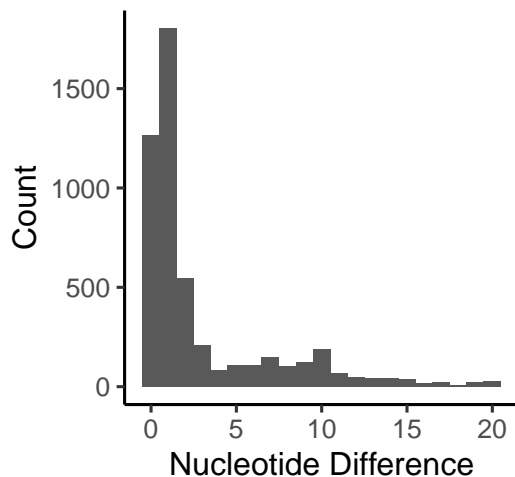


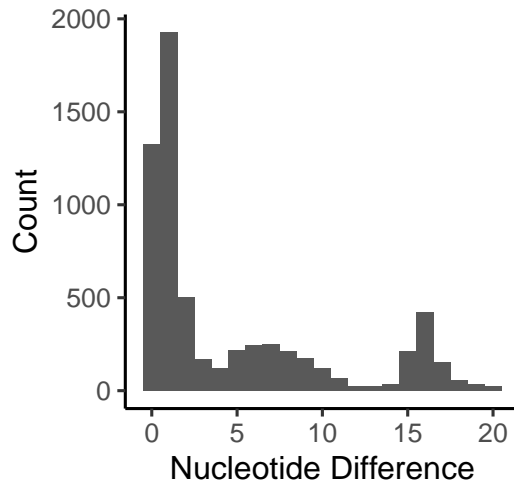
IGHV1-2*02

5669 sequences assigned
1264 (22.3%) exact matches, in which:
992 unique CDR3
7 unique J



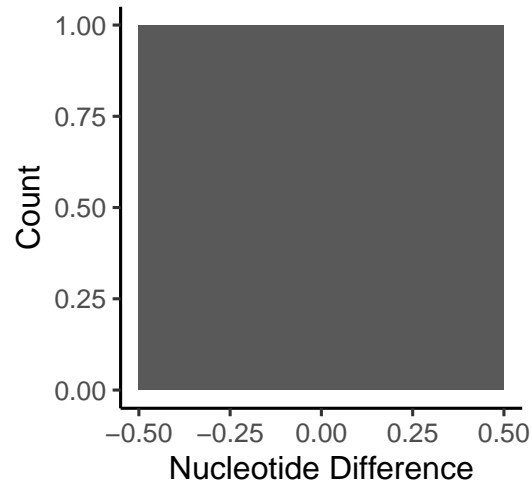
IGHV1-8*01

6452 sequences assigned
1327 (20.6%) exact matches, in which:
1040 unique CDR3
7 unique J



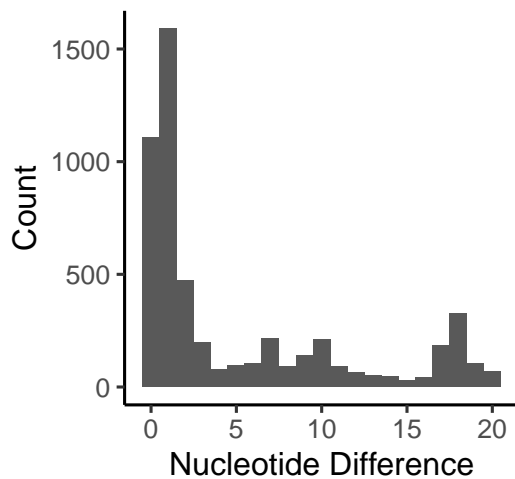
IGHV1-38-4*01

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



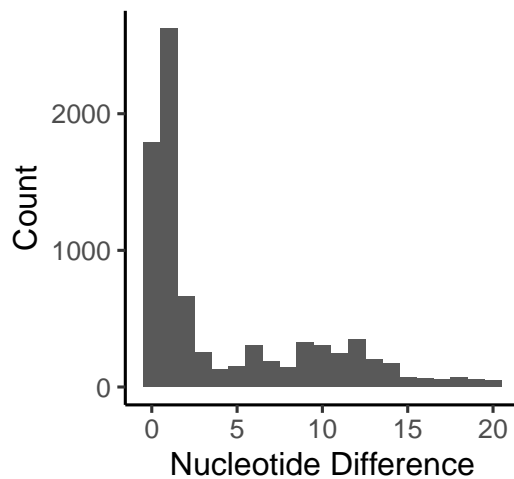
IGHV1-2*06

5807 sequences assigned
1107 (19.1%) exact matches, in which:
870 unique CDR3
7 unique J



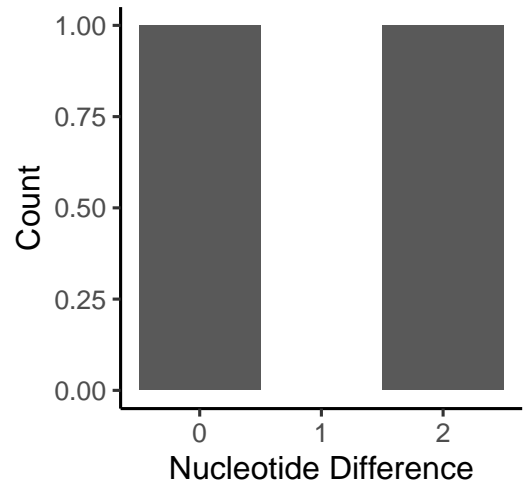
IGHV1-18*01

10309 sequences assigned
1789 (17.4%) exact matches, in which:
1376 unique CDR3
7 unique J



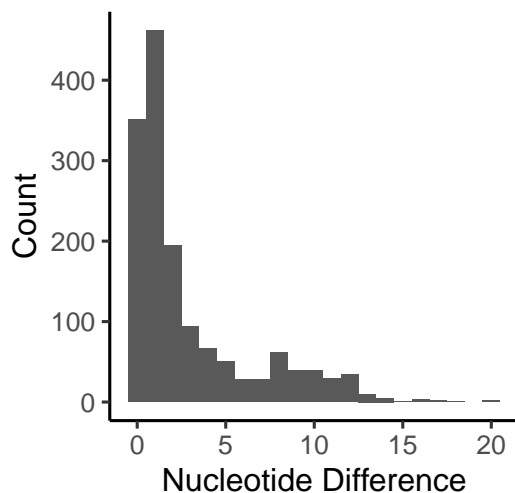
IGHV1-45*02

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



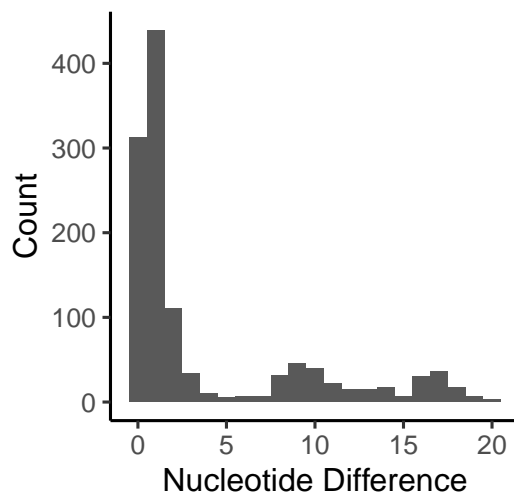
IGHV1-3*01_05

1516 sequences assigned
351 (23.2%) exact matches, in which:
270 unique CDR3
7 unique J



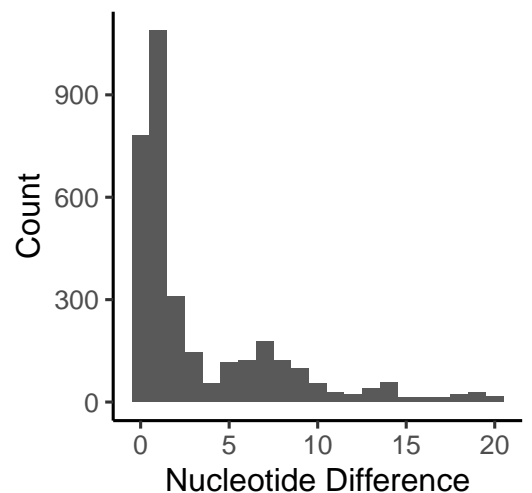
IGHV1-24*01

1253 sequences assigned
312 (24.9%) exact matches, in which:
240 unique CDR3
7 unique J



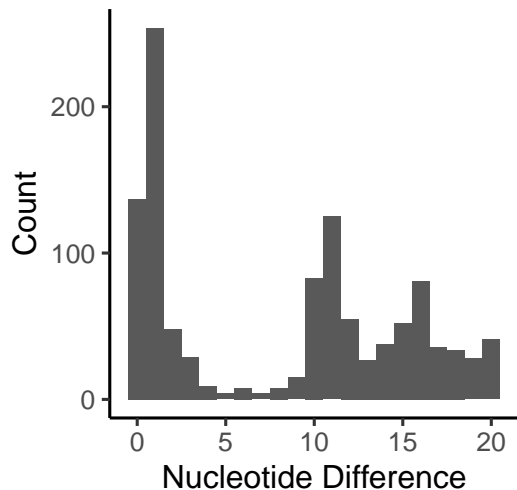
IGHV1-46*01

4371 sequences assigned
782 (17.9%) exact matches, in which:
657 unique CDR3
7 unique J



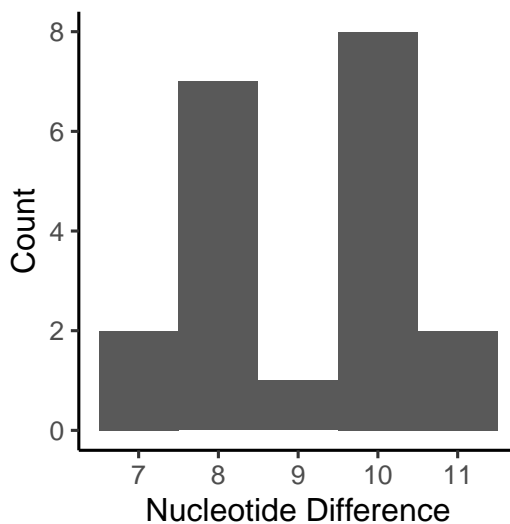
IGHV1-58*01_03

1614 sequences assigned
137 (8.5%) exact matches, in which:
109 unique CDR3
6 unique J



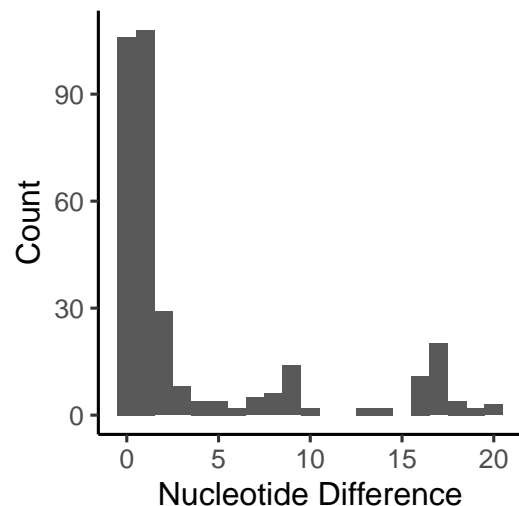
IGHV1-NL1*01

20 sequences assigned
No exact matches.



