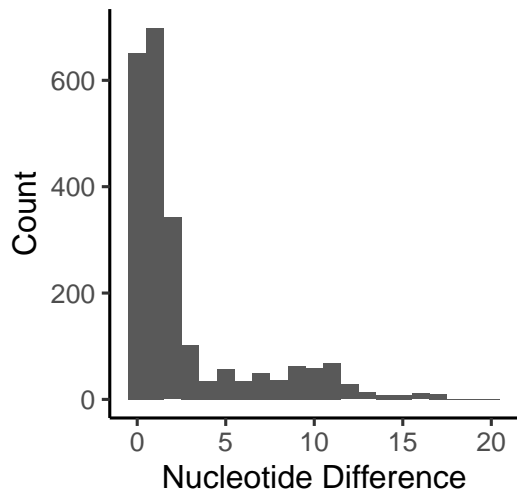


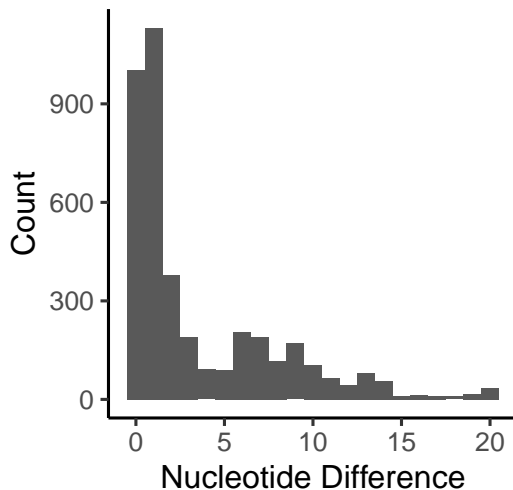
IGHV1-2*04

2291 sequences assigned
652 (28.5%) exact matches, in which:
579 unique CDR3
6 unique J



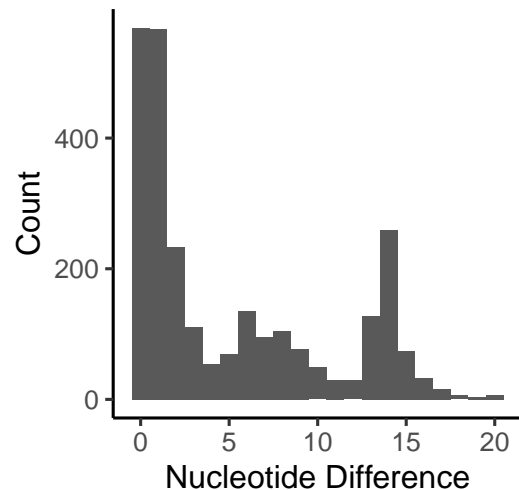
IGHV1-18*01

4149 sequences assigned
1004 (24.2%) exact matches, in which:
879 unique CDR3
6 unique J



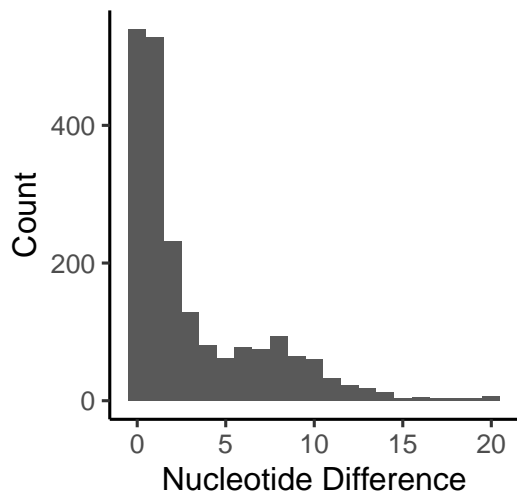
IGHV1-46*01

2669 sequences assigned
569 (21.3%) exact matches, in which:
515 unique CDR3
5 unique J



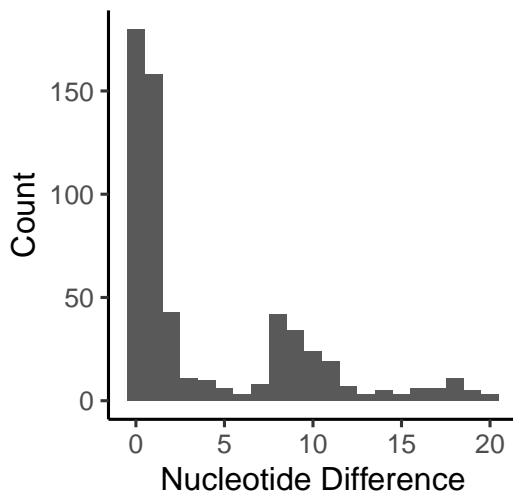
IGHV1-3*01_05

2098 sequences assigned
540 (25.7%) exact matches, in which:
469 unique CDR3
6 unique J



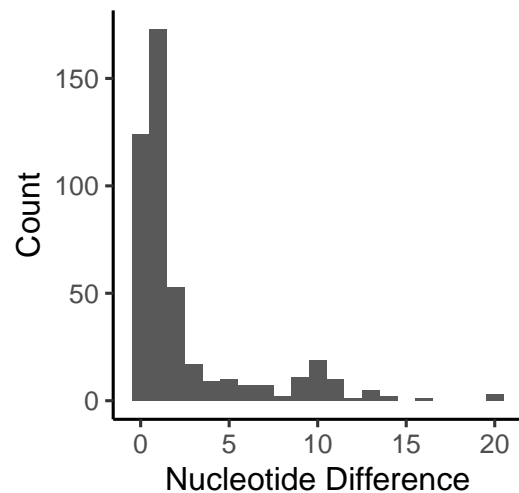
IGHV1-24*01

806 sequences assigned
180 (22.3%) exact matches, in which:
172 unique CDR3
6 unique J



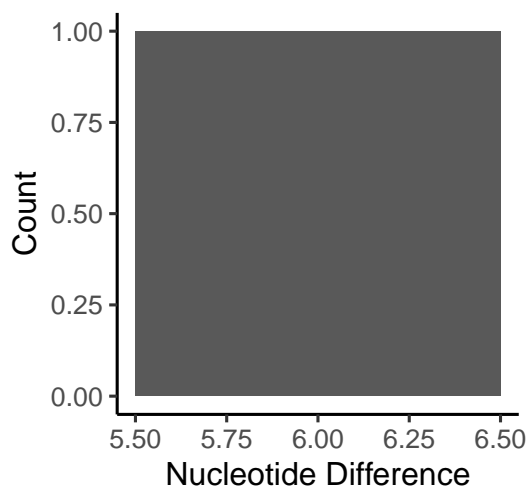
IGHV1-46*03

463 sequences assigned
124 (26.8%) exact matches, in which:
100 unique CDR3
6 unique J



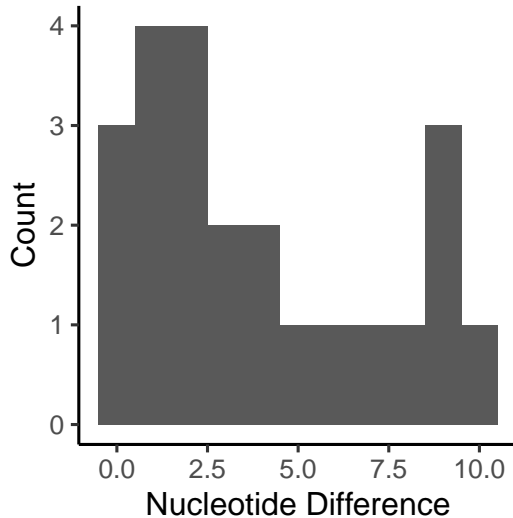
IGHV1-8*01

4 sequences assigned
No exact matches.



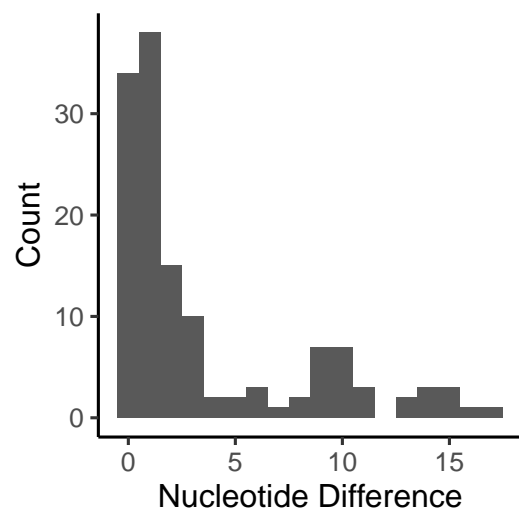
IGHV1-45*02

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



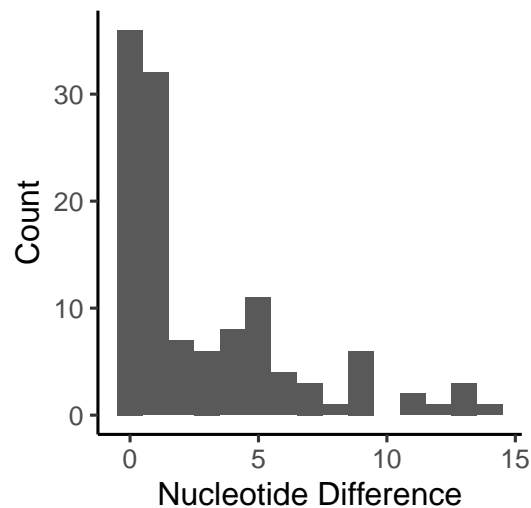
IGHV1-58*02

134 sequences assigned
34 (25.4%) exact matches, in which:
32 unique CDR3
5 unique J



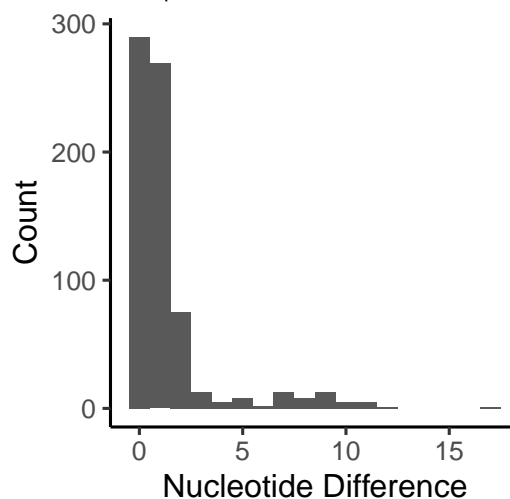
IGHV1-58*01_03

123 sequences assigned
36 (29.3%) exact matches, in which:
33 unique CDR3
4 unique J



