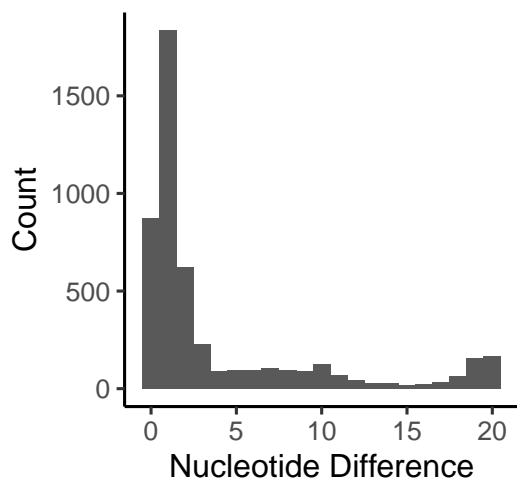


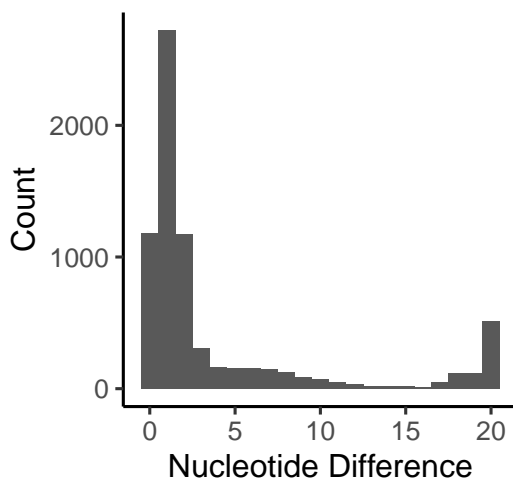
IGHV1-2*02

7169 sequences assigned
873 (12.2%) exact matches, in which:
632 unique CDR3
6 unique J



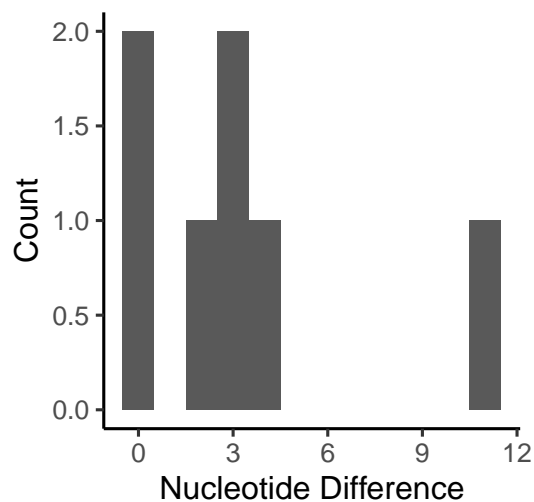
IGHV1-8*01

9778 sequences assigned
1181 (12.1%) exact matches, in which:
838 unique CDR3
7 unique J



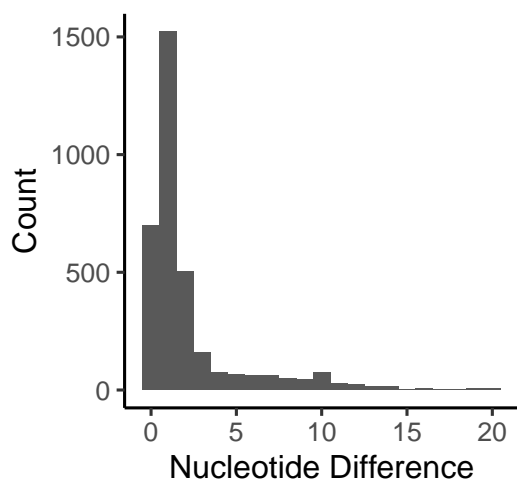
IGHV1-45*02

7 sequences assigned
2 (28.6%) exact matches, in which:
2 unique CDR3
2 unique J



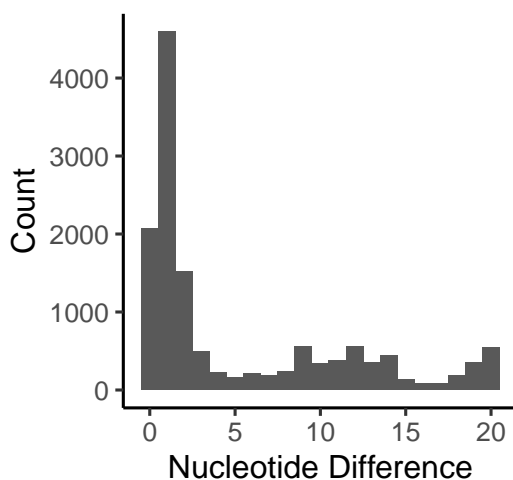
IGHV1-2*06

7665 sequences assigned
698 (9.1%) exact matches, in which:
479 unique CDR3
6 unique J



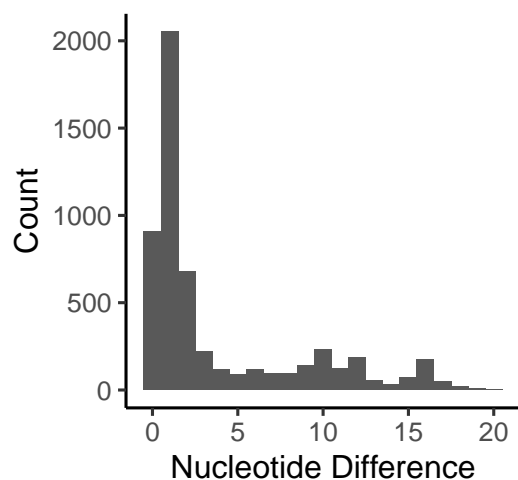
IGHV1-18*01

16127 sequences assigned
2070 (12.8%) exact matches, in which:
1416 unique CDR3
7 unique J



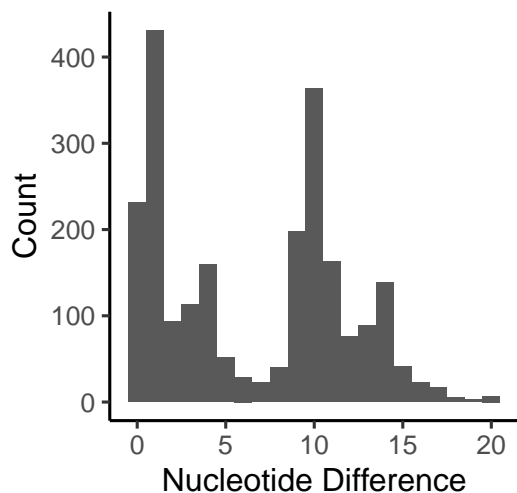
IGHV1-46*01

5685 sequences assigned
906 (15.9%) exact matches, in which:
636 unique CDR3
7 unique J



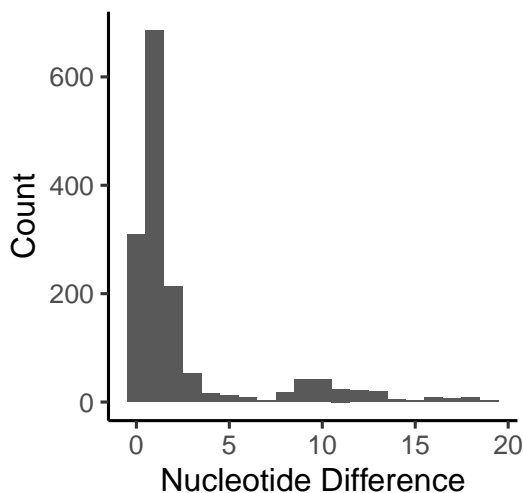
IGHV1-3*01_05

2324 sequences assigned
231 (9.9%) exact matches, in which:
173 unique CDR3
5 unique J



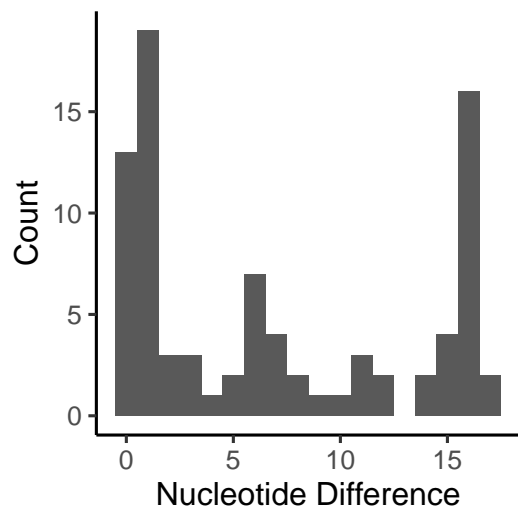
IGHV1-24*01

1501 sequences assigned
310 (20.7%) exact matches, in which:
209 unique CDR3
6 unique J



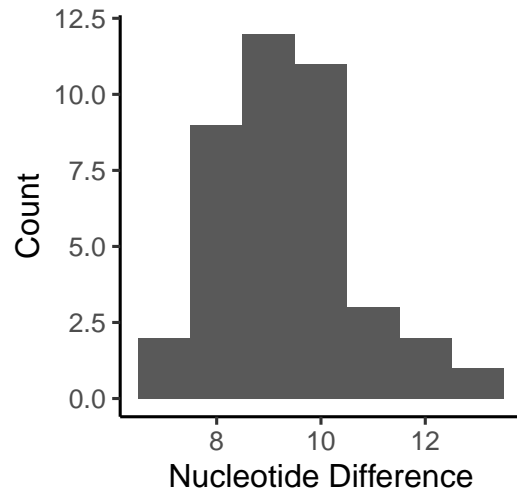
IGHV1-58*01_03

92 sequences assigned
13 (14.1%) exact matches, in which:
12 unique CDR3
5 unique J



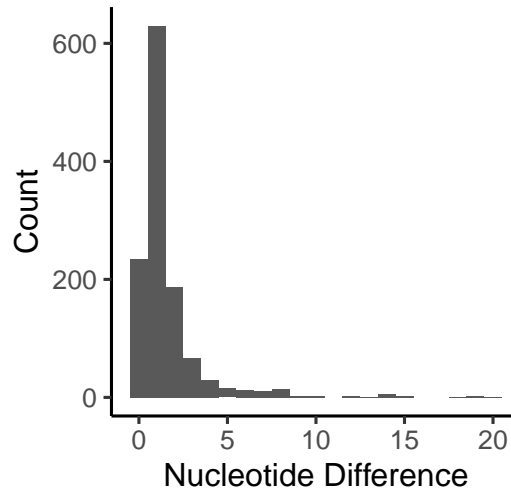
IGHV1–NL1*01

40 sequences assigned
No exact matches.



