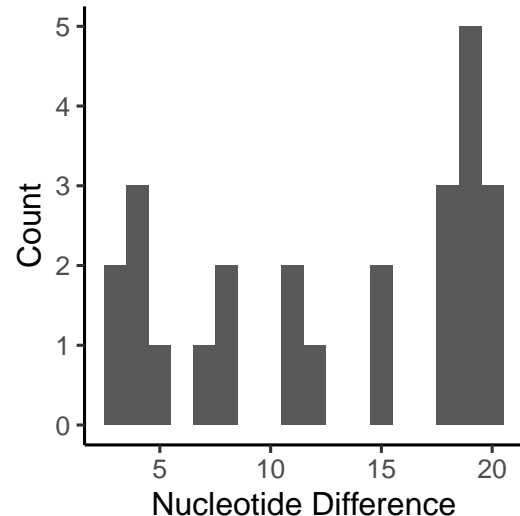
IGHV3-64*04

363 sequences assigned
37 (10.2%) exact matches, in which:
36 unique CDR3
4 unique J



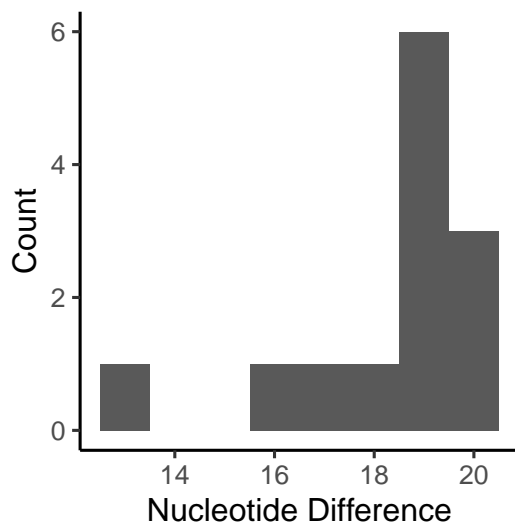
IGHV3-69-1*01

45 sequences assigned
No exact matches.



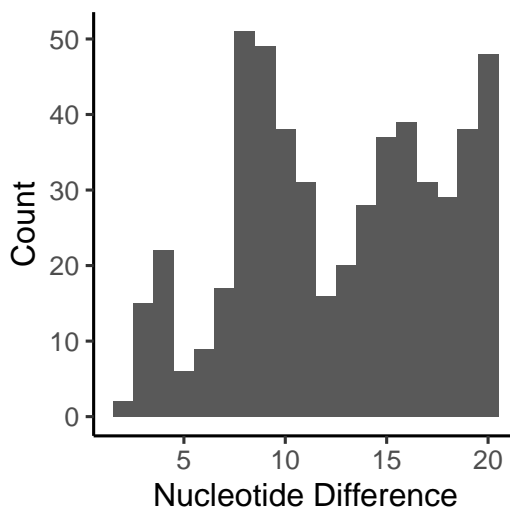
IGHV3-69-1*02

26 sequences assigned
No exact matches.



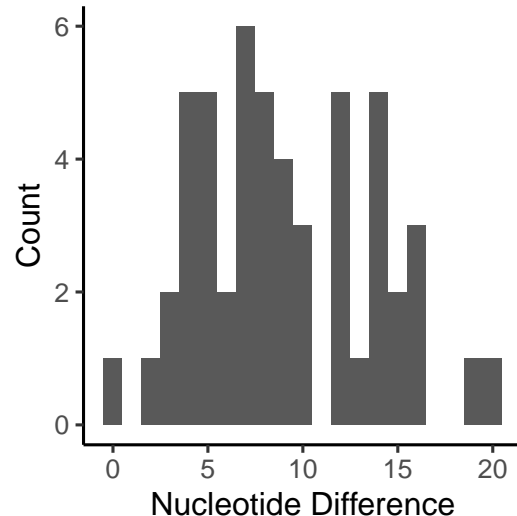
IGHV3-74*03

1870 sequences assigned
No exact matches.



