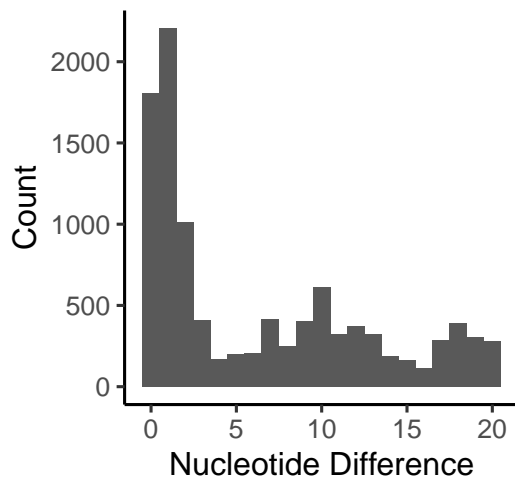


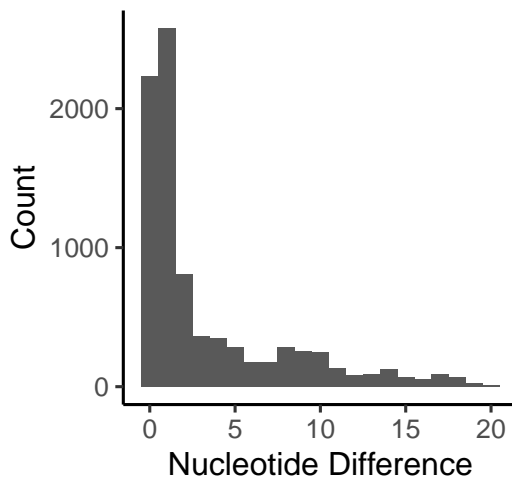
IGHV1-2*02

12344 sequences assigned
1809 (14.7%) exact matches, in which:
1475 unique CDR3
6 unique J



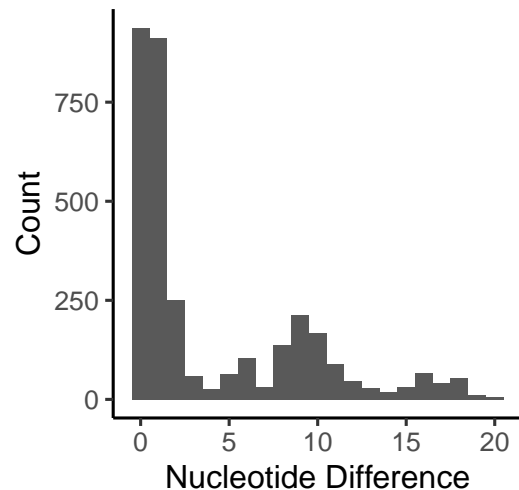
IGHV1-8*01

8667 sequences assigned
2235 (25.8%) exact matches, in which:
1876 unique CDR3
6 unique J



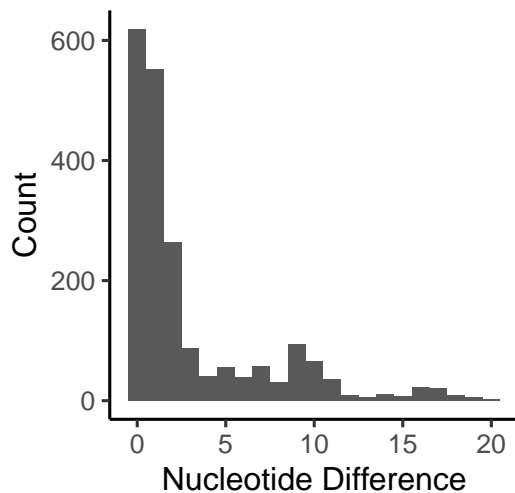
IGHV1-24*01

3319 sequences assigned
938 (28.3%) exact matches, in which:
774 unique CDR3
6 unique J



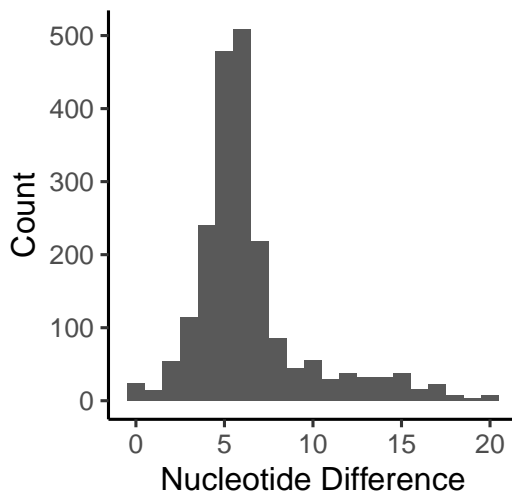
IGHV1-2*04

2046 sequences assigned
619 (30.3%) exact matches, in which:
523 unique CDR3
6 unique J



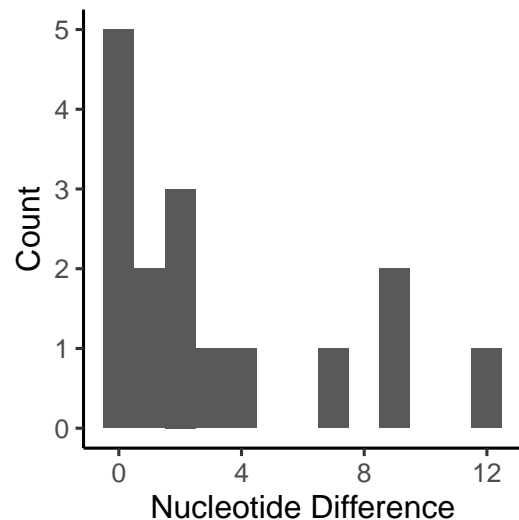
IGHV1-8*02

2097 sequences assigned
24 (1.1%) exact matches, in which:
24 unique CDR3
4 unique J



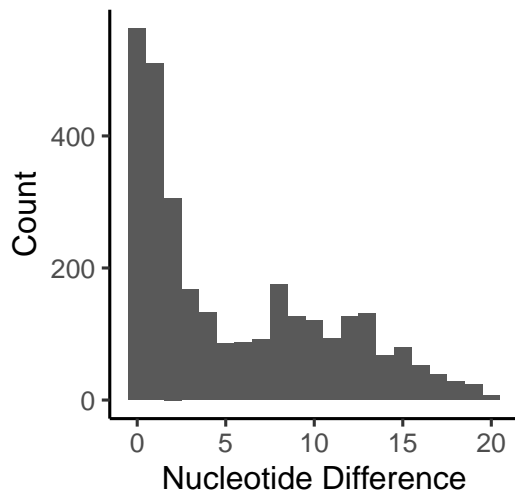
IGHV1-45*02

16 sequences assigned
5 (31.2%) exact matches, in which:
4 unique CDR3
1 unique J



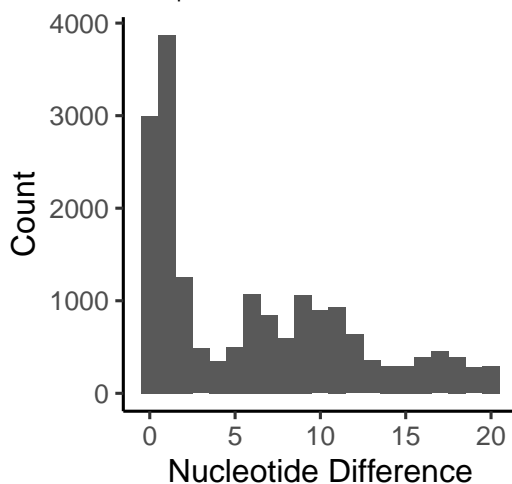
IGHV1-3*01_05

3473 sequences assigned
563 (16.2%) exact matches, in which:
456 unique CDR3
6 unique J



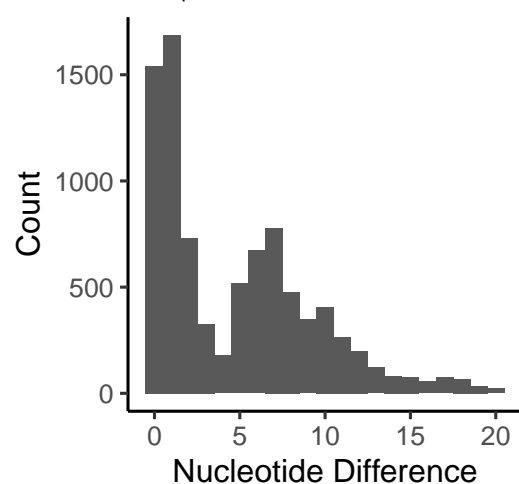
IGHV1-18*01

21181 sequences assigned
2994 (14.1%) exact matches, in which:
2418 unique CDR3
6 unique J



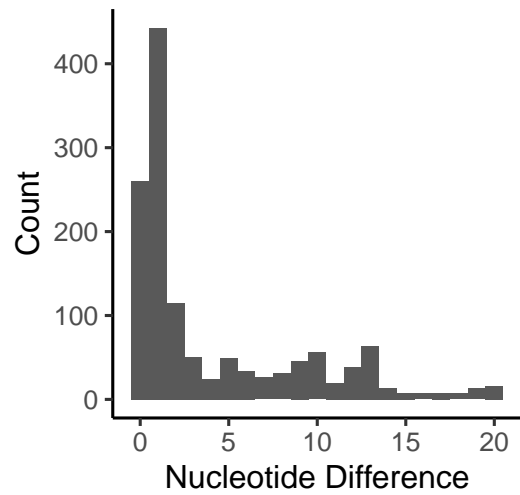
IGHV1-46*01

8873 sequences assigned
1540 (17.4%) exact matches, in which:
1316 unique CDR3
6 unique J



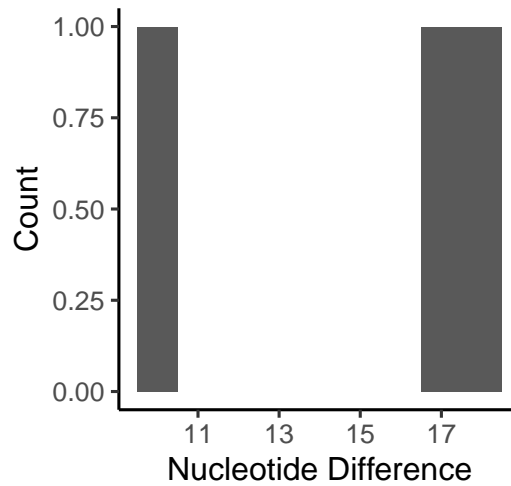
IGHV1-46*03

1374 sequences assigned
260 (18.9%) exact matches, in which:
192 unique CDR3
5 unique J



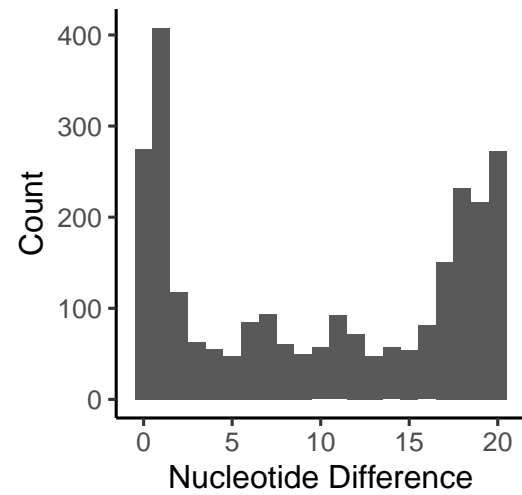
IGHV1-69-2*01

3 sequences assigned
No exact matches.



