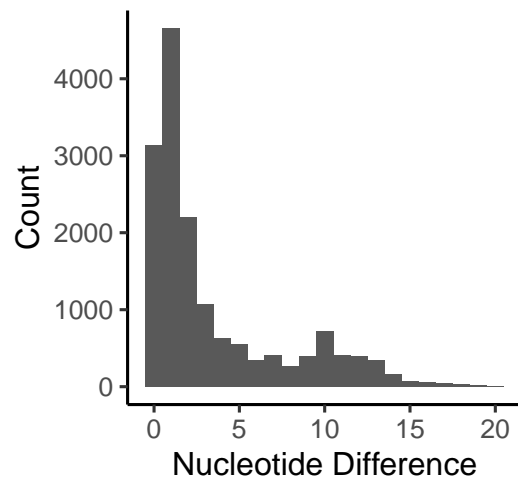


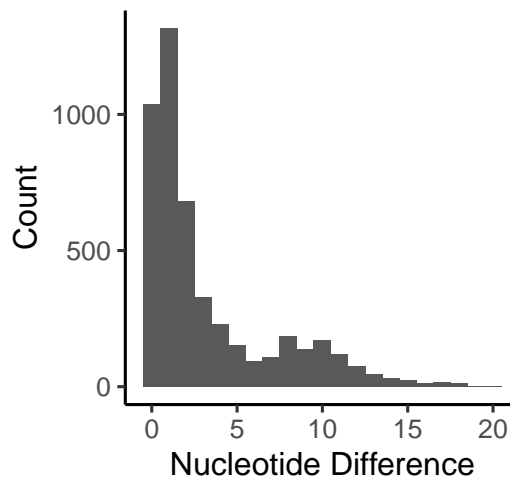
IGHV1-2*02

15996 sequences assigned
3132 (19.6%) exact matches, in which:
2665 unique CDR3
7 unique J



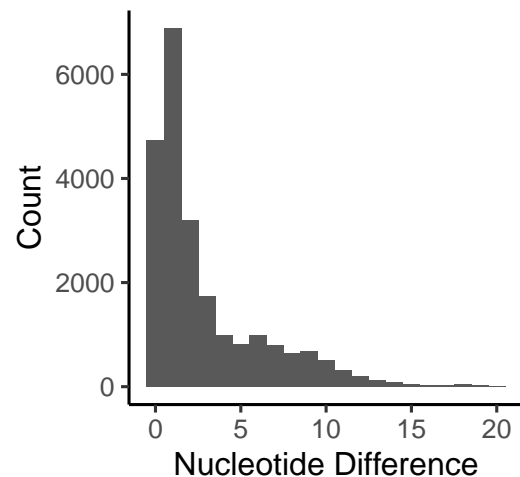
IGHV1-3*01_05

4784 sequences assigned
1038 (21.7%) exact matches, in which:
904 unique CDR3
7 unique J



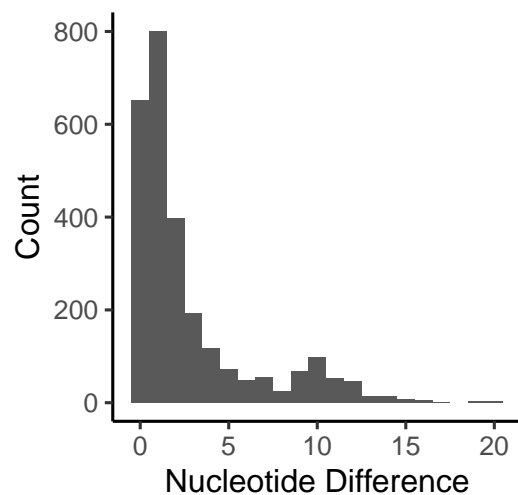
IGHV1-18*01

22956 sequences assigned
4731 (20.6%) exact matches, in which:
4003 unique CDR3
7 unique J



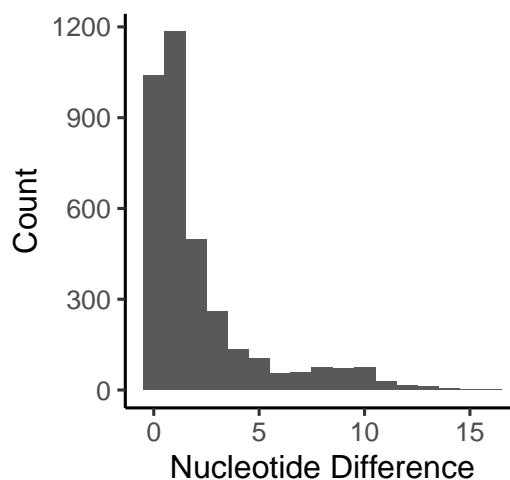
IGHV1-2*04

2675 sequences assigned
652 (24.4%) exact matches, in which:
567 unique CDR3
7 unique J



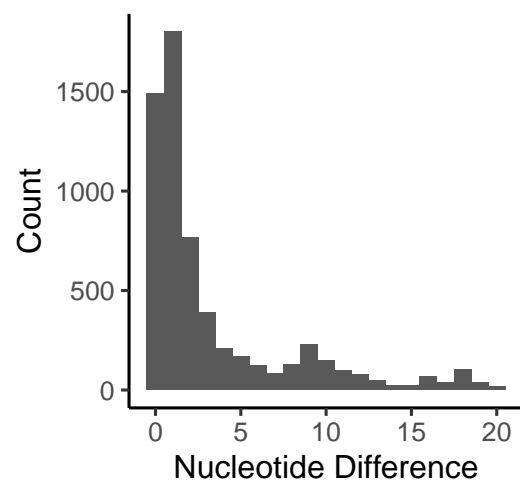
IGHV1-8*01

3623 sequences assigned
1040 (28.7%) exact matches, in which:
906 unique CDR3
7 unique J



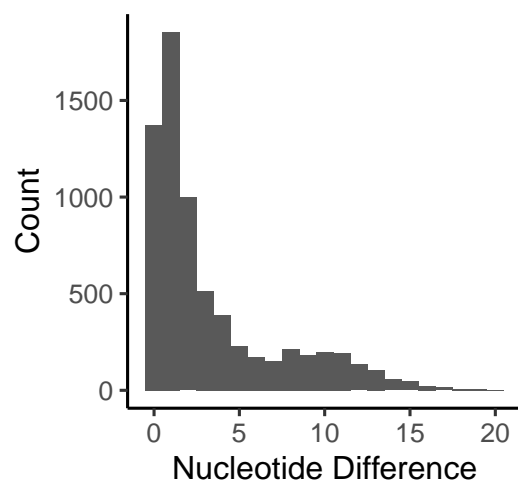
IGHV1-24*01

6099 sequences assigned
1490 (24.4%) exact matches, in which:
1262 unique CDR3
7 unique J



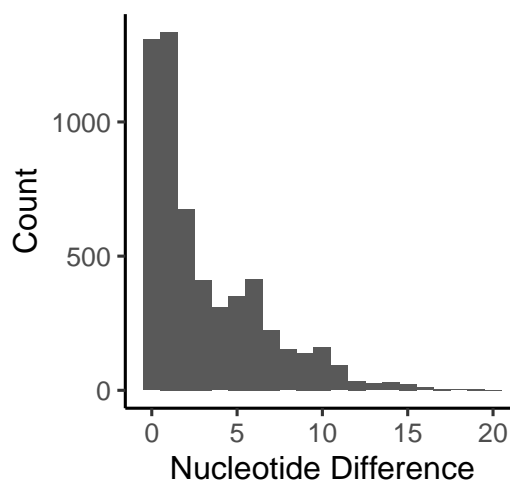
IGHV1-3*04

6873 sequences assigned
1374 (20%) exact matches, in which:
1184 unique CDR3
7 unique J



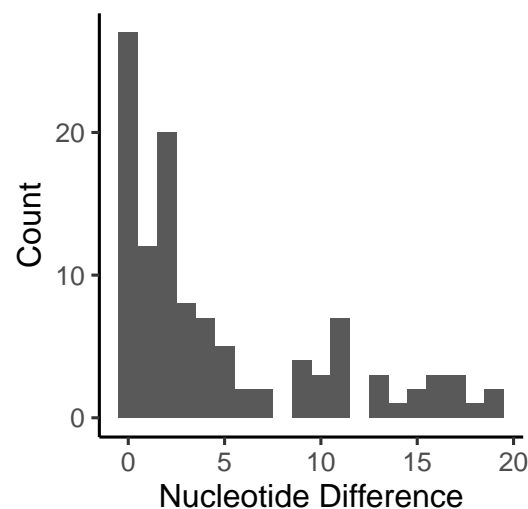
IGHV1-8*02

5709 sequences assigned
1307 (22.9%) exact matches, in which:
1165 unique CDR3
7 unique J



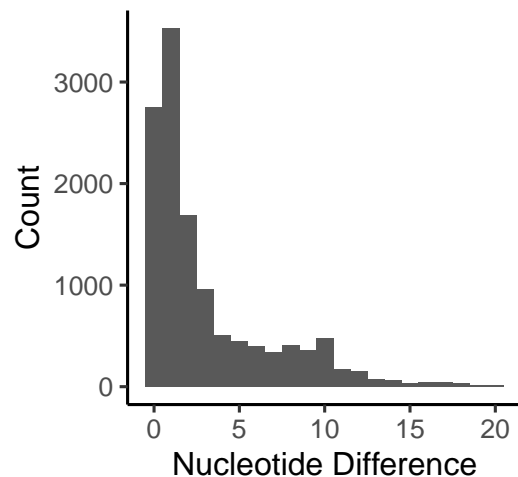
IGHV1-45*02

115 sequences assigned
27 (23.5%) exact matches, in which:
22 unique CDR3
5 unique J



