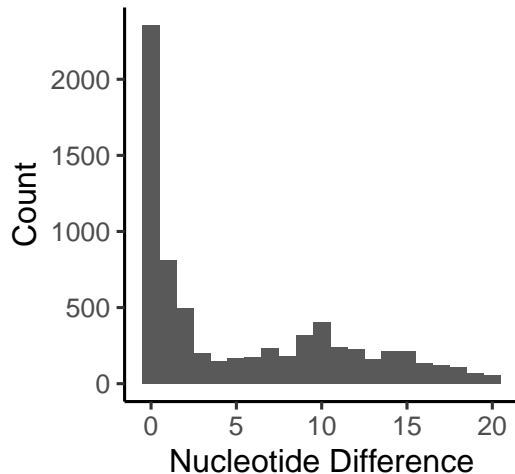


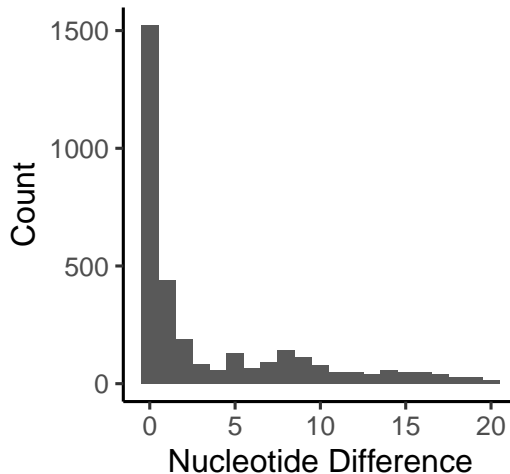
IGHV1-2*02

8621 sequences assigned
2354 (27.3%) exact matches, in which:
2316 unique CDR3
7 unique J



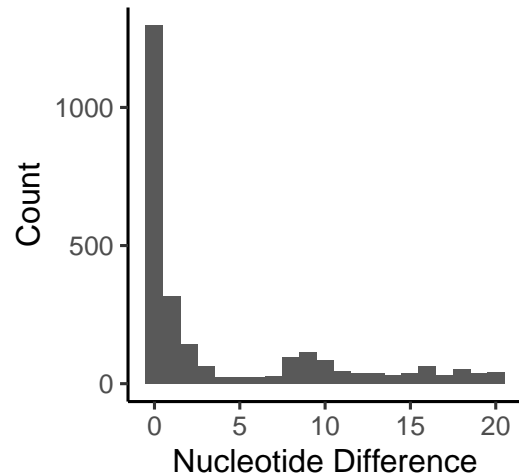
IGHV1-8*01

3459 sequences assigned
1522 (44%) exact matches, in which:
1506 unique CDR3
7 unique J



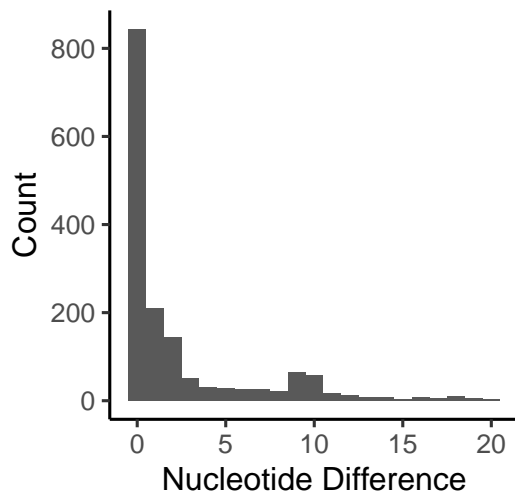
IGHV1-24*01

2799 sequences assigned
1297 (46.3%) exact matches, in which:
1285 unique CDR3
7 unique J



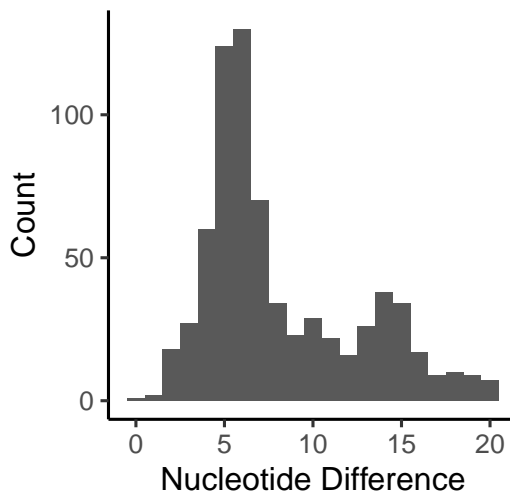
IGHV1-2*04

1604 sequences assigned
844 (52.6%) exact matches, in which:
834 unique CDR3
7 unique J



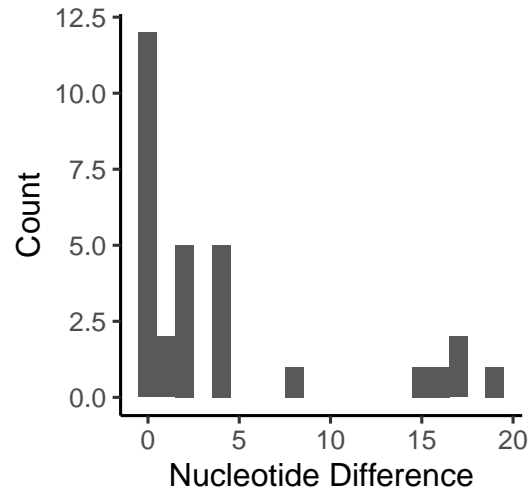
IGHV1-8*02

789 sequences assigned
1 (0.1%) exact matches, in which:
1 unique CDR3
1 unique J



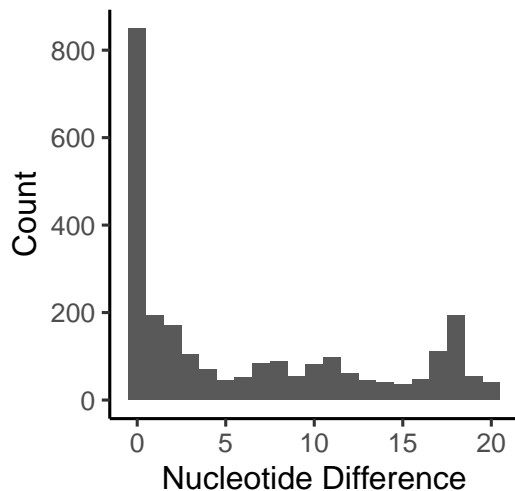
IGHV1-45*02

31 sequences assigned
12 (38.7%) exact matches, in which:
12 unique CDR3
5 unique J



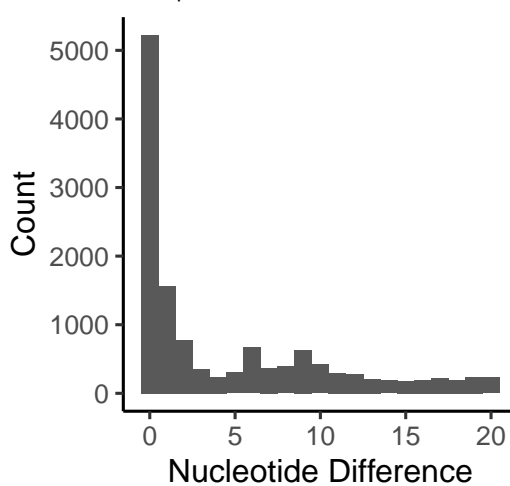
IGHV1-3*01_05

3524 sequences assigned
850 (24.1%) exact matches, in which:
848 unique CDR3
7 unique J



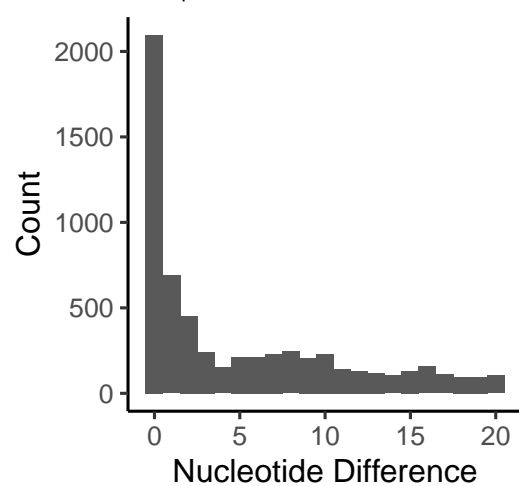
IGHV1-18*01

14790 sequences assigned
5223 (35.3%) exact matches, in which:
5136 unique CDR3
7 unique J



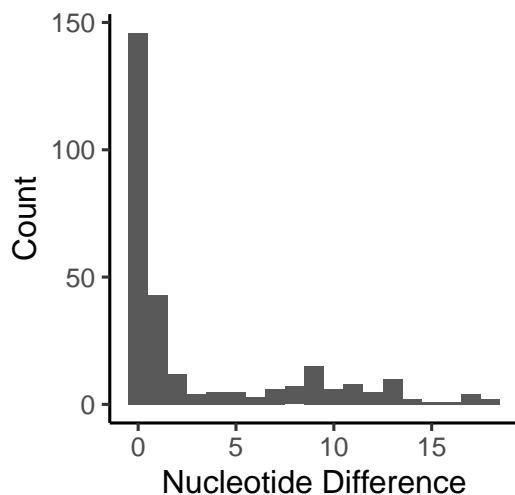
IGHV1-46*01

7013 sequences assigned
2096 (29.9%) exact matches, in which:
2069 unique CDR3
7 unique J



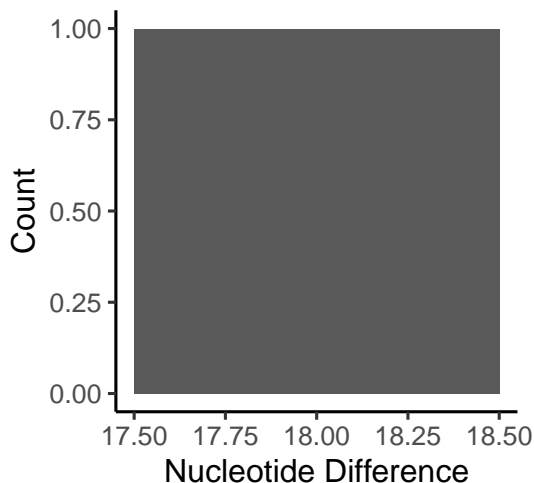
IGHV1-58*02

325 sequences assigned
146 (44.9%) exact matches, in which:
146 unique CDR3
7 unique J



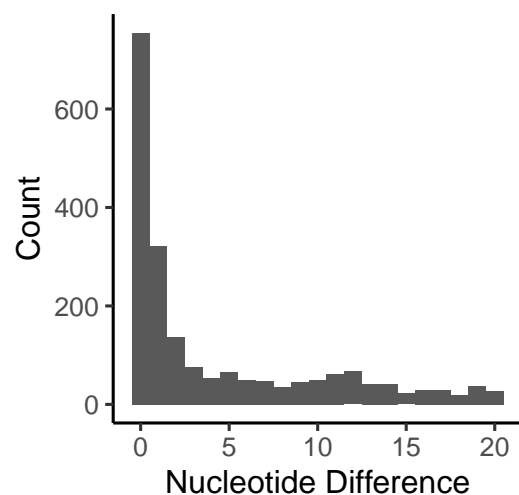
IGHV1-69-2*01

8 sequences assigned
No exact matches.



