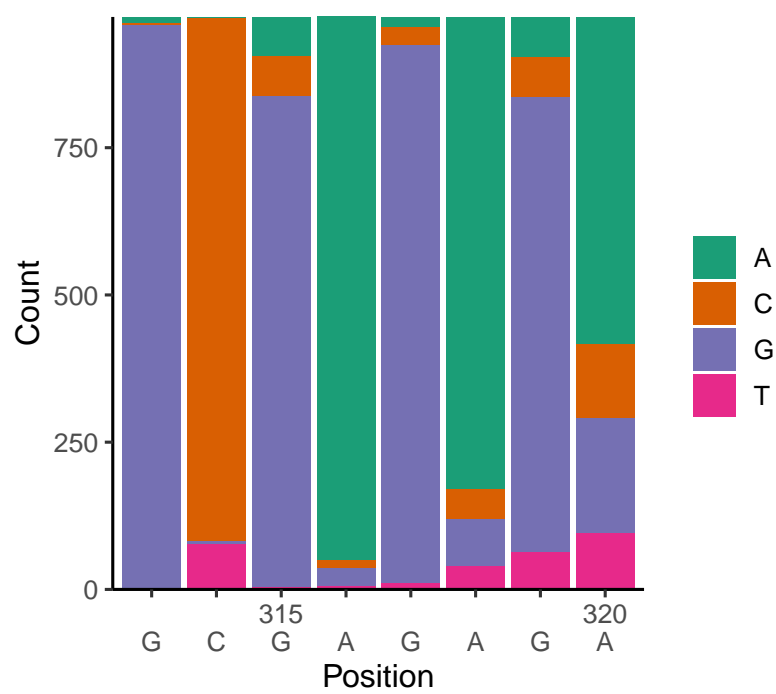
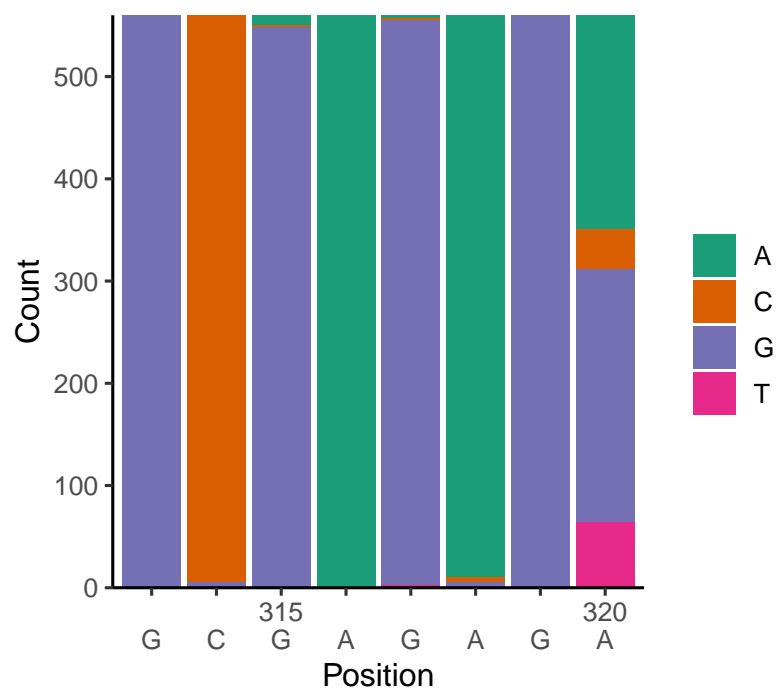