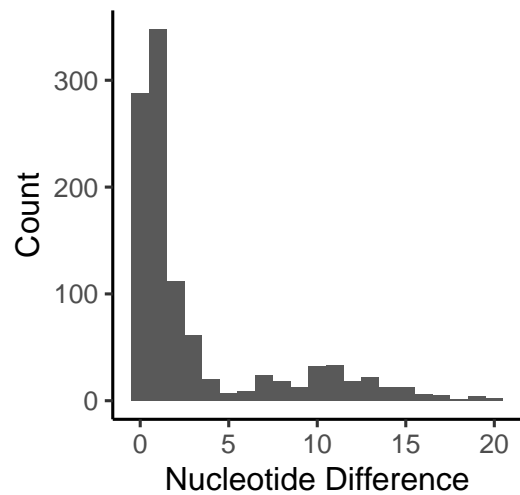
IGHV2-5*02

3737 sequences assigned
275 (7.4%) exact matches, in which:
218 unique CDR3
5 unique J



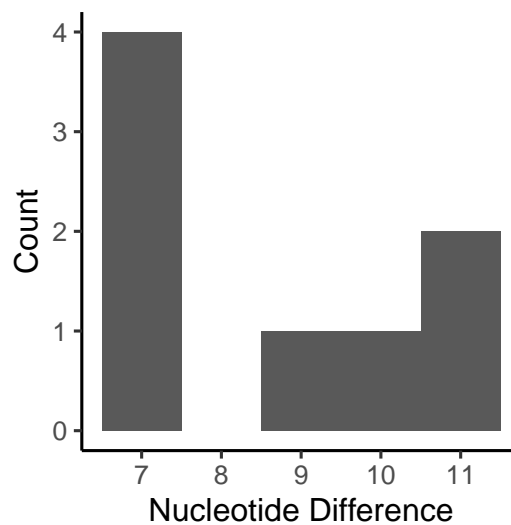
IGHV1-58*01_03

1051 sequences assigned
288 (27.4%) exact matches, in which:
241 unique CDR3
6 unique J



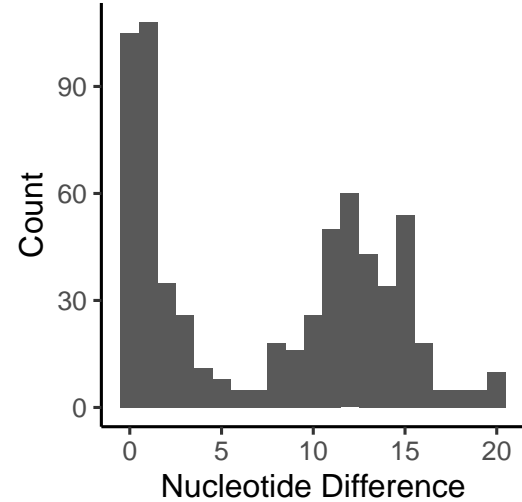
IGHV1-NL1*01

8 sequences assigned
No exact matches.



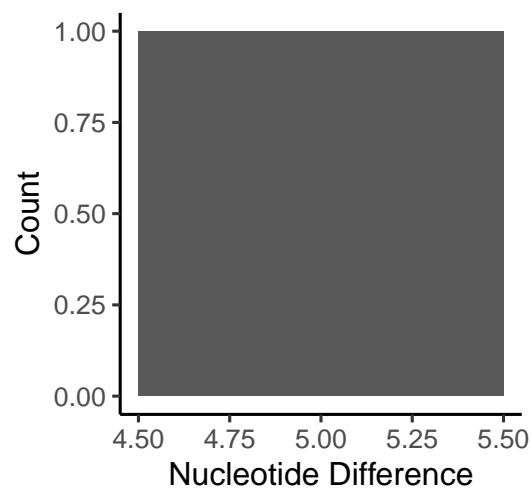
IGHV2-26*01

829 sequences assigned
105 (12.7%) exact matches, in which:
87 unique CDR3
5 unique J



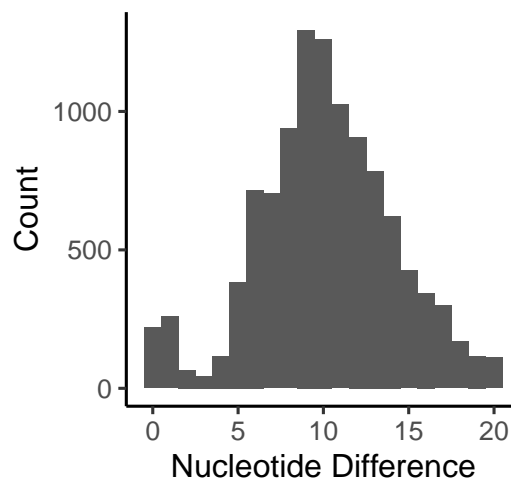
IGHV1-68*01

1 sequences assigned
No exact matches.



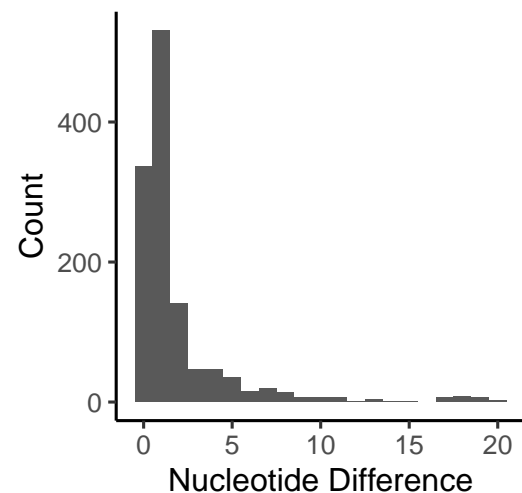
IGHV2-5*01

11234 sequences assigned
220 (2%) exact matches, in which:
170 unique CDR3
6 unique J



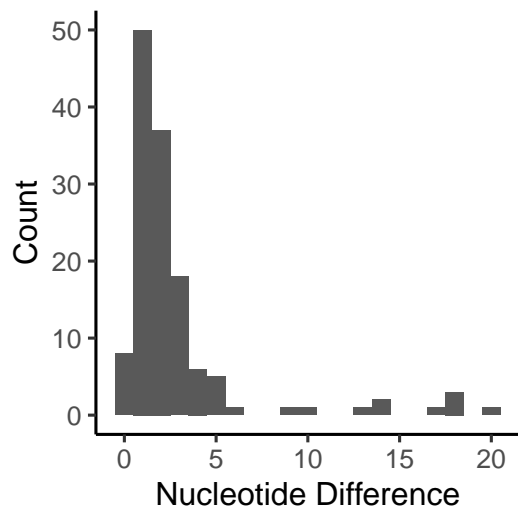
IGHV2-70*01

1292 sequences assigned
337 (26.1%) exact matches, in which:
210 unique CDR3
5 unique J



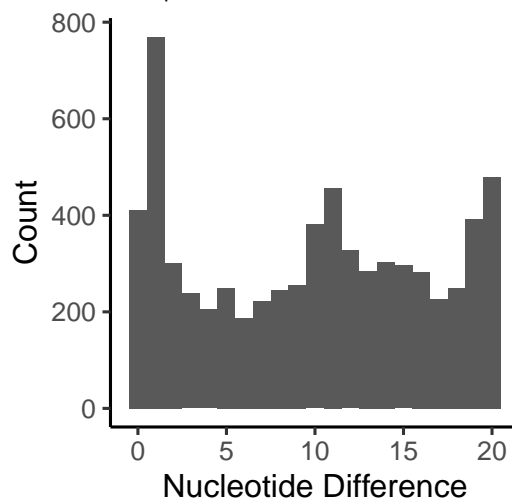
IGHV2-70*12

144 sequences assigned
8 (5.6%) exact matches, in which:
8 unique CDR3
3 unique J



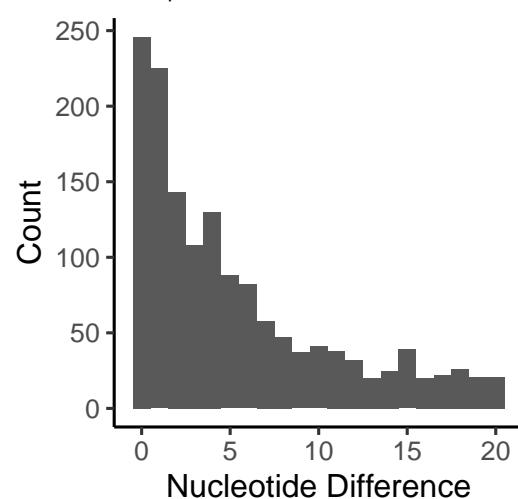
IGHV3-7*03

10205 sequences assigned
411 (4%) exact matches, in which:
274 unique CDR3
6 unique J



