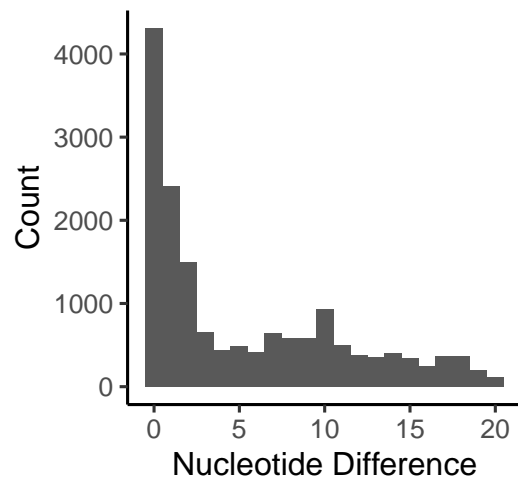


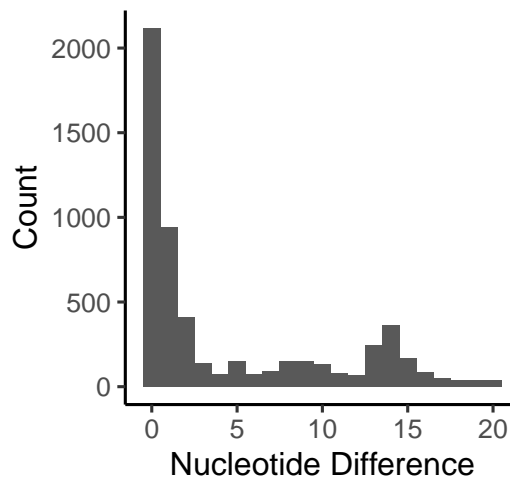
IGHV1-2*02

17154 sequences assigned
4307 (25.1%) exact matches, in which:
3989 unique CDR3
6 unique J



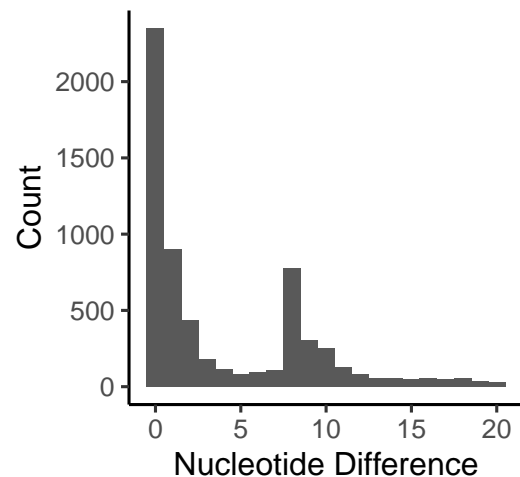
IGHV1-8*01

5691 sequences assigned
2116 (37.2%) exact matches, in which:
1996 unique CDR3
6 unique J



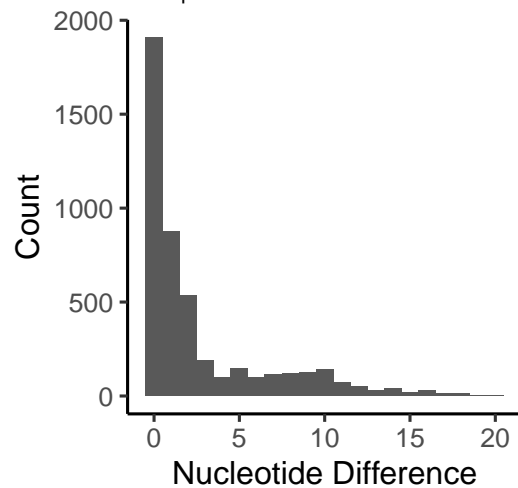
IGHV1-18*04

6565 sequences assigned
2349 (35.8%) exact matches, in which:
2239 unique CDR3
6 unique J



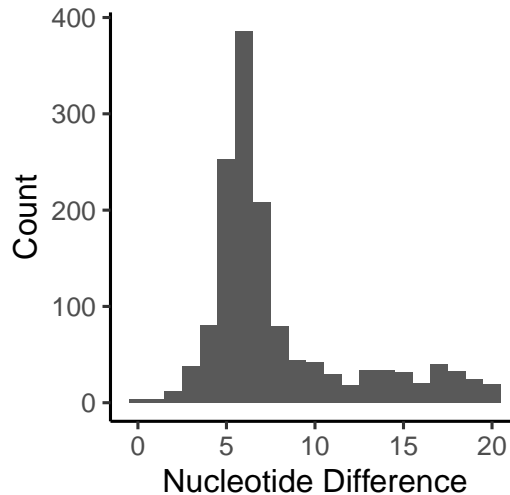
IGHV1-2*04

4774 sequences assigned
1907 (39.9%) exact matches, in which:
1815 unique CDR3
6 unique J



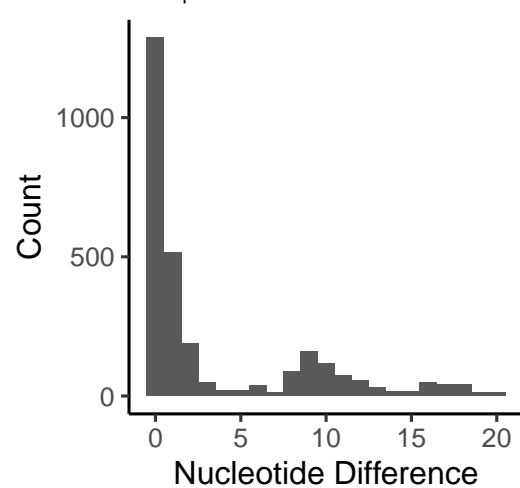
IGHV1-8*02

1519 sequences assigned
4 (0.3%) exact matches, in which:
4 unique CDR3
3 unique J



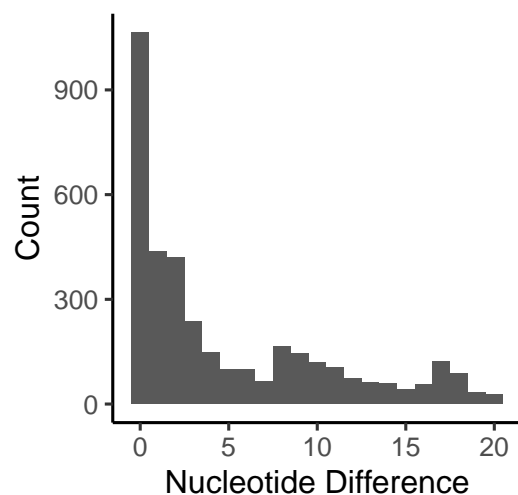
IGHV1-24*01

2989 sequences assigned
1287 (43.1%) exact matches, in which:
1224 unique CDR3
6 unique J



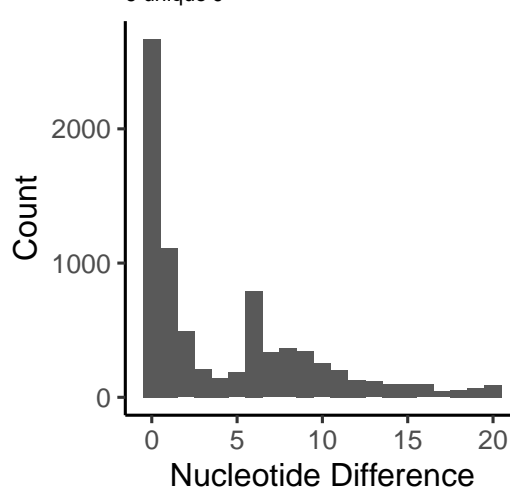
IGHV1-3*01_05

3948 sequences assigned
1065 (27%) exact matches, in which:
1000 unique CDR3
6 unique J



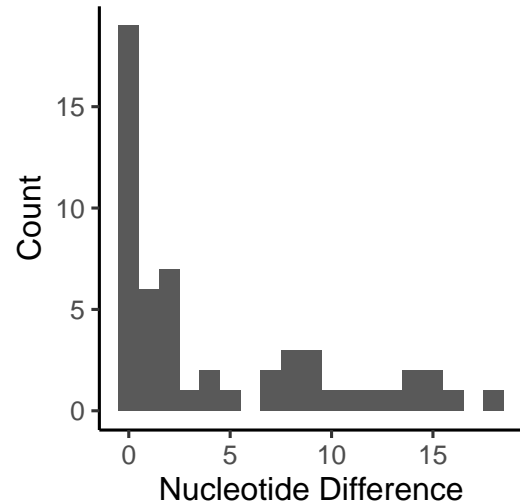
IGHV1-18*01

8843 sequences assigned
2669 (30.2%) exact matches, in which:
2562 unique CDR3
6 unique J



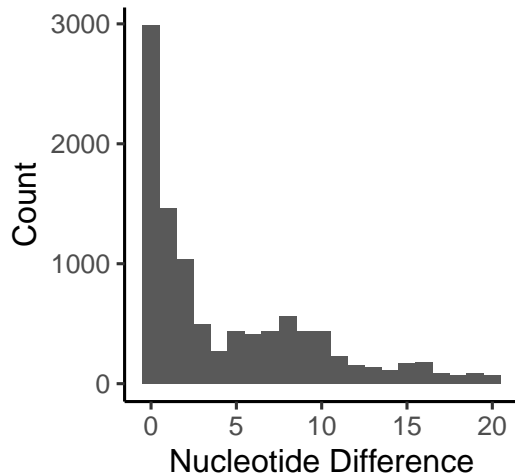
IGHV1-45*02

56 sequences assigned
19 (33.9%) exact matches, in which:
18 unique CDR3
4 unique J



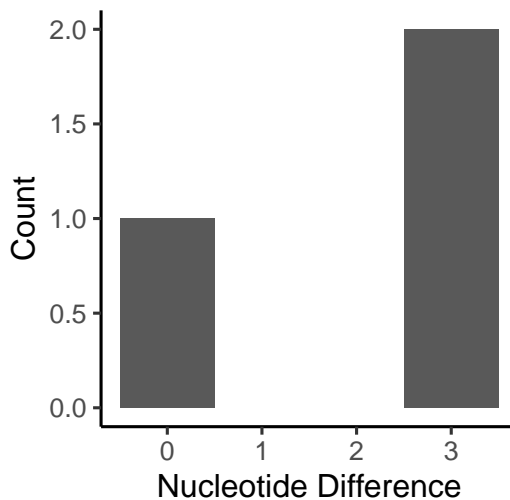
IGHV1-46*01

11103 sequences assigned
2987 (26.9%) exact matches, in which:
2839 unique CDR3
6 unique J