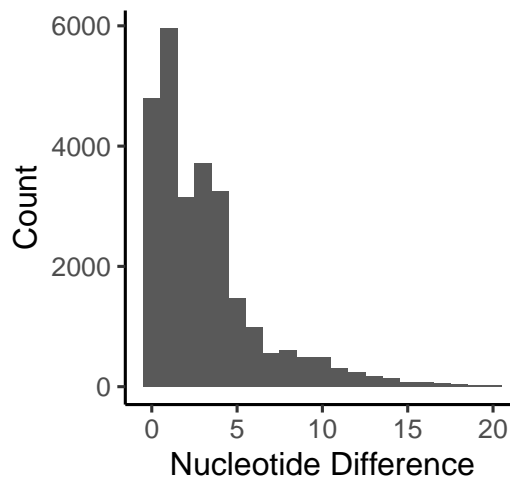
IGHV1-46*01

12615 sequences assigned
2755 (21.8%) exact matches, in which:
2359 unique CDR3
7 unique J



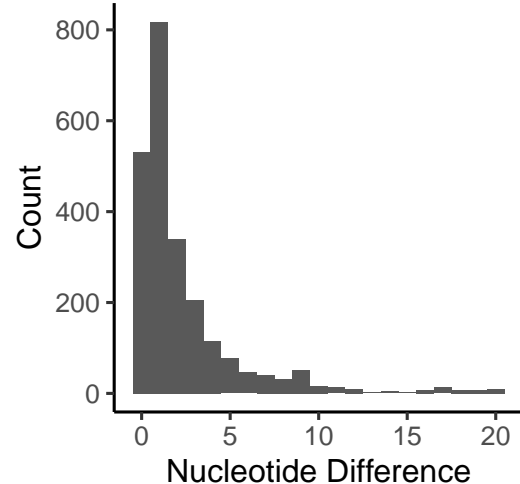
IGHV1-69*11

26654 sequences assigned
4801 (18%) exact matches, in which:
4154 unique CDR3
7 unique J



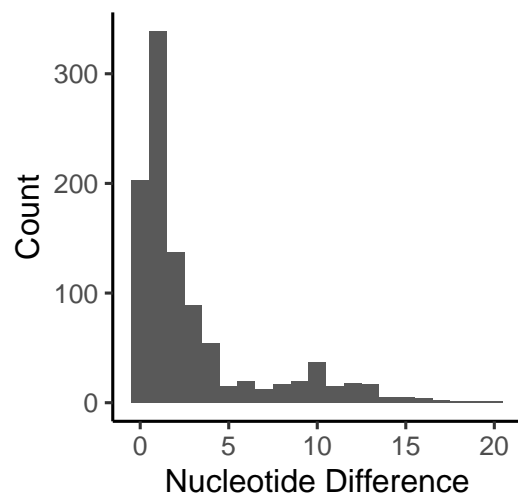
IGHV2-26*01

2399 sequences assigned
531 (22.1%) exact matches, in which:
430 unique CDR3
7 unique J



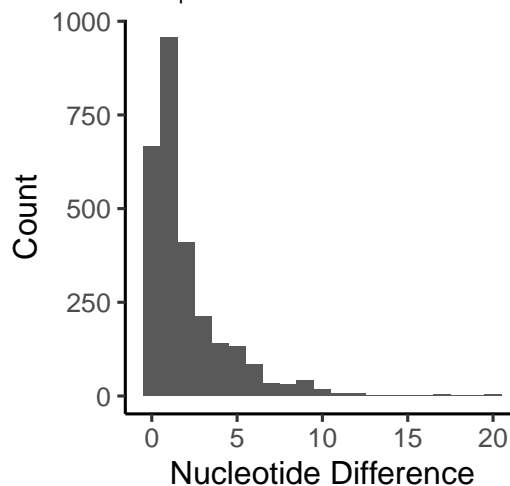
IGHV1-58*02

1013 sequences assigned
203 (20%) exact matches, in which:
178 unique CDR3
7 unique J



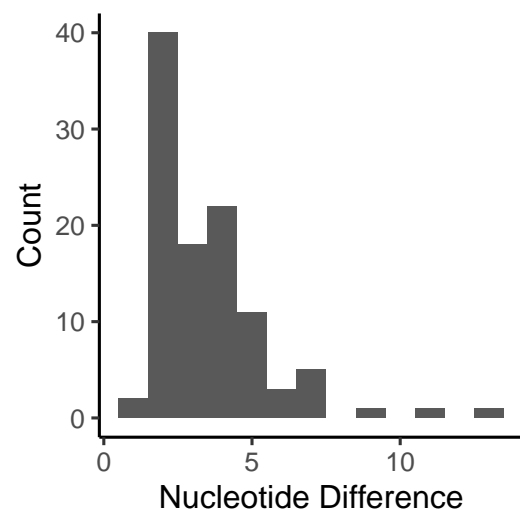
IGHV2-5*01

2789 sequences assigned
667 (23.9%) exact matches, in which:
569 unique CDR3
7 unique J



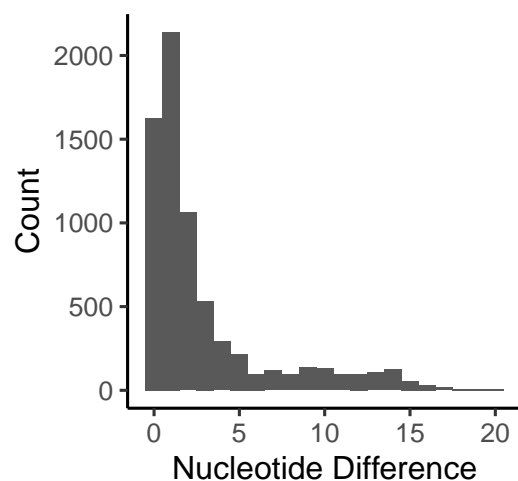
IGHV2-70*12

106 sequences assigned
No exact matches.



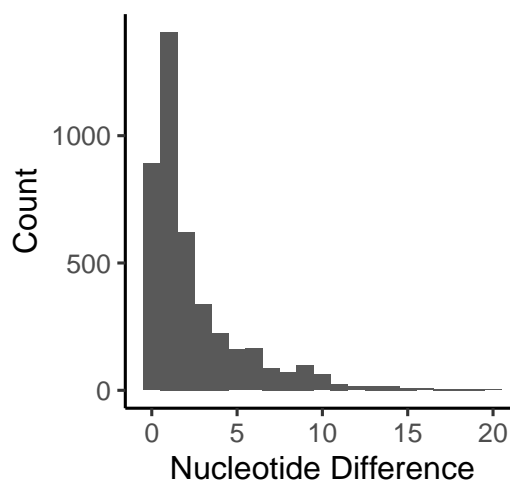
IGHV1-69-2*01

7033 sequences assigned
1627 (23.1%) exact matches, in which:
1353 unique CDR3
7 unique J



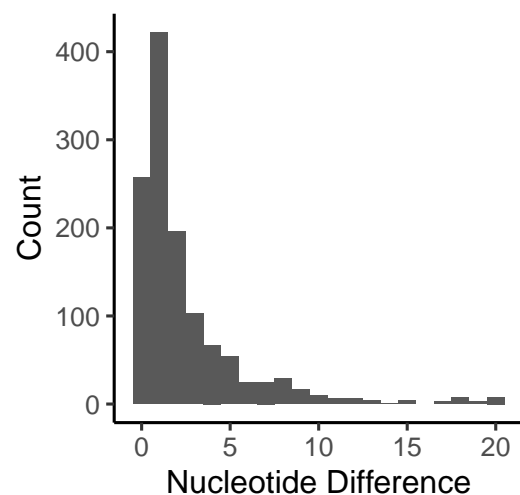
IGHV2-5*02

4281 sequences assigned
891 (20.8%) exact matches, in which:
736 unique CDR3
7 unique J



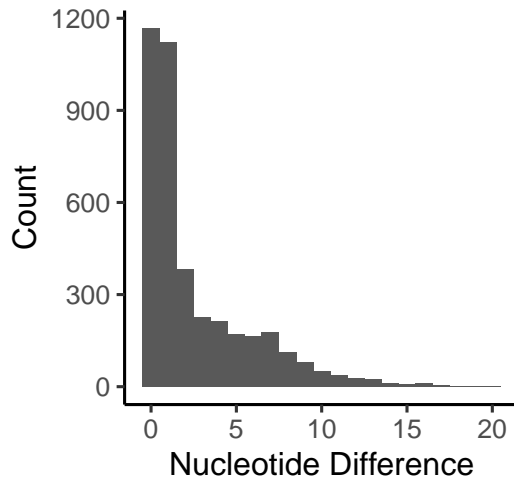
IGHV2-70*11_15

1278 sequences assigned
257 (20.1%) exact matches, in which:
219 unique CDR3
6 unique J



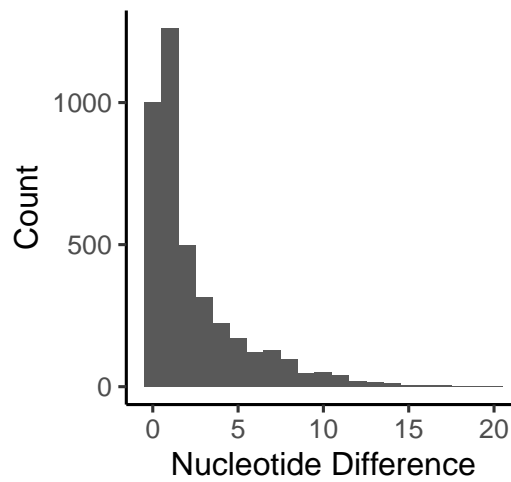
IGHV3-7*01

4003 sequences assigned
1167 (29.2%) exact matches, in which:
1064 unique CDR3
7 unique J



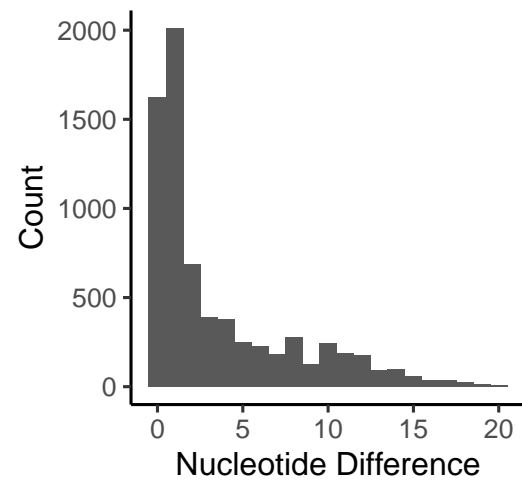
IGHV3-11*01

4039 sequences assigned
1002 (24.8%) exact matches, in which:
870 unique CDR3
7 unique J