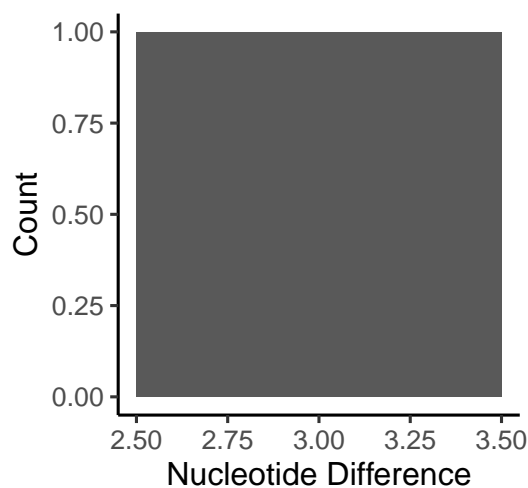
IGHV3-11*04

1605 sequences assigned
246 (15.3%) exact matches, in which:
235 unique CDR3
6 unique J



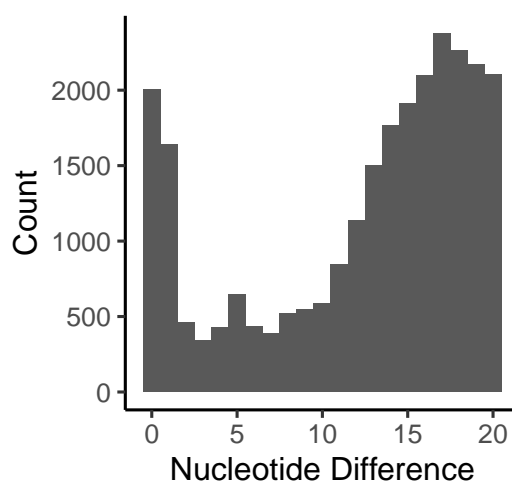
IGHV2-70D*04

2 sequences assigned
No exact matches.



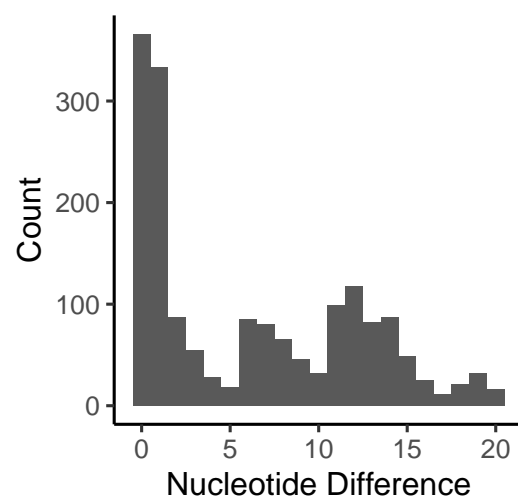
IGHV3-9*01

40580 sequences assigned
2004 (4.9%) exact matches, in which:
1161 unique CDR3
6 unique J



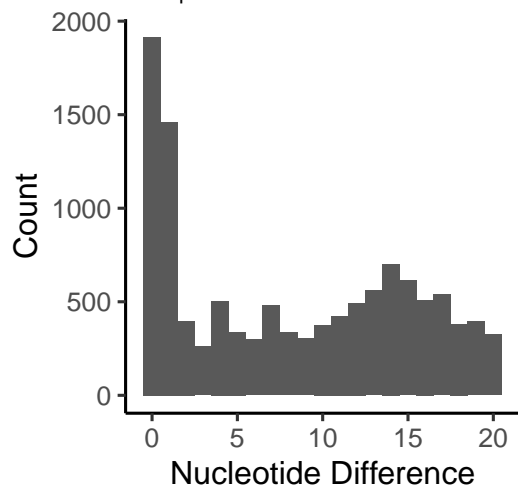
IGHV3-13*01

2079 sequences assigned
366 (17.6%) exact matches, in which:
236 unique CDR3
6 unique J



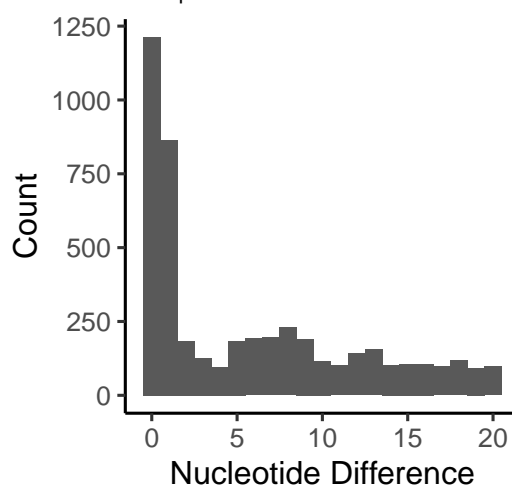
IGHV3-7*01

14234 sequences assigned
1915 (13.5%) exact matches, in which:
1289 unique CDR3
6 unique J



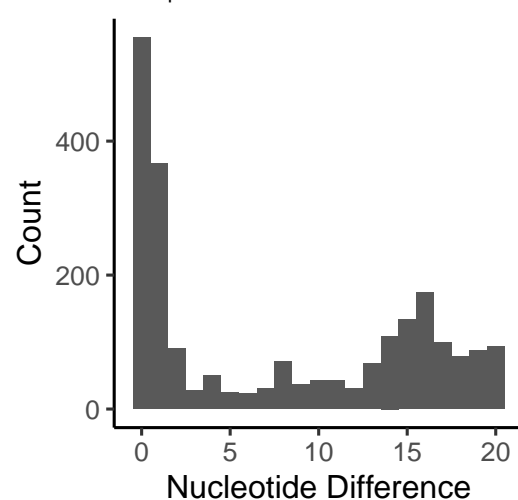
IGHV3-11*01

5624 sequences assigned
1213 (21.6%) exact matches, in which:
820 unique CDR3
6 unique J



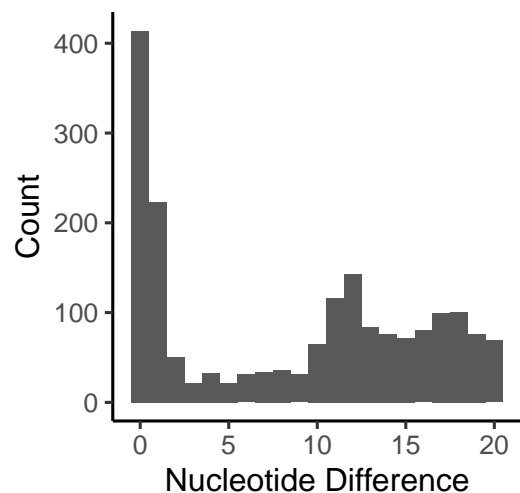
IGHV3-15*07

3026 sequences assigned
555 (18.3%) exact matches, in which:
361 unique CDR3
5 unique J



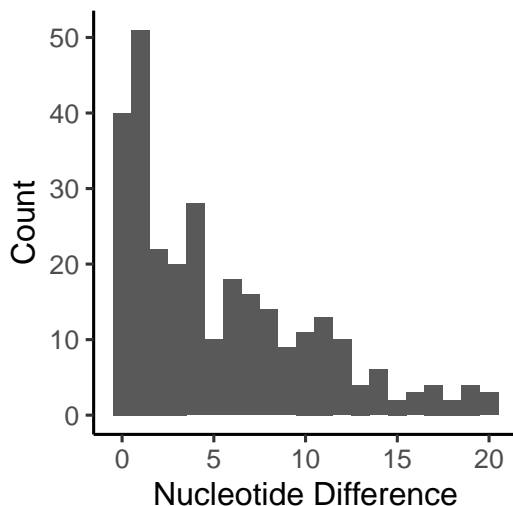
IGHV3-15*01_02

2386 sequences assigned
414 (17.4%) exact matches, in which:
277 unique CDR3
6 unique J



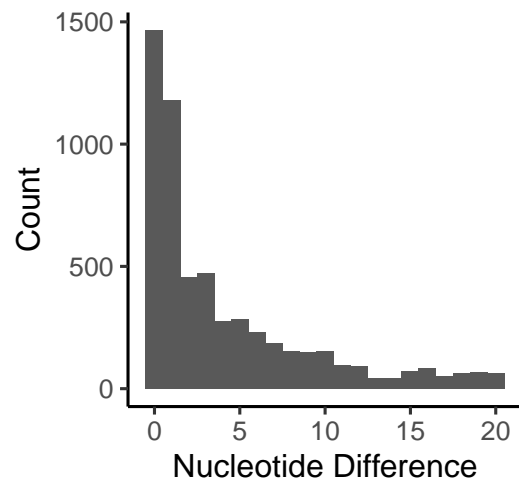
IGHV3-20*03_04

385 sequences assigned
40 (10.4%) exact matches, in which:
29 unique CDR3
4 unique J



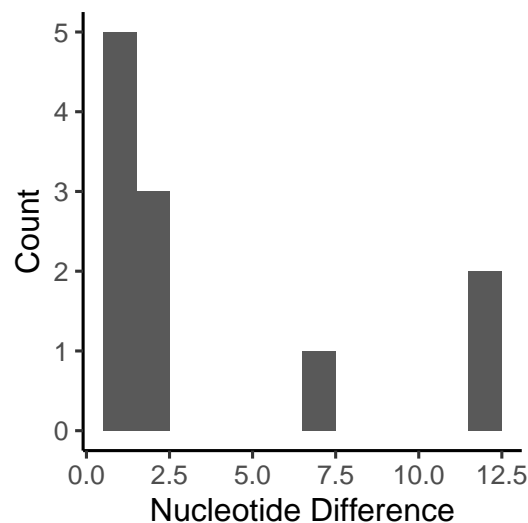
IGHV3-30-3*01

6082 sequences assigned
1465 (24.1%) exact matches, in which:
982 unique CDR3
6 unique J



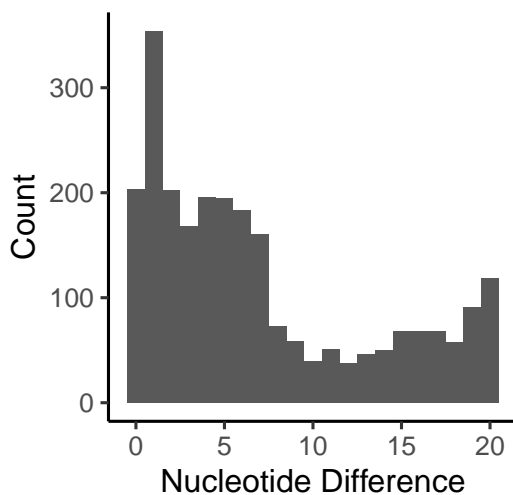
IGHV3-19*01

11 sequences assigned
No exact matches.