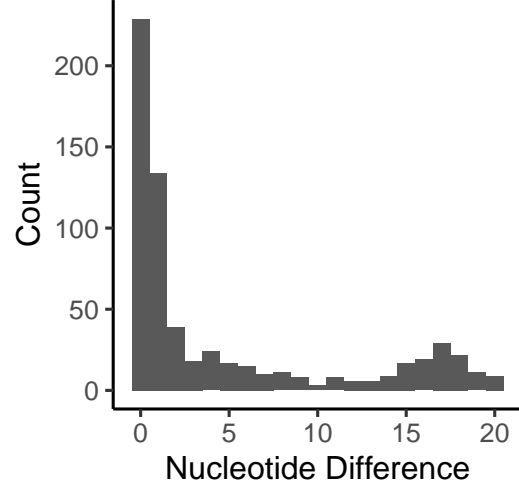
IGHV1-68*01

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



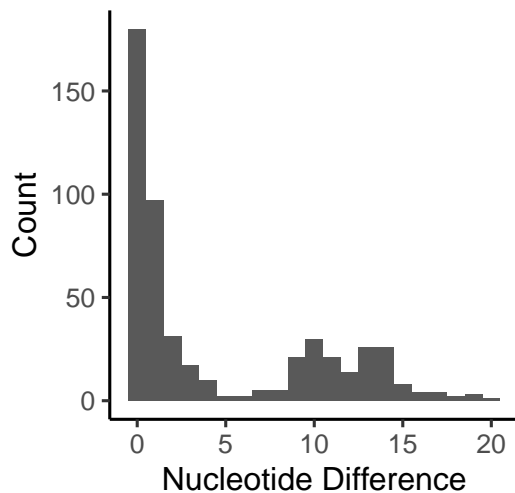
IGHV2-5*01

706 sequences assigned
229 (32.4%) exact matches, in which:
215 unique CDR3
6 unique J



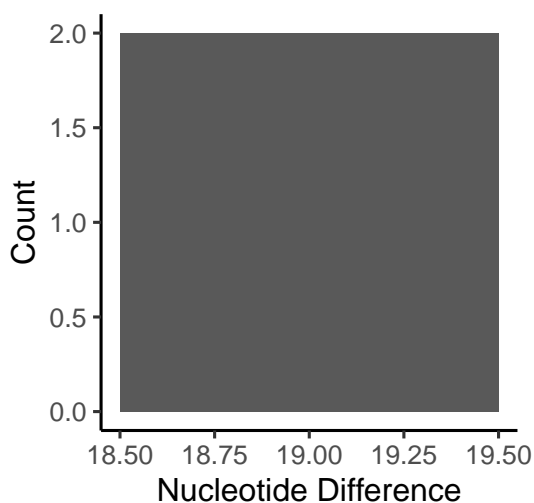
IGHV1-58*02

522 sequences assigned
180 (34.5%) exact matches, in which:
173 unique CDR3
6 unique J



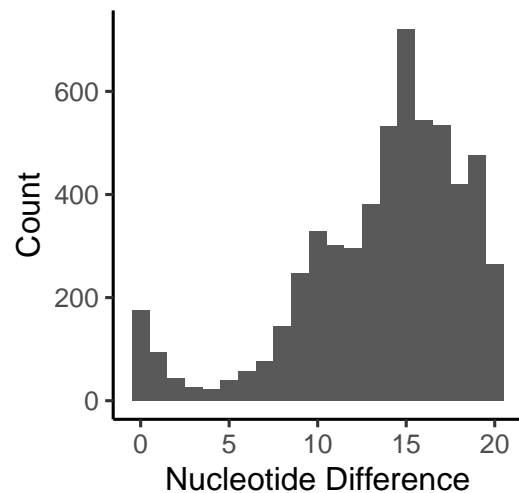
IGHV1-69-2*01

2 sequences assigned
No exact matches.



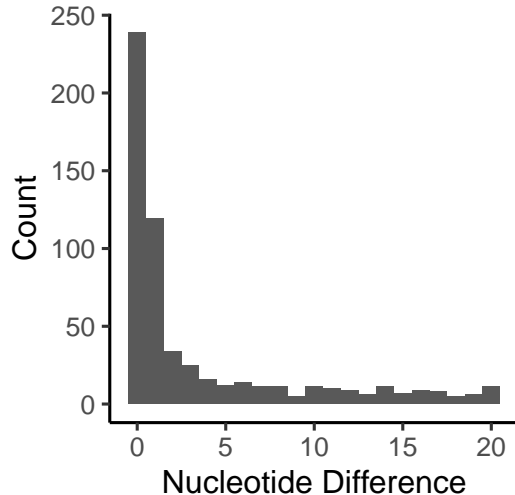
IGHV2-5*02

6985 sequences assigned
175 (2.5%) exact matches, in which:
165 unique CDR3
6 unique J



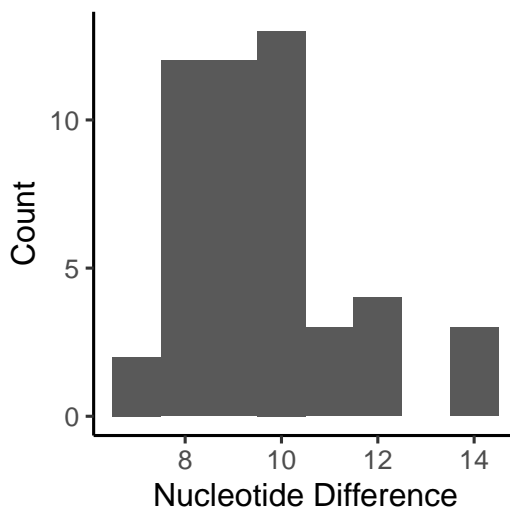
IGHV1-58*01_03

609 sequences assigned
239 (39.2%) exact matches, in which:
230 unique CDR3
5 unique J



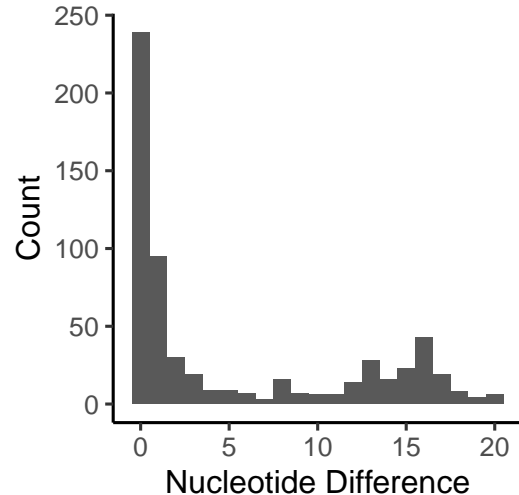
IGHV1-NL1*01

49 sequences assigned
No exact matches.



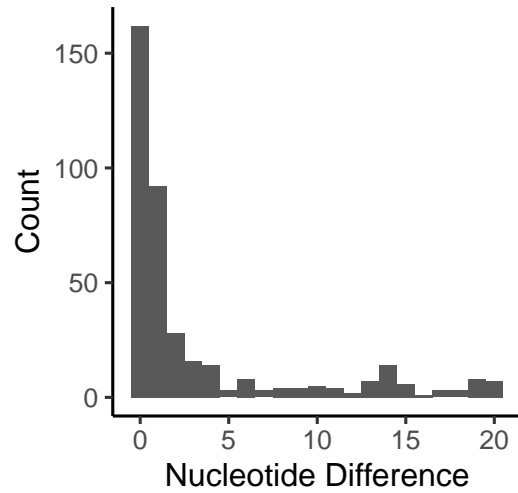
IGHV2-26*01

634 sequences assigned
239 (37.7%) exact matches, in which:
223 unique CDR3
5 unique J



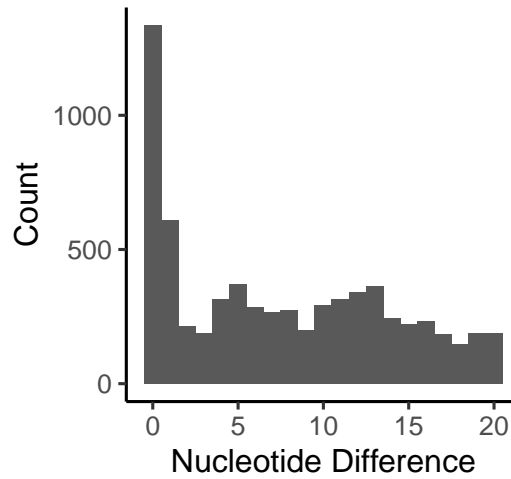
IGHV2-70*01

411 sequences assigned
162 (39.4%) exact matches, in which:
149 unique CDR3
5 unique J



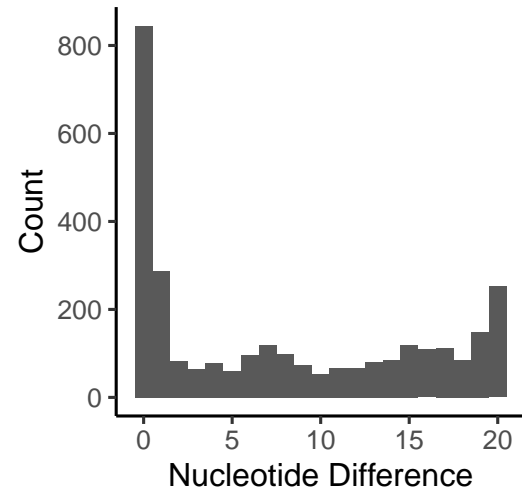
IGHV3-7*01

7852 sequences assigned
1335 (17%) exact matches, in which:
1161 unique CDR3
6 unique J



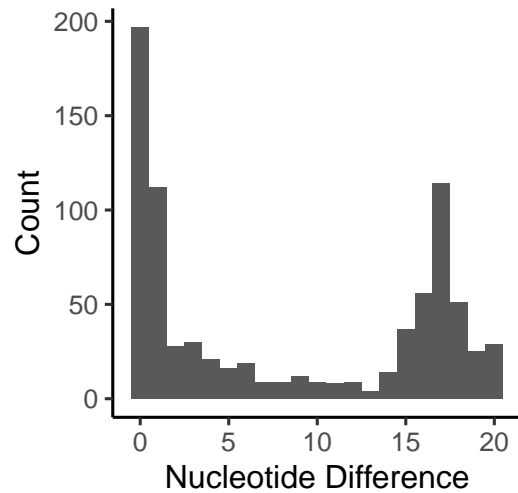
IGHV3-11*01

4217 sequences assigned
845 (20%) exact matches, in which:
723 unique CDR3
6 unique J



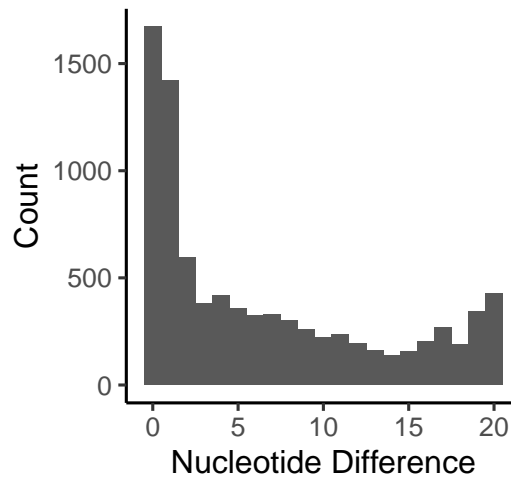
IGHV2-70*11_15

853 sequences assigned
197 (23.1%) exact matches, in which:
192 unique CDR3
6 unique J