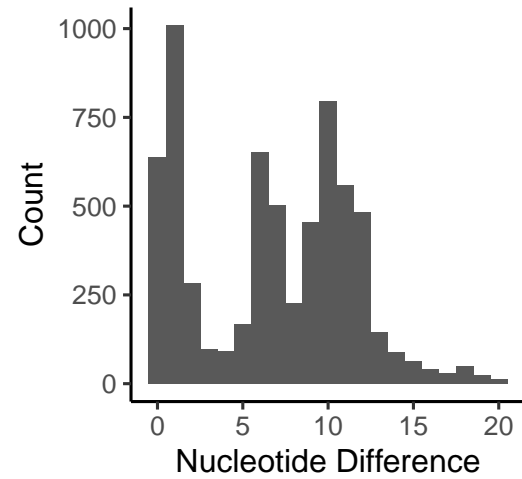
IGHV2–26*01

1226 sequences assigned
234 (19.1%) exact matches, in which:
151 unique CDR3
6 unique J



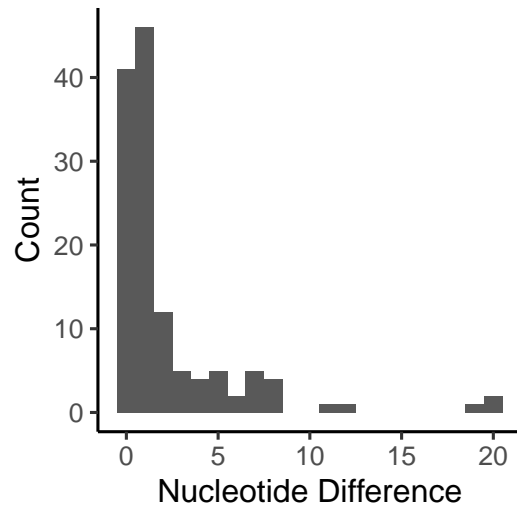
IGHV3–7*01

6663 sequences assigned
639 (9.6%) exact matches, in which:
407 unique CDR3
7 unique J



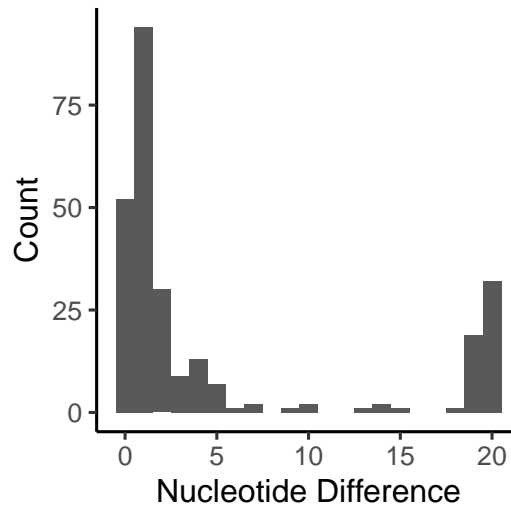
IGHV2–5*01

144 sequences assigned
41 (28.5%) exact matches, in which:
40 unique CDR3
5 unique J



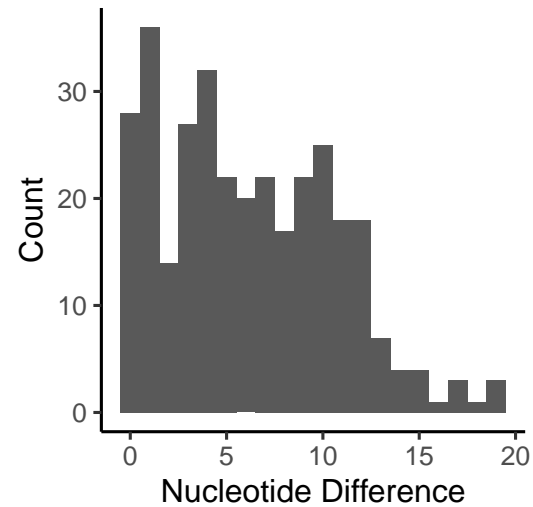
IGHV2–70*01

320 sequences assigned
52 (16.2%) exact matches, in which:
43 unique CDR3
4 unique J



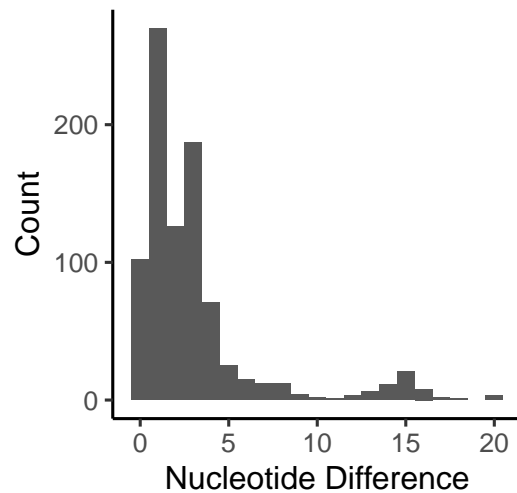
IGHV3–7*03

352 sequences assigned
28 (8%) exact matches, in which:
23 unique CDR3
4 unique J



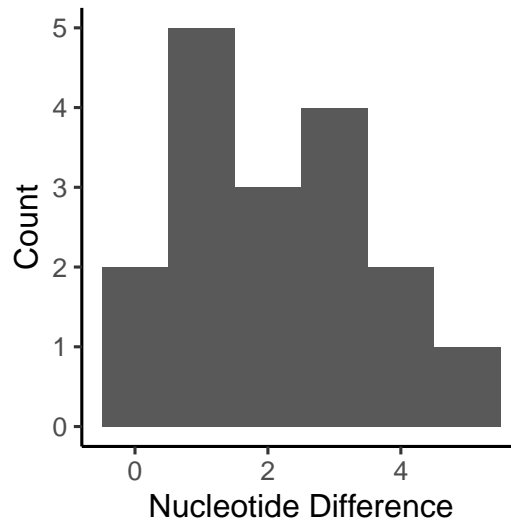
IGHV2–5*02

1108 sequences assigned
102 (9.2%) exact matches, in which:
75 unique CDR3
5 unique J



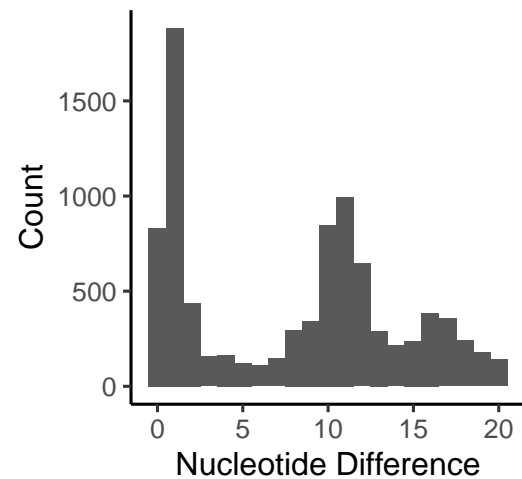
IGHV2–70*12

19 sequences assigned
2 (10.5%) exact matches, in which:
1 unique CDR3
1 unique J



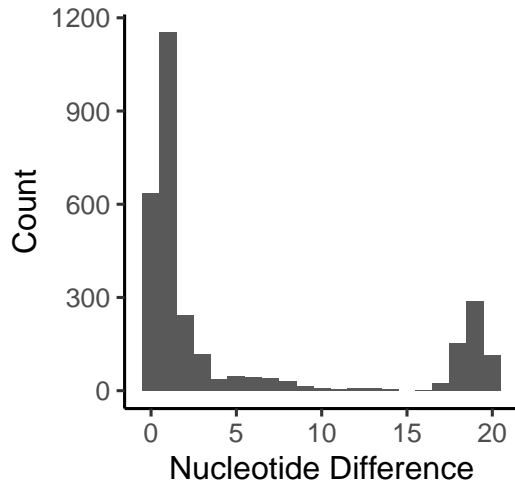
IGHV3–9*01

10536 sequences assigned
831 (7.9%) exact matches, in which:
433 unique CDR3
7 unique J



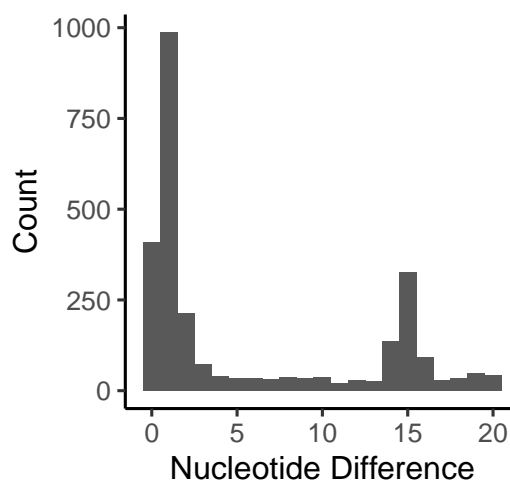
IGHV3-11*01

3687 sequences assigned
636 (17.2%) exact matches, in which:
372 unique CDR3
7 unique J