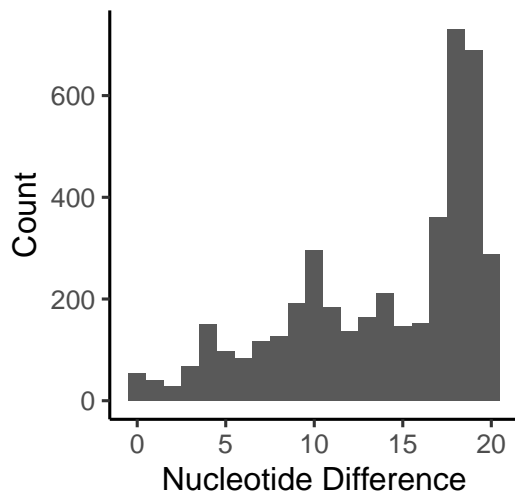
IGHV3-NL1*01

59 sequences assigned
1 (1.7%) exact matches, in which:
1 unique CDR3
1 unique J



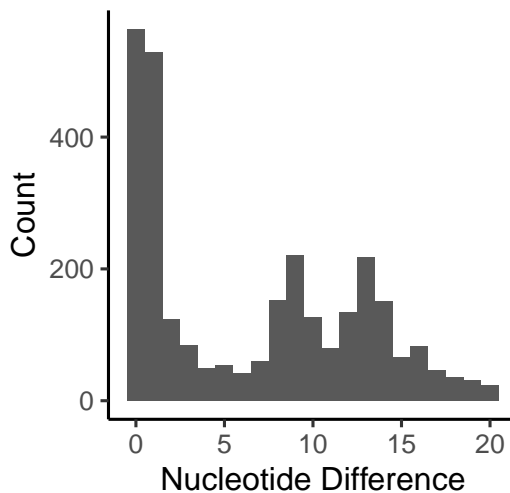
IGHV3-72*01

5838 sequences assigned
54 (0.9%) exact matches, in which:
34 unique CDR3
5 unique J



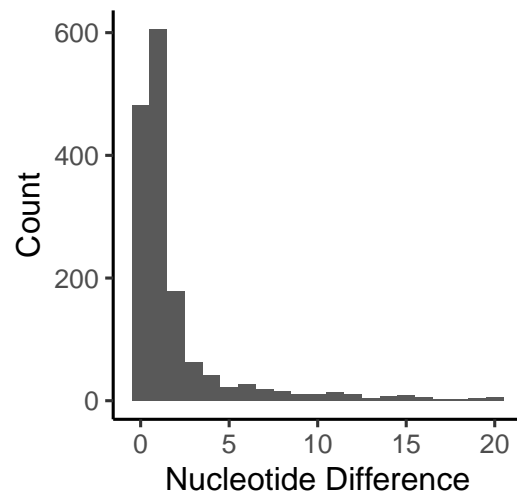
IGHV3-74*01_02

3270 sequences assigned
564 (17.2%) exact matches, in which:
377 unique CDR3
6 unique J



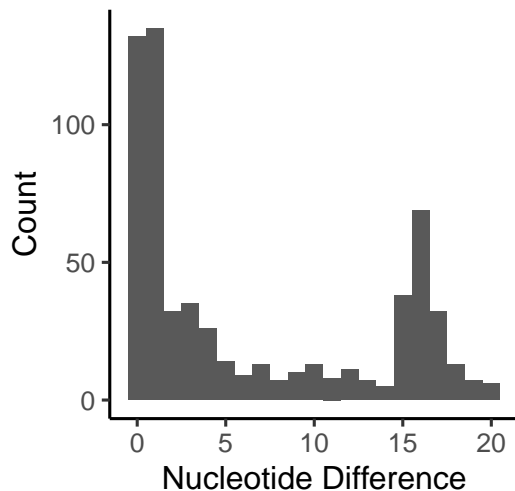
IGHV4-4*07

1668 sequences assigned
481 (28.8%) exact matches, in which:
404 unique CDR3
6 unique J



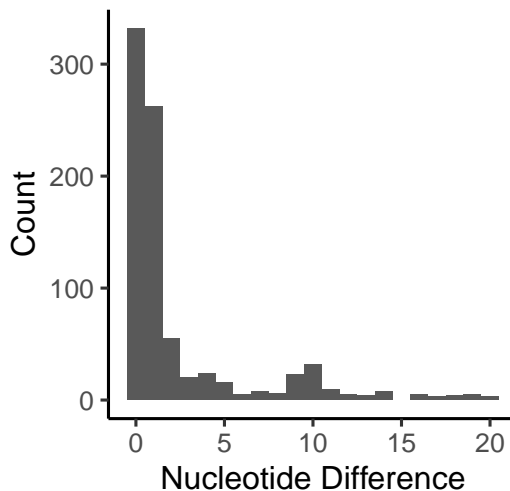
IGHV3-73*01_02

987 sequences assigned
132 (13.4%) exact matches, in which:
81 unique CDR3
5 unique J



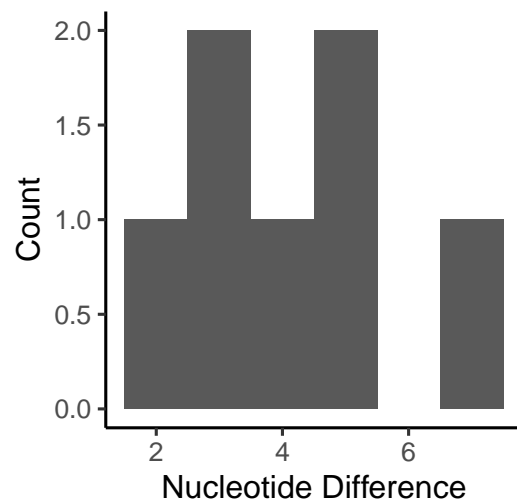
IGHV3-64D*09

941 sequences assigned
332 (35.3%) exact matches, in which:
199 unique CDR3
5 unique J