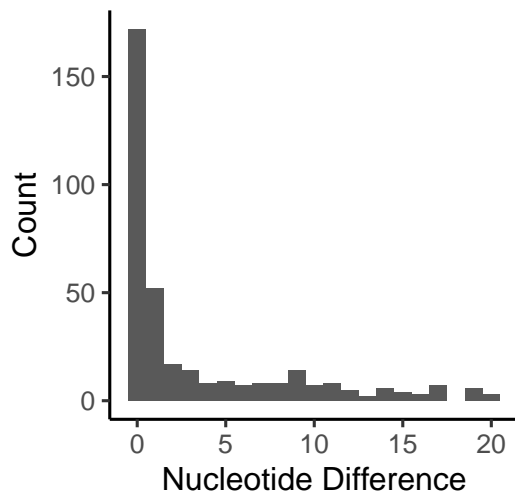
IGHV2-5*02

2191 sequences assigned
755 (34.5%) exact matches, in which:
754 unique CDR3
7 unique J



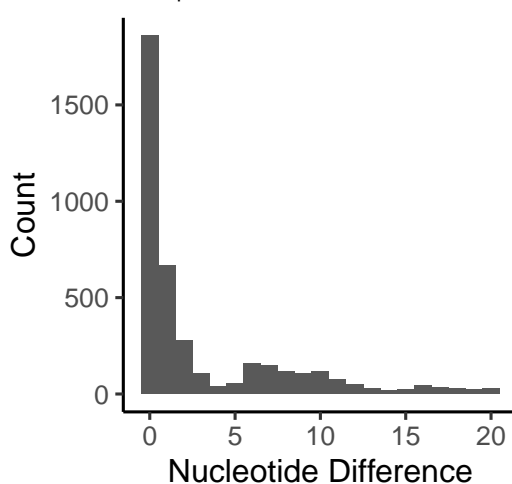
IGHV1-58*01_03

371 sequences assigned
172 (46.4%) exact matches, in which:
172 unique CDR3
6 unique J



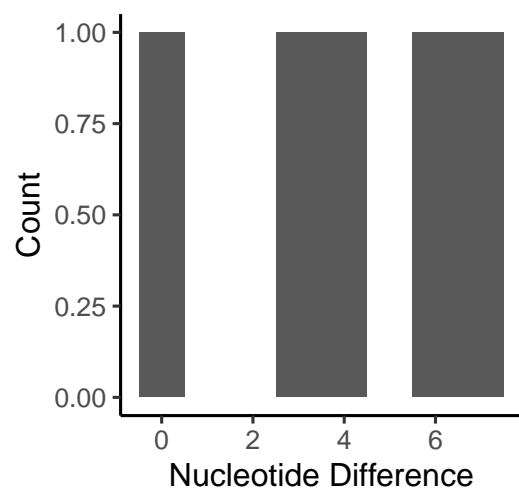
IGHV1-69*04_09

4410 sequences assigned
1859 (42.2%) exact matches, in which:
1845 unique CDR3
7 unique J



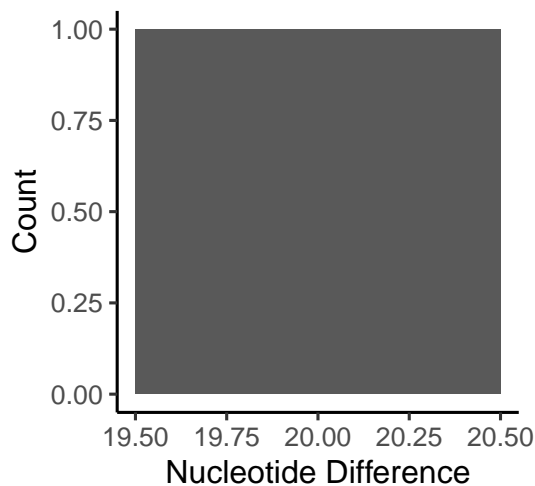
IGHV2-26*01

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



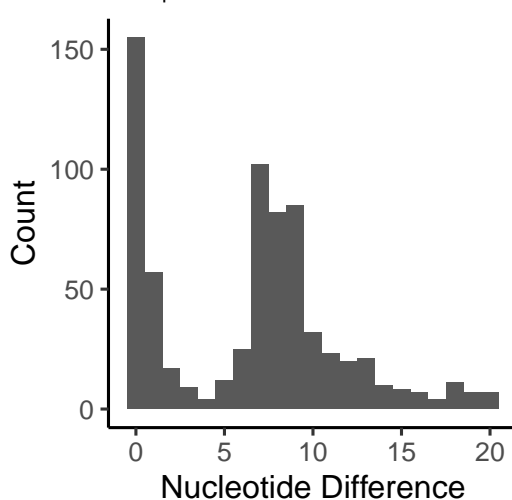
IGHV1-68*01

1 sequences assigned
No exact matches.



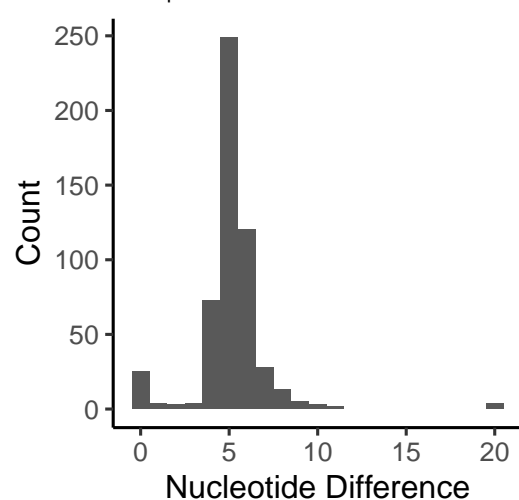
IGHV1-69*06_14

736 sequences assigned
155 (21.1%) exact matches, in which:
154 unique CDR3
7 unique J



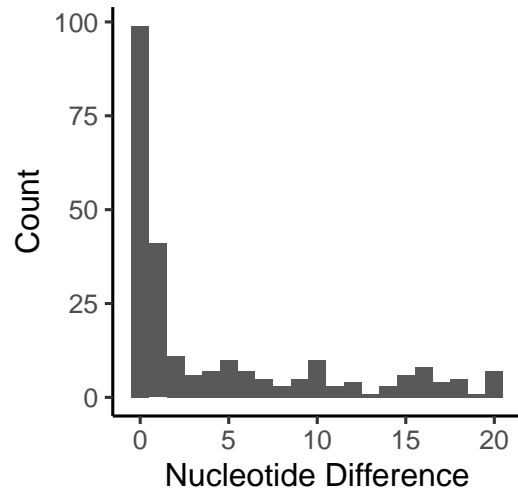
IGHV2-26*02

547 sequences assigned
25 (4.6%) exact matches, in which:
25 unique CDR3
5 unique J



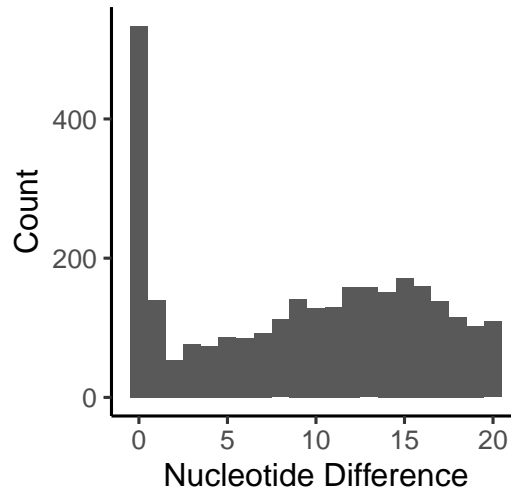
IGHV2-70*01

283 sequences assigned
99 (35%) exact matches, in which:
99 unique CDR3
5 unique J



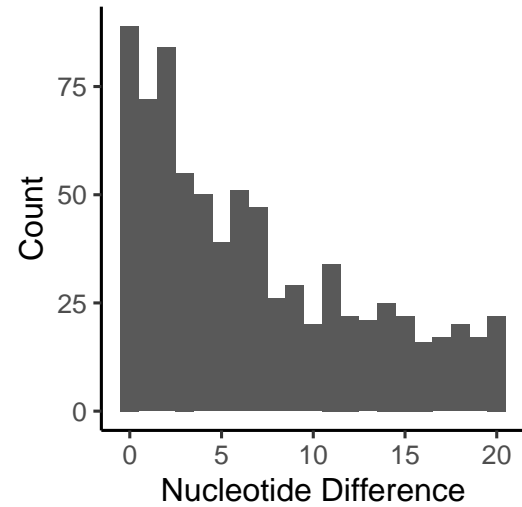
IGHV3-7*04

3604 sequences assigned
534 (14.8%) exact matches, in which:
507 unique CDR3
7 unique J



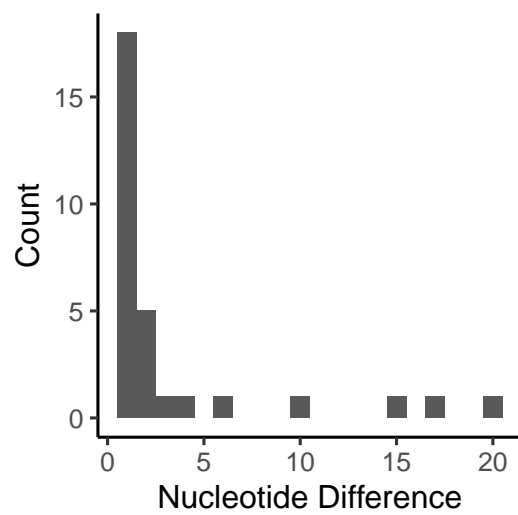
IGHV3-11*04

951 sequences assigned
89 (9.4%) exact matches, in which:
89 unique CDR3
7 unique J



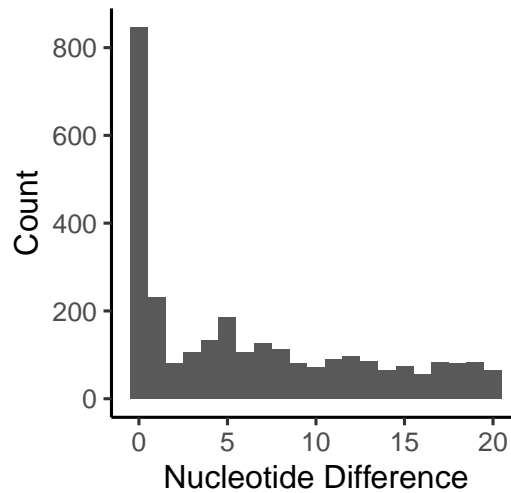
IGHV2-70*12

33 sequences assigned
No exact matches.