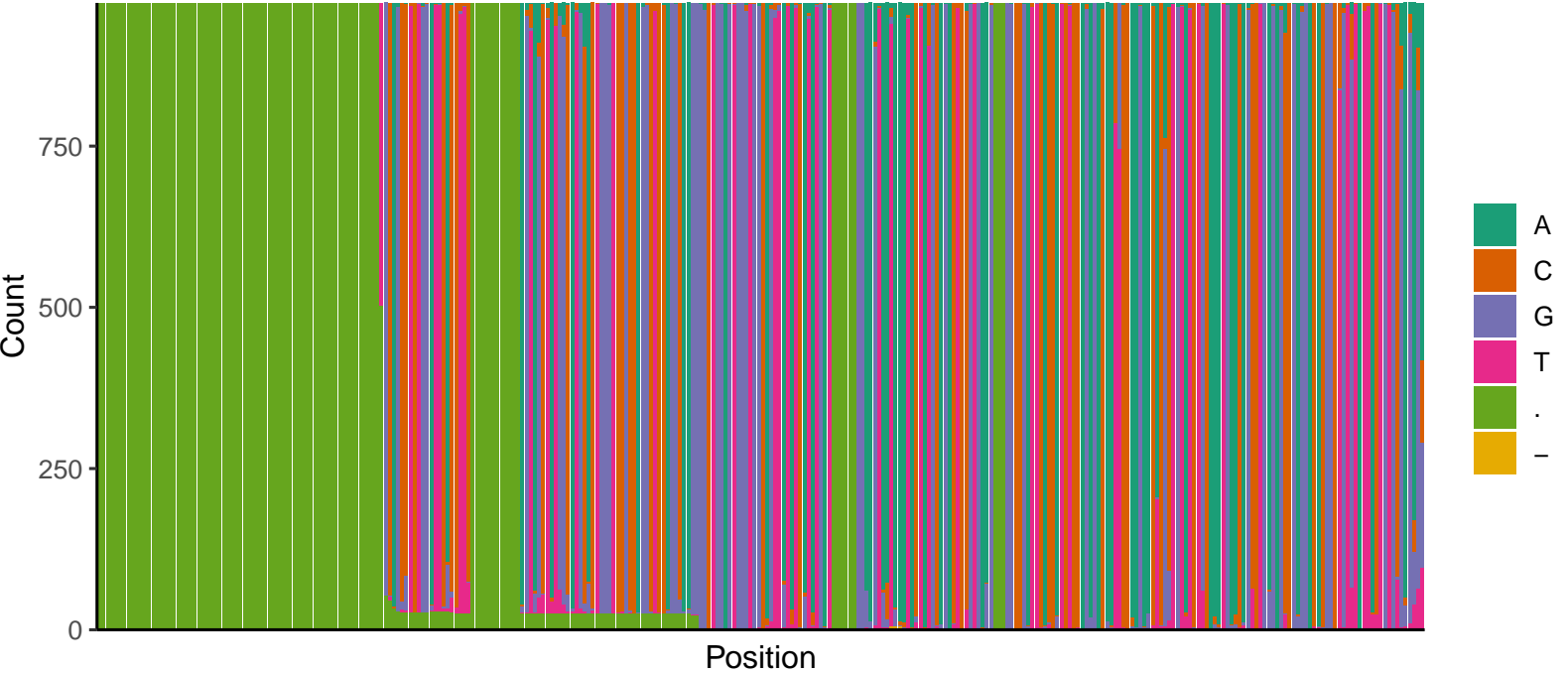
Gene IGHV3-30*03_T288C



Gene IGHV4-39*02_C258G



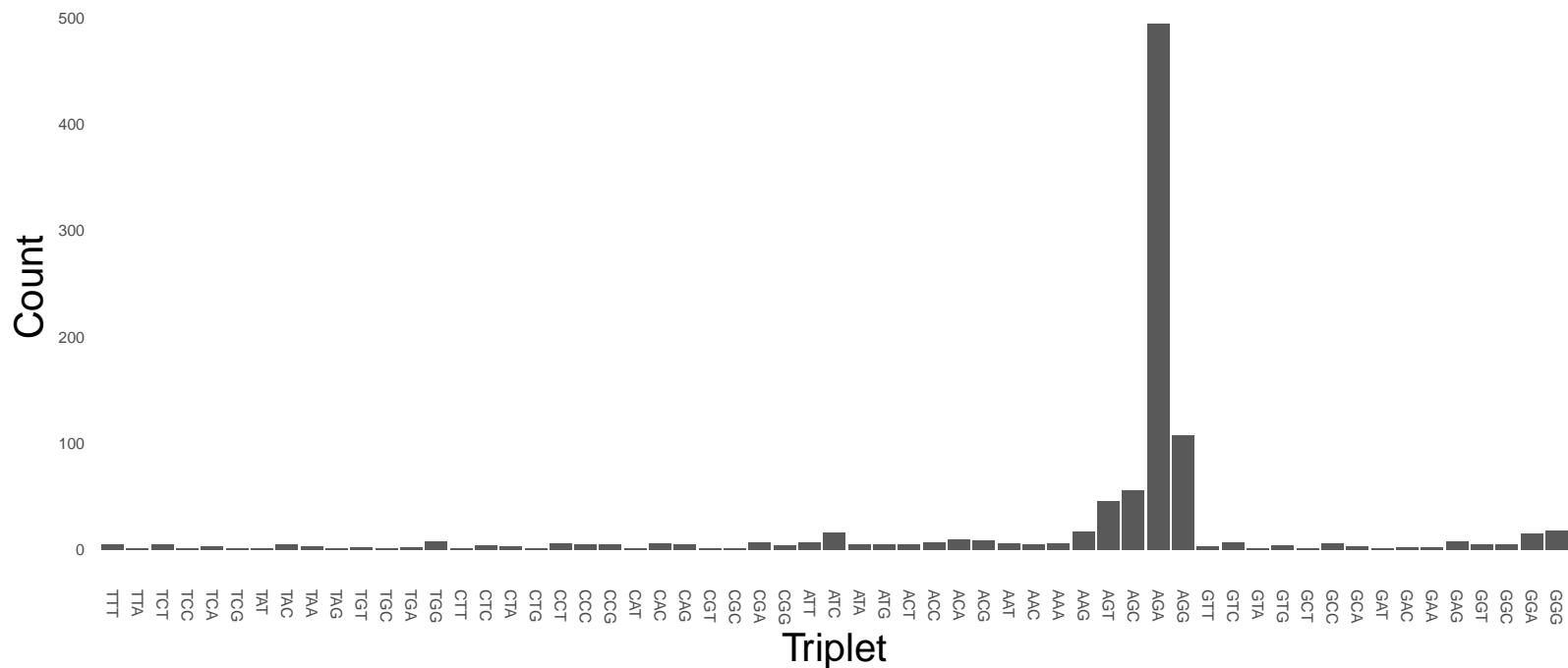
Gene IGHV3-30*03_T288C



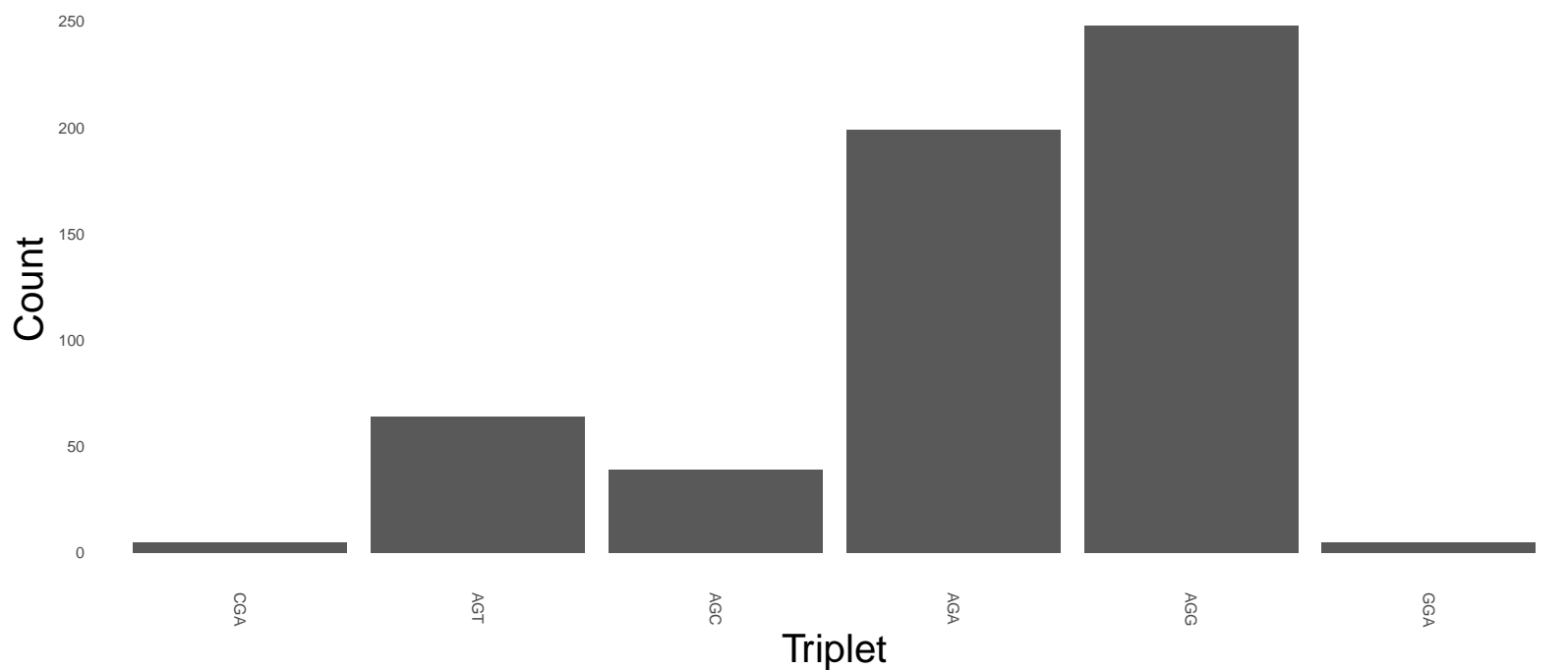
Gene IGHV4-39*02_C258G



IGHV3–30*03_T288C– Final 3 nucleotides as a triplet

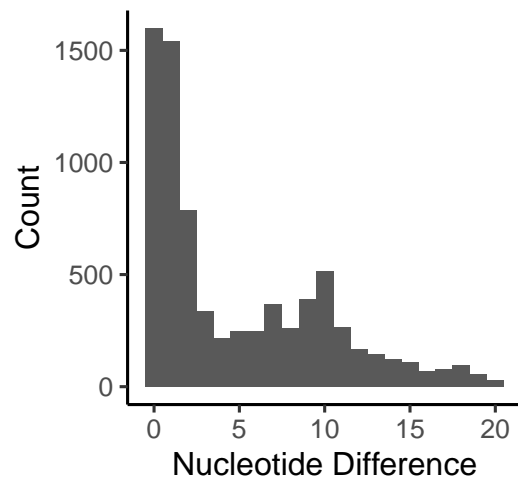


IGHV4–39*02_C258G– Final 3 nucleotides as a triplet



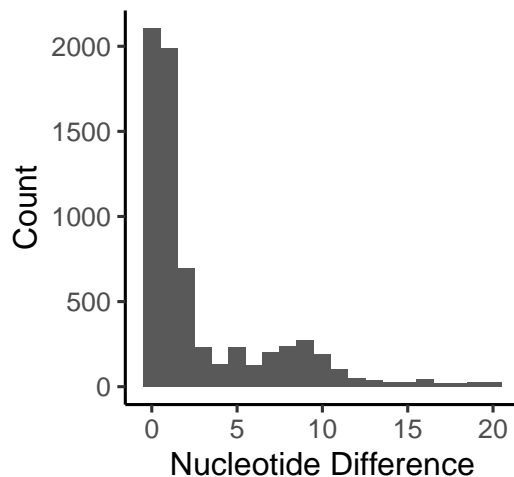
IGHV1-2*02

8800 sequences assigned
1598 (18.2%) exact matches, in which:
1391 unique CDR3
6 unique J



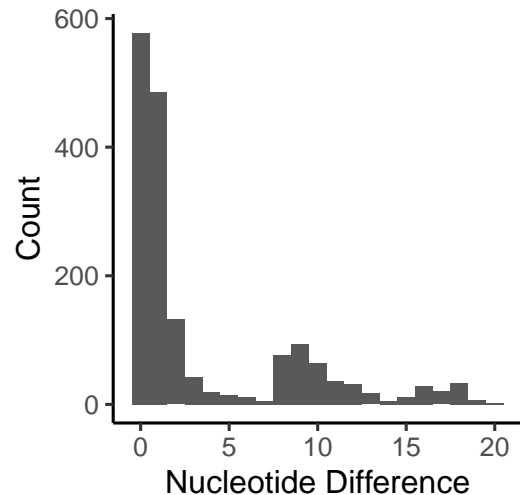
IGHV1-8*01

6884 sequences assigned
2105 (30.6%) exact matches, in which:
1798 unique CDR3
6 unique J



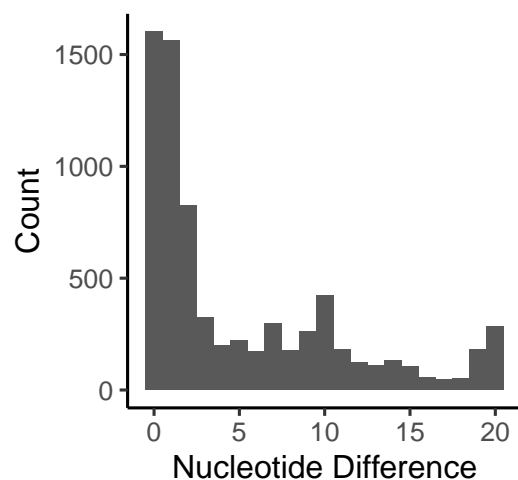
IGHV1-24*01

1738 sequences assigned
578 (33.3%) exact matches, in which:
512 unique CDR3
6 unique J



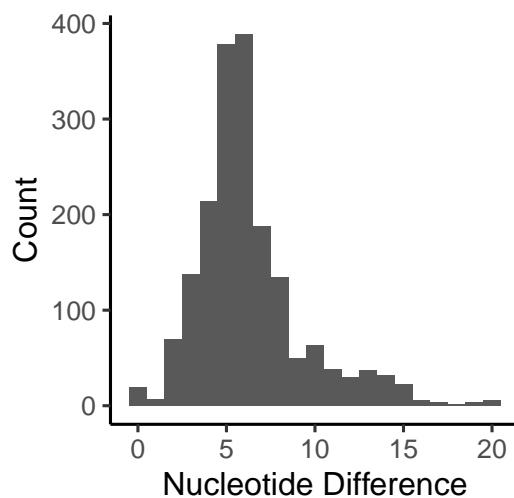
IGHV1-2*06

8011 sequences assigned
1602 (20%) exact matches, in which:
1362 unique CDR3
6 unique J



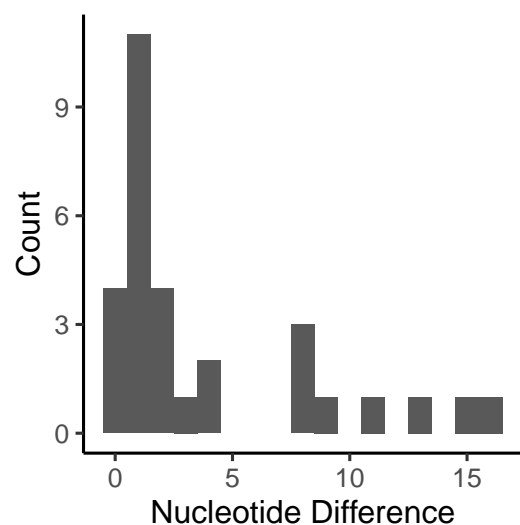
IGHV1-8*02

1844 sequences assigned
19 (1%) exact matches, in which:
18 unique CDR3
4 unique J



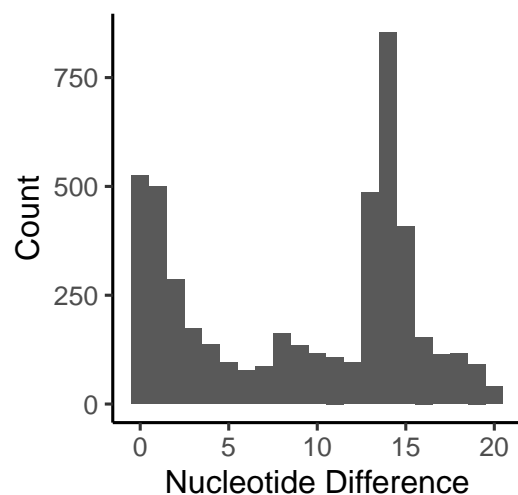
IGHV1-45*02

30 sequences assigned
4 (13.3%) exact matches, in which:
4 unique CDR3
4 unique J



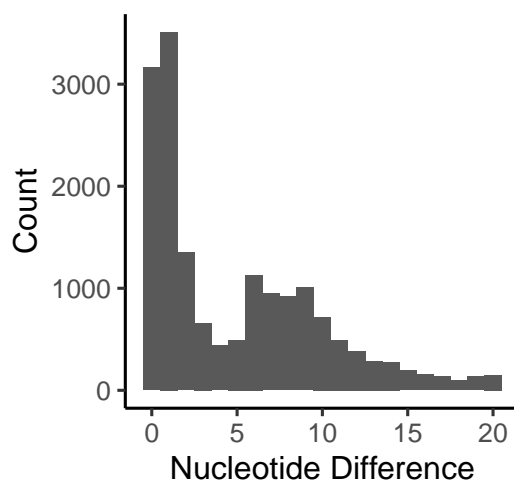
IGHV1-3*01_05

5066 sequences assigned
526 (10.4%) exact matches, in which:
452 unique CDR3
6 unique J



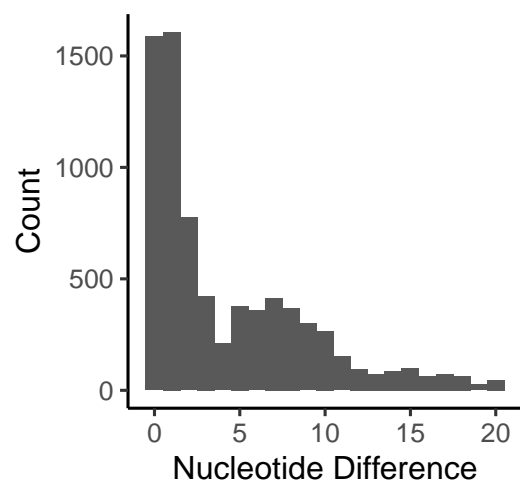
IGHV1-18*01

18084 sequences assigned
3164 (17.5%) exact matches, in which:
2622 unique CDR3
6 unique J



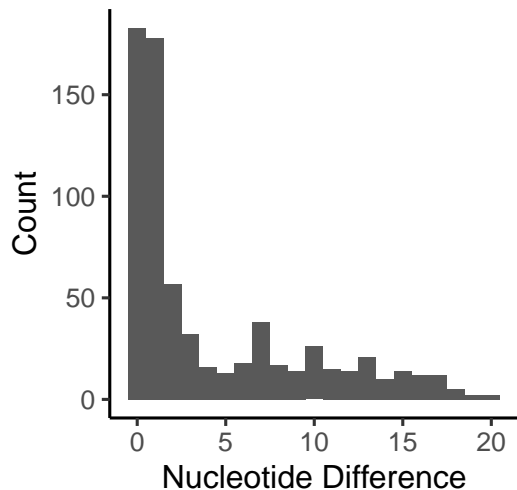
IGHV1-46*01

9696 sequences assigned
1587 (16.4%) exact matches, in which:
1384 unique CDR3
6 unique J



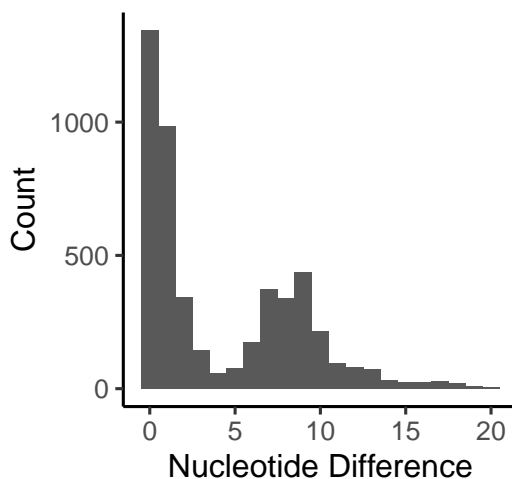
IGHV1–58*01_03

704 sequences assigned
183 (26%) exact matches, in which:
159 unique CDR3
6 unique J



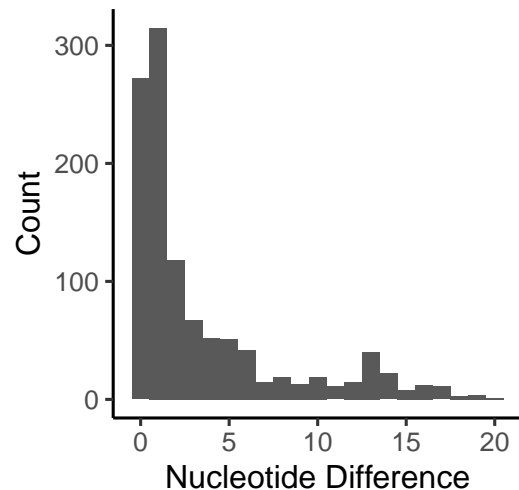
IGHV1–69*06_14

4908 sequences assigned
1344 (27.4%) exact matches, in which:
1229 unique CDR3
6 unique J