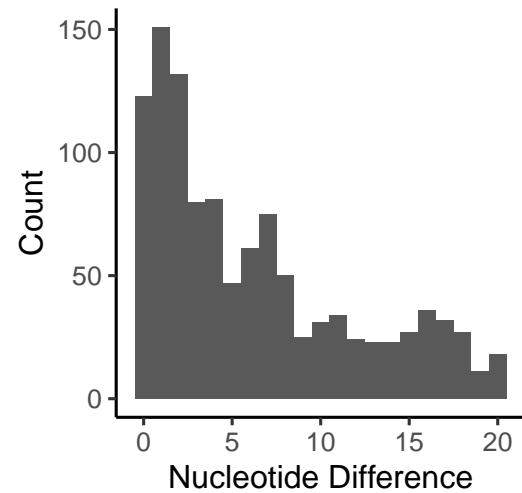
IGHV3-7*03

11255 sequences assigned
1672 (14.9%) exact matches, in which:
1218 unique CDR3
6 unique J



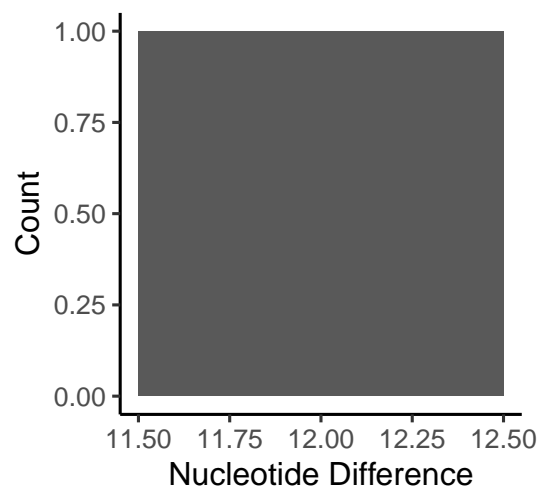
IGHV3-11*04

1215 sequences assigned
123 (10.1%) exact matches, in which:
123 unique CDR3
4 unique J



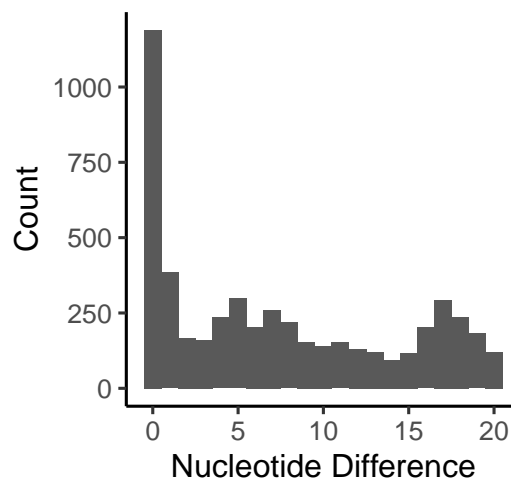
IGHV2-70D*04

1 sequences assigned
No exact matches.



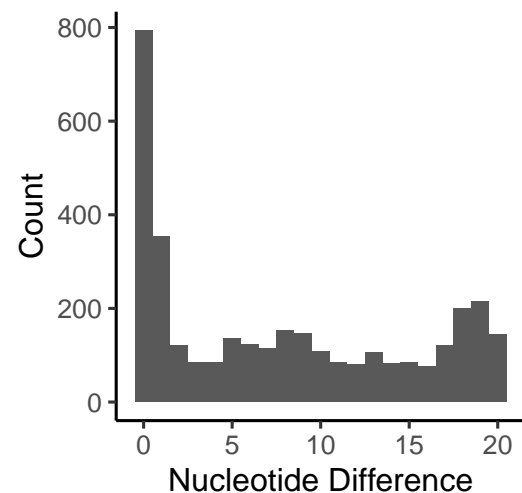
IGHV3-9*01

6039 sequences assigned
1189 (19.7%) exact matches, in which:
972 unique CDR3
6 unique J



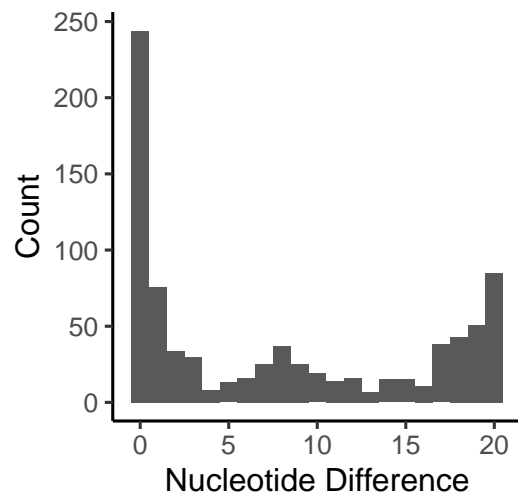
IGHV3-11*06

4360 sequences assigned
794 (18.2%) exact matches, in which:
677 unique CDR3
6 unique J



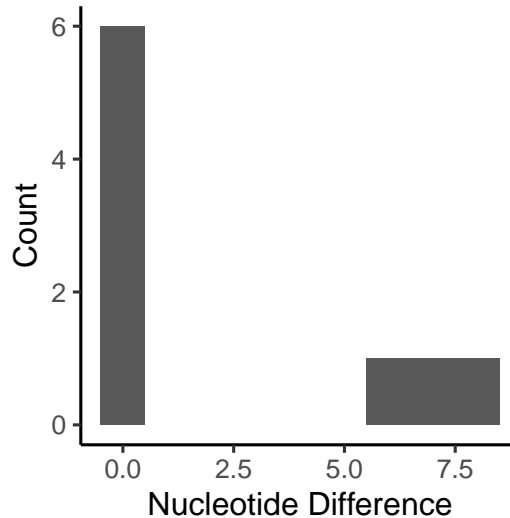
IGHV3-13*01

1112 sequences assigned
244 (21.9%) exact matches, in which:
208 unique CDR3
5 unique J



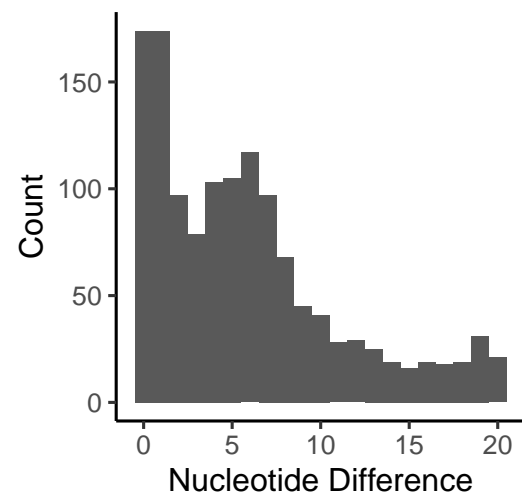
IGHV3-19*01

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



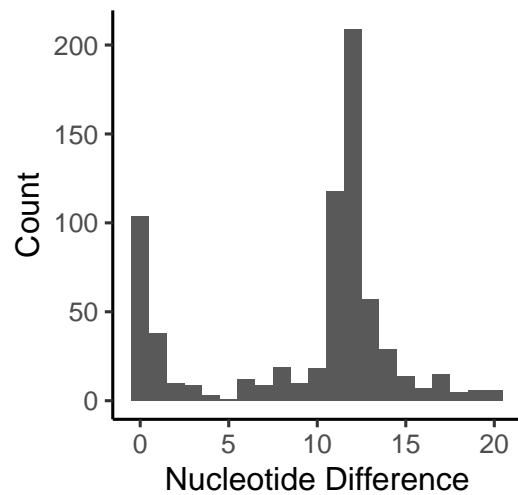
IGHV3-21*04

1526 sequences assigned
174 (11.4%) exact matches, in which:
171 unique CDR3
6 unique J



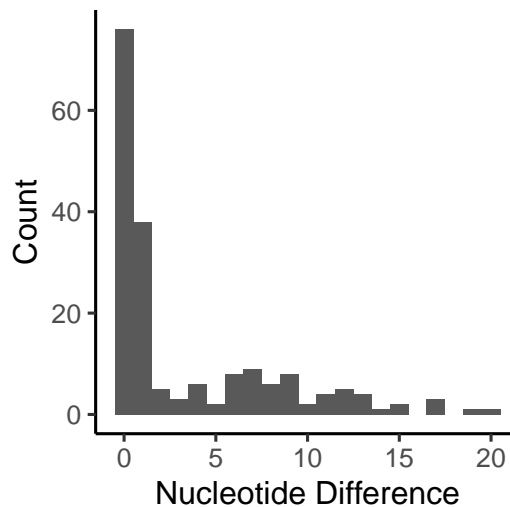
IGHV3-13*05

713 sequences assigned
104 (14.6%) exact matches, in which:
87 unique CDR3
5 unique J



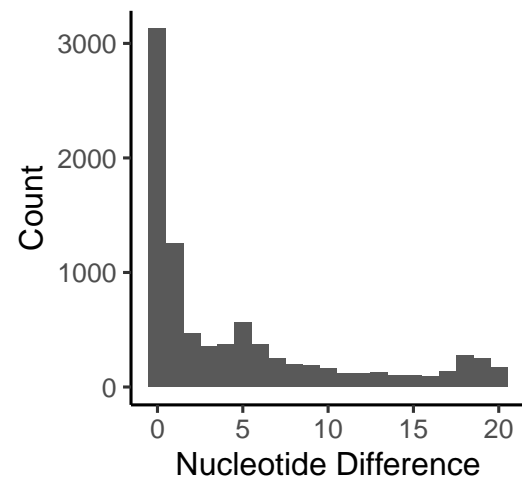
IGHV3-20*01_02

186 sequences assigned
76 (40.9%) exact matches, in which:
60 unique CDR3
4 unique J



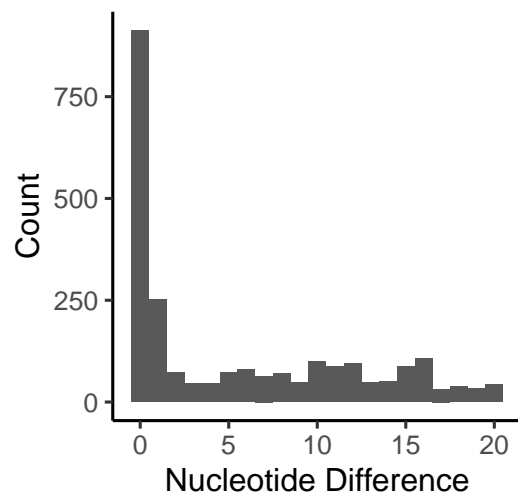
IGHV3-21*01_02

9930 sequences assigned
3128 (31.5%) exact matches, in which:
2566 unique CDR3
6 unique J



