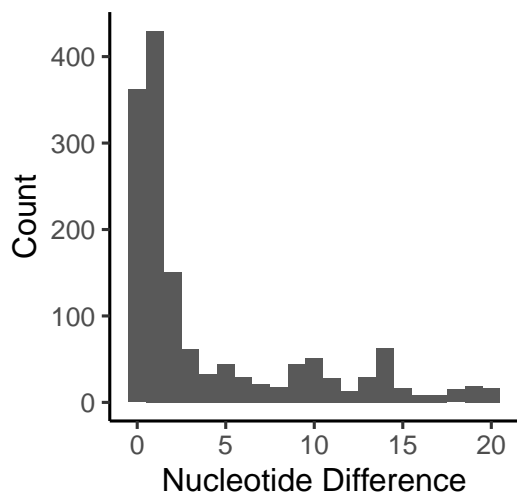


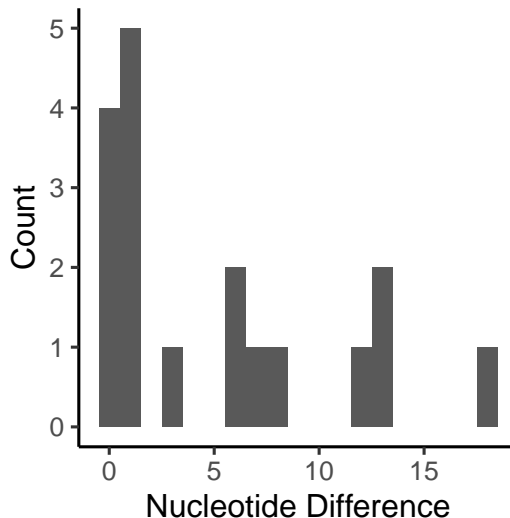
IGHV1-2*04

1539 sequences assigned
362 (23.5%) exact matches, in which:
289 unique CDR3
6 unique J



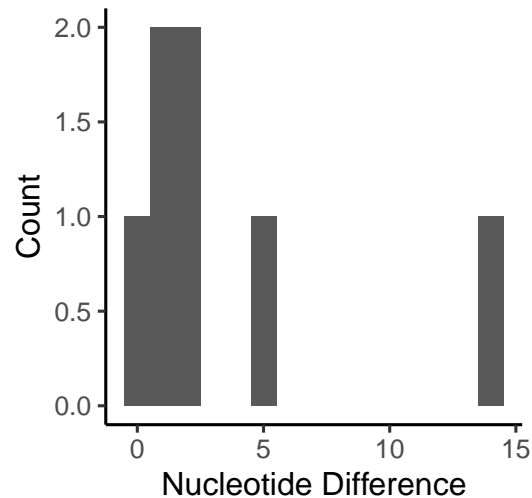
IGHV1-8*01

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



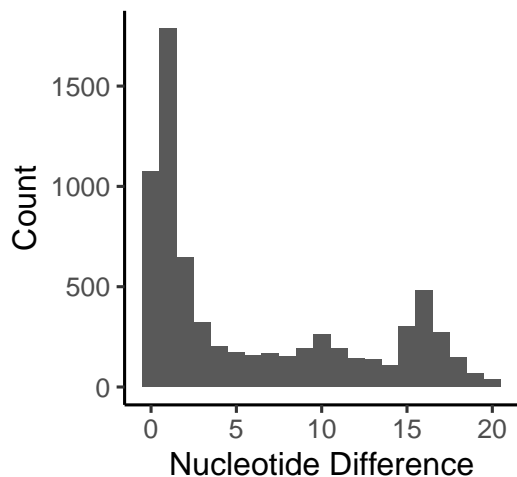
IGHV1-45*02

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



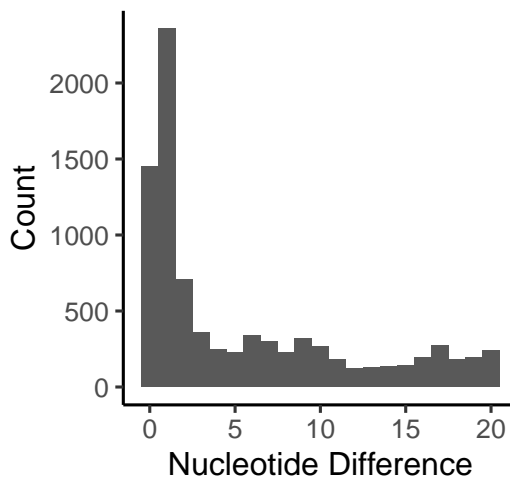
IGHV1-2*06

8323 sequences assigned
1075 (12.9%) exact matches, in which:
800 unique CDR3
6 unique J



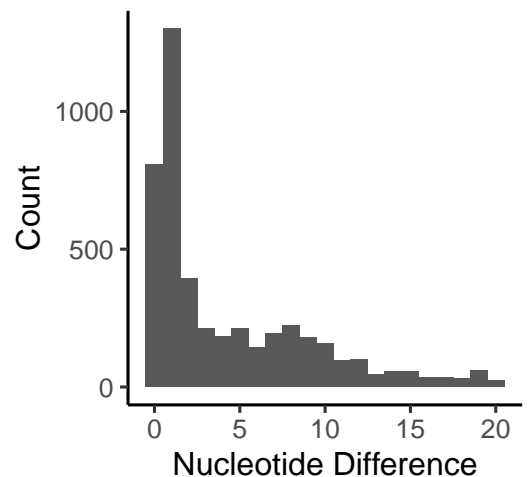
IGHV1-18*01

10517 sequences assigned
1453 (13.8%) exact matches, in which:
1114 unique CDR3
6 unique J



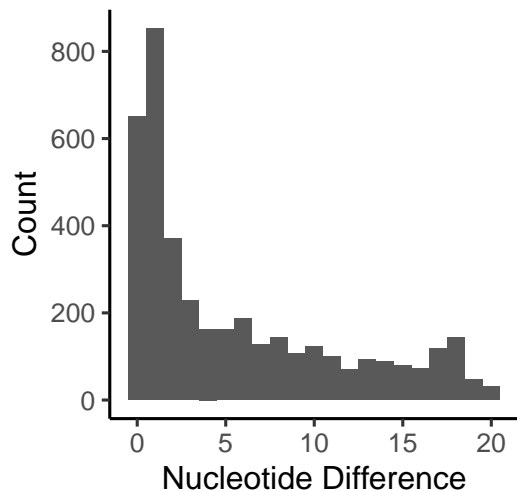
IGHV1-46*01

4803 sequences assigned
809 (16.8%) exact matches, in which:
604 unique CDR3
6 unique J



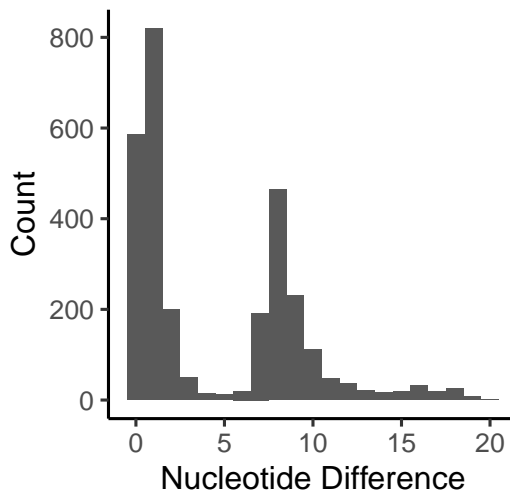
IGHV1-3*01_05

5216 sequences assigned
650 (12.5%) exact matches, in which:
517 unique CDR3
6 unique J



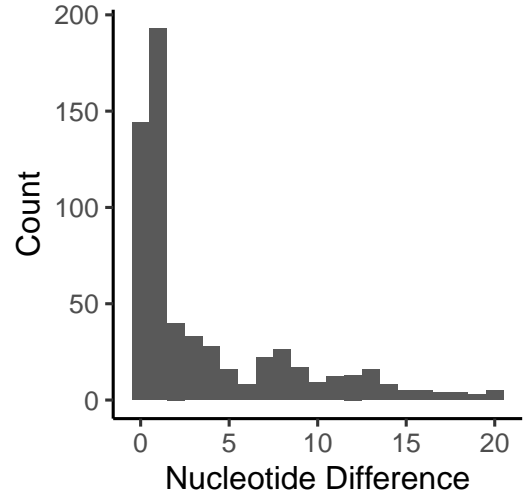
IGHV1-24*01

3073 sequences assigned
585 (19%) exact matches, in which:
436 unique CDR3
6 unique J



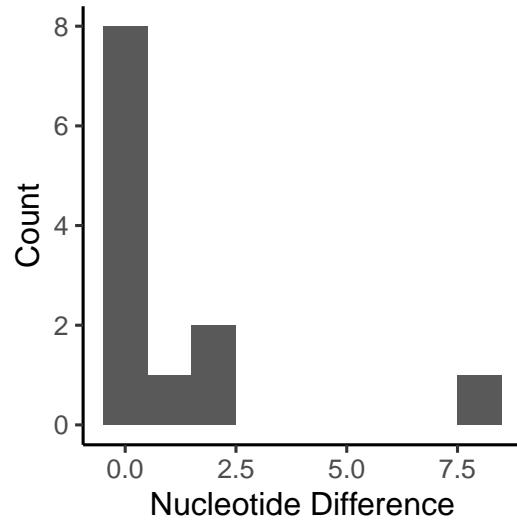
IGHV1-58*01_03

633 sequences assigned
144 (22.7%) exact matches, in which:
111 unique CDR3
6 unique J



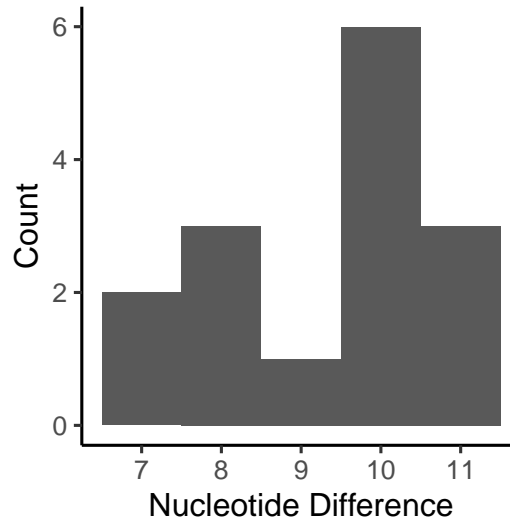
IGHV1-69-2*01

19 sequences assigned
8 (42.1%) exact matches, in which:
7 unique CDR3
3 unique J



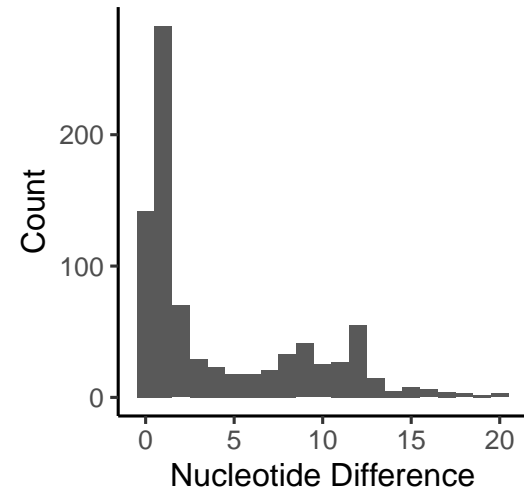
IGHV1-NL1*01

15 sequences assigned
No exact matches.