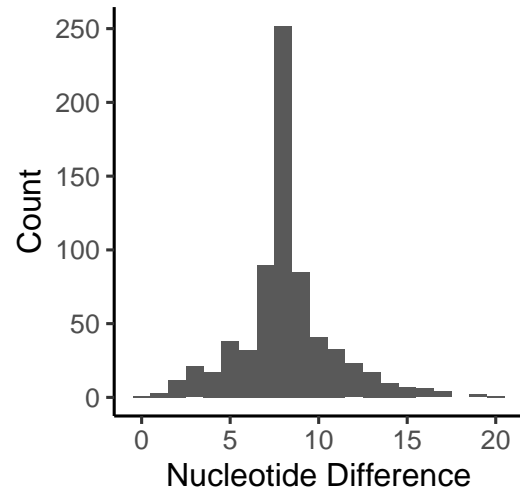
IGHV3-15*01_02

2974 sequences assigned
408 (13.7%) exact matches, in which:
219 unique CDR3
7 unique J



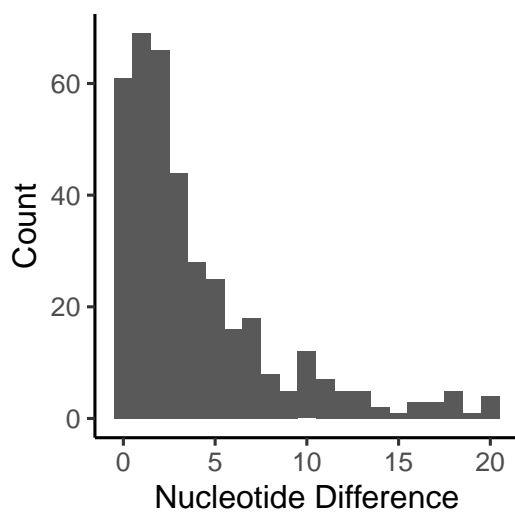
IGHV3-20*03_04

700 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



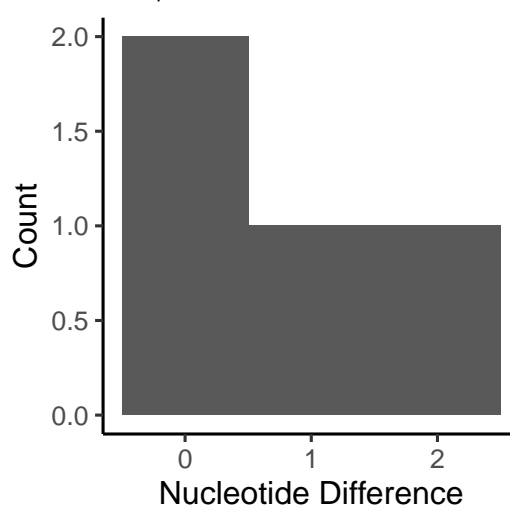
IGHV3-11*04

404 sequences assigned
61 (15.1%) exact matches, in which:
50 unique CDR3
6 unique J



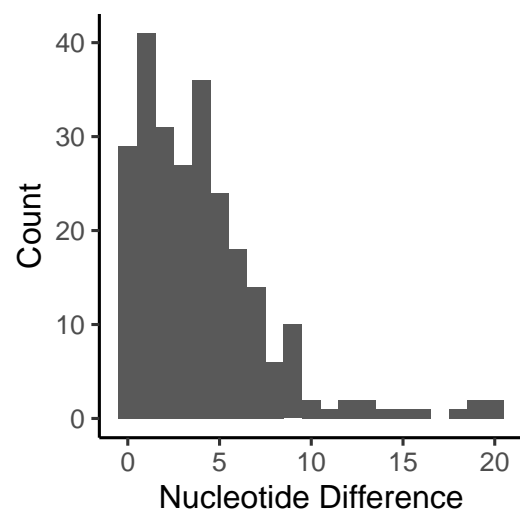
IGHV3-19*01

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



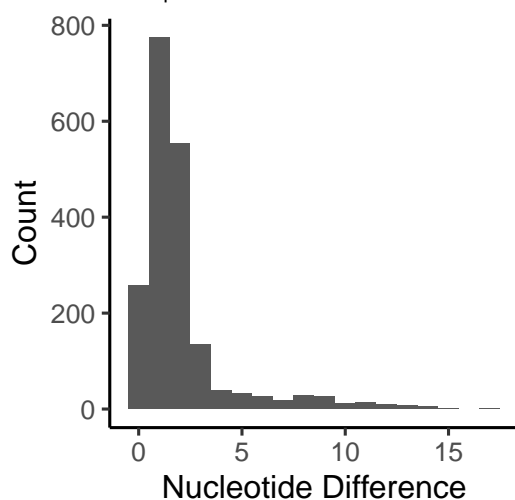
IGHV3-21*04

270 sequences assigned
29 (10.7%) exact matches, in which:
24 unique CDR3
5 unique J



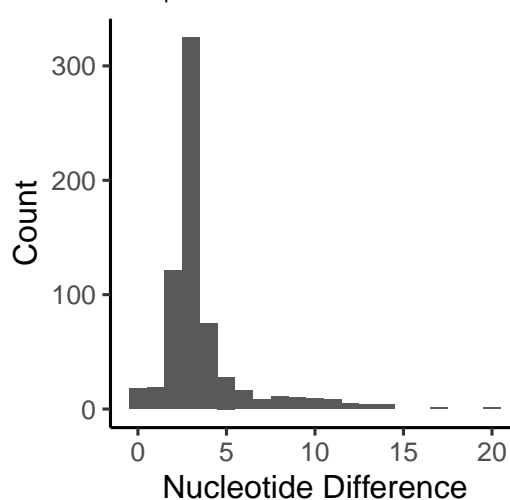
IGHV3-13*01

1999 sequences assigned
257 (12.9%) exact matches, in which:
120 unique CDR3
5 unique J



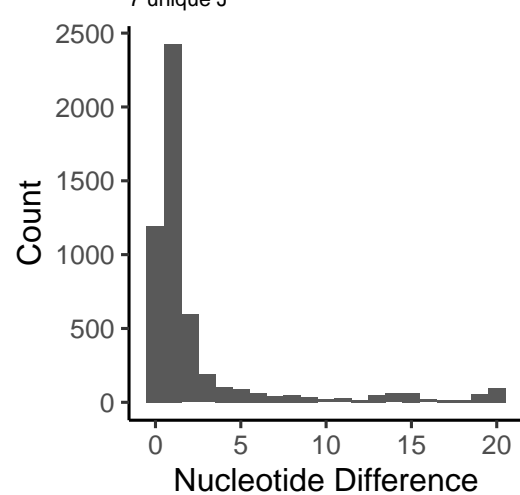
IGHV3-20*01_02

663 sequences assigned
18 (2.7%) exact matches, in which:
10 unique CDR3
4 unique J



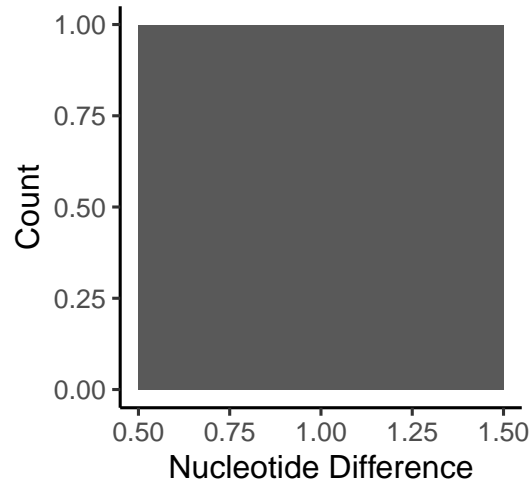
IGHV3-21*01_02

5498 sequences assigned
1194 (21.7%) exact matches, in which:
674 unique CDR3
7 unique J



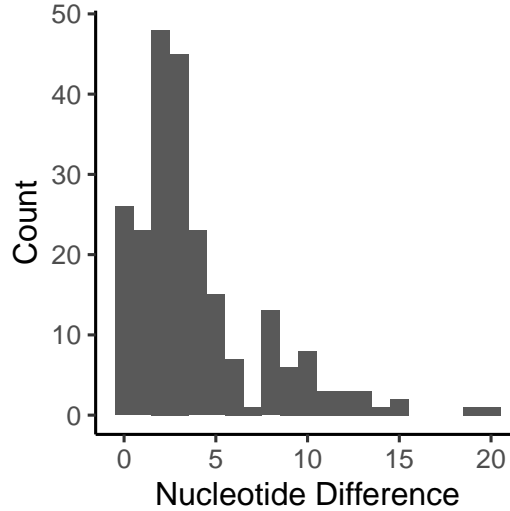
IGHV3-22*01_02

1 sequences assigned
No exact matches.