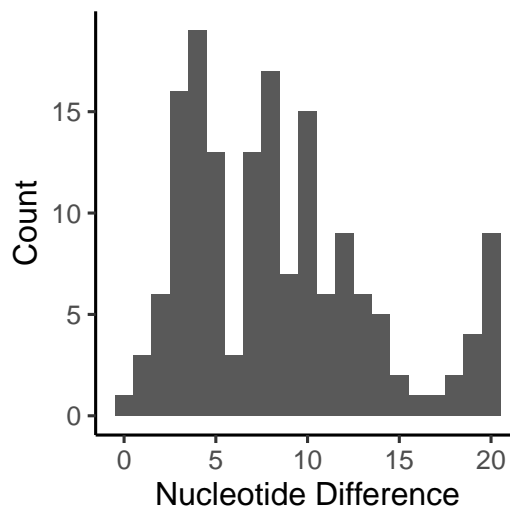
IGHV3-15*01_02

2969 sequences assigned
913 (30.8%) exact matches, in which:
735 unique CDR3
6 unique J



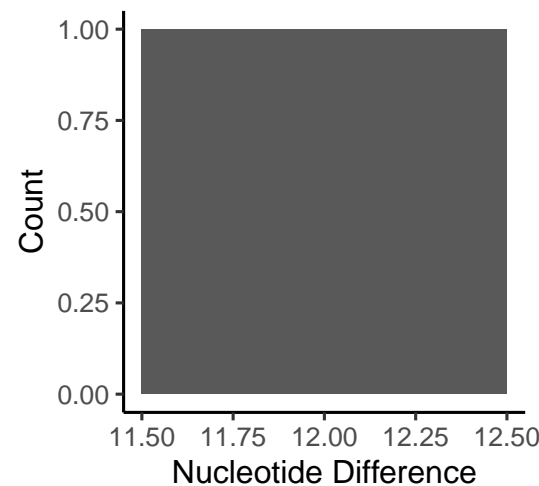
IGHV3-20*03_04

178 sequences assigned
1 (0.6%) exact matches, in which:
1 unique CDR3
1 unique J



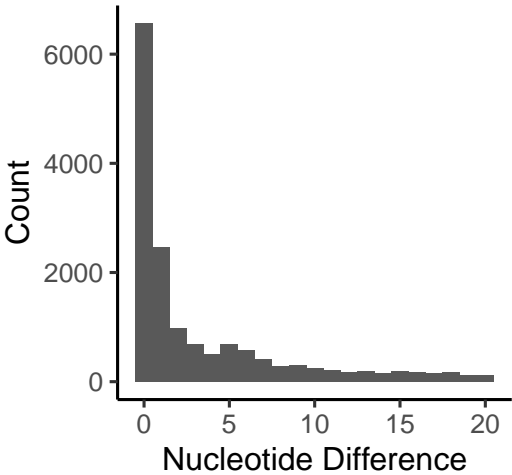
IGHV3-22*01_02

1 sequences assigned
No exact matches.



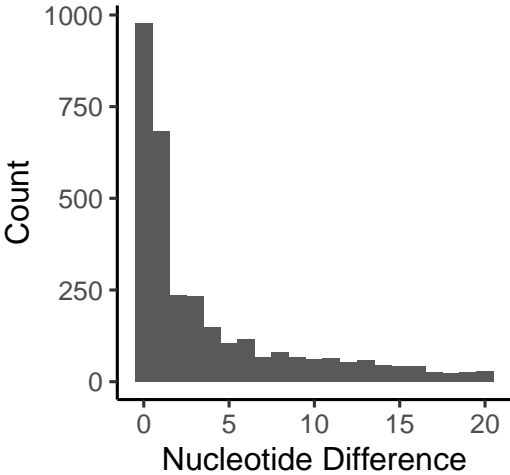
IGHV3-30-3*01

29565 sequences assigned
6563 (22.2%) exact matches, in which:
5297 unique CDR3
6 unique J



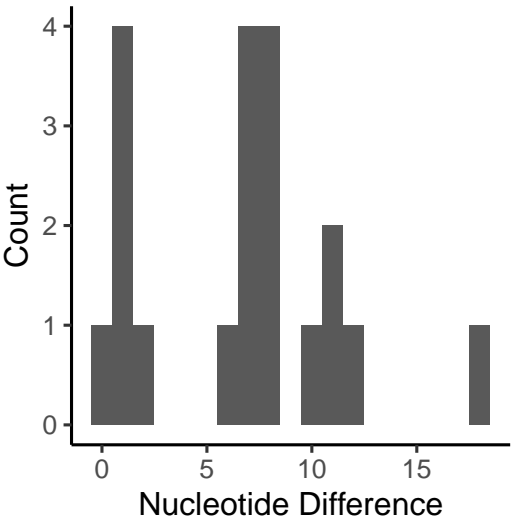
IGHV3-33*01

3534 sequences assigned
977 (27.6%) exact matches, in which:
839 unique CDR3
6 unique J



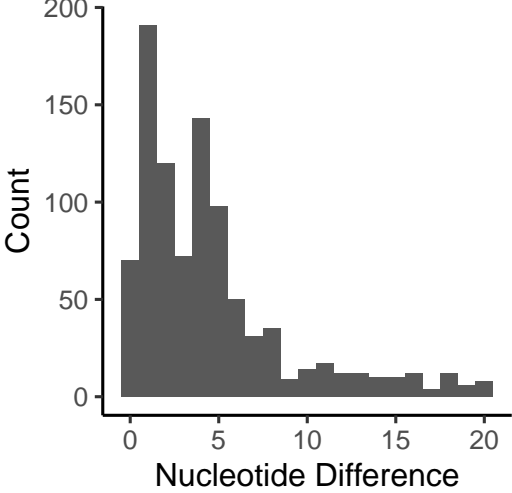
IGHV3-35*01

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



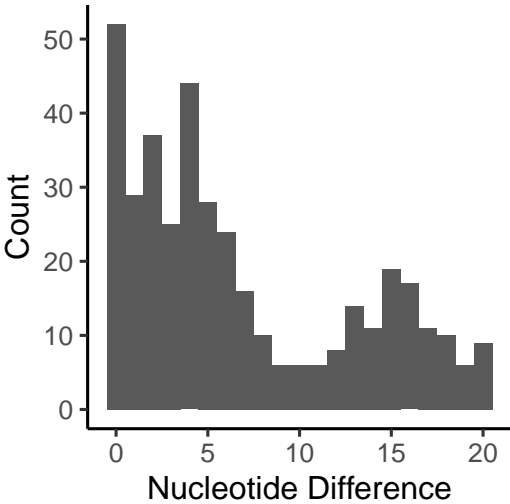
IGHV3-30-3*02

1344 sequences assigned
70 (5.2%) exact matches, in which:
65 unique CDR3
6 unique J



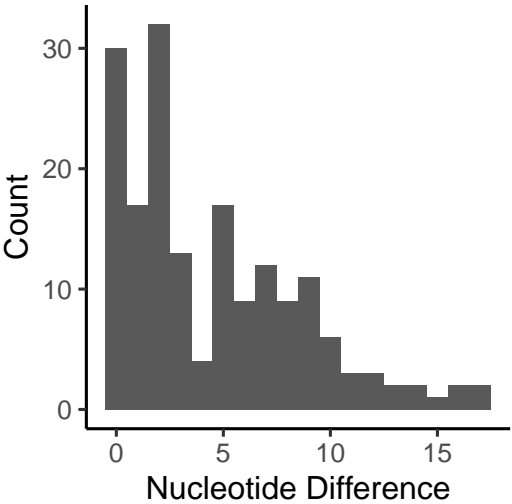
IGHV3-33*05

430 sequences assigned
52 (12.1%) exact matches, in which:
51 unique CDR3
5 unique J



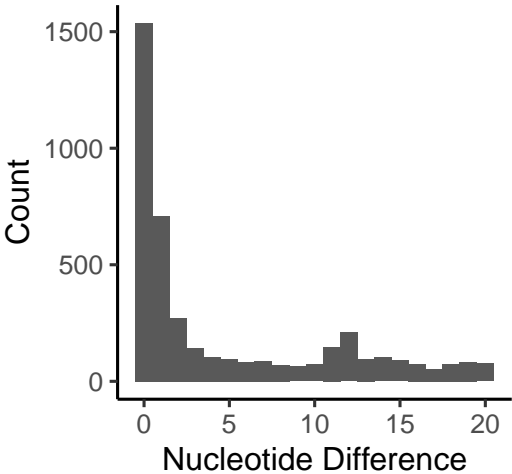
IGHV3-38-3*01

175 sequences assigned
30 (17.1%) exact matches, in which:
30 unique CDR3
3 unique J



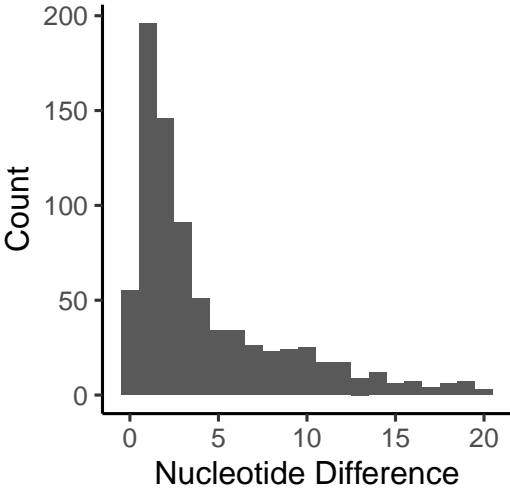
IGHV3-30*03

4966 sequences assigned
1537 (31%) exact matches, in which:
1457 unique CDR3
6 unique J



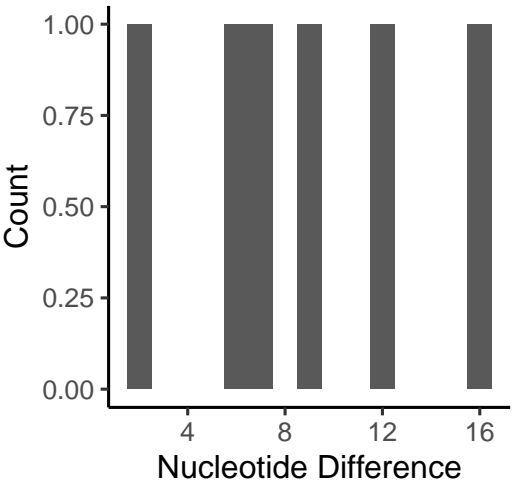
IGHV3-33*06

847 sequences assigned
55 (6.5%) exact matches, in which:
54 unique CDR3
4 unique J



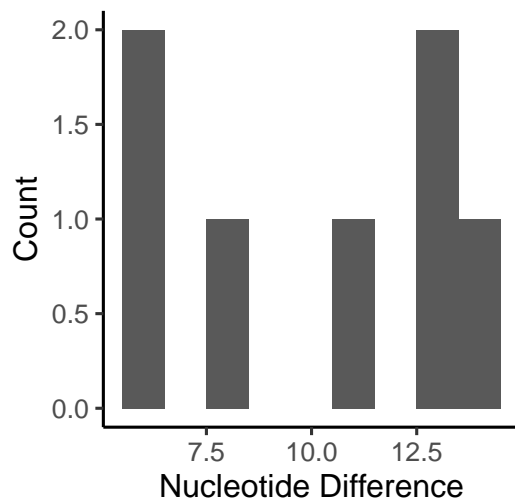
IGHV3-38*02

6 sequences assigned
No exact matches.



