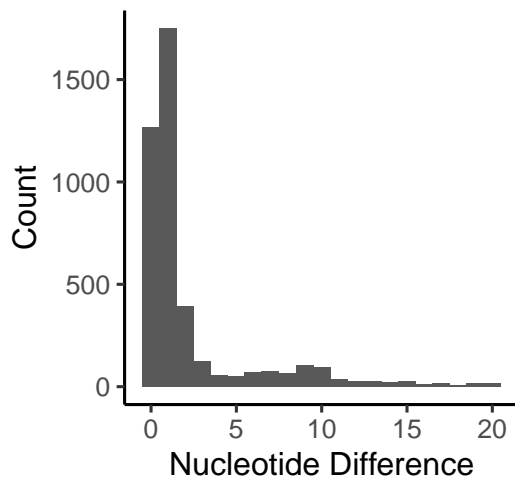


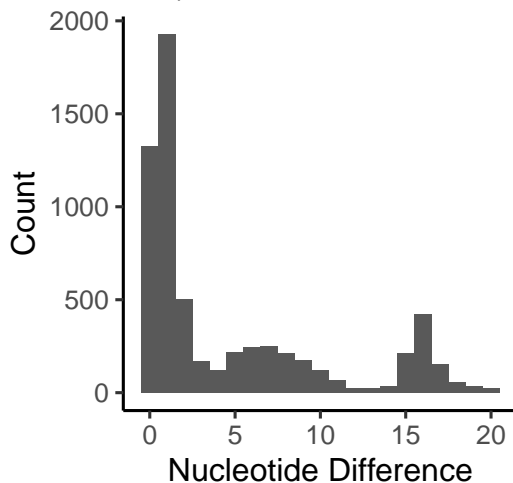
IGHV1-2*02

4880 sequences assigned
1268 (26%) exact matches, in which:
995 unique CDR3
7 unique J



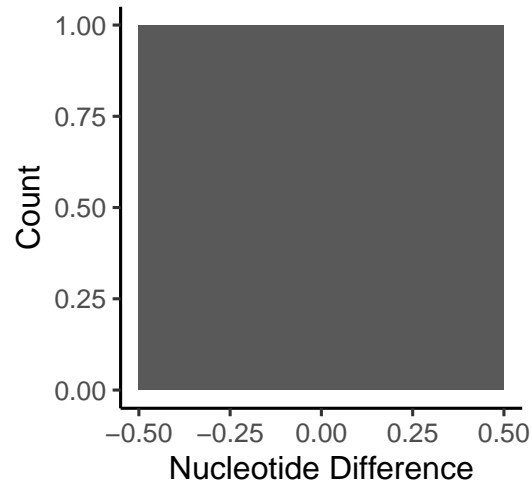
IGHV1-8*01

6455 sequences assigned
1328 (20.6%) exact matches, in which:
1041 unique CDR3
7 unique J



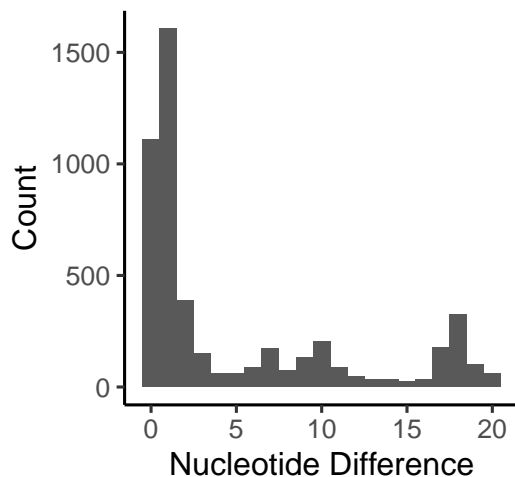
IGHV1-38-4*01

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



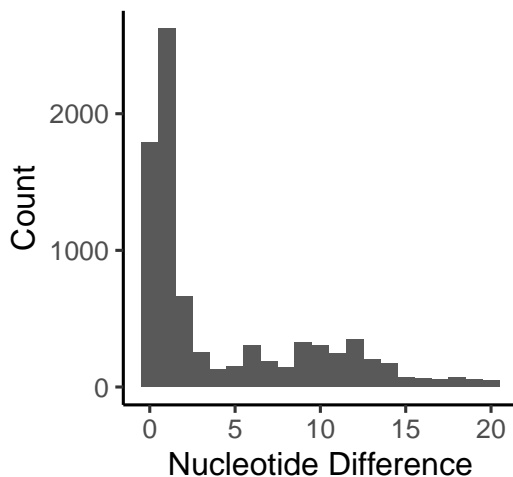
IGHV1-2*06

5461 sequences assigned
1111 (20.3%) exact matches, in which:
874 unique CDR3
7 unique J



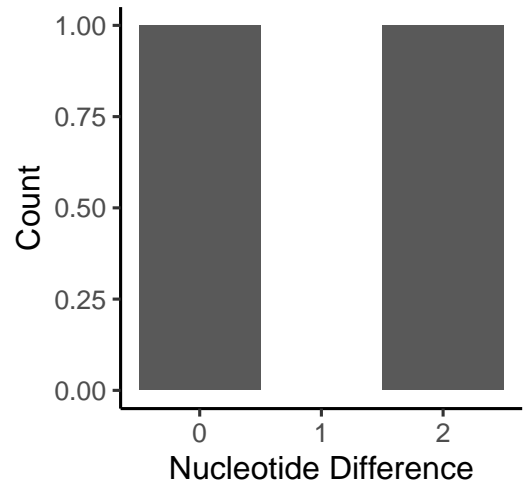
IGHV1-18*01

10302 sequences assigned
1789 (17.4%) exact matches, in which:
1376 unique CDR3
7 unique J



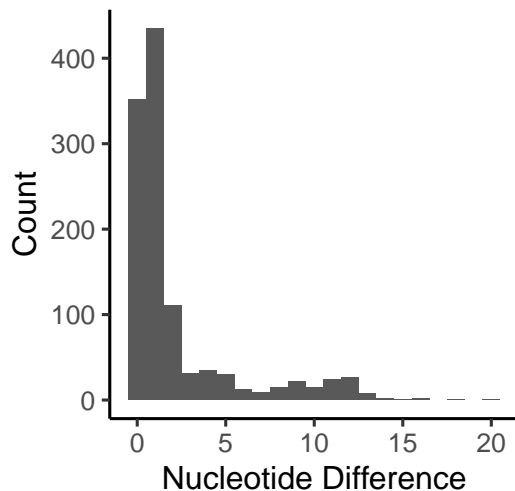
IGHV1-45*02

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



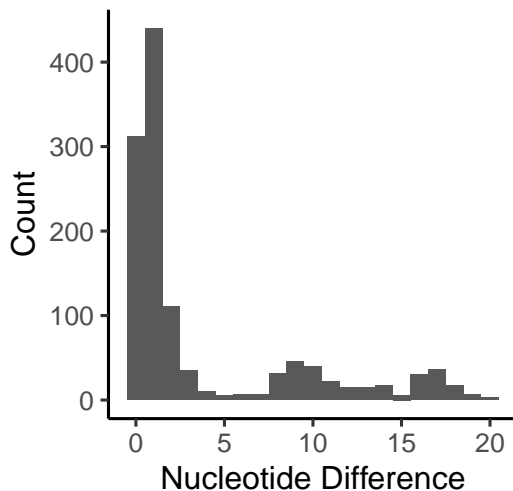
IGHV1-3*01_05

1148 sequences assigned
352 (30.7%) exact matches, in which:
270 unique CDR3
7 unique J



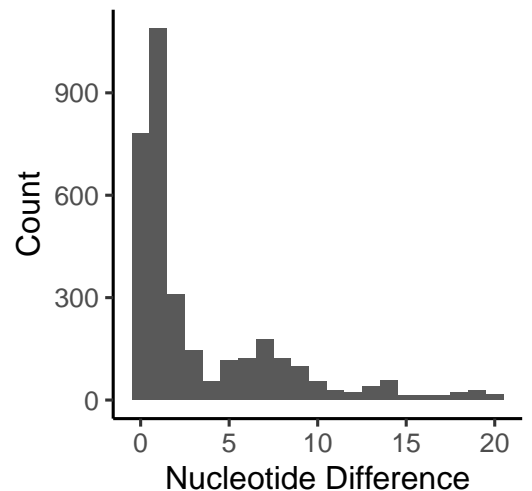
IGHV1-24*01

1255 sequences assigned
312 (24.9%) exact matches, in which:
240 unique CDR3
7 unique J



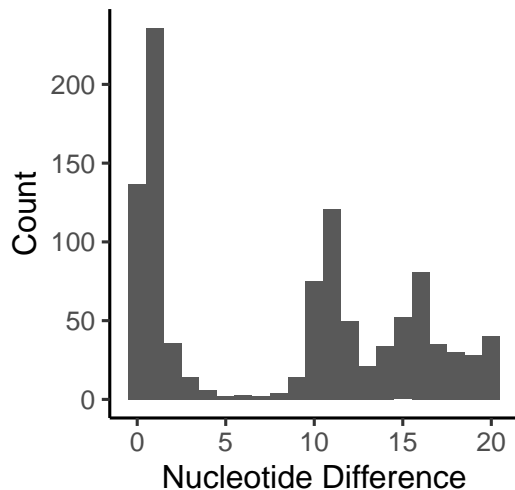
IGHV1-46*01

4367 sequences assigned
782 (17.9%) exact matches, in which:
657 unique CDR3
7 unique J



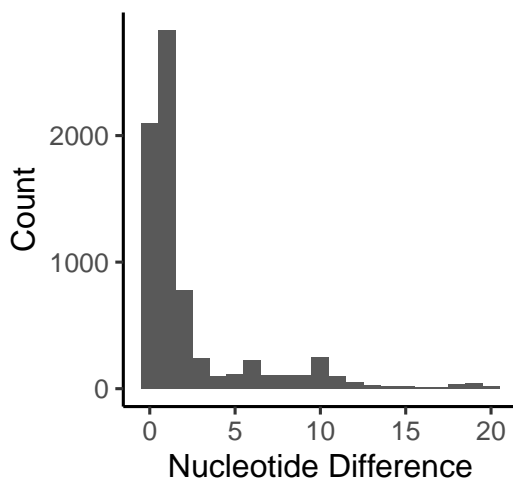
IGHV1–58*01_03

1512 sequences assigned
137 (9.1%) exact matches, in which:
109 unique CDR3
6 unique J



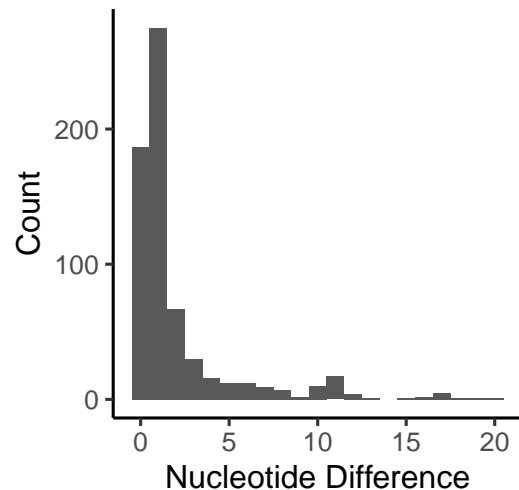
IGHV1–69*01_12_13

7498 sequences assigned
2097 (28%) exact matches, in which:
1672 unique CDR3
7 unique J



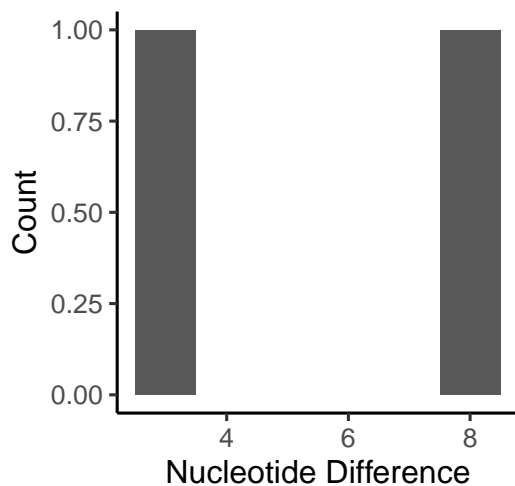
IGHV2–5*02

674 sequences assigned
187 (27.7%) exact matches, in which:
143 unique CDR3
7 unique J



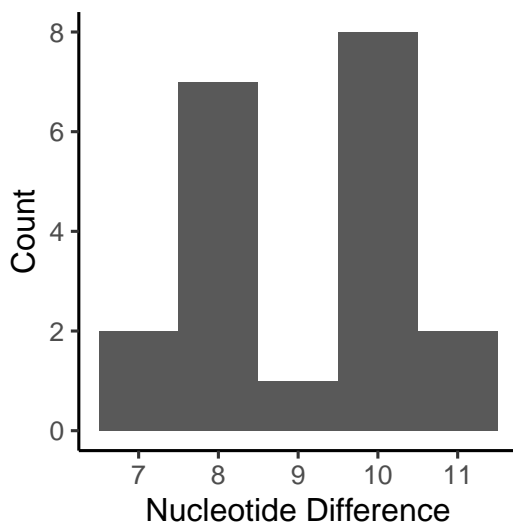
IGHV1–68*01

2 sequences assigned
No exact matches.