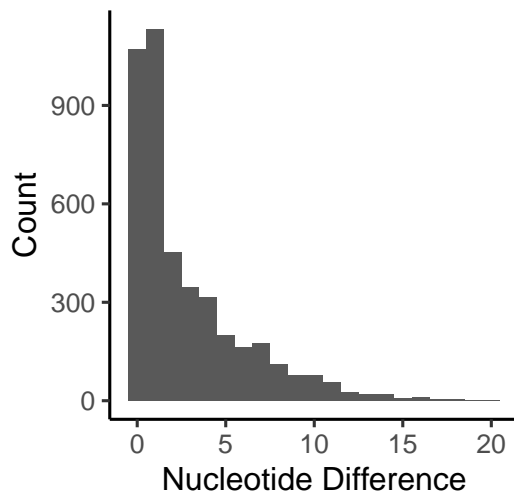
IGHV3-15*01_02

7160 sequences assigned
1623 (22.7%) exact matches, in which:
1367 unique CDR3
7 unique J



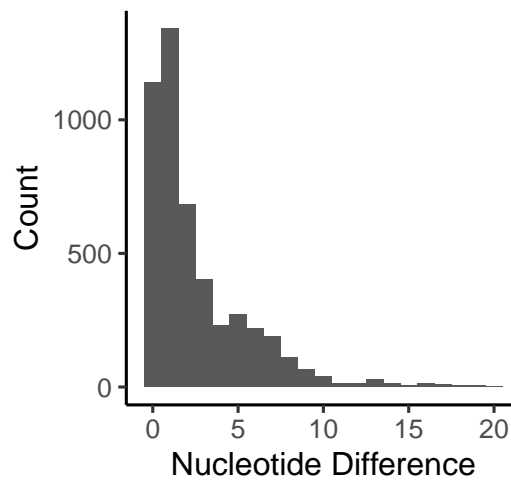
IGHV3-7*03

4281 sequences assigned
1070 (25%) exact matches, in which:
936 unique CDR3
7 unique J



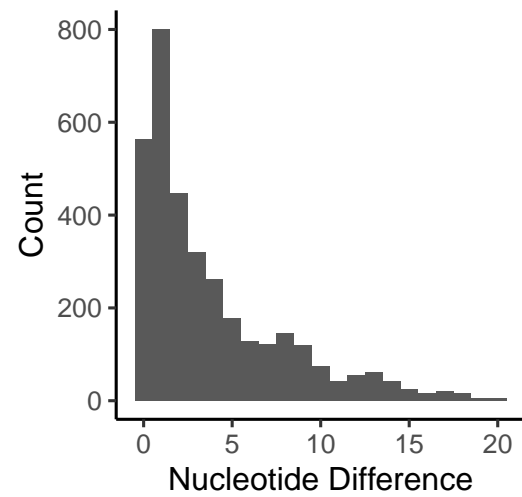
IGHV3-11*04

4795 sequences assigned
1138 (23.7%) exact matches, in which:
1008 unique CDR3
7 unique J



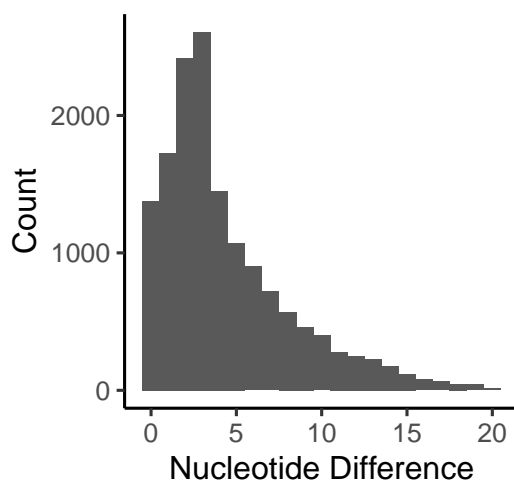
IGHV3-20*03_04

3469 sequences assigned
563 (16.2%) exact matches, in which:
471 unique CDR3
7 unique J



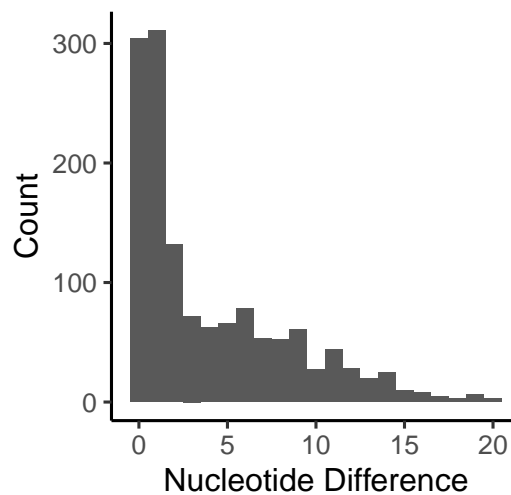
IGHV3-9*01

15038 sequences assigned
1377 (9.2%) exact matches, in which:
1125 unique CDR3
7 unique J



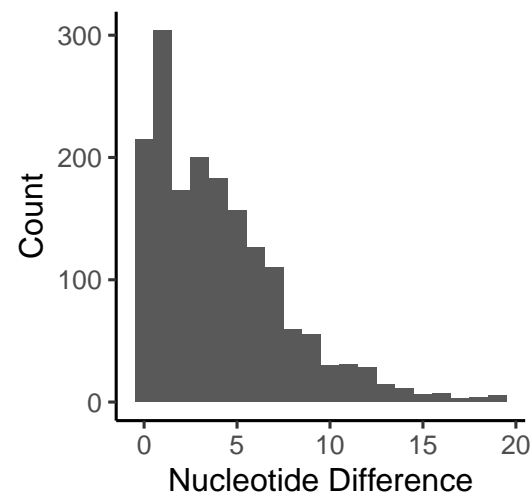
IGHV3-13*01

1375 sequences assigned
304 (22.1%) exact matches, in which:
264 unique CDR3
7 unique J



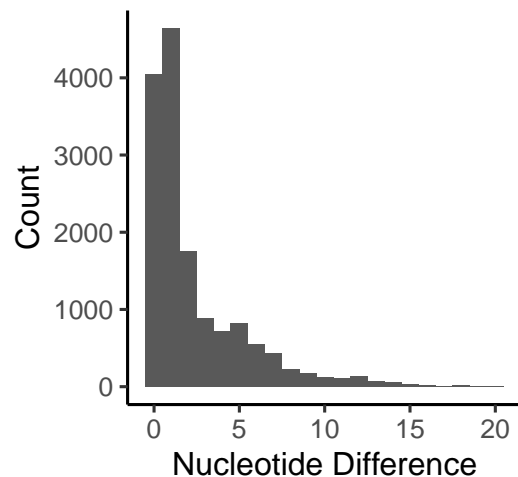
IGHV3-21*04

1724 sequences assigned
215 (12.5%) exact matches, in which:
212 unique CDR3
7 unique J



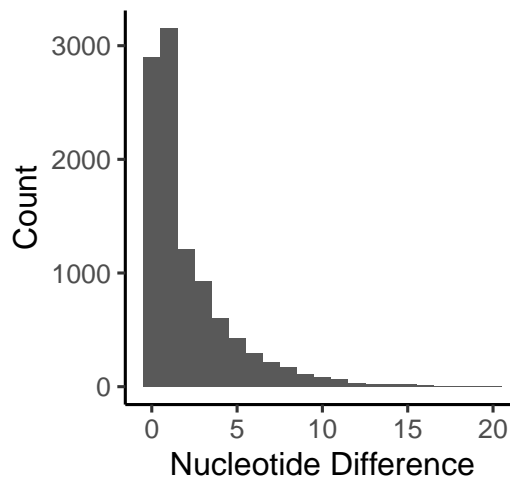
IGHV3-21*01_02

14835 sequences assigned
4047 (27.3%) exact matches, in which:
3421 unique CDR3
7 unique J



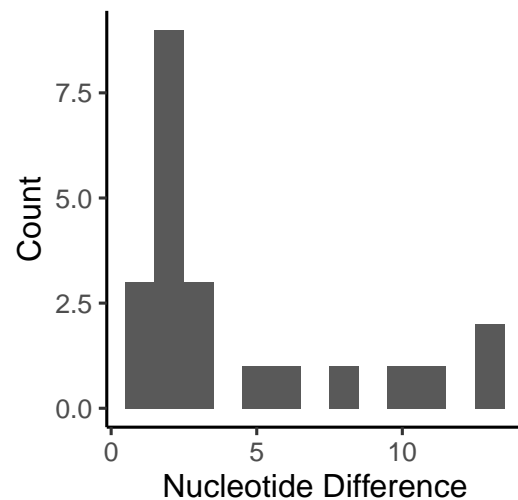
IGHV3-30*01

10287 sequences assigned
2898 (28.2%) exact matches, in which:
2566 unique CDR3
7 unique J



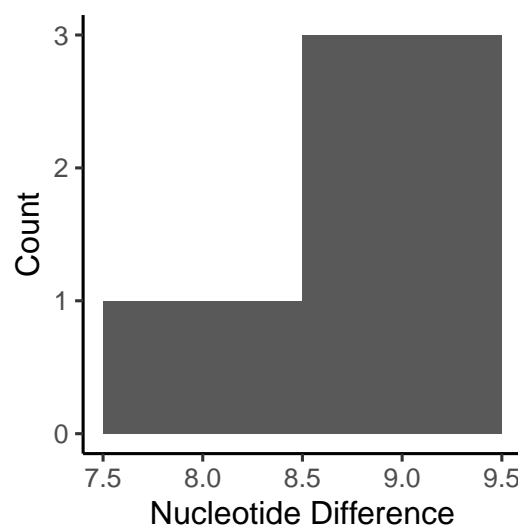
IGHV3-35*01

22 sequences assigned
No exact matches.