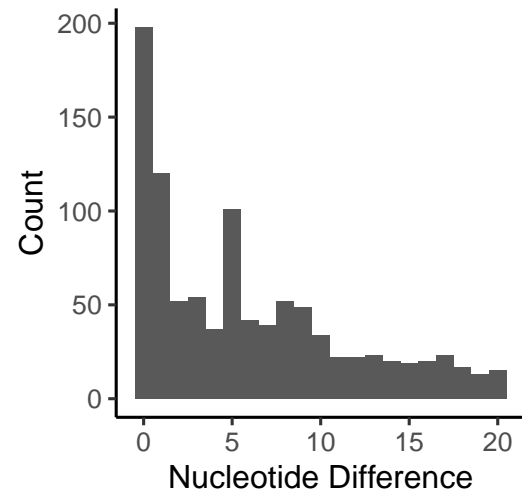
IGHV3-9*01

3460 sequences assigned
847 (24.5%) exact matches, in which:
795 unique CDR3
7 unique J



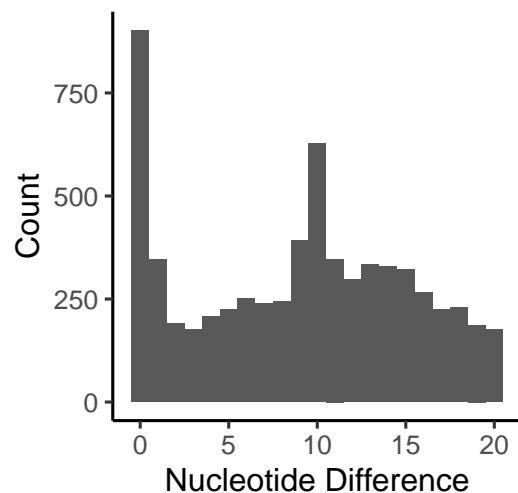
IGHV3-11*06

1151 sequences assigned
198 (17.2%) exact matches, in which:
198 unique CDR3
7 unique J



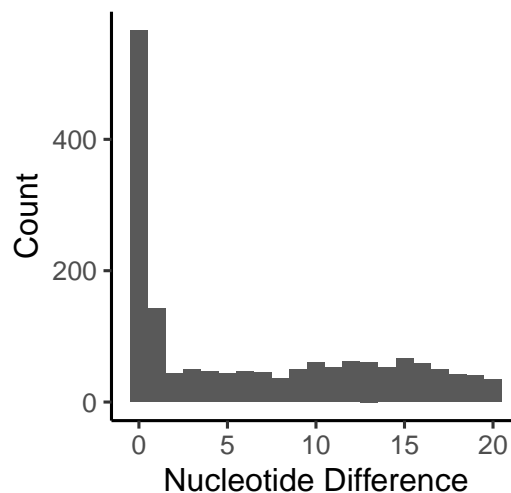
IGHV3-7*01

7390 sequences assigned
902 (12.2%) exact matches, in which:
860 unique CDR3
7 unique J



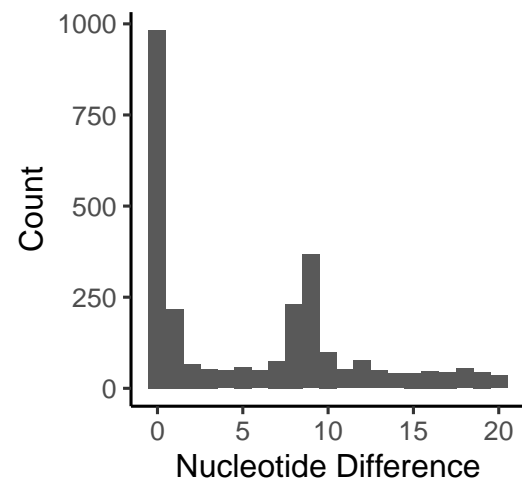
IGHV3-11*01

2231 sequences assigned
566 (25.4%) exact matches, in which:
540 unique CDR3
7 unique J



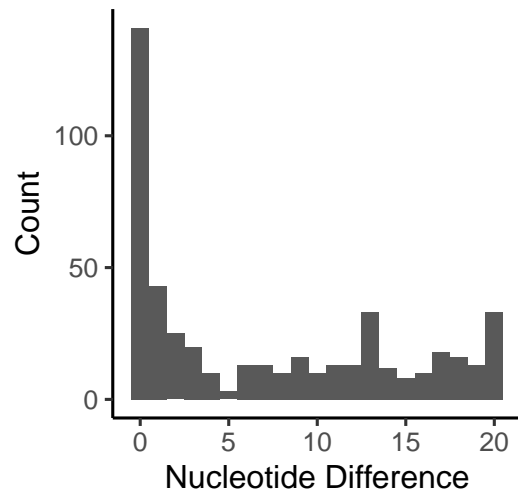
IGHV3-11*03_05

3597 sequences assigned
983 (27.3%) exact matches, in which:
938 unique CDR3
7 unique J



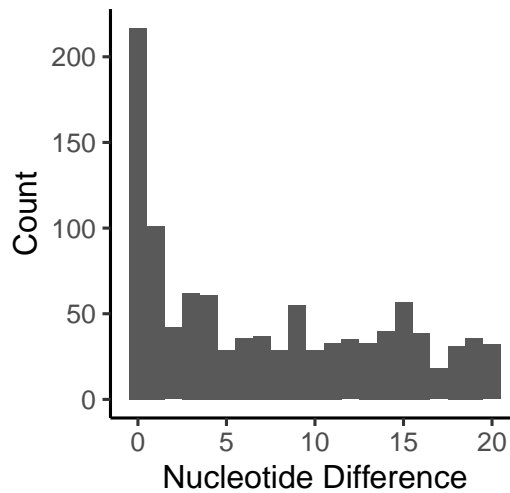
IGHV3-13*01

677 sequences assigned
141 (20.8%) exact matches, in which:
126 unique CDR3
6 unique J



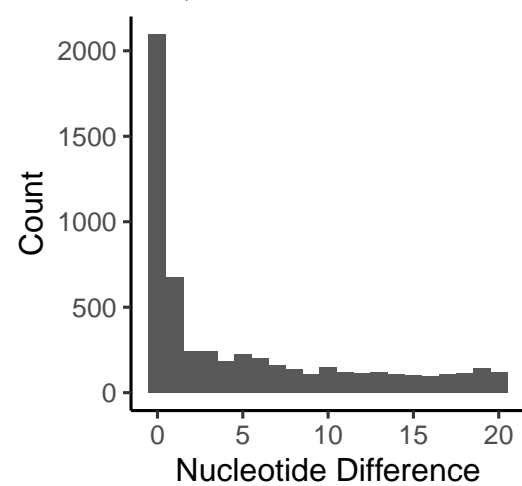
IGHV3-20*03_04

1298 sequences assigned
217 (16.7%) exact matches, in which:
208 unique CDR3
7 unique J



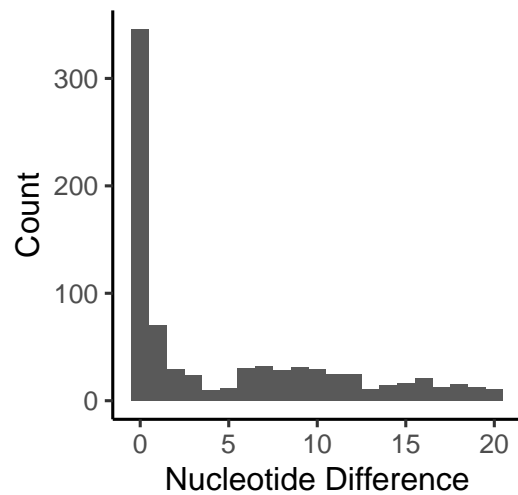
IGHV3-30-3*01

6883 sequences assigned
2096 (30.5%) exact matches, in which:
2008 unique CDR3
7 unique J



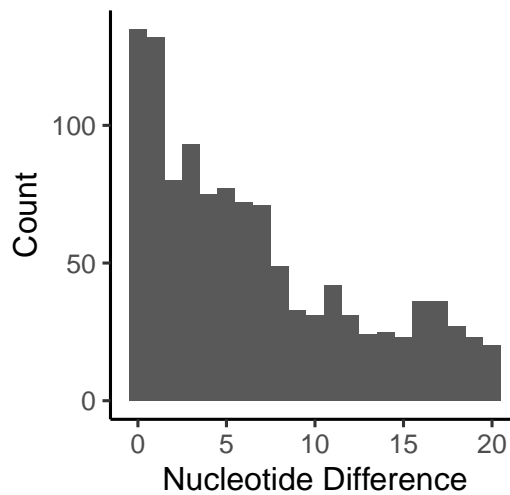
IGHV3-13*04

1342 sequences assigned
346 (25.8%) exact matches, in which:
327 unique CDR3
6 unique J



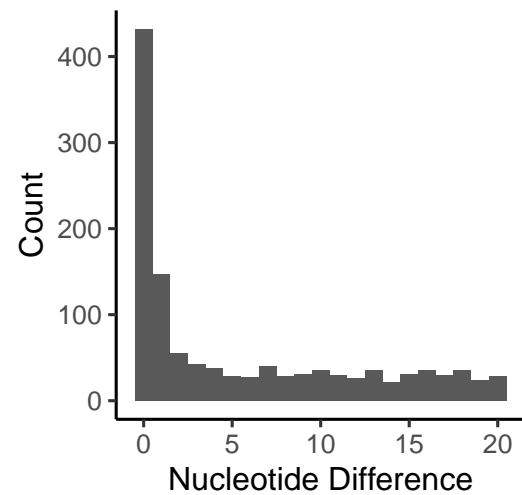
IGHV3-21*04

1367 sequences assigned
135 (9.9%) exact matches, in which:
135 unique CDR3
7 unique J