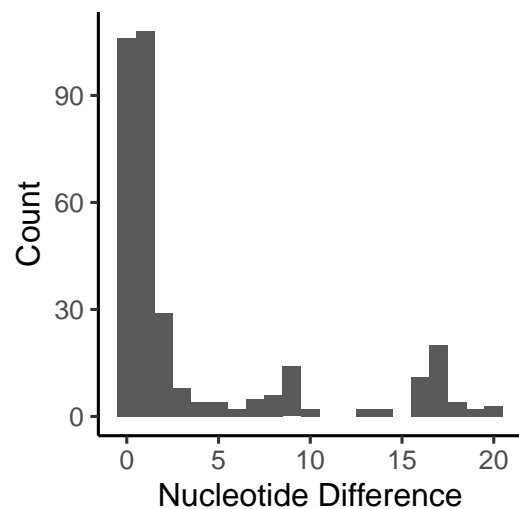
IGHV1–NL1*01

20 sequences assigned
No exact matches.



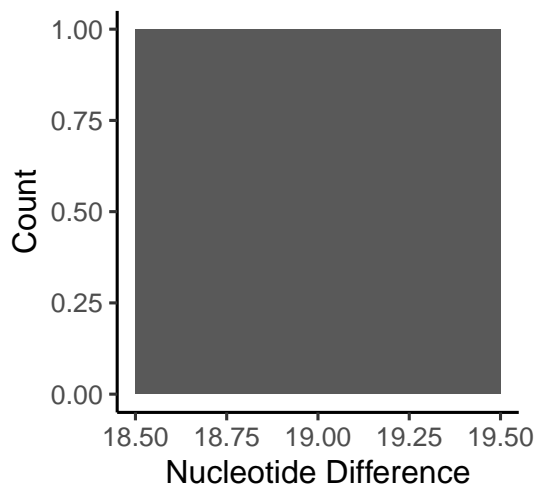
IGHV2–26*01

376 sequences assigned
106 (28.2%) exact matches, in which:
81 unique CDR3
5 unique J



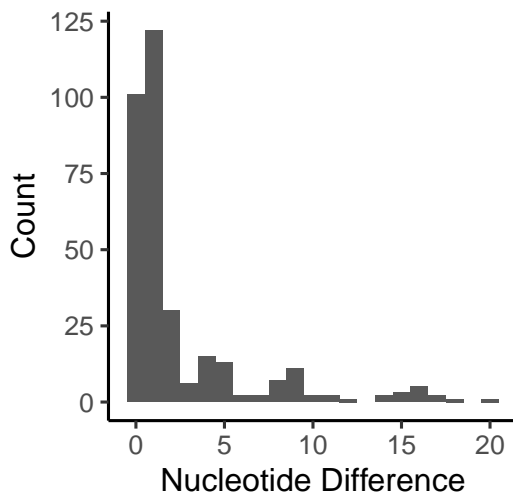
IGHV1–69–2*01

2 sequences assigned
No exact matches.



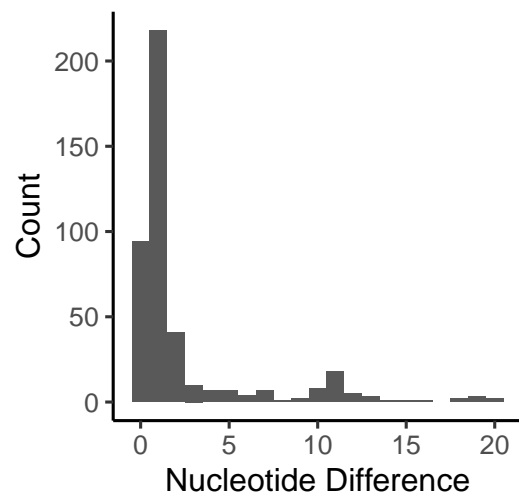
IGHV2–5*01

349 sequences assigned
101 (28.9%) exact matches, in which:
74 unique CDR3
5 unique J



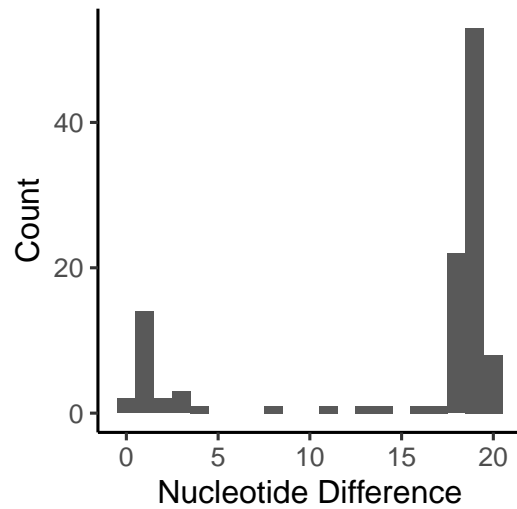
IGHV2–70*01

447 sequences assigned
94 (21%) exact matches, in which:
64 unique CDR3
5 unique J



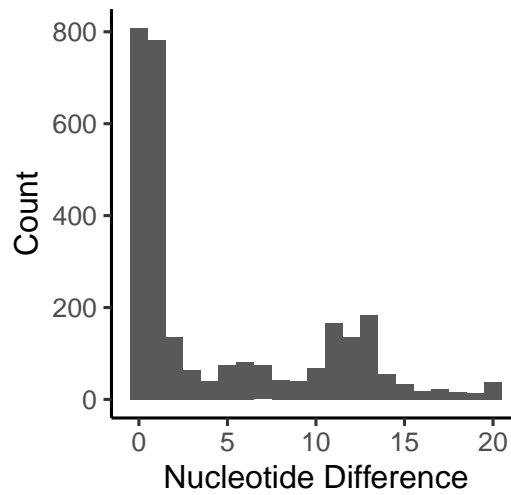
IGHV2-70*12

122 sequences assigned
2 (1.6%) exact matches, in which:
2 unique CDR3
2 unique J



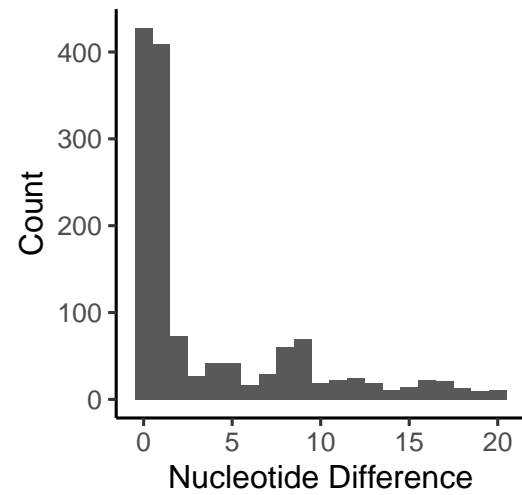
IGHV3-11*01

3927 sequences assigned
809 (20.6%) exact matches, in which:
527 unique CDR3
7 unique J



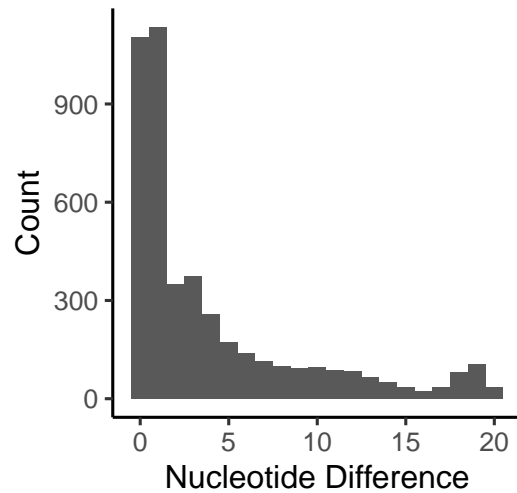
IGHV3-15*07

1687 sequences assigned
428 (25.4%) exact matches, in which:
253 unique CDR3
7 unique J



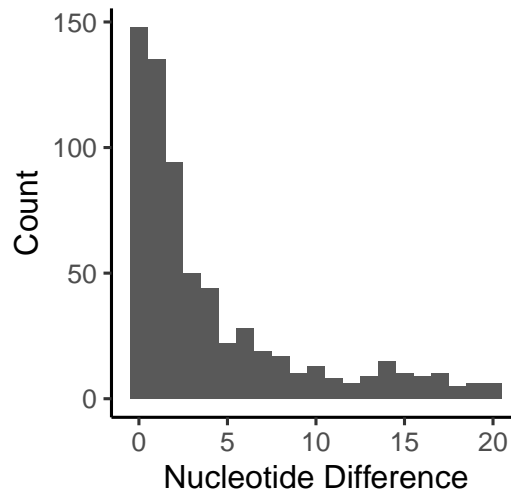
IGHV3-7*01

5127 sequences assigned
1104 (21.5%) exact matches, in which:
737 unique CDR3
7 unique J



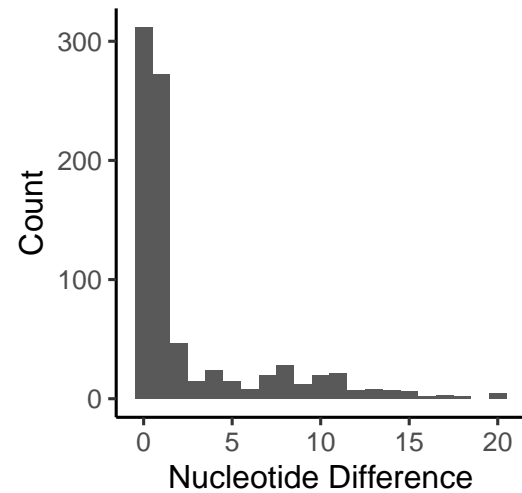
IGHV3-11*04

723 sequences assigned
148 (20.5%) exact matches, in which:
132 unique CDR3
6 unique J