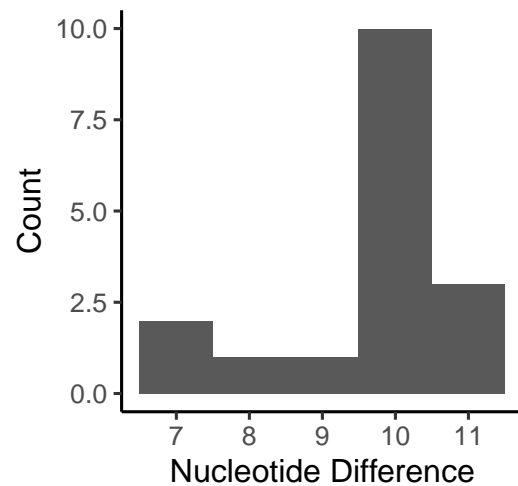
IGHV1-69*02

719 sequences assigned
290 (40.3%) exact matches, in which:
264 unique CDR3
6 unique J



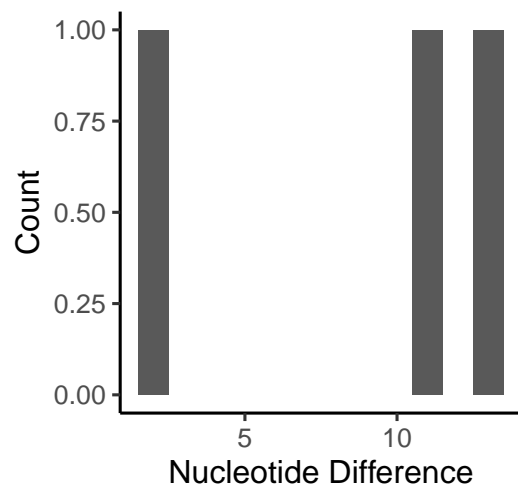
IGHV1-NL1*01

17 sequences assigned
No exact matches.



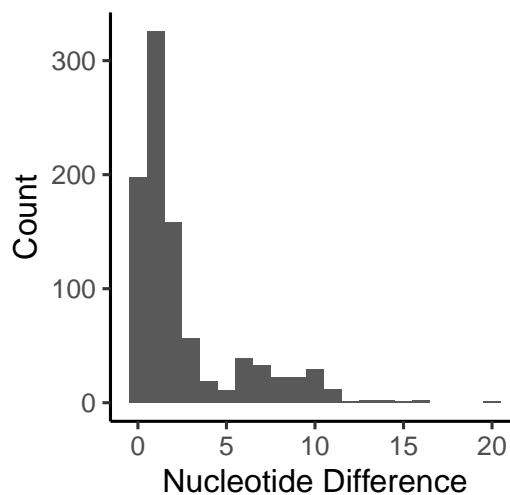
IGHV1-68*01

3 sequences assigned
No exact matches.



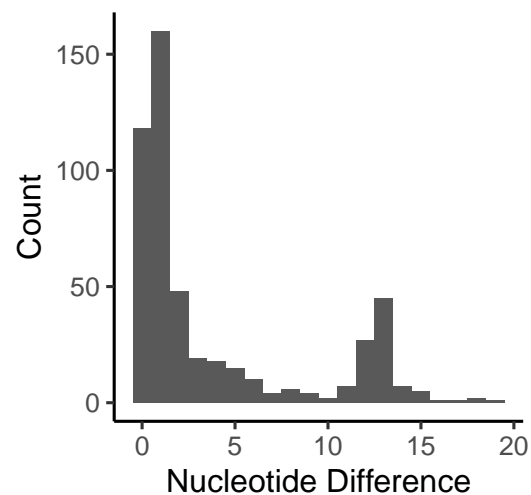
IGHV1-69*04_09

945 sequences assigned
198 (21%) exact matches, in which:
176 unique CDR3
5 unique J



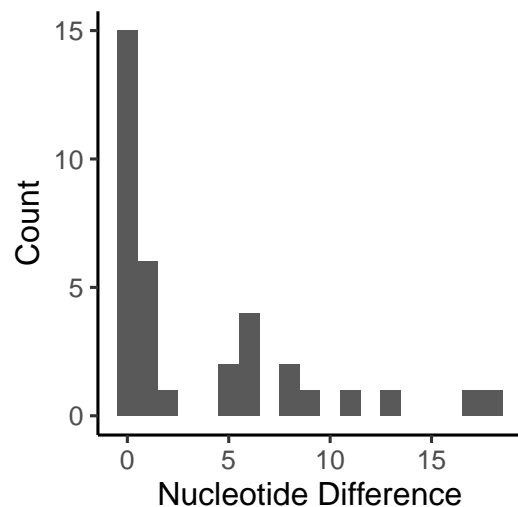
IGHV2-5*02

700 sequences assigned
118 (16.9%) exact matches, in which:
100 unique CDR3
6 unique J



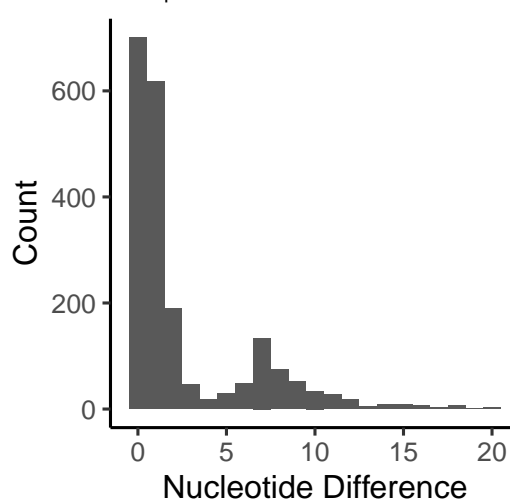
IGHV1-69-2*01

35 sequences assigned
15 (42.9%) exact matches, in which:
14 unique CDR3
3 unique J



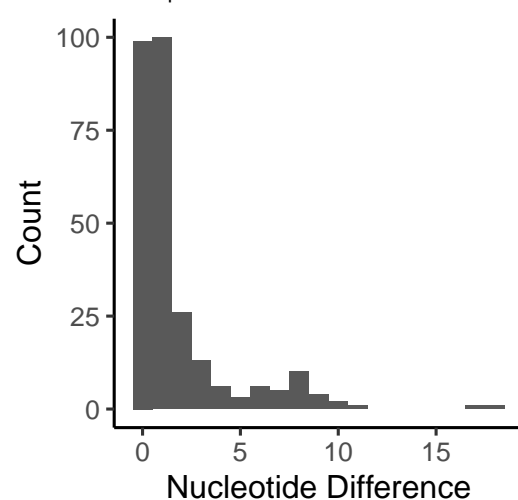
IGHV1-69*06_14

2033 sequences assigned
701 (34.5%) exact matches, in which:
647 unique CDR3
6 unique J



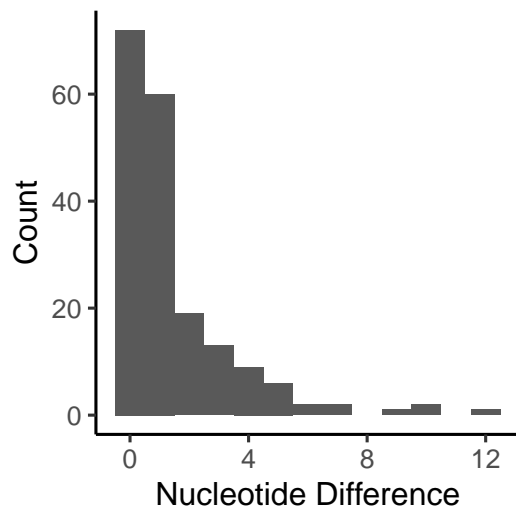
IGHV2-26*01

278 sequences assigned
99 (35.6%) exact matches, in which:
84 unique CDR3
4 unique J



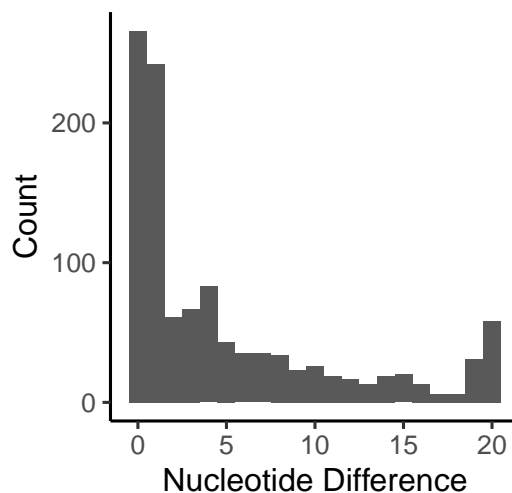
IGHV2-70*01

187 sequences assigned
72 (38.5%) exact matches, in which:
62 unique CDR3
3 unique J



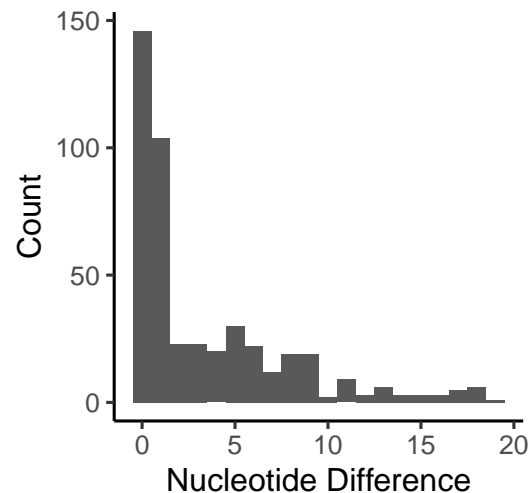
IGHV3-7*03

1378 sequences assigned
266 (19.3%) exact matches, in which:
188 unique CDR3
5 unique J



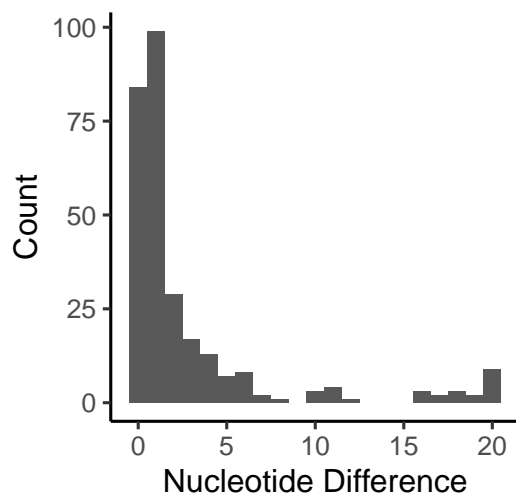
IGHV3-11*06

477 sequences assigned
146 (30.6%) exact matches, in which:
123 unique CDR3
5 unique J