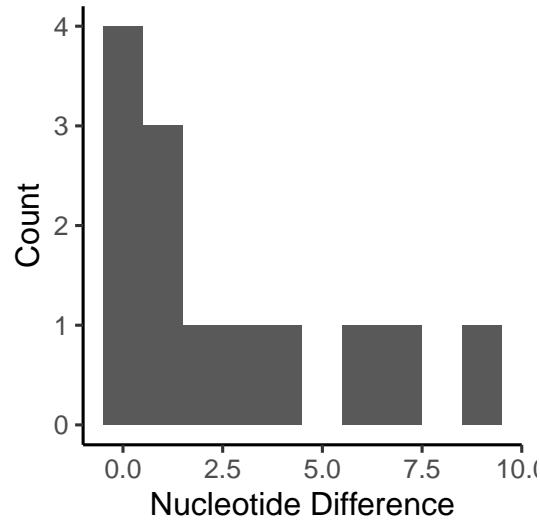
IGHV4-28*03

8 sequences assigned
No exact matches.



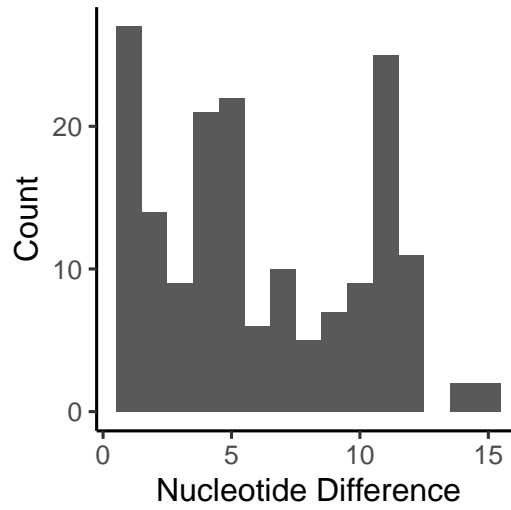
IGHV4-28*02_05

13 sequences assigned
4 (30.8%) exact matches, in which:
3 unique CDR3
3 unique J



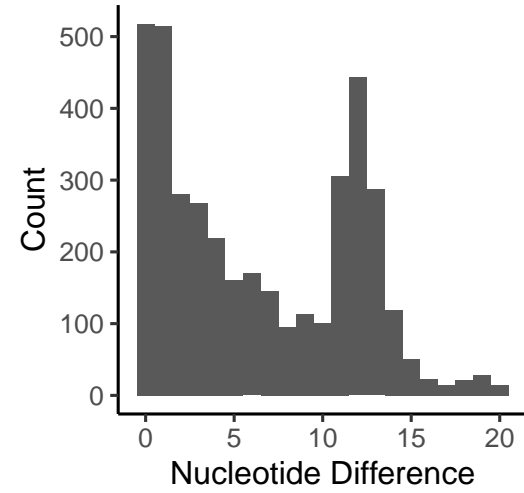
IGHV4-30-2*03

191 sequences assigned
No exact matches.



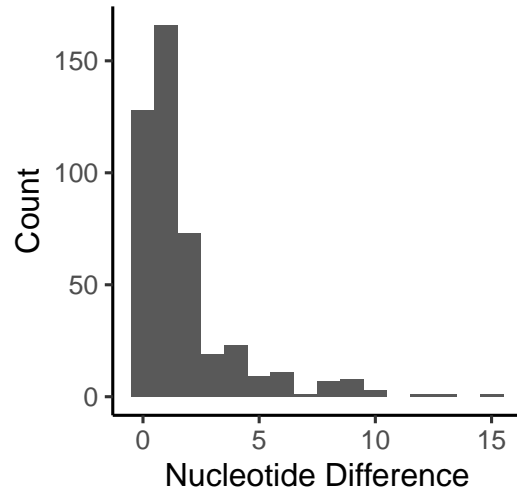
IGHV4-31*02

3981 sequences assigned
518 (13%) exact matches, in which:
414 unique CDR3
6 unique J



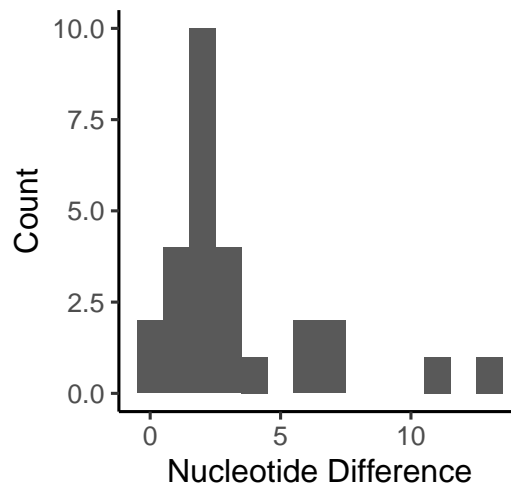
IGHV4-30-2*01

1447 sequences assigned
128 (8.8%) exact matches, in which:
68 unique CDR3
4 unique J