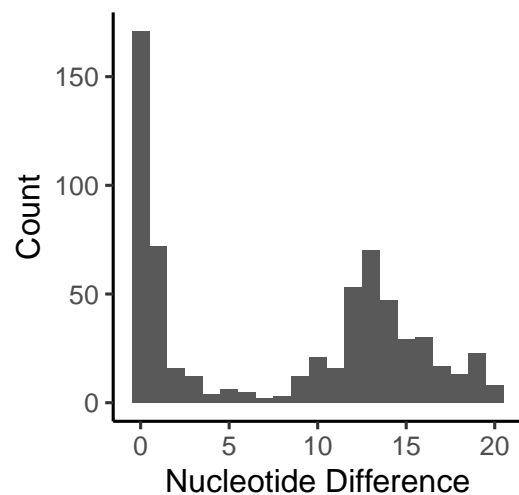
IGHV3-21*04

3322 sequences assigned
203 (6.1%) exact matches, in which:
187 unique CDR3
6 unique J



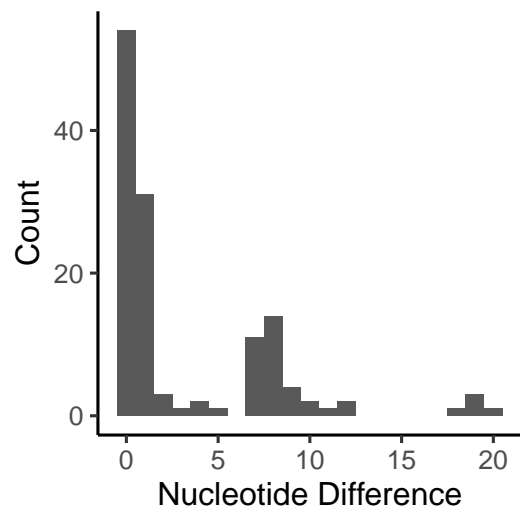
IGHV3-30*03

784 sequences assigned
171 (21.8%) exact matches, in which:
162 unique CDR3
6 unique J



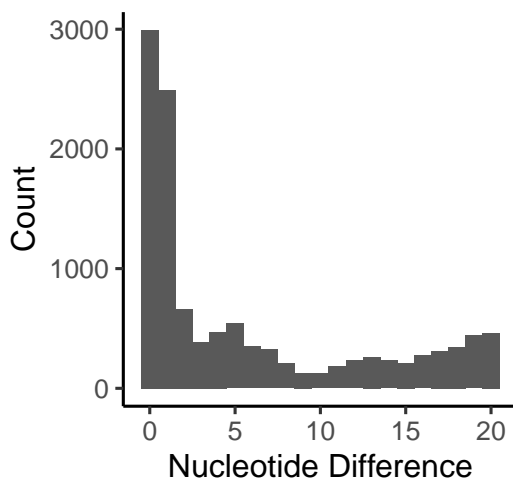
IGHV3-20*01_02

149 sequences assigned
54 (36.2%) exact matches, in which:
29 unique CDR3
5 unique J



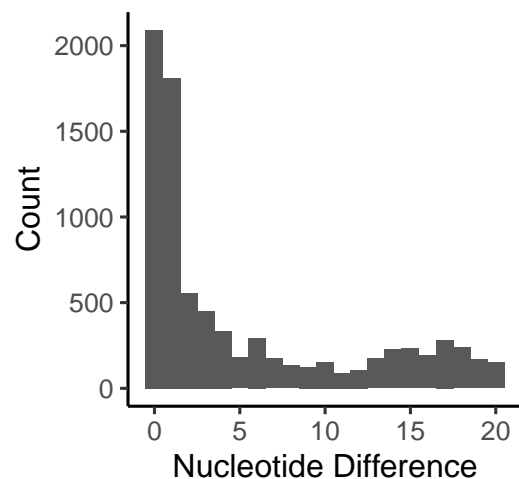
IGHV3-21*01_02

14656 sequences assigned
2993 (20.4%) exact matches, in which:
1855 unique CDR3
6 unique J



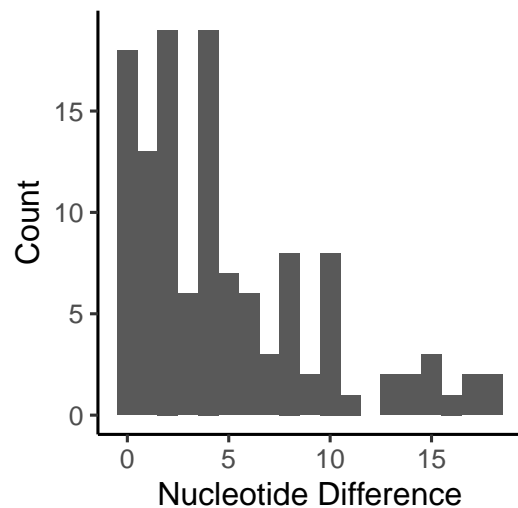
IGHV3-33*01

9526 sequences assigned
2091 (22%) exact matches, in which:
1359 unique CDR3
6 unique J



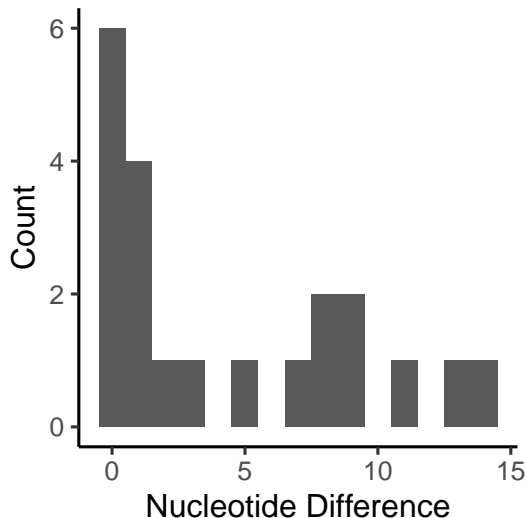
IGHV3-33*05

178 sequences assigned
18 (10.1%) exact matches, in which:
17 unique CDR3
4 unique J



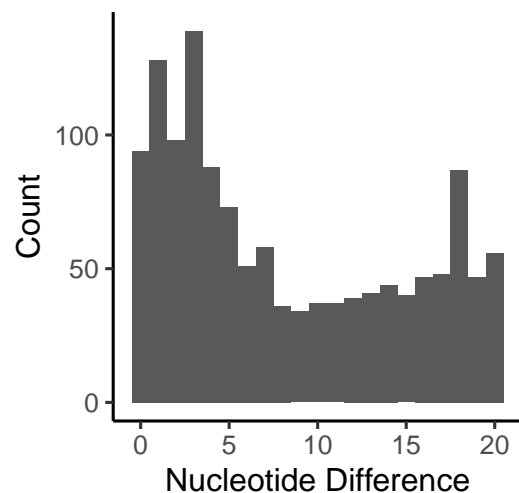
IGHV3-47*02

21 sequences assigned
6 (28.6%) exact matches, in which:
3 unique CDR3
1 unique J



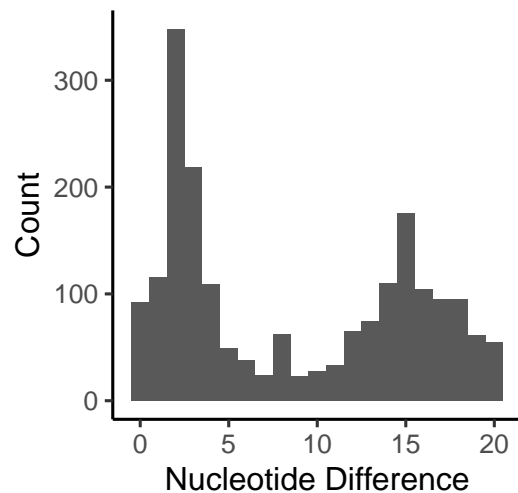
IGHV3-48*04

1896 sequences assigned
94 (5%) exact matches, in which:
86 unique CDR3
5 unique J



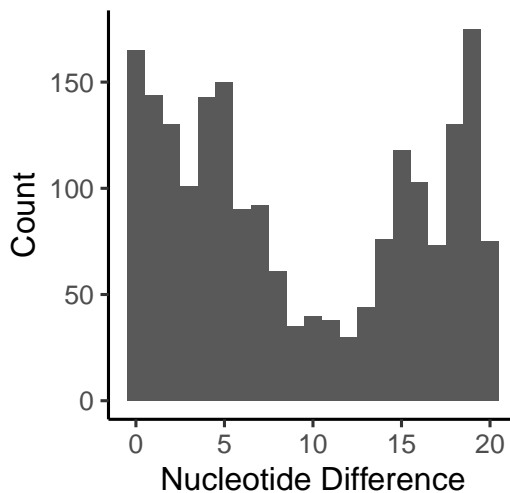
IGHV3-33*06

2216 sequences assigned
92 (4.2%) exact matches, in which:
86 unique CDR3
6 unique J



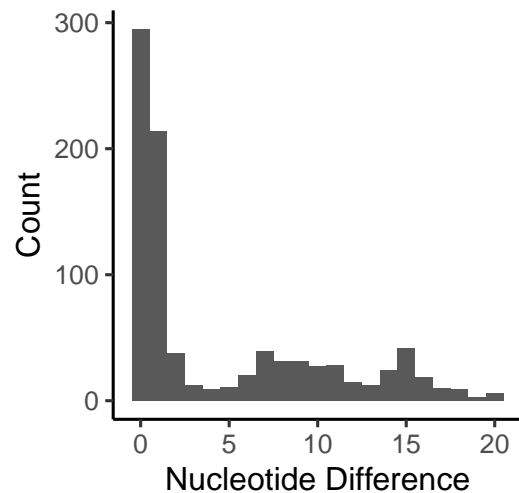
IGHV3-48*01

2337 sequences assigned
165 (7.1%) exact matches, in which:
155 unique CDR3
6 unique J