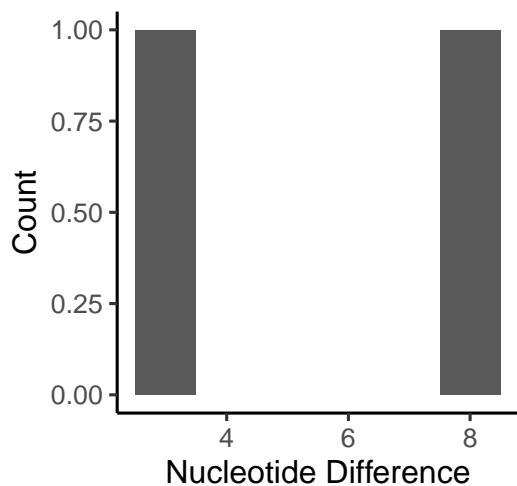
IGHV2-26*01

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



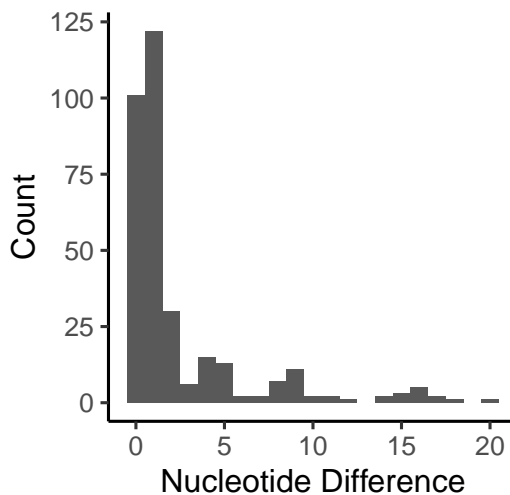
IGHV1-68*01

2 sequences assigned
No exact matches.



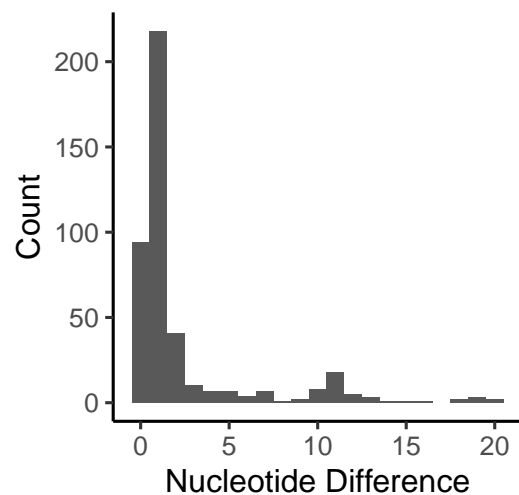
IGHV2-5*01

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



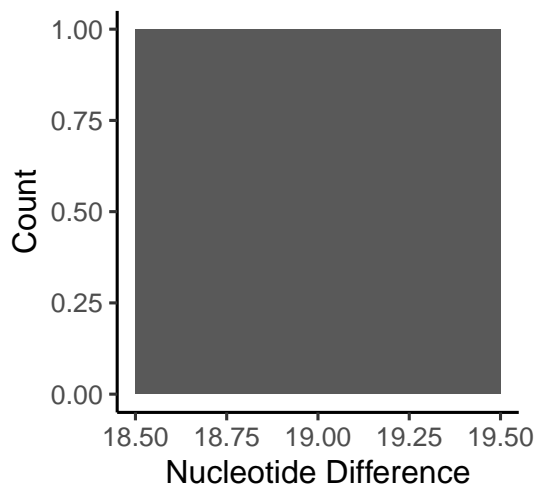
IGHV2-70*01

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



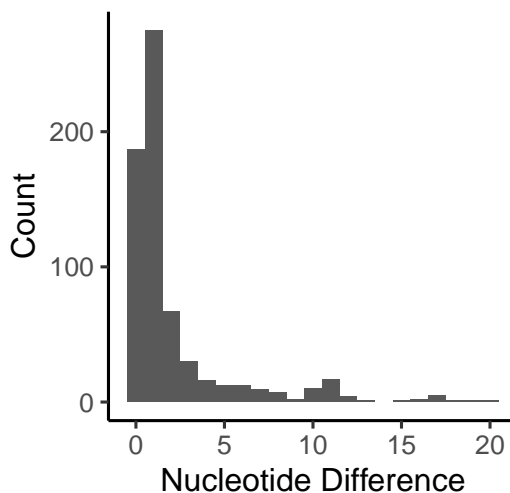
IGHV1-69-2*01

2 sequences assigned
No exact matches.



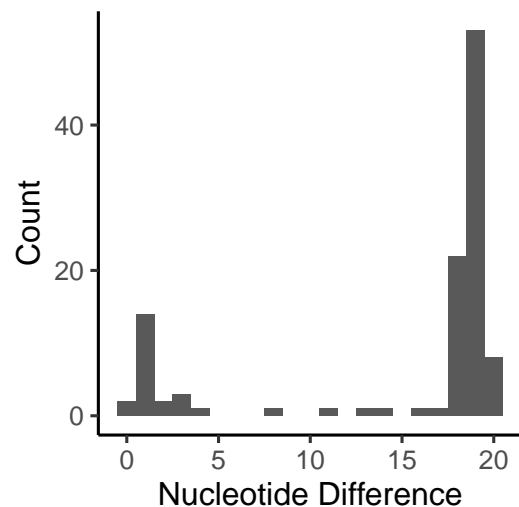
IGHV2-5*02

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



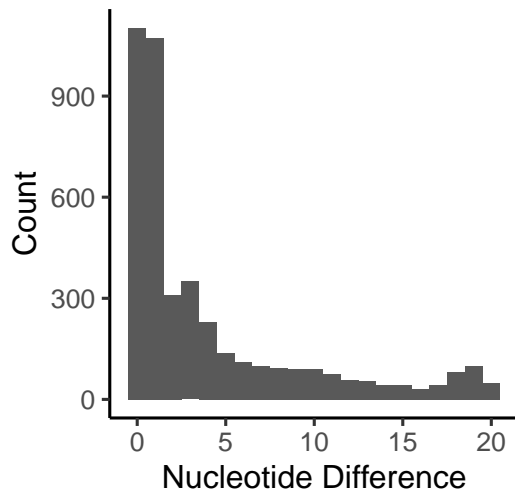
IGHV2-70*12

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



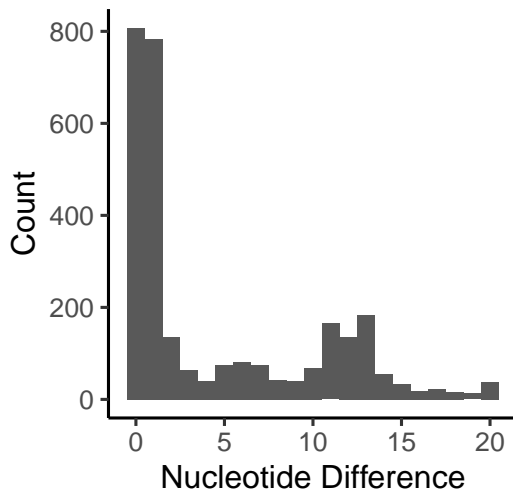
IGHV3-7*01

5077 sequences assigned
1103 (21.7%) exact matches, in which:
736 unique CDR3
7 unique J



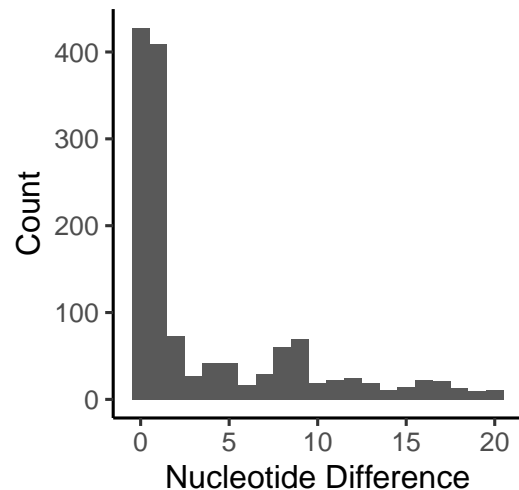
IGHV3-11*01

3849 sequences assigned
808 (21%) exact matches, in which:
526 unique CDR3
7 unique J