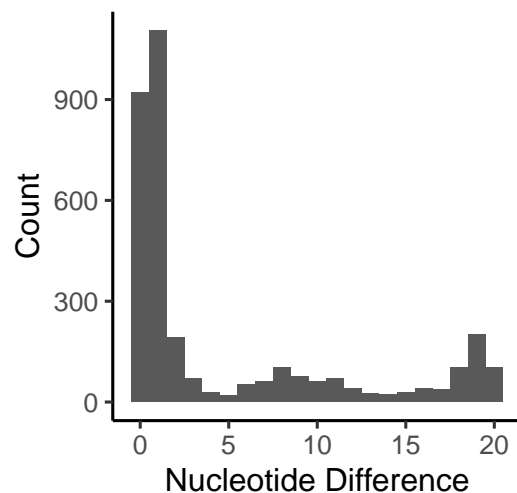
IGHV3-15*01_02

859 sequences assigned
312 (36.3%) exact matches, in which:
195 unique CDR3
7 unique J



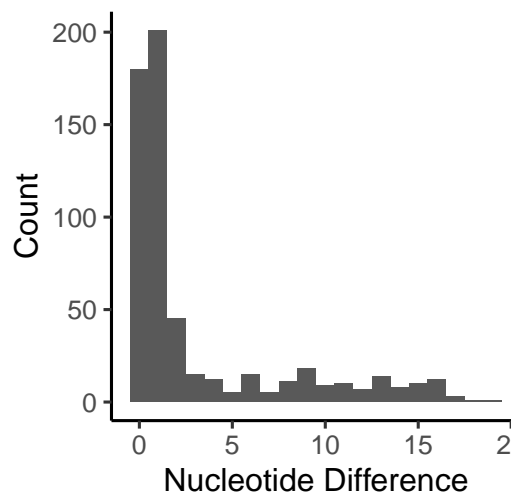
IGHV3-9*01

4041 sequences assigned
920 (22.8%) exact matches, in which:
519 unique CDR3
7 unique J



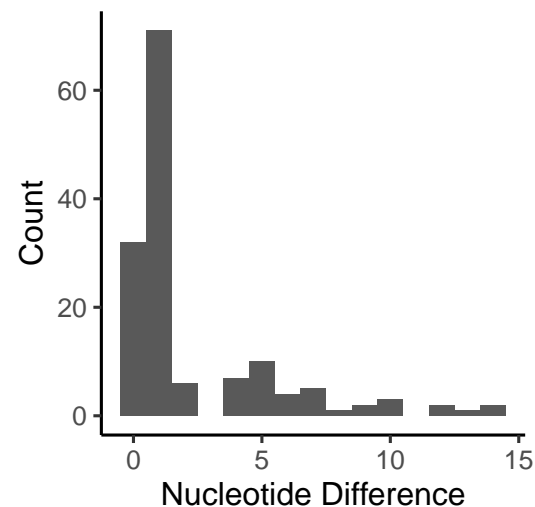
IGHV3-13*01

626 sequences assigned
180 (28.8%) exact matches, in which:
115 unique CDR3
7 unique J



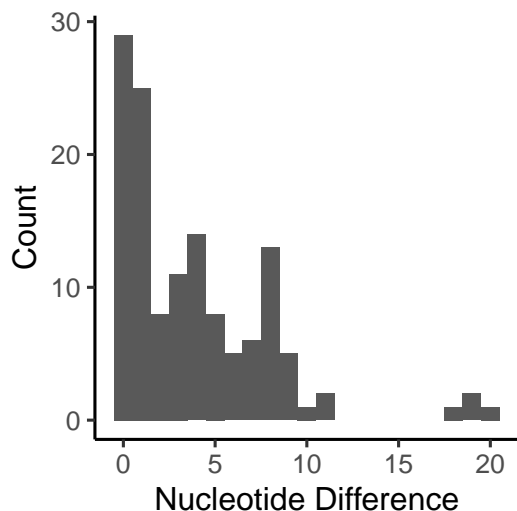
IGHV3-20*01_02

146 sequences assigned
32 (21.9%) exact matches, in which:
21 unique CDR3
4 unique J



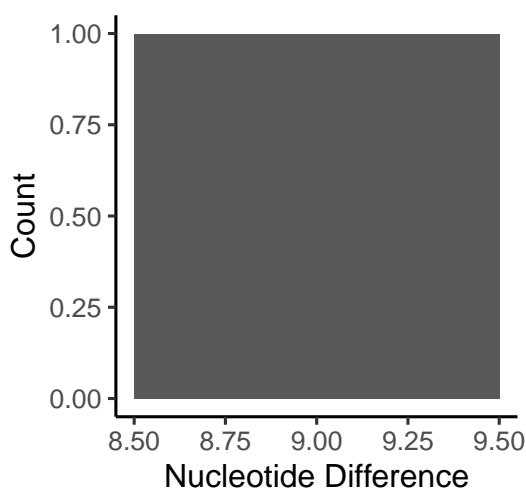
IGHV3-20*03_04

135 sequences assigned
29 (21.5%) exact matches, in which:
23 unique CDR3
5 unique J



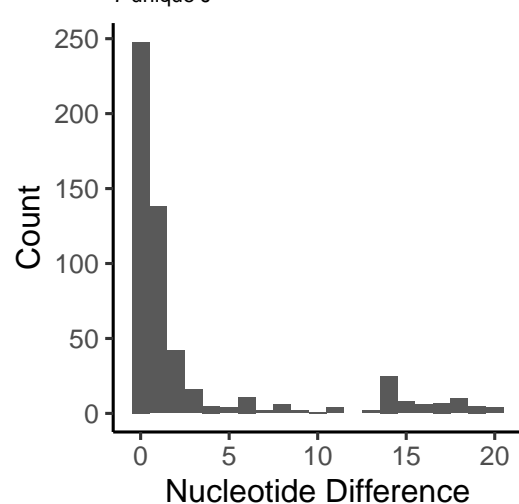
IGHV3-22*01_02

1 sequences assigned
No exact matches.



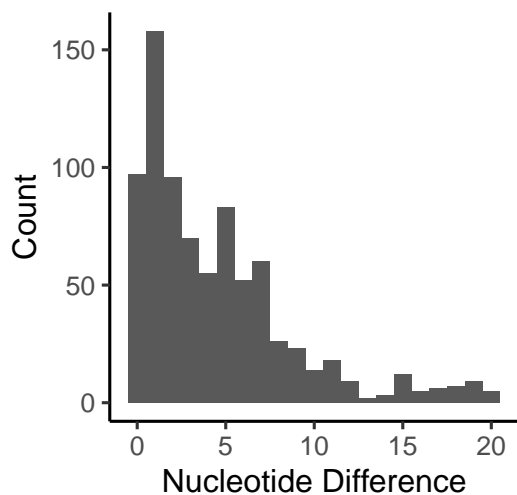
IGHV3-30*03

840 sequences assigned
248 (29.5%) exact matches, in which:
218 unique CDR3
7 unique J



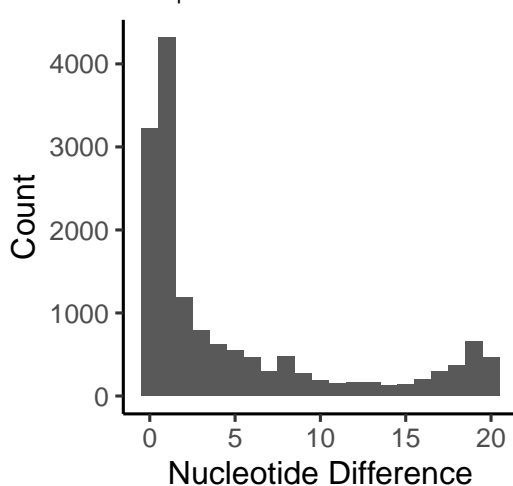
IGHV3-21*04

1030 sequences assigned
97 (9.4%) exact matches, in which:
89 unique CDR3
7 unique J



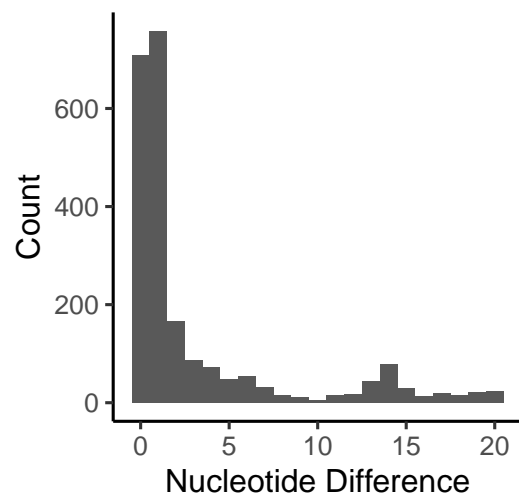
IGHV3-23*01_04

24191 sequences assigned
3222 (13.3%) exact matches, in which:
1787 unique CDR3
7 unique J



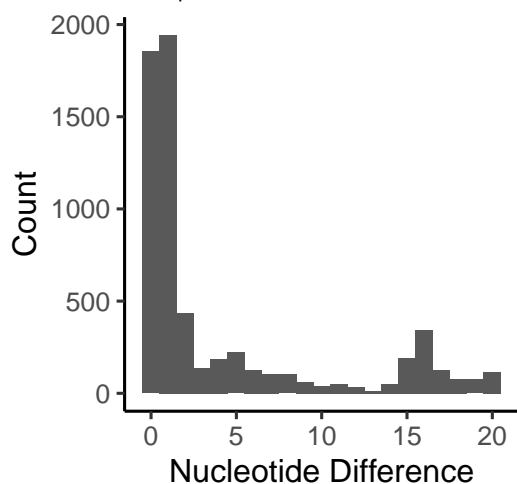
IGHV3-33*01

2707 sequences assigned
708 (26.2%) exact matches, in which:
447 unique CDR3
7 unique J



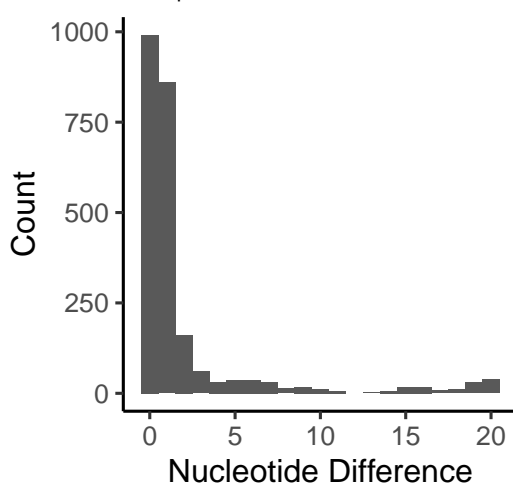
IGHV3-21*01_02

9073 sequences assigned
1853 (20.4%) exact matches, in which:
1145 unique CDR3
7 unique J



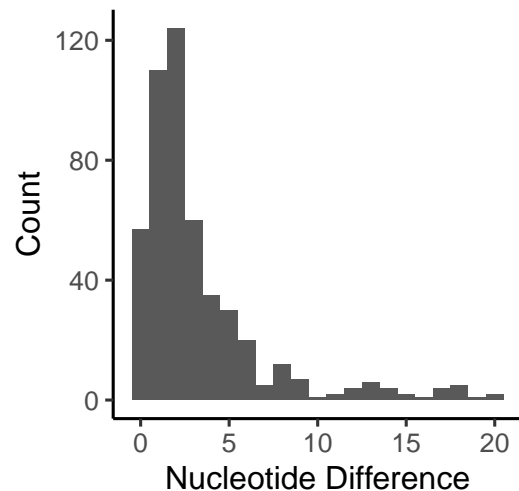
IGHV3-30-3*01

3302 sequences assigned
991 (30%) exact matches, in which:
664 unique CDR3
7 unique J