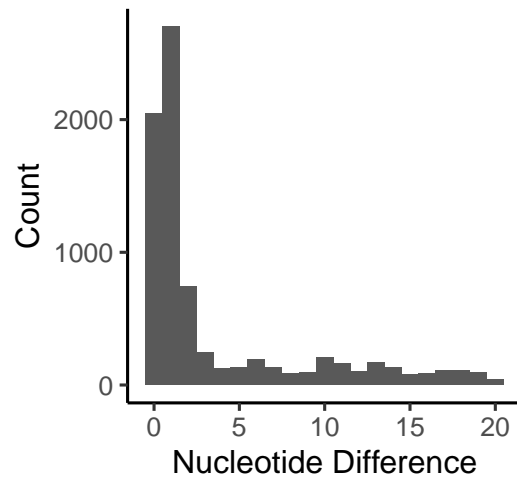
IGHV2-70*01

918 sequences assigned
142 (15.5%) exact matches, in which:
87 unique CDR3
4 unique J



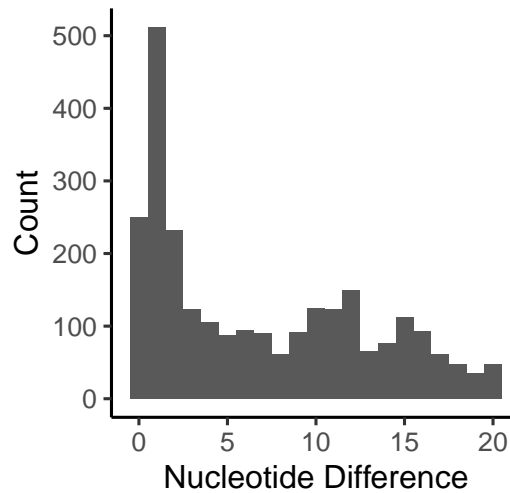
IGHV1-69*01_12_13

8371 sequences assigned
2043 (24.4%) exact matches, in which:
1629 unique CDR3
6 unique J



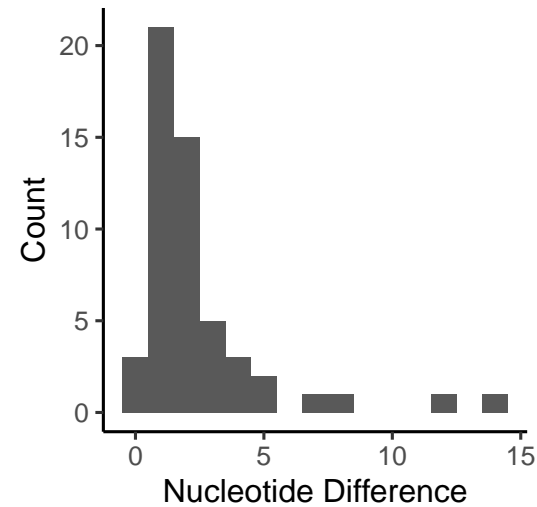
IGHV2-5*02

3304 sequences assigned
250 (7.6%) exact matches, in which:
184 unique CDR3
5 unique J



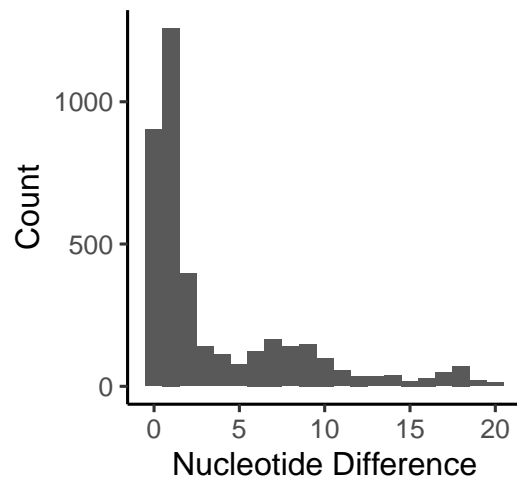
IGHV2-70*12

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



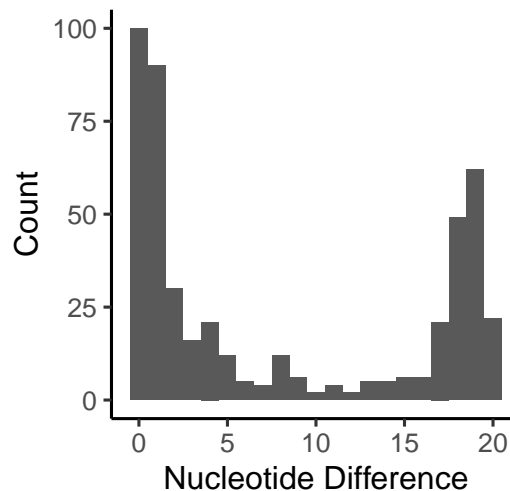
IGHV1-69*06_14

4166 sequences assigned
903 (21.7%) exact matches, in which:
728 unique CDR3
6 unique J



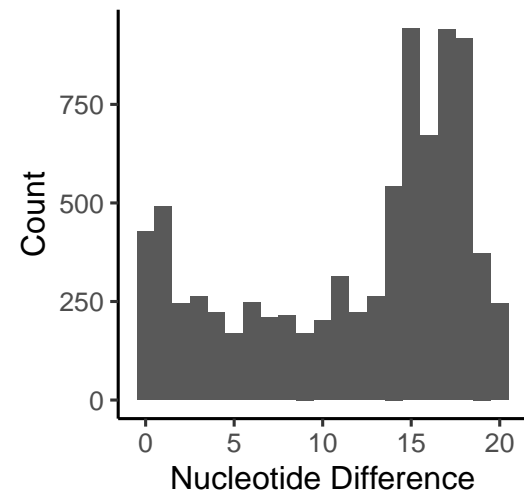
IGHV2-26*01

506 sequences assigned
100 (19.8%) exact matches, in which:
83 unique CDR3
5 unique J



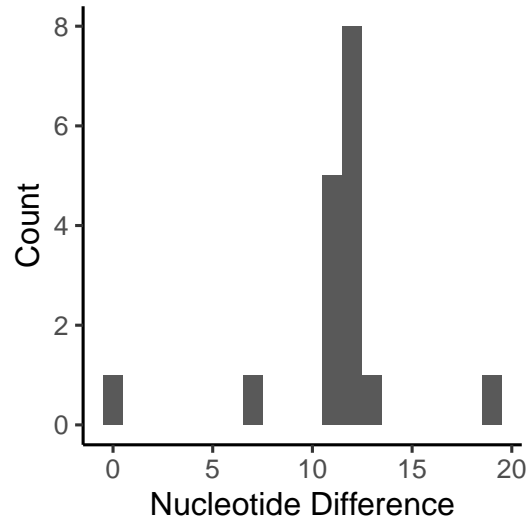
IGHV3-7*04

9756 sequences assigned
427 (4.4%) exact matches, in which:
289 unique CDR3
6 unique J



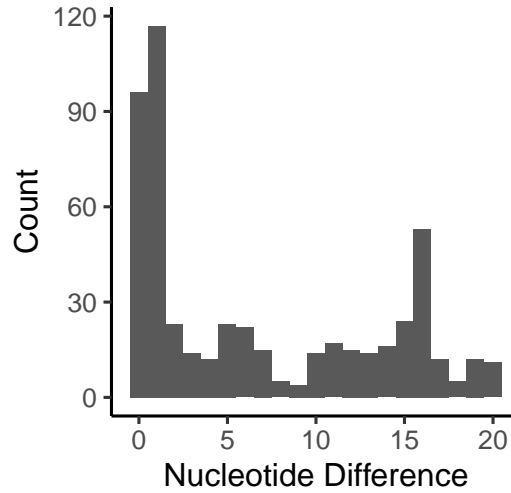
IGHV3-9*01

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



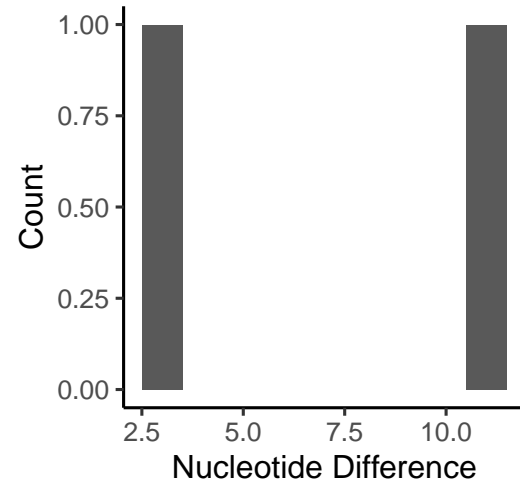
IGHV3-13*04

766 sequences assigned
96 (12.5%) exact matches, in which:
61 unique CDR3
5 unique J



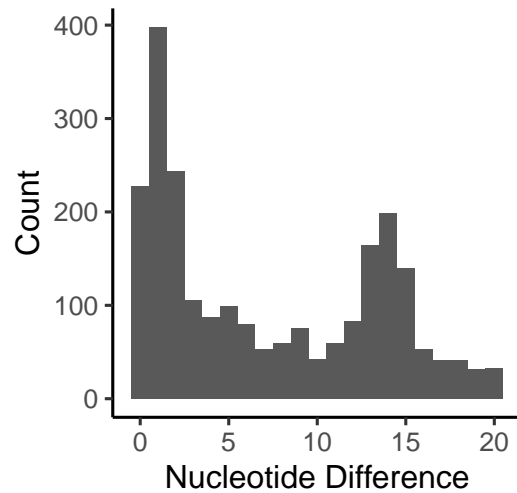
IGHV3-19*01

2 sequences assigned
No exact matches.