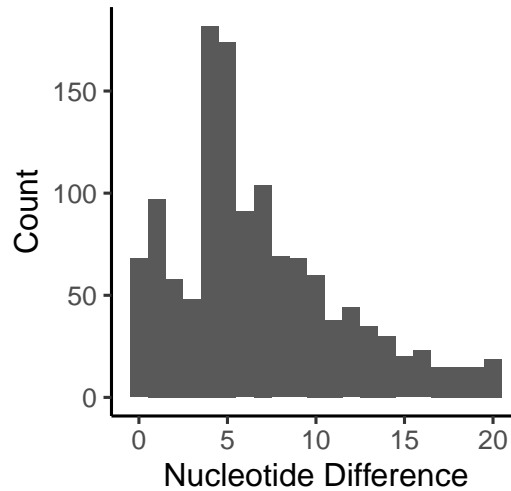
IGHV3-38*03

7 sequences assigned
No exact matches.



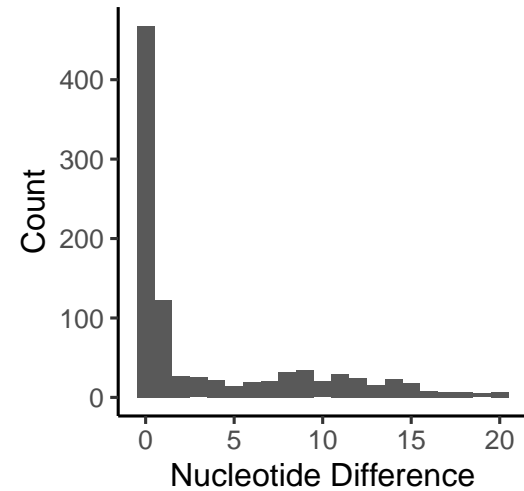
IGHV3-48*01

1368 sequences assigned
68 (5%) exact matches, in which:
68 unique CDR3
5 unique J



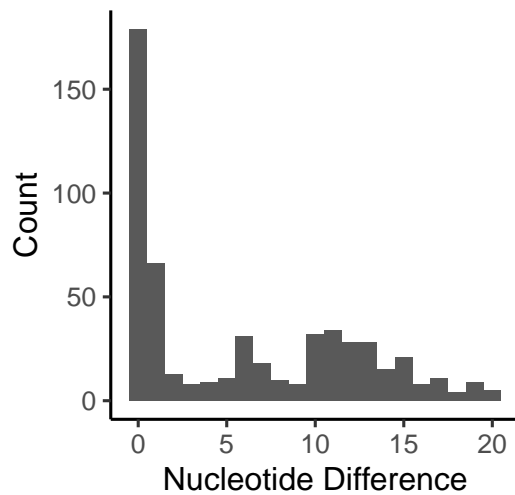
IGHV3-49*03_05

1056 sequences assigned
468 (44.3%) exact matches, in which:
393 unique CDR3
6 unique J



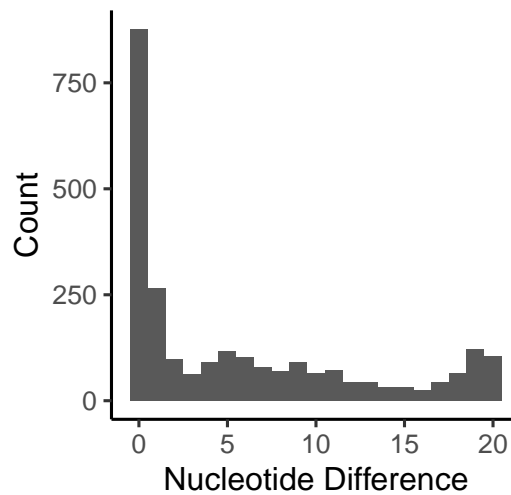
IGHV3-43*01

579 sequences assigned
179 (30.9%) exact matches, in which:
151 unique CDR3
5 unique J



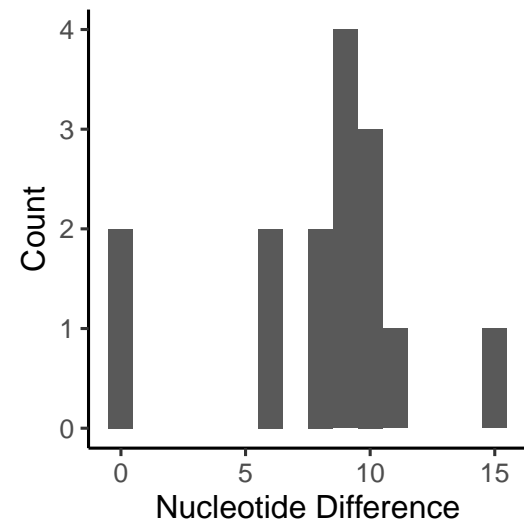
IGHV3-48*02

2804 sequences assigned
877 (31.3%) exact matches, in which:
726 unique CDR3
6 unique J



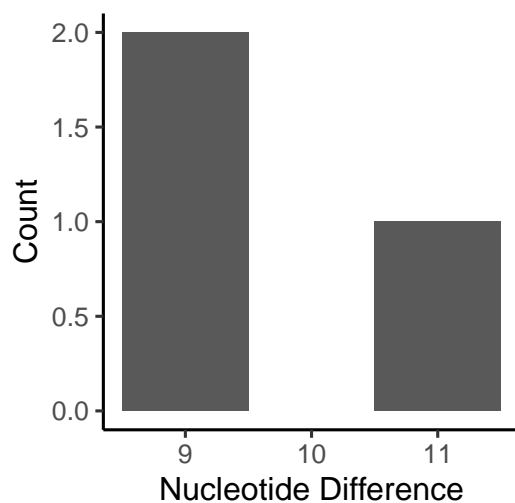
IGHV3-52*01_03

15 sequences assigned
2 (13.3%) exact matches, in which:
2 unique CDR3
1 unique J



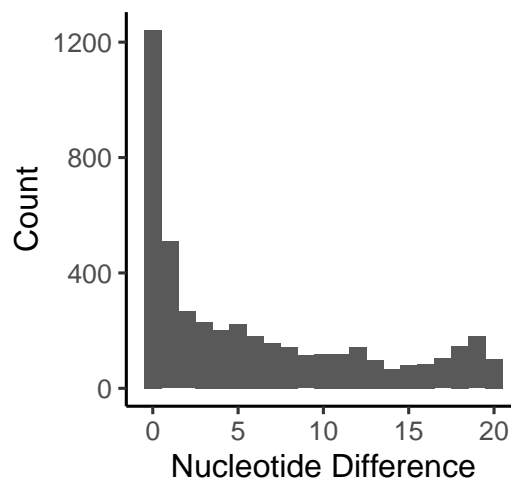
IGHV3-47*02

3 sequences assigned
No exact matches.



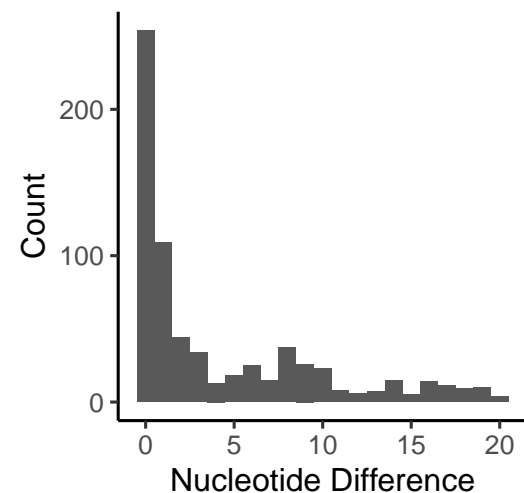
IGHV3-48*04

5742 sequences assigned
1242 (21.6%) exact matches, in which:
1046 unique CDR3
6 unique J



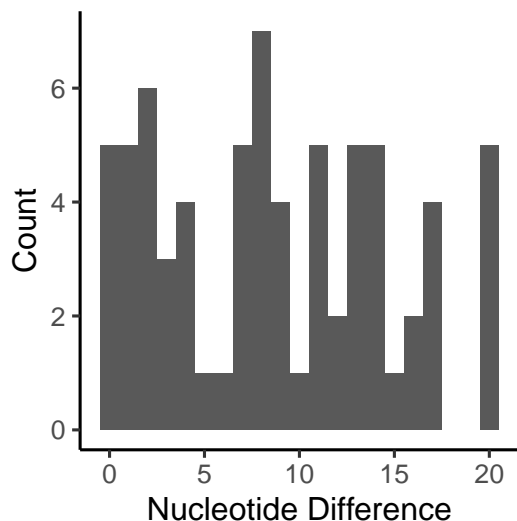
IGHV3-53*04

708 sequences assigned
254 (35.9%) exact matches, in which:
220 unique CDR3
6 unique J



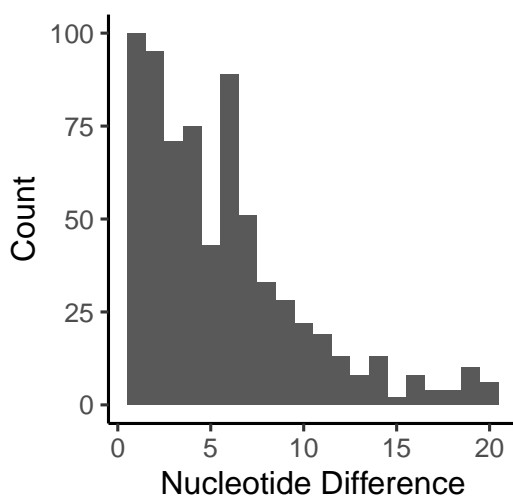
IGHV3-53*05

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



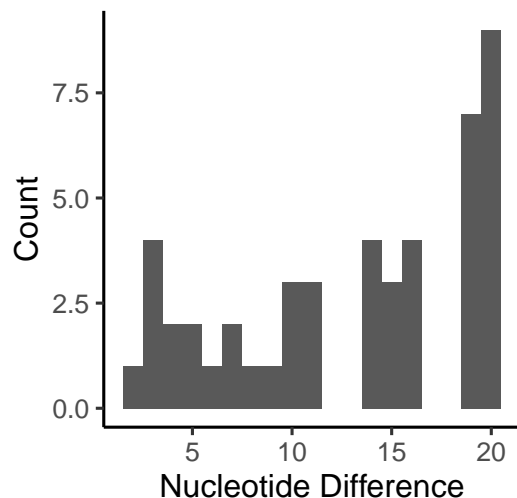
IGHV3-64*04

831 sequences assigned
No exact matches.



