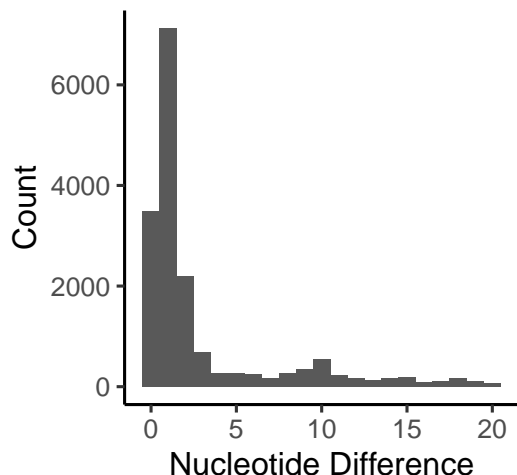


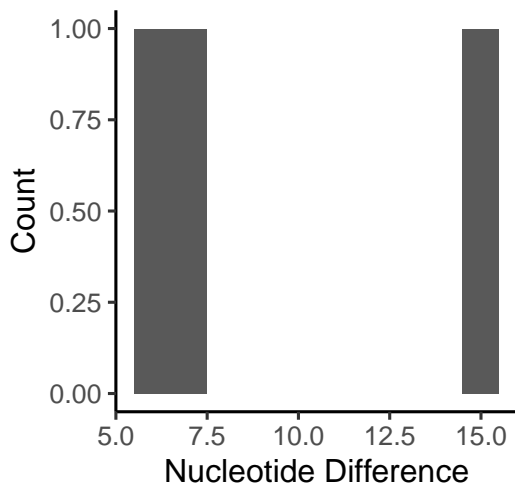
IGHV1-2*02

17120 sequences assigned
3491 (20.4%) exact matches, in which:
2325 unique CDR3
6 unique J



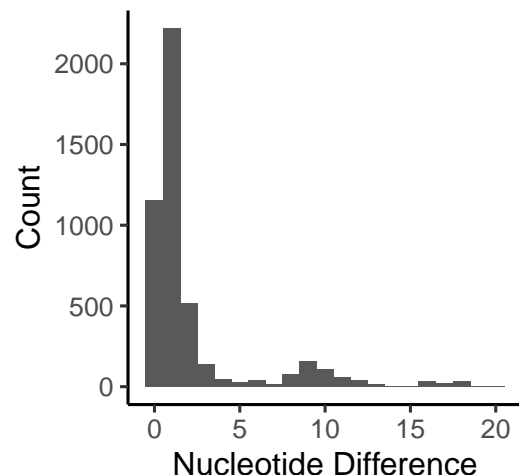
IGHV1-8*02

3 sequences assigned
No exact matches.



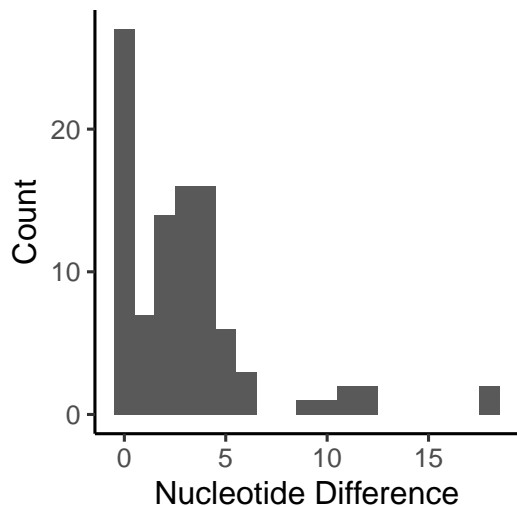
IGHV1-24*01

4729 sequences assigned
1153 (24.4%) exact matches, in which:
792 unique CDR3
6 unique J



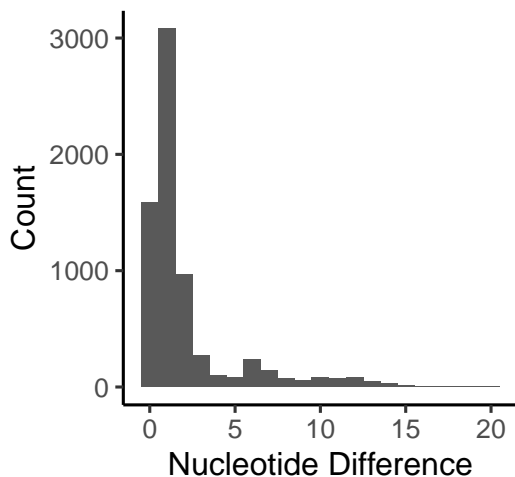
IGHV1-3*02

104 sequences assigned
27 (26%) exact matches, in which:
25 unique CDR3
4 unique J



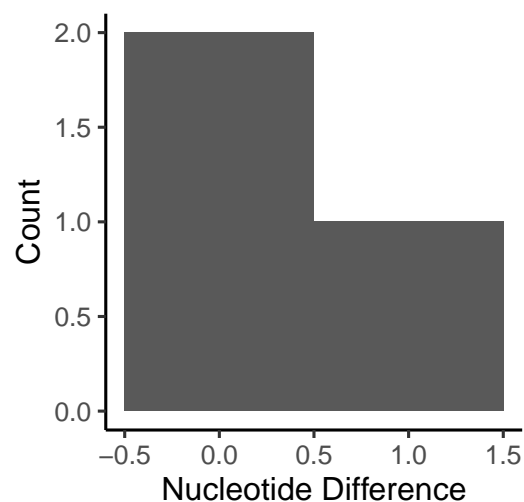
IGHV1-18*01

6991 sequences assigned
1589 (22.7%) exact matches, in which:
1163 unique CDR3
6 unique J



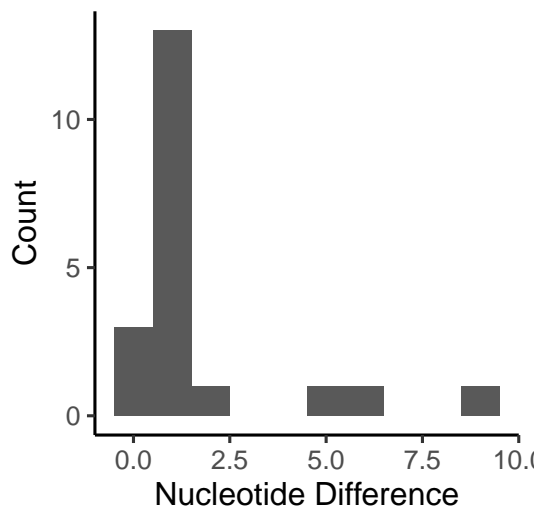
IGHV1-45*02

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



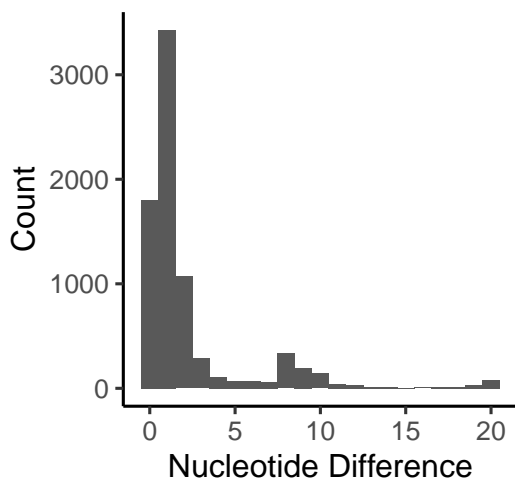
IGHV1-8*01

21 sequences assigned
3 (14.3%) exact matches, in which:
3 unique CDR3
1 unique J



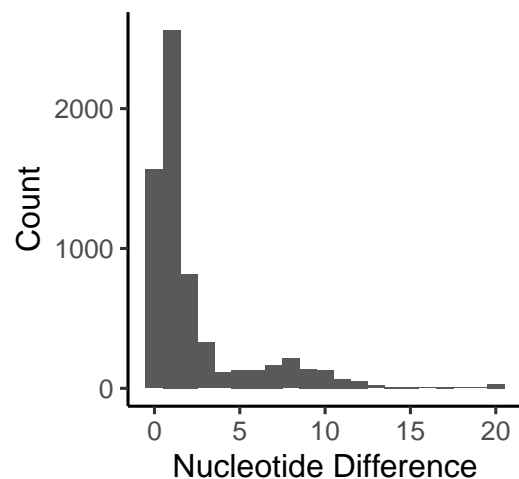
IGHV1-18*04

7861 sequences assigned
1799 (22.9%) exact matches, in which:
1259 unique CDR3
6 unique J