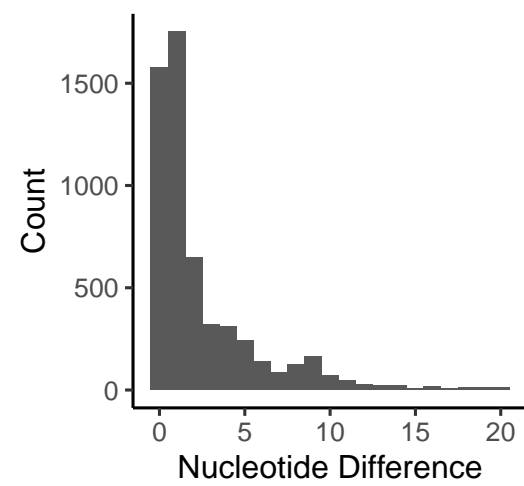
IGHV4-30-2*05

38 sequences assigned
2 (5.3%) exact matches, in which:
2 unique CDR3
1 unique J



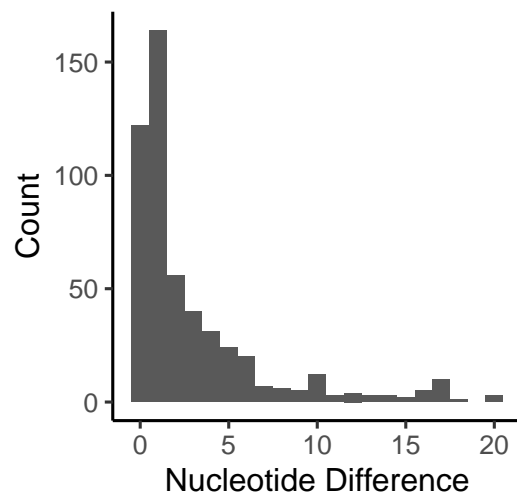
IGHV4-34*01_02

5922 sequences assigned
1579 (26.7%) exact matches, in which:
1124 unique CDR3
6 unique J



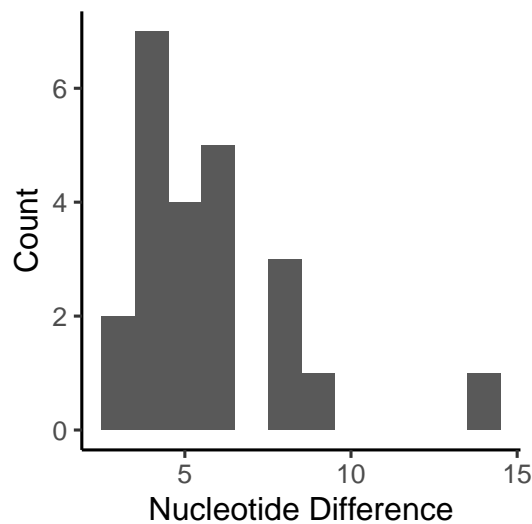
IGHV4-30-4*01

765 sequences assigned
122 (15.9%) exact matches, in which:
92 unique CDR3
4 unique J



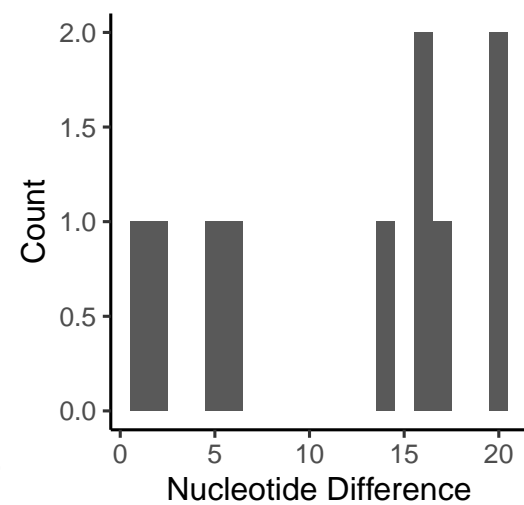
IGHV4-30-4*07

23 sequences assigned
No exact matches.