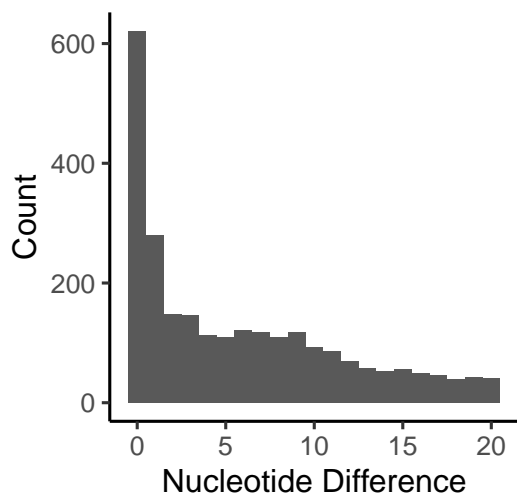
IGHV3-69-1*01

96 sequences assigned
No exact matches.



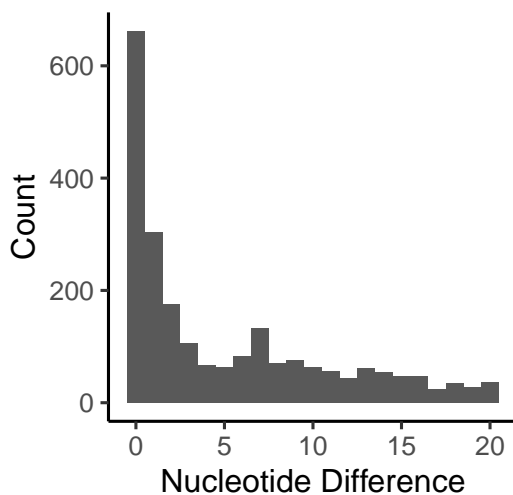
IGHV3-53*01_02

3064 sequences assigned
621 (20.3%) exact matches, in which:
530 unique CDR3
6 unique J



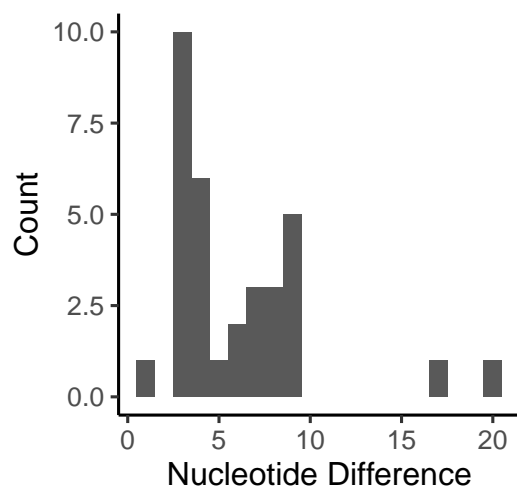
IGHV3-66*01

2972 sequences assigned
662 (22.3%) exact matches, in which:
555 unique CDR3
6 unique J



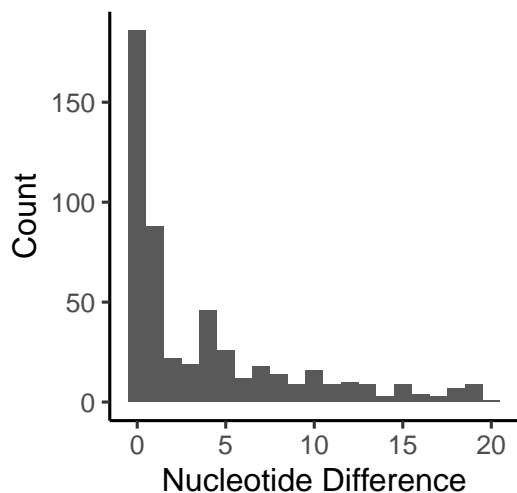
IGHV3-69-1*02

59 sequences assigned
No exact matches.



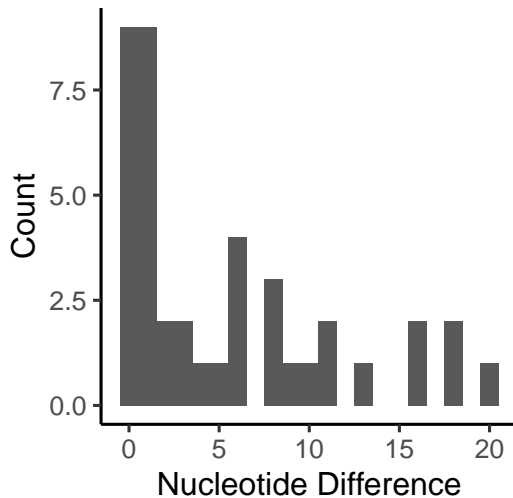
IGHV3-64*01

543 sequences assigned
186 (34.3%) exact matches, in which:
154 unique CDR3
6 unique J



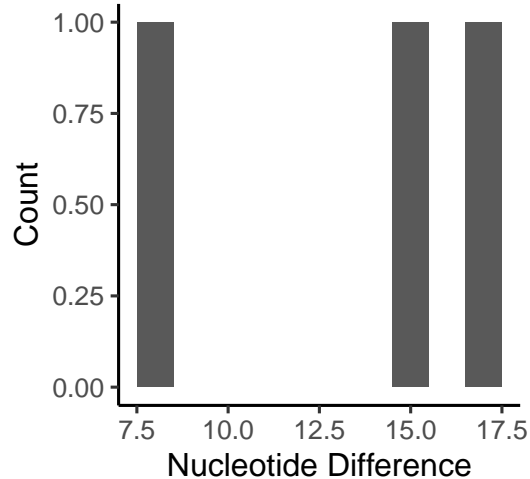
IGHV3-66*03

56 sequences assigned
9 (16.1%) exact matches, in which:
8 unique CDR3
4 unique J



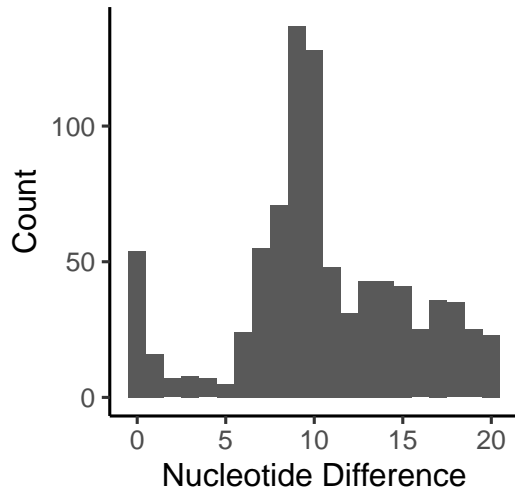
IGHV3-71*03

4 sequences assigned
No exact matches.



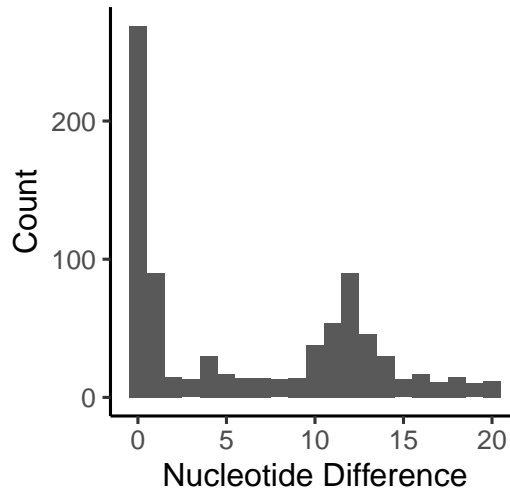
IGHV3-72*01

979 sequences assigned
54 (5.5%) exact matches, in which:
43 unique CDR3
5 unique J



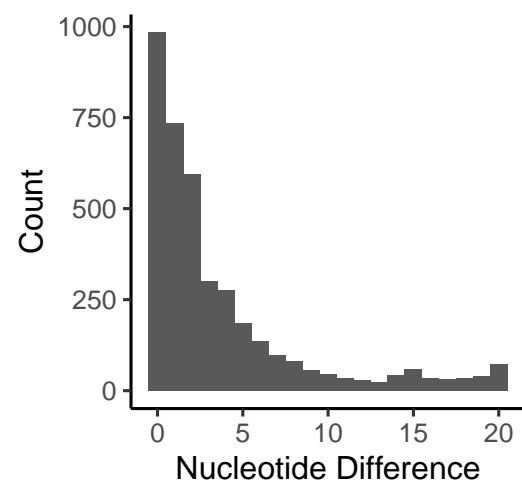
IGHV3-43D*03

880 sequences assigned
269 (30.6%) exact matches, in which:
217 unique CDR3
6 unique J



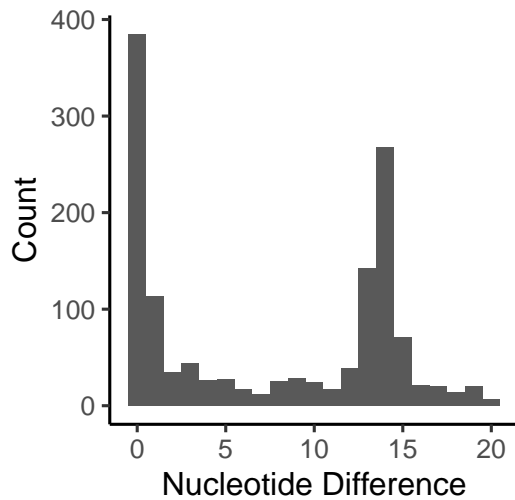
IGHV4-4*07

4676 sequences assigned
984 (21%) exact matches, in which:
937 unique CDR3
6 unique J



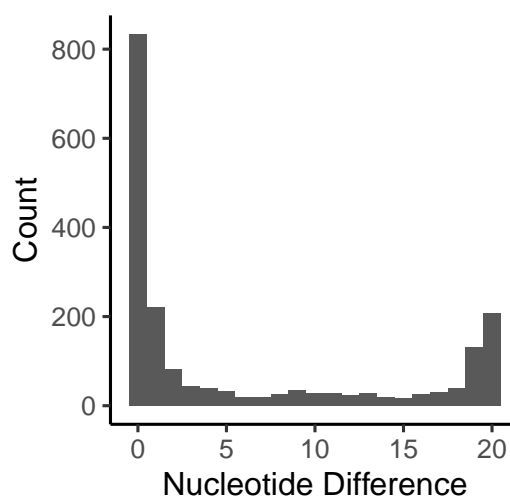
IGHV3-73*01_02

1410 sequences assigned
385 (27.3%) exact matches, in which:
334 unique CDR3
6 unique J



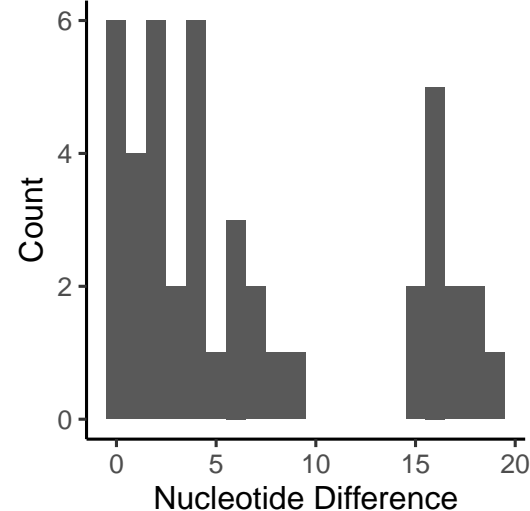
IGHV3-64D*06

2125 sequences assigned
834 (39.2%) exact matches, in which:
645 unique CDR3
6 unique J