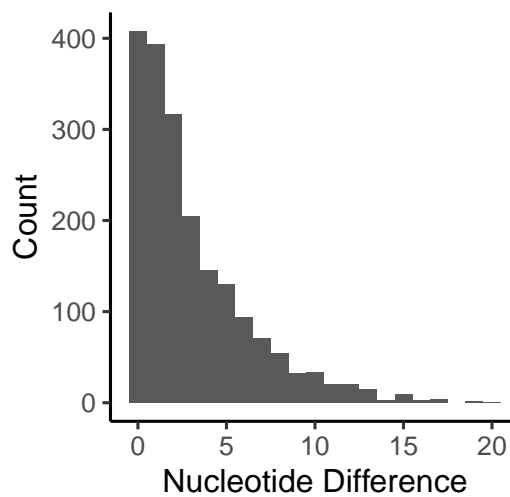
IGHV3-22*01_02

4 sequences assigned
No exact matches.



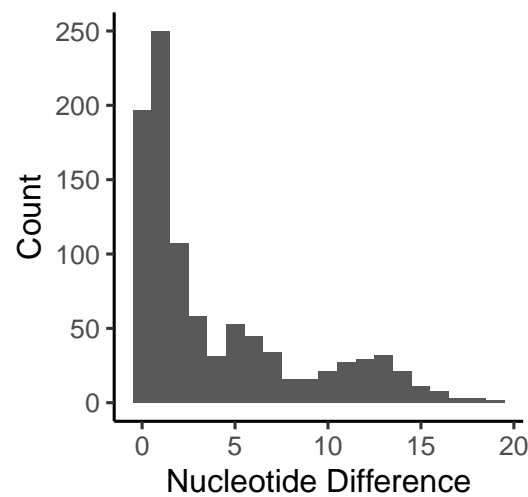
IGHV3-33*01

1964 sequences assigned
408 (20.8%) exact matches, in which:
404 unique CDR3
7 unique J



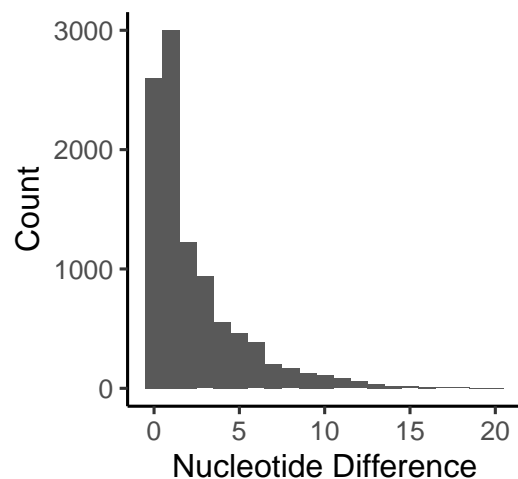
IGHV3-43*01

967 sequences assigned
197 (20.4%) exact matches, in which:
172 unique CDR3
6 unique J



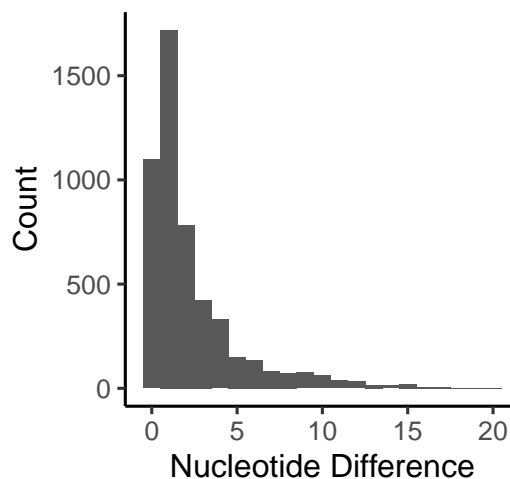
IGHV3-30-3*01

10020 sequences assigned
2601 (26%) exact matches, in which:
2250 unique CDR3
7 unique J



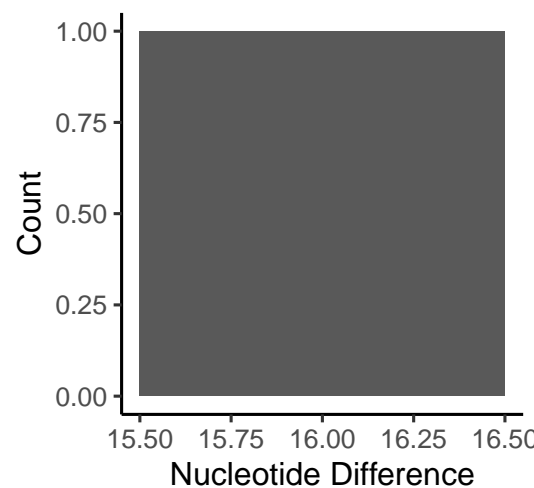
IGHV3-33*06

5074 sequences assigned
1098 (21.6%) exact matches, in which:
916 unique CDR3
7 unique J



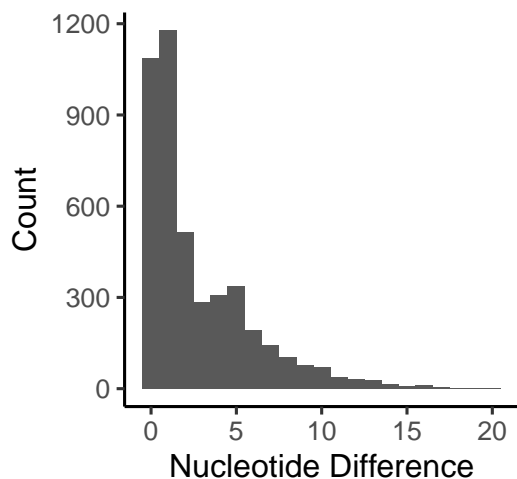
IGHV3-47*02

1 sequences assigned
No exact matches.



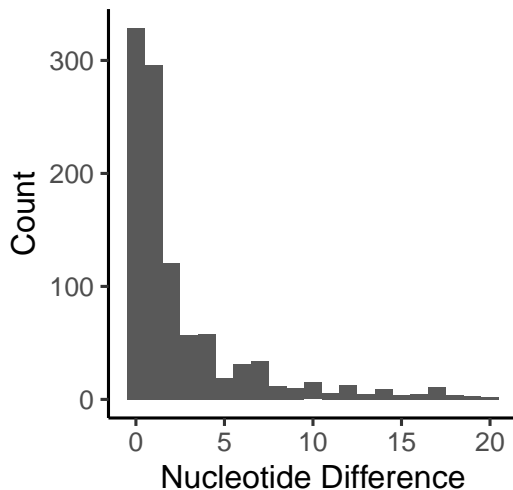
IGHV3-48*01

4437 sequences assigned
1086 (24.5%) exact matches, in which:
929 unique CDR3
7 unique J



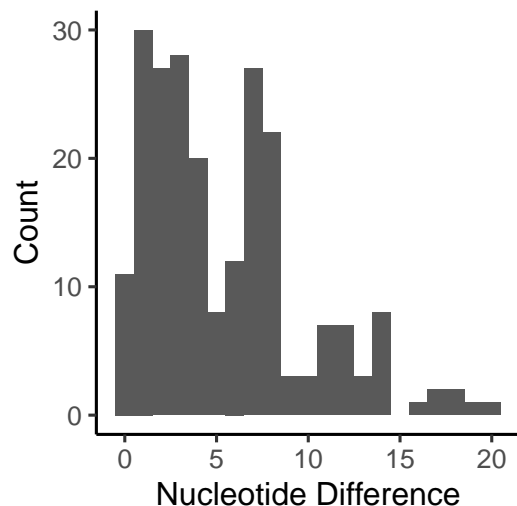
IGHV3-49*03_05

1047 sequences assigned
329 (31.4%) exact matches, in which:
284 unique CDR3
7 unique J



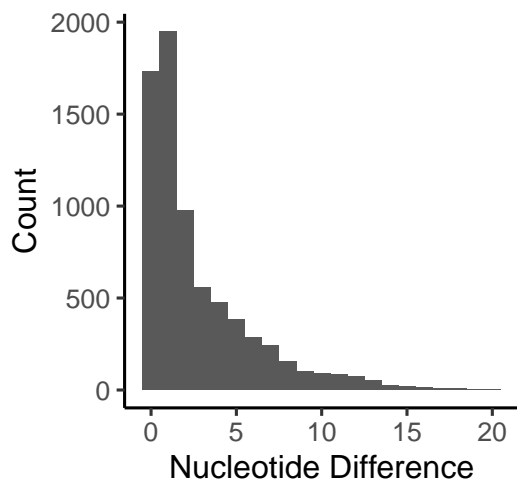
IGHV3-53*05

224 sequences assigned
11 (4.9%) exact matches, in which:
11 unique CDR3
5 unique J



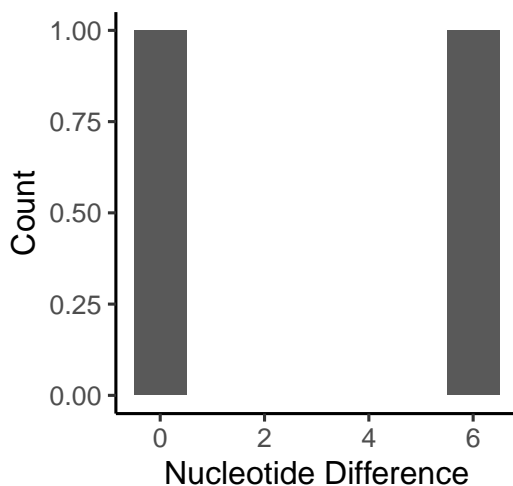
IGHV3-48*04

7258 sequences assigned
1734 (23.9%) exact matches, in which:
1515 unique CDR3
7 unique J