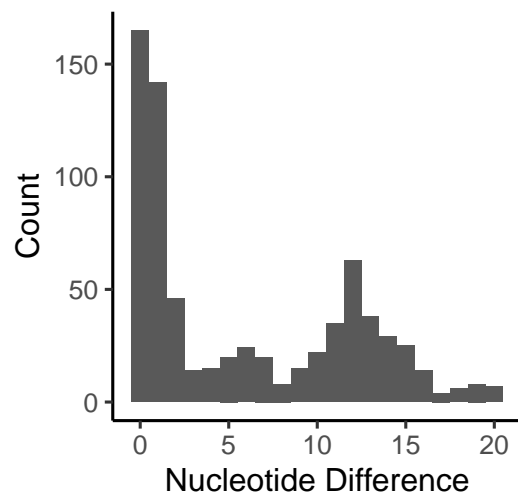
IGHV3-49*03_05

977 sequences assigned
295 (30.2%) exact matches, in which:
181 unique CDR3
6 unique J



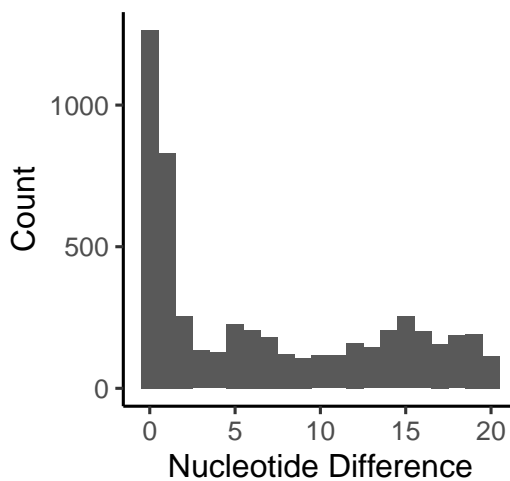
IGHV3-43*01

836 sequences assigned
165 (19.7%) exact matches, in which:
103 unique CDR3
5 unique J



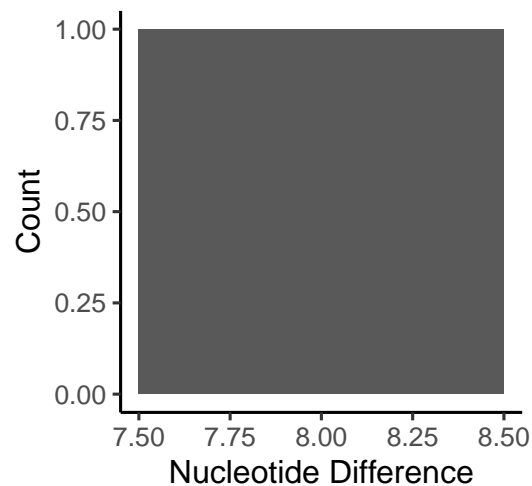
IGHV3-48*02

6360 sequences assigned
1265 (19.9%) exact matches, in which:
811 unique CDR3
6 unique J



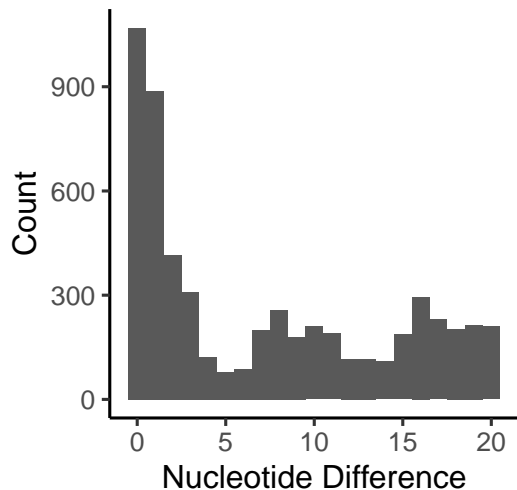
IGHV3-52*01_03

1 sequences assigned
No exact matches.



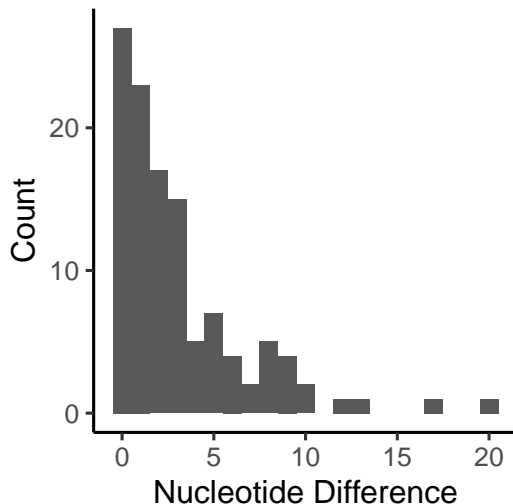
IGHV3-53*01_02

9624 sequences assigned
1070 (11.1%) exact matches, in which:
747 unique CDR3
6 unique J



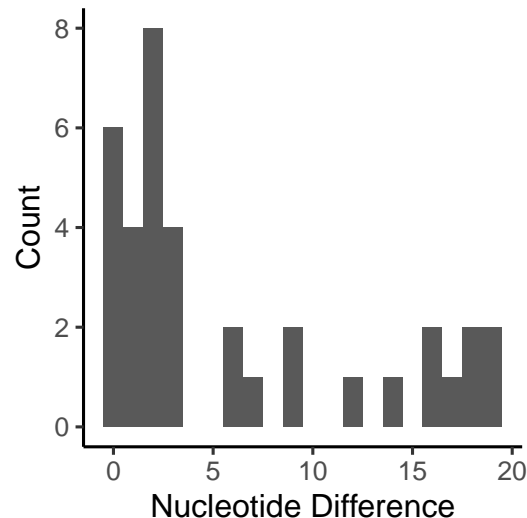
IGHV3-64*02_07

118 sequences assigned
27 (22.9%) exact matches, in which:
16 unique CDR3
3 unique J



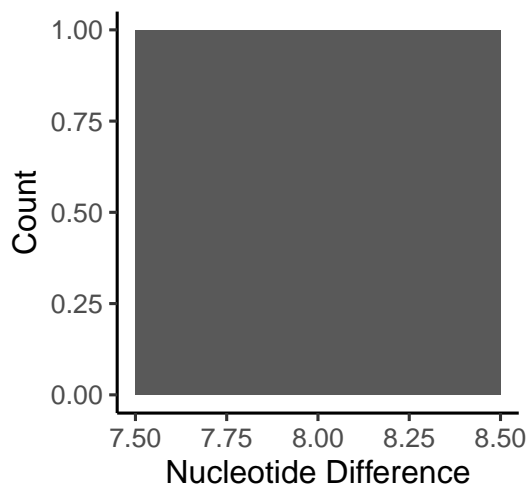
IGHV3-66*03

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



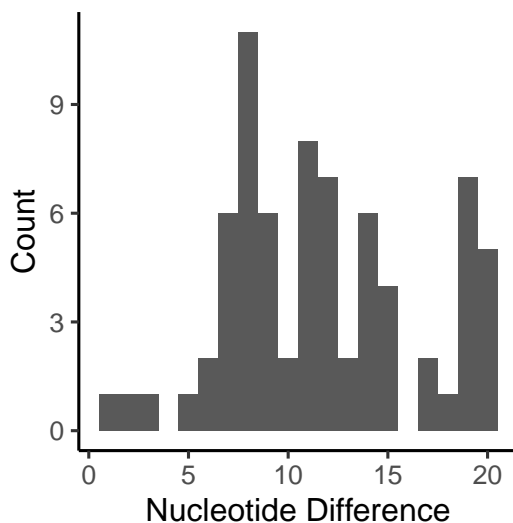
IGHV3-62*03

2 sequences assigned
No exact matches.



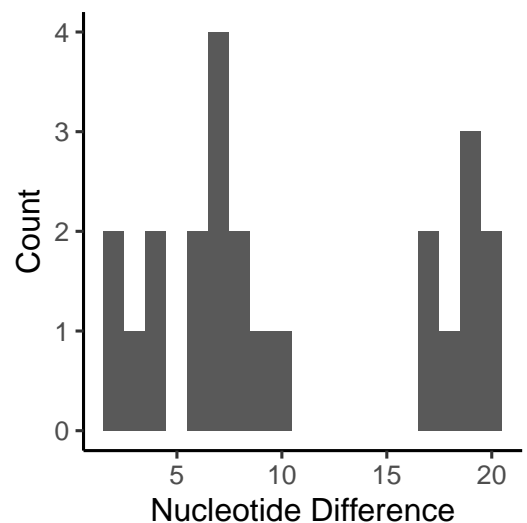
IGHV3-66*01

149 sequences assigned
No exact matches.



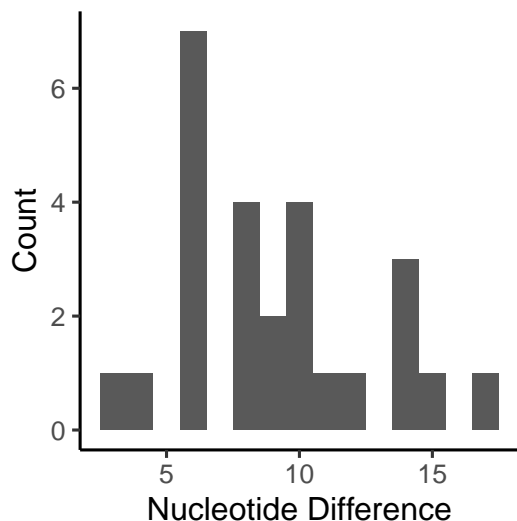
IGHV3-66*04

53 sequences assigned
No exact matches.



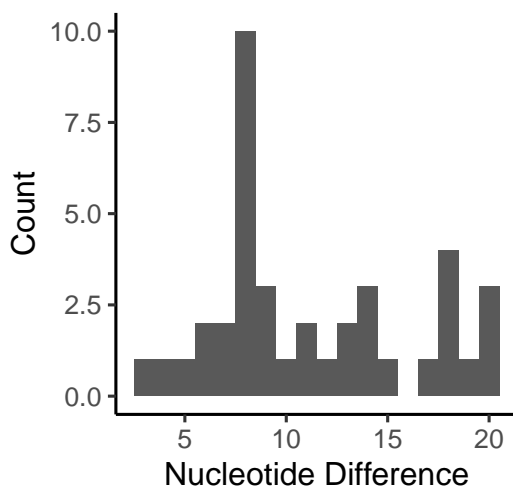
IGHV3-64*04

30 sequences assigned
No exact matches.