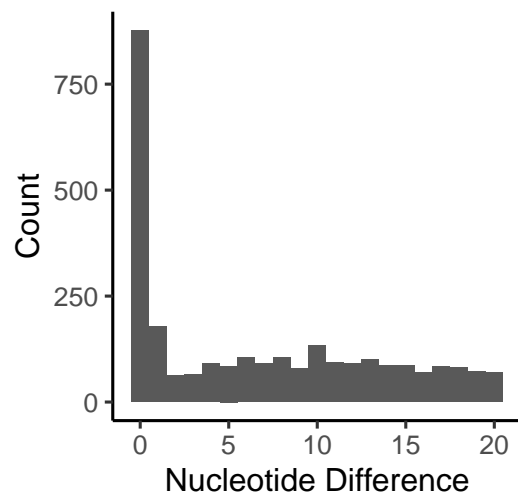
IGHV3-30*03

1562 sequences assigned
432 (27.7%) exact matches, in which:
427 unique CDR3
7 unique J



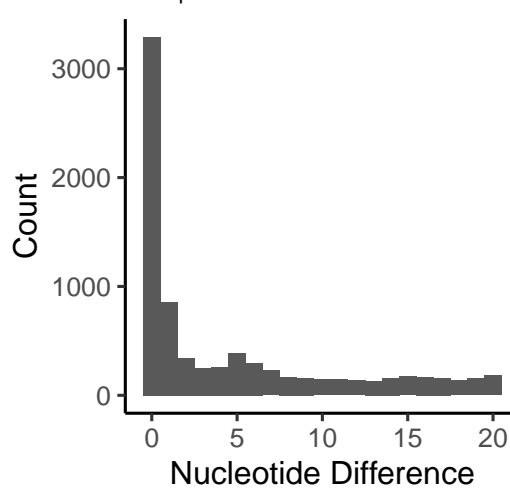
IGHV3-15*01_02

3377 sequences assigned
877 (26%) exact matches, in which:
846 unique CDR3
7 unique J



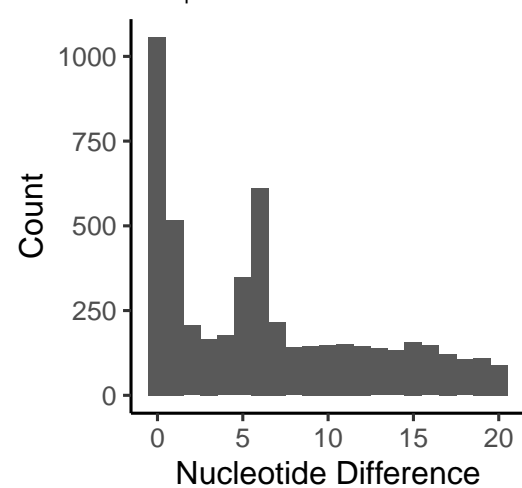
IGHV3-21*01_02

9387 sequences assigned
3291 (35.1%) exact matches, in which:
3100 unique CDR3
7 unique J



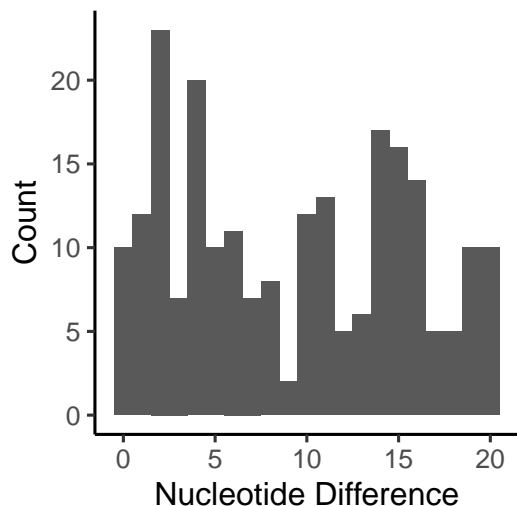
IGHV3-33*01

5499 sequences assigned
1057 (19.2%) exact matches, in which:
1018 unique CDR3
7 unique J



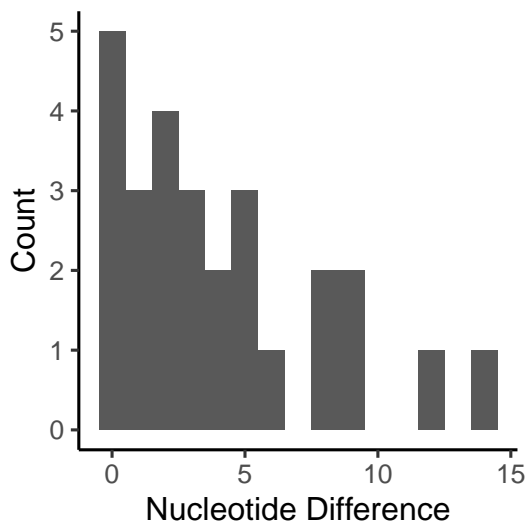
IGHV3-33*05

318 sequences assigned
10 (3.1%) exact matches, in which:
10 unique CDR3
4 unique J



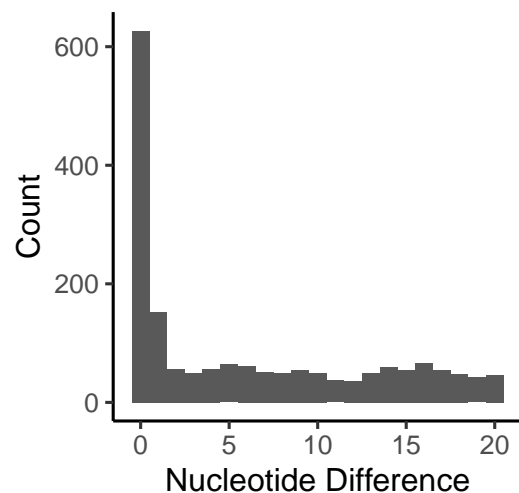
IGHV3-38-3*01

28 sequences assigned
5 (17.9%) exact matches, in which:
5 unique CDR3
2 unique J



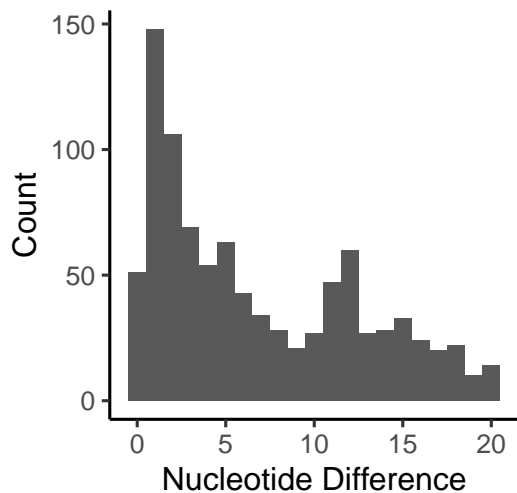
IGHV3-48*02

2176 sequences assigned
627 (28.8%) exact matches, in which:
590 unique CDR3
7 unique J



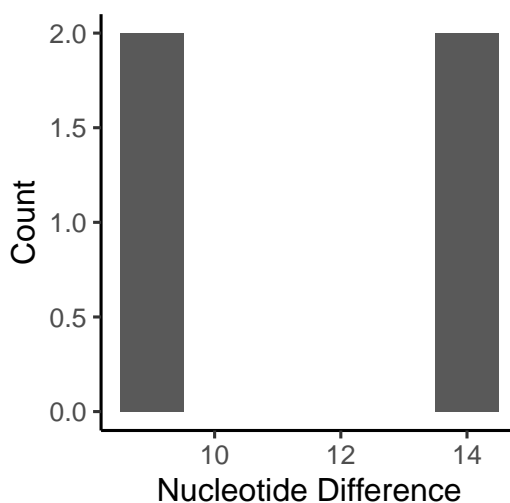
IGHV3-33*06

1007 sequences assigned
51 (5.1%) exact matches, in which:
50 unique CDR3
6 unique J



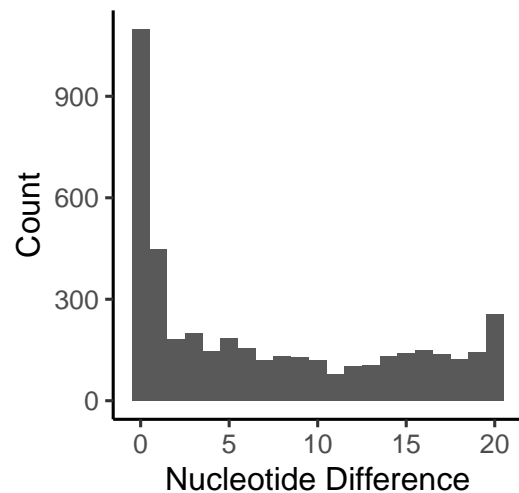
IGHV3-38*03

4 sequences assigned
No exact matches.



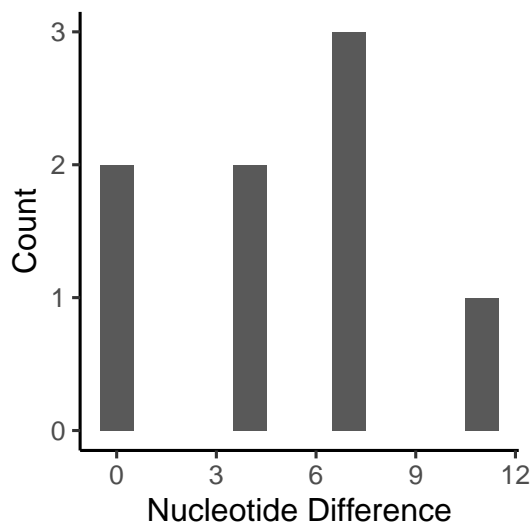
IGHV3-48*04

6731 sequences assigned
1099 (16.3%) exact matches, in which:
1053 unique CDR3
7 unique J



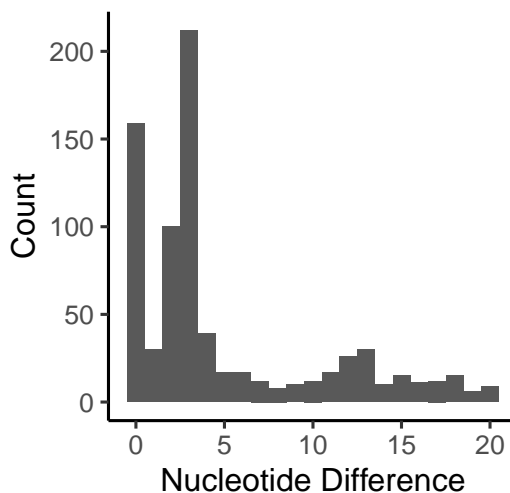
IGHV3-35*01

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



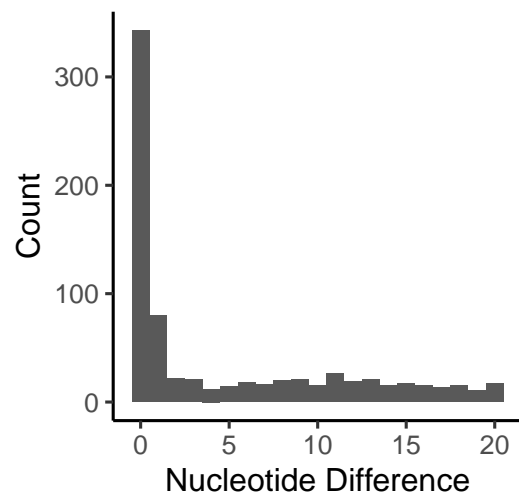
IGHV3-43*01

860 sequences assigned
159 (18.5%) exact matches, in which:
152 unique CDR3
7 unique J