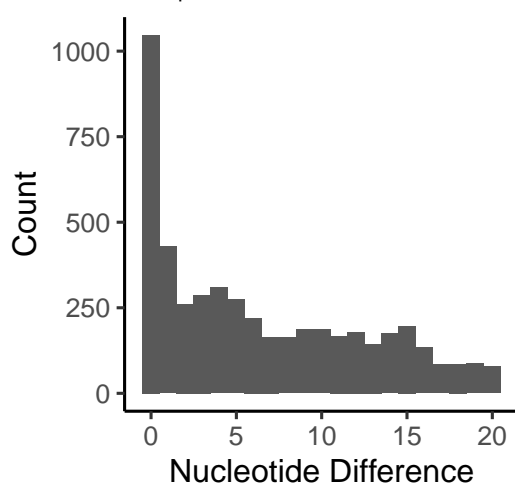
IGHV4-28*03

60 sequences assigned
6 (10%) exact matches, in which:
5 unique CDR3
3 unique J



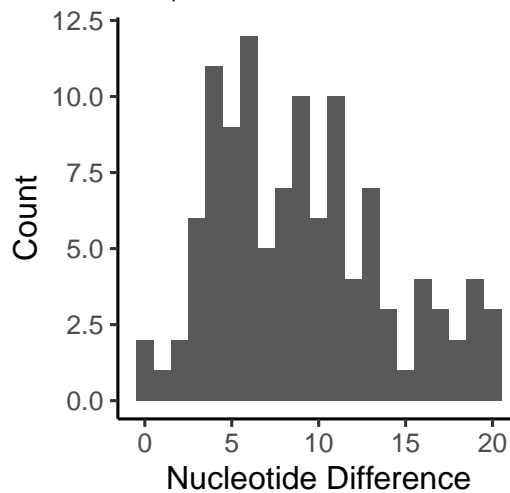
IGHV3-74*01_02

5432 sequences assigned
1047 (19.3%) exact matches, in which:
849 unique CDR3
6 unique J



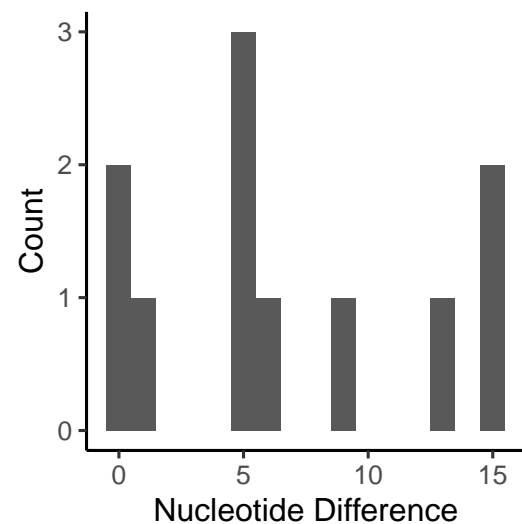
IGHV3-NL1*01

140 sequences assigned
2 (1.4%) exact matches, in which:
2 unique CDR3
2 unique J



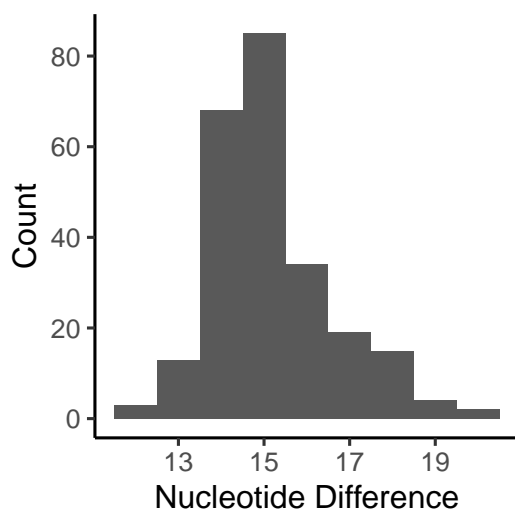
IGHV4-28*01_07

12 sequences assigned
2 (16.7%) exact matches, in which:
2 unique CDR3
2 unique J



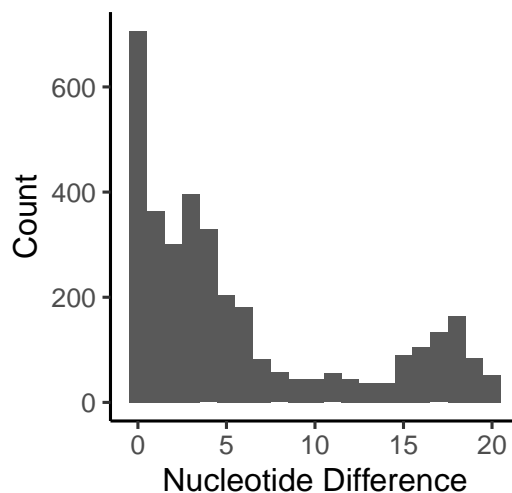
IGHV4-28*02_05

262 sequences assigned
No exact matches.



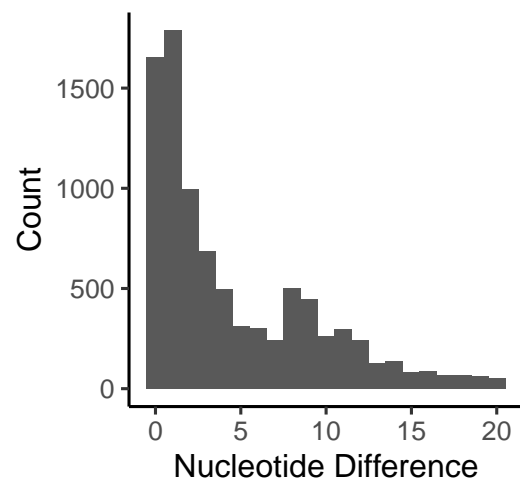
IGHV4-31*03_04

4847 sequences assigned
707 (14.6%) exact matches, in which:
676 unique CDR3
6 unique J



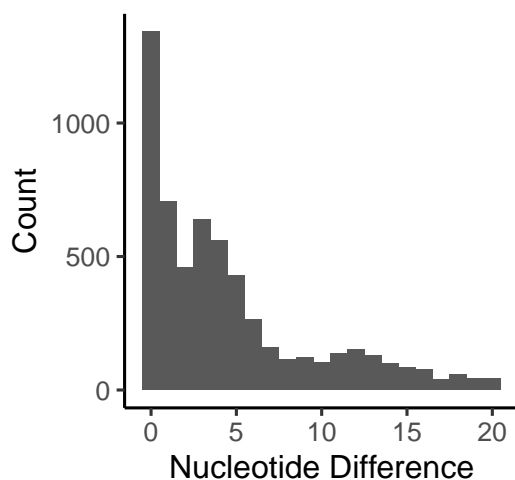
IGHV4-39*07

9871 sequences assigned
1656 (16.8%) exact matches, in which:
1560 unique CDR3
6 unique J



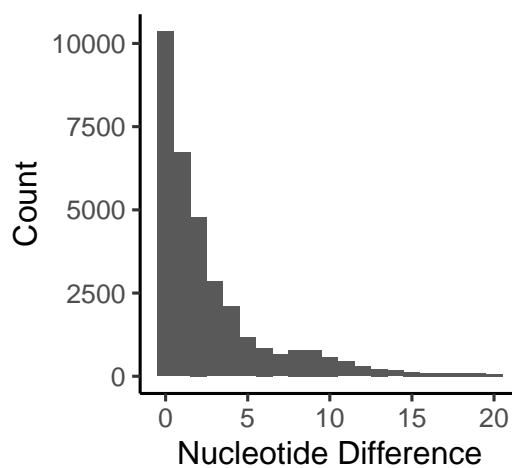
IGHV4-30-4*01

6001 sequences assigned
1342 (22.4%) exact matches, in which:
1273 unique CDR3
6 unique J



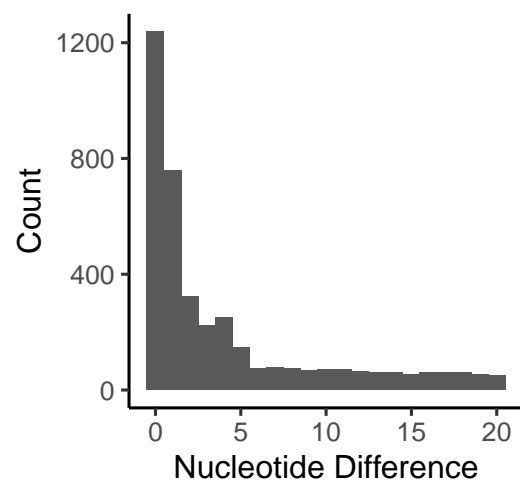
IGHV4-34*01_02

35113 sequences assigned
10360 (29.5%) exact matches, in which:
9218 unique CDR3
6 unique J



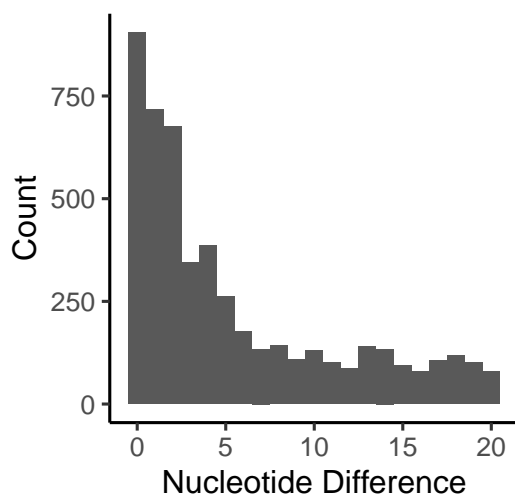
IGHV4-39*01_05

5270 sequences assigned
1238 (23.5%) exact matches, in which:
1146 unique CDR3
6 unique J



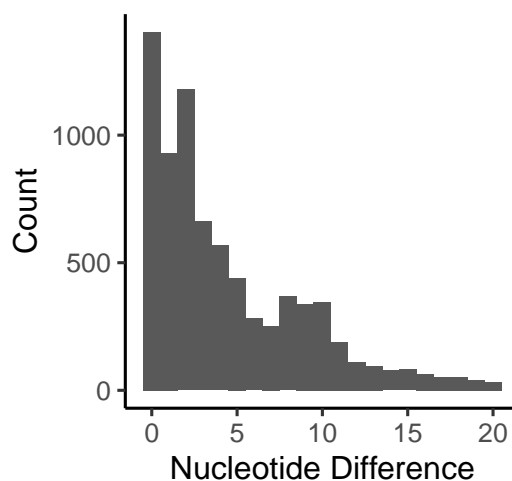
IGHV4-30-2*01

5262 sequences assigned
905 (17.2%) exact matches, in which:
826 unique CDR3
6 unique J