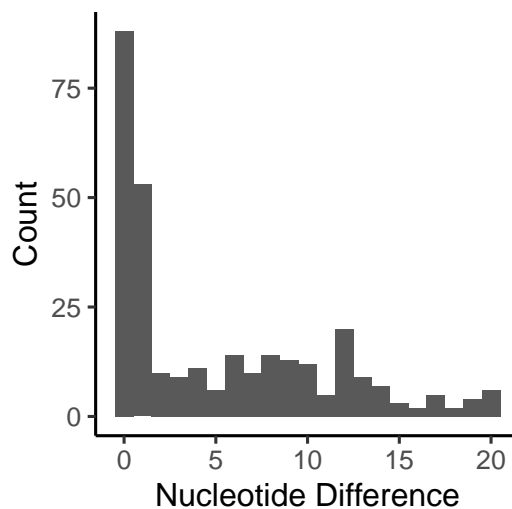
IGHV2-70*11_15

326 sequences assigned
84 (25.8%) exact matches, in which:
66 unique CDR3
4 unique J



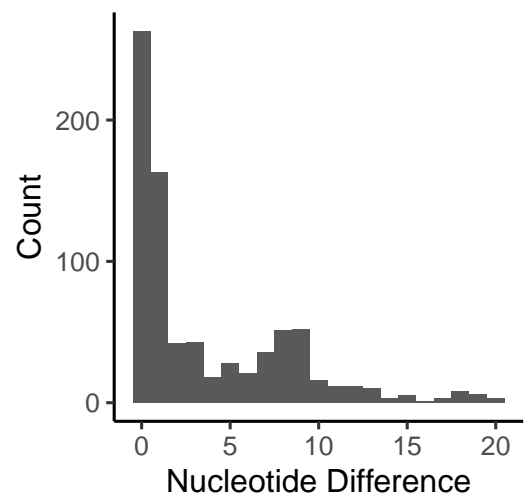
IGHV3-7*04

505 sequences assigned
88 (17.4%) exact matches, in which:
53 unique CDR3
4 unique J



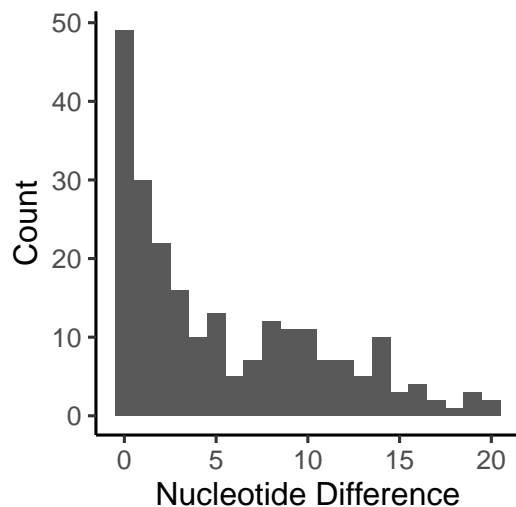
IGHV3-11*03_05

842 sequences assigned
263 (31.2%) exact matches, in which:
192 unique CDR3
6 unique J



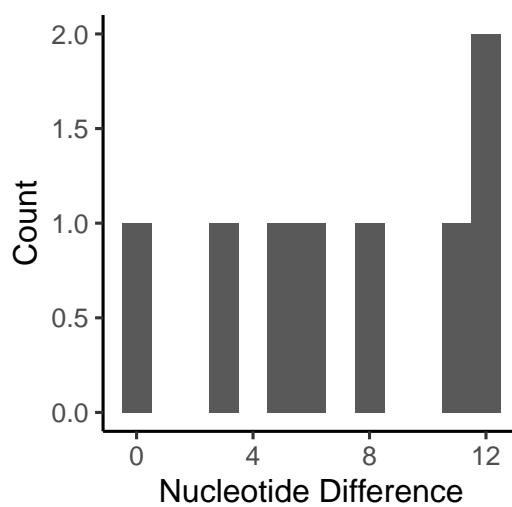
IGHV3-7*01

255 sequences assigned
49 (19.2%) exact matches, in which:
49 unique CDR3
4 unique J



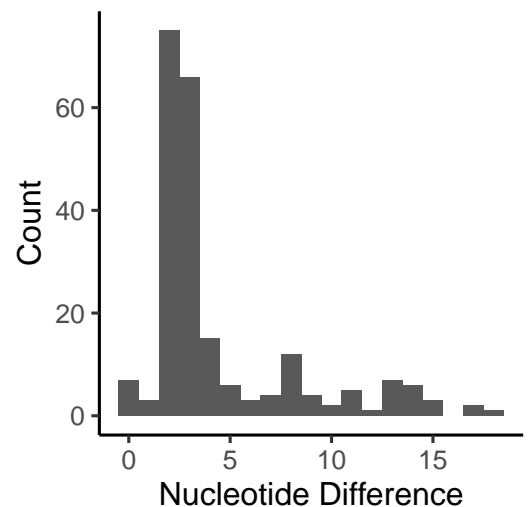
IGHV3-9*01

8 sequences assigned
1 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



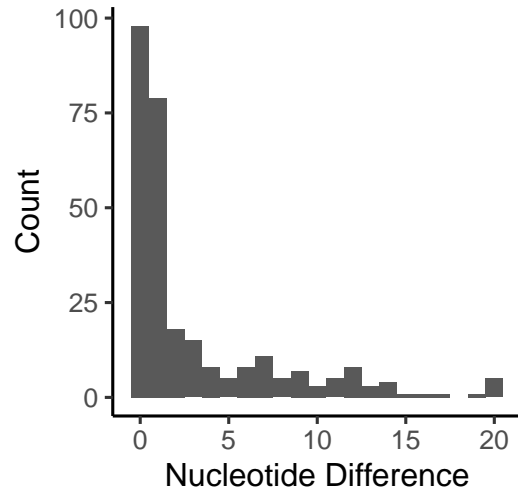
IGHV3-13*01

223 sequences assigned
7 (3.1%) exact matches, in which:
7 unique CDR3
4 unique J



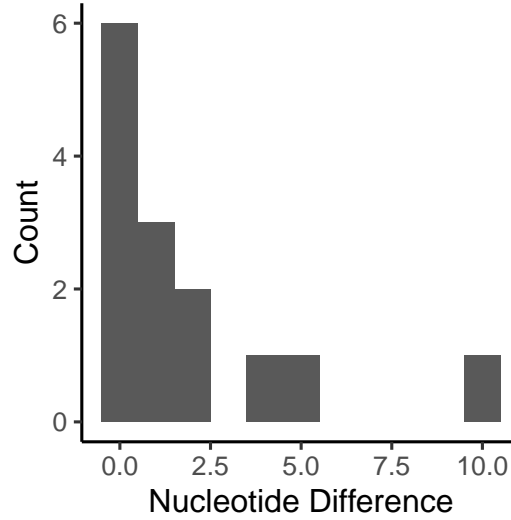
IGHV3-13*04

295 sequences assigned
98 (33.2%) exact matches, in which:
79 unique CDR3
5 unique J



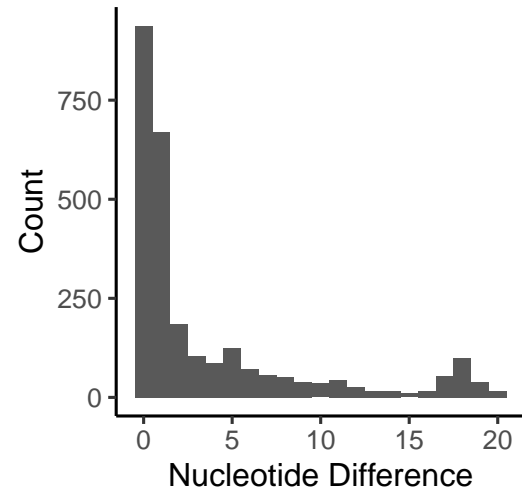
IGHV3-19*01

14 sequences assigned
6 (42.9%) exact matches, in which:
5 unique CDR3
2 unique J



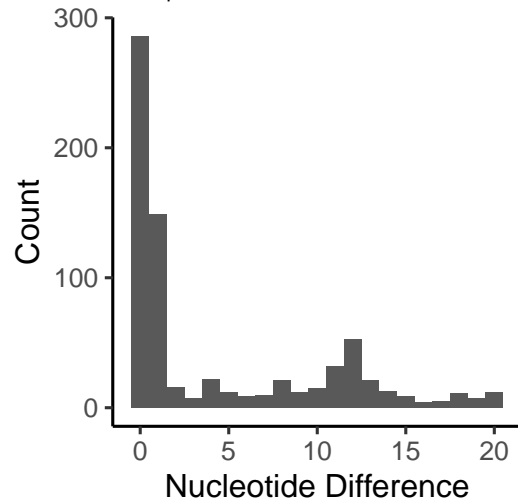
IGHV3-21*01_02

2751 sequences assigned
938 (34.1%) exact matches, in which:
631 unique CDR3
6 unique J



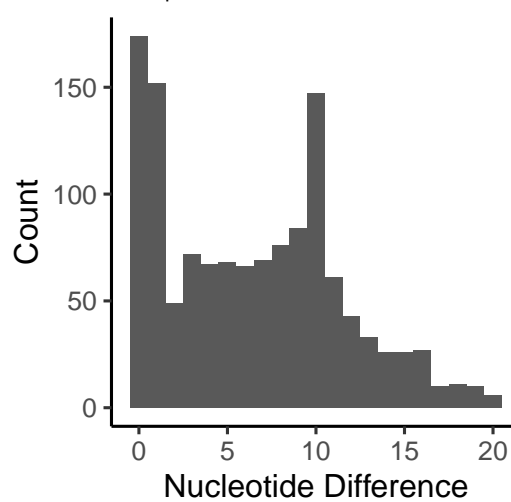
IGHV3-15*07

1136 sequences assigned
286 (25.2%) exact matches, in which:
192 unique CDR3
6 unique J



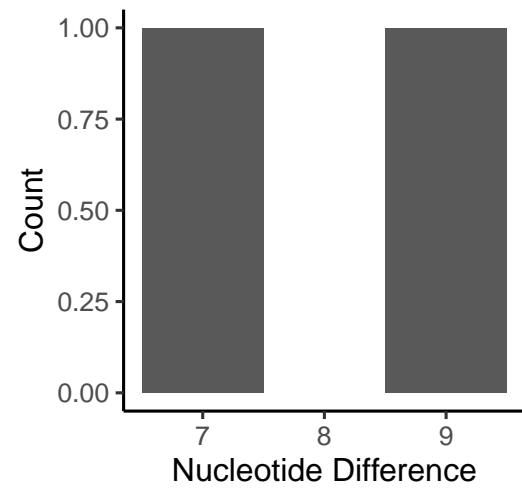
IGHV3-20*03_04

1327 sequences assigned
174 (13.1%) exact matches, in which:
104 unique CDR3
4 unique J



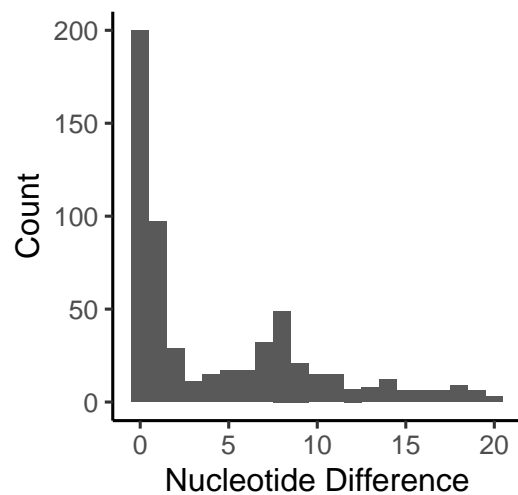
IGHV3-22*01_02

2 sequences assigned
No exact matches.