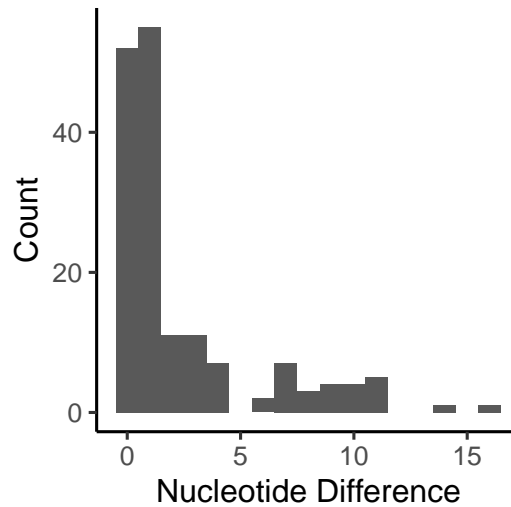
IGHV3-11*06

3570 sequences assigned
228 (6.4%) exact matches, in which:
174 unique CDR3
5 unique J



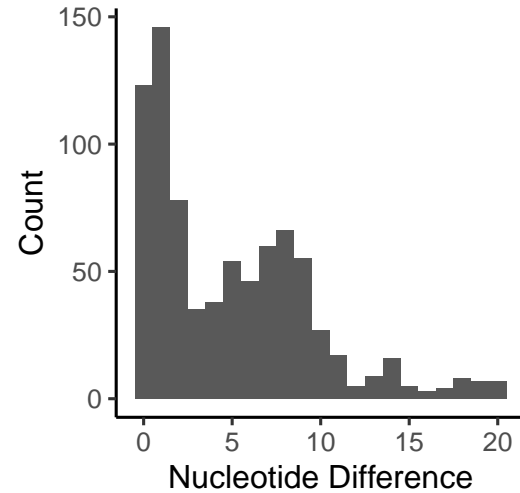
IGHV3-13*05

201 sequences assigned
52 (25.9%) exact matches, in which:
34 unique CDR3
4 unique J



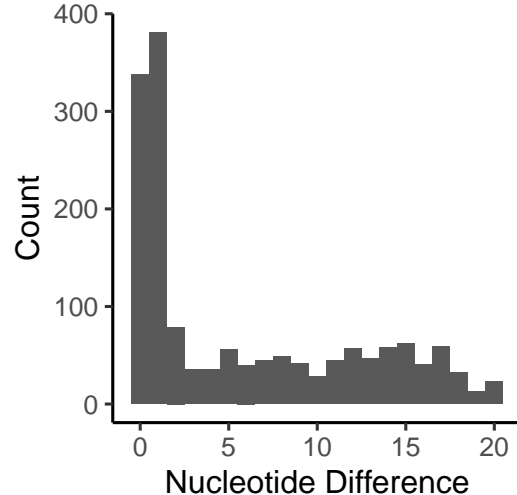
IGHV3-20*03_04

844 sequences assigned
123 (14.6%) exact matches, in which:
76 unique CDR3
5 unique J



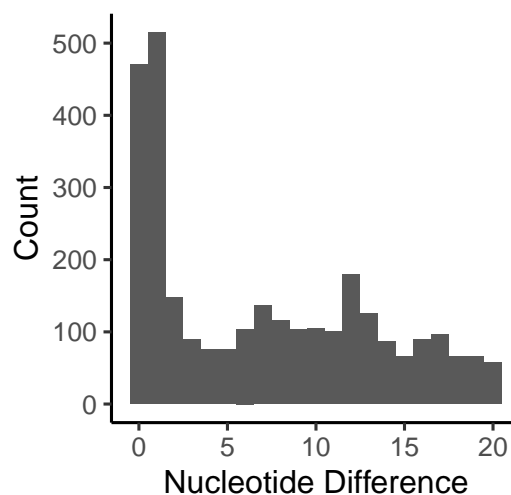
IGHV3-11*03_05

1967 sequences assigned
338 (17.2%) exact matches, in which:
203 unique CDR3
6 unique J



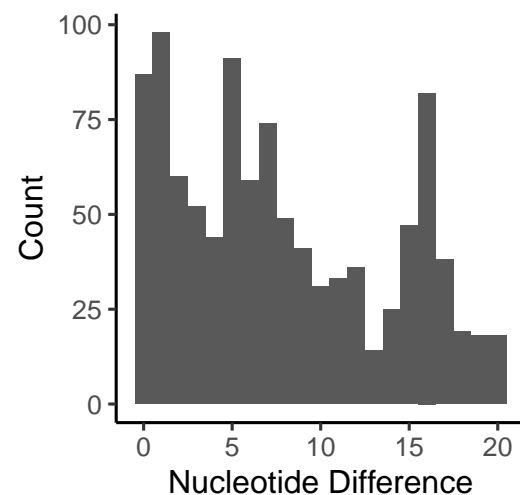
IGHV3-15*01_02

3862 sequences assigned
471 (12.2%) exact matches, in which:
267 unique CDR3
6 unique J



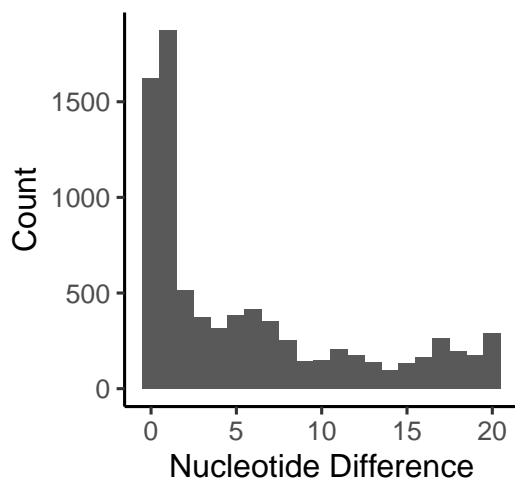
IGHV3-21*04

1183 sequences assigned
87 (7.4%) exact matches, in which:
74 unique CDR3
6 unique J



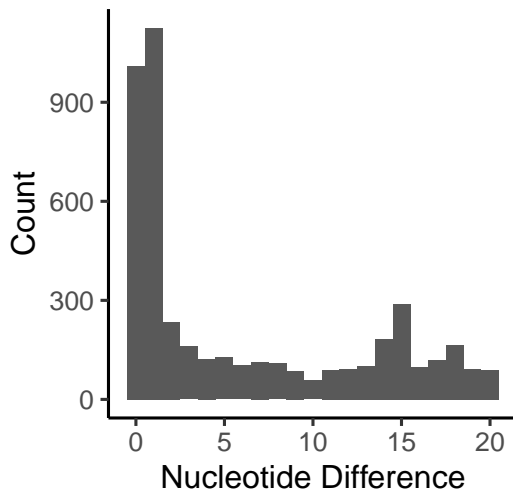
IGHV3-21*01_02

11078 sequences assigned
1621 (14.6%) exact matches, in which:
979 unique CDR3
6 unique J



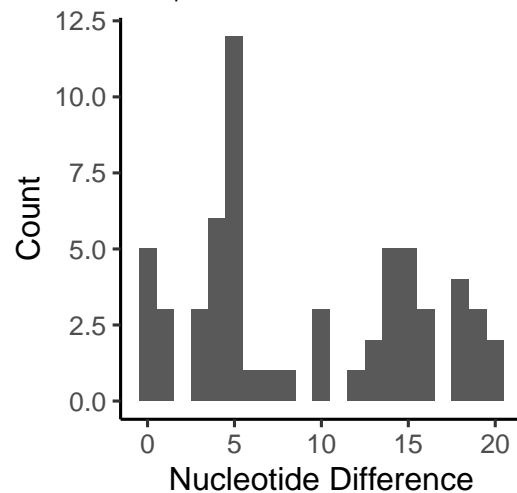
IGHV3-30*01

5774 sequences assigned
1009 (17.5%) exact matches, in which:
643 unique CDR3
6 unique J



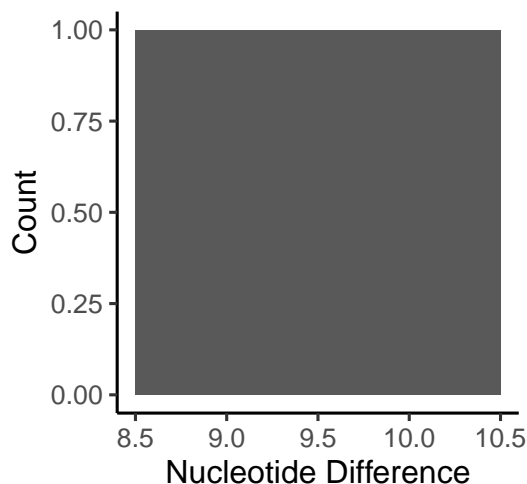
IGHV3-30-3*03

389 sequences assigned
5 (1.3%) exact matches, in which:
5 unique CDR3
2 unique J



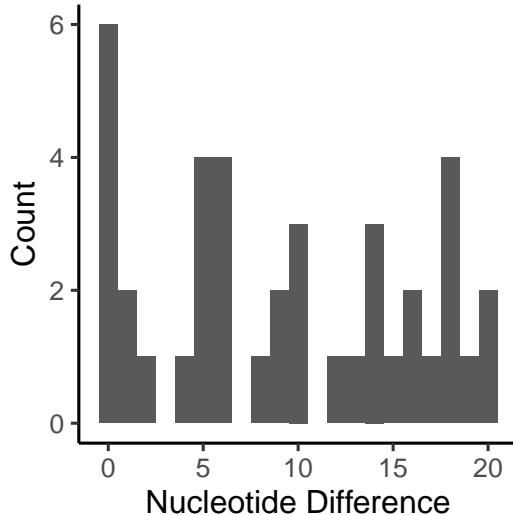
IGHV3-22*01_02

12 sequences assigned
No exact matches.



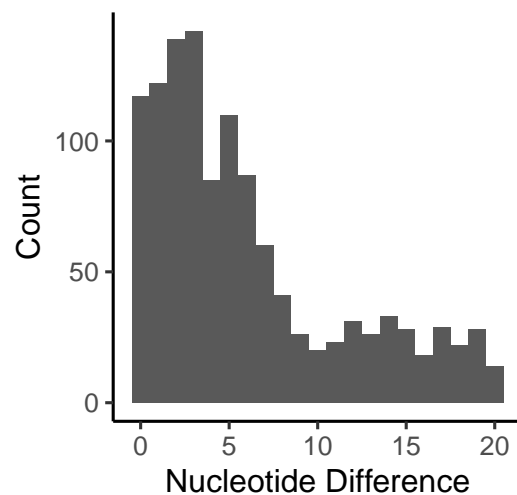
IGHV3-30-5*01

549 sequences assigned
6 (1.1%) exact matches, in which:
6 unique CDR3
4 unique J



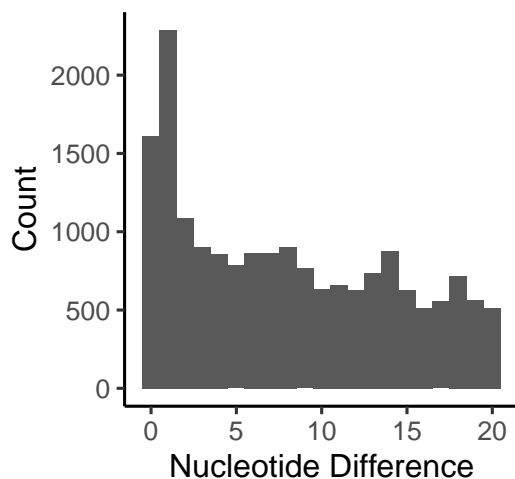
IGHV3-30*07

1367 sequences assigned
117 (8.6%) exact matches, in which:
106 unique CDR3
6 unique J