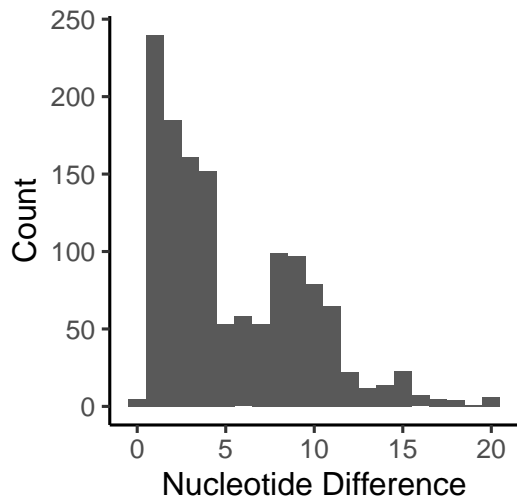
IGHV4-38-2*01

16 sequences assigned
No exact matches.



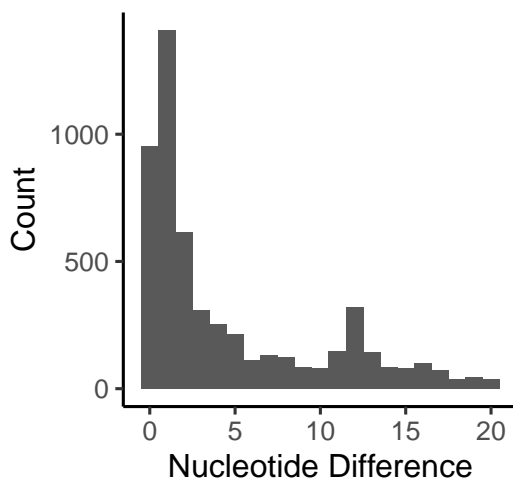
IGHV4–39*07

1550 sequences assigned
5 (0.3%) exact matches, in which:
5 unique CDR3
2 unique J



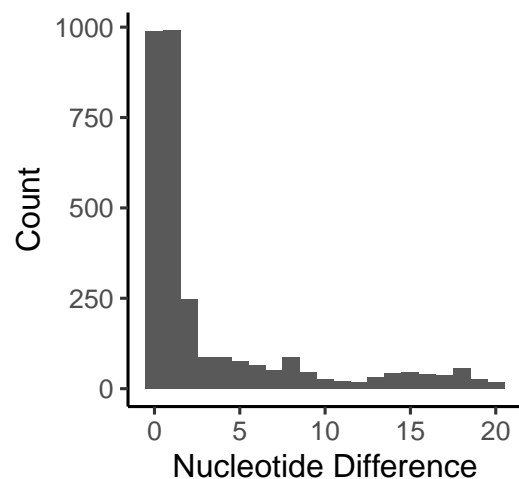
IGHV4–59*08

5883 sequences assigned
954 (16.2%) exact matches, in which:
730 unique CDR3
6 unique J



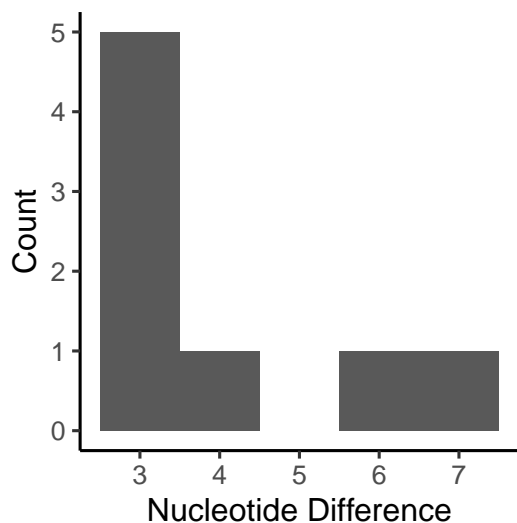
IGHV4–61*02

3252 sequences assigned
990 (30.4%) exact matches, in which:
828 unique CDR3
6 unique J



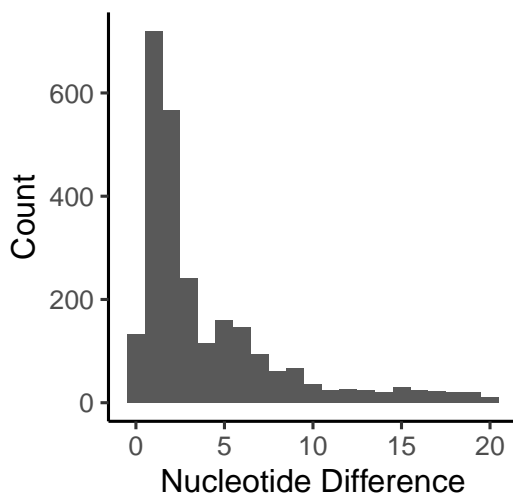
IGHV4–55*09

10 sequences assigned
No exact matches.