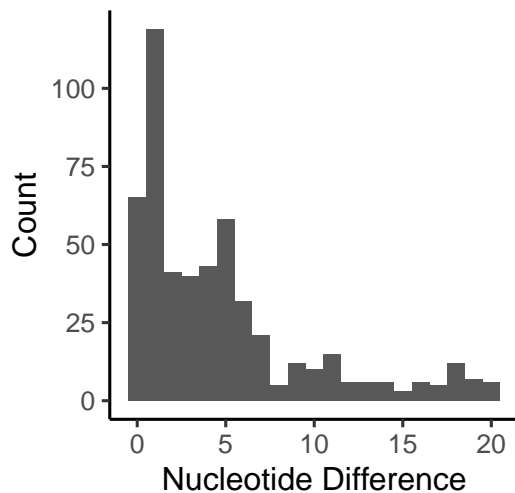
IGHV3-15*07

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



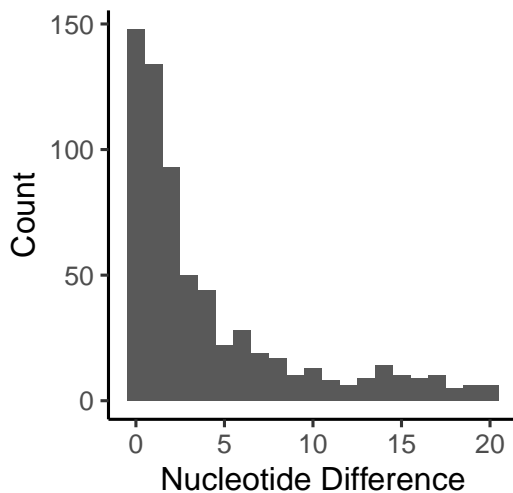
IGHV3-7*03

566 sequences assigned
65 (11.5%) exact matches, in which:
60 unique CDR3
6 unique J



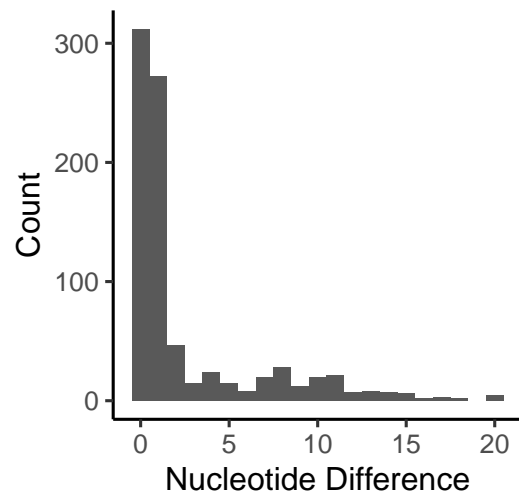
IGHV3-11*04

720 sequences assigned
148 (20.6%) exact matches, in which:
132 unique CDR3
6 unique J



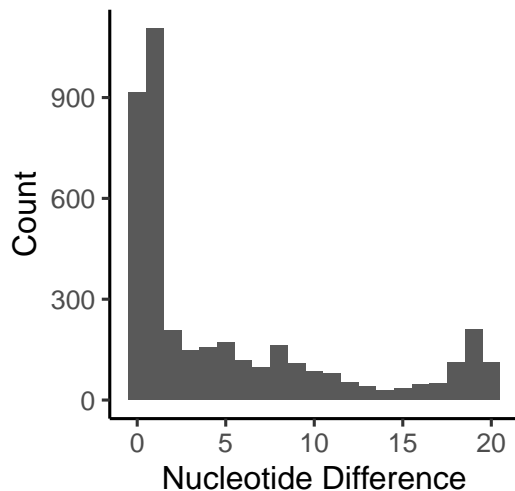
IGHV3-15*01_02

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



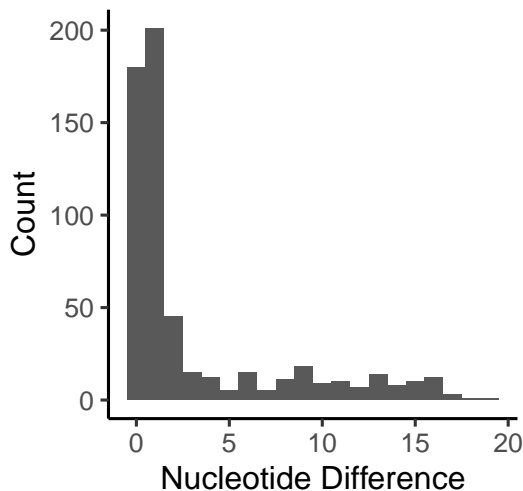
IGHV3-9*01

4820 sequences assigned
915 (19%) exact matches, in which:
516 unique CDR3
7 unique J



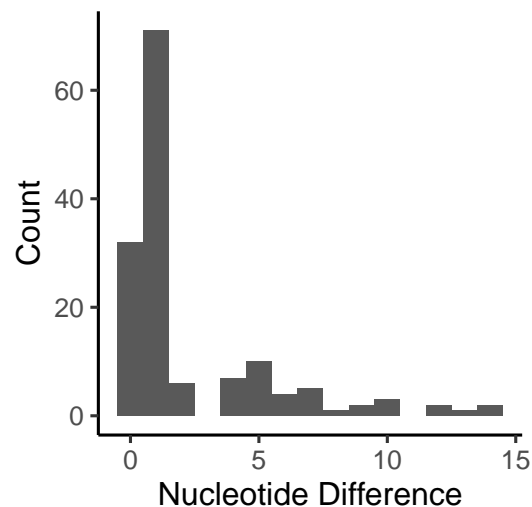
IGHV3-13*01

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



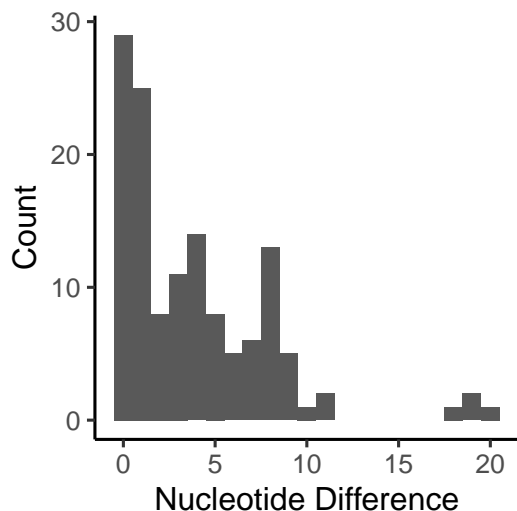
IGHV3-20*01_02

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



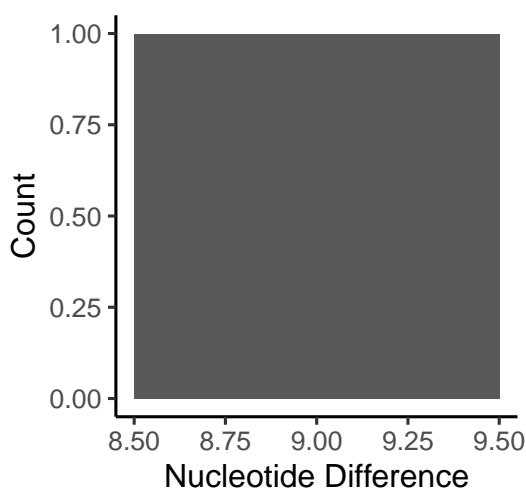
IGHV3-20*03_04

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



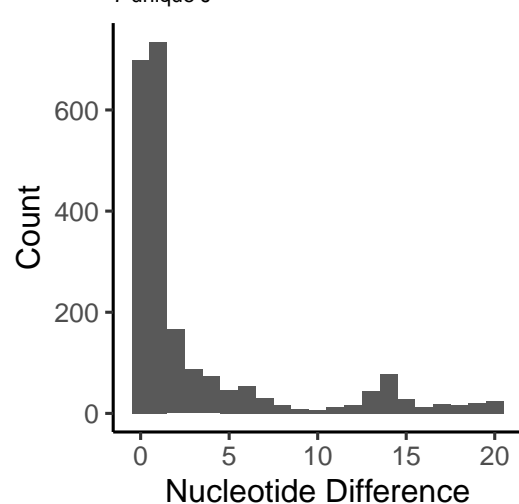
IGHV3-22*01_02

1 sequences assigned
No exact matches.



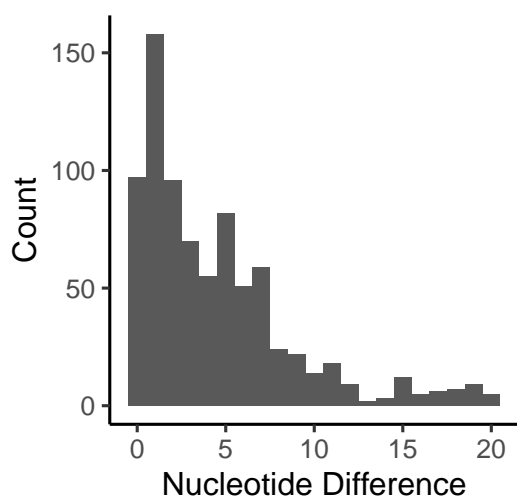
IGHV3-33*01

2644 sequences assigned
699 (26.4%) exact matches, in which:
445 unique CDR3
7 unique J



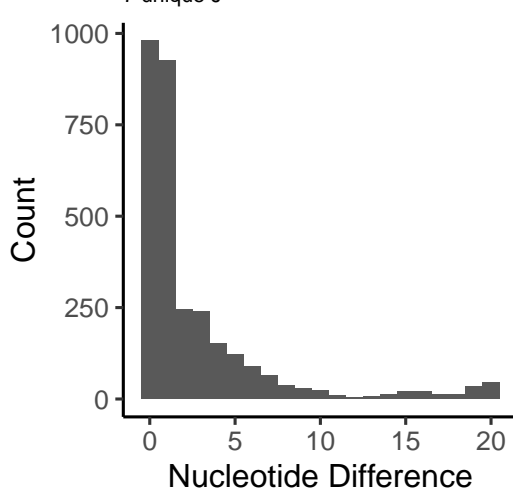
IGHV3-21*04

1023 sequences assigned
97 (9.5%) exact matches, in which:
89 unique CDR3
7 unique J



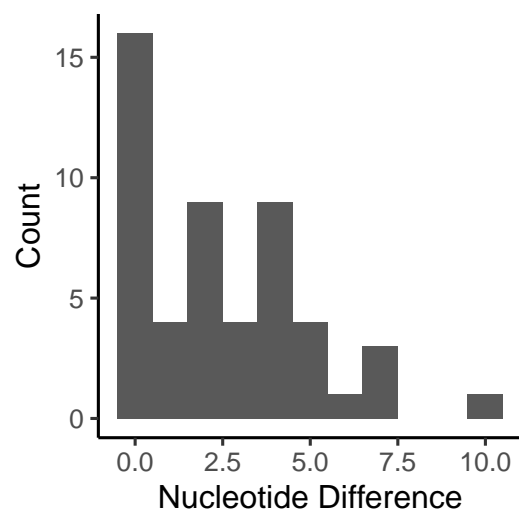
IGHV3-30-3*01

4077 sequences assigned
980 (24%) exact matches, in which:
658 unique CDR3
7 unique J