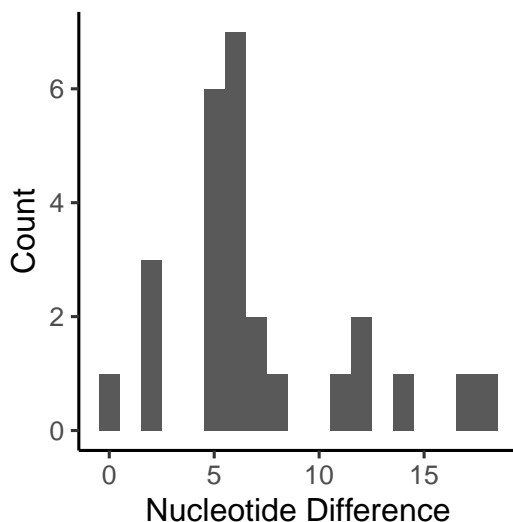
IGHV3-23*01_04

28322 sequences assigned
1610 (5.7%) exact matches, in which:
927 unique CDR3
6 unique J



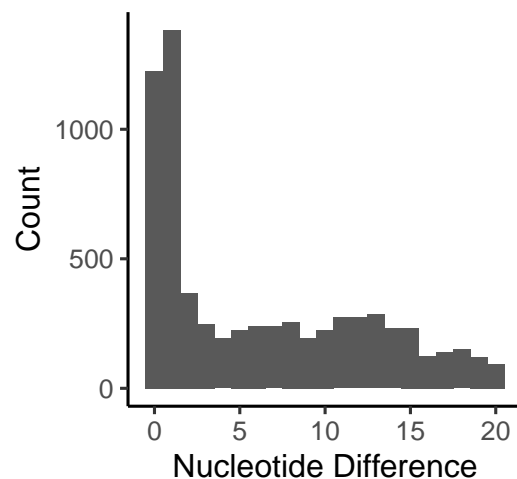
IGHV3-30-3*01

47 sequences assigned
1 (2.1%) exact matches, in which:
1 unique CDR3
1 unique J



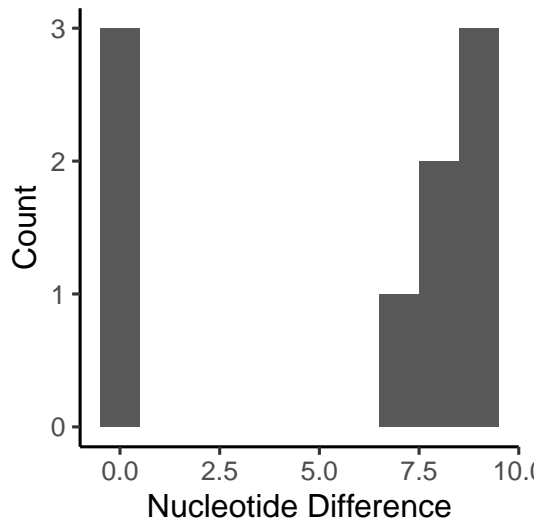
IGHV3-33*01

9391 sequences assigned
1225 (13%) exact matches, in which:
798 unique CDR3
6 unique J



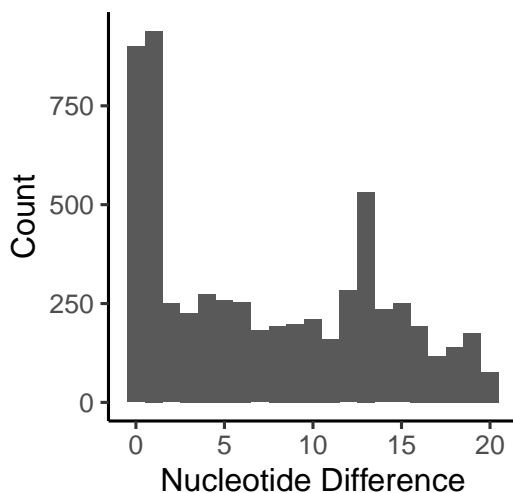
IGHV3-35*01

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



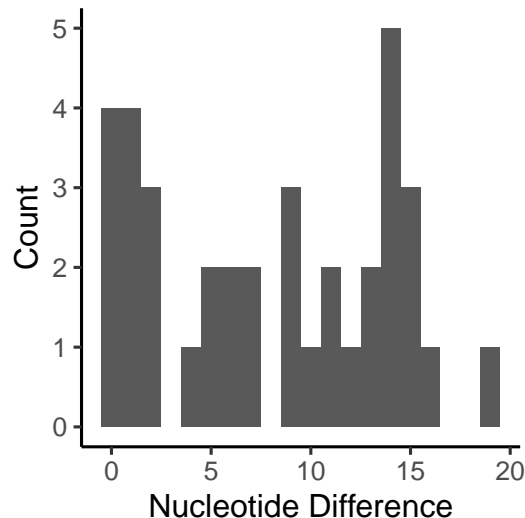
IGHV3-48*03

7736 sequences assigned
900 (11.6%) exact matches, in which:
554 unique CDR3
6 unique J



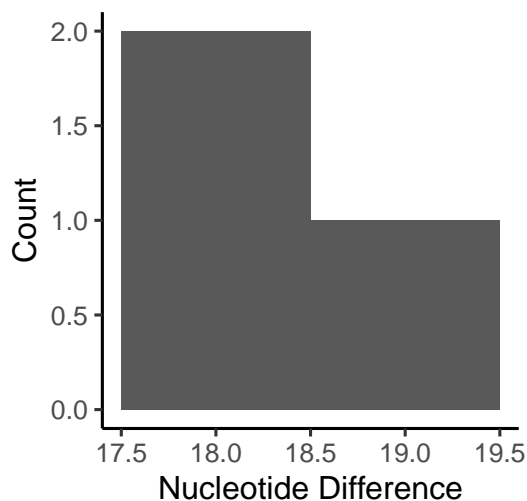
IGHV3-53*05

40 sequences assigned
4 (10%) exact matches, in which:
4 unique CDR3
3 unique J



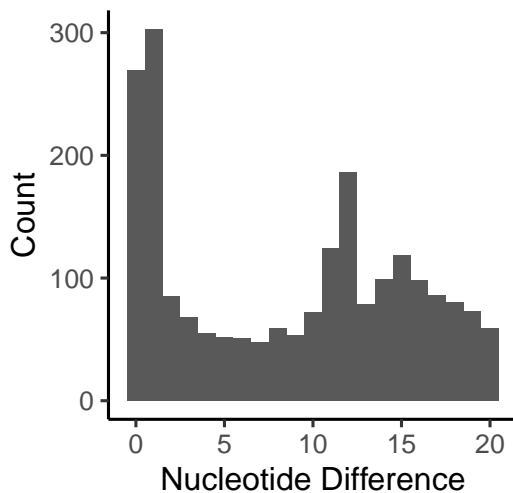
IGHV3-43*01

14 sequences assigned
No exact matches.



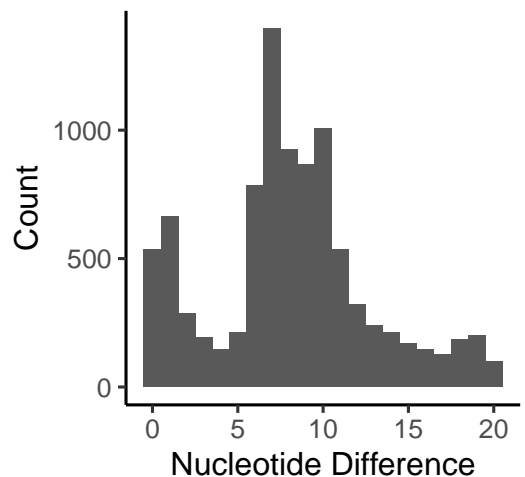
IGHV3-49*04

5135 sequences assigned
269 (5.2%) exact matches, in which:
158 unique CDR3
6 unique J



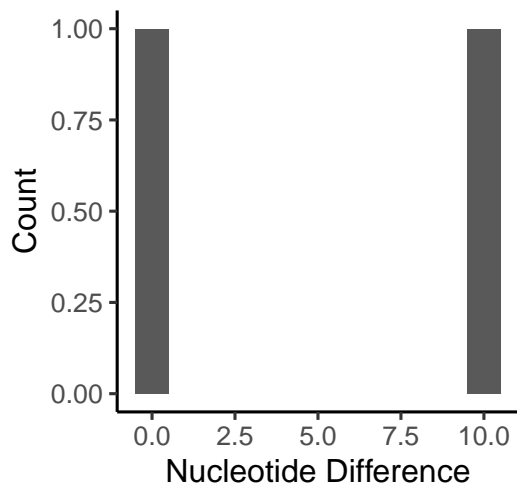
IGHV3-53*01_02

10102 sequences assigned
534 (5.3%) exact matches, in which:
356 unique CDR3
6 unique J



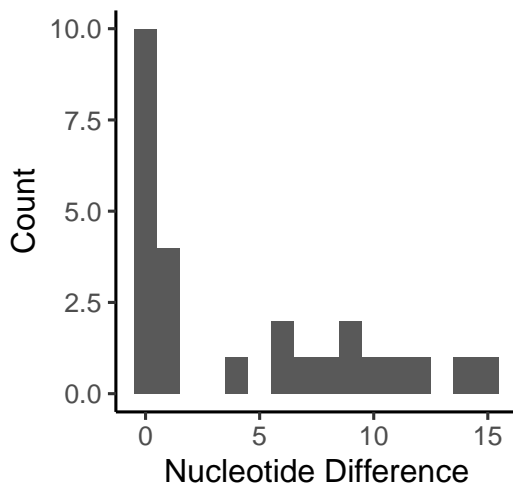
IGHV3-47*01

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



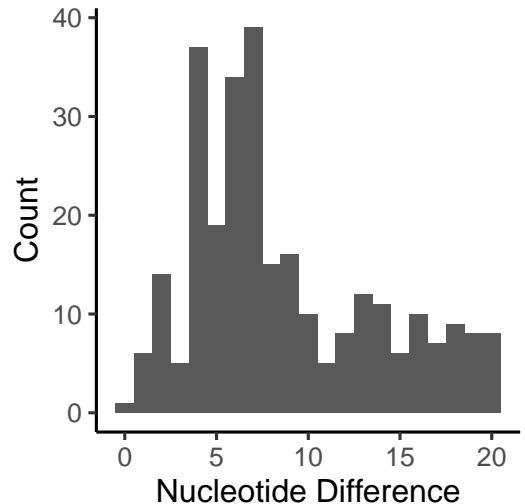
IGHV3-52*01_03

26 sequences assigned
10 (38.5%) exact matches, in which:
6 unique CDR3
4 unique J