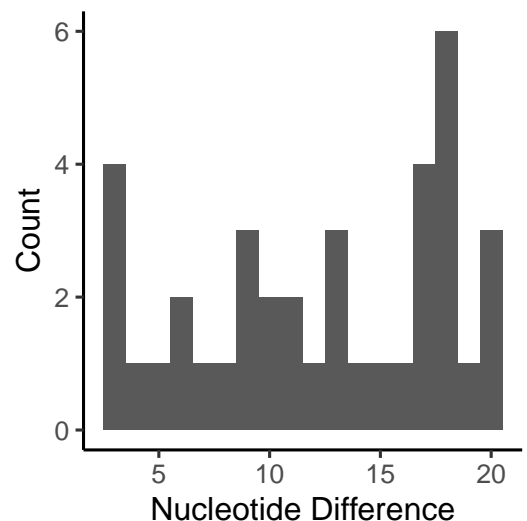
IGHV3-66*02

62 sequences assigned
No exact matches.



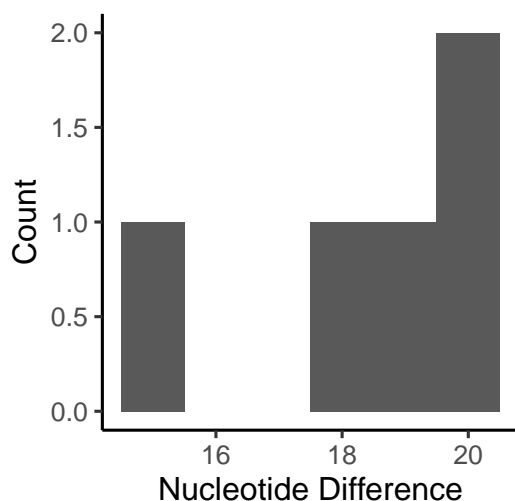
IGHV3-69-1*01

104 sequences assigned
No exact matches.



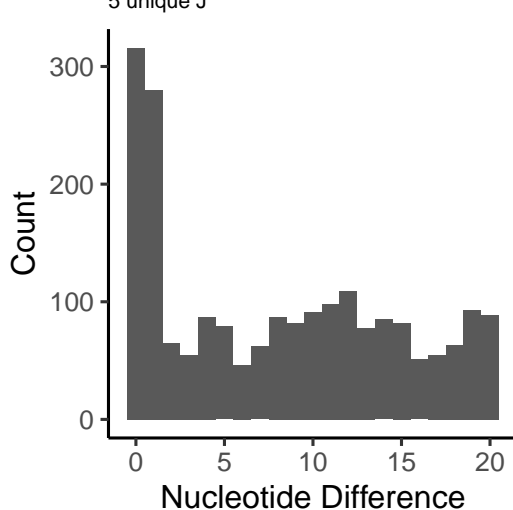
IGHV3-69-1*02

22 sequences assigned
No exact matches.



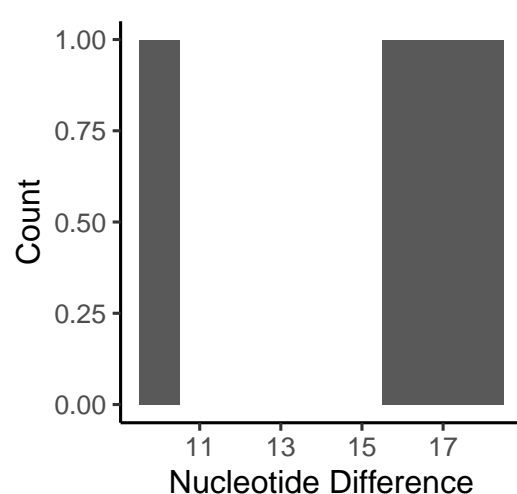
IGHV3-73*01_02

2403 sequences assigned
316 (13.2%) exact matches, in which:
186 unique CDR3
5 unique J



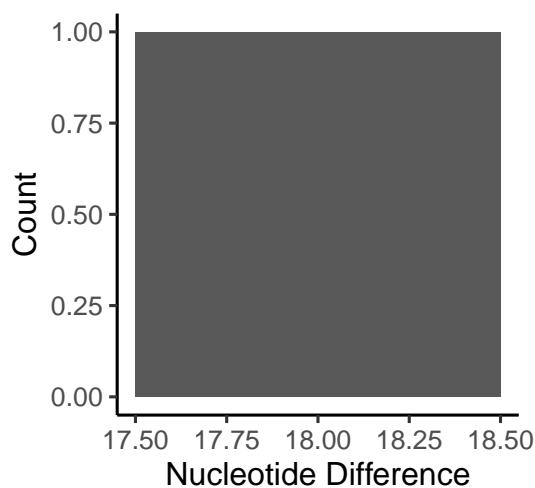
IGHV3-43D*04

4 sequences assigned
No exact matches.



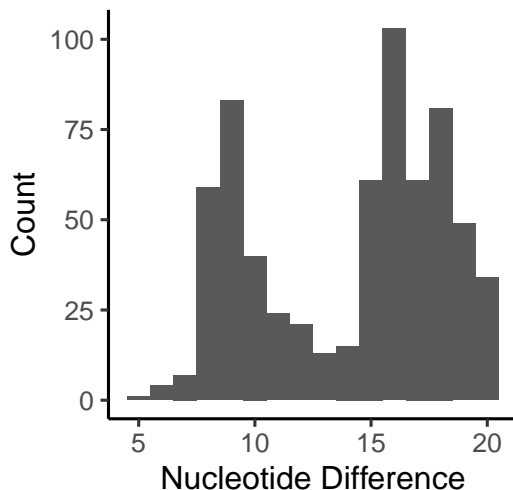
IGHV3-71*01_04

4 sequences assigned
No exact matches.



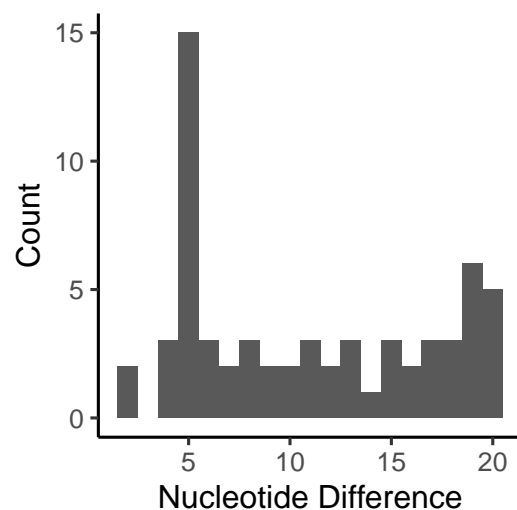
IGHV3-74*03

1400 sequences assigned
No exact matches.



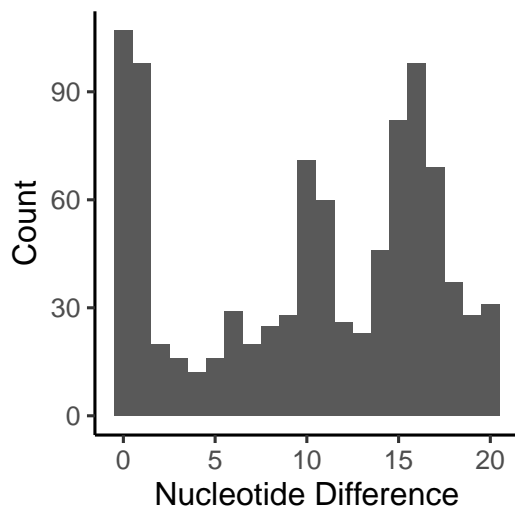
IGHV3-NL1*01

130 sequences assigned
No exact matches.



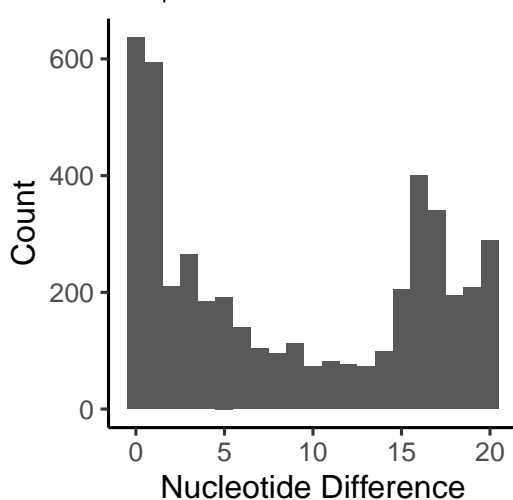
IGHV3-72*01

1199 sequences assigned
107 (8.9%) exact matches, in which:
65 unique CDR3
6 unique J



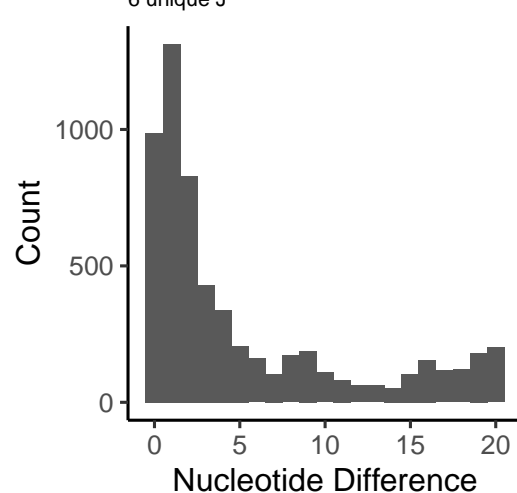
IGHV3-74*01_02

6171 sequences assigned
637 (10.3%) exact matches, in which:
420 unique CDR3
6 unique J



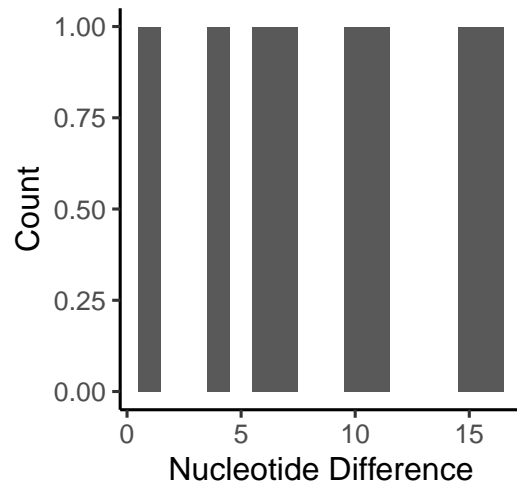
IGHV4-4*07

8633 sequences assigned
987 (11.4%) exact matches, in which:
803 unique CDR3
6 unique J



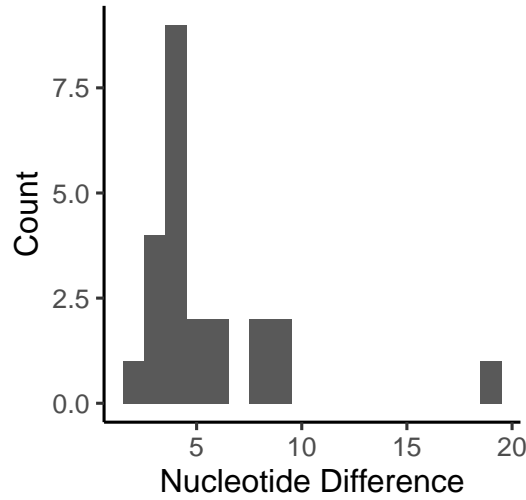
IGHV4-28*03

9 sequences assigned
No exact matches.