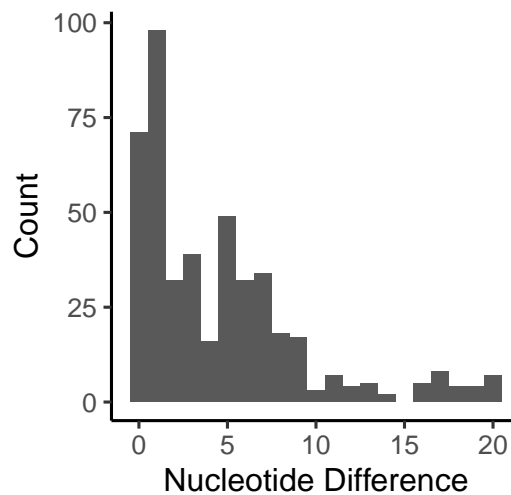
IGHV3-15*01_02

639 sequences assigned
200 (31.3%) exact matches, in which:
135 unique CDR3
5 unique J



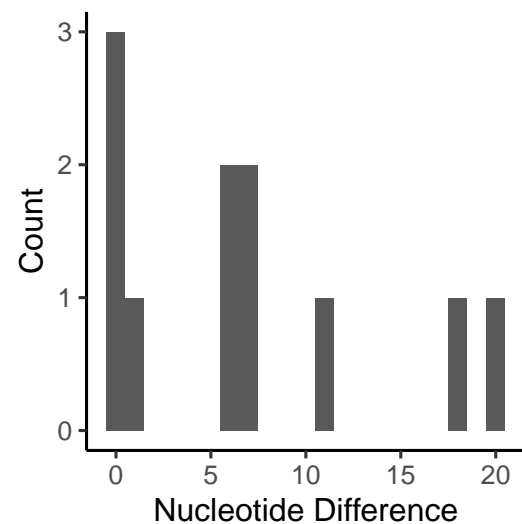
IGHV3-21*04

466 sequences assigned
71 (15.2%) exact matches, in which:
65 unique CDR3
4 unique J



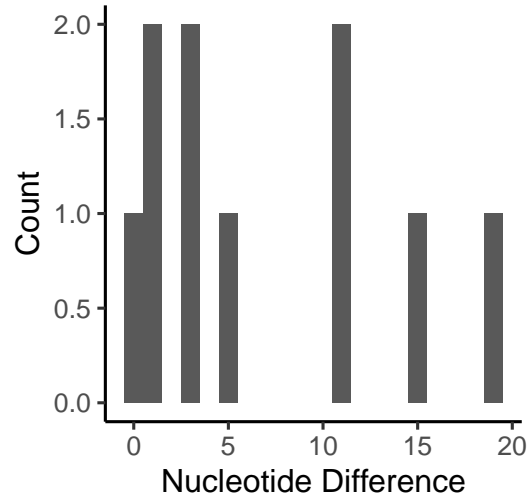
IGHV3-30-3*01

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



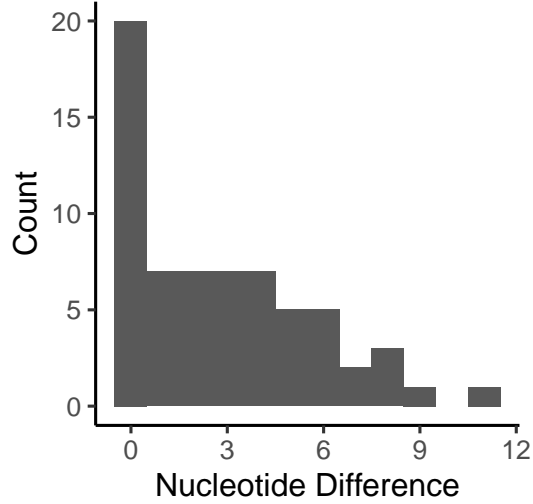
IGHV3-30-3*03

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



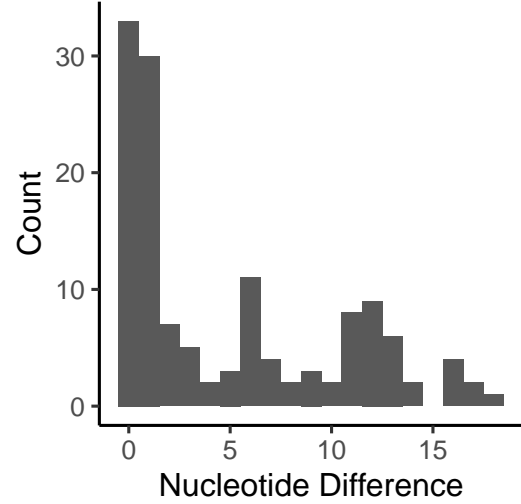
IGHV3-33*05

67 sequences assigned
20 (29.9%) exact matches, in which:
20 unique CDR3
2 unique J



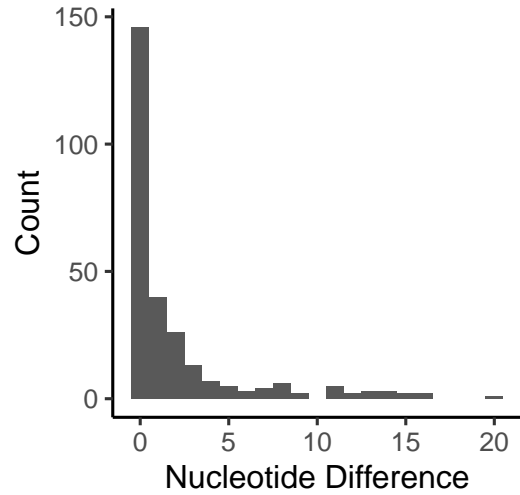
IGHV3-43*01

137 sequences assigned
33 (24.1%) exact matches, in which:
22 unique CDR3
5 unique J



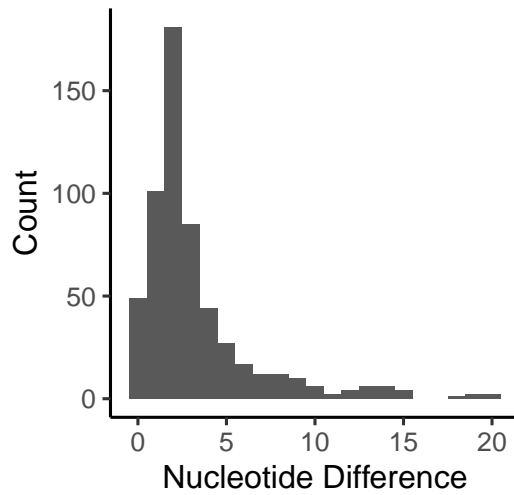
IGHV3-30*03

287 sequences assigned
146 (50.9%) exact matches, in which:
138 unique CDR3
5 unique J



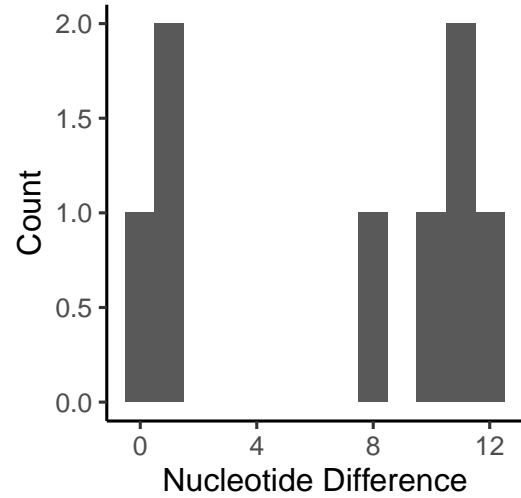
IGHV3-33*06

574 sequences assigned
49 (8.5%) exact matches, in which:
48 unique CDR3
6 unique J



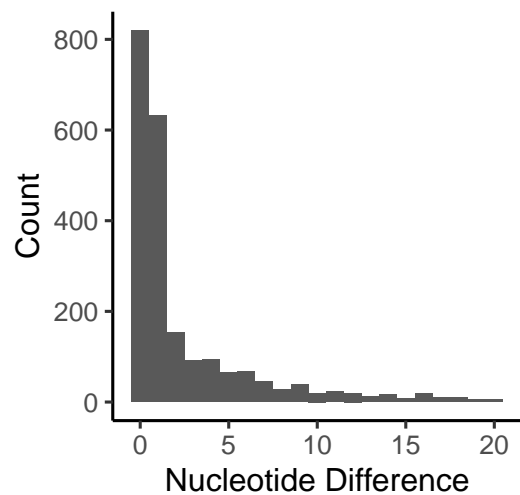
IGHV3-47*02

8 sequences assigned
1 (12.5%) exact matches, in which:
1 unique CDR3
1 unique J



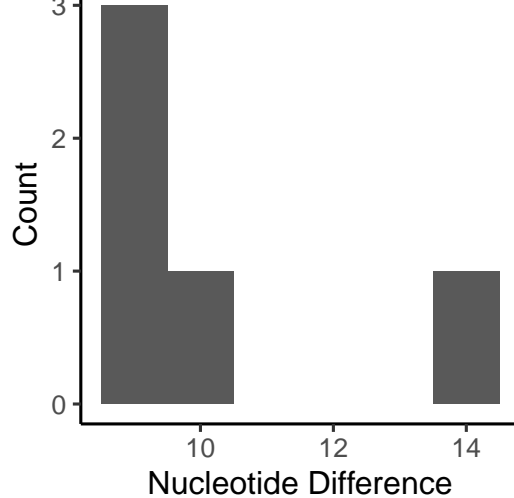
IGHV3-33*01

2235 sequences assigned
820 (36.7%) exact matches, in which:
550 unique CDR3
6 unique J



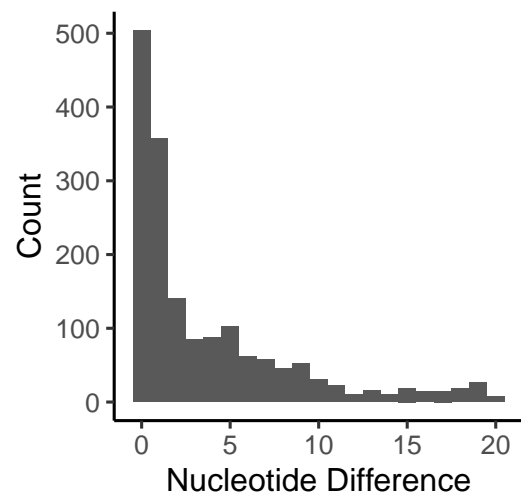
IGHV3-35*01

5 sequences assigned
No exact matches.