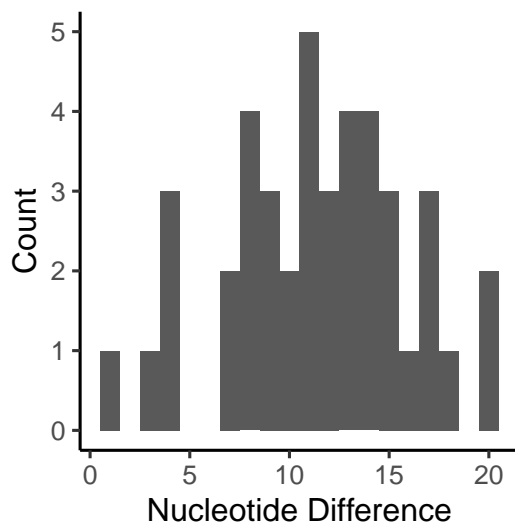
IGHV3-64*04

327 sequences assigned
1 (0.3%) exact matches, in which:
1 unique CDR3
1 unique J



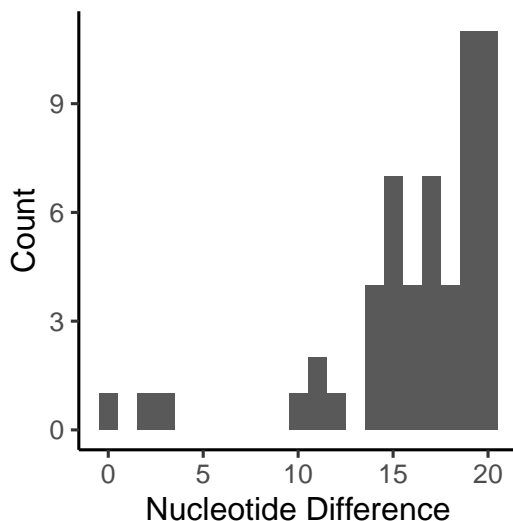
IGHV3-66*01

71 sequences assigned
No exact matches.



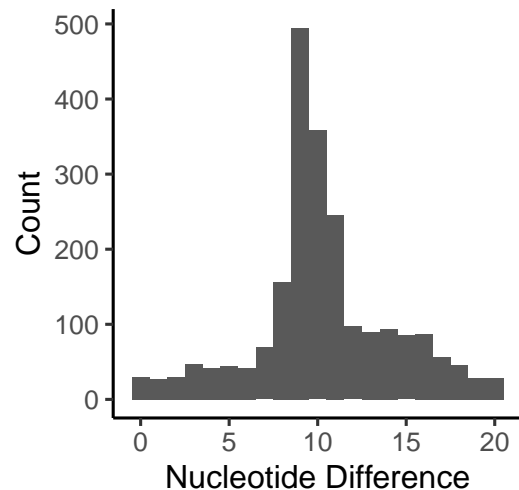
IGHV3-69-1*02

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



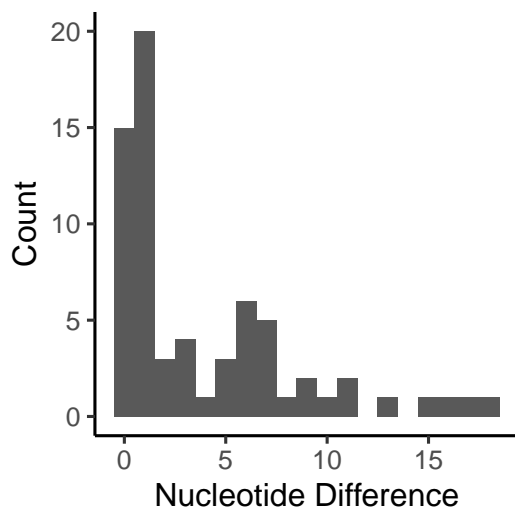
IGHV3-72*01

2730 sequences assigned
30 (1.1%) exact matches, in which:
22 unique CDR3
4 unique J



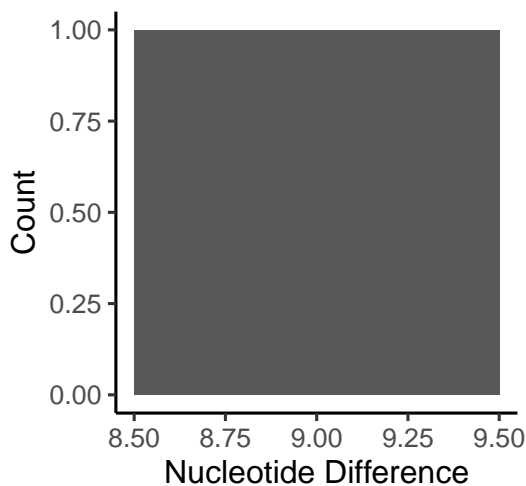
IGHV3-66*03

78 sequences assigned
15 (19.2%) exact matches, in which:
13 unique CDR3
3 unique J



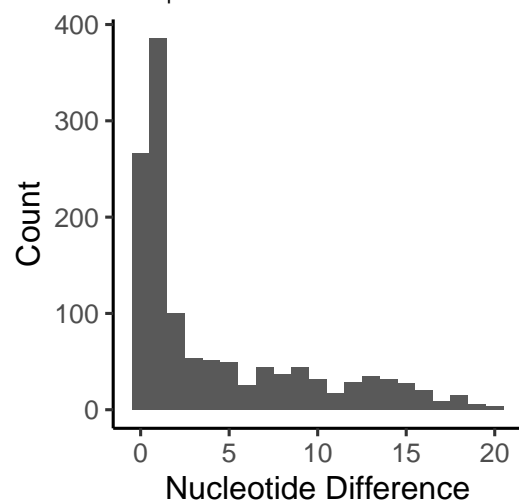
IGHV3-71*03

1 sequences assigned
No exact matches.



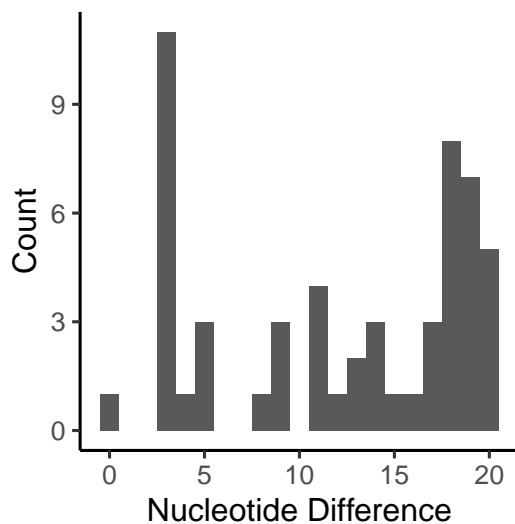
IGHV3-73*01_02

1456 sequences assigned
266 (18.3%) exact matches, in which:
151 unique CDR3
5 unique J



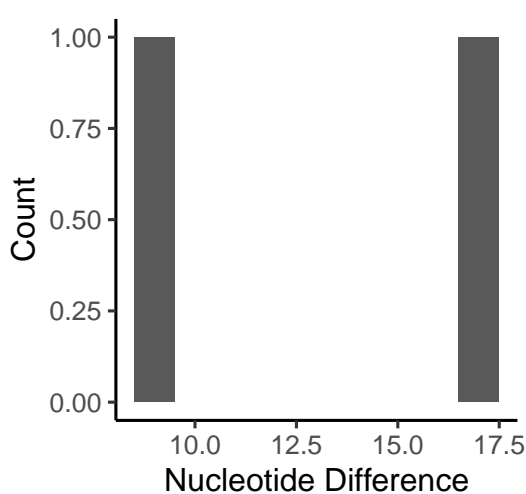
IGHV3-69-1*01

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



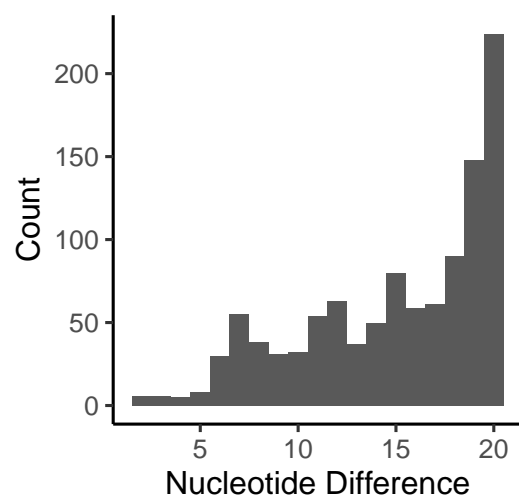
IGHV3-71*01_04

10 sequences assigned
No exact matches.



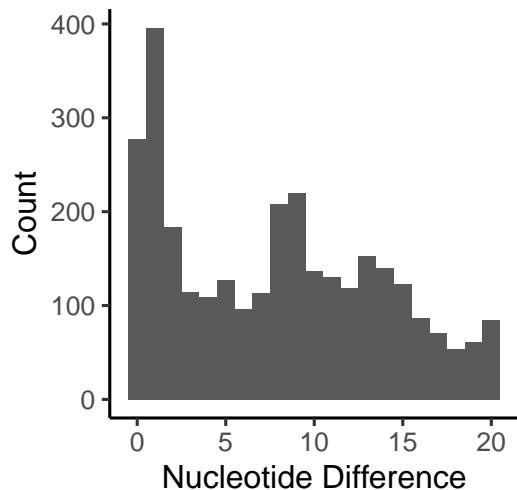
IGHV3-74*03

3161 sequences assigned
No exact matches.



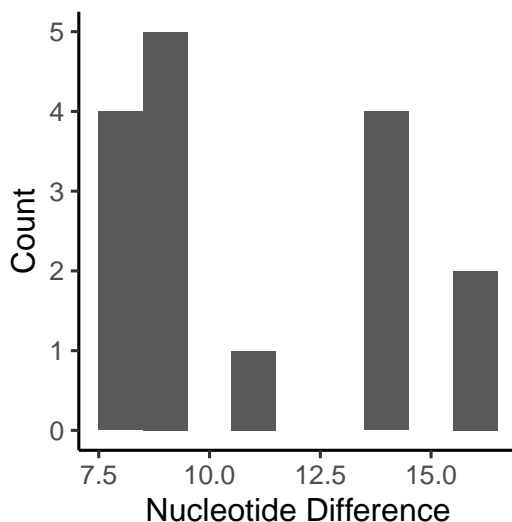
IGHV3-74*01_02

4404 sequences assigned
277 (6.3%) exact matches, in which:
187 unique CDR3
6 unique J



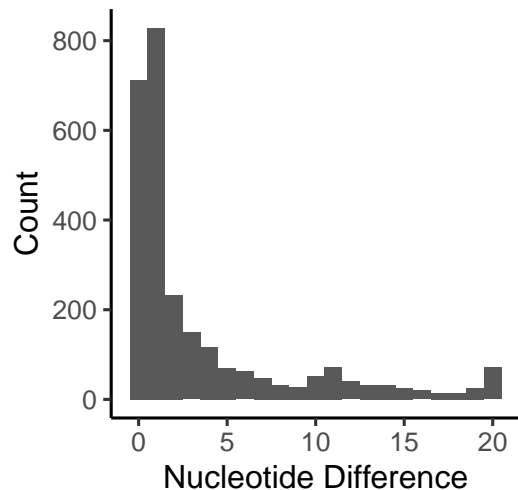
IGHV3-64D*08

17 sequences assigned
No exact matches.