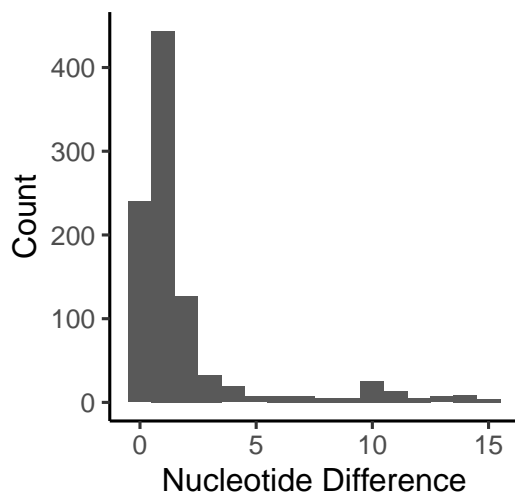
IGHV1-46*01

6673 sequences assigned
1564 (23.4%) exact matches, in which:
1148 unique CDR3
6 unique J



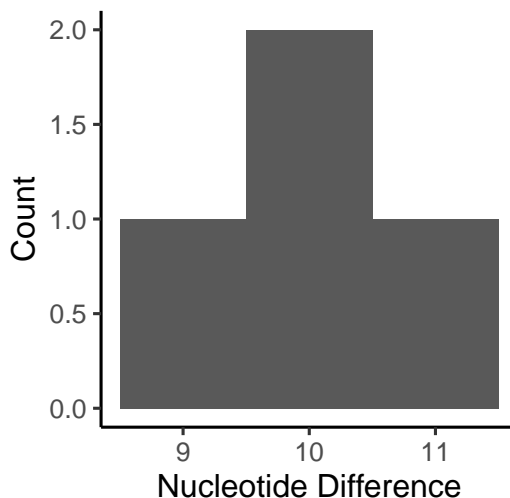
IGHV1–58*01_03

966 sequences assigned
240 (24.8%) exact matches, in which:
172 unique CDR3
5 unique J



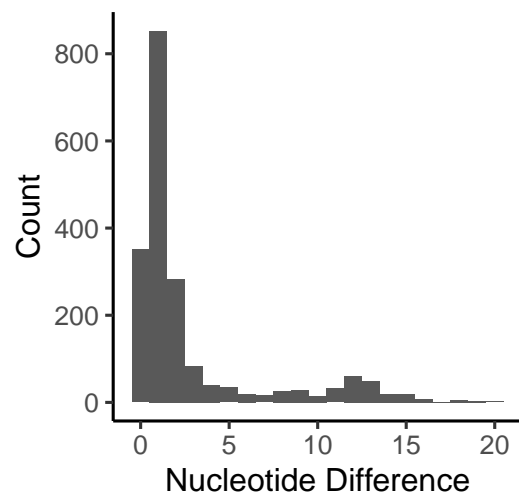
IGHV1–NL1*01

4 sequences assigned
No exact matches.



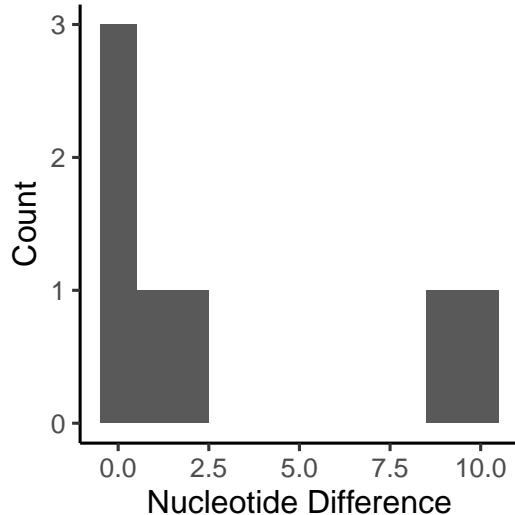
IGHV2–70*01

1991 sequences assigned
351 (17.6%) exact matches, in which:
200 unique CDR3
5 unique J



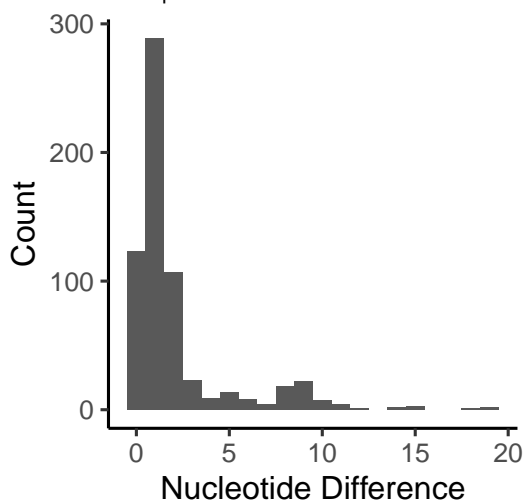
IGHV1–69–2*01

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



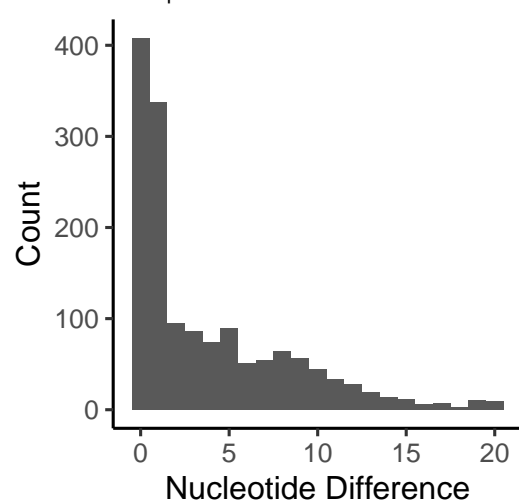
IGHV2–5*02

638 sequences assigned
123 (19.3%) exact matches, in which:
90 unique CDR3
5 unique J



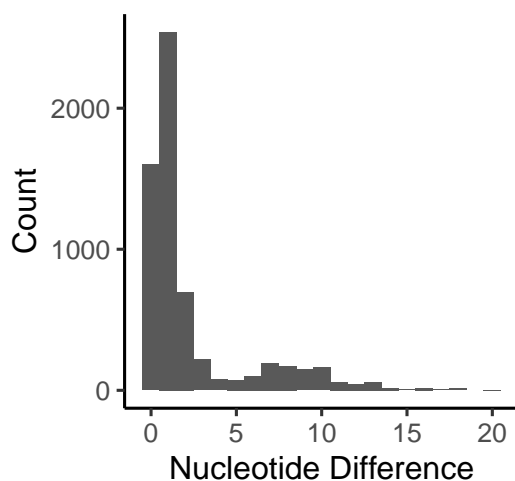
IGHV3–7*01

1515 sequences assigned
408 (26.9%) exact matches, in which:
333 unique CDR3
6 unique J



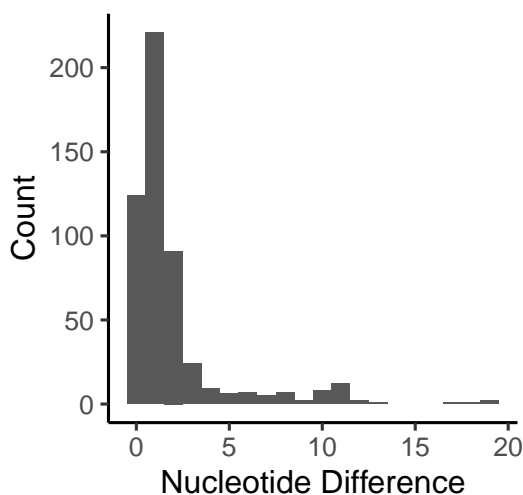
IGHV1–69*06_14

6221 sequences assigned
1602 (25.8%) exact matches, in which:
1184 unique CDR3
6 unique J



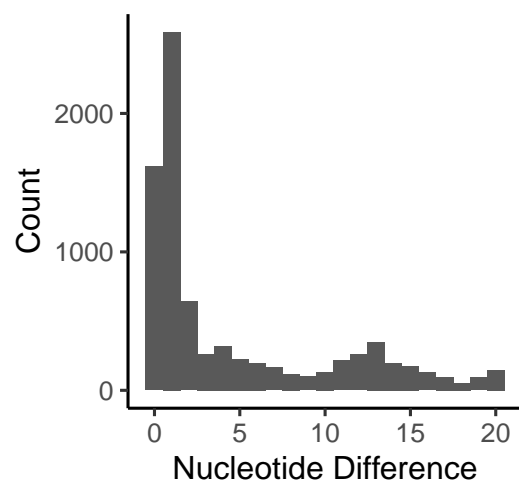
IGHV2–26*01

524 sequences assigned
124 (23.7%) exact matches, in which:
88 unique CDR3
5 unique J