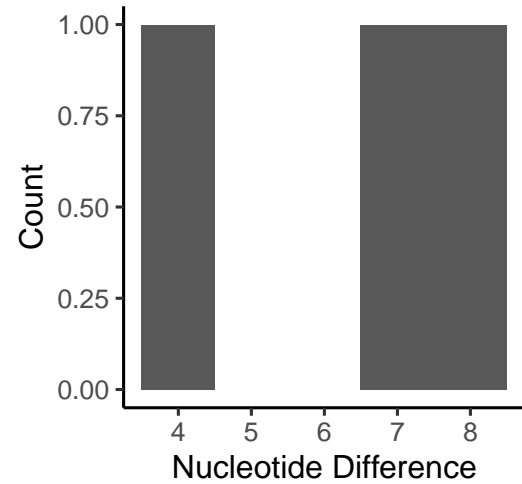
IGHV3-33*06

231 sequences assigned
26 (11.3%) exact matches, in which:
23 unique CDR3
7 unique J



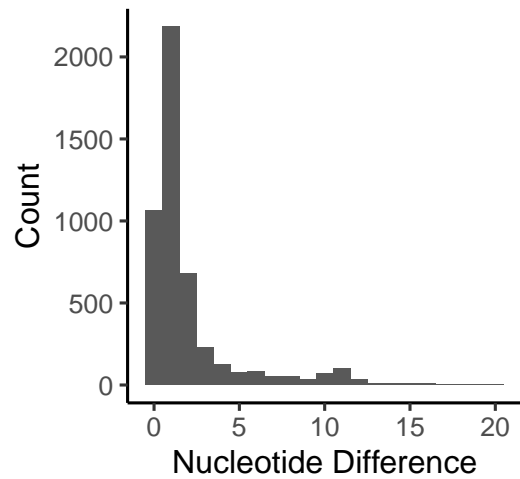
IGHV3-47*02

3 sequences assigned
No exact matches.



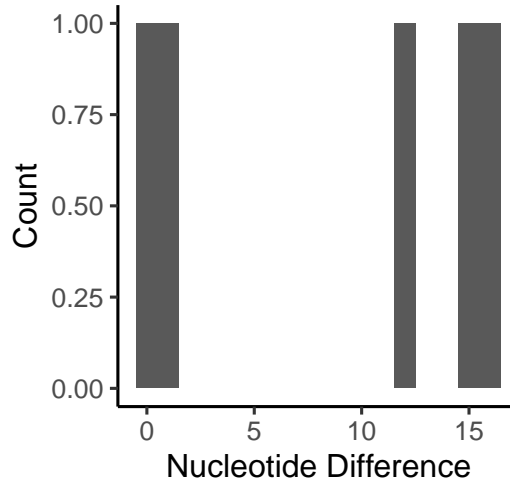
IGHV3-33*01

5023 sequences assigned
1062 (21.1%) exact matches, in which:
595 unique CDR3
6 unique J



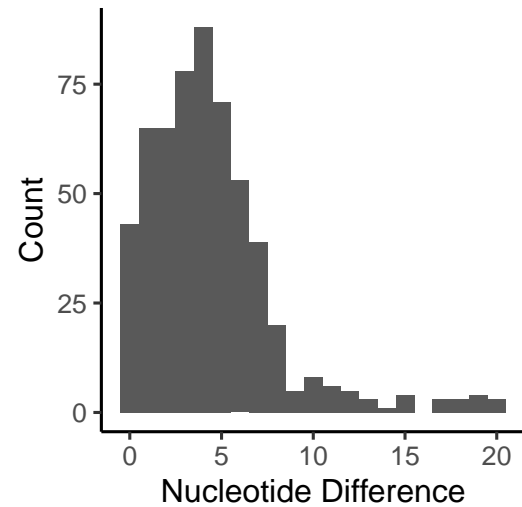
IGHV3-35*01

5 sequences assigned
1 (20%) exact matches, in which:
1 unique CDR3
1 unique J



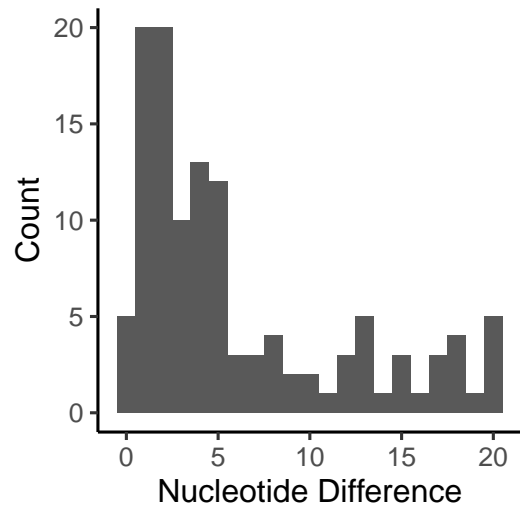
IGHV3-48*01

574 sequences assigned
43 (7.5%) exact matches, in which:
30 unique CDR3
6 unique J



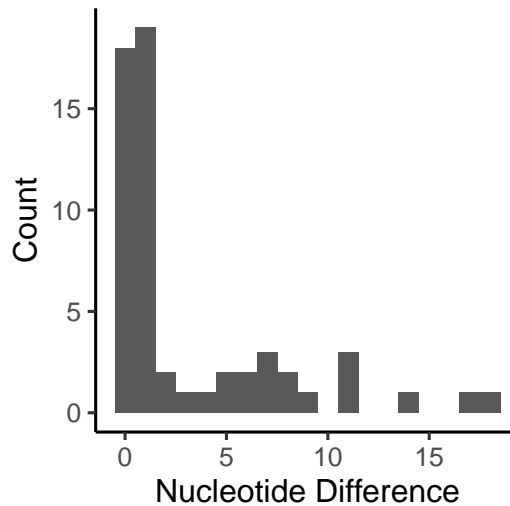
IGHV3-33*05

137 sequences assigned
5 (3.6%) exact matches, in which:
5 unique CDR3
2 unique J



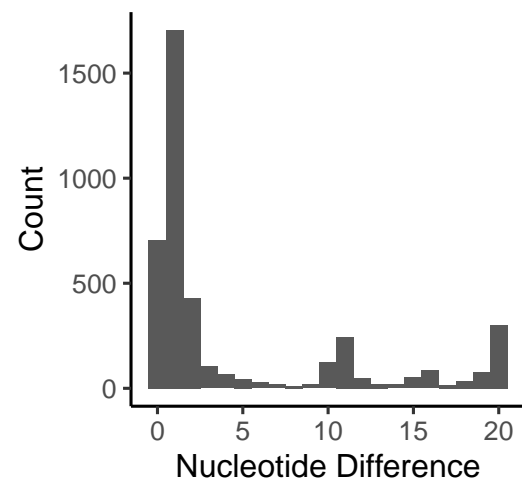
IGHV3-43*01

59 sequences assigned
18 (30.5%) exact matches, in which:
14 unique CDR3
4 unique J



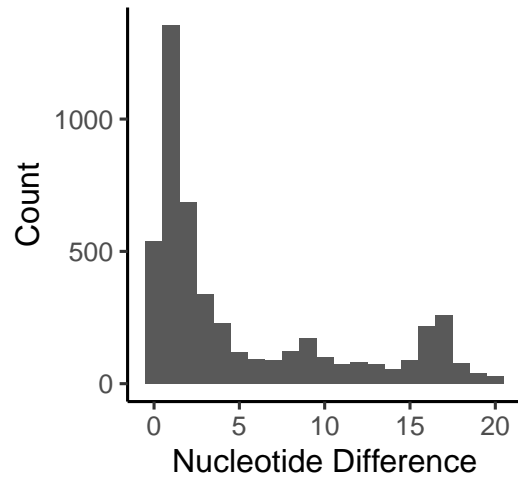
IGHV3-48*02

4595 sequences assigned
706 (15.4%) exact matches, in which:
333 unique CDR3
7 unique J



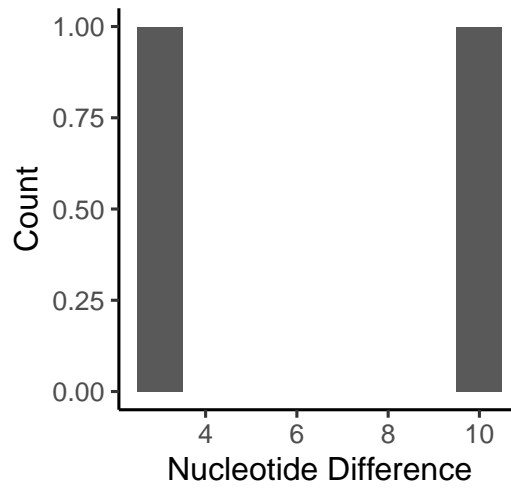
IGHV3-48*03

5437 sequences assigned
538 (9.9%) exact matches, in which:
248 unique CDR3
5 unique J



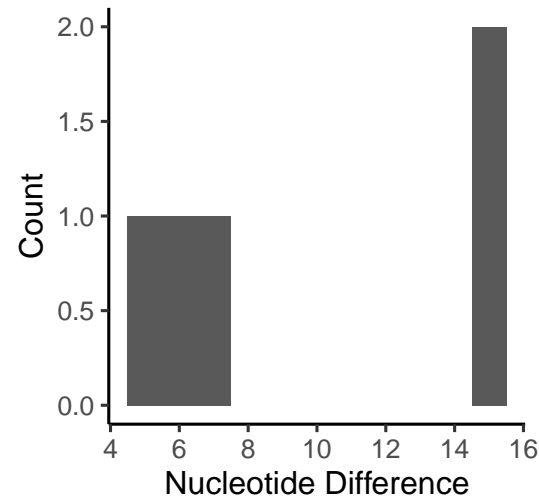
IGHV3-52*01_03

2 sequences assigned
No exact matches.



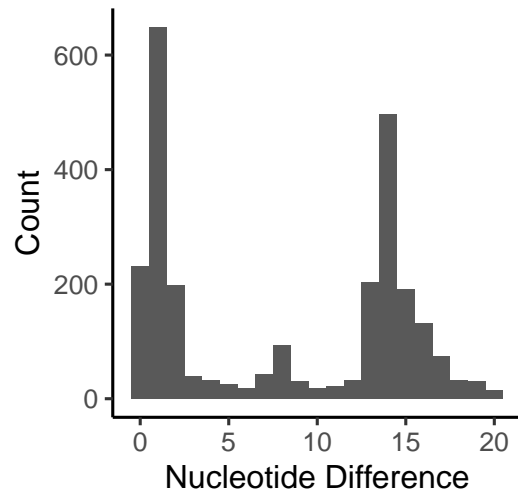
IGHV3-64*04

11 sequences assigned
No exact matches.