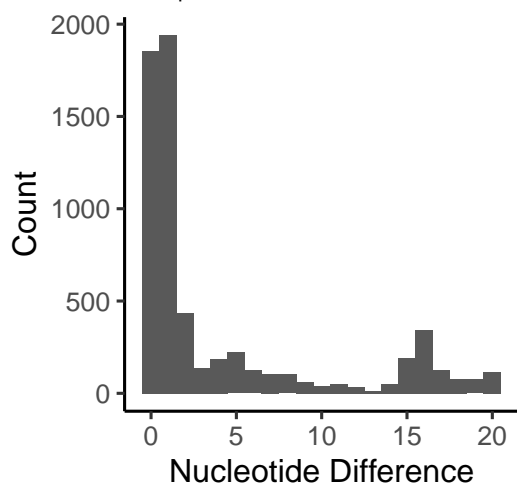
IGHV3-33*05

64 sequences assigned
16 (25%) exact matches, in which:
12 unique CDR3
4 unique J



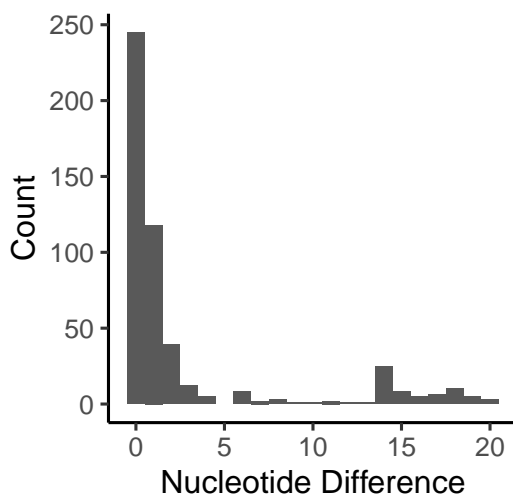
IGHV3-21*01_02

9063 sequences assigned
1853 (20.4%) exact matches, in which:
1145 unique CDR3
7 unique J



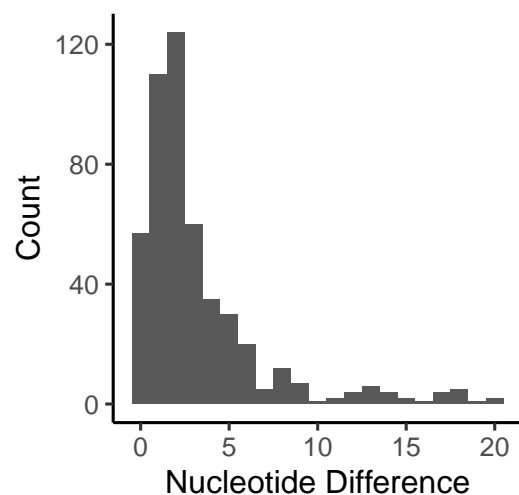
IGHV3-30*03

796 sequences assigned
245 (30.8%) exact matches, in which:
216 unique CDR3
7 unique J



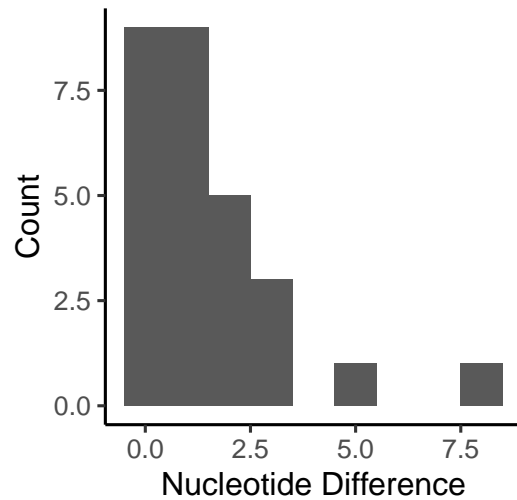
IGHV3-33*06

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



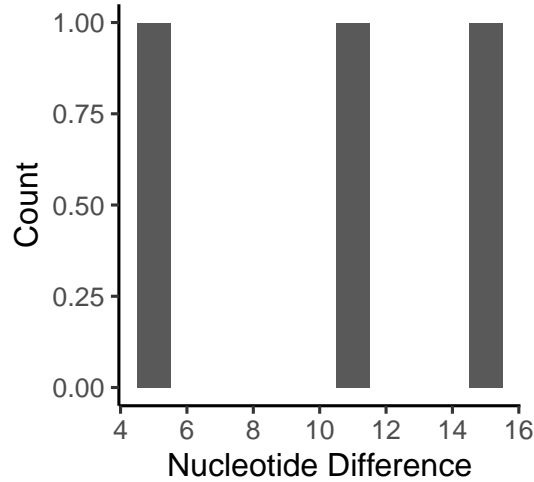
IGHV3-38-3*01

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



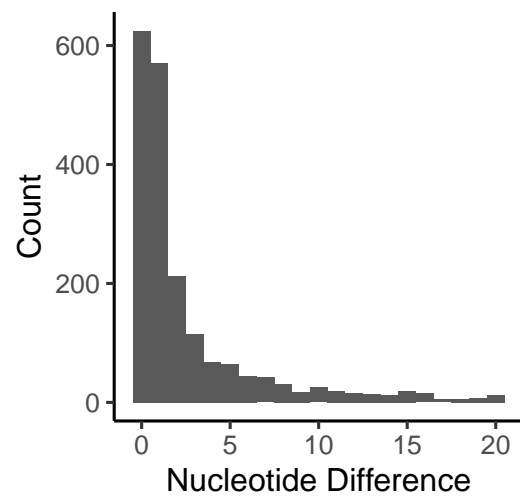
IGHV3-47*02

3 sequences assigned
No exact matches.



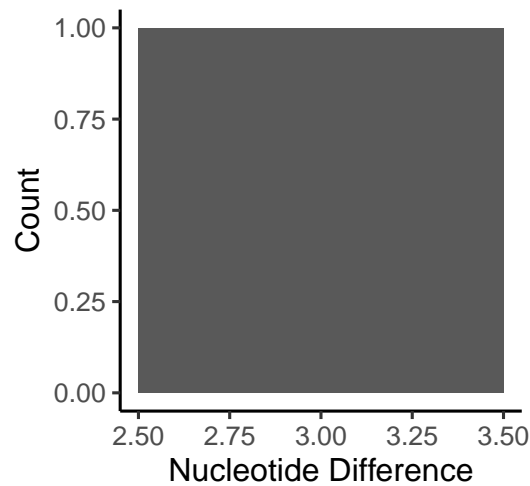
IGHV3-48*04

2040 sequences assigned
625 (30.6%) exact matches, in which:
408 unique CDR3
7 unique J



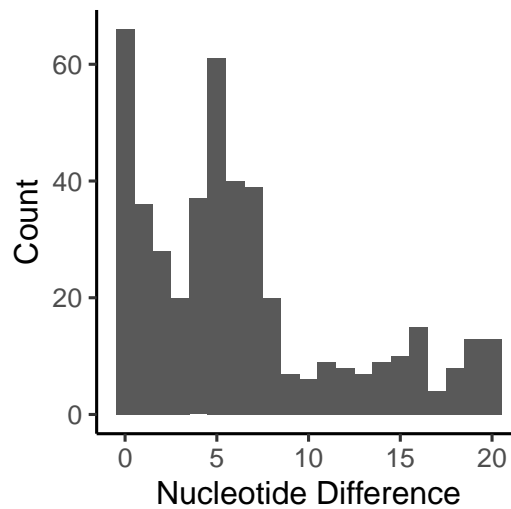
IGHV3-38*03

1 sequences assigned
No exact matches.



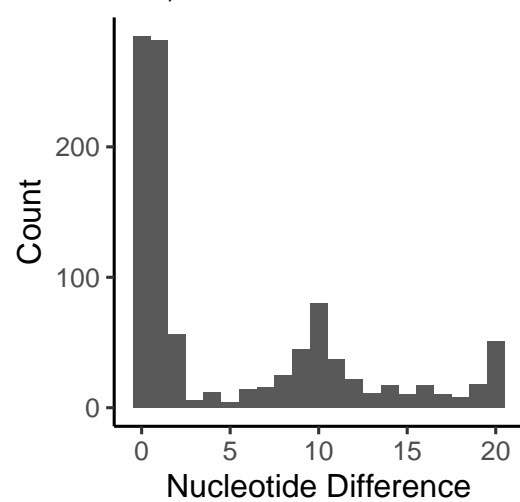
IGHV3-48*01

585 sequences assigned
66 (11.3%) exact matches, in which:
65 unique CDR3
5 unique J



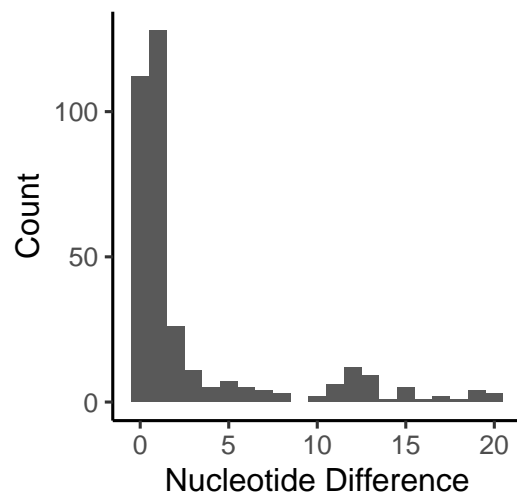
IGHV3-49*03_05

1111 sequences assigned
285 (25.7%) exact matches, in which:
165 unique CDR3
7 unique J



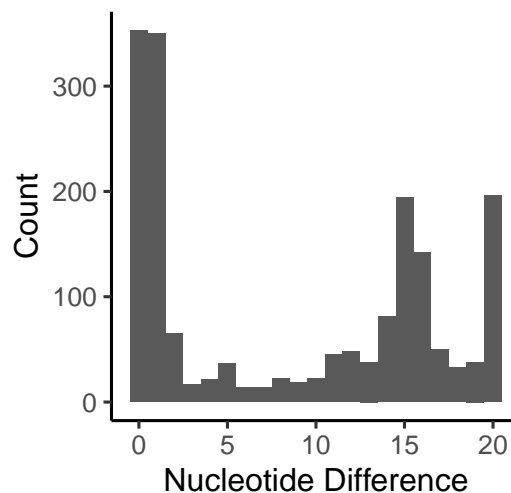
IGHV3-43*01

368 sequences assigned
112 (30.4%) exact matches, in which:
58 unique CDR3
6 unique J