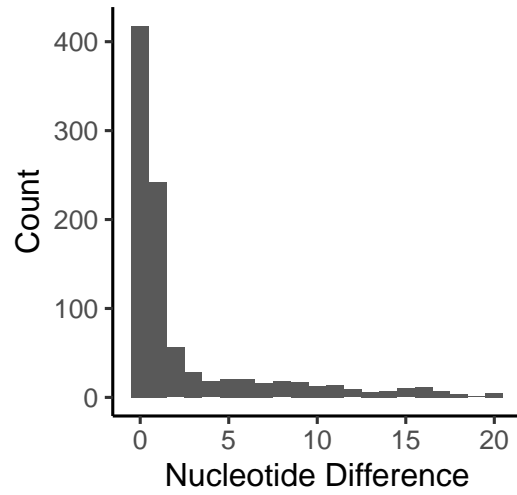
IGHV3-48*01

1775 sequences assigned
504 (28.4%) exact matches, in which:
354 unique CDR3
6 unique J



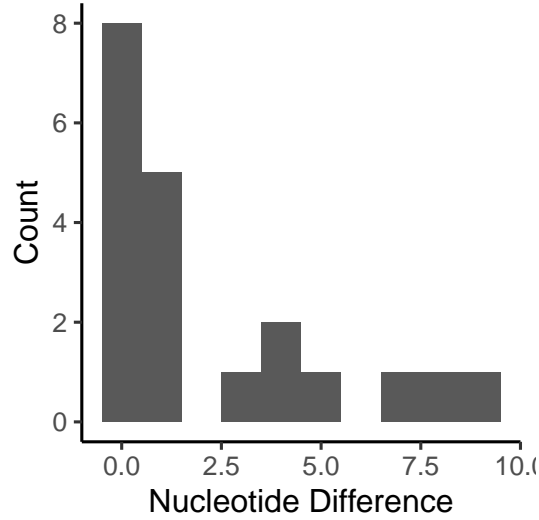
IGHV3-48*02

1337 sequences assigned
418 (31.3%) exact matches, in which:
282 unique CDR3
6 unique J



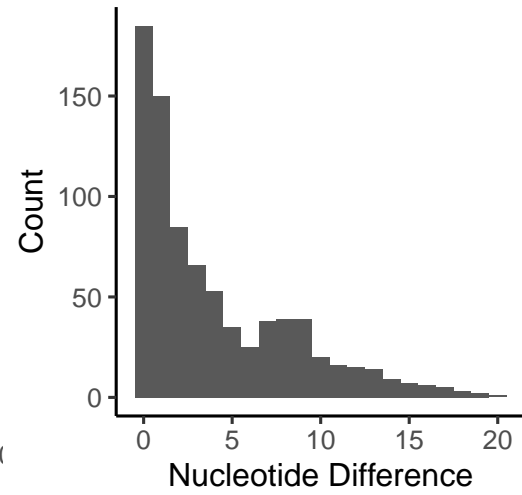
IGHV3-52*02

20 sequences assigned
8 (40%) exact matches, in which:
6 unique CDR3
2 unique J



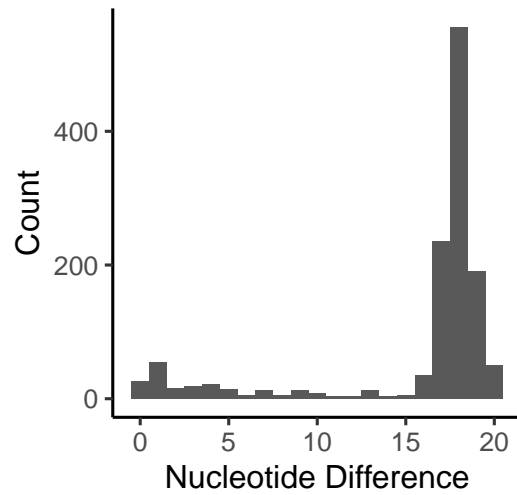
IGHV3-53*01_02

831 sequences assigned
185 (22.3%) exact matches, in which:
130 unique CDR3
5 unique J



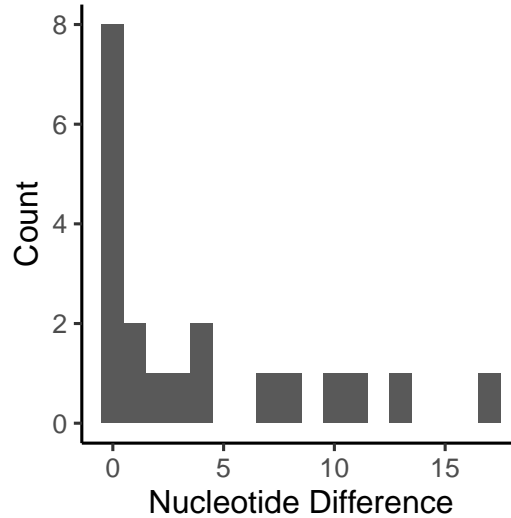
IGHV3-48*04

1430 sequences assigned
26 (1.8%) exact matches, in which:
26 unique CDR3
4 unique J



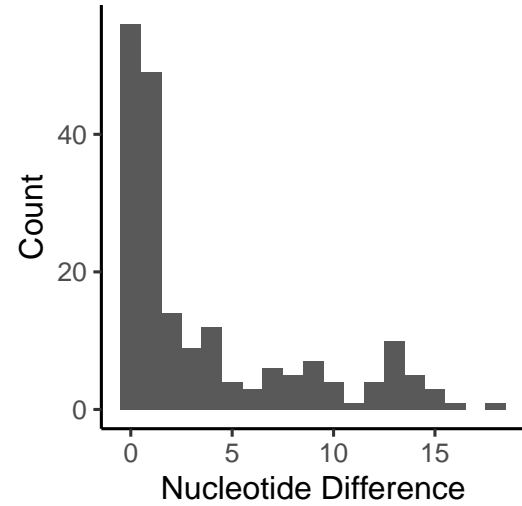
IGHV3-52*01_03

20 sequences assigned
8 (40%) exact matches, in which:
7 unique CDR3
3 unique J



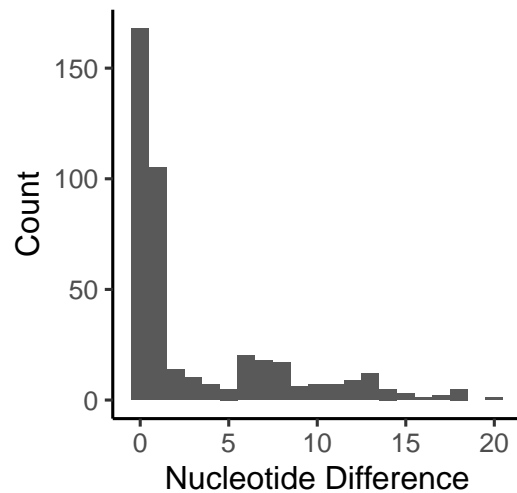
IGHV3-64*01

196 sequences assigned
56 (28.6%) exact matches, in which:
39 unique CDR3
5 unique J



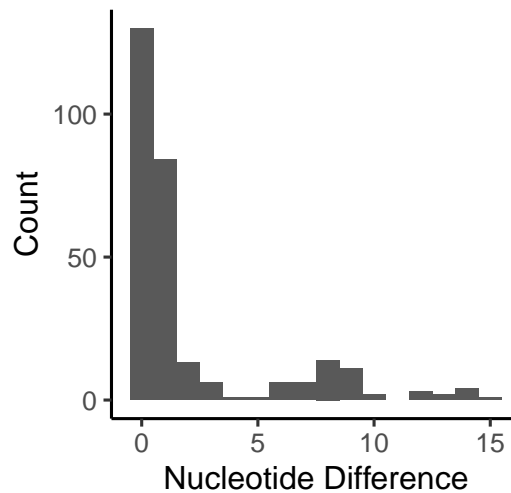
IGHV3-49*03_05

423 sequences assigned
168 (39.7%) exact matches, in which:
110 unique CDR3
5 unique J



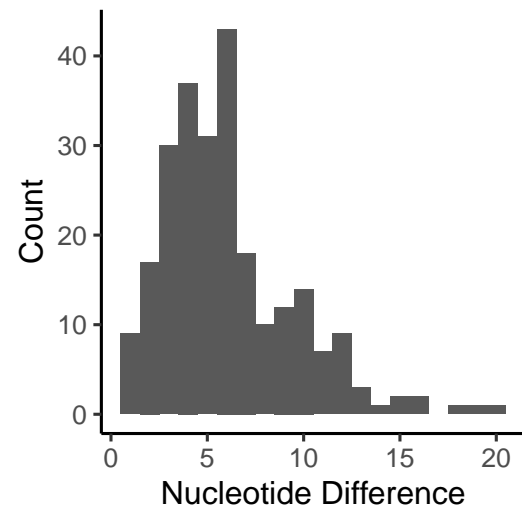
IGHV3-53*04

284 sequences assigned
130 (45.8%) exact matches, in which:
97 unique CDR3
5 unique J



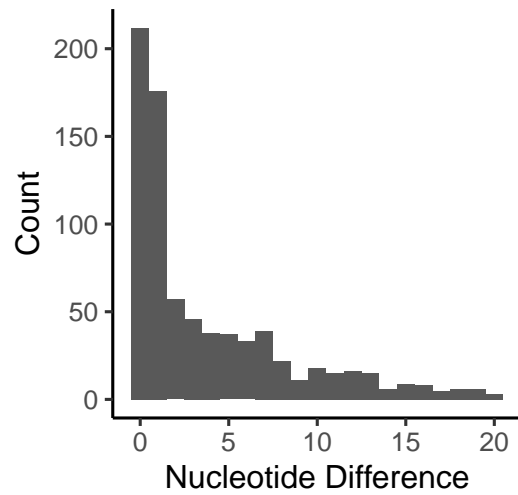
IGHV3-64*04

253 sequences assigned
No exact matches.