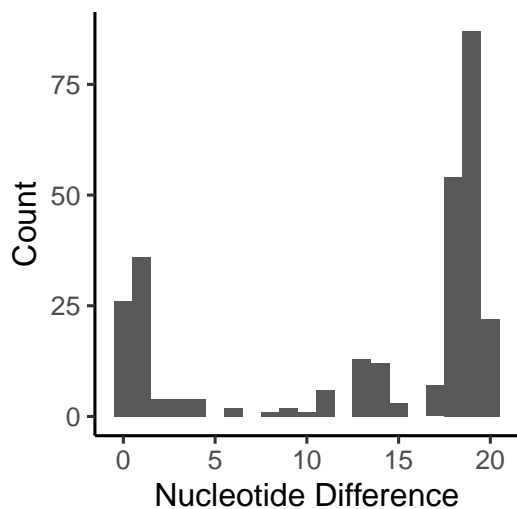
IGHV4-4*02_03

3387 sequences assigned
712 (21%) exact matches, in which:
537 unique CDR3
6 unique J



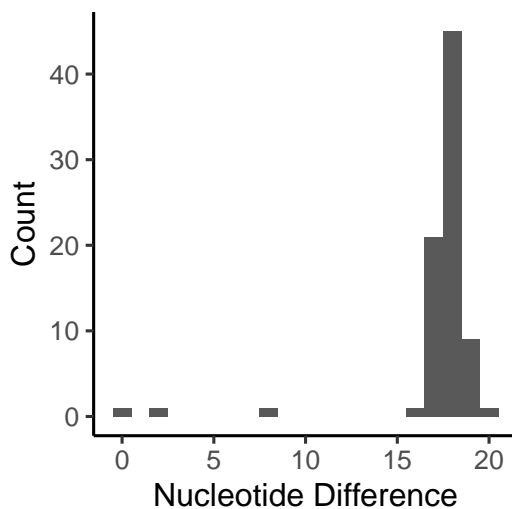
IGHV3-43D*04

332 sequences assigned
26 (7.8%) exact matches, in which:
15 unique CDR3
3 unique J



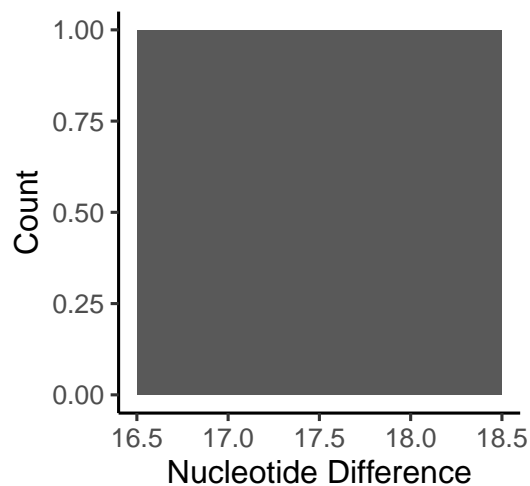
IGHV3-64D*09

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



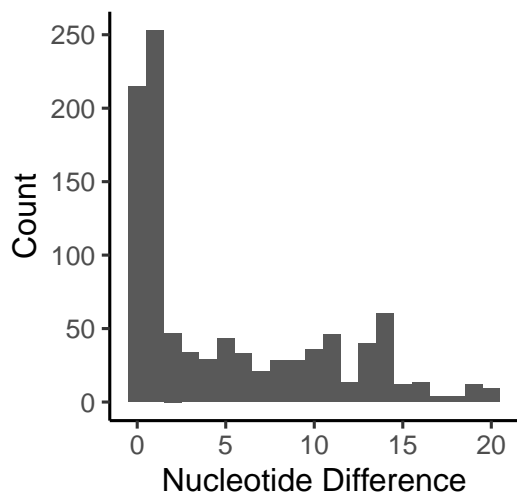
IGHV4-28*03

4 sequences assigned
No exact matches.



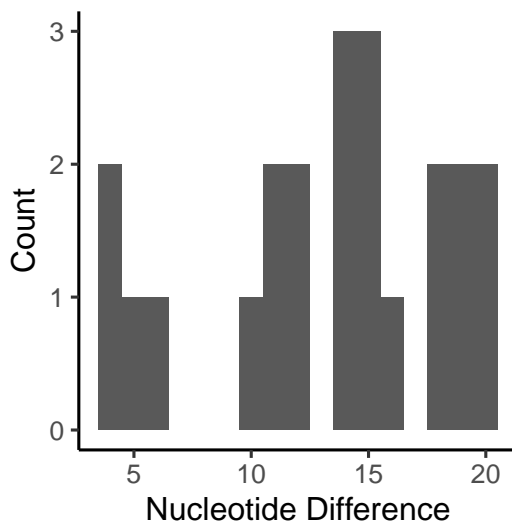
IGHV3-64D*06

1152 sequences assigned
215 (18.7%) exact matches, in which:
113 unique CDR3
6 unique J



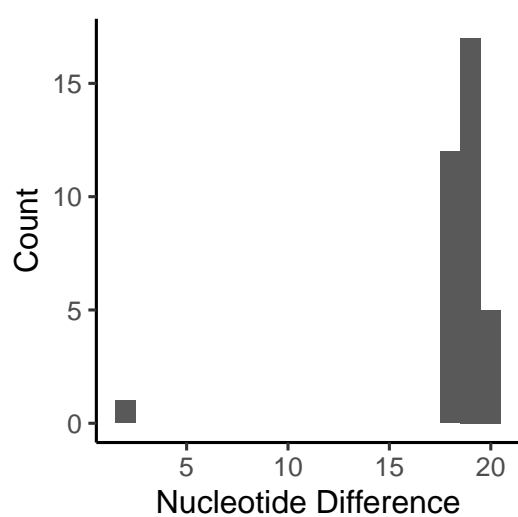
IGHV3-NL1*01

30 sequences assigned
No exact matches.



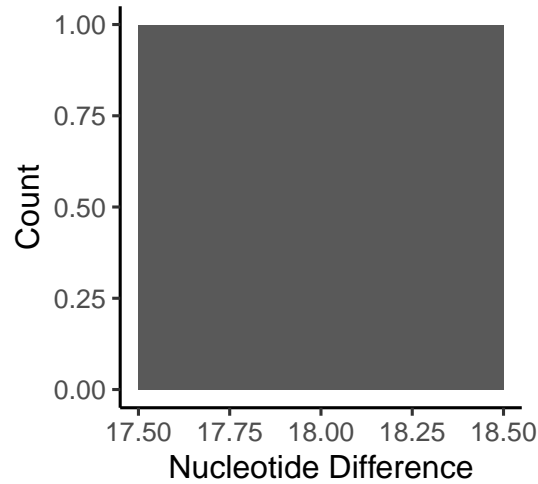
IGHV4-30-2*01

42 sequences assigned
No exact matches.



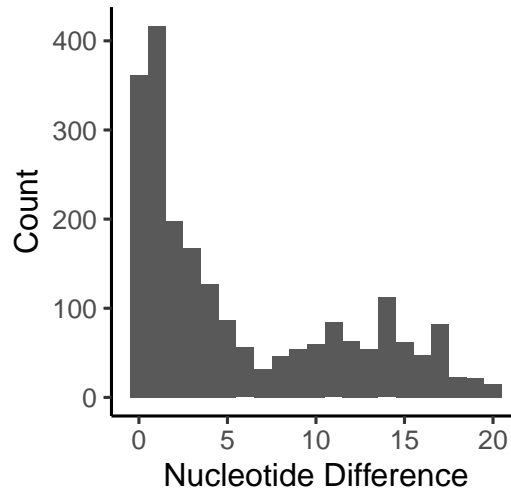
IGHV4-30-4*01

4 sequences assigned
No exact matches.



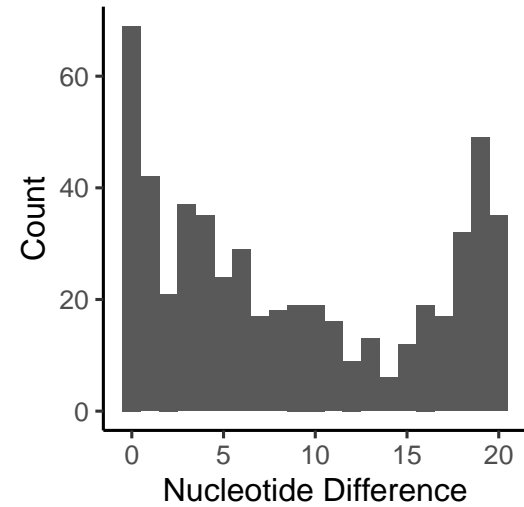
IGHV4-31*02

2515 sequences assigned
362 (14.4%) exact matches, in which:
298 unique CDR3
6 unique J



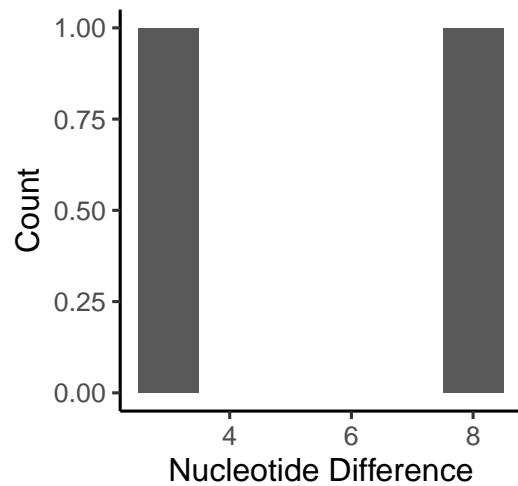
IGHV4-38-2*02

1586 sequences assigned
69 (4.4%) exact matches, in which:
52 unique CDR3
4 unique J



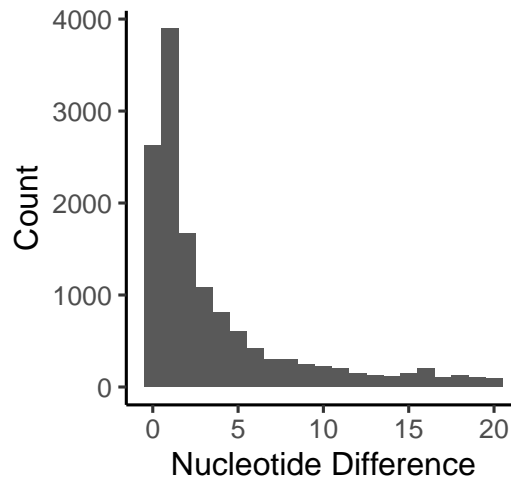
IGHV4-30-2*04

5 sequences assigned
No exact matches.