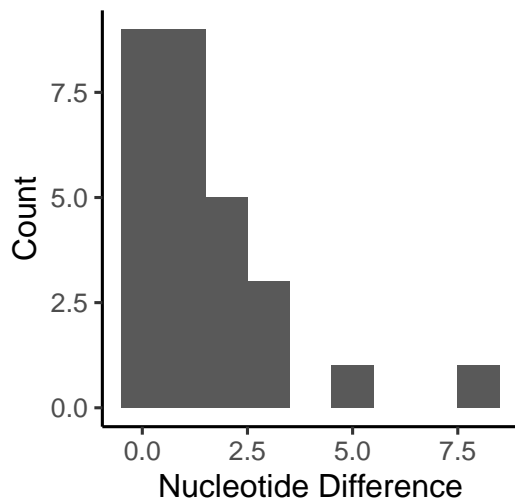
IGHV3-33*06

511 sequences assigned
57 (11.2%) exact matches, in which:
54 unique CDR3
5 unique J



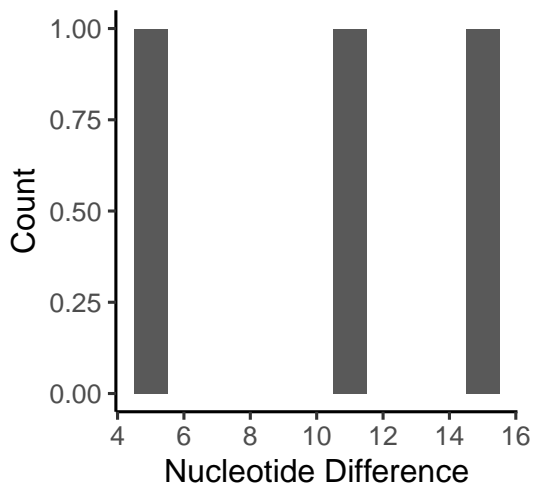
IGHV3-38-3*01

28 sequences assigned
9 (32.1%) exact matches, in which:
8 unique CDR3
3 unique J



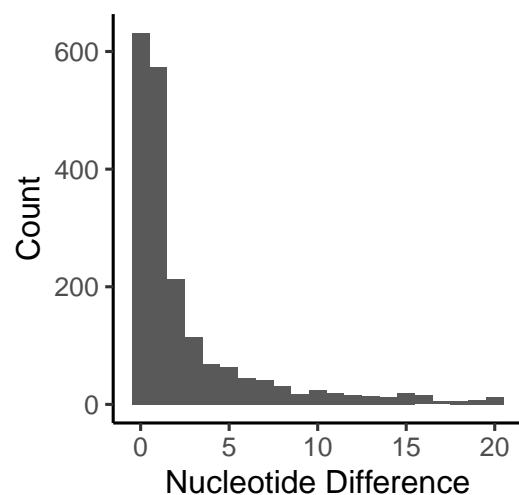
IGHV3-47*02

3 sequences assigned
No exact matches.



IGHV3-48*04

2054 sequences assigned
632 (30.8%) exact matches, in which:
413 unique CDR3
7 unique J



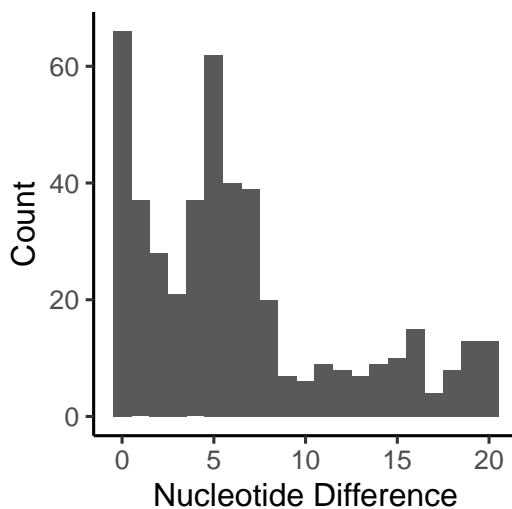
IGHV3-38*03

1 sequences assigned
No exact matches.



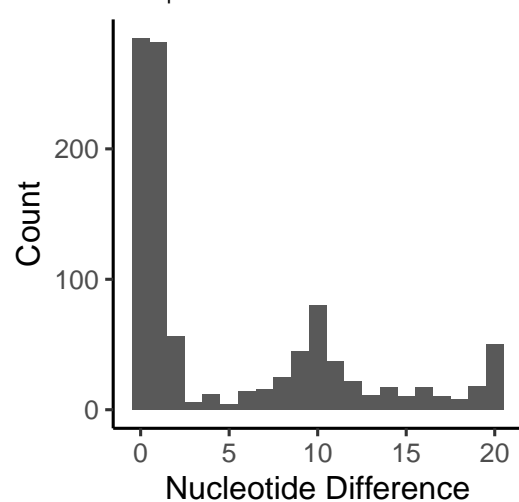
IGHV3-48*01

589 sequences assigned
66 (11.2%) exact matches, in which:
65 unique CDR3
5 unique J



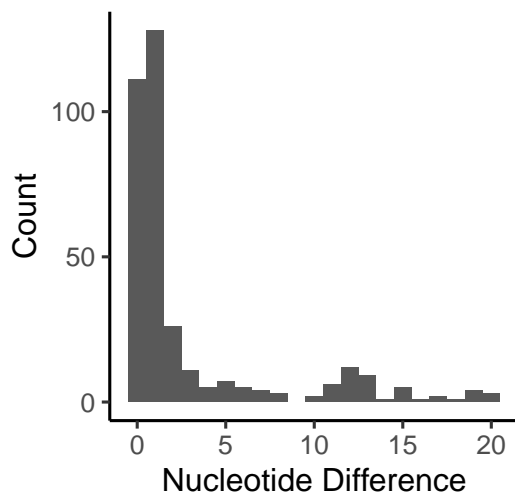
IGHV3-49*03_05

1110 sequences assigned
285 (25.7%) exact matches, in which:
165 unique CDR3
7 unique J



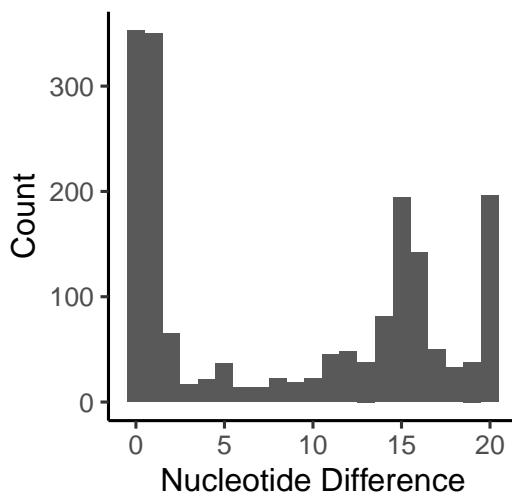
IGHV3-43*01

367 sequences assigned
111 (30.2%) exact matches, in which:
58 unique CDR3
6 unique J



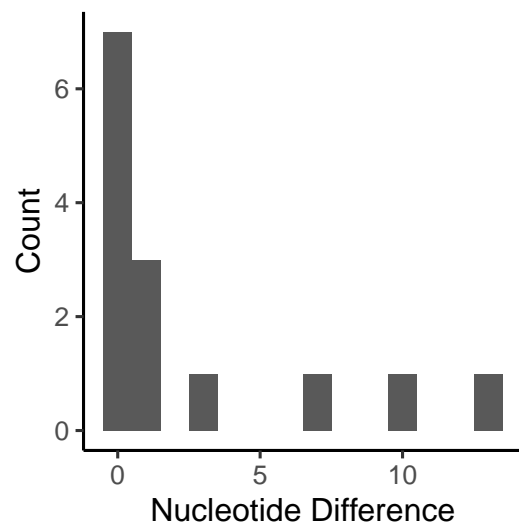
IGHV3-48*02

3907 sequences assigned
353 (9%) exact matches, in which:
211 unique CDR3
7 unique J



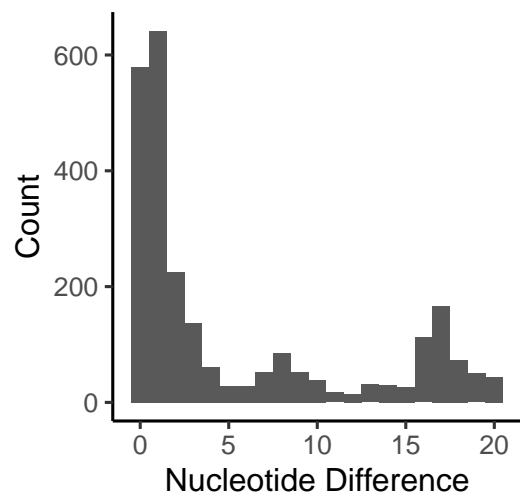
IGHV3-52*01_03

14 sequences assigned
7 (50%) exact matches, in which:
6 unique CDR3
3 unique J



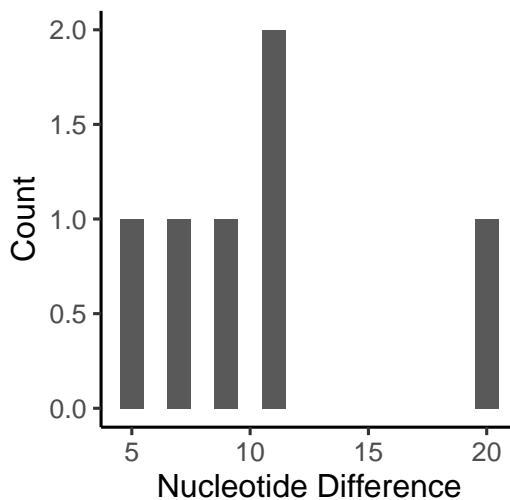
IGHV3–53*01_02

3267 sequences assigned
579 (17.7%) exact matches, in which:
371 unique CDR3
7 unique J



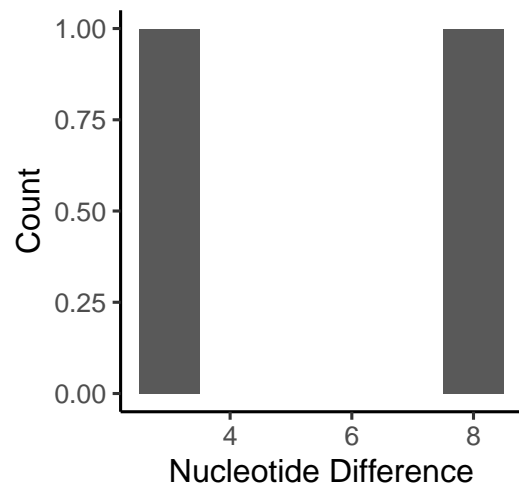
IGHV3–66*01

13 sequences assigned
No exact matches.



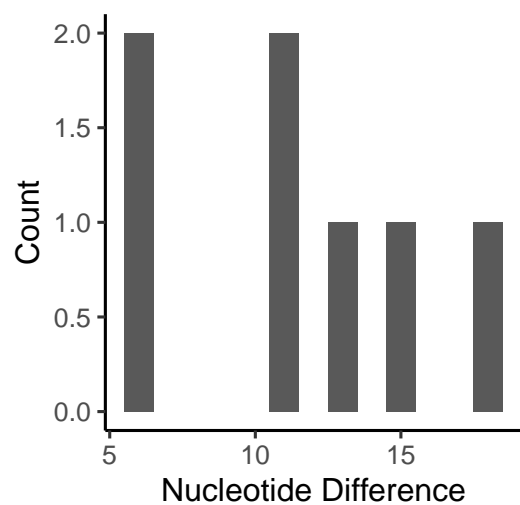
IGHV3–66*04

7 sequences assigned
No exact matches.