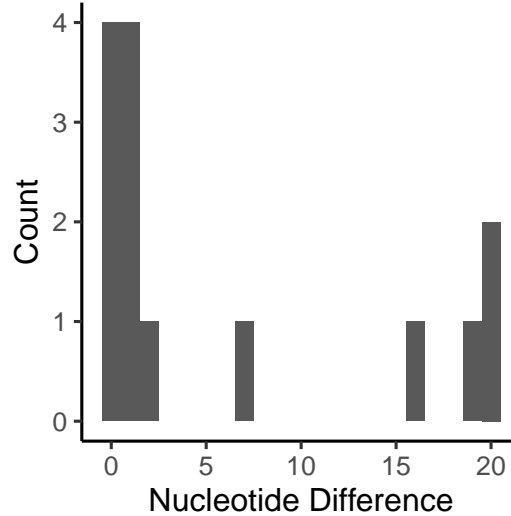
IGHV3-49*04

2846 sequences assigned
231 (8.1%) exact matches, in which:
108 unique CDR3
6 unique J



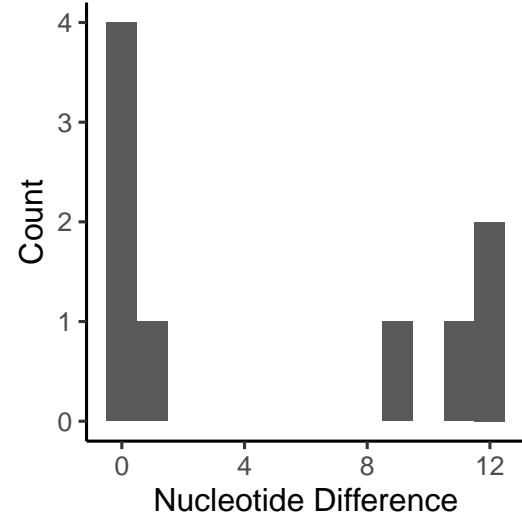
IGHV3-53*05

22 sequences assigned
4 (18.2%) exact matches, in which:
3 unique CDR3
1 unique J



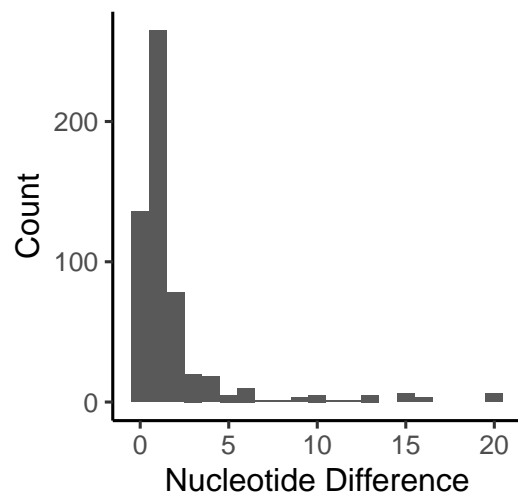
IGHV3-64*02_07

15 sequences assigned
4 (26.7%) exact matches, in which:
4 unique CDR3
2 unique J



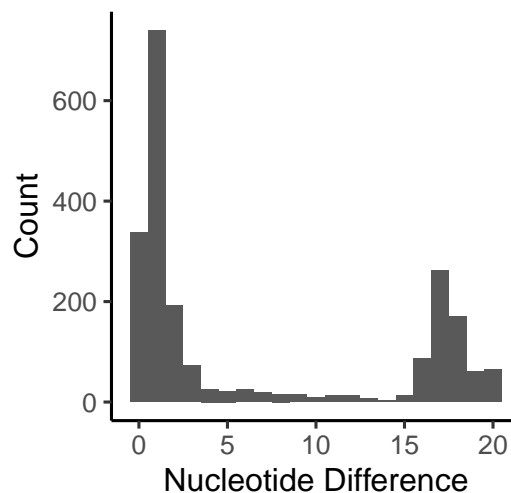
IGHV3-49*03_05

801 sequences assigned
136 (17%) exact matches, in which:
77 unique CDR3
6 unique J



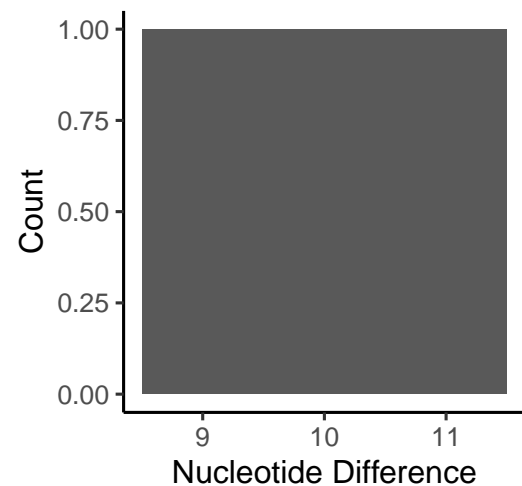
IGHV3-53*01_02

2679 sequences assigned
338 (12.6%) exact matches, in which:
192 unique CDR3
7 unique J



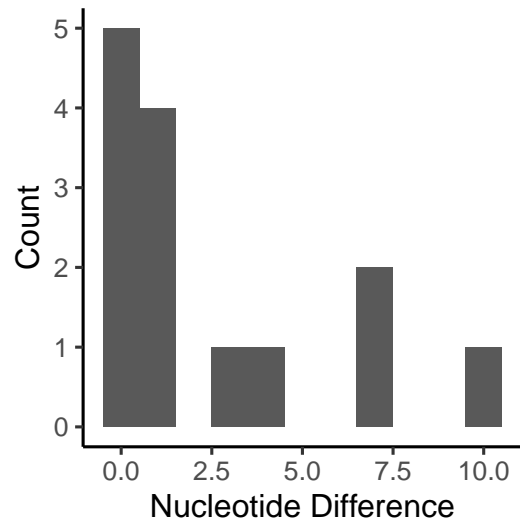
IGHV3-66*01

4 sequences assigned
No exact matches.



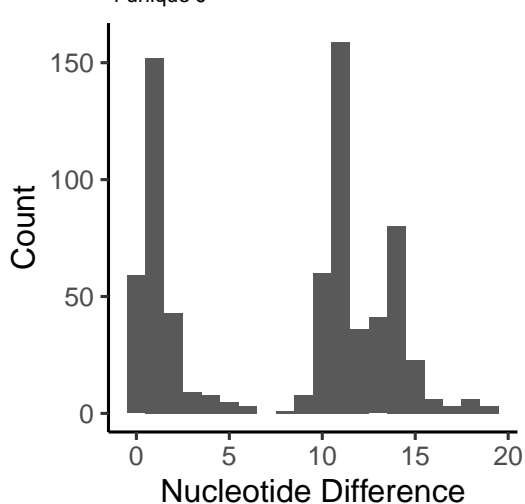
IGHV3-66*03

14 sequences assigned
5 (35.7%) exact matches, in which:
5 unique CDR3
2 unique J



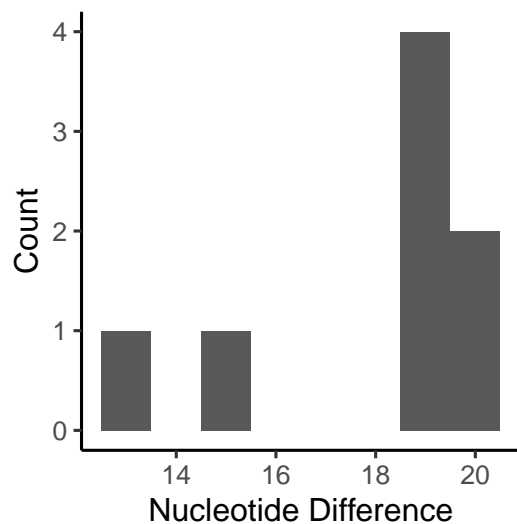
IGHV3-73*01_02

1319 sequences assigned
59 (4.5%) exact matches, in which:
27 unique CDR3
4 unique J



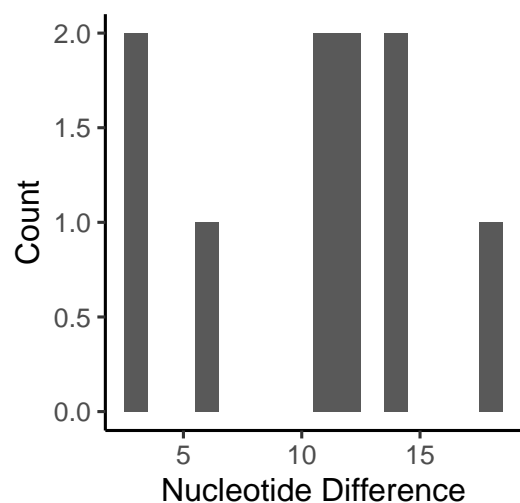
IGHV3-NL1*01

12 sequences assigned
No exact matches.



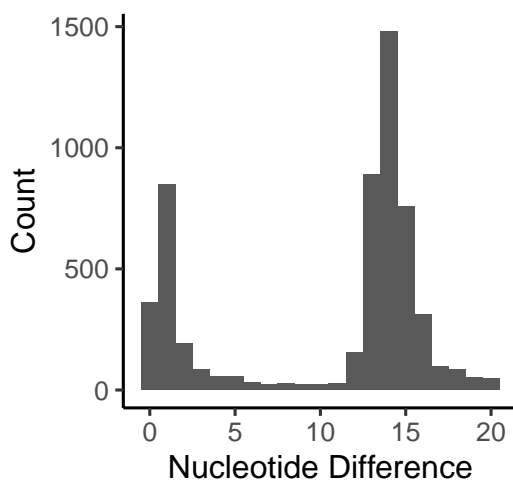
IGHV3-69-1*01

10 sequences assigned
No exact matches.