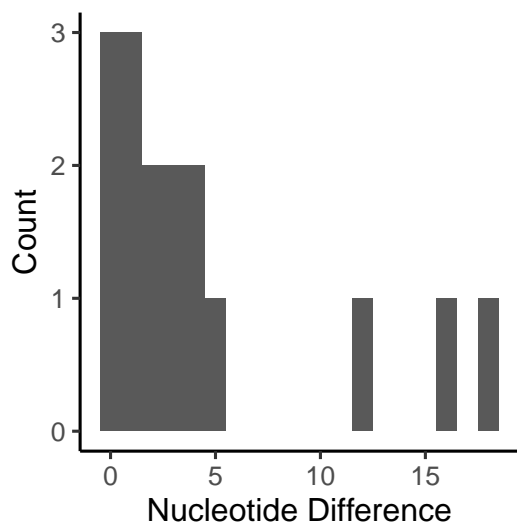
IGHV2–5*02

1163 sequences assigned
272 (23.4%) exact matches, in which:
221 unique CDR3
6 unique J



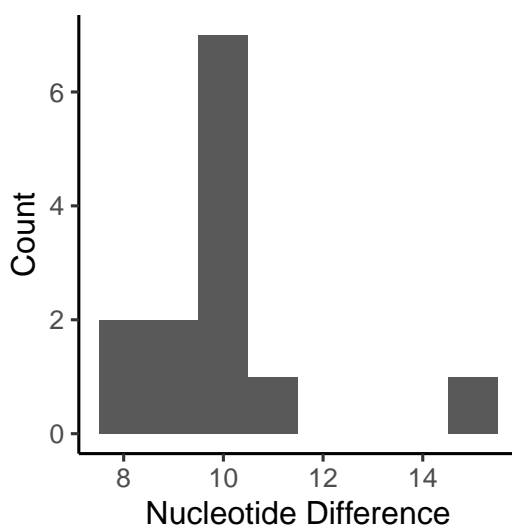
IGHV1–68*01

16 sequences assigned
3 (18.8%) exact matches, in which:
3 unique CDR3
1 unique J



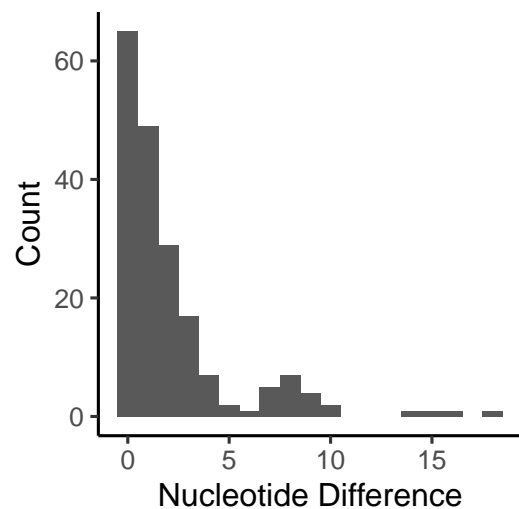
IGHV1–NL1*01

13 sequences assigned
No exact matches.



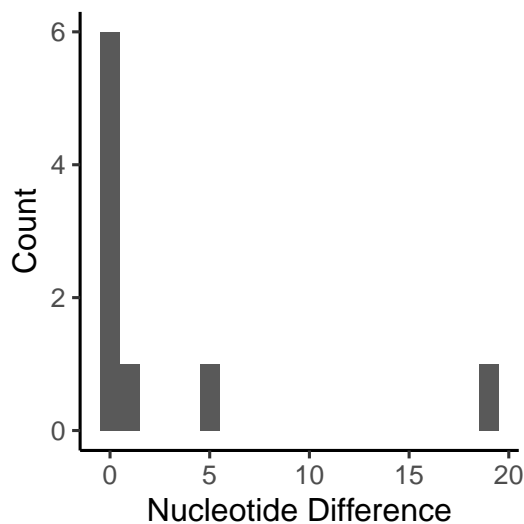
IGHV2–26*01

193 sequences assigned
65 (33.7%) exact matches, in which:
59 unique CDR3
6 unique J



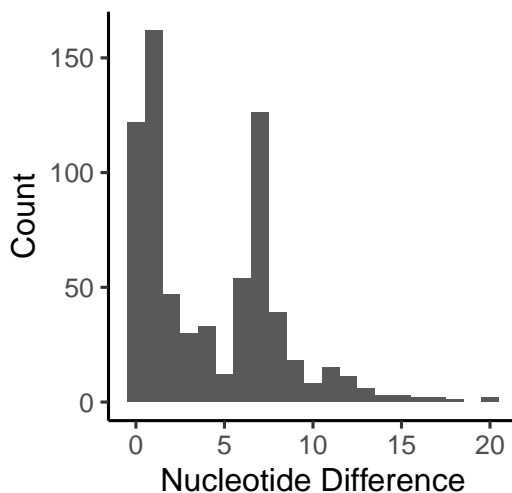
IGHV1–69–2*01

9 sequences assigned
6 (66.7%) exact matches, in which:
6 unique CDR3
2 unique J



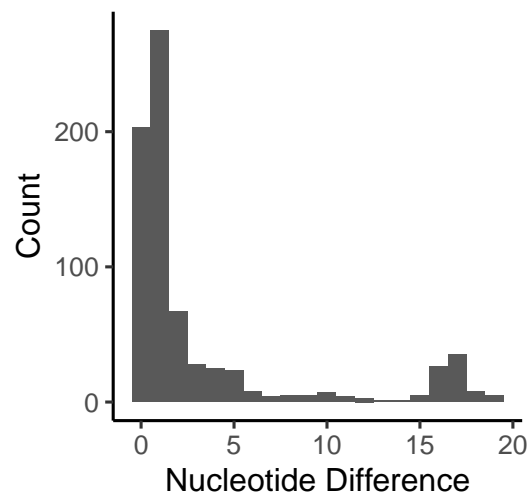
IGHV2–5*01

701 sequences assigned
122 (17.4%) exact matches, in which:
110 unique CDR3
6 unique J



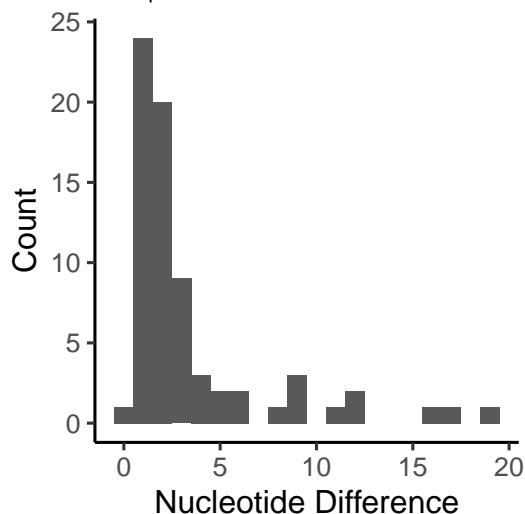
IGHV2–70*01

744 sequences assigned
203 (27.3%) exact matches, in which:
149 unique CDR3
6 unique J



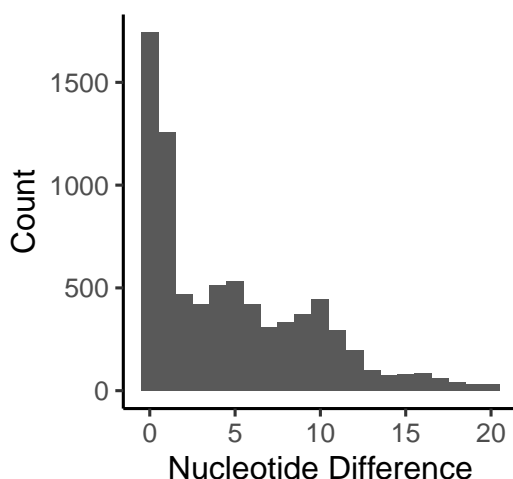
IGHV2-70*12

71 sequences assigned
1 (1.4%) exact matches, in which:
1 unique CDR3
1 unique J



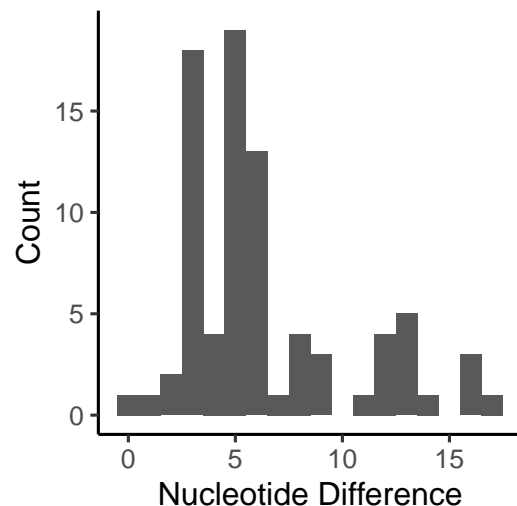
IGHV3-9*01

8693 sequences assigned
1743 (20.1%) exact matches, in which:
997 unique CDR3
6 unique J



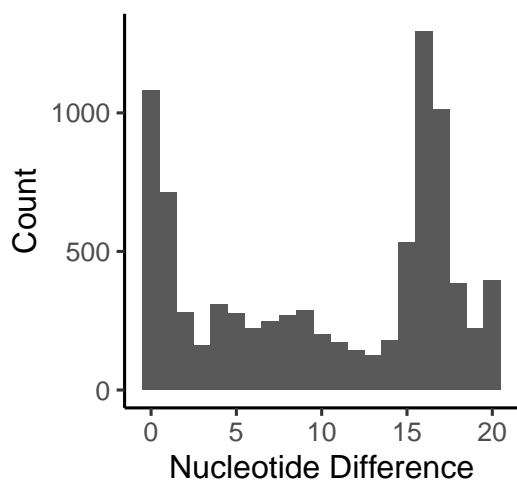
IGHV3-11*06

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



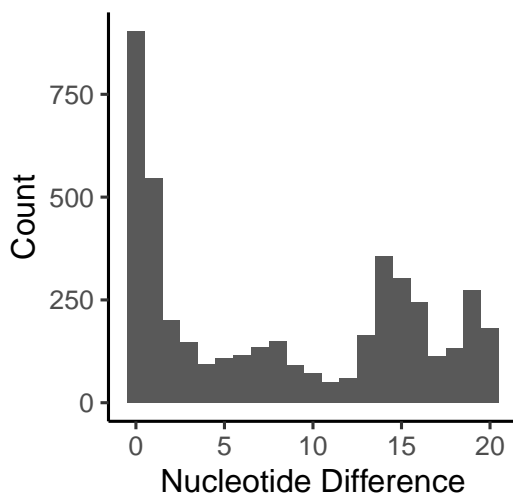
IGHV3-7*01

9701 sequences assigned
1080 (11.1%) exact matches, in which:
757 unique CDR3
6 unique J



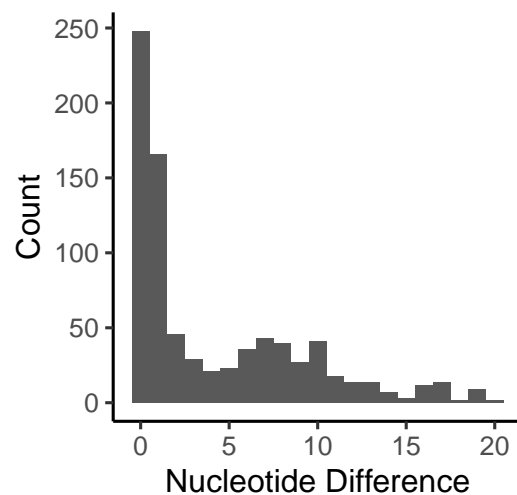
IGHV3-11*01

6550 sequences assigned
904 (13.8%) exact matches, in which:
610 unique CDR3
6 unique J



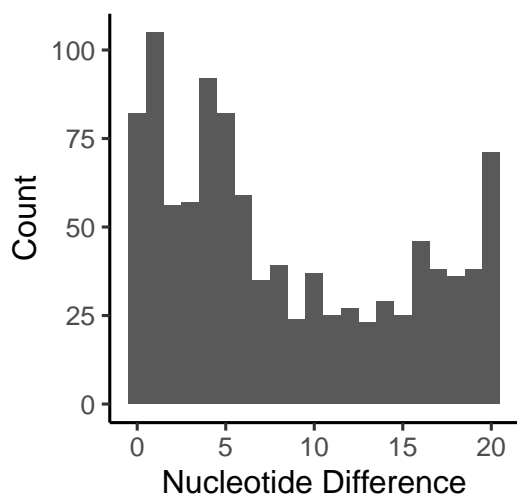
IGHV3-13*01

825 sequences assigned
248 (30.1%) exact matches, in which:
158 unique CDR3
5 unique J