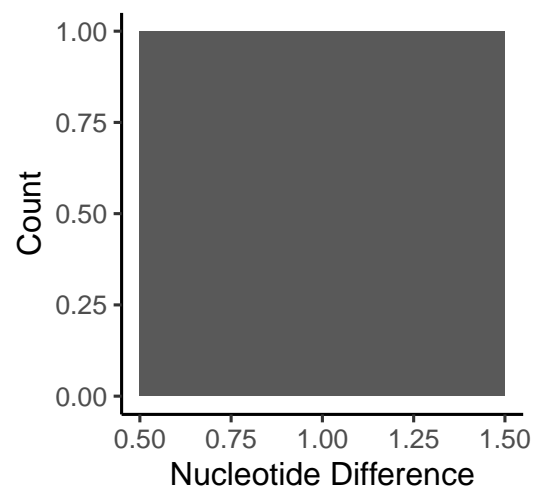
IGHV4-38-2*02

7938 sequences assigned
1404 (17.7%) exact matches, in which:
1353 unique CDR3
6 unique J



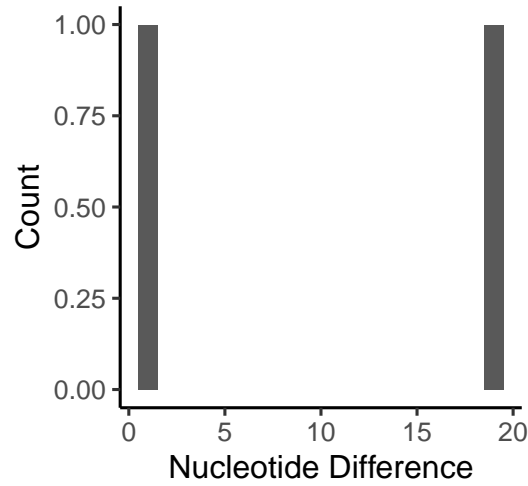
IGHV4-55*01_05

1 sequences assigned
No exact matches.



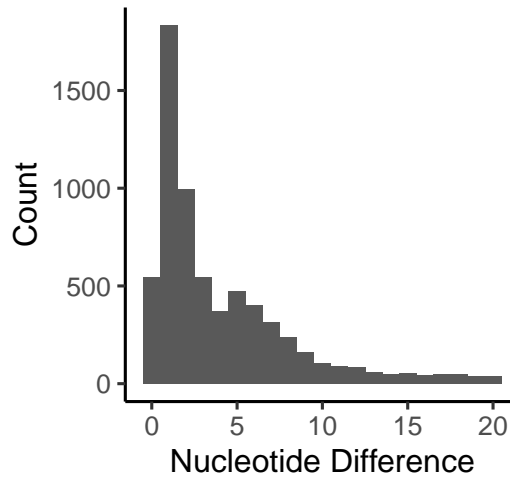
IGHV4-55*02_04_08

8 sequences assigned
No exact matches.



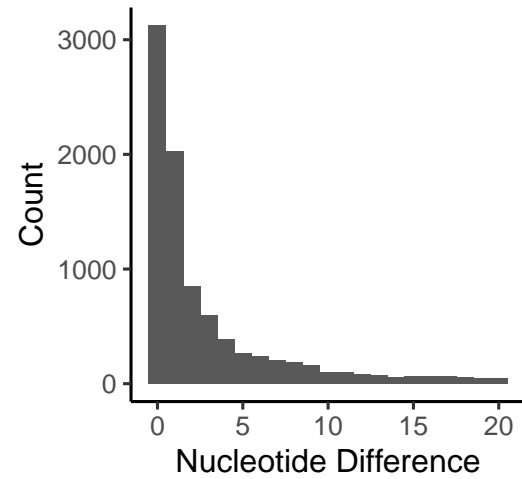
IGHV4-59*12

6740 sequences assigned
546 (8.1%) exact matches, in which:
539 unique CDR3
6 unique J



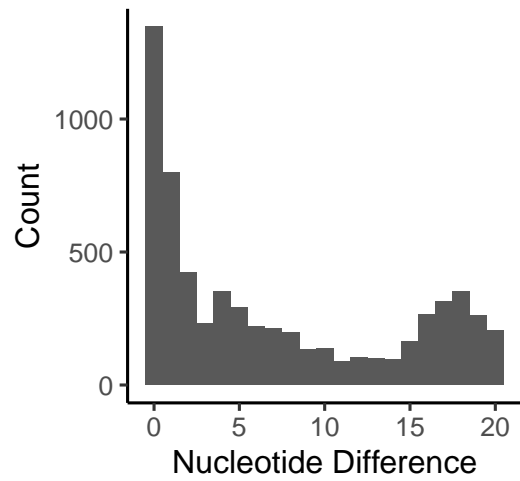
IGHV5-10-1*01_03

9491 sequences assigned
3125 (32.9%) exact matches, in which:
2522 unique CDR3
6 unique J



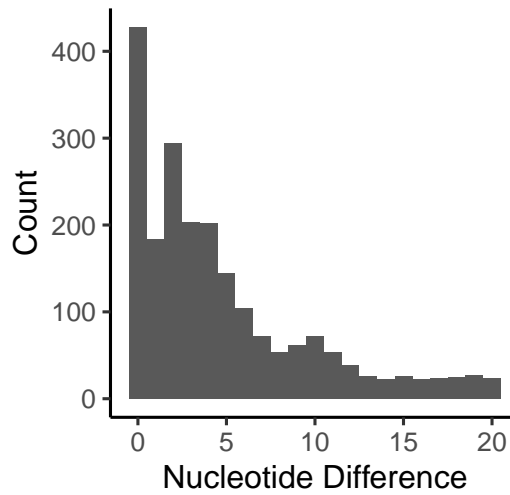
IGHV4-59*08

7048 sequences assigned
1347 (19.1%) exact matches, in which:
1275 unique CDR3
6 unique J



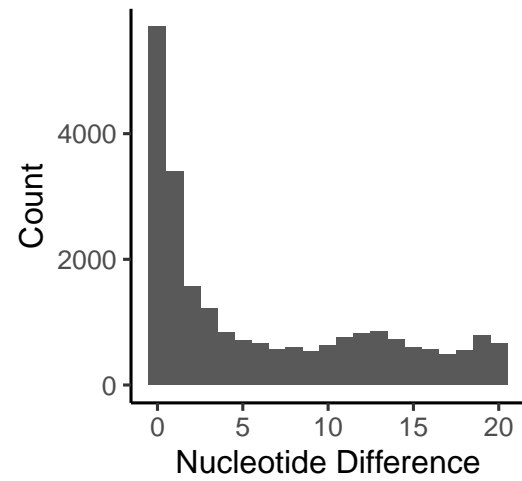
IGHV4-61*01

2179 sequences assigned
428 (19.6%) exact matches, in which:
415 unique CDR3
6 unique J



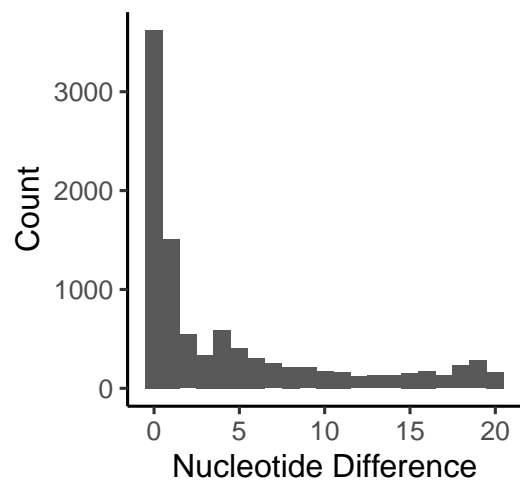
IGHV5-51*01_03

25922 sequences assigned
5702 (22%) exact matches, in which:
4388 unique CDR3
6 unique J



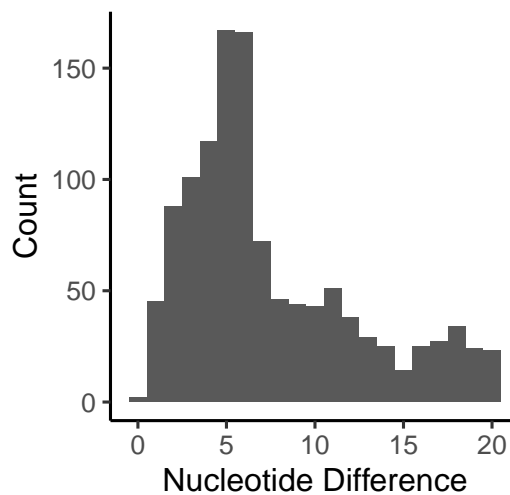
IGHV4-59*01_07

10459 sequences assigned
3624 (34.6%) exact matches, in which:
3420 unique CDR3
6 unique J



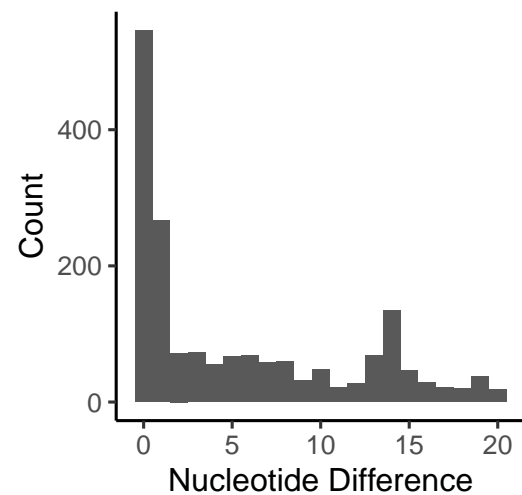
IGHV4-61*08

1332 sequences assigned
2 (0.2%) exact matches, in which:
2 unique CDR3
2 unique J



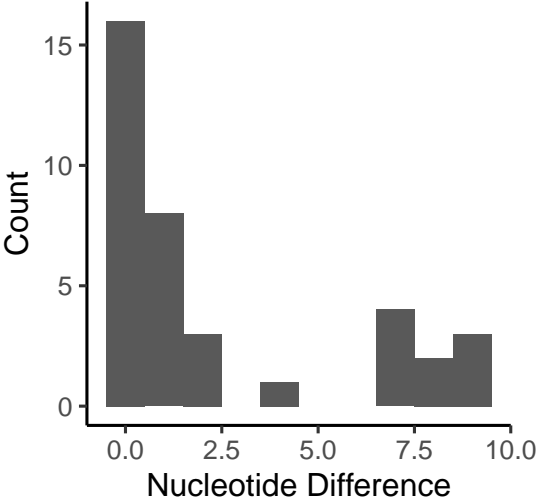
IGHV6-1*01_02

1826 sequences assigned
546 (29.9%) exact matches, in which:
515 unique CDR3
6 unique J



IGHV7-4-1*01

38 sequences assigned
16 (42.1%) exact matches, in which:
16 unique CDR3
4 unique J





Novel sequence(s)IGHV1–69*01_12_13_G238AIGHV3–48*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)IGHV3–30–3*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.