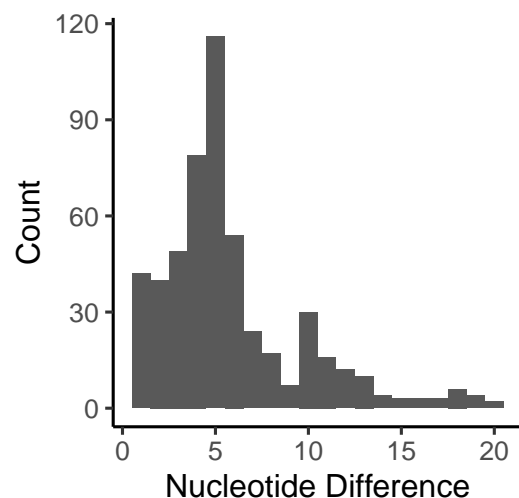
IGHV4–59*12

3345 sequences assigned
133 (4%) exact matches, in which:
126 unique CDR3
6 unique J



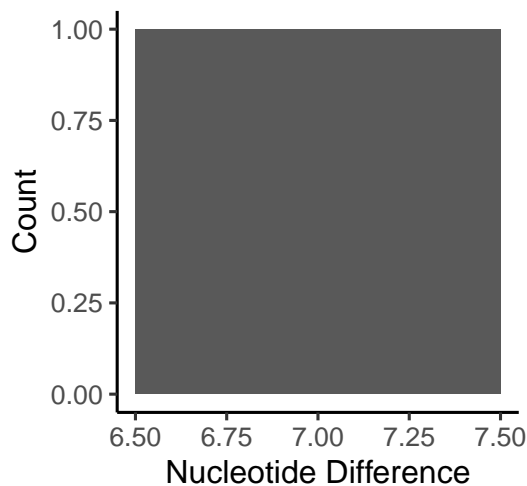
IGHV4–61*08

541 sequences assigned
No exact matches.



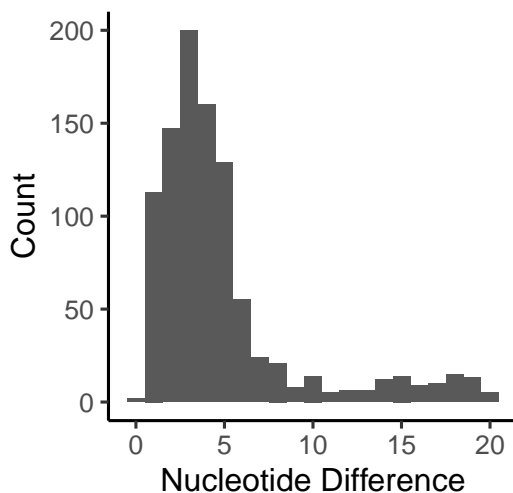
IGHV4–55*02_04_08

1 sequences assigned
No exact matches.



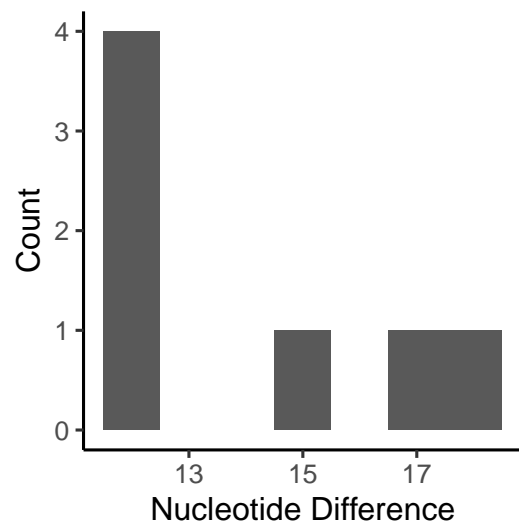
IGHV4–61*01

1019 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
2 unique J



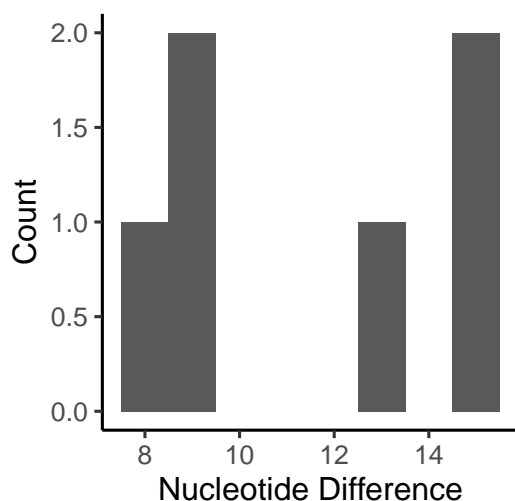
IGHV1/OR15–2*02_03

10 sequences assigned
No exact matches.