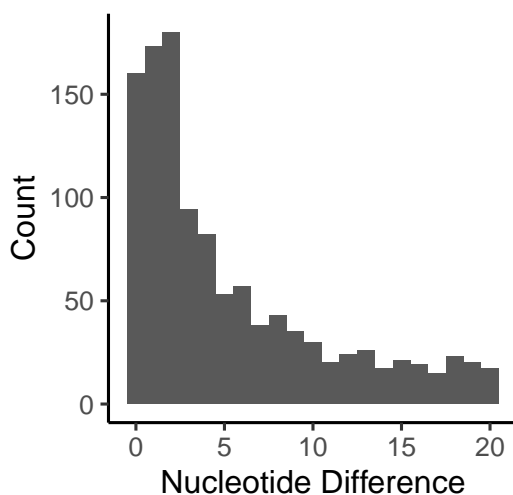
IGHV3-7*03

1273 sequences assigned
82 (6.4%) exact matches, in which:
70 unique CDR3
5 unique J



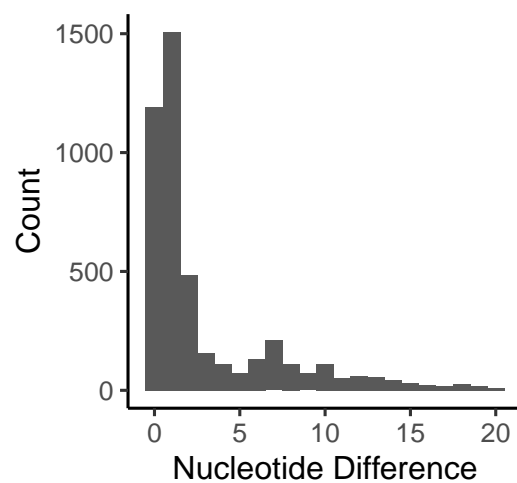
IGHV3-11*04

1221 sequences assigned
160 (13.1%) exact matches, in which:
153 unique CDR3
6 unique J



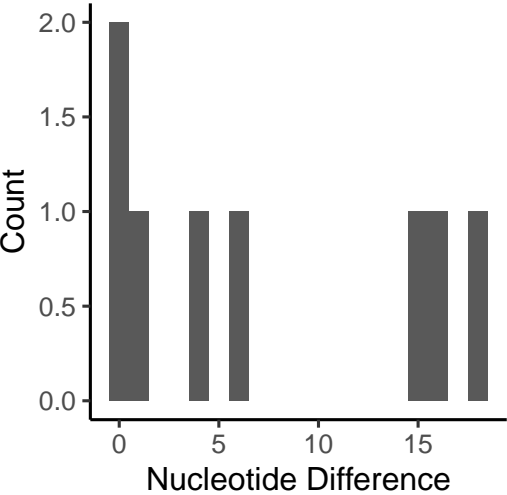
IGHV3-15*01_02

4600 sequences assigned
1192 (25.9%) exact matches, in which:
661 unique CDR3
6 unique J



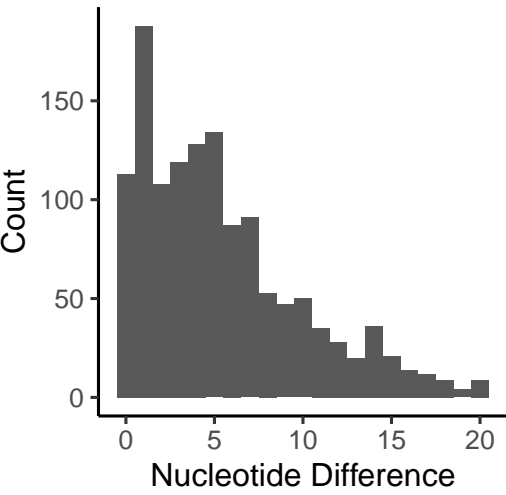
IGHV3-19*01

8 sequences assigned
2 (25%) exact matches, in which:
2 unique CDR3
2 unique J



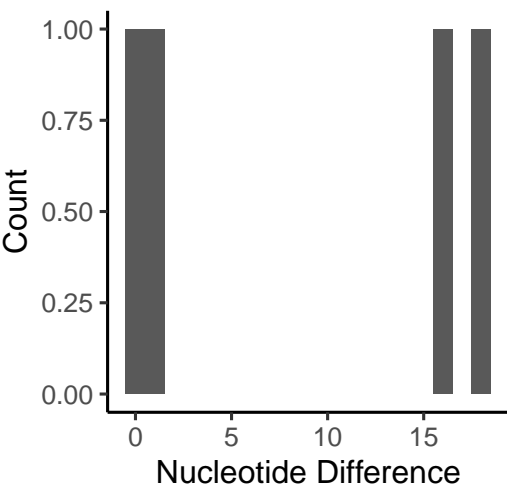
IGHV3-21*04

1348 sequences assigned
113 (8.4%) exact matches, in which:
110 unique CDR3
4 unique J



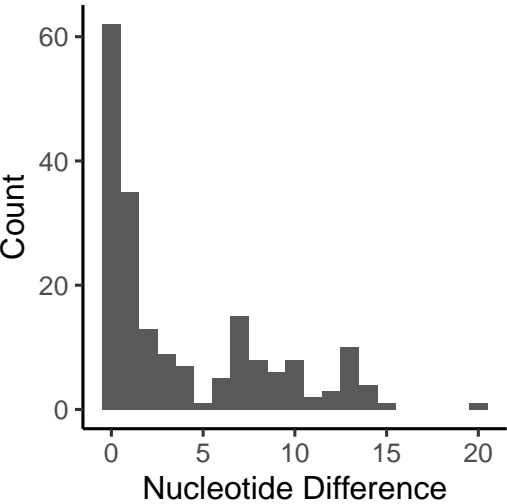
IGHV3-30-3*01

4 sequences assigned
1 (25%) exact matches, in which:
1 unique CDR3
1 unique J



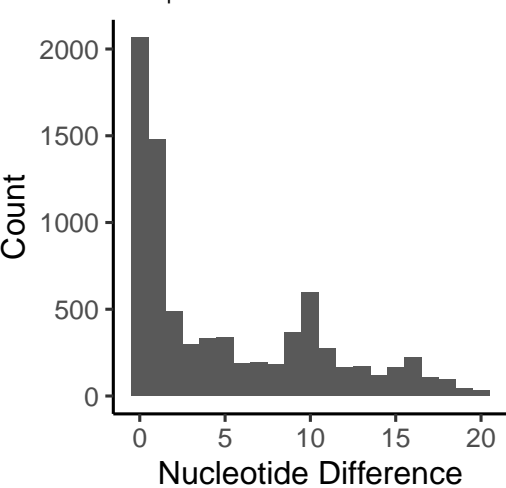
IGHV3-20*01_02

194 sequences assigned
62 (32%) exact matches, in which:
36 unique CDR3
6 unique J



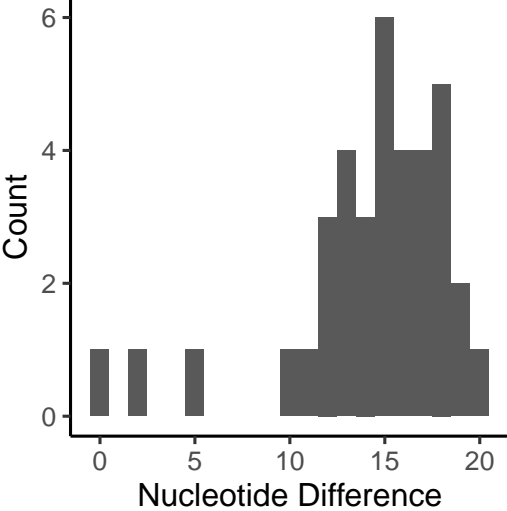
IGHV3-21*01_02

8146 sequences assigned
2065 (25.3%) exact matches, in which:
1320 unique CDR3
6 unique J



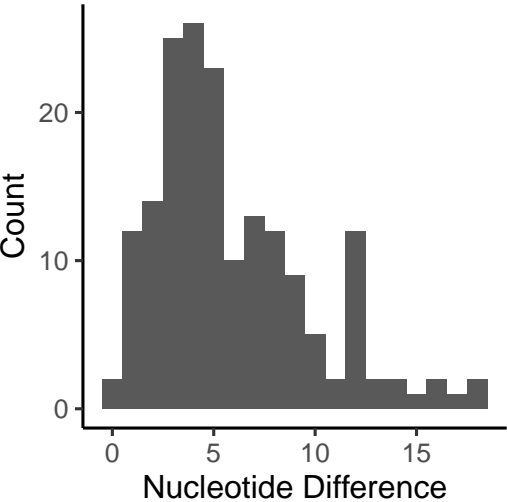
IGHV3-30-5*02

44 sequences assigned
1 (2.3%) exact matches, in which:
1 unique CDR3
1 unique J



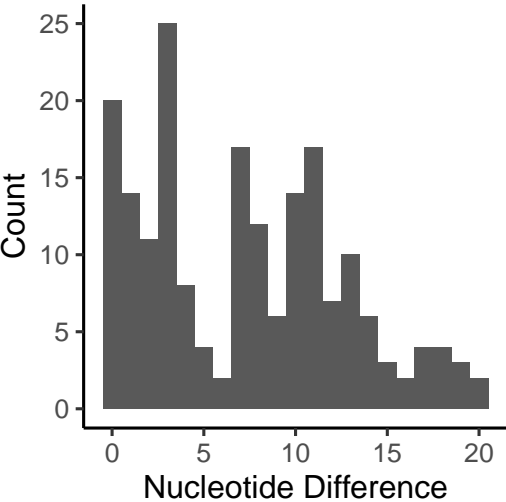
IGHV3-20*03_04

185 sequences assigned
2 (1.1%) exact matches, in which:
2 unique CDR3
1 unique J



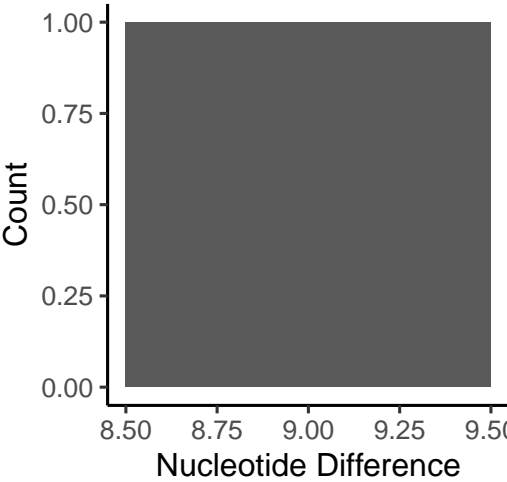
IGHV3-30-5*01

193 sequences assigned
20 (10.4%) exact matches, in which:
19 unique CDR3
4 unique J



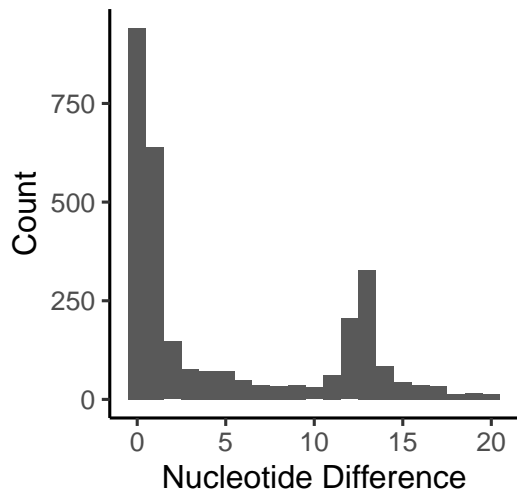
IGHV3-30-3*02

1 sequences assigned
No exact matches.