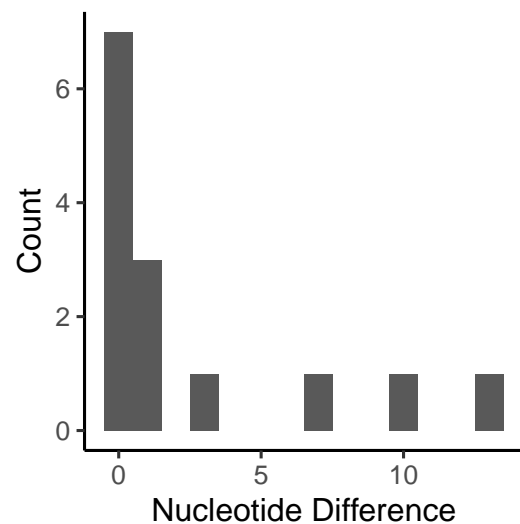
IGHV3-48*02

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



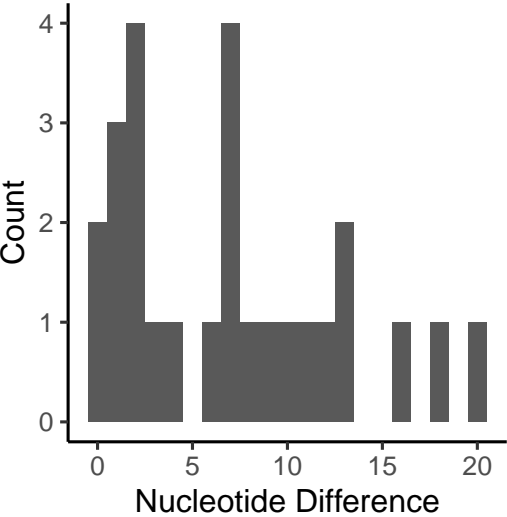
IGHV3-52*01_03

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



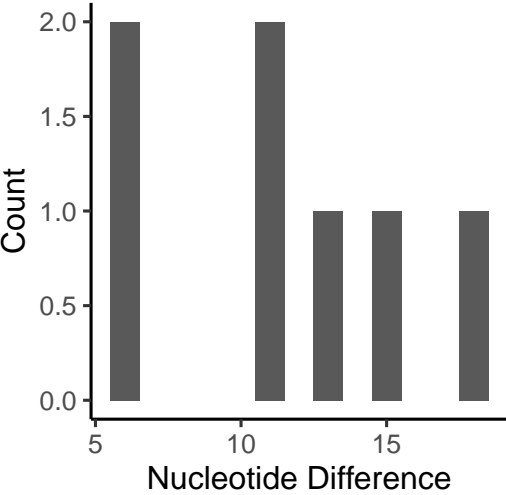
IGHV3-53*05

32 sequences assigned
2 (6.2%) exact matches, in which:
2 unique CDR3
2 unique J



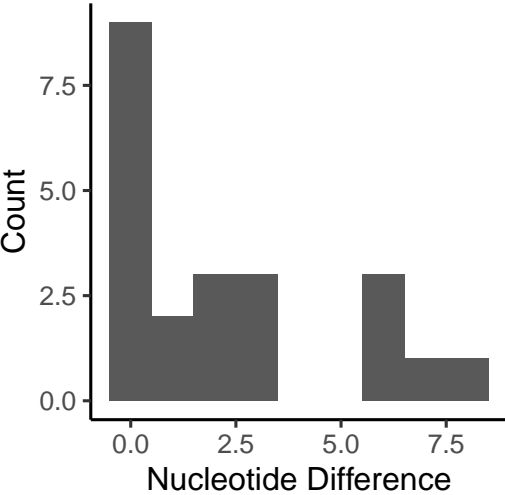
IGHV3-64*04

9 sequences assigned
No exact matches.



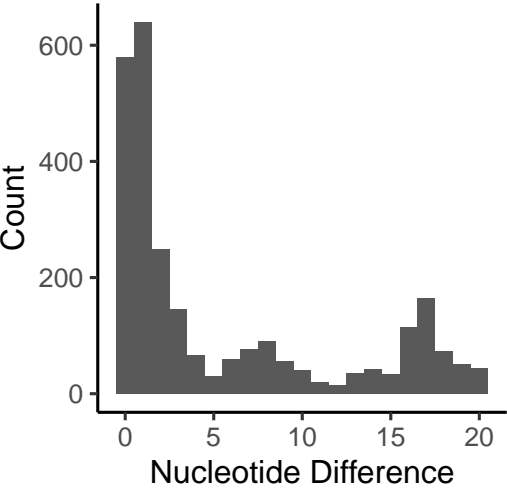
IGHV3-66*03

25 sequences assigned
9 (36%) exact matches, in which:
9 unique CDR3
4 unique J



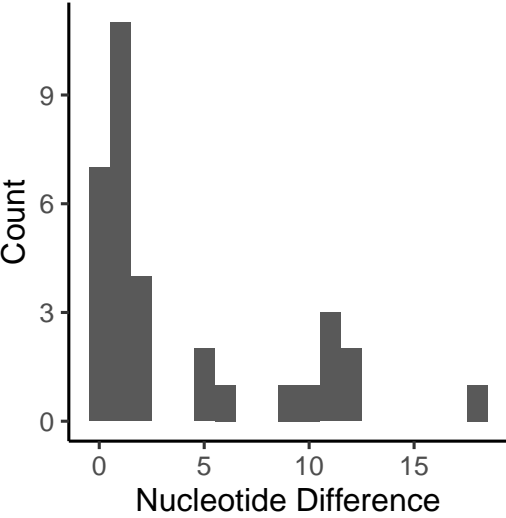
IGHV3-53*01_02

3415 sequences assigned
579 (17%) exact matches, in which:
371 unique CDR3
7 unique J



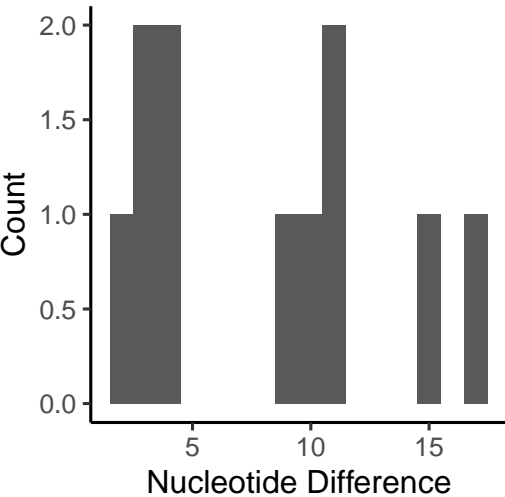
IGHV3-64*02_07

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



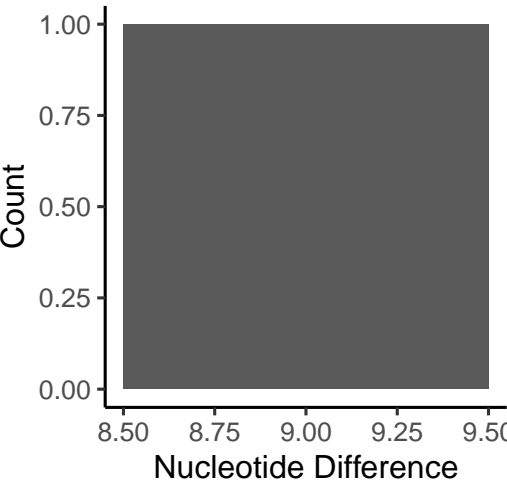
IGHV3-69-1*01

28 sequences assigned
No exact matches.



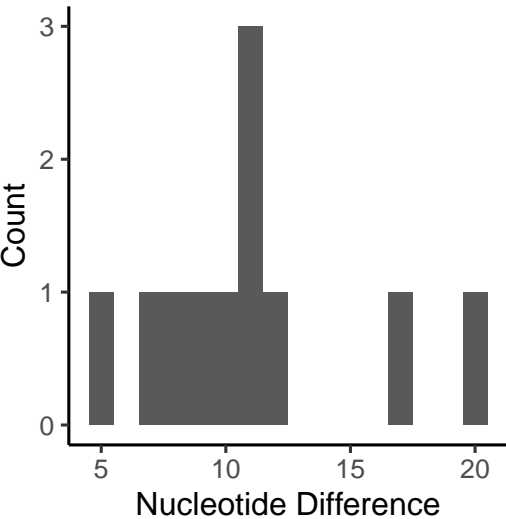
IGHV3-62*03

1 sequences assigned
No exact matches.



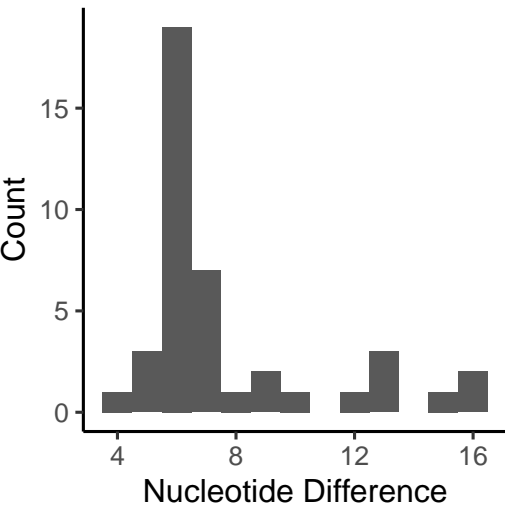
IGHV3-66*01

20 sequences assigned
No exact matches.