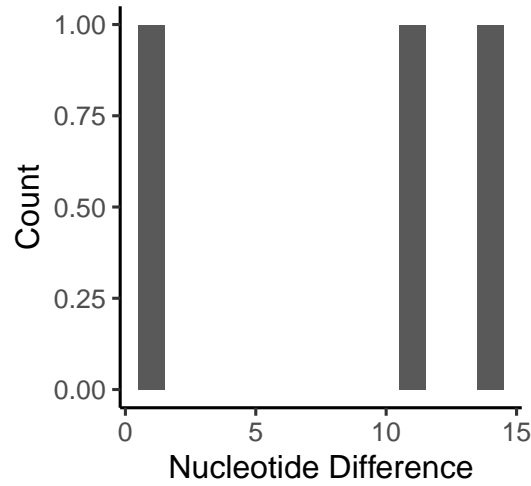
IGHV3–7*03

8660 sequences assigned
1616 (18.7%) exact matches, in which:
1025 unique CDR3
6 unique J



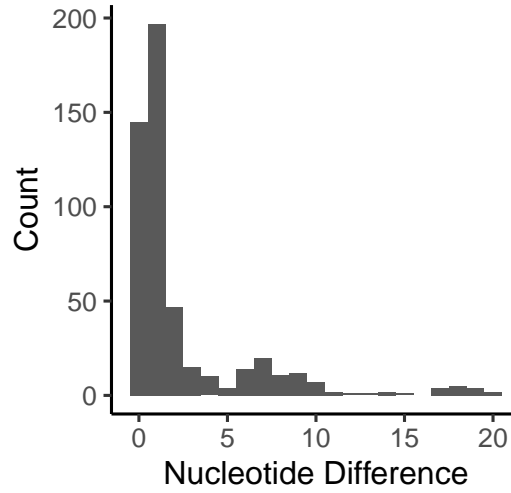
IGHV3-9*01

6 sequences assigned
No exact matches.



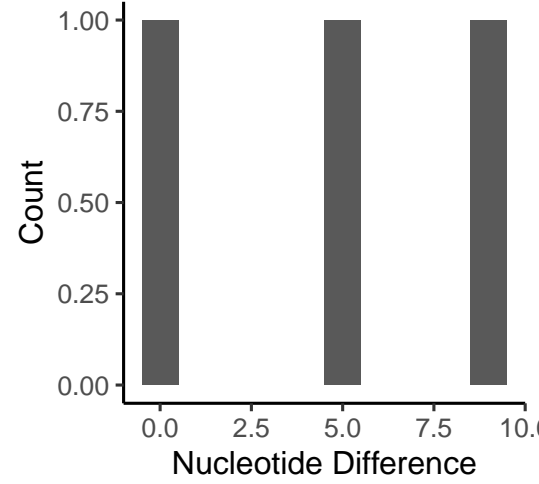
IGHV3-13*05

516 sequences assigned
145 (28.1%) exact matches, in which:
98 unique CDR3
6 unique J



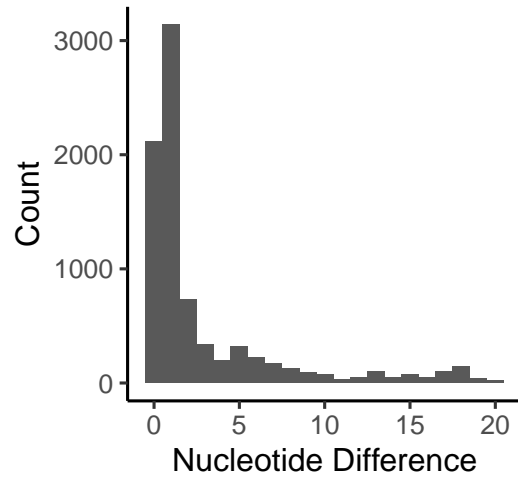
IGHV3-19*01

3 sequences assigned
1 (33.3%) exact matches, in which:
1 unique CDR3
1 unique J



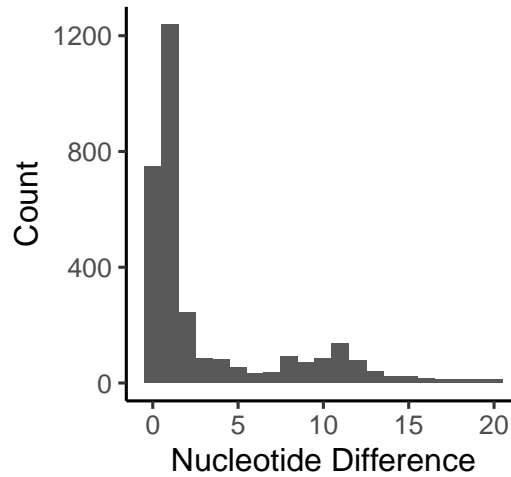
IGHV3-11*06

8225 sequences assigned
2119 (25.8%) exact matches, in which:
1246 unique CDR3
6 unique J



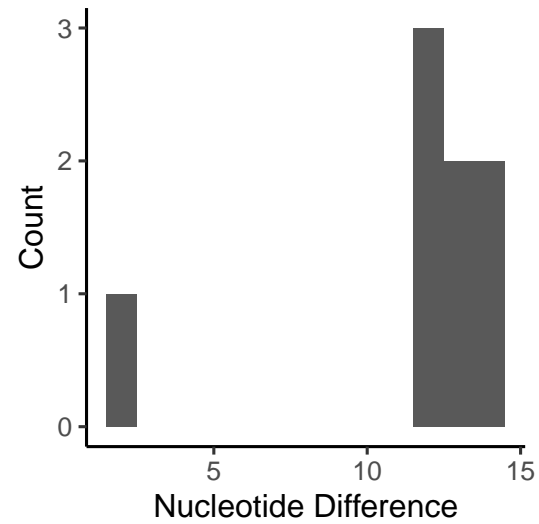
IGHV3-15*07

3223 sequences assigned
749 (23.2%) exact matches, in which:
405 unique CDR3
6 unique J



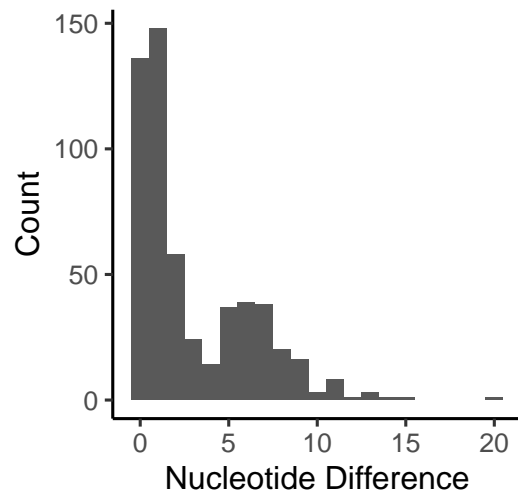
IGHV3-20*03_04

9 sequences assigned
No exact matches.