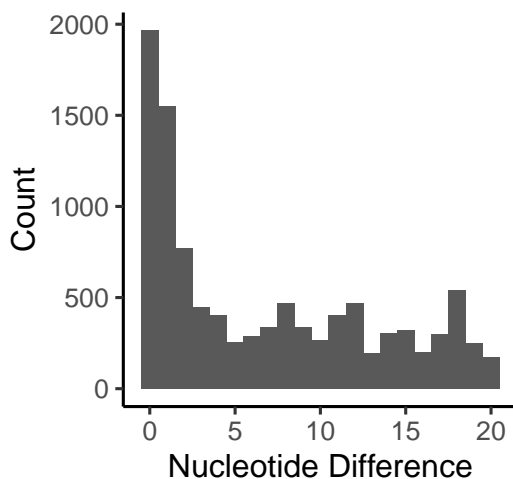
IGHV3–30*03

3010 sequences assigned
942 (31.3%) exact matches, in which:
611 unique CDR3
6 unique J



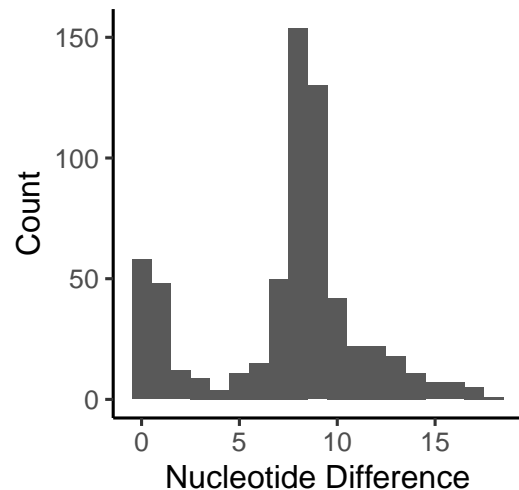
IGHV3–33*01

10828 sequences assigned
1966 (18.2%) exact matches, in which:
1336 unique CDR3
6 unique J



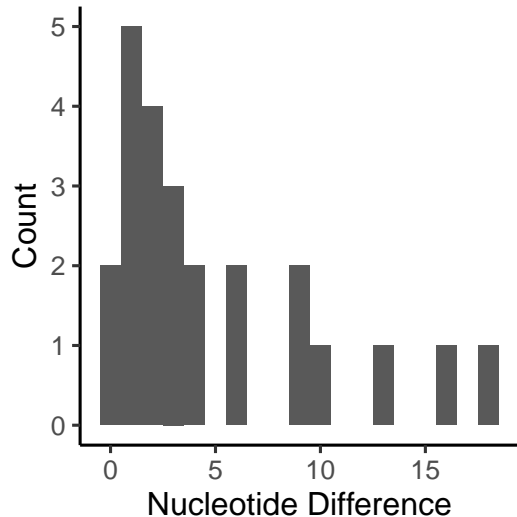
IGHV3–43*01

631 sequences assigned
58 (9.2%) exact matches, in which:
34 unique CDR3
3 unique J



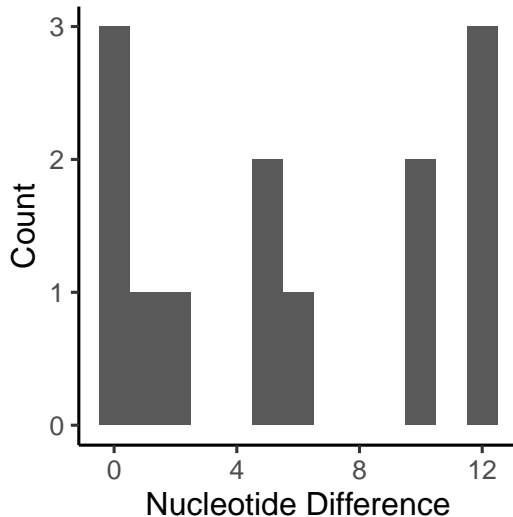
IGHV3–30–3*03

28 sequences assigned
2 (7.1%) exact matches, in which:
2 unique CDR3
2 unique J



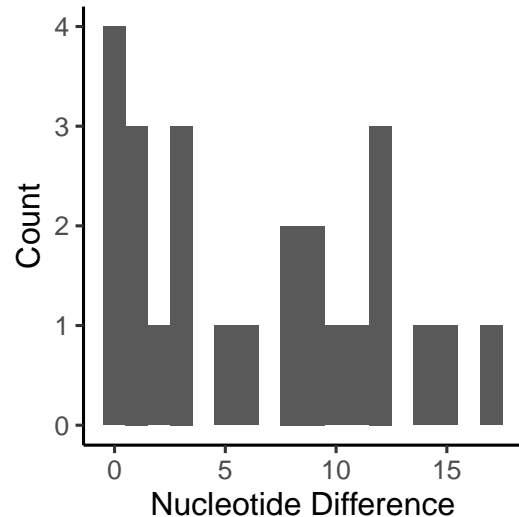
IGHV3–35*01

13 sequences assigned
3 (23.1%) exact matches, in which:
2 unique CDR3
1 unique J



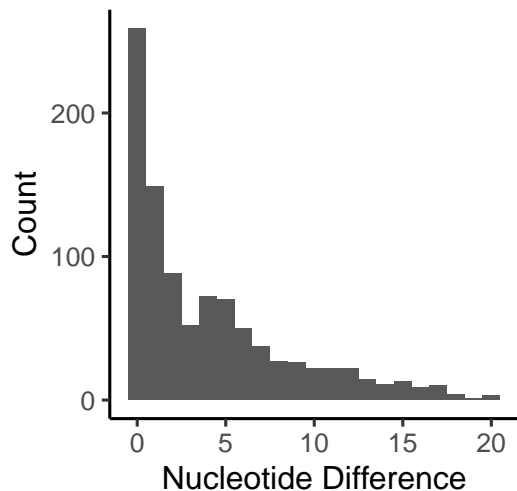
IGHV3–47*02

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



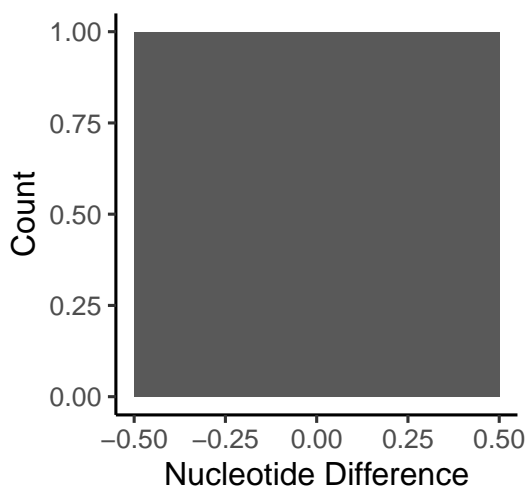
IGHV3–30*03_T288C

972 sequences assigned
259 (26.6%) exact matches, in which:
234 unique CDR3
6 unique J



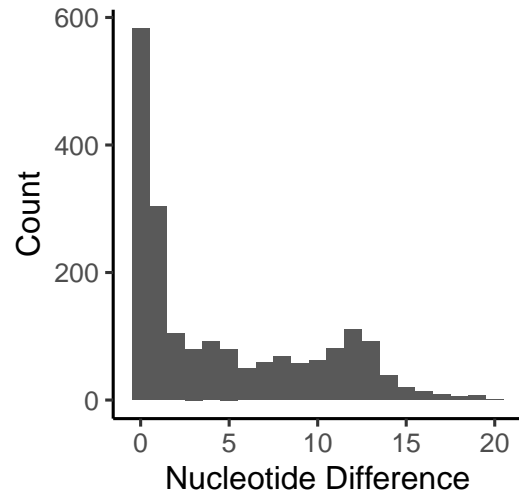
IGHV3–38*02

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



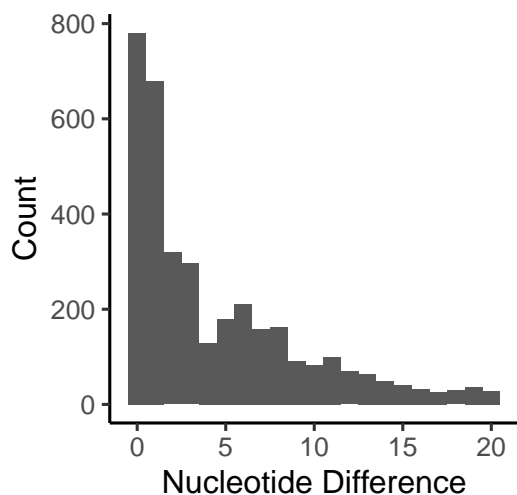
IGHV3–48*02

1988 sequences assigned
583 (29.3%) exact matches, in which:
369 unique CDR3
6 unique J



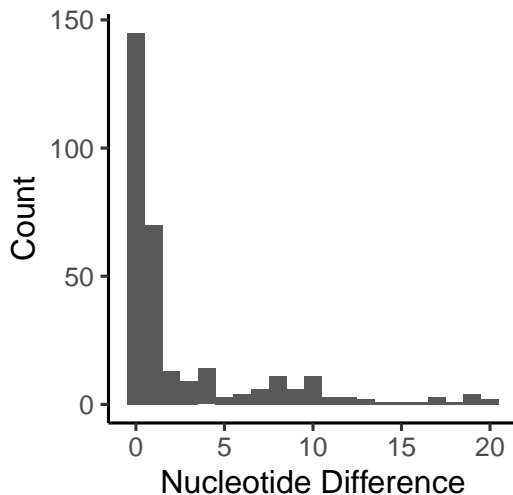
IGHV3-48*03

7592 sequences assigned
781 (10.3%) exact matches, in which:
492 unique CDR3
6 unique J



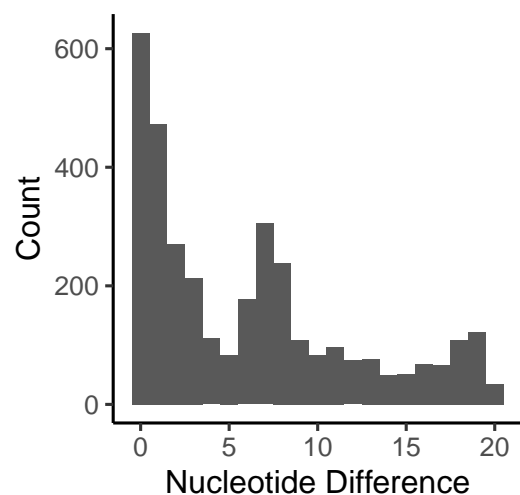
IGHV3-49*03_05

330 sequences assigned
145 (43.9%) exact matches, in which:
84 unique CDR3
5 unique J



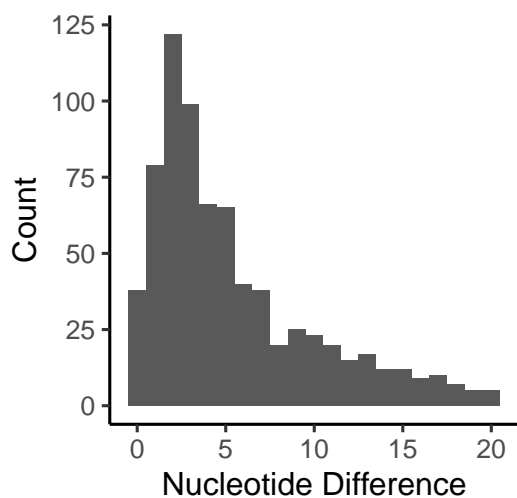
IGHV3-53*01_02

4117 sequences assigned
627 (15.2%) exact matches, in which:
410 unique CDR3
6 unique J



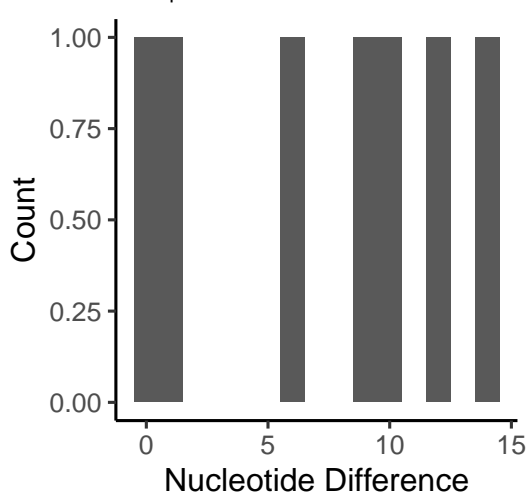
IGHV3-48*04

795 sequences assigned
38 (4.8%) exact matches, in which:
37 unique CDR3
4 unique J



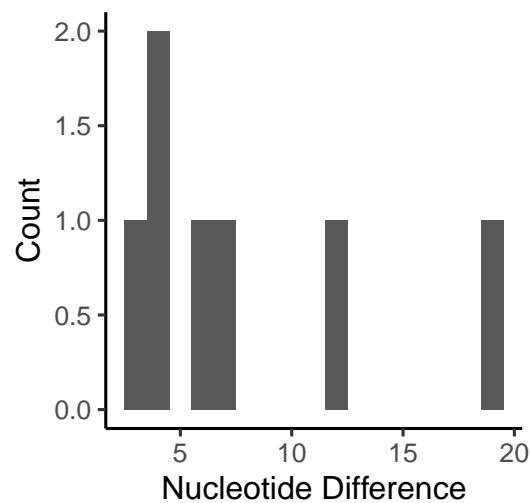
IGHV3-52*01_03

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



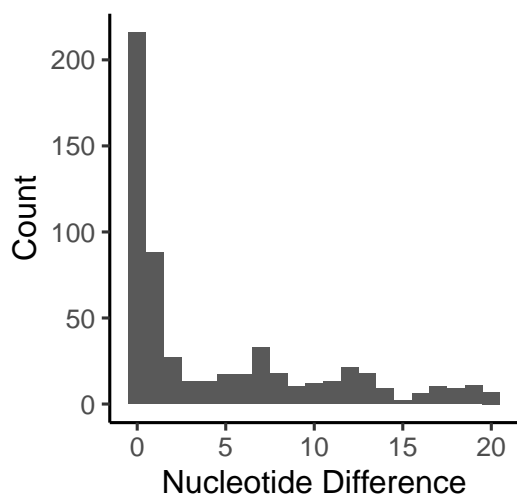
IGHV3-64*04

9 sequences assigned
No exact matches.