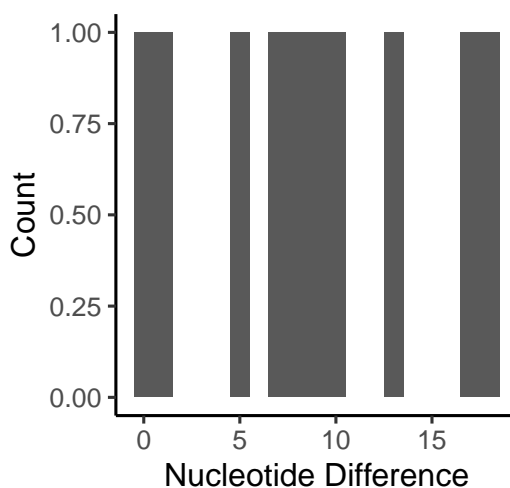
IGHV3–64*04

9 sequences assigned
No exact matches.



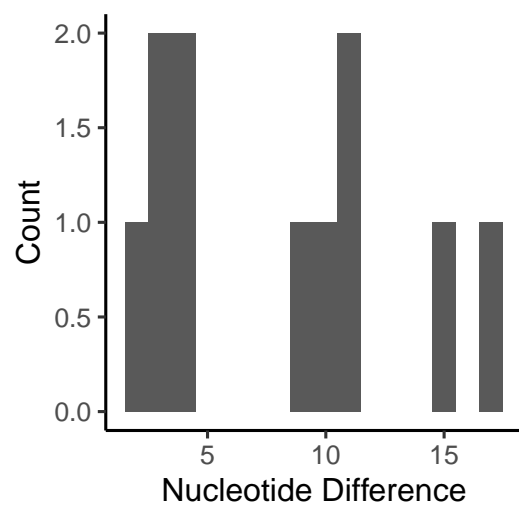
IGHV3–66*02

15 sequences assigned
1 (6.7%) exact matches, in which:
1 unique CDR3
1 unique J



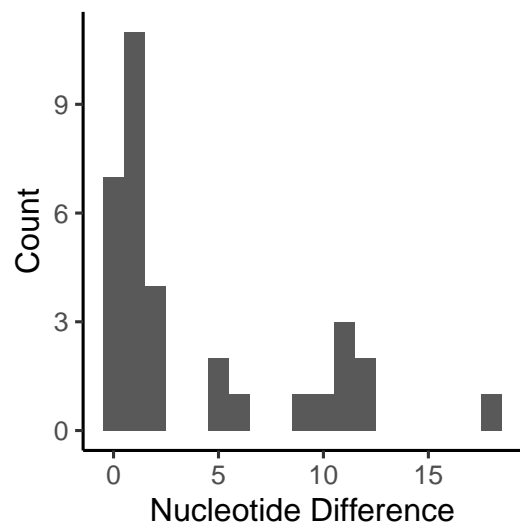
IGHV3–69–1*01

28 sequences assigned
No exact matches.



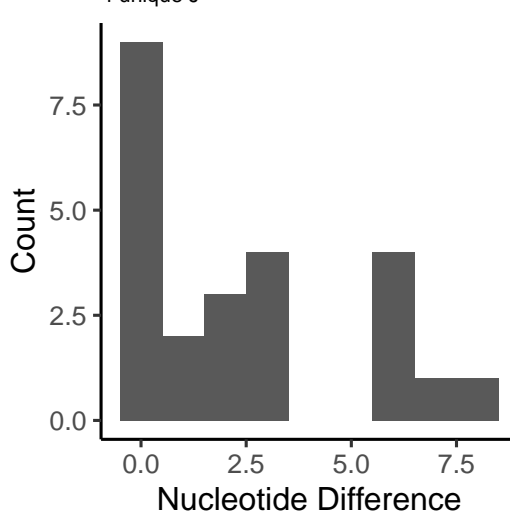
IGHV3–64*02_07

33 sequences assigned
7 (21.2%) exact matches, in which:
6 unique CDR3
1 unique J



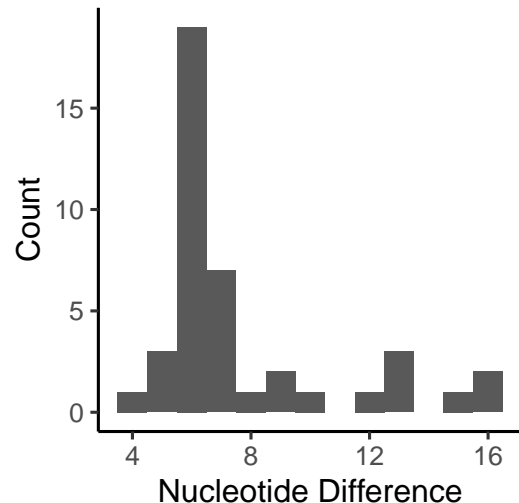
IGHV3–66*03

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



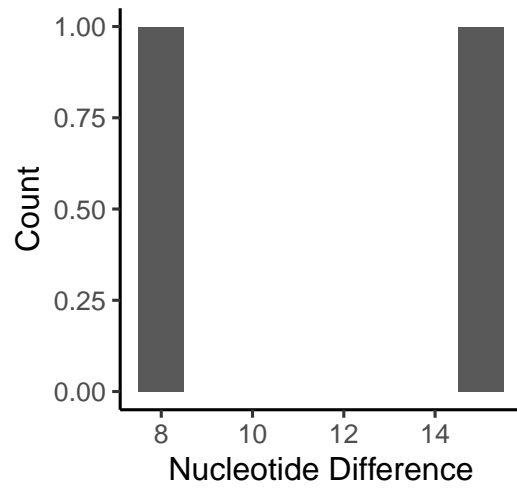
IGHV3–69–1*02

57 sequences assigned
No exact matches.



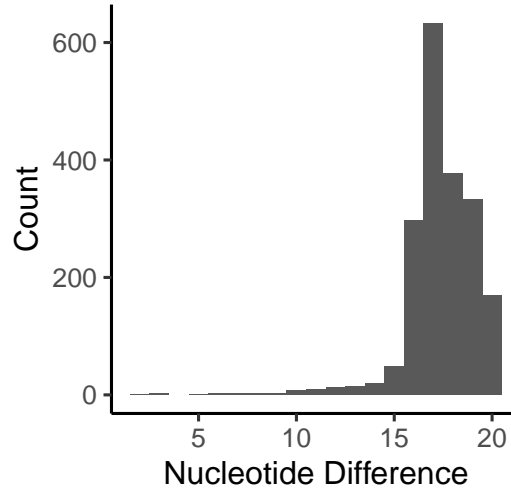
IGHV3-71*01_04

2 sequences assigned
No exact matches.



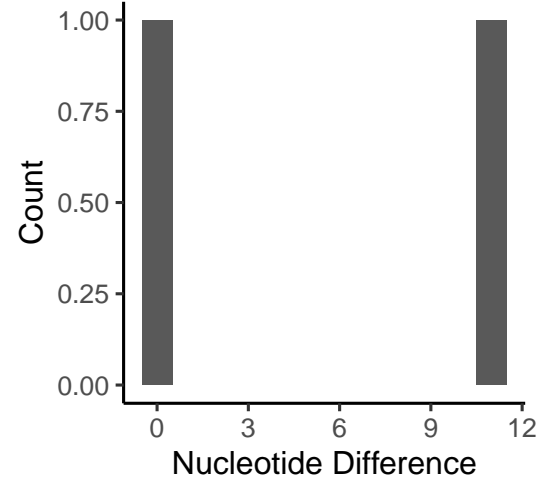
IGHV3-74*03

5954 sequences assigned
No exact matches.



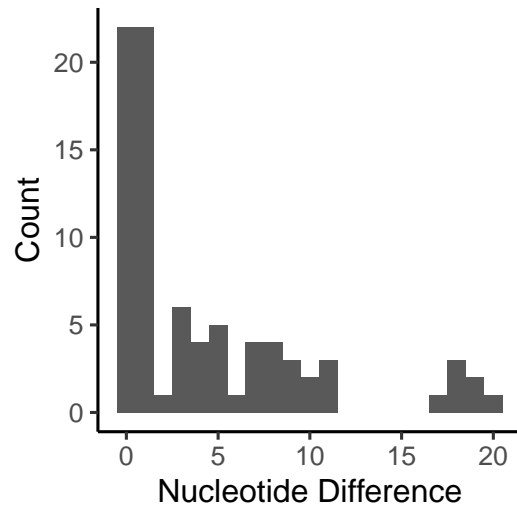
IGHV3-64D*06

45 sequences assigned
1 (2.2%) exact matches, in which:
1 unique CDR3
1 unique J



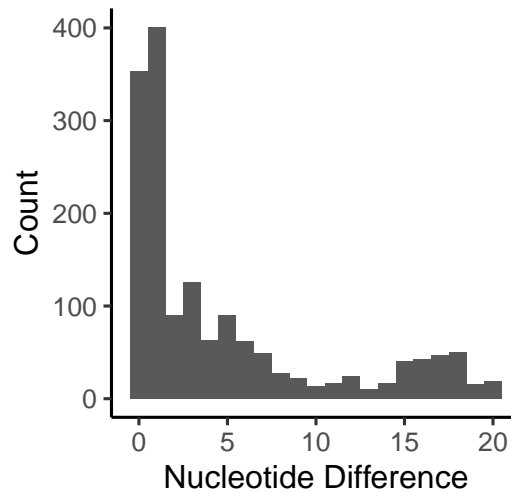
IGHV3-72*01

127 sequences assigned
22 (17.3%) exact matches, in which:
13 unique CDR3
5 unique J



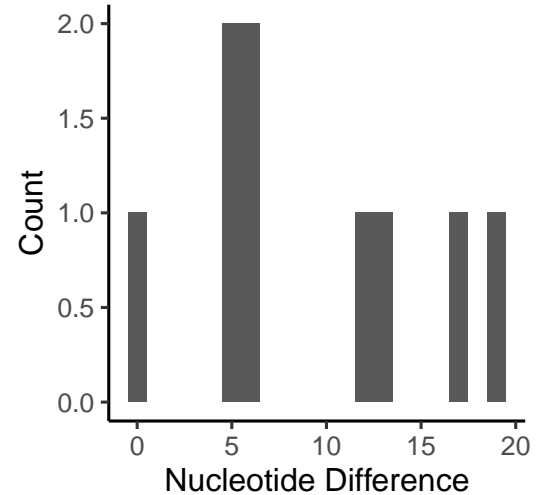
IGHV3-74*01_02

2249 sequences assigned
353 (15.7%) exact matches, in which:
232 unique CDR3
7 unique J