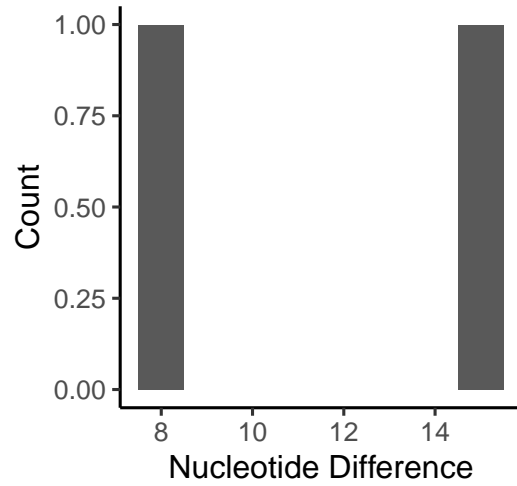
IGHV3-69-1*02

54 sequences assigned
No exact matches.



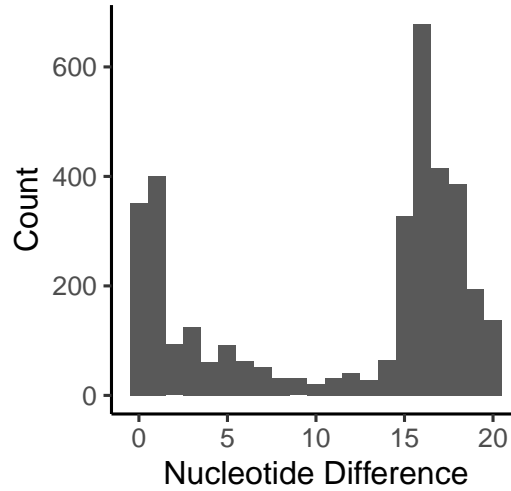
IGHV3-71*01_04

2 sequences assigned
No exact matches.



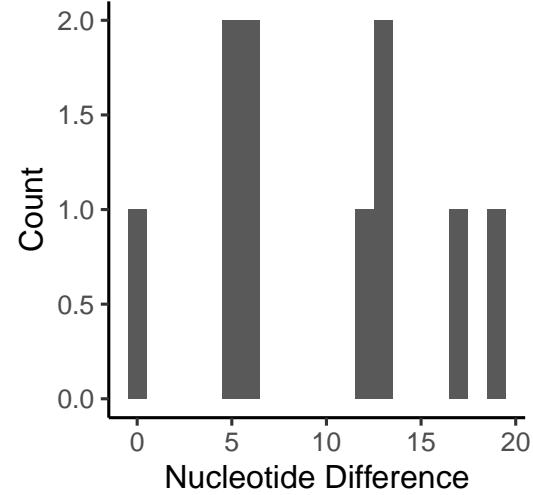
IGHV3-74*01_02

8337 sequences assigned
352 (4.2%) exact matches, in which:
231 unique CDR3
7 unique J



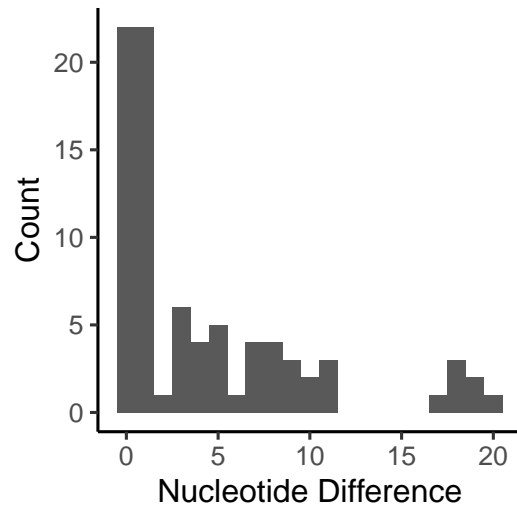
IGHV3-NL1*01

30 sequences assigned
1 (3.3%) exact matches, in which:
1 unique CDR3
1 unique J



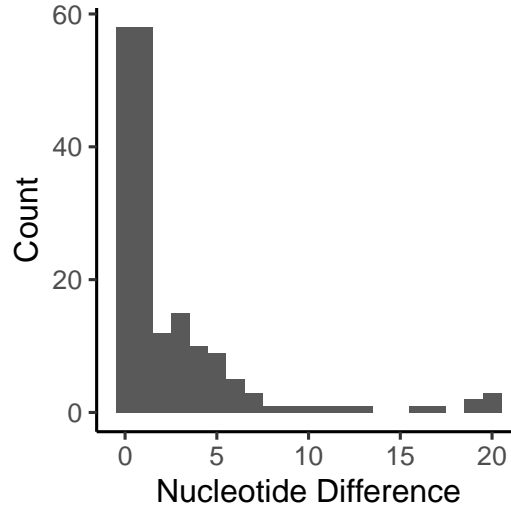
IGHV3-72*01

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



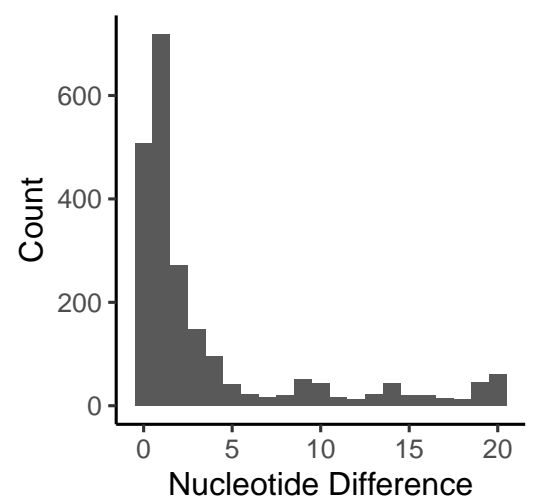
IGHV3-43D*03

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



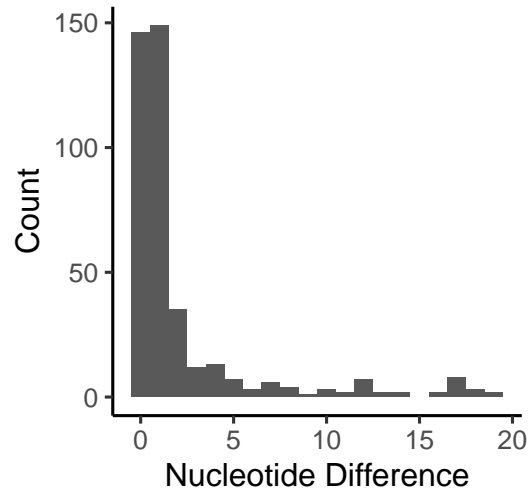
IGHV4-4*07

2521 sequences assigned
508 (20.2%) exact matches, in which:
402 unique CDR3
7 unique J



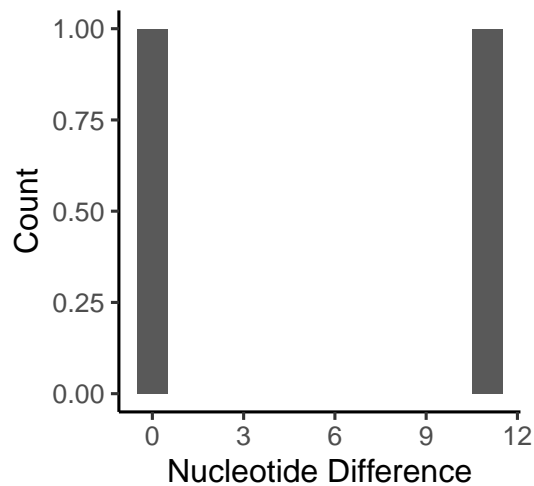
IGHV3-73*01_02

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



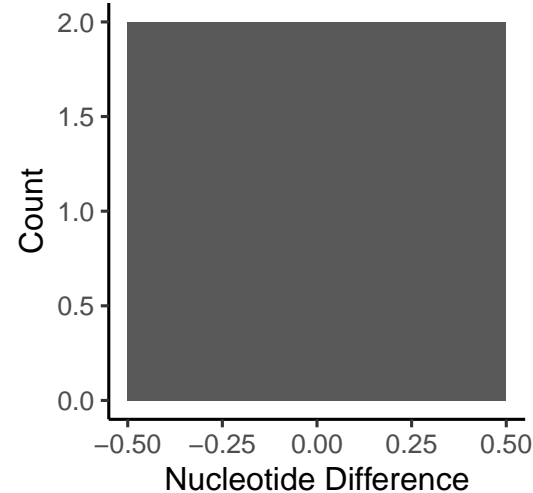
IGHV3-64D*06

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



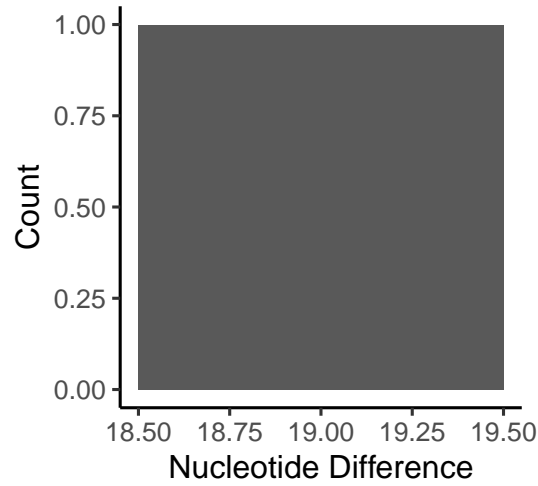
IGHV4-28*03

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



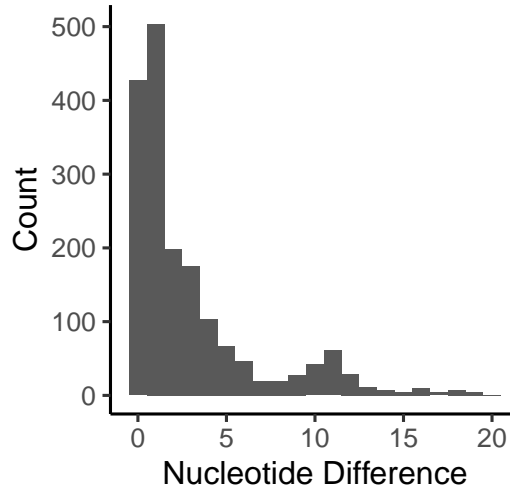
IGHV4-28*02_05

1 sequences assigned
No exact matches.