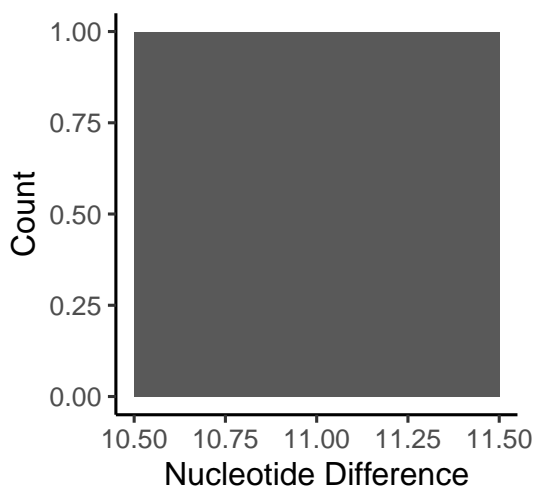
IGHV1/OR15-3*02

7 sequences assigned
No exact matches.



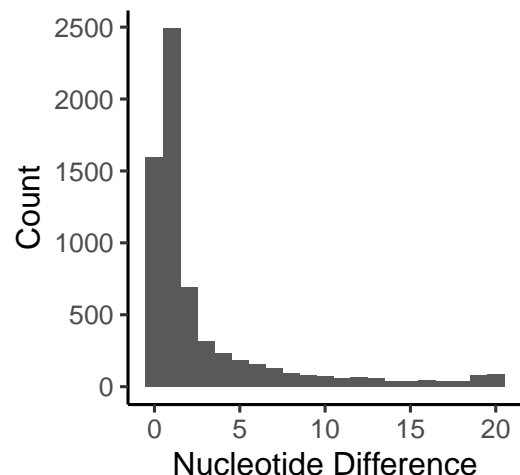
IGHV1/OR15-9*01

1 sequences assigned
No exact matches.



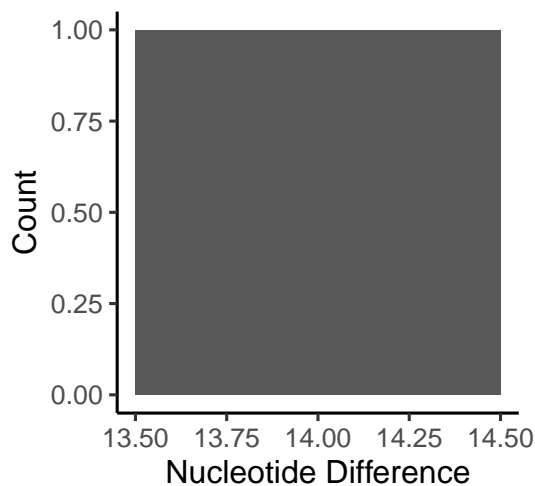
IGHV5-51*01_03

8470 sequences assigned
1594 (18.8%) exact matches, in which:
818 unique CDR3
5 unique J



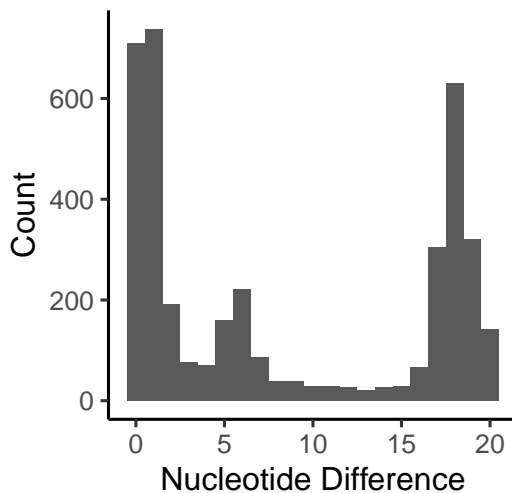
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



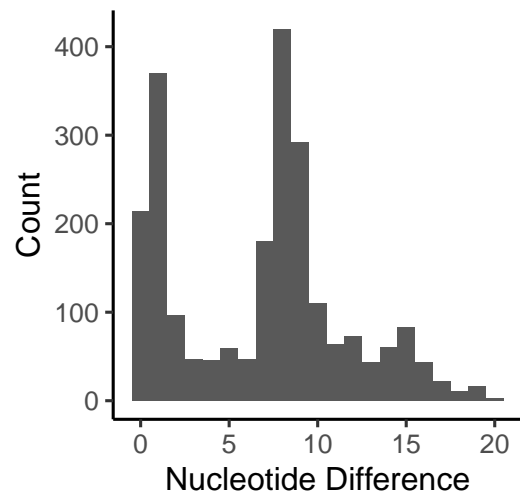
IGHV5-10-1*01_03

4376 sequences assigned
710 (16.2%) exact matches, in which:
468 unique CDR3
5 unique J