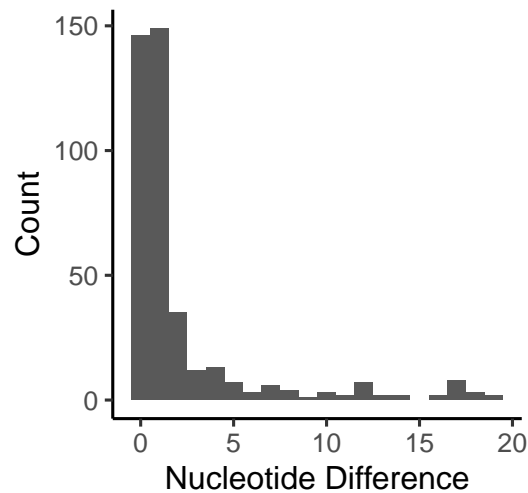
IGHV3-NL1*01

29 sequences assigned
1 (3.4%) exact matches, in which:
1 unique CDR3
1 unique J



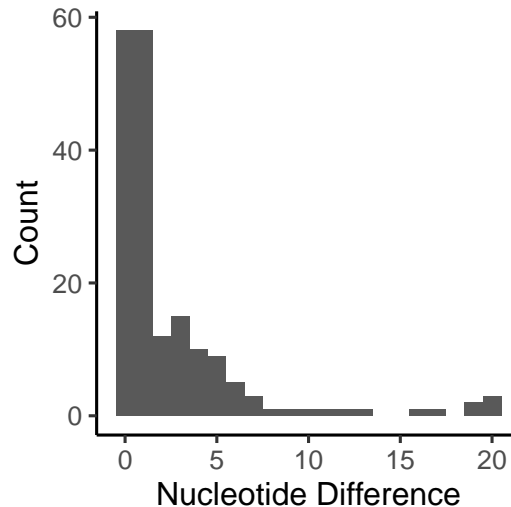
IGHV3-73*01_02

731 sequences assigned
146 (20%) exact matches, in which:
90 unique CDR3
7 unique J



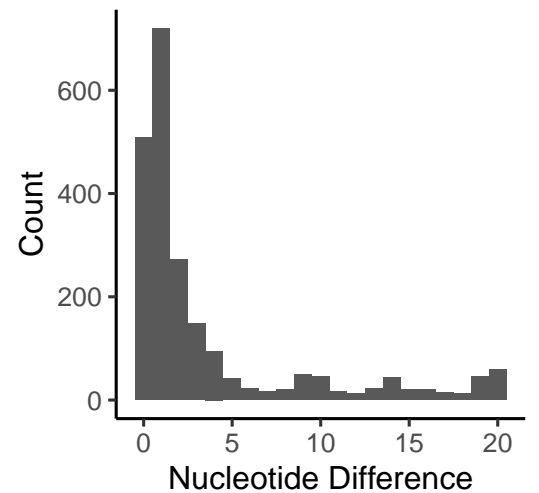
IGHV3-43D*03

190 sequences assigned
58 (30.5%) exact matches, in which:
32 unique CDR3
6 unique J



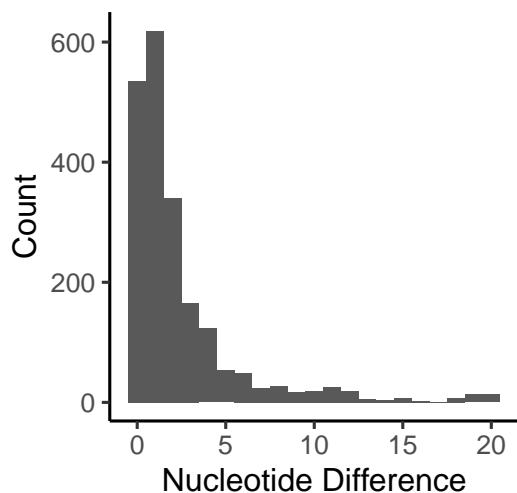
IGHV4-4*07

2526 sequences assigned
509 (20.2%) exact matches, in which:
403 unique CDR3
7 unique J



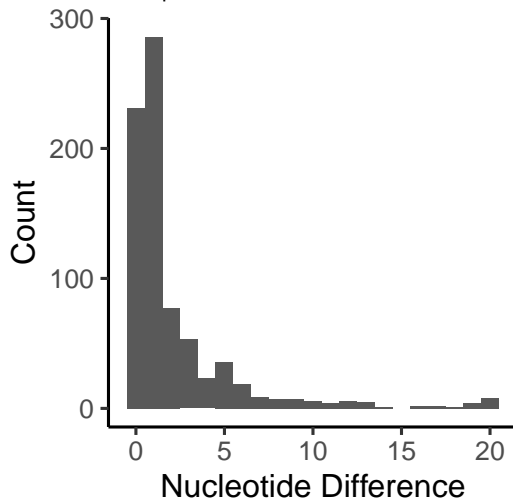
IGHV4-4*02_03

2180 sequences assigned
535 (24.5%) exact matches, in which:
397 unique CDR3
7 unique J



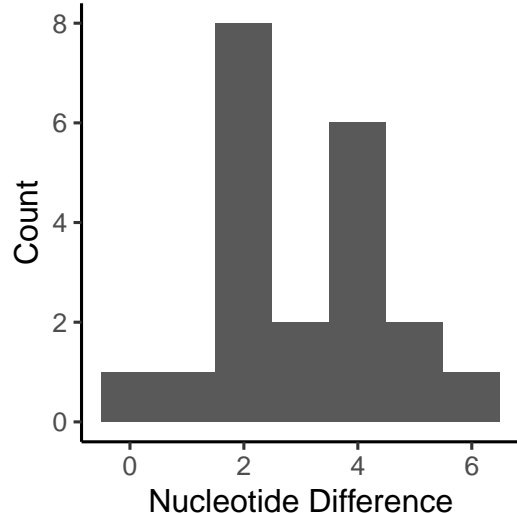
IGHV4-30-4*01

913 sequences assigned
231 (25.3%) exact matches, in which:
183 unique CDR3
7 unique J



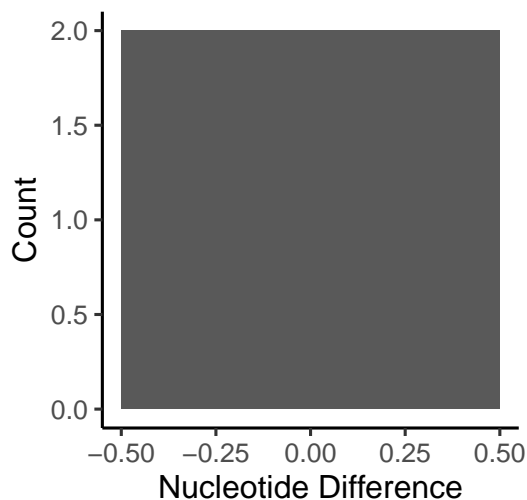
IGHV4-30-2*05

21 sequences assigned
1 (4.8%) exact matches, in which:
1 unique CDR3
1 unique J



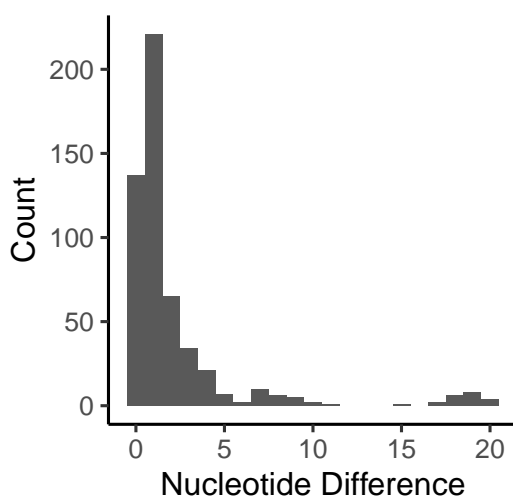
IGHV4-28*03

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



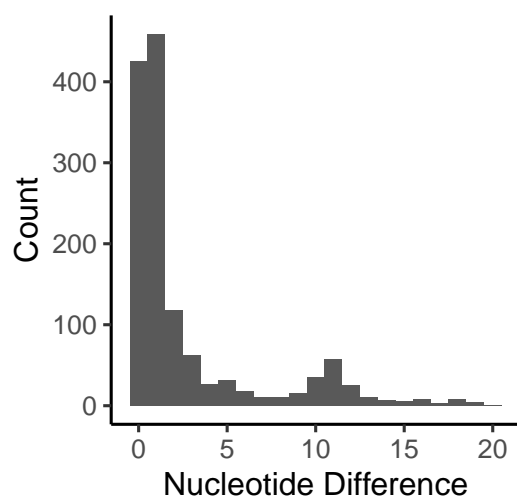
IGHV4-30-2*01

543 sequences assigned
137 (25.2%) exact matches, in which:
82 unique CDR3
6 unique J



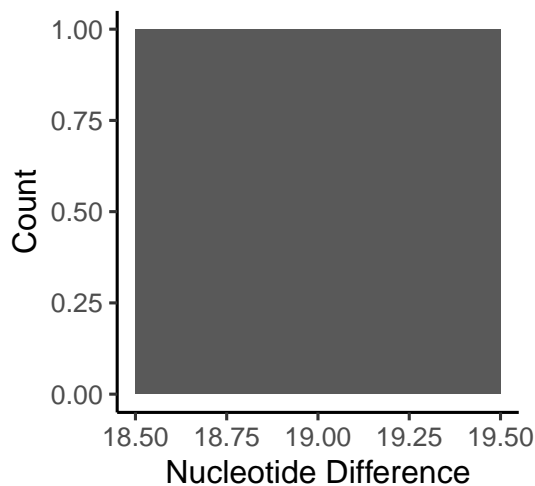
IGHV4-31*02

1386 sequences assigned
425 (30.7%) exact matches, in which:
340 unique CDR3
7 unique J



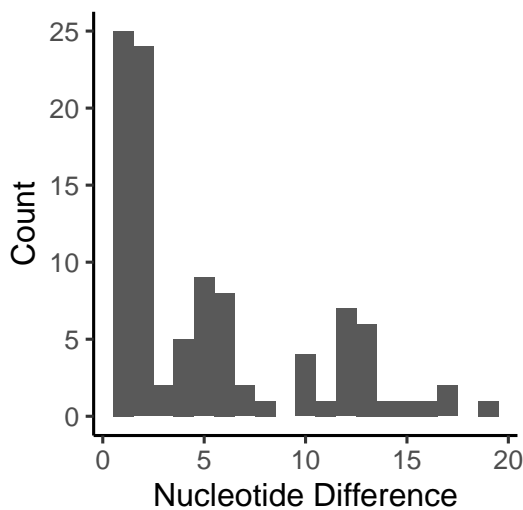
IGHV4-28*02_05

1 sequences assigned
No exact matches.



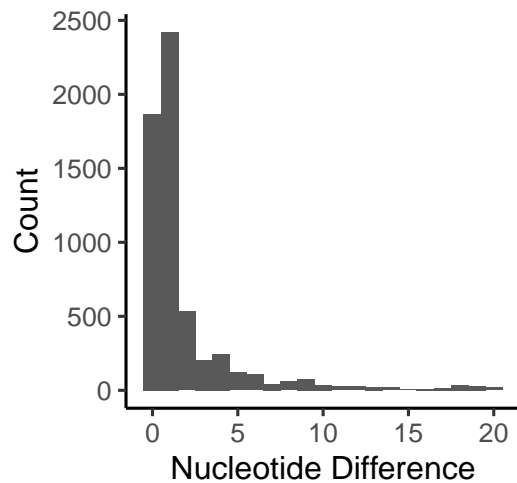
IGHV4-30-2*03

106 sequences assigned
No exact matches.