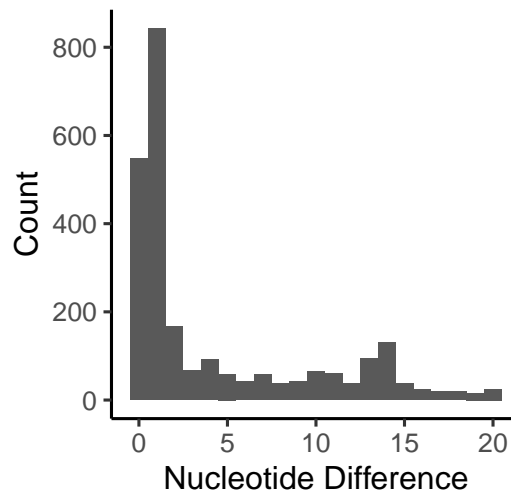
IGHV3-11*03_05

552 sequences assigned
136 (24.6%) exact matches, in which:
108 unique CDR3
6 unique J



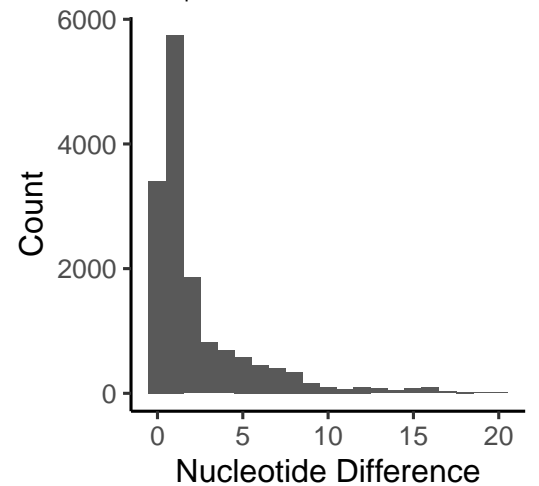
IGHV3-15*01_02

2629 sequences assigned
548 (20.8%) exact matches, in which:
301 unique CDR3
6 unique J



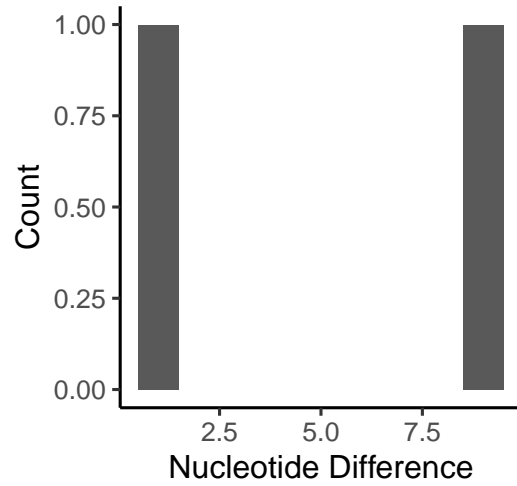
IGHV3-21*01_02

15273 sequences assigned
3403 (22.3%) exact matches, in which:
1932 unique CDR3
6 unique J



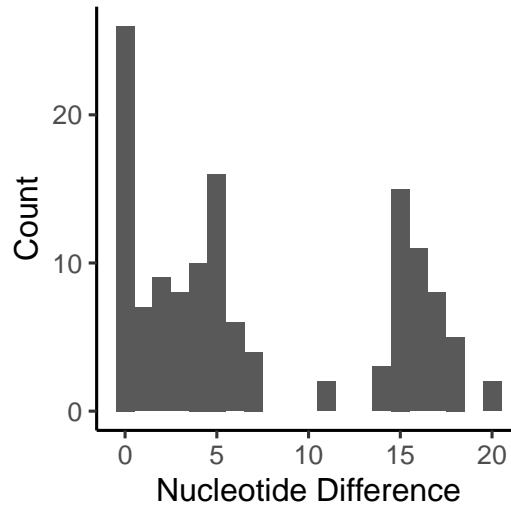
IGHV3-22*01_02

2 sequences assigned
No exact matches.



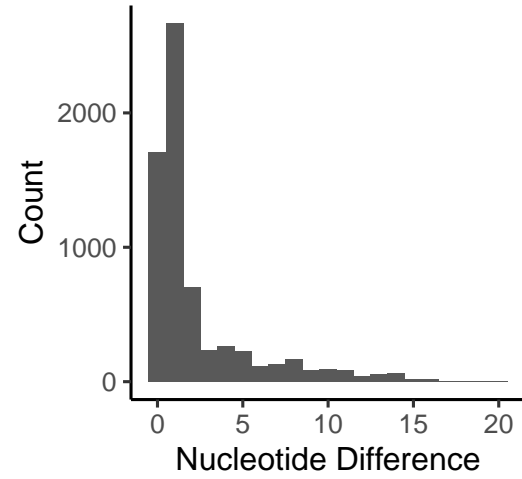
IGHV3-33*05

135 sequences assigned
26 (19.3%) exact matches, in which:
24 unique CDR3
4 unique J



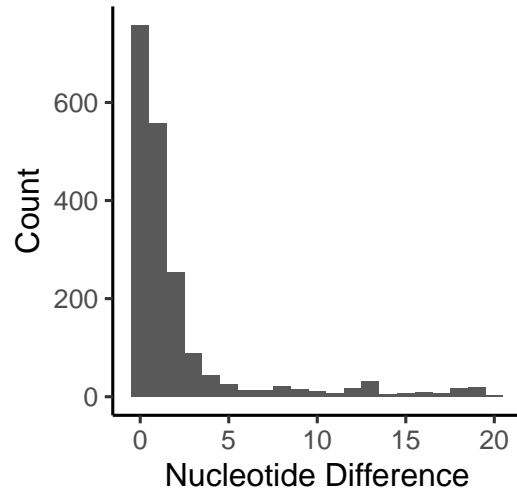
IGHV3-48*01

6740 sequences assigned
1710 (25.4%) exact matches, in which:
1015 unique CDR3
6 unique J



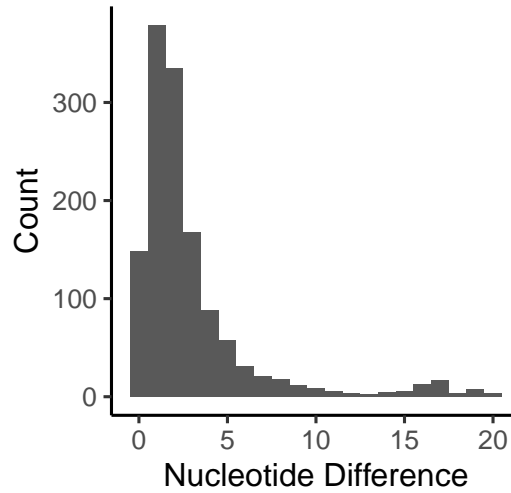
IGHV3-30*03

1954 sequences assigned
758 (38.8%) exact matches, in which:
569 unique CDR3
6 unique J



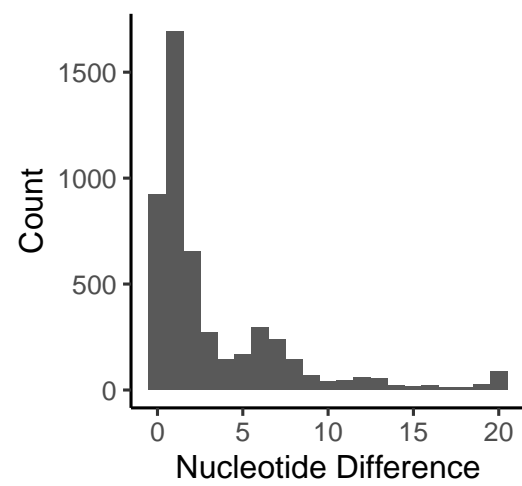
IGHV3-33*06

1344 sequences assigned
148 (11%) exact matches, in which:
125 unique CDR3
6 unique J



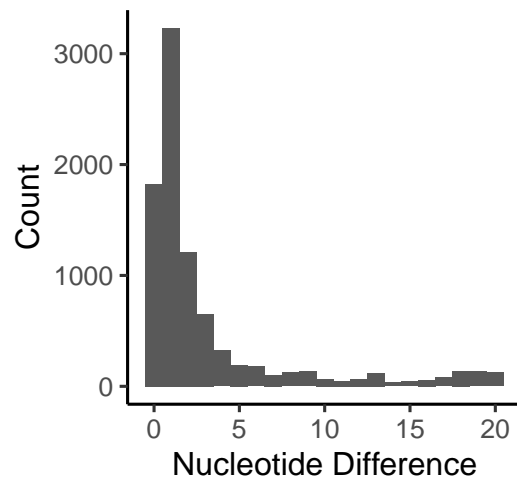
IGHV3-48*03

8012 sequences assigned
922 (11.5%) exact matches, in which:
516 unique CDR3
6 unique J



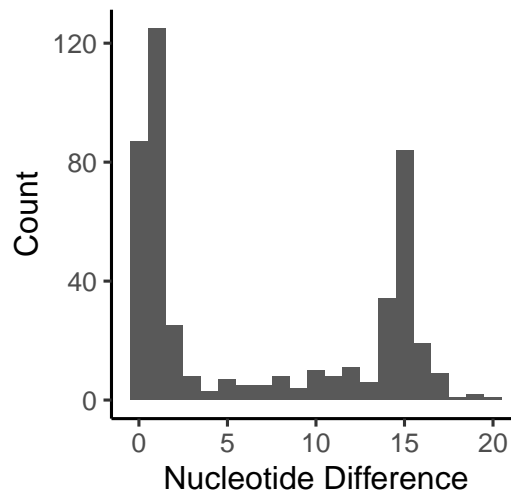
IGHV3-33*01

9089 sequences assigned
1826 (20.1%) exact matches, in which:
1112 unique CDR3
6 unique J