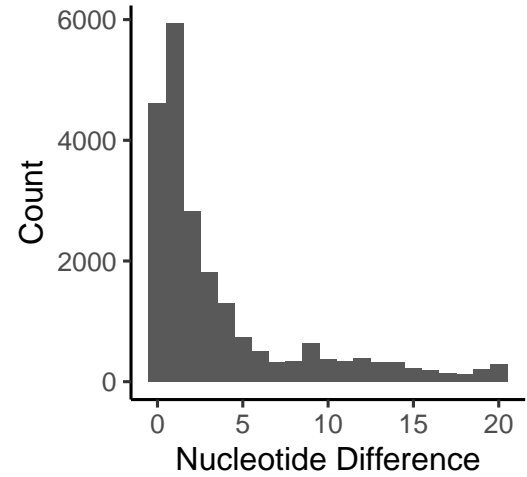
IGHV4-30-4*07

24 sequences assigned
No exact matches.



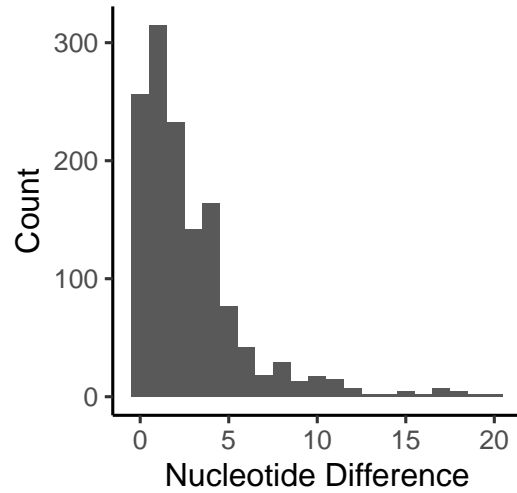
IGHV4-34*01_02

23158 sequences assigned
4609 (19.9%) exact matches, in which:
3017 unique CDR3
6 unique J



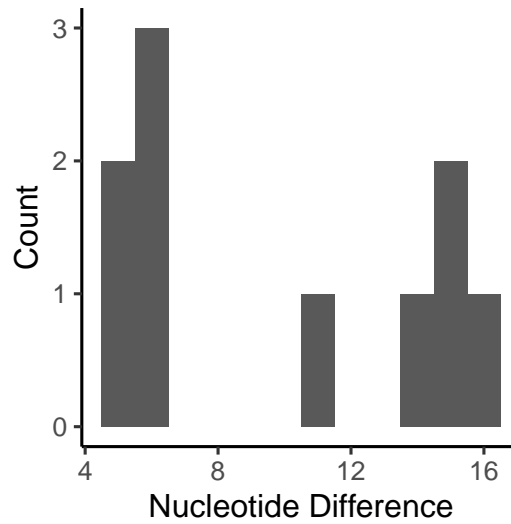
IGHV4-30-2*01

1382 sequences assigned
256 (18.5%) exact matches, in which:
176 unique CDR3
6 unique J



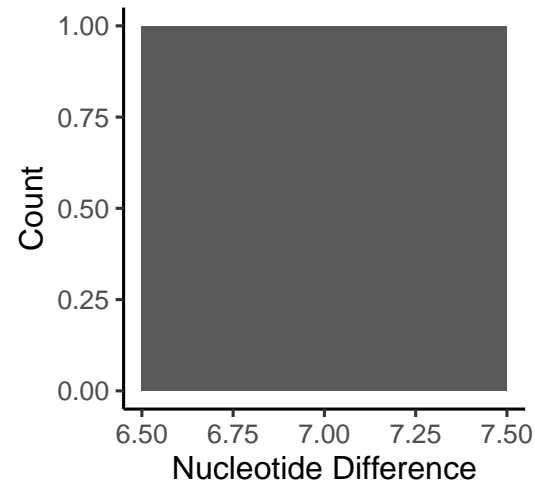
IGHV4-30-4*08

12 sequences assigned
No exact matches.



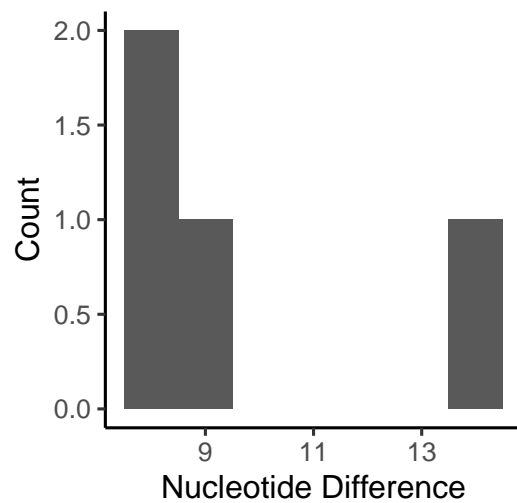
IGHV4-38-2*01

2 sequences assigned
No exact matches.



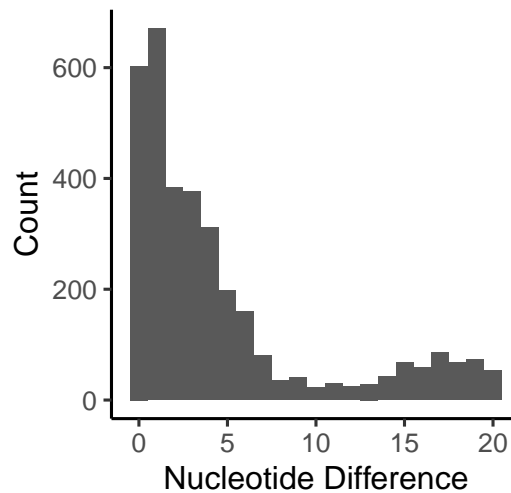
IGHV4-30-4*01

13 sequences assigned
No exact matches.



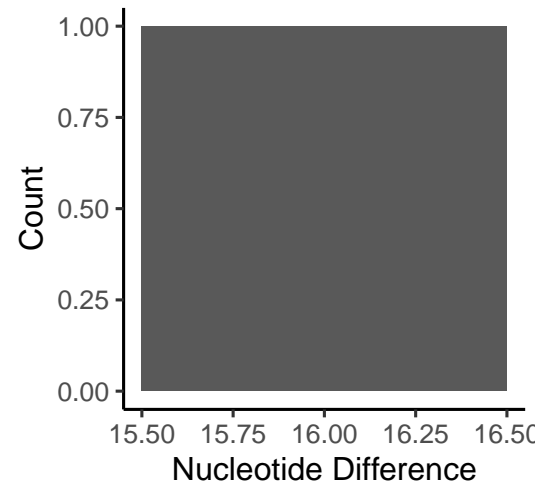
IGHV4-31*03_04

5395 sequences assigned
603 (11.2%) exact matches, in which:
484 unique CDR3
6 unique J



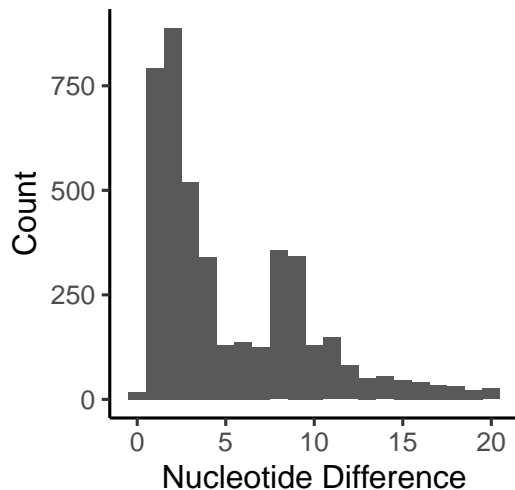
IGHV4-38-2*02

5 sequences assigned
No exact matches.



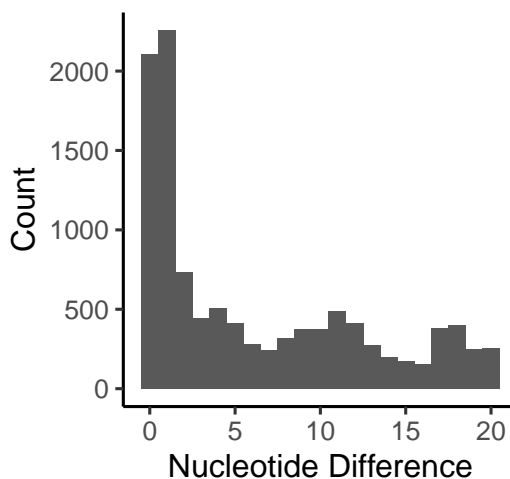
IGHV4-39*07

4532 sequences assigned
18 (0.4%) exact matches, in which:
18 unique CDR3
5 unique J



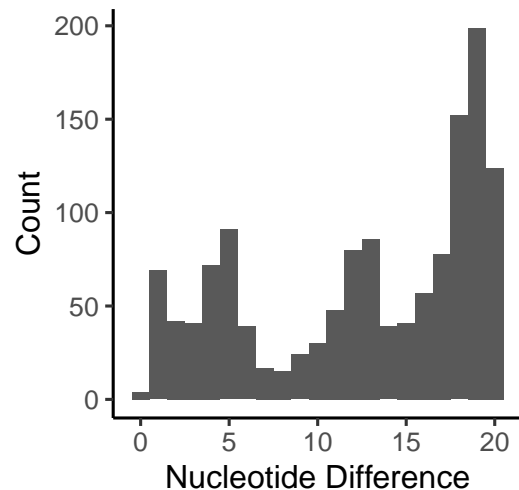
IGHV4-59*01_07

12903 sequences assigned
2106 (16.3%) exact matches, in which:
1670 unique CDR3
6 unique J