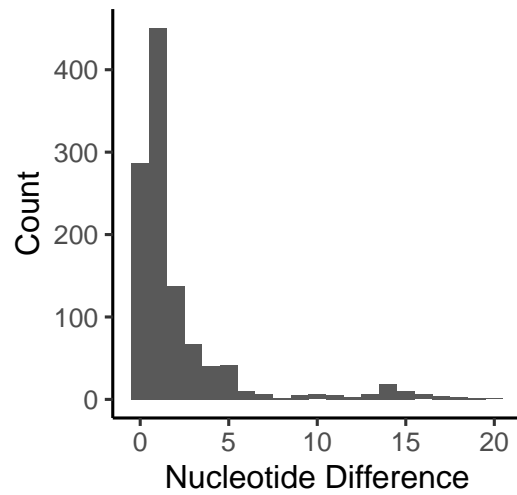
IGHV4-34*01_02

6754 sequences assigned
1868 (27.7%) exact matches, in which:
1283 unique CDR3
7 unique J



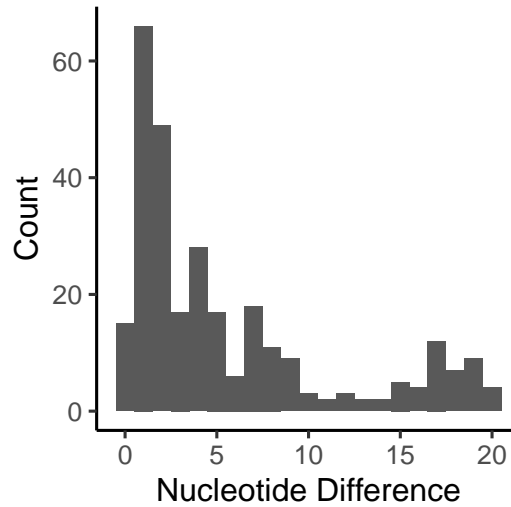
IGHV4-38-2*02

1176 sequences assigned
287 (24.4%) exact matches, in which:
227 unique CDR3
7 unique J



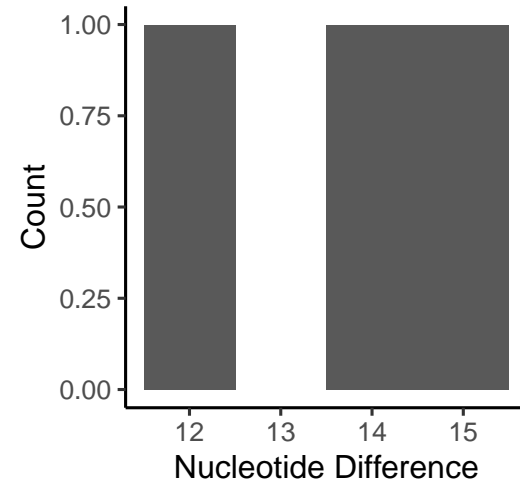
IGHV4-59*08

418 sequences assigned
15 (3.6%) exact matches, in which:
15 unique CDR3
4 unique J



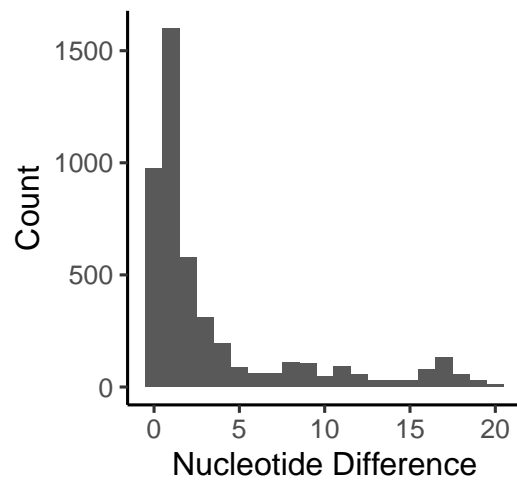
IGHV1/OR15-2*02_03

4 sequences assigned
No exact matches.



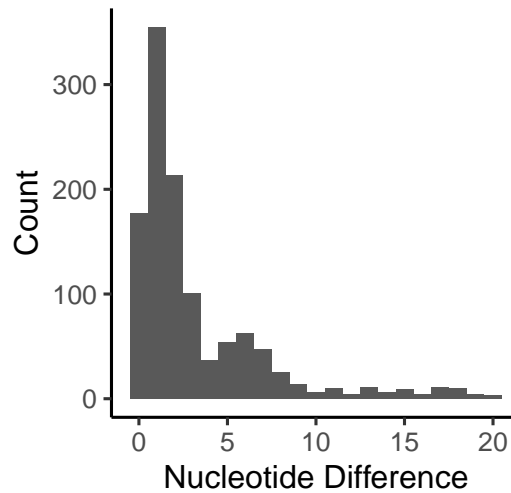
IGHV4-39*07

4779 sequences assigned
975 (20.4%) exact matches, in which:
737 unique CDR3
7 unique J



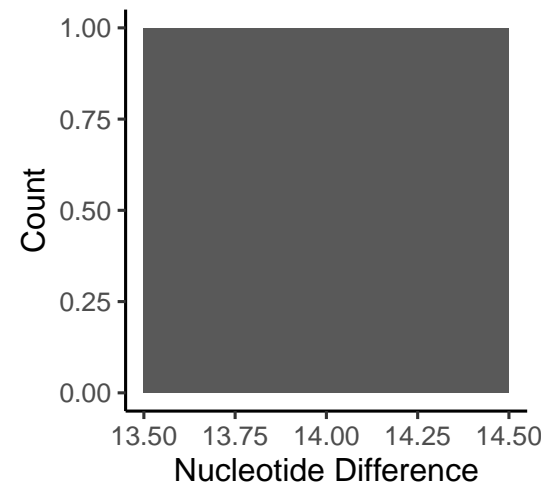
IGHV4-59*12

1287 sequences assigned
177 (13.8%) exact matches, in which:
174 unique CDR3
7 unique J



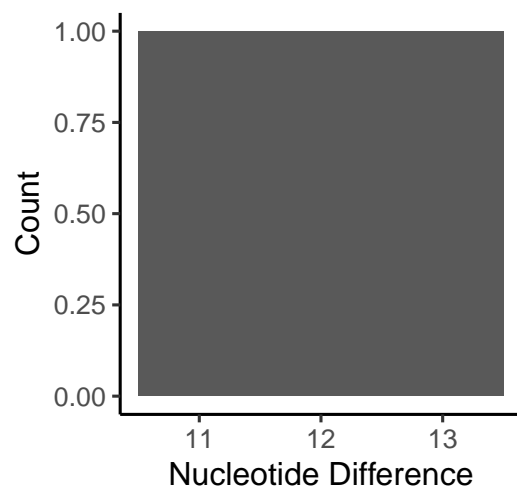
IGHV1/OR15-4*01

1 sequences assigned
No exact matches.



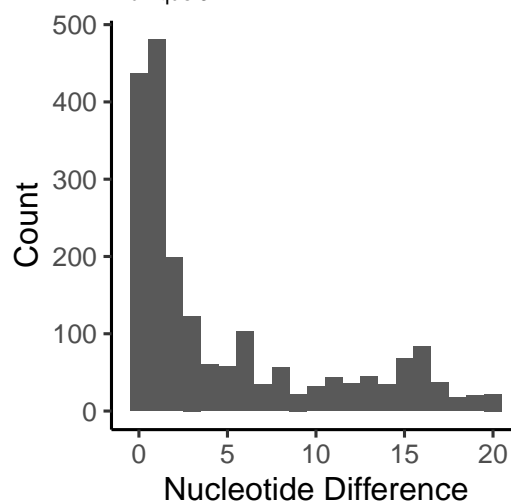
IGHV4-55*09

3 sequences assigned
No exact matches.



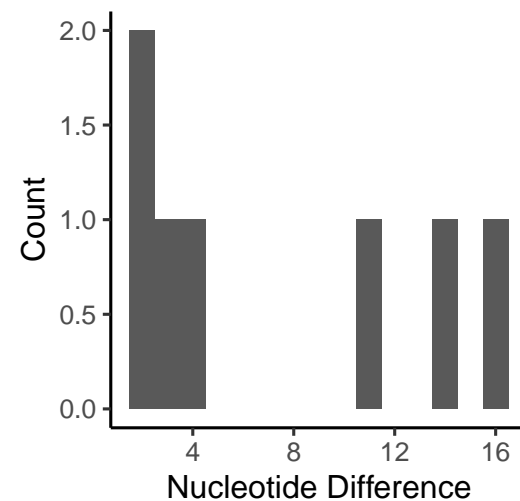
IGHV4-61*01

2181 sequences assigned
437 (20%) exact matches, in which:
368 unique CDR3
7 unique J



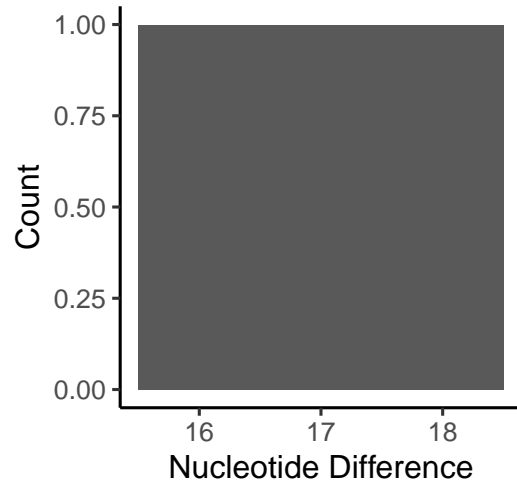
IGHV4/OR15-8*01

7 sequences assigned
No exact matches.



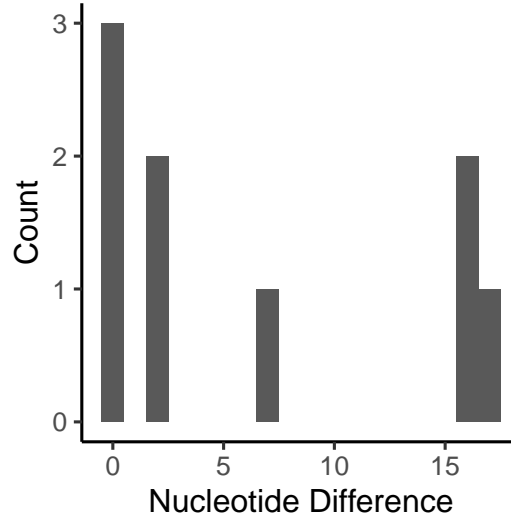
IGHV4/OR15-8*02

10 sequences assigned
No exact matches.



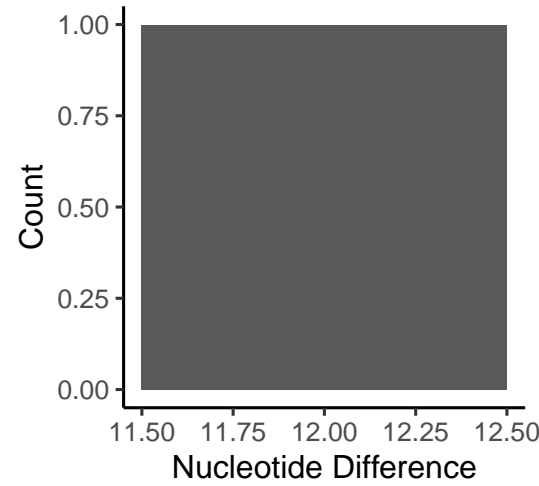
IGHV5-51*06

38 sequences assigned
3 (7.9%) exact matches, in which:
3 unique CDR3
3 unique J



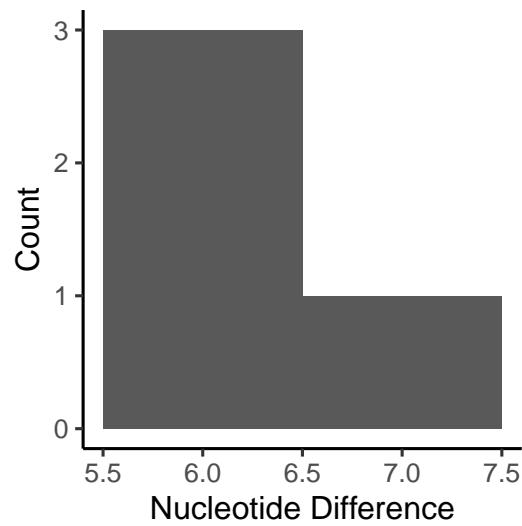
IGHV3/OR16-9*01

2 sequences assigned
No exact matches.