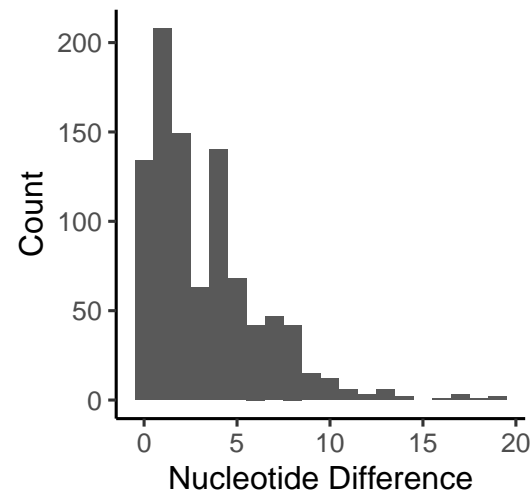
IGHV3-43*01

467 sequences assigned
87 (18.6%) exact matches, in which:
48 unique CDR3
3 unique J



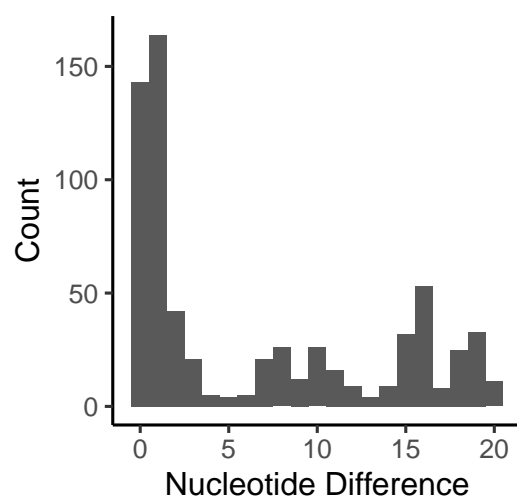
IGHV3-48*04

951 sequences assigned
134 (14.1%) exact matches, in which:
117 unique CDR3
5 unique J



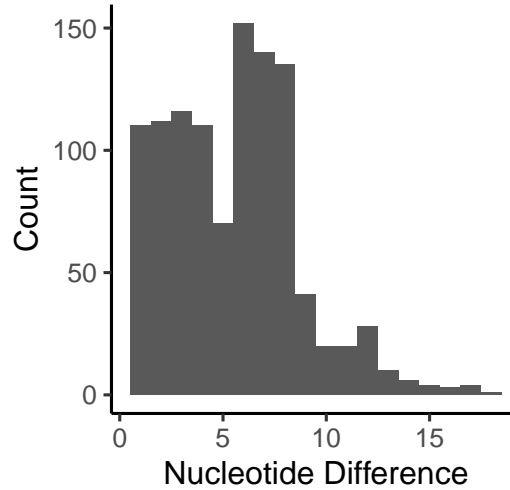
IGHV3-49*04

925 sequences assigned
143 (15.5%) exact matches, in which:
86 unique CDR3
5 unique J



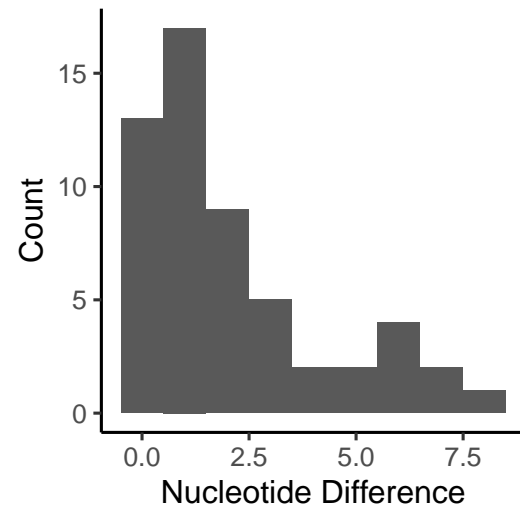
IGHV3-64*04

1084 sequences assigned
No exact matches.



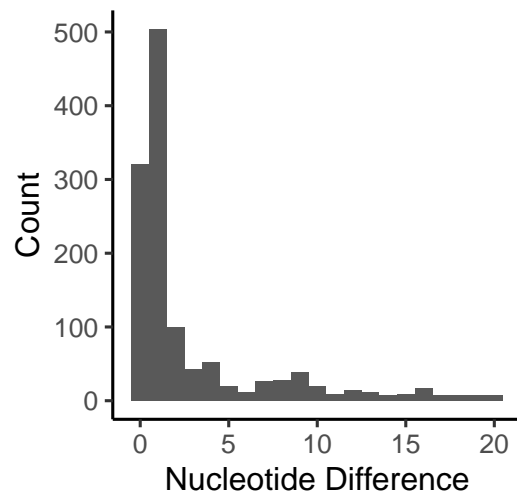
IGHV3-66*03

57 sequences assigned
13 (22.8%) exact matches, in which:
12 unique CDR3
3 unique J



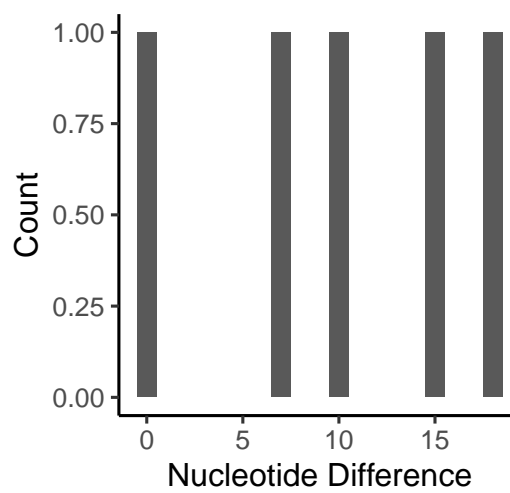
IGHV3-49*03_05

1295 sequences assigned
320 (24.7%) exact matches, in which:
176 unique CDR3
4 unique J



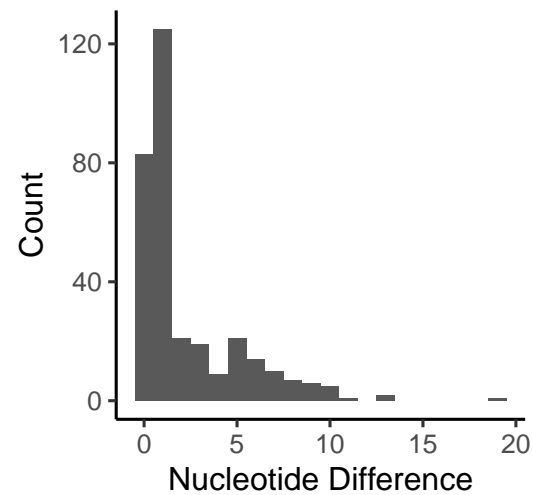
IGHV3-66*01

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



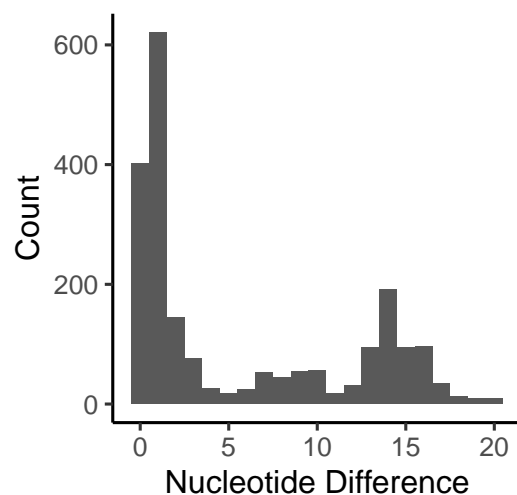
IGHV3-69-1*01

326 sequences assigned
83 (25.5%) exact matches, in which:
63 unique CDR3
5 unique J