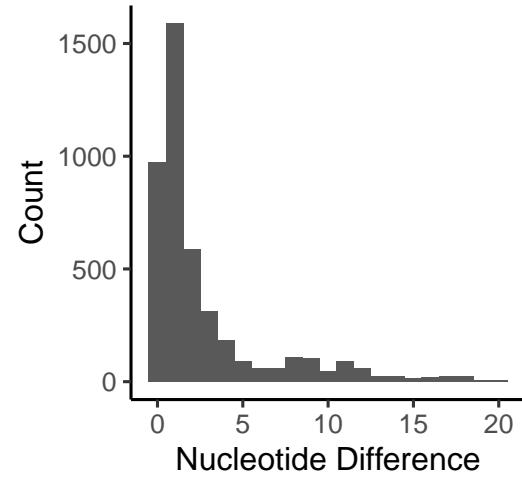
IGHV4-31*03_04

1816 sequences assigned
427 (23.5%) exact matches, in which:
340 unique CDR3
7 unique J



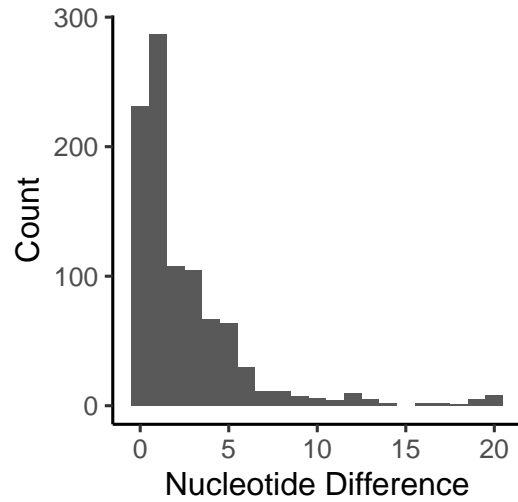
IGHV4-39*07

4531 sequences assigned
973 (21.5%) exact matches, in which:
735 unique CDR3
7 unique J



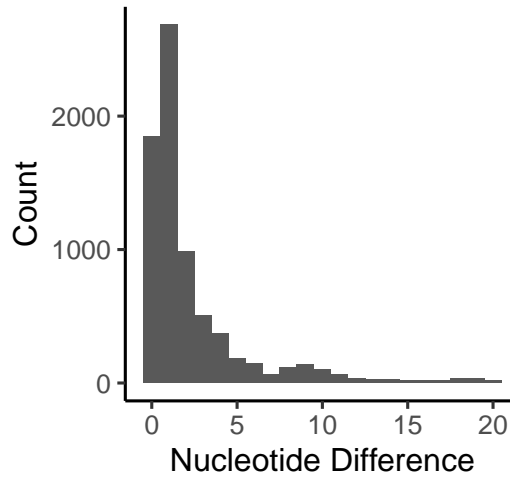
IGHV4-30-4*01

1092 sequences assigned
231 (21.2%) exact matches, in which:
183 unique CDR3
7 unique J



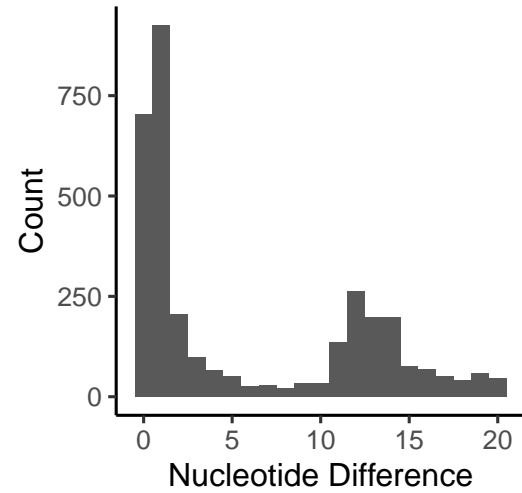
IGHV4-34*01_02

8299 sequences assigned
1849 (22.3%) exact matches, in which:
1274 unique CDR3
7 unique J



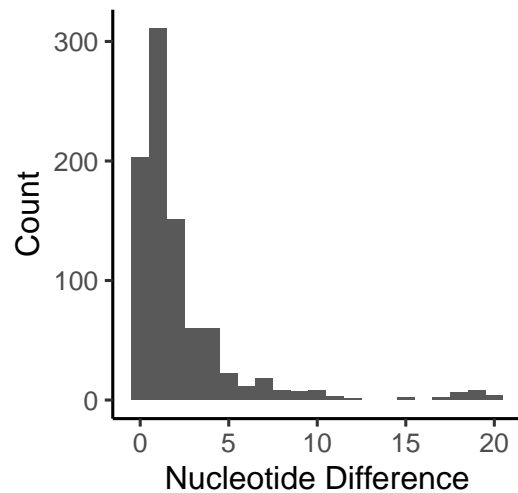
IGHV4-39*01_05

3949 sequences assigned
704 (17.8%) exact matches, in which:
520 unique CDR3
7 unique J



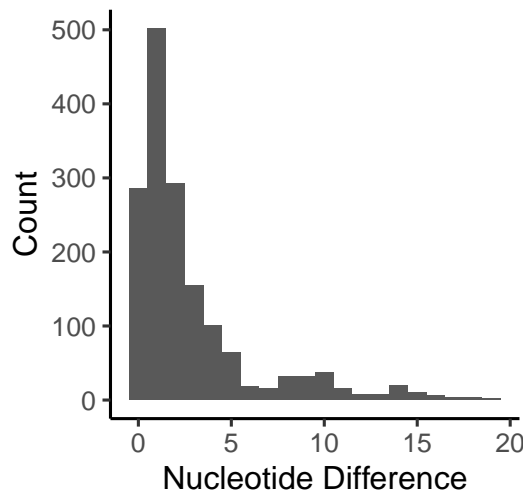
IGHV4-30-2*01

897 sequences assigned
203 (22.6%) exact matches, in which:
148 unique CDR3
7 unique J



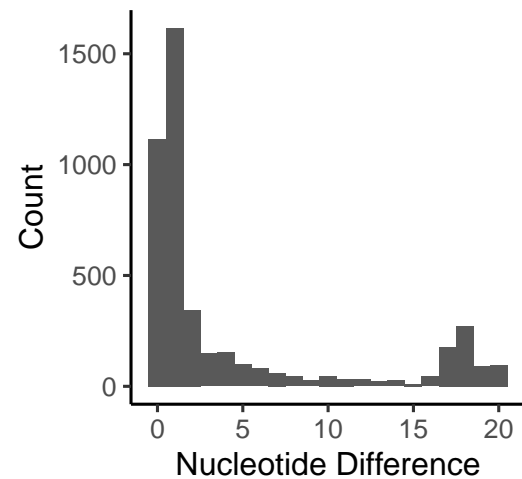
IGHV4-38-2*02

1676 sequences assigned
286 (17.1%) exact matches, in which:
227 unique CDR3
7 unique J



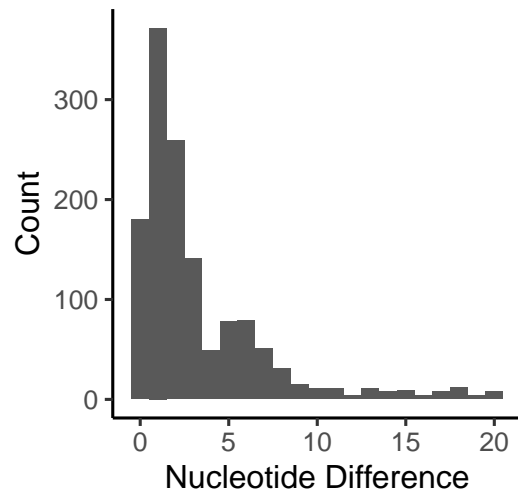
IGHV4-59*01_07

6001 sequences assigned
1116 (18.6%) exact matches, in which:
880 unique CDR3
7 unique J



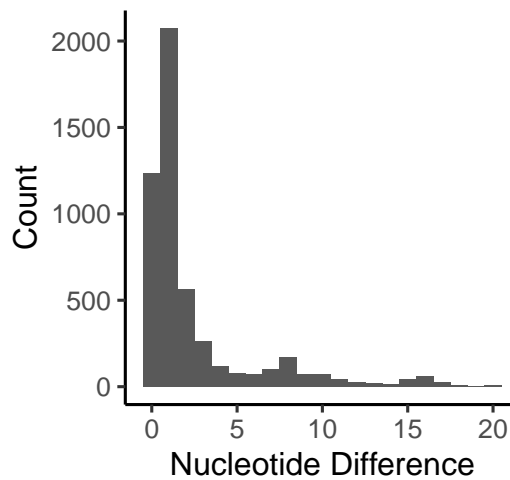
IGHV4–59*12

1383 sequences assigned
180 (13%) exact matches, in which:
177 unique CDR3
7 unique J



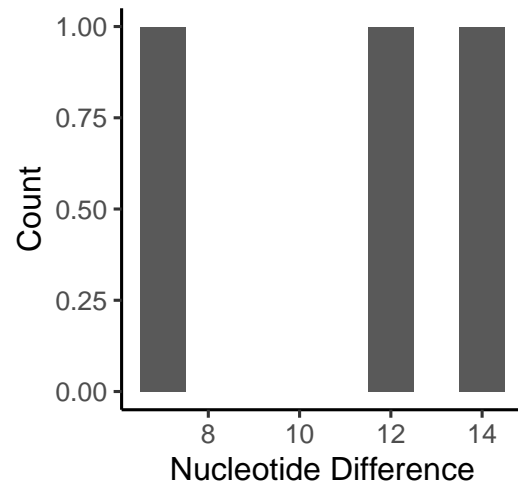
IGHV5–51*01_03

5336 sequences assigned
1238 (23.2%) exact matches, in which:
663 unique CDR3
7 unique J



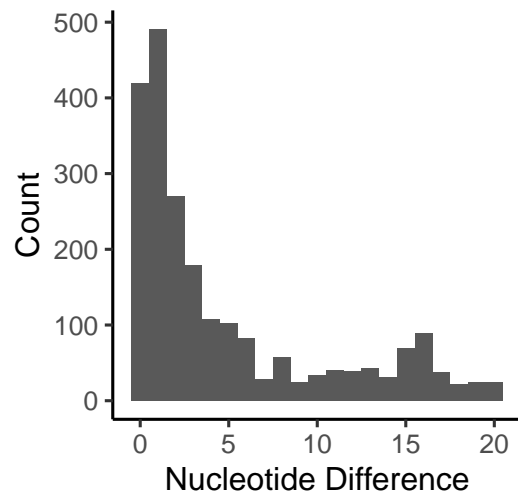
IGHV7–4–1*02

3 sequences assigned
No exact matches.