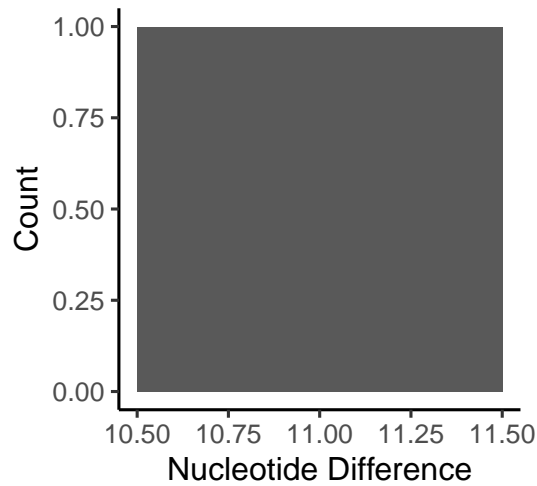
IGHV3-66*01

793 sequences assigned
212 (26.7%) exact matches, in which:
159 unique CDR3
6 unique J



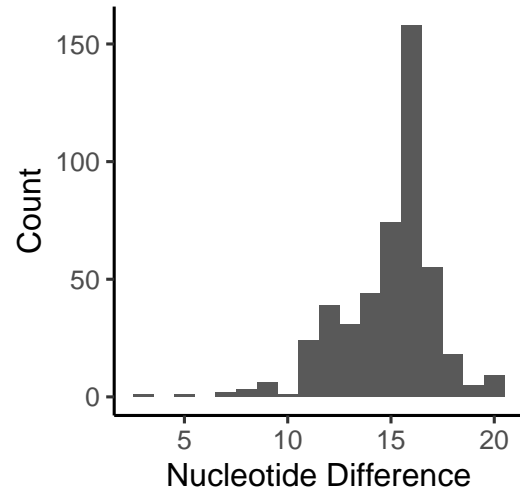
IGHV3-71*03

2 sequences assigned
No exact matches.



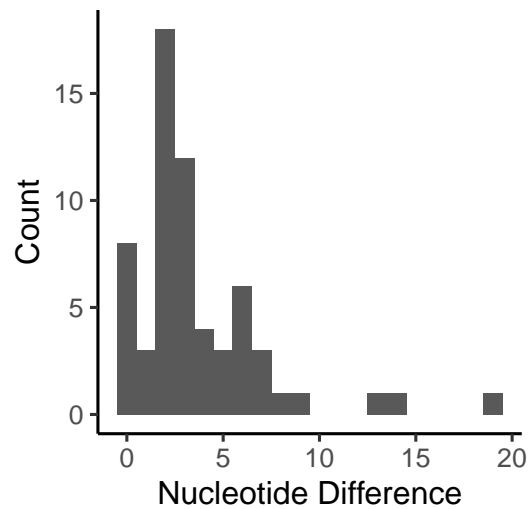
IGHV3-74*03

518 sequences assigned
No exact matches.



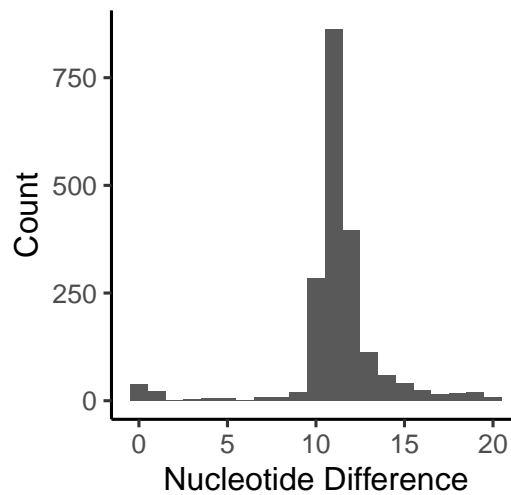
IGHV3-66*03

63 sequences assigned
8 (12.7%) exact matches, in which:
8 unique CDR3
2 unique J



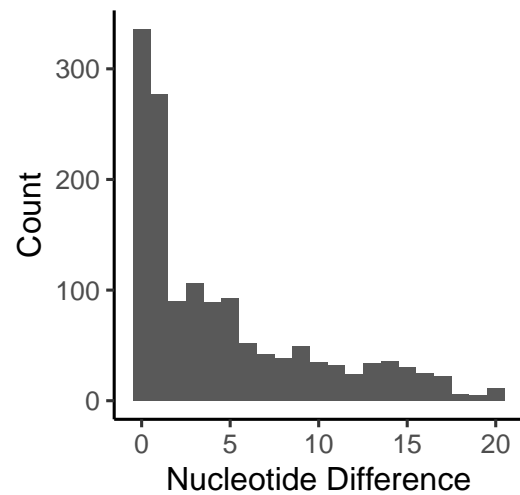
IGHV3-72*01

1975 sequences assigned
38 (1.9%) exact matches, in which:
26 unique CDR3
4 unique J



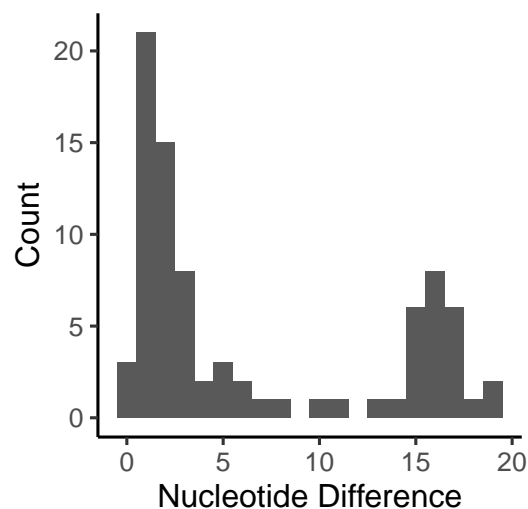
IGHV3-74*01_02

1603 sequences assigned
336 (21%) exact matches, in which:
231 unique CDR3
6 unique J



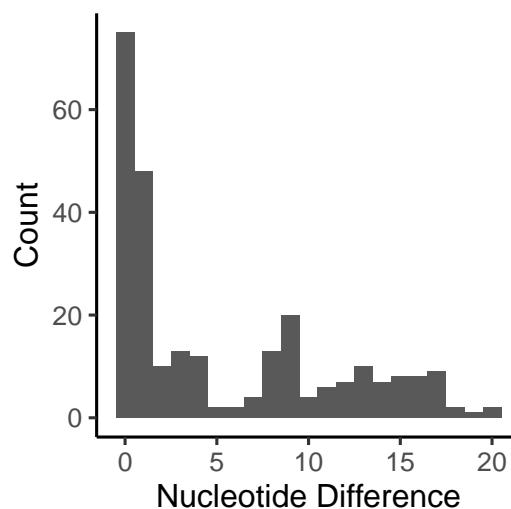
IGHV3-69-1*01

83 sequences assigned
3 (3.6%) exact matches, in which:
3 unique CDR3
1 unique J



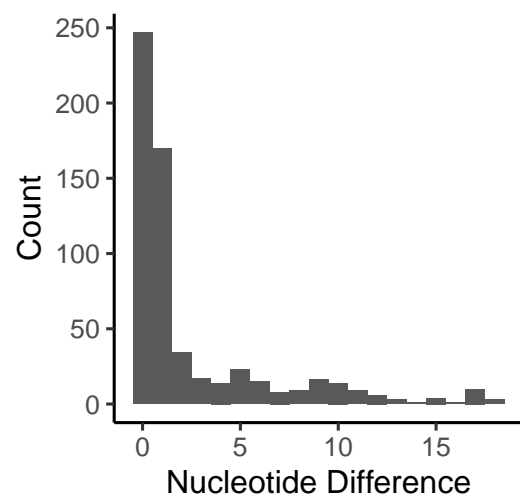
IGHV3-73*01_02

269 sequences assigned
75 (27.9%) exact matches, in which:
50 unique CDR3
4 unique J



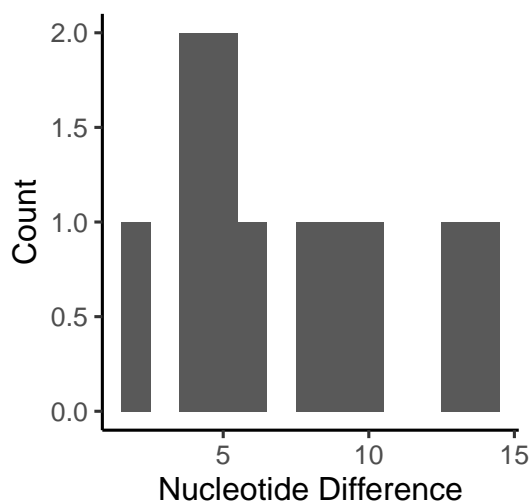
IGHV3-64D*06

663 sequences assigned
247 (37.3%) exact matches, in which:
165 unique CDR3
6 unique J



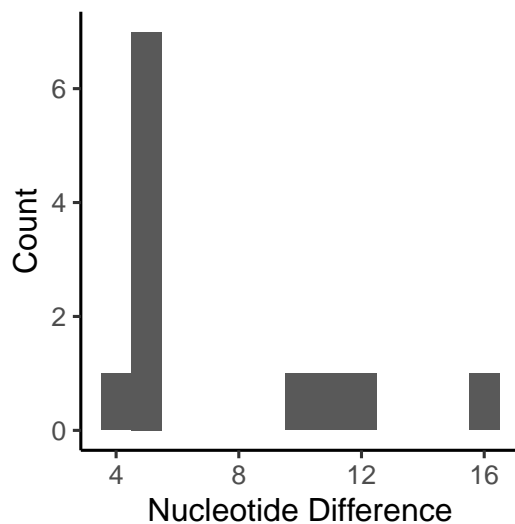
IGHV3–NL1*01

11 sequences assigned
No exact matches.



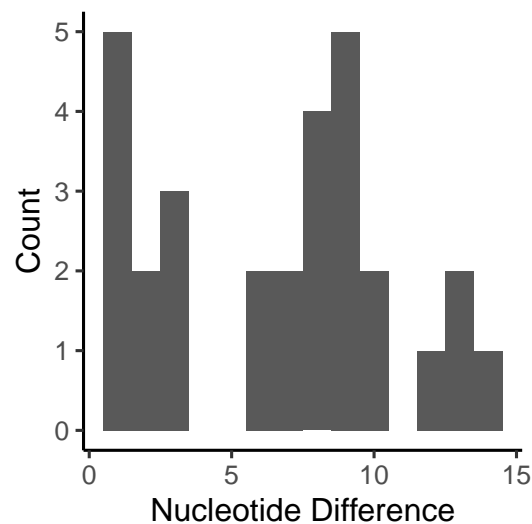
IGHV4–30–2*03

12 sequences assigned
No exact matches.