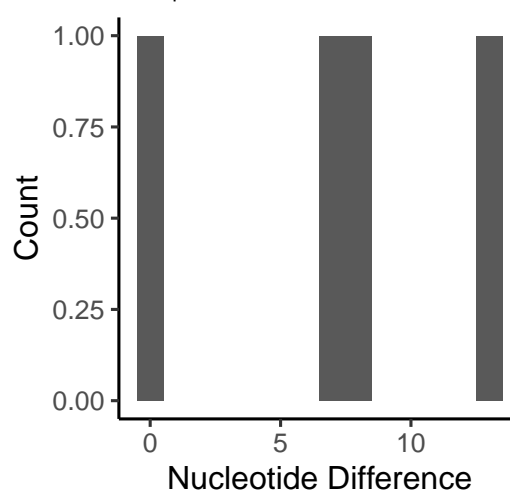
IGHV3-53*01_02

2201 sequences assigned
402 (18.3%) exact matches, in which:
262 unique CDR3
6 unique J



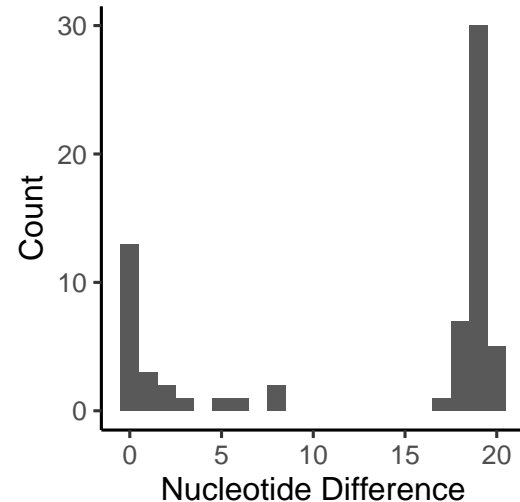
IGHV3-66*02

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



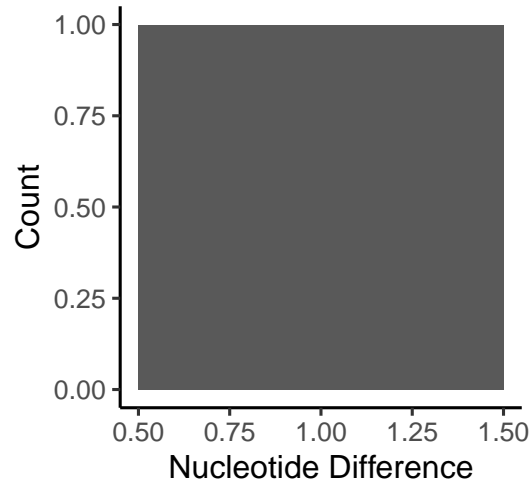
IGHV3-69-1*02

69 sequences assigned
13 (18.8%) exact matches, in which:
13 unique CDR3
4 unique J



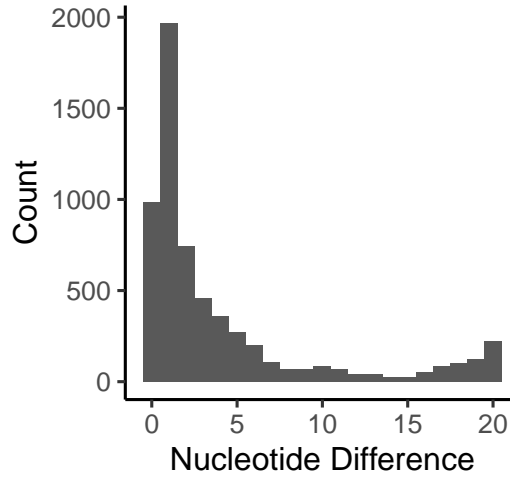
IGHV3-71*02

1 sequences assigned
No exact matches.



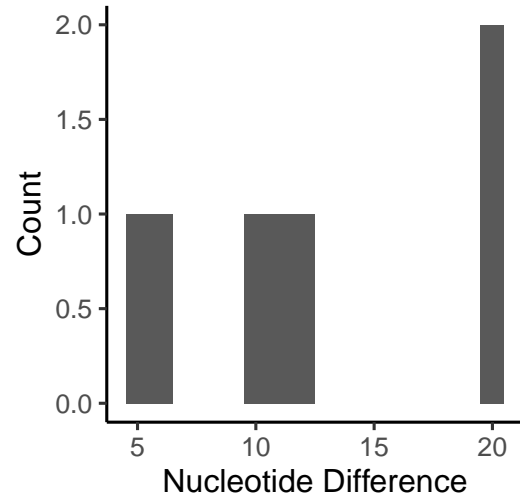
IGHV3-74*01_02

9383 sequences assigned
983 (10.5%) exact matches, in which:
596 unique CDR3
6 unique J



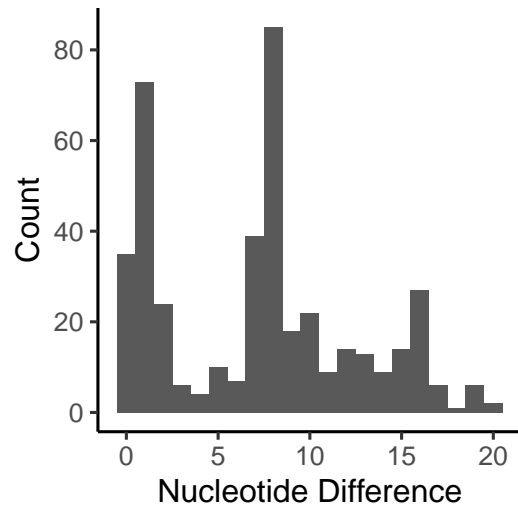
IGHV3-NL1*01

8 sequences assigned
No exact matches.



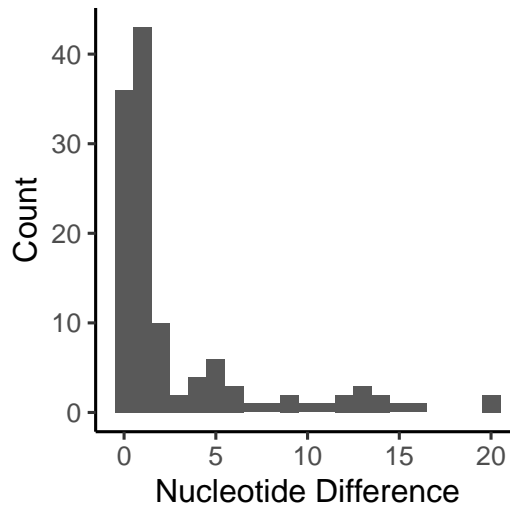
IGHV3-72*01

694 sequences assigned
35 (5%) exact matches, in which:
18 unique CDR3
3 unique J



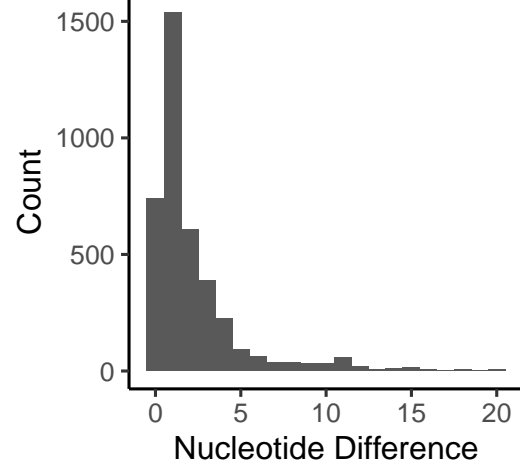
IGHV3-43D*04

148 sequences assigned
36 (24.3%) exact matches, in which:
24 unique CDR3
2 unique J



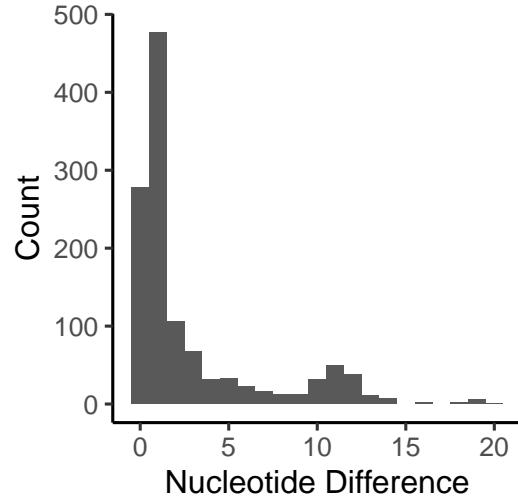
IGHV4-4*07

4030 sequences assigned
742 (18.4%) exact matches, in which:
513 unique CDR3
6 unique J