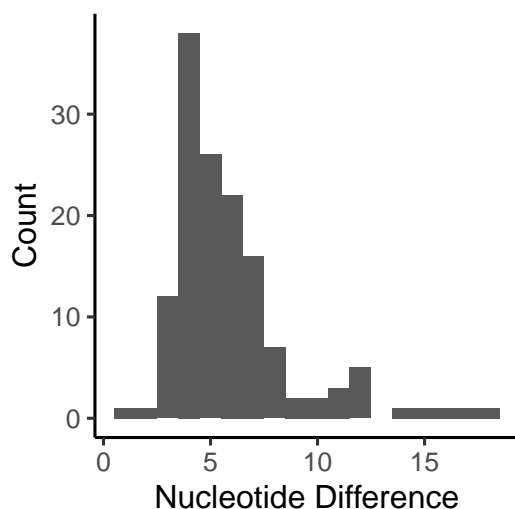
IGHV6-1*01_02

2493 sequences assigned
214 (8.6%) exact matches, in which:
158 unique CDR3
6 unique J



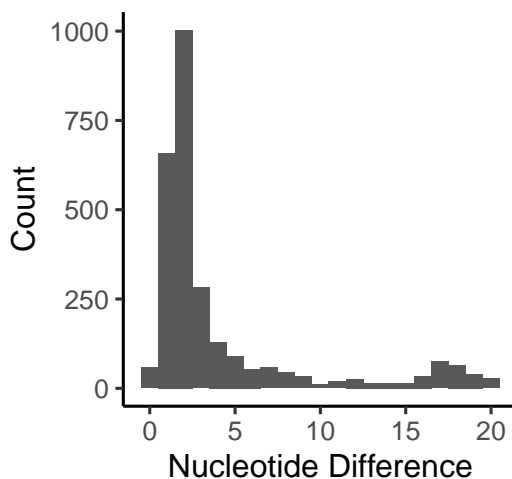
IGHV4/OR15-8*01

144 sequences assigned
No exact matches.



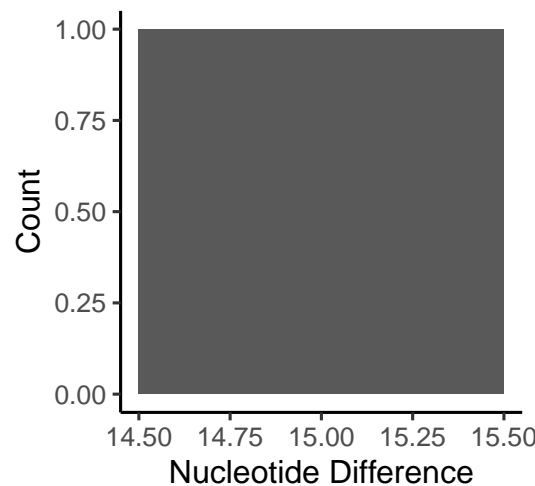
IGHV5-51*07

4002 sequences assigned
58 (1.4%) exact matches, in which:
47 unique CDR3
4 unique J



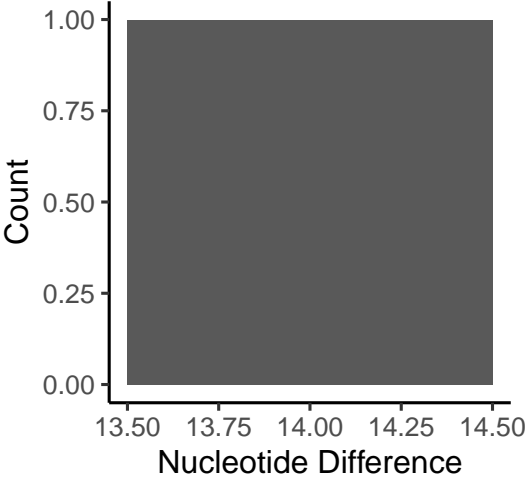
IGHV3/OR16-6*02

4 sequences assigned
No exact matches.



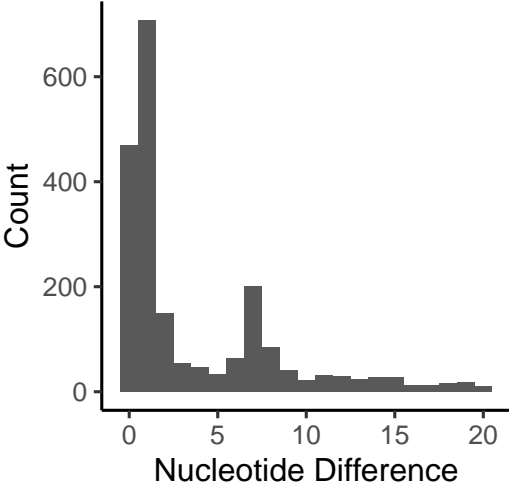
IGHV3/OR16-13*01

1 sequences assigned
No exact matches.



IGHV7-4-1*02

2654 sequences assigned
470 (17.7%) exact matches, in which:
360 unique CDR3
6 unique J



IGHV7-81*01

2 sequences assigned
No exact matches.