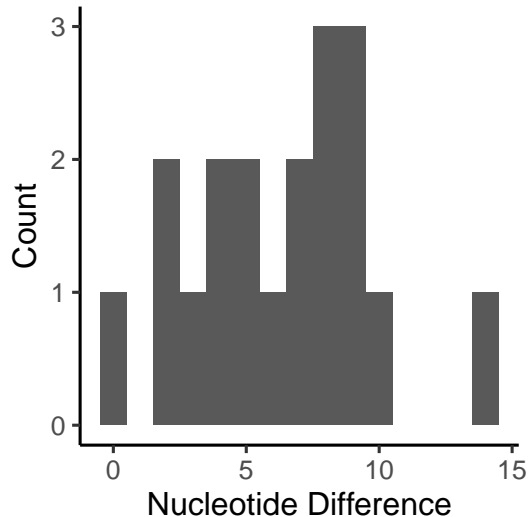
IGHV4–30–4*08

29 sequences assigned
No exact matches.



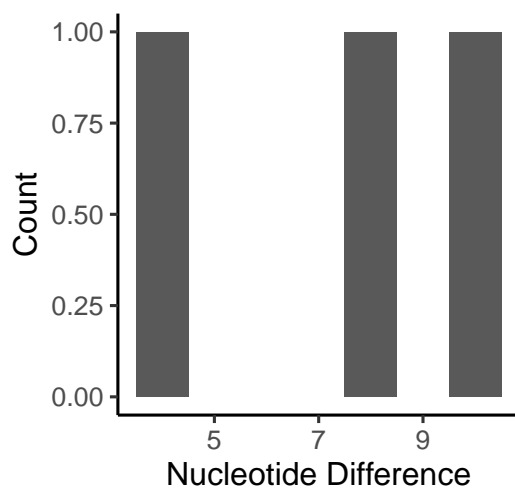
IGHV4–28*03

19 sequences assigned
1 (5.3%) exact matches, in which:
1 unique CDR3
1 unique J



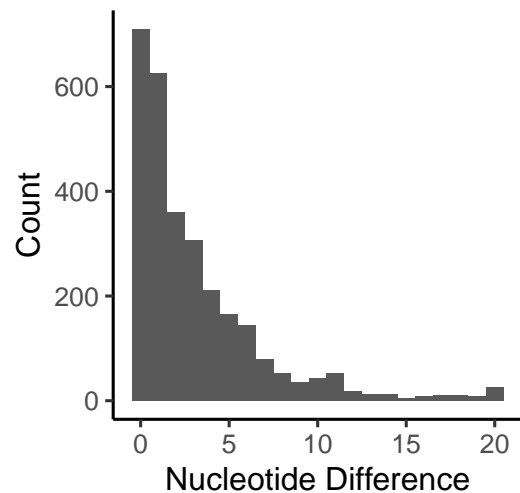
IGHV4–30–2*04

3 sequences assigned
No exact matches.



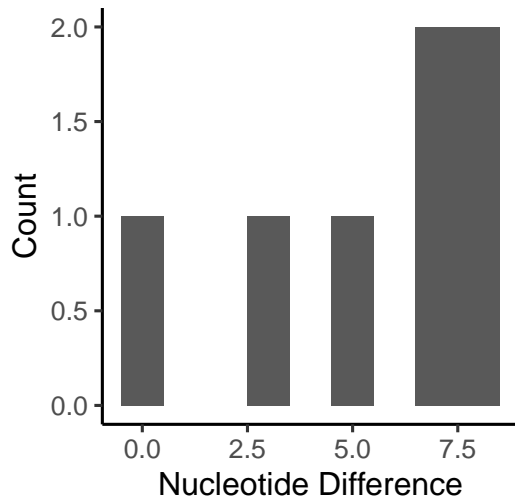
IGHV4–31*03_04

3025 sequences assigned
710 (23.5%) exact matches, in which:
604 unique CDR3
6 unique J



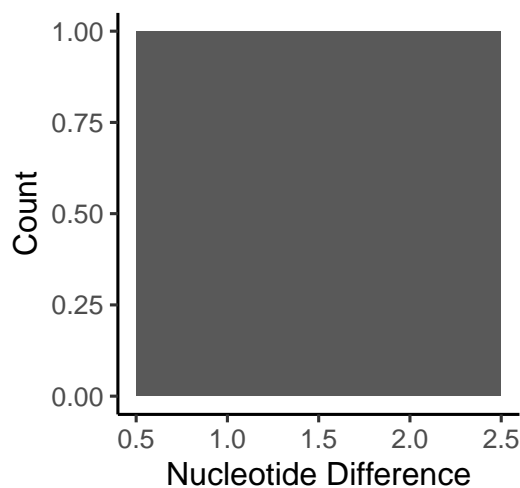
IGHV4–28*01_07

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



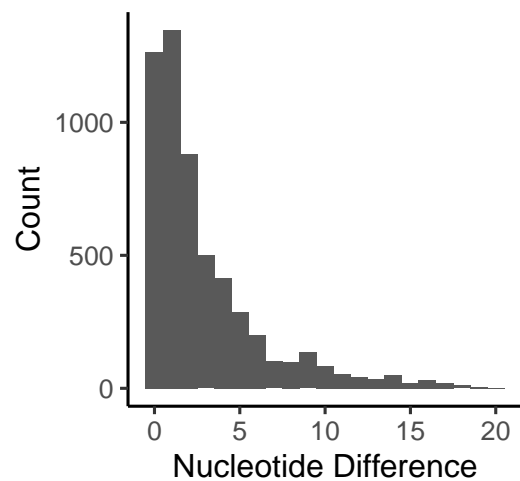
IGHV4–30–4*07

2 sequences assigned
No exact matches.



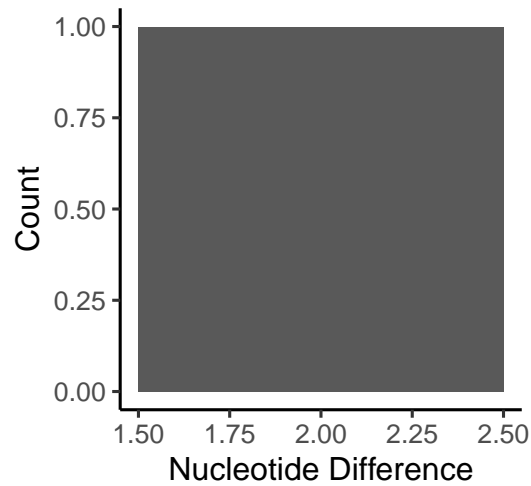
IGHV4–34*01_02

5639 sequences assigned
1265 (22.4%) exact matches, in which:
925 unique CDR3
6 unique J



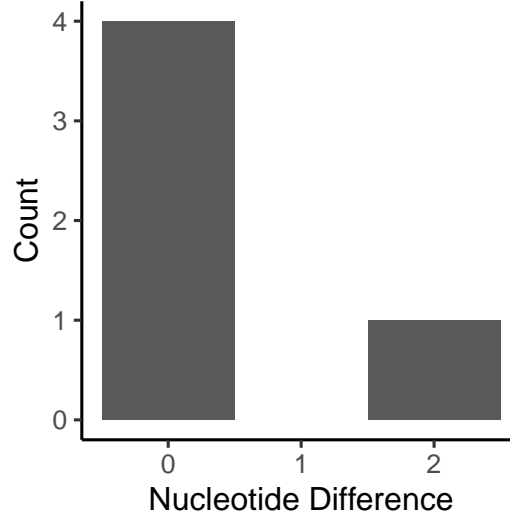
IGHV4-38-2*02

1 sequences assigned
No exact matches.



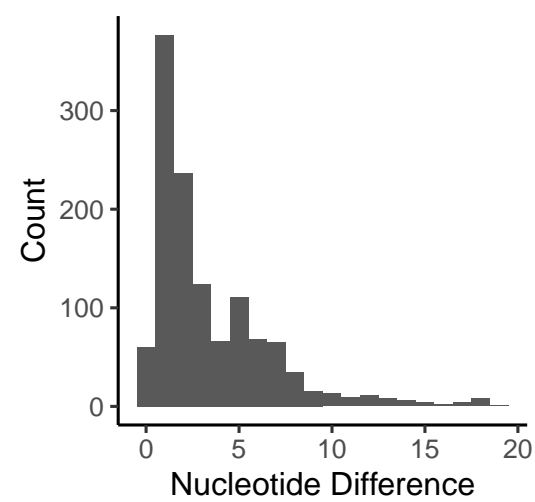
IGHV4-55*02_04_08

5 sequences assigned
4 (80%) exact matches, in which:
4 unique CDR3
2 unique J



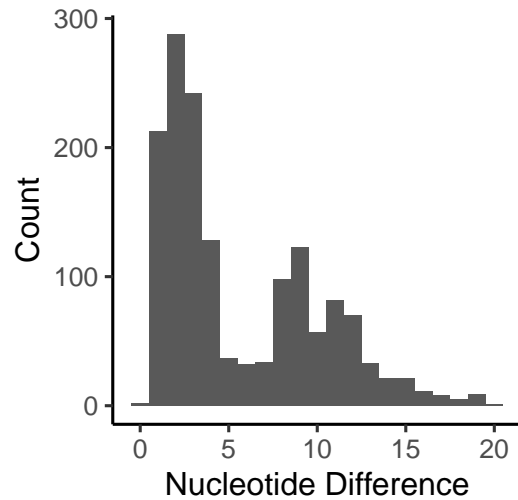
IGHV4-59*12

1235 sequences assigned
60 (4.9%) exact matches, in which:
58 unique CDR3
6 unique J



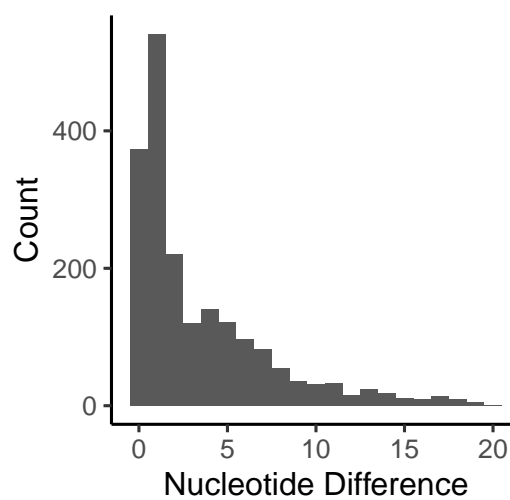
IGHV4-39*07

1522 sequences assigned
2 (0.1%) exact matches, in which:
2 unique CDR3
2 unique J