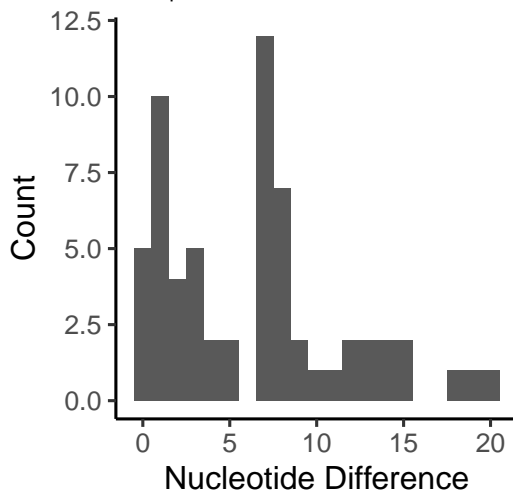
IGHV3-49*04

578 sequences assigned
216 (37.4%) exact matches, in which:
140 unique CDR3
6 unique J



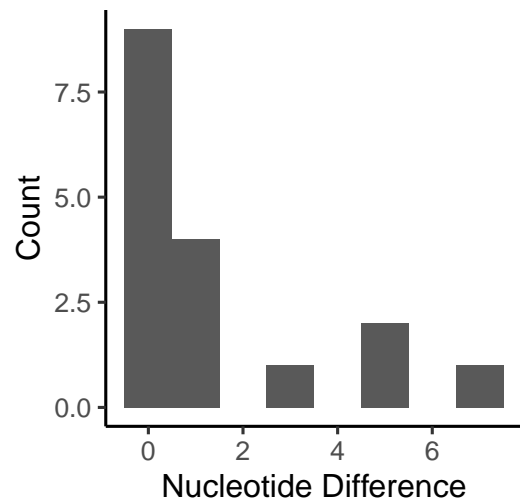
IGHV3-53*05

64 sequences assigned
5 (7.8%) exact matches, in which:
5 unique CDR3
3 unique J



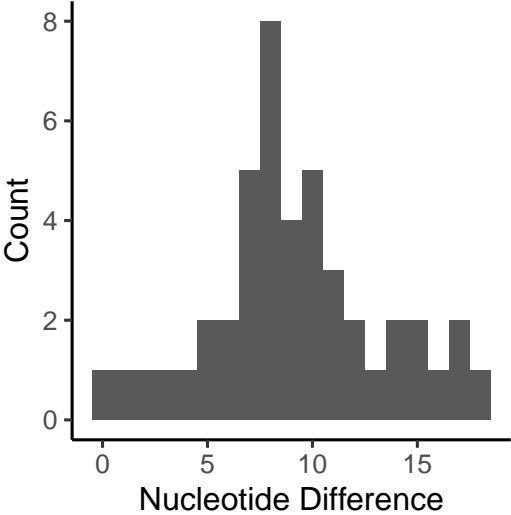
IGHV3-64*02_07

17 sequences assigned
9 (52.9%) exact matches, in which:
8 unique CDR3
4 unique J



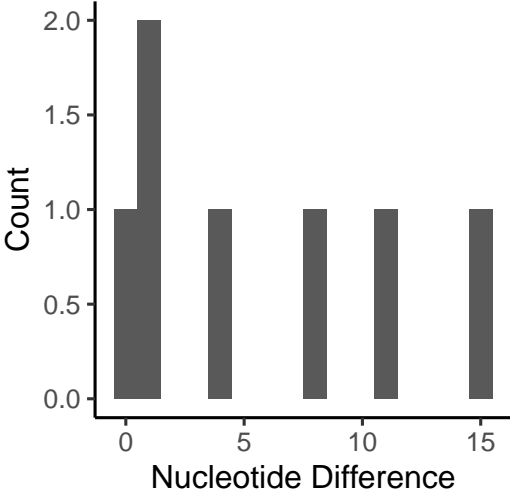
IGHV3-66*01

67 sequences assigned
1 (1.5%) exact matches, in which:
1 unique CDR3
1 unique J



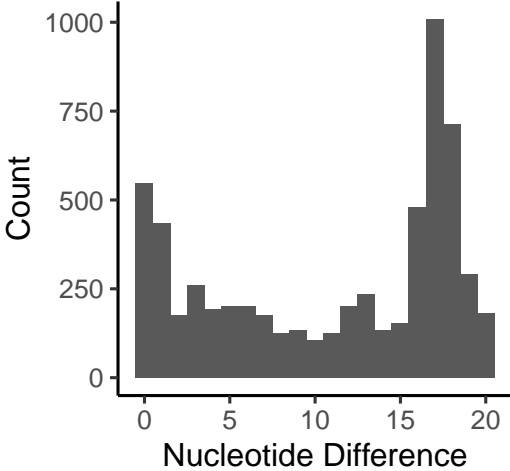
IGHV3-69-1*02

11 sequences assigned
1 (9.1%) exact matches, in which:
1 unique CDR3
1 unique J



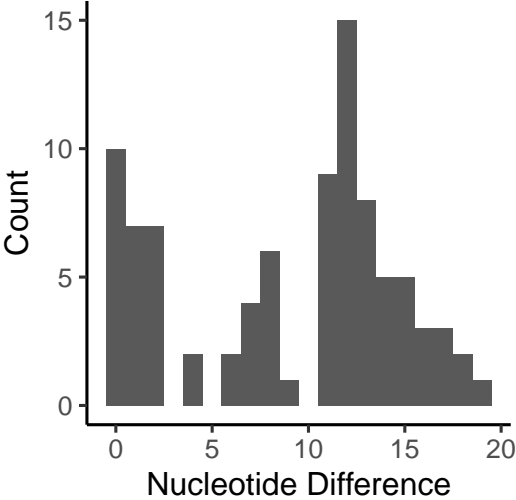
IGHV3-74*01_02

6811 sequences assigned
546 (8%) exact matches, in which:
354 unique CDR3
6 unique J



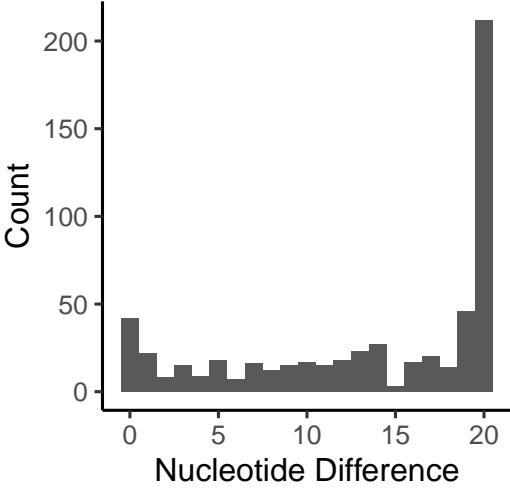
IGHV3-66*03

90 sequences assigned
10 (11.1%) exact matches, in which:
10 unique CDR3
2 unique J



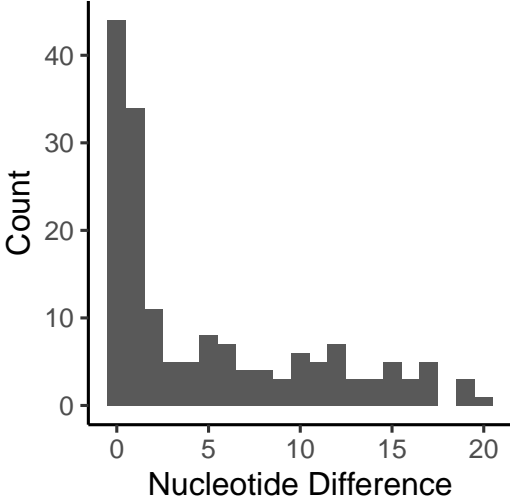
IGHV3-72*01

2089 sequences assigned
42 (2%) exact matches, in which:
30 unique CDR3
5 unique J



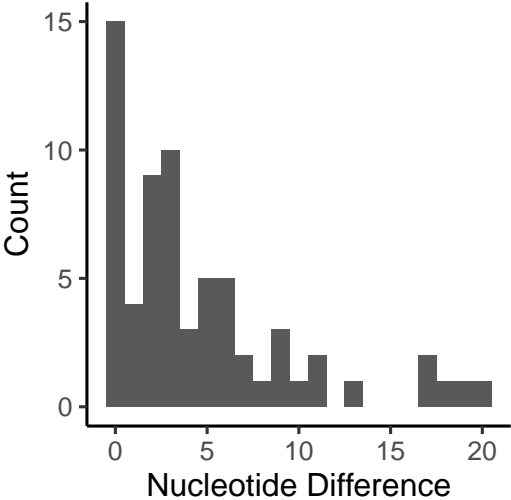
IGHV3-43D*04

174 sequences assigned
44 (25.3%) exact matches, in which:
24 unique CDR3
3 unique J



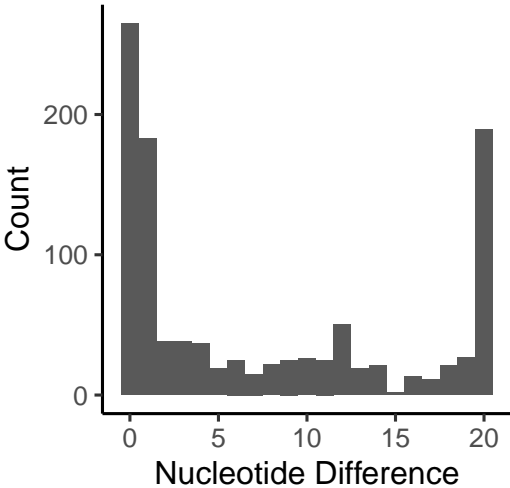
IGHV3-69-1*01

70 sequences assigned
15 (21.4%) exact matches, in which:
13 unique CDR3
3 unique J



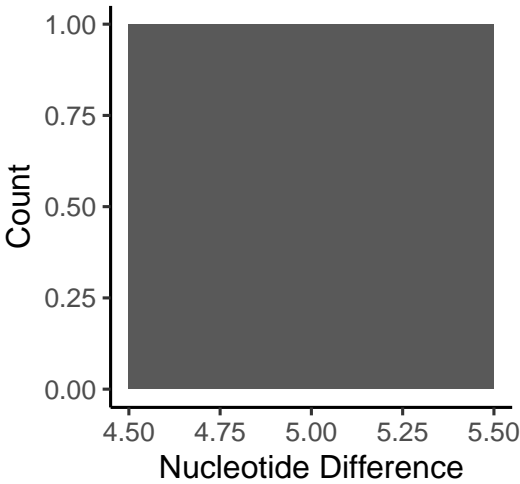
IGHV3-73*01_02

1731 sequences assigned
265 (15.3%) exact matches, in which:
159 unique CDR3
5 unique J



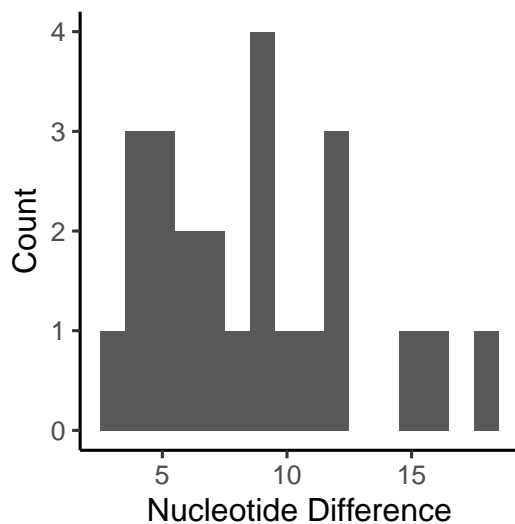
IGHV3-64D*06

11 sequences assigned
No exact matches.