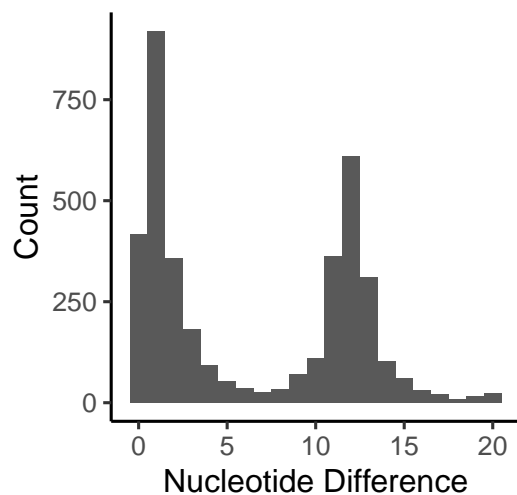
IGHV3-74*01_02

9523 sequences assigned
362 (3.8%) exact matches, in which:
188 unique CDR3
7 unique J



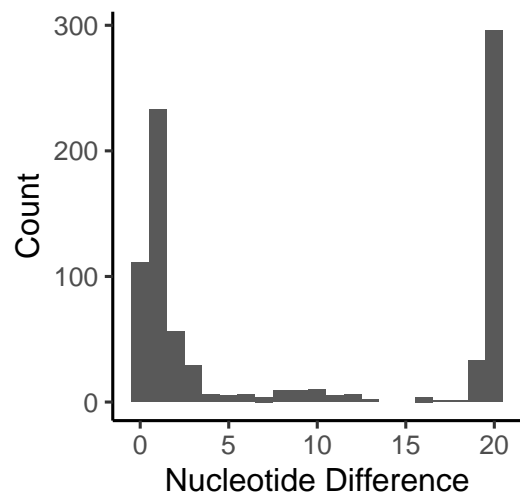
IGHV4-4*07

3894 sequences assigned
418 (10.7%) exact matches, in which:
282 unique CDR3
6 unique J



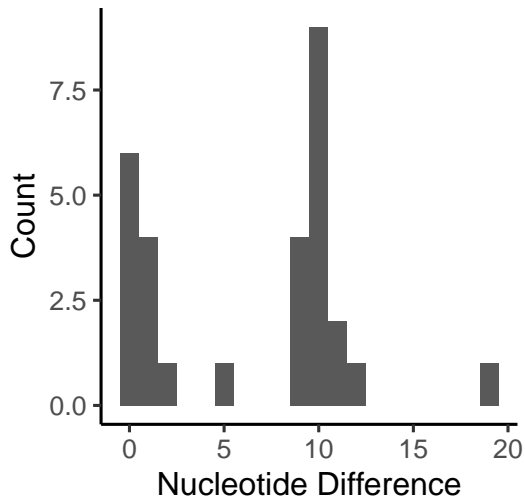
IGHV3-72*01

2508 sequences assigned
111 (4.4%) exact matches, in which:
62 unique CDR3
5 unique J



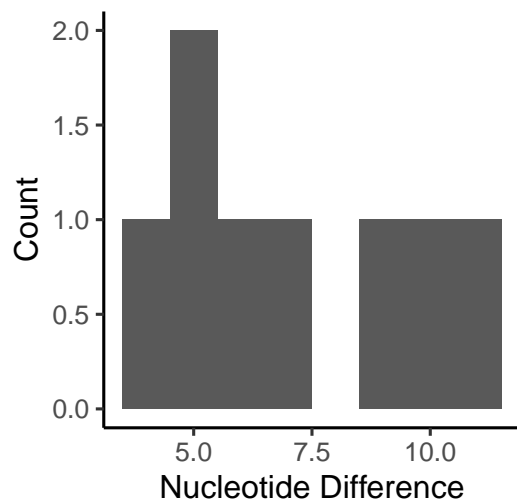
IGHV3-43D*04

30 sequences assigned
6 (20%) exact matches, in which:
5 unique CDR3
1 unique J



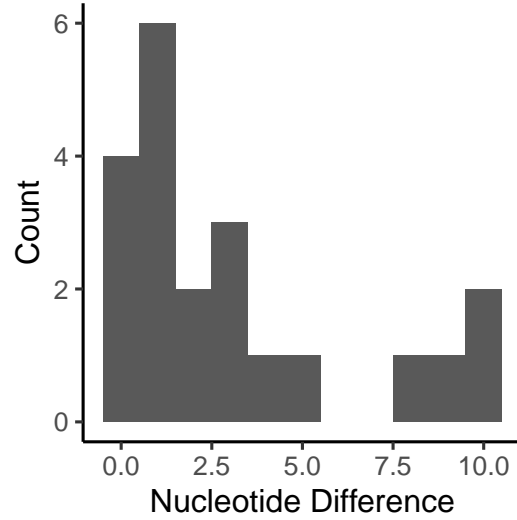
IGHV4-28*03

8 sequences assigned
No exact matches.



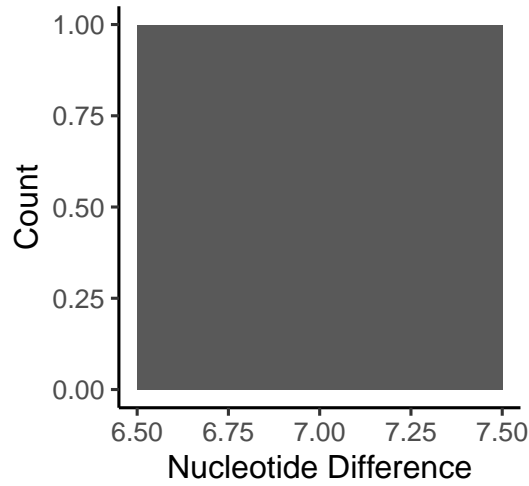
IGHV4-28*02_05

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



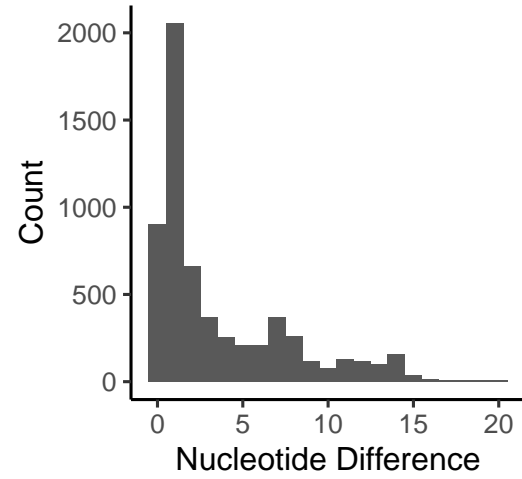
IGHV4-30-2*04

1 sequences assigned
No exact matches.



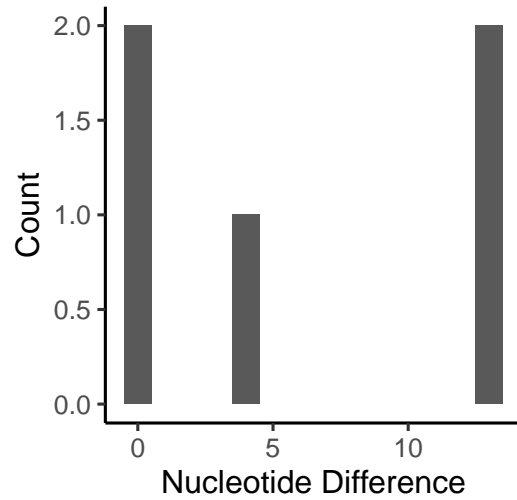
IGHV4-31*03_04

6354 sequences assigned
903 (14.2%) exact matches, in which:
590 unique CDR3
7 unique J



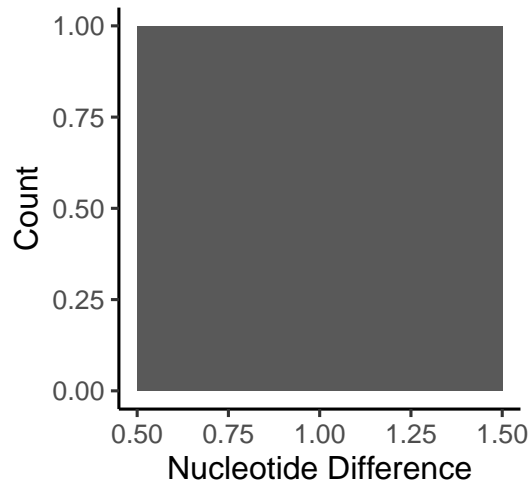
IGHV4-30-2*01

9 sequences assigned
2 (22.2%) exact matches, in which:
2 unique CDR3
2 unique J



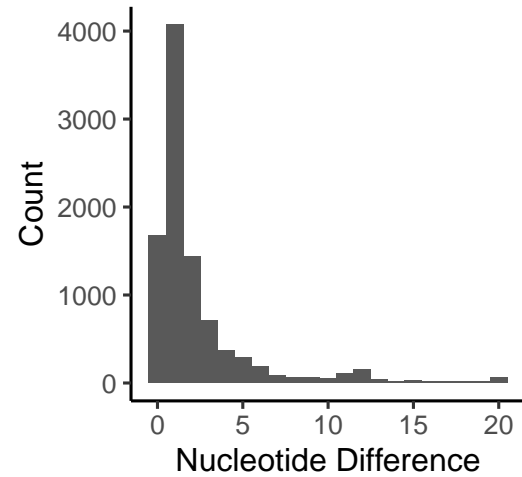
IGHV4-30-4*07

2 sequences assigned
No exact matches.