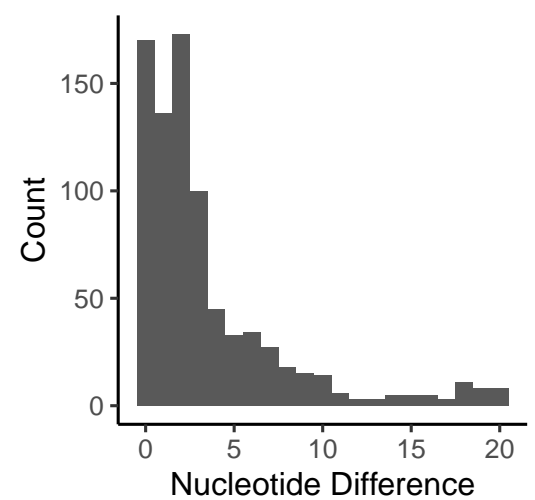
IGHV4-59*08

1990 sequences assigned
373 (18.7%) exact matches, in which:
314 unique CDR3
6 unique J



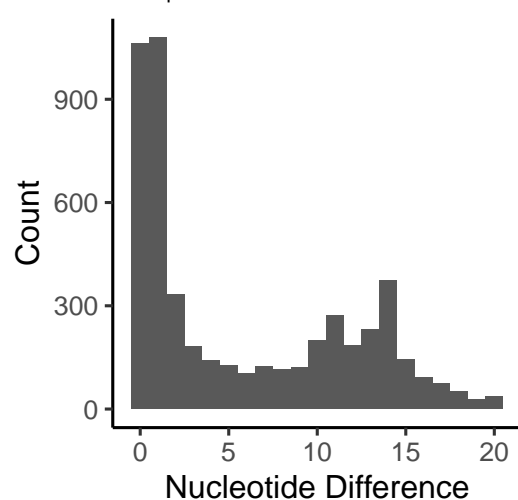
IGHV4-61*01

834 sequences assigned
170 (20.4%) exact matches, in which:
154 unique CDR3
6 unique J



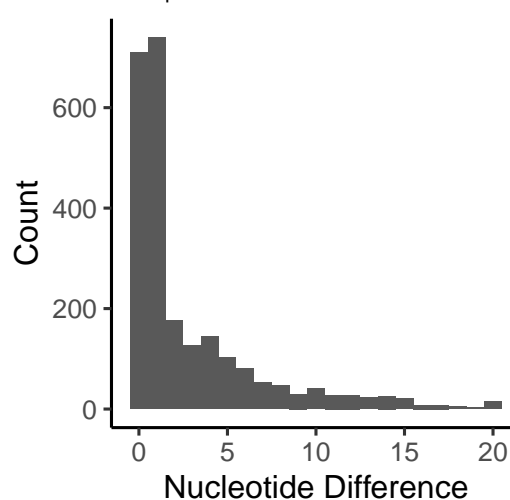
IGHV4-39*01_05

5196 sequences assigned
1061 (20.4%) exact matches, in which:
844 unique CDR3
6 unique J



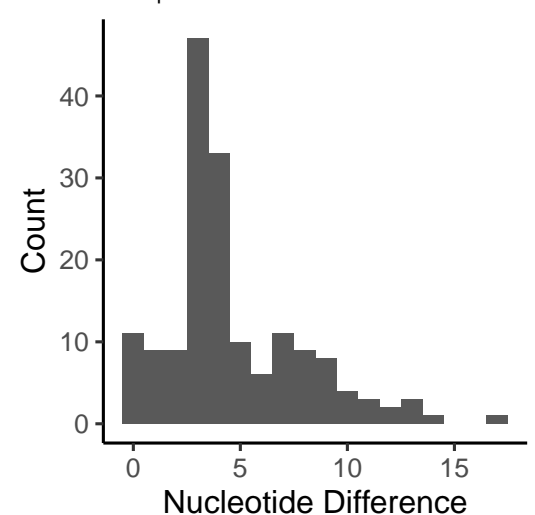
IGHV4-59*01_07

2508 sequences assigned
710 (28.3%) exact matches, in which:
626 unique CDR3
6 unique J



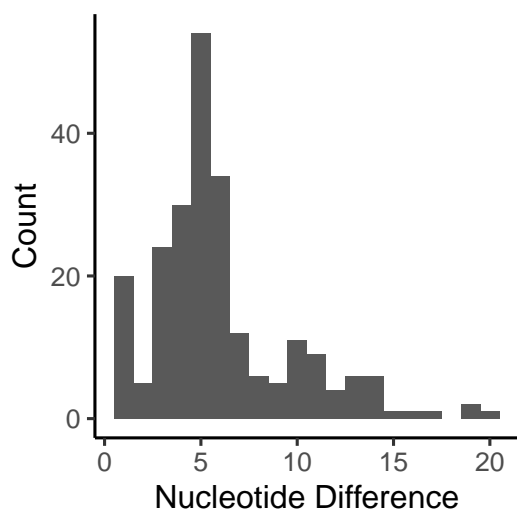
IGHV4-61*05

168 sequences assigned
11 (6.5%) exact matches, in which:
11 unique CDR3
3 unique J



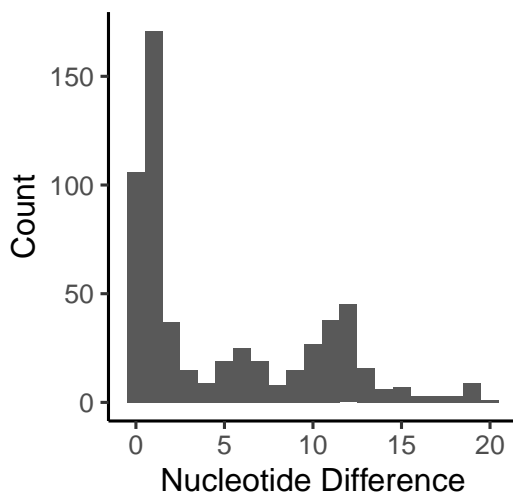
IGHV4-61*08

235 sequences assigned
No exact matches.



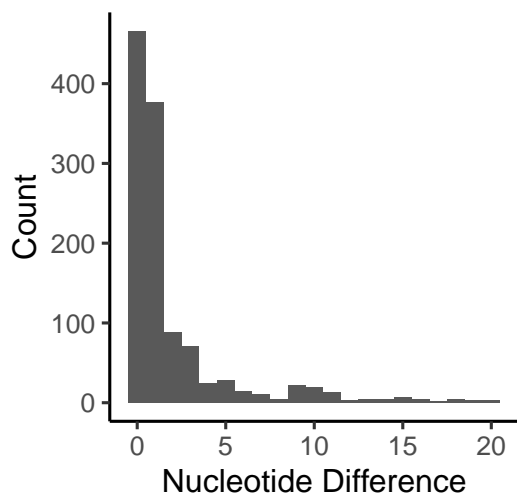
IGHV6-1*01_02

591 sequences assigned
106 (17.9%) exact matches, in which:
100 unique CDR3
5 unique J



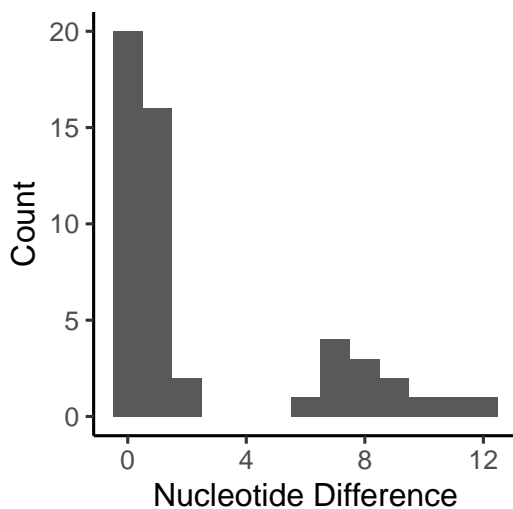
IGHV5-10-1*01_03

1184 sequences assigned
466 (39.4%) exact matches, in which:
324 unique CDR3
6 unique J



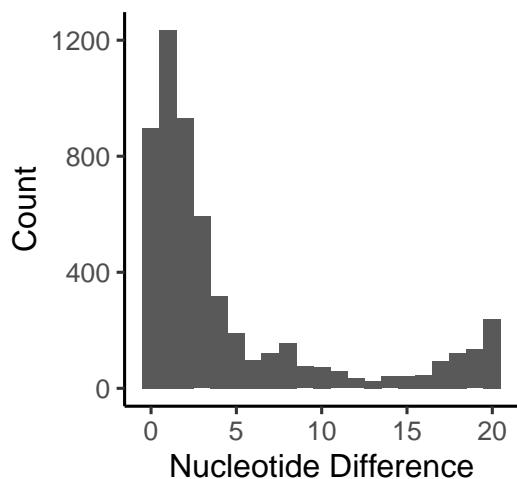
IGHV7-4-1*01

51 sequences assigned
20 (39.2%) exact matches, in which:
19 unique CDR3
3 unique J



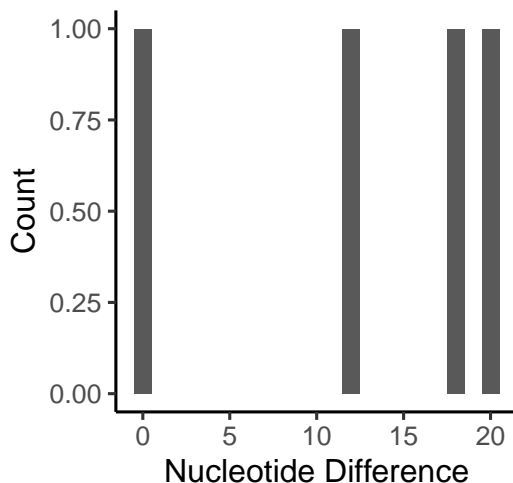
IGHV5-51*01_03

5798 sequences assigned
898 (15.5%) exact matches, in which:
564 unique CDR3
6 unique J



IGHV7-4-1*02

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





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*04_09_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.

Warning – no inferred sequences found.

Novel sequence(s)IGHV3–30*03_T288CIGHV5–51*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_C191TIGHV3–30*03_T288CIGHV3–30–3*02_G75CIGHV4–59*02_G88AIGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s)IGHV4–59*02_G88AIGHV5–51*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_C300TIGHV5–51*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_C191TIGHV3–11*06_T300CIGHV3–30*03_T288CIGHV4–59*02_G88AIGHV5–51*07_A128G are not listed in the genotype and will be ignored.