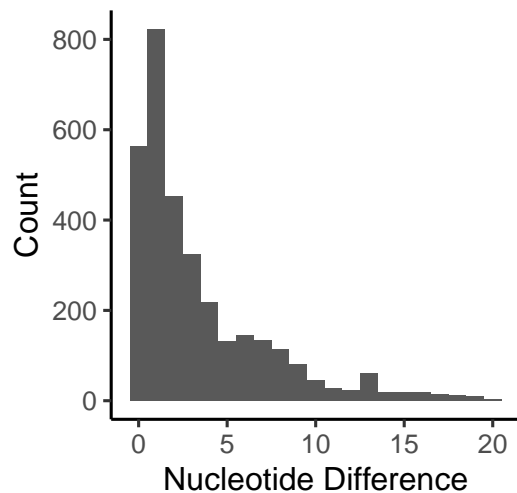
IGHV3-52*01_03

2 sequences assigned
1 (50%) exact matches, in which:
1 unique CDR3
1 unique J



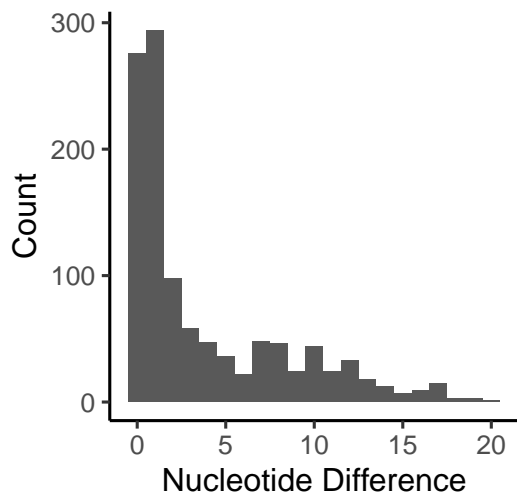
IGHV3-53*01_02

3250 sequences assigned
564 (17.4%) exact matches, in which:
461 unique CDR3
7 unique J



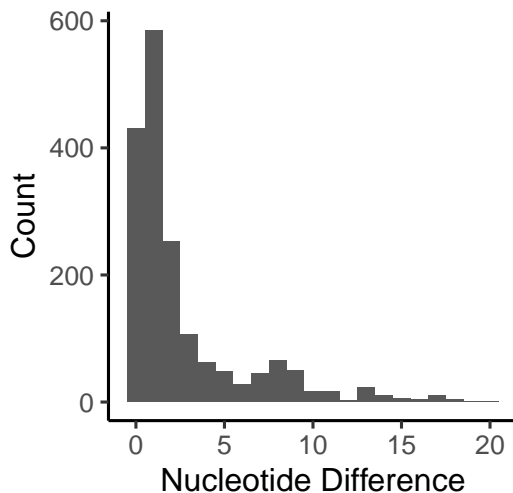
IGHV3-49*04

1119 sequences assigned
276 (24.7%) exact matches, in which:
236 unique CDR3
7 unique J



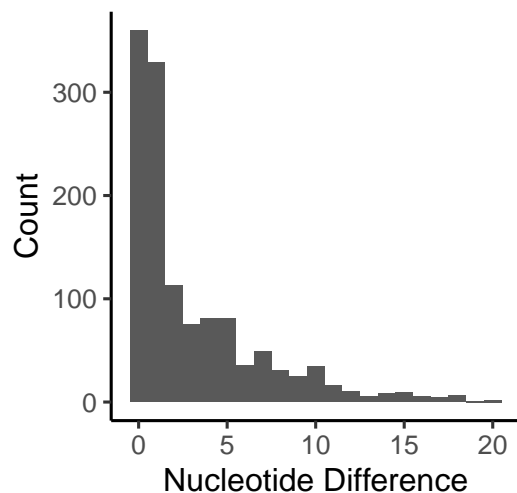
IGHV3-53*04

1767 sequences assigned
430 (24.3%) exact matches, in which:
340 unique CDR3
7 unique J



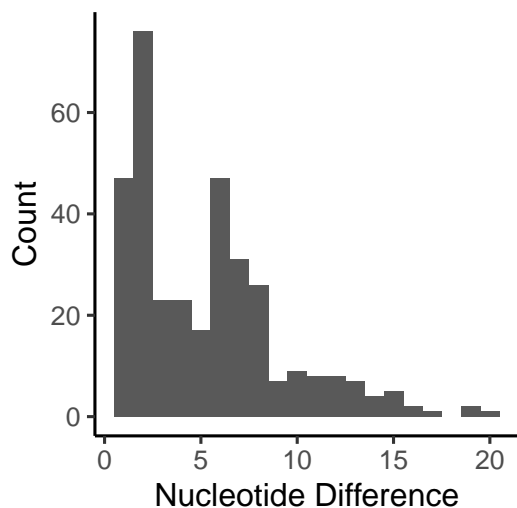
IGHV3-64*01

1281 sequences assigned
360 (28.1%) exact matches, in which:
296 unique CDR3
7 unique J



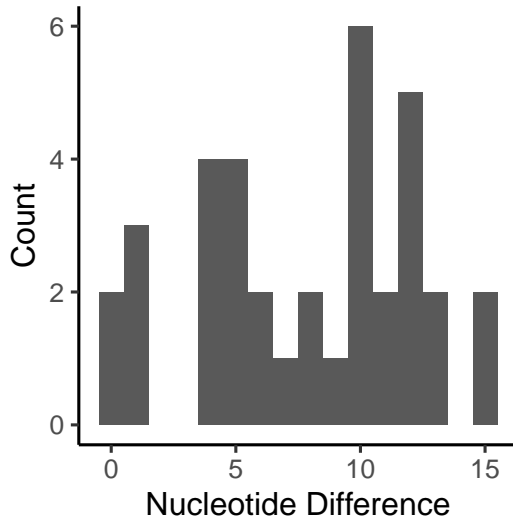
IGHV3-66*01

345 sequences assigned
No exact matches.



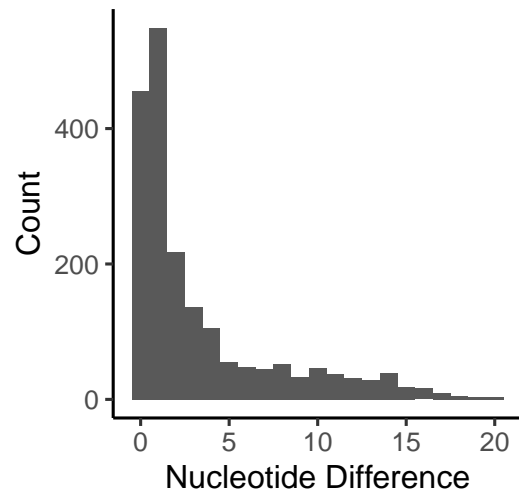
IGHV3-69-1*01

38 sequences assigned
2 (5.3%) exact matches, in which:
2 unique CDR3
2 unique J



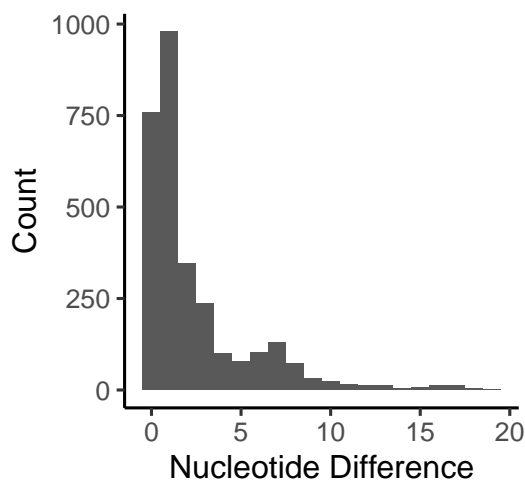
IGHV3-73*01_02

1944 sequences assigned
455 (23.4%) exact matches, in which:
402 unique CDR3
7 unique J



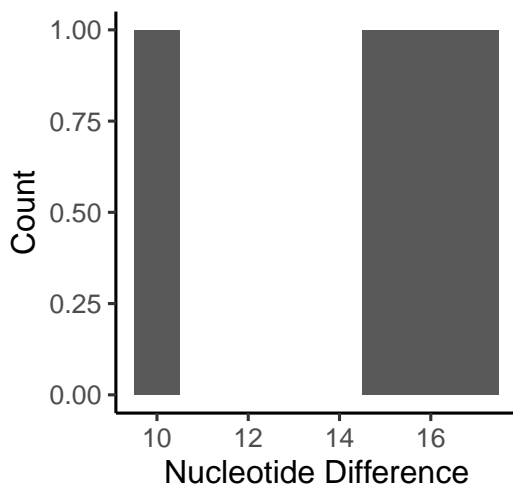
IGHV3-66*02

2936 sequences assigned
759 (25.9%) exact matches, in which:
640 unique CDR3
7 unique J



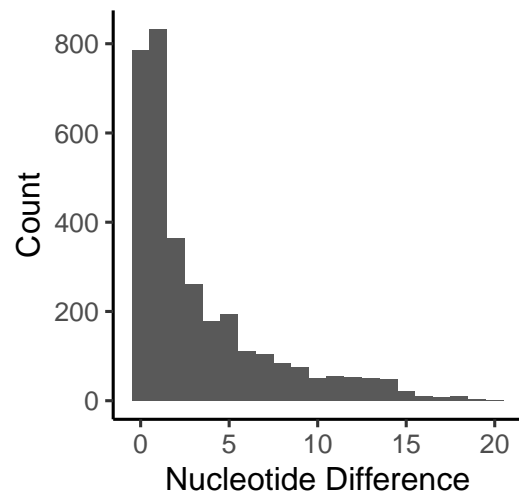
IGHV3-71*01_04

4 sequences assigned
No exact matches.