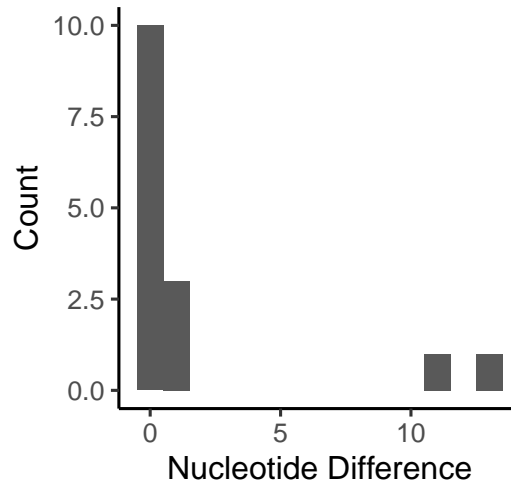
IGHV5-10-1*01_03

4 sequences assigned
No exact matches.



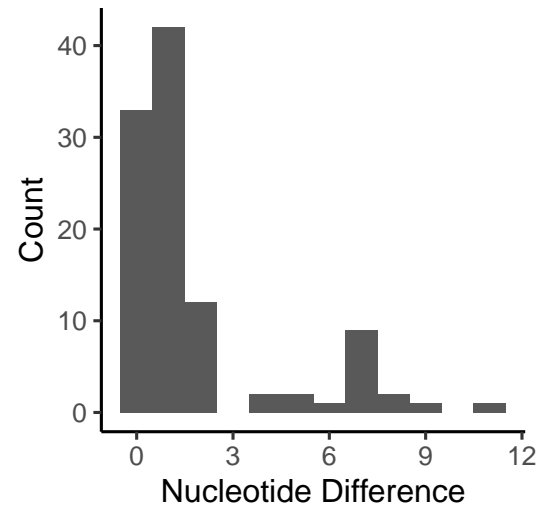
IGHV5-51*07

16 sequences assigned
10 (62.5%) exact matches, in which:
10 unique CDR3
5 unique J



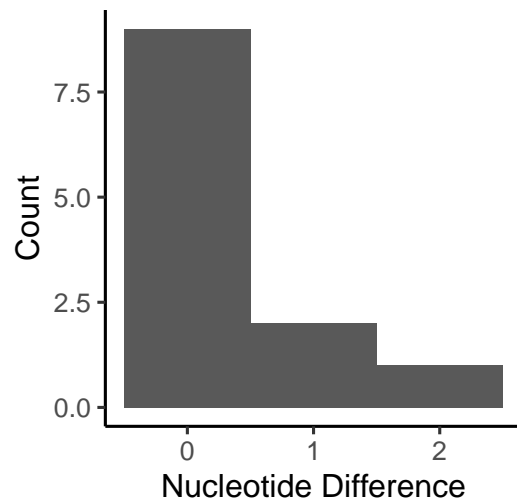
IGHV7-4-1*01

105 sequences assigned
33 (31.4%) exact matches, in which:
26 unique CDR3
5 unique J



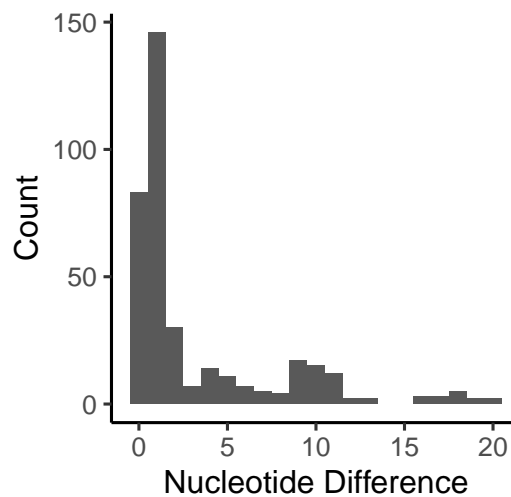
IGHV5-51*04

111 sequences assigned
9 (8.1%) exact matches, in which:
8 unique CDR3
3 unique J



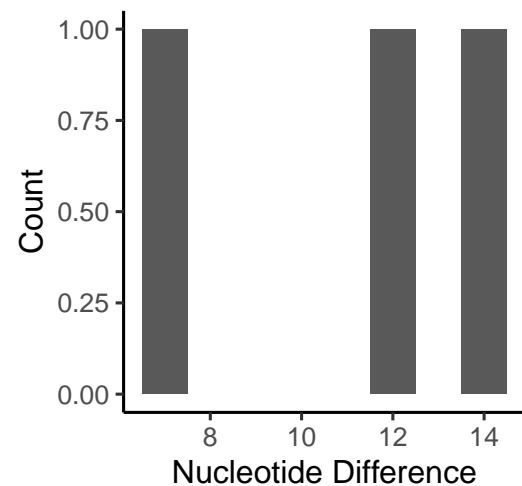
IGHV6-1*01_02

373 sequences assigned
83 (22.3%) exact matches, in which:
66 unique CDR3
6 unique J

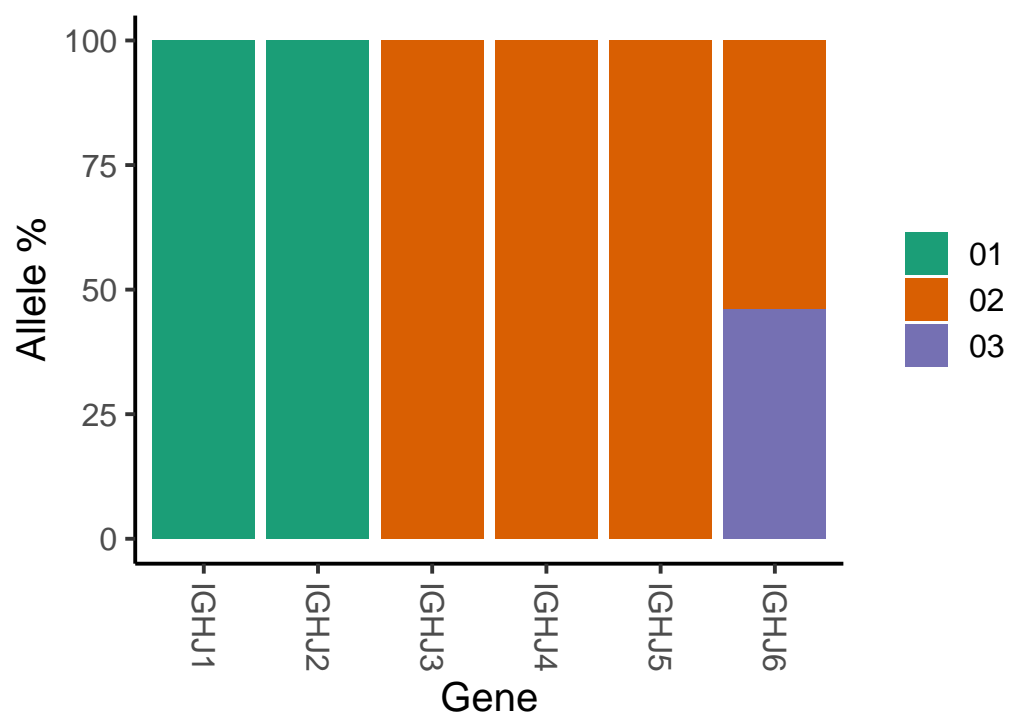


IGHV7-4-1*02

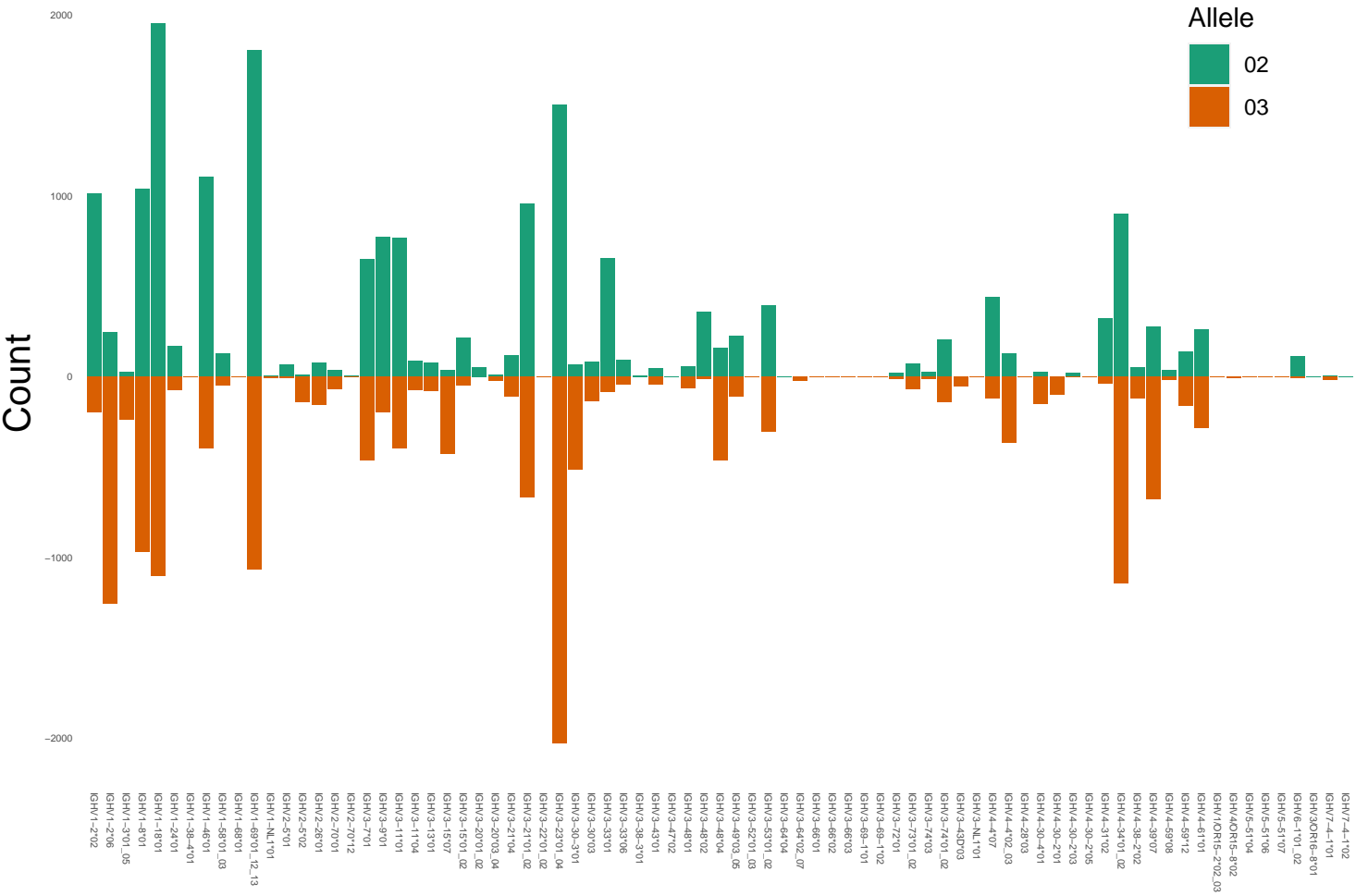
3 sequences assigned
No exact matches.



Allele Usage



Sequence Count by IGHJ6 allele usage



[illegible]