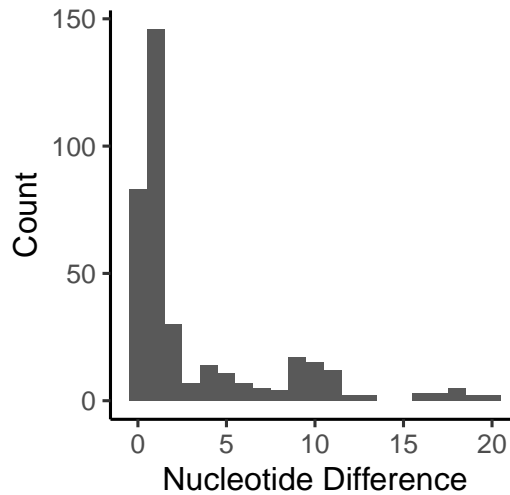
IGHV4–61*01

2414 sequences assigned
419 (17.4%) exact matches, in which:
352 unique CDR3
7 unique J



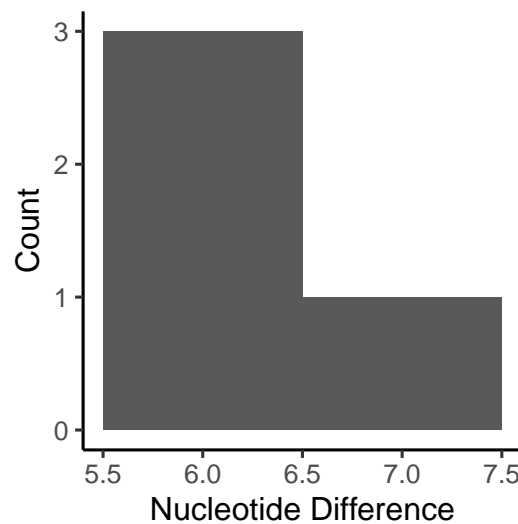
IGHV6–1*01_02

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



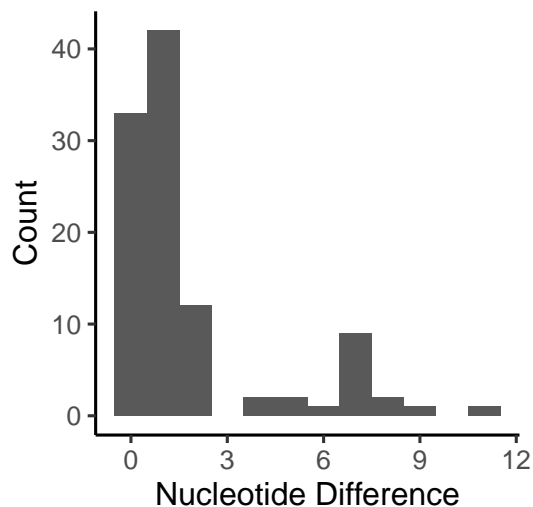
IGHV5–10–1*01_03

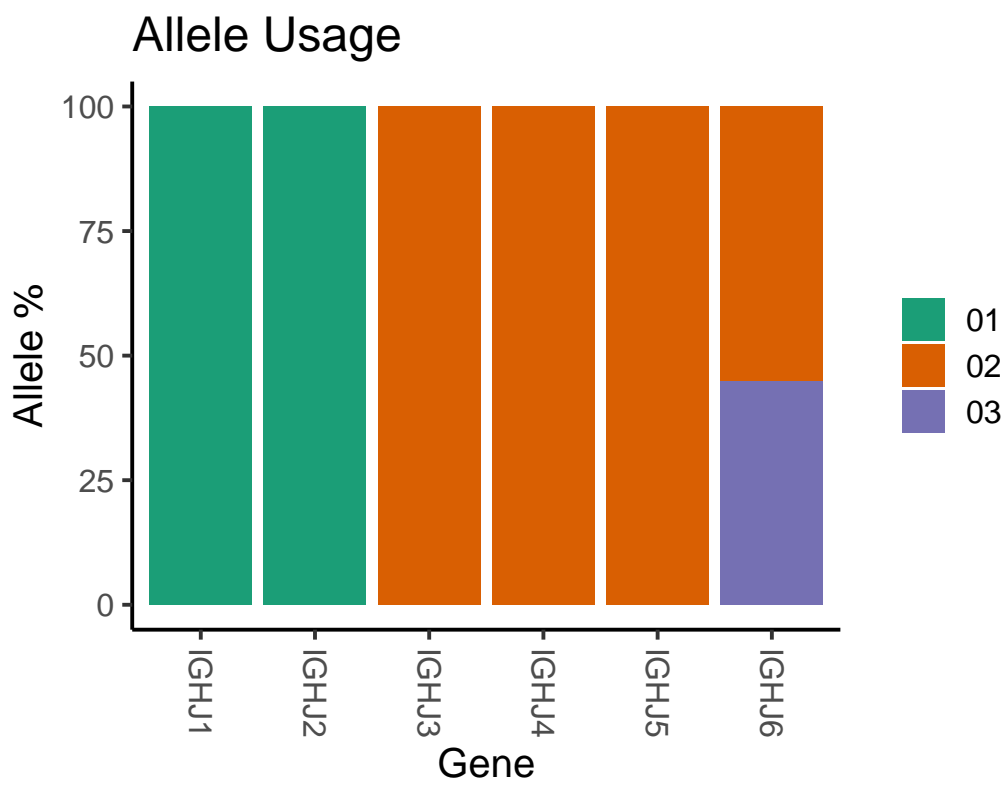
4 sequences assigned
No exact matches.



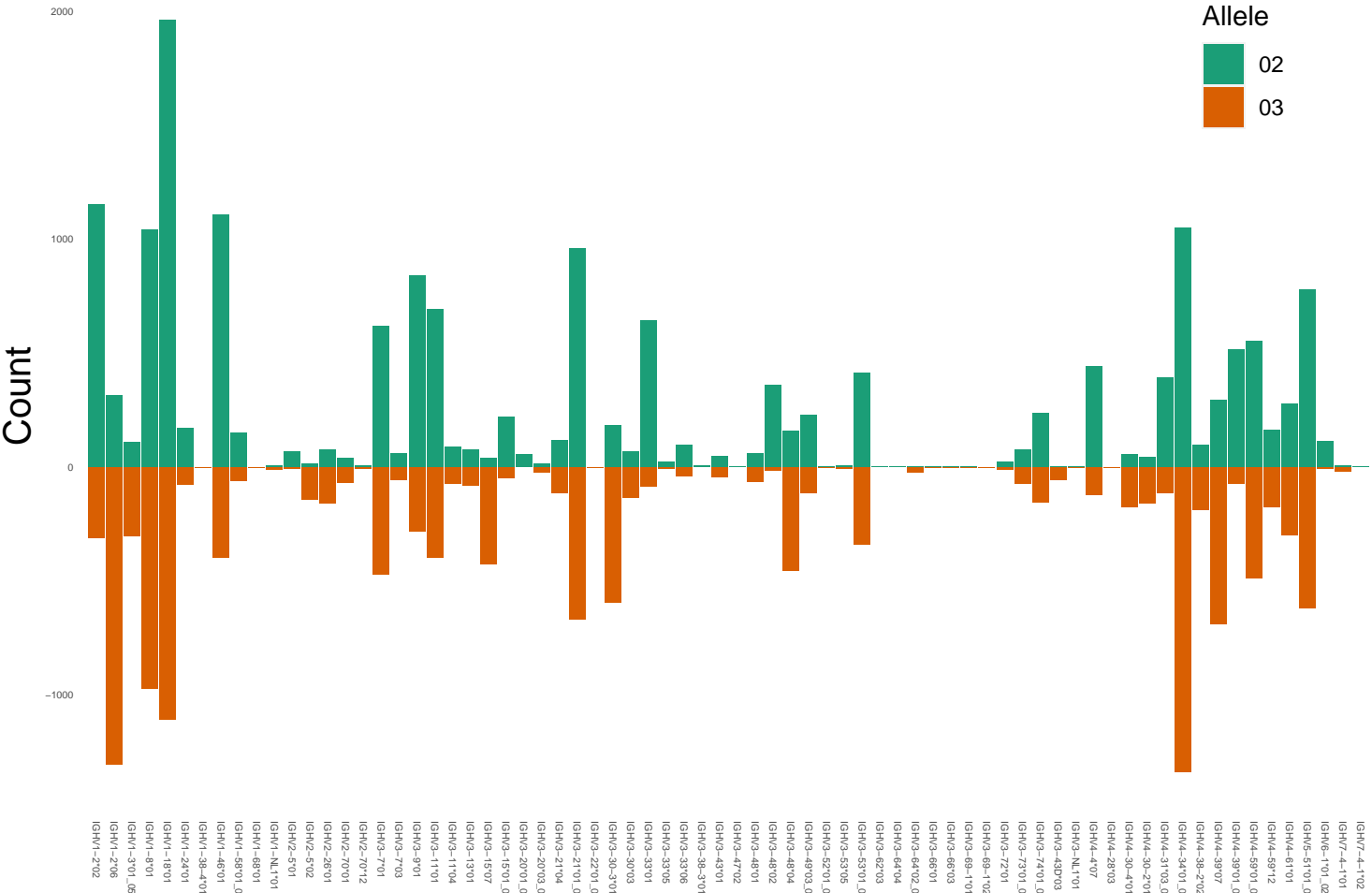
IGHV7–4–1*01

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





Sequence Count by IGHJ6 allele usage



Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69*04_09_G112A IGHV4–59*02_G88A IGHV5–10–1*01_03_T258C IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69*08_C191T IGHV3–48*03_T303G IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Novel sequence(s) IGHV3–30*03_T288C IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning: IGHV4–31*02, IGHV4–31*03_04 have identical germline sequences.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV1–69*04_09_G112A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV1–69*02_C191T IGHV3–30*03_T288C IGHV3–30–3*02_G75C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–4*02_03_C300T IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Novel sequence(s) IGHV4–59*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV1–69*08_C191T IGHV3–11*06_T300C IGHV3–30*03_T288C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV5–51*07_A128G are not listed in the genotype and will be ignored.