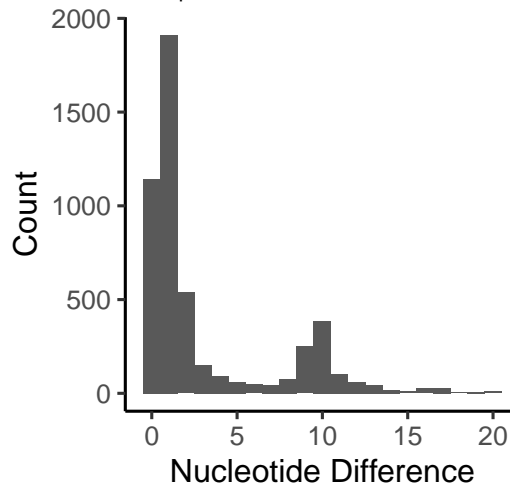
IGHV3-73*01_02

1205 sequences assigned
278 (23.1%) exact matches, in which:
160 unique CDR3
6 unique J



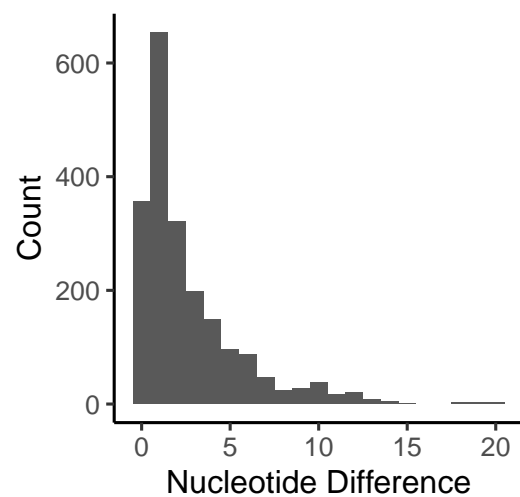
IGHV3-64D*06

5116 sequences assigned
1144 (22.4%) exact matches, in which:
676 unique CDR3
6 unique J



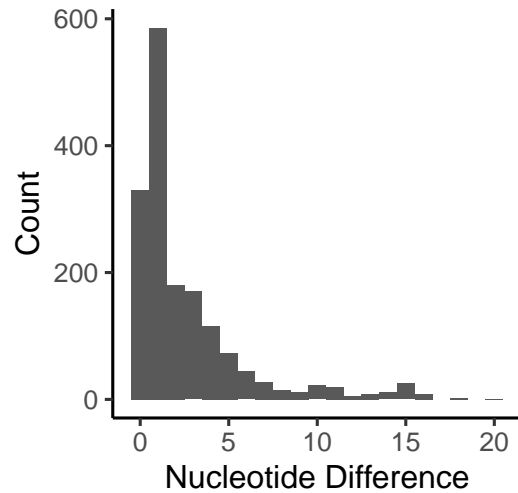
IGHV4-30-2*01

2303 sequences assigned
357 (15.5%) exact matches, in which:
255 unique CDR3
6 unique J



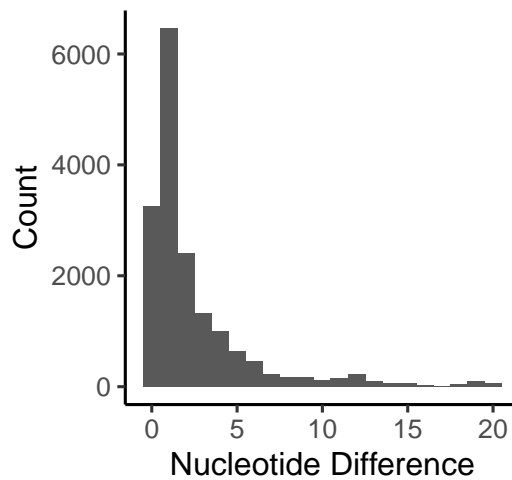
IGHV4-30-4*01

1677 sequences assigned
330 (19.7%) exact matches, in which:
236 unique CDR3
6 unique J



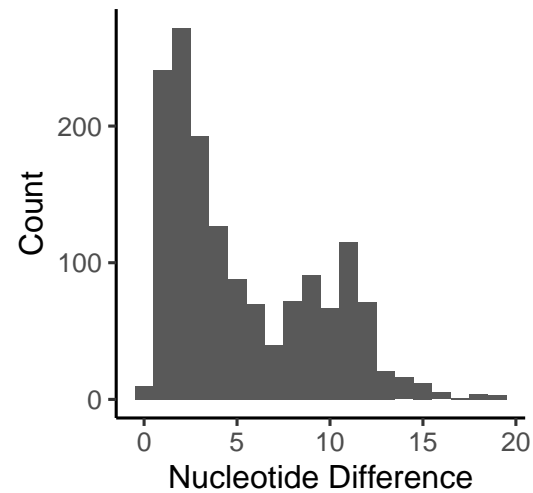
IGHV4-34*01_02

17303 sequences assigned
3249 (18.8%) exact matches, in which:
2094 unique CDR3
6 unique J



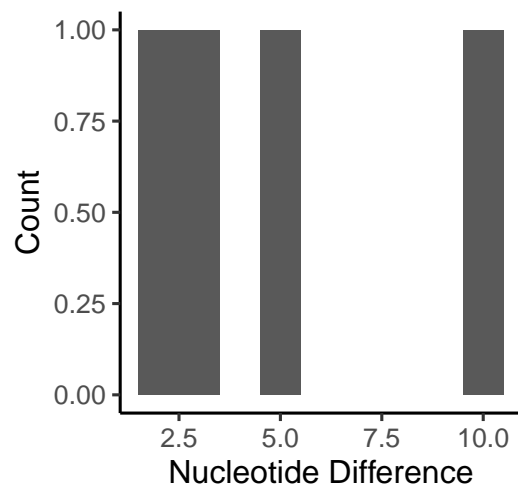
IGHV4-39*07

1521 sequences assigned
10 (0.7%) exact matches, in which:
10 unique CDR3
3 unique J



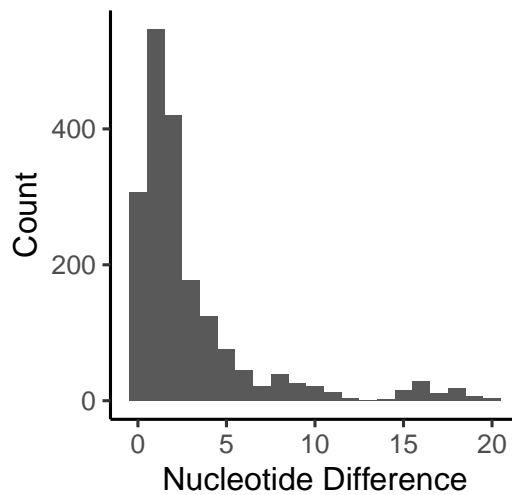
IGHV4-30-2*04

4 sequences assigned
No exact matches.



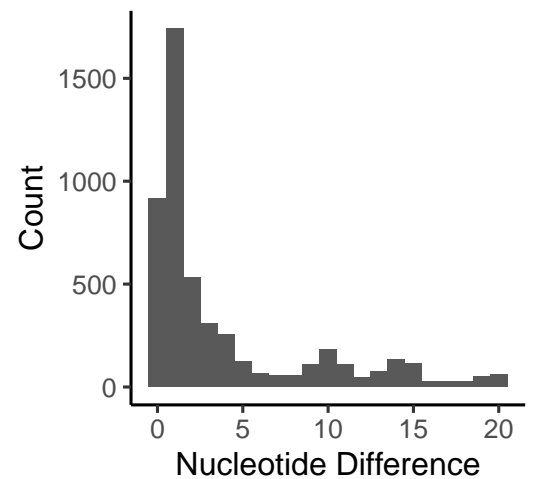
IGHV4-38-2*01

1941 sequences assigned
307 (15.8%) exact matches, in which:
249 unique CDR3
6 unique J



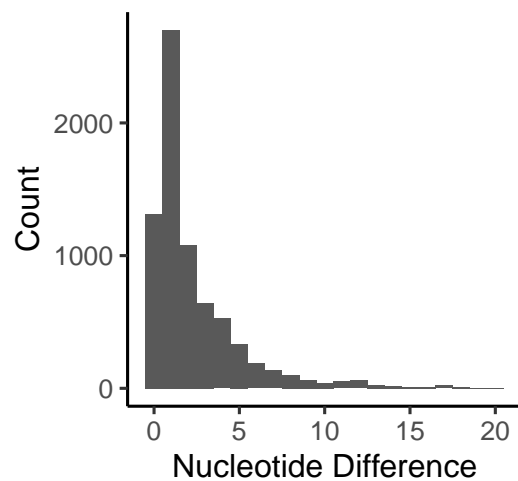
IGHV4-39*01_05

5168 sequences assigned
916 (17.7%) exact matches, in which:
622 unique CDR3
6 unique J