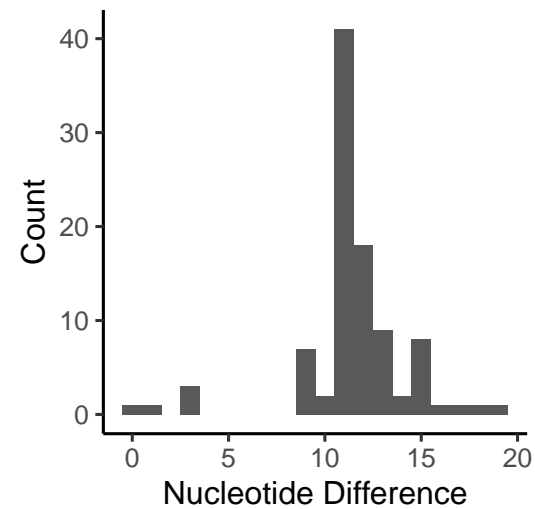
IGHV4-34*01_02

14901 sequences assigned
2625 (17.6%) exact matches, in which:
1805 unique CDR3
6 unique J



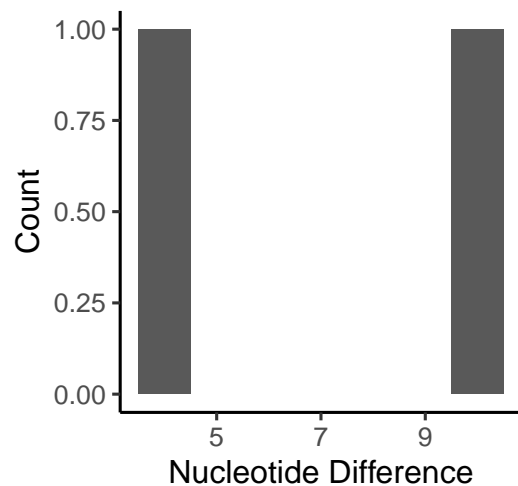
IGHV4-39*07

120 sequences assigned
1 (0.8%) exact matches, in which:
1 unique CDR3
0 unique J



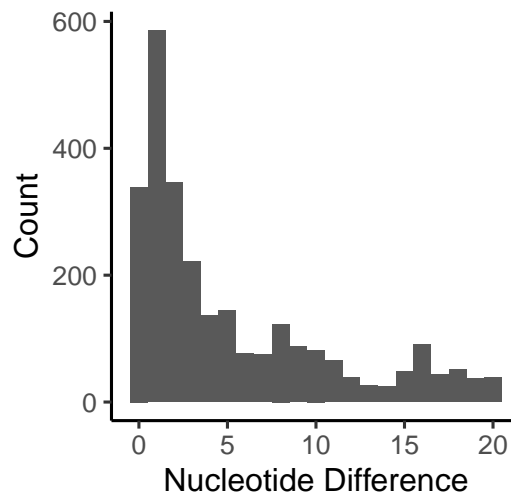
IGHV4-30-4*08

5 sequences assigned
No exact matches.



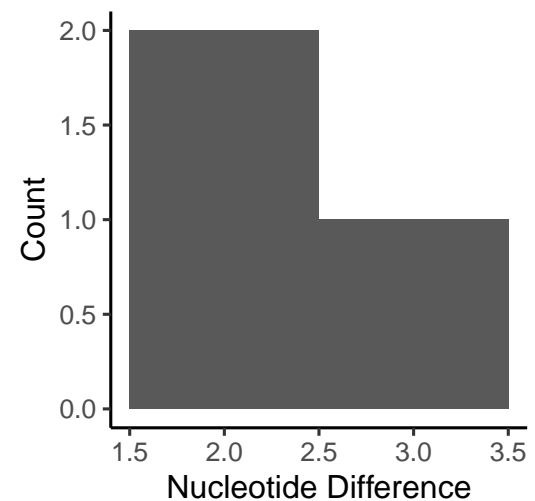
IGHV4-38-2*01

4443 sequences assigned
339 (7.6%) exact matches, in which:
265 unique CDR3
6 unique J



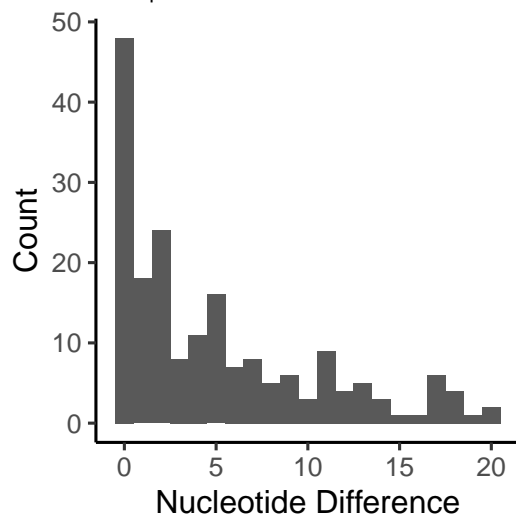
IGHV4-55*09

3 sequences assigned
No exact matches.



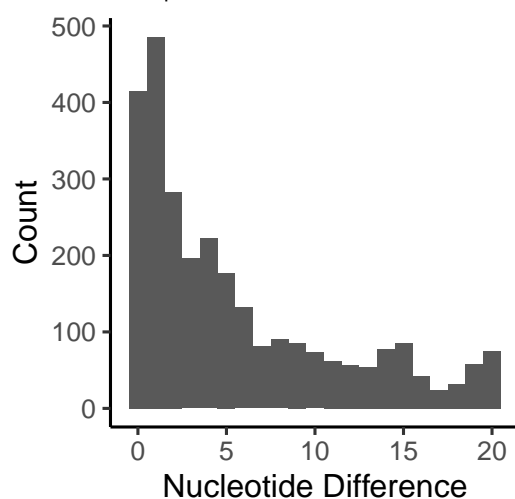
IGHV4–59*08

524 sequences assigned
48 (9.2%) exact matches, in which:
42 unique CDR3
4 unique J



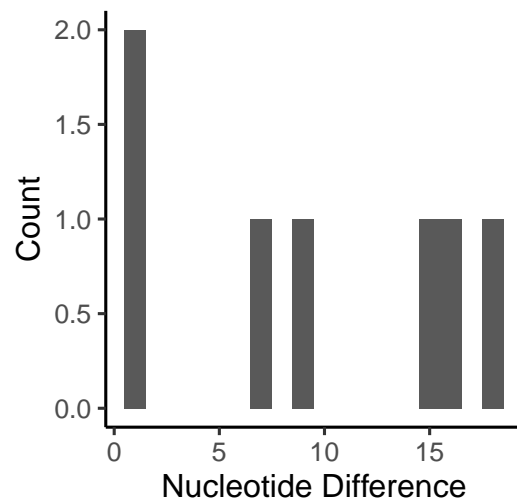
IGHV4–61*01

3637 sequences assigned
415 (11.4%) exact matches, in which:
345 unique CDR3
6 unique J



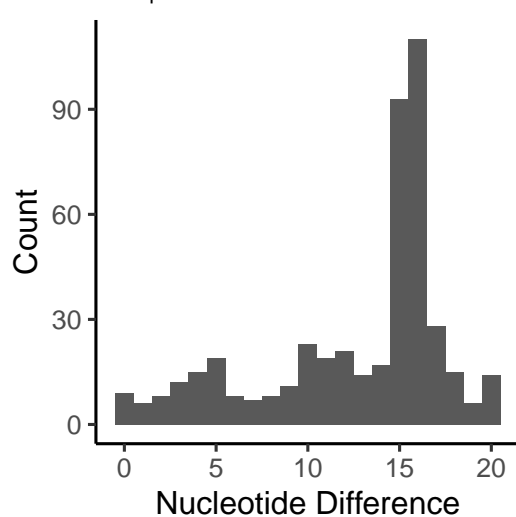
IGHV4/OR15–8*01

60 sequences assigned
No exact matches.



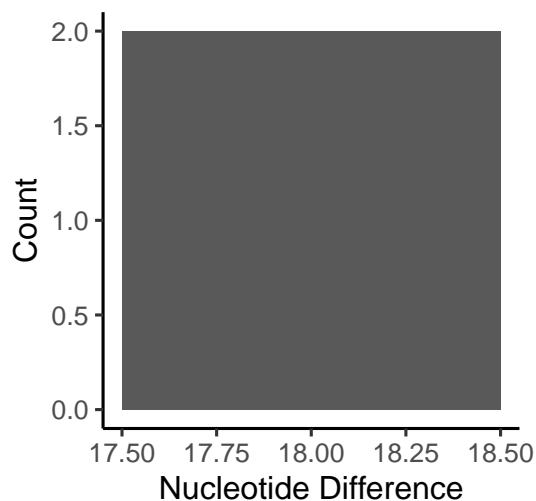
IGHV4–59*11

1554 sequences assigned
9 (0.6%) exact matches, in which:
9 unique CDR3
4 unique J



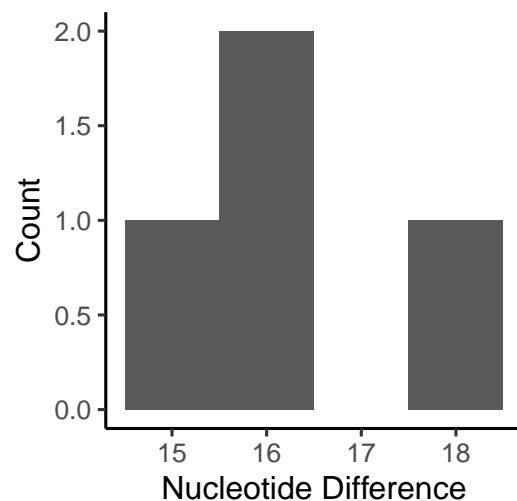
IGHV1/OR15–2*02_03

3 sequences assigned
No exact matches.



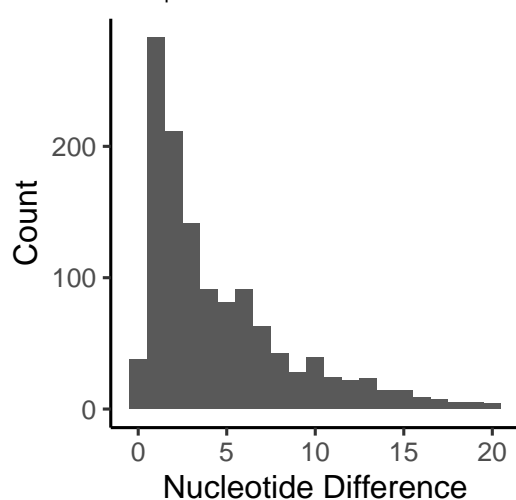
IGHV4/OR15–8*02

6 sequences assigned
No exact matches.