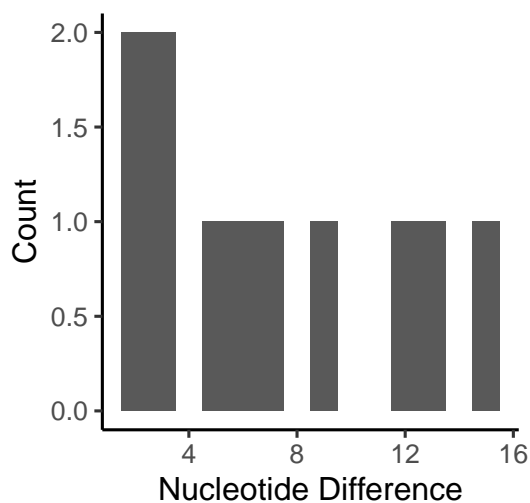
IGHV3-74*01_02

3308 sequences assigned
786 (23.8%) exact matches, in which:
700 unique CDR3
7 unique J



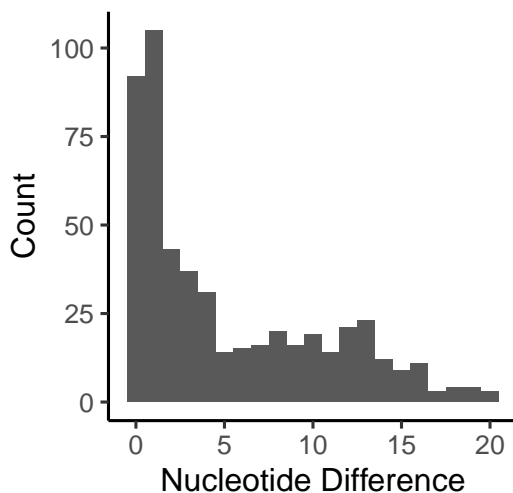
IGHV3-66*03

11 sequences assigned
No exact matches.



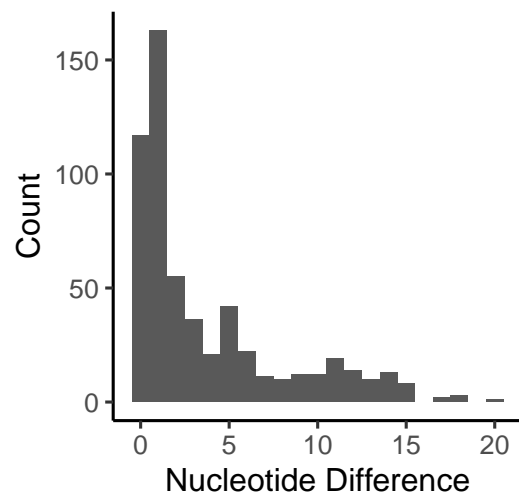
IGHV3-72*01

522 sequences assigned
92 (17.6%) exact matches, in which:
77 unique CDR3
6 unique J



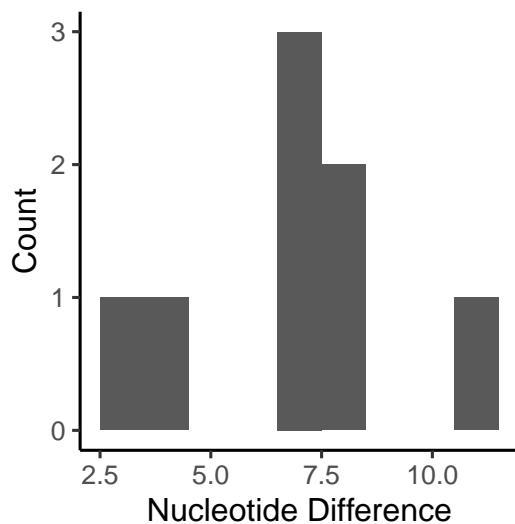
IGHV3-43D*04

572 sequences assigned
117 (20.5%) exact matches, in which:
104 unique CDR3
6 unique J



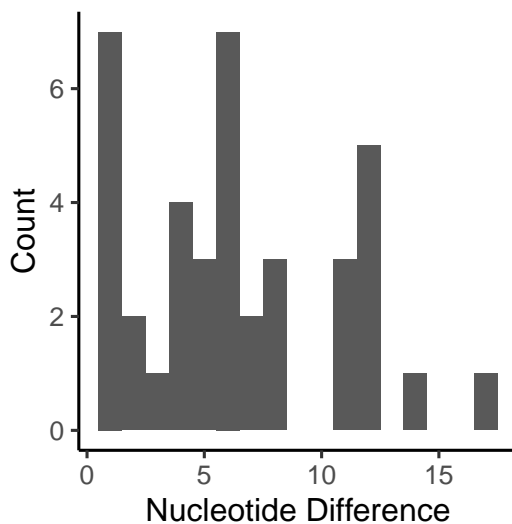
IGHV3-64D*06

8 sequences assigned
No exact matches.



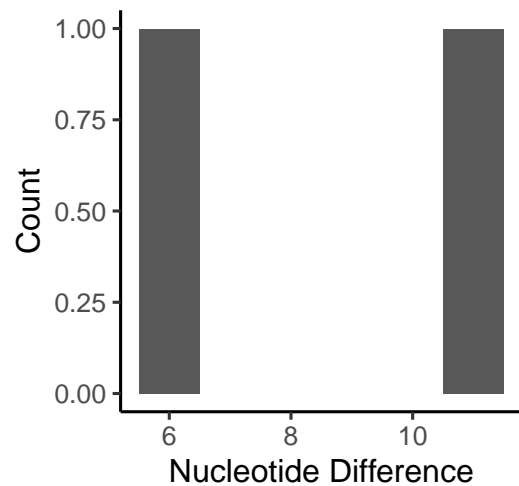
IGHV4-28*03

39 sequences assigned
No exact matches.



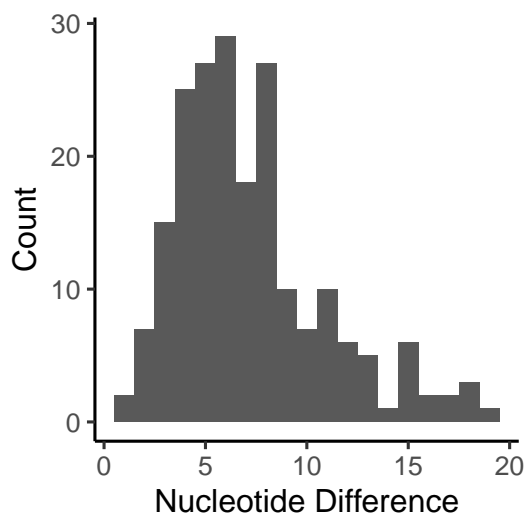
IGHV4-30-2*04

2 sequences assigned
No exact matches.



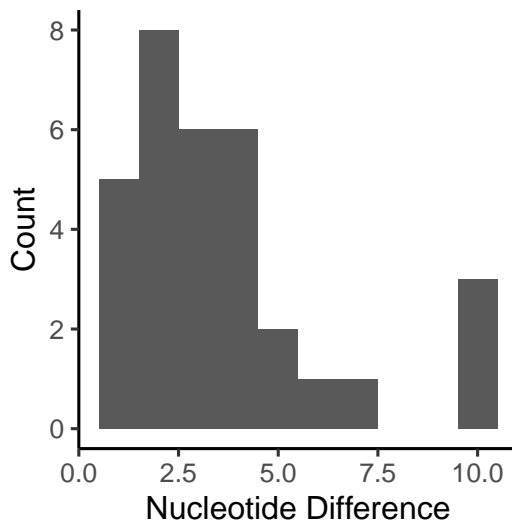
IGHV3-NL1*01

203 sequences assigned
No exact matches.



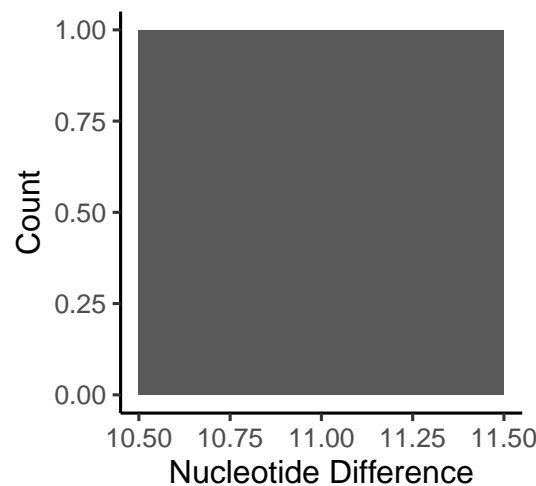
IGHV4-28*01_07

32 sequences assigned
No exact matches.



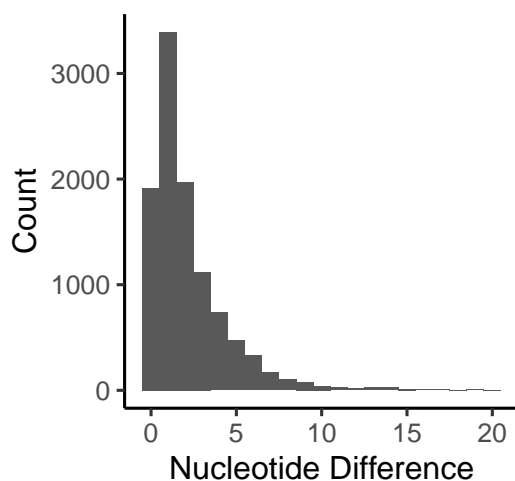
IGHV4-30-2*05

1 sequences assigned
No exact matches.