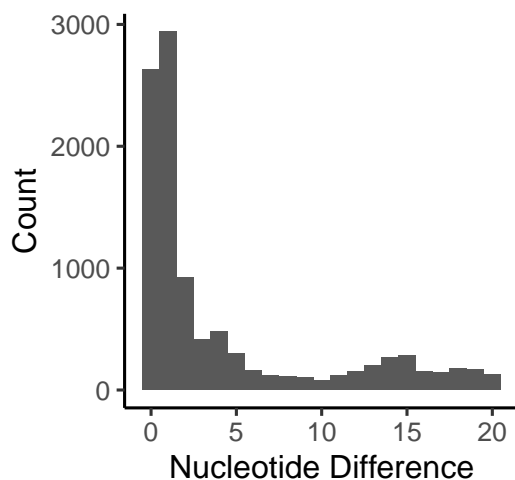
IGHV4-61*08

2257 sequences assigned
4 (0.2%) exact matches, in which:
4 unique CDR3
3 unique J



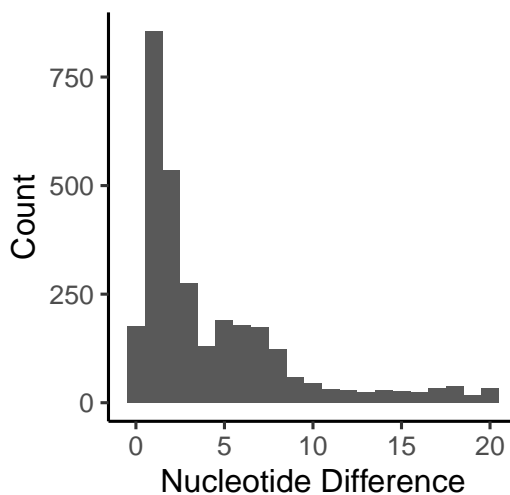
IGHV4-39*01_05

13547 sequences assigned
2630 (19.4%) exact matches, in which:
1962 unique CDR3
6 unique J



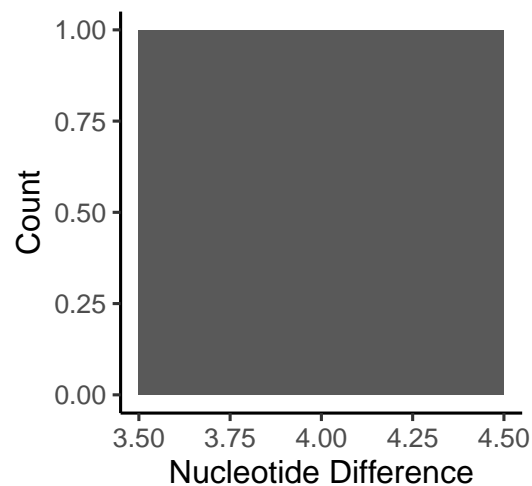
IGHV4-59*12

3291 sequences assigned
177 (5.4%) exact matches, in which:
170 unique CDR3
6 unique J



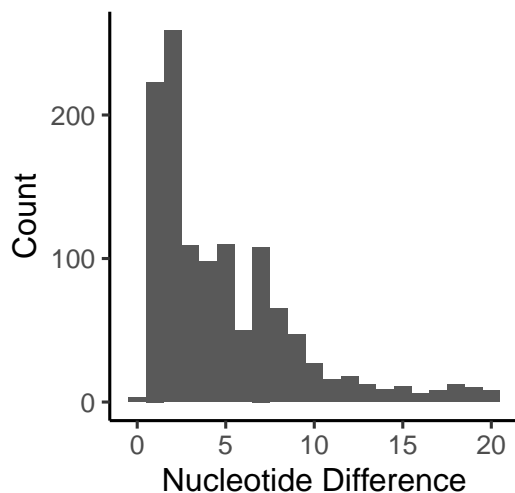
IGHV5-10-1*04

1 sequences assigned
No exact matches.



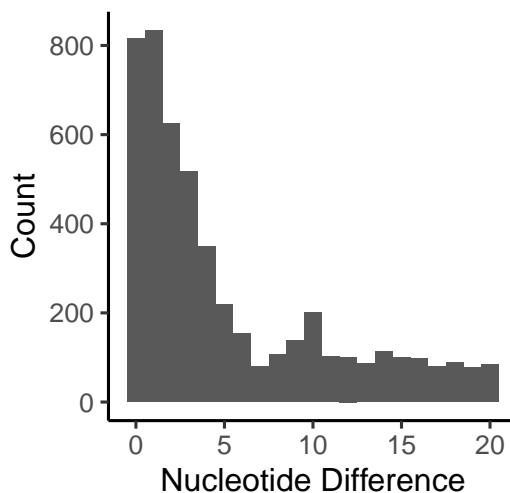
IGHV4-59*08

1315 sequences assigned
3 (0.2%) exact matches, in which:
3 unique CDR3
2 unique J



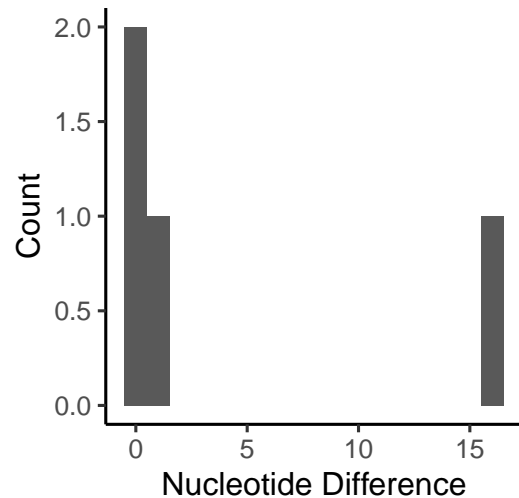
IGHV4-61*01

5519 sequences assigned
815 (14.8%) exact matches, in which:
704 unique CDR3
6 unique J



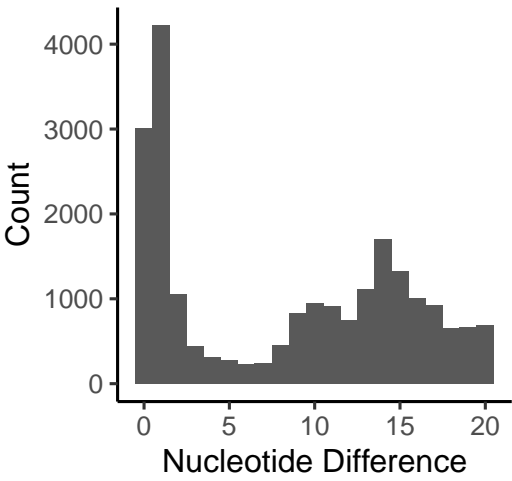
IGHV5-10-1*01_03

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



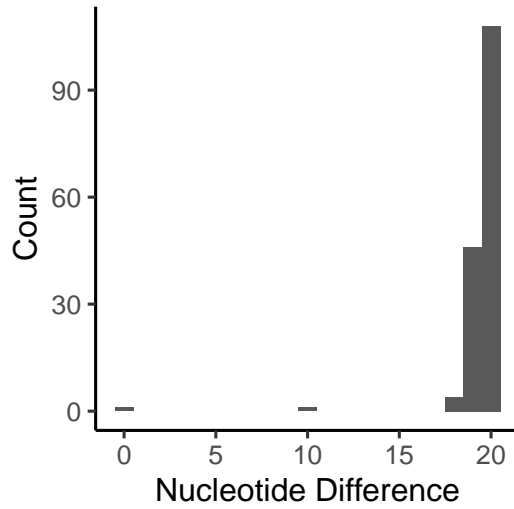
IGHV5-51*01_03

25737 sequences assigned
3010 (11.7%) exact matches, in which:
1556 unique CDR3
6 unique J



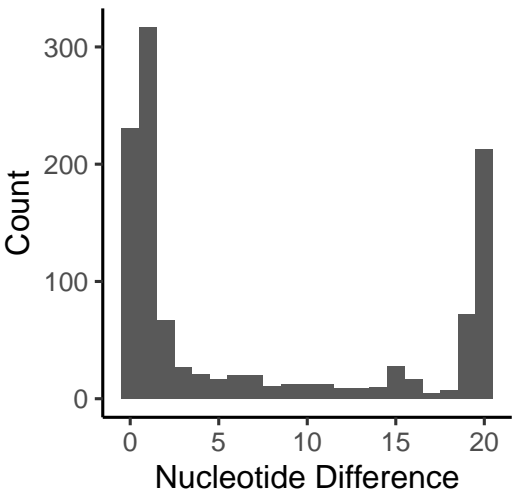
IGHV7-4-1*02

223 sequences assigned
1 (0.4%) exact matches, in which:
1 unique CDR3
1 unique J



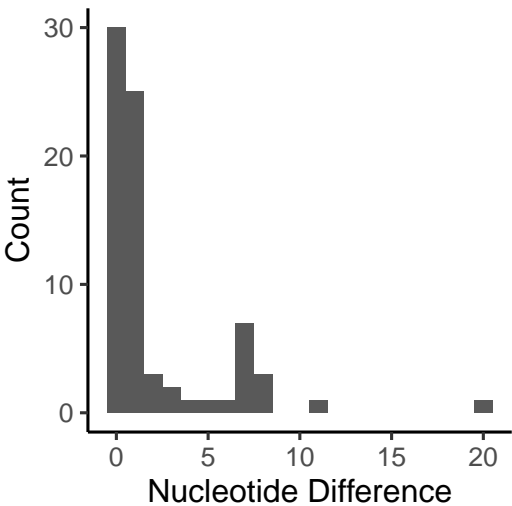
IGHV6-1*01_02

1302 sequences assigned
231 (17.7%) exact matches, in which:
183 unique CDR3
5 unique J



IGHV7-4-1*01

75 sequences assigned
30 (40%) exact matches, in which:
22 unique CDR3
5 unique J





Warning – no inferred sequences found.

Novel sequence(s) IGHV3–33*01_G75C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–33*01_G75C IGHV4–59*02_G88A IGHV5–51*07_A128G are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV3–30*03_T288C 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.

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.