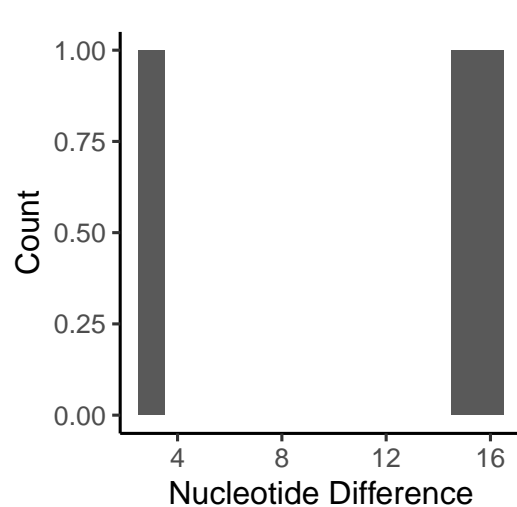
IGHV4-34*01_02

10105 sequences assigned
1674 (16.6%) exact matches, in which:
1015 unique CDR3
7 unique J



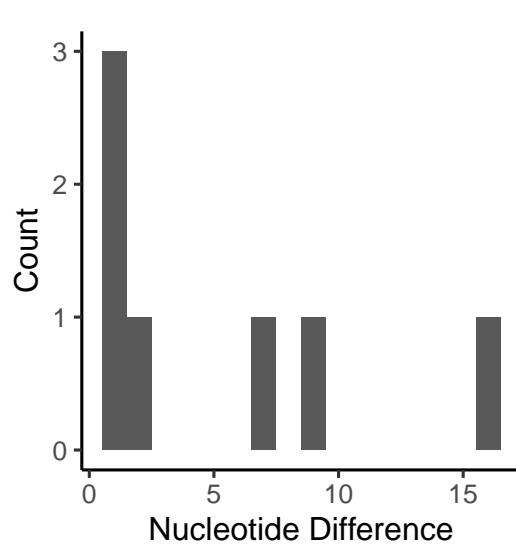
IGHV4-30-2*03

4 sequences assigned
No exact matches.



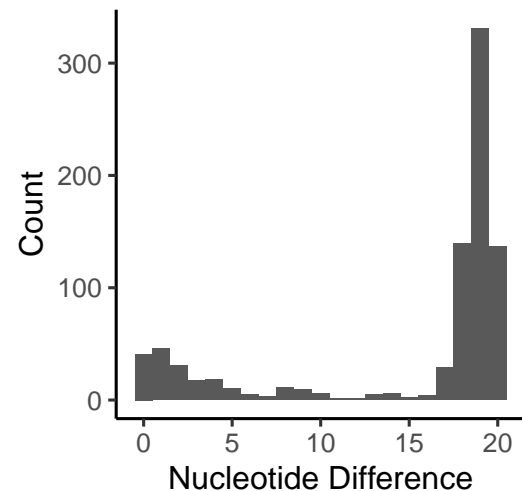
IGHV4-30-4*08

9 sequences assigned
No exact matches.



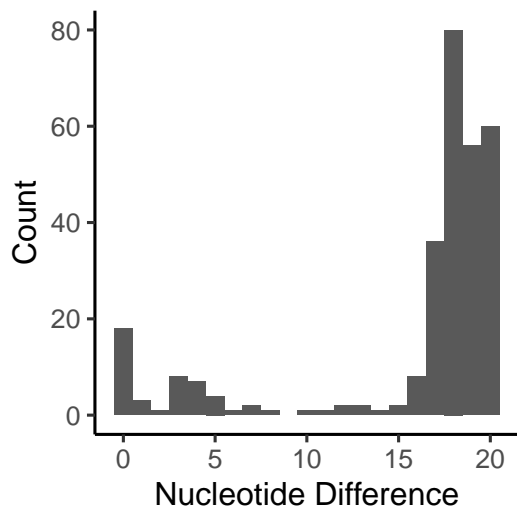
IGHV4-38-2*01

1778 sequences assigned
41 (2.3%) exact matches, in which:
39 unique CDR3
6 unique J



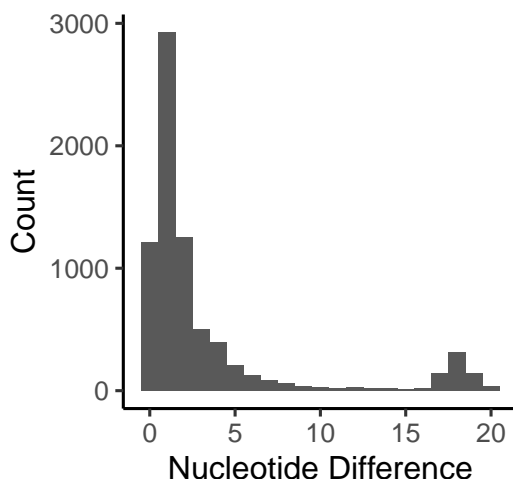
IGHV4-38-2*02

365 sequences assigned
18 (4.9%) exact matches, in which:
15 unique CDR3
5 unique J



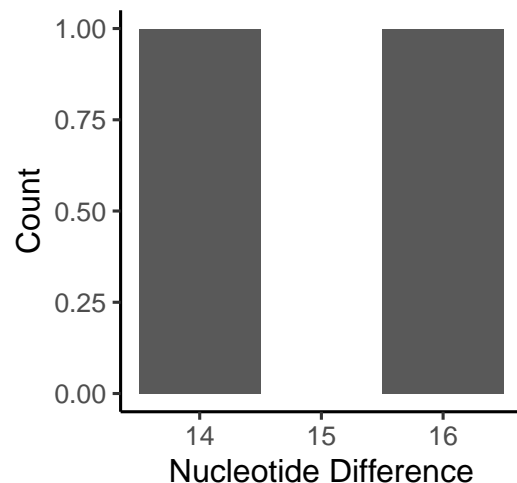
IGHV4-59*01_07

8082 sequences assigned
1212 (15%) exact matches, in which:
798 unique CDR3
7 unique J



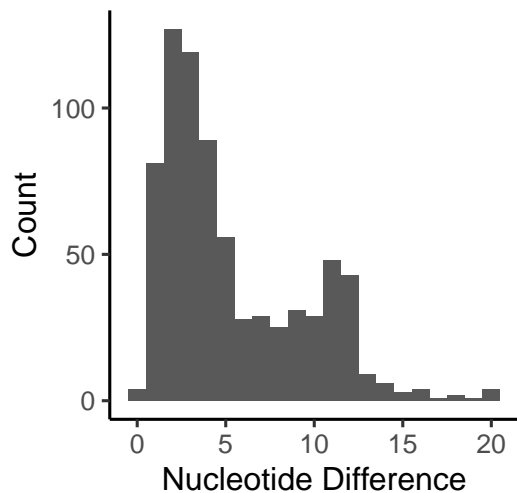
IGHV5-10-1*01_03

2 sequences assigned
No exact matches.



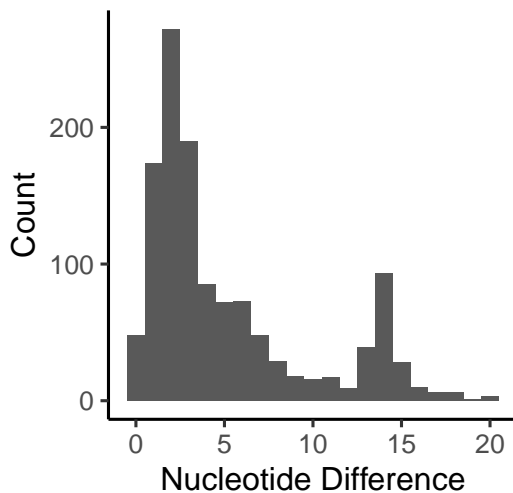
IGHV4-39*07

761 sequences assigned
4 (0.5%) exact matches, in which:
4 unique CDR3
2 unique J



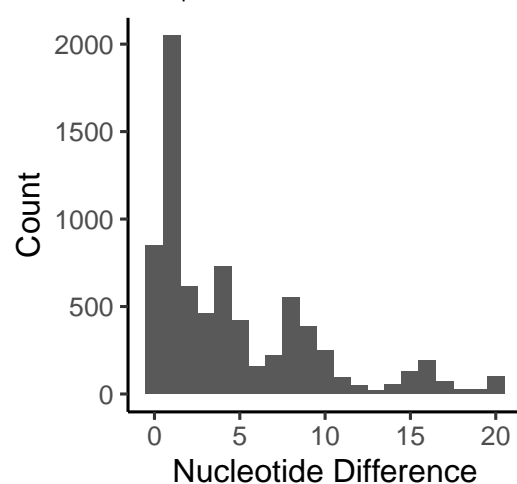
IGHV4-59*12

1265 sequences assigned
48 (3.8%) exact matches, in which:
43 unique CDR3
7 unique J



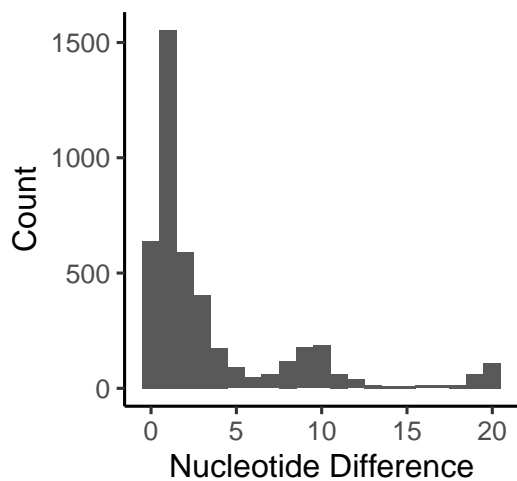
IGHV5-51*01_03

7723 sequences assigned
847 (11%) exact matches, in which:
468 unique CDR3
5 unique J