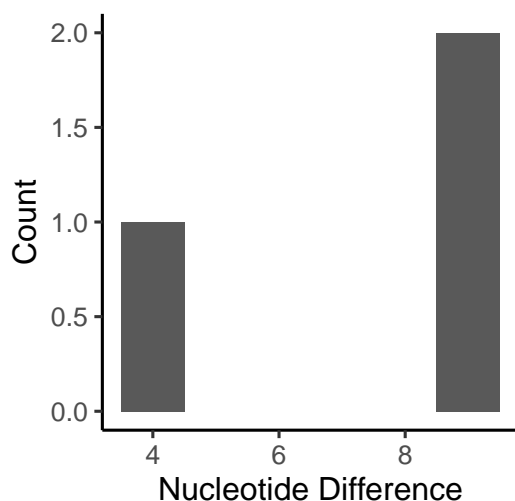
IGHV3-49*03_05

898 sequences assigned
343 (38.2%) exact matches, in which:
334 unique CDR3
7 unique J



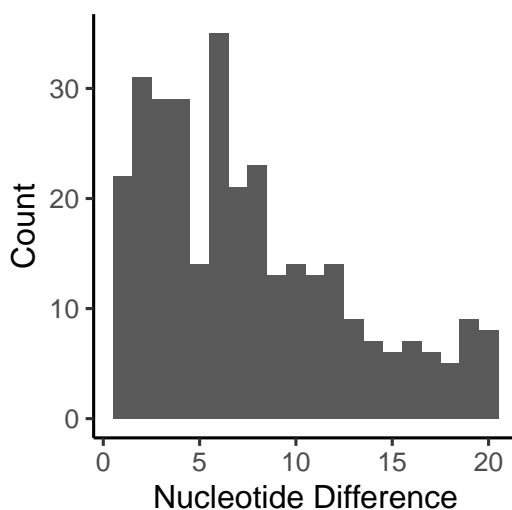
IGHV3-52*01_03

3 sequences assigned
No exact matches.



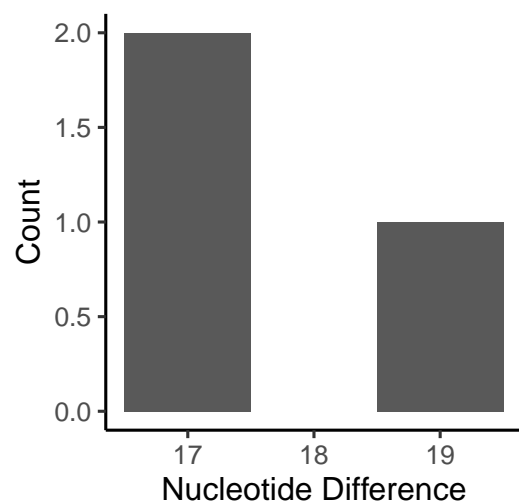
IGHV3-64*04

374 sequences assigned
No exact matches.



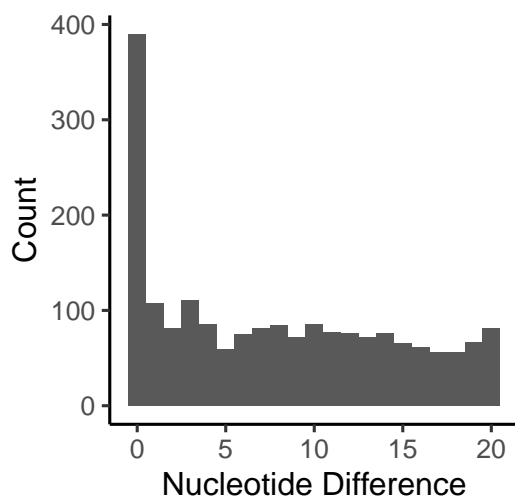
IGHV3-69-1*02

72 sequences assigned
No exact matches.



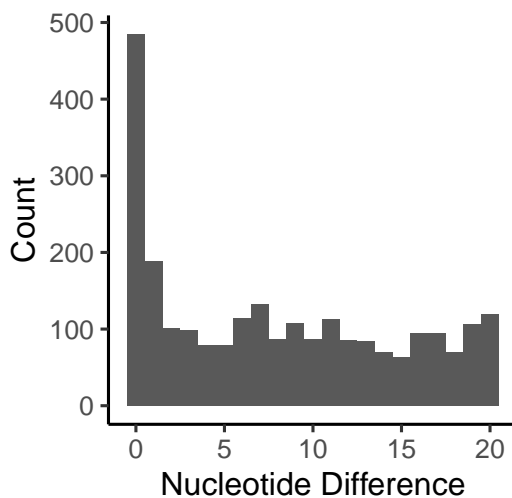
IGHV3-53*01_02

2493 sequences assigned
390 (15.6%) exact matches, in which:
376 unique CDR3
7 unique J



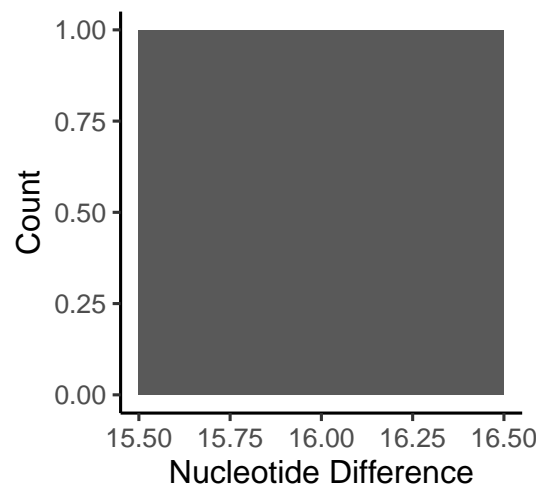
IGHV3-66*01

3532 sequences assigned
485 (13.7%) exact matches, in which:
463 unique CDR3
7 unique J



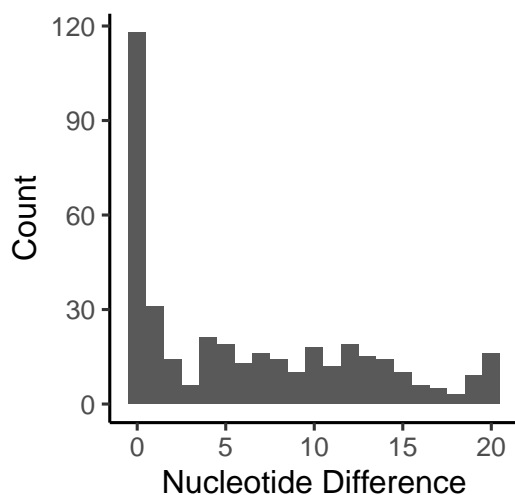
IGHV3-71*01_04

5 sequences assigned
No exact matches.



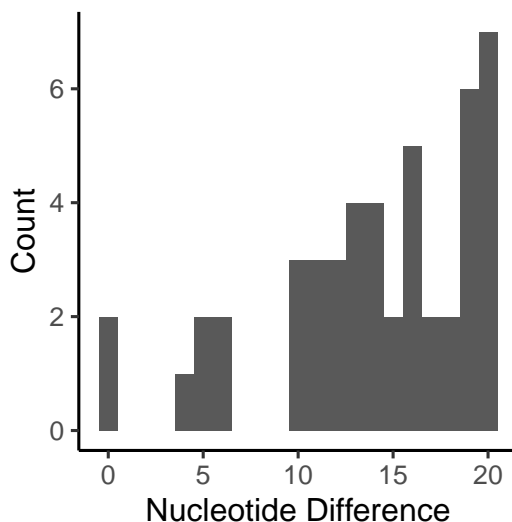
IGHV3-64*01

524 sequences assigned
118 (22.5%) exact matches, in which:
111 unique CDR3
6 unique J



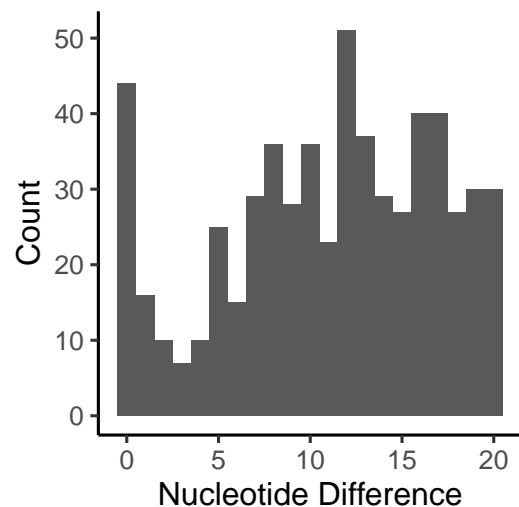
IGHV3-69-1*01

151 sequences assigned
2 (1.3%) exact matches, in which:
2 unique CDR3
2 unique J



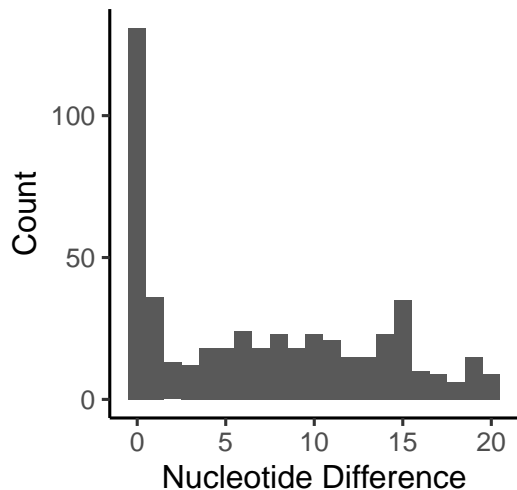
IGHV3-72*01

786 sequences assigned
44 (5.6%) exact matches, in which:
40 unique CDR3
5 unique J