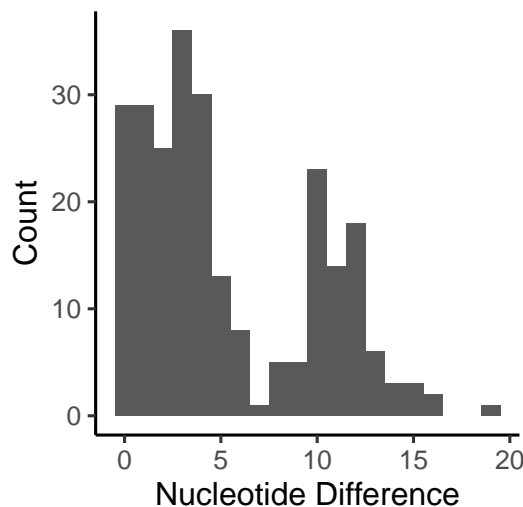
IGHV4-31*03_04

7384 sequences assigned
1314 (17.8%) exact matches, in which:
892 unique CDR3
6 unique J



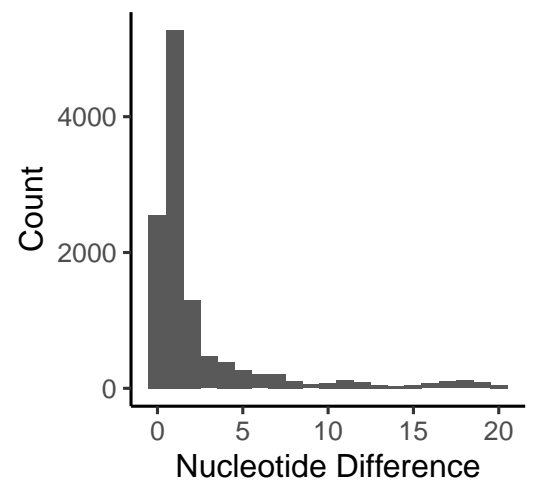
IGHV4-38-2*02

280 sequences assigned
29 (10.4%) exact matches, in which:
23 unique CDR3
6 unique J



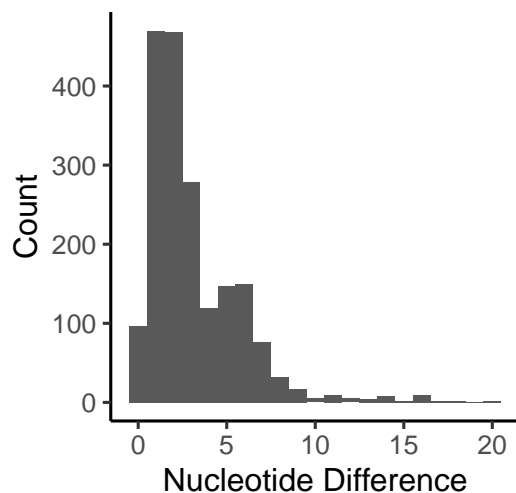
IGHV4-59*01_07

12689 sequences assigned
2549 (20.1%) exact matches, in which:
1727 unique CDR3
6 unique J



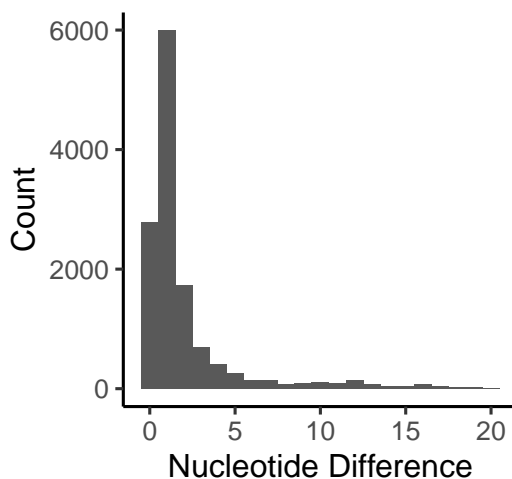
IGHV4-59*12

1958 sequences assigned
97 (5%) exact matches, in which:
94 unique CDR3
6 unique J



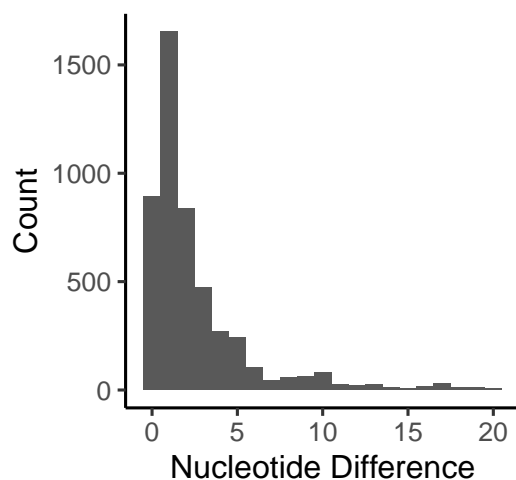
IGHV5-51*01_03

13081 sequences assigned
2781 (21.3%) exact matches, in which:
1455 unique CDR3
6 unique J



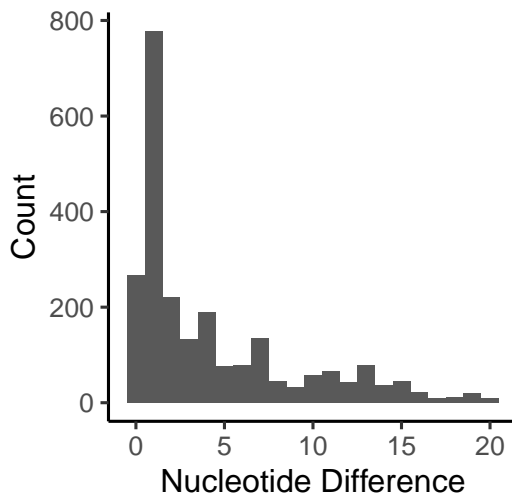
IGHV4-61*01

4986 sequences assigned
894 (17.9%) exact matches, in which:
692 unique CDR3
6 unique J



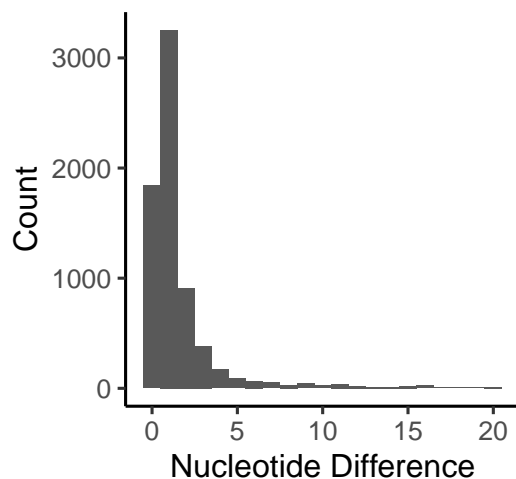
IGHV6-1*01_02

2463 sequences assigned
267 (10.8%) exact matches, in which:
169 unique CDR3
5 unique J



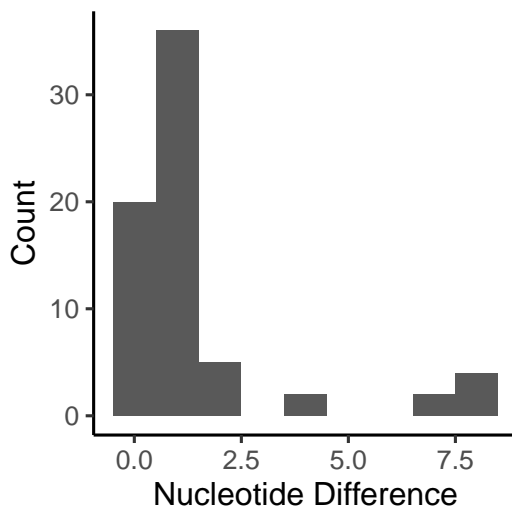
IGHV5-10-1*01_03

7067 sequences assigned
1842 (26.1%) exact matches, in which:
1024 unique CDR3
6 unique J



IGHV7-4-1*01

69 sequences assigned
20 (29%) exact matches, in which:
16 unique CDR3
4 unique J





Novel sequence(s) IGHV1-69*01_12_13_G238A IGHV3-48*03_T303G 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) IGHV5-51*07_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s) IGHV3-30*01_T288C 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 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_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.