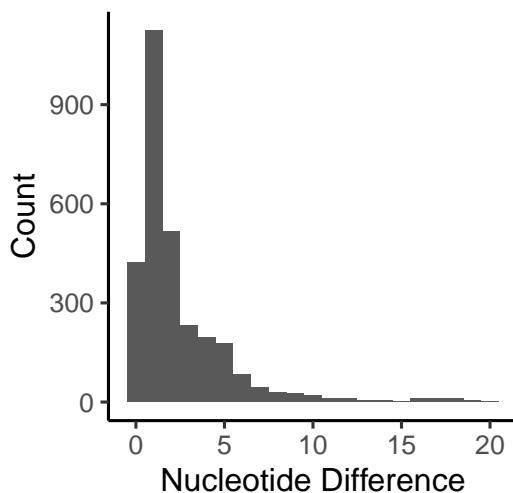
IGHV4-39*01_05

5283 sequences assigned
640 (12.1%) exact matches, in which:
386 unique CDR3
7 unique J



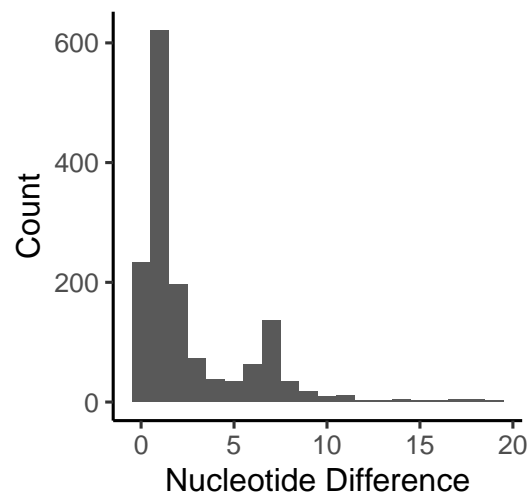
IGHV4-61*01

4744 sequences assigned
421 (8.9%) exact matches, in which:
271 unique CDR3
6 unique J



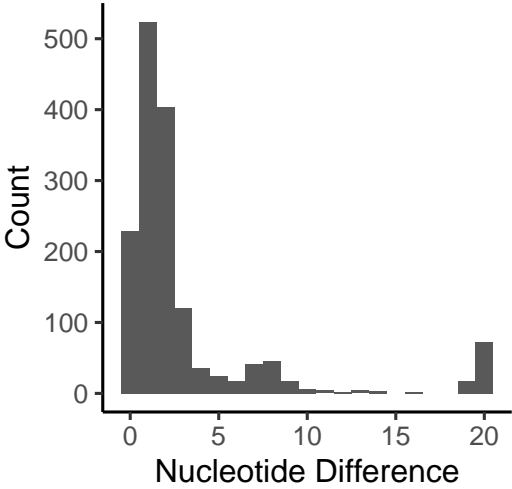
IGHV6-1*01_02

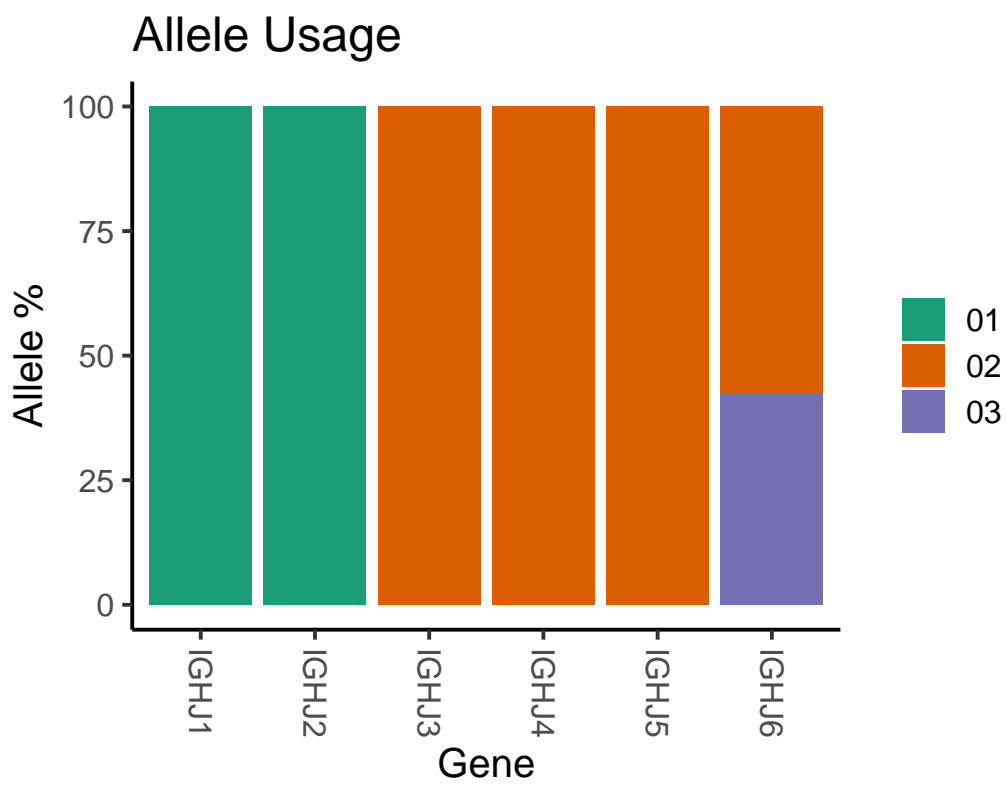
1497 sequences assigned
233 (15.6%) exact matches, in which:
162 unique CDR3
5 unique J



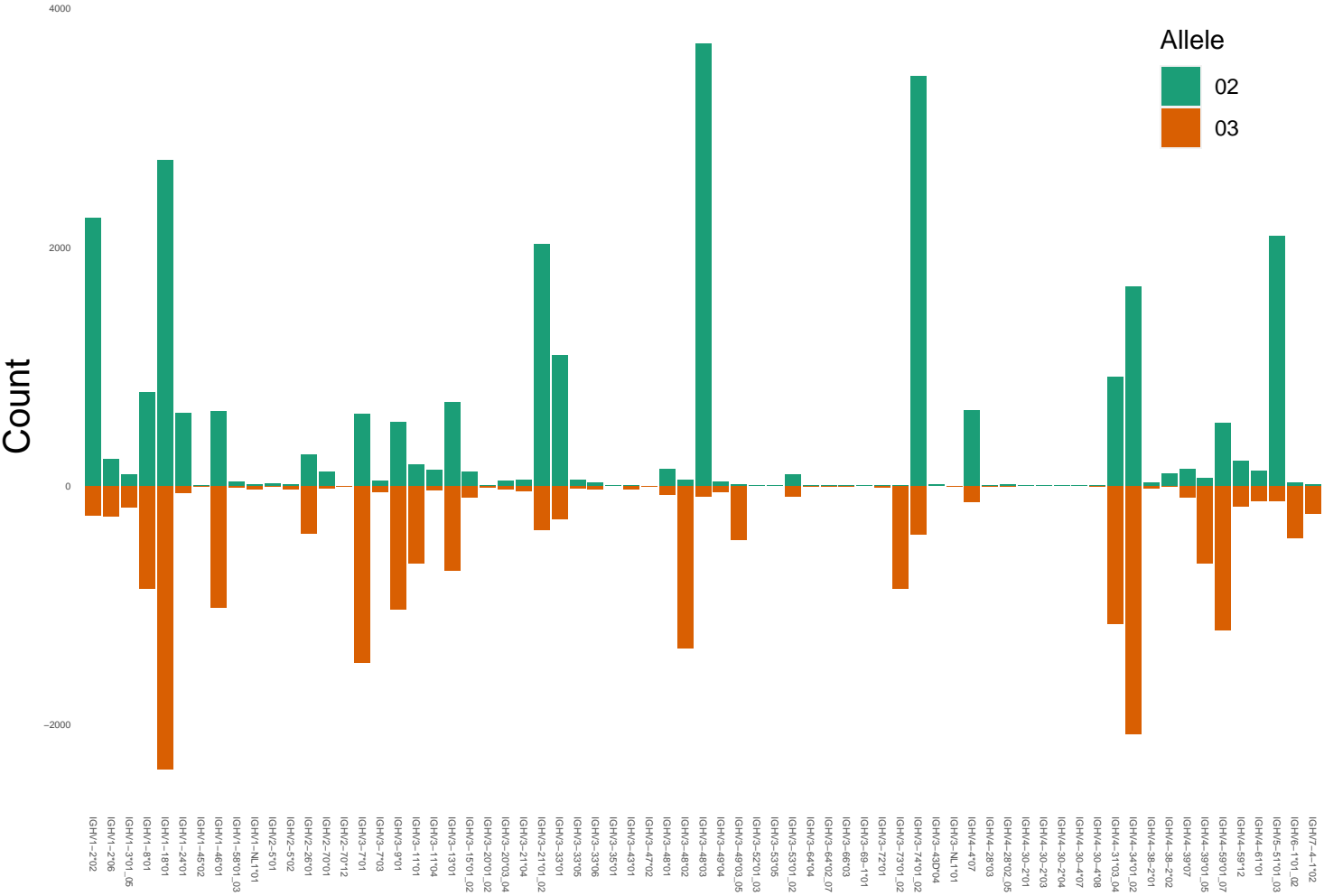
IGHV7-4-1*02

1873 sequences assigned
229 (12.2%) exact matches, in which:
160 unique CDR3
7 unique J





Sequence Count by IGHJ6 allele usage



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*08_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.

Warning – no inferred sequences found.

Warning – no inferred sequences found.