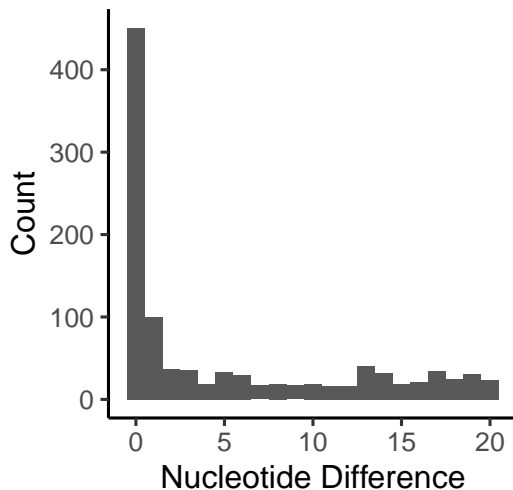
IGHV3-73*01_02

589 sequences assigned
131 (22.2%) exact matches, in which:
126 unique CDR3
7 unique J



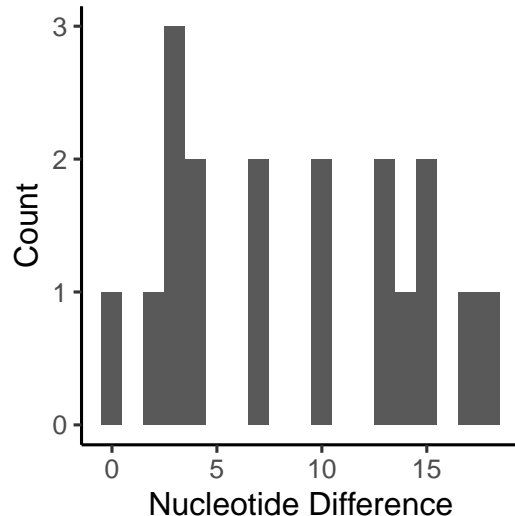
IGHV3-64D*06

1281 sequences assigned
451 (35.2%) exact matches, in which:
416 unique CDR3
7 unique J



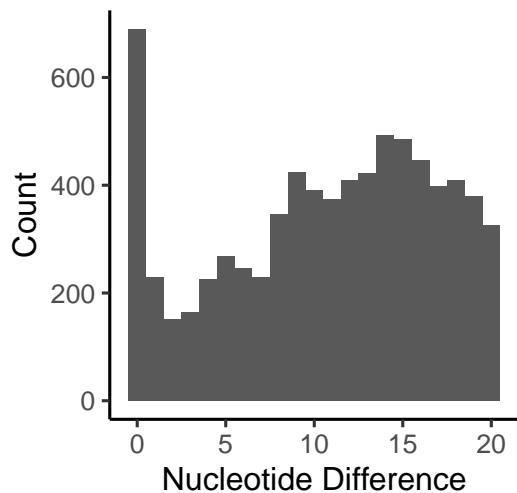
IGHV4-28*03

22 sequences assigned
1 (4.5%) exact matches, in which:
1 unique CDR3
1 unique J



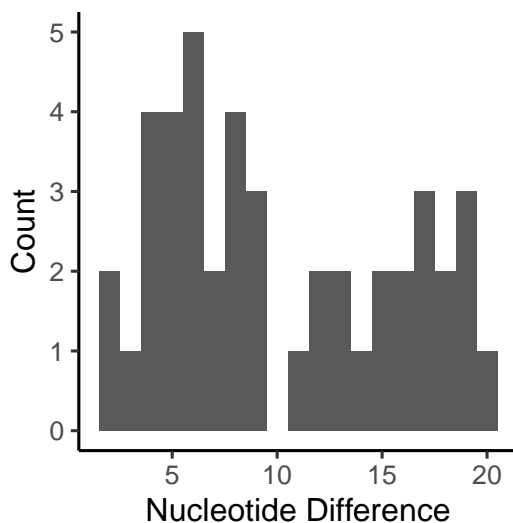
IGHV3-74*01_02

9533 sequences assigned
690 (7.2%) exact matches, in which:
646 unique CDR3
7 unique J



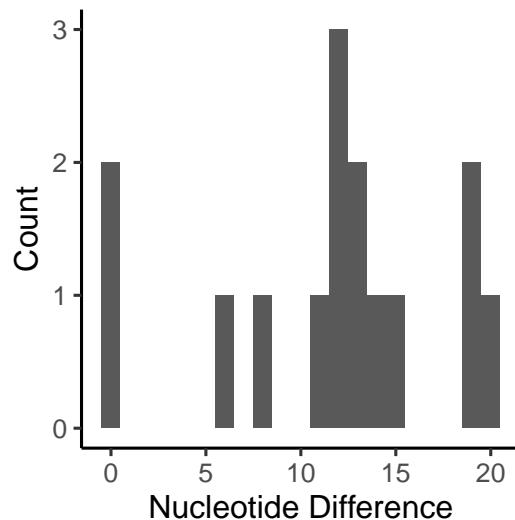
IGHV3-NL1*01

76 sequences assigned
No exact matches.



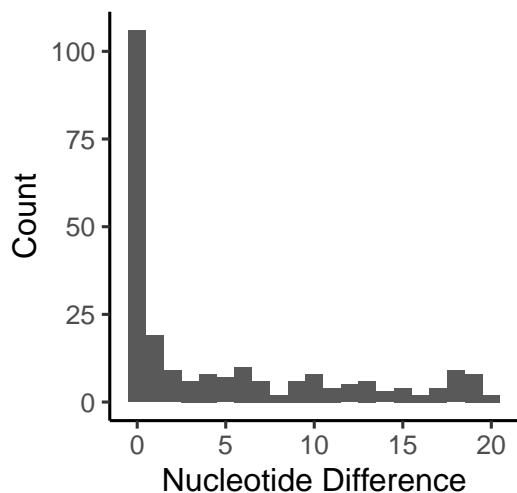
IGHV4-28*01_07

17 sequences assigned
2 (11.8%) exact matches, in which:
2 unique CDR3
2 unique J



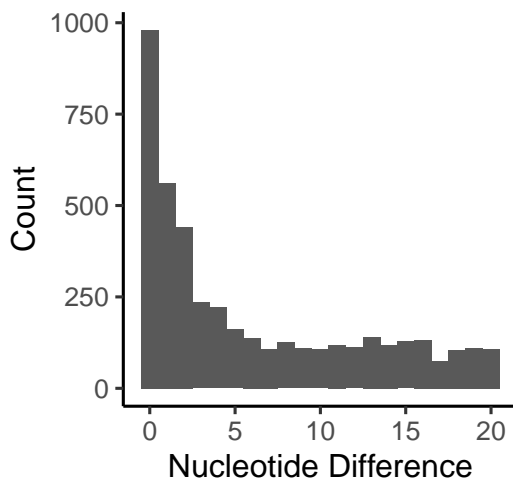
IGHV3-43D*03

299 sequences assigned
106 (35.5%) exact matches, in which:
102 unique CDR3
6 unique J



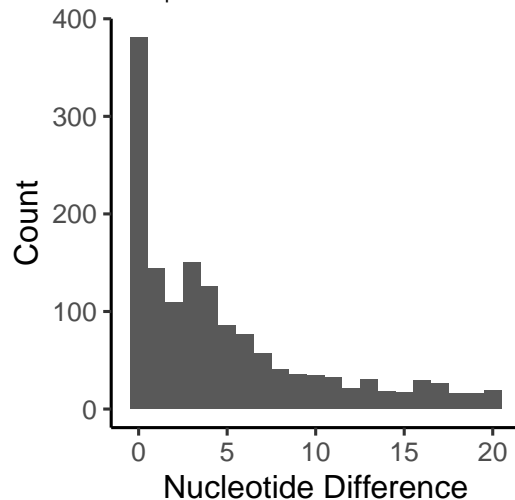
IGHV4-4*07

5134 sequences assigned
980 (19.1%) exact matches, in which:
961 unique CDR3
7 unique J



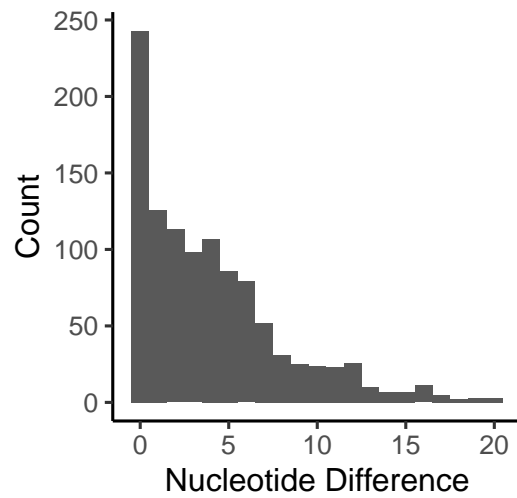
IGHV4-30-4*01

1724 sequences assigned
381 (22.1%) exact matches, in which:
378 unique CDR3
7 unique J



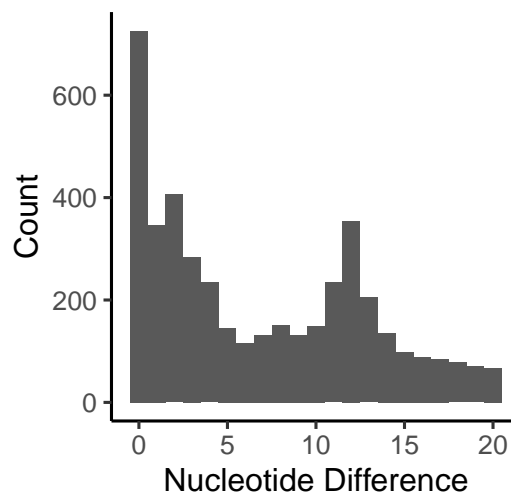
IGHV4-30-2*01

1143 sequences assigned
243 (21.3%) exact matches, in which:
239 unique CDR3
7 unique J



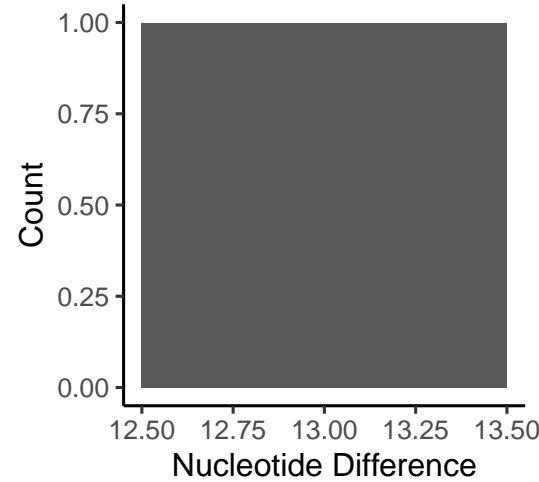
IGHV4-38-2*02

4909 sequences assigned
726 (14.8%) exact matches, in which:
723 unique CDR3
7 unique J



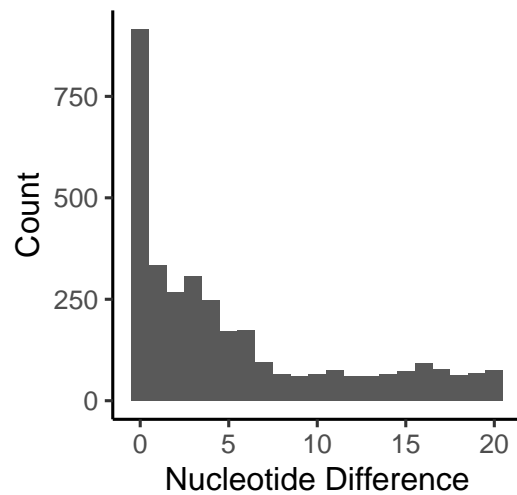
IGHV4-55*02_04_08

39 sequences assigned
No exact matches.