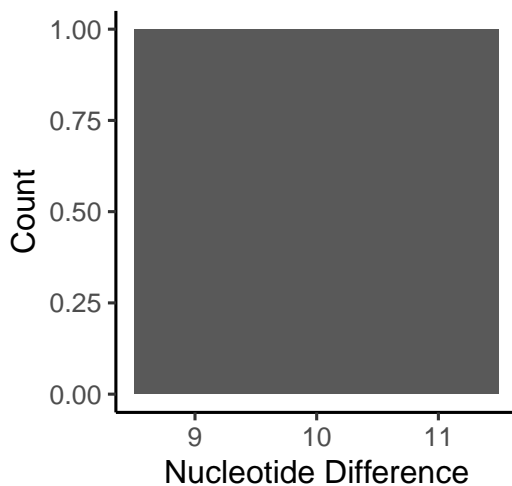
IGHV4-4*09

10477 sequences assigned
1917 (18.3%) exact matches, in which:
1556 unique CDR3
7 unique J



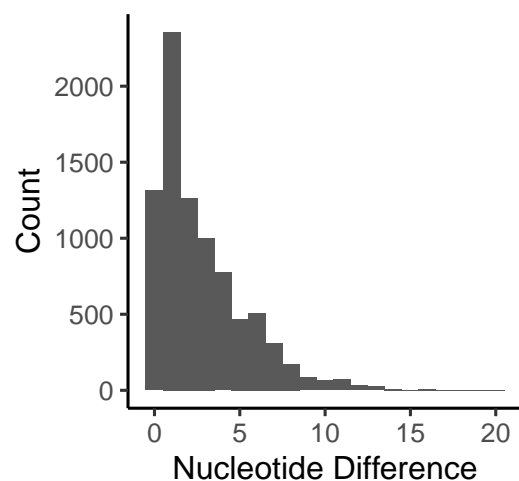
IGHV4-30-2*01

3 sequences assigned
No exact matches.



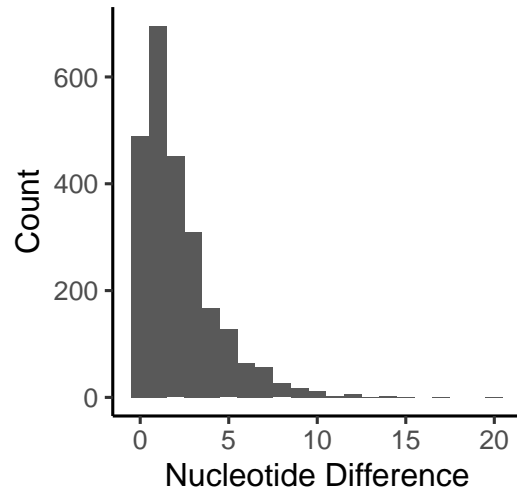
IGHV4-30-4*08

8487 sequences assigned
1314 (15.5%) exact matches, in which:
1075 unique CDR3
7 unique J



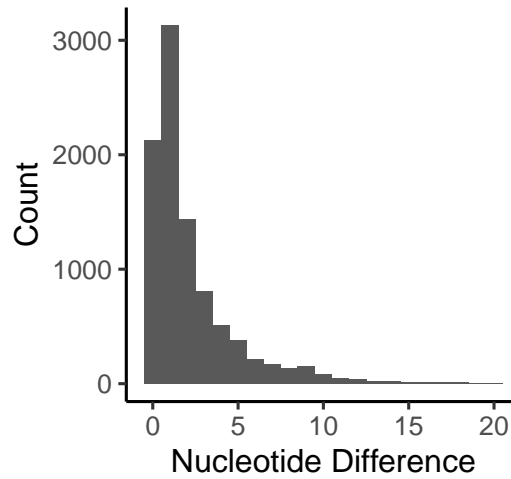
IGHV4-31*01

2431 sequences assigned
489 (20.1%) exact matches, in which:
389 unique CDR3
7 unique J



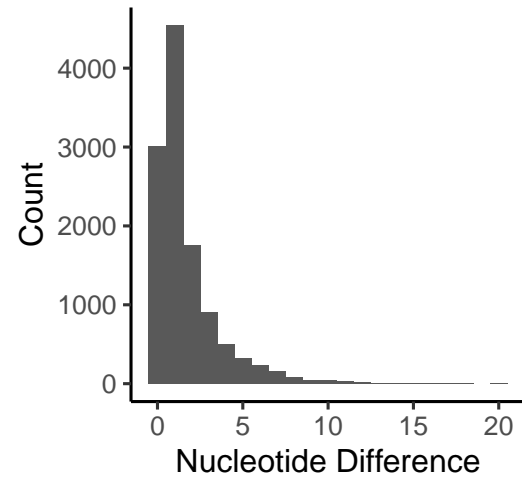
IGHV4-38-2*01

9353 sequences assigned
2128 (22.8%) exact matches, in which:
1755 unique CDR3
7 unique J



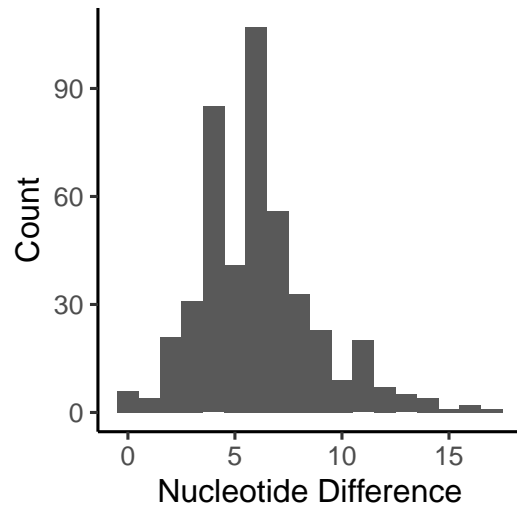
IGHV4-59*11

11705 sequences assigned
3006 (25.7%) exact matches, in which:
2545 unique CDR3
7 unique J



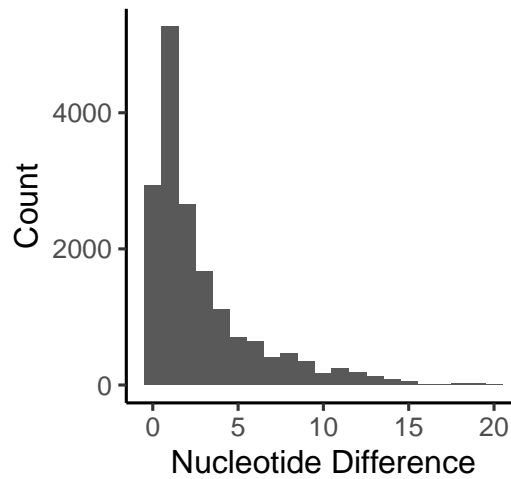
IGHV4-31*03_04

456 sequences assigned
6 (1.3%) exact matches, in which:
6 unique CDR3
3 unique J



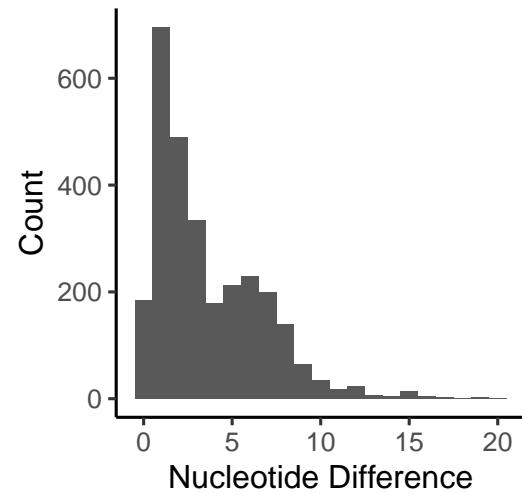
IGHV4-39*07

17127 sequences assigned
2934 (17.1%) exact matches, in which:
2374 unique CDR3
7 unique J



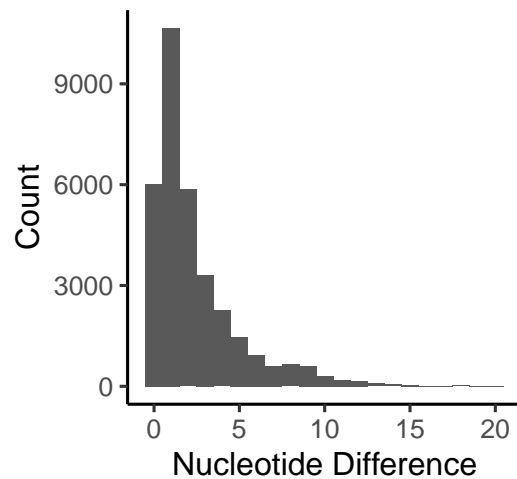
IGHV4-59*12

2846 sequences assigned
185 (6.5%) exact matches, in which:
184 unique CDR3
6 unique J



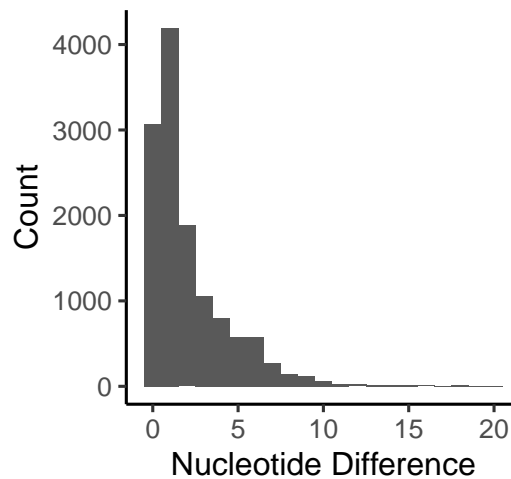
IGHV4-34*01_02

33335 sequences assigned
6017 (18.1%) exact matches, in which:
4915 unique CDR3
7 unique J



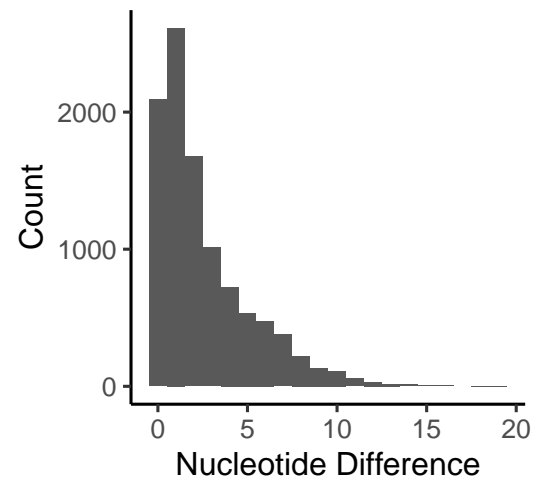
IGHV4-59*01_07

12888 sequences assigned
3069 (23.8%) exact matches, in which:
2627 unique CDR3
7 unique J