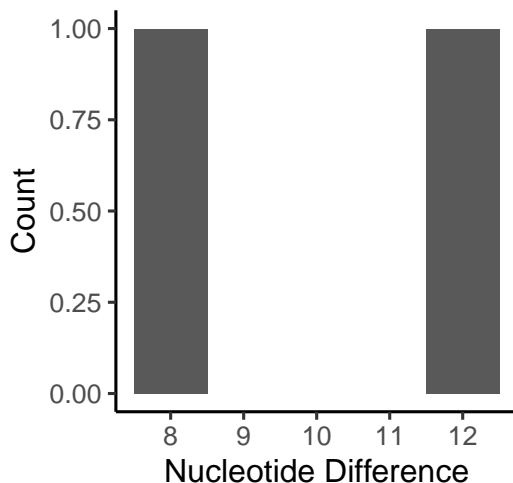
IGHV3–NL1*01

32 sequences assigned
No exact matches.



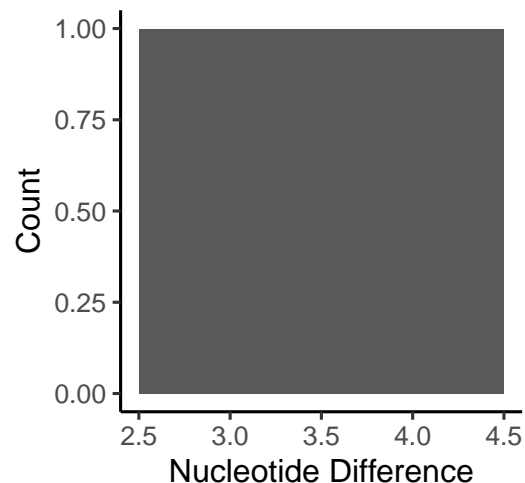
IGHV4–30–4*01

2 sequences assigned
No exact matches.



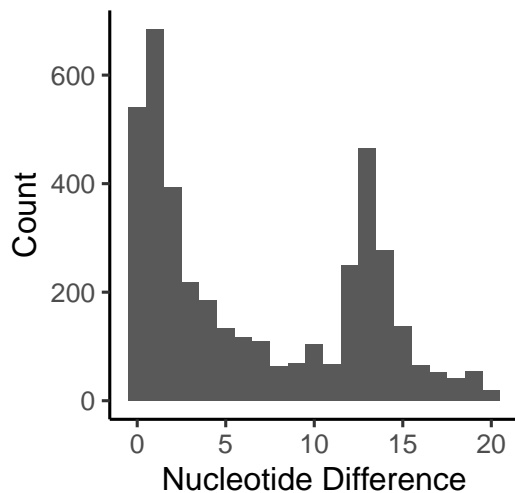
IGHV4–30–4*05

2 sequences assigned
No exact matches.



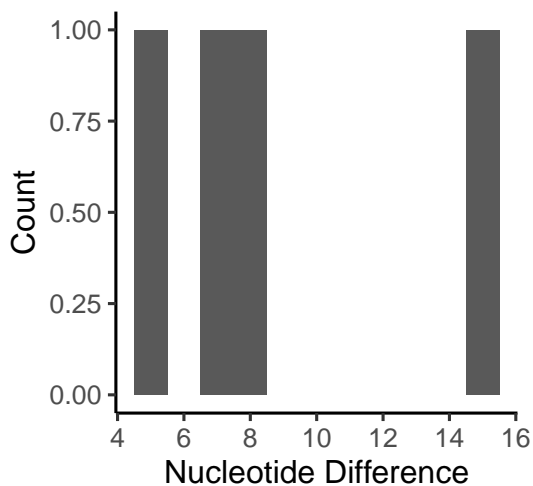
IGHV4–4*07

4119 sequences assigned
540 (13.1%) exact matches, in which:
445 unique CDR3
6 unique J



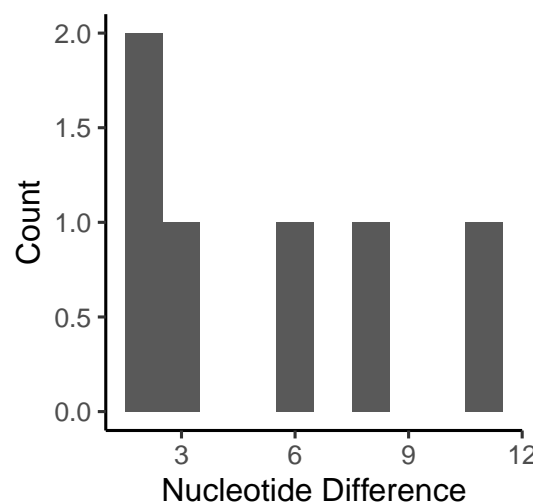
IGHV4–30–2*03

4 sequences assigned
No exact matches.



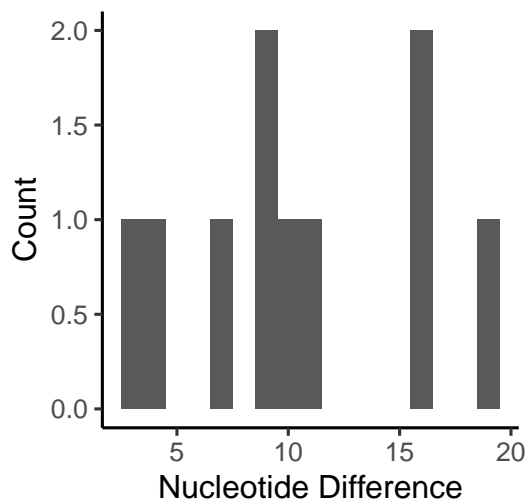
IGHV4–30–4*07

6 sequences assigned
No exact matches.



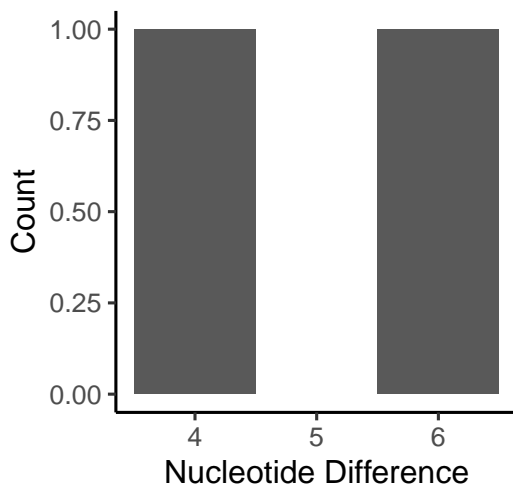
IGHV4–28*03

11 sequences assigned
No exact matches.



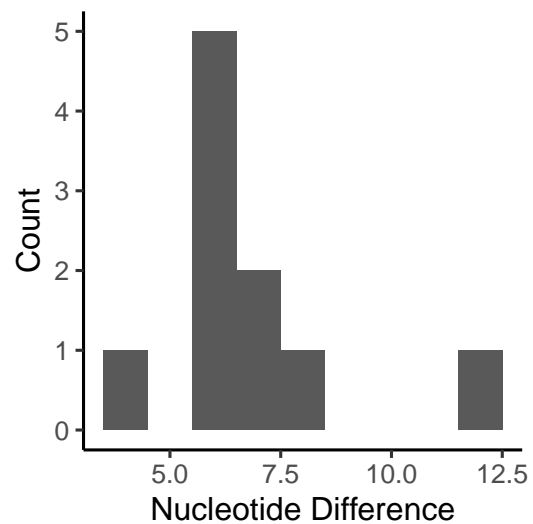
IGHV4–30–2*04

2 sequences assigned
No exact matches.



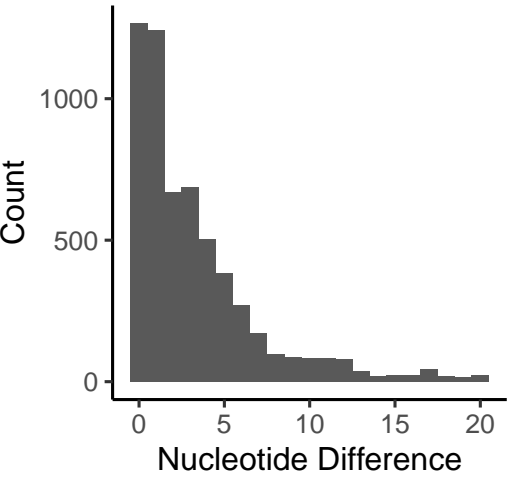
IGHV4–30–4*08

12 sequences assigned
No exact matches.



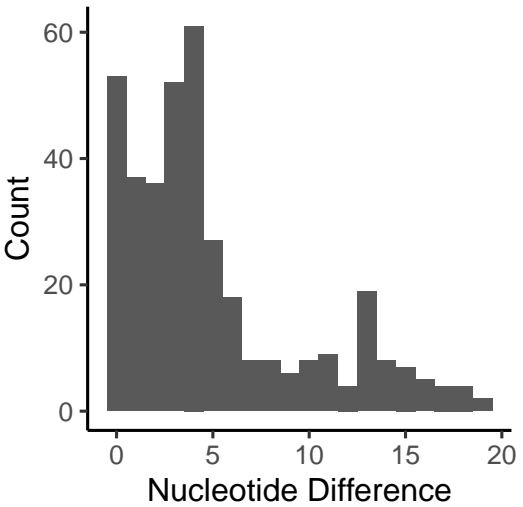
IGHV4-31*03_04

5969 sequences assigned
1266 (21.2%) exact matches, in which:
1070 unique CDR3
6 unique J



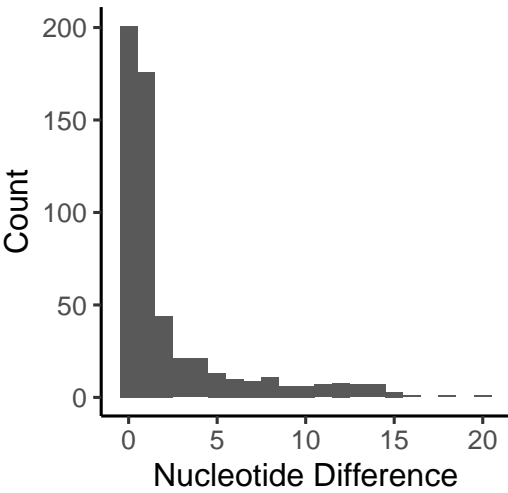
IGHV4-38-2*02

387 sequences assigned
53 (13.7%) exact matches, in which:
46 unique CDR3
5 unique J



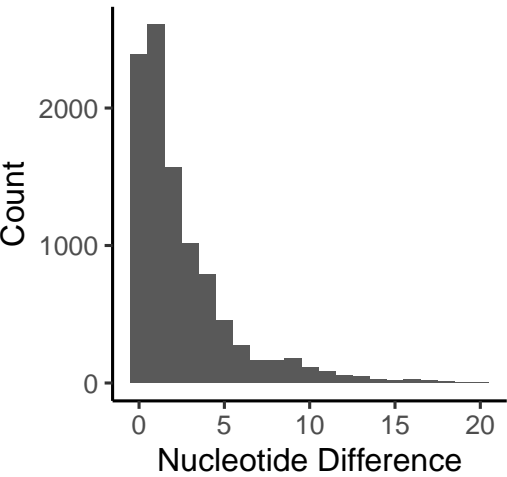
IGHV4-39*02_C258G

560 sequences assigned
201 (35.9%) exact matches, in which:
186 unique CDR3
6 unique J



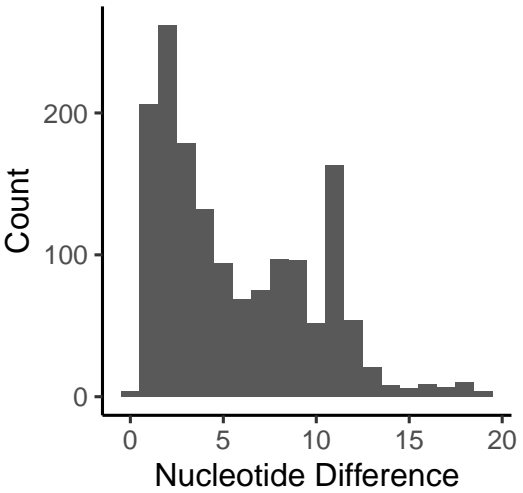
IGHV4-34*01_02

10126 sequences assigned
2393 (23.6%) exact matches, in which:
1776 unique CDR3
6 unique J



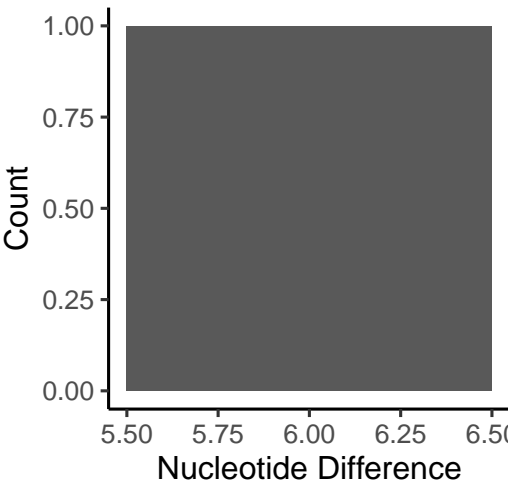
IGHV4-39*07

1555 sequences assigned
4 (0.3%) exact matches, in which:
4 unique CDR3
2 unique J



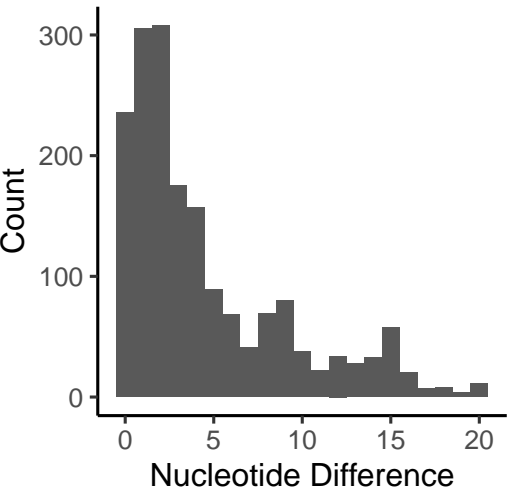
IGHV4-55*09

1 sequences assigned
No exact matches.