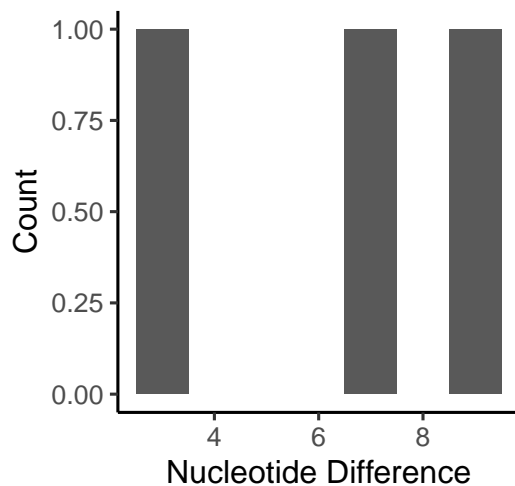
IGHV4–59*12

1305 sequences assigned
38 (2.9%) exact matches, in which:
37 unique CDR3
4 unique J



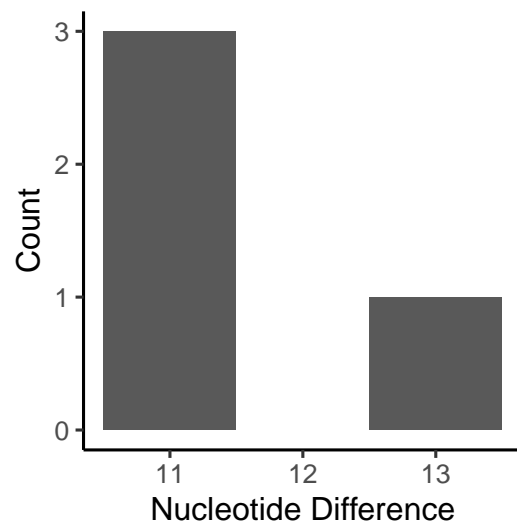
IGHV1/OR15–3*02

4 sequences assigned
No exact matches.



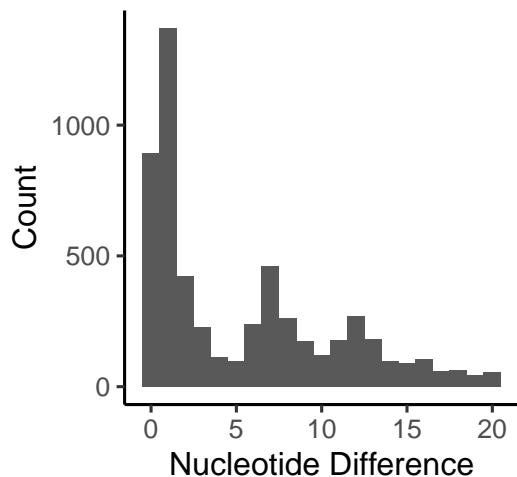
IGHV1/OR15–9*01

4 sequences assigned
No exact matches.



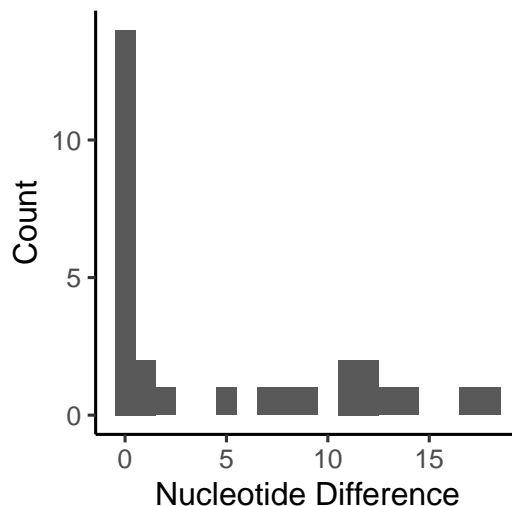
IGHV5-10-1*01_03

6848 sequences assigned
893 (13%) exact matches, in which:
531 unique CDR3
6 unique J



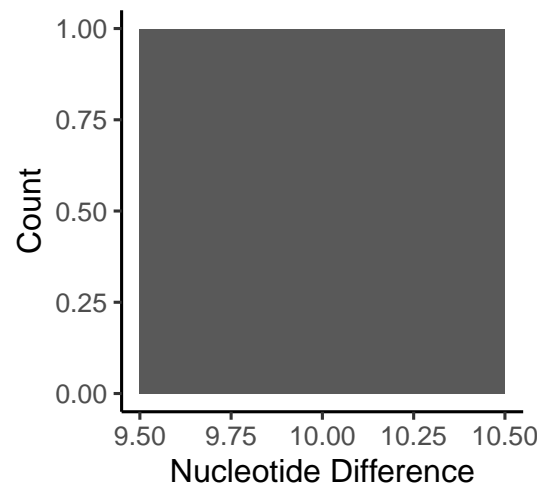
IGHV5-51*07

31 sequences assigned
14 (45.2%) exact matches, in which:
14 unique CDR3
5 unique J



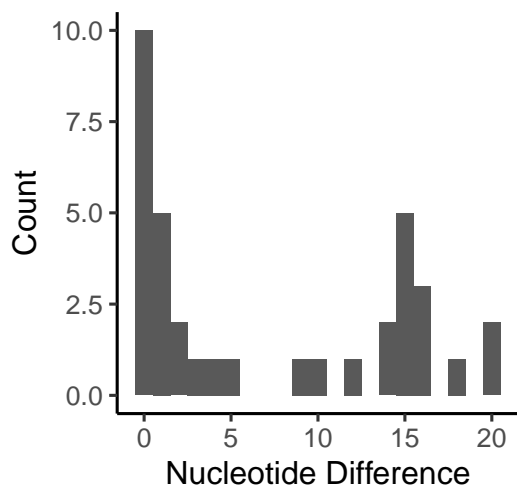
IGHV7-81*01

1 sequences assigned
No exact matches.



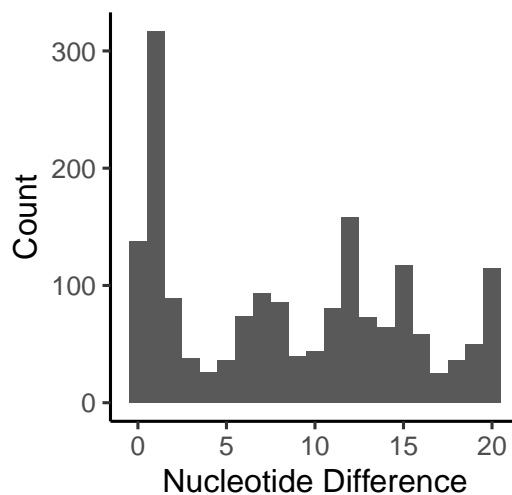
IGHV5-51*04

44 sequences assigned
10 (22.7%) exact matches, in which:
9 unique CDR3
2 unique J



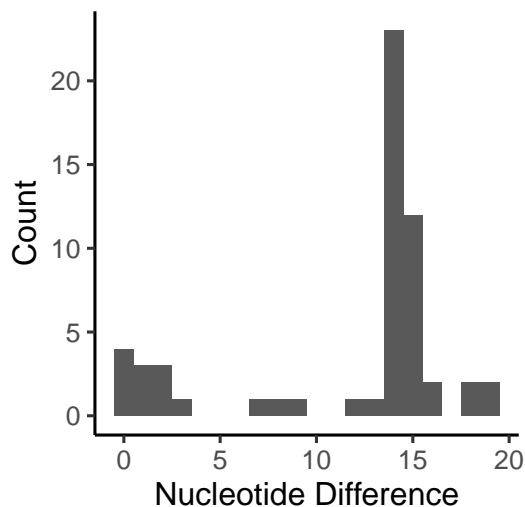
IGHV6-1*01_02

2666 sequences assigned
138 (5.2%) exact matches, in which:
103 unique CDR3
5 unique J



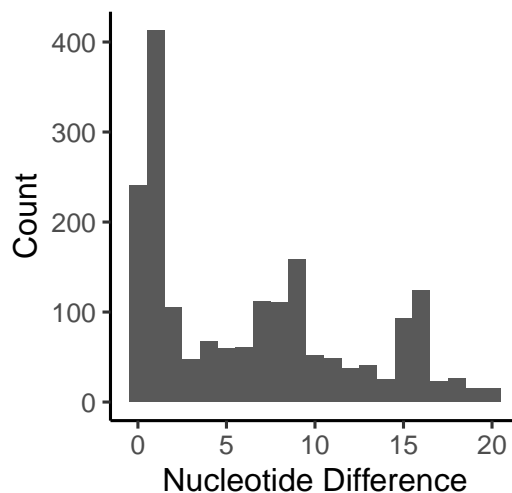
IGHV5-51*06

98 sequences assigned
4 (4.1%) exact matches, in which:
4 unique CDR3
2 unique J

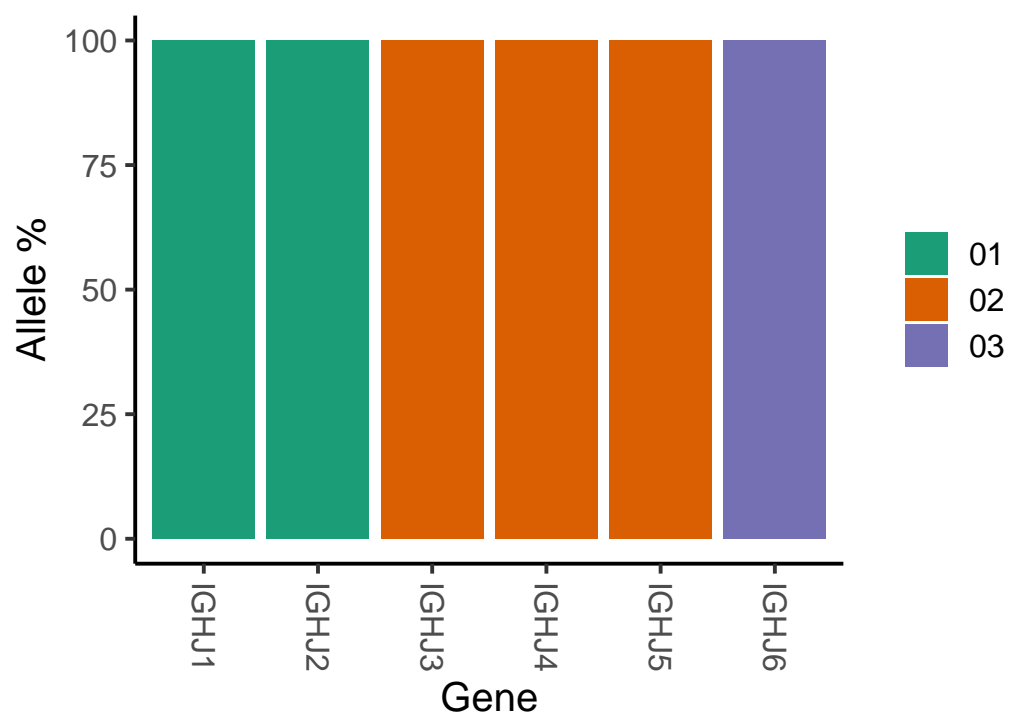


IGHV7-4-1*02

2609 sequences assigned
241 (9.2%) exact matches, in which:
171 unique CDR3
4 unique J



Allele Usage



Warning – no inferred sequences found.