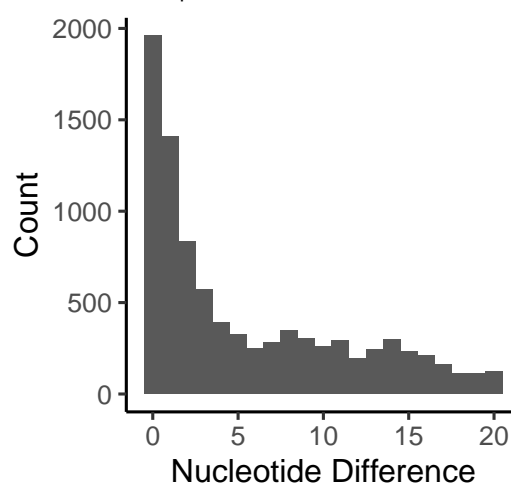
IGHV4-31*03_04

4465 sequences assigned
916 (20.5%) exact matches, in which:
911 unique CDR3
7 unique J



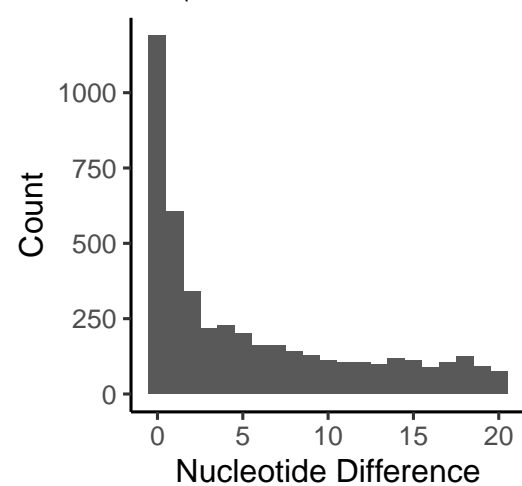
IGHV4-39*07

10012 sequences assigned
1960 (19.6%) exact matches, in which:
1926 unique CDR3
7 unique J



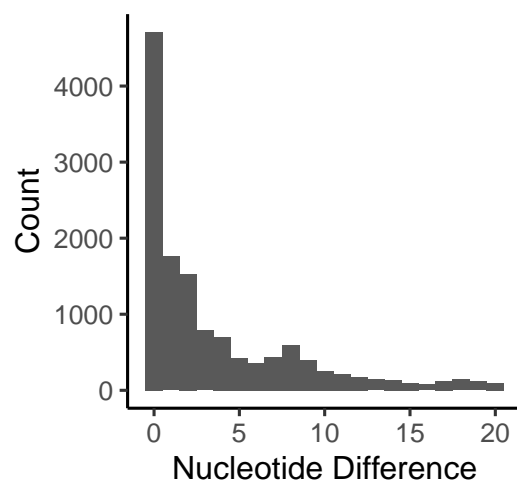
IGHV4-59*08

5334 sequences assigned
1189 (22.3%) exact matches, in which:
1175 unique CDR3
7 unique J



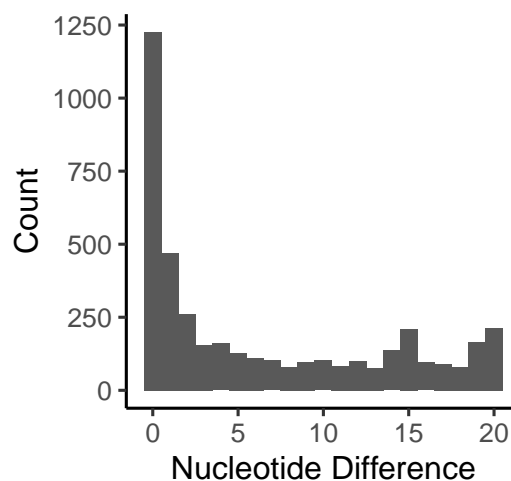
IGHV4-34*01_02

14277 sequences assigned
4710 (33%) exact matches, in which:
4643 unique CDR3
7 unique J



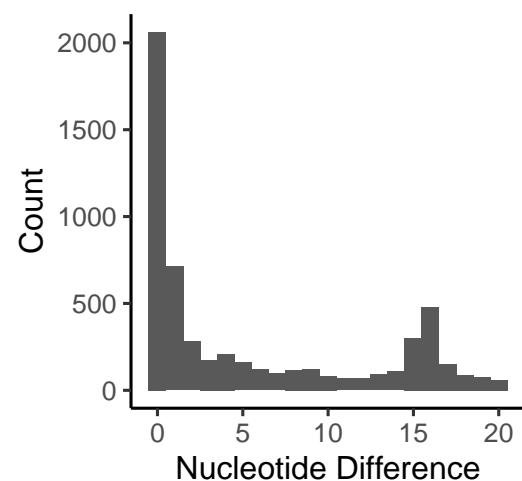
IGHV4-39*01_05

5222 sequences assigned
1226 (23.5%) exact matches, in which:
1205 unique CDR3
7 unique J



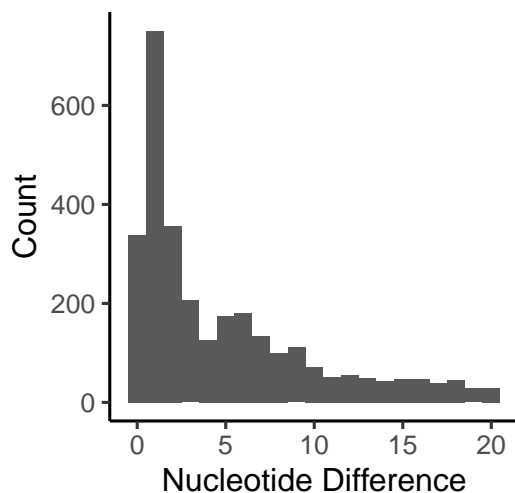
IGHV4-59*01_07

6286 sequences assigned
2062 (32.8%) exact matches, in which:
2011 unique CDR3
7 unique J



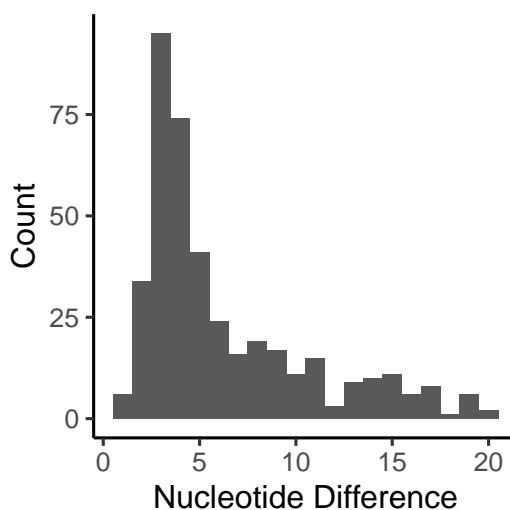
IGHV4–59*12

3232 sequences assigned
339 (10.5%) exact matches, in which:
337 unique CDR3
7 unique J



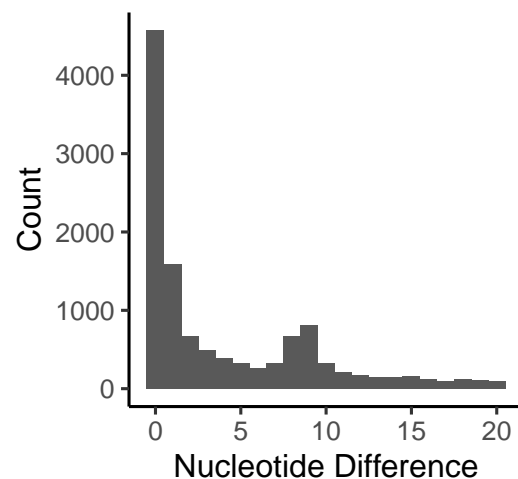
IGHV4–61*05

449 sequences assigned
No exact matches.



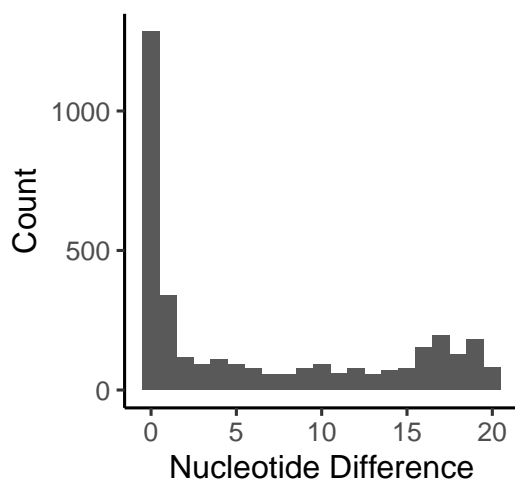
IGHV5–51*01_03

12397 sequences assigned
4573 (36.9%) exact matches, in which:
4451 unique CDR3
7 unique J



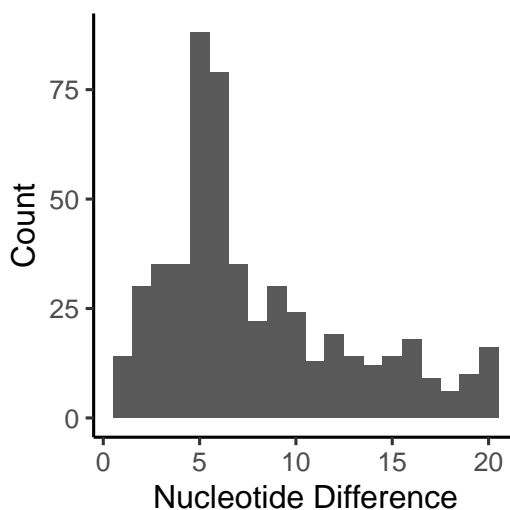
IGHV4–59*13

4200 sequences assigned
1284 (30.6%) exact matches, in which:
1274 unique CDR3
7 unique J



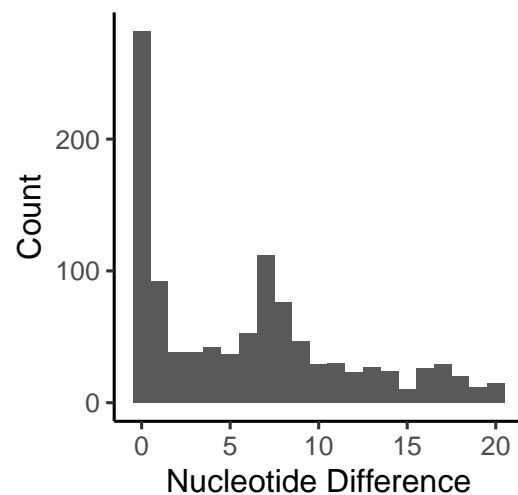
IGHV4–61*08

618 sequences assigned
No exact matches.