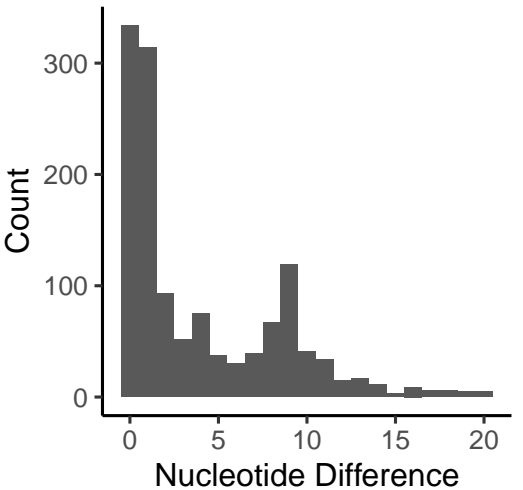
IGHV4-38-2*01

1857 sequences assigned
236 (12.7%) exact matches, in which:
210 unique CDR3
6 unique J



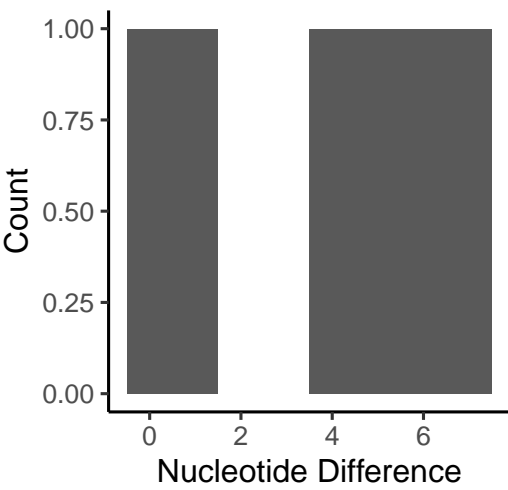
IGHV4-39*01_05

1335 sequences assigned
334 (25%) exact matches, in which:
254 unique CDR3
6 unique J



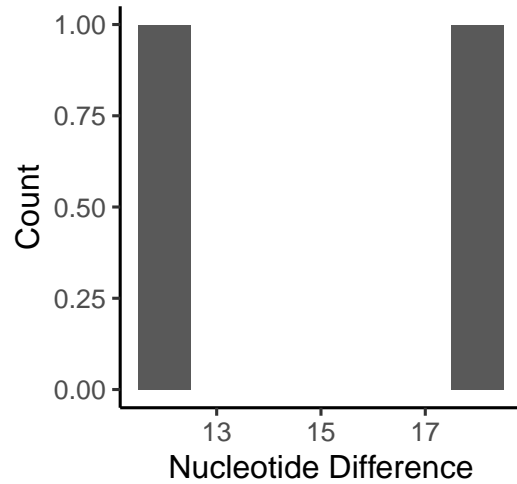
IGHV4-55*01_05

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



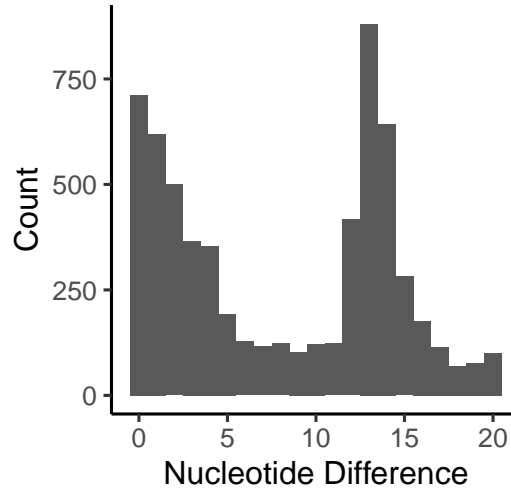
IGHV4-55*02_04_08

45 sequences assigned
No exact matches.



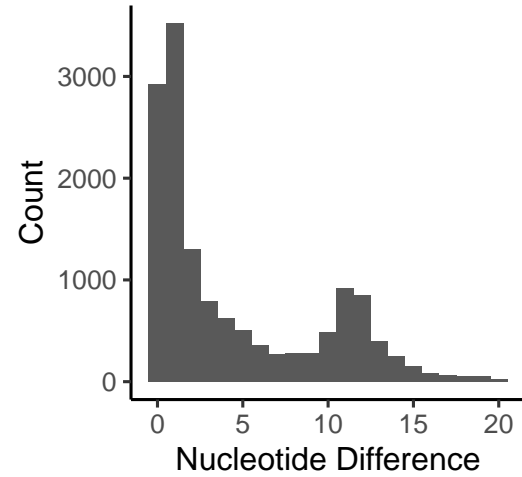
IGHV4-61*01

7930 sequences assigned
712 (9%) exact matches, in which:
655 unique CDR3
6 unique J



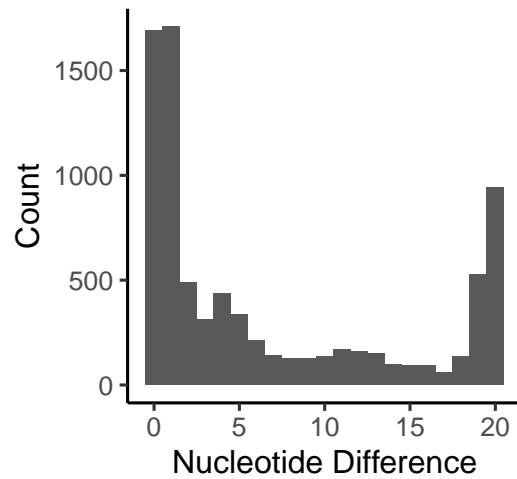
IGHV5-51*01_03

15262 sequences assigned
2924 (19.2%) exact matches, in which:
1556 unique CDR3
6 unique J



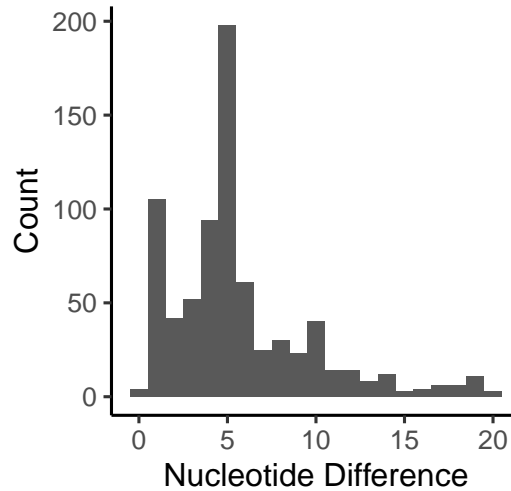
IGHV4-59*01_07

9833 sequences assigned
1691 (17.2%) exact matches, in which:
1395 unique CDR3
6 unique J



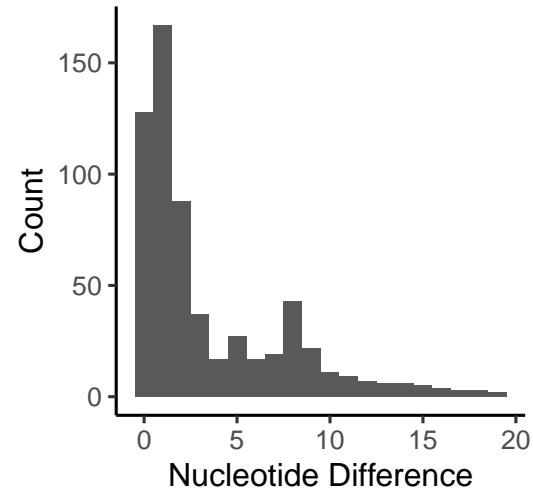
IGHV4-61*08

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



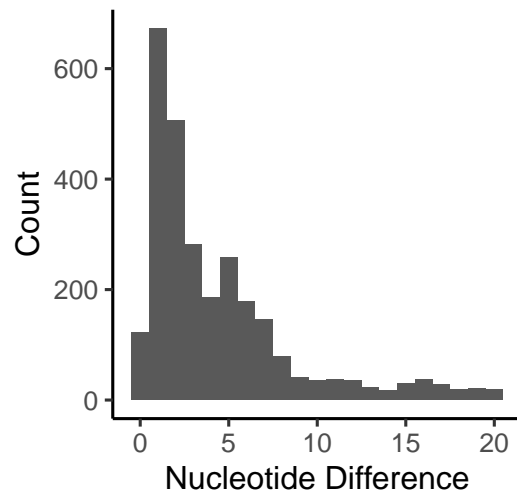
IGHV6-1*01_02

622 sequences assigned
128 (20.6%) exact matches, in which:
112 unique CDR3
5 unique J



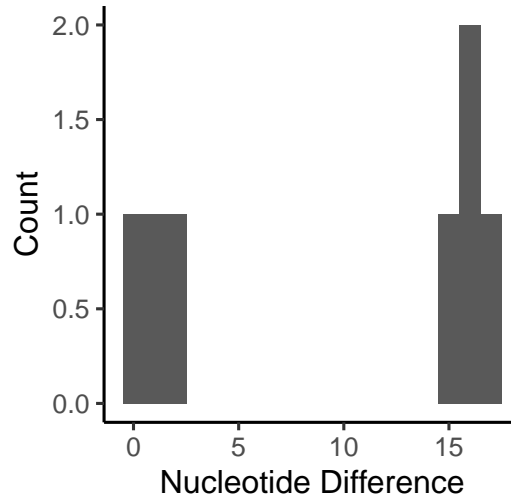
IGHV4-59*12

2809 sequences assigned
122 (4.3%) exact matches, in which:
116 unique CDR3
6 unique J



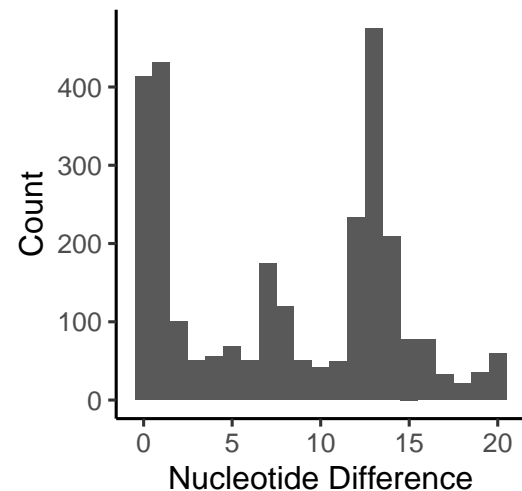
IGHV5-10-1*01_03

7 sequences assigned
1 (14.3%) exact matches, in which:
1 unique CDR3
1 unique J



IGHV7-4-1*02

2869 sequences assigned
413 (14.4%) exact matches, in which:
335 unique CDR3
6 unique J





Novel sequence(s)IGHV1-30*02_G88A are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-30-3*01_T288CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-30*03_T288C 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.

Novel sequence(s)IGHV3-33*01_G75CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-33*01_G75CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV3-30*03_T288CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.

Warning - no inferred sequences found.

Warning - no inferred sequences found.

Novel sequence(s)IGHV1-69*08_G112AIGHV4-59*02_G88AIGHV5-10-1*01_03_T258CIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.

Novel sequence(s)IGHV1-69*08_C191TIGHV3-48*03_T303GIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

Warning - no inferred sequences found.