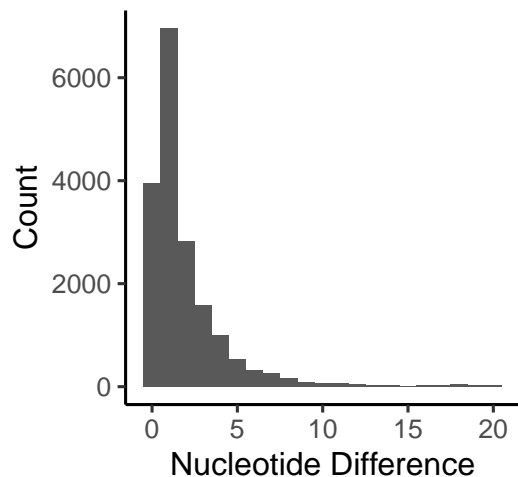
IGHV4-61*10

10131 sequences assigned
2091 (20.6%) exact matches, in which:
1833 unique CDR3
7 unique J



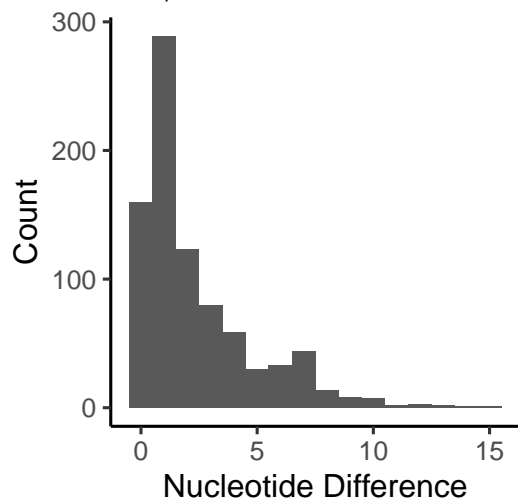
IGHV5-51*01_03

18216 sequences assigned
3961 (21.7%) exact matches, in which:
2585 unique CDR3
7 unique J



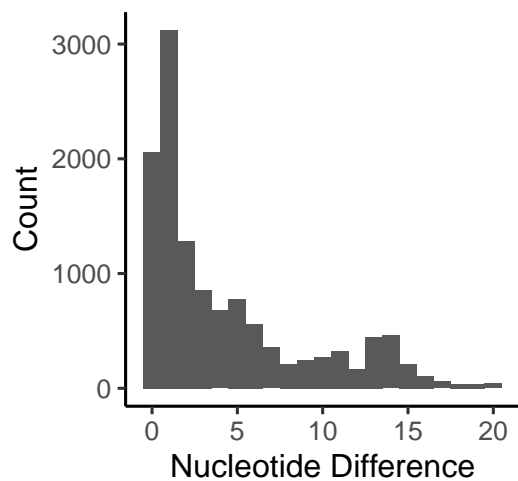
IGHV6-1*01_02

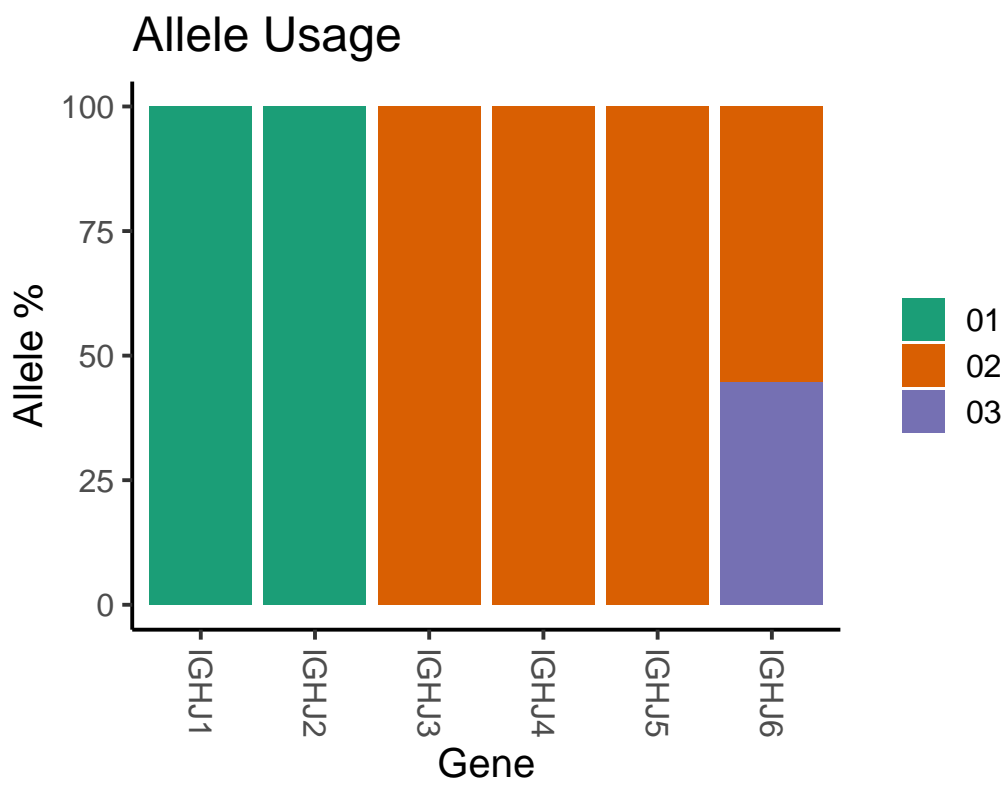
856 sequences assigned
160 (18.7%) exact matches, in which:
138 unique CDR3
6 unique J



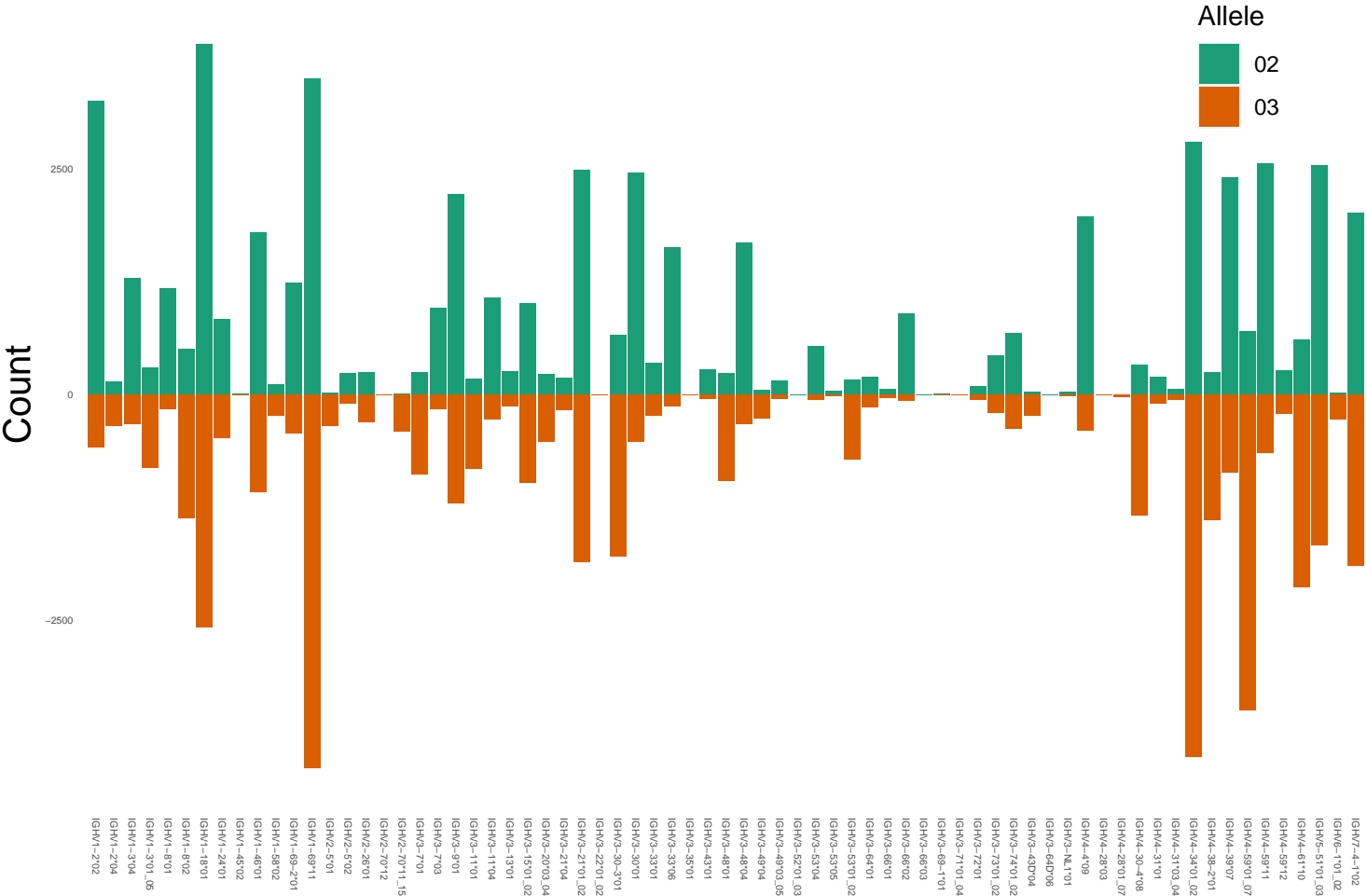
IGHV7-4-1*02

12613 sequences assigned
2061 (16.3%) exact matches, in which:
1713 unique CDR3
7 unique J





Sequence Count by IGHJ6 allele usage



Novel sequence(s)IGHV1-69*08_C191TIGHV3-11*06_T300CIGHV4-59*02_G88AIGHV5-51*07_A128G are not listed in the genotype and will be ignored.

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

Novel sequence(s)IGHV3-53*05_C300T are not listed in the genotype and will be ignored.