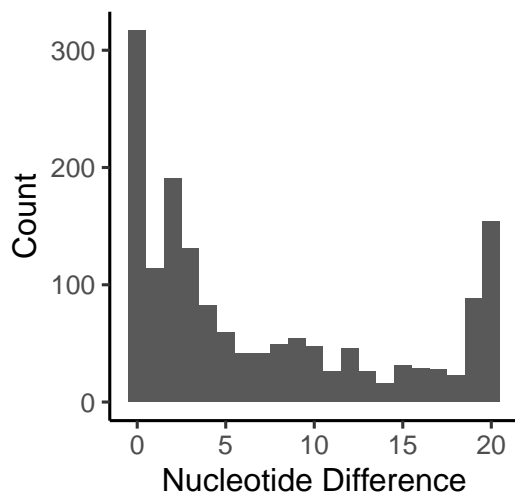
IGHV6–1*01_02

1179 sequences assigned
282 (23.9%) exact matches, in which:
279 unique CDR3
7 unique J



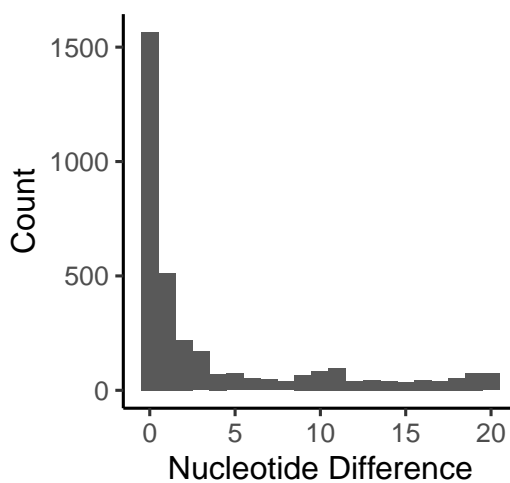
IGHV4–61*01

2026 sequences assigned
317 (15.6%) exact matches, in which:
317 unique CDR3
7 unique J



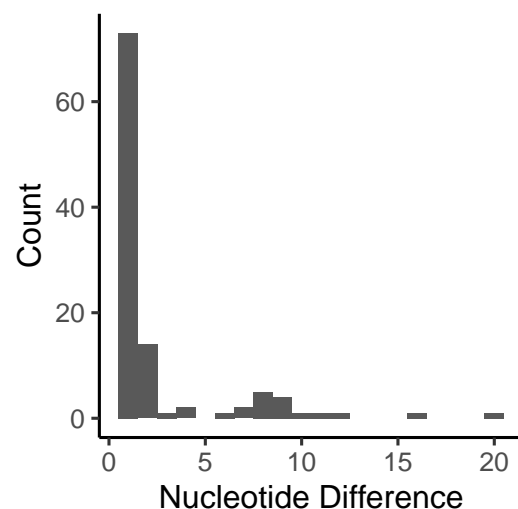
IGHV5–10–1*01_03

3869 sequences assigned
1566 (40.5%) exact matches, in which:
1545 unique CDR3
7 unique J

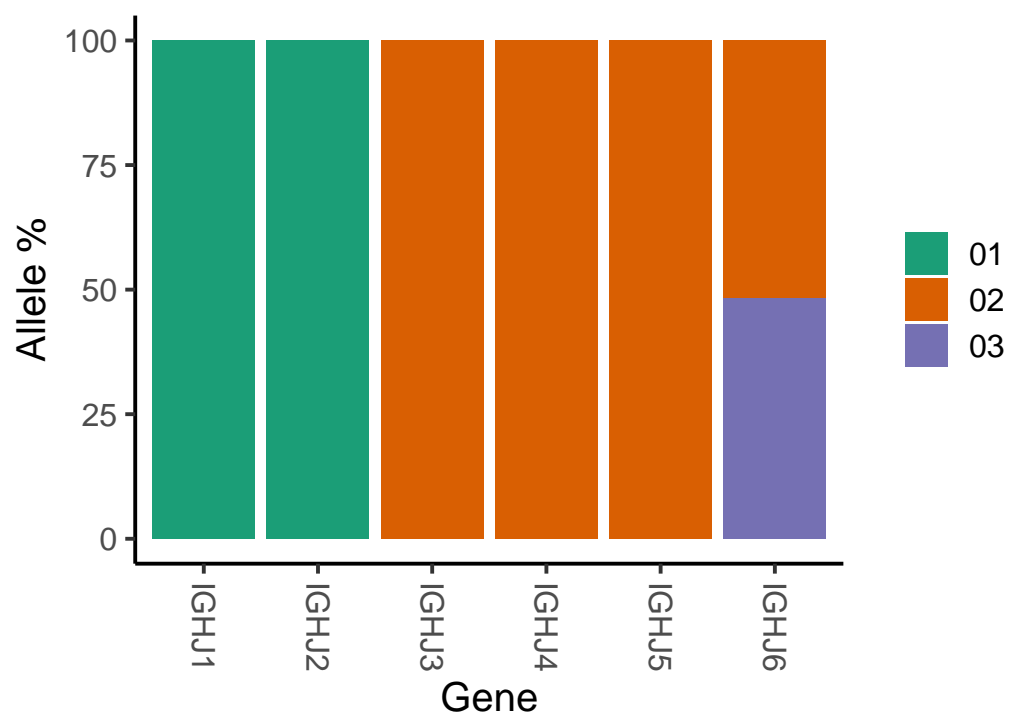


IGHV7–4–1*01

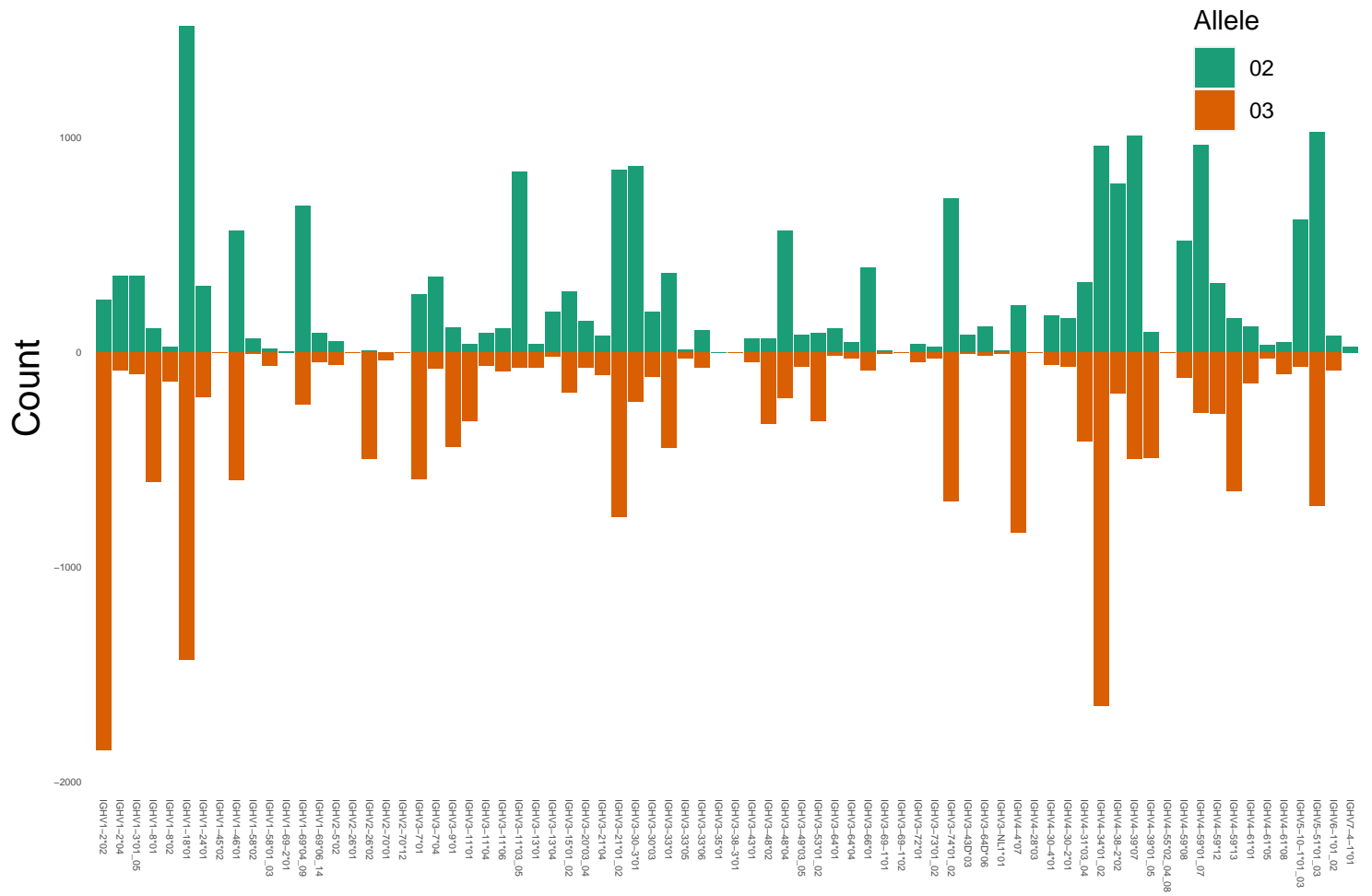
113 sequences assigned
No exact matches.



Allele Usage



Sequence Count byIGHJ6 allele usage



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) 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) IGHV7-4-1*02_T63C are not listed in the genotype and will be ignored.

Novel sequence(s) IGHV7-4-1*02_T63C are not listed in the genotype and will be ignored.

Warning – no inferred sequences found.

Warning: IGHV4-31*02, IGHV4-31*03_04 have identical germline sequences.

Warning – no inferred sequences found.

Warning – no inferred sequences found.

Warning: IGHV4-31*02, IGHV4-31*03_04 have